

OFF THE HOOF

Kentucky Beef Newsletter – September 2008

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 Cows

- Limited creep feeding can prepare calves for the weaning process since they can become accustomed to eating dry feed. This will especially benefit those calves which you are going to keep for a short postweaning period – like the CPH-45 program. It's time to start planning the marketing of this year's calf crop.
- When planning the preweaning working, consult with your veterinarian for advice on animal health products and procedures. Some procedures which can be done now are pregnancy checking cows (which will allow time to make culling decisions prior to weaning time), and blood testing cows for herd certification. The remainder of the work, like booster shots, can be done at weaning time.
- It is time to start the process of weaning spring-born calves. Stresses associated with weaning can be minimized by spreading-out other activities commonly associated with weaning – like vaccinations, deworming and, perhaps, castration and dehorning (which should have already been done!). Therefore, this month is a good time to do a “preweaning” working of cows and calves.
- Begin evaluating individuals for herd replacements – or culling. Each time you put them through the chute you can evaluate them for several traits, including their disposition.

Fall-Calving Cows

- Fall-calving should start this month. Cows should be moved to a clean, accessible pasture and be watched closely. Identify calves soon after they are born and record dam ID and calf birthdate, etc.

Castration is less stressful when performed on young animals and feeder calves can be implanted now, too.

- Move cows to best quality fall pasture after calving. Stockpiled fescue should be available to these cows in November-December to meet their nutritional needs for milking and rebreeding.
- Start planning now for the breeding season. If using AI, order supplies and semen now.

Stockers

- Calves to be backgrounded through the winter can be purchased soon. A good source is Kentucky preconditioned (CPH-45) calves which are immunized and have been preweaned and “boosted”.
- Plan your receiving program. Weanling calves undergo a great deal of stress associated with weaning, hauling, marketing, and wide fluctuations in environmental temperature at this time of year. Plan a program which avoids stale cattle, get calves consuming water and high quality feed rapidly. Guard against respiratory diseases and other health problems.

General

- Complete nitrogen application to fescue pastures early this month and allow them to grow and accumulate until November, or when other sources of grazing have been used up - so that grazing may be extended and feeding can be delayed. To make best use of this pasture, put fall calvers or thin spring-calvers on this pasture and strip graze.
- Plan the winter feeding program. Take forage samples of hay which you will feed this winter. Request protein and TDN analysis so that supplemental feed needs may be estimated. Plan to minimize hay storage and feeding loss, consider utilizing crop residue for dry cows, group cattle according to their feed needs.
- Don't graze sorghum or sudan pastures between the first frost and a definite killing frost because of the danger of prussic acid poisoning. Johnsongrass in stalk fields can also be a problem after a light frost. Grazing can resume after the sorghum-type grasses have undergone a killing frost and dried up.
- **Don't forget Beef Bash '08. We're looking forward to seeing you in Princeton on September 23.**

Should Seedstock Producers Lead or Follow?

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

Seedstock producers are looked upon as the leaders of the cow-calf industry. They supply the genetic material for commercial cattlemen and have a definite influence on the nation's cow herd. However, I am not sure that they always lead or that we should expect them to.

To say that they lead implies that they make the decisions on what genetics are best for cow-calf producers and, perhaps, the cattle industry. To say that they follow implies that they produce what commercial cattlemen, who purchase breeding stock, indicate they want. So who sends the signals?

One problem seems to be that many seedstock producers are enamored by higher EPDs with little concern about their long-term consequences. The first thing many think about is using breeding animals with EPDs that are in the highest 2% to 5% of their breed. That's why frame size, mature size and milk production of the animal's offspring often outstrip the commercial cow-calf producers forage/feeding

program, leading to poor reproductive efficiency. So why do they continue to do this? Probably because some buyers don't truly understand EPDs but continue to buy seedstock solely for the "highest numbers". It takes more courage to be different than to follow the masses. However, a lot more cow-calf producers are paying attention to things like birth weight or calving ease EPDs in order to get a live calf.

Ultrasound technology is more accurate and gives a better look at carcass traits of breeding stock than our visual assessment. We can look at fat thickness, rib-eye area and intramuscular fat using this technology. My biggest fear is that, if taken to extremes, we will remove fleshing ability from the cow herd. Body condition score is linked to reproductive efficiency. I like to see cows that carry some flesh with enough capacity (i.e. depth) to convert forages to meat and milk. However; if used correctly, ultrasound technology can aid us in making more informed decisions about the carcass characteristics of our cattle.

