

Effects Of Ginger (*Zingiber Officinale*) Oils On Growth Performance And Microbial
Population Of Broiler Ross308

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Abstract

An experiment was conducted at the University of Kirkuk poultry farm of college of agriculture department of animal science to evaluate the effect of ginger oils on some blood parameters, growth performance and gut microbial population of broiler chickens. Two hundred male and female day old chicks of Ross308 were arranged in a complete random design experiment and allotted to one of four treatments doses 0 (Control), 10mg/kg/day(T1), 20mg/kg/day(T2) and 40mg/kg/day(T3). All diets were iso-nitrogenous, containing 22% and 19% crude protein in the starter and the finisher periods, respectively. The trial lasted for seven weeks and there were no differences in feed intake, body weight gain and the feed conversion ratio among the birds, All organs weight and carcass characteristics were not affected by the treatments, except for a decrease ($P < 0.05$) in relative liver weight of birds those given ginger oil treatment compared with control. Similarly, a lower ($P < 0.001$) proportion of the head weight of birds given oil was observed compared to the control. Dosages effects showed a decrease in relative weight of organs only for the head ($P < 0.001$) and the gizzard ($P < 0.05$) compared to the control. Male broilers deposited less ($P < 0.001$) than the females. There were no significant differences observed in the activities of the serum transaminases (AST & ALT) and blood creatinine level, indicating that none of the three dosages of oil

given to birds was toxic. However, *Escherichia coli*, and other Enterobacteria counts in the ileo-cæcal digesta numerically decreased ($P < 0.05$) compared to the control as the doses of oil given increased. The same observation was made for the *Salmonella* and *Shigella* species ($P < 0.001$). The colony forming units (CFU) of *Staphylococci spp* were statistically significantly ($P < 0.01$) reduced compared with the control group. Yeast and mold fungi were found in the ileo-cæcal digests of all the groups.