Spring-Calving Cow Herd

- Bulls should have been removed from the cow herd by now! 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. Don’t keep trying to get open spring cows bred – move them to fall calving or sell them when they wean this year’s calf.
- 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.
- Fescue pastures don’t generally produce much this month, however rain in July has given us some forage going into the usually dry months. Keep rotating pastures to permit calves to continue gaining weight. Keep minerals available at all times.

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
  - eartags for identification
  - iodine solution for newborn calf’s navel
  - calf puller
  - castration equipment
General

- Keep a good mineral mix available at all times. The UK Beef IRM Basic Cow-Calf mineral is a good choice.
- 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.
- 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.
- 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.
- 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 which can be toxic.
- Select pastures for stockpiling. Remove cattle and apply nitrogen when moisture conditions are favorable. Stockpiled fescues can be especially beneficial for fall-calving cows after calving.
- Take soil samples to determine pasture fertility needs. Fertilize as needed, this fall.

A Lifetime of Service, A Legacy Unmatched

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

The Kentucky Beef Industry is entering a new era. On September 5th, Dr. Roy Burris retired from his Beef Extension position at the UK Princeton Research and Education Center. Undoubtedly, few Extension educators have influenced their industries as much as Dr. Burris.

In 1995, the University of Kentucky established one of the first truly integrated teams to guide the development of the beef educational programs. Prior to this effort, the beef educational programs in Kentucky were unorganized, with no structured curriculum to help educate our producers and stimulate change. The UK Beef IRM Coordinating developed a “Blueprint for Success” with the mission stating they “…will change the Kentucky Beef Industry in a measurable, positive way by providing a dynamic educational program…” Arguably, the educational program developed by the UK Beef IRM Committee has had more impact on the Kentucky Beef Industry than any other Extension program in the US. The UK Beef IRM Committee was the brainchild of Dr. Roy Burris. Roy’s vision, his dedication, his leadership have revolutionized our Extension programs and will have a lasting impact on Kentucky’s beef industry.

Dr. Burris’s true gift is that he understands the value of teamwork. Roy recognized that individual accomplishments were not going to “move the needle” and were not going to change an entire industry. He needed a team and wanted to work with a group whose focus was improving the industry rather than individual accomplishments. With the support of Dean C. Oran Little and Associate Dean for Extension Walter Walla, Roy founded the UK Beef IRM Coordinating Committee. This committee was charged by UK administration to change the beef industry. I joined the Coordinating Committee in 1997 and I quickly learned that this committee was different and had a different approach. The Committee function by consensus; all members had to agree with a proposal before it was adopted. It was a true team led by Dr. Burris. Roy wrote a grant and the UK Beef IRM Committee was awarded $750,000 by the USDA to fund the development of Master Cattleman and the Beef Leadership Conference. These two programs helped establish our first curriculum for beef education and prepared our group for our first submission to the Agricultural Development Board. Twenty years later, the Kentucky beef industry is vastly different, in part, because of Dr. Burris’s vision and leadership.

Dr. Burris’s teamwork and leadership was not limited to his UK colleagues. Roy helped shape UK’s relationship with KCA. Roy fostered UK’s partnership with the Kentucky Beef Network to procure the funding necessary for the growth of our beef educational programs. Many states are envious of our close working
relationship and our collective ability to obtain funding vital for progress.

Roy always considered his main job was to work with beef producers, especially those in Western Kentucky. It’s easy to see why Dr. Burris has such an impact. Roy invested in his work and his clientele are his friends. Roy once told me “It’s not just about education, it’s about changing people’s lives”. If you know Dr. Burris, you know he practiced what he preached.

Dr. Burris has been an incredible mentor. His selfless focus on young faculty made it much easier to develop a career. His guidance will be missed but not as much as his friendship. Beef Bash this fall is dedicated to Dr. Burris and his service to Kentucky. Please join us on September 20th at Beef Bash.

Dr. Roy Burris has dedicated his career to the Kentucky Beef Industry. His leadership, selflessness, and friendship will be greatly missed. Dr. Roy Burris, a lifetime of service, a legacy unmatched!

