

Sow housing affects pregnancy rate at day 28 of gestation



Figure 1. Treatments: Stalls (mean parity 2.4) or groups with approximately 4.3 + 0.8 m² (deep litter + slatted area) per sow (mean parity 2.3).

INTRODUCTION

From 1.1.2013 EU legislation will permit stall-housing of dry sows for only four weeks after service. Stalls have been associated with compromised animal welfare because of space restriction, but group housing comes with risks arising from social confrontations.

MATERIALS AND METHODS

Effects of housing on pregnancy rate 28 days post-service (P28) was investigated by comparing twelve replicates of 15-20 sow groups in two treatments (*Figure 1.*) Pregnancy was detected using real-time ultrasound and salivary progesterone analyses. Data was analysed using mixed logistic regression in MLwiN with replicate and sow as random factors at levels 2 and 1, respectively.

RESULTS

Stall treatment increased the odds for P28 with 2.3 (*Table 1.*). The observed effect of housing was to a large extent mediated by a long weaning-to-service -interval.

Factor (versus or change)	OR for pregnancy (sow level)
Breed: hybrid (Yorkshire)	2.5*
Treatment: Stalled (group-housed)	2.3*
Backfat 2 days before weaning +1mm)	1.3***
Backfat change ^a (+1 mm)	1.8**
Backfat change ^a +1mm in parity 1 (in parity 4)	2.2*
Backfat change ^a +1 mm in parity 1 (in parity 2)	1.6*

Table 1. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. ^a) From 2 days before weaning to 24 days of gestation

CONCLUSION

Estrus detection, timing of insemination and stress-free conditions do need special attention in group housing systems to prevent rebreeding.