Campbell County Extension Service

Martin-Gatton College of Agriculture, Food and Environment
University of Kentucky.

The FARMACY

"Agriculture is our wisest pursuit because it will in the end contribute most to real wealth, good morals and happiness"

- Thomas Jefferson -

Agriculture & Natural Resources Newsletter

September 2023

Update:

We are excited to announce that we will be hosting the **Cattleman's Cheese Coney Booth at the Alexandria Fair** this year! Please reach out if you are interested in helping at the booth and promoting the Cattleman's Association. Volunteers will receive a pass for free admission to the fair! If you would like to advertise your farm or business in the booth, the Cattleman's are accepting $100 donations and signs that will be posted at the booth. Signs must be 24"x18" and provided by the farm or business.

Also at the Fair, the Cattle Association will be sponsoring a **Herdsman Award** to a 4-H or FFA youth beef cattle exhibitor. The guidelines are posted in the fair catalog and in the show barn during the fair and the winning youth will be recognized before the 4-H & FFA Show and Sale.

Free Smartphone App:

Nutrien Pocket Rain Gauge

A free rain gauge right in your pocket! Using smartphone GPS technology, Nutrien Ag Solutions' Pocket Rain Gauge™ app shows you the total amount of rainfall, in your surrounding area or field, for the previous 24 hours. For accuracy, meteorological information is drawn from reliable data sources and translated into ready-to-use information.

VISIT:
https://apps.apple.com/us/app/nutrien-pocket-rain-gauge/id1446291602

Northern Kentucky Horse Network Update:

The annual **Hamburger Trail Ride** will be at **AJ Jolly Park on September 23**. Come enjoy a Hamburger lunch that will be provided!

Mark your calendars for the **Ranch Horse Show & Clinic** at Cowtown Arena in Williamstown on **October 14-15**.

Campbell County Extension Office Welcomes New District Board Member

Campbell County Extension Office welcomes Chelsea McNichols to their District Board. Pictured are Chelsea with Campbell County Judge Executive Steve Pendery during her swearing in ceremony.

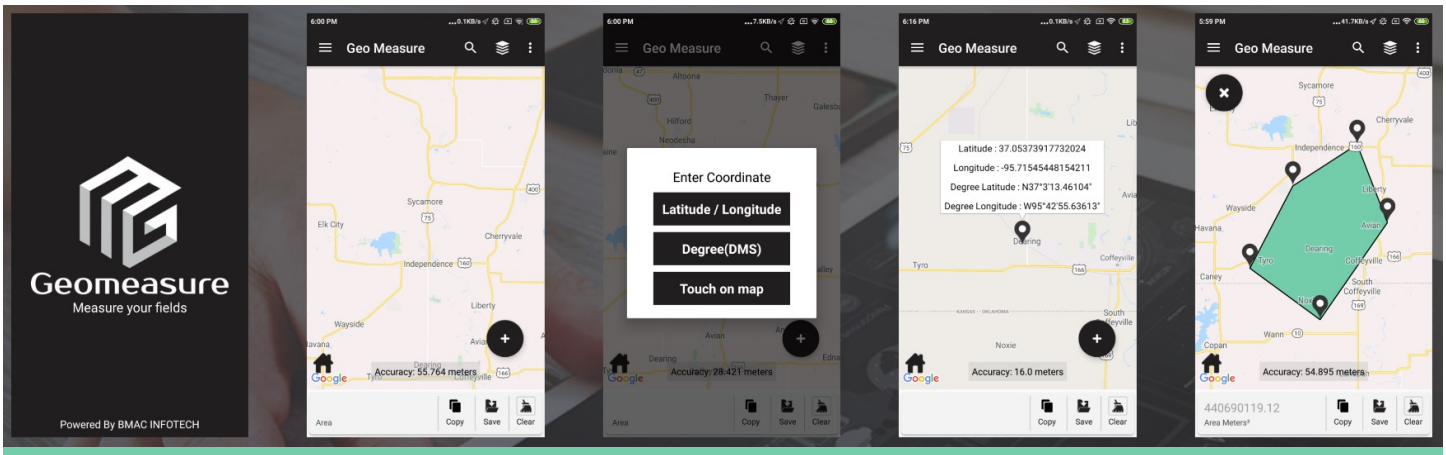
Michelle Simon
Campbell County Extension Agent
for Agriculture and Natural Resources

"Like" Campbell County Agriculture and Horticulture on Facebook
https://www.facebook.com/CampbellCountyAgricultureandHorticulture/

FREE: Smartphone App: Geomeasure Area Calculator

Geomeasure
Measure your fields

The Geomeasure area calculator is an excellent GPS field area map measurement tool. This app allows you to measure distance, acerage and more by tapping the screen or selecting GPS points. This is a great tool to use when spraying pesticides or spreading lime and fertilizer to know how many acres are in a field.



https://geomeasure.in/#down-app

Here's some exciting updates about the **Stocket (formerly x10d)** platform! As you may have noticed, we're in the process of rebranding to Stocket across our online and mobile applications. At the heart of our rebranding is our new slogan, Farm Forever. This slogan represents our commitment to help farmers Manage, Connect, and Learn using the Stocket platform to empower them to better manage their business and leave it to the next generation.

This rebranding comes hand in hand with numerous bug fixes and general improvements to enhance the overall platform performance. We have taken your feedback into account and worked tirelessly to address any issues to make your Stocket experience even smoother.

You can find our new website at Stocket.us. We chose a .us domain to reflect our focus on empowering and supporting American farmers to Farm Forever!

KENTUCKY CATTLEMEN'S ASSOCIATION

Northern Kentucky

Martin-Gatton College of Agriculture, Food and Environment
University of Kentucky.

REGIONAL BEEF FIELD DAY

Thursday, September 14, 2023

6:00pm
Registration & Meal

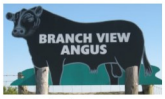
6:30-8:30pm
Program

Registration:
by September 7, 2023
Campbell County
Cooperative Extension Service
859-572-2600

Cattle Watering Options

Tour the barns at Eden Shale with Dr. Steve Higgins, UK Environmental Specialist and see first-hand how different automatic waterers work and see creative ways to harvest water and utilize non-traditional structures and equipment to water cattle.

Selecting & Developing Replacement Heifers



Branch View Angus Since 1940

Tim Dietrich, Director of Commercial Relations at Branch View Angus, will discuss what qualities it takes for heifers to make the cut! What qualities do you look for in replacement heifers? What benchmarks should heifers meet to make them good candidates to make it in the cow herd?

Fall & Winter Nutrition

Dr. Katie VanValin, UK Beef Nutrition Specialist. Tough times making hay in the summer means tough times feeding in the winter. Do you test your hay? Do you supplement your hay with grain? This is the year to have a plan to keep your cattle healthy and performing at their best.

Cattle Handling Facilities

Dr. Josh Jackson, UK Ag Engineering Specialist, will explain the "dos & don'ts" of a cattle working facility. We will tour the barn and see the new working pens, scales and chute set up to work the cattle herd. Come and brainstorm with Dr. Jackson to design or tweak your own facility!

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

UK Forage News

Renovation Tips for Novel Endophyte Tall Fescue

Time is counting down with only a month until the ideal Tall Fescue planting time depending on where you are in the fescue belt. Plan on seeding September 1-15 in most of Kentucky. The Spray-Wait-Spray-Plant renovation plan requires the first application of glyphosate 30-40 days before planting followed by another application just before planting.

Walk fields to be renovated and scout for weeds. Are there problem weeds that might need an herbicide treatment in additional to glyphosate? An example would be areas where horsenettle or tall ironweed are present as these weeds may not be killed by glyphosate. Consider using a broadleaf herbicide effective on these weeds (and/or other target weeds). Only use herbicides that have short waiting periods from the time you spray until the time you seed.

Order your seed now if you haven't already. The variety you choose is likely not available on store shelves, so talk to your seed dealer to make sure they have your seed when you need it. Make sure you get the variety you order and check to make sure that the bags carry the Alliance for Grassland Renewal logo. This logo indicates that you are buying safe novel endophyte seed that has passed rigorous testing for seed quality and endophyte viability. Don't get talked into planting an endophyte-free tall fescue if you want stands that last more than a few years. If the store does not have your seed when you need it, wait! Waiting a week or two is better than planting endophyte-free or toxic KY-31 Tall Fescue.

Schedule a drill if you must use a rental unit, or do needed maintenance if you own your own drill. If you plan to broadcast seed then make sure your spreader is in good shape, and that you are using some level of tillage to prepare the seedbed. Immediately after broadcast seeding follow with a cultipacker or similar implement to insure good soil to seed contact.

