

**Roughage utilization in heavy pig production.
Interactions between genotype, sex and management system**

2 - Meat quality and processing ability

R. GOUTEFONGEA, J.P. GIRARD *, J.L. LABADIE *,
M. RENNERRE *, C. TOURAILLE *

*I.N.R.A., Laboratoire des Aliments d'Origine animale,
La Géraudière, 44072 Nantes Cedex*

** I.N.R.A., Station de Recherches sur la Viande, Theix, 63122 Ceyrat
France*

The purpose of the present work was to assess the effect of genotype and management system on meat quality and its ability to undergo dry cured processing.

Genotypes :

Large White × *Large White* and *Corsican* × *Large White*.

Management :

1) Small pens and *ad libitum* feeding with concentrates.

2) Large pens (20 000 square feet for 10 pigs) and partial feeding with forage.

Pigs were slaughtered at 120 kg live weight.

The following characteristics were measured :

— fresh meat : pH, percentage of reflectance at 525 nm, waterholding capacity, dry matter content, total pigments, colour characteristics, and fatty acid composition of subcutaneous depot fat ;

— during processing : weight losses at different steps ;

— in dry cured products : total dry matter and chloride contents, colour characteristics, and lipolysis in adipose tissue.

The results showed that :

- The genotype had a significant effect on meat characteristics ; meat from *Corsican* × *Large White* pigs had a higher pH, a higher waterholding capacity and a higher pigment level than that from *Large White* pigs.

- Management in large pens led to a higher pigment content and a darker colour.

- Processing suppressed the colour differences observed in fresh meat.

- Organoleptic analyses showed significant aroma differences in the three following instances :

- meat from *Corsican* × *Large White* had a stronger aroma when the animals were kept in large pens than in small pens ;

- when all the pigs were kept in large pens, meat from *Corsican* × *Large White* had a stronger aroma than that from *Large White* ;

- when all pigs were kept in small pens, meat from *Large White* had a stronger aroma than that from *Corsican* × *Large White* pigs.