Importance of Feeding Behavior on Milk Production

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The behavior of cows has a direct impact on how a feeding program needs to be managed. Michigan State completed a study where they examined the eating and drinking behavior of Holstein cows. Results from this study illustrate why and how management centered around the feeding program is so important.

Cows in this study were fed twice a day a total mixed ration composed of alfalfa silage, corn silage, and a grain mix. Cows were milked twice daily and were housed in tie-stalls so that individual feed and water intakes could be measured. Milk production averaged 73 lbs. of milk with half of these cows being first-calf heifers.

Eating Behavior

On the average, the cows spent 5 hours eating and averaged almost 19,000 chews a day. They consumed their feed in 11 separate meals over the day! They spent an average of 30 minutes eating each meal. Each of these meals averaged 4.5 lbs. of feed on a dry matter basis or 9.0 lbs. on an as fed basis. What would happen to milk production if feed intake had been reduced by the amount consumed in one meal? Milk production could have decreased by almost 7 lbs. of milk. The question now becomes, how a manager can encourage cows to consume as much feed as possible. First, feed needs to be kept close to where cows are resting so they can easily consume many meals over the day. Secondly, fresh feed needs to be kept in the feed bunk at all times so when they want a "snack", high-quality feed is available.

Drinking Behavior

These researchers also studied the drinking behavior of these cows. These cows drank an average of 20.5 gallons of water a day and averaged drinking water 14 times a day. These cows, however, only spent 19 minutes a day drinking water. These cows averaged drinking 1.2 gallons of water per minute. Again, clean water must be kept close to where cows are housed and fed. Limiting water intake can very quickly compromise milk production. Also, water fountains need to deliver water at a rapid rate to replenish water consumed by 2 or more cows.

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Cud Chewing Behavior

These cows spent 7.66 hours a day chewing their cuds for a total of almost 30,000 chews per day. They had 14 separate chewing bouts over the day with each bout lasting an average of 33 minutes. When a cow chews her cud, she secretes saliva which helps to buffer the rumen contents. Generally, when we observe resting cows, we want to see 60 to 70% of them chewing their cud. It is especially important that we pay attention to fresh cows to see that they are chewing their cuds. The behavior of cows helps us understand why various management practices are important in managing a feeding program. It is important to have high-quality feed available at all times so that cows can consume many meals a day. Water needs to be readily available so that a cow can drink at numerous times throughout the day. Rumination or cud chewing is a very important part of feeding behavior which must not be overlooked.