If you missed a critical step for summer burndown/fall establishment, then go ahead and spray with glyphosate anyway, and after the field dies down drill in a small grain like rye, oats or wheat (or other cool season annual) for winter grazing. Follow with a summer annual grass next year and you will be on schedule to plant novel endophyte tall fescue pastures in the Fall of 2024. Ask your extension agent or other advisor for help, and attend an Alliance workshop during the coming year to learn all you can about Tall Fescue Pasture Renovation.~ excerpt from article by Dr. Matt Poore, NC State Beef Specialist and Alliance for Grassland Renewal chair.

Martin-Gatton College of Agriculture, Food and Environment
University of Kentucky

SPONSORED BY VICTORY hemp

HEMP EDUCATIONAL SESSIONS & FIELD DAY

SEPTEMBER 12, 2023

PIRRI EQUINE PAVILLION

2011 Star Pilot Ln
Lexington, KY 40511

PRESENTATIONS INCLUDE:

- *Grain Dehulling & Crushing Demo*
- *Regulatory Overview*
- *Agronomy Presentations & Discussions*
- *Disease & Insect Hands-on Presentations*

JOIN US FOR ANY OR ALL OF THE FOLLOWING SESSIONS:

- Victory Hemp Grain Series: 8:30 am – 1:00 pm *Lunch included (Sponsored by Victory Hemp Foods)*
- Educational Session: 1:00 pm – 4:15 pm
- Field Tours: 4:30 pm – 7:30 pm *Dinner included*

PRE-REGISTER HERE BY *SEPTEMBER 5* TO SECURE MEAL TICKETS :
https://uky.az1.qualtrics.com/jfe/form/SV_etIaroYSn3RHnDw

Educational programs of the Kentucky Cooperative Extension Service serve all people regardless of race, color, age, sex, religion, disability, or national origin.

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

Implanting Strategies for Higher-Value Calves

Lee-Anne Walter *Technical Services / Merck Animal Health*

Implanting calves can maximize their value by improving feed efficiency, weight gain and growth rate, resulting in a $30-$40 increase in calf value for an investment of $1.50 per head.

Implanting is both an economical and sustainable practice. Photo courtesy of Merck Animal Health.

In many areas, it is weaning time. If you are looking for ways to maximize the value of your calves, implanting should be considered as part of your herd management program. Growth-promoting implants are proven to improve feed efficiency and weight gain, and to more effectively increase growth rate and protein deposition.

For an investment of approximately $1.50 per head, implanting results in a $30-$40 increase in calf value in today's market. Not only is the cost to produce beef reduced, but calves also have no loss of subsequent performance in later production phases.

Here are some of the key benefits of implanting calves.

Improved average daily gain (ADG)

Implanting suckling calves significantly enhances ADG between branding and weaning, resulting in more salable weight every fall. A 23-trial summary of more than 2,358 suckling calves showed an average weaning weight advantage of 23 pounds in cattle administered an implant.

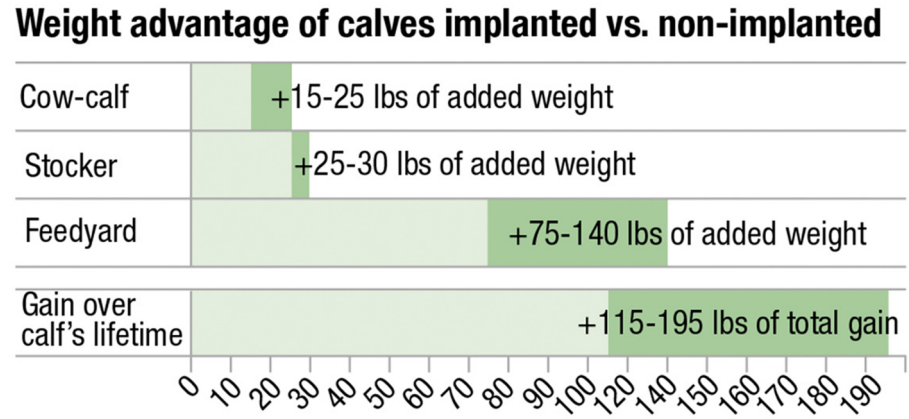
Research shows that a zeranol implant improves ADG in weaned backgrounding cattle by close to 10%. Assuming cattle gain 2 pounds per day without an implant during a 60-day post-weaning preconditioning period, implanting would improve ADG to 2.2 pounds per day. That equates to 12 additional pounds of weight gain over 60 days.

Long-lasting, additive benefits

When the right implants are used – matching strength of the implant to weight, growth rate and composition of gain – a return on investment (ROI) can be achieved during each phase of production (see Figure 1).

Studies consistently show that producers who implant suckling calves will have a competitive weight advantage with no loss of subsequent performance in later production phases after using a calf implant. One study showed that implanted calves were 19 pounds heavier after the suckling phase and continued to gain more during the growing phase. Cattle implanted at

FIGURE 1 Incremental weight gain at each stage of production



both suckling and growing phases were 40 pounds heavier than calves never receiving an implant.

Another study found cattle implanted across three separate production phases – suckling, growing and finishing – were heavier at finishing than animals receiving an implant only at the start of finishing.

A recent study looked at implant strategy and the rate of gain during the winter backgrounding phase. The results showed that implants had additive effects, increasing animal performance throughout all phases. Providing a zeranol implant during the winter growing phase reduced compensation during the summer grazing phase. Furthermore, an implant strategy and a high rate of gain during winter backgrounding resulted in 75 pounds of additional hot carcass weight.

More revenue on sale day

A study published in 2019 looked at sale prices of beef calf lots enrolled in the non-hormone treated cattle (NHTC) program and those that received implants, sold through 67 summer video auctions from 2010 through 2018. There were 40,941 lots of beef calves used in the analysis.

When comparing NHTC and implanted lots of cattle, the implant status did not result in a price reduction in any year, indicating no price difference between implanted lots and NHTC lots of cattle. The data show that producers can gain more revenue by using implants to market higher-weight calves.

Unless NHTC programs offer a premium that outweighs the productivity and efficiency of gains from implants, calves that are destined for finishing and sale to a terminal market should be implanted.

New FDA guidance

Implanting is both an economic and environmentally sustainable practice that is critical to the cattle industry, allowing the use of fewer resources while enabling a calf to gain anywhere from 115 to 195 pounds of additional weight (over non-implanted calves) over its lifetime. This means economic value by improving margin due to increased gain and decreased cost of gain.

The FDA recently provided new guidance for implant use in cattle. Work with your veterinarian, nutritionist, extension specialist and/or animal health representative to understand these changes and develop a calf implant program that's optimal for your operation.

Is Your Operation AGRItourism or AgriTOURISM?

Jesse Richardson, West Virginia University

Whether your operation emphasizes the agricultural aspect or the tourism aspect of agritourism matters in several legal issues. This article briefly describes some of the pitfalls of having the tourism aspects dominate the agricultural aspects. However, except for federal income taxation, these issues differ from state to state. In addition, this article cannot begin to explore the nuance of these issues. Therefore, this article intends to alert the reader to these issues. You should consult with your attorney and tax advisor for advice.

Agritourism Generally

One definition of agritourism defines the term as "a form of commercial enterprise that links agricultural production and/or processing with tourism to attract visitors to a farm, ranch, or other agricultural business for purposes of entertaining and/or educating visitors and generating income for the farm, ranch, or business owner."Like most definitions of agritourism, this definition connects the tourism activity to a farm, ranch or agricultural business. This connection proves particularly important in zoning

Zoning

In general, local governments are free to define agritourism in zoning ordinances differently than any state definitions. Theoretically, every local government could define agritourism differently from any other local government for zoning purposes. However, most zoning definitions share some common elements.

In zoning terminology, the connection between tourism and agriculture makes agritourism activity an accessory use on the land. The agricultural use is the property's principal use, or primary use. Accessory uses are uses that are subordinate and customarily incidental to the principal use.

A use is subordinate where the use does not dominate the parcel. Courts look at how much land area is encompassed by each use, how many employees are engaged in each use, and revenue generated by each use. The agricultural (or principal use in this case) should dominate the parcel of land.

Customarily incidental means that the accessory use is an activity that one would consider a normal part of or related to the primary use. For example, a pick-your-own operation is customarily incidental to an apple orchard. A corn maze may be customarily incidental to an operation that grows hay. A bouncy house does not appear to be customarily incidental to any farming operation.

