Texas Dairy Matters
Higher Education Supporting the Industry

IMPROVING FEED INTAKE

Ellen Jordan, Ph.D.
Extension Dairy Specialist
Department of Animal Science
Texas A&M AgriLife Extension Service
The Texas A&M University System

Getting cows to maintain their dry matter intake during the summer continues to challenge dairy producers. Recently researchers have been investigating the feeding behavior of cows.

When cows graze, they tend to eat mostly during the day, with a lot of their consumption occurring near sunrise and sunset. Once cows are housed in freestall barns, their feeding behavior becomes more influenced by when feed is delivered or pushed up and when milking occurs.

Canadian researchers have reported that feed delivery is the most critical influencer of when feeding occurs. Since feed delivery is the primary driver of feed consumption, increasing the frequency of providing fresh feed can help increase dry matter intake.

Another advantage of feeding multiple times per day is that rumen pH is more stable because the cow's feed intake is spread across a larger part of the day. Whenever rumen pH is more stable, milk fat is improved and fiber digestibility is enhanced as well.

In addition, when cows are fed more times daily, the timid cows aren't displaced from the feedbunk as frequently. This means they are more apt to have access to an unsorted ration, which could lead to increased productivity.

When cows are fed two or more times per day, there is less sorting of the ration than what is seen with

once a day feeding. In general this results in increased dry matter intake and greater milk production.

Although feed push-up does make sure that the remaining feed is within reach of cows, it does not result in as much feed being consumed as the delivery of fresh feed.

Stocking density influences feed intake as well. When insufficient bunk space is available, aggressive cows eat first; forcing more timid cows to wait their turn. This competition results in the cows consuming larger meals less frequently, which may also result in rumen pH disturbances.

Research has shown that as bunk space per cow increases, the group average milk fat percentage increases and somatic cell counts decrease. The milk fat percentage increase may be a direct result of the more stable rumen fermentation resulting from a more uniform consumption of feed during the day.

Having headlocks on the feed lanes improves consumption of feed, particularly for the more timid cows. Again this results in cows having a more stable dry matter intake, which may result in a more consistent rumen pH, ultimately improving milk fat percentage and productivity.

In Texas, summers are hot and feed stability is an issue. Feeding more times a day can minimize the amount of heating occurring prior to consumption, provided fresh feed is used in mixing each batch. If silage is brought to a central location and stockpiled for multiple feedings, some of the advantages of feeding multiple times a day can be lost.

One important nutrient that often isn't discussed enough is water. Clean fresh water should be available to the cows at all times. Providing cows access to water as they exit the parlor should be a priority. All cows from a single turn of the parlor should be able to drink at once. A large PVC pipe cut in half can be made into a long water trough for exit lanes, provided the dairy has adequate pressure to keep the trough full when cows are drinking. In addition, access to water in the holding pen has been beneficial in some herds.

Finally, don't forget that shades, fans and soakers over the feed lane can help drive dry matter intake during the summer. Install timers on soakers and fans that automatically increase the frequency of soaking as temperatures rise for optimal results.

Increasing the frequency of feed delivery, providing adequate bunk space for all cows to eat simultaneously, using the freshest feeds available, insuring an adequate supply of fresh, clean water and adjusting the cooling system as temperatures rise can all help in maintain summer dry matter intakes.