

# *Off the Hoof*

*Kentucky Beef Newsletter – September 2007*

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

## **On a personal note....**

This likely isn't the right forum to advertise a sale but I am going to anyway. Select cows from the Jeff Settles farm will be auctioned on September 18<sup>th</sup> at 1 PM at the Washington County Livestock Center in Springfield Kentucky. These cows (~80) are Angus/Simmental cross, have been subjected to AI for 20+ years, and have been selected based upon performance for many years. These cattle will absolutely be productive. The proceeds from the sale of these cattle will go into the ***Jordan and Jacob Settles Scholarship Fund***. Jeff was a leader in our industry, helped innumerable people, and touched the hearts of many more. If you can, please help his children. Thanks for putting up with me on this. Les

## **Timely Tips**

*Dr. Roy Burris, UK 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 “boostered”.
- 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.

## **When Should I Wean My Calves?**

*Dr. Roy Burris, UK Beef Specialist*

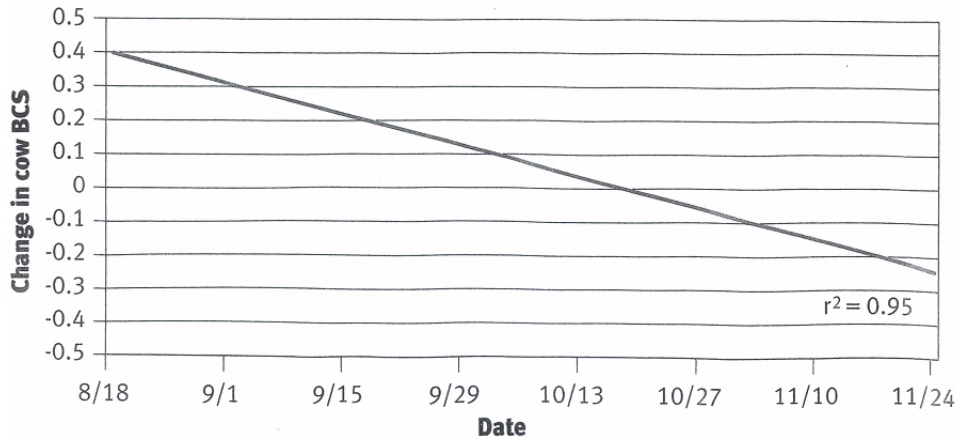
When should you wean calves? Is it when they reach a certain age? When you run out of grass? When calves stop gaining weight? When you need some money?

Most record keeping systems adjust weaning weight to an industry standard of 205 days. So that must be it. Wean them at 7 months, right? No, it's not that simple. Sometimes we wean them earlier (like drought years) and sometimes we wean them later (fall born calves are frequently about 9 months of age at weaning). So, weaning at a certain age isn't necessarily the answer.

So, what should determine when we should wean calves? I believe that you should monitor the cows' body condition and wean the calves before cows lose much condition (flesh). This is extremely important this year. Do not let cows deplete their “energy reserves” when you can anticipate a winter when feed is in short supply.

A trial conducted by the University of Nebraska, in the Sandhills, looked at the effect of weaning date of March-born calves on cow BCS change (Figure 1). Our growing season is generally longer here, but this graph shows that as forage quality begins to decline, cows lose condition. Their diet doesn't meet their needs for both maintenance and lactation. Thus, stopping lactation should stop the “draw-down” of energy reserves.

**Fig. 1: Effect of weaning date on change in cow body condition score**



Additional data in the Nebraska trial also showed that calf gains were minimal after October 13. Therefore, calves should have been weaned by then in that location. Weaning date may vary by location and year, but weaning before cows drop to a BCS of 4 (you can see their last two ribs) and calves stop gaining is critical. First-calvers are most likely to be thin at weaning. If your pastures are limiting, I would go ahead and wean their calves now.

Body condition scores (BCS) are a good way to monitor the nutritional adequacy of your feeding/grazing program. Body condition at the time of breeding (next spring) is critical to reproductive success. If the cows enter the winter feeding period in poor condition and you don't correct it, pregnancy rates will be decreased. Calf survival for the coming calving season can be decreased, too.

