

OFF THE HOOF

Kentucky Beef Newsletter – April 2007

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

ON A PERSONAL NOTE.....

I apologize for getting this out a few days late, but I have not been functioning well this week. For those of you that hadn't heard, UK and the Kentucky beef industry lost one of our great leaders. Mr. Jeff Settles of Washington County was one of the truly unique people I have known in my life. Jeff cared deeply for agriculture and worked tirelessly for the Kentucky beef industry. Jeff made a difference in many peoples lives. I was fortunate to have gotten to know Jeff; to have been inspired by him. He will be sorely missed.

Timely Tips

Dr. Roy Burris, UK Beef Specialist

Here are some timely management tips for April:

Spring Calving Cow Herd

- Increase feed for cows after calving. Probably free-choice hay with the equivalent of 5 lb of corn and 2 lb of protein supplement or about 50 lb of corn silage with 2 lb of protein supplement will work along with a good mineral-vitamin supplement before "turn-out" to pasture.
- Don't "rush to grass". Be sure that grass has accumulated enough growth to support the cow's nutritional needs before depending solely upon it. Cows may walk the pastures looking for green grass instead of eating dry feed. This lush, watery grass is not adequate to support them. Keep them consuming dry feed until sufficient grass is available to sustain body condition. We've spent too much money keeping them in good condition to lose it now!
- Continue to watch cows and calves closely. Identify calves while they are young and easy to handle. Commercial male calves should be castrated and implanted. Registered calves should be weighed at birth.
- *Prevent grass tetany!* Continue providing magnesium in the mineral mix until daytime temperatures are consistently above 60°F. Mineral supplement should be available at all times and contain a minimum of about 15 percent magnesium. Make sure that your mineral mix also contains adequate selenium, copper and zinc or you can ask your feed dealer for the UK Beef IRM High Magnesium Mineral.
- Make final selection of heifer replacements. Be sure that yearling heifers have attained their "target" weight (2/3 of mature weight) before breeding. Obtain measurements for pelvic area in heifers and cull those which have small pelvic areas. Consider vaccinating with a modified-live BVD vaccine.
- Purchase replacement bulls at least 30 days prior to the start of the breeding season. Have herd bulls evaluated for breeding soundness (10-20% of bulls are questionable or unsatisfactory breeders). Get all bulls in proper condition for breeding.
- If you are going to use artificial insemination and/or estrus synchronization, make plans now and order needed supplies and semen.

- Prebreeding or "turn-out" working is usually scheduled for late April or May - between the end of calving season and before the start of the breeding season (while cows are open). Consult your veterinarian about vaccines and health products your herd needs. Make arrangements now for products needed and have handling facilities in good working order. Dehorn commercial calves before going to pasture.
- Start breeding heifers 1 heat cycle before cows so that they have extra time to recover from calving next year.

Fall Calving Cow Herd

- Pregnancy check cows now and cull open ones at weaning or move to the spring-calving herd.
- You may let calves creep-graze wheat or rye, if it is available. Calves will benefit from extra feed until spring grass appears.
- Consult with your veterinarian about a preweaning working of the herd.
- Reimplant feeders.
- Plan marketing strategy for feeder calves.

Stocker

- "Condition" purchased calves prior to grazing. They should be processed and fed a conditioning diet prior to being placed on pasture. You can also use this time to introduce them to electric fences which are used in rotational grazing.
- Don't go to pastures too soon, give plants some growing time. Then stock at two to three times the July rate and rotate rapidly.
- Provide a good mineral supplement which contains a rumen modifier (Rumensin, Bovatec, etc.) along with adequate levels of copper and selenium. The UK Beef IRM Stocker mineral with Monensin will work well in this case.

General

- Prepare for the grazing season. Check fences and make necessary repairs.
- Get everything ready to make high quality hay in May! Have equipment serviced and spare parts on hand. Order baler twine now.
- Plan now for fly control ... decide what fly control program that you will use but don't put insecticide eartags on cattle until fly population appears.

Understanding Neonatal Calf Diarrhea

Dave Sparks, DVM, Oklahoma State University Area Extension Food-Animal Quality and Health Specialist

Neonatal calf diarrhea or CALF SCOURS generally is caused by one or more of the following disease organisms: Rota virus, Corona virus, Cryptosporidium parvum, E. coli (K99 enterotoxigenic form), or Salmonella. Understanding the impact that these disease entities have on baby calves can help cow calf managers reduce the adverse effects of calf scours. Adequate colostrum intake by the calf is important for disease protection. A vigorous baby calf nursing a properly immunized, properly fed dam, will be a first line of protection against calf scours.