Similarly, genetic analysis (like Genestar®) will permit us to check individual animals to see if they carry genetic markers for tenderness, marbling and feed efficiency. This allows us to use breeding animals that should pass these traits on to their off-spring. That is certainly good information to have but who pays the cow-calf producer for "more tenderness" in the meat?

If cow-calf producers are expected to select for more favorable carcass traits and feed efficiency, they must be rewarded in the market place. But that doesn't happen yet. How can the commercial cattleman take advantage of better carcass attributes in their feeder calves? It won't be easy but the new market place will have to adapt to identifying, grouping and providing data on feeder calves that is instantly available and follows them through commerce. Cattle producers with better genetics may have to retain ownership or participate in alliances which will reward them for better genetics in their calf crop.

The most fundamental principle that commercial cow-calf producers must remember is that "reproductive efficiency is still the most important measure of profitability". Don't lose sight of that as you choose breeding values in your cattle.

So, should seedstock producers lead or follow? I think that all parties need to make informed decisions that best serve their interests while keeping an eye on needs of the industry. Seedstock producers do set the direction for the nation's cow herd and, as a result, can determine the profitability of your cow-calf operation. But ... the commercial cattleman ultimately decides on what he/she purchases. It's kind of like the "golden rule" (he who has the gold makes the rules). You should buy breeding stock that will keep you in business for the long-term.

Some Facts Regarding Foot Rot

Dr. Patty Scharko, DVM, MPH, UK Extension Ruminant Veterinarian

Several producers seem to be having difficulty with foot rot this summer/fall. Following are some quick FACTS and FICTIONS regarding foot rot in cattle.

1. Foot rot is only a problem when there are wet conditions. **FICTION.**

While it is true that in wet conditions the skin around the hoof will soften and thin, making it susceptible to injure and allow bacteria to enter, dry conditions also can lead to foot rot. In dry conditions, injuries to the foot can happen easily with stubble, thorns, etc. and crowded loafing areas can lead to a concentrated amount of bacteria to exposed the injured skin.

2. Quick treatment of foot rot can head off more serious problems. **FACT.**

If not treated quickly and properly, foot rot can become chronic. Additionally, if treatment is delayed, infection may progress to the deeper structures of the foot, which can result in poorer prognosis for recovery. Producers should treat early with a long-lasting 200 mg oxytetracycline (Biomycin[®], LA-200[®], Duramycin 72-200[®] and other generic formulations) or NuFlor[®] at an appropriate dosage to give at least 3 days of treatment. Remember that these products can and should be given under the skin (subcutaneous injection.)

3. All lameness can be attributed to foot rot. **FICTION.**

It is estimated that the disease accounts for approximately 20% of all diagnosed lameness in cattle. Diagnosis of foot rot is made by observation of the animal and physical examination of the foot for the characteristic gross lesions. Hind feet are affected most often and cattle tend to stand and walk on their toes.

One preventive measure for foot rot is to insure that damage to the feet of cattle is minimized. This includes making sure cattle are not in muddy areas for extended periods of time. Limit coarse stubble grazing to cooler times of the year and limit contact with gravelly or rocky areas. Some of these problems may not be avoidable under practical conditions. Feeding organic iodine (ethylenediamine dihydriodide; EDDI) can help prevent foot rot. The EDDI should be fed at 10-15 milligrams per head per day. EDDI fed in loose salt mixes works very well, however; EDDI should not be fed in salt block formulations as it does not seem to be available to the cattle.

If your cattle are copper deficient or selenium deficient, the number of pinkeye and foot rot cases will be greater and the severity will be worse. Be sure your mineral program provides adequate amounts and is working. Copper and selenium are important in the animal's immune response to diseases.

Keep written records of treatments and results. Discuss these treatment ideas with your veterinarian as you reevaluate prevention and treatment plans for the summer. Foot rot can be a cause of economic losses in beef herds. Early treatment, control and prevention under the direction of a veterinarian will help to keep losses to a minimum.

Considerations When Feeding Corn Silage

Dr. Jeff Lehmkuhler, Beef Extension Specialist, University of Kentucky

According to the US Drought Monitor website (www.drought.unl.edu), nearly all of Kentucky is considered to be experiencing either "abnormally dry" to "moderate drought" conditions as of the August 26 information. This area is larger than from the week prior in which only 30% of the state was experiencing these conditions. This indicates continued decline in soil moisture conditions limiting the potential for stockpiling fall forage growth unless precipitation arrives soon. Additionally, in areas experiencing long periods of dry conditions this summer concerns related to nitrate toxicity have arose. According to a conversation with Dr. Scharko some forage samples have come in this year with high nitrate levels. Be prepared to test corn silage and other nitrate accumulating forages this year if you've experienced drought conditions. With respect to corn silage, let's spend some time discussing it since harvest has or will begin shortly.

