Sampling cow to assess lying time in tie-stall and free-stall dairy herds

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Measures of time spent lying down may be useful measures to assess the welfare of dairy cows and data loggers can be used to automatically monitor lying time on commercial farms. For cows in both tie-stalls and free-stalls, we examined how number of days sampled, parity, stage of lactation and milk production affected measures of lying time. Lying time was monitored automatically for 10 d using data loggers. Our results suggest that it is necessary to sample cows based on their stage of lactation, parity and eventually milk production to obtain a representative measure for the herd. Four-day is a suitable length of sampling period to accurately estimate lying time of a herd.

Implications: Automated monitoring of lying time has potential as a measure of dairy cow welfare on commercial farms but cows differ greatly in lying time. Therefore, to obtain a representative measure for the herd it is necessary to sample cows based on their parity, stage of lactation and eventually milk production level.