When adjusting your herd’s total mixed ration (TMR) you should consider how changes to the diet might affect your cows’ digestion. A high-starch diet can increase your cows’ risk of developing acidosis. This nutritional disease causes rumen pH to drop, decreases feed intake and lowers milk production. University of Guelph researchers have discovered adding active yeast to cows’ feed can successfully prevent acidosis and improve rumen health.

Animal science professor Brian McBride and research associate Dr. Ousama AlZahal added four grams of baker’s yeast to the TMR of 16 cannulated cows at the Elora Dairy Research Centre. Cannulated cows have a port-hole-like device that allows access to a cow’s rumen. The researchers found the yeast alleviated acidosis symptoms and improved the health and function of the cows’ rumens.

“Rumen microbes can’t function properly and acidosis becomes an issue when cows are switched from roughage diets to high-starch diets,” says AlZahal.

Acidosis prevents volatile fatty acids (VFAs) from being absorbed in the rumen. VFAs are essential for milk production. The disease also lowers rumen pH. Cows have acidosis when their rumen pH is below 5.6. Normal rumen pH is 6.5 to 6.7, depending on diet.

Subacute acidosis causes a cow’s feed intake to decrease by 10 percent and leads to reduced milk production. Cows may stop eating if the condition develops to acute acidosis.

The researchers found the added yeast consumed restored the pH of the cows’ rumens. This action produces more rumen microbes and improves digestion.

“The yeast improved pH levels, feed intake and milk production,” says McBride. “It also created a healthier environment within the rumen, allowing other important microbes to thrive.”

McBride and AlZahal found cows fed the added yeast recovered from acidosis within three weeks, compared with untreated cows.

“Yeast offers a safe, accessible and affordable method of treatment producers can easily incorporate into their cows’ feed,” says McBride.

The researchers are continuing to study how yeast can be used to treat and prevent acidosis.

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