Since reproductive efficiency is the most important indicator of profitability, we must keep the cows in good body condition (BCS 5) this winter. You can't do this if you start with poor cows and don't feed them adequately this winter. So... regardless of an anticipated feed shortage, we have to feed the cow herd adequately this winter to avoid open cows next year.

### **Epizootic Hemorrhagic Disease Outbreak in Whitetail Deer and Cattle.**

*Dr. Lucky Pittman, MSU-BVC Pathology and Dr. Kent Whitaker, MSU-BVC Virology*

In mid-July, Breathitt Veterinary Center diagnosticians began receiving case submissions and telephone calls regarding deaths of whitetail deer in captive cervid rearing facilities, as well as from landowners and KDFWR officers finding dead deer in the wild. Daily submissions, frequently involving multiple animals from multiple premises, have continued for the intervening 6-8 weeks. Findings have consistently been suggestive of Epizootic Hemorrhagic Disease (EHD). KDFWR officials have currently tallied 30 KY counties as having reported EHD cases in whitetail deer, mostly in the Green River, Pennyryle, and Jackson Purchase areas.

Epizootic Hemorrhagic Disease is an insect-vectored viral disease, transmitted by *Culicoides spp.* midges, primarily affecting whitetail deer, but occasionally spilling over into cattle and other ruminant species. Two serotypes of EHD virus (1,2) and five serotypes of Bluetongue virus (2,10,11,13,17) are common in the USA, and all may cause this disease, but EHDV type 2 is the serotype most frequently encountered from year to year. Cases of EHD are seen in free-ranging deer almost every year, but major epizootics occur every 2 to 4 years, with morbidity and mortality rates in wild deer typically below 25%, but

occasionally as high as 50%. Affected deer will frequently be found moribund or dead near or in water sources such as ponds, streams, and creeks. Outbreaks of EHD typically occur in late summer/early fall, ending soon after frosts diminish insect vector numbers.

The majority of deer submitted to MSU-BVC have originated from captive cervid facilities; clinical histories have been characteristic of the peracute form of the disease, with animals succumbing within 2-3 hours of first being observed ill. In many of these animals, gross lesions observed at necropsy have been limited to pulmonary congestion and edema and (+/-) submandibular edema. As the season has progressed, other animals have exhibited more pronounced lesions typically reported for the acute phase of the disease – ulceration of oral mucous membranes, particularly the dental pad, hemorrhage &/or ulceration in the forestomachs, hemorrhages in the myocardium and pulmonary arteries, coronitis, and enteritis. Mortality rates in excess of 80% have been reported from some of these captive cervid operations, but mortality rate in the free-ranging deer population will be more difficult to quantify.

Approximately 3 weeks into the current outbreak, reports of EHD-like disease in cattle began to be reported by veterinary practitioners. Clinical signs reported in affected cattle included one or more of the following: coronitis/laminitis, lameness and/or reluctance to move, fever, diarrhea, oral mucosal (dental pad, tongue) ulceration, hypersalivation, cracked/ulcerated skin on muzzle and/or udder. To date, 20 of 21 serum samples submitted from cattle with suspected EHD have been seropositive for EHDV, with 10 of 21 also being positive for antibodies against Bluetongue virus. Virus isolation studies on whole blood from affected cattle are in progress, with results pending.

Historically, the majority of infected cattle recover uneventfully, although EHDV infection is occasionally implicated as a cause of abortion in clinically affected cattle.

Questions asked by the concerned public frequently center around safety of pets and family members in the face of such an outbreak, as well as regarding the safety of meat products harvested from potentially-infected animals.

EHD virus does not cause disease in humans, dogs, cats, horses, or other non-ruminant animals. Goats appear to be refractory to infection; sheep have been experimentally infected, but do not develop clinical disease.

Venison from deer which appear to be clinically normal and healthy should be perfectly safe for human consumption. However, animals which develop the chronic form of this disease may exhibit progressive emaciation, sloughed hooves or interrupted patterns of hoof growth, and may have internal abscesses secondary to vasculitis and thrombosis.

