

HERBS AS ALTERNATIVE OF ANTIBACTERIAL AGENTS IN BROILER RATION AND PRODUCTION OF ANTIBIOTIC RESIDUE FREE POULTRY MEAT

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Extended Summary

Antibiotics are commonly used as antibacterial and therapeutic agents in broiler diet. Antibiotics have residue effect. Therefore, it can easily enter in human body through meat and egg. It is the threat for public health. With the above views in mind, the present study was undertaken.

To find out the effect of cinnamon on the productive performance of broiler and analyze the cost-profit of broiler farming and finally assess the impact of cinnamon on bacterial population & bio-chemical characteristics of blood serum.

For the experiment 240 (one day old) chicks collected and divided into treatment groups 1 to 8. The chicks of each treatment group were further divided in the form of 3 replications each having 10 birds. The chicks of treatment group 1 to 6 were respectively treated with 0.5, 1.0, 1.5, 2.0, 2.5 and 3.0% of cinnamon. The chicks of treatment group 7 were given antibiotic (1g/L oxitetracycline) and group 8 were reared an untreated control.

At the age of 28 days 0.5% cinnamon had significantly ($p < 0.05$) greater body weight than the antibiotic and control group. The feed conversion ratio (FCR) of 0.5% cinnamon was significantly ($p < 0.05$) better compared to antibiotic and control. Almost all treatments of cinnamon were significantly ($p < 0.05$) higher antibody SP ratio for Gumboro and Newcastle disease compared to the control. In this research, 0.5% cinnamon was showed significantly ($p < 0.05$) lower blood glucose level than antibiotic and control group. At 28 days of age, blood cholesterol was significantly lower ($p < 0.05$) in 0.5% cinnamon than control but higher than antibiotic. There was no impact on edible part percentage of cinnamon. All treatments of cinnamon were significantly ($p < 0.05$) lower *E. coli* population than the control. In this research 0.5% cinnamon was significantly ($p < 0.05$) more profitable compared to the antibiotic and control.

At 0.5% level of cinnamon was significantly ($p < 0.05$) better for FCR, body growth, immunity level, cholesterol level, sugar level in blood, microbial population, profit per bird and can be used as good alternative of antibacterial agent in broiler diet.

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