Corn silage is a widely utilized feed ingredient in cattle diets. A vast amount of research has been conducted with respect to length of cut, moisture level, processing, additives, hybrids and many other areas. Corn silage has proven to be a high quality feedstuff if managed properly that can be utilized in cattle diets as an energy and roughage source. It fits nicely with double cropping systems as the plant is not required to mature fully as is the case with grain production. It is attractive in that it is a high yielding crop as well. Yet, it does have some challenges that producers must manage around.

Moisture level is a critical factor for producing quality corn silage. Quality silage is often produced at moisture levels near 65% and optimum moisture level can vary depending on the storage structure. A rapid assessment for monitoring corn silage dry down is observing the milk line. Breaking a corn cob in half and looking at the tip end half of the cob one can view the smooth endosperm of the corn kernels and look for the milk line. As the plant matures, the milk line recedes towards the cob and a black layer will form at full maturity. The milk line is formed at dent stage and can be monitored. As the milk line recedes down the kernel and reaches the half-way point, moisture level is near optimum at 62% to 68%. This method is simple, yet as with many things, the ability to predict whole plant moisture is limited and moisture levels may not be accurately estimated using this technique especially during abnormally wet or dry conditions prior to harvesting. Sampling the whole plant and testing the moisture content is preferred under these abnormal conditions.

During periods of drought, corn silage can pose a risk to livestock. High levels of nitrate can accumulate in the plant that is reduced to nitrite in the rumen which when absorbed into the bloodstream can impede the animal's red blood cells ability to transport oxygen. Fortunately the fermentation process can reduce the nitrate levels in the corn silage by up to 50%. However, some of this reduction is to nitrite which can be detrimental to the animal. For these reasons, it is advised that questionable silage be tested after the fermentation process and then develop your feeding strategy. Further, it is not advised to feed drought stressed corn as green chop without testing for nitrate levels first. Since much of the nitrate accumulates in the base of the plant, chopping height can impact nitrate level in the harvested material. Also, when feeding green chop, be extremely cautious immediately following a rain as the plant nitrate concentrations may increase following precipitation.

Silage quality is largely determined by the fermentation that takes place. In order for proper fermentation, oxygen must be excluded. This involves many factors. Proper chop length of 3/8" to 1/2" allows for densely packing of the silage excluding oxygen. Proper chop length is also important from intake standpoint. We had a crop harvested one year with dull knives in the chopper. Intakes were poor and sorting was high. So be sure to have things ready in advance of the harvest window.

Ensuring proper moisture will also aid in packing and production of quality silage. A desirable fermentation results in the formation of acetic and lactic acid which lowers the pH to near 4.0. In some cases with poor fermentation, butyric acid is produced which can lead to an off-odor and poor intakes. This low pH is important for preservation. Improperly fermented silage could pose risks to cattle by allowing for growth of undesirable organisms which can lead to botulism and/or listeriosis. In some cases there can be a "bad spot" in the silo or bag as a result of poor fermentation. In one instance we were nearly half way through the silo when a couple steers developed listeriosis. Interestingly, it was only two steers of about 80 that showed clinical signs and were treated for the disorder. When making silage, it is important to take the appropriate actions at the beginning of the process to ensure a positive outcome rather than ending up with a product that is in between feed and compost.

Limiting Access Time to Hay Can Stretch the Roll

Dr. Jeff Lehmkuhler, Beef Extension Specialist, University of Kentucky

Being in Kentucky a couple months now, I'm picking up on some of the local terminology. One of those local synonyms being "roll" was quickly discovered as I attended my first few meetings. The lack of precipitation again has folks asking how to manage cattle on limited forage resources. In these challenging times, it does not hurt to discuss strategies to conserve precious inputs.

There are several strategies that can assist in reducing forage needs which include timely culling of open cows, selling calves early, feeding grains or co-products, proper bale storage, hay feeder type and limiting access to hay. The following will discuss how hay supplies may be stretched by limiting the time cows have access to hay as a conservation approach.

Having weaned calves in the fall from spring calving cows reduces nutrient needs of cows as milk production is eliminated and fetal growth during mid-gestation is slow. Therefore, production and nutrient needs are lowest during this time frame with nutrient needs increasing as cows advance to late gestation. This period of low nutrient demand is a key time frame to implement forage conserving strategies. The following option assumes cows are in good condition and thin cows should not be managed under these strategies rather they should be separated from the herd. Thin cows will not regain body condition prior to calving needed decreasing their odds of rebreeding the following season.

