

# **COW/CALF CORNER**

The Newsletter

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In this Issue:

## **U.S. Hay Production and Supplies Record Low**

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

## **Management Practices for Added Value in Market Calves: What's in Your Tool Box?**

Gant Mourer, Oklahoma State University Beef Value Enhancement Specialist

## **Most Passive Immunity Occurs in the First 6 Hours**

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

## **U.S. Hay Production and Supplies Record Low**

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

Two years of drought have taken a huge toll on U.S. hay production. In the recently released USDA Annual Crop Production Summary, total U.S. hay production in 2012 was 120 million tons, down nearly 18 percent from the 2006-2010 average. This is the lowest U.S. hay production total in data going back to 1974. This follows the 2011 hay production total of 131

million tons, down nearly 10 percent from the same five year average. The impact of the drought was significantly different in the two years. In 2011, the states of Texas, Oklahoma and Kansas all had production decreases of over 30 percent compared to the 2006-2010 average, with Texas and Oklahoma having over 57 percent decreases compared to that five year average. In 2011, these three states accounted for 78 percent of total decrease in U.S. hay production. By contrast, in 2012, eight of the top thirty hay producing states were down in excess of 30 percent of the five year average. These states represented a wide swath of the center of the country and included the states of Arkansas, Iowa, Kansas, Missouri, Nebraska, North and South Dakota and Wisconsin. These eight states accounted for 61 percent of the decrease from the five year average with a number of other states also showing significant decreases. A total of 21 states saw 2012 hay production down more than 20 percent from the five year average. Hay production in Oklahoma and Texas was up significantly from 2011 but was still down more than 30 percent from the 2006-2010 average.

The combination of reduced hay production and increased hay feeding due to drought the past two years leaves the U.S. with severely depleted forage supplies. Total U.S. December 1 hay stocks were 76.5 million tons, the lowest December 1 stock level in data back to 1974. This stock level is down 25.5 percent from the 2006-2010 five year average. The reduction is severe in many states. Among the top 30 hay producing states, Arkansas and Michigan had December 1 stock levels down 55 percent from the 2006-2010 average. Additionally, the states of Iowa, Kansas, South Dakota, Wisconsin and Wyoming all had December 1 stock levels down more 40 percent from the five year average. Another five states including Arizona, Missouri, Ohio, Oklahoma, and Texas all had December 1 hay stock levels down more than 30 percent from the five average stock level. December 1 hay stocks were down between 20 and 30 percent in eight more states including Colorado, Illinois, Indiana, Kentucky, Minnesota, Nebraska, Pennsylvania and Utah. In fact, among the top 30 hay producing states only the states of Mississippi, New York and Virginia had December 1 hay stocks greater than the 2006-2010 average level.

Pasture conditions in most regions are similarly poor. With the final pasture and range condition report at the end of October, 15 states had more than 60 percent of pastures in poor or very poor condition and another five states had 40-60 percent poor to very poor pasture conditions. Anecdotal indications are that crop aftermath, especially corn stalks, have been heavily used this winter to provide critical feed resources for cattle. The latest Climate Prediction Center forecast for drought conditions indicates little improvement in much of the country through the forecast period to the end of April. If drought conditions extend into spring the impact on cattle is likely to be immediately severe given that forage resources across much of the country are critically low. This, combined with water shortages for livestock in some regions, will lead to another significant round of cow herd liquidation beginning in the second quarter of the year unless drought conditions moderate.

# **Management Practices for Added Value in Market Calves: What's in Your Tool Box?**

Gant Mourer, Oklahoma State University Beef Value Enhancement Specialist

Lack of forage and increased input costs for beef producers continue as we move ahead in 2013. However, there are several tools that producers can use to increase efficiency of cattle planned for market and in doing so increase margins. All it takes is a little prior planning for cattle that may be hitting the ground as we speak or calves that producers may be thinking about weaning this spring.

Information and documentation on a cow herd always adds value. Keeping records allows producers to make informed culling, marketing, nutrition and planned mating decisions, after all a quality calf is what adds the most value when it comes to marketing. Good records also allow producers to document the types management practices that they have implemented, and records can be easily passed from one segment of the beef industry to the next making a more integrated system, adding value at every step.

Improved record keeping and collecting calf birth dates and weights often times leads a defined calving season. This may include a spring or fall calving herd or possibly both and typically be 90 days or less in length. Defining a calving season for your cow herd adds value to calves in several ways: a shortened calving season allows reproductively efficient cows to be easily identified and cows that do not settle with a calf within the time allowed can be palpated as open and culled. A defined calving season means producers can better target calving during a time of the year where high quality forage is more readily available and are able to meet a cow's increased nutritional requirement during early lactation without increasing supplementation.

Also, a more uniform calf crop is realized, management of calves for the producers is easier and we often see 2-7\$/cwt premium for those uniform calves as they are sold at market. Along with uniformity, increased lot size adds value at auction. Cattle sold in lots of 6 head or more can bring 10-16\$/cwt more than smaller lots (Stuts et al. 2012). Larger sale lots can be achieved not only through a calving season but also through alliances, whether that is locally with a neighbor or participating in a specific alliance program that requirements have been met.

