

OFF THE HOOF

Kentucky Beef Newsletter – August 2010

Published Monthly by Dr. Les Anderson, Beef Extension Specialist, Department of Animal & Food Science, University of Kentucky

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Timely Tips

Dr. Roy Burris, University of Kentucky Beef Specialist

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.
- Providing high quality forage to suckling calves will increase weaning weight. Creep graze or advance graze calves, providing them with the best forages available.
- Fescue pastures are not likely to produce much this month. *Pasture, other than fescue, can be beneficial.* If it looks like pastures will run out, provide emergency feed such as a neighbor's idle pasture, summer annuals or hay.
- 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" calves. Plan to participate in CPH-45 feeder calf sales in your area.

Fall-Calving Cow Herd

- It will soon be time for fall calves. Get ready, be sure you have the following:
 - record book
 - eartags for identification
 - iodine solution for newborn calf's navel
 - calf puller
 - castration equipment

- 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.

General

- Take soil samples to determine pasture fertility needs. Fertilize as needed, this fall.
- 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.
- Keep a good mineral mix available at all times. The UK Beef IRM Basic Cow-Calf mineral is a good choice.
- 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.
- 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.
- 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.
- 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.

YOU’RE INVITED TO BEEF BASH 2010

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

It’s back! The second Beef Bash will be held at the UK West Kentucky Station in Princeton on the 23rd of September beginning at 10 a.m. Our first Beef Bash was held in ’08 and was attended by 480 and progressive cattle producers beef industry leaders. Beef Bash 2010 is a joint effort by the University of Kentucky and the Kentucky Cattlemen’s Association which will feature live cattle demonstrations, research presentations, commercial and educational exhibits along with an opportunity to visit with University and industry leaders and other cattle producers.

We are making a few changes from the 2008 format in order to accommodate a large attendance. We will have more tours and demonstrations so that we can spread people out more and allow room for observation. We are also planning a separate tent for “hot topics” which will feature various industry, university and government leaders discussing those subjects which are facing agriculture and the beef industry.

Dean Scott Smith and associate deans Nancy Cox and Jimmy Henning have already committed to be there. The leadership of the Kentucky Cattlemen’s Association will be present with KCA’s Executive Board meeting that morning at the UKREC. Lunch will be available on-site and will feature beef grilled by the Caldwell-Lyon Cattlemen’s Association.

Find the most up-to-date information at <http://ces.ca.uky.edu/beefirm/bash/> - but here's a general description of what you can see and do:

Cattle. You can see a “no-frills” cattle operation which provides animals for beef research. We keep 150 cows which are evenly split between fall and spring calving. September the 23rd will be just after the first round of fall calving and just before the spring calves are weaned. Commercial cows are of Angus breeding with some Brangus-influence. We maintain some registered Angus and Brangus animals to provide our own herd bulls. All animals are raised on the farm under a strict herd health program. The cows have one round of timed-AI utilizing CIDR's and then clean-up bulls are used for a short time. We'll have several cattle exhibits to illustrate various management practices.

Commercial exhibits. A large tent in the staging area will house commercial exhibits and serve as the focal point of all activities. You can visit with various company representatives as you please and make plans for purchasing products for weaning calves or wintering the cow herd. Information on many new products will be available. Take your time and visit a while. These folks contribute the funds that allow us to pay the expenses for this event which include renting tents and giving a pair of gloves to everyone that registers.

Hands-on Demonstrations. Various “how-to” demonstrations will be conducted throughout the day. You can attend those that interest you and ask questions in a less formal environment. Examples of demonstrations are: storing and handling by-product feeds, ration balancing, freeze-branding, fencing and water, etc. We'll spend more time “doing” and less time speech making.

Social: Visit with the leadership of the Kentucky Cattlemen's Association and the University of Kentucky. The Dean and Associate Deans of the UK College of Agriculture are planning to attend and look forward to visiting with you. Bring any prospective agriculture students, especially those interested in Animal and Food Sciences with you. The beef Extension specialists and researchers will, of course, be available to visit and answer questions. KCA will be represented with leaders from across the state. Come and visit with other cattlemen from across the state and be a part of making KCA the voice for all Kentucky cattle producers.

