How Much Does That Round Bale Weigh?
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If you asked most people what the round bales they baled or bought weighed, they would probably tell you a number between 1,000 and 1,200 pounds. Why? Because that's what the guy that sold them the bale or the baler said, right!

It seems strange that cattlemen (rightly so) insist on an accurate weight on cattle bought or sold, feed deliveries, fertilizer loads and other purchases but seem lax about the weight of the bales they buy or sell. When buying or selling bales of hay or baleage, one should know the tonnage or weight of the lot being purchased. Buying by the bale (i.e., $ per bale) can lead to paying an amount that is too high or too low for the value of the hay.

In addition, the only true way to know what a bale or a lot of hay weighs is to actually weigh it. It is rare that anyone will actually know the weight of their bales. At times it may be inconvenient to have a scale of sufficient size to weigh the bales. Also, some sellers may be put off if the buyer insists on weighing the bales prior to purchase.

In those cases, Table 1 (below) may be useful. Bale density is a huge variable that can be difficult to estimate. Most modern round balers will make a bale that is between nine and twelve pounds of Dry Matter per cubic foot. If the bales are very loose and spongy when pressed, it is likely that they have a bale density of 9 lbs DM per ft3 or less. If the bale deforms only slightly when pressed or spiked, it is likely to be approximately 10 lbs DM per ft^3. If the bale is rigid but deforms when pressed hard or spiked, it is likely to be approximately 11 lbs DM per ft^3. If the bale is very rigid and only deforms under the tractor's weight, it is likely to be approximately 12 lbs DM per ft^3. Please note that the values listed in Table 1 are merely estimates of bale weight.

Table 1. Estimated dry weight or dry matter (DM) of bales of the most common bale dimensions at different bale densities.*

Bale Size		Bale Weight ---- Density, (*lbs per ft³*) ----			
Width	Height	9	10	11	12
(ft)		*(lbs of DM/bale)*			
4.0	4.0	450	500	550	600
4.0	4.5	570	640	700	760
4.0	5.0	710	790	860	940
5.0	4.0	570	630	690	750
5.0	4.5	720	800	870	950
5.0	5.0	880	980	1080	1180
5.0	5.5	1070	1190	1310	1430
5.0	6.0	1270	1410	1560	1700

*Overestimating bale density is a common mistake. So, one should assume the bale's weight is ~10% less than indicated in the table.

Buying hay by weight rather than by the bale is the only fair way, but it may make the transaction harder. In fact, just as with bale weight many folks tend to overestimate bale density. Therefore, one should assume the bale's weight is approximately 10% less than indicated in the table. Also note that these values are on a dry matter basis. To convert to the actual as fed or wet weight divide the estimated dry matter weight by the percent dry matter of the bale. For example, if the hay is at a stable 12% moisture and the table estimate is 1080 lbs of DM, then the actual "as-fed" or wet weight is 1227 lbs (1080/.88)

I would also suggest that producers test your hay and other feedstuffs for nutrient value prior to feeding this winter. This will make sure your nutrition program is dialed in. If you need help feed testing or building a ration please stop by the office or call me at 620-583-7455.

Upcoming Extension Events: "Join us for Wits Workout at the Madison Senior Center on the first Tuesday of each month. The next session will be held on February 3. Enjoy fun, interactive activities designed to challenge your brain and support mental wellness. Contact the Extension Office for more information."