



Stall Selection Behavior of Lactating Cows and Effects of Cow Characteristics on Them in Two-row Free Stall Housing

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Abstract

Studies were conducted of 16 free stall utilization by 15 lactating Holstein cows in the temperature range of the thermo-neutral zone to determine cows' selection qualities and cows' characteristics for stall location. The free stall barn observed had two head-to-head rows with 8 stalls each. Stall location chosen and lying behavior were recorded at one minute intervals for six days. Daily mean lying time for each cow and for each stall were subjected to principal component analysis. The first principal component with a 27% contribution was the differences in use of either interior or end stalls of the rows, and the second with a 23% contribution was the differences in use of either the east (edge of the barn) or the west (center of the barn) stalls. The third and fourth components could not be clearly accounted for. Cows that used interior stalls rather than stalls at the end of rows tended to be characterized as cows of an older age and heavier body weight. Cows that used the east stalls (near the start point of feeding) longer than the west stalls (near the end point of feeding) were characterized as cows of a higher social order.

Key words: Cow, Free stall, Lying behavior, Stall location, Stall selection