

Drought Was Just One Reason the US Cow Inventory Declined

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Introduction.

It is widely expected that the next two decades will be bright for the beef industry because there will be more people who will have more money and who will want more beef. Worldwide, as medium incomes of consumers increase from \$500/yr to \$2000/yr, it is projected that yearly meat expenditures will increase from \$19 to \$170. Likewise, increasing income from \$2000/yr to \$9000/year will further increase total meat expenditures to a projected \$397/year. The rise in ethnic populations will have an impact on beef consumption because Hispanics are anticipated to increase from 16% to 30% of households, Asians from 5% to 9% and African-Americans from 14% to 15%. What this means for beef is that producers must maintain and broaden beef's appeal to all ethnic groups because culinary tastes will continue to shift. Remember, that the customer is always right. But also consider that the customer is not always informed, scientifically literate, interested in the truth or concerned about the livestock producer's well-being (Anderson, 2015).

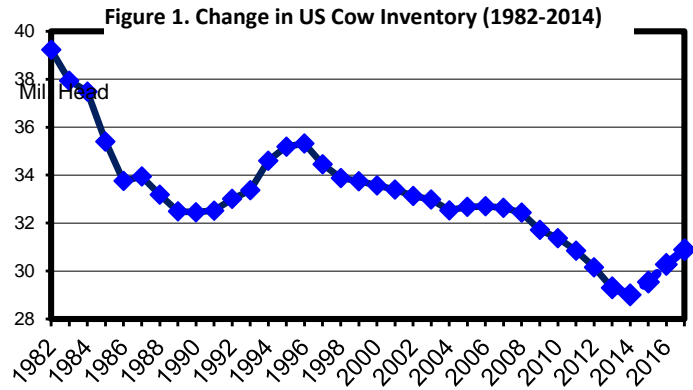
Demand for all beef has increased but it has especially increased for ground beef. Since 2009 the price of hamburger has increased more than 60% and much of the carcass is now ground. Although ground beef is very important, it will remain a secondary-targeted product (Brink, 2015, NCBA Cattlemen's College, San Antonio). It has been predicted that the future of the industry will be in the production of big, high value cattle to maximize revenue per unit. The beef industry will facilitate this by exporting some of our premium product and importing low cost, lean trim for grinding and the production of hamburger.

How has the population of the US cowherd changed?

Historically, since the early 1950's the beef industry has witnessed four large spikes in calf prices; 1951, 1973, 1979 and 2014 (Brester, 2014, MT Nutrition Conference). The commonality of these years is that they were years of low cattle numbers and were the start of herd expansion. During the 1951 spike there were concerns about food security following supply disruptions after WWII and also concerns about a new world war. However, by 1954 calf prices had declined below the long run average. In 1973 the price rise was partially due to declines in world food production and the 1972 Russian grain deal. By 1975 prices once again declined, in response to demand decline and this was also a year for record cattle inventory. Between 1975 and 1978 there was a 15% decline in cattle numbers and herd rebuilding began in earnest. However, rebuilding only lasted a couple of years because of the 1979 OPEC oil shock hurt demand.

Most recently, the beef cow inventory has declined from approximately 40 million head to a 50 year low of approximately 28 million head (Figure 1). There are probably at least six reasons for the decline; prolonged drought, high feed costs, high operating cost, age of the producer, competition with crops which have been more profitable and unbelievable prices for calves, heifers and cows which have slowed rebuilding.

From about 1982 until 1991 there was sustained liquidation of the cow herd (39 million to 32 million cows). Starting in 1991 there was herd expansion which continued until 1996 when liquidation started again. However, due to drought liquidation (2000), recession (2009) and continued drought (2012-2014) the inventory dropped to less than 29 million beef cows.



Cornell researchers have predicted that a “mega drought” will occur late in this century and could last for three decades. One pundit (Durden, 2015) observed that California has no contingency plan for a persistent drought (let alone a mega drought) except to stay in an emergency mode and “pray for rain”. As an example of the devastating effects of drought during the years of 2007-2014, Texas lost 25% of its cow inventory, Oklahoma lost 12% and New Mexico lost 16%.

