HOW TO USE GOOD FEEDBUNK MANAGEMENT PRACTICES

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Using proper feedbunk management practices becomes increasingly important in production systems as we accept more total control and put more stresses on the animal. In accepting this control, we are accepting responsibility for a management decision to allow the producer to become a major influence in the animal's ability to produce meat and milk.

Pritchard laid out five ground rules for managing intakes. They are:

1) The default mode for appetite is hungry. It is driven by the metabolism of the animal. This may be desirable or undesirable.

2) The rumen functions best in a steady state condition. Any deviation may have great consequences.

3) Cattle are creatures of habit. Good habits support rule #2. Everything else is a bad habit.

4) It is a long way between the bovine brain and the rumen. Behavior changes may occur without respect to possible changes in ruminal environment.

5) Feed delivered divided by pen head count does not equal feed intake.

General Areas of Concern

Several areas that are of concern in both beef and dairy operations that may be influenced by feedbunk management are:

- Cattle receiving and feeding at time of initial processing
- Bringing cattle up on feed or feeding of the transition ration
- Water and water management
- Feeding log
- Feed calling and feed delivery
- Feeding priority and feeding frequency
- Feed interactions and feed processing
- Hospital pen management and feeding
- Personnel and inventory control

This paper will address each of these briefly to give an idea of the considerations that have the opportunity to improve production and reduce the problems of feeding confined animals.

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Cattle Receiving and Feeding at Time of Initial Processing

It is well documented that the primary cause of death in feedlot cattle is respiratory virus. Using proper feedbunk management in promoting intake of a well-balanced ration to help the animal respond to an immune challenge is essential. We can entice the animal to the bunk and, as a result, use the feeding program to help identify sick cattle. In a feedlot situation, one popular method of doing this is to feed the processed higher energy receiving ration on top of the long-stemmed hay that is put in the bunk. Most cattle will respond to the hay. By placing the hay on the bottom, the calf must eat its way down through the processed ration. In doing so, it should be receiving a balanced amount of protein, energy, vitamins, minerals and any feed additives that we have chosen to provide at this time.

There is increasing controversy on the timing of feeding and initial processing. Although most all feedlots have feed in the bunk when cattle arrive, producers can either process immediately on arrival or wait 24-48 hours to initiate processing. Producers and managers who process immediately do so with the assumption that immediate processing will reduce stress and allow the animal to steadily build consumption. Managers and producers who wait any length of time before processing subscribes to the idea of allowing the animal to consume nutrients to help develop an active immune system before processing and vaccination. Currently, both concepts are implemented successfully.

Bringing Cattle Up on Feed or Feeding of the Transition Ration

When bringing beef cattle up on feed, knowing the background of the calf is always a help if possible. If the calf underwent minimal stress during transportation, returning to the same energy level for the first feeding is acceptable. Likewise, considering the energy content of the dry cow ration, moving on to the transition ration may or may not be a one step process. Moving up in energy content from there can be accomplished at a relative fast and safe rate. Whether you increase energy content based on dry matter intake or time, one important rule is to make only one change at a time. If you increase energy content of the ration, do not increase the amount. If you increase the amount, do not increase energy content.

In feeding dairy transition rations, timing becomes important. Increased consumption of the dairy cow and increasing nutrient density of the ration must be handled properly to achieve maximum intake and prevent any severe drop after parturition.

Water and Water Management

Improving water intake and using water as a tool for dry matter intake management is of growing concern. To date, very little drug treatment is provided to ruminants via water administration. This is not the case with other species. It must be something that beef and dairy producers need to consider and incorporate into their management schemes.

Providing adequate amounts of clean water is and has been the basis of all water recommendations. Temperature control and cleanliness have been some of the only management concerns applied. In the future, timed access to water, water trough space and location will be issues that we will need to address and handle according to our overall management scheme.

Feeding Log

Maintaining a written record is essential to developing an understanding of any feeding program. This feed logbook should be located where it can be used on a daily basis. It should contain accurate pen data, up-to-date head counts, previous day's bunk reading, and a consumption average. This average may be a three-day, five-day or even longer feed intake average as a reference to the recent intake history and level of the cattle. The feeding log should also contain ration information such as the maximum increase allowed.

Feed Calling and Feed Delivery

The feed caller in both the dairy and feedlot plays a vital role in the feeding program. This position decides the amount to be fed, notices bunk condition and decides the need for bunk cleaning. In addition, he should notice neck rail placement and pen condition.

Ration content dictates the increase in the amount of the ration to be fed. The goal is to have very little remaining before the next feeding, but not at the expense of reduced consumption and reduced production. Always consider small increments in the amount to be fed. Remember that just because the bunk is slick, it does not mean that the improper amount was called or fed.

Adjusting the amount fed only once during a 24-hour period is the most common method. Additional adjustments within a day result in overfeeding and feed remaining in the bunk the next day.

Always remember the principle concept that feed delivered is not feed consumed or daily intake. Feed refusal becomes a monitoring tool that is adjusted daily.

