



PROJECT 2013-2018

EFFECT OF EXERCISE AND STALL MODIFICATIONS ON COW COMFORT AND PERFORMANCE IN TIE-STALL FARMS

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University of British Columbia**Number of students trained
(MSc, PhD, Post-Doc):****1****TOTAL BUDGET****\$169,550****INVESTMENT PARTNERS**Agriculture and
Agri-Food Canada**OBJECTIVES:**

The research objectives were designed to identify practices to improve animal welfare through housing modifications and alternative management strategies (i.e. outdoor exercise). Another objective of this study was to conduct the study in commercial dairies (12 farms) to evaluate the applicability of applying those modifications in multiple farms with the constraints of the field (i.e. consensus to be found between advisor and farmer, limitations in applied modifications due to structure of the barn or exercise yard availability, etc.).

KEY OUTCOMES:

Recommendations were produced for tie-stall configuration: how to optimize cow comfort in the stall, as well as the short, mid and long term impact of stall modifications on cow condition and performance over one year. Recommendations for exercise access all year long for tie-stall cows were also produced.

- The greatest improvement to tie-stalled cows' health and welfare status was outdoor access year-round. Access to pasture and/or exercise time can improve outcome measures of dairy welfare (e.g. reduction of lameness and body injuries), as well as allow cows to express more natural behaviours. This is a more economical alternative than major modifications to the housing system.
- Making small stall modifications also helped improve some aspects of animal welfare. Most of the modifications were focused on the tie-rail and front of the stall, therefore neck injuries were most affected by modifications (i.e. neck injuries decreased with modifications). But decrease in cleanliness was observed, so producers making those modifications should be informed that adjustments in their management practices will be needed to compensate.
- There appears to be a cumulative effect of both exercise and modified tie-stalls for positive benefits of cow welfare.

BENEFITS TO THE DAIRY INDUSTRY

New knowledge on inexpensive and simple changes to stall modifications and management practices that are effective in improving cows' welfare and health status.

ORGANIC SCIENCE CLUSTER WEBSITE

dal.ca/faculty/agriculture/oacc/en-home/organic-science-cluster/OSCII.html