

## Effect of Peganum harmala Seeds on Blood Factors, Immune Response and Intestinal Selected Bacterial Population in Broiler Chickens

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**Abstract :** This experiment was designed to study the effects of feeding different levels of Peganum harmala seeds (PHS) and antibiotic on serum biochemical parameters, immune response and intestinal microflora composition in Ross broiler chickens. A total of 240 one-d-old unsexed broiler chickens were randomly allocated to each of the four treatment groups, each with four replicate pens of 15 chicks. The dietary treatments included of control (C) - without PHS and antibiotic - the diet contains 300 mg/kg Lincomycin 0.88% (A) and the diets contain 2 g/kg (H1) and 4 g/kg (H2) PHS. The chicks were raised on floor pens and received diets and water ad libitum for six weeks. Blood samplings were performed for the determination of antibody titer against Newcastle disease on 14 and 21 days and for biochemical parameters on 42 days of age. The populations of Lactobacilli spp. and Escherichia coli were enumerated in ileum by conventional microbiological techniques using selective agar media. Inclusion of PHS in diet resulted in a significant decrease in total cholesterol and significant increase in HDL relative to the control and antibiotic groups. Antibody titer against NDV was not affected by experimental treatments. E. coli population in birds supplemented with antibiotic and PHS was significantly lower than control, but Lactobacilli spp. population increased only by antibiotic and not by PHS. In conclusion, the results of this study showed that addition of PHS powder seem to have a positive influence on some biochemical parameters and gastrointestinal microflora.

**Keywords :** antibiotic, biochemical parameters, immune system, Peganum harmala

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