## BEEF

## Winter Feeding in Light of Short Supplies & High Costs

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s beef cattle producers face winter feeding, questions in their minds are whether forage supplies are sufficient and whether forage quality is appropriate for cattle they will be feeding this winter. Approaches to answering the first question are complicated by the loss of body condition in most cow herds as the 2012 drought only intensified in late summer and early fall. This implies that cow herds that have lost 1 point of body condition score will require an additional 100 lbs of gain before calving. The answer to the second question is likely greater quality hay or diets will be needed this year.

Typically, in the upper Midwest, cows require a total of 1,000 lbs of hay/month during winter (approximately one large round bale/cow/month). If the body condition score is at least 5 when winter comes around, then no additional energy for weight gain is required prior to calving. From a practical standpoint, this amount of feed is equivalent to one round bale/cow/month. However, due to the effects of the drought some cows may need additional weight gain; thus, this amount (and quality) of hay may not be sufficient. Therefore, producers may be faced with considering the need to supplement hay, even if inventories are equivalent to one large round bale/cow/month.

Every unit body condition score is equivalent to 100 lbs weight. At a body condition 4 scored in November, a cow will need to gain 100 lbs to achieve body condition score 5 at calving time. This is necessary to ensure reproductive success. Assuming calving is in late February, 100 lbs gain, or a rate of gain of 1 lb/day, is needed during the first 90 days of winter feeding. At a hay TDN content of 55%, common of hay typically referred to an "com hay" a daily supplementation of 7 lbs TDN is required to achieve the total score to a set of the total score to a set of the total score total score to a set of the total score tot



referred to as "cow hay," a daily supplementation of 7 lbs TDN is required to achieve this gain.

Traditionally, supplementing with a high-energy grain, such as corn, was the least expensive option. Given today's corn prices, this may not be the case. Corn silage purchased at under \$50/ton would provide a reasonably lower price option than corn grain at \$8/bu. Corn screenings purchased at under \$220/ton would be another option.

An oversimplified opportunity price calculator was derived by estimating opportunity price of various feeds based on the energy contribution to the diet relative to the price of corn grain. By dividing this opportunity price by the reference corn grain price, a simple ratio or factor can be used to quickly estimate opportunity price based on corn grain price. Example: current bids summarized for northwest Iowa, corn grain averaged \$7.34/bu on November 19, 2012 (http://www.ams.usda. gov/mnreports/nw\_gr111.txt). Multiplying this value by 37 yields an estimate of the opportunity price of dry distillers grains in \$/ton or \$272/ton. The corresponding bids quoted in the USDA report for dry distillers grains were \$246-\$270/ton. The quote does not reflect trucking or losses from feed storage. Therefore, if a producer can buy dry distillers grains at \$240/ton, given corn at \$7.34/bu, trucking costs and losses from storage should be kept to within \$30/ton to make dry distillers grains a good or better option than corn. Values for most dry feeds with energy concentrations similar to corn grain will have multiplying factors in the mid 30s. Dry corn gluten feed, barley, wheat, and corn screenings have a factor of 34. Again, if a producer is interested in buying corn screenings with corn grain at \$7.34/bu, quoted price should be below \$249.56 (7.34 X 34) to be considered a good purchase relative to corn grain. Higher moisture alternative feeds, although high in energy, have lower multiplying factors; from 13-16 for wet corn gluten feed, wet distillers grains, and corn syrup.

In addition, as calves are weaned, consideration to culling open, late-pregnant or old cows with poor teeth should provide some indirect relief in feed savings on these cull cows. Again, when considering that a cow will consume over 6,000 lbs of hay in a winter, being able to save this amount of feed to use for cows remaining in the herd extends already short hay supplies. Although hay spared by culling old or unproductive cows may not be ideal, mature cows can benefit from access to this hay early after weaning a calf and as extra feed when weather turns bitter cold. In addition, producers should think of using lower quality hay early in the winter feeding season.

High cost feeds and other inputs in 2012 also dictate attention to preventing excessive feed losses. Hay waste when no feeders are used, regardless of whether hay was processed or not, were in the range of 15%-18%. Data from the University of Minnesota Beef Research Facilities at Grand Rapids and Rosemount indicate hay wastage is kept to within 5% when cows are fed long hay in a round bale feeder or ground hay in a feed bunk. Greater losses (over 18%) are expected when large bales are simply rolled or shredded onto the ground. Additional hay waste reductions occurred when limiting time cows had access to hay feeder. Limited access by cows to round bale feeders for 14 hours reduced hay waste further. Given the fact that input and feed cost prices will likely remain elevated, and weather is always difficult to predict, producers must consider these feed efficiency alternatives for the winter of 2012-2013 and beyond.