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Dr. Jason Cleere, Editor
Assistant Professor and Extension Beef Cattle Specialist
Texas A&M Kleberg Center - College Station

As the winter issue of Beef Cattle Penning is being distributed, cow-calf producers are in the middle of the winter feeding season. Across central Texas limited to no rainfall is still continuing to plague cattle producers and some areas are experiencing exceptional drought conditions. Grain, fuel and fertilizer prices dropped during the fall and unfortunately cattle prices fell sharply as well. Lately, trying to predict the cattle and commodity markets is like trying to predict Texas weather. Higher input costs over the past two years have forced us to spend more time thinking about the efficiency of our cattle operations.

This issue of Beef Cattle Penning will include the following topics:

Is Your Cow Herd Efficient?, Maximize the Revenue from Market Cull Cows, Pasture Bloat and Texas A&M Beef Cattle Short Course.

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PASTURE BLOAT

SAVE THE DATE! - TAM BCSC

Upcoming Events

*Pasture & Livestock Management Workshop for the Novice I
March 24-26, 2009*

*Pasture & Livestock Management Workshop for the Novice II
March 31-April 2, 2009*

*55th Annual Texas A&M Beef Cattle Short Course
August 3-5, 2009*

IS YOUR COW HERD EFFICIENT?

Dr. Stephen P. Hammack
Professor and Extension Beef Cattle Specialist Emeritus
Texas A&M AgriLife Center - Stephenville



We must become more efficient in order to survive. Sound familiar? Okay, but what is efficiency? My favorite dictionary (Webster's Unabridged, 1940) says simply that efficiency is the ratio of useful effect to expenditure. Another way of saying that is output relative to input. In the beef cow business there is biological efficiency, how much of some product you get compared to what you have to put in to get it. There is also economic efficiency or profit. Again from Webster's, profit is excess of value received beyond expenditure. In other words, it's dollars out versus dollars in.

A producer told me recently, "My weaning weights this year averaged 648 pounds, and 20 years ago they probably wouldn't have been even 550." Since I know him pretty well I asked if that meant he'd become more efficient, or more profitable." He said, "Well, that's more pounds and we still sell calves by the pound." But weight alone (output) can't measure efficiency, because there's no accounting for input.

I read recently that pounds of beef produced per cow has increased more than 50 percent over the last 40 years and that meant greater efficiency. Pounds of beef is a measure of output and a cow could be a measure of the input needed to get that beef. But is a cow today the same as 40 years ago? No, they're now bigger and are producing bigger calves, resulting in bigger carcasses and therefore more beef per cow. And we are finishing most of our calves today, instead of slaughtering them right off the cow as was done with a good many calves 40 years ago. Neither average weaning weight nor beef per cow measure biological efficiency and they certainly say nothing about economics.

Besides not accounting for input, average weaning weight is not even a complete measure of output. How many calves did you have to market? That brings in reproduction and survival. So how about measuring average weaning weight per cow exposed to breeding, which includes reproduction, survival, and production? That's how biological efficiency is often measured in a beef cow herd.

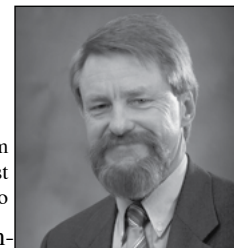
But pounds per cow exposed still says nothing about economics. To deal with that, Unit Cost of Production can be used. For beef cow enterprises that's total cost per pound of calf produced. But calves are not all the same. Lighter calves almost always sell for more per pound than heavier calves. And even calves of the same weight don't all sell for the same price. Some are more highly valued than others.

Every measure discussed so far has been on a per-head basis. Is that a good way to measure efficiency? Cow herds mostly operate on a fixed resource, a piece of range or pasture land. So, it's the total of what happens on that resource that is relevant, not some average figure per cow. A 1400 pound cow should be able to produce more calf weight than a 1000 pound cow.

But we can't run as many of the larger cows on the same land. Does that mean that

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PASTURE BLOAT



Dr. Ted McCollum
Professor and Extension Beef Cattle Specialist
Texas A&M AgriLife Center - Amarillo

Foamy or frothy bloat reduces performance and can potentially lead to death of cattle. Frothy bloat occurs when the gases normally produced during ruminal fermentation cannot be expelled from the rumen by eructation (belching). At the onset of bloat, cattle may cease eating and the bloat may dissipate. As the severity of bloat increases, the rumen becomes more distended and the level of discomfort increases. If no intervention occurs, death can result from respiratory distress and heart failure.

