

MSU extension

Managing round bales to minimize losses

It's not too late to prevent storage losses.

Posted on **September 23, 2011** by **Phil Kaatz**, Michigan State University Extension

With the use of round bales becoming more prevalent in hay producing areas, producers are faced with decisions about how they store the bales. The decision to produce large round bales compared to small square bales is usually made to save both labor and time. Given the amount of investment that any producer has in making hay, it also makes sense to make decisions about storage that will provide the best quality forage for the longest time. If a producer has not made the investment for storage, you may want to consider the consequences of your decision.

In our Michigan climate, dry matter loss is dependent on hay moisture, temperature and length of time stored. The higher the moisture and temperature, the higher the rate of loss you can expect for your hay. Outside storage loss is most pronounced, when rain and melting snow have the chance to slowly be absorbed into the bale and water is wicked up from the bottom. In these situations, the bale doesn't have a chance to dry out. Alfalfa hay will typically have larger amounts of dry matter loss compared to grass hay that tends to shed water better.

Studies have measured the effect storage methods have on the amount of dry matter loss for round bales. Table 1 is a summary of studies from Wisconsin and West Virginia.

Table 1. Large round bale storage methods and effect on dry matter loss.

Storage	% Dry matter loss	Average
Inside	2-8	4
Outside on ground	7-61	26
Outside on gravel	4-46	17
Outside on pallets	8-39	25
Outside covered on pallet	5-10	8

Producers should analyze how much loss they can typically expect given their storage system and compare that to what the cost might be for inside storage. Here's an example: Assume you have mid-grade quality, large round bales priced at \$100'00 per ton and outside storage on gravel with no covering, and you average 4 tons per acre on 40 acres. The loss per ton would be approximately \$26 and a total loss per year would be \$4,160. For inside storage of the same hay, your losses per year would be approximately \$640. The difference a producer could realize is approximately \$3,500 per year.

Considering the cost for flexible fabric buildings, large hay tarps, covers or more permanent buildings, the investment for hay storage is one producers should seriously consider.

This article was published by **Michigan State University Extension.**