Effects of *Ganoderma lucidum* fermentative products supplementation on growth performances, carcass characteristics and immune response in Native chickens [1]

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Abstract

The purpose of this study was to investigate the effects of *Ganoderma lucidum* fermented products (GLFP) on the growth performances, carcass characteristics and immune response for the Native chickens. A total of three hundred and twelve day-old Native chickens were randomly grouped with equal sex in four groups for three replicates as following treatments: (1) basal diet (control); (2) addition of 500 ppm GLFP; (3) addition of 1,000 ppm GLFP; (4) addition of 125 ppm oxytetracycline (OTC). Feed and water are supplied *ad libitum*. There was no diet effect on feed intake during the whole growth stages. At ages of 5-8 weeks, the birds fed the 1,000 ppm GLFP had higher ($P < 0.05$) weight gains than the other treatments. Feed conversion ratios were significantly ($P < 0.05$) improved when GLFP or drug were added in the chicken diets during 9 - 12 weeks of age. The control group had significantly ($P < 0.05$) lower survival rate during the experimental period. The chickens fed the GLFP diets had significantly ($P < 0.05$) lower percentage of abdominal fat. However, the percentages of edible internal organs did not affected among the treatments. The birds fed with GLFP diet had significantly ($P < 0.05$) higher or increasing tendency of villous height and crypt ratio at 4, 8 and 16 weeks of age, respectively. The PHA score had significantly higher by GLFP diets, however, IBD antibody and IgA contents were increased those supplementation of GLFP groups than that of control group. In conclusion, the growth performances, survival rate, carcass characteristics and immune response of the Native chickens could be improved by the supplementation of *Ganoderma lucidum* fermentative products, especially at 1,000 ppm was supplemented.

Key words: *Ganoderma lucidum* Fermentative Products, Growth performances, Native chicken, Survival rate.

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