Improving feed efficiency at any time, especially during a drought can help increase profit for any producer. A lesson can be taken away from feedlots; who 99% of, use implants and ionophores to improve margins. The use of such technologies would be warranted in a traditional marketing program if a natural or organic program has not been established and is not planned by a producer. Approved implants can be used on suckling calves and can increase average daily gain (ADG) by .12 lbs/d but may be more effective during the stocker phase as calves are weaned and retained for a period of time. Increases in ADG have been documented at 8-20% on calves post weaning. This can easily be a \$10 return for every \$1 invested in implants. Similarly, ionophores are a cost effective way to increase feed efficiency in cattle. Fed at 100-200 mg/head/day, it can increase gain by 0.15-0.2 lbs/day with a cost of about \$0.02 a day and act as a coccidiostat and bloat preventer in grazing cattle on high quality forage.

Dehorning calves as well as castration of intact males are management tools that require little overhead cost to accomplish and can add substantial value. Horned cattle can be discounted up to 15-20\$/cwt. Similarly, bulls may be discounted from 3-6\$/cwt as compared to steers. Some people believe that an increase in weight gain can be obtained by leaving a steer intact, but castration of steers at weaning, adds stress and decreases post-weaning gains while leaving the calf more vulnerable to disease. An approved implant for a suckling calf can obtain the same results with less stress at weaning. Bottom line, the earlier a calf can be dehorned or castrated the better off and less stress occurs when that calf goes to market.

Drought effects over the last two years are becoming more apparent as cattle enter the grower yard or feedlot. Death loss recently in yards has been upwards to 8-10%, in some instances, for calves that are not considered high risk. Research has shown that cattle, which have been restricted from adequate diets, have calves that lack proper immunity (Hough et. al, 1990). This coupled with high feed prices add just another difficult hurdle for many producers who are feeding cattle. Proper vaccination and mineral supplementation by the cow/calf producer can aid in prevention of disease and sickness whether or not retained ownership is part of the marketing plan.

Preconditioning cattle prior to sale can seem like an expensive investment when forage is limited and feed prices often times are over 400\$/ton. Research shows that incidences of sickness and death loss can be decreased significantly if calves are weaned a minimum of 45 days. However, if value of gain from calves continues to be high simply the added gain in a weaning program can off-set those high feed costs, especially if feed costs are properly managed and calves can gain 2 lbs/day or more. Individual producers need to assess their particular situation to see what fits their management program best and see if preconditioning is right for them during a drought year. Calculators are available at [www.beefextension.com](http://www.beefextension.com) to aid in making retained ownership decisions.

Vaccinations, along with a preconditioning period over 45 days, qualify many cattle to be enrolled in a value added program. These programs work by combining many of the management strategies listed above and offering those cattle for sale to buyers for a premium. Buyers will pay premiums for cattle that have been managed correctly because they perform better in the feedlot with less sickness and death loss as compared to cattle not previously weaned. Pfizer's "Select Vac", Merial's "Sure Health", OSU's OQBN VAC-45 are only examples of value added programs and all have slightly different requirements. Cattle that qualify in a value added program normally see premiums from \$6-10/cwt over non- weaned calves.

These are only a few of the "tools" that a producer can choose to put into their tool box that comes from what is considered a "traditional" beef cattle system. Some producers may choose to use only some of the tools or some may choose not to use any of them, but the bottom line is for producers to have the information at hand to make informed decisions as they go to market calves in 2013 and not leave any money on the table when they do so.

## **Most Passive Immunity Occurs in the First 6 Hours**

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Resistance to disease is greatly dependent on antibodies or immunoglobulins and can be either active or passive in origin. In active immunity, the body produces antibodies in response to infection or vaccination. Passive immunity gives temporary protection by transfer of certain immune substances from resistant individuals. An example of passive immunity is passing of antibodies from dam to calf via the colostrum (first milk after calving). This transfer only occurs during the first few hours following birth. Research is indicating that successful transfer of passive immunity (the first day of life) enhances disease resistance and performance through the first two years of life including the feedlot phase.

Timing of colostrum feeding is important because the absorption of immunoglobulin from colostrum decreases linearly from birth. "Intestinal closure" occurs when very large molecules are no longer released into the circulation and this occurs before the specialized absorptive cells are sloughed from the gut epithelium. In calves, closure is virtually complete 24 hours after birth, although efficiency of absorption declines from birth, particularly after 12 hours. Feeding may

induce earlier closure, but there is little colostral absorption after 24 hours of age even if the calf is starved. This principle of timing of colostrum feeding holds true whether the colostrum is directly from the first milk of the dam or supplied by hand feeding the baby calf previously obtained colostrum.

Provide high risk baby calves (born to thin first calf heifers or calves that endured a dystocia) at least 2 quarts of fresh or thawed frozen colostrum within the first 6 hours of life and another 2 quarts within another 12 hours. This is especially important for those baby calves too weak to nurse naturally. Thaw frozen colostrum slowly in a microwave oven or warm water so as to not allow it to over-heat. Therefore denaturation of the protein does not occur. If at all possible, feed the calf natural colostrum first, before feeding commercial colostrum substitutes. If natural colostrum is not available, commercial colostrum replacers (those with 100 g or more of immunoglobulin per dose) can be given to the calf within the first 6 hours.

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