

Litter weight and litter size at birth and at weaning were significantly better in the *Large White* sows.

Maternal abilities of the local sow must be underlined (8.5 p. 100 mortality v 21.3 for the *Large White*) and as a result sow productivity was almost the same for both the *Large White* and the local pig : 13.82 and 14.6 piglets per sow and per year respectively.

Growth and tissue composition results of the progeny of the two breeds were the following :

1) The average daily gain was significantly higher in the *Large White* breed (514 g v 440 for the local pig).

2) The food conversion ratio was higher ( $p < 0.01$ ) in the *Creole* breed (4.03 v 3.33 for the *Large White* pigs).

3) The main characteristics of the carcass quality was a significantly ( $p < 0.01$ ) higher muscle percentage in the *Large White* (46.96 p. 100 v 38.97 for the local pigs).

A good relationship between cut and physical dissection results on the one hand linear and ponderal carcass characteristics on the other hand was observed in both the *Creole* and the *Large White* breed.

Ham weight and growth performance was independent of the body composition.

## **Utilization of roughage to produce heavy pigs. Interactions between genotype, sex and management system**

### **1. - Growth performance and carcass characteristics**

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Growth performance and carcass characteristics of 119 pigs, females and castrated males, were studied using a  $2 \times 2$  factorial design : two genotypes, *Large White* (LW) and *Corsican*  $\times$  *Large White* (C  $\times$  LW) crossbred pigs ; two management systems, in pens with an *ad libitum* concentrated diet, and in open-air with a restricted concentrated diet and forage given *ad libitum*. The analysis of variance showed a favourable effect of pen-housing on food conversion ratio ( $-10$  p. 100 compared to pigs in open-air), daily gain ( $+20$  p. 100), dressing percentage of carcass ( $+2.6$  p. 100), but an unfavourable effect upon carcass characteristics ( $-24$  p. 100 for loin/backfat ratio) more pronounced for castrated males than for females. Growth performance of the crossbred pigs were 4 to 8 p. 100 poorer than those of LW pigs ; the carcasses of LW pigs showed a poorer dressing percentage than those of C  $\times$  LW, but a higher meat content ( $+36$  p. 100 for loin/backfat ratio); there were no significant genotype  $\times$  management interactions, as the responses of the two genotypes to the management systems were similar.

### V. - CARCASS AND MEAT QUALITY

#### **The effect of an excess of tryptophan and of rearing conditions on the incidence of boar taint in young *Large White* boars : relationship with male reproductive tract development**

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Twenty eight board of the *Large White* breed were reared between 25 and 100 kg live weight according to a  $2 \times 2$  factorial design : two rearing conditions (with or without