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Timely Tips
Dr. Roy Burris, Beef Extension Professor, University of Kentucky

Spring-Calving Cow Herd
- Remove 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 (when the bulls are being removed) is a good 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 haven’t 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 during this period of time. 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.

Fall-Calving Cow Herd
- De-worm cows 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 at all times. 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 which are 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.

Dining Out….With Friends

Dr. Roy Burris, Beef Extension Professor, University of Kentucky

I enjoy good food – especially when it is shared with friends and fellow cattle producers. There just isn’t much better than a good steak dinner – unless it is the amusing things that can happen. However, the quest for a perfect meal can go terribly wrong.

Like the time I was attending my first beef meeting as a “professional”. I was in Mississippi and it was my first week on the job. The local cattlemen were having their annual meeting complete with grilled ribeye steaks. I wasn’t on the program but as I sat down with my steak, they asked if I would speak to the group. You never get a second chance to make a first impression so I was as nervous as a long-tailed cat in a room full of rocking chairs! I broke my plastic knife and fork, so I just decided that I would wait until after I spoke to finish my steak. A woman seated across from me ceremoniously opened her purse and took out her personal steak knife and fork. She just inhaled her steak and then began eyeing mine. I was watching the podium to make sure that I didn’t have a hunk of meat in my mouth when I got introduced. She pointed at my steak and said “You gonna eat that?” I jokingly replied “Why? Do you want it?” She did! She reached across the table and “speared” my steak. I had to watch her eat it as I spoke to the group. People wonder why I eat so fast!

A long time ago – before credit cards – Dr. Garry Lacefield and I were having a piece of pie and a cup of coffee as we waited until it was time to go to a county meeting. Garry recognized a couple that was just sitting there drinking coffee and struck up a conversation with them. He then – true to his generous nature – picked up their ticket. The grateful couple thanked him profusely – and perhaps excessively for two cups of coffee. As we got ready to leave, Garry looked at the ticket and said to me “do you have any extra money on you?” Those folks must have had an anniversary dinner complete with dessert and had just been finishing up with their after-dinner coffee when we came in.

Speaking of not having enough money (there’s a pattern here), Kevin Laurent and I have travelled together a lot. One evening, after a hard day getting cattle ready for a CPH sale in Hopkinsville, we thought that we would have a barbeque dinner before the sale started. After a good meal and good service, we got our money out to pay the tab. You had to go up front to pay and then come back through the tables to exit. Kevin looked at the tab and said “do you have any extra money on you?” I didn’t, so together we had enough to pay the tab with a dime.
left for a tip. The waitress was very prompt at cleaning our table but we made a hasty retreat before she could “thank” us.

Once, after driving to Lexington in the evening, I thought that I was going to reward myself so I ordered a steak at the nearest steak house. I must have had a dismayed and disappointed look on my face when the waiter handed it to me. He inquired “is everything alright?” I told him that was the smallest, thinnest steak that I had ever seen. He replied “Yes, but you get the all-you-can-eat salad bar!” To which I replied “the sign said this was a STEAK house – not a salad house”.

Speaking or steaks again, Karen and I and another couple were leaving Atlanta in 1998 and I wanted to celebrate another Kentucky SEC Tournament Championship with a steak, of course. My steak looked great but I couldn’t cut it – not even with my steak knife. I called my waiter over and demonstrated. He apologized and said “sir, let me get you a sharper knife!” I had a better idea.

Another evening, after a long day at the state fair, several of us beef workers decided to eat at the Red Lobster. Some of us, especially those wearing western hats looked enough like cowboys that our waitress decided to lecture us on animal welfare. My good friend, Jerry Fraim, would have none of it. He said “Ma’am, we take care of our cattle but you will take that big old lobster out front and drop him into a pot of boiling water. I don’t think you’ve got any room to talk.”

