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Beef IRM Team

KENTUCKY BEEF CATTLE NEWSLETTER JULY 3, 2023

Published Monthly by UK Beef IRM Team and edited by Dr. Les Anderson, Beef Extension Specialist, Department of Animal & Food Science, University of Kentucky

Contents

This month's newsletter includes:

Timely Tips

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

Spring-Calving Cow Herd

- Consider removing bulls from the cow herd by the end of the month and keep them away from the cows. A short calving season can concentrate labor during the calving season; group calves by age so that it is easier to find a convenient time to vaccinate, castrate, dehorn, etc.; and provide a more uniform group of calves at market time.
- Mid-July is an ideal time to deworm cattle. Use a product that is effective against inhibited ostertagia. Re-implant calves which were implanted at birth if the type of implant and amount of time indicate. Calves which have not been vaccinated for blackleg should be. Spraying or using a pour-on for flies while cattle are gathered can supplement other fly control methods. Remember to work cattle early in the morning when it is cool and handle them gently to minimize stress.
- Watch for pinkeye and treat if necessary. Minimize problems by clipping pastures, controlling face flies, and providing shade. Monitor the bulls' activity and physical condition as the breeding season winds down.
- Fescue pastures tend to go dormant in July and August, so look for alternatives like warm season grasses. Try to keep the young calves gaining weight. Go to pastures which have been cut for hay to have higher quality re-growth when it is available.
- Consider cutting warm season grass pastures for hay if reserves have not been restored yet.
- Heat stress can lead to low conception rates, low libido in bulls, and embryonic loss (abortion) between days 6 and 45 of pregnancy. Keep a close eye on your herd. Plan to diagnose your herd for pregnancy early this fall to identify open cows for future planning.

Fall-Calving Herd

- De-worm calves in mid-July with a product that is effective against inhibited ostertagia.

- Fall-calving cows should be dry and pregnant now. Their nutrient needs are minimal, and they can be maintained on poor pasture to avoid over fattening. Keep a good free-choice mineral mix available. You can use a lower phosphorus mineral supplement now if you want to save a little money. These cows are regaining body condition after a long winter-feeding period.
- Get ready for fall calving and plan to have good pasture available at calving and through the breeding season.

Stockers

- Sell heavier grazing cattle before rate of gain decreases or they get into a heavyweight category. This will also relieve grazing pressure as pasture growth diminishes. They can be replaced with lightweight calves after pastures recover.
- Lighter cattle kept on pasture need to be rotated to grass-legume or warm-season grass pastures to maintain a desirable level of performance. Re-implant these calves and deworm with a product that is effective against inhibited ostertagia.

General

- Check pastures for downed wild cherry trees after storms (wilted wild cherry leaves are toxic to cattle).
- Be sure that clean water is always available, especially in hot weather. Make routine checks of the water supply. Cattle need 13 to 20 gallons of clean water in hot weather. Cattle should have access to shade.
- Maintain a weed control program in permanent pastures and continue to "spot-spray" thistle, honey locust, etc.
- Have forage analyses conducted on spring-cut hay and have large, round bales covered. Begin planning the winter-feeding program now. Most of the hay was cut late due to a wet spring.
- Start soil testing pastures to determine fertilization needs for this fall.
- We are finishing June in the middle of an extremely hot and dry period. Begin planning now for drought. If this weather continues, you may need to begin feeding hay/supplement August-October to allow for fall stock piling of fescue.

Beef Bash 2023

Dr. Les Anderson, Extension Professor and Tyler Purvis, Beef Extension Associate, University of Kentucky

Dr. Roy Burris started Beef Bash at the UKREC almost two decades ago. His vision was to create an event to encourage fellowship among producers, the industry, and the entities that serve the beef industry. The goal was to unite and empower the beef industry for the future.

The theme of Beef Bash 2023 is "Vision of the Future". Our goal is to create an event illustrating the tremendous work done in the beef industry in Kentucky creating a vision of the future of the beef industry. We are redesigning the format to accentuate all the work being done in Kentucky to improve the sustainability of the beef industry. We will have rotations featuring current research from UK and the USDA ARS group, educational opportunities sponsored by UK and Kentucky Beef Network and we will have several demonstrations by the UK Foods group and by the Kentucky Beef Council. In addition to these rotations, we will have an update on new facilities being designed and developed for the new Beef Extension Education Facility in Princeton, the new Livestock Education Center in Versailles, and the new USDA ARS research facility located on campus. We should have something for everyone at this year's Beef Bash.