Anytime cattle are consuming highly digestible feedstuffs and forages the potential for frothy bloat exists. Carbohydrates and soluble proteins from these feeds are rapidly degraded and fermented in the rumen. Slime-producing bacteria that degrade soluble proteins and small feed particles produce a slime that can develop into a stable, proteinaceous foam. Bloat occurs when the gases produced by the fermentation become trapped in this foam and cannot be expelled.

Frothy bloat on pasture is usually associated with actively growing, highly digestible forages that contain low fiber and relatively high crude protein (and soluble protein) levels. Among these forages are small grains forages and legumes such as alfalfa and red and white clover.

The occurrence of bloat is affected by a number of factors – soil fertility, climatic conditions, stage of plant development, grazing management, and animal predisposition – among others. Because of the multiple factors, reducing or preventing bloat may require multiple management approaches on a single operation and, the success, or lack thereof, of a preventative measure can vary from year-to-year and operation-to-operation.

Soil fertility practices may influence the incidence of bloat on small grains pastures. Work in the Rolling Plains suggests that high, single applications of N on wheat increases the potential for bloat.

Stage of plant development affects the concentration of carbohydrates and soluble proteins that can provoke bloat. Small grains bloat is typically a problem in the late winter/early spring when the forage is coming out of winter dormancy. Occasionally fall bloat can be a problem. With legumes, bloat risk changes with stage of plant development. For instance, bloat risk on alfalfa decreases as the plant matures and blooms. Knowing when bloat risk increases and subsides during the grazing season aids the timely application of prevention practices.

For pastures containing bloat-provocative legumes, it is recommended that the legumes comprise no more than 50% of the forage mix. An alternative is to plant adapted legumes that are less bloat provocative.

**Focus on turn-out practices and forage availability this winter for a smoother adjustment to spring pastures.*

Grazing programs should focus on turn-out practices and forage availability. Prior to turning cattle onto pasture ensure that the cattle are full. This will tend to limit immediate grazing activity and forage consumption. Likewise, if cattle are managed under a rotational grazing scheme, judiciously manage forage availability. Moving cattle from pastures with a limited forage supply (and hence limited consumption) to fresh paddocks with an abundant supply (and hence increased consumption) may predispose the cattle to bloat. Adjust the rotation so cattle are not rotated from a limited forage supply to an abundant forage supply.

During bloat risk periods, providing access to hay or other forages may reduce the occurrence of bloat. Assuming the cattle will consume the hay/forage, consumption of the bloat-provocative forage may be reduced and hence reduce the risk of bloat.

Poloxalene (Bloatguard) is a mild detergent that reduces the foam in the rumen and hence can reduce the incidence of bloat. The product is available in different forms – blocks, mineral supplements, liquids, top dresses. To be effective, the cattle must consume a sufficient amount of poloxalene daily. Poloxalene in a self-fed form will probably never totally prevent bloat because of the variation in daily consumption by individual animals. Handfeeding poloxalene in a larger volume of feed will increase the consistency of daily intake.

Ionophore feed additives can also reduce the occurrence of bloat. Studies on irrigated wheat in New Mexico demonstrated that Rumensin dramatically reduced the incidence and severity of bloat. Ionophores can be delivered in blocks, mineral supplements, pelleted supplements and mixed feeds. As noted with poloxalene, these feed additives will not totally eliminate bloat. In addition to aiding with bloat prevention, the ionophores will improve daily weight gain.

Some cattle are predisposed to bloat. This may reflect physiological differences, differences in ruminal microbial populations, differences in forage selection and forage intake, or other factors. If animals are chronic bloaters, the best approach is to remove them from the group.

Several factors can lead to a bloat problem and several management practices can aid in reducing the occurrence of bloat. Because multiple factors are involved, no one single practice will be completely effective all of the time. Knowledge of when bloat occurs and why it occurs can help in developing and implementing a management plan to reduce the occurrence.



