

Off the Hoof

Kentucky Beef Newsletter – February 2008

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

Contents

This month's newsletter includes:

Timely Tips - Burris

Bib Overalls in a White Lab Coat World - Burris

UK Beef IRM to Conduct Cow College Again this Year - Anderson

Choosing an Estrus Synchronization Program for Your Heifers - Anderson

Kentucky Beef Cattle Market Report - Burdine

Roberts Agricultural Marketing Report

Timely Tips

Dr. Roy Burris, University of Kentucky Beef Specialist

Spring-calving Herd

- Overall condition of the cow herd should be evaluated. Cows losing weight now are most likely to have weak or dead calves. These cows will likely be a poor source of colostrum milk for the newborn calf. Feed cows, if necessary to keep them in good body condition.
- Replacement heifers should be gaining adequately to reach target breeding weights by May 1. Be sure that their feeding program is adequate for early breeding.
- Have calving equipment, supplies and labor ready for the spring calving season. Some supplies which may be needed are: ear tags and applicator (put numbers on ear tags now), tattoo pliers and ink, record book, scales for calf weights, iodine for calves' navels and colostrum supplement. Calving equipment (puller and chains, etc.) and facilities should be ready and clean.
- Heifers should begin head-start calving in early February. Move them to a clean, accessible pasture, away from cow herd and near facilities so that calving assistance can be given. Cows may start calving later this month. Signs of calving are relaxation of pelvic ligaments, enlargement and swelling of the vulva, and enlargement of the udder. Expect calving difficulty if (1) calf's head and two feet are not visible, (2) only the calf's tail is visible, and (3) the cow has been in labor for 1½ hours. Be sure calf is being presented normally before using calf puller. Recognize situations that are beyond your capability and seek professional help as early as possible. Calves that aren't breathing should receive assistance. Try sticking a straw in nostril to stimulate a reflex or try alternate pressure and release on rib cage. Commercial respirators are also available. Calves should consume colostrum within 30 minutes of birth to achieve good immunity.

- Record birth date, cow I.D., and birth weight immediately (use your Beef IRM calendar). Identify calf with ear tag and/or tattoo. Registered calves should be weighed in the first 24 hours. Male calves in commercial herds should be castrated and implanted as soon as possible.
- Separate cows that calve away from dry cows and increase their feed. Avoid muddy feeding areas so that cows' udders won't become contaminated and spread scours. Don't confine cows to muddy lots.
- Increase feed after calving to 25-27 pounds of high quality hay. Concentrate (3-4 lb. for mature cows and about 8 lb. for first-calf heifers) may be needed if you are feeding lower quality hay. Supplementation may have a beneficial effect on date and rate of conception. The most important time to feed a beef cow is after calving. Thin cows don't come into heat very soon after calving. We must have cows in good condition, if we plan to breed them early in the season for best pregnancy rates, especially on high-endophyte fescue pastures.
- Sub-zero weather can mean death for newborn calves. During extremely cold spells, bring the cow(s) into a sheltered area as calving approaches to protect the calf. Be prepared to warm-up and feed newborn, chilled calves. Calving in mud can also cause problems.
- Watch for scours in newborn calves. Consult your veterinarian for diagnosis, cause, and treatment. Obtain fecal samples and submit to diagnostic lab, if scouring begins.

Fall-calving Herd

- Breeding season should end this month. Remove bulls and confine them so that they regain condition.
- **Important!** Consider creep feed or creep grazing (wheat, etc.) to supply extra nutrition to fall-born calves which may have to depend solely on their dam's milk supply for growth. They are not getting much except their dam's milk now (i.e. there is nothing to graze). February/March is the worst time of the year for fall-born calves.
- Provide windbreaks or clean shelter for calves.

General

- You should be feeding a mineral supplement with adequate magnesium to prevent grass tetany (~ 15% Mg) now. The Hi-mag UK Beef IRM mineral can be used now.
- Provide shelter or increase feed as temperature drops. When temperature falls below 15 degrees, cattle need access to windbreaks. For each 10 degree drop below 15 degrees, add three pounds of hay, two pounds of corn, or six pounds of silage to their rations.
- Provide water at all times. Watch for frozen pond hazards.
- Control lice. Watch for signs such as rubbing.
- Continue looking for herd sire replacements, if needed.
- Begin pasture renovation. You can overseed clover on frozen or snow-covered pastures.

