

COW/CALF CORNER

The Newsletter

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Beef herd expansion: how fast and how much?

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

The dramatic rise in calf prices in 2014 and the corresponding increase in cow-calf returns highlight the growing market incentives to rebuild the beef cow herd. As the primary supply source for the beef industry, cow-calf producers will, by their decisions in the next two to four years, determine the inventory of cattle and the overall level of beef production in the U.S. for the remainder of the decade. Dramatic improvement in forage and pasture conditions in much of the country in 2015 means that the beef cattle industry can focus on doing what they want to do rather than being restricted to what they have to do. Much of the far west regions of the country are still hampered by severe drought in areas that represent about 9 percent of the total beef cow herd.

Beef cow herd expansion started briskly in 2014 with a 2.1 percent increase in beef cow numbers in the first year of expansion. This faster-than-typical early growth reflected suppressed expansion desires as a result of the drought. Though producers were forced to liquidate cows during the drought years of 2011-2013, they continued to add heifers to the herd to be ready to expand when the opportunity arose. The resulting cow herd is young and productive and allowed for a sharp drop in beef cow culling in 2014 with a culling rate of 8.8 percent, down from 10.6 percent in 2013.

So far in 2015, beef cow slaughter is down 17.3 percent. Though seasonally higher beef cow slaughter is anticipated in the fall, thereby reducing the year over year decline, beef cow slaughter will be down again year over year and is likely to result in a near record low 2015 net culling rate below 8 percent. The July Cattle report indicates a 2.5 percent year over year increase in beef cows to mid-year 2015. Historical relationships between the estimated July beef

cow inventory and the following January 1 inventory suggest a January 2016 beef cow inventory of just over 30 million head, representing just over 1 percent growth in 2015. However, beef replacement heifers were up 4 percent on January 1 and were up 6.5 percent on July 1, indicating more aggressive herd expansion. The year over year increase in the beef cow herd in 2015 is likely to fall in the range of 2.5-3.5 percent. Annual herd growth up to 4 percent is possible but would be very aggressive. The January 1, 2016 inventory is likely to fall in the range of 30.4 to 30.7 million head. The upper end of this range, corresponding to an aggressive 3.5 percent annual growth rate, would represent a one million head increase in beef cows from 2015 and would be slightly less than the pre-drought 2011 level of 30.9 million head.

This leads to the question of just how much beef cow herd expansion is needed. The answer to that depends on several factors. Total beef production in coming years will be the result of increased slaughter numbers resulting from herd growth and cattle carcass weights. Cattle carcass weights have jumped sharply the past three years. If that pace of increase continues it will curtail the amount of herd expansion needed. However, more moderate carcass weight growth in the next two or three years would warrant a larger herd inventory.

Beef demand is the ultimate determinant of how big the beef industry will be and thus the combination of domestic and international demand for U.S. beef will be critical to determine how much beef cow herd expansion is needed. Per capita beef consumption will grow as beef production expands but demand will determine at what price level this consumption will occur. In a stable market, consumers will pay a price just high enough for a given level of consumption to ensure that producers will provide enough beef for that level of consumption. Of course, international beef trade must be figured into that as well. It is an evolving picture that will depend on conditions in the coming years but at the current time my estimate is that the industry will operate with around 32 to 32.5 million beef cows. It appears that we could achieve that level at the earliest by 2017, more likely by 2018 or 2019.

Time of day of harvest and impact on nitrate concentration

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Forage sorghums are used by cattle producers for summer grazing or harvested for hay. Forage sorghums can be very productive and high quality, but can also accumulate toxic levels of nitrate when stressed. In the past, the assumption was made that the plant continues soil nitrate uptake during nighttime hours, followed by accelerated conversion of the nitrate to protein during daylight hours. Therefore past recommendations have been to wait until afternoon to cut forage sorghum for hay if anticipated nitrate levels are marginally high. You have heard the old adage: *“Never assume anything....”*

To evaluate the significance of the change in nitrate concentration in forage sorghums during the day, Oklahoma State University Extension County and Area Educators collected samples at two hour intervals from 8 AM to 6 PM. Five cooperator's fields (“farm”) were divided into

quadrants. Three random samples, consisting of ten stems each, were taken from each quadrant at the specified interval. The samples were analyzed at the Oklahoma State University Soil, Water, and Forage Analytical Laboratory to determine the level of nitrates, in parts per million (ppm).

As expected, differences between “farms” were substantial and significant. The mean concentration of nitrate for individual farms varied from only 412 ppm to 8935 ppm. The mean nitrate concentrations across all farms were 3857, 3768, 4962, 4140, 4560, and 4077 ppm for samples at 8 AM, 10 AM, noon, 2 PM, 4 PM, and 6 PM, respectively. Remember, most laboratories consider nitrate concentrations at, or above 10,000 ppm potentially lethal. **There was much more variation between farms than between harvest times.** Time of day of harvest did **not** impact nitrate concentration or proportion of dangerous samples of forage sorghum hay. Don’t be misled and believe that cutting the hay late in the day will solve all of the potential dangers of nitrate toxicity. [Source: Levalley and co-workers. 2008 Oklahoma State University Animal Science Research Report.](#)

Now is the time to add value to your calves

Gant Mourer, Oklahoma State University Beef Value Enhancement Specialist

October and November calf-weaning days may seem to be quite a long time in the future. However, now is the time to contact the value-added calf program that best fits your calves. The Oklahoma Cooperative Extension Service at Oklahoma State University in cooperation with the Oklahoma Cattlemen’s Association recognized the increased interest and participation in value-enhancement marketing strategies for cow-calf producers. However, many producers are unaware and unfamiliar with value-added programs available to them.

Enrollments often must be done well in advance of weaning and many of the programs require that calves be weaned at least 45 days prior to the sale date. In the situation where a pharmaceutical company is sponsoring the value-added calf sale, the cow calf rancher will need to obtain the proper vaccinations recommended for the specific program and be certain that they are given to calves according the program requirements.

An OSU Fact Sheet ANSI-3288; “Marketing Opportunities Available to Oklahoma Beef Cattle Producers” (<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-8886/ANSI-3288web2013.pdf>) discusses the details of becoming involved with a value-added calf program and lists over 30 of the current value-enhancement programs that are available to Oklahoma producers. The list also gives contact information for the individual programs so that ranchers can make the initial inquiry about enrolling their calves this year. Value-added calf programs are continuing to grow in popularity with calf buyers and sellers alike. For more information about value-added calf programs in Oklahoma contact Gant Mourer at gantm@okstate.edu.

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