

An Efficient Hay Feeding System

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One aspect of sustainable cattle production is to manage forage to ultimately reduce or eliminate feeding hay. We have not been able to achieve this elusive goal but we continue to refine how we feed hay.

We currently use a system where hay bales are left in the pastures during the hay season, rather than stored somewhere else and taken to the herd. This system was coined the *Spaced-Bale Hay Feeding System* by the Forage Systems Research Center (FSRC) in Missouri. There are numerous advantages to this system. Primarily, our reason for using it is to reduce the damage to our pastures and equipment when conditions are less than ideal.

The basic set up of the feeding system is illustrated in the diagram. Large round bales are pre-set prior to winter feeding time to reduce labor, tractor usage, and pasture damage from running

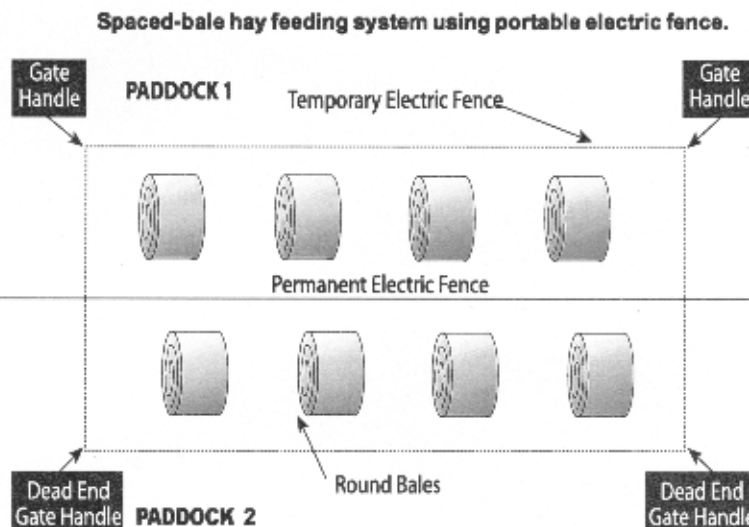
equipment in the field during muddy times. The pasture can be any size and the number of bales in each can vary as well.

We generally figure our hay needs based on previous history of usage. We generally have had to plan on feeding for 70-90 days. We also keep an inventory of cattle to determine needs on a per-head basis.

If I know the number of head of cattle and estimate consumption based on historical data I can preplan my hay needs fairly closely. Because of our stocking rate and rotational grazing system we have fed approximately 1-2 bales per head for the winter period. The number of

cattle this year is planned to be 450 head. Therefore we will prepare for 500 bales spaced throughout our pastures.

Bales are spaced according to the total number of pastures used in the planned rotation. One example illustrating the math is the Stewardship Farm where we rotate our stocker cattle through approximately 208 acres divided into 18 paddocks. Our rotation is primarily a two day rotation. Therefore enough hay should be placed in each paddock for a 90 day period. With 18 paddocks and a two-day rotation we would need approximately six bales per paddock to last the desired time. In this system each pasture would be rotated through three times with a rest period of 34 days. We could also be flexible and speed up the rotation when it gets closer to spring



green-up. In this scenario we could have two rotations with a two-day rotation, and two with a single-day rotation.

We prefer to use biodegradable sisal twine for the bales since we are not transporting the bales from the barn to the pasture. It is critical that twine spacing be kept to less than three inches to minimize storage waste. The narrow twine spacing provides excellent storage protection for grass-dominant hay. Hay from pastures which have a higher percentage of legumes is generally stored in the barn.

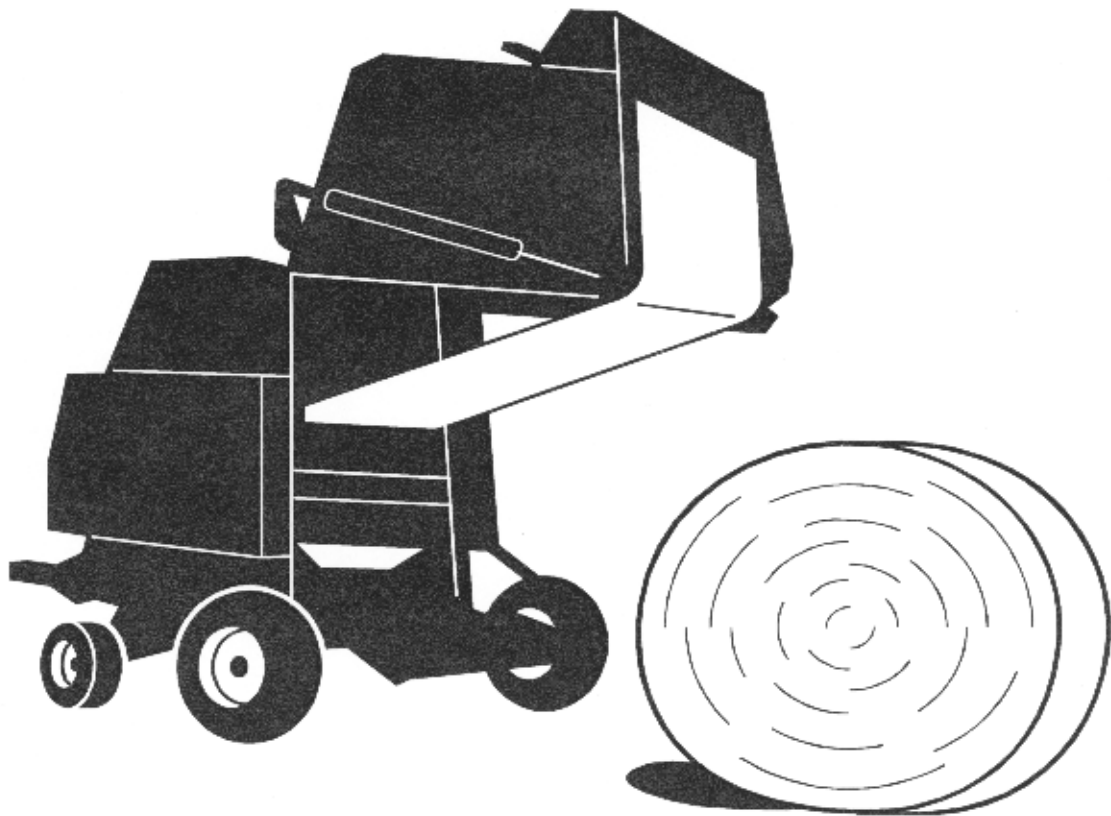
Even setting out a month's worth of hay at a time is much more efficient than feeding on a daily basis. In our rotation system we've also found that using hay rings doesn't save that much hay from wastage. When cows are limited to only a few bales they tend to vacuum up any hay available.

One negative behavior we have observed is that dominant cows tend to spend more

time at the hay than grazing. With this drawback in mind, producers could divide the herd into smaller, common groups, such as first-calf heifers, stocker calves, bulls, mature cows in good body condition, older cows, etc. Using this system allows us to manage at a more efficient level. If the mature cows look to be maintaining body condition, why feed hay just to put weight on those few that are a little thinner?

We prefer a small number of bales in many paddocks rather than large number of bales in just a few paddocks. Trampling damage does occur around hay bales and a light discing or harrowing may be required to smooth out the ground and re-establish forage. Our general experience has been that this is not necessary and that seed from hay spreads throughout the pasture.

Many producers are beginning to look at this system more closely. Maybe you should re-evaluate the traditional practices of feeding hay!



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