Possibilities of using wheat bran for finishing pigs in the « Antilles »

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Two trials were made on a total of 82 pigs with the aim of studying the effect of incorporating high levels of wheat bran (15 to 90 p. 100) into the diets on the performances of the animals from 60 kg live weight.

Until an incorporation level of 45 p. 100, wheat bran had no marked influence either on growth rate of the animals or on feed conversion ratio. At the highest level (90 p. 100), the growth rate decreased by 25 p. 100 ($P < 0.05$) and the feed conversion ratio increased by 15 p. 100 ($P < 0.05$).

Increase in the level of bran in the diet caused a linear decrease in dressing percentage whereas backfat thickness decreased only a little.

It can be assumed that incorporation into the diet of wheat bran until a level of *45 p. 100* has no unfavourable effect on the performances of *finishing pigs*.

Study of some factors affecting feed efficiency when offering a cereal and a supplement separately

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Two experiments were conducted to examine some factors liable to make feed efficiency vary when a cereal (maize) and a supplement (soyabean meal) were given separately.

The two trials were made on pigs (castrated males and females) of 21 to 100 kg to which a diet providing the same levels of energy and lysine was given every day.

When two complete diets were distributed every day, lysine proved to be a soyabean meal sparing factor.

Performances (growth rate, feed conversion) and body composition decreased when a low-nitrogen diet (cereal) and a high-nitrogen diet (oil-meal + minerals + vitamins) were offered separately.

Moreover, the respective times of feeding (morning or evening) did not have any effect.

But when free lysine was added to the cereal, the performances (growth rate, feed efficiency) were significantly higher (+ 8 p. 100) than those obtained in pigs when lysine was added to the oil-meal.

Effect of dietary amino acid balance (lysine deficiency) and protein level on growing pig performances

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Three groups of 20 animals were kept in individual pens (between 24 and 100 kg live weight) in order to study the consequences of dietary protein reduction after amino acid supplementation, on growth performances and body composition of pigs under restricted feeding conditions and according to sex.

— Group BL, lysine deficient (0.6 p. 100 up to 45 kg live weight and 0.4 p. 100 beyond that weight), but with a suitable protein supply (17.2 until 45 kg, then 19.5).

— Group HL, receiving a lysine supplementation, the total lysine contents being 0.80-0.05 and 0.60 p. 100 respectively before 45 kg, between 45 and 70 kg and after 70 kg live weight.

— Group BN, receiving a reduced supply of protein (13.5 p. 100 up to 45 kg and 12 p. 100 beyond that weight), but suitably supplemented with essential amino acids.

The diets were composed of a mixture of cereals (barley, wheat and maize) providing a digestible energy value of 3 100 kcal/kg.

The favourable influence of lysine supplementation showed that the requirement was higher in the females than in the castrated males.

Likewise, a difference between sexes was noted in the response to crude protein reduction, *the requirements for essential amino acids being anyhow satisfied.* In the case of castrated males subjected to usual feed restriction (progressive supply up to 2.7 kg/day at 80 kg live weight), the total requirement for crude protein seemed to be satisfied by the levels : 14 p. 100 during the growing period and 12 p. 100 during the finishing period (over 50 kg), corresponding to 45 and 40 g crude protein/1 000 kcal digestible energy. This leads to a sparing of 15-20 p. 100 protein as compared to the recommended standards. However, in the females subjected to a more liberal feeding level (until 2.95 kg/day), the supply of crude protein must be maintained at a higher level, notably during early growth, to prevent excessive carcass adiposity.