

# Beef Newsletter

AGRICULTURE & NATURAL RESOURCES

**Cooperative Extension Service**

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## Monthly Newsletter Available

Each month, Dr. Les Anderson publishes a newsletter called “Off the Hoof”. It’s filled with timely tips, notices about upcoming meetings and lots of helpful information. We can’t afford to mail this to everyone on our beef mailing list each month, but if you would like to receive it electronically, just give us a call at 247-2334 or email me at [keperr2@uky.edu](mailto:keperr2@uky.edu) and we’ll see that you get it each month.

The following information includes most of the May edition. Hope you enjoy it.

## OFF THE HOOF

### Timely Tips

*Dr. Roy Burris, University of Kentucky Beef Specialist*

### Spring-Calving Cow Herd

- Bulls should have a breeding soundness evaluation (BSE) well before the breeding season. They should also receive their annual booster vaccinations and be dewormed.
- Improve body condition (CS=5) of cows before breeding season starts.
- Choose best pastures for grazing during the breeding season. Select those with the best stand of clover and the lowest level of the fescue endophyte, if known. Keep these pastures vegetative by grazing or clipping. *High quality pastures are important for a successful breeding season.*
- Schedule spring of “turn-out” working in late April or early May-at the end of

calving season and before the start of breeding season. Consult with your veterinarian about vaccines and health products for your herd. “Turn-out” working for the cow herd *may* include:

- Prebreeding vaccinations
- Deworming
- Replacing lost identification tags
- Sort cows into breeding groups, if using more than one bull
- Insecticide eartags (best to wait until fly population builds up)

Turn-out working of calves may include:

- Vaccinate for IBR-PI3, Clostridial diseases and Pinkeye
- Dehorn, if needed (can be done with electric dehorner and fly repellent during fly season)
- Castrate and implant male feeder calves (if not done at birth)
- Deworm
- Insecticide eartags
- Continue supplying a high magnesium mineral until daytime temperatures are consistently above 60 degrees F.
- Start breeding yearling replacement heifers one heat cycle (about 21 days) earlier than cows for “Head-start” calving. Mate to known calving-ease bulls.

- Begin breeding cows no later than mid-May, especially if they are on high endophyte fescue. Cows should be in good condition so that conception occurs prior to periods of extreme heat.
- If using **artificial insemination**:
  - Check the herd at least twice daily (early morning and late evening) to observe cows in heat (Confining cows to a limited grazing area will ease this chore.)
  - Use an experienced inseminator.
  - Make positive identification of cows and semen used. This will permit accurate records on date bred, return to heat, calving date and sire.
  - Good handling facilities and gentle working of the cows are essential.
- Record identification of all cows and bulls in each breeding group.
- Observe breeding pastures often to see if bulls are working. Record cows' heat dates and then check 18-21 days later, for return to heat.

### **Fall-Calving Herd**

- Pregnancy check the cow herd. Remove open cows at weaning time.
- Let fall calves remain with cows during the spring "flush" of pasture for heavier weaning weights, unless cows are really thin – then you might go ahead with weaning.
- Plan marketing program for calves. Consider various options, such as maintaining ownership and back-grounding in a grazing program, or precondition and sell in a CPH-45 feeder calf sale.
- Initiate fly control for the cows when fly population builds up.

### **Stockers**

- Keep calves on good pasture and rotate pastures rapidly during periods of lush

growth. Manage to keep pastures vegetative for best performance.

- Control internal and external parasites.
- Provide mineral mix with an ionophore.
- Implant as needed.

### **General**

- Harvest hay. *Work around the weather and cut early before plants become too mature. Harvesting forage early is the key to nutritional quality.* Replenish your hay supply! This last year can provide a "worst case scenario" for how much you might need.
- Clip pastures to prevent seedhead formation on fescue and to control weeds.
- Rotate pastures as needed to keep them vegetative.
- Seed warm season grasses this month.

## **Too Much Like the Old West**

*Dr. Roy Burris, Beef Extension Specialist, University of Kentucky*

Wow! People are stealing copper pipes out of buildings and catalytic converters off cars. What's next? Cattle? Yes, now that cattle are valuable commodity, cattle rustling is on the increase. That's just a little too much like the Old West.