Bib Overalls in a White Lab Coat World

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

The news from the Food and Drug Administration (FDA) indicates that final approval will likely be given for the use of meat and milk from cloned animals. A generation ago, this would have seemed like something from Aldous Huxley's "Brave New World". Our industry is now dealing with many technological advances. For those of us who wear bib overalls or blue jeans, the advancement of science and technology does get into our comfort zone. Change can be difficult.

I grew up in middle Tennessee and I recall my father telling me that he helped drive hogs and turkey's down to the Cumberland River so that they could be put on a packet boat. I remember stories about my ancestors floating farm products on a raft down the Cumberland River to Nashville. I also have a letter written by my great-great-great grandfather in June 1855. It says, "I have a good crop of wheat and my corn crop is as good as the rest of crops. I think I shall have plenty to make me independent and that I will be as long as my property will keep me so. My bees has (sic) done well this year. This rain has raised the Cumberland and is yet raising and small boats can come so it is has been long looked for as there is no salt in the country and if this keeps up there will be salt hear (sic) in a few days". This letter was written when he was seventy-four years old and had lost his wife. He was just worried about surviving. By the way, he remarried soon after this and had twins. Guess we can adjust to change when necessary! Maybe it was the salt.

Now, what is the big deal about cloned animals? I suspect that many people's fear ultimately concerns cloning in humans. That is an area of bioethics that I won't deal with here. The academic response concerning meat and milk from cloned animals is that it is safe. I see no reason to doubt that; however, it will be a problem if the consumer won't buy our product. Since it will cost \$15,000 to \$20,000 per individual to clone an animal, I don't see these animals going into the food supply in any great number, rather they would be produced as "superior" breeding stock for the beef industry. Their offspring could be used in greater numbers.

Do I think cloning will revolutionize the beef industry? Probably not. One thing I do know is that seedstock producers are frequently looking for ways to differentiate their cattle from those of others. Since Kentucky has, I think, the greatest number of seedstock producers in the country, we can expect some producers that have the means (money) to try for that advantage. However, since, only about 4 percent of cattle producers use artificial insemination and even less use embryo transfer (ET) and in vitro fertilization, I don't think that the impact will be that great. Cloning should be limited to genetically superior animals. We have produced some pretty average individuals from embryo transfer techniques and expected them to bring more money just because they are ET cattle. In that case, it is no more than a marketing gimmick.

This whole issue of cloning may push us to answer more relevant questions though. How do we deal with all of the recent technological advances? Who chooses what we use – the market or the government? How do we respond to the consumer's demands and concerns?

We have sometimes had the mindset that we know what is best and we'll produce what we want. Just because we think that a roast would make a good dinner doesn't mean that consumers in a microwave society will cook it. Ultimately the consumer will decide what we market. We are all like order buyers who fill orders. An order buyer doesn't tell the feeder "here's what you get". They respond to what the client wants. What would have happened to Ford Motor Company if they had continued to produce the Edsel instead of developing the Mustang?

If consumers want assurances on the safety and origin of their food supply, we may have to adopt the existing technology that allows us to trace livestock through all phases of commerce. Again, it's not necessarily what we want or like, but what the consumer might demand. We are moving in that direction with CPH-45 PVP sales.

We also have technology that allows us to test for the presence of certain genes that are responsible for various traits like tenderness or marbling. We can identify animals that possess those genes and emphasize them in our breeding programs. We also have emerging technology in genetic engineering, commonly

referred to as “gene splicing” which might permit us to put those genes into plants or animals to improve certain characteristics. Think of grasses with more cold tolerance or cows with more tolerance to the fescue endophyte ... or maybe fescue that withstands abuse without the endophyte... or maybe leaner cattle for one market and highly marbled beef for another. Remember, we’re going to let the consumer decide.

