animal welfare program

Abstract # M6

Temporal feed restriction and overstocking increases competition for feed by dairy cattle

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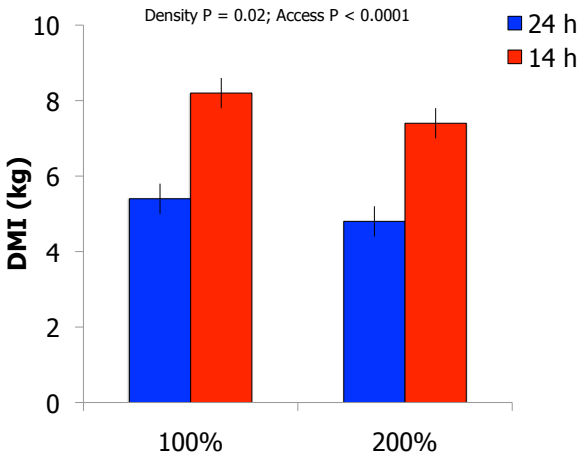
Cows on farms across North America are often overstocked and sometimes fed to a slick bunk (i.e. 0% refusals). The resulting spatial and temporal restriction may make it more difficult for cows to access feed, increasing competition at the feed bunk.

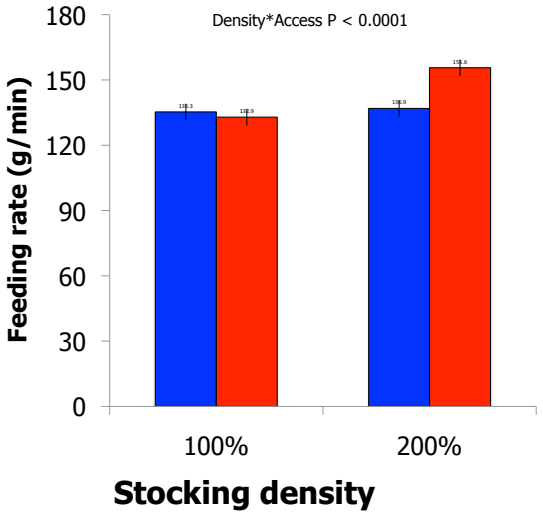
Aims: To determine the effects of spatial restriction (i.e. overstocking) and temporal restriction (i.e. limiting feed access time) on feeding and competitive behavior of group-housed, lactating dairy cows.

Methodology: Treatments were two levels of stocking density (2:1 versus 1:1 cows:feed bin) and two levels of feed access time (14 versus 24 h/d access). Eight groups (each of 6 cows) were tested on each of the 4 treatment combinations for 1 week, with treatment order assigned using a replicated 4x4 Latin-square. DMI, feeding time and rate were measured for the last 4 d of each week, and data were summarized daily and for the 2-h period immediately after morning feeding.

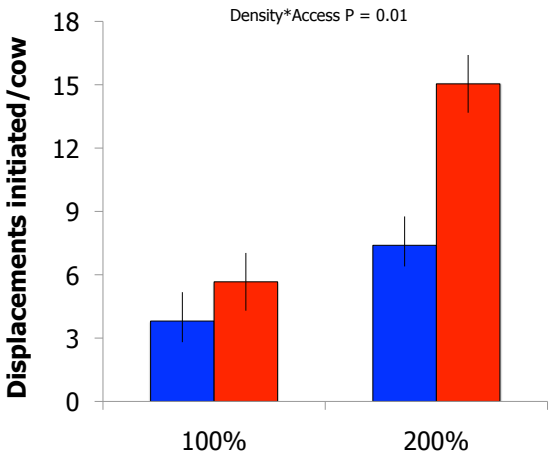
DMI 2-hr period after morning feeding



Daily Feeding Rate



Daily Competitive Displacements



Spatial and temporal feed restriction increased competition at the feed bunk and lead cows to consume 33% of their daily DMI in the 2-h period after morning feed delivery.

This research was funded by NSERC Industrial Research Chair in Animal Welfare with contributors from the Dairy Farmers of Canada and other found at http://www.landfood.ubc.ca/animalwelfare. Lindsay Collings was supported by The Viterra Graduate Fellowship.