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Proper Hay Storage Benefits

I've been trying to "Kick the Hay Habit" after following Jim Gerrish and other year-round grazers. That said, putting up hay is still a favorite summer tradition on a personal level and is an important summertime activity for many agriculture producers. Travel down any gravel road this time of year and you'll likely get stuck behind or meet hay equipment in this busy time. Proper haying practices take time, effort, and resources to harvest properly. With so much invested, it is critical to make the most of this effort with proper storage. In preparing to write on this subject, I came across an Oklahoma State Extension release from Mark Johnson, Beef Cattle Breeding Specialist. Let's look at what Dr. Johnson recommends for storing hay.

Proper hay storage is always important. This year, with limited amounts of harvested forage available and record high prices, it is worth discussing some simple storage practices that can lead to less spoilage. First, one of the few upsides to the drought of the past few months is that there has been very little precipitation falling on hay stored outside. Precipitation, air temperature and humidity all lead to more spoilage in big bales. Twine wrapped bales are more subject to spoilage than net wrapped. Greater bale density leads to less spoilage. That being said, keep the following in mind when considering how your hay is stored.

Select a site on higher ground that is not shaded and is open to air flow to enhance drying conditions. The site should be well drained to minimize moisture absorption into the bottom of bales. Ground contact leads to more bale spoilage. When practical keep bales off the ground using low cost surplus materials like old pallets, fence posts, railroad ties and tires. Another option is a six-inch layer of coarse ground rock. A thinner layer of packed ag lime can also be used to create a soil barrier layer. Anything that can be done to maximize drainage and minimize moisture within and around the storage site will be beneficial.

Bails should be stored in rows, butted end-to-end, and oriented in a north/south direction. Avoid stacking three rows of hay on top of each other, in a triangle shape. This formation leads to more spoilage, particularly in the two bottom rows. North/south orientation combined with at least three feet between the rows permits good sunlight penetration and airflow, allowing for faster drying. Vegetation between the rows should be mowed.

Large round bales stored outside with plastic or canvas usually sustain much less spoilage compared to unprotected bales. If barn storage is an option, this is the best method. Dry matter losses in round bales stored for up to nine months in an enclosed barn should be less than two percent. If the discussion involves rectangular bales, storage under roof or tarps becomes extremely important, as they do not shed water as well as the round bales do.

All forages packaged in large round bales benefit from protection and proper storage practices. Producers are encouraged to consider the cost to benefit ratio of providing this protection. Factors to consider include the value of hay, projected in storage losses, local environmental conditions, the cost of providing protection and how long the hay will be in storage before it is fed. At the very least it may be worthwhile to restack or re-orient your hay supply according to the best practices described.

Although the publication referenced is a bit dated on the economics, there is good Kansas data and recommendations found within the K-State Research and Extension publication, MF-1066 Large Round Bale Hay Storage which further details ways to address storage losses.