For more information, visit:
https://southernagtoday.org/2023/08/04/is-your-operation-agritourism-or-agritourism/

Exemptions from Zoning
Some states exempt agritourism from zoning regulations. To qualify, the activity must meet similar requirements to the accessory use definition. For example, a North Carolina court identified three main factors to determine whether an activity is agritourism and, therefore, exempt under North Carolina law. First, the agritourism activity derives some value from or requires the farm or natural setting. Second, the legal risk factor should align with that of the farm use, and third, the agritourism use does not require much in the way of artificial structures or alterations to the land.

Agritourism Liability Acts
Many Agritourism Liability Acts similarly define agritourism as "an activity carried out on a farm or ranch." Without the principal use of the farm or ranch, the liability protection may be lost.

Use Value Assessment for Real Property Tax Purposes
Use value assessment for real property tax purposes also depends upon the agricultural use of the land. When income from non-agricultural uses exceeds income from agricultural uses, use value assessment may be denied.

Federal Income Tax
Persons engaged in "farming" report farm income on the Schedule F for federal income tax purposes. Farm income is treated differently in many ways than other business income to the benefit of the farmer. However, most "agritourism" income does not likely qualify as "farm income." If the agritourism income is more than "incidental" (which is difficult to define), the agritourism income should be segregated and reported separately on Schedule C.

Conclusions
Agritourism provides producers with the opportunity to generate additional income to supplement income from production activities. However, with additional income and success with agritourism activities come the potential for loss of the preferential treatment of agricultural in several legal settings. Operators should be careful to consider these consequences when planning agritourism activities.

Timely Tips

Dr. Les Anderson, Beef Extension Professor, University of Kentucky

Spring-Calving Cow Herd

- Fescue pastures don't generally produce much this month. Many of us have had some rain (some of us a bit too much) but the heat has waited until late summer to become an issue. Most of you may have some forage going into the usually dry months. Keep rotating pastures to permit calves to continue gaining weight. Always keep minerals available.
- Bulls should have been removed from the cow herd by the end of the month. They should be pastured away from the cow herd with a good fence and allowed to regain lost weight and condition. It is a good time to evaluate physical condition, especially feet and legs. Bulls can be given medical attention and still have plenty of time to recover, e.g., corns, abscesses, split hooves, etc. If removing the bull is not practical for you then call your herd veterinarian and schedule a pregnancy diagnosis. Market your "late-bred" cows and keep those that conceived early in the breeding season.
- Repair and improve corrals for fall working and weaning. Consider having an area to wean calves and retain ownership for postweaning feeding rather than selling "green", lightweight calves. Plan to participate in CPH-45 feeder calf sales in your area.

Fall-Calving Cow Herd

- Dry cows should be moved to better pastures as calving time approaches. Cows should start calving next month. Yearling heifers may begin "headstart" calving later this month. Plan to move cows to stockpiled fescue for the breeding season, so it will soon be time to apply nitrogen fertilizer.
- Prepare for the fall-calving season (usually September). Get ready, be sure you have the following:
  - record book
  - ear tags for identification
  - calf puller
  - castration equipment

General

- Perhaps the most tedious aspect of agriculture is keeping records, generating reports, and using data to make management decisions. Consider using one of the many electronic data collection and management systems available on the market.
- Provide shade and water! Cattle will need shade during the hot part of the day. Check water supply frequently – as much as 20 gallons may be required by high producing cows in very hot weather.
- Select pastures for stockpiling. Remove cattle and apply nitrogen when moisture conditions are favorable. Stockpiled fescue can be especially beneficial for fall-calving cows after calving. Reproductive rates are highest in fall-calving cows grazing stockpiled fescue.
- Avoid working cattle when temperatures are extremely high – especially those grazing high-endophyte fescue. If cattle must be handled, do so in the early morning.
- Do not give up on fly control in late summer, especially if fly numbers are greater than about 50 flies per animal. You can use a different "type" of spray or pour-on to kill any resistant flies at the end of fly season.
- Keep a good mineral mix available at all times. The UK Beef IRM Basic Cow-Calf mineral is a good choice.
- Cattle may also be more prone to eat poisonous plants during periods of extreme temperature stress. They will stay in "wooded" areas and browse on plants that they would not normally consume. Consider putting a roll of hay in these areas and/or spraying plants like purple (perilla) mint that can be toxic.
- Take soil samples to determine pasture fertility needs. Fertilize as needed, this fall.

Swinging for the Fences, Small Ball, and Water Issues

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

My alma mater recently won the College Baseball World Series. All season long this team was ranked in the top five for home runs and total runs scored. Their approach was to "swing for the fences" or as it's known in South Louisiana, "Geauxrilla Ball". As impressive as their offensive stats were during the regular season, two areas of huge concern going into the World Series was their inability to play "small ball" (laying down bunts to advance the runner) and the inconsistent play of their bullpen. The College World Series for many years was played at historic Rosenblatt Stadium in Omaha, Nebraska and it was known as a hitter's ballpark. Several years ago, a new stadium was built and is oriented so that batters are hitting into the prevailing winds, therefore home run production dropped dramatically. So, if you can't knock it out the park, pitching and "small ball" becomes more important. Although my alma mater struggled in these areas of the game throughout the season, fortunately during the World Series, pitching improved and for the most part, the weather conditions and wind direction were in their favor. So, was LSU just lucky? Not necessarily, but they did get a few lucky breaks as any championship team needs to win it all.

So how does any of this relate to water issues and producing beef? I think we can all agree that the subject of rainfall has been uppermost on our minds this spring and summer. At one point in late spring conditions seemed eerily similar to the drought of 2012. As I write this in early July, most areas of the state have received timely rains and hopefully this will continue. Mother Nature has a way of exposing the weak areas of production systems and the last several months are a prime example. Ask yourself a few questions. During the recent dry spell: Did you feel like you were overstocked? Were stock water ponds getting low and overused, resulting in poor water quality? Did you have any areas of the farm with ample grass but no access to stock water? Do you have a backup plan when rain doesn't come? In our area of Western KY several of the crop farmers have installed irrigation pivots and this year the pivots have been in full use. But what about the years when we get ample moisture, were the pivots a waste of money? Farmers will tell you that even in wet years the pivots pay, because it allows them to "swing for the fences" in terms of plant population, genetics and fertilization strategies knowing that if the rains don't come, the pivots can be turned on.

So, if farming under pivots allows for "swinging for the fences", what is the right strategy for pasture systems? Since most pasture systems do not have the access to irrigation, maybe a combination of stock water development along with a "small ball" approach might be more appropriate. Having water within 800 feet of grazing animals during the summer grazing season is a good goal. Missouri research shows that water within 800 feet results in improved forage utilization and more even nutrient distribution. Fencing and developing water access to the "back forty" or that field that has only been historically used for hay could also be considered. Water development will allow for rotational grazing and rotational grazing will enable you to better withstand dry periods and grow more forage. How you use that extra forage is the next decision. Do we increase stocking rates or do we summer stockpile for drought insurance or winter stockpile to reduce feeding days? Deciding what to do with extra forage is a great problem to have.

A quote from a presentation by John Genho, of Eldon Farms in Virginia at the 2019 Forages at KCA Symposium comes to mind.

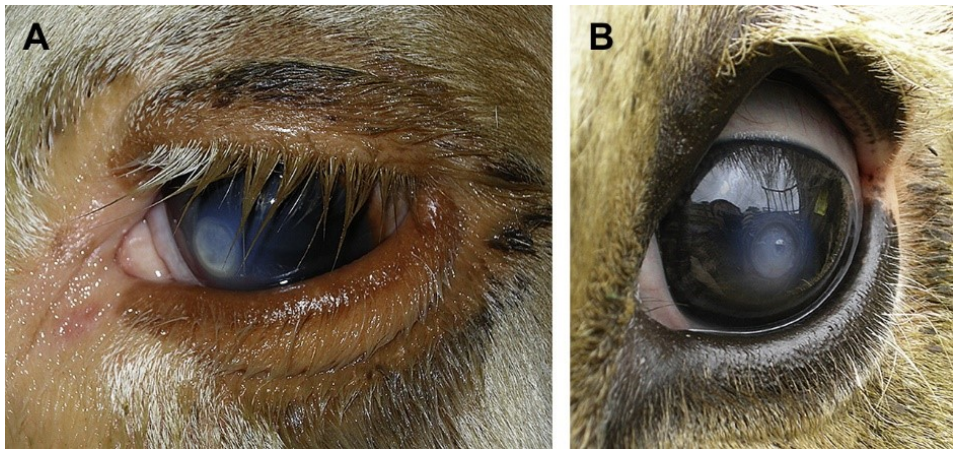
> ***"The economic optimum is always under the biological optimum when it comes to stocking rates. We should always run a few less cows than a field can actually carry to make the most money."***

The proceedings of his talk can be found on the UK Forages webpage at the following link: [Profitability at Eldon Farms: Guiding Principles (uky.edu)]

We are currently experiencing "World Series Championship Prices" for our cattle. These prices only come along every 8-10 years. Hopefully these prices result in added income that can be used to improve infrastructure in our grazing programs. These improvements when coupled with "small ball" stocking rate strategies, will help ensure economic survival over the long haul to make it to the next "Championship" price year. Or we could simply sit around hoping that every year the wind blows in our favor.