Researchers at Purdue investigated restricting cow access to hay. When mature cows were allowed access to hay for 4, 8, 12, or 24 hours, hay disappearance which includes both hay waste and consumption was decreased with reduced access time. Body weight change did not differ between 8, 12 or 24 hours of access while restricting access to only 4 hours resulted in decreased weight gain over the 50 day trial. For mature cows, to maintain body weight gain in this trial, restricting access to only 8 hours was adequate. Restricting access time to hay resulted in a linear decrease in body weight gain in young, second calf cows. Keep in mind that these young cows are still growing to reach their mature size and have greater nutrient requirements during the dry period than older, mature cows. In this work, restricting access to hay to 8 hours reduced hay disappearance by approximately 15% while not effecting weight change/gains. Restricting time further to only 4 hours resulted in reduced intakes but also impacted cow body weight gain and this is not ideal for thin, mature cows needing to regain body condition score or young, growing cows. Reducing time access to hay may restrict growth and body condition impacting future production and these younger and thinner cows should be sorted from the herd and managed separately if this strategy is to be employed.

Need more proof that this works? Recently, researchers at the University of Illinois reported findings from a similar trial involving restricting access time to hay. Two trials were conducted lasting 87 and 89 days using third trimester Simmental cows. Access to hay in this study was ad libitum (free-choice), 9, 6 or 3 hours. Hay disappearance decreased from 34 lbs of dry matter for free choice cows to approximately 18 lbs for cows having only 3 hours of hay access. Hay waste was similar and averaged 32% and calculated hay intake was reduced from 21 lbs of dry matter to 12 lbs. Cow body weight gains were 94, 87, 73 and 54 lbs for free-choice, 9, 6 and 3 hour access, respectively. Body condition score changes followed similar trends to weight changes with cows maintaining body condition with an increase of 0.1 body condition score when cows had only 3 hours of access to hay.

In the second trial conducted by University of Illinois researchers, hay access was restricted to 6 or 9 hours. Again, hay disappearance decreased as access time was limited decreasing by 13% and 17% in comparison to free-choice for 9 and 6 hours of access. Hay waste was lower in this trial averaging 14%. Body weight and body condition score changes were not impacted by restricting hay access in this trial.

These trials indicate that when forage supplies are tight or for producers looking to reduce annual cow costs associated with stored feeds, restricting the time that cows have access to hay can reduce hay disappearance by approximately 15% with little impact on animal performance. Depending upon forage quality, cow body condition score and environmental stress, hay savings may be even greater if time restriction is reduced to 3-4 hours. However, it is not recommended that access be restricted for developing replacement heifers, lactating females, young or thin cows as this may impact future productivity. Additionally, the degree of restriction will be influenced by the quality of the hay. If you are considering this hay saving strategy, it is advised that you test your forages. For information on this and other related topics, contact your local county extension agricultural agent.

September Marketing Report

Kenny Burdine, Livestock Marketing Specialist, University of Kentucky

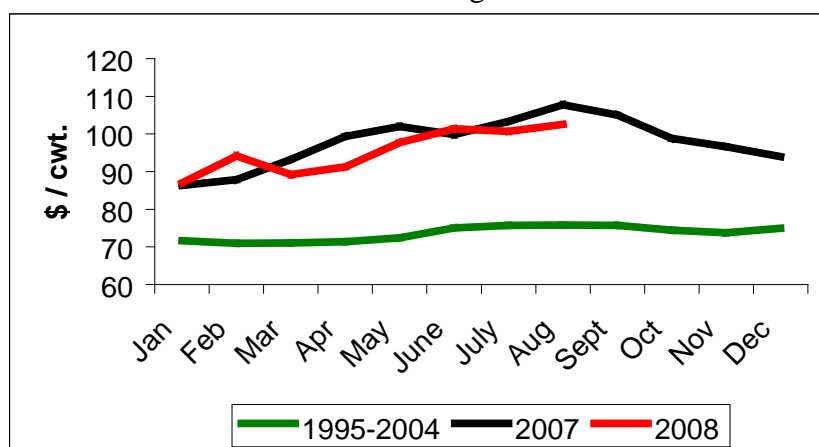
Kentucky cattle markets were a little more volatile in August as they were processing many more factors. Last month, we discussed the shrinking cow-herd and its implications. Grain and live cattle markets played the leading role in August and once again seemed to push feeder cattle in opposite directions.

