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Feeders Matter in Waste

The calendar has flipped to December, and it has begun to feel like winter is on the way. This fall has been an open one to graze livestock on relatively abundant forages in northeast Kansas. All good things generally come to an end and even the most dedicated graziers find times when harvested forages need to be provided for livestock. University research has shown that the type of feeder and amount of access to hay makes a difference in feeding loss.

Reducing hay waste is one of the easiest ways to improve the efficiency and profitability of livestock operations. The type of hay feeder utilized can significantly impact how much forage is wasted at feeding. Feeders are designed differently and understanding how feeder design influences hay loss, can guide decisions on feeder type utilization and affect bottom-line profitability. Keep in mind that each operation is unique and there is no "one size fits all" answer to feeding hay.

Hay feeders fall into three major classifications; open-bottomed, sheeted-bottomed and cone or basket type feeders. The feeding waste ranges from most waste to minimal, respectively. K-State's Beef Systems Extension Specialist Emma Briggs summarized University research, and her article in Beef Tips serves as the basis for this column today.

Open-bottom feeders are widely used, but this design often leads to high levels of waste. Feeders that lack sheeted bottoms, individual feeding stations, or barriers to limit access to the bale make it easy to pull hay from the bale and drop it outside the feeder. Research has shown waste levels of 16% to 21% of the original bale weight with these feeders, much of it due to hay being trampled. While open-design feeders may seem convenient, lightweight, or cost-effective upfront, the hay wasted can quickly add up, making them a less economical choice in the long run.

Feeders with sheeted bottoms offer a practical way to reduce hay waste. A sheeted bottom, extending at least 18 inches from the ground, helps contain loose hay and minimizes the amount cattle can pull out. Sheeted-bottom feeders are particularly effective during the later stages of feeding when the bale collapses. They help maintain a clean feeding area and keep loose hay within reach. Research indicates that these feeders can reduce hay waste by about 39% compared to open-design feeders, with waste levels dropping to around 12% of the original bale weight.

The most efficient feeder designs have either basket or cone inserts. These feeders incorporate advanced features that drastically reduce hay waste, such as suspending or restricting access to the top third of the bale. By keeping the hay centrally located and contained, these designs make it harder for livestock to waste hay by pulling it outside the feeder. Studies have shown that feeders like these can reduce waste by 60% to 73% compared to open designs, with reported losses as low as 2% to 5% in some cases. In these studies, these feeders also incorporate sheeted bottoms, which reduce waste as the bale collapses, and provide ample feeding space.

Another important consideration, no matter the type of feeder or for those unrolling hay, is to keep a limited amount of forage in front of the livestock. More waste is generated when the amount of feed provided is in excess to what the animals will consume in a day. The longer the animals have access, the more likely they are to use hay for bedding versus feed. Restricting access to hay for 5 to 12 hours a day can be a highly effective way to reduce waste. This practice decreases hay intake and lowers overall costs by reducing the amount needed for the winter season. Despite the reduced access, cattle can maintain acceptable performance, making this a practical option for many operations.