Alternative Winter Nutritional Management Strategies

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One of the main challenges to beef producers in the western U.S. is to develop a cost-effective winter-feeding program while still maintaining acceptable levels of beef cattle production. Many producers in the Pacific Northwest and Intermountain West feed between 2 and 4 tons of hay to their mature cows during the winter feeding period. It is estimated that feed and supplement costs account for 50 and 70 percent of total production costs; therefore, a producer's ability to compete with other regions is dependent in large part on the ability to reduce these costs. Producers can consider a variety of management alternatives when developing economical alternatives to feeding harvested forages.

Swath/Windrow Grazing

Costs associated with hay production vary widely according to location, yield, and cultural practices but can exceed $40/cow for producers in the western states (Short 2001). Swath or windrow grazing is the process of cutting hay and leaving it in windrows for cows to graze in the winter. Allowing cows to harvest cut forage directly can result in lower production and labor costs. Swath grazing has been shown to cost over $30/ton less than traditional haying systems due to the savings in baling and bale moving costs (Thomson 1999; Volesky et al. 2002).

Forage quality of swaths is generally similar to that of baled forage; however, a general decline in quality can be expected over the winter months. Energy or protein supplements may be warranted if grazing pregnant or lactating cows, and forage analysis is recommended.

A summary of 10 years of data from the Eastern Oregon Agricultural Research Center demonstrated that cows wintered on swaths had increased body condition and did not require supplements of additional hay compared to cows fed baled forage. Likewise, conception rates, calving interval, weaning weights, and attrition rates were equal between control and treatment groups.

The practice of swath grazing can generally be used with success in snow depths of up to 2 feet; however, producers may encounter forage loss and reduced forage accessibility in windy areas or areas with extreme weather conditions such as crusting snow or ice. In order to optimize success with windrow grazing, forage crops should be cut in the fall and windrows should be no more than 4 feet wide. Cross fencing with electric fence at right angles to the windrows will increase forage utilization and minimize waste.

To estimate swath utilization, assume a cow will consume 2 to 2.5 percent of its body weight. Thus, a 1,200-pound cow will consume about 24 dry matter pounds of swath feed per day. If fences are moved to limit cattle to one day's feed, wastage could be lower than 5 percent (Surber et al. 2001).

Winter Grazing

Another alternative to traditional winter-feeding may be the winter grazing of "stockpiled" forage. To effectively use this alternative, the producer must defer grazing of irrigated pasture and native range to the fall or winter months. The range forage base will be dormant and, as a result, will likely need some level of supplementation depending on quality of selected diets, body condition status of mature cows, and stage of gestation (Brandyberry et al. 1994). Quality of standing forage may decline faster than forage stored in bales or windrows (Streeter et al. 1966). Controlling grazing with an inexpensive electric fence that allows access to a 3- or 4-day supply of forage at a time can increase forage utilization and reduce waste by up to 40 percent (Boyles et al. 1998).

Like swath grazing, winter grazing may decrease winter feed costs by $20 to $30 per cow during mild to average years. To effectively use winter grazing as part of a management program, the producer should have relatively easy access to grazing animals to accommodate supplementation programs. In addition, it