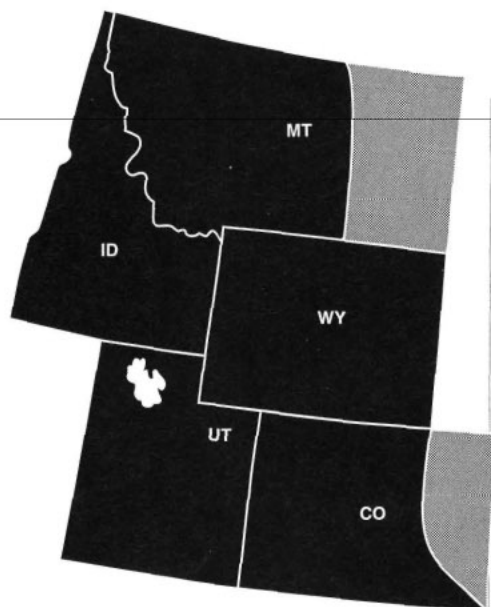


# ROCKY MOUNTAIN REGION



## ROCKY MOUNTAIN HIGH

Although there is considerable variation, much of this area lies at an altitude greater than 3,000 feet above sea level. Regions from 5,000 to 8,000 feet elevation are particularly challenging.

Under the latter conditions, winter weather often "comes early and stays late." This can often add considerably to winter feed costs.

Brisket disease (sometimes called high-altitude disease) can be a problem for a percentage of cattle at an elevation generally over 7,000 feet. This is typified by fluid accumulation in the brisket area due to congestive right heart failure associated with lower oxygen content of the air.

Some purebred producers test for brisket disease susceptibility using Pulmonary Arterial Pressure (PAP) measurements. Some lines of cattle appear to be more susceptible to this problem than others. Incidence level may range from .5 to 2 percent of the population.

## HIGH AND DRY

Lack of water is another problem that often plagues producers in this region. Much of this area is semi-arid with annual precipitation ranging from 6 to 18 inches. This lack of water not only affects forage growth but also grazing distribution in areas where adequate stock (drinking) water is not available.

The relatively low level of precipitation leads to stocking rates from as low as 10 to 15 acres per cow-calf pair on some areas of better range forages, up to 50 to 75 acres per pair on some high mountain desert areas.

## FORAGE MANAGEMENT

Grass or available forage in the wide-open spaces of the Rocky Mountain region is the main reason for having beef cattle.

Although the majority of beef production in this area consists of cow-calf operations, there are a significant number of stocker cattle that graze in the region for 120 to 150 days during the summer months.

Much of this region is considered mountain desert and/or mountain meadows. Forages consist of forb and native range grasses.

The region also has areas where irrigated or sub-irrigated forages are grown. Irrigation water often comes from melting winter snow pack rather than from wells. These irrigated forages are generally harvested as hay to help meet nutritional needs when grazing is not available. Irrigated areas may also be used for crop production at the more moderate altitudes where a sufficient growing season exists.

These areas, along with dryland farmed areas, have nutritional alternatives available to the beef producer in the form of crop residues such as corn stalks and wheat straw. This adds flexibility to the nutritional program and helps reduce feed costs.

## SPRING CALVING

The majority of cow-calf operations calve in the spring. March and April are predominate calving months with some starting as early as mid-January and others finishing up in May. Data from Colorado's Integrated Resource Management (IRM) program suggest the most optimum time to calve, from a cost and efficiency standpoint, is approximately 50 days prior to green grass. In much of this area, only limited grazing is available prior to May 1, with mid-June being more typical at the higher elevations. The calving period lasts 60 to 90 days.

Some of the more moderate climates with available nutritional alternatives may utilize a fall-calving (late August through October) season. However, fall calving is not a major contributor to production in the Rocky Mountain region.

Several factors make beef production in the Rocky Mountain region of the western United States somewhat unique in comparison to other parts of the country. In addition to the mere vastness and size of grazing areas, factors such as public lands, altitude and lack of water have a major impact on the production system.

Many producers are forced to graze their cattle on public lands at certain times of the year because they lack reasonable alternatives. USDA statistics show the federal government owns 63 percent of Utah's land surface, 48 percent of Wyoming, 34 percent of Colorado and approximately 28 percent of Montana. These are often marginal lands with limited available forage and/or water. In addition, those leasing public lands must abide by the decisions of the managing agency when it comes to grazing management decisions. Therefore, there is considerable uncertainty involved in this type of production system.

The public land grazing fee issue is a "political hot potato" that will most likely continue as long as livestock are allowed to graze these lands.

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## **MARKETING OPPORTUNITIES**

Traditionally, the majority of calves have been marketed off the cow at weaning. However, in recent years more producers are evaluating marketing alternatives and often retaining ownership on their calves for some period longer than this traditional "weaner calf" marketing period. They realize if they are going to be paid for improved growth and carcass genetics, they need to own calves longer.

Depending on feed prices and market expectations, this may mean retaining ownership to the finished endpoint. More alliances are being formed where the feeder and the cow-calf producer partner on a group of calves and own them until the finished product is sold to the packer. Programs such as the Wyoming Beef Cattle Improvement Association's (WBCIA) Feedlot Test and Carcass Evaluation Program (several states have similar programs) have allowed producers to evaluate a sample of their genetics and retain ownership on a relatively small basis. This will help them better prepare for value-based marketing.

The majority of cow-calf producers in this region generate their entire income from the cow-calf enterprise or in some cases, from an integrated production system where the cows complement a farming operation. Under these circumstances, the typical cow herd numbers from 350 to 500 cows. However, there are smaller herds where cows play more of a complementary role, as well as much larger operations that run several thousand cows.

## **MATCH TO THE ENVIRONMENT**

No matter what the size of the operation, the major challenge for management is to match the biological type of cow to the environment under which she must produce. A crossbred cow allows commercial producers the opportunity to take advantage of heterosis. This enhances the more lowly heritable traits such as fertility. In a majority of cases, this cow has Angus breeding with the black baldy being a regional favorite.

The matching of cow to environment is a continual period of adjustment that requires monitoring costs. Records are essential. Not only production records but, more importantly, financial records. There is nothing more important to the producer and nothing more disliked than keeping

records. Still, how can a producer develop a plan to meet his goals if he doesn't know the starting point?

## **FEED COST CONTROL**

Economic analyses of production units in this region suggest that as much as 50 to 75 percent of annual cow costs are due to feed costs. A majority of this is associated with winter feed costs. Factors such as cow size, level of milk production and time of calving have a major impact on the cow's nutritional requirements.

Nutrition programs in the Rocky Mountain region are built around available forages. As long as green grass and water are available, the cow can pretty well take care of her nutritional needs.

In the late summer and fall, if dry standing forage is available, she can meet her energy needs but may be deficient in protein. A source of natural protein supplement during these periods will allow the cow to more efficiently utilize this low quality forage and enhance her body condition. This is typically during the mid-third of gestation when her nutritional needs (her calf has been weaned) are the lowest.

Although some areas have specific additional mineral deficiencies, phosphorus is typically deficient in harvested forages and dry standing forage in this region. In addition, some research data suggests a gain response from potassium supplementation on dry standing forage. These can both be supplied by a commercial mineral supplement or in a free-choice salt/mineral mix.

In the higher altitudes of this region, snow cover often interferes with the utilization of the standing dry forage. As much as 2 tons of hay may be required per cow to carry her through this period. This is often a combination of native grass hay supplemented with some alfalfa.

If adequate irrigation water is available, high quality hay can be harvested because interfering rainfall is typically not as much of a problem as in higher precipitation areas of the country.

Hay meadow regrowth is another excellent source of nutrition for cows after the calves are weaned and the last hay crop is harvested.

## **COW SIZE**

Just as there are great differences in the environment in the Rocky Mountain re-

gion, there are large differences in cow size. Desert areas may be inhabited by 900-pound cows while 1,200- to 1,250-pound cows may be more common where more plentiful nutritional resources exist. However, large cow size can become a liability from the standpoint of maintenance costs. Therefore, optimums are emphasized. The cow must be able to add body condition when possible in order to maintain herself during periods of less available nutrition.

## **IN SUMMARY**

Successful producers in this region of the country do a good job of utilizing expected progeny differences (EPDs) to assist in matching cattle to their environment. They understand how to use them to make directional change in their genetic program. They realize that "more is not always better" as it relates to growth, mature size and milk when only limited nutritional resources are available. It is more important to determine optimum levels of production rather than maximums.

The replacement heifer and the first-calf heifer (two-year-old) and even the three year-old are good monitoring tools when it comes to determining how well your beef genetics are matched to their environment. Can these young females do what they are being asked to do — grow, reach puberty, calve, milk, rebreed, and wean a calf that is profitable to produce — with a limited amount of supplemental feed? Producers who can generate females that can do these things with the appropriate amount of inputs will be the most profitable.

## **ABOUT THE AUTHOR**

*Doug Hixon, Extension beef specialist and associate professor of animal science at University of Wyoming, has established positive beef production programs in his state. He initiated the formation of Wyoming Beef Cattle Improvement Association in 1984 and serves as its executive secretary.*

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