

University of Zabol Graduate School Faculty of Agriculture Department of Animal Science

The Thesis Submitted for the Degree of M. Sc. In the field of poultry production

Title:

effect of Thyme (*Thymus vulgaris* L) and Probiotic on Performance and some Blood parameters of Japanese quail

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Abstract

The aim of the current study was to evaluate the effects of thyme and probiotics on performance, and some blood parameters of Japanese quails. The birds received six dietary treatments including 3 levels of thyme (0, 0.5 and 1% of diet) and 2 levels of probiotics (0 and 0.015% of diet) as a factorial arrangement of 3×2 in a completely randomized design. Body weight gain (BWG) and feed intake (FI) were recorded on weekly basis and appropriate feed conversion ratios (FCR) were calculated. In order to assess primarily and secondary immune responses against sheep red blood cells (SRBC) antigen, the birds were injected through wing vein on d 15 and 25, respectively. On d 35, one bird of each replicate were sacrificed and carcass attributes were weighed immediately. The main effects of dietary thyme, probiotics and their interactions did significanty not effect on FI (P > 0.05). Results of BWG showed significant difference between levels of thyme during 7 to 21, 7 to 28 and 7 to 35 d of age (P < 0.05). The 0.5% level of thyme showed the lowest BWG but dietary probiotics increase BWG during the 7 to 28 and 7 to 35 d of age (P < 0.05) and their interaction on BWG was significant during 7 to 14 and 7 to 35 d of age. Dietary thyme did not effect on FCR (P > 0.05) while dietary probiotics significantly decreased FCR compared to control group during the 7 to 35 d of age (P < 0.05). The effect of treatments on blood biochemical parameters (Albomin, Triglycerides, Cholesterol, Uric acid) was not significant (P > 0.05). The effect of thyme, probiotics and their interactions on carcass internal organs relative weights (carcass, thigh, liver, heart, breast, gizzard, intestine, intestine and bursa) was not significant (P > 0.05). Results of HI had not significant differences (P > 0.05). 0.05) but results of SRBC1 and SRBC2 showed significant differences between levels of thyme (P < 0.05), probiotics was not significant on primary, secondry immunity while significantly decreased HI immunity. dietary thyme significantly decreased MDA compared to control group while probiotics significantly increased MDA compared to control group.

Key words: *Thymus vulgaris*, Japanese quail, Probiotics, Blood parameters, Meat

quality, Immunity