EFFECTS OF SOURCE OF PROTEIN AND ENZYME SUPPLEMENTATION ON PERFORMANCE OF FATTENING RABBITS

GARCÍA J. [1], GARCÍA A. I.[1], GARCÍA-REBOLLAR P. [2], DE BLAS C. [2], CARABAÑO R. [2]

[1]NUTRECO PRRC, Casarrubios del Monte, 45950 Spain.
[2]Dept. Producción Animal, ETS Ingenieros Agrónomos. UPM, 28040 Madrid, Spain.

ABSTRACT

An experiment was conducted to determine the effects of source of protein (soybean *vs.* sunflower meal) and enzyme supplementation (no enzyme, as a control diet, vs. protease *vs.* protease + xylanase addition) on feed intake, weight gain, feed efficiency and mortality during the fattening period. Treatments were arranged factorially (2 x 3) in six isonutritive diets. One hundred and eighty New Zealand x Californian rabbits were assigned in a randomised block (litter) design to the experimental diets (30 rabbits per treatment). Animals were weaned at 35 days of age and fed *ad libitum* in individual cages during four weeks. Diets based on soybean meal showed a higher average daily gain (51.0 *vs.* 49.1 g; SE = 0.45; P = 0.005) and feed intake (138 *vs.* 132 g; SE = 1.30; P = 0.001), but a similar feed efficiency (2.69; SE = 0.013; P = 0.15), and a higher mortality (11.1 *vs.* 4.44%; SE = 2.91; P = 0.09) than those based on sunflower meal. Effects were higher and more significant in the first two-weeks after weaning than in the whole fattening period. Enzyme supplementation did not affect significantly (P > 0.15) any of the traits studied at any period. An interaction source of protein x enzyme supplementation was observed on mortality (P = 0.11), as both protease and protease + xylanase addition reduced mortality found in the control diet (10%) to 0 and 3.33%, respectively in sunflower diets, whereas no response was detected in soybean-based diets. These results agree with previous work that indicates that sunflower meal should be preferred to soybean meal in starter diets for rabbits in order to minimize digestive disorders. They also suggest that enzyme supplementation of sunflower diets might further reduce fattening mortality through a decrease of the amounts of nutrients reaching the fermentative area.

Key words: soybean meal, sunflower meal, enzymes, performance.

REFERENCES

GUTIÉRREZ I., ESPINOSA A., GARCIA J., CARABANO R., DE BLAS J.C., 2002b. Effects of starch and protein sources, heat processing, and exogenous enzymes in starter diets for early weaned rabbits. *Anim. Feed Sci. and Techn., **98**: 175-186.*