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Abstract for poster presentation

CHANGES IN SOW OF THE ELECTRICAL CONDUCTIVITY OF VAGINAL MUCUS IN DIFFERENT REPRODUCTIVE SITUATIONS.

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The composition of vaginal mucus changes during the perioestrus period and these changes induce variations of conductivity.

The electrical conductivity of vaginal mucus (ECVM) was determined in different situations: during all the oestrus cycle (Experiment 1, n=10), the perioestrous period (Experiment 2, n=29), the peripubertal period after the "stress of transport" (Experiment 3, n=54), after weaning (Experiment 4, n=56) and the month following A.I. (Experiment 5, n=27). ECVM was measured at least twice daily (8 and 18 h) with a probe (LANDATA, COBIPORC). The probe was inserted in the cervix and disinfected before and after each insertion. The values ranged between 0 to 50 arbitrary units. For each experiment, oestrous detection was performed twice daily with a boar. Ovarian activity was monitored with progesterone levels (Experiments 2, 3, 4) and by echography (Experiment 2, Martinat - Botté et al., 1995*). For experiment 5, the gilts were slaughtered 30 days after A.I. and the genital tracts were dissected.

When females did not show oestrous during the period of observations, the ECVM values remained high with no significant variation. This situation had been observed in impuberal gilts (Experiment 3, n=11), in gilts coming late in oestrous (>20 days, Experiment 3, n=18), in sows not seen in oestrous (Experiment 4, n=2) and in pregnant gilts (Experiment 5, n=10). The ECVM values varied, depending on the females, between 30 to 50 units. On the opposite, when the females came in oestrous during the period of observations, there was a drop of ECVM during the perioestrous period. Such situations have been observed in gilts coming in oestrous rapidly after the "stress of transport" (Experiment 3, n=31), in sows in oestrous after the weaning (Experiment 4, n=54) and in gilts with a return in oestrous 18 to 25 days after A.I. (Experiment 5, n=15). The ECVM values decreased rapidly from 45 to 20 units and, depending on the females, one to four days before the onset of oestrous. Then, the values rose gradually from the first day of oestrous and, at the end, the mean values reached 35 units. This pattern corresponded to the evolution obtained in cyclic gilts (Experiment 1) at the end of follicular phase. The interval between onset of oestrous and ovulation was variable, 23 to 64 h, but no characteristics ECVM variations could be related to time of ovulation (Experiment 2).

In conclusion, the measurement of ECVM twice a day enabled the detection of the onset of oestrous but not the time of ovulation.