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Is Limit Feeding an Option?

Coming out of the Thanksgiving holiday and heading into Christmas candy season, you might think this is a human healthy eating article; believe me, I'm the last person who needs to discuss healthy eating! I'll leave that topic for my co-workers to discuss and focus on ruminant nutrition feeding today. Limit-feeding is not a new concept, however the current forage prices relative to grain or by/co-products may make this practice an attractive alternative to feeding high roughage growing diets to calves, or even utilized to dry lot cow herds through winter.

Cattle producers who have the equipment and facilities to feed in a bunk, would be likely candidates for limit-feeding a high energy diet as a cost-effective option for growing calves this late fall and winter. Just because a ration worked in the past, it may not be the most economical today. The current situation is mostly due to a short national forage supply and declining commodity grain prices. For example, hay priced at \$175/ton with a total digestible nutrients (TDN) value of 52% equates to approximately \$0.17 per pound of TDN. However, \$4.75/bu corn (88% TDN) calculates out to about \$0.10 per pound of TDN. This scenario only looks at the energy values, but protein has a big impact on this discussion as well.

Research at [Kansas State University](https://www.k-state.edu/) has looked at limit-feeding calves a high energy diet at 2.2% of body weight compared to a full-fed high roughage diet (2.8% of body weight) for a 90 day backgrounding period. Both diets included 40% wet corn gluten feed (dry matter basis) and varying amounts of corn, alfalfa, prairie hay, and a supplement. Stockers limit fed the high energy diet were more efficient and gained 2.5 lb/d whereas stockers full-fed the high-roughage diet gained 2.9 lb/d. Backgrounding system had little to no effect on finishing performance or carcass characteristics.

What are the advantages of high energy, limit-fed diets? There can be the direct ration cost reduction, but here are a few of the additional benefits that feeders need to evaluate when looking at this type of feeding approach.

- Reduced mixing time and loads of feed due to less forage in the diet.
- Less feed falling out of bunks and being wasted, reducing rodent issues.
- More efficient use of bunk space, as the feed delivered is typically cleaned up faster.
- Improved health management of calves. Healthy calves will be eager to get to the bunk at feeding time, making lethargic, sick calves easier to spot.
- Improved pen conditions and maintenance due to less manure. Research from Kansas State University has shown a 40-45% reduction in manure output when limit feeding.

When getting calves started on feed, place long stemmed hay in bunks prior to arrival. Start calves at an intake of approximately 0.75% of body weight (dry matter basis) and work up to 2.2% of body weight within a two-week window. Consistent daily feeding time and adequate bunk space, at least 15 inches per head, are critical components of this approach that can help prevent digestive upsets and set calves up for success.

Focus on this article has been on growing calves, but as stated earlier, a limit feeding approach can be utilized for cow herds as well. The cow herd discussion can be an article all on its own. To learn more about this work, recorded informational zooms can be found at: www.ksubeef.org