MAXIMIZE THE REVENUE FROM MARKET CULL COWS



Dr. Dan Hale
Professor and Extension Meat Specialist
Texas A&M Animal Department - College Station

Cattle Fax reports that on average the revenue from the sale of market bulls and cows accounts for 10-20% of a cow/calf operation's total revenue. It is often surprising to cattle producers that there are 6-8 million cows sent to harvest every year. The meat from these cows is used for more than ground beef. Cow lean trimmings are included in a number of different blends of ground beef and in fast-food hamburgers, and cow and bull meat is also used to make jerky, chicken fried steaks, fajitas, steaks and roasts.

In 1994, the Beef Check-off program sponsored the first National Market Cow and Bull Beef Quality Audit to develop strategies and tactics for improving quality, minimizing economic losses, and maximizing producer profit from market cows and bulls. The 1994 audit determined the industry fell short in ensuring the quality of its product in a number of important areas. The audit concluded that most of the losses could have been reclaimed if producers managed, monitored and marketed their herds differently to promote value in their cows and bulls and improve the quality of beef. In 1999, a second audit determined that the industry had made significant strides in reducing condemnations, the frequency of disabled cattle, bruising, damage caused by branding, injection-site lesions and the overall condition of cattle, but concluded much more work needed to be done to make beef better and beef producers more competitive.

For the most recent audit, personnel from Texas AgriLife Extension, Texas A&M University, North Dakota State University, California Polytechnic State University, Pennsylvania State University, University of Georgia, University of Florida and West Texas A&M University carried out the 2007 audit between December 2006 and September 2007. Their goal was to compare results to the 1994 and 1999 audits, determine how far the industry has come in addressing previously identified quality problems, what areas are still below grade and what challenges might lay ahead.

These researchers conducted audits in packing plants to identify quality defects in cows and bulls in receiving areas and holding pens, and in their carcasses on harvest floors and in chill coolers. They also audited packing plants for fabrication and traceability. The audit took place in 23 packing plants in 11 states. Collectively, these plants harvest more than 15,000 head per day. The audit surveyed approximately 5,500 live animals, 5,000 carcasses during harvest and 3,000 carcasses in the coolers.

The following are some key findings and subsequent best management practices:

Receiving - Audits Key Points:

- Auditors saw the virtual elimination of cattle that could not walk off the trailer when compared to previous audits.
- All truck and trailer loads met American Meat Institute (AMI) guidelines for spacing.
- Unnecessary use of electric prods continues to be a cattle-handling concern that needs improvement.
- On average beef cattle traveled 473 miles from the ranch or livestock market auction to the packing plant.

Receiving - Best Management Practices:

- Only place cattle on the trailer that will safely make the trip and arrive in good condition.
- Handle weaker and injured cows and bulls locally. This may involve the help of a veterinarian, humanely euthanizing the animal or selling directly to the local packing plant. Do not sell these types of cattle through the livestock market auction.
- Separate cattle by gender within trailers to avoid injuries.
- Handle cattle in a low stress manner, never using an electric prod as a primary driving tool and only using it as a last resort.

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**There are over 6-8 million cows sent to harvest every year. Strategizing to improve this market could overall bring more profit to producers.*



[Cow Herd Efficient?, continued from p.1]

a higher number of smaller cows is more efficient? Or could reducing cow numbers on an operation, resulting in fewer calves to sell but lowered input costs, be more efficient? Maybe, or maybe not. But we simply can't answer such questions by looking at things on a per-cow basis. It's got to be per total operation.

In the end, four things should be considered in a cow/calf enterprise. How many animals are marketed in a year? What is their average sale weight? What is their average value (price per pound)? Combining those three gives total income. From that must be subtracted cost. That means every cost that is relevant. (Yes, that includes such things as something for the revenue you could get by leasing out your land instead of operating it yourself, even if your great grandfather paid it off a hundred years ago.)

Standardized Performance Analysis (SPA, <http://agrisk.tamu.edu/irmspa.htm>) is a widely accepted tool to evaluate cow-calf operations. What is the final value that comes out of SPA? It's Percent Return on Assets (ROA). ROA in SPA uses those four things listed above: numbers, pounds, value of pounds, and cost. And ROA is figured not by looking at averages per cow, but at the total operation.