I am not making light of changes brought on by rapidly advancing technology. In fact, I believe that it is imperative that we do some long-range planning on dealing with these issues so that they impact our industry in a positive way. This much is certain ... “Change is inevitable.”

UK Beef IRM Committee to Conduct Cow College Again This Year

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

The UK Beef IRM Committee is offering Cow College again this year. Cow College is a 10 day educational program that covers all aspects of beef production and management. Cow College begins with a 2-day training session in Lexington on Beef Cattle Economics and Marketing. In this session, participants are not only taught advanced livestock marketing and economics subject matter but they are also taught how to use beef record keeping systems, how to make production decisions using partial budgets, and how to use the market system to their advantage. Students are lead through case studies to help demonstrate how to use the class room material on their operation. The second 2-day session is held in Lexington on beef cattle nutrition. Students are taught the principles of beef cattle nutrition and are exposed to “next level” information. Participants bring in their hay analysis and are taught how to balance rations using the UK Ration Balancer Program. The third session is held in Princeton and provides 2 full days of instruction on herd health and beef cattle facilities. Students are taught the principles of immunity, and how to build and administer a herd health program. Hands-on sessions include how-to instruction in castration, implants, BQA certification, and dehorning. Reproduction and Genetics are the subjects in the fourth 2-day session. Participants are not only taught the principles of these subjects but how to implement breeding systems. Hands-on sessions include breeding stock selection, pregnancy palpation, pelvic area measurements, artificial insemination, and breeding soundness examinations. The final session includes two full days of instruction on the end product. Participants are taught how to grade carcasses and how to break down a carcass into individual cuts of meat. Management factors that impact meat quality are also discussed. Students participate in a taste panel to determine if their palate can determine the difference between high quality and lower quality cuts. Past students have rated Cow College a 9.2 out of 10. Cow College is the most in-depth instruction in beef production and management available in the United States. For more information, please contact Mr. Land Dale or Mr. Jay Busby at 859-278-0899.

Choosing an Estrus Synchronization Program for Your Heifers

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

Perhaps the single best decision most beef producers can make to reduce calving problems in their heifers is to artificially inseminate them to proven calving ease bulls. This practice, combined with pelvic area measurements, can drastically reduce the incidence of dystocia. Even though these practices are essential to limiting calving problems, fewer than 10% of beef producers routinely incorporate AI into their heifer development program.

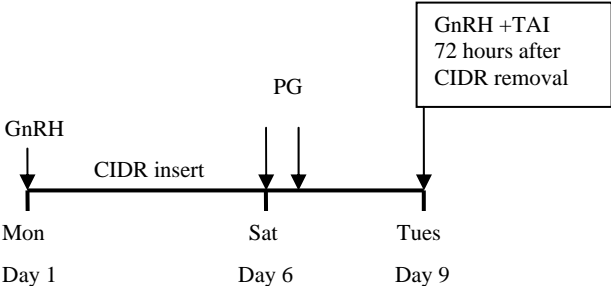
One reason for the low adoption rate of AI is the time, labor, and facilities necessary to accomplish the task. Some basic facilities are vital to AI (head catch, chute, etc.) but methods to synchronize estrus for AI have been developed that greatly reduce labor.

The most proven method to synchronize heifers for AI is called the MGA-PG method. To synchronize estrus using this method, heifer are fed melengestrol acetate (MGA; .5 mg/hd/d) for 14 days (look at figure). Nineteen days later heifers are injected with prostaglandin (Lutalyse, Estrumate, Prostamate, or In Synch) and estrus is detected for 72 hours. Heifers that are observed in estrus are bred accordingly (~ 12 hours after first observed estrus). Heifers that are not observed in heat by 72 hours are time inseminated and given an injection of gonadotropin releasing hormone (GnRH; Cystorelin, Fertagyl, Factrel, or Ova Cyst). Therefore, after 72 hours all heifers are inseminated and most are inseminated after observed estrus. This system has proven effective in millions of heifers across the United States. Typically, 80% of the heifers treated will be observed in estrus, conception rates will be normal and the pregnancy rate to AI ranges from 50-70%. Although this system reduces the labor necessary for AI, it is not adaptable to total timed-insemination.

