



# CATTLEMAN'S CORNER



Division of Agriculture Sciences and Natural Resources \* Oklahoma State University

NOV/DEC 2015

## Poor temperament adversely affects profit

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

October is a traditional weaning and culling time for spring-calving herds. This is a time when producers decide which cows no longer are helpful to the operation and which heifer calves will be kept for future replacements. Selecting against ill-tempered cattle has always made good sense. Wild cattle are hard on equipment, people, other cattle, and now we know that they are hard on the bottom line.

Mississippi State University researchers (Vann and co-workers, 2006. Southern Section of American Society of Animal Science) used a total of 210 feeder cattle consigned by 19 producers in a "Farm to Feedlot" program to evaluate the effect of temperament on performance and net profit. Temperament was scored on a 1 to 5 scale (1=nonaggressive, docile; 5=very aggressive, excitable). Three measurements were used: pen score, chute score, and exit velocity. Measurements were taken on the day of shipment to the feedlot. Exit velocity is an evaluation of temperament that is made electronically by measuring the speed at which the animal leaves the confinement of the chute. Exit velocity and pen scores were highly correlated. As pen scores increased, so did exit velocity. As pen score and exit velocity increased, health treatments costs and number of days treated increased, while average daily gain and final body weight decreased. As pen score increased, net profit per head tended to decline. Pen temperament scores and net profits per head were as follows: 1=\$121.89; 2=\$100.98; 3=\$107.18; 4=\$83.75; 5=\$80.81. Although feed and cattle price relationships have changed since this data was collected, one would expect similar impacts from the temperaments of cattle under today's economic situation.

Colorado State University (Voisinet, 1996) conducted an experiment examining the effects of temperament on weight gains and the incidence of dark cutting. Cattle were temperament ranked, on a 5 point system, while animals were held on a single animal scale. Their results show that there is a highly significant effect of temperament ranking on average daily gain. Animals exhibiting the highest temperament ranking also have the lowest average daily gains. Conversely, animals that were the calmest had the highest average daily gains. Their results also show that those cattle that have the highest temperament ranking, those that were berserk, also have the highest incidence of dark cutters. Dark cutter carcasses will be discounted approximately 20-25 dollars per hundred pounds compared to carcasses with normal colored lean. In fact 25% of the cattle that had a temperament score of 5 exhibited dark cutting, while less than 5% of the cattle that had temperament scores of 1,2,3, and 4 exhibited dark cutting.

"Heritability" is the portion of the differences in a trait that can be attributed to genetics. The heritability of temperament in beef cattle has been estimated to range from 0.36 to 0.45. This moderate level of heritability indicates that real progress can be made by selecting against wild cattle. Whether we are marketing our calf crop at weaning or retaining ownership throughout the feedlot phase, wild, excitable cattle are expensive to own and raise.

## More steers in feedlots

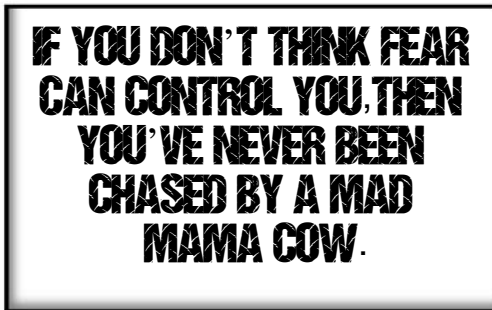
Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

The October USDA monthly Cattle on Feed report showed no surprises. September placements were close to expectations at 96 percent of last year, as were marketings at 98 percent of one year ago, leading to an October 1 on-feed total of 10.2 million head or 102.3 percent of last year. The relatively strong marketings number was confirmed by a 5.8 percent year over year increase in fed steer slaughter in September. This is an indication that progress was made to clean up a bulge of heavy fed cattle in the last half of September.

