J. Agric. Sci. Mansoura Univ., 32 (5): 3359 - 3369, 2007

EFFECT OF PHYTASE SUPPLEMENTATION ON THE GROWTH PERFORMANCE OF GROWING RABBITS FED LOW-PHOSPHORUS DIETS.

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ABSTRACT

A total of forty eight New Zealand White rabbits (NZW)of 30 days of age were used to study the growth performance, carcass characteristics, digestibility of nutrients and tibia bone traits of growing rabbits fed low – phosphorus diet (low-P) with or without phytase supplementation. Rabbits were divided into four experimental group, each containing 12 rabbits (4 replicates of each group) to receive one of the four experimental diets which controlled with adequate phosphorus, low phosphorus diet, low phosphorus diet + 750 U phytase/kg diet and low phosphorus diet + 1250 U phytase/ kg diet. The feeding period was extended for 56 days. The results showed that rabbits fed low-phosphorus diet recorded lower values ($P<0.05$) of live body weight, weight gain, and depressed feed conversion ratio compared to control group. Dietary phytase supplementation at 750 and 1250 U/Kg improved significantly ($P<0.05$) the weight gain, feed conversion ratio, growth rate and performance index than rabbits fed phytase free low-P diet. The dressing percentage and digestibility coefficients were significantly ($P<0.05$) increased by phytase supplementation. Tibia bone breaking strength; ash and phosphorus percent improved ($P<0.05$) by phytase supplementation. The rabbits fed low-P diet supplemented with 1250 U phytase/Kg diet showed the highest growth performance, dressing percentage, nutrients digestibility and characteristics of tibia bone than those fed control diet containing adequate phosphorus but without phytase supplementation.

In conclusion, Supplementing deficiency phosphorus diets by 1250 U phytase / kg diets improve the growth performance of growing rabbits.

Keywords: Rabbit, low-phosphorus, phytase, growth performance, carcass, digestibility, tibia bone.