Beef Bash 2023 will be held Thursday, September 21st from 1-8 PM at the C. Oran Little Research Center. Registration will begin at 1 PM and the event will begin at 2 PM. We will have the educational components from 2-4 PM and again from 6-8 PM. We will use 4-5 PM for participants to visit the tradeshow and interact with our vendors. We will rotate participants through the stations again from 6-8 PM. We extended the rotations into the evening for those who want to attend but cannot get off work.

Dinner will be provided by the Woodford County Cattleman's Association at 5 PM. Pre-registration for attendees will be $15 and includes a meal ticket. Come out to see a "Vision for the Future" provided by the University of Kentucky, the Kentucky Cattlemen's Association, and the USDA ARS.

For more information, please contact your local ANR Agent. We hope to see you there!

Information for Seedstock Symosium

Tyler Purvis, Beef Extension Associate, University of Kentucky

In conjunction with the University of Tennessee, the University of Kentucky will be hosting a Beef Cattle Seedstock Symposium October 17th, 18th, and 19th. The symposium will target beef cattle seedstock producers (bull providers) and will be held in three locations with the intention of making travel more convenient for those attending. On October 17th, the Fayette County Kentucky Extension Office will be hosting, the October 18th session will be held at the Barren County Kentucky Extension Office and the October 19th session will be held in Spring Hill, TN. The sessions will begin at 8:30 a.m. and wrap up around 4:30 p.m. Lunch will be provided at 12:30 p.m. University of Kentucky and University of Tennessee specialists will cover topics such as genetics, nutrition, reproduction, health, and marketing along with special guest speaker Dr. Matt Spangler from the University of Nebraska. Funding for this program was provided by the Kentucky Ag Development Fund and a small registration fee will be collected to help offset the cost of the meal. To receive information as it becomes available, please email Maggie Ginn at mmgi241@uky.edu and indicate your interest and contact information.

Start Looking Now for Perilla Mint

Dr. Michelle Arnold, DVM (Ruminant Extension Veterinarian, UKVDL), JD Green, PhD (Extension Professor [Weed Scientist], UK Plant and Soil Sciences Department), Megan Romano, DVM (Clinical Veterinary Toxicologist, UKVDL)

Poisonous plants can be responsible for considerable losses in livestock although many cases go unrecognized and undiagnosed due to a lack of knowledge of which plants are dangerous and the wide range of signs that may be observed after consumption. The risk posed to animals by a particular plant depends on a variety of factors, including how much of the plant is consumed and over what time period; the stage or maturity of plant growth; which parts of the plant are eaten; whether the plant is green or dried; and the animal's age, species, and in some cases breed. Most weeds are tough and unpalatable, and cattle will not consume them unless baled in hay or the pasture is limited due to drought or overgrazing and there is little else to consume.

If cattle on pasture suddenly develop symptoms such as diarrhea, salivation or slobbering, muscle weakness, trembling, incoordination, staggering, collapse, difficulty breathing, or rapid death, then poisoning due to plants or any number of other toxicants should be high on the list of possible causes.

Oftentimes poisonous plants affect just a few cattle in the herd. Cases occur more often shortly after animals are moved to a new field. The severity of signs primarily depends on how much of the plant or other toxicant is consumed over what time period (the rate of consumption). If plant poisoning in livestock is suspected, the first thing to do is call a veterinarian, since prompt treatment is critical to the animal's chances of survival. Until the veterinarian arrives, keep the affected animal quiet and confined where a physical examination can be performed, and treatment given. Other animals should be moved as carefully as possible from the pasture where the suspected poisoning occurred until the cause of illness has been determined. Prevention involves learning to recognize poisonous plants, implementing effective weed control and pasture improvement, and offering supplemental forage or feed when pasture is limited so cattle are not forced to graze toxic weeds. A common summer weed in Kentucky that can cause problems in livestock is perilla mint (*Perilla frutescens*), also known as perilla, purple mint, mint weed, beefsteak plant, and wild coleus. Severe lung damage can result from ingestion of the leaves and seeds, resulting in "atypical interstitial pneumonia" or AIP. Perilla is a summer annual that thrives in late summer when pastures are frequently dry and dormant. The opposite ovate leaves attached to square stems can be dark green to purple with toothed leaf margins.

