

For all criteria studied the differences were all the larger as the fertilization level of the herd was low and in particular when changing from 0 to 1 return.

In the case where sows can easily be reintegrated into the batches (1 or 3 week-intervals between batches) mating of sows returning 1-2 times to heats is more advantageous for the breeder.

The objectives of pig breeding in France

L. OLLIVIER

*I.N.R.A., Station de Génétique quantitative et appliquée,
Centre de Recherches zootechniques,
F 78350 Jouy-en-Josas*

Several possibilities exist for defining the overall objective of pig production, for choosing the elementary objectives and for combining them. The goals which have been defined ten years ago are re-examined on account of changes in the economic conditions of pig production in France, and particularly the use of the European system of carcass grading since 1972. Prediction equations for carcass value (using measurements obtained in the standardized Parisian jointing system) have been derived from a sample of 15 648 female pigs jointed and graded in the progeny-testing station from 1972 to 1978. These equations are similar to the prediction equations for muscle percentage obtained by HAMELIN (see NAVEAU and POMMERET, 1979, *Techni-Porc*, 2 (4), 7-12). Furthermore, though the present grading system practically ignores meat quality, its inclusion among the selection objectives is considered. A modification of the grading system in order to take meat quality into account appears to be desirable.

Genetic parameters of Large White and French Landrace progeny testing female pigs over the 1970-1978 period

L. OLLIVIER, A. DERRIEN et M. MOLENAT

*I.N.R.A., Station de Génétique quantitative et appliquée,
Centre de Recherches zootechniques,
F 78350 Jouy-en-Josas*

On a sample of 4 822 *Large White* and 2 777 *French Landrace* pigs tested from 1970 to 1978 in six progeny-testing stations, the following variables were considered : growth traits over the 35-100 kg liveweight interval, i.e. individual average daily gain (ADG) and food conversion ratio (FCR) on a two-sib-pen basis, carcass (using the standardized Parisian jointing system) and meat quality traits after slaughter at 100 kg liveweight. Heritability estimates for ADG and FRC were close to those obtained over the same period on individually-fed boars of the same breeds in the performance-testing stations (OLLIVIER *et al.*, 1980, *Techni-Porc*, 3 (1), 7-12). The highest heritabilities were obtained for the weights of loin (0.60 ± 0.06) and backfat (0.61 ± 0.06). Among the three meat quality traits considered (pH, colour, water-holding capacity), the most highly heritable was colour, measured by a reflectometer (0.27 ± 0.05). The dam components of variance largely exceeded the sire components, especially for ADG (sib correlation 0.78) and meat quality (sib correlation 0.30). This may be