Finally, I was traveling with a UK delegation to Thailand once when we were in the Chiang Mai region which is well known for producing onions. Our full course meal started with soup, it appeared to be onion soup – with lots of little onion strips. I asked one of our hosts what kind of soup it was – since I’m thinking of something like French onion soup. He said “fish gut soup, you like?” Well I did (past tense) but I could have used a good USDA Choice ribeye about that time. Steak, it’s what’s for any celebration on any occasion.

**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 versus 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. 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.

Is That Weed Poisonous? What You Don’t Want Your Cattle to Eat (Part I)

Michelle Arnold, DVM (Ruminant Extension Veterinarian, UKVDL) and a special thanks to JD Green, PhD (Extension Professor (Weed Scientist), UK Plant and Soil Sciences Department)

Poisonous plants are responsible for considerable losses in livestock although many cases go unrecognized and undiagnosed due to a lack of knowledge of which plants could be responsible and the wide range of symptoms that may result from consumption. The potential for poisoning depends on the availability and quantity of the toxic weed, the stage or maturity of plant growth, weather, and season of the year. Most weeds have an undesirable taste and cattle will not consume them unless they are baled up in hay or pasture is limited due to drought or overgrazing. However, if cattle have access to areas where toxic weeds predominate and little else to consume, the potential exists to eat enough of one particular plant to result in illness or death. Usually large quantities are required to cause problems but some are deadly with just a few mouthfuls. Plant poisoning should be considered a possibility in cattle on pasture with a sudden onset of unexplained symptoms such as diarrhea, salivation or slobbering, muscle weakness, trembling, incoordination, staggering, collapse, severe difficulty breathing or rapid death. Oftentimes plant poisonings only affect a few cattle in the herd and severity of symptoms primarily depends on the amount consumed over what period of time (rate of consumption). Many weeds retain toxicity when dried and are considered dangerous in hay. Seeds can be a potent source of toxin and may inadvertently end up in grains fed to cattle. Prevention of problems begins with learning to recognize poisonous plants; weeds frequently grow 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. Do not overgraze pastures because animals will usually avoid weeds as long as there is plenty of hay or grass available. It is also important not to harvest toxic weeds in hay or silage since cattle often do not sort through these feeds and leave the weeds uneaten. Ultimately, prevention involves implementing effective weed control and offering supplemental forage or feed when pasture is limited so cattle are not forced to graze toxic weeds. Where it is practical, 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.

The following chart addresses the major poisonous weeds found in Kentucky pastures along with a few of lesser importance. These weeds were chosen because of their potential for some symptoms to result from consumption and they are relatively common so the risk of exposure is elevated. If available, information on the amount necessary to be toxic in cattle is included. Part II will cover toxic trees and shrubs. This series of articles will not address forage disorders such as grass staggers from mold, fescue toxicosis, slobbers from moldy clover, and will only briefly address nitrate and cyanide poisoning where applicable. UK Extension fact sheets are available on these and other forage disorders at the UK Extension Website http://www2.ca.uky.edu/agcomm/pubs.asp under the “Publications” tab or ask the county extension agent for this information. Pictures of many of the weeds and control options are available from the UK Extension publication “Broadleaf Weeds of KY Pastures” at
For help identifying weeds, individuals can submit unknown weed samples through the local county extension office. For plants that the local ANR agents are unable to identify, he or she will forward them on to the UK Weed Science Herbarium. Collect as much of plant as possible (roots, leaves, stems, flowers, etc.) for submission to the county extension agency.

Two common weeds in Kentucky causing problems in livestock are perilla mint and poison hemlock. A severe type of pneumonia can result from ingestion of the leaves and seeds of perilla mint (Perilla frutescens). This weed is also known as perilla, purple mint, mint weed, beefsteak plant, and wild coleus. Perilla thrives in late summer, when pastures are frequently dry and dormant, and cattle are looking for something to eat. 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 flowering or seed parts of perilla mint contain the highest concentration of perilla ketone, considered the most toxic agent involved. The perilla ketone is absorbed into the bloodstream and carried to the lungs where it damages the lung tissue. Affected animals are frequently found dead. Treatment is of limited value and severe cases seldom survive.

