

Off the Hoof

Kentucky Beef Newsletter – July 2007

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

This issue will focus on managing the cow herd during a drought. Some of you are receiving rain but the rest of us need to be prepared....Les

Timely Tips

Dr. Roy Burris, UK Beef Specialist

Spring-Calving Cow Herd

- X Avoid high endophyte fescue and continue pasture rotation for best rebreeding performance. Grass-legume mixture or warm season grasses will be more productive at this time than cool season grasses like fescue.
- X Mid-July (when the bulls are being removed) is a good time to deworm cattle, use a product that is effective against inhibited ostertagia. Reimplant 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 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.
- X 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.
- X Continue to watch for pinkeye and treat if necessary. Minimize problems by clipping pastures, controlling face flies and providing shade.

Fall-Calving Cow Herd

- Fall-calving cows should be dry and pregnant now. Their nutrient needs are minimal and they can be maintained on poor pasture to avoid overfattening. Keep a good free-choice mineral mix available at all times.
- X Replacement heifers should be gaining at an adequate rate to reach their "target" breeding weight.
- X De-worm cows in mid-July.
- X 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.

- X 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. Reimplant these calves and deworm with a product that is effective against inhibited ostertagia.

General

- 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.
- X Maintain a weed control program in permanent pastures and continue to “spot-spray” thistle.
- X Check pastures for downed wild cherry trees after storms (wilted wild cherry leaves are toxic to cattle).
- X Have forage analyses conducted on spring-cut hay and have large, round bales covered. Begin planning the winter feeding program now.
- X Start soil testing pastures to determine fertilization needs for this fall.

Thoughts on the Drought.....

Dr. Roy Burris, UK Beef Specialist

A lot of things go through your mind when you are left alone with your thoughts. For most of us, that’s what happens when we are doing monotonous jobs like riding a tractor and bushhogging. I was actually riding a lawn tractor and wondering why I was even mowing. The grass wasn’t very tall and I was stirring up a lot of dust. I couldn’t help but think about how strange the first half of this year has been.

A UK news release for the end of May indicated that much of Kentucky was in a moderate hydrologic drought. I had the soaker hose going in my garden and had just counted rolls of hay in a particular field to see how it “turned out”. The field made 50 rolls of hay this year compared to 140 last year. Most of you have similar results. So, after a very mild March, historic cold temperatures the first week of April and drought conditions in early June, we are left scrambling for our winter hay supply and wondering what we will do if dry weather continues. Below normal rainfall and above normal temperatures have made this a scary way to enter the hot summer months of July and August.

We are also experiencing gasoline prices at an all-time high. Fertilizer and corn prices are high too. So how will all of these factors impact profitability in our cow herds this year? It may be time to make some adjustments and prepare for the worst. I’m writing this on June 1, so maybe we will have received moisture and perhaps some of this won’t even be relevant in July, but I’ll go ahead just in case.

- In the short run, we need to make some decisions on how we will ensure an adequate feed supply for this grazing season and this coming winter. Since many of us had to cut over more of our pasture acreage just to get what we hope is adequate hay for the winter, we are extremely vulnerable to a drought-related pasture shortage.
- We can start by rotationally grazing our pastures to maximize utilization. Let’s be sure to keep the pastures vegetative and not waste forage. Drought and extreme heat in June/July could have a negative impact on pregnancy rates this breeding season. So, we must maintain body condition of the cows even if it requires supplemental feed.
- Estimate your feed needs for the winter and allow for extra just in case you need to feed during drought. If you need additional hay, feed up your “carry over” hay first. If you know you aren’t going

to have enough hay, buy it soon. Check the Kentucky Department of Agriculture website for hay availability.

- Contract your supplemental feed early while prices may be more favorable. A widespread drought would likely increase corn prices and other “energy” feeds would probably follow. Feeds like soyhulls are selling at a reasonable price now. They will likely be higher this winter.
- Use warm season grasses for grazing or hay making if they are available. Or consider leasing a neighbor’s unused pastures. You also need to consider stockpiling fescue pasture for winter grazing. However, this will require nitrogen fertilization in August. Since fertilizer is pretty expensive now, I would suggest that you watch the soil moisture conditions and apply it when and if there is adequate moisture or a good chance of receiving some.
- Plan to have an alternative to ponds as your water source in case they dry up. Water lines and waterers may be necessary to insure a reliable water supply.
- Early culling of non-productive or problem cows can be beneficial, too. Unsound cows refer to those with no or only a few teeth, feet or leg problems, udder or teat problems, bad eyes or bad dispositions.
- Early weaning calves is a more drastic option but could be advantageous, especially for first-calvers. Early weaning would allow the cows to be managed as dry cows with feed going to the weaned calves.
- I hope that you have enough rainfall and that drought isn’t an issue but some areas of the state are usually affected about every year so it doesn’t hurt to be prepared.