Affected animals should be reported to your local KDFWR conservation officer

## **Epizootic Hemorrhagic Disease (EHD)**

*Dr. Patty Scharko, Extension Ruminant Veterinarian, University of Kentucky*

Epizootic Hemorrhagic Disease (EHD) is common to white-tailed deer, but rarely affects other species. It occurs in the driest part of the year when conditions are just right for biting gnats, the carriers of the disease.

Numerous cases of deer deaths have been reported in the western region of Kentucky in July and August. Recently, several livestock farms have had cattle affected. Sporadic cases can occur in livestock during an epizootic, usually affecting a single animal in a herd. In affected cattle, they have crusty, cracked skin on muzzle & udder (muzzles often look like you took a blowtorch and flamed them), fever, +/- diarrhea, and +/- lingual ulcerations. Because these signs can be similar with Foot and Mouth Disease (FMD), Vesicular

Stomatitis (VS), Bluetongue (BT) or EHD, producers should contact their veterinarian for diagnosis and treatment.

USDA Veterinary Services investigated one farm as a suspect Foreign Animal Disease. Samples were collected in the field and sent to Plum Island - all were confirmed to be EHD positive and FMD/VS/BT negative.

Most affected cattle recover uneventfully with supportive care, but they do tend to lose several hundred pounds of weight. During the acute phase of the disease, their feet and mouth are so painful. It is important to bring affected cattle closer to evaluate, feed, and especially have easy access to water.

Both EHD and bluetongue viruses are spread by the same midge (Culicoides - 3 species), and occasionally the 2 viruses travel in parallel or series. This is significant because you can't really tell the two viruses apart when they infect deer. Bluetongue in sheep is a serious disease with high morbidity and, usually, low mortality. Cattle usually show no signs but are the reservoir for the bluetongue virus. Occasionally abortions and other signs appear in cattle with either virus infection. However, this is not the usual. Producers, especially sheep producers, would be well advised to call their veterinarian if they see signs of high fever, depression, loss of appetite, and possibly swelling and ulceration of the tongue or mouth (in sheep) in a number of animals.

#### **EHD Details:**

- EHD does not affect humans, nor impact the safety of consumed deer.
- EHD is caused by the bite of an infected midge and once there has been a hard freeze, the insects die off for the winter, eliminating new cases of EHD.
- Most significant disease of white-tailed deer in the United States
- Endemic to Southeastern United States.
- Outbreaks often associated with drought.
- Can result in high deer mortality in some areas.

#### **EHD Transmission:**

- The EHD virus is not appear to be transmissible to humans.
- The virus deteriorates in <24 hours after death and cannot be spread from dead deer carcasses
- The virus does not appear to be a threat to livestock- sporadic cases can occur during an epizootic outbreak.
- There appears to be no risk associated with direct exposure to the virus or in consuming a deer that has been infected with the virus.
- However, never kill or eat a sick deer.
- Use rubber gloves to field dress deer.

[http://www.dnr.state.oh.us/Home/wild\\_resourcessubhomepage/dealing\\_with\\_wildlifeplacehol](http://www.dnr.state.oh.us/Home/wild_resourcessubhomepage/dealing_with_wildlifeplacehol)

## **Taking Stock and Moving Forward**

*Dr. John Hall, Beef Extension Specialist, Virginia Tech University*

August is usually a hot but fairly easy time in the cow calf operation. However, this year the dark clouds on the horizon don't appear to have much rain in them. The drought continues to expand and worsen in most parts of Virginia and the Mid-Atlantic. This August is a good time to take stock of your resources and cattle. Then use this information to make management decisions.

Taking Stock - Feed inventory is the first item that needs to be addressed. Most pastures are in poor shape and first cutting hay supplies are short. Prospects for an above average second cutting are not looking real good. Here are some taking stock items to consider:

- \* Estimate current total hay supplies - not just bales but tons of hay. Don't overestimate bale weight
- \* Take forage samples of hay and analyze them for quality
- \* Make a realistic estimate of second cutting hay yield prospects
- \* Find out current availability and price of by-product feeds in your area
- \* Consider temporary fence and water options
- \* Inventory the cow herd - on paper divide cattle into the following groups
- \* Developing replacement heifers
- \* Pregnant heifers
- \* Young cows
- \* Mature cows
- \* Old cows
- \* Bulls

Estimate the total feed needs from now until April 2008. Each cow or bull will need at least 30 to 35 lbs of hay or equivalent in pasture per day. Pregnant heifers and developing heifers will need 20 to 30 lbs of hay or equivalent per day. Feeder calves will need 12 to 15 lbs. per day. These numbers include some wastage of feed, but operations with excessive feed wastage will require more lbs per animal. Then compare the feed needed to current feed available.

