

## The Basic Resource - The National Cow Herd

### Northwest Region

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When asked to participate in this conference and describe the commercial cow herd in the northwest quadrant of the U.S., I thought it was probably an impossible situation. After a considerable amount of investigation and thought, I have concluded that my original thought was correct. A person can probably find as many different frame sizes, breeds (and combinations of crosses), nutritional and management programs in the Northwest as you can find anywhere in the U.S. However, in this discussion I will attempt to describe the predominant or "average" situation and potential trends. The reader must realize that hard data is often not available to support the exact description of the various parameters discussed in this paper. Information has been drawn from key individuals in the various states to which I am grateful for their input. For the purpose of this presentation, the Northwest states included in this discussion will be bounded by the eastern and southern borders of Kansas and run northward to Canada and westward to the Pacific Ocean. This tremendously diverse region varies from coastal mountain area to desert rangeland and contains approximately 35% of the U.S. land mass.

The large majority of producers in this portion of the country obtain their entire income from the cattle business. They utilize various beef cattle production systems to convert a forage resource into dollars. The most successful managers of these production systems optimize their level of production in order to maximize net dollar return.

There are a couple of unique aspects about this area of the country as it relates to beef production. First, is the general lack of water. It is obvious that you must have water to produce a forage resource. The more water that is available, the greater the number of feed alternatives. Enough available water to produce feed grains often allows for economical supplementation as well as nutritional alternatives using silages and crop residues. In addition, water will affect grazing distribution on the more arid rangeland. The second unique aspect about this Northwest area is the fact that it is largely composed of public land. Public lands comprise a rather large proportion (Table 1) of the western-most states of this region:

Not all of this public land is used for grazing of livestock. National Figures indicate that approximately 75% of the public land is administered by Forest Service and Bureau of Land Management (BLM) and would be available for grazing livestock.

Where public grazing is utilized, management efforts must be concentrated during the approximately eight months when the cattle are not on public land. Typically, salt is all that can be supplemented while cattle are grazing public lands. In addition, public grazing is often on a common allotment with other producers.

**Table 1. Percentage of Public Land in 9 Northwestern States<sup>1</sup>**

State	%
Nevada	86
Idaho	65
Utah	63
Oregon	54
Wyoming	48
California	45
Colorado	36
Montana	30
Washington	29

<sup>1</sup>Public Land Statistics, U.S. Department of Interior, 1982.

Cow numbers have decreased in the Northwest (Table 2) since the peak year of 1975 by approximately 25 percent as compared to 27.5% nationally. In January, 1988, this area supported approximately 11 million beef cows, down 2% from a year previous. This represents 33.4% of the U.S. beef cow population. However, in many areas where the decrease in cow numbers have occurred, yearlings are being utilized to market their forage resources. In other instances, when interest rates rose, culling rates became uncommonly high in order to reduce debt and improve cash flow. As of January, 1988, heifer replacement numbers are up approximately 6.8% in the Northwest from the previous year. However, national replacement figures remain unchanged from January, 1987.

**Table 2. Beef Cow Numbers in the 13 Northwest States as of January 1<sup>1</sup>.**

State	1975	1988	% Change From 1987
(1,000 Head)			
Nebraska	2,374	1,680	0
South Dakota	2,129	1,448	-3
Kansas	1,978	1,466	0
Montana	1,692	1,275	-2
North Dakota	1,235	871	-4
California	1,097	895	-6
Colorado	1,050	778	+3
Wyoming	806	630	-3
Idaho	721	510	-2
Oregon	617	547	-4
Washington	403	359	-10
Utah	349	318	-1
Nevada	338	246	-8

<sup>1</sup>USDA, National Agricultural Statistics Service

The liquidation of the cow herd may have had an impact on its genetic makeup in the Northwest. When the economy tightened, there is indication that the loss in cow numbers took a greater toll on straightbred commercial cows.

The use of the crossbred cow is increasing with figures ranging from 50 to 80% reported in the various states in the Northwest. Where available hard data existed, a lesser number actually had a planned system of crossbreeding. The most predominant crossbred cow was the Angus X Hereford, more commonly known as the black baldy. Simmental, Limousin, and Gelbvieh were included at a lesser frequency than the baldy with Salers becoming more prominent in recent years.

