Lying and standing behavior on farms using deep-bedded versus mattress freestalls

K. Ito, M. A. G. von Keyserlingk, and D. M. Weary

Freestall dairy herds using mattresses experience a higher prevalence of lameness than do herds using deep-bedded stalls. This may be attributed to reduced comfort of the mattress as a lying surface, but the effects of different stall surfaces on stall use behavior are not well understood.

**Aim:** To compare lying and standing behavior of cows on farms using mattresses with minimal bedding versus those using deep-bedded (sand or sawdust) stalls.

**Methodology:** 17 farms using mattresses (lameness prevalence = 10.3%) and 12 farms using deep-bedded stalls (lameness prevalence = 4.6%) were included in the analysis. Lying behavior of 48 ±2 focal cows / farm was recorded using electronic data loggers at 1-min intervals for 5 d. Stall use behavior (using the Stall Standing Index, "SSI") was sampled at a single observation 2 h before PM milking.

**Lying Behavior**
- Standard deviation (SD) of lying times among cows within farm was greater on farms with mattresses compared to deep-bedded ($P = 0.005$)

**Stall Standing Behavior**
- SSI was greater on farms with mattresses ($P = 0.002$)

**Cows on farms using mattress stalls have more variable lying times. Based on the SSI, these cows spend more time standing with 2 or 4 feet in the stall, increasing the risk for lameness.**

Project funding provided by: Artex Barn Solutions, Clearbook Grain and Milling, Nutritech Solutions, Ritchie-Smith Feeds, Unifeed, Invenntment Agriculture Foundation of BC, and Westgen Endowment Fund.