

OFF THE HOOF

KENTUCKY BEEF CATTLE NEWSLETTER NOVEMBER 2019



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Beef IRM Team

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Timely Tips

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

Spring-calving cow herd

- If you need to replace cows, consider buying bred heifers in some of the Kentucky Certified Replacement Heifer sales that are being held across the state this month.
- Extend grazing for as long as possible to decrease the amount of stored feed needed.
- Evaluate body condition of cows. Sort thin (less than body condition score 5) cows away from the cow herd and feed to improve their condition. Two and three-year olds may need extra attention now. These cattle can use the extra.
- Dry cows in good condition can utilize crop residues and lower quality hay now (but don't let them lose any more body condition). Save higher quality feed until calving time. Keep a good mineral supplement with vitamin A available.
- Pregnancy diagnose your cows if you have not already done so. Culling decisions should be made prior to winter feeding for best use of feed resources. Consider open, poor-producing and aged cows as candidates for culling.
- A postweaning feeding period will allow you to put rapid, economical gains on weaned calves, keep them through the fall "runs" and allow you to participate in Kentucky CPH-45 sales. Consider this health and marketing program which is designed for producers which are doing a good job of producing high quality feeder calves.
- Replacement heifers require attention during the winter, too. Weaned heifer calves should gain at an adequate rate to attain their "target" breeding weight (2/3 of their mature weight) by May 1.

Fall-calving herd

- Continue to watch fall-calving cows. Catch up on processing of calves including identification,

castration and vaccinations.

- Cows that have calved need to go to the best pastures now! Help them maintain body condition prior to breeding in December.
- Vaccinate the cows while they are open and prior to the breeding season. Move cows to accumulated pasture (not this year!) or increase feed now.
- Start the breeding season in late November or early December for calving to begin in September. If you are using AI and/or estrous synchronization, get your supplies together now and schedule your technician. Don't forget Breeding Soundness Evaluations (BSE) on your bulls. Make final selection of replacement heifers now.

General

- Have your hay supply analyzed for nutritive quality and estimate the amount of supplementation needed. Consider purchasing feed now.
- Take soil tests and make fertility adjustments (phosphate, potash and lime) to your pastures.
- This is a good time to freeze-brand bred yearling heifers and additions to the breeding herd.
- Graze alfalfa this month after a "freeze-down" (24 degrees for a few hours).
- Don't waste your feed resources. Avoid excessive mud in the feeding area. Hay feeding areas can be constructed by putting rock on geotextile fabric. Feed those large round bales in hay "rings" to avoid waste. Concrete feeding pads could be in your long range plans.

Emergency Calf Management after Dystocia (Difficult Birth)

Dr. Michelle Arnold, UK Veterinary Diagnostic Laboratory

"Dystocia" is defined as a difficult or prolonged calving, whether or not human assistance was necessary for delivery of the calf. Factors known to cause dystocia include a mismatch between small pelvic size of the dam and large calf size, abnormal calf presentation (for example, backwards or head turned back), and maternal factors such as weak labor, insufficient dilation of the cervix, or a uterine twist or torsion. Thin cows often experience prolonged labor and calves are born weak and slow to stand and nurse. Inappropriate timing of intervention or excessive force applied during delivery may cause additional stress and injury to an already weakened calf. Following dystocia, a calf is 6 times more likely to get sick than a calf born normally, with most deaths occurring within 96 hours of birth.

The key event in the transition from life inside the uterus to an independent existence is the initiation of breathing. As the lungs inflate, blood is enriched with life-sustaining oxygen. The first breath is the hardest to take and is comparable to the first hard push of air necessary when inflating a balloon. In order to help breathing begin after a difficult delivery, immediately place the calf upright on its sternum (breastbone) to maximize ventilation (Figure 1). Calves should have their nose and mouth cleared of any fluid or other physical obstruction, either by hand or suction bulb. Calves should not be hung upside-down or swung around by their rear legs to remove fluids by gravity. These procedures cause the abdominal organs to push against the diaphragm, making it even more difficult to expand the lungs. Calves should make active respiratory movements within 30 seconds of being delivered.

If spontaneous breathing does not begin, it is important to stimulate respiration. Many methods have been tried but very little published information is available as to their usefulness. Once the calf is placed on its sternum, vigorous stimulation of the calf by rubbing the head and body and placing a finger or piece of straw in the nose should initiate a gasping reflex that helps bring air into the lungs. Mouth-to-mouth or mouth-to-nose resuscitation is very difficult to do effectively. Establishing a tight seal to prevent air

leakage is difficult but, even more importantly, the air blown in usually goes down the esophagus and fills the stomach, making the situation worse for the struggling calf. To avoid these problems, a veterinarian may use an endotracheal tube with an inflatable cuff to provide positive pressure ventilation effectively. Certain prescription medications such as doxapram may also be used to stimulate respiration although severely affected calves do not always respond to it. Veterinarians may also use injectable sodium bicarbonate to correct metabolic acidosis, a condition that often follows dystocia in which the calf's blood is more acidic than it should be due to the lack of oxygen. In general, cardiac resuscitation is not attempted in calves born without a heartbeat as there is very little chance of survival. Similarly, calves that do not respond to respiratory stimulation techniques and cannot sit up on their own after 10 minutes are unlikely to survive.

