Effect of some parameters on the drying-off - 1st oestrus interval Results from 1975-1982

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The effect of some parameters on the onset of oestrus after the end of lactation was studied on the basis of data from the National computerized programme for management of sow herds. The data analysis was performed on two samples (I, n : 5 867 ; II, n : 36 926) and over two periods at 7-year interval (1975-1982). Synchronization of oestruses between Day 3 and 9 after drying-off represented 85.5 p. 100 as compared to the 1975 value (80 p. 100). Whatever the year, the maximum frequency of oestrus onset was observed on Day 5. The frequency was about 6 p. 100 higher in 1982. Primiparous sows returned to oestrus later than multiparous sows (p. 100 oestrus Day 3 to 9 — primiparous, 1975 : 69.9 p. 100 ; 1982 : 75.9 p. 100 — multiparous, 1975 : 83.5 p. 100 ; 1982 : 88.8 p. 100). The optimum synchronization of heats after drying-off (Day 3-9) corresponded to weanings between Day 26 and 35 in primiparous as well as in multiparous sows whatever the year. There was an influence of the season on the return to oestrus. However, in 1982, the « season » effect was more marked in primiparous sows ; the variation range between the most favourable months (November to February) and the less favourable ones (July and August) reached 8 p. 100. It was only 3 p. 100 in multiparous sows. The data analysis per herd (n = 292) showed that in 84.2 p. 100 of the cases the return to oestrus of the primiparous sows was less synchronized than that of the multiparous ones and this disturbed the batch management.

IV. — REPRODUCTION

Combination of a progestogen treatment (RU 2267) with different herd management systems for a better control of sow reproduction

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Use of a progestogen treatment (Regumate in oil solution) to control ovulation was tested over a period of one year in nulliparous and multiparous sows subjected to different herd management conditions.

A total of 621 nulliparous, presumably pubertal sows, were administered orally 20 mg Regumate daily for 18 days. At the end of the treatment, half the batch (I) was systematically inseminated on days 6 and 7, the remainder (II) was inseminated after oestrus detection

(A.I. at 24 h intervals — 3.10^9 or 6.10^9 spz/AI). A total of 93.6 p. 100 of the females exhibited oestrus between day 5 and day 8 after the treatment. The presence of the boar in the piggery during and after progestogen intake, significantly improved the heat synchronization (p. 100 of oestrus on day 5-day 8 : 97.4 p. 100 — absence of boar in the building : 85.7 p. 100). On an average, females of the LW type returned to oestrus later (90.6 p. 100) than LR (100 p. 100) and crossbreds (94 p. 100). Insemination on predetermined days was possible in crossbred and LR females. Farrowing rate and litter size (piglets born alive) were similar whatever the mode of fertilization (crossbred, I : 75.7 p. 100, 9.5 ; II : 78.3 p. 100 ; 9.2 — LR, I : 94.1 p. 100, 10.2 ; II : 83.3 p. 100, 9.6). Results were similar in LW females (I : 51.3 p. 100, 9.0 ; II : 78.3 p. 100, 9.2). Increase in the number of spermatozoa used (6.10^9 instead of 3.10^9) did not alter either the farrowing rate or the litter size. Between and within herd variations in fertility and prolificacy were large. However, in 30 p. 100 of the herds, inseminating on predetermined days or after detected oestrus did not affect the farrowing results.

After drying-off, a short administration of Regumate to primiparous females (3 days — 20 mg/d — treatment started the day of drying off — double A.I. after oestrus detection (3.10^9 spz/A.I.) had a beneficial effect on oestrus synchronization (D4-D8) (controls, n = 72 I : 72.2 p. 100 ; treated, n = 91 ; II : 83.5 p. 100), farrowing rate (I : 66.7 p. 100 ; II : 82.4 p. 100) and prolificacy (I : 9.8 ± 2.9, II : 10.5 ± 3.2). In multiparous sows, the progestogen treatment did no improve the good results observed in the controls after the end of lactation.

Application of artificial insemination in pigs by the farmer or the inseminator
Technical and practical results as well as advantage of the method

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This report deals with the analysis of fertility rates obtained after application of A.I. in pigs either by farmers or by inseminators for a period of four years.

The farrowing rate calculated from all available results, was 72.4 and 70.5 p. 100 respectively for the farmer and the inseminator group. The prolificacy (10.4 piglets) did not vary from one group to the other.

When A.I. was practised by the farmer, differences occurred depending on the age of the semen. Accordingly, the role played by the semen storage conditions is very important. The utilization of a double dose or not on Day 2 did not seem to affect the fertility. Well trained inseminators as well as use of sows with a weaning oestrus interval shorter than 9 days led to a higher fertility. Semen diluted with the Guelph extender could be used up to 3 days after collection without causing any lowering of fertility.

In the best conditions, fertility and prolificacy were similar to those resulting from natural mating. Utilization of boars from an A.I. centre provided an excellent genetic guarantee.