Pinkeye Prevention begins Long Before the First Bad Eye of the Season

Dr. Michelle Arnold, DVM (Ruminant Extension Veterinarian, UKVDL)



Corneal ulceration in the early stages of pinkeye. Photo from Veterinary Clinics of North America, Food Animal Practice 26 (2010), page 489.

Infectious Bovine Keratoconjunctivitis (IBK) or "Pinkeye" is a costly and exasperating disease for the beef producer and industry. For the producer, the economic costs of pinkeye include lower average weaning weights, pinkeye treatment and labor costs, and discounts received for calves with corneal scars. Despite ongoing research to combat this disease, prevention has proven difficult because of the complicated interaction of pathogens (bacteria), host (cow/calf), and environmental factors that result in pinkeye's development and its fast spread. Frequent observation of the herd allows early recognition and prompt treatment of affected eyes, resulting in better healing and less transmission to herd mates. However, preventing a pinkeye outbreak does not start with the first bad eye of the season. Once pinkeye cases begin, it is highly contagious and the bacterial pathogens spread rapidly by direct contact and by mechanical vectors, especially face flies. In an outbreak, on average 10% of calves and 3% of cows in a herd are affected in 30 days or less. Although knowledge gaps exist in our understanding of immunity in the bovine eye, prevention starts early by maximizing the herd's ability to fight disease, and through reduction of sources of eye irritation, injury, and transmission. Pinkeye prevention for individual herds is best accomplished with the help of your local veterinarian because there is no "one size fits all" approach to control.

Recent research is changing much of what we thought we knew about the bacterial cause of pinkeye (the "pathogen"). Previously, the cause was thought to be invasion of the bacterium Moraxella *bovis* (*M. bovis*) because, in research trials, it was the only bacterium recovered from diseased eyes that resulted in pinkeye when placed in healthy calves' eyes. However, we now know *M. bovis* colonizes the eyes at a young age and is part of the normal flora (the "microbiome") of the eye. Cattle are the only known reservoir of *M. bovis* and adult cows harbor this organism year-round without problems. However, Moraxella bacteria have two known virulence factors, pili and cytotoxin, that change this organism from a harmless inhabitant to an aggressive pathogen. Because of this complex mixture of organisms, it is difficult to make an effective, protective vaccine against the pathogens associated with pinkeye.

"Host" factors that contribute to pinkeye development include immune deficiencies due to poor nutrition, lack of trace minerals, inadequate hydration, and sub-par vaccination status. Meeting nutritional requirements, providing vitamins and trace minerals, establishing a comprehensive vaccination program including the respiratory viral disease infectious bovine rhinotracheitis (IBR), and parasite control are all exceptionally important in improving the cow's or calf's innate ability to fight pinkeye. No scientific evidence supports feeding excessive levels of any vitamin or mineral, including Vitamin A, to prevent diseases of the eye. However, if trace mineral levels (especially selenium and copper) are very low in an animal, immune function is severely impaired. Cool, clean drinking water (instead of stagnant creek or pond water) improves intake and provides the necessary fluid for tear production to protect the corneal surface. This is exceptionally important in dry, dusty, and/or windy conditions. Tears are essential to wash away pathogens and tear proteins include antibodies to fight infection. Do not forget to regularly check and clean automatic waterers, especially in the summer. Other host factors unrelated to management can contribute to pinkeye. White-faced cattle, particularly Herefords, are more prone to the disease, likely due to enhanced reflection of UV radiation on the cornea. Reported heritability of pinkeye is low to moderate so any control through genetics is unlikely or will be slow, at best.

Environmental factors contributing to pinkeye are those that can irritate or injure the eye's corneal surface and

predispose the eye to infection, include ultraviolet rays from the sun, face flies, dust, seed heads and tall weeds. UV radiation promotes formation of "dark cells" in the cornea; these are damaged cells that are targets of M. bovis attachment. Dust particles, seed heads, tall weeds, and sharp stubble can scratch the corneal surface. Face flies irritate eyes when feeding, with abrasive blotting mouthparts that rasp, scrape, and penetrate the conjunctival tissues, triggering tear and mucus production that feed the insects. Bacteria in the secretions of pinkeye-infected cattle can survive on or in face flies for 2 to 3 days and infect other animals when the flies feed again. Cattle display "fly avoidance behaviors" including head throws, tail flicks, and bunching together with heads directed inward when face flies feed. Preventing eye damage with good face fly control, removing irritant seed heads and weeds, and by providing shade for UV protection reduces the opportunity for pinkeye to strike.

Face fly control is challenging and is not the same as horn fly control. Face flies are "blotters" that feed on tears instead of "piercers" that feed on blood as horn flies do. Fly control methods that depend on insecticides delivered in the bloodstream have no effect on face fly numbers. Face flies spend only a few minutes at a time on or around the head, which is a difficult area to protect. They are also strong fliers and may move two miles or more during their life so they can easily transfer pinkeye from herd-to-herd and farm-to-farm. Face flies can be partially controlled with feed-through insecticides such as IGRs (insect growth regulators), offered in feed or mineral. Both horn fly and face fly females lay their eggs in very fresh manure. IGRs can reduce the number of fly maggots developing to adults, provided the IGR is started early enough in the spring and cattle consume a sufficient daily dose. IGRs should be started in mid-spring, 30 days prior to fly season, and removed 30 days after fly season is over.

Supplemental adult fly control is still needed to control adult flies moving in from nearby herds. Adult face flies can be somewhat controlled with repellents and insecticides applied directly to the face and eyes of cattle. Insecticide impregnated ear tags or forced-use dust bags provide the most consistent reductions in face fly numbers. Back rubbers with fly flyps or fly bullets tied at 4-6" intervals along their length and placed in forced-use areas like mineral feeders or entrances to water sites will consistently deliver insecticide to the face. The goal is to reduce face flies to less than 10 flies per head. The Veterinary PestX Database **(Figure 1)**, available at https://www.veterinaryentomology.org/vetpestx is a tremendous resource to identify insecticide ear tags,

(continued on next page)

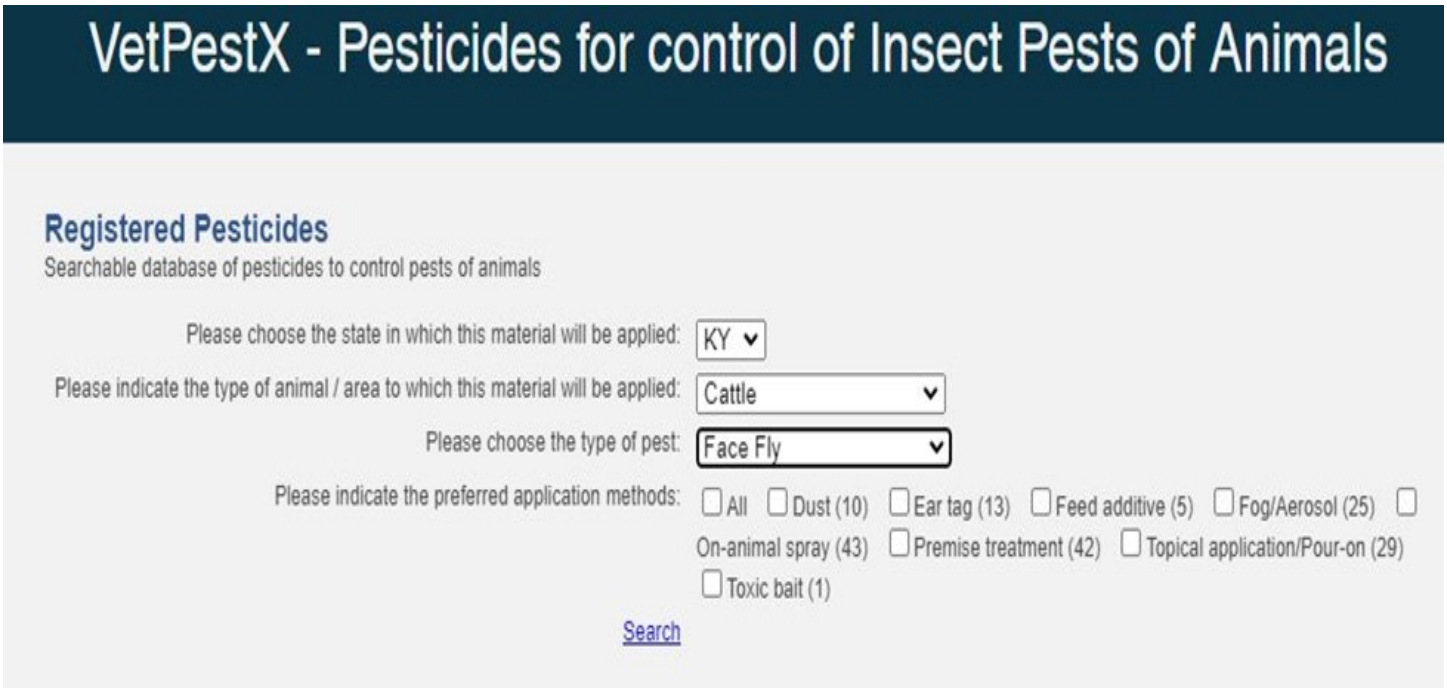


Figure 1: Screenshot of the Veterinary PestX Database dashboard.

