

Preserving Tight Forage Supplies

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With the way 2021 is shaping up forage inventories are going to be way down and hay prices way up. In a scenario like this the last thing that producers are looking at is throwing away what precious supplies they may have.

One of the biggest losses that can happen (up to 50 percent) is right after harvest but before it gets to the animal. Poorly stored forage can have losses of 20 percent without being noticed. Hay storage losses are often related to contact with moisture and anything you can do to keep hay dry will have a large impact on losses, quality and your bottom line.

Storing bales on poorly drained areas can lead to wicking of moisture upwards from the ground into the bale causing spoilage and dry matter (DM) losses of over 20 percent in a short period of time. Store hay on a well-drained surface such as gravel, rock, or old tires or pallets to keep hay out of contact with the soil and to minimize dry matter losses to less than 15 percent.

When you look at bale type square bales work well but should be covered and elevated off the ground. If bales are stored outside, tightly wrapped round bales are a better option and if net wrapped, they will shed water and could result in less than 32 percent DM loss compared to twine wrapped bales. Larger bales have a greater percentage of the bale protected inside leading to lower storage losses. A 2 inch layer of spoiled hay on the outside of a 4 ft bale contains 16 percent of the bales DM while the same 2 inches on a 6 ft bale has only 11 percent of the bales DM.

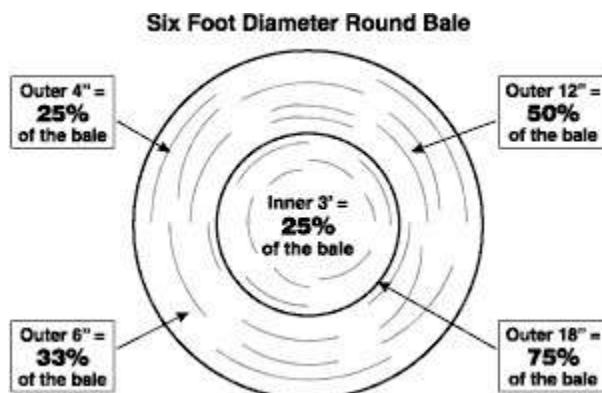


Figure 1: Effect of depth of spoilage on percentage of hay waste.

When it comes to stacking round bales end to end and 3-5 feet between rows is the best way to go. Pyramid stacking traps moisture leading to greater DM losses.

Hay storage method	Dry matter loss range
	%
Under roof	2-10
Plastic wrap, on ground	4-7
Bale sleeve, on ground	4-8
Covered, rock pad or elevated	2-17
Uncovered, rock pad or elevated	3-46
Uncovered, on ground, net wrap	6-25
Covered, on ground	4-46
Uncovered, on ground	5-61

From Craig Saxe, 2007, UW, Big Bale Storage Losses; how different options stack up.

In summary:

- Bales should be dense and dry <20 percent, even lower for larger bales.
- Stack hay so it does not trap moisture.
- Improve drainage of your hay storage pad.
- Consider buildings, tarps or bale wraps to keep hay covered.

If you are storing forage as baleage or silage most losses are due to exposure to oxygen during storage and feed out. Checking baleage regularly for holes and patching immediately will minimize spoilage. Packing and covering silage piles properly and keeping oxygen out of the piles after covering will keep your silage in good condition with minimal losses. Feed out losses can be minimized by following best management practices for the type of silage storage you are utilizing.

More information on silage: [Silage Handling and Management](#)