There is a current trend in large commercial feedlots to control intake even more drastically. This trend is to provide feed in an amount where the bunks are clean within six to eight hours following the evening feeding. This concept challenges the cattle to consume more feed, and minimizes bunk cleaning and maintenance. In addition, it protects the cattle's owner from a possibility of poor feed conversions by over-consuming cattle. However, the goal is to increase total consumption and not to limit production. Limit feeding increases digestibility. Improvements in performance are not totally explainable by increased digestibility. It is more likely due to a reduction in the maintenance requirement of the cattle.

Anytime producers accept the responsibility of controlling feed intake, management schemes, feeding schedules and feedbunk management become increasingly important. M. E. Hubbert, Hubbert Biosystems, states, "As feed intake increases, responses such as average daily gain become nonlinear. It is our role to exert more control and limit this nonlinear effect."

When delivering feed, use the entire bunk or feeding space. The idea is to give animals all the room possible for consuming feed. Allow proper mixing time and deliver the proper amount called.

Optimize the number of rations in use and match rations with equipment. This is becoming increasingly important as the use of by-products increases.

Feeding Priority and Feeding Frequency

Feeding priority is important to both the feedlot and the dairy. Producers must ask themselves "What are my most important cattle and ration?". This establishes which ration is to be fed first. In the dairy, this usually is the herd that is being milked and about to come back to the feeding area or barn. This is even more important if this is the highest producing herd or group on the dairy. In dairy cows, maximum dry matter and energy intake is achieved during early lactation, generally after the peak of milk production. Having proper amounts of clean, fresh, well-balanced ration in the bunk will stimulate feeding activity and keep the cattle standing longer. This not only promotes increased consumption, but may have implications in reducing other problems in the herd, such as somatic cell counts.

In the feedlot, the heaviest cattle or cattle closest to market that are on the highest grain ration is, without question, the most important cattle in the yard. They need to receive feed as soon as possible to reduce any cyclic intake behavior and promote a level consumption pattern.

In decreasing feeding priority, the other rations would be: scheduled limit-fed rations, finishing rations for heavy cattle that were not 'slick', starter rations, step-up rations and full-fed silage grower rations.

Feeding frequency becomes a question as size of operations grow. In a dairy operation, the number of feedings should at least equal the number of milkings. In a feedlot, only extremely large operations can justify three or more feedings per day. However, ration moisture, grain processing and forage type need to be considered when developing a feeding frequency schedule.

Current research seems to indicate that when ration quality is not reduced, feeding once daily to full-fed, finish ration cattle will produce results equal to twice daily feeding schedules.

Feed Interactions and Feed Processing

The intent here is not to address the nutritional interactions, but to address the physical interactions and importance of mixing and processing.

Dry rations have longer bunk life than rations that carry any appreciable amount of moisture. Fermented feeds loose their condition faster by moisture loss and reheating of secondary fermentation. As a result, any processing procedures that add moisture require more bunk management. However, moisture will stimulate appetite and can be used successfully in increasing total dry matter intake.

More sorting will occur with diets containing higher roughage content. Silage diets also lend themselves to more sorting by both beef and dairy cattle.

Feed mixing in the feedlot or the total mixed ration in the dairy needs proper attention as well. Proper order of ingredient loading needs to be established. Consider bulk density of your feedstuffs and do not place the lightest ingredient in last. By placing a higher density over a lighter density feedstuff, better mixing will occur by the tendency of movement of the heavier feedstuff in a downward direction. In addition, consider the amount of the feedstuff or supplement that is being added. Do no place the smallest inclusion ingredient into the mixer either first or last. Liquid supplements and fats do best if not added directly after roughage, particularly dry roughage.

Allow adequate mixing time and consider mixer style and capacity. Performing mixer tests is essential to deciding adequate mixing length and practices. Consider obtaining revolution counters for the mixer. These provide a measurement other than time for developing proper mixing schedules of various rations.

Hospital Pen Management and Feeding

Dry matter intake in the hospital pen should be one of our greatest concerns in sick cattle. Providing small amounts of fresh ration will enable us to encourage proper intakes in these cattle. Both the bunk and water trough need to be cleaned daily.

Develop a hospital ration or consider what concentrate level these cattle came from when deciding which ration to feed. If energy content between the hospital ration and the finishing pen ration is large, hold cattle on a transition ration for a short time before placing them back into the home pen.

Personnel and Inventory Control

Always be aware of the abilities of your employees. Provide adequate training and information before giving them total control of the feeding program.

Match employees to equipment and equipment to ration formulations. Simple rules, checks and balances need to be implemented to ensure proper feeding management. Always justify load sheets to delivery sheets to obtain delivery efficiency. Also, justify delivery sheet to the feed call sheet to detect feeding accuracy. This may sound simplistic, but the concepts are very important.

Summary

Feeding and feedbunk management in both the feedlot and dairy becomes a routine chore that without continual participation and evaluation leads to possible catastrophic circumstances.

References

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