Research Results. Participants will learn about research which is being conducted to improve the beef herds of Kentucky and beyond. Feeding trials are being conducted with modified or dried distillers grains, corn gluten feed and soyhulls for growing calves. Different forage systems for spring or fall-calving cows has been studied for 3 years. Cutting-edge research has been conducted in the area of mineral supplementation of cattle – especially selenium. Other research has been conducted to extend the productive life of cows and to alleviate the effects of fescue toxicosis. We'll have a separate tour to focus on this work.

All heifers which are produced at the station are trained to Calan® (electronic) individual feeding gates and are used in supplementation trials. The goal is to have an entire beef herd trained to the gates so research can be conducted on various supplements to mature cows in the same pasture.

We hope to see you at Princeton. You are important to us and the beef industry. Make plans now to spend some time with folks who are interested in the same things that you are – improving our position in the beef industry. Mark September 23 on your calendar and bring a neighbor. These are difficult economic times, but we'll keep moving forward with meaningful research and continue to build an even stronger cattlemen's organization.

Getting Cows Bred in July and August

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

One of the most challenging aspects of spring calving is trying to determine when to calve to maximize reproductive rate. Reproductive efficiency in a cow herd is most accurately measured by the term “percent calf crop weaned” which is calculated by dividing the number of calves weaned by the number of cows that were in the cow herd when the breeding season began the previous year. The two factors that affect the ability of a cow to wean a calf is pregnancy rate and calf death loss.

Most spring-calving herds begin calving sometime in February or March and end sometime in May or June. Calving in February and March can be challenging because both of these months are typically wet and/or cold. Wet/cold environments result in higher calf death loss; calf death losses average 5-7% for most spring calving herds. One method to reduce calf death loss is to calve when the weather is more accommodating. For example, death loss is much lower (1-2%) for cows that calve in the fall (September and October). One might think that calving in April and May could be a better option; the weather is certainly warmer and calf death loss will likely be lower. To calve in April and May, the breeding season would be start June 23rd and would last through the month of August. Unfortunately, breeding cattle during this time results in lower pregnancy rates and would put most beef cattle producers out of business.

Data from the University of Kentucky Research Center at Princeton demonstrate the impact of breeding season on reproductive rate. In this trial, cows were exposed to a 45-day natural service breeding season. The breeding seasons were early (4/21-6/5), typical (5/21-7/6), or late (6/19-8/4). Pregnancy rates declined dramatically in cows that were bred later in the summer. Pregnancy rates were 89% for cows bred early, 78% for cows bred during the typical time, and only 59% for cows bred to calve later (April/May). Therefore, in Kentucky, cows that are bred to calve later in the spring will likely have lower calf death loss but considerably fewer of the cows will actually get pregnant. Why is pregnancy rate so low for cows in July and August?

The main factor that reduces pregnancy rates in our state, and others in the fescue belt, is heat stress. Heat stress occurs when the body temperature is elevated for more than two degrees above normal for more than 48 consecutive hours. Heat stress reduces pregnancy rates by increasing embryonic mortality. Developing embryos/pregnancies can be lost at two different periods of pregnancy; before Day 7 (loss of the developing embryo) and from Day 25-45 (early fetal loss). Cows that experience embryonic loss in the first week of pregnancy are repeat-breeders; they come back into heat 20-21 days after service. Cows that experience fetal loss from Day 25-45 are normally those cows that conceived early in the breeding season (end of May) but were exposed to extreme heat stress 25-45 days later. Data from trials at the University of Kentucky illustrate that fetal death loss ranges from 5-25% depending upon the level of heat stress. Cows that experience fetal death loss are typically open at the end of the breeding season.

The heat stress problems in our state are the result of consumption of endophyte-infected fescue. Endophyte is a fungus that grows in fescue and it produces chemical compounds that reduce the ability of a cow to dissipate heat. These chemicals redirect blood flow in an animal's body such that the blood supply pools in the interior regions of the body. Normally in the summer an animal's blood supply flows more to the exterior of the body so that it can be cooled. The redirection of the blood flow reduces the ability of an animal to cool itself during the night and results in tremendous heat stress on the body and lower pregnancy rates.