Security for livestock is difficult. Fences are designed to keep cattle in – not to keep thieves out, isolated herds can't be watched 24 hours a day and livestock can be difficult to positively identify. This all adds up to providing thieves with an accessible target without too much risk.

It would seem like today's cattle rustlers aren't your normal thieves. They need a truck and trailer and some knowledge of handling and selling cattle-so as not to arouse suspicion. They are looking for easy targets-easy to steal and easy to dispose of. What can you do to make their "job" more difficult?

- (1) Identify cattle. A well designed ownership brand is probably the best deterrent. A registered brand in Kentucky is considered your legal property and recognized in any court of law as proof of ownership. For more information on registering your own livestock brand, you can contact:

Kentucky Department of Agriculture  
Division of Animal Health  
100 Fair Oaks Lane, Suite 252  
Frankfort, KY 40601  
502-564-3956

You can also e-mail me ([rburris@uky.edu](mailto:rburris@uky.edu)) for information on freeze branding.

Tattoos and eartags-along with records on sex, color and other descriptions could be beneficial in proving ownership if stolen cattle. However, it would be more desirable to prevent the theft in the first place. A thief would not be as likely to steal cattle with an ownership brand as he would unmarked cattle.

- (2) Restrict access to cattle by keeping gates locked (especially on your loading chute and corrals) and keep lanes blocked. Don't build working facilities and loading chutes near public roads.
- (3) Post cattle organization signs prominently, especially those which offer rewards for arrest and conviction of rustlers.
- (4) Enlist your neighbors help in watching your property and cattle. Remember in order to have good neighbors you need to be one. Do something for them sometime. It could pay dividends.
- (5) Watch for strangers or any activities that are out of the ordinary. Write down the license plate number of any suspicious vehicles.
- (6) Report suspected losses as soon as possible. The sooner a theft is

reported, the greater your chances of recovery.

Cattlemen must work to protect their investment. Don't let your cattle become easy targets. The theft of a trailer-load of cattle would be a terrible loss for most producers especially at today's prices. Don't be a victim.

## **Webinar on Estrus Synchronization and AI**

***Dr. Les Anderson, Beef Extension Specialist, University of Kentucky***

The eXtension Beef Cattle Clearing House conducted a webinar titled "Estrus Synchronization: New Protocols and Economic Impact." Presenters for the seminar were Dr. Les Anderson, University of Kentucky and Dr. Justin Rhinehart, University of Tennessee. The webinar discussed the newest synchronization protocols approved by the Reproductive Task Force. In addition, the presentation addressed the economic impact of incorporating estrus synchronization and AI.

To view the webinar, go to the national eXtension website at [www.extension.org](http://www.extension.org). Click on the tab for resource areas and find the link for Beef Cattle. Directly underneath the Beef Tips section is a link for Archived Beef cattle Webinars. Click that link and the last selection under the Table of Contents is the latest webinar on estrus synchronization. Click on that link to view.

Or type in the link below:

[http://www.extension.org/pages/18946/archived-beef-cattle-webinars#Estrus\\_Synchronization:\\_New\\_Protocols\\_and\\_Economic\\_Impact](http://www.extension.org/pages/18946/archived-beef-cattle-webinars#Estrus_Synchronization:_New_Protocols_and_Economic_Impact)

At the site you will find several other webinars to choose from mainly on genetics and reproduction.

## **Maturity Determines Forage Quality**

*Dr. Garry D. Lacefield, Extension Forage Specialist, University of Kentucky*

Of all the factors affecting hay quality, stage of maturity when harvested is the most important and the one in which greatest progress can be made. As legumes and grasses advance from the vegetative to reproductive (seed) stage, they become higher in fiber and lignin content and lower in protein content, digestibility, and acceptability to livestock.

The optimum stage of maturity to harvest for yield-quality persistence compromise is usually when plants are making a transition from vegetative (leafy) to reproductive (flower-seed) stage. Making the first hay cut early permits aftermath growth to begin at a time when temperature and soil moisture are usually more favorable for plant growth and generally increases total yield per acre.

