

dissection results of 16 carcasses from each breed were analysed using two methods of multidimensional analysis : centred data analysis and generalized distance of Mahalanobis's D2.

Both methods showed numerous differences between breeds as well in the anatomical tissue composition (bone, muscle, inner and outer fat percentage), as in the muscle distribution.

The FL breed exhibited a higher bone and fat percentage and a lower muscle percentage than the other breeds and the BL breed had a higher bone percentage than the P breed.

The muscle hypertrophy observed in the BL and P breeds stimulated the relative hyperdevelopment of some muscles (*Adductor*, *Semimembranosus*, *Biceps femoris*, *Vastus lateralis*) as compared to the FL breed.

The muscle distribution was not the same in the BL breed and the P breed where the *Adductor*, *Gracilis* and *Pectineus* muscles were relatively smaller. The differences observed in the muscle distribution between breeds might result from differences in the morphological traits of their bone supports.

### III. — SOW PRODUCTIVITY IN FRANCE

#### Technical management of sow herds : development and results

Nicole COUANON, D. THOREL

*C.E.M.A.G.R.E.F., B.P. 1312, 17, avenue de Cucillé, 35016 Rennes Cedex  
France*

In 1981, after 11 years of activity, the « National computerized programme for analysis of "on-the-farm sow records" » is applied to 30 p. 100 of the farms with more than 20 sows. It concerns 8 568 herds with 777 940 litters. However, the presence of the herds in the file is extremely variable.

This programme showed that a large number of criteria has been improved. In particular, the productivity has increased from 18.4 to 20.4 weaned piglets per sow between 1973 and 1981. Results are correlated to the size of the herds.

Examination of a smaller file involving 650 herds with reliable records and present from 1978 to 1981 showed the variability of the results for each criterion, especially in herds with the lowest or the highest performance with regard to the number of weaned piglets per sow and per year.

In 1978 and 1981 the discrepancy between the performance of the extreme herds reached 6.8 and 6.2 piglets, respectively. Even if the discrepancy is slightly smaller, the difference is still large. On an average, the herds remained in the same category in 1981, but large improvements were noticed in 15 p. 100 of the herds and large decreases in 6 p. 100 of the herds belonging to the medium category in 1978.