Providing a balanced diet for your cows takes time and money. A total mixed ration (TMR) contains many components to provide your cows with the nutrients they need to stay healthy and produce milk. However, cows don’t always eat what you expect. Healthy cows may sort their food and pick out their favourite components. University of Guelph researchers have discovered sick cows will sort their food as well, but do so to feel better.

Animal and poultry science professor Brian McBride, post-doctoral fellow Ousama AlZahal and graduate student Erin Hendriksen have found dairy cows with chronic subacute ruminal acidosis (SARA) will try to self-medicate by eating more of a certain component of their feed.

SARA is a common digestive disorder that affects about 20 per cent of dairy cows. It occurs when a cow experiences extended periods of lowered ruminal pH or elevated acidity. Cows with SARA eat less. This may lead to decreased nutrient absorption, compromised health and reduced milk production.

“When considering production losses, a farmer loses $400 per year for each cow that has SARA,” says McBride.

McBride and his research team wanted to analyse SARA’s effect on cow health. They fed 16 lactating Holstein cows a high-forage diet for 49 days before switching them to a high-grain diet to try inducing SARA. The researchers recorded cow feeding behaviour and ruminal acidity. They found cows on the high-forage diet preferred to eat the short and fine components in the TMR and avoided the large feed particles. However, the researchers noted the cows’ feeding behaviour changed when switched to the high-grain diet. Instead, they sorted their feed for the long particles.

Sudden dietary changes affect a cow’s ability to digest feed. High-grain diets increase acidity in the rumen, killing the microbes needed to breakdown food. Chewing the long food particles produces more saliva. Saliva contains sodium bicarbonate, which helps counteract high acidity in the rumen.

“When cows have SARA, they seem to recognize it,” says McBride. “They’ll try to select feed to induce rumination.”

McBride and his team want to determine SARA’s impact on nutrient absorption within the rumen, and examine feeding strategies to promote adoption of higher-grain diets.

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