



Ron Torell

# Back to Basics

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## Does size matter?

The U.S. beef industry is quite unique in its structure. Visualize a pyramid. At the bottom of the pyramid, serving as the foundation, are approximately 762,880 U.S. beef operations holding inventory on 32.9 million head of beef cows with an average herd size of 43 head. In the middle of the pyramid are 90,000 U.S. feedlots that feed and market an estimated 22 million head of fed cattle. The majority of the 22 million fed cattle are fattened in lots with one-time capacities of more than 4,000-head that are located in the mid-U.S. region. At the top of the pyramid are the four major packers who harvest nearly 80% of the 22 million annual fat-cattle inventory.

In this month's column let's address the question, "Does size matter?" Specifically, let's concentrate on the cow-calf sector of the four arid and public-land states of Nevada, Idaho, Utah and Arizona.

These four states combined make up 10.82% of the U.S. land mass. This 249-million-acre chunk of desert real estate is 63.7% public-owned and -managed, yet it accounts for a mere 3.7% of the U.S. beef cow herd (see Table 1). Nevada and Arizona, the two most arid states, each contribute less than 1%.

So does size matter? It does — if we evaluate and look at the correct numbers.

### Deceptive stats

Early settlers passed up the arid rangelands for more productive ground in higher-precipitation areas of the country. This resulted in government ownership of large acreages in the arid states. It is estimated that 80% of the water in this four-state desert region is

under the ownership or control of the low percentage of privately owned land.

Obviously, early settlers saw the beauty in raising cattle in the desert and recognized that ownership and/or control of the water also meant control of the land. Privately owned land supports the majority of wildlife and wildlife habitat, for this is where the water is utilized.

**Those of us in the cattle business are harvesters of grass, thus grass producers.**

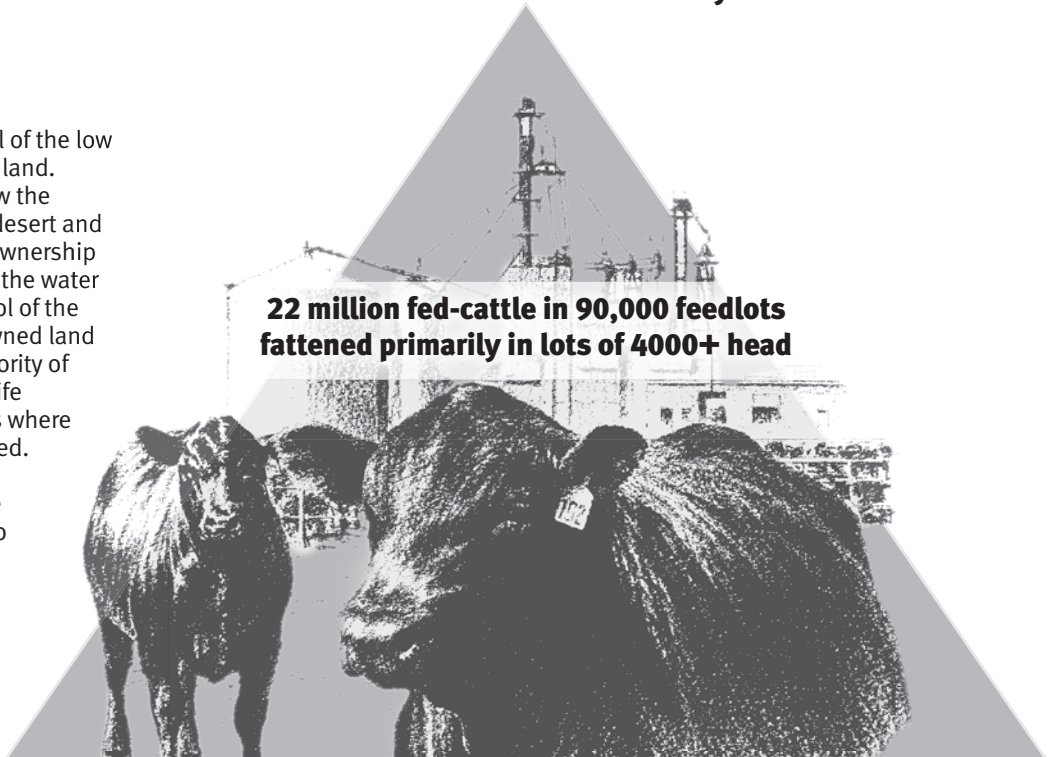
The four-state average herd size of 79 head fails to reflect the many operations in these arid and public-land states that exceed 1,000 head of mother cows, with several operations at 2,000 and a few at 10,000 plus. A large percentage of these desert operations are full-time beef producers who are heavily dependent on grazing public lands.