**Bull Value Assessment Program - New Program - Fall 2018**

*Dr. Darrh Bullock, Extension Beef Specialist, and Ben Crites, IRM Coordinator, University of Kentucky*

Kentucky has a beef cattle population of over 1 million head, ranks 3rd in the nation in cattle density and has a financial worth estimate of over $1.5 billion. With a cow to bull ratio of 25:1 it requires 40,000 bulls to service the commonwealth’s cow herd; considering a useful life of 4 breeding seasons over 10,000 bulls are purchased by Kentucky beef farmers annually. Approximately 75% of the genetics in a calf crop, when heifers are retained, comes from the bulls used over the past five years; reinforcing the point that proper bull purchases are critical to genetic and overall improvement. There are enormous consequences associated with purchasing a bull and introducing his genetics for both the calf crop to be marketed and the future cow herd, if replacements are being retained. The purpose of this educational program is to improve beef farmers’ ability to purchase the correct bull for their management conditions, in a cost effective manner, and then manage the bull properly to facilitate reproductive success.

Matching genetics to management, breeding soundness exams, bull nutritional and health management and the economic considerations of each of these topics will be addressed by Extension professionals with expertise in each of these areas. Auctions can be intimidating events for small cattle producers and after making their purchases there is no measuring stick to determine if their purchase may actually lead to future financial gains or losses. A mock auction will be utilized to reinforce the key points made in the educational program and to provide teachable moments without actual financial risk.

The Bull Value Assessment Program is a two-part educational program. The first session will be formal classroom education using the modules described below. At the conclusion of the educational program each producer will be assigned one of five scenarios. Scenarios may include varying levels of base cow herd production, management and marketing strategies.

Participants will also receive a sales catalogue with the charge to research the bulls and determine which ones would be suitable in their assigned scenario. Videos of the bulls will be available online for viewing. Participants will return the following week for the second part of the program with the responsibility of buying a single bull to fit their assigned scenario. This session will be the “Mock Auction”. Every attempt will be made to simulate a real auction. Producers can come early and view the bull videos and ask questions to the sales team. At the designated time the auction will begin and all bulls will be sold to the highest bidder while viewing the video of each bull.

Utilizing economic index selection methods, each bull will be assigned a value for each scenario. With economic indexes a bull that has extremely high value in one scenario may have a much lower value in a scenario that emphasizes other traits or has a different marketing scheme. Therefore, each bull will have a
computed estimated value for each scenario.

At the conclusion of the sale the “sales team” will determine the relative value of each sale; this will be done by comparing the sale price against the determined value of each bull (i.e., if a bull is purchased for $2500 and his computed value was $3500 then that producers would have a plus $1000 value; however, if that producer had paid $4000 then they would have a minus $500 value). The producer with the highest value purchase within each scenario will be recognized.

**Session 1 Topics**

- **Breeding Soundness Exams:** The importance of BSE, potential production and economic losses associated with undetected bull infertility and proper procedure for conducting BSE. Additional information will be provided on scrotal circumference verses service capacity and limitations on age of bull.
- **Bull Nutritional Management:** Nutritional management of bulls after purchase, during the breeding season and through the rest of the year.
- **Matching Genetics to Management:** Assessing resources, labor and nutrition, and determining what level of production is optimal for each case.
- **Targeting Selection for Specific Markets:** Identifying available markets and determining what traits should be targeted for selection.
- **Tools for Selection:** Techniques for selecting bulls, including specific information on understanding and using Expected Progeny Differences and implementing a crossbreeding program.

**Five Regional Locations**

This program will be offered at five locations across the state and will be limited to 50 producers per location. It is required to attend the first educational session in order to participate in the sale the following week. A light meal will be served at each program session. It is important to note that all material will be consistent across locations and sessions will begin at 6:00 pm local time.

**Western KY**
- Hopkins County Extension Office
  - Session 1: October 9
  - Session 2: October 16

**Central KY**
- Madison County Extension Office
  - Session 1: October 11
  - Session 2: October 18

**South Central KY**
- Barren County Extension Office
  - Session 1: October 22
  - Session 2: October 29

**North Central KY**
- Shelby County Extension Office
  - Session 1: October 23
  - Session 2: October 30

**Eastern KY**
- Fleming County Extension Office
  - Session 1: November 1
  - Session 2: November 8

The cost to attend the program is $25 per individual. This will include dinner at both sessions along with all program materials. Space is limited to 50 individuals per location and will be filled on a first come, first serve basis. To register and to secure your spot for any location, please email Ben Crites at benjamin.crites@uky.edu. Additionally, registration is available online by visiting [https://www.eventbrite.com/o/university-of-kentucky-cooperative-extension-16891600267](https://www.eventbrite.com/o/university-of-kentucky-cooperative-extension-16891600267). If you have any questions or would like more details on the program, please contact Ben Crites (benjamin.crites@uky.edu) or Dr. Darrh Bullock (dbullock@uky.edu) or your local ANR Extension Agent.
Beef Bash 2018
Mr. Ben Crites, IRM Coordinator, University of Kentucky

The University of Kentucky and Kentucky Cattlemen’s Association are proud to host the 6th biennial event, Beef Bash, this year on September 20th at the University of Kentucky Research and Education Center in Princeton, KY. This event is one of the larger field days offered to Kentucky beef producers. Participants have the opportunity to hear from a variety of extension specialists, researchers, and industry experts. A large number of commercial vendors will be on display representing a variety of different products and services. With historical attendance between 400-500 participants, a large amount of networking will take place.

