Comparison of fattening performances of *Large White*, *Belgian Landrace* and Cross-Bred pigs

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A single feed (3 300 digestible kcal, 17.5 p. 100 of crude protein) was given *ad libitum* to pigs weighing between 20 and 95 kg. The animals were either *Large White* (*LW*) or *Belgian Landrace* (*LB*) or *Cross-Bred* (*CR*) (half castrated males, half females).

The daily mean intake of the females was 10 p. 100 lower than that of the males. The *LB* pigs consumed 5 p. 100 less feed than the *LW*, and the *CR* 5 p. 100 more. The *LB* reached 90 kg 7 days later and the *CR* 16 days earlier than the *LW*. Feed efficiency was the highest in the *CR* pigs and the lowest in the *LB* pigs.

As regards body composition, carcasses of the females were of better quality than those of the castrated males (loin/backfat ratio : + 38 p. 100). As compared with *LW*, this ratio was 27 p. 100 higher in *CR* and 50 p. 100 higher in *LB*. When fed *ad libitum* and on a free choice, a cereal-based diet (9.5 p. 100 of crude protein) and a complementary feed (50 p. 100 of crude protein), *LW* and *LB* pigs (castrated males and females) consumed a ration the protein level of which gradually decreased from about 20 p. 100 at 30 kg live weight, to 14 p. 100 in *LB* of both sexes and in *LW* females and to 12.5 p. 100 in castrated *LW* after 60 kg live weight.

Factors affecting selection of boars in a closed line with a low degree of inbreeding

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The aim of this study was to establish a programme for the selection and utilization of boars in a closed line with a low degree of inbreeding.

If we admit that it is necessary to have at least 4 boars on service simultaneously, this study may lead to the following simple rule :

> Every 21 days, selection of a new young boar and elimination of the boar which has alreadyperformed the greatest number of services.

On condition of an equivalent utilization of each boar and of a random mating programme excluding sib or half-sib matings, this method may give the following results :

— a selection pressure (selection intensity/generation interval ratio) of 35-45 points on the boars according to the magnitude of the line ;
— correct economic management depending on production of at least 100 litters per year ;
— less than 1 p. 100 increase in the inbreeding coefficient per generation.

Utilization of a control herd to estimate genetic change of fattening and carcass traits in the *Large White* breed in France from 1965 to 1973. A preliminary note

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No real control herd presently exists in France, but it seemed to be possible to consider as such an experimental herd kept at the « domaine de Galle » (I. N. R. A.) for another purpose. This *Large White* herd, established in 1965 with 10 boars and 120 sows, was primarily used for a selection experiment on litter size at birth. Being not subjected to any selection on growth and carcass traits, the Galle herd could be considered as a control for these production traits, supposed to be genetically independent of the litter size. Available data consisted of measurements on 60 gilts from the Galle herd, tested in competition with 112 contemporary gilts from 26 selection herds of the *Large White* breed. Comparisons were made within-testing period for 14 traits. Results definitely show a favourable genetic trend of *Large White* breed since 1965, both for rate and economy of gain and for most of body-composition traits. The estimated genetic gain is around 7.5 F per year. Another point of concern is the unfavourable evolution of meat quality, particularly of ultimate pH of muscle. The genetic assumptions underlying the validity of this estimation of genetic change are discussed. A statistical analysis of a larger number of data is now in progress.

A comparison of the crossbred progeny of *French Landrace* and *Pietrain* boars

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Both *French Landrace* and *Pietrain* boars were randomly used (by A. I.) on *Landrace* × *Large White* sows of commercial farms. Gilts and barrows sampled in resultant litters were sent to an experimental station where they were fed *ad libitum* (test started at 30 kg) and slaughtered at