Original Article

Effects of Commercial Herbal and Chemical Medicines on Performance, GI Microbial Population, Intestinal Morphology and Serum Lipids of Broiler Chickens Challenged with Infectious Bronchitis Vaccine Virus

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Abstract

The aim of this study was to investigate the effect of commercial herbal and chemical medicines on growth performance, serum lipids, intestinal selected bacterial population and intestinal morphology of broiler chickens. In this study, 450 day-old female broiler chickens (Arian strain) were divided into 10 treatments with three replicates of 15 chicks per replicate. On day 14 of the experiment, birds in following treatments: 1) Anzofin®; 2) Antibiofin®; 3) Immunofin®; 4) Broncofin®; 5) Zagrol®; 6) Mentofin®; 7) Enrofloxacin®; 8) Bromhexin®; and 9) positive control received IB-4/91 vaccine 5 times greater than the standard dose, but chickens in 10) negative control (NC) group was vaccinated with standard dose of IB vaccine. The birds in treatments 1 to 6 received herbal medicines in drinking water from days 15 to 48. Chickens in treatments 7 and 8 received Enrofloxacin® and Bromhexin®, from days 15 to 19 in drinking water. The highest feed intake, body weight, and body weight gain were observed in Bromhexin® treatment. The lowest body weight, body weight gain and highest FCR were observed in Zagrol® treatment. Immunofin® had the lowest FCR among all treatments. The highest and lowest European Production Efficiency Factor was observed in Immunofin® and Positive control group, respectively (P>0.05). Bacterial population in GI tract was reduced in Mentofin® treatment. Bromhexin® insignificantly improved villi height of duodenum, jejunum and ileum. The highest crypt depth in duodenum, jejunum and ileum was observed in Zagrol® treatment.

Key words: Chemical medicine, Plant medicine, Performance, Broilers, Infectious bronchitis