

Off the Hoof

Kentucky Beef Newsletter – August 2007

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

Timely Tips

Dr. Roy Burris, UK Beef Specialist

Spring-Calving Cow Herd

- 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.
- Bulls should have been removed from the cow herd by now! They should be penned 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.
- 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

- 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.

- 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.
- 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.

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.

Doc, I’m Runnin’ Out of Hay. What Can I Do?

Dr. Roy Burris, UK Beef Specialist

The “Easter freeze” and subsequent dry weather has left cattle producers scrambling for their winter feed supply. Hay is in short supply and a lot of late-cut hay is of poor quality. One thing that is bothersome to me is that the more we write about it, the higher the price of hay will likely go. So let’s not panic and drive the price up too much just yet.

What can you do? First, do what we always recommend. Shorten the hay feeding period by extending the grazing season. Some possibilities include grazing (1) corn stalks, (2) stockpiled/accumulate fescue pasture and (3) winter annuals.

Grazing corn stalks, especially with “dry” cows after weaning, is a routine practice out West. We can graze corn fields after harvest in Kentucky too. The biggest problems are fences and water but, if we could remedy that with electric fences and temporary water supplies, we could get about forty days of grazing. A rule of thumb is that stalks will yield about 16 lbs of dry matter per bushel. If a field yielded 150 bushels of corn that would be 2400 lb/dry matter per acre. If you allowed 50-60 lbs per cow per day (including waste, refusal, etc.) that would be about 40 cow days per acre. Workers at Iowa grazed stalks from October 11 for 41 days and fed modified distiller grain every third day (18 lb/hd – after a week long step-up period). All cows maintained body condition and weight. Thus, we could get the cattle fed up to Thanksgiving Day.

What would you graze next? Let’s consider stockpiled fescue. If we have decent moisture in August, we can apply nitrogen and allow it to grow (accumulate) until needed. That could be about Thanksgiving – after you have grazed stalks. I would allow between a half-acre and an acre per cow. I realize nitrogen costs are high this year but everything else is too. The key to being successful is using it judiciously by strip-grazing. We try to graze stockpiled fescue until about Valentine’s Day. Then we probably have to start feeding hay. See this month’s articles on wintergrazing in the forage section.

We can, sometimes, have both early and late grazing with winter annuals – like ryegrass or cereal grains (rye, wheat, oats). This practice is riskier since cold weather can limit their growth. We have used cereal rye for the past few years in a grazing trial here. Results have been somewhat limited. We get some winter growth which allows creep grazing by fall-born calves then we see a flush of growth in the spring but it is usually not too far ahead of fescue. If you have considered using winter annuals, this might be the year to give them a try. Select them based on their cold tolerance. If we successfully grazed cattle until mid-February, that will just leave about 60 days of hay feeding.

We can limit feed hay to the point that we are just using it as a “scratch factor” to keep the rumen healthy (about 5 lb/hd/day) to stretch the hay supply and supplement with a concentrate to balance the ration. If you are already out of pasture, early weaning and feeding the calves can be another option that will allow you to keep condition on the cows.

We didn't have much hay this year but we were generally able to get it baled without it being rained on. So, the early-cut hay may be a good value. The problem is with late-cut “junk” and straw. These will need some supplementation. Don't buy hay without a nutrient analysis (forage test). Corn and hay are both expensive this year but in my opinion, poor quality hay in large round bales is the most expensive feed ingredient that you can buy. A lot of people are trying various treatments to improve quality. There is an old saying that “you can't make a silk purse out of sow's ear”. That may apply here. Some producers are injecting the bales or considering ammoniation.

Treating straw with anhydrous ammonia is always tried in times like these. It will increase the crude protein content of the hay and may improve digestibility but it is a risky procedure. And one which is not approved by F.D.A. so I can't recommend it, but I don't anyway. You might be successful with dry wheat straw, but we have been through this in the 80's when we learned that ammoniation, especially of wheat and fescue hay, can lead to the formation of a toxic compound (4-methyl imidazole) which cause “crazy cow” syndrome. In my opinion, the best approach to feeding low quality roughage is to supplement it and/or limit feed it. In any case, feed a balanced ration and monitor body condition of the cows.

Whatever strategy that you choose to implement to stretch your hay supply, you should supplement to keep your cows in good body condition – BCS of 5. The most severe result of this hay shortage would be to have poor pregnancy rates next spring. We must feed the cows an adequate ration to avoid this.

The challenge for AUGUST is to be sure that cattle have plenty of shade, mineral supplementation, fly control, good pasture in addition to good water. Nursing calves should continue to gain during this “summer slump”.

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 sorghum 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.

Roberts Agricultural Commodity Market Report

Mike Roberts, Commodity Marketing Agent, Virginia Tech University

LIVE CATTLE on the Chicago Mercantile Exchange (CME) finished higher on Monday. The AUG'07LC contract closed at \$91.975/cwt, up \$1.15/cwt. In last week's report I said this contract was off \$27.50/cwt from the last close. I hope I didn't give anyone a heart attack for misplacing that decimal point. However, all of your notes about this miscue did make me feel good, again showing me that my report is widely read. Trying again, this contract was \$0.625/cwt higher than last week at this time. The October contract was the most active closing up \$0.575/cwt at \$97.175/cwt. Friday's USDA cattle reports and sinking grain markets were supportive. Total cattle inventory was 99.6% of last year while most notable were cows weighing more than 500 lbs for replacements were placed at 94% of last year. USDA put the July 1 cattle-on-feed numbers at 99.6% of last year with June placements running at 85% of last year versus the previous estimate of 89.2% of last year. June marketings were up 0.8% at 97% of last year. Cash cattle traded \$1/cwt lower but traders are expecting steady to possibly higher cash prices this week. The choice boxed beef cutout came in at \$142.54/cwt, up \$1.20/cwt. According to HedgersEdge.com, the average beef packer cutout margin for Monday was a negative \$31.25/head, \$3.80/head worse than last Friday and \$18.05/head worse than last week at this time. Packer margins will have to get better to spur stronger cash cattle, several floor sources stated. Commercial buying and hedge lifting added to the gain in the August contract while deferred contracts found support from last Friday's report. Cash sellers can take their time about getting cattle out the door now. It might be a very good idea to buy more near-term grain inputs and hedge expected feeder purchases.

FEEDER CATTLE contracts at the CME were up on Monday amid declining grain prices, strength in live cattle, and the bullish USDA report last Friday. The AUG'07FC contract closed at \$116.650/cwt, up \$1.150/cwt. SEPT'07FC futures finished at \$117.575/cwt, up \$0.900/cwt. Fresh highs were set in all but the August contract. USDA reported that tighter feeder cattle supplies were in store for the near future. The latest CME Feeder Cattle Index was up \$0.10/cwt at \$112.69/cwt. It might be a good idea for feeder buyers to lock in some, but not all, feeder prices at this time. It would also be a very good move to lock in more near-term grain supplies.