

FARM SURVEY: NURSE SOWS' REPRODUCTIVE PERFORMANCE IN THE SUBSEQUENT LITTER

T.S. Bruun¹, J. Vinther¹, T.A. Schop¹, A.B. Strathe², C. Amdi³ and C.F. Hansen³

¹Danish Pig Research Centre, SEGES P/S, Copenhagen; ²Department of Clinical Veterinary and Animal Sciences, Faculty of Health and Medical Science, University of Copenhagen; ³Department of Large Animal Science, Faculty of Health and Medical Sciences, University of Copenhagen

Background

Nurse sows (NSOWS) are widely used in Danish herds due to large litter sizes. However, it is not known how this affects their subsequent reproduction compared to sows only weaning their own litter (OSOWS).

Objective

The aim of this study was to compare reproductive performance in the subsequent litter of NSOWS and OSOWS.

Materials and Methods

- Data (2012-2013) from 20 herds (79,868 litters) was used.
- All herds produced more than 14.5 live born piglets per litter and had a stable distribution of sows among parities over time.
- NSOWS weaned their own litter at least 21 days post-partum and weaned another litter (nurse litter) afterwards.
- OSOWS weaned their own litter 21 to 39 days post-partum.
- Data describing subsequent litter size and interval from weaning to service in NSOWS and OSOWS was compared using PROC MIXED in SAS.
- Data regarding sows returning to heat and being culled was analysed using PROC GLIMMIX in SAS.



Nurse sows (NSOWS) are widely used in Danish herds due to large litter sizes.

TABLE 1. PRODUCTION RESULTS PER LITTER IN THE FIRST LITTER (MEANS)

	NSOWS	OSOWS
n	16,617	63,251
Live born	15.9	15.9
Stillborn	1.7	1.8
Weaned (1 st weaning)	12.4	11.7
Weaned (2 nd weaning)	11.5	-
Average parity	3.12	3.27

Results

Approximately 20% of the sows were used as NSOWS. The results from the first litter (Table 1) indicate that NSOWS were selected amongst sows nursing large litters, and thus that these sows represented the best sows in the herds.

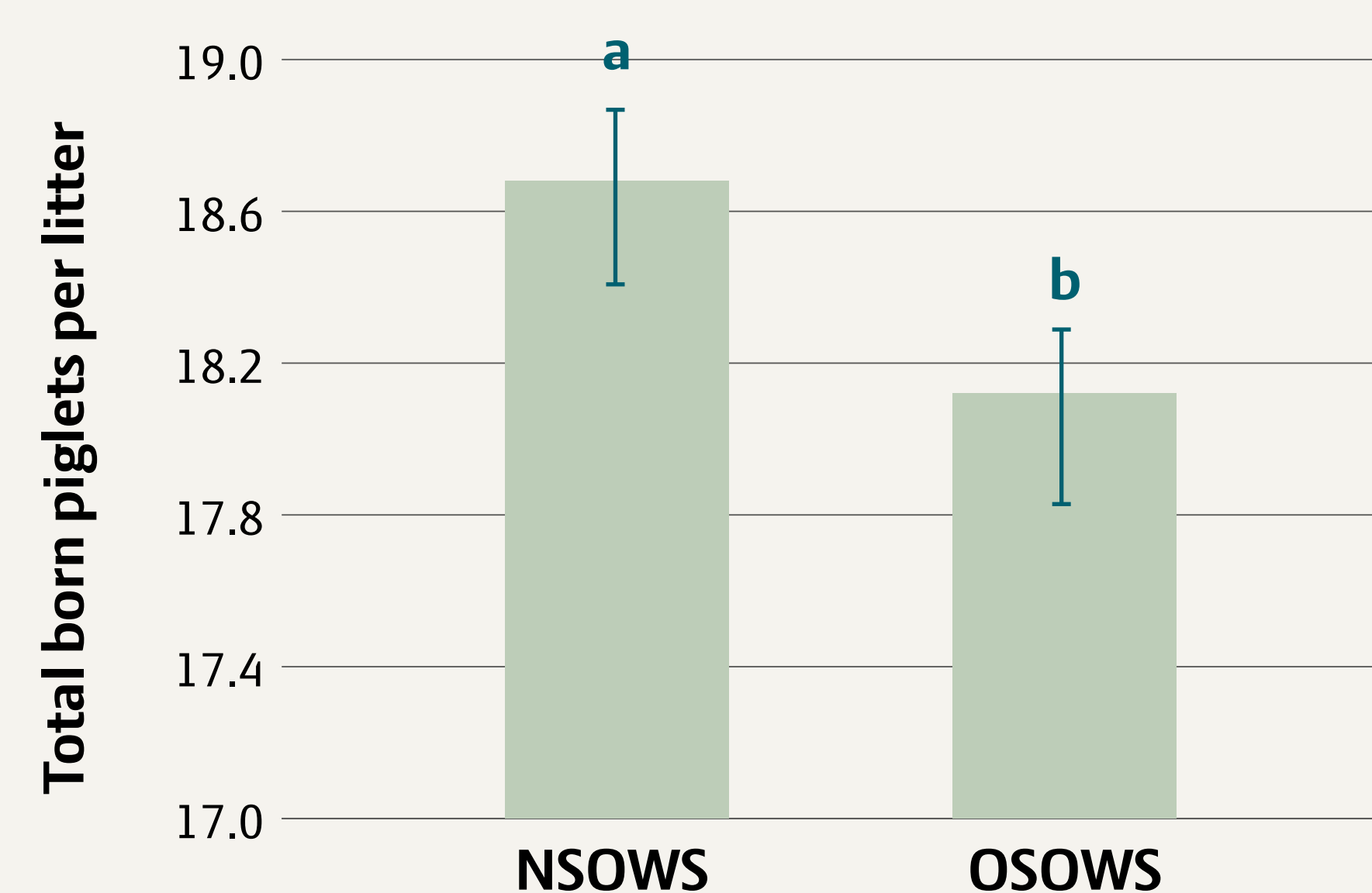


FIGURE 1. TOTAL BORN (LSMEANS) PIGLETS IN SUBSEQUENT LITTER FOR NSOWS AND OSOWS. VARIATION IS INDICATED USING 95% CI ($P < 0.0001$).

In the subsequent litter, total born was higher for NSOWS ($P < 0.0001$; Figure 1). Significant effects were also found for days from weaning to service ($P > 0.0001$) although the difference is of no practical importance, and percentage sow culled/removed from 1st to 2nd farrowing ($P > 0.0001$), whereas there was no difference for returns to heat ($P = 0.8960$), see Table 2.

TABLE 2. PRODUCTION RESULTS PER LITTER IN THE SUBSEQUENT LITTER (LSMEANS \pm SE)

	NSOWS	OSOWS
Weaning to service (days)	4.21 \pm 0.05 ^a	4.17 \pm 0.05 ^b
Return to heat (%)	3.08 \pm 0.29	3.06 \pm 0.26
Culled from current to next farrowing (%)	15.15 \pm 1.16 ^a	17.29 \pm 1.08 ^b

^{a,b} Values in a row without a common superscript differ ($P < 0.0001$).

Conclusion

In conclusion, this survey indicated no negative effects of being selected as a NSOWS on the subsequent reproductive performance. On the contrary, NSOWS gave birth to more piglets compared to OSOWS.

Acknowledgements

We gratefully acknowledge the pig producers who have shared their production data.

CONTACT
Thomas Sønderby Bruun
Danish Pig Research Centre
T +45 8740 5264
M +45 2498 3877
thsb@seges.dk