Strategic Winter Grazing...One Method of Reducing Hay Needs

Kevin Laurent, Extension Associate in Animal Sciences, University of Kentucky

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Kentucky cattle producers with spring calving herds traditionally graze pasture throughout the fall until pastures are exhausted. At that point, hay is fed throughout the winter and early spring until spring grass emerges. Certain problems exist with this conventional method:

- 1) Cows graze pastures in the fall that could be stockpiled for winter and early spring.
- 2) Cows consume higher quality forage when nutritional needs are lowest.
- 3) Cows are fed hay when nutritional needs are greatest so supplementation is needed.
- 4) Tractor traffic on pastures is highest when conditions are wet and muddy.
- 5) Cows calve close to muddy feeding areas.
- 6) Higher intake requirements for lactating cows results in more hay being consumed.

One way to address these problems is to use a strategic approach to winter feeding and grazing to optimize the available resources based on the cow’s changing production needs.

The concept for this strategic approach is simple, but requires changing the traditional approach to winter feeding. Hay is fed to cows immediately after weaning in either a drylot or a sacrifice pasture while forage is stockpiled in pastures. Dry cows are not allowed to graze stockpile pastures until one month prior to calving season. Stockpiled pastures are then strip-grazed until new spring grass is sufficient to support grazing in April.

What are the Advantages?

- Creates a larger stockpile of higher quality forage without alternative forage crops or additional acreage. Nearly the whole farm can be stockpiled.

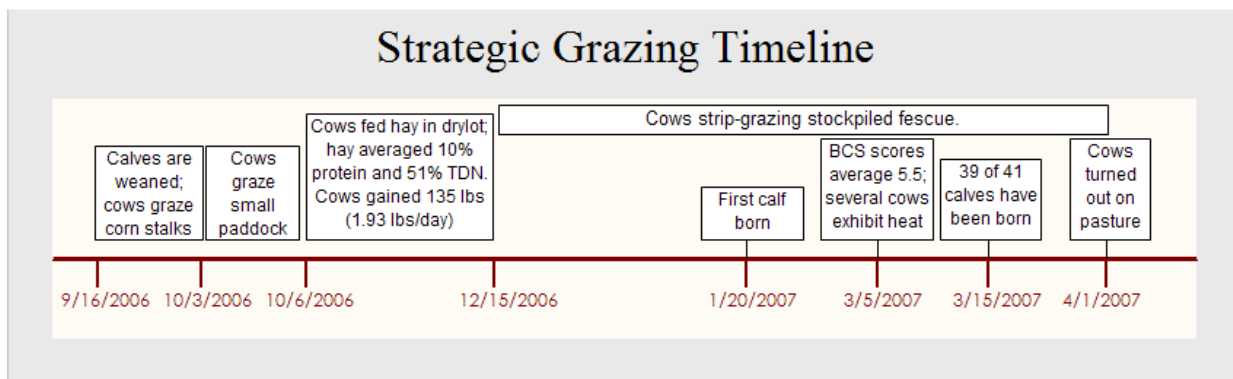
- Dry cows consume approximately 20% less hay and require less nutrition than lactating cows. Feeding when appetites and requirements are lower extends the hay supply.
- Utilizes stockpiled forage when cow needs are highest reducing or eliminating the need to supplement.
- Little or no hay is fed during calving resulting in a cleaner environment for newborn calves and less tractor damage to pastures.
- Grazing cows return nutrients to pasture areas rather than feeding areas for effective nutrient recycling. Targeting fall hay feeding on the weakest pasture or paddock would build fertility for future renovation.

Implementing the Program

- Set your target weaning date: mid September is ideal but no later than October 1
- Fertilize paddocks as you rotate off. Try to have all paddocks fertilized by Sept 15. In a 30 day pasture rotation, your fall fertilization program could be spread from mid-August to mid-September reducing weather risk.
- Feed hay to dry cows immediately after weaning either in a drylot or a selected pasture or paddock
- Begin strip-grazing stockpiled grass approximately one month before the beginning of calving season
- Calves should be backgrounded at least 45 days post-weaning prior to selling. If you normally wean in October, an additional 2-4 weeks of backgrounding may be needed to maintain sale weights. However, the growing calf is the most efficient animal on the farm to feed.

A Case Study

A case study on strategic winter grazing was conducted this past winter in Western Kentucky with a group of 41 cows and calves on 71 acres of pasture. The timeline below shows how the project was implemented beginning on September 1.



