

## The effect of age on fibre digestion in the rabbit

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The ability of the commercial meat rabbit to digest dietary fibre was examined at three different ages (6 weeks, 14 weeks and 22 weeks). Dried grassmeal provided the principal fibre source in two experimental diets fed *ad libitum*. The ADF content of the diets was 130 g ADF/kg DM (diet A) and 226 g ADF/kg (diet B).

There was no apparent improvement in the DM digestibility of either diet as the animal aged. Overall the DM digestibility coefficients for diet A and diet B were 71 p. 100 and 54 p. 100 respectively. Similarly there was no improvement in ADF digestibility with age, coefficients of ADF digestibility being on average 13 p. 100 (diet A) and 12 p. 100 (diet B). Animals fed continuously on the high fibre diet did not consistently digest more fibre than those animals changed from the low to high fibre diet for the duration of each balance period, i.e. there was no evidence of animals adapting their fibre digesting capabilities. The low fibre digestibilities reported could be associated with the degree of lignification of these grassmeal-based diets (approx. 22 p. 100 of the ADF fraction).

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## Effect of different crude fibre levels on nutrient digestibility of diets for growing rabbits

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The work was made at the Rabbit culture Section of Faculdade de Medicina Veterinária e Agronomia de Jaboticabal, with the aim to observe the effect of different crude fibre levels on the nutrient digestibility of growing rabbits as well as to estimate the digestion capacity of the fibrous fraction of the diet.

The trials were made with 15 New Zealand white rabbits using diets containing 7, 10 and 13 p. 100 crude fibre and the experiment was achieved with 5 replications entirely at random.

The following conclusions were drawn: 1 — the digestibility coefficient of organic matter, protein and non nitrogenous extract reduced with increasing levels of crude fibre in the diet. 2 — Rise in the crude fibre levels of the diet increased its digestibility coefficients. This increase was probably due to the analytical method used.

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## Energy feeding of rabbits with low cost and high fibre materials

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Eight New-Zealand doe rabbits (8 month-old) and young rabbits of 2nd parturition were fed diets at two energy levels using low cost feeds without lucerne (2 900 kcal digestible energy (DE) per kg feed and 2 625 kcal DE/kg for doe-rabbits and 2 835 to 3 150 kcal/kg feed for their

young). We studied the feeding effects on the number of young rabbits at birth and their performance at 70 days of age.

From the obtained information, we conclude that:

- doe-rabbits showed a racial heterogeneity which had an effect on production process;
- it is necessary to have a better bromatology knowledge of fibrous materials for a better use in rabbit feeding having regard to their low cost;
- Feed for rabbits with high energy levels (DE) gives better results; the 3 150 kcal digestible Energy/kg when adding fat are equivalent to 3 000 kcal metabolisable Energy/kg.
- In experimental rooms of small research units with controlled environment, we must use pure-bred or high level selected rabbits;
- When using fibrous materials in rabbit feeding, attention has to be paid to technological aspects, feed palatability and addition of synthesis amino-acids.

## Energy and digestible protein concentration of diets Effects on growth performances of rabbits

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Sixty 5 week-old rabbits of both sexes were offered 4 diets with a digestible energy value of 2 320 kcal/kg or 2 730 kcal/kg and 49.4 or 58.3 g digestible protein per 1 000 kcal digestible energy. At the end of the 5 week experimental period the animals were slaughtered to determine the energy and protein balances. The apparent digestibility was studied during the third experimental week. Replacement of starch by straw decreased the digestible energy content of the diets. But, protein digestibility of the different diets was not affected. When the digestible energy concentrations in the diets decreased, the animals kept their daily digestible energy intake fairly constant and maintained their growth rate. The digestible proteins/digestible energy ratio did not significantly affect either the apparent digestibility of the different nutrients, or the growth performances. The efficiency of protein deposition was higher when the digestible protein digestible energy ratio was low.

## Effects of dietary metabolisable energy concentration and physical form of the diet on the performance of growing rabbits

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This study was carried out to assess the ability of rabbits to use diets of various nutrient density and form.

In this study, 24 seven week old Californian rabbits (initial weight  $1.44 \pm 0.33$  kg) were pair-fed 2 diets in 3 physical forms. The 2 diets (8 M/D and 12 M/D) were formulated to contain 8 and 12 MJ/kg dry matter using ruminant metabolisable energy values. Crude protein content was 160 g/kg dry matter. Ground barley straw was the main fibre source. Diets were