These larger ranches derive their livelihood solely from cattle sales and are the backbone of rural communities. These vast acreages of sparsely populated and parched states and the few rural communities that populate them are largely dependent on the livestock industry for survival.

Compare these full-time operations to the average U.S. beef operation of 43 head. Forty-three head would pretty well indicate a part-time or hobbyist beef producer. Part-time producers would derive the majority of their income from other enterprises or a full-time town job. Most of these operations are located in higher-rainfall areas that grow several other agricultural commodities that result in byproduct beef feeds. Most of these higher-precipitation areas are also

**4 major packers harvest 80% of the fat-cattle inventory**

**22 million fed-cattle in 90,000 feedlots fattened primarily in lots of 4000+ head**



**32.9 million head of beef cows in 762,880 U.S. beef operations = average of 43 head per operation**

the more populated areas of the United States.

### Spreading expenses

So why is the size of an operation vital to full-time western ranchers? The economy of size, the same reason we are seeing fewer but larger feedlots and packing houses in the United States. Quantity has a quality all its own. For example, a large ranch can afford to own a 4-wheel-drive tractor with three-point hitch spray rig and backhoe attachments, a hydraulic chute with good portable working facilities behind it and all other necessary infrastructure, such as trucks, trailers, horses, shop, tools, labor and housing. These items are much more affordable for the 1,000- to 5,000-head operation vs. the 43-head ranch.

Equipment and labor are essential

when managing large tracks of arid land in the West. These ranchers often perform upkeep on roads, maintain and develop stock water, and generally look out for the welfare of our public lands. These efforts benefit wildlife as well as multiple uses (recreation and hunting) of public lands and the general public who holds title. There is an intrinsic stewardship value associated with ranches, particularly large ranches. Due to rancher upkeep and range improvements, greater wildlife numbers exist on public land than there would be otherwise due to improved habitat.

It is for this basic economic reason that the trend is for fewer but larger ranches throughout the United States and particularly in a 7- to 14-inch (in.) precipitation zone area. It takes large acreages of land to maintain a cow in the desert — in the more harsh areas as many as 35 acres for one cow-calf pair for one month. Due to high input costs and low cow productivity, it takes large numbers of cattle to spread out this infrastructure cost and realize a profit.

According to a series of University of Nevada Cooperative Extension (UNCE) fact sheets on cow-calf production costs and returns, the average Nevada beef operation turned a net profit in 2006 of a mere \$33.42 per head. This figure includes total costs. Don't forget, 2006 was a year when the livestock market was up, so you can imagine the red ink on a down cycle!

Some criticize western grazing

(Continued on page 184)

**Table 1: 2007 beef cow inventory and private and public land mass statistics**

	U.S.	Nevada	Idaho	Utah	Arizona	4-state area
No. of beef cows* <sup>1</sup>	32.9 million	233,000	473,000	344,000	175,000	1,225,000
% of U.S. <sup>1</sup>	100%	0.7%	1.4%	1.0%	0.5%	3.7%
No. of beef cattle operations <sup>1</sup>	762,880	1,300	7,100	5,200	1,900	15,500
Avg. herd size <sup>1</sup>	43	179	67	66	92	79
Land mass acres <sup>2</sup>	2.3 billion	70.26 million	52.93 million	52.7 million	72.69 million	249 million
% land mass of U.S. <sup>2</sup>	100%	3.05%	2.30%	2.29%	3.16%	10.82%
% public land <sup>2</sup>		83.1%	62.5%	64.5%	45.3%	63.7%
Avg. annual precip., in. <sup>3</sup>		9.5**	18.92**	12.22**	13.59**	

\*Dairy cattle not included.