There are indications that more progress was made in the first half of October though carcass weights have continued to increase, with steer carcasses averaging 928 pounds for the week ending October 10. This value is 29 pounds heavier than the 899 pound average for the same period last year. Interestingly, bull carcasses currently average 899 pounds, the

same as steers one year ago and 29 pounds less than current steer carcass weights. Steer carcass weights exceeded bull carcass weights for the first time in October, 2011 and have done so a few months seasonally since then. However, steer carcass weights have exceeded bull carcass weights by a record amount the past two weeks.

The quarterly breakdown of steers and heifers in feedlots in the latest report confirms, as expected, that heifers are being retained for herd expansion. The number of heifers on feed on October 1 was down 7 percent from one year earlier, the



thirteenth consecutive year over year decrease in quarterly heifers on feed since July, 2012. At the same time, the inventory of steers in feedlots was up 7.4 percent, continuing a strong trend of year over year increases in steers on-feed in 2015. Fewer heifers and more steers in feedlots have pushed the ratio of steers to heifers up sharply in recent months reflects the changing demographics of fed cattle production during herd expansion. The ratio of steers to heifers in feedlots since April of this year has reached levels not seen since the cyclical expansion in the early 1990s. The quarterly data on the breakdown of feedlot inventory only goes back to 1994. Similar indications are shown by the ratio of steer to heifer slaughter, for which the data goes back much farther. A 12 month moving average of the ratio of steer to heifer

monthly slaughter for September is at the highest level since June, 1975. The current ratio of steer to heifer slaughter exceeds levels that occurred in the cyclical expansion of the early 1990s as well as the truncated expansion in 2004-2005.

This confirms, not only that the industry is in the midst of herd expansion, but that it is a very aggressive herd expansion. It is not clear how long this aggressive herd expansion will persist nor whether the recent market shakeup may have tempered expansion plans. How much herd expansion will occur and how fast it will happen are both moving targets that will be determined by both demand and supply factors in the coming months/years.

## **Maintain body condition between calving and the breeding season. (“Don’t let ‘em slip”)**

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Body condition score at calving is the single most important trait determining when a cow resumes heat cycles and therefore when she is likely to re-conceive for the next calf crop. However, it is also very important to avoid condition loss between calving and the breeding season to maintain excellent rebreeding performance. Fall calving cows normally are in good body condition when they calve in September and October. Body condition changes from the time the cow calves until she begins the breeding season can also play a significant role in the rebreeding success story. This appears to be most important to those cows that calve in the marginal condition score range of "4" or "5".

A two-year Oklahoma State University study shows the impact of losing body condition in the period from calving to the start of the breeding season. This study was conducted with spring-calving cows, but the “lesson-learned” applies to fall calving cows as well. Seventy-five cows in year 1 and seventy cows in year two were randomly allotted to LOSE body condition from calving (beginning February 11) until mid April or MAINTAIN body condition during the same time frame. Cows were exposed to fertile bulls for 90 days each year starting May 1. Pregnancy rate was determined at 70 days after the breeding season. **Cows that were fed to maintain body condition from calving until the beginning of the breeding season averaged 94% pregnant, while those that calved in similar body condition but lost nearly one full condition score were 73% rebred.** The body condition that was maintained throughout late pregnancy until calving time must be maintained until rebreeding to accomplish high rebreeding rates.

By studying the nutrient requirement tables for lactating beef cows, we can learn that an 1100 pound cow needs about 2.5 pounds of crude protein per day. She should receive approximately 1 pound of protein from the standing grass and/or grass hay she consumes free choice. Therefore we need to provide 1.5 pounds of protein via supplements. If we are feeding a high protein cube such as a 40% protein supplement, she will need about 3.75 pounds of supplement daily. If

the supplement is a 30% supplement then 5 pounds per day will be needed. Maintaining the body condition through the breeding season should be rewarded with a high percentage calf crop the following year.

## **Mineral program for cows on wheat pasture**

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Some Oklahoma cow calf producers will use wheat pasture as a major source of winter feed for beef cows. If wheat pasture is the predominant feed in the diet of mature beef cows, providing an appropriate “wheat pasture” mineral mix will be helpful in preventing grass tetany at, or after the calving season begins.

