

Feeding Hay in Drought

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Background

Throughout the summer and fall, the Southwind District has been in D2 (severe), D3 (extreme), or D4 (exceptional) drought. This has compromised pasture quality, reduced surface water availability, diminished cattle condition, and increased hay prices while reducing quality and quantity. This article discusses different cattle feeding methods to increase feeding efficiency and profitability.

Feeding Efficiency – Quantity and Quality

No matter the feeding method, bale waste is directly affected by how much hay you are providing cattle at one time. Providing a daily hay ration can reduce hay loss by 25% compared to providing two or more days' rations at a time.

****Special Note**** Forage analyses are an inexpensive technique to know what you are feeding your cattle. Forage probes can be checked out at any Southwind Extension Office. Additionally, we will help you select the proper analysis for your operation.

Feeding Hay on Pasture

Let's evaluate four hay-feeding methods for cattle on pasture. Many producers stockpile tall fescue in the Southwind District and feed supplemental hay while cattle are on pasture. While most fescue greened up with recent precipitation, not much growth has occurred. However, producers may still seek to feed cattle in pastures where water is available.

Method 1: Hay Rings or Round Feeders

The tried-and-true method to get hay to cattle. Almost every livestock farm has at least one of these, and it continues to be the most used method to feed hay. Feeding out of a hay ring is simple and takes little effort with a loader tractor.

Let's consider that there are many bale ring types, each offering their own benefits and shortcomings. We are focusing on data from Oklahoma State University showing percent hay waste with three commonly used bale rings, and one "ideal" hay ring type that is not commonly used.

Type 1: Open Bale Ring. The open bale ring is the simplest bale ring. The open bale ring is a ring of metal tubing to hold the bale in place while cattle eat. This ring type has shown to result in 20% hay loss by weight as hay can fall out of the bottom and cattle can drag hay out for bedding.

Type 2: Poly-pipe Bale Ring. The poly-pipe rings are becoming very popular because of their durability, light weight, and maneuverability. Poly-pipe bale rings are functionally the same as open bale rings, thus resulting in similar losses.

Type 3: Sheeted Bottom Bale Rings. These bale rings feature a sheet of metal along the bottom half of the feeders, limiting hay from falling out of the bottom as the bale unravels. Most sheeted bottom rings also have stanchions on the top half to limit the number of cattle that have access to the bale at a given time. Sheeted Bottom Bale Rings with 16 stanchions resulted in 13% loss by weight.

Type 4: Modified Cone Feeders. In this study, an "ideal" bale ring was constructed. A "cone" was added to the top of a sheeted bottom ring. This cone only allows small amounts of hay to be dropped down the feeder at a time. This modified cone feeder had only 5.3% waste by weight.

Method 2: Unrolling Bales

Unrolling bales on pasture is another commonly used method to feed hay. It is as simple as unrolling a large round bale with a tractor, hydraulic bale bed, or using gravity to unroll down a slope. If you plan to unroll down a slope, plan to have all children and animals out of the way of where the bale is to unroll to prevent injury.

Unrolling bales has been nicknamed the "bed and breakfast" feeding method. As the nickname states, cattle will not only feed on the unrolled bale, but they will also take the opportunity to bed in the soft hay, further increasing waste. Simply unrolling bales can have varying amounts of wastage, depending on the amount of cattle being fed at one time. Studies by Kansas State University have shown 22-23% waste using this method. More cattle will create more competition and less waste; whereas, fewer cattle will create less competition and more waste.



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Method 3: Unrolling Bales and Using Electric Fence

Using electric fences helps to alleviate waste experienced with unrolling bales on pasture. The idea is simple, unroll the bale as you normally would and then string a hot electric fence right down the middle of the roll.

You may have noticed a trend as we looked at feeding methods. As you add barriers to accessing the hay, you tend to limit waste. The idea of using electric fences over top of the bale roll is relatively new, ergo little data are available to support this practice. If your operation utilizes electric fences, it may be worth trying.

Method 4: Grazing Bales

Grazing bales requires more preparation than the previous methods, but once the fencing is in place it is an easy and versatile method of feeding cattle. Grazing bales is spreading bales evenly throughout a field and limiting access to only a few bales at a time with an electric fence. This method can be very useful to producers who may not have access to a loader tractor or bale bed on a daily basis, or even for producers who don't want to cold start their tractors every day this winter. By spreading the bales throughout the field, you only need equipment for one day. Then you can move the fence on foot as needed.

Grazing bales can easily incorporate one or more of the aforementioned methods, whether it be moving one or more hay rings to the next bales to be grazed or unrolling the bales ahead of time and allowing access as needed. When bale grazing, waste can range from 5 - 15% with hay rings or 11 - 45% without hay rings.



Feeding in Dry Lots

Some cattle producers may choose to feed cattle in dry lots this winter for convenience, pasture health, or water limitations. Depending on lot size, many methods listed above can be repeated with similar results. For example, feeding with bale rings will result in 5.3 - 20% waste in a dry lot.

Many producers feeding in dry lots will use a bale processor or mixer to feed hay. Processed hay will decrease the selectivity of cattle, thereby decreasing waste. Feeding processed hay in a bunk line results in 8 - 11% waste.

Another option for producers feeding in a dry lot is feeding a total mixed ration (TMR). A TMR is a mix of feeds such as ground forage (hay or silage), grain, protein feed, vitamins, minerals, and other additives. When mixed properly, cattle are unable to select for certain ingredients, giving producers more control over feed intake.

Feeding a TMR in a bunk line will result in 2 - 10% waste. While a TMR adds additional feed costs, a proper mix can decrease hay usage by 20 - 50% when compared to feeding hay in an open bale ring. For producers with limited hay resources and access to a mixer, a TMR may be a more cost-effective option for feeding cattle this fall.

Considerations for feeding in a bunk line: plan to need 28 - 36 inches of bunk space per cow, depending on cattle frame size. Also plan to feed cows, calves, and bulls separately to ensure each animal is eating the necessary allotment.

Final Thoughts

A drought can make it tough for cattle producers to turn profits with decreased amounts of quality forages, poor animal performance, and limited water. Changing how animals are fed can lead to serious savings. Switching from an open bale ring to a sheeted bottom bale ring could save over \$10/ton of hay fed on \$150/ton hay.

For more information, and to have your hay tested, contact Hunter Nickell (Livestock Production Agent) or Chad Guthrie (Crop Production and Forage Management Agent) at any Southwind Extension District Office.