\*\*Includes all elevations of the state, which skews precipitation averages higher than actual for the majority of the land mass contained in each state.

<sup>1</sup>2007-2008 Cattle-Fax Beef Industry Reference Guide and USDA.

<sup>2</sup>Public Lands Statistics, 2006. Volume 191.

<sup>3</sup>National Weather Service.

**Back to Basics** (from page 182)

operations as large corporate ranches that are taking advantage of public lands through excessive grazing. They term these operations “welfare ranchers.” This misinformation and false propaganda could not be further from the truth. Those of us in the cattle business are harvesters of grass, thus grass producers. It is not in

our long-term best interest to overgraze rangelands. I personally know of no better way for man to utilize our renewable natural resource on our public lands than through the grazing ruminant.

I am thankful to those individuals and/or corporations for maintaining the infrastructure and volunteering to be

stewards of the desert, “God’s country.” I am also thankful for the Bureau of Land Management (BLM) and U.S. Forest Service for their management of these public lands and for working with these permittees to preserve the 249-million-acre chunk of desert real estate that I call home.

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### Quantity has a quality all its own.

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These agencies have a tough job. With every on-the-ground management proposal, good or bad, there are environmentalists, special interest groups, politicians, or, sad to say in some cases, misinformed beef producers or groups that challenge and place roadblocks that hinder on-the-ground improvements of our rangelands.

You can help! Educate yourself and support grazing on public lands. Educate others about the benefits of public lands grazing, including benefits to the general public. When land management decisions are made in courtrooms instead of on the ground, the only winners are lawyers.

The take-home messages of this column are that grazing on public lands is a good thing and size does matter in the desert, as it is the economy of size that makes livestock operations viable.

As always, if you would like to discuss this article or simply would like to talk cows, do not hesitate to contact me at 775-738-1721 or [torellr@unce.unr.edu](mailto:torellr@unce.unr.edu).



## REFERENCES

- Alevy, Jonathan; Fadali, Elizabeth; and Harris, Thomas R. *Analysis of Impacts of Public Land Grazing on the Elko County Economy and Mountain City Management Area: Economic Impacts of Federal Grazing in Elko County*, University of Nevada, Reno, University Center for Economic Development, University Center Technical Bulletin UCED2006/07-03, May 2006.
- Curtis, Kynda R.; Brough, Emily; Torell, Ron; and Riggs, William W. 2007. *Elko County Cow-Calf Production Costs & Returns*, 2006. University of Nevada Cooperative Extension Fact Sheet 07-08.
- Curtis, Kynda R.; Mori, Andrea; and Riggs, William W. 2005. *Eureka County Cow-Calf Production Costs & Returns*, 2004. University of Nevada Cooperative Extension Fact Sheet 05-39.
- Curtis, Kynda R.; Riggs, William W.; and Shultz, Brad. 2005. *Humboldt County Cow-Calf Production Costs & Returns*, 2004. University of Nevada Cooperative Extension Fact Sheet 05-41.
- Curtis, Kynda R.; Sceirine, David; Riggs, William W.; and Wilson, Robert. 2005. *White Pine County Cow-Calf Production Costs & Returns*, 2004. University of Nevada Cooperative Extension Fact Sheet 05-42.
- Foulke, T.; Coupal, R.H.; and Taylor, D.T. 2006. *Implications for the Regional Economy from Changes in Federal Grazing: Park County, Wyoming*. Western Regional Science Association, 45th Annual Meeting, Santa Fe, N.M., University of Wyoming Department of Agricultural and Applied Economics.
- Myer, G. L.; Champney, W.O.; Ching, C.T.K.; Garrett, J.R.; Knechel, J.A.; Lucier, G.; McNeeley, J.C.J.; Povolny, C.; Schrempp, R.E.; Shane, R.L.; Torell, A.; and Yanagida, J.F. (1980). *Government Grazing Allotment Reductions: Impact on Humboldt County, Nevada*. Reno, Nev., University of Nevada, Reno Division of Agricultural and Resource Economics, College of Agriculture: 1-14.