Grass tetany, caused by magnesium deficiency does not seem to be a major problem in Oklahoma although occasional cases are reported. It typically occurs in beef cows during early lactation and is more prevalent in older cows. The reason is thought to be that older cows are less able to mobilize magnesium reserves from the bones than are younger cows. Grass tetany most frequently occurs when cattle are grazing lush immature grasses or small grains pastures and tends to be more prevalent during periods of cloudy weather. Symptoms include incoordination, salivation, excitability (aggressive behavior towards humans) and, in final stages, tetany, convulsions and death.

It is known that factors other than simply the magnesium content of the forage can increase the probability of grass tetany. High levels of potassium in forages can decrease absorption of magnesium and most lush, immature forages are high in potassium. High levels of nitrogen fertilization have also been shown to increase the incidence of tetany although feeding protein supplements has not. Other factors such as the presence of certain organic acids in tetany-causing forages have been linked with tetany. It is likely that a combination of factors, all related to characteristics of lush forage are involved.

When conditions for occurrence of tetany are suspected, cows should be provided mineral mixes containing 12 to 15 percent magnesium and be consumed at 3 to 4 ounces per day. It is best for the mineral supplements to be started a couple of months ahead of the period of tetany danger so that proper intake can be established. Because tetany can also occur when calcium is low, calcium supplementation (7%) should also be included. Symptoms of tetany from deficiencies of both minerals are indistinguishable without blood tests and the treatment consists of intravenous injections of calcium and magnesium gluconate, which supplies both minerals.

Cows grazing lush small grain pastures should be fed mineral mixes containing both calcium and magnesium. More information about mineral supplementation for grazing cattle can be found in the Oklahoma State University Extension Circular E-861 [Vitamin and Mineral Nutrition of Grazing Cattle](#) .

## **World beef trade: Exports**

Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

Among top global beef exporters, the 2016 market situation is quite variable according to the latest USDA World Markets and Trade report for livestock and poultry. India passed Brazil in 2014 to become the number one beef exporter in the world. India, which exports mostly meat from water buffalo (also known as carabeef) continues to see strong demand from southeast Asia and the halal processing of Indian beef makes the meat popular in Muslim countries. Indian beef exports, which have increased over three-fold in the last six years, are expected to increase again in 2016 keeping India as the top global beef exporting country.

Brazil is expected to regain the number two position in global beef exports in 2016 with an increase in exports from the 2015 level but still below the record level of 2014. Brazil overtook Australia in 2004 as the leading beef exporter, losing that position back to Australia for one year in 2011, before being overtaken by India in 2014 and also by Australia again in 2015. Brazil's weak currency is expected to boost 2016 beef exports but the weak Brazilian economy will limit both beef production and domestic consumption, keeping Brazil as the number two beef exporter in 2016

Australia is projected to drop back into the number three spot for beef exports in 2016 after temporarily overtaking Brazil for the second largest beef export total in 2015. Drought-forced liquidation in Australia resulted in a jump in beef production and exports in 2014 and 2015. Whether or not drought continues, decreased herd inventories in Australia will result in decreased beef production and exports in 2016. At some point, improving forage conditions will prompt herd rebuilding in Australia and result in additional supply squeeze due to heifer retention. A significant portion of increased Australian beef exports in 2014 and 2015 have gone to the U.S. In 2015, Australian exports of beef to the U.S. have exceeded the tariff rate quota with exports at the end of the year subject to over-quota tariff. Australian beef exports to the U.S. are expected to moderate in 2016 from the sharply higher levels of 2014 and 2015.

The U.S. has been the fourth largest global beef exporter for several years and is expected to continue in that position in 2016. U.S. beef exports experienced double-digit decreases in 2015 as a result of reduced beef production, high domestic beef prices and a strong U.S. dollar combining to challenge beef exports. Exports are down sharply in 2015 to most major destinations, including Japan, Mexico, Canada and Hong Kong. The only exception is South Korea, still up for the year to date but down year over year in the latest monthly data. U.S. beef exports should stabilize and perhaps grow modestly in 2016 as domestic beef production begins to grow and beef prices moderate somewhat. However, dollar strength is likely to continue and will be a headwind for U.S. beef exports.