Poison hemlock is growing everywhere in Kentucky. Cattle seldom eat poison hemlock but they will if no other forage is available or it is incorporated in hay or silage. Occasionally cattle in total confinement will break into an area with an overgrowth of poison hemlock and graze it down quickly simply because it is green. The toxins involved are conium alkaloids that have two major effects in cattle. A rapid, sometimes fatal effect on the nervous system can occur by ingesting as little as 0.2-0.5% of their body weight in green hemlock. Symptoms of poisoning can develop rapidly, anywhere within 30 minutes to 2 hours after consumption, and begin with slobbering, muscle tremors, and incoordination progressing to respiratory failure and death. Secondly, the alkaloids are teratogenic agents (causing birth defects) in calves if it is eaten by a cow during the first trimester of pregnancy. Fall calving cows are more frequently affected when they ingest young, green hemlock plants in the late winter and deliver calves in the fall with severe birth defects including crooked legs, deformed neck and spine, and cleft palate.
Can you identify the weeds that may be poisonous to livestock?

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)

Two Upcoming Forage Events  
Dr. S. Ray Smith, Forage Specialist, University of Kentucky

Western KY KFGC Field Day - August 7th: In 2018 KFGC will host two summer field days. The Western KY field day is August 7 from 2:30 to 6:30 in Ballard County. The Eastern KY field day is at the Morehead State University farm September 6 from 4:30 to 8:00. More details on the eastern field day in the August issue of Forage News.

“This year’s Western KY field day features an innovative grazing operation that has implemented rotational stocking, uses novel forages for both summer and winter months and has selected animals that perform well in their all forage environment,” said Chris Teutsch, UK extension forage specialist. “This will be one of the best field days in 2018.”

During the western KY event, participants will tour the farm, which is owned and operated by Toby and Debby Dulworth. The Dulworths run about 300 head of Hereford cattle. Over the years, they have implemented innovative grazing techniques, so the herd is raised entirely on pasture. The Dulworths have direct marketed their local, grass-finished beef since 2003, and it is now the farm’s major enterprise. Event participants will visit a farm-scale demonstration that features 12 warm-season annual grasses and mixtures, see how improved crabgrass varieties work on Dogwood Farm, tour a 30-year-old eastern gamagrass stand, learn about fencing and watering improvements, and hear how the farm finishes and markets beef on an all-forage diet.

Pre-registration for the western field day is required. Participants can register online at https://westernkyforageday.eventbrite.com or contact Christi Forsythe at 270-365-7541, ext. 221. The cost to attend is $10 payable on the day of the event. The full schedule and a flyer is available on the UK Forage Website.

Address: DOGWOOD FARM, 2492 South Kirkman Rd, LaCenter, KY 42056

KY Grazing School-Sept. 25-26: The Fall Kentucky Grazing School will be held at the Woodford County Extension Office and the C. Oran Little Research Center in Versailles, KY on September 25-26, 2018. The highlight of the Grazing School is always the hands-on components including: setting up temporary fence and water systems, determining stocking rate, measuring forage, forage ID and more... Registration is only
$50 and includes educational materials, transportation to and from the research farm and lunches. Space is limited; see full details and register online at the Forage Website forages.ca.uky.edu/event.

Kentucky Beef Cattle Market Update  
Dr. Kenny Burdine, Livestock Marketing Specialist, University of Kentucky

I always like to see the fed cattle market put in its summer lows and there are some indications that this has already happened for 2018. August CME© Fed Cattle Futures have rallied from late May and deferred futures are trading at a premium to August. Kentucky feeder cattle markets were relatively flat from May to June. Heavy feeder prices in Kentucky were basically unchanged over the last two months, but it was very encouraging that they held the ground they gained after April (see figure 1).

