

عنوان مقاله:

Effects of Artichoke (*Cynara scolymus* L.) Leaf Meal and Vitamin E on Productive Performance, Intestinal Microflora and Morphology in Japanese Quail

محل انتشار:

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خلاصه مقاله:

A total of 240, one-day-old quail chicks (*Coturnix coturnix japonica*) were used to study the effects of Artichoke leaf meal (ALM) and vitamin E in diet on growth performance, ileal microbial populations and intestinal morphology in a 42-d trial. This experiment was performed as a completely randomized design with 4 replicates of 15 quails each, using a 4 × 2 factorial arrangement with diet and gender as the main effects. Four dietary treatments were formulated by addition of 2 levels (1.5 and 3 percent) of ALM and 300 mg/Kg vitamin E to the basal diet. Supplementing basal diet with ALM did not improve growth performance at different rearing periods, whereas dietary vitamin E increased feed intake and body weight gain at day 21 of age (P). The ileal populations of lactobacillus and coliforms was not affected by dietary ALM treatments, whereas vitamin E increased the population of total aerobic bacteria ($P \leq 0.04$). The ileal villus height ($P \leq 0.01$) and crypt depth ($P \leq 0.008$) were reduced in quails fed on diets with ALM and vitamin E. The quails fed diets containing 3 percent ALM and 300 mg/Kg vitamin E had higher villus height: crypt depth ratio. The thickness of muscularis ($P \leq 0.04$) and mucosa ($P \leq 0.0007$) layers were decreased in birds fed diets containing ALM than control birds. Birds treated with ALM and vitamin E showed a shorter intestinal length ($P \leq 0.02$) and a lower pancreas relative weight. The results of this study showed that supplementing diet by ALM (1.5 and 3%) and 300 mg/Kg vitamin E did not improve growth performance, ileal microbiota populations and intestinal morphometric indices in Japanese quail.

کلمات کلیدی:

Artichoke, Performance, Japanese quail, Ileal microflora, Gut morphology

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