In moving from the uterus to the outside environment during birth, newborn calves often experience a dramatic shift in temperature. Calves delivered normally maintain their body temperature (thermoregulation) by shivering and by mobilizing energy from brown adipose (fat) tissue. Simple, natural physical activities such as standing, walking, and consuming colostrum will also generate body heat. Following a difficult birth, calves have an impaired response to cold temperatures. Inadequate oxygen can

reduce muscle tone and prevent shivering as well as decrease the calf's ability to utilize its brown fat. Calves with thermal stress and low energy are slow to stand and nurse, limiting their ability to warm themselves through this natural physical behavior. These calves should be exposed to an infrared heater or placed in a warm bath to improve rectal temperature, blood oxygen level, and respiratory rate. If electric heating pads are used, they must be closely monitored because pads can get hot enough to cause burns, particularly if the calf is unable to move off the pad. Heat lamps must also be monitored to prevent burns.



Figure 1: Meconium staining (yellow color) is an indicator of calf stress during delivery. Placing the calf on the sternum (as pictured) maximizes ventilation of the lungs.

The single most important factor in calf survival after a calf establishes its breathing, is receiving and absorbing an adequate amount of good-quality colostrum. It is

essential that all calves receive 3-4 quarts of colostrum within the first 6 hours of life, preferably 2 of those quarts within an hour of birth. Since a calf is unlikely to voluntarily suckle after dystocia, it is recommended to feed colostrum via stomach tube ("esophageal feeder") within one hour of birth if there is any doubt as to the calf's vitality. Calves that are wedged in the pelvic canal for prolonged periods may be born with a swollen head and/or tongue. This condition will usually resolve itself within one to two days but feeding the calf with an esophageal feeder is required until the calf is able to suckle. Colostrum contains immunoglobulins that form the calf's immune system as well as nutrients vital to the newborn such as fat-soluble vitamins and sugars. A weak newborn calf left to suckle the cow without assistance is a major cause of "failure of passive transfer" (FPT) of antibodies from dam to calf because of delayed consumption of

colostrum. FPT increases susceptibility to infectious diseases, increases neonatal sickness and death and has long-term effects on growth and performance if the calf survives.

Major problems in the calf may arise days to weeks after a complicated delivery. Excessive force applied during delivery may result in trauma such as fractures of the legs, ribs and vertebral column and damage to the spinal cord. The extent of these injuries may not be obvious at birth but will become apparent over the next one to two weeks. The umbilicus (or “navel”) may become infected due to prolonged contact with the ground, predisposing the calf to infections carried by the bloodstream to all major organs and death follows shortly afterward. Mild antiseptics can be used on the umbilical cord but avoid strong, caustic agents as these will cause irritation and inflammation of these sensitive tissues. Maintaining a clean, dry calving area and ensuring adequate high-quality colostrum ingestion quickly after birth are the best methods to prevent disease in fragile newborns.

In summary, success in saving a calf after a difficult delivery will depend largely on the condition of the calf at birth. Some will suffer major trauma during delivery resulting in severe bruising, fractured ribs, bleeding in the central nervous system, and other maladies resulting in death irrespective of treatment. Other calves will be born with a heartbeat but not breathing; these calves are good candidates for resuscitation. Establishing a straight airway by placing the calf on its sternum, initiating breathing through vigorous rubbing of the head and body and tickling the nasal passages with a piece of straw, and establishing a warm body temperature are the cornerstones to immediate calf survival. Once the calf is stable, early delivery of high-quality colostrum is essential for passive transfer of immunoglobulins, energy, and long-term survival.

USDA Suspends Plans to Use RFID Tags

Dr. Michelle Arnold, UK Veterinary Diagnostic Laboratory

Last month’s article, “Goodbye Metal Tags, Hello RFID” regarding the new identification regulations have recently been retracted. USDA’s Animal Plant Health Inspection Service (APHIS) announced Friday (Oct. 25) it has suspended its plan to phase-in the use of electronic ID (RFID) tags for cattle and bison. APHIS said in a statement the policy shift was in response to executive orders from President Trump that have highlighted the need for transparency and communication of issues “before placing any new requirements on American farmers and ranchers.” In its statement Friday, APHIS said the factsheet was removed because it “is no longer representative of current agency policy.”

