Covering Hay Prevents Nutrient Losses

published in

The Peace River Farmer and Rancher

November - 2002

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Round hay balers came into prominence in the 1950s and made bales similar in size to small square bales, weighing about 50 pounds each. Round bales did not stack well, but were promoted with the concept that round bales could be rained on and not have weather damage. The round contour help shed rainwater, protecting the bale from getting wet. This was true if small round bales were left in the field for short periods, but with time they get wet and deteriorate.

The concept of outside storage carried over to large round bales that are in vogue today. They can be stored in the field with minimum losses. Again, this is only partially true because with time large round bales also become weathered and deteriorate. Dr. David Sanson recently completed a research study in Louisiana which compared hay storage methods. The study was summarized in an article written by Larry Stalcup in Hay and Forage Magazine, August 10, 2002.

Dr. Sanson stored ryegrass hay uncovered, under a tarp, and under a barn. After six months nutrient losses were measured. Total digestible nutrient (TDN) loss was 2% for hay stored under the barn, 11% loss for hay covered with a tarp, and 27% loss for hay left uncovered. Crude protein losses were similar with a 3% loss for barn-stored hay, 11% loss for hay stored under a tarp, and 26% loss for uncovered hay. It is estimated that uncovered hay will lose another 30% of its dry matter due to cattle refusal to eat parts of the weathered bale.

At the Range Cattle REC we store spring-cut hay under a barn, but for the last 15 years we have stored fall-cut hay under tarps. We feed tarp-covered hay first in the winter, but with a very mild winter, some tarp-covered hay can be carried over to the following winter. It is important to place tarp-covered hay on a
well-drained area because large amounts of the bottom bales will severely deteriorate if in contact with wet soil.

A tarp costing about $210 will cover forty 800-900 pound round bales stacked in a 3-2-1 combination. The average life of a tarp is three years, thus, costing about $1.75 per bale. We feel it is worth the cost and effort to cover hay with a tarp. Barn storage of hay is also cost effective, but the high initial cost requires time to recover the capital investment.

Next, we will discuss the use of ammonia treatment to greatly improve the nutritive value of weathered hay.

For questions or comments regarding this publication contact Findlay Pate