Perilla reaches 20 to 30 inches in height at maturity with opposite leaves. The white to whitish-purple flowers and subsequent seed which occur in late summer are attached to terminal spikes. The plant also has a distinct, minty odor, especially as it becomes more mature. The weed prefers shaded areas along creeks, in fence rows, and the edges of the woods and partially shaded pastures. Once it becomes established, perilla produces many seeds and large colonies can develop in succeeding years. The early pre-seed stage of the weed is of relatively low toxicity while the flowering and green seed stage plant is most toxic, especially the seeds themselves. The time of year when perilla reaches the seed stage often corresponds to periods when desirable pasture grasses are scarce and the weather is hot, enticing cattle to consume plants they normally

Perilla mint has a distinctive mint aroma, with opposite dark green to purplish leaves that have serrated leaf margins attached to square stems. Mature plants reach 2-3 feet tall and produce small, white to purple flowers with abundant seeds. Pictures courtesy JD Green

avoid, especially those in shady areas. The flowering or seed parts of perilla mint contain the highest concentration of toxic agents, perilla ketones. Perilla ketones are toxic in both fresh plants and in hay. Once ingested, they are absorbed into the bloodstream and carried to the lungs. Within the lungs, perilla ketones and other similar compounds are then activated, damaging the cells lining the air sacs and severely impairing gas exchange and lung function. This lung damage causes the animal to develop acute respiratory distress syndrome (ARDS), a sudden and dramatic onset of severe breathing difficulty. Treatment is of limited value and severe cases seldom survive.

The clinical signs of acute respiratory distress syndrome include a sudden onset of open-mouth breathing with the head and neck extended, nostrils dilated, a sway-back appearance, tongue protruding with foam coming from the mouth, an open-shouldered stance, and sometimes aggression. Breathing is shallow and rapid (35-75 breaths per minute) and may have a loud expiratory grunt. Temperature is typically normal but may be mildly elevated due to the severity of the condition. In extreme cases, air under the skin (subcutaneous crepitation) may be felt over the upper portions of the neck, shoulders and back. Mild exercise may cause the animal to collapse and die. Generally, there is an absence of coughing and no signs of infection such as fever or depression unless a secondary bacterial pneumonia develops. Severely affected animals usually die within 1-2 days but animals that survive may develop chronic lung damage or heart failure. The stress of handling can cause prompt death so treatment must be approached with caution. A dart gun may be necessary to avoid moving the animal to a treatment facility. Treatments administered or prescribed by a veterinarian may include diuretics, nonsteroidal anti-inflammatory medications and corticosteroids used in an extra-label manner.

Photo used with permission from Dr. Alan Doster, University of Nebraska-Lincoln.

At necropsy, atypical interstitial pneumonia (AIP) is recognized when the chest cavity is opened, because the lungs remain fully expanded, sometimes with rib indentations on them, rather than collapsed as with a normal lung. AIP-affected lungs are heavy with a firm, rubbery texture instead of the expected light and spongy lung tissue. These necropsy findings are confirmed microscopically as a very distinct pattern of damage to the lung cells. In addition, the leaves and distinct square stems are sometimes identifiable in rumen contents.

The best time of the year to begin scouting for perilla mint is late spring (May and June). During the late summer months when plants are flowering and producing new seed, grazing infested fields should be limited. Mowing can be used for control but must be timely to reduce new seed production. Unfortunately, mowing or clipping fields may not be feasible in some areas since many plants grow near trees and in fence lines. Chemical control options include herbicides labeled for use in pastures and hay fields that consist of single or premixed active ingredients of 2,4-D, dicamba (e.g., Weedmaster®, Rifle-D®, Brash®, etc.), triclopyr (eg. Crossbow®, etc.) or aminopyralid (e.g., DuraCor®, GrazonNext®). For best results, herbicide applications should be made to smaller, actively growing plants. Control is likely to be less effective when applied to taller, flowering plants. Grazing animals should be removed for a while after herbicide treatment since they may be more attracted to dying perilla mint plants. Furthermore, use good stewardship and observe label precautions when applying herbicides.

Prevention begins with learning to recognize poisonous plants, where they grow, and when they cause problems. Toxic weeds may be found in fence rows, along creek or stream banks, near ponds and in the woods although some (such as cocklebur, horsenettle and pigweed) are found in pastures and hayfields. Scout summer pastures and offer supplemental forage or feed when pasture is limited so cattle are not forced to graze toxic weeds. Do not harvest toxic weeds in hay or silage since cattle do not sort through these feedstuffs and will readily ingest the weeds. Most importantly, implement effective weed control at the right time and use management practices to thicken the stand and improve the growth of desirable forages which can compete with the emergence and growth of annual weeds.

