

Behavioural development of piglets in farrowing crates and in a multi-suckling system

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Commercial use of group housing systems for lactating sows is limited, but the recent transition to group housing during gestation in the EU may result in a renewed interest in such systems. Multi-suckling (MS) systems, for instance, in which sows are grouped together with their litters, may provide a better transition from gestation housing. Additionally, MS housing may benefit piglet development compared with conventional housing in farrowing crates (FC), by stimulating play behaviour and, possibly, by reducing harmful oral manipulative behaviour directed at pen mates, e.g. tail and ear biting. In addition, piglet feed intake may be stimulated, especially when social learning of foraging behaviour is facilitated by use of a communal feeding area. Adaptation to solid feed during the suckling phase is important for a successful transition to the post-weaning period. One week before farrowing, 20 multiparous sows were allocated to the MS system or to farrowing crates (2 batches with 5 sows per system). MS sows farrowed in individual pens with 2 kg of straw and had access to a communal area (with feeding area) with 5 ropes and 5 hessian sacks throughout lactation. The piglets gained access from 1 week of age. Of 4 piglets per litter, frequencies of oral manipulation of sows and other piglets, play behaviour and foraging-related behaviour were recorded using 4×10 min. continuous behaviour sampling per week at 2, 3 and 4 weeks of age. Effects of housing system, week and their interaction were analysed with mixed models with batch nested within system as random effect, i.e. a replicate of 5 sows was the experimental unit. MS piglets played 2.6 times more often (7.0 ± 0.3 vs. 2.7 ± 0.5 , $P < 0.01$) and showed 2.4 times less manipulative behaviour (1.4 ± 0.3 vs. 3.4 ± 0.1 , $P < 0.05$) than FC piglets. Play and manipulative behaviour were unaffected by week. Frequency of foraging-related behaviour (i.e. sniffing, nosing or eating sow or piglet feed) did not differ between the two systems (3.5 ± 0.7), but tended to increase with age (week effect $P < 0.10$). In conclusion, although MS piglets had more opportunities to eat together with sows and other piglets, the frequency of foraging-related behaviour did not differ from that of FC piglets. The MS system promoted piglet play behaviour and reduced harmful manipulative behaviour, compared with FC housing, likely due to the physically and socially enriched and more spacious environment. The reduced manipulative behaviour may decrease the risk of tail and ear biting problems in later life. Future research in the MS system will address long-term consequences of these developmental differences on pig performance.