Pinkeye Prevention begins Long Before the First Bad Eye of the Season

(continued from page 13)

Insecticide Impregnated Ear Tags

Active Ingredients	MOA Group	Brand Names
15% coumaphos + 35% diazinon	1B	Corathon; 2 tags
coumaphos + diazinon	1B	Co-Ral Plus; 1 tag for horn fly, 2 tags for face fly suppression
20% pirimifos-methyl	1B	Dominator; 2 tags
20% diazinon	1B	Optimizer / X-Terminator
40% diazinon	1B	Patriot; 2 tags
permethrin	3A	Atroban Extra, Apollo, Deckem, Ear Force, Gard Star Plus, New Z Permethrin, Permectrin Insecticide Ear Tags, Super Deckem II (10%) ; 2 tags
beta-cyfluthrin	3A	CyLence Ultra (8%) CyGuard 15%; 2 tags
10% *zeta*-cypermethrin	3A	PYthon MagnuM, ZetaGard; 1 tag
10% *lambda*-cyhalothrin	3A	Saber Extra, Excalibur; 2 tags
6.8 % *lambda*-cyhalothrin + 14% pirimophos methyl	1B + 3A	Double Barrel VP; 2 tags
15% tolfenpyrad	21	Tolfenpro; 1 or 2 tags
18% abamectin	6	XP 820; 2 tags

Figure 2: Example of Mode of Action (MOA) groups. The group number represents the MOA followed by a letter that relates to chemical structure. In the example above, there are 2 different MOA groups: 1B (organophosphates), and 3A (synthetic or synergized pyrethroids).

dusts, feed-throughs, pour-ons, sprays, and premise treatments and their mode of action (MOA) group to control almost any type of cattle pest **(see Figure 2)**. Fly control products must be rotated annually to a different MOA to preserve effectiveness. Repeatedly exposing face flies to insecticides in the same MOA group or to sublethal doses and killing most, but not all flies, allows survivors to develop resistance to all insecticides within the same MOA group. That genetic resistance can then be passed to their progeny.

While fly tags can be an effective method to reduce face flies, it is important to use 2 tags (one in each ear) for optimal control of face flies. Some manufacturers offer "insecticide cattle strips" that can be slipped onto the shaft of an existing ID tag, alleviating the need for two tags in one ear. Read the label and look for tags that "control" face flies, instead of those that "aid in control" and observe the length of time control of face flies is expected. Additional insecticide products will be needed for late season fly control when the tags begin to lose effectiveness. All insecticide ear tags should be removed at the end of the season to decrease development of resistance and, most importantly, rotate fly tags to a different mode of action (MOA) each year **(see Figure 3)**.

Other non-chemical fly control methods can prove useful such as sticky fly traps placed around high animal traffic areas, or wherever livestock congregate in pastures **(Figure 4)**. There are reports that garlic powder mixed in mineral helps reduce face fly numbers although there is little research to verify its success.

Early detection of animals with the first clinical signs of pinkeye (excessive tearing, squinting, and blinking) and then prompt, effective treatment is essential to reducing spread to herd mates and limiting scar formation in the eye. Long-acting prescription antibiotics such as long-acting oxytetracycline (LA-300®) or tulathromycin (Draxxin®) are specifically labeled for pinkeye treatment. If those two antibiotics lose effectiveness, a veterinarian may prescribe florfenicol (Nuflor®), ceftiofur (Excede®), or other antibiotics to be used in an extra-label manner for treatment. Injectable antibiotics are considered the best option because of their long duration of activity and effectiveness in eliminating bacteria, enabling the cornea to heal. Other remedies may reduce pain and allow healing, but the bacteria can be shed for weeks if not eliminated. When severe ulceration exists, the cornea may

need extra protection with either a patch, a third eyelid flap, or the eyelids may need to be sutured (stitched) together. Remember, preventing spread by recognizing and treating affected animals as soon as they show the first symptoms is crucial in controlling a disease outbreak. Active cases of pinkeye with excessive tearing attract flies that widely spread the aggressive bacteria. Additionally, topical application of a fly repellant to the face of an affected animal and quarantine away from the herd will also help reduce spread.

Pinkeye vaccines, whether commercial or autogenous (custom-made), will usually help reduce the number of affected animals or lessen the severity of clinical signs but cannot be completely relied upon to prevent pinkeye. Immune responses to pinkeye vaccines have been shown to be protective in some studies where animals are vaccinated with pili of a certain type and then challenged with a similar strain. A high degree of diversity among genes coding for pili is likely responsible for why some herds see a benefit from vaccination while other herds do not; if the vaccine strain stimulates immunity to a pilus type that is also present in the herd, there should be good protection. In clinical trials, approximately half reported significant protection from commercial pinkeye vaccines. When commercial vaccines are ineffective, an "autogenous" or custom-formulated vaccine can be manufactured from bacteria cultured from affected eyes within a certain area. To make a vaccine, all samples for bacterial culture must be taken early in the course of disease; preferably when the eye is just beginning to tear excessively and before any medications are used.

Figure 4: Fly trap made with fly paper wrapped around a protein tub with chicken wire, placed near water and mineral sites. Photo courtesy of Gregg Brann, Grazing Specialist, TACD, and Synergistic Grazing Management Consultant [https://gregbrann.com]

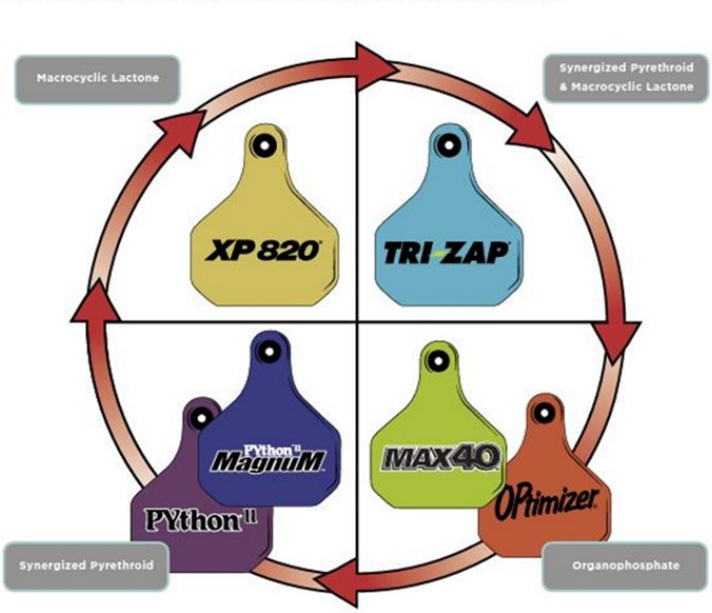


Figure 3: Example of fly tag rotation system (Y-tex Corporation). [UK does not specifically endorse any fly control product; example above is for illustration only]

In summary, pinkeye is one of the most common diseases of cattle and is of major economic importance to Kentucky cattle producers. Although research is ongoing to understand this complex disease, the keys to prevention and control of pinkeye still rely on the basics of maximizing the herd's immune status, face fly control and maintaining as irritant-free environment as possible. Vaccines, either commercial or autogenous, will help but cannot be completely relied upon to prevent pinkeye. Once cases begin, antibiotic treatment decisions are best made with your veterinarian who will consider effectiveness and cost of the antibiotic, withholding times, and provide a prescription for the product.

What makes a "Good Complete" Mineral?