The demonstrations and educational exhibits this year will cover a variety of different topics. Some of the topics to be covered include: mineral and reproduction interactions, breeding programs, coproduct feedstuffs, environmental management techniques, forages, sex-sorted semen, and controlling wildlife problems. Registration begins at 8:30 a.m. CDT, and programs and tours start at 9 a.m. CDT. A lunchtime meal will be made available to purchase. No preregistration is required. Participants will receive a free pair of cotton-knit gloves.

For more information, please contact Ben Crites (859)-257-7512 (benjamin.crites@uky.edu

Use Your Eyes and Records to Decide Which Cows to Cull
Michelle Arnold, DVM (Ruminant Extension Veterinarian, UKVDL)

Which cows in your herd are consistently making you money? Every year, the cow-calf producer needs to critically evaluate each animal in the herd and decide if she is paying her upkeep. Open cows (those that are not pregnant) at the end of breeding season obviously are high on the cull list. With variable costs running $400-$500 per year per head and an additional $100-$300 in fixed costs, keeping open cows is difficult to justify financially. Beyond pregnancy status, what other variables are important to evaluate? Structural soundness, body condition score, age, annual performance, and disposition are significant factors to consider when developing a culling order specifically for your farm. This culling order is essentially a ranking of the cow traits you consider most important for a cow to be productive on your farming operation. Culling is exceptionally important during times of drought or a year with marginal hay production as you may be forced to cull deeper to manage through a challenging season. However, there may be times to consider keeping more replacement heifers and letting older cows go, such as when many in the herd are getting older and the heifers have good genetic potential to perform. To begin, it is best to think about which animals in the herd have the least chance of being productive over the long term or are farthest away from being productive. Equally important are factors such as disposition and phenotype (color, size) that affect the marketability of offspring. The following is a list of factors to carefully consider when deciding who to cull this year.

- Disposition - A cow’s attitude is an important consideration in any cattle operation. Bad behavior has both a genetic component and is also learned behavior by calves at an early age. Mean, nervous, “high strung” cattle are dangerous to people, damage facilities, tear up fences and make gathering and working cattle difficult at best. Remember a good cow can be protective of her calf without being dangerous and destructive.
- Pregnancy Status - A cow should produce a calf at least once a year and the sale of that calf needs to pay her way. Diagnosing a cow as “open” (not pregnant) is as simple as having a veterinarian palpate for pregnancy at least 40 days either after breeding or after the bull is removed. A simple, inexpensive blood
test can also be used 28 days post-breeding to determine pregnancy status. If many cows are found open at pregnancy check, work with your veterinarian to determine if reproductive disease, poor nutrition, bull infertility or inability to conceive was the cause. Remember cows that calve late in the season have fewer opportunities to breed back in a controlled (for example, 90 day) breeding season. Summer heat and fescue toxicosis can be important contributors to low conception rates.

- Structural Soundness - Bad hooves or claws, lameness due to hip/knee injury, eye problems, and poor udder conformation are all examples of structural problems that adversely affect performance. Good feet and legs are essential for weight maintenance, breeding, calving, self-defense, and raising a calf. The udder should be firmly attached with a level floor and high enough that newborn calves can easily find and latch onto teats. Cows with blind or light quarters, funnel or balloon shaped teats, or any history of mastitis are strong candidates for culling.

- Cows with chronic conditions that will not improve such as progressive weight loss, early cases of cancer eye, repeated episodes of vaginal prolapse during pregnancy, and extreme sensitivity to the effects of fescue toxicosis should be removed from the herd as soon as the calf is weaned. Cows with confirmed disease conditions such as Johne’s disease, bovine lymphoma, or advanced cancer eye should not be sold to a commercial market. The most common reasons for carcass condemnation at slaughter include emaciation, lymphoma, peritonitis, cancer eye, blood poisoning, bruising, and other types of cancers.

- Age - Cows are considered most productive between 4-9 years of age. The size and shape of the teeth can be used to assess age but always evaluate them in light of the diet. Cows that eat gritty or sandy feeds and forages have increased tooth wear beyond their years. Regardless, cows with badly worn or missing teeth will have a hard time maintaining body condition. Remember, older cattle die of natural causes, too.

