



## How Many Bales of Hay Do I need for the Winter?

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Regardless of what kind of cattle you own, they need nutrients. During the winter, those nutrients could be dedicated to maintenance, reproduction or growth based on their physiological needs. Most cattle producers provide these nutrients in the form of fresh grass, hay and/or supplemental feed. Trying to predict how much hay the cattle herd will need over the winter may seem overwhelming, perhaps even impossible to determine. However, if you familiarize yourself with the factors that affect how much hay a cow will eat over a period of time (days, months) such as the quality of the hay and the way hay is stored and fed and the type of bales being used, you should be able to estimate your winter hay needs without too much trouble. Keep in mind that winter hay needs will vary slightly depending upon what other feed options you provide, including winter annual grasses (ryegrass, small grains) or other feedstuff such as distiller's grains, cottonseed meal, soybean hulls and/or corn gluten.

A written feed budget of some sort will help to clarify what measures need to be taken to maintain a desirable inventory. Hay budgeting does not have to be complex or involve a computer. They are more useful if they are simple, practical and **constantly reviewed**. Feed costs are usually the largest expense associated with raising livestock. They include hay, grain, mineral supplementation, and pasture maintenance. In order to determine how many bales of hay your cow herd needs for the winter, you should first assess your cattle herd. That means determining how long you estimate to feed hay in the winter time (i.e. 30, 45 or 60 days), the type of livestock (dry cows, pregnant cows, lactating cows, weaned calves, stocker, etc.), the animal's size, and the desired growth rate. For example, you might have 10 dry cows, 20 pregnant cows, and 20 steers. Each those groups will have different forage intake and nutrient requirements. Remember that gestation and lactation periods will require more hay and/or higher quality hay each day, since cows are gaining weight and providing nutrients for the calves.

The most accurate method of determining your winter hay needs for cows is by calculating the percentage of body weight that your cow will consume as hay each day. A cow's average feed intake is approximately 3.0 to 3.5% of its body weight. In order to use this method of calculating winter hay needs, estimate the number of days you'll need to feed hay, then estimate the average weight of your livestock class and the average bale weight and size in your hay supply. Hay bales especially round bales can have a large range of weight depending on the size of the bale and the tightness of the bale. For example, a 4'x5' round bale will range from 700-850 lbs while a 5'x6' round bale will range from 1000-1200 lbs.

Forage quality is another important component on determining the needed hay supply. Before establishing a supplementation protocol, get your hay tested. Feed your herd good quality hay, since this will save money in the long term. Cheaper hay is generally more mature and provides the cow with fewer nutrients. It is also less digestible and more hay is required to maintain the cow's body condition. Cows being fed with low energy hay, low crude protein and high neutral detergent fiber (NDF) will require a higher hay intake to obtain the nutrients need under no or minimal supplementation. Pregnant or lactating cows do must have a regular source of protein and energy in order to sustain their health and milking production. If hay quality is low, supplementing your hay supply with other feedstuff to maintain the energy and protein levels required by the livestock is very important. Producers might be able to give cows daily access to winter grass, which provides an important alternate source of forages for your cows. Providing these alternate feed sources may reduce the amount of hay that your cow herd needs over the winter. But, you should still need to calculate your hay requirements as if you're feeding hay alone to ensure that you have enough hay available to last through the winter, in the event that weather and environmental conditions do not allow for grazing of winter pastures.

As you feed hay consider storage and feeding methods. Greater hay losses will occur when left outside and exposed. Storing hay in a barn or under a trap saves 20% more than bales left outside. Assume you have well fertilized hay at \$150.00 per ton. Then a cost-conscious farmer will save approximately \$30 per ton. Evaluating your hay feeding system before winter begins will help minimize your feeding losses and reduce the number of bales of hay that your cows will

need for the winter season. Because most beef producers use hay in the form of a large round bale, it is difficult to limit hay losses. Choose a winter feeding method that will minimize losses such as a cone, a ring or a trailer. Round bale feeders reduce hay waste; the amount of reduction will vary by type. Losses with these type of systems could range from 2 to 10% while feeding on the ground could have losses greater than 40%.



The cow winter feeding program is based on feeding hay, an enterprise that could be very costly. One of the best ways to estimate the profitability of your winter feeding system is by estimating and budgeting your hay needs. All informed decisions start with information or data. Since weather is a very unpredictable factor in any agricultural enterprise, it is recommended to budget at least 25 to 50% above the current hay needs. This extra hay will depend on what winter grazing systems are in place. Either if the hay is home grown or bought, producing or buying good quality hay that is well-stored, will help to reduce the projected hay inventory. Many producers believe that the only way to make money raising cows or to make more money is to increase income. Lowering production costs is probably a more realistic way to increase the net income from a livestock enterprise. This can be done by lowering expenses or increasing productivity. That means feeding hay more efficiently.

This simple discussion was intended to spark the process of asking questions about how you perceive the true cost of hay used on feeding the cow herd. Consider pushing the pencil or working the keyboard to calculate your own costs of feeding hay and to begin considering alternatives that save money and reduce hay costs by storing hay properly, feeding efficiently and feeding good quality hay. An online **HAY CALCULATOR** is available in the MSU Extension Forage website at <http://mississippiforages.com> (Publication 2590). Choose the feeding system that meets the livestock's needs at the lowest costs. Work with your local County Extension Office to develop a winter hay feeding program and build your inventory.

There is no right or wrong decision when feeding hay; the real wrong thing is **NOT** making a decision and taking the steps to reduce cost. Reducing feeding and other costs where possible is an appropriate strategy to improve the profitability of beef production, but underfeeding animals is not a recommended way to reduce cost.

Nutrient requirements are oftentimes not a fun thing to think about regarding our herds; however, having an understanding of these requirements is paramount to successfully feeding hay. In many instances, producers focus on quantity rather than quality. Having a surplus of bales that are low in CP and TDN will not help any if the herd is in peak lactation (when CP and TDN needs are greatest). That is why it is so critical to be aware of the quality of hay fed.