The first 3 organisms on the above list usually cause diarrhea at 7 to 21 days of age, while the common E. coli strains cause diarrhea within the first few days of life. The E Coli bacteria attaches to cells in the lining of the gut and turn on the fluid pump mechanism to cause excess water secretion into the gut. (Enterotoxigenic scours. Cow vaccination is helpful with this form.) The viral scours are caused by decreased absorption of water from the gut as the virus kills the cells of the gut papilla. (Cow vaccination is available but not always effective). Cryptosporidium and salmonella are zoonotic (transferable to humans) problems. The diarrhea is the result of a combination of factors including: (1) dose (number) of organisms the calf is exposed to, (2) amount or lack of calf immunity (colostrum), and (3) stress on the calf.

When should I treat the calf? Calves running around the pasture with their tails in the air, bucking and kicking with yellow or white diarrhea may not need treatment. The main indications for treatment are (1) general disposition, (2) appetite, (3) dehydration, and (4) body temperature. If the calf is weak, depressed, or reluctant to move these are all indications that something is wrong. If the calf is not eating, the cow's udder will be distended and this is sign of trouble also. Dehydration can be evaluated easily by pulling up the skin on the side of the neck or shoulder. In a normal calf, the skin snaps back into position quickly. In a dehydrated calf, the skin remains "tented" for a period of time-the longer it remains "tented" the worse the dehydration. Also, as dehydration worsens, the eyeballs sink back away from the eyelids-this is a bad sign and fluids are indicated immediately. Normal body temperature (measured with a rectal thermometer) is 100.5° F to 102.5 ° F. Body temperatures less than 100 ° F and greater than 102.5 ° F is a sign of problems and treatment should be started.

What are the recommended treatments? The main treatment is fluid therapy. Secondary treatments are antibiotics and nursing care. Because the main problem in scouring calves is loss of body fluid and electrolytes, the primary treatment must be aimed at restoring the water balance. The calves are thirsty, but they are too sick to drink. Therefore, the first line of treatment is oral electrolyte solutions. There are a number of excellent commercial products on the market for treatment of calf scours. All of these products contain glucose or a similar material, sodium chloride (table salt), and other electrolytes. The glucose and sodium allow the animal to absorb the water they need from their digestive tract. Giving straight water does not work. Usually 2 liters (just over 2 quarts) of the oral fluid solution is given 1 to 3 times per day to the sick calf. Consult with your veterinarian regarding the appropriate oral electrolyte product for your operation.

Antibiotics are often given to scouring calves even though antibiotics do not kill most of the calf scours agents. Due to damage in the gut of scouring calves, bacteria will "leak" into the blood stream of these calves and cause further problems. Antibiotics are of value for this reason. Antibiotics may kill the normal flora bacteria in the gut and actually make the problem worse but they must be used in circulating infections. Again, consult with your veterinarian regarding the correct choice of antibiotics to give. Many of the antibiotics are not labeled for calf scours and thus require a prescription from your veterinarian and an extended withdrawal time.

When treating sick calves, always treat them after you have attended to all the normal calves. This will decrease the spread of germs from the sick calves to the younger healthy calves. Also, keep all your treatment equipment clean-including your hands and clothes, as you can easily transmit these agents.

When do I need additional help? If your treatment methods are not working, contact your veterinarian immediately for additional help. If more than 5% of your calves are scouring and require treatment, you need help. If death loss is greater than 2% due to calf scours contact your veterinarian.

Begin Planning The Breeding Season

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

Now is the ideal time to prepare for the breeding season. Mark on your IRM calendar the dates you will turn in and remove your bulls from the herd. Producers should consider synchronizing estrus. If natural service is to be used, producers can synchronize estrus either by feeding MGA for 7 days prior to the breeding season or by inserting a CIDR device for 7 days before the bulls are turned out. Below is a little article on estrus synchronization with natural service.

