Abstract:
The aim of current study was to evaluate the effects of Biotronic organic acid on performance, immune response and intestinal microbial population of growing Japanese quails. The birds received five dietary treatments including 5 levels of Biotronic organic acid (0, 0.25, 0.50, 0.75 and 1% of diet) in a completely randomized design for 28 days. Birds receiving the diet of 0.75 % organic acid increased FI at age of 7-28 days (p<0.05). Adding organic acid to diet increased body weight at age of seven to 28 days (p<0.05). The use of organic acids in diet improved FCR at the age of seven to 28 (p<0.05). Use of organic acid increased carcass relative weights (p<0.05). In addition adding 0.25% organic acid increased relative weight of thighs (p<0.05). Dietary organic acids increased antibody titer against sheep red blood cells in both primarily and secondary challenging (p< 0.05). Dietary treatments had no effect on E. coli and total bacterial counts of intestine (p>0.05), but level of 1% increased lactic acid bacteria population when compared with control group (p<0.05). Biotronic organic acid had no effect on meat malondialdehyde (MDA) concentration (p>0.05). In conclusion result of this experiment showed that Biotronic organic acid improves performance, humoral immune response, and increase intestinal lactic acid bacteria population in Japanese quail.

Keywords: Japanese quail, Performance, Humoral Immunity, Microbial population
The Thesis Submitted for the Degree of M.Sc
In the field of Poultry Production and Management

Title:

Effect of organic acids in rations of performance, immune system and gastrointestinal microbial population of Japanese quail

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Sep 2015