

## IV. — REPRODUCTION AND HERD MANAGEMENT

**First results of an inquiry into the age, length of useful life and causes of culling of service boars in production herds**

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The purpose of this study was to determine more accurately the age of boars when they enter the herds, their length of useful life and the causes of their culling. The inquiry was done in 87 herds belonging to 13 co-operative organizations distributed over the whole country and including 283 boars.

The mean size of the herds was 86.4 sows and the number of sows per service boar 22. One herd out of five used artificial insemination as an alternative. The proportion of boars in the pre-service period was very low (0.1 per herd).

When entering the herds boars were 203 days old, on an average. There was no important variation between breeds, but 28 p. 100 of the breeding animals were less than 6 months old at their arrival in the herd.

The mean age of service boars was highly variable: 615 days ( $\pm$  295 days), crossbred boars being 56 days older, on an average; 53 p. 100 of the breeding animals had been on service for less than one year and only 15 p. 100 for more than two years.

Though the mean age of culling was 23 months, one boar out of five was culled before 13 months.

The main causes of culling were: reproductive disorders and locomotor disorders (32 p. 100) as well as age or an excessive weight (23 p. 100). Miscellaneous causes represented 13 p. 100 of culling.

This inquiry should be pursued for a better understanding of the possible differences between genotypes and the mode of preparation of young boars before their first service.

**Efficiency of Guelph's and SCK<sub>7</sub> extenders for prolonged preservation of liquid boar semen**M. PAQUIGNON <sup>(1)</sup>, J. BUSSIÈRE <sup>(2)</sup>, F. BARITEAU <sup>(2)</sup>  
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Two experiments were made to test the efficiency of Guelph's and SCK<sub>7</sub> extenders in improving the length of maintenance of the fertilizing ability of boar spermatozoa in comparison with that obtained with the BL<sub>1</sub> extender. Each semen doses contained 3.10<sup>9</sup> total spermatozoa and was adjusted to 100 ml with Guelph's and BL<sub>1</sub> extenders and to 25 ml with the SCK<sub>7</sub> extender. The doses were stored at + 15 °C. At insemination the doses prepared with the SCK<sub>7</sub> extender

were rediluted with 50 ml of this extender. The insemination was made with a single dose of semen on each day of storage for SCK<sub>7</sub> and on D<sub>0</sub> and D<sub>1</sub> for BL<sub>1</sub> and Guelph. A double dose was used for BL<sub>1</sub> and Guelph on D<sub>2</sub> and for Guelph on D<sub>3</sub> and D<sub>4</sub>. When comparing BL<sub>1</sub> to Guelph the farrowing rate was 63.2 p. 100, 70.5 p. 100 and 60 p. 100 for D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub>, respectively, with BL<sub>1</sub> and 69.1 p. 100, 76.2 p. 100, 68.8 p. 100, 81.3 p. 100 and 61.2 p. 100 for D<sub>0</sub>, D<sub>1</sub>, D<sub>2</sub>, D<sub>3</sub> and D<sub>4</sub>, respectively, with Guelph. When comparing BL<sub>1</sub> to SCK<sub>7</sub>, the rate of non return at 54 days was 66.7 p. 100, 70.6 p. 100 and 81.2 p. 100, respectively, for D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> with BL<sub>1</sub> and 81.5 p. 100, 48.2 p. 100, 61.3 p. 100 and 63.2 p. 100 respectively, for D<sub>3</sub>, D<sub>4</sub>, D<sub>5</sub> and D<sub>6</sub> with SCK<sub>7</sub>. In conclusion Guelph's extender as compared to BL<sub>1</sub> increases by one day the preservation length of boar semen while the SCK<sub>7</sub> extender does not maintain the fertilizing ability at a high level after a long preservation.

## Artificial insemination of pigs practised at the farm with semen sent by a production centre. Technical procedure and practical results

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Owing to present insemination techniques in pigs the farmer may use semen sent by semen production centres and practise the interventions at the farm.

This paper analyses the results obtained over a period of three years including 3 932 first inseminations with doses prepared by the SEIA of Rouille. The farrowing rate calculated on the basis of all the data obtained was 71 p. 100 with a prolificacy of 10.1 piglets per litter.

The breed of boars had no influence, whereas other technical and physiological factors changed the results.

The differences observed according to the age of semen showed the importance of semen preservation conditions at the farm and the necessity of using a double dose with J<sub>2</sub> — semen. Two inseminations during the oestrus were required. Onset of oestrus in the sows within the 9 days following weaning led to a better fertility. An adequate technical A.I. training of the farmers should improve the results.

In the best conditions, fertility and prolificacy were close to those obtained after natural mating. Use of boars from an A.I. centre provided good genetic guarantees.

## Use of a very early gestation diagnosis in sow herds

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In a previous work (TERQUI *et al.*, 1979) it was shown that it is possible to establish whether the sow is pregnant or not according to the blood level of a F<sub>2</sub> prostaglandin metabolite (13, 14 - dihydro - 15 ceto PGF<sub>2</sub><sup>α</sup> - « PGF »).

In order to determine whether this diagnosis could be used in practice we tested the two following points relative to the accuracy of the diagnosis:

1) The possible consequences of the mode of conveying the samples (either immediate centrifugation or transport of blood by mail, or centrifugation 24 hr after sampling).

2) The effect of sampling date (in days 13 and 15 after mating in 389 females).

Ninety-nine per cent of the diagnoses made by means of samples sent by mail were identical to those made with immediately centrifuged samples.

The diagnosis accuracy was high whatever the day of sampling. However, the accuracy