Dr. Katie VanValin, Extension Specialist, Department of Animal and Food Science ,University of Kentucky

You've probably heard it a dozen times, "Make sure you put out a good complete mineral," but what does this mean? Like many aspects of beef production, one perfect recipe for a mineral that will meet the needs of all cattle throughout the year does **not** exist. A good mineral is a product that can provide supplemental minerals in a form and source that allow cattle to consume enough minerals to prevent deficiencies. Unfortunately, not every mineral product on the shelves at the local farm store will meet this definition. Here are a few considerations when looking for a "good" mineral.

The first thing to consider is the form of mineral you are looking for. The form typically refers to how the mineral is delivered to the cattle and includes blocks, loose free-choice minerals, loose minerals for mixing in feed, or injectables. While blocks continue to be a popular choice, these products are typically 95-99% salt. These products are often missing minerals such as calcium and phosphorus, and even when trace minerals such as copper, zinc, or selenium are included, the concentrations are so low that cattle cannot consume enough of the product for this form of supplementation to be effective. Injectable mineral products are an effective method of delivering a dose of minerals quickly. However, this form of mineral supplementation does not contain all recommended supplemental minerals and shouldn't be used as a complete mineral program. When cattle are on feed, selecting a loose mineral that has been formulated to be mixed directly into the feed can be a convenient and effective method of mineral supplementation. For cattle on pasture, a loose free-choice mineral will typically be the best form of mineral supplementation to meet requirements for all supplemental minerals.

While mix-in or free-choice minerals are effective forms of mineral supplementation, a closer look at the mineral tag can allow you to select the product that is both cost-effective and meets the needs of your herd. The guaranteed analysis section of the mineral tag provides the concentration of selected minerals included in the supplement. One must look at the ingredient section for a complete list of included minerals. However, if it is not listed under the guaranteed analysis, the concentration of a specific mineral is unknown. When comparing two mineral products of the same form, be sure to look at the target intake that the mineral was formulated for. The target intake is listed in the directions section of the tag. If one mineral was formulated for a daily intake of 3 ounces and another product formulated for 4 ounces, the 3 oz. product may look like it contains more minerals, but this is not a fair comparison. Be careful not to compare apples to oranges.

It is also important to consider the source of the minerals in the supplement. The source refers to the kind of each individual mineral included in the mix and can be determined by looking at the ingredients list. Some mineral sources are more "bioavailable" than others. When a mineral source is more bioavailable, more of the mineral consumed can be used by the animal. Typically, inorganic sources of minerals are used in all mineral supplements. However, organic, chelated, or hydroxy sources of some minerals may also be included as these sources are often more bioavailable. When cattle are at risk of developing a deficiency for a specific mineral, looking for a mineral that includes more bioavailable sources may be advantageous. In the Southeast, cattle tend to be at risk for developing copper and selenium deficiencies, whereas manganese deficiencies, for example, would be rare. Thus, looking for a mineral that includes more bioavailable sources of copper (copper amino acid complex, basic copper chloride, copper lysine, etc.) and selenium

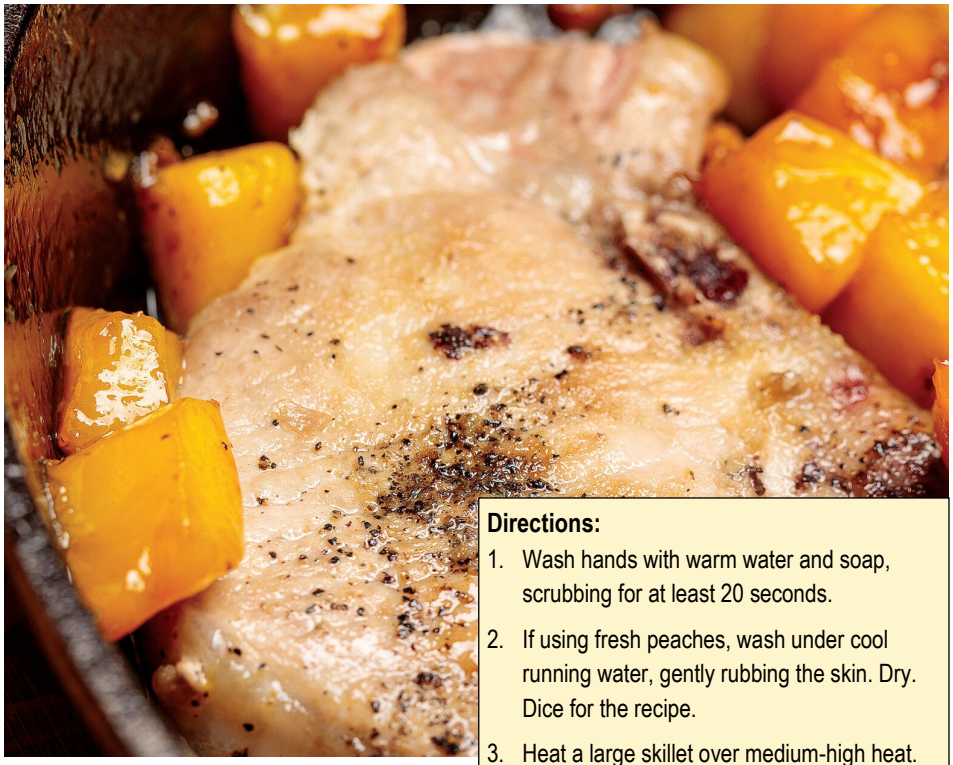
(selenium yeast) is an important consideration when selecting a "good" mineral. Often mineral supplements will include multiple sources of a single mineral, and it is impossible to tell from a mineral tag alone how much of the mineral is being supplied from each source. This information can be gained by asking your feed dealer or nutritionist.

Consider what else can be provided in the mineral supplement. The mineral can effectively deliver feed additives such as ionophores, ingredients to manage flies or antibiotics. The efficacy of these added ingredients and the mineral supplementation program relies heavily on mineral intake. All mineral supplements are formulated to be consumed at a target rate. For free-choice supplements, this is typically 2-4 ounces. For a good mineral to work well, target intakes should be met. A 50 lb. bag of mineral with a target intake of 3 oz should last 30 cows for about 8 days.

Remember that what might make a good mineral for a producer in the western United States may not be the best option for a producer in the Southeast. Also, specific mineral needs or additive needs may change with the time of year and stage of production. For example, it is recommended that lactating cows at risk of developing grass tetany consume a high-magnesium mineral. For help understanding the mineral requirements of cattle in your local area and to discuss what a "good" mineral looks like for your herd, reach out to your local Extension office.

Skillet Pork Chops with Peaches

Servings: 4 Serving Size: 1 Pork Chop Recipe Cost:$7.78 Cost per Serving:$1.95



Ingredients:

- 1 tablespoon oil
- 4 center cut pork chops (about 1/2 inch thick), trim visible fat
- 1/2 teaspoon garlic powder
- 1/2 teaspoon salt
- 1/4 teaspoon ground black pepper
- 1 tablespoon butter
- 2 cups diced canned peaches, drained
- 2 tablespoons apple cider vinegar
- 2 tablespoons sugar

Nutrition facts per serving:
280 calories; 10g total fat; 3g saturated fat; 0g trans fat; 70mg cholesterol; 400mg sodium; 21g total carbohydrate; 2g dietary fiber; 19g total sugars; 6g added sugars; 28g protein; 6% Daily Value of vitamin D; 2% Daily Value of calcium; 6% Daily Value of iron; 15% Daily Value of potassium

Directions:

1. Wash hands with warm water and soap, scrubbing for at least 20 seconds.
2. If using fresh peaches, wash under cool running water, gently rubbing the skin. Dry. Dice for the recipe.
3. Heat a large skillet over medium-high heat. Add oil.
4. Season pork chops with garlic powder, salt, and black pepper. Add to pan.
5. Rewash hands after handling raw meat.
6. Brown both sides of pork chops cooking until the meat reaches an internal temperature of 145 degrees F as measured on a meat thermometer. Remove from pan to rest.
7. Return skillet to the stove and increase heat to high. Add butter, peaches, apple cider vinegar, and sugar. Cook quickly, stirring often, allowing peaches to slightly turn brown and sauce to thicken (about 2 to 4 minutes).
8. Return pork chops to the pan with peaches and continue cooking until the mixture coats the pork chops (about 2 to 3 minutes).
9. Serve each pork chop topped with peaches.
10. Refrigerate leftovers within 2 hours.

Source: Brooke Jenkins, Extension Specialist, University of Kentucky Cooperative Extension Service

A pain in the ash kind of year

By Mike Rankin, Managing Editor

It's well known that the growing environment can impact the quality of forage. Cool temperatures generally are favorable for improving fiber digestibility, hot temperatures will speed plant maturity, persistent precipitation will delay harvest, and rain on a wilting crop will leach out desirable nonstructural carbohydrates.

