

**Effect of grouping on behaviour of dairy heifer and cows in the transition period.**

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## Summary

Regrouping dairy cows is a common feature of dairy farm management. Cows are grouped based on lactation stage, age, milk yield etc. Regrouping cows during the dry period brings new challenges, especially for heifers. The aims of this study were to determine how grouping affects activity, nearest neighbour relationships and aggression, and how heifers' acclimatisation to a new group differs from cows, to test the hypotheses that regrouping cows has less of an effect on older cows compared to heifers, and cows' individuality affects acclimatization to a new group. Aggression data was recorded using a video camera that was directed at the feed bunk, activity recorded with activity monitors that were attached around cows and heifers right left legs, synchrony and distance to nearest neighbour were recorded as was cows' location on the first three days from the day they returned to the main herd. Motion index, mean number of steps and number of lying bouts were significantly higher after calving compared to the week before calving and the difference was higher amongst heifers compared to cows ( $p < 0.001$ ). Both cows and heifers lay down more in the strawyard compared to cubicle housing ( $p = 0.002$ ) and cows were more aggressive than heifers in both housing systems ( $p < 0.001$  and  $p = 0.035$ , respectively). The results show that heifers were more affected by regrouping and cows with more experience settled quicker.