

## THE IMPACT OF GESTATION HOUSING ON SOW PERFORMANCE

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Accommodation of sows after weaning is important to ensure successful service (re-mating interval) and pregnancy. An individual stall for gestating sows is a common practice in swine production in North America. The use of gestation stalls is currently one of the major welfare issues in swine production. These issues are based on public perceptions and misconceptions of the welfare of the pregnant sow. The swine industry has been evaluating alternative housing systems for gestating sows. A comparative study was performed with gestating sows housed in either individual sow stalls (ISS) (length 200 cm, width 60 cm, height 97 cm) or sows housed in groups of 50 to 60 sows in a pen (length 12.75 m, width 6.75 m, height 0.97 m) with electronic sow feeder (PESF). The ISS had a feeder and water nipple and the PESF had the electronic sow feeder and three water bowls per pen. The environmental conditions were similar for both groups. In this study, sows in the PESF group were a "dynamic" group; two batches of sows were mixed in a pen. The data was retrieved from the Pig CHAMP data base for the unit from January 2004 to January 2007 with 1,595 and 1,644 litters from PESF and ISS, respectively. Sows from parities 1 to 12 were used in the analyses. The data were analyzed with descriptive statistics and Two-Sample T-Test. The average parity of the sows in ISS was higher ( $P < 0.01$ ) than sows in PESF ( $3.56 \pm 0.07$  vs.  $3.24 \pm 0.07$ ). Sows from PESF had a higher ( $P < 0.01$ ) backfat than sows from ISS ( $19.8 \pm 0.12$  mm vs.  $18.6 \pm 0.13$  mm) and consumed less ( $P < 0.01$ ) feed during lactation ( $6.09 \pm 0.04$  kg vs.  $6.30 \pm 0.03$  kg). There was no impact ( $P > 0.05$ ) of sow gestation housing system on number of pigs born alive, litter birth and weaning weights and pre-weaning mortality. Sows housed in ISS weaned more ( $P < 0.02$ ) piglets than sows from PESF ( $9.6 \pm 0.02$  vs.  $9.5 \pm 0.02$ ). Wean to estrus interval was higher ( $P < 0.01$ ) for sows from PESF ( $5.22 \pm 0.02$ ) than sows from ISS ( $5.10 \pm 0.02$ ). Overall performance indicates that sows from individual stalls generally have as good as if not better reproductive performance than group-penned sows.

**Take Home Message:** The welfare of gestating sows has been evaluated in two housing systems. The group penned system allows sows to move around and eat when they want. This system will require further research to make it more adaptable in modern swine production.