Effects of Management Options on Performance of Gestating Sows Housed in an Electronic Sow Feeder System

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Performance and welfare of group-housed sows can vary greatly with management options. A study was conducted to examine the effect of two management options on performance of gestating sows group-housed with electronic sow feeders. Multiparous sows (n = 1,569, Parity 1 to 9, PIC genetics) from 100 contemporary breeding groups were used for data collection, including 457 sows in stalls for reference. Group-housed sows (n=1,112) were assigned to a 2×2 factorial arrangements of management treatments representing Stage of gestation at mixing (pre-implantation vs. post-implantation) and Social management (Static vs. dynamic). Pre-implant sows were mixed within 9 days after insemination, and Post-implant sows were mixed 37 to 44 days after insemination. Each Static group had 35 to 40 sows and remained in the same group during gestation. Dynamic groups were managed by adding a group of 35 to 40 sows and removing the same number of sows as they were ready for farrowing every fifth week. The results indicate that pre-implant sows had a lower farrowing rate (82.3% vs. 86.7%, P = 0.05), and greater body weight after breeding (218 vs. 210 kg, SE = 3.3; P < 0.01) and before farrowing (286 vs. 275, SE = 3.6; P < 0.001) compared with post-implant sows. Change in body weight during gestation was not affected by Stage of gestation at mixing. Social management did not affect farrowing rate, body weight and weight change during gestation. Neither Social management nor Stage of gestation affected wean-to-mating interval, change in body weight
during gestation, total or live born litter size. Sows in stalls had a similar farrowing rate (86.2%) to that of post-implant sows. These results demonstrate that sows that were mixed after implantation performed similarly as sows in stalls. When sows were mixed before implantation, farrowing rate was reduced by 4% compared with sows that were mixed after implantation.

Key Words: Group-housing, Sows, Static, Dynamic, Implantation