

Use of frozen boar semen in practice

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A technique of semen freezing and use of the frozen semen after variable storage length were tested in practice. Inseminations were performed by trained technicians. About 58 per cent of the inseminated sows produced 9.7 piglets. However, there were differences between the boars. Hence, semen of Large White boars as compared with that of Landrace boars significantly improved the farrowing rate (67 per cent versus 48 per cent). Prolificacy was not significantly improved. According to the results obtained a further development of this new technique of low temperature storage of semen should be possible, notably as no lowering of fertility was recorded all along the period of storage.

Control of the sexual cycles of nulliparous gilts by means of norethandrolone and prostaglandin analogue (ICI 80996)

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Daily injection of 30 mg norethandrolone for 18 days allowed a grouping of oestruses over 72 hours in 79.2 per cent of the treated females. The first heats appeared 5 days after the end of the treatment. Fertility after induced oestrus was 75 per cent. When administration of the progestagen was restricted to 9 days, oestrus, synchronisation over 72 hours only slightly differed from that of a long treatment if a prostaglandin analogue (2 injections of 500 µg of ICI 80996) was injected on the day when the progestagen administration ceased. This prostaglandin analogue destructed the corpora lutea persisting at the end of the short treatment started on the first 5 days of the cycle. The fertility of this controlled oestrus was 81.8 per cent. The practical value of these treatments remains limited, but the results obtained show that:

- use of a progestagen for a long time does not modify the fertility of this oestrus,
- prostaglandins are active on a corpus luteum aged 10-14 days.

Control of the sexual cycles of nulliparous gilts. Comparison of two progestagens : Norethandrolone and RU 2267

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Two progestagens, norethandrolone (derived from nortestosterone) and RU 2267 (derived from progesterone) were administered orally for 18 days to nulliparous gilts. The animals were inseminated twice after induced oestrus; gestation was checked at 30 days, after slaughter.

Doses of 100 and 200 mg norethandrolone were necessary to prevent occurrence of cystic follicles after stoppage of the treatment. Using these doses, synchronization of oestruses over a period of 72 hrs was obtained in 65 per cent and 75 per cent of the treated female, the others exhibiting oestrus later (48 hrs). 83.3 per cent and 75 per cent of the treated sows were pregnant. Fertility was comparable with that of the controls (90 per cent). RU 2267 doses of 20 mg/day/sow were necessary to prevent formation of cystes. An excellent oestrus synchronization over 72 hrs was obtained in 98 per cent of the animals. 50 to 60 per cent of the sows were pregnant at 30 days. Supply of PMSG and HCG when the treatment stopped did not change the rate of pregnant sows.

Comparison of some techniques of pregnancy diagnosis in the sow

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The accuracy of pregnancy diagnosis depends on fertility and thus varies with the experimental conditions. For preventing this problem, a method is proposed based on the Doppler ultrasonic technique and use of a boar. According to results obtained, this procedure gives more exact results than those obtained by determination of the plasma level of progesterone, vaginal biopsy, echography or simple supervision of the animals. Moreover, efficiency of a diagnosis can be defined as the product of total accuracy into the difference between duration of pregnancy and time of diagnosis. This method shows that use of a boar remains the most suitable method for diagnosis of pregnancy.

Use of prostaglandins at the time of parturition in the sow. Results in field conditions

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Two possibilities of use of an analogue of prostaglandin F_{2α} at the time of parturition have been tested in field conditions. 229 animals were treated. The results show that farrowings can be grouped in 2 or 3 days with suppression of parturition during the week-end. The secondary effects observed in piglets or in sows allow to consider the systematic application of this kind of compound.