V. — Reproduction

Development and genetic value of a method for evaluating " in vivo " the testicles of young boars

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The testicles of 226 young Large White boars, sons of 16 sires, were measured at a slaughter weight of 40,85 and 108 kg in order to develop a method for a simple and economic evaluation of the weight of these organs in living animals.

The repeatability of the different measures was very high and above 0.89. The evaluations of heritability were high: they ranged between 0.58 ± 0.28 and 0.69 ± 0.30 for the three measures of the total testicle width obtained with a slide-stick, between 0.55 ± 0.27 and 0.67 ± 0.30 for the testicle surface by a planimetric measurement on a photo.

Estimations of the heritability of the organ weight at slaughter were 0.73 ± 0.30 for the testicle weight; 0.35 ± 0.25 for the epididymis weight and 0.77 ± 0.31 for the weight of both, respectively.

The best two explicative variables of the testicle weight are the total width measured before slaughter and the testicle surface calculated by projection in real size: a linear combination of these two variables explains 68 and 70 p. 100 of the weight variance of testicles and of testicles + epididymis, respectively.

In conclusion, these results show that it is relatively easy to modify by selection the testicle size of young boars. However, further studies are still necessary for establishing the consequences of this choice on the semen production potential in the adult animal, on growth, body composition, frequency of appearance of sexual odours as well as on the prolificacy of sows.

Prolonged preservation of fresh boar semen

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Two experiments were achieved with the aim of improving the preservation length of boar semen at the liquid state by comparing it to that obtained atter dilution with the BL_1 extender. The ejaculates were split into two fractions diluted at 3.10^9 total spz/dose of 100 ml ready for use with either the BL_1 extender with or without catalase (270 units/ml) or Guelph's extender and the BL_{11} extender, respectively. The diluted semen was stored at 15 °C. The catalase added to the BL_1 extender did not improve either the number of motile spermatozoa or the farrowing rate when the semen was preserved until four days after collection. Though Guelph's extend-