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HAY STORAGE IN SOUTHEAST NEBRASKA

This week's column is adapted from the work of a University of Nebraska Extension Educator from Burwell, Nebraska with Gage County roots, Steve Niemeyer.

Storing big round hay bales by lining them up along the fence row may be easy, but it is not economical. Baled forage is the highest percentage of winter feed cost we have wrapped up in a beef cow. The production of hay uses a large amount of resources and the ration of beef cattle can be affected by the hay quality. Storing dry hay on the ground without cover is the worst possible storage technique. University of Nebraska Extension research conducted in 2005 – 2008 reported no significant nutrient changes in total dry matter pounds, pounds of crude protein or pounds of total digestible nutrients on native hay and alfalfa plots. However, visual damage losses after one year were 17 percent on uncovered twine and net wrap on native grass hay and 25 and 15 percent after two years on uncovered alfalfa hay. In this study twine and net wrap were similar in year one with lower loss on net wrap in the two year study. University of Wisconsin studies show net wrap reduces harvest losses, reduces storage losses and retains more feed value. Tarp covering on the hay reduced losses by 60 percent in the University of Nebraska study.

There is no one “right way” for everyone when it comes to hay storage. Producers should consider three factors in determining their optimum storage method. Look at hay quality, there is a big dollar difference in a 25 percent loss on \$140/ton of hay vs. \$70/ton of hay. The better the quality, the more you'll save putting it under storage. Evaluate the likelihood of spoilage in your climate. Spoilage (weathering) is the result of moisture getting into bales, and temperature accelerating bacterial and fungal breakdown of the digestible nutrients. Warmer temperatures combined with moisture increase bale deterioration. Wind can also influence drying time. Moisture gets into bales in three ways: rainfall, snowmelt, and humidity. The tops of bales absorb moisture from rain and snowmelt, the bottom wicks moisture from the ground. Also consider the length of time bales will be exposed to weathering. First cutting forages are more susceptible than hay harvested in the fall, depending on when it's fed.

Research studies show outdoor hay storage losses range from 5-35 percent. They can be reduced by 66 percent with indoor storage and be reduced by 50 percent with good plastic covering outdoors. Make a dense bale: It will shed more precipitation, sag less, and have less surface area to absorb moisture. Net wrap you will reduce bale sag and maintain bale shape. In addition, net wrap makes a tight, smooth surface that will resist weathering, insects, and rodents. Store bales on a well- drained location with a 4-6 inch coarse rock base that will minimize bottom spoilage. Store bales end-to-end in long lines in a northwest to southeast direction whenever possible. Adjacent storage lines should be at least 10 feet apart. Stacking bales usually increases losses. Locate bale rows away from fences and fields and it is recommended to cover hay if keeping more than one year. Hay stored inside buildings loses very little value in storage unless rodents or roof leaks create issues.

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