

EFFECTS OF FEEDING GARLIC ON GROWTH PERFORMANCE AND IMMUNITY OF BROILER

Mofassara Akter*

Executive Summary

The experiment was conducted to evaluate the effects of using different levels of garlic on production performance, carcass traits, immune parameters, and cholesterol level of commercial broiler. A total of 240 "Lohman Meat (Indian River)" strain chicks were separated into 6 experimental groups, each with 4 replications of 10 chicks. The treatments were T_0 = control (basal feed), T_1 = basal feed + antibiotic, T_2 =0.5% garlic, T_3 =1.0% garlic, T_4 =1.5% garlic and T_5 =2.0% garlic. Throughout the trial period, body weight, feed consumption, and FCR were recorded. At the end of the experiment, cholesterol levels, immunological parameters, and carcass features were also examined. The average live weight, body weight gain and dressing % were significantly ($P<0.05$) increased in the different doses of garlic-treated groups than in the control and antibiotic-treated groups and the highest performance was observed with 2.0% garlic-treated groups. Birds fed different levels of garlic showed improved FCR non-significantly ($P>0.05$). The effects of different levels of garlic on carcass and some internal organs were measured and results show that feeding broilers with 2.0% garlic have significant effects ($P<0.05$) on the breast, thigh, wing, liver, neck, heart, giblet while it appeared insignificant on ($P>0.05$) back, drumstick, gizzard, intestine, spleen and bursa. Significant ($P<0.05$) difference was detected for immune parameters i.e. WBC, lymphocyte and granulocyte in garlic-treated groups than in the control and antibiotic-treated groups which indicates better immunity in garlic-treated groups. Additionally, compared to the control and antibiotic groups, supplementing with different levels of garlic significantly reduced the levels of total cholesterol, triglycerides, and LDL with a significant ($P<0.05$) increased amount of HDL. The best outcomes were obtained with a supplement of 2.0% garlic-treated group. Therefore, the addition of 2.0% garlic to broiler ration as a substitute for antibiotics and a cholesterol-lowering agent can be guided to prevent risks to human health.

*Professor, Dept..of Animal Nutrition, Genetics and Breeding, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh