REP-020

STUDY OF REPRODUCTIVE BEHAVIOR AND DESCRIPTION OF ANATOMICAL REPRODUCTIVE STRUCTURES BY ABDOMINAL ULTRASOUND IN IBERIAN SOWS

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Introduction

The lower prolificacy of the Iberian sows breed (IS) can be due to a lower ovulation rate, a lower percentage of fertilization, a lower implantation rate. The limited uterine space for embryo implantation would justify the greater embryonic losses.

The objective of the study was to determine the estrus weaning interval (WEI), estrus duration (ED), weaning ovulation interval (WOvI) and Estrous ovulation interval (EOvI) in weaned sows of the Iberian breed. As well as estimate the ovulation rate. In addition the weigth of the uterus was estimated. Results were compared with those obtained in a commercial "white" sows (WS) farm LwxLD evaluated in the same period of time.

Materials & methods

In March 2017 a total of 123 IS and 110 WS, all from a weaning, were evaluated reproductively. The WEI, ED, WOvI, EOvI were measured and compared. The follicular dynamics were performed by abdominal ultrasound, performing ovarian studies sequentially in time at intervals of 12 hours from 96 hours of weaning until the time of ovulation, that was defined as the time between two ultrasound measurements on the same sows where only preovulatory follicles were observed in the first (> 6mm) and in the second CH was observed with no more than one preovulatory follicle. The weight of the uterus, estimated by ultrasound, is measured according to the area of the uterine horns (averaged over several sections) and assuming that there is a relationship between the average of these sections and the weight of the uterus, (Y=172 x sectional area + 320), it was compared with bibliographic data of the WS. The ovulation rate was stimated in one of the two ovaries by sonography by the number of preovulatory follicles founded.

Results

WEI was 158 ± 43 [109- 325] h (X ± SD [range]) in IS Vs 98 ± 13 [84-140]h in WS. The ED was 65 ± 13 [48-96] h in IS Vs 52 ± 10 [36-80] in WS. There was no relationship between WEI and ED in the case of IS, R2 = 0.005, in comparison with WS, R2 = 0.36. WOvI was 188 ± 30 [144-253] h in IS Vs 131 ± 13 [116-168] h in WS. The EOvI was 42 ± 11 [24-72] h Vs 38 ± 10 [20-54] h in WS. The stimate ovulation rate was in WS: 4-6 follicles we have 3 of 35 (9%); 6-8 18 of 35 (51%); 8-10 13 of 35 (37%) and 10-12 1 of 35 (3%). The weight of the uterus was 863 ± 113 [674-1004] g comparable with previous studies on convencional puber gilts 802 ± 314 [424-2260] g.

Conclusion

Important differences were observed between Iberian sows and classical sows in terms of reproduction behaviour. The ED not depend on the WEI as happens in "White" sows. By the other hand they are similar data in terms with EOvI. A big variability was observed in ovulation rates between the Iberian sows and the size of the uterus was significantly different in compare with conventional sows.