Estrus synchronization can greatly improve reproductive efficiency and profitability in cow-calf operations. Estrus synchronization increases profitability by improving pregnancy rate, increasing weaning weights, enhancing calf uniformity, and improving cow productivity. Cow productivity is increased because more early-born heifers are available for use as replacements. Research has demonstrated that early-born heifers become more productive cows because they are more likely to conceive early in their first and subsequent breeding seasons and therefore wean older, heavier calves. Estrus synchronization has been used mainly to enhance the use of artificial insemination. Data from the University of Kentucky illustrates that estrus can be synchronized before a natural service season. In this trial, mature cows and 2-year-old cows approximately 65 days after calving were assigned to one of three treatments. The cows in the first group were not treated (CONT) and were exposed to natural service for 60 days. The cows in the second group (MGA) were fed the orally active progestin melengestrol acetate (MGA, .5 mg/hd/d) for 7 days and were exposed to natural service for 60 days beginning the day after MGA feeding ended. Cows in the third group (CIDR) had a EAZI-BREED CIDR device inserted for 7 days before being exposed to a 60-day natural service season. All bulls used in this experiment were mature and were subjected to breeding soundness exams approximately 30 days before the breeding season. Bull-to-cow ratios (BCR) ranged from 1:23 up to 1:42. Date of conception was determined using rectal palpation approximately 30 days after the end of the breeding season. The results of this experiment are illustrated in Table 1. More cows conceived and conceived earlier in the treated than in control groups. Treatments did not differ because of BCR.

Table 1. Effects of estrus synchronization prior to natural service on reproductive response in postpartum beef cows.

Treatment	Number of Cows	Pregnancy Rate (%)	Pregnant in the First 30 Days (%)
CONT	1,040	83	46
MGA	614	93	78
CIDR	421	91	80

Synchronization prior to exposure to natural service markedly enhanced the rebreeding performance in this experiment. The use of estrus synchronization prior to natural service certainly improved pregnancy rates, should improve weaning weights (because the calves will be older), and should improve uniformity of the calf crop. Rough estimates indicate that based on the predicted reproductive response, cows in the treated groups returned approximately \$121 more profit than cows in the control group. Therefore, inclusion of estrus synchronization should be recommended

If AI is to be used, contact your technician to set up the dates and order semen and other supplies. Contact your local veterinarian to set up a date for a breeding soundness exam for your herd sires. Remember, every bull needs to be subjected to a breeding soundness exam about 30 days before the breeding season. One infertile cow means one fewer calf at weaning while one infertile bull means zero calves at weaning.

Roberts Agricultural Commodity Market Report

Mike Roberts, Commodity Marketing Agent, Virginia Tech University

LIVE CATTLE in Chicago on the Chicago Mercantile Exchange (CME) finished higher on Monday. APR'07LC futures closed at \$97.80/cwt, up \$0.700/cwt but \$4.225/cwt lower than last week at this time. Support in this contract is now at \$96.225/cwt. Just think, this contract set three-year highs last week. This uptick didn't last the expected two weeks. The JUNE'07LC closed up \$0.575/cwt at \$94.850/cwt, over \$3.50/cwt lower than last Monday. Live cattle closed higher on short covering after losing lots of steam on Friday on technical trading. Cash markets late last week were disappointing fueling price declines. Futures rebounded on Monday amid technical corrections with the JUNE'07LC contract holding above the 40-day moving average. Spreading accounted for most of the volume as funds started rolling April positions. Last week's selling is seen as a possible high point with cash cattle down in most places. USDA placed the choice beef cutout at \$163.83/cwt, off \$0.36/cwt. The choice beef cutout reached a high of \$167.53/cwt last Wednesday not seen since Nov. 18, 2003. The setbacks in wholesale beef cut into packer margins. According to HedgersEdge.com, the average beef plant margin for Monday was estimated at \$6.25/head, down \$12.85/head from last Friday and off \$9.10/head lower than a week ago at this time. Cash sellers should sell cattle as soon as they are ready amid prospects for lower cash cattle this week. Be ready to price more feed inputs within the next few days.

FEEDER CATTLE at the CME finished higher on Monday. The MAR'07FC contract finished at \$106.525/cwt, up \$0.300/cwt and \$0.650cwt higher than last Monday. The APR'07FC contract closed up \$0.475/cwt at \$107.925/cwt and \$0.800/cwt higher than last week at this time. Upward price movement was aided by early fund buying, a firm cash market, and lower CBOT corn futures. Cash feeders have been making a stronger-than-expected showing for a while now. Instead of the usual February decline, prices have held pretty firm. The latest CME Feeder Cattle Index for March 16 was placed at \$105.12/cwt, up \$1.15/cwt. Cash sellers should think about selling feeder cattle when they are ready in order to take advantage of these good prices. As with live cattle feeders, be ready to price more feed inputs within the next few days.