Here's an example:

From August 1, 2007 to April 20, 2008 is 263 days. Cattle inventory and feed (dry matter) needs for a 60 cow spring calving herd are shown in table 1. Total tons of feed needed is 346.9 tons. Current feed inventory includes 120 round bales averaging 1100 lbs, 160 acres of pasture, and 45 acres of hayland. Each acre of grass contains 200 to 300 lbs of hay equivalent per inch of grass above 3 inches. Utilization rate of rotated pasture is 50%. In other words, cattle can only eat about half of the grass available. The rest of the grass is trampled or soiled by urine and feces. Grass is currently growing at about 3 to 4 inches per month.

Table 1. Cattle inventory and feed requirements until April 2008.

	No. Head	Lbs. Dry Matter (Hay equivalent) needed/head/day	Total Lbs. Dry Matter (Hay equivalent) needed/group until 4-20 (or sold)	Tons needed
Cows	60	32	504,960	252.5
Bulls	2	35	18,410	9.2
Pregnant heifers	10	28	73,640	36.8
Replacement Heifers	12	20	63,120	31.6
Feeder calves to be sold in October	45	10	33,750	16.9

Total	129		693,880	346.9
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An estimated feed inventory is shown in Table 2. This inventory assumes pasture will continue to grow at 4 inches per month through October and utilization is 50%. Second cutting hay will be harvested in September. Current feed inventory is in essence all the forage available until mid-April 2008.

Table 2. Estimated current feed inventory

Resource	Unit	Lbs. per unit available	Total pounds available	Tons available
Hay	120 bales	1100	132,000	66.0
Pasture	160 Acres	1600	256,000	128.0
Hayland	45 Acres	1400	63,000	31.5
Total	325		451,000	225.5

Comparing the dry matter needs to current availability, it is easy to see there is a short fall of over 120 tons. If we had to purchase this forage at \$80/ton, then we would be spending an extra \$9,600 or almost another \$115 per animal to make it until next spring. Of course, this is a worst case scenario with little expectation of improved moisture this fall. Still we need to consider our options for making it through the winter.

Moving forward - Reduce cattle inventory. One option is to sell all animals that do not have the potential to produce a quality calf to sell next fall. In addition, this includes animals that can relatively easily be replaced. Animals that fall into this category are open cows, old cows, weaned replacement heifers, and bulls. If we take this drastic step, the forage shortfall is cut to one third to 40 tons (compare Table 2 and 3). However, we still will have the same number of calves to sell next fall. Decisions on buying replacement bulls and pregnant replacement heifers can be deferred to next spring when pasture and feed availability may be improved.

Table 3. Feed needs for reduced cattle inventory.

	No. Head	Lbs. Dry Matter (Hay equivalent) needed/head/day	Total Lbs. Dry Matter (Hay equivalent) needed/group until 4-20 (or sold)	Tons needed
Cows	50	32	420,800	210.4
Bulls	0	35	0	0.0
Pregnant heifers	10	28	73,640	36.8
Replacement Heifers	0	20	0	0.0
Feeder calves to be sold in October	45	10	33,750	16.9
Total	105		528,190	264.1

Stockpile forage. Another possibility is to graze hay fields instead of making second cutting hay, and stockpile 45 acres of pasture. To stockpile during this dry weather 40 units of N is recommended. Utilization of stockpiled fields is higher than pasture at about 70%. This reduces our feed shortfall to 30 tons (Table 4). This would mean purchasing an additional \$2,400 of hay (or about \$2,000 worth of corn gluten feed) plus 1800 units of N.

Table 4. Impact on grazing hay fields and stockpiling on forage availability.

