How Much Hay Will Your Cows Consume?

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With the difficult weather this past year, many producers have excess amount of forage, but quality is low. Under this scenario, estimating forage usage by cows is going to be an important part of the task of calculating winter feed needs. Hay intake must be estimated in order to make these calculations. Forage quality will be a determining factor in the amount of forage consumed. Higher quality forages contain larger concentrations of important nutrients so animals should be more likely to meet their nutrient needs consuming these forages. Also, cows can consume a larger quantity of higher quality forages.

Higher quality forages are fermented more rapidly in the rumen leaving a void that the animal can refill with additional forage. Consequently, forage intake increases. For example, low quality forages (below about 6% crude protein) will be consumed at about 1.5% of body weight (on a dry matter basis) per day. Higher quality grass hays (above 8% crude protein) may be consumed at about 2% of body weight. Excellent forages, such as good alfalfa, silages, or green pasture may be consumed at the rate of 2.5% dry matter of body weight per day. The combination of increased nutrient content and increased forage intake makes high quality forage very valuable to the animal and to the producer. With these intake estimates, producers can calculate the amounts of hay that need to be available.

Using an example of 1,200-pound pregnant spring-calving cows, let's assume that the grass hay quality is good and tested 8% crude protein. Cows will voluntarily consume 2% of body weight or 24 pounds per day. The 24 pounds is based on 100% dry matter. Grass hays will often be 7 to 10% moisture. If we assume that the hay is 92% dry matter or 8% moisture, then the cows will consume about 26 pounds per day on an "as-fed basis". Unfortunately we also have to consider hay wastage when feeding big round bales. Hay wastage is difficult to estimate, but generally has been found to be from 6 to 20% (or more). For this example, let's assume 15% hay wastage. This means that approximately 30 pounds of grass hay must be hauled to the pasture for each cow each day that hay is expected to be the primary ingredient in the diet.

After calving and during early lactation, the cow may weigh 100 pounds less, but will be able to consume about 2.6% of her body weight (100% dry matter) in hay. This would translate into 36 pounds of "as-fed" hay per cow per day necessary to be hauled to the pasture, assuming 15% hay wastage once again. Accurate knowledge of average cow

size in your herd as well as the average weight of your big round bales becomes necessary to predict hay needs and hay feeding strategies.

Where the real concern comes this year is with the low quality forages that may be on the farm. As mentioned, low protein hay is consumed at 1.5% of body weight. Cows consuming lower quality forages may not be able to physically consume enough forage to meet their nutrient requirements. This can lead to lower body scores, weak calves and lower conception rates next spring.

If you suspect your feed may not be up to its normal standards or you don't have better quality feeds available to supplement your rations, getting your feed tested and having a ration balanced by your feed representative or Manitoba Agriculture Livestock specialist can help assure that your rations will meet your cows' requirements.

Consider the following management practices to reduce winter stress on your herd:

1. Develop balanced rations with available feed and supplement when necessary.

   • Increase ration TDN to meet additional energy needs during adverse weather events
   • Consider supplements to increase energy and protein
   • Manage feed resources keeping the best feeds for late gestation and lactation

2. Shelter can be beneficial during severe conditions.

   • provide dry bedding areas for cows and bulls
   • provide wind breaks that can be accessed by cows during adverse weather

3. Body condition score all cows and monitor monthly to assess their status and group cows and heifers based on nutritional needs by age and body condition.