After grazing a small paddock, cows were fed hay in a drylot. This hay averaged 10% protein and 51% TDN. Cows gained 135 lbs (1.93 lbs/day) during the drylot phase. Body condition scores were maintained throughout the strip-grazing period. Samples of stockpiled fescue were taken on December 15, February 23 and March 9. Protein content was 14%, 17.6% and 12.2%, respectively. TDN content was 62%, 62% and 61%, respectively. The average of the three samples of stockpiled fescue was 14.6% protein and 62% TDN. Cattle progressed from stockpiled grass to new spring grass on April 1 grazing stockpiled pasture a total of 106 days.

Item	Total	Per Unit
Hay (48 tons @ \$70/ton)	\$3360.00	\$1.17/hd/day
Pasture Costs:		
Urea* (4.17 tons @ \$335/ton)	\$1018.24	\$20.02/acre
Fencing Supplies (100 tread in posts, 4 polywire reels, 2 rolls polywire)	\$470.00	\$67/year ⁺
Total Pasture Costs	\$1488.24	\$14.04/day or \$.34/head/day

* applied September 1 & 2

⁺ assumes a 7 year life on fencing materials

There are several management factors that must be considered when deciding whether or not to implement this grazing strategy:

- Soil fertility must be adequate (P & K medium high to high, pH 6.0 – 7.0)
- An emergency store of hay for heavy snows or ice storms.
- Have at least two winter water sources.
- Proper fencing equipment for strip-grazing.
- Overcome misconceptions about winter grazing.

This strategic grazing approach may go against conventional thinking and common practices and may even raise a few eyebrows from the neighbors, but it does prove that Kentucky cattle producers have several options regarding how they use available forage resources to meet the needs of their beef cattle herds.

Options for Beef Cattle Producers During Drought

Dr. Francis Fluharty and Dr. Steve Loerch, Dept. of Animal Science, The Ohio State University

Drought conditions are intensifying and quickly moving north, progressing over most of Kentucky and Ohio. This, following on the heels of a very poor yielding first cutting of hay is causing many cattle producers to begin to feed next winter's hay supply, and/or consider selling light weight calves at a discounted values.

Researchers at The Ohio State University have several years of data and experience with managing early-weaning calves as well as alternative ways to feed the cow herd. From 100 to 205 days of age, calves that are fed high-concentrate diets convert 3.5 to 4.5 pounds of feed to a pound of gain. With the current price of corn, some may be concerned that it's too expensive to feed. However, our data suggests this is not the case and there is no reason to sell light weight calves at a loss.

With corn at \$4.00 per bushel and protein supplement at \$250-300 per ton, the feed cost per pound of gain should be around \$.40-.50/lb. Research at Wooster has shown that early-weaned steers can be fed from 100 days of age until slaughter weight of 1150-1200 pounds at an average age of 340-360 days. In OSU studies, steers have had a feed efficiency overall of 5.0-5.5 lb feed/lb gain, with approximately 85% of cattle grading choice.

Feeding recommendations for early-weaned calves are as follows: Start 300-400 lb calves on 4 pounds/head of corn/supplement mix. Commercial protein supplements that contain minerals are the best option to feed with whole-shelled corn. For the first 14 days, the diet should be 16-18% protein to take into account low feed intake. After the calves are consuming close to 2% of their body weight, the protein concentration can be decreased to 14-16% protein. Limiting the protein intake on these young calves may seem cost effective, but it will result in their not achieving their potential for growth rate, feed efficiency, or terminal weight.

Give calves hay at 1.0 to 1.5 pounds/head/day, and then top dress the concentrate mix. If hay is not available, pelleted soybean hulls or alfalfa pellets can be used as a source of fiber.

If calves do not eat the mix, weigh back the uneaten concentrate into a large bucket (we use 30 gallon trash cans). If the uneaten feed looks pretty similar to the original mix (no sorting), it can be re-mixed with new concentrate mix so that there is little feed wasted, but be sure that you take into account the pounds of uneaten feed that you are re-feeding.

Don't increase intake by more than 1 pound of concentrate/head/day, even if the feed is cleaned up in a couple of hours. Also, don't feed more than 2 pounds of hay/head/day. The concentrate feed is what allows rapid gains (not hay), but the cattle must be adjusted to the diet slowly.

Keep a feed record book with the daily amounts of concentrate offered, hay offered, concentrate refused, and hay refused. This is the only way to actually know intake. Once the calves are on feed, expect little or no refused feed. In a properly managed feed bunk, the calves should clean up the feed in approximately 18-24 hours.

