



SCC DIAGNOSTICS TOOL BOX



R-EF-8: Effects of Sawdust Bedding Dry Matter on Lying Behavior of Dairy Cows: A Dose-dependent Response

L.J. Reich^{*}, D.M. Weary^{*}, D.M. Veira[†], and M.A.G. von Keyserlingk^{*}

^{*}Animal Welfare Program, Faculty of Land and Food Systems, University of British Columbia, Vancouver, BC, Canada

[†]Agriculture and Agri-Food Canada, Agassiz, BC, Canada

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Abstract

The objective was to determine the effect of sawdust bedding dry matter on the lying behavior of Holstein cows. Dry matter (DM) was varied systematically over 5 treatment levels to test how cows respond to damp bedding. This experiment was repeated during summer and winter to test if the effects of damp bedding varied with season. The 5 bedding treatments averaged (\pm SD) 89.8 \pm 3.7, 74.2 \pm 6.4, 62.2 \pm 6.3, 43.9 \pm 4.0, and 34.7 \pm 3.8% DM. Over the course of the trial, minimum and maximum temperatures in the barn were 2.6 \pm 2.0 and 6.8 \pm 2.2°C in the winter and 13.3 \pm 2.5 and 22.6 \pm 4.1°C in the summer. In both seasons, 5 groups of 3 nonlactating cows were housed in free stalls bedded with sawdust. Following a 5-d acclimation period on dry bedding, groups were exposed to the 5 bedding treatments in a 5 \times 5 Latin square. Each treatment lasted 4 d, followed by 1 d when the cows were provided with dry bedding. Stall usage was assessed by 24-h video scanned at 5-min intervals. Responses were analyzed within group ($n = 5$) as the observational unit. Bedding DM affected lying time, averaging 10.4 \pm 0.4 h/d on the wettest treatment and increasing to 11.5 \pm 0.4 h/d on the driest bedding. Lying time varied with season, averaging 12.1 \pm 0.4 h/d across treatments during the winter and 9.9 \pm 0.6 h/d during the summer, but season and bedding DM did not interact. These results indicate that access to dry bedding is important for dairy cows.

Key words: bedding quality, cow comfort, season, lying behavior