Resource	Unit	Lbs. per unit available	Total pounds available	Tons available
Hay	120 bales	1100	132,000	66.0
Pasture	115 acres	1600	184,000	92.0
Hayland	45 acres	1400	63,000	31.5
Stockpiled grass	45 acres	2000	90,000	45.0
Total	325		469,000	234.5

What about rain. If we get a good fall combined with reducing cow numbers and stockpiling, then things look pretty good (Table 5). In fact, we end up with a surplus of about 20 tons of forage. This may allow the operation to keep one of the bulls and still have hay to sell next spring. By next spring, hay may be a very profitable commodity.

Table 5. Effect of adequate fall rain, grazing hay fields, and stockpiling on forage availability.

Resource	Unit	Lbs. per unit available	Total pounds available	Tons available
Hay	120	1100	132,000	66.0
Pasture	115	2000	230,000	115.0
Hayland	45	1600	72,000	36.0
Stockpiled grass	45	3000	135,000	67.5
Total	325	7700	569,000	284.5

The bottom line - The examples above only consider the dry matter intake of the animal as met by hay and pasture. In addition, these examples assume that forage quality is adequate to meet animal needs. Producers should be very careful to obtain forage analyses and work with their Extension agent or nutritionist to make sure hays meet the needs of the animal. It will not be uncommon for energy supplements to be needed in addition to hay, especially for pregnant heifers and replacement heifers.

To continue to be a viable and perhaps profitable operation, producers will need to consider a combination of strategies to make it through the drought. The first and most important consideration is to make a realistic inventory of feed resources and cattle needs. Then producers should employ a combination of:

- \* Cattle inventory reduction
- \* Alternative grazing and forage practices
- \* Feeding of alternative feeds

Producers should try to consider all the options, and should not be afraid to seek assistance from Farm Management Extension Agents or other Agricultural Extension agents. Remember prayer never hurts either.

## **Roberts Agricultural Commodity Market Report**

*Mike Roberts, Commodity Marketing Agent, Virginia Tech University*

LIVE CATTLE futures on the Chicago Mercantile Exchange (CME) were mixed on Monday. The AUG'07LC contract closed at \$94.20/cwt, off \$0.175/cwt but \$2.250/cwt higher than last Monday. This contract is set to expire on Friday. The OCT'07LC contract settled at \$97.750/cwt, off \$0.075/cwt but \$2.10/cwt higher than last week at this time. DEC'07LC futures traded higher \$0.025/cwt finishing at \$100.750/cwt. Support was seen from lower corn and wheat prices, expectations for renewed South Korean and Japan imports, and stronger cash prices. For the week ended August 25, USDA reported cash cattle \$2.00/cwt - \$2.50/cwt higher than the previous week at \$92.61/cwt for steers and \$92.76/cwt for heifers. Cash cattle are expected to go \$1-\$1.50/cwt higher this week. This time last year steers were reported at \$87.54/cwt while heifers were running \$87.64/cwt. Weighing on the market were profit taking and spreading after the market gapped up last Friday. On Monday, USDA raised the choice boxed beef cutout by \$1.07/cwt to \$144.22/cwt. According to HedgersEdge.com, the average beef packer cutout margin for Monday was at a negative \$29.95/head, \$21.50/head worse than last Friday and \$26.45/head worse than last Monday. Cash sellers are still looking at good prices. It might be wise to hold off pricing near-term corn inputs another week or two.

FEEDER CATTLE contracts at the CME were firm on Monday with three distant deferreds down somewhat. The AUG'07FC contract closed at \$117.775/cwt, up \$0.200/cwt and \$1.325/cwt higher than last Monday. SEPT'07FC futures finished at \$118.575/cwt, up \$0.525/cwt and \$1.200/cwt higher than a week ago. These contracts set fresh highs. Feeders were supported all day by lower grains, strong technicals and firm cash markets. Cash feeders also showed strength in Oklahoma City where USDA reported sales there \$1-\$2/cwt higher in spite of large numbers to be sold. The latest CME Feeder Cattle Index for August 24 was placed at \$117.50/cwt, up \$1.19/cwt and the highest it's been since September 19, 2006. It is now a very good idea to aggressively sell cash feeders getting them off pastures. Hold off pricing corn supplies for another two weeks.