Haymaking is, pure and simple, a weather game.

Dusty conditions enhance the likelihood that dry soil will find its way into harvested hay or haylage. Once in the forage, we call it ash. Forage ash content is effectively the sum of two primary sources. The first is the minerals that are inherent in the plant — components such as calcium, phosphorus, potassium, and magnesium. We normally regard these as essential and beneficial to both plant and livestock health. Typically, these minerals comprise about 8% of the dry weight for alfalfa and 6% for grasses.

The other component of forage ash content is external soil contamination, primarily silica. This is the stuff that was once used to grow forage but becomes a part of the feed. The likelihood of picking up soil between cutting and storing forages is enhanced by the type of conditions many of us have experienced in 2023.

While silica isn't necessarily toxic to an animal, it does take the place of more desirable energy-dense nutrients on a one-to-one basis. Ash or minerals contain no protein, calories, energy, or nutrients that cattle can ferment in their rumens. As one dairy nutritionist once said, "We don't know exactly what the impact of eating dirt is, but it can't be good."

Soil contamination also carries the risk of introducing undesirable fermentation microorganisms such as clostridium to the forage. This can be especially problematic in baleage.

How much is too much?

Ash content often ranges from about 5% to 18% when a large data set of both grasses and legumes are analyzed. Values trend on the lower end of that range for grasses and dry hay samples and are generally higher for haylage. Although it's impossible to keep all soil contamination out of harvested forage, a good maximum value to aim for is 11%, or about 3% external soil contamination in the case of alfalfa.

Unfortunately, high forage ash content is not just aggravated by dry weather and dusty conditions like we've seen this year. It can also elevate when soils are wet and muddy. Heavy rains have the potential to splash soil particles onto forage, especially if the forage is lodged. Factors such as rodent holes, previous flooding, and gravel roads will also contribute to higher ash values in localized field areas.

The greater attention to ash content has now led most forage laboratories to offer a neutral detergent fiber (NDF) analysis that is ash-free. This is designated as NDFom or aNDFom on a forage analysis report.

To demonstrate the economic significance of ash, consider a ton of 100% dry matter alfalfa. There will be about 160 pounds of plant mineral in the ton of hay (2,000 pounds x 0.08). Every 1% bump in ash content above 8% equates to adding about 20 pounds of soil. As such, alfalfa with an ash content of 13% will contain 100 pounds of soil per dry matter ton.

You can help

Although it's impossible to harvest "dirt-free" forage, there are proven practices that will minimize forage

ash content when conditions are excessively dry or wet. They include:

1. **Raise the cutting height.** Though a low cutting height offers a higher yield potential, it also results in more soil being incorporated into the forage.
2. **Make wide swaths.** This will not only speed up the drying rate, but it will also keep the wilting forage on top of the stubble and off the ground.
3. **Use flat knives on disc mowers.** These will create less suction and introduce less soil into the forage than angled knives.
4. **Make sure rakes and tedders are properly adjusted.** The goal is to move the forage, not the soil. University of Minnesota research showed that wheel rakes tend to incorporate more ash into the forage than other rake types.
5. **Rake as little as possible.** Often, the crop must be raked, but use strategies that minimize hay movement over the ground. Mergers are much more effective in this regard as the hay is picked up before being moved.
6. **Control rodents.** In addition to the damage they do to fields and plants, dirt mounds are easily incorporated into forage windrows.
7. **Keep storage areas clean.** Soil can be added at the storage and loading site as easily as in the field. Keep silage bags and silo piles on well-drained, solid surfaces.

Disposition Tempers Feedlot Profitability

by Jim Krantz, former SDSU Extension Cow/Calf Field Specialist. Courtesy of iGrow.org

As cattlemen and feedlot operators target increased levels of performance, efficiency and quality that enables them to compete in a global marketplace, these same production goals may blind them from a lurking cattle trait that negatively affects them. Cattle disposition may be one roadblock to obtaining additional profitability within cattle production systems.

Feedlot cattle with aggressive dispositions when compared to docile calves in the same feeding program generated reduced gains of approximately 0.3 lb/day while doubling the mortality rate according to research studies conducted at Iowa State University. When combined with inferior quality grades and increased treatment costs, aggressive cattle returned over $60/head less than those cattle in the same study labeled as docile.

Almost 50,000 cattle were involved in the study bridging over eight years and involving management systems in 18 Iowa feedlots. Calves were scored three or four times during the duration of the feeding period. Value differences for aggressive versus docile cattle are well documented beyond the feedlot. Toughness of the meat cuts and dark cutter characteristics are two documented affects of an acceptable eating experience for consumers. Studies have shown a significant relationship between these two characteristics and animal behavior.

Aggressive cattle had carcasses that exceeded the food industry's acceptable level for tenderness 40% of the time compared to docile penmates at 13.7%. Dark cutter labeling was evident 25% of the time in aggressive cattle carcasses while only 6.7% in the docile cattle.

Disposition is a moderately heritable trait. Consequently, cattlemen have the ability to improve the level of disposition within their herd through selection pressure. In addition, a renewed industry focus on animal welfare, the recognized merits of improved livestock handling techniques, an expanded understanding of animal behavior patterns and improved handling facilities can temper the dispositions of those cattle labeled aggressive.

Forage Costs of Production and Breakeven Curves

Brian E. Mills—Mississippi State University Extension

In forage production, whether that is establishing a forage system or simply maintaining it, it is important to understand what costs are involved and how these can impact your break-evens. A break-even is the price/yield needed in order to cover your total costs. Depending on the type of forage system you have, the costs can be relatively expensive. Developing an enterprise budget is one way of examining and comparing these costs.

Figure 1 shows the costs per acre from forage enterprise budgets developed at Mississippi State for four different forage maintenance systems: 1) conventional alfalfa hay, 2) permanent summer pasture, 3) mixed grass hay, and 4) hybrid bermudagrass hay. The conventional alfalfa system had the highest costs per acre at $957.63. Permanent summer pasture maintenance had the lowest costs per acre at $282.24/ac. Fertilizer, herbicide, and machinery costs make up a large portion of the costs in each system. Machinery costs include fuel, repair and maintenance, and interest costs.

Figure 2 shows the break-even curves for each of the four forage production systems. Break-even curves show the price and yield needed to cover total specified expenses. Price/yield combinations below this curve would result in losing money, and any combination above the curve would generate a profit. The market price shown in the figure was the average hay price received by producers in Mississippi for 2022 at $126/ton. Hay prices and costs can vary significantly from state to state, so again, it is important to adjust for your situation. However, the basic idea is that production systems with higher costs need a higher price, yield, or both to be profitable. For example, at the Mississippi 2022 market price and assumed costs, a permanent summer pasture system would need to produce 2.2 tons/ac to break-even. A mixed grass hay system would need 4.9 tons/ac to break-even. A conventional alfalfa hay system and a hybrid bermudagrass hay system would each need to produce around 7.6 tons/ac given a price of $126/ton. As such, permanent summer pasture and mixed grass hay are two of the more popular forage systems in Mississippi.

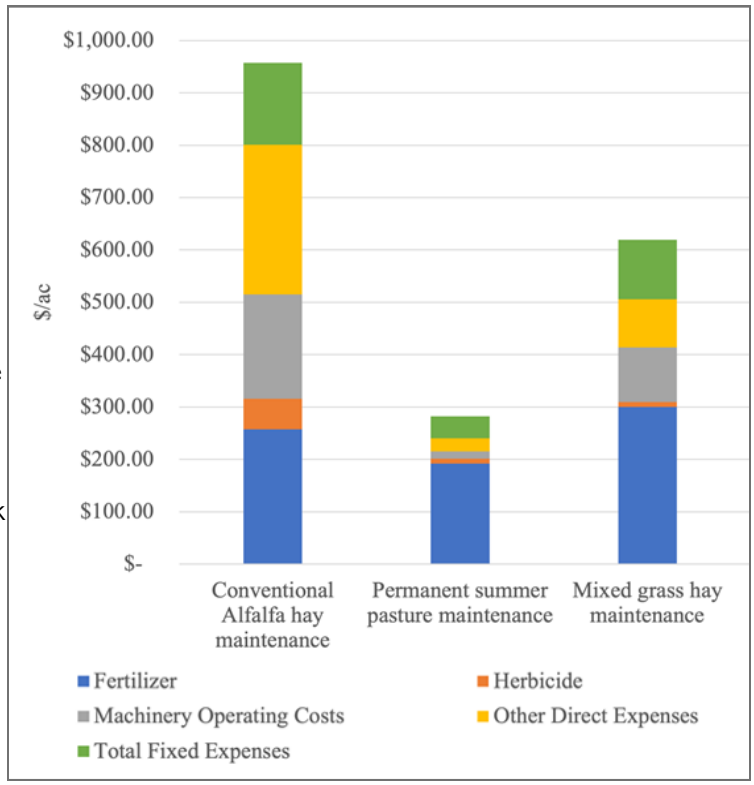


Figure 1. Costs per acre for forage maintenance production systems in Mississippi