After mowing, poor weather and handling conditions can lower hay quality. Rain can cause leaf loss and can leach nutrients from plants during curing. Sunlight can lower hay quality through bleaching and lowering Vitamin A content. Raking and/or tedding dry, brittle hay can cause excessive leaf loss.

Hay plants with an 80 percent moisture content must lose approximately 6,000 pounds of water to produce a ton of hay at 20 percent moisture. Crushing stems (conditioning) at time of mowing will cause stems to dry at more nearly the same rate as leaves. Conditioning will usually decrease the drying time of large-stemmed plants by up to a day and can result in leaf and nutrient savings.

Raking and/or tedding while hay is moist (about 40 percent moisture) and baling before hay is too dry (below 15 percent moisture) will help reduce leaf losses. Store to minimize loss, preserve quality and feed for efficiency. For more information on forage quality see the publication "[Understanding Forage Quality](#)" at your local county extension office.

## **Know Your Block and Tub**

*Dr. Jeff Lehmkuhler, Beef Extension Specialist, University of Kentucky*

Supplement blocks and tubs continue to be a popular feed technology used by cattle producers in the southeast. Forage shortages caused by droughts, poor or low quality hay due to excessive spring rain, and overstocking are situations we often see these products being utilized. These products are convenient for producers, easy to handle, require no investment in feeding troughs, take little area for storing and require minimal labor to feed. This makes blocks and tubs attractive to producers that have off-the-farm employment as it eliminates the daily feeding aspect. There are differences in the blocks and tubs marketed and being familiar with how they differ will allow for a better decision on what tub will best fit your needs.

One of the most obvious differences is the package size. The blocks usually are 33 1/3 lb to 50 lb while many of the tubs are packaged as 125 lb to 250 lb. Certainly, the differences in weight can have some implications, particularly with respect to who will be getting them out of the truck. The way these products are packaged also will differ. Most blocks will be wrapped in a light clear plastic film that can be cut and discarded properly. Tub products may be obtained in plastic or metal drums, biodegradable fiber drums and cardboard. Some companies will reuse or recycle the tubs while others do not.

The other difference between these products is related to the process of making the supplement. There are generally three categories that these products can be divided into and include: pressed, chemically hardened, and low moisture cooked blocks and tubs. Pressed blocks are manufactured as the name implies. Ingredients are mixed, conditioned with steam and then pressure is applied to the product. This process allows for a wide range of available feed ingredients to be used. Humidity can lead to degradation of the block and those feedstuffs

that do not pellet well are difficult to use in pressed blocks and tubs. High fat levels as an example can make it difficult to make a firm block. The amount of pressure and the ingredients utilized will limit the intake and high levels of intake can be achieved if the blocks are soft.

Chemically hardened blocks are made by mixing liquid and dry products together. This mixture is poured into a container and allowed to cure. The hardness of the block is controlled by the proportion of metal oxides such as calcium oxide and magnesium oxide added. Both liquid and dry ingredients can be utilized in these products.

Low moisture or cooked blocks and tubs are typically the most expensive to manufacture especially as utility costs increase. Moisture is removed from liquid feedstuffs through heating the liquid and subjecting it to vacuum pressure. Both dry and liquid ingredients can be used in these products. These products typically have lower targeted intake rates of the three categories discussed.

Read the label of these products. Be aware of the guaranteed analysis information as well as the ingredients listed as sources of nutrients. Even today we see copper oxide being utilized in some of these products which is a very poor supplemental form of copper for beef cattle. Look for products that are using copper sulfate, copper chloride and/or chelated forms of minerals. Be smart and learn about the tubs or blocks you are considering to buy. Will a tub that provides ½-1 lb of daily intake provide the nutrients a lactating cow needs on the forage provided? Or is the needed intake closer to two pounds?