**Even if you are on the  
right track, you'll get run  
over if you just sit there.  
Will Rogers**

The next tier of global beef exporters are significantly smaller than the top four and include New Zealand in fifth place, followed by Paraguay, Uruguay, Canada, the European Union and Mexico, in that order if current 2016 projections hold. These five countries export roughly similar quantities and the rankings will likely change due to production and market conditions and trends in the countries. Exports from mature markets and long-time global market players such as Uruguay, Canada and the European Union are relatively stable while beef export newcomers Paraguay and Mexico are still growing rapidly and are likely to move up in the rankings over time. Argentina, currently out of the top ten global beef exporters, may see modest export growth in 2016 but will likely remain a minor player in global beef markets.

## **How much hay will a cow consume?**

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Estimating forage usage by cows is an important part of the task of calculating winter feed needs. Hay or standing forage intake must be estimated in order to make the calculations. Forage quality will be a determining factor in the amount of forage consumed. Higher quality forages contain larger concentrations of important nutrients so animals consuming these forages should be more likely to meet their nutrient needs from the forages. Also **cows can consume a larger quantity of higher quality forages.**

Higher quality forages are fermented more rapidly in the rumen leaving a void that the animal can re-fill with additional forage. Consequently, forage intake increases. For example, low quality forages (below about 6% crude protein) will be consumed at about 1.5% of body weight (on a dry matter basis) per day. Higher quality grass hays (above 8% crude protein) may be consumed at about 2.0% of body weight. Excellent forages, such as good alfalfa, silages, or green pasture may be consumed at the rate of 2.5% dry matter of body weight per day. The combination of increased nutrient content AND increased forage intake makes high quality forage very valuable to the animal and the producer. With these intake estimates, now producers can calculate the estimated amounts of hay that need to be available.

Using an example of 1200 pound pregnant spring-calving cows, lets assume that the grass hay quality is good and tested 8% crude protein. Cows will voluntarily consume 2.0% of body weight or 24 pounds per day. The 24 pounds is based on 100% dry matter. Grass hays will often be 7 to 10% moisture. If we assume that the hay is 92% dry matter or 8% moisture, then the cows will consume about 26 pounds per day on an "as-fed basis". Unfortunately we also have to consider hay wastage when feeding big round bales. Hay wastage is difficult to estimate, but generally has been found to be from 6% to 20% (or more). For this example, lets assume 15% hay wastage. This means that approximately 30

pounds of grass hay must be hauled to the pasture for each cow each day that hay is expected to be the primary ingredient in the diet.

After calving and during early lactation, the cow may weigh 100 pounds less, but will be able to consume about 2.6% of her body weight (100% dry matter) in hay. This would translate into 36 pounds of “as-fed” hay per cow per day necessary to be hauled to the pasture. This again assumes 15% hay wastage. Accurate knowledge of average cow size in your herd as well as the average weight of your big round bales becomes necessary to predict hay needs and hay feeding strategies.

The best sermons  
are lived,  
not preached.  
Cowboy Wisdom

The *Cattleman's Corner* newsletter is distributed bi-monthly by the following:

*Oklahoma Cooperative Extension Service  
707 West Electric Avenue  
McAlester, Oklahoma 74501  
918/423-4120  
[www.oces.okstate.edu/pittsburg](http://www.oces.okstate.edu/pittsburg)*

This Newsletter is one way of communicating cattle information to those interested.

**David Cantrell**  
*Extension Educator, Agriculture, CED*  
[david.cantrell@okstate.edu](mailto:david.cantrell@okstate.edu)

Prepared By: Stephanie Wilson,  
[stephanie.wilson12@okstate.edu](mailto:stephanie.wilson12@okstate.edu)

*The Oklahoma Cooperative Extension Service offers its programs to all eligible persons regardless of race, color, national origin, religion, sex, age disability or status as a veteran and is an equal opportunity employer.*