

## LACTATIONAL OESTRUS IN INTERMITTENTLY SUCKLED SOWS: PERI-OVULATORY HORMONES, FOLLICLE DEVELOPMENT AND OVULATION

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Intermittent Suckling (IS) can induce lactational oestrus in sows. This study examines the quality of lactational oestrus by studying peri-ovulatory hormones, follicle development and ovulation. Multiparous "TOPIGS 40" sows were allocated to a Control group (C) weaned at D21 of lactation (n=23), or to one of two IS groups. Sows and piglets were separated for 12 h and reunited for 12 h (IS12; n=14) or separated for 6 h and reunited for 6 h (IS6; n=13) continuously from D14 of lactation until D23 after ovulation. Oestrus detection was performed without a boar. Lactational oestrus occurred in 100% of IS12, 92% of IS6 and 26% of C sows before D22 of lactation. The remaining 74% of C sows showed oestrus within 7 days after weaning. Ovulation occurred in 93% of IS12, 83% of IS6 and 100% of C sows, which showed oestrus after start of IS/weaning. Cystic follicles were present in non-ovulating oestrous sows. Duration of oestrus was longer for C (70±5 h; LSM±SE) than for IS6 sows (48±8 h; P=0.06); IS12 sows were intermediate (61±6 h). No differences were found in follicle development, ovulation rate or oestradiol levels, or in onset of oestrus or time of ovulation relative to start of IS/weaning. LH peak tended to be higher in C sows (8.38±1.24 ng/ml) than in IS12 sows (5.1±0.48 ng/ml; P=0.08). Progesterone levels rose faster in C sows than in IS12 and IS6 sows (at 75 h after ovulation: 17.1±0.9 ng/ml vs 8.8±1.0 ng/ml vs 7.0±1.2 ng/ml; P<0.01). Thus, lactational oestrus was easily induced in these sows, but the process of ovulation seemed to be affected by IS based on peri-ovulatory hormones and cystic follicles.