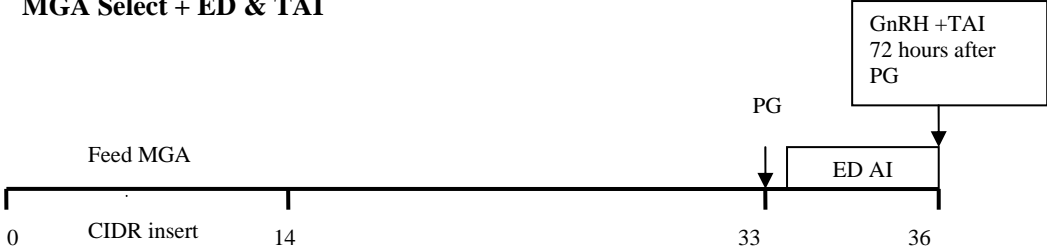
Recently, researchers at The Ohio State University and Virginia Tech University have reported results from a new estrus synchronization protocol for timed insemination in heifers. This protocol begins with the insertion of a CIDR device and an injection of GnRH (figure below). Six days later the CIDR device is removed and an injection of prostaglandin is given. The following day a second injection of prostaglandin is given and all heifers are time inseminated 72 hours after the CIDR device is removed. A second injection of GnRH is given at the timed insemination. Pregnancy rates to the timed insemination have been acceptable in these trials averaging 52-55% on ~2,000 heifers over the last few years.

Although neither system is perfect both offer producers the opportunity to AI their heifers to proven calving ease bulls with just a few trips down the chute and limited estrus detection. Breeding yearling heifers to proven calving ease sires will reduce calving problems, calf death loss, and will improve the ability of these females to rebreed and become productive young females.

5-Day CIDR & TAI



MGA Select + ED & TAI



GnRH = Cystorelin, Fertagyl, Factrel or Ova Cyst
 PG = Lutalyse, Prostamate, Estrumate, In Synch

Kentucky Beef Cattle Market Update

Kenny Burdine, Livestock Marketing Specialist, University of Kentucky

January saw weaker cattle prices than December, largely due to the increase in grain prices mid-month. The major market mover was an increase in projected feed and residual corn use that left projected corn ending stocks more than 350 million bushels below the December estimate. Prices of corn and soybeans rose rapidly, pushing feeder cattle prices down during the week following the report. Towards the end of January, cattle prices had rallied back to early January levels.

With the 2007 crop estimates final, the grain markets will largely focus on usage and planting prospects for direction. Feeder cattle prices will remain on edge as we move into planting season. Outside of grain impacts, spring prices should be aided by grazing demand and stronger 4th quarter live cattle futures.

USDA also released their inventory estimates for January 1, 2008. As expected, the cattle cycle is stalled, largely due to weather challenges over the last couple of years. Total cattle and calf inventory was down slightly and beef cow numbers were down 1%. The table below reports US beef inventory estimates from USDA that were just released.

Here at home, Kentucky will start 2008 with 4% fewer beef cows in production according to USDA. Total cattle and calf numbers were down by less than beef cow numbers in the state. Given the impacts of rising feed, fuel, and fertilizer prices, profitability will really come under pressure. It's not clear how rising input prices will affect beef producers decisions about re-building numbers if weather does permit this year.

USDA January 1, 2008 Cattle Inventory Report

	2007 (1,000 hd)	2008 (1,000 hd)	2008 as % of 2007
Total Cattle and Calves	97,003	96,669	100
Cows and Heifers That Have Calved	42,023	41,777	99
Beef Cows	32,891	32,553	99
Milk Cows	9,132	9,224	101
Heifers 500 Pounds and Over	20,086	20,003	100
For Beef Cow Replacment	5,877	5,670	96
For Milk Cow Replacment	4,310	4,457	103
Other Heifers	9,899	9,876	100
Steers 500 Pounds and Over	17,222	17,305	100
Bulls 500 Pounds and Over	2,215	2,207	100
Calves Under 500 Pounds	15,456	15,378	99
Cattle on Feed	14,269	14,317	100
	2006	2007	
Calf Crop	37,519	37,361	100