A newly revised UK Extension publication entitled “Guide to Plants of Kentucky Potentially Poisonous to Livestock” is available at the UK Extension Website http://www2.ca.uky.edu/agcomm/pubs/ID/ID2/ID2.pdf or ask the county ag and natural resources (ANR) extension agent how to access this information. Pictures of many of the weeds and control options available for pasture weed control can be found at the following websites:

AGR-172:Weed Management in Grass Pastures, Hayfields, and Other Farmstead Sites, 2021

AGR-207:Broadleaf Weeds of Kentucky Pastures, 2021

Control efforts for Poison Hemlock and Buttercups Begin in Late Winter | Kentucky Forage News

For further help identifying weeds, individuals can submit unknown weed samples through the local county extension office. When sampling plants, collect as much of the plant as possible (roots, leaves, stems, flowers, etc.) for submission to the county extension office. State the general structure or size of the plant and provide details about the specific site where it was collected, and other characteristics, such as color of flowers, that can be useful for proper identification. Pictures of the whole plant and close-up photos of distinctive features can also be helpful with identification. If plants cannot be sent in fresh condition, they should be pressed out flat and packaged between pieces of cardboard or paper before sending.

Margin Calls in a Rising Market

Dr. Kenny Burdine, Extension Professor, Livestock Marketing, University of Kentucky

The feeder cattle market has been on a tear since fall of 2022. In most markets, heavy feeders are selling for $30 to $50 per more than they were in the 4th quarter and the price improvement in calf markets has been even greater than that. The August CME© feeder cattle futures contract that was trading below $200 per cwt in early fall is now trading in the mid-$230's. There is much reason for optimism as many profit opportunities exist in the current environment. But sharp price increases can also create challenges for producers, and I wanted to specifically discuss one of these challenges that came up last week as I was having lunch with a friend of mine that works in the agricultural lender sector.

While there are several price risk management strategies that can be employed by cattle producers, some of those strategies involve potential for margin calls. And a lot of margin can be needed when markets make major runs like the cattle markets have been doing. This can create a significant challenge for producers that assumed a short futures position (or wrote a call option) as part of their marketing plan. Sure, much of this will be recouped when cattle are eventually sold on the higher market. But the short-term liquidity strain can be a serious problem and is compounded today by much higher interest rates on borrowed money. I wanted to share a few thoughts on this situation that are applicable this year, and in future years.

First, farmers should have a fully transparent relationship with their lender. If a farmer's risk management plan involves potential for margin calls, the lender should be aware of that from the start so that capital access can be discussed. While it may not be possible to plan for all possible scenarios, examining the impact of major market moves is important. Evaluating the effect of declining prices may be commonplace, but walking through rising price scenarios is also important due to possible liquidity concerns when margin potential exists.

Secondly, producers should at least consider risk management strategies that do not involve the potential for margin. Forward contracts immediately come to mind and are used by some. But they can be pretty elusive in volatile times as buyers are hesitant to price far in advance. Put options and LRP insurance would also fall in this category as they allow a producer to have some downward price protection, while retaining upside potential. Premium is paid in both cases, but no margin is required as markets move.

Producers should also remember that there are ways to move out of a marginable position and into something different if conditions necessitate doing so. For example, someone with a short futures position could offset that position and purchase a put option or LRP insurance. And the price floor set would be reflective of the current, stronger market. Shifting to one of these strategies will require premium to be paid but will eliminate the potential for future margin calls. These strategies also have the added advantage of allowing the producer to capitalize if prices continue to rise, which they were unable to do with the short futures position.

Finally, producers that like the more solid downside price protection that comes from a short futures position, could also consider a synthetic put. An example of this would be keeping the short futures position but combining it with a call option. Premium is paid on the call option, but this also allows the producer to capitalize on rising prices as he/she gains on the call. Plus, as the call option becomes more valuable that works to offset the margin expense to some extent.

To be clear, there is nothing wrong with utilizing a risk management strategy that involves margin. In fact, there is good merit in many of those strategies. I like to say that if a farmer is not leaving money on the table occasionally, they are probably taking too much risk. However, I do think that producers should consider all risk management tools at their disposal, including those that do not carry potential for margin calls. And most importantly, they should fully think through the implications of major market swings in both directions.