

Influence of PBT and Oxytocin on Sow Performance

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PBT-four way is a nutritional supplement for lactating sows which is claimed to increase litter weaning weight, farrowing rate, subsequent litter size, and to decrease weaning to estrus interval (WEI). Furthermore, European studies have shown that an injection of oxytocin at the time of AI increases conception rate and subsequent litter size. The objective of this on-farm trial was to validate these claims under commercial conditions.

In part 1, a total of 183 sows, parity 1 to 3, were assigned to receive either, 1) PBT top-dressed on their feed for the last 4 days of lactation (PBT) or 2) no PBT on feed (CON). Litters were weighed at day 10 of lactation and again at weaning (day 17.95). At weaning (part 2), PBT and CON sows were assigned to one of three re-breeding treatments; 1) intra-vulval injection of 0.5 ml of oxytocin at the first breeding (1OXY), 2) intra-vulval injection of 0.5 ml of oxytocin at the first breeding and again at the second breeding, or 3) no injection at either of the breedings (CON). Combining parts 1 and 2 of the experiment resulted in 6 possible treatment groups. At their first post weaning estrus, sows were bred by AI at the detection of estrus and again 24 hours later. Weaning to estrus interval, 25 day pregnancy status and subsequent litter size (total and live born) were recorded.

Litter weaning weights were not significantly different between PBT treated and CON sows, 49.87 Kg and 47.52 Kg, respectively. WEI was also not significantly different ($P=0.73$) between PBT and CON sows, 5.60 and 5.43 days, respectively. There were also no significant differences between the 6 overall treatment groups in conception rate (86.19 %), total born (10.70) and live born (9.78).

Implication

These results indicate that neither PBT nutritional supplement or oxytocin injection at time of service affected litter weaning weight or post-weaning sow reproductive performance on this farm.