The Cost of Overwintering Open Cows

Jordan Buerck, Research Assistant and Brenda Boetel, Professor, Department of Agricultural Economics, University of Wisconsin-River Falls

As winter in the Midwest begins in full force, one of the more important decisions for producers is whether or not to continue feeding open cows throughout the winter period in hopes of attaining higher market value for that animal in the spring. This decision must be analyzed based on each individual’s location and access to feed and labor. Typically, the cull cow market reaches a seasonal low in November and December due to the large influx of cull cows and cull bulls on the market. Following the 1st of the year, the market routinely increases and reaches a high in July and August.

The simplest method of managing open cows is to sell immediately following pregnancy checking from September-November, while the cull cow market is on its descent. According to USDA NASS data, between 2016-18, national cull cow prices averaged \$61/cwt, placing the gross value of a 1200lb cow at \$732. With this marketing decision, there are no costs associated with an open animal after determining that she is not carrying a calf. During years of high feed prices, this may be the most financially responsible

decision, provided the cull cow market isn't too depressed at the time of selling and that BCS is adequate. Under this system it is crucial to sell open cows immediately following pregnancy check, as a cow sold in September averages an \$85/hd higher value than a cow sold in December at the same weight between 2016-18, not including the costs to retain the cow until December.

Under highly managed and low-cost winter-feeding methods, profitability is possible by adding weight to cows to increase BCS and selling in better market conditions in the spring. There are many different feeding methods of overwintering cows, all of which have their pros and cons based on location and feed availability. In the Midwest, grazing corn stalks with mineral and DDG supplements is widely abundant and can be a low-cost method estimated to cost \$0.50/hd/day, or \$75/hd over the 150-day winter-feeding period; with the added benefit of manure distribution for the following years' crop. This figure does not include the upfront costs of fencing supplies and means of watering, which will vary by producer and existing infrastructure. Actual labor costs heavily influence management decisions, but labor can be estimated at \$20 per cow in a 100-cow herd, making the cost of wintering \$95/cow. Historically, this method can realize a profit of \$300/open cow with a gain of 1.5lbs/day. Another avenue of adding value to open cows is to attempt to rebreed and sell in the spring as bred cows expected to calve the following fall/late summer. Steve Lira and Jon Biermacher found that by rebreeding cows, on average, producers in 2016-18 saw a \$120/hd increase in cow value for bred cows compared to open cows in the spring. Considering a \$25/cow cost of bulls for natural service, producers in 2016-18 have seen an average of \$400 more per bred cow compared to selling as an open cow in the fall. The aforementioned feed protocol can be followed in this situation as well.

Retaining open cows throughout the winter has potential to be profitable through low-cost winter-feed systems. Cull cow prices in September 2019 were on average 4% lower compared to 2016-18. If a producer can keep labor costs low while maintaining efficient feed to gain, there is opportunity to realize additional profits by overwintering this year. Individual costs and feed availability vary by location and should be appropriately considered when making management decisions.

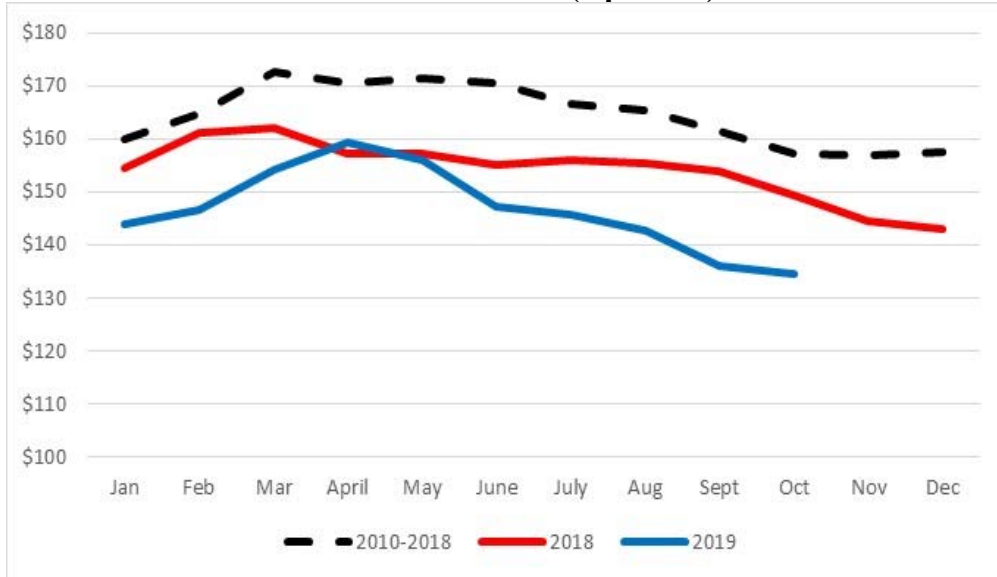
From: The Ohio Beef Cattle Newsletter, November 20, 2019