The amount of water available to the environment appears to exert the most pressure on cow size although a portion of the size difference may be in differences of condition. In areas of greater amounts of available water, more alternatives are available in terms of feedstuffs. Cow size varies from average estimates of approximately 1000 pounds in the drier areas to the 1150 pound range in farming areas where more feed resource alternatives are available. However, 850 to 900 pound cows also exist in some desert areas. On the other hand, frame size appears to range from 4.0 to 5.5 with the larger frame cows typically being associated with more water and feed resource alternatives.

The primary feed resource used for wintering rations in the Northwest is hay with crop residues used extensively where available. The cost of hay production has gotten to the point where consideration is sometimes given to moving the cows to areas where crop residues can be grazed during less-critical nutrition periods such as mid-third of gestation. Harvesting hay or crop residue increases costs considerably as does the transportation of energy supplements to areas where their production is not possible. The first choice is to build a nutritional program around home-grown forages with alfalfa or alfalfa/grass hay furnishing the required protein where possible. In general, mineral supplements supplying phosphorus would be the primary additional purchased supplement. The successful producers have effectively constructed a biologically efficient cow to utilize the nutrient resources available with minimum required supplementation.

Again, the land area required per annual cow unit varies tremendously with available water. Some desert areas will require over 100 acres per cow unit while irrigated or high rainfall area might get by with 3 or 4 acres per cow unit. A typical acreages in the semi-arid range country appears to be in the range of 30 to 35 acres per cow unit.

The average culling rate per year varies depending on available feed, cattle prices and debt load. The range appears to be from 10 to 20% with 12 to 15% being average for a typical year with open cows and physical problems being culled as first priority.

The highest frequency calving months for the majority of the area appears to be March and April with some activity commencing by mid-February and ending by mid-April. Fall calving is an alternative in the southern areas of the region as well as in approximately 70% of

California. In those areas, September and October appear to be the most concentrated calving months.

Heifers are bred to calve at approximately 24 months by more than 95% of the producers in the Northwest. Economics dictate that a producer must get the heifer into production as soon as possible. However, because of limited feed resources, heifer development is often a problem area and a key component to the successful cow-calf operation in range country.

As a general estimate, labor is a limiting factor (behind water) in determining what management practices are conducted and therefore the level of return from a production system. Often times producers realize the value of a management practice but simply don't have available labor at the appropriate time to institute the practice. Typically, a herd of 300 to 400 cows will be approaching the labor limit of a single family operation. As the cow herd approaches 400 in number, often an additional person is hired at least during the labor intensive periods of the year. In order to obtain dependable people with the needed degree of skill, a producer will tend toward numbers that will support full time assistance if the operation is more than family labor can support. An estimate is that half of the operations rely totally on family labor.

Marketing of the calf crop is trending toward ownership past weaning although estimates still suggest that approximately 50% of the calf crop is marketed at weaning. Again, economics conditions largely determine the marketing scheme. Producers with structured genetic improvement programs tend to retain ownership to some point past weaning if the associated conditions indicate that it might be a feasible economic decision. They realize they will not maximize return from their improved genetics by selling at weaning. Unfortunately, the IRS becomes involved in these marketing decisions since a producer tries to avoid marketing two calf crops in the same tax year. A feasible alternative appears for producers to split marketing so a portion of the calf crop is sold in the fall with the remainder retained for some length of time longer than weaning, depending on feed and market conditions. Even though there has been a shift in longer ownership, it is estimated only 5-8% are owned through the finished product in the feedlot. The remaining 42 to 45% are estimated to be fairly evenly split with a slight tendency for more to be marketed in the spring.

In summary, it is apparent that we have considerable diversity in the commercial cow herd in the northwest 13 states. Cow size and genetic make-up is largely dependent on what the environment will support. A feasible alternative appears to match the cow to the environment and the bull to the market. However, this is easier said than done when cow herds often spend part of the breeding season on public land. Where water is more abundant and more alternative feed resources exist, there are generally heavier, larger frame cows with less certainty about what is optimum. In the drier range area, the functional cow is one that weans a calf every year and is palpated pregnant in the fall with a minimum of supplemental feed.