How can we reduce the impact of heat stress? The first logical approach would be to limit the access of your cows to endophyte-infected fescue during the heat stress months (mid-June thru August). Grazing options include warm season grasses, endophyte-free fescue, predominately legume pastures, and/or sorgum sudan grass. Cows could graze endophyte-infected pastures until late-May to mid-June while the summer grazing pastures grow. Cows could then be turned out on the “summer pastures” until the end of the breeding season. If non-endophyte pastures are not feasible, then diluting the fescue with legumes and/or other feedstuffs will help reduce the impact of the heat stress. One supplemental feed that appears to reduce the effects of heat stress is fat. Research at the University of Kentucky has demonstrated that feeding cows high fat diets while grazing highly infected endophyte fescue during the breeding season can help reduce heat stress and improve pregnancy rates. In these trials, cows were fed either a commercial fat supplement free choice or whole soybeans (3 lbs/hd/day) during the breeding season (6/5-8/15). Fat supplementation increased hair shedding, reduced cow body temperature, and improve pregnancy rates from 56% to 78%.

The decision of when to concentrate your calving in the spring is tough. Life is easier if your cows could calve later but fewer of them will calve. With little doubt, calving earlier will increase pregnancy rates but will also likely increase calf death loss. Economically, 5-7% death loss is more financially sound than only 60-70% pregnancy rates. Use of alternative summer grazing systems to reduce the effects of endophyte-infected fescue is a logical but sometimes difficult solution. Feeding cows fat supplements will help but perhaps the best solution is to completely change your breeding and calving season. Cows that calve in the fall have lower calf death loss, higher pregnancy rates, and shorter calving seasons than cows that calve in the spring.

Bovine Viral Diarrhea Virus (BVDV): Is My Herd at Risk?

Dr. Michelle Bilderback, Extension Large Animal Veterinarian, University of Kentucky

Last month we reviewed the BVD virus, its clinical presentations and its devastating effects on productivity. This month we will assess the risk to your herd, diagnosis, setting goals to control the disease and choosing the right tools to meet these goals.

BVDV-is this virus circulating in my herd? To answer this question, a producer must be aware of what is going on within his herd and keep accurate records to determine if at high or low risk. Ask yourself this series of questions:

1. Does my herd have poor reproductive performance despite good nutrition and fertile bulls?
 - a. Is there a decrease in overall pregnancy rate and % pregnant in the first 21 days?
 - b. Are there more abortions, stillbirths, and neonatal deaths than usual?
 - c. Are there cows that take more than 21 days to return to heat?
 - d. Is there a decrease in the percentage of cows exposed to the bull who actually wean a calf?
2. Do I see any physical abnormalities (dummy calves, eye defects, cleft palate) in the calves at birth?
3. Do I have unexplained suckling (baby) calf loss due to pneumonia or scours?
4. Do I introduce new cattle (including bulls) into the herd without testing for BVD?
5. Do feeder calves or the neighbor’s herd come in contact (fence line) with my cow/calf herd?
6. Is there a significant population of wild animals (such as deer) on my farm?

If you answered “yes” to any of these questions, your herd is at risk for BVD (the more “yes” answers, the higher the risk). Your goal should be to know with certainty if the virus is in your herd and, if found, work to eliminate it. If you answered “no” to all of the questions, your herd is at low risk for BVD so your goal

is to keep the herd free of the virus and minimize losses if it is introduced. In either case, the tools of diagnostic testing, vaccination, and biosecurity will all be needed to accomplish your individual herd goal.

Diagnostic testing for BVDV is important for two distinct reasons. The first reason is to find out if the virus is causing a clinical disease problem in your herd. Sending any aborted fetuses and membranes, stillbirths and/or dead calves to a laboratory will help to confirm the presence of the virus. The second reason and perhaps most important is to test is to identify any PI cattle in order to remove them before breeding season. Recall from last month's article that PI (persistently infected) calves result when a cow is infected with the BVD virus between 42-125 days of gestation or if a PI cow has a calf. Once the calf is born, it is a virtual virus factory, churning out millions of virus particles in all of its body secretions throughout its life. Therefore it is crucial to get these PI animals away from the breeding herd and stop the disease spread. The most commonly used sample for identifying PI cattle is skin, usually taken as an ear notch. Blood (serum) can also be used but not in young stock (calves less than 3 months old). Remember to:

1. Test *before* the start of breeding season.
2. Test all calves-if positive, euthanize the calf and test the dam. Remove (+) dams.
3. Test all open cows without a calf. Cull positives.
4. Test all bulls and replacement heifers (purchased or raised). Cull positives.
5. For Pregnant cows-test calf when it is born. If calf is positive, euthanize calf then test cow.
6. Purchased Pregnant Cows-Test cow and, if negative, quarantine her until the calf is born then test calf-if positive, euthanize calf. If negative, cow and calf can join the herd.
7. Any positive test in valuable animals can be confirmed by segregating the animal and retesting blood drawn at least 3 weeks after the first sample. True PI animals will still be positive after 3 weeks. *Remember PIs are considered defective and there is a moral and ethical obligation to euthanize and dispose of these animals.*

