INEXPENSIVE WAYS TO WINTER YOUR COWS

In a recent Cattle-Fax® survey of 550 producers in 39 states, the annual cost to carry a cow averaged $366. When cow cost was compared by region, we had the highest. The annual costs by region were Southwest - $380, Southeast - $328, Southern Plains - $359, Midwest - $366, and Northwest - $399. The primary reason for our greater costs is the 1.5 to 3.0 tons of hay normally fed to mature cows during the winter feeding period. Feed costs accounted for 62% of the total annual cow cost. This number will be greater for 2007 given the value of meadow hay and alfalfa this year. This is a major disadvantage compared with other areas of the country. Consequently, our ability to compete with other regions of the United States may depend on how effectively we can reduce winter-feed costs while maintaining acceptable levels of performance. In this article I will summarize some management alternatives that can reduce winter-feed costs.

Rake-Bunch Hay

Rake-bunching is a system in which hay is cut and then raked into small piles (80 to 120 pounds), and left in the field. The forage is then strip-grazed using New Zealand type electric fences throughout the winter. The Eastern Oregon Agricultural Research Center conducted approximately 10 years of research evaluating rake-bunch as an alternative to feeding traditional baled hay during the winter. On average, cows wintered on rake-bunch came out of the winter in as good a body condition as traditional hay fed cows and did not require supplements or additional hay. In addition, cow winter feed cost associated with rake-bunching was $30 to $40 less than if baled hay was fed.

Winter Grazing

To effectively use winter grazing a producer must “stockpile”, or defer grazing of irrigated pasture and/or native range to the fall/winter. Because the forage will be dormant and low-quality, some form of supplementation will most likely be necessary to maintain acceptable performance of late-gestation cows. In addition, there are other drawbacks of winter grazing. These include maintaining adequate access to cows and pastures to allow for supplementation, maintaining water availability throughout the winter (even though cows can use snow effectively), and keeping a supply of harvested forage nearby for severe weather events. During mild to average winters, winter grazing can decrease annual winter feed costs by $20 to $30 per cow. Nevertheless, the economic benefit to winter grazing is lost during severe or “hard” winters.

Grass Seed Straw

Grass seed straw is a byproduct of Oregon’s grass seed industry. In general, grass seed straw is slightly lower in nutritional quality, on a crude protein basis, than most meadow hays and superior to most cereal grain straws. When used as the major component of the diet, grass seed straw usually does not have the digestible protein and/or energy to support optimal performance in late-gestation beef cows. Therefore, as with winter grazing, grass seed straw will normally require some form of supplementation. Also, a few varieties of some particular species of grass seed straw (primarily tall fescue and perennial ryegrass) can contain alkaloids, which can cause animal health and/or neurological concerns if the alkaloids are present in high concentrations. Consequently, the first step in feeding potentially high-alkaloid grass seed straw is to have it tested for alkaloids (contact your local extension agent for information on testing grass seed straw for alkaloids). Table 1 lists the estimated maximum acceptable levels of alkaloids (ergovaline and lolitrem B) in the diet of cattle and sheep. These values can be used to minimize the chance of causing clinical symptoms of fescue toxicosis and perennial ryegrass staggers when feeding alkaloid containing grass seed straw. As a result, grass seed straw should be tested for forage quality, and potentially alkaloids, by a certified lab prior to purchase and/or use as a forage source for ruminants. Depending on purchase price and delivery cost, use of grass seed straw in place of meadow hay can decrease winter feed costs from $5 to $45 per cow.

Table 1. Estimated alkaloid maximum acceptable levels (parts per billion; ppb) for ergovaline and lolitrem B in cattle and sheep

<table>
<thead>
<tr>
<th>Species</th>
<th>*Ergovaline (ppb)</th>
<th>Lolitrem B (ppb)</th>
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<tbody>
<tr>
<td>Cattle</td>
<td>400-750</td>
<td>1800-2000</td>
</tr>
<tr>
<td>Sheep</td>
<td>500-800</td>
<td>1800-2000</td>
</tr>
</tbody>
</table>

*Level is environmentally dependent and decreases in colder weather.
Limit feeding

