In The Cattle Markets

Glynn T. Tonsor, Associate Professor
Department of Agricultural Economics, Kansas State University

A Longer-Term Look (Back and Forward) at Cattle Herd Trends…

On January 31st USDA released the much anticipated *January Cattle Inventory Report*.[i] The February 2nd *In The Cattle Markets* article summarized main points of this report. The purpose of this article is to provide further context on regional adjustments and to augment this historical information with a look at what the future may hold.

Regional assessment of multi-year adjustments can shed additional light on transitions underway in the industry. Tables 1 and 2 were derived to present estimates of herd size statistics individually for the 10 states currently with the largest beef cow herds as well as regionally and nationally. Values are presented to enable easy comparison not to last year (which are directly available in the USDA report) but rather to the pre-drought period (2010), 10 years ago (2006), and 20 years ago (1996). This reveals broader trends that can easily be missed by looking solely at year-over-year adjustments.

Table 1. Beef Cows that Calved (1,000 hd)

State / Region	*1996*	*2006*	*2010*	*2015*	*1996 (% of US)*	*2006 (% of US)*	*2010 (% of US)*	*2015 (% of US)*
TX	5,900	5,350	5,140	4,180	16.7%	16.4%	16.3%	14.1%
OK	1,986	2,045	2,073	1,900	5.6%	6.3%	6.6%	6.4%
MO	2,185	2,166	1,968	1,881	6.2%	6.6%	6.3%	6.3%
NE	1,930	1,930	1,781	1,786	5.5%	5.9%	5.7%	6.0%
SD	1,705	1,719	1,637	1,632	4.8%	5.3%	5.2%	5.5%
MT	1,570	1,401	1,465	1,506	4.4%	4.3%	4.7%	5.1%
KS	1,497	1,550	1,434	1,477	4.2%	4.7%	4.6%	5.0%
KY	1,200	1,118	1,070	1,007	3.4%	3.4%	3.4%	3.4%
IA	1,055	1,000	895	920	3.0%	3.1%	2.8%	3.1%
FL	1,115	916	958	916	3.2%	2.8%	3.0%	3.1%
US	35,319	32,703	31,440	29,693				
Great Plains	9,301	8,936	8,594	8,744	26.3%	27.3%	27.3%	29.4%
Southern Plains	7,886	7,395	7,213	6,080	22.3%	22.6%	22.9%	20.5%
Cornbelt	5,084	4,877	4,497	4,395	14.4%	14.9%	14.3%	14.8%
Northeast	372	332	343	354	1.1%	1.0%	1.1%	1.2%
Southeast	8,868	7,787	7,560	7,119	25.1%	23.8%	24.0%	24.0%
West	3,808	3,376	3,233	3,001	10.8%	10.3%	10.3%	10.1%

Source: USDA data, compiled by LMIC, modified for presentation by Glynn Tonsor. Regions defined as: *Great Plains* (CO, KS, MT, NE, ND, SD, WY), *Southeast* (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV), *Southern Plains* (OK, TX), *Cornbelt* (IL, IN, IA, MI, MN, MO, OH, WI), *West* (AK, AZ, CA, HI, ID, NV, NM, OR, UT, WA), and *Northeast* contains remaining states.

A review of table 1 reveals the geographic stability of the beef cow herd was over the 1996-2010 period. Adding the recent drought and heifer retention patterns (table 2) enriches current understanding. In total head the Great Plains followed the national trend of downsizing over the 1996-2010 period, yet its relative role as home to beef cows and heifers being retained was growing prior to the drought and remains higher than 2010. This suggests the Great Plains is a "growth area" in terms of its role in the national industry. Conversely while the share of the country's beef cows has been stable in the Southeast at about 24%, this region has a longer history of a decreasing role in retaining heifers. If one goes further and recognizes this region was the main cow-calf area containing pastures that broadly avoided drought conditions over recent years (and yet largely did not expand) casts doubt on the likelihood of the Southeast leading national herd expansion. The one-year changes noted in the most recent *January Cattle Inventory Report* largely reinforce this. Between the patterns of the Great Plains and Southeast is the Southern Plains. Prior to the recent drought, the herd in Texas was contracting while the herd in Oklahoma was expanding leading to limited net change in the region's collective role in the industry (about 23% of cows pre-2010). However, since 2010 the portion of both beef cows and retained heifers residing in the Southern Plains has fallen notably. The most recent *January Cattle Inventory Report* indicated the Southern Plains are indeed in the process of reversing this pattern as home to 58% of the country's increase in heifers retained (130,000 of the 226,100 head).

