The effects of probiotic on growth performance and mortality of broiler chickens

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Objectives: The European Union has banned all in-feed use of antibiotics from 2006 and the use of antibiotics in feed is being considered for elimination (or intense regulation) in other parts of the world. This perspective has stimulated nutritionists and feed manufacturers to search for new and safe alternatives. The primary alternatives studied include; acidification of the feed by organic acids, feeding probiotic organisms and feeding prebiotic compounds. In this study the effect of probiotic Aviguard supplementation was investigated on growth performance and mortality of broiler chickens during 1 to 42 d of age.

Materials & Methods: This experiment was conducted in a completely randomized design with 2 treatments, 5 replicates and 16 chicks per each replicate. Experimental treatments contained 2 doses of Aviguard (0, 0/125 mL/chick) that was added to the chick’s water. Feed intake, body weight gain and feed to gain ratio were measured weekly. Birds mortality were recorded daily. Data of this experiment were analyzed by analysis of variance using GLM procedures (SAS institute, 2001). Differences among means were compared by Duncan’s multiple range tests at 5% probability (Duncan, 1955).

Results & Conclusion: Although using Aviguard improved feed intake, body weight gain and feed to gain ratio numerically, there was no significant difference between treatments (P>0.05). Birds fed with Aviguard had 0.5 percent mortality, while the other group had 2.5 percent mortality (P<0.05). Reduced birds mortality can be due to the probiotic effects on supporting broilers immune system against pathogens and improving their health and welfare.

Keywords: Probiotic, Growth, Mortality, Broiler Chickens