**Taking into consideration cow efficiency can lead to true success.
{7 month old calf with no supplemental creep feed}*

[Market cull cows, continued from p.3]

Holding Pen Audits – Key Points:

- 97% of the cattle had no evidence of cancer eye, an improvement over 1999 and 1994.
- Too many knots were observed on the shoulder rather than in the neck area.
- Fewer beef cows were lame than in 1999.
- More beef cows were in leaner condition (Condition Score 1 or 2) than in 1999.

Holding Pen – Best Management Practices:

- Give injectable animal health products in the neck; never administer these injectables in the round or sirloin area.
- Market cattle with blemishes (for example cancer eye) earlier rather than later.
- Market cows with a body condition score of 4 to receive the highest purchase price from the packer or at the livestock market auction.
- Remember that often during the months of November, December, and January ranchers will receive the lowest prices for their market cows and bulls.
- Market cattle before they become too thin or too lame for transport.

Harvest Floor Audits Key Points:

- No carcasses with buckshot/bird shot were observed during the 2007 audit, an improvement over 1999.
- Fewer cows had bruises than in 1994 and 1999.
- Fewer arthritic joints than in 1999.
- More heads and livers were condemned than in 1999.
- Fewer cows were pregnant at harvest than in 1999.
- Residue tests show that while the incidence of violative residues in organs has remained low, producers still need to be vigilant in this area.

Harvest Floor – Best Management Practices:

- Never use firearms to haze or move cattle.
- Move cattle in a calm manner and use their natural flight zone and point of balance to direct their movement. This can result in fewer bruises for the animal and more money for the producer selling the cattle.
- Follow label directions when administering animal health products.
- Only give animal health products in an extra label manner under the direct supervision of a veterinarian.
- Strictly follow the withdrawal times listed on the product labels or as determined by a veterinarian.

Cooler and Fabrication Audits Key Points:

- Cows and bulls were heavier than in 1999.
- Cows and bulls had lower fat thickness than in 1999.
- More cows had the more desirable fat color scores of 1 and 2 than in the previous two audits.
- A significant portion of the cuts from beef is being used as whole muscle cuts and lean strips of meat.
- Among beef cows and bulls only 6.3% of the top sirloins had injection site blemishes; however, 13.9% of the bottom rounds had injection site blemishes.

Cooler and Fabrication Audits Key Points:

- Only give injectable shots in the neck.
- Remember the meat from every market cow or bull sold will potentially be a food product sold to consumers.



**It is key to market cattle that show signs of blemishes, lameness or thinness before conditions become severe.*



SAVE THE DATE!

Dr. Jason Cleere, Editor
Assistant Professor and Extension Beef Cattle Specialist
Texas A&M Kleberg Center - College Station

Planning is well underway for this year's Beef Cattle Short Course to be held August 3-5, 2009. Each year in August more than 1,300 beef cattle producers from across the U.S. and other countries converge on the campus of Texas A&M University to attend the Texas A&M Beef Cattle Short Course. The short course, in its 54-year history, has become the largest beef producer educational event of its kind in the U.S. The 2 ½ day educational event is known for being one of the most comprehensive beef cattle adult educational programs available. More than 50 different university faculty and industry leaders from across Texas and the U.S. help form a very diverse and cutting edge educational program.

The most popular part of the short course each year is the Cattleman's College which is a group of workshops that are devoted to specific topics. Soil fertility, forage quality, nutrition, genetics, reproduction, cattle health and cattle handling are just a few of the topics covered in 20 different sessions. This format allows participants to choose the specific workshops that they are interested in. The Beef Cattle Short Course trade show is also a popular part of the conference with more than 100 different exhibitors on hand to discuss their products and services. Listen to what 2008 participants had to say about attending the 2008 Beef Cattle Short Course:

- "The entire program was very educational. I wish I had known about it years ago."
- "The ability to interact with other cattlemen and wealth of knowledge in the sessions."
- "Excellent speakers, relevant topics."



For more information contact:
Beef Cattle Extension
2471 TAMU College Station, TX 77843-2471
(979) 845-6931
extansc@ag.tamu.edu
<http://beef.tamu.edu>