

# Feeding Behaviour of Dairy Cattle

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## ■ Abstract

Feeding behaviour can have a significant impact on dairy cow productivity and health. Feeding is likely affected by factors such as feed availability and social interactions among cows, but there has been little previous research in this area, especially on cows housed in free-stall barns. A new collaborative research project by UBC and Agriculture and Agri-Food Canada (Lethbridge) is now identifying factors controlling feeding behaviour with the intent of improving cow welfare and productivity.

In a recent study we fitted 24 cows at the UBC Dairy Education and Research Centre with passive transponders. These transponders allowed us to automatically monitor the location and duration of each visit to the feed bunk, using a computerised feed bunk monitoring system (GrowSafe Systems Ltd., Airdrie AB) originally developed for feedlot cattle. We found that cows ate on average ( $\pm$  S.D.) 7.4 ( $\pm$  0.88) meals a day and spent an average of 301.9 ( $\pm$  49.31) minutes per day at the feed bunk.

One common practice thought to affect feeding behaviours is mixing of animals. In one experiment we mixed first-lactation animals into a stable group of older cows ( $4.0 \pm 1.13$  lactations), but found little effect on either the number of meals or the total time spent feeding. In a second study, cows were subjected to two different feeding schedules. Each feeding schedule consisted of an AM and a PM feeding, with one having an increased number of feed push-ups between feedings. Preliminary results have shown that increasing the number of push-ups improves the quality and availability of feed during the less desirable feeding times, but has little affect on feeding behaviour.

## ■ Implications

Computerised feed bunk monitoring equipment can provide detailed information of the feeding behaviour of individual dairy cows in free-stall barns. Our work with this system shows cows eat about 8 meals a day and spend 5 to 6 hours a day at the bunk. This equipment can be used to rapidly evaluate the effect of changes in cow management on feeding behaviour.