

Effect of a Lactic Acid Bacteria Based Probiotic, FloraMax-B11®, On Performance, Bone Qualities and Morphometric Analysis of Broiler Chickens: An Economic Analysis

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Abstract :

Probiotics are live microorganisms which, in adequate dose, will increase the beneficial microbial population in gut. A commercial lactic acid bacteria-based probiotic FloraMax-B11® (FM) has shown to have beneficial effect in reducing microbial colonization in broilers. The present study was intended to evaluate the effect of FM on growth performance, bone qualities and morphometric analysis of broiler chickens. In experiment 1, broiler chickens were divided into control or FM treated chickens. Treated chickens received 5 doses of FM. At the end of 30 days, body weight, was recorded and all chickens were humanely killed. Tibias and ileum content were collected. A significant ($p<0.05$) increase in body weight was observed in the group that received the probiotic treatment when compared with control non treated group. The improved performance was associated with a significant ($p<0.05$) reduction of energy and protein digested content of the distal ileum as well as bone parameters. Experiment 2 consisted of two independent trials. In each trial, 400 day-of-hatch, broiler chickens randomly assigned to probiotic or control non treated chickens. At days 1, 12, 23, 34 and 45 days of age, treated chickens received the probiotic in the drinking water. In both trials, a significant ($p<0.05$) improvement in body weight, feed conversion and morphometric changes in gut and tibia were observed in the group that received FM. Estimation of the cost benefit suggested a 1:24 ratio by using FM. The results of this study suggest that the increase in performance and bone parameters in neonatal chickens treated with FM probiotic may be related with improved morphometric changes in the mucosa of duodenum which are also related with improved digestibility.

Key Word :

Lactobacillus , probiotic, broiler, productive parameters, bone qualities

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