

Impact of artificial piglet rearing systems on the behaviour and growth of early weaned piglets

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Key words

piglet, fostering, artificial piglet rearing system, behaviour, belly nosing

Aim of the study

The aim of the study was to compare the behaviour of piglets weaned at the early age of 3 to 6 days and raised in commercially available artificial piglet rearing systems with the behaviour of piglets reared by the sow in a loose farrowing pen.

Material and methods

The study was carried out using two different artificial piglet rearing systems. The 'Rescue Deck' piglet rearing system was tested at the Agroscope's swine barn, whereas the 'Nursery' piglet rearing system was studied on commercial farms. With both systems, the behaviour of piglets raised artificially and piglets reared by the sow in a loose farrowing pen was compared. Behaviour was videotaped on days 4, 11 (only 'Rescue Deck') and 18 after introduction of the early weaned piglets to the artificial rearing system. Belly nosing, manipulation of a pen mate, play-fighting, aggressive behaviour and resting were scored by continuous focal observation twice a day in the periods from 05:00 to 10:15 and from 13:00 to 18:15. Data were analysed by using linear mixed-effects models.

Results and significance

Belly nosing was hardly ever observed in piglets reared by the sow, whereas the duration as well as the frequency of this behaviour increased from day 4 to day 18 in piglets raised in both the 'Rescue Deck' and the 'Nursery' artificial rearing system. Moreover, artificially raised piglets spent more time manipulating a pen mate, showed less play-fighting and more aggressive behaviour, and had shorter resting bouts compared to piglets reared by the sow. Finally, total duration of resting decreased from day 4 to day 18 in artificially raised piglets and increased in piglets reared by the sow.

It is concluded that piglets weaned very early and raised artificially without contact to the sow redirect massaging behaviour to their pen mates, resulting in high levels of belly nosing and indicating impaired animal welfare. In addition, the small space allowance provided in the tested artificial rearing systems may have accounted for behavioural differences observed between artificially raised piglets and piglets reared by the sow in a loose farrowing pen.

Publications, posters and presentations

Rzezniczek, M.; Wechsler, B.; Weber, R. (2012): Impact of an artificial piglet rearing system on the behaviour of early-weaned piglets. In: Proceedings of the 8th Annual Symposium of the PhD-program in Sustainable Agriculture (ASPSA), Agroscope Reckenholz-Tänikon Research Station (ART) (Poster).

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