Although huge in inventory losses, drought wasn’t the only reason for a decline in cow inventory. Approximately 18% of farms operated by producers between the ages of 35-54 saw an exit from the industry between 2007 and 2012. This represented approximately 24,000 operators. Presently, 64% of cow ownership is held by producers older than 55 and 65% of pastured acres are owned by producers older than 55 (2012 Census of Agriculture).

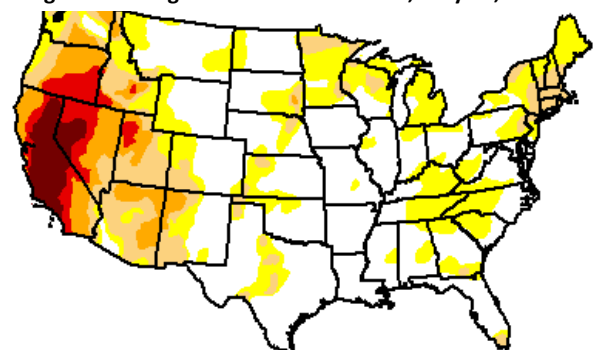
The result of a shrinking calf crop means that as prices go up, feedyards close, packing plants close (Tyson, Cargill, National Beef) and final weights of fed cattle go up. Management at the feedyard level has seen an aggressive use of implants and beta agonists. With the decline in feeder calf numbers, genetic capability of the cattle has improved because less productive cows were sold in response to high prices and consequences of drought.

Interestingly, part of the cow inventory loss was due to competition for additional crop land. Peel (Oklahoma State University) reported that cropland used for pasture declined 64% from 35.8 million acres to 12.8 million acres (2007- present) because farmers tilled additional acres in order to exploit high grain prices. Ringwald (2014, Drovers Journal) showed that the average net return for wheat, corn, soybeans and sunflowers was \$65/ac vs. \$16/ac for the cow-calf operators. This may be one major reason why the decline in cow inventory has ranged from 12% in IA to 23% in TN.

What are the predictions for the future?

Parts of Texas and Oklahoma have received almost two feet of rain over the past couple of months which has stopped the drought. But, California and parts of the Southwest continue to be either extremely dry or abnormally dry (Figure 2).

Figure 2. Drought Conditions in the US, May 26, 2015



Last year, in anticipation of herd rebuilding, Troy Marshall (2014) asked the question “Are producers going to add 100 cows and invest \$100,000 to do it or will they use that money to pay off debt, upgrade the tractor or remodel the kitchen?” Chandler Keyes (2014) wrote an Op Ed entitled “The Industry’s Future is Positive but Partly Cloudy” (BEEF, June 17). He said that 70% of our beef comes from 30% of our producers. If this trend continues, then “If you’ve got 200 mother cows, I think you’re in the business and will try and find ways to expand. However, if you have less than 200 cows and you do it by yourself, I’m not so sure you’re going to run out there and try and find pasture, buy cattle and find a hired hand”. Randy Blach from CattleFax was quoted as saying “The beef cowherd must expand in the next 1-4 years and if it doesn’t, we will have a smaller industry and we will move beef from the center of the plate to more of a specialty item”.

Expansion of the cow herd at present is occurring at a faster than expected rate with 72% of the growth occurring in the Southern Plains. Sixty-six percent of the retained beef replacement heifer growth is also in the Southern Plains. When beef cattle producers have been asked why they are optimistic in rebuilding their cowherds they responded that 1) supply and demand fundamentals encourage rebuilding, 2) there is international demand for beef, 3) with the lessening of the drought, there is available feed and forage and 4) there is less volatility in input costs. However, when producers were asked what would make them pessimistic about the future they responded that 1) government regulations and oversight would hinder expansion, 2) lessening consumer demand, 3) industry consolidation and concentration and 4) credit availability to purchase replacement heifers.

Dr. Pete Anderson (2015, NCBA Cattlemen’s College, San Antonio) summarized the challenge to cow herd growth as “North America must get in, stay in and dominate the worlds high quality beef market. Exports are a key because no other countries can do that as well, it is a best use of our resources, and it is a more profitable way to export grains”. Finally, Derrell Peel (2014) summarized the psychology of the current cattle business: “Cattle producers thrive on adversity but sometimes they seem ill-equipped to handle prosperity”.