- Poor Performance - Record keeping is an invaluable tool for evaluating performance. Readable visual tags on both the cow and calf allow you to match calf sale weights to the dams and identify cows that
did not produce a calf. Inferior genetics and poor milk production produce lightweight calves that do not grow well. An overweight cow or large framed cow with a small calf that doesn’t gain weight usually means the cow is not producing much milk. Sick baby calves may be an indication of poor quality colostrum and poor mothering ability.

- Phenotype - Cows that do not “fit” the herd because of external features such as unusual breed, size, muscling and color are candidates for culling. These challenges may be overcome to some degree by choice of sire to balance out the unwanted traits. Remember that buyers of commercial calves look for uniformity in color, weight, and frame in a set of calves and will pay a premium price for it.

- The last ones to go - Hopefully culling will never have to go this deep in your herd. Bred cows over 9 years old, replacement heifers (especially those that did not breed in the first 30 days), and bred cows 3-9 years old should be the last sold. Thin cows that conceive late in the breeding season should go first.

Since 20% of gross receipts in a typical cow-calf operation come from the sale of cull animals, pay attention to price seasonality and body condition score before sending these animals to market. Prices are historically highest in spring and lowest in late fall/early winter when spring born calves are weaned and many culls are sent to market. Adding weight and body condition to culls is an opportunity to increase profitability but can be expensive. Work with a nutritionist to come up with realistic cost projections before feeding cull cattle for a long period of time.

When it comes to making decisions on who to cull, remember to consider functionality in your environment. Is she an “easy keeper”? Does she keep flesh and condition and raise a good calf, even when feed and forage is limited? On the opposite side, does she give too much milk or is her frame size so large that you can’t keep weight on her, even when pasture is plentiful? Is her pelvis so small and tight that calving is a problem and will be a problem in her offspring? Functionality leads to longevity and improved efficiency. By retaining more young cows in the herd, you can decrease the number of replacement heifers needed each year and cull cows that are only marginally profitable. Young cows also increase in value as they mature because the body weight of the cow and her calf’s weaning weight will continue to increase until approximately 5 years of age. Longevity will also be improved through crossbreeding because hybrid vigor adds essentially 1.3 years of productivity or one more calf per cow. If considering buying heifers, UK has a decision support tool available at [http://www.uky.edu/Ag/AgEcon/pubs/BredHeifer.xlsx](http://www.uky.edu/Ag/AgEcon/pubs/BredHeifer.xlsx) to help understand how to evaluate the price in your specific circumstances.

In summary, a herd of easy-keeping, efficient cows is possible through rigorous culling and careful selection of replacements. Match your genetics to your management and environment for maximum efficiency, longevity, and ultimately, maximum enjoyment of cattle production.

**The Real Cost of Limiting Nutrients**

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

Fall is rapidly approaching and all cow-calf producers need to access the body condition score (BCS) of their herd. Spring-calving cows are nearing weaning time and the fall is the most economical time to put weight back on. Now is also a key time to manage BCS score in fall-calving cows. Most realize the link between body condition score and reproductive rate but what is the economic impact of allowing BCS to decline? Each year producers faced the decision of how much money should I put into my cows? Can I afford to feed them? So, what is the cost of letting your cows get thin? What is more cost effective; reducing costs by limiting nutrition to your cows and living with reduced reproductive performance or feeding your cows to perform?
Let’s use a real world example. The farm we will discuss had 100 fall-calving cows. The average body weight of these cows was about 1300 lbs. at a BCS of 5. These cows calved in good condition, averaging a BCS of a nearly 6. However, lack of rain resulted in limited pastures and the producer began to feed hay approximately September 1st, which coincided with the onset of calving. The hay was below average in quality (TDN of 48, CP of 7%). Money was tight for this operation so they made the decision NOT to supplement these cows. Making the assumption that these cows were average lactating cows and that they would consume about 27 pounds of hay (as fed) daily, the hay provided only 82% of their maintenance energy needs and would result in a loss of one BCS in about 57 days. This producer decided to synchronize and AI his cows. On November 21st when the timed AI was performed, the average BCS had decreased, as predicted above, averaging a strong 4. Remember each BCS equals about 75 pounds so these cows were losing weight rapidly. After the insemination, the bulls were turned out for 60 days then removed. The cows were diagnosed for pregnancy about 90 days after the insemination and their average BCS was a weak 4 so the cows likely lost another 30 pounds or so of body weight. Reproductive performance was terrible as only 29 conceived to the AI, 31 conceived via natural service, and 40 were OPEN!

