IV. — GENETICS AND BREEDING

A comparison of the crossbred progeny of *Pietrain* and *Hampshire* × *Pietrain* boars

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In three trials, a total of 11 *Pietrain* and 11 *Hampshire* × *Pietrain* boars (sons of 6 *Hampshire* boars imported from U. K.) were compared in terms of combining ability with *Large White* or *Landrace* × *Large White* females. No significant effect of « breed of sire » was found for size at birth and at weaning of 31 litters sired by *Pietrain* boars (XPP group) and 50 litters sired by *Hampshire* × *Pietrain* boars (XHP group). Fattening and carcass data were recorded on 302 XPP and 448 XHP gilts and barrows fed *ad libitum* (from 26-31 kg) and slaughtered at around 100 kg liveweight. The difference between the two types of boars was estimated by the least-squares method for 22 traits. XHP pigs grew more quickly (+ 59 ± 7 g for average daily gain on test and — 9,3 ± 1,5 days for age at slaughter) and showed a higher daily food consumption (+ 5 p. 100) than XPP pigs : a slight advantage (2 p. 100) of XHP pigs was observed in food conversion ratio. No significant effect of « breed of boar » was found for dressing out percentage and carcass length but XPP pigs, as compared to XHP pigs, showed a better carcass composition : + 0,19 ± 0,05 kg in weight of loin, — 0,25 ± 0,07 kg in weight of backfat, — 1.3 ± 0,4 mm in average backfat thickness, — 0.15 ± 0.03 kg in weight of belly. An interaction sex × breeding group was observed for weight of loin : the breed difference was larger in gilts than in barrows. A significant superiority of *Pietrain* cross was found for 4 meat quality traits, measured 24 hours *post mortem*, especially for pH and color of meat ($P < 0.01$). The difference of fattening cost was about 10 F per pig, in favour of the XHP group, but average commercial value of the carcass was 5F higher in the XPP group. So, it may be concluded that the crossbred progeny of *Hampshire* × *Pietrain* boars present an overall economic advantage of 5F as compared to the crossbred progeny of *Pietrain* boars. Some general conclusions of our evaluation of *Hampshire* and *Pietrain* breeds are drawn.