If forage and hay prices are high due to limited availability, producers should consider limit feeding grain to cows. The basic principle is to feed corn, barley, or some other grain source and a supplement in just enough quantity to meet the cows’ requirements for a targeted level of performance. Also, a small amount of forage (usually meadow hay or alfalfa) is fed in order to keep the rumen healthy. The program is referred to as limit feeding because the amount of grain fed is much less than the amount of hay or grass normally fed (1 pound of grain normally replaces 1.5 to 2.0 pounds of forage) and the cows will be hungry. However, skill and extreme caution is required by the herd manager because limit feeding can result in health disorders and/or death due to acidosis, bloat, and founder. Be sure and contact a ruminant nutritionist or extension agent prior to initiating a limit feeding program. However, if carried out properly during periods of limited forage availability, limit feeding can decrease winter feed costs by up to 50% compared with traditional hay feeding.

Early Weaning

Most cattle producers wean at approximately 7 months of age, which is usually late October or early November for spring-calving herds. Gains of both cows and calves are often poor by late August; particularly during years of poor forage quality (less than 4% CP in the diet). We have weaned calves around 140 days of age (approximately August 1) since 2000 at the Eastern Oregon Agricultural Research Center in Burns. This has routinely increased cow body condition score (BCS; 1 to 9 scale; 1 being thin and emaciated and 9 being overly obese or fat) by one full score and weight by almost 120 pounds compared with traditional weaned cows entering the winter feeding period (November 1). Consequently, the traditional weaned cows have increased winter feed costs by up to 50% compared with traditional hay feeding.

Split the cow herd into low and adequate BCS groups

One of the most cost-effective winter feeding strategies is to split the cow herd into groups based on BCS. This can be a hassle depending on resource (pasture and labor) availability; however, it is worthwhile if planned properly. It is recommended that the cow herd be split into at least two groups, one containing cows with adequate/heavy BCS (5 and above) and one containing cows with low BCS (4 and less). By grouping cows based on BCS, a cow/calf producer can strategically provide better quality feed to the thin cows to increase their BCS and potentially decrease the quantity of feed provided to the heavy BCS cows.

Research from Texas A&M has shown cows with a BCS of 4 or less at calving and breeding will not breed back fast enough to maintain a 365-day (one calf a year) calving interval. This results in one of two scenarios – open cows at weaning and/or an extended calving season. Also, compared with thin cows, cows with a BCS of 5 or greater have improved calf health, survivability, and weaning weights. The bottom line is that thin cows cost cow/calf producers money (Table 2). A reduced pregnancy rate, resulting in fewer calves to sell at weaning, is responsible for the largest reduction in net income.

Table 2. Lost net income per thin cow (BCS 3 or 4) compared to a cow with a BCS of 5

<table>
<thead>
<tr>
<th>Calf price per hundredweight</th>
<th>$80</th>
<th>$90</th>
<th>$100</th>
<th>$110</th>
<th>$120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cow BCS</td>
<td>Lost net income per thin cow ($)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCS 4</td>
<td>52</td>
<td>64</td>
<td>76</td>
<td>88</td>
<td>100</td>
</tr>
<tr>
<td>BCS 3</td>
<td>100</td>
<td>124</td>
<td>148</td>
<td>172</td>
<td>196</td>
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Summary

The ability of the Western cow/calf producer to compete effectively with other regions of North America will depend on management strategies that emphasize profit margins and efficiency rather than weaning weights. The information provided in this article just touches on the potential alternative management strategies available to beef cow/calf producers to lower winter feed costs. Each producer must evaluate his/her ranches resources and determine what may work for that unique operation.

Many of the management strategies suggested above involve some form of supplementation and, therefore, diet formulation. I encourage you to see publication EM 8883 (Beef Cattle Nutrition Workbook) available in your county Extension office or at http://extension.oregonstate.edu/eesc/ (click on Publications and Multimedia Catalog and then enter 8883 in the Search entire catalog box and click on Go) to assist in formulating diets and deciding on a winter feeding strategy. If you have any questions, or want some assistance in evaluating your feeding program, drop by the Eastern Oregon Agricultural Research Center or give me a call at 541-573-8910.

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