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 mixed on Monday. February '08 - June '08 contracts were off while August '08 - February '09 were gainers on thoughts the U.S. cattle herd is shrinking. FEB'07LC futures finished off \$0.650/cwt at \$90.750/cwt. The APR'08LC contract closed at \$93.825cwt, off \$0.550/cwt while the JUNE'08LC contract finished down \$0.425/cwt at \$92.575/cwt. The nearbys were pressured by the announcement on Friday that Tyson Foods was stopping cattle slaughter at Emporia, KS. That plant processes 4,000 head per day. This news followed months of losses due to more slaughter capacity than there are cattle. According to HedgersEdge.com the average beef plant margin for Monday was estimated at a negative 20.55/head, \$0.30/head worse than Friday but \$0.25/head better than a week ago. Estimated breakeven for packers was placed at \$88.41/cwt while packers were able to buy at \$90.03/cwt, a difference of a minus \$1.62/cwt. On Friday, USDA placed the monthly Cattle-on-Feed numbers at 101% of a year ago while decreasing December placements to 99% of last year. The market was expecting an increase of 102.7%. December marketings were up at 101% of last year vs. the average expectation for 100.4%. USDA is expected to publish its semi-annual U.S. Cattle Inventory report this coming Friday which was supporting news for deferreds. The 5-area cash cattle average price published by USDA was steady to firm ranging from \$90-\$90.50/cwt. USDA on Monday place the choice boxed beef cutout at \$142.96/cwt, up \$0.220/cwt. Cash sellers should go ahead and sell those heavy calves off pastures. A \$0.25 cent/bu increase in a bu of corn increases the cost of a 500-600 weight calf by about \$3.50/cwt. It increases the cost of a 700-900 weight feeder by about a \$1.00/cwt. It might be a good idea to price corn at the low points as markets take profits. This volatility will continue until the U.S. crop is planted as corn wars with soybeans for planted acres.

FEEDER CATTLE at the CME were up Monday. JAN'08FC futures closed at \$99.550cwt, up \$0.950/cwt. The MAR'08FC contract finished at \$102.675/cwt, up \$0.575/cwt. Feeders were supported by reports of higher cash cattle in Oklahoma City and other northern markets. The Oklahoma City market is closely watched. Gains happened despite higher corn because the market is expecting lower feeder placements. The CME Feeder Cattle Index for January 24 was placed at \$98.090/cwt, up \$0.39/cwt. Feeder sellers should consider selling cattle on this uptick while pricing corn on any downticks in that market.

CORN on the Chicago Board of Trade (CBOT) closed up on Monday. The MAR'08 contract finished up 3.6¢/bu at \$4.982/bu. The DEC'08 contract closed up 0.6¢/bu at \$5.104/bu. Gains in wheat, good export numbers and a crude oil rebound were supportive. Improved weather in South America and worries over recession were not. USDA placed corn-inspected for export at 61.094 mi bu vs. expectations for between 34-40 mi bu. Improving weather in the Brazilian corn-crop areas was seen as helping the crop there. The CBOT increased margins for corn trading to \$1,350, up from \$1,283 effective for Monday night trading amid concerns for market volatility. Trading sources said the large number of long positions in corn futures made ripe conditions for profit-taking if large funds and speculators in long positions liquidated positions. The supplement to Friday's CFTC Commitment of Traders report showed funds decreasing bull positions in CBOT corn to 233, 616 contracts, down 10,000 lots from Friday and down 15,713 lots from the previous week. The March contract traded above all key moving averages as the RSI approached 60. An RSI of 70 or above is considered an indication of an overbought market. Cash corn bids were steady to somewhat weaker amid some sales. Cash bids for corn in the U.S. Mid-Atlantic States were steady at 4.0-6.0¢/bu higher. If you have any of the '07 crop left, it would be a very good idea to price at least half of it while forward contracting 10%-20% of the '08 crop. Out of the money May Call Options might be a considered if you are concerned about rising prices. Prices could trend higher on increased volatility as spring approaches and soybeans compete for acres.