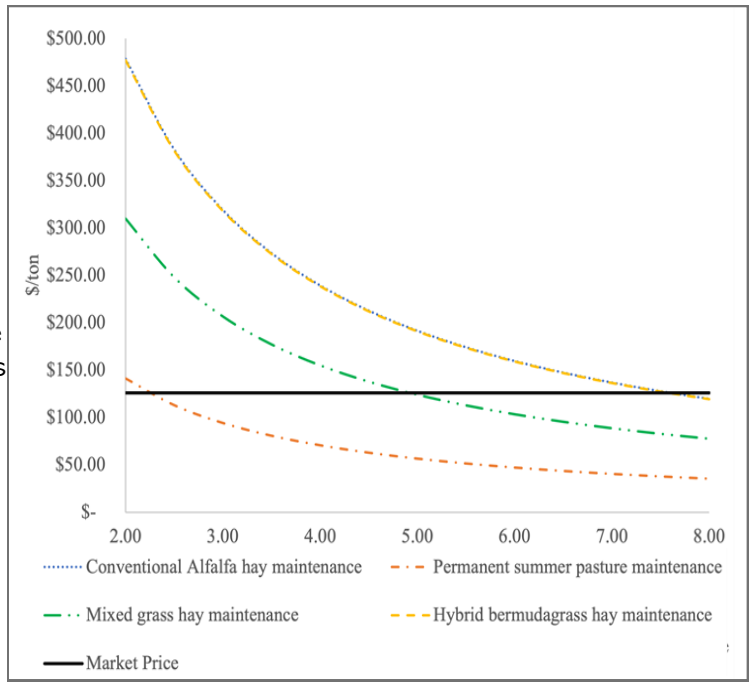


Figure 2. Forage maintenance break-even curves in Mississippi

Kentucky: https://agecon.ca.uky.edu/budgets

Top 10 Routine Tractor Maintenance Tasks

Source: Tim Stombaugh, extension agricultural engineer

Tractor maintenance tends to fall by the wayside when you get busy. Don't put these tasks off until spring and summer. Performing a simple front-to-back routine every week can help you remember key maintenance points. The manufacturer will have suggested intervals for most of the maintenance tasks, so you won't have to do everything every week. But the routine will prompt you to ask if it is time to do specific tasks.

Be ready for the growing season before it starts with these 10 routine maintenance tasks.

- ❑ Inspect the front axles and steering. Is it time to grease the bearings and steering components? Make sure nothing is loose.
- ❑ Check the coolant system. Make sure the coolant levels are adequate. Ensure the radiator is not plugged up with debris.
- ❑ Look at those belts. Check to see they have the right tension and that they are not cracked. This will prompt you to have a spare on hand.
- ❑ The air filter is next. Make sure it is not clogged and robbing power from your engine by not allowing air to get through.
- ❑ Check engine oil. You should check this daily, but if you haven't, a good time to do it is during your weekly inspection. Also, check the fluid itself to ensure it doesn't have any contaminants or water in it.
- ❑ Pay attention to the battery. If your battery is not a maintenance-free battery, check the liquid levels. Examine the cables for corrosion and make sure they aren't rubbing against the frame components.
- ❑ Check clutch and brake linkages. With everyday use, you may not notice linkage getting out of adjustment. Specifically check for free play and other linkage adjustments.
- ❑ Look at the hydraulic reservoir. Make sure the fluid is at the correct level and change the fluid when needed. The system provides fluids for remote cylinders, and it the critical lubricating force in your tractor's transmission.
- ❑ Test those tires Make sure they are properly inflated.
- ❑ Check the back of the tractor. Is it clean? Make sure the hydraulic hose connections are clean to keep dirt out of the system.

These simple procedures can extend the life of your tractors and protect your critical investment.

Using Proven Strategies During Unprecedented Times

– Garth Ruff, Beef Cattle Field Specialist, OSU Extension (originally published in The Ohio Cattleman)

When calf prices are high, animal health is increasingly important and the economic toll of death loss is amplified.

Drought west of the Mississippi is the reason we are facing unprecedented times in beef production, especially with regards to cattle prices. For the first time likely ever, a couple of Ohio auction markets have reported $2/lb. fed cattle. Feeder cattle markets remain historically strong, given the limited supply and smaller national cow herd.

When calf prices are high, animal health is increasingly important and the economic toll of death loss is amplified

I continue to get several questions from producers about management strategies for calves this summer and fall, with the goal of capturing the top of the market prices. Type and kind of cattle aside (more on that later), calf management programs that are good practices when cattle prices are low are often good management programs when cattle are selling high. Why not do everything possible to increase profit potential of a calf that generates a onetime revenue for an operation?

Animal health becomes increasingly important when feeder cattle prices are high as the economic toll of death loss is amplified. Vaccination and disease prevention yield positive returns most any time, but in mid mind are a non-negotiable given the current calf market.

Selling bull calves for instance, will nearly always trigger a discount in the marketplace. Much like marketing fed cattle, the goal should be to minimize know discounts before chasing premiums.

Weaning length is another piece of the puzzle that producers need to take a longer look at. Not long ago 30 day weaning programs were considered value added. Today 45 days at a minimum and 60 days have become the norm. Many of our herd management practices are dictated by calving season, I would argue working backwards on the calendar from an intended marketing date could be even more beneficial.

The greatest limitation to calf prices here in Ohio is and will likely always be lot size. With an average cow herd of 17 cows, there are minimal opportunities to increase group size. Having cattle of consistent quality and kind that can be sold together will increase cattle prices. Dr. Kenny Burdine at the University of Kentucky has reported that groups of three to five head generate a premium over a single calf, and the lots of 10 head generate a greater premium than lots of three to five.

All too often I hear complaints about how cattle were sorted at a given market. By sorting out any #2 quality cattle, the overall value of the group is increased so long as #1 quality calves make up the majority of a consignment. In many cases those #2 cattle could have been backgrounded a while longer and made into #1's and sold at a higher price. If the cattle are all of #2 quality or lower, that is a calf production issue on the producer side, not a salebarn issue.

It's too easy to get wrapped up in where cattle fall on a market report on a given sale day. Sometimes I have to remind folks that for a group of calves that were raised together that the average price is more important than the high or low. Production costs are often averaged across the herd, and therefore an average price tells a better story about profitability. If possible, keep track of the cows and bulls that produce the highest and lowest sale calves. On the high side, those could be genetics to emphasize in future breeding seasons. On the low end, those cows should be future cull candidates or health and/or nutrition practices need reevaluated.

The key to success is finding the right combination of genetics, nutrition, and management. If you've heard me speak before, it takes proper nutrition and management to optimize the genetic potential of an animal. If that genetic potential can be captured, so too can increased profitability. If management practices have paid for themselves in prior years, there is no reason to think they won't in 2023 and beyond.

We hope you enjoyed this month's newsletter!

Happy Farming!

Across:

2. A building used for storing farm equipment or housing livestock.
4. A structure with transparent walls used for growing plants in controlled conditions.
6. Cereal crops such as wheat, corn, or rice.
7. A farming implement used to turn over the soil.
11. The act of preparing and tending land for growing crops.
12. A powerful vehicle used for pulling farm machinery or trailers.
13. Domesticated animals raised on a farm for various purposes.
14. Substances applied to soil or crops to promote plant growth.
17. A house located on a farm, typically for the farmer and their family.
18. The process of gathering mature crops from the field.
19. Plants grown for food or other agricultural purposes.

Down

1. Tools and machinery used in agricultural activities.
3. A person who owns, manages, or works on a farm.
5. Dried grass or other plants used as animal feed or bedding.
7. Land covered with grass or other plants for grazing livestock.
8. An area of land where fruit trees are grown.
9. Domesticated birds raised for their meat or eggs.
10. Large domesticated animals raised for meat or milk.
15. The artificial application of water to crops or plants.
16. Unwanted plants that compete with crops for resources.

Open House & Community Celebration

September 9, 2023

10:00 AM - 2:00 PM

PENGUIN ENCOUNTER 11:00 a.m.

For more information call: 859-572-2600
or e-mail: campbell.ext@uky.edu
3500 Alexandria Pike
Highland Heights, KY 41076