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221. The effects of dry sow housing conditions on responses to farrowing

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The objective of this study was to determine whether the housing conditions of sows during gestation, affected their responses to farrowing conditions. Eleven stall-housed sows and 11 group-housed sows were each observed over two farrowings; once in an open pen and once in a conventional crate, giving 11 farrowings in each of four treatments. The sows moved to the farrowing house 5 days before the predicted farrowing date, and were recorded using timelapse video, until farrowing occurred. The number of posture changes were recorded, and the average duration and total duration per posture type calculated, in three separate 24-h periods. These periods were: (1) the first 24 h in the farrowing house, (2) the period between 72 and 48 h before farrowing, and (3) the 24 h preceding farrowing. The postures recorded were: lying with udder exposed, lying on udder, sitting/kneeling and standing.

Average number of posture changes during three 24-h periods

Condition	Period 1	Period 2	Period 3	P-value
Group/crate	64.74 ^a	70.4 ^a	215.29 ^b	0.0001
Stall/crate	73.27 ^a	64.41 ^a	138.45 ^b	0.0001
Group/pen	52.74 ^a	55.3 ^a	137.54 ^b	0.0001
Stall/pen	61.46 ^a	55.28 ^a	114.54 ^b	0.0001

All treatments showed a significant increase in posture changes during the last 24 h prior to farrowing, there being more posture changes in crates (176.3) than in pens (126.6, $P = 0.0002$) and most in group-housed sows farrowing in crates. The results show that although all sows appeared to settle into their farrowing

conditions, as farrowing approached group-housed sows in crates were the most restless. This restlessness may indicate frustration of maternal behaviour so welfare just before farrowing is poorer in confined sows especially if they have previously had freedom of movement.