To control BVDV, effective vaccines are available to combine with management practices in order to prevent/limit its introduction into the herd. For breeding herds, vaccines should be given to the adults 4-6 weeks prior to breeding season to reduce the risk of reproductive problems and fetal infection. Calves should be vaccinated after 4 months of age; ideally with 2 doses of a modified live vaccine given 4 weeks apart (observe label warnings). It is also recommended to administer the vaccine to calves at least 2 weeks before a stressful event such as weaning, transport, and commingling. Other important management practices to reduce the risk of BVDV include:

1. Screen newly purchased cattle for the presence of the virus (submit ear notch or serum) and isolate until the results are known. Remember that pregnant cows may be test negative for BVDV but the unborn fetus may be PI so you must test the cow **and** her newborn calf before introducing them into the herd.
2. Show cattle should be isolated 3-4 weeks after returning to the farm.
3. Test new bulls before they are used (virus can live in the semen).
4. Prevent potentially BVDV contaminated objects (boots/vehicles/equipment) from entering the premise.
5. Limit wildlife interaction with the cows if possible.
6. Vaccinate the breeding herd annually to maintain high immunity in the event of exposure.
7. Manage pastures to minimize fence line contact with other cattle during breeding season.

Consult with your local veterinarian on the best way to detect BVDV on your farm as well as to assess the most biologically appropriate and cost-effective control measures. Successful control will result in improved productivity, performance, health, and ultimately economic return.

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

Cattle inventory reports are all starting to look the same. In fact, since 2006 we have seen a slow decline in cattle inventory year after year. USDA’s July 2010 Cattle report did not buck the trend as it showed a continued decrease in cattle numbers from July of 2009.

In the report released in late July, beef cow inventory was estimated to be down by about 1.5%, while heifers held for beef cow replacements were estimated to be down by a little more than 2%. Clearly, herd liquidation continues in 2010, despite reasonably good weather conditions across the US. While state-level estimates are not made in July, I would expect a similar trend in Kentucky.

Not surprising, the size of the 2010 calf crop is also expected to be smaller than 2009, down by a little more than 1%. The smaller calf crop, coupled with cattle-on-feed numbers above year-ago levels, mean that feeder cattle outside feedlots were very low at mid-year. This should be a very positive supply side factor as we move into the third and fourth quarters.

At the time of this writing (July 29, 2010), the October and November future’s contracts were trading at a slight premium to August. In my opinion this remains fairly optimistic given what we have seen in the fall over the last few years. Both have made a nice push upward since late May and are within a couple dollars of contract highs. As we start to get a more confident feel for the size of the US corn crop and the strength of domestic beef demand, these prices likely offer an acceptable profit on feeder cattle backgrounded through the summer.

USDA July 1, 2010 Cattle Inventory Report

| | 2009 (1,000 hd) | 2010 (1,000 hd) | 2010 as % of 2009 |
|--|----------------------------|----------------------------|------------------------------|
| Total Cattle and Calves | 102,00 | 100,800 | 99 |
| Cows and Heifers That Have Calved | 41,400 | 40,800 | 99 |
| Beef Cows | 32,200 | 31,700 | 98 |
| Milk Cows | 9,200 | 9,100 | 99 |
| Heifers 500 Pounds and Over | 16,200 | 16,100 | 99 |
| For Beef Cow Replacement | 4,500 | 4,400 | 98 |
| For Milk Cow Replacement | 3,950 | 4,050 | 103 |
| Other Heifers | 7,750 | 7,650 | 99 |
| Steers 500 Pounds and Over | 14,400 | 14,300 | 99 |
| Bulls 500 Pounds and Over | 2,100 | 2,100 | 100 |
| Calves Under 500 Pounds | 27,900 | 27,500 | 99 |
| Cattle on Feed | 11,600 | 12,000 | 103 |
| Calf Crop | 35,819 | 35,400 | 99 |