I have been contacted on two separate occasions in which tubs were being fed and cows were lost. Of course it is easy to blame it on the product. In one case for instance, a 250 lb compressed tub was placed out for a group of cows. Within 12 hours the tub had been consumed, one cow lost, and the estimated

average intake was close to 8 lbs per cow. Two weeks later the same individual fed a second tub which disappeared in 24 hours and two cows were lost. No cattle were posted and it is not possible to claim that these cows were lost from overconsumption of the block. However, the blocks were sampled and nutrient analysis information suggests that at these extremely high rates of intake, cattle were at risk to toxicities. I had a similar call from an individual about a year ago. He was upset because he lost several cows when feeding tubs and found out that his tubs contained high levels of sulfur. The intake of the product was well above the targeted level of intake listed by the manufacturer. The cause of deaths was found to be polioencephalomalacia as a result of high sulfur intakes in this situation.

What was the connection between these two? Both were using compressed tubs that contained feed ingredients that resulted in sulfur levels that were above the maximum tolerable level for beef cows in the tub. One had been fertilizing bermudagrass pastures with ammonium sulfate which was running short. The other had limited forage and cattle had access to sulfur spring water. Limited forage availability and likely quality led to intakes well above the targeted rate.

The use of blocks and tubs are a convenient method of delivering supplemental nutrients. By no means should they be used to stretch or replace limited forage resources. The term supplement should infer more of an additive notion, not substitution. Do not rely on the product itself to self-limit intake under limited forage situations. Talk to the salesman or call the manufacturer before purchasing the product and inquire about the product asking for a more detailed analysis including sulfur levels if you have a water source that is high in sulfates. Here's wishing everyone a bountiful hay crop and green pastures this year.

## **Pregnancy Examination - Is it Worth the Cost?**

*Dr. Michelle Arnold, Large Ruminant Extension Veterinarian, University of Kentucky*

“Weak Calf Syndrome” is a term applied to any calf born alive but is slow to stand and may or may not attempt to nurse. With intense management, some of these will survive but most will die within 1-3 days of birth. This condition can be caused by multiple factors, most of which must be addressed *before* calving season begins.

When faced with the unexplained death of a calf, the immediate reaction is to look for a disease affecting the calf, find a way to treat it quickly, and effectively prevent it from spreading. Unfortunately, weak calves are most often the result of problems within the cow including nutritional deficiencies, calving difficulties, and sometimes infectious organisms. Factors contributing to weak calf syndrome include:

### **1. Pre-Partum Nutrition**

Nutrition in the last 50-60 days of gestation is key to preparing a calf for life outside the cow. Approximately 80% of fetal growth occurs during this time so the dam must have adequate nutrition to support this growth. Additional nutrients are required to develop fetal brown fat that will supply energy for the calf to survive until adequate colostrum and milk are ingested. The two most important cow requirements are protein and energy. Research has shown that calves born to cows on a protein restricted diet have less vigor, less ability to get warm, and it takes a much longer time for them to stand after birth. Energy restricted cows (cows losing weight during late gestation or are thin) have calves with lower energy (fat) stores and longer intervals from birth to standing.

There is a much higher incidence of weak calves born to heifers and very old cows. First calf heifers are still growing themselves while pregnant so it is easy for them to become deficient in protein and energy. Older cows may

have difficulty keeping weight on due to bad teeth, lameness or chronic disease issues.

### **2. Micromineral Balance**

Deficiencies in blood selenium levels of cows (occasionally cobalt and iodine) have been associated with weak calves. A severe selenium deficiency will cause “white muscle disease” in which calves are born with a weak heart and/or weak muscles and die soon after birth.

### **3. Dystocia**

A calf involved in a difficult birth will have decreased vigor and take longer to stand and nurse. Low levels of oxygen in the blood of the calf (“hypoxia”) may also impair the function of the central nervous system as well. Anytime a “calf jack” is needed indicates it was a difficult birth. Outward signs of dystocia in the calf include a swollen head or tongue, bruising, fractures, excessive fluid in the trachea or lungs, and brown or yellow staining of the hair coat from the meconium. Additionally a calf may have broken ribs that affect its ability to breathe.

If a calf does not stand and nurse within one hour of birth, the calf must be fed colostrum either milked from the dam or a commercial colostrum replacement.