December corn futures traded in about a \$1 range in August, closing as low as \$5 and as high as \$6. Holding everything else constant, that type of range would move 7 and 8 wt. feeder cattle prices about \$8 per cwt. and 5 wts. \$10 or \$12 per cwt. Realistically, we are past the point that temperature and rain are going to have much impact on the corn crop. Speculation now will move towards the actual size of the 2008 crop. USDA's August estimate was just less than 12.3 billion bushels. The one weather factor that remains in the cards is the risk of frost, which is slightly greater this year with the later crop.

Winter live cattle futures have not been friendly to feeder cattle over the summer. The expectation of live cattle trading above \$110 by fall has been replaced with hopes of live cattle reaching \$105 by mid-winter. We have not managed to push cash cattle prices above \$100 per cwt. since the first week in July. Feedlot placements, which had been running well below year-ago levels, are now moving much closer to where they were in 2007.

Despite all the volatility surrounding the feeder cattle markets, feeder cattle futures seem to be comfortable trading in a range of \$110 to \$115. It would likely take a fairly significant surprise to move feeder cattle futures out of this "comfort zone". Something like corn moving under \$5 per bushel, or live cattle futures moving back towards those \$110 levels. This month's chart shows the slight upward trend in 7wt. feeder cattle prices at Kentucky markets since spring (see chart below).

Kentucky Auction Prices
700 to 800 lb Med / Large Frame Steers



Roberts Agricultural Commodity Market Report

Mike Roberts, Commodity Marketing Agent, Virginia Tech University

Index Funds and large speculators keep the "Fun" in Fund influence. The USDA World Agriculture Supply Demand Estimate (WASDE) report was bearish for corn, neutral for soybeans, and bullish for wheat. However, corn futures were oversold so index funds took prices up . . . way up. Soybeans tagged along while wheat rode its own fundamentals lower. The volatility of the market has been dizzying. It looks like the corn market has put in a major bottom. I'm through with my measuring objective of \$4.81/bu for corn. An old friend talked with me today about the fact that the US no longer produces an excess corn. We can now burn in our gas tanks what we couldn't use up before. With supply and demand so closely aligned, any shift in weather, actual use vs. production, and/or exports can change market momentum in a minute . . . even a New York minute.

That is what happened last week. Traders didn't believe USDA's report about yield potential due to late planting, dry conditions, and the possibility of an early frost . . . and . . . the U.S. dollar weakened helping oil prices rebound. Result . . . more money in large speculative pockets. This provided large amounts of cash to buy commodities such as grains and oilseeds and livestock therefore driving those prices up. In addition, the Relative Strength Index (RSI) showed oversold in many markets. Put all this together and you have large speculators with a lot of cash with mostly "buy-only" position rules bidding up prices.

LIVE CATTLE futures on the Chicago Mercantile Exchange (CME) were gainers on Monday. The AUG'08LC contract closed at \$102.000/cwt, up \$0.150/cwt from Friday and \$0.075/cwt higher than this time last week. The August contract will expire this week. OCT'08LC futures were up \$0.025/cwt at \$105.800/cwt but \$0.150/cwt lower than last Monday. Lower corn futures; short covering; and USDA's Cattle on Feed report issued last Friday was supportive. Funds were major buyers of October and December '08 futures. The USDA report showed placements up only 2% (vs. expectations for around 7%) and cattle-on-feed supplies as of August 1 down 4% from last year. Cash cattle were posted \$1-\$2/cwt lower with USDA's 5-area price placed at \$98.57/cwt - \$98.76/cwt on Monday. USDA put the choice boxed beef cutout at \$161.4/cwt, up \$0.64/cwt. According to HedgersEdge.com, the estimated average

packer margin was off \$17.70/head placed at a positive \$4.80/head based on the average buy of \$99.29/cwt vs. a breakeven of \$99.66/cwt. Corn and soybeans remain very volatile in technical selling and buying as the market doesn't believe the most recent USDA report. It is still a good idea to price short term feed needs on down ticks in the market.

FEEDER CATTLE at the CME closed mixed on Monday. AUG'08FC futures were up \$0.250/cwt at \$113.100/cwt; \$0.55/cwt lower than last Monday. The SEPT'08 contract finished the day at \$112.900/cwt, off \$0.050/cwt from Friday's close and \$0.675/cwt lower than last Monday. August/September and October/September spreads provided mixed finishes. Feeders never recovered after corn futures opened higher and then finished lower. However, higher live cattle were supportive. Cash feeders in Oklahoma City were steady with a volume of 8,200 head on Monday vs. 6,105 head last week and 11,724 head a year ago. The latest CME Feeder Cattle index for August 21 was placed at \$113.21/cwt, down \$0.05/cwt. The feed markets are still volatile. Try and price short-term needs on technical selling in the grains.