This example may seem exaggerated but this scenario actually occurred on a farm and is a real-world example of improperly managing body condition score. The question then becomes which was the more economical management scheme; no supplementation and reduced reproduction or supplementation to meet nutrient needs. To help determine this let’s first look at our losses. In the above scenario, 40 cows were examined as open. Of these, let’s assume 7 would have been open regardless so 33 calves were lost due to the reduced input management. Let’s say these 33 calves (17 steers, 16 heifers) would have weaned at 525 pounds (550 for steers, 500 for heifers) so we lost 17,350 pounds of product. If we would have sold these calves last week they would have averaged about $145.19 cwt (average price for steers and heifers). Our lost income would be about $25,190 (173.5 x $145.19).

Allowing the cows to lose weight likely also increased the cost per AI pregnancy. Our data from thousands of properly conditioned cows suggested that typically we achieve a 60% conception rate to AI and 92-93% overall pregnancy rate. The cost per cow to perform the insemination totaled approximately $40 ($10 CIDR, $13 GnRH & PG, $5 technician, $12 semen) per cow or $4,000 total. The reproductive failure basically doubled the cost per pregnancy from $67 ($40/.60) to $138 ($40/.29) making it impossible for this operation to recoup the cost of the AI.

What would it cost to supplement these cows to maintain their weight for this period of time? To meet their nutrient needs, these cows would need about 12 pounds of our soyhull/corn gluten supplement mixed at a ratio of 2:1 assuming a 1:1 substitution of supplement for hay intake. The cost of our supplement averaged $150 per ton for the feeding period which lasted from September 1st to bull removal on February 1st or 123 days. So the cost of supplementation would be about $11,070 ($0.75 per pound x 12 pounds x 123 days x 100 cows = $11,070). If you back calculate, the break-even weaning weight for this level of supplementation is slightly less than 350 pounds.

So what is cheaper? What if we would have separated the thin cows and fed them to match their nutrient needs? What if we would have taken the $4,000 we used for the AI and used it to purchase supplement? What if we had cut our hay earlier so that the TDN exceeded 55% (nutrient needs of the lactating cow) even though we would have made less hay?

We could ask several more questions. We could consider several more options. The decision to supplement is pretty easy math.
Feeder cattle markets really gained some momentum during the first half of September. As I write this on September 15th, fall CME© Feeder Cattle futures had pushed up into the upper $150’s. Spring 2019 futures, which will drive our fall calf market, were trading in the low-mid $150’s. 550# steer calf prices in KY have shown very little seasonal drop from summer, still moving in the $152-$155 per cwt range on a state average basis. 850# steers were selling for $138 on a state average basis, but up into the $140’s in larger groups.

While I am certain there are many that are not happy with the current cattle market, I truly feel like the market has been incredibly resilient. Production of all three major meats are significantly higher in 2018 and I was very concerned all year how the increased per capita availability would impact prices. Put simply, the cattle market has held better than I thought it would. And, despite a lot of uncertainty surrounding trade, beef exports have remained very strong.

This month, I wanted to take a quick side-bar and talk about fed cattle markets. Historically, fed cattle markets reached a seasonal high in the spring, dropped rather sharply to June or early July, and pushed upward through fall and winter. But, that pattern had been slightly different for the last several years. The red line in the following chart shows the 5 market weighted average slaughter steer prices for 2012 to 2016. Note that the seasonal high is still occurring in the spring, but the market really drags though summer and has reached its low in the fall. While 2017 and 2018 show slightly different highs, both suggest this continued later low.

As an extension economist in feeder cattle country, I work with very few producers who sell finished cattle. However, every producer I work with is impacted by the fed cattle market. Feeder cattle are priced based on their eventual value as fed cattle and what it costs to get them there. Deferred live cattle futures, which drive current feeder cattle prices, are clearly impacted by changes in the spot fed cattle market. I have always felt like markets looked for this fed cattle seasonal low as they priced themselves for fall. The fact that is continuing to occur later in the year is likely adding a bit more uncertainty to our markets.

We are still a month away from traditional weaning time for spring calving herds. And, given the excellent pasture conditions, it is very likely that weaning times will generally be later and more spread out this year. This usually means that our seasonal lows in the calf market are higher than usual. Combining this with recent strength in spring 2019 CME© feeder cattle futures has me more optimistic about this fall market than I was several months ago. If these conditions hold, I really don’t expect much of a seasonal decline in calf prices this fall. I expect our fall calf market to be very similar to last year, which is pretty encouraging given 2018 production levels.
Source: Livestock Marketing Information Center