### **4. Infectious Causes-BVD Virus and Leptospirosis**

Both the BVD virus and the spirochete *Leptospira interrogans* serovar *hardjo* infection have been implicated in weak calves. If the cow is infected with the BVD virus during the first 5 months of gestation, there may be multiple congenital defects such as a domed head, cleft palate, cataracts and other eye defects, hydrocephalus and other brain abnormalities in the affected calf. The involvement of *Leptospira* organisms in weak calves is not well understood but they have isolated and deserve further study.

### **5. Severe Cold Weather**

A majority of weak calves are born during cold, wet weather. Cold weather increases the cow’s maintenance requirements

for energy so cows must be fed more to fit hostile environmental conditions when present. Bad weather can also cause hypothermia of the calf with signs identical to a weak calf. Cold calves are usually depressed and unable to stand or nurse until warmed. In an outbreak situation in which multiple weak calves have occurred in your herd, several measures should be instituted immediately:

1. Diagnose the cause of death-Contact your local veterinarian and submit any calves that die due to unknown causes to the UK Veterinary Diagnostic Lab or Breathitt Laboratory in Hopkinsville.
2. Provide shelter during harsh winter weather-Clean, well-drained areas with windbreaks or woods provide protection during times of intense rain and cold. A shed or barn can be used but remember that organisms that cause diarrhea build up very quickly in those protected areas.
3. Identify the weak calves and institute special care-If the calf has not nursed within one hour of birth, intervention is necessary. Other indications of problems include if the calf is not cleaned off and/or is lying on its side unable to right itself. In these instances it is imperative to dry the calf off, warm it up, and feed colostrum with an esophageal feeder. Severely dehydrated calves may need intravenous or oral electrolytes.
4. Evaluate the protein and energy in the ration and address any deficiencies. Body condition score the cows and heifers due to calve in the next 60 days to evaluate their needs.

The best strategies to prevent weak calves next calving season are a solid herd health program, proper nutritional management, and avoiding dystocias. Not only will calf survival improve but pregnancy rates will increase as well. Keep the following points in mind:

1. Vaccinate cows at least 4-6 weeks before breeding with a 5 way viral respiratory vaccine (IBR, BVD Types 1 & 2, PI3, BRSV) and the 5 strains of Leptospirosis. Consult your veterinarian about testing the herd for cows persistently infected with BVD virus.
2. Provide enough protein and energy for cows and heifers.
3. Maintain a body condition score of 5 for cows (up to a 6 for heifers) to ensure adequate condition at calving.
4. Allow cows access to shelter in case of bad weather when calving.
5. Have enough help on hand at calving to watch cows, assist with calving and treat weak calves if necessary. A solid relationship with your local veterinarian is exceptionally important for difficult calving situations and the evaluation/treatment of weak calves.

### **Kentucky Beef Cattle Market Update** *Kenny Burdine, Livestock Marketing Specialist, University of Kentucky*

It appears that Kentucky calf markets made their peak a little earlier than usual this year, which is not surprising given the early grass growth most producers experienced. Too much moisture has certainly been a problem in many areas and is creating concern about corn planting. Heavier feeders have also shown some softness, but appear to have been less affected than calves. Feeder cattle supplies will remain tight this summer and fall, which should provide some solid underpinning for these prices.

The primary story in the feeder cattle markets has been major decreases in futures prices since the first of April. May and August feeder cattle contracts have lost about \$12 per cwt from their highs. Both contracts moved down quickly, with two short lived bear flags. The August contract is very close to the psychologically important \$130 level. If it pushes through this

level, there is likely support in the mid-upper \$120's.

The weakness on the board has been seen across most all commodities. Live cattle have lost a lot of ground, grain crop prices have softened, and even crude oil saw a sizeable drop in early May. As the role of speculators and hedge funds in these markets has expanded, we have increasingly seen them move in tandem.

Clearly, we don't know where this feeder cattle market is heading, but I think it will take a major fundamental change for the August contract to move back up and challenge the \$140 level again. Producers who took advantage of those price levels and priced a portion of the cattle for summer capitalized on a great opportunity. We often talk about the volatility that speculators add to the market, but we seldom talk about the pricing opportunities they create.

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