Energy and protein value of low glucosinolate or dehulled rapeseed oil-meals and of a sunflower oil-meal in growing pigs

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A digestibility study in growing pigs was carried out by direct measurements according to the substitution method in order to assess the energy and protein value of three types of rapeseed oil-meals and a sunflower oil-meal:

- a low glucosinolate rapeseed meal improved by the genetic way;
- a normal low erucic acid Primor rapeseed meal;
- a dehulled Primor rapeseed meal;
- a sunflower meal.

The trial involved 36 Large White pigs with a mean live weight of 36.9 kg distributed into 9 groups of 4 pigs. The energy and protein value of each meal was assessed at two incorporation levels (12 and 24 p. 100) for the low glucosinolate rapeseed oil-meal (8 and 16 p. 100), for the other meals as compared to a control diet containing only maize. Faecal collection was made during 10 consecutive days.

Only one mean estimate was retained from the results for both incorporation levels of each meal: for the normal low glucosinolate Primor rapeseed oil meal, dehulled Primor and sunflower the values expressed in digestible and metabolisable energy in Kcal/kg dry matter were 3 828, 3 698-2 916, 2 575-3 301, 2 693 and 2 722, 2 160, respectively, corresponding to energy and protein apparent digestibility coefficients of 78.7; 85.6-61.5; 80.0-71.4; 85.8 and 59.4; 89.4.

This study showed that for rather similar crude fibre contents (13.6 p. 100) the digestible energy value of low glucosinolate rapeseed oil-meal (o-thio) was improved by 30 p. 100 as compared to that of the normal Primor rapeseed meal (14.6 p. 100 crude fibre). The dehulling led to a 16 p. 100 increase of the apparent digestibility of energy and a 7 p. 100 increase of that of protein after a 5.4 p. 100 reduction of the crude fibre content of the product. The very good digestibility of sunflower protein was confirmed. Moreover, it appeared that the use of genetics to obtain low glucosinolate rapeseed and of a technological treatment (dehulling) were efficient techniques for improving the nutritional value of rapeseed meal in pigs.

Feeding of fattening pigs according to Lehmann's method with skim milk or yoghurt containing lactic acid bacteria alive or dead

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Lehmann's traditional feeding method based on a daily supply of a constant amount of 4 litres of skim milk and of an increasing amount of barley as well as a mineral vitamin mixture was compared to a feeding technique using complete growing-finishing diets theoretically supply-