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## Comparison of boar taint estimation methods in pork from boars and hogs of Belgian Landrace or Large White breed

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**Composition of female pig fats :  
influence of the genetic type (*LF*, *LB* or *PP*)  
and changes during growth (between 40 and 100 kg)**

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Comparison was made on the fatty acid composition of total lipids in the leaf fat and backfat of female pigs from the following breeds : *Landrace Français (LF)* ; *Landrace Belge (LB)* and *Pietrain (PP)*. The influences of the energy value and energy/protein ratio of the diet as well as of the growth stage of the animals were also studied.

The results obtained show :

1. That the breed has a small influence on the composition of fats in animals slaughtered at 96 kg. However, with the richest energy diets, the fats of *LB* and *PP* pigs were more unsaturated than those of *LF* pigs.
2. That at slaughter weights of 40 and 60 kg, fats of *LB* pigs were more unsaturated than those of *LF* and *PP* pigs. From 40 kg to 96 kg, the consistence of the fats of *LB* pigs highly increased, that of *LF* pigs moderately increased whereas that of *PP* remained almost unchanged.
3. That the amount of linoleic acid supplied by the consumption of pig fats is rather large. The increase of this amount, easy to obtain through the nutritional factors, leads, however, to a decrease in the technological quality of the fats.

**Comparison of boar taint estimation methods in pork from boars  
and hogs of *Belgian Landrace* or *Large White* breed**

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Four olfactory tests were practised after quick or long heating of backfat and kidney fat in order to detect boar taint. Their forecasting value was settled by reference to 2 tests realized after cooking of roast or cutlets. The 6 tests were achieved by 3 female and 5 male judges on 16 boars and 14 hogs of *Belgian Landrace* or *Pietrain* breed. Main results were the following :

— olfactory assessments practised after quick heating of backfat or long heating of kidney fat were the most severe and gave the best forecasting of pig meats presenting boar taint at the time of cooking ;

— fatty acid composition was not a precise reference for presence of boar taint ;

— frequency of boar taint was high from the weight of 90 kg in *Pietrain* pigs (51 p. 100 of the judgements at cooking of cutlets) and from 110 kg in the *Landrace* breed (35 p. 100 of opinions). These results confirm that frequency of boar taint varies according to breeds.

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**Heating fat to detect boar taint in boars,  
hogs and gilts from the *Large White* breed :  
olfactory assessment of each panel member according to fatty tissue**

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The odour of 3 fatty tissues from 88 *Large White* pigs (24 boars, 32 hogs and 32 gilts) was estimated at the slaughter-house by 5 male judges after quick heating with a soldering iron. The features of the judgements of each panel member were studied by multifactorial analysis, then the pigs were classed according to odour.

Main results about boars were the following :

— one of the panel members did not distinguish boar taint from other unpleasant odours and therefore he was eliminated. The other 4 panel members unequally distinguished these two kinds of odours according to fatty tissues ;

— few boars presented strong boar taint (0 or 1 according to judges) ; however, slight taint was imputed to 33 or 46 p. 100 of them. The odour of 20 to 46 p. 100 of the boars remained undetermined because of the contradiction between the various judgements of the 3 fatty tissues of the same carcass by one judge ;

— fatty acid composition was not closely related to boar taint in fatty tissues.

Slight boar taint was imputed to 0-14 p. 100 of hogs and gilts. Moreover, frequency of unpleasant odours was as high in hogs and gilts as in boars.

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**Production of heavy carcasses from primiparous or nulliparous gilts**

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Two systems of production of heavy carcasses were compared : In the « experimental group », 28 *Large White* gilts were slaughtered two weeks after weaning of their first litter (at the average age and weight of 410 days and 144 kg, respectively), in the control group, 29 contemporary