Effect of dietary protein and amino acid level on milk production of doe-rabbits

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Due to the lack of literature on protein requirements of breeding rabbits, we have made an experiment to study the effect of an increase in the dietary amino acid level on milk production of the dam and accordingly the weight increase of the young rabbits.

The experiment was made in a rabbitry of the Real Escuela Oficial y Superior de Avicultura, at Arenys de Mar, using New Zealand breeding animals housed in 80 x 60 cm. cages. Feed and water were supplied ad libitum and doe-rabbits were divided randomly into two groups. All management conditions were identical for both groups except the feed supplied to the breeding animals from the day of mating. One ration — A — was a standard commercial one containing 0.75 p. 100 lysine, 0.27 p. 100 methionine and 0.57 p. 100 methionine plus cystine, the other one, ration B was isoenergetic and contained 0.90 p. 100 lysine, 0.30 p. 100 methionine and 0.62 p. 100 methionine plus cystine; both included 2 609 Digestible Kcal/kg.

The lowest protein level was supposed to be good for pregnancy because we did not observe any significant difference between the weight of one day old rabbits of both groups. However, the increase in protein level resulted in a higher milk production, a higher daily body weight gain, a higher body weight of the rabbits at 15 days old and a higher breeder feed consumption in this period. All these differences were statistically significant.

No significant difference was observed in the daily body weight gain of the breeders nor in the feed intake/milk production or milk production/increase in weight of the rabbits.

Preliminary note: feeding behaviour of 12 week-old crossbred New Zealand × wild rabbits

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The feeding behaviour characteristics of five 12 week-old crossbred New-Zealand × wild rabbits were recorded. Amounts and number of solid and liquid meals seemed to be located just between those of the domestic and the wild breeds.

Concerning the circadian distribution of food consumption, some of the rabbits did not show the rhythm generally observed in the domestic or wild adult rabbit and ate very little during the dark phase. The behaviour of the same animals recorded when they were 9 months old showed that they all ate mainly during the night.