

Effects of purslane extract on performance, immunity responses and cecal microbial population of broiler chickens

ABSTRACT

The aim of present study was to evaluate the effect of purslane extract on performance, cecal microflora composition and immune responses of broiler chickens. One hundred and ninety two 16day old broiler chicks (Ross 308) were allocated randomly in 4 groups with 4 replicates to receive diets supplemented with 0 (control), 100, 200 and 300 ppm of purslane extract for 42 days. Body weight gain, feed intake (FI) and feed conversion ratio were measured weekly and calculated for starter (1-21 d), grower (22-42 d) and overall periods (1-42 d). All diets were isocaloric, isonitrogenous and provided ad libitum. Antibody response against sheep red blood cell (SRBC) was measured on d-28 and d-42. At the age of 42 d, eight chicks per treatment killed aseptically for enumeration of cecal bacteria. The results of this experiment indicated that FI increased significantly with inclusion of purslane extract in grower and overall period ($p < 0.05$). Purslane extract did not affect coliform and *Escherichia coli* populations but increased *Lactobacillus* population of cecal content significantly ($p < 0.05$). There were no significant differences in primary and secondary antibody titer against SRBC and no differences among the treatments for relative weight of thymus and spleen ($p > 0.05$). Relative weight of bursa was affected with inclusion of purslane extract in the diet. Therefore, it was concluded that purslane inclusion had a positive significant effect on cecal microflora composition, but had no effect on immune response of broiler chickens.

Keyword: Broiler performance; Cecal microflora; Immune response; Antibody titer