Source: NASS, USDA

Roberts Agricultural Commodity Market Report

Mike Roberts, Commodity Marketing Agent, Virginia Tech University

LIVE CATTLE futures on the Chicago Mercantile Exchange (CME) closed down on Monday with the exception of the April 2011. The AUG'10LC contract closed at \$92.175/cwt; off \$0.475/cwt and \$0.475/cwt lower than last report. The DEC'10LC contract closed down \$0.30/cwt at \$95.925/cwt; \$0.100/cwt higher than this time last week. The APR'11LC contract closed at \$99.475/cwt, up \$0.075/cwt. Lower beef prices, profit taking, spreading, slack fund buying, and the lack of packer interest on falling margins pressured prices. Cash cattle last week brought about \$93/cwt, off \$2/cwt from week before last. USDA's 5-area price was placed at \$92.88/cwt, \$1.92/cwt lower than this time last week. USDA lowered the choice beef cutout price \$1.13/cwt to \$150.70/cwt; \$1.73/cwt lower than this time last week. Over the last two weeks two large Brazilian meat packers, Frialto with a capacity of 4,000 head, and Frigol in Sao Paulo declared bankruptcy. Brazil is the No. 1 beef exporter in the world. This is seen as positive for U.S. beef exports. However, Australia announced it will increase beef exports to three key customers - Japan, Russia, and South Korea - this year. These are primary U.S. export targets. According to HedgersEdge.com, the average packer margin was lowered \$6.55/hd from last week to a negative \$11.10/hd based on the average buy of \$93.81/cwt vs. the average breakeven of \$92.95/cwt.

FEEDER CATTLE at the CME closed down on Monday. AUG'10FC futures closed at \$112.600/cwt; off \$1.125cwt and \$2.350/cwt under last report. The OCT'10FC contract finished off \$1.350/cwt at \$113.725/cwt; \$1.675/cwt higher than last week at this time. Feeders were pressured by lower cash prices, lower fat cattle, fund selling, and by spreading. Lower corn prices didn't help much since they are still high. Hot, dry conditions in the central Plains have cut water supplies and are seen as forcing stocker producers to sell calves earlier than they would like too. Floor traders in Chicago told me they expect stocker buyers to try and take advantage of the situation over the next two weeks with lower cash bids. Estimated receipts on Monday at the Oklahoma National Stockyards in Oklahoma City were put at 6500 head, vs. 6013 last Monday and 7393 a year ago. Feeder steers were bid \$1/cwt lower than last week while heifers were steady to \$2/cwt lower. Steer and heifer calves were bid \$2-\$5/cwt lower. Two buyers in Oklahoma City told me they were more interested in buying the weight rather than the gain but feared buying fleshy calves because they didn't think they could handle the extreme heat and humidity of a stockyard. Demand was considered moderate to good for average to lean feeder cattle and moderate for calves. The CME feeder cattle index was placed at 112.77/lb, 0.13/lb higher than Friday and 0.84/lb over a week ago.

CORN futures on the Chicago Board of Trade (CBOT) closed down from profit taking and hedger selling after being pulled higher by soaring wheat on Monday. The SEPT'10 contract closed at \$3.904/bu; down 2.25¢/bu but 26.5¢/bu higher than last report. DEC'10 corn futures closed off 2.25¢/bu at \$4.044/bu but 26.5¢/bu higher than last Monday. The DEC'11 contract closed at \$4.306/bu; down 2.5¢/bu but 16.25 cents higher than a week ago. Soaring wheat prices on news of drought in Russia, better crude oil and gold prices, as well as a weaker U.S. dollar caused corn prices to soar out of the gate. However, profit-taking by non-commercials, hedge selling by commercials, quick farmer selling, and lower-than-expected exports pressured corn near the close. Funds bought near 8,000 contracts while commercials sold near 12,000 lots. When funds buy or sell it is a measure of money flow into or out of a commodity market. USDA put corn-inspected-for-export at 31.528 mi bu vs. expectations for 38-41 mi bu. USDA did confirm a sale of 232,000 tonnes (9.1 mi bu) of U.S. corn to an undisclosed buyer for 2010/11 delivery. Good crop weather forecast for the U.S. Midwest was a neutral influence today. USDA lowered the good-to-excellent U.S. corn rating by 1% to 71%. Several floor sources said the corn pits considered anticipated this. It is a very,

very good idea to get the 2010 crop to 80% priced, as well as advance sales of the 2011 crop to 30% priced.