From 100 to 205 days of age, calves will consume approximately 2.0-2.5% of their body weight in dry feed daily. Following the normal weaning time (205 days of age), calves should be fed typical finishing diets containing approximately 85% concentrate and 12.5-14.0% protein, and intake will fall to around 2.0% of body weight on a dry matter basis. During the entire feeding period, gains should be approximately 3.0-3.5 lb/day.

An aggressive implant strategy works well for early-weaned calves to assure that animals don't finish at light weights. In OSU studies, steers implanted with an estrogen containing implant at 130 days of age followed by androgen containing implants at 200 and 270 days of age reached .50 inches of backfat at 1160 pounds. The carcasses were acceptable, with 85% grading low choice or higher, 35% of the carcasses in the upper 2/3 of choice, and an average carcass weight of 720 pounds.

Feeding the Cow Herd: Rather than buying expensive hay to feed to the cow herd, consider limit-feeding corn and a commercial supplement with limited amounts of hay. Even today, corn grain remains the least expensive harvested feed per unit of digestible energy available to cattle producers in Ohio. Hay has only about half the energy value (calories) as corn grain. When corn is priced at \$4.00/bu, it is worth \$143/ton. This makes the breakeven price for hay on an energy basis about \$72/ton.

Research at OSU has found that a 1300 pound cow's requirements can be met by feeding 12 pounds of whole-shelled corn, 2 pounds of commercial supplement, and 3-4 pounds of hay. This results in a feed cost of \$1.30-1.40 per day. In contrast, if hay costs \$100 per ton (.05/lb) and a 1300 pound cow eats 30 pounds per day, the cost of hay alone is \$1.50. If there is enough pasture to provide roughage to the cow, there is no need for feeding purchased hay, and the cost of feeding concentrate to the cow falls to \$1.10-1.20 per

day. If the calves are early-weaned, the amount of corn fed to the cow can be dropped to 8-10 pounds per day, because the cow is no longer in lactation and doesn't require as much energy.

NOTE: If distillers grains are fed in place of corn, remember that the upper tolerable limit for sulfur is .4% of diet dry matter.

Recommendations for starting cows on corn:

1. Take 3-4 days adjusting up the corn and decreasing hay to the 3-4 lb level.
2. Feed intake is being limited, so make sure that cows have enough space so that all cows can eat at once.
3. The protein and mineral supplement should be similar to that used for feedlot cattle fed a high grain diet.
4. Feed corn whole. Our research has shown that whole corn works better than ground corn when daily hay intake is limited to less than 5 pounds

Roberts Agricultural Commodity Market Report

Mike Roberts, Commodity Marketing Agent, Virginia Tech University

LIVE CATTLE on the Chicago Mercantile Exchange (CME) finished mixed on Monday in an increasingly tighter trading pattern. The JUNE'07LC contract closed at \$90.65/cwt, up \$0.925/cwt but \$2.950/cwt lower than two weeks ago. The AUG'07LC contract continued to be very volatile and was the most active on Monday closing at \$90.000/cwt, up \$0.40/cwt. Some short covering was noted in the oversold front-months. A contract is said to be oversold if the Relative Strength Index (RSI) is at 30 or below. An RSI of 70 or above indicates a contract is overbought. Bull spreading out of back months into the June contract was noted as live cattle contracts trailed because of higher corn. The 5-area-weeklyweighted- average cattle price for steers was \$1.00/cwt-\$1.50/cwt lower than last week but still over \$12.00/cwt higher than last year at this time. Some support was found in good clearance of retail beef amid firmer choice-beef prices. USDA early on Monday put the choice-beef cutout at \$149.91/cwt, up \$0.20/cwt. According to HedgersEdge.com, the average beef plant margin for Monday was a negative \$8.75/head, down \$5.10/head from Friday and off \$18.35/head from last week at this time. Cash sellers are encouraged to sell cattle at the right weights. It looks like we might have more of the same throughout the week. It might be a good idea to hedge grain inputs or hold off pricing near-term needs at the moment.

FEEDER CATTLE contracts at the CME fell on Monday amid higher corn prices and no support from live-cattle. The AUG'07FC contract closed at 107.550/cwt, off \$0.650/cwt. SEPT'07FC futures also finished at \$107.550/cwt, off \$0.625/cwt. Feeders were also under pressure from technical signs after contracts gapped lower in opening trade. Selling took August to a three-month low and September to 10 ½ week lows. Pastures are noted as deteriorating as grass dries up. The CME Feeder Cattle Index for June 7 was down \$0.01/cwt at \$107.63/lb. It might pay to hold onto feeders if you can find the pasture.