Table 2. Heifers for Beef Cow Replacement (1,000 hd)

State / Region	*1996*	*2006*	*2010*	*2015*	*1996 (% of US)*	*2006 (% of US)*	*2010 (% of US)*	*2015 (% of US)*
TX	880	820	760	710	14.2%	14.0%	14.0%	12.3%
MT	330	445	340	425	5.3%	7.6%	6.2%	7.4%
OK	390	430	405	405	6.3%	7.3%	7.4%	7.0%
NE	285	295	320	390	4.6%	5.0%	5.9%	6.8%
SD	270	295	290	380	4.4%	5.0%	5.3%	6.6%
MO	345	340	280	310	5.6%	5.8%	5.1%	5.4%
KS	240	255	240	260	3.9%	4.3%	4.4%	4.5%
WY	150	180	145	183	2.4%	3.1%	2.7%	3.2%
IA	150	140	140	170	2.4%	2.4%	2.6%	2.9%
ND	175	157	165	164	2.8%	2.7%	3.0%	2.8%
US	6,189	5,864	5,443	5,777				
Great Plains	1,610	1,742	1,620	1,962	26.0%	29.7%	29.8%	34.0%
Southern Plains	1,270	1,250	1,165	1,115	20.5%	21.3%	21.4%	19.3%
Cornbelt	847	856	762	822	13.7%	14.6%	14.0%	14.2%
Northeast	107	94	99	114	1.7%	1.6%	1.8%	2.0%
Southeast	1,598	1,288	1,213	1,133	25.8%	22.0%	22.3%	19.6%
West	757	633	584	632	12.2%	10.8%	10.7%	10.9%

Source: USDA data, compiled by LMIC, modified for presentation by Glynn Tonsor. Regions defined as: *Great Plains* (CO, KS, MT, NE, ND, SD, WY), *Southeast* (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV), *Southern Plains* (OK, TX), *Cornbelt* (IL, IN, IA, MI, MN, MO, OH, WI), *West* (AK, AZ, CA, HI, ID, NV, NM, OR, UT, WA), and *Northeast* contains remaining states.

Beyond looking at historical patterns, it is useful to contemplate future total and regional herd expansion possibilities. Every year the USDA releases 10-year projections on a host of agricultural market adjustments, including the size of the U.S. beef cow herd.[ii] These projections provide one source of predictions that are instructive to contemplate. Some of the key points of these projections include total U.S. beef cow inventory will:

- be 4.6 million head larger in 2024 than 2014 (33.7 million cows),
- not be over 31 million cows until 2019 (31.8 million cows),
- grow by at least 750,000 cows each year between 2016 and 2019.

Exactly how persistent past regional patterns are in coming years will be instructive to monitor as the entire industry adjust to have infrastructure "in the right place" given available supplies. Similarly, the extent to which realized future national inventories align with the recently released USDA projections will be important for understanding "how large" the industry really will be going forward.

Whether you are a cow-calf, stocker, feedlot, or packing firm seeking to operate in this changing industry recognition of these adjustments is critical. What is equally important is making and acting upon developed strategic plans that correspond to these adjustments.

The Markets

Cattle prices last week generally increased from prior week levels. The 5-area live fed cattle price for the week was up $1.50/cwt while Nebraska yearlings traded stead at $219.72/cwt. Corn prices were down slightly for the week trading at $3.68/bu in Omaha.

Data Source: USDA-AMS Market News		**Week of 2/13/15**	**Week of 2/6/15**	**Week of 2/14/14**
5-Area Fed Steer	all grades, live weight, $/cwt	$161.78	$160.28	$141.89
	all grades, dressed weight, $/cwt	$256.75	$254.63	$224.90
Boxed Beef	Choice Price, 600-900 lb., $/cwt	$238.69	$241.75	$208.83
	Choice-Select Spread, $/cwt	$4.41	$6.64	$0.92
700-800 lb. Feeder Steer Price	Montana 3-market average, $/cwt	$213.12	$207.19	$167.10
	Nebraska 7-market average, $/cwt	$219.72	$219.41	$177.62
	Oklahoma 8-market average, $/cwt	$210.30	$210.84	$167.79
500-600 lb. Feeder Steer Price	Montana 3-market average, $/cwt	$264.59	$262.93	$215.08
	Nebraska 7-market average, $/cwt	$274.70	$278.70	$218.30
	Oklahoma 8-market average, $/cwt	$267.62	$257.59	$197.99
Feed Grains	Corn, Omaha, NE, $/bu (Thursday)	$3.68	$3.74	$4.31
	DDGS Price, Nebraska, $/ton	$178.50	$177.30	$191.00

[i] The full report is available at: http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1017.
[ii] The final release of these projections are available at: http://www.ers.usda.gov/publications/oce-usda-agricultural-projections/oce151.aspx.