Calf prices decreased slightly, but that is very much in line with seasonal expectations. A quick visual comparison of 2018, to the longer term average in figure 2, would suggest that our calf price pattern in 2018 is pretty normal. Calf prices are $15 to $20 per cwt lower this year, but much of that is due to the extremely high price levels of 2014 and 2015 pulling that longer term average upward.

As I write this article (July 11, 2018), international trade seems to be the topic of discussion most everywhere I turn. Many people want to know the likely impact of tariffs that have been, or may soon be, imposed on US beef. So, I thought it might be worth a quick dive into the topic to put some of the discussion into perspective.

We will start with the basics and keep it pretty simple. A tariff is a tax on imports that is imposed by the importing country. We can discuss the United States and Canada, since that is the most recent example. Canada has imposed a tariff on imported beef from the US. Due to the tariff, the price of US beef increases in Canada. Because the price rises, less US beef is imported by Canada, which means that more beef will be on the US market. And, because more beef is left on the US market, beef prices in the US will decrease.

However, the picture becomes less clear when one starts to think about the potential magnitude of this price
impact and this is where I want to spend some time looking at the numbers. Like many agricultural sectors, exports have a major impact on the US beef market. As can be seen at the bottom of table 1, the US exported nearly 11% of its beef production in 2017. While this is definitely significant, the beef sector is actually less export-dependent than pork or poultry, which export 22% and 16%, respectively.

Then, as we start thinking about impacts from tariffs imposed by specific countries, we also need to think about how much beef actually flows to that specific country. Table 1 shows US beef exports to our largest five export destinations (Japan, South Korea, Mexico, Hong Kong, and Canada) for 2017. Note that Japan is the largest importer of US beef, accounting for 28.9% of our total exports. However, because most US beef is consumed domestically, this still only represents a little over 3% of our total production.

Again, we will consider the recent Canadian tariff on US beef. As can be seen in table 1, over 300 million lbs of beef were exported to Canada in 2017. However, this only represented 1.2% of total US beef production. So, even if exports to Canada decreased by 25%, which would be a very large response, domestic supply would only increase by about 0.3%. Similarly, there has also been a lot of discussion about China recently, but China remains a very small importer of US beef at this time. Hopefully, table 1 provides some perspective on how dependent the US beef sector is on specific export markets.

<table>
<thead>
<tr>
<th></th>
<th>Exports, Carcass wt equivalent (1,000 lbs)</th>
<th>As % of US Beef Exports</th>
<th>As % of US Beef Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>826,004</td>
<td>28.9%</td>
<td>3.2%</td>
</tr>
<tr>
<td>South Korea</td>
<td>472,729</td>
<td>16.5%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Mexico</td>
<td>419,349</td>
<td>14.7%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>335,705</td>
<td>11.7%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Canada</td>
<td>309,138</td>
<td>10.8%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Total Exports (includes others)</td>
<td>2,859,687</td>
<td></td>
<td>10.92%</td>
</tr>
</tbody>
</table>

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

Since our export markets are pretty diverse, the direct impact of tariffs imposed on US beef by any specific trading partner are not likely to have a large impact on the cattle market. Still, the culmination of tariffs by multiple trading partners does have more potential to impact prices. At the same time, tariffs on other meat products also have the potential to impact beef markets. China and Mexico both have levied tariffs on US pork, which will negatively impact US pork prices. Due to the substitution effect, beef prices will be negatively impacted as pork becomes a relatively cheaper source of protein.

My article in May primarily focused on beef production levels and the challenges that is presenting. I wanted to shift the focus to trade this month and it has proven to be a very timely month to do so. Clearly, trade remains another challenges, but I also think that the diversity of our markets will buffer the impacts on beef producers somewhat. There is never a shortage of factors driving the markets and one can only focus on those things that are within their control.