Kentucky Beef Cattle Market Update

Dr. Kenny Burdine, Livestock Marketing Specialist, University of Kentucky

It seems like I could have written the same thing for each of the last three months. Heavy feeder cattle prices have held reasonably well and been supported by some significant gains in the futures' market since early September. But the calf market has really been struggling and dropped a little further from September to October. While I can't say for certain, I expect calf prices to increase slightly for November and the second week of this month pointed in that direction. This fall calf market has been the lowest since 2016, and prior to that, I would have to go back to 2011 to find a fall where prices were lower.

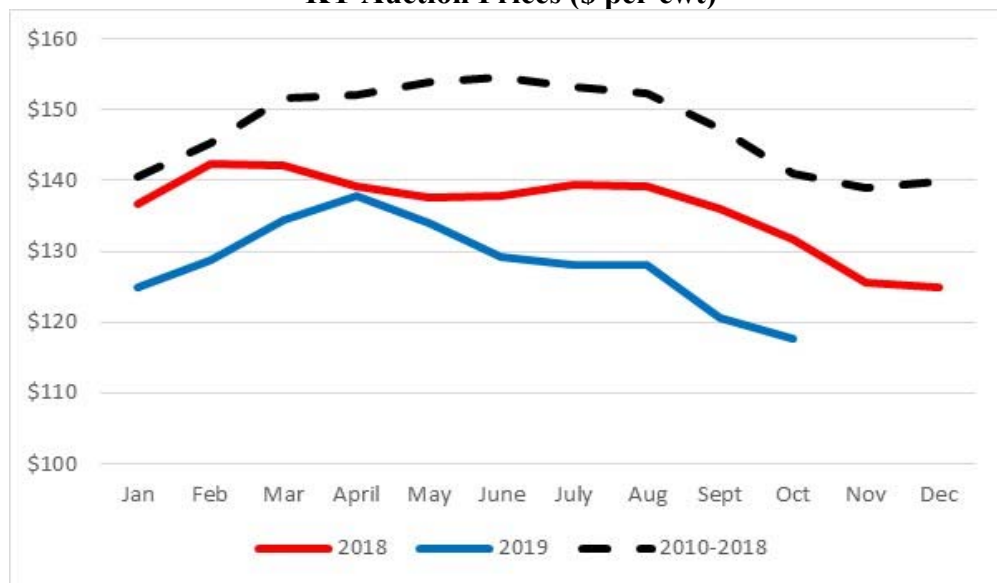
**Figure 1. 550# Medium & Large Frame #1-2 Steers
KY Auction Prices (\$ per cwt)**



Source: USDA-AMS, Livestock Marketing Information Center, Author Calculations

I almost always show a steer calf price chart, but wanted to talk a little bit about heifers this month. Figure 2 shows heifer prices in the same manner that figure 1 shows steer prices. For the month of October, 550 lb M/L #1-2 heifer calves were trading at a discount of nearly \$17 per cwt to steer calves. The steer-heifer differential is often times discussed as a potential indicator of interest in herd expansion. Conventional wisdom would suggest that the differential would narrow as the cow-herd was growing, due to increased demand for breeding stock, and widen when the cow-herd is decreasing in size. This is largely true, but probably more so for larger heifers than for heifer calves.

**Figure 2. 550# Medium & Large Frame #1-2 Heifers
KY Auction Prices (\$ per cwt)**



Source: USDA-AMS, Livestock Marketing Information Center, Author Calculations

Two other factors that impact this differential are the weight of the heifers and the overall level of the calf market. The reason why heifers sell at a discount to steers is lower feed conversion. Put simply, it takes

more feed to add a pound of gain to a heifer than it does a steer. So, as calves increase in weight, this becomes less of an issue, and the differential tends to narrow. By the time steers and heifers reach slaughter weight, the differential is practically non-existent and steers and heifer sell for about the same price per lb.

At the same time, the steer-heifer differential tends to move with the overall calf market. As overall price levels increase, the steer-heifer differential tends to widen. The best example of this was during the fall of 2014 and spring of 2015 when this differential exceeded \$30 per cwt for 550 lb calves. During 2010, when the calf market was much lower, the differential on a 550 lb calf was just over \$12 per cwt. Figure 3 shows this differential by month for 2019 and compares it to the average from 2010-2018. Note that the differential has been wider than normal since April.

**Figure 3. 550# Medium & Large Frame #1-2 Steer-Heifer Differential
KY Auction Prices (\$ per cwt)**



Source: USDA-AMS, Livestock Marketing Information Center, Author Calculations