

## SUMMARY

FEEDING METHODS AND BEHAVIOUR DURING THE MEAL,  
IN THE GROWING FINISHING PIG

Restricted feeding twice a day of a diet containing cereals either granulated or moistened cereal meal or soaked meal (cold or 4 hours at 40°C) was performed during a trial repeated two times including each time 48 growing-finishing pigs. The dilution level was : 2.25 l of water/kg feed. We observed that pelleted cereals and moistened meal gave the same performances whereas the results obtained with soaked meal were slightly lower whatever the temperature may be. At slaughtering the females were leaner as the castrated males but there was no difference following the treatments. During the finishing period we observed the behaviour of the pigs when eating. These observations were realized by means of television and magnetoscope allowing accurate determination of the food consumption time. The pigs fed the pelleted food took a longer time to eat than those receiving the three other meals but for the latter there was no significant difference. Generally the consumption rate increases with age. Thus at 53 kg live weight 1 kg pelleted food is consumed in 21 minutes compared with 14 minutes for the paste. At 75 kg the time of consumption is reduced to 15 and 8 minutes. As far as the pelleted food is concerned, we did not observe any correlation between the consumption rate and the growth rate whereas the correlation coefficient is highly significant for the paste — 0.502. Consequently, it may be assumed that when feeding restricted moistened diets, the animals having a high consumption rate eat one part of the rations of their congeners and therefore grow more quickly.

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TECHNOLOGIEDÉVELOPPEMENT ET STRUCTURE HISTOLOGIQUE  
DU MUSCLE DEMI-MEMBRANEUX DE PORC

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RÉSUMÉ

La structure du muscle demi-membraneux de porcs *Large White* et *Piértrain* a été étudiée en analysant des coupes de faible épaisseur (15  $\mu$ ) de la totalité du muscle considéré au niveau de sa surface maximum de section. Bien que l'importance relative de ce muscle soit plus élevée chez le *Piértrain* et que la surface de section y soit plus grande, il n'existe pas de différences sensibles

ni dans le nombre de myoskhènes, ni dans le nombre de faisceaux primaires. La taille plus importante des myoskhènes, entourés par ailleurs, d'un réseau plus fin de tissu conjonctif, et une plus faible densité de fibres musculaires par mm<sup>2</sup>, jointe à l'existence de fibres géantes, semblent être directement liées à l'aptitude à l'hypertrophie du muscle demi-membraneux chez le Porc *Piétrain*.

## SUMMARY

### DEVELOPMENT AND HISTOLOGICAL STRUCTURE OF MUSCLE SEMI-MEMBRANOSUS IN PIGS

The structure of the muscle *semi-membranosus* from pigs of *Large White* and *Piétrain* breeds has been investigated by studying thin cuts (15  $\mu$  depth) of the whole muscle considered at its maximum cross-section. It appears that, though the relative amount of the muscle is higher and though the cross-section is bigger in *Piétrain*, it does not exist major differences neither in the number of the myoskhènes, nor in the number of primary muscular bundles. The bigger size of myoskhènes, surrounded by a thinner network of connective tissue, and the lower density of muscular fibres par mm<sup>2</sup>, in addition to the existence of giant fibres seem to be directly connected with the hypertrophy ability of the muscle *semi-membranosus* in *Piétrain* breed.

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## LA DÉTERMINATION DE LA DENSITÉ CORPORELLE

### I. — Principes et conditions d'une mesure directe de l'état d'engraissement de la carcasse du porc

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## RÉSUMÉ

La variation de poids d'une fraction corporelle de la carcasse du Porc donne une estimation peu précise de sa composition tissulaire : suivant les compartiments corporels représentés après la dissection en muscles et graisses les liaisons statistiques avec le poids de l'ensemble varient de  $\pm 0,80$  à  $\pm 0,40$  (DESMOULIN, 1969). La densimétrie permet de préciser la répartition des cons-