News Column
by Greg McClure, KSU-Riley County Extension Agriculture Agent
110 Courthouse Plaza
Manhattan, KS 66502

For Release 08/31/20
Phone: 785/537-6350
Fax: 785/537-6353

ROUND BALE STORAGE

The young man at the drive-thru handed me my large drink, then it took him about 10 seconds before he handed me my bag of food. While I waited, I stared at my drink,...and fought back the urge to hand the cup back and ask him to please fill my drink to the top.

That day my drink was filled to about an inch from the top – not really even close to being full. I glanced again at my disappointing drink,... and all I could think about was round hay bales. That's right. Hay bales.

Did you know that 25% of the hay in a six foot diameter bale is in the outer four inch layer of hay? And, did you know that 20% of my drink would have been in the top one inch of that cup?

Yes. I took an empty cup and measured how much more liquid would fit in the top inch of the cup. I just had to know!

While I made it through the day with 20% less caffeine, I'm sure I would have complained if I had opened my hamburger and found teeth marks, and a big bite taken out of it. Essentially, that's what happens when round bales aren't properly stored – a big bite gets taken out of them before they get to the cow herd.

Weathering losses are generally limited to the outer four to eight inches for hay stored outside. Keep in mind though that 25% of a six-foot diameter bale is in the outer four inches.

Unless you are in the business of selling premium quality hay for a premium price,

building a new barn to store hay probably isn't going to be a money making venture. However, there are several things you can do to decrease storage losses.

Speaking from experience, there is no doubt that deterioration at the bottom of bales stored on damp soil can cause major spoilage. Park those bales in a low spot, too close to a windbreak where snow piles up, or under the drip line of a row of trees and you'll increase storage losses.

The first step toward minimizing storage losses is to choose a well-drained site with good air movement and sunlight, to enhance drying. If possible, bales should be elevated by stacking on old tires, pallets, railroad ties, or whatever you have on hand.

Getting the bottoms of bales up off the ground will eliminate the rotten piles of hay that are left behind when moving bales that have been stored outside for months,... or even years. For small operations like ours, wooden pallets work well. We even put pallets under the bales that are stored inside. If the barn floor isn't dry, bales will rot on the bottom under a roof too.

When stacking round bales at the edge of a field, stacking end to end and pushing them tightly together will prevent spoilage on the ends of bales. North-south rows are preferred because they allow an equal amount of sunlight on both sides of the bale row, resulting in more uniform drying.

Leaving at least three feet between rows allows air circulation and sunlight to reach bales and reduces snow accumulation between rows. If major snow accumulation is a possibility, then even wider spacing between rows would be better.

Some believe net wrapping is better than twine for preventing storage losses, but K-State studies don't support that theory. In K-State studies, storage losses have been similar for both net-wrapped and twine-wrapped bales.

Bale density, on the other hand, does matter. Tighter bales will shed water better and you will have less spoilage. If you can depress the surface of the bale more than one half inch, it isn't tight enough.

Barn storage is a great option if the structure already exists and isn't already being used. However, in the real world, most round bales are going to be stored outside. If you will be storing bales outside for several months, at least make tight, dense bales, and get them up off the ground so they don't rot from the bottom up.

If you have questions, you can reach me at the Riley County Extension Office at 785/537-6350. Or, you can send e-mail to gmcclure@ksu.edu.

-30-