

Does the increase of feeding frequency by automated systems impact the behavior of dairy cows?

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With increasing automation of dairy farm, new questions arise about the possible impacts on the health and the welfare of cows. Automated feeding systems lead to increase significantly the rate of mixed ration distributions, up to 7/day on average in a recent review around European countries (Grothmann, 2009). Because cows' behavior is strongly sequenced by feeding and rumination, the increase of feed distribution may impact this behavior and impede animal welfare. The behavior of a group of 17 cows fed once a day (1D) was compared with a paired group of 17 cows fed 8 times a day with an automated system (8D), both wintering in the same experimental farm. Both groups were observed during daytime by the same person using scanning visual observations. Feeding sequences of 8D differed, with a peak of ingestion after each ration distribution, but the whole daytime budgets were not significantly affected. Although, 8D cows spent more time ruminating when standing in the feeding area than when standing or lying in the cubicles. More competition was observed in 1D group, but this behavior was very rare in both groups. It was concluded that in good housing and feeding conditions, where feeding is ad libitum and feeding competition is minimized, the increase of the distribution of mixed ration wouldn't impact significantly the welfare of animals. Yet, this issue should be investigated also in more competitive farm conditions and taking into account nighttime behavior also.

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