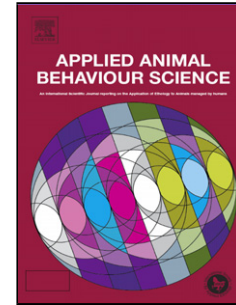


Accepted Manuscript

Title: Gradually reducing sow contact in lactation is beneficial for piglet welfare around weaning

Authors: Emily M. de Ruyter, William H.E.J. van Wetter, David S. Lines, Kate J. Plush



PII: S0168-1591(17)30102-8
DOI: <http://dx.doi.org/doi:10.1016/j.applanim.2017.03.011>
Reference: APPLAN 4436

To appear in: *APPLAN*

Received date: 13-6-2016
Revised date: 27-2-2017
Accepted date: 5-3-2017

Please cite this article as: de Ruyter, Emily M., van Wetter, William H.E.J., Lines, David S., Plush, Kate J., Gradually reducing sow contact in lactation is beneficial for piglet welfare around weaning. *Applied Animal Behaviour Science* <http://dx.doi.org/10.1016/j.applanim.2017.03.011>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Gradually reducing sow contact in lactation is beneficial for piglet welfare around weaning

Emily M. de Ruyter^{a,c,d,e}, William H.E.J van Wettere^{a,c} David S. Lines^{b,c}, and Kate J. Plush^{b,c}

^aSchool of Animal and Veterinary Sciences, The University of Adelaide, Roseworthy Australia 5371

^bSunPork Farms, Stirling Australia 5152

^c CRC for High Integrity Australia Pork, Roseworthy Australia 5371

^dPresent address: Rivalea Australia, Corowa Australia 2646

^eCorresponding author: Tel.: +61 433 857 120 E-mail: ederuyter@rivalea.com.au

Highlights

- Sow separation during lactation provides welfare benefits for piglets around the highly stressful weaning period
- Gradually weaned piglets displayed a reduction in cortisol concentration in response to the weaning event
- Gradually weaned piglets showed less maladaptive behaviours, suggesting there was a reduction in weaning stress.

Abstract

This study tested whether a gradual reduction in sow contact during lactation, achieved through housing the sow in a 'sow only' area, would influence piglet stress responses to weaning. Gradual reduction in sow contact was achieved by separating the sow from her piglets (SP, n = 30) for 5, 7, and 9 hrs per day on days 10 – 15, 16 – 20 and 20 to weaning, respectively. Litters from 20 sows were followed as controls (CON), remaining in full contact with one another until weaning. Weaning occurred on day 28 ± 1.3 of lactation. Piglet body weight, injury scores and evidence of creep ingestion were measured throughout lactation and after weaning. Continuous video footage was collected for 6 hours on the days following weaning for behavioural analyses. After weaning, SP piglets were lighter than CON piglets (6.8 ± 0.22 versus 7.6 ± 0.16 kg); however, by day 7 post-weaning piglet weights were similar ($P > 0.05$) for the CON (8.6 ± 0.22 kg) and SP (8.4 ± 0.15 kg) treatments, possibly reflecting a reduced growth check in SP piglets. There was a significant effect of treatment (CON versus SP) on the duration of aggressive (6.5 ± 1.1 versus 4.2 ± 0.8 seconds) and belly nosing (6.3 ± 2.0 versus 2.4 ± 1.3 seconds) events post-weaning. Injury scores were higher for CON piglets on almost all days examined ($P < 0.05$). Plasma circulating cortisol concentrations following weaning were increased in CON piglets (18.7 ± 13.3 nmol/L), and decreased in SP piglets (-12.3 ± 14.1 nmol/L; $F_{1,127} = 4.425$, $P < 0.05$). These findings imply

Download English Version:

<https://daneshyari.com/en/article/5763401>

Download Persian Version:

<https://daneshyari.com/article/5763401>

[Daneshyari.com](https://daneshyari.com)