

How much hay will a cow consume?

Winter hay feeding season is upon us. This year hay supplies are very adequate but it is still important to manage your feed inventory. Plus matching feed quality and quantity with cow nutritional needs especially as the weather changes is key to meeting her nutritional requirements. 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.

Estimating forage usage by cows is an important part of the task of calculating winter feed needs. Hay or standing forage intake must be estimated in order to make the 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 consuming these forages should be more likely to meet their nutrient needs from the 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 re-fill 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 2.0% 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 the producer. With these intake estimates, now producers can calculate the estimated amounts of hay that need to be available.

Weather can also influence intake. Cows will eat more when it is cold. The major effect of cold on nutrient requirement of cows is increased need for energy. A general rule of thumb is that for every one degree (F) the temperature drops below 32°F, increase the ration energy by 1%. Quantity is important but this is where knowing the quality of your feed also comes into play.

What is a realistic estimate of the weight of your cows? How was that determined? Did you sell cull cows recently? Weighed them on a farm scale or elevator scale at weaning? Guessed? Cow size has grown over the years. You might be surprised how big your cows really are. In a survey of 17 Washington County cow herds, 8 out of 17 reported an average cow weight of over 1400 pounds.

Using an example of 1200 pound pregnant spring-calving cows, let's assume that the grass hay quality is good and tested 8% crude protein. Cows will voluntarily consume 2.0% 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. This again assumes 15% hay wastage.

Hay quality, weather conditions, cow age, stage of production, feeding method, hay wastage, and type of bale feeder can all influence intake. Just make sure that the amount of hay you are feeding is meeting the needs of your cows. Body condition will be the best way to measure if your cows are eating enough to meet their nutritional requirements.

Management questions to consider:

What is the average weight of my cows?

What is the average weight of my hay bales- alfalfa, brome, prairie hay, etc.?

What is the protein and energy content of my hay?

What are realistic hay feeding losses for my operation?

Adapted from Cow Calf Corner Newsletter article by Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist, Nov. 9, 2015.

Additional resources:

- [UNL Beef website: beef.unl.edu](http://beef.unl.edu)
- [UNL BeefWatch \(monthly e-newsletter that you can subscribe to\):
http://newsroom.unl.edu/announce/beef](http://newsroom.unl.edu/announce/beef)
- [UNL BeefWatch Podcasts \(these are more intimate chats with some of the authors of the BeefWatch articles, you can also subscribe or download them\):
http://beef.unl.edu/beefwatch-podcast](http://beef.unl.edu/beefwatch-podcast)
- [AgriculturalWithDrLindsay.com: livestock and agriculture blog by Lindsay, timely topics \(subscribe on the webpage\)](http://AgriculturalWithDrLindsay.com)

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