University of Zabol
Faculty of Agriculture
Department of Animal Science

Thesis for obtaining a MSc. Degree in Poultry Production and Management

Title:

# The feasibility of using barley during the laying period of Japanese quail with and without the use of enzyme

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**Abstract**

This study was conducted to investigate the possibility of replacing barley with corn with and without enzymes in Japanese quails' diet during the laying period. For this purpose, 440 fourthy-day-old quail chicks were used in a completely randomized design with 9 treatments and each treatment with 4 replications and 10 quail chicks in each replicat. Experimental groups included replacement of zero, 25, 50, 75 and 100% barley levels instead of corn in two groups with and without enzyme. Performance traits were measured weekly. In order to evaluate the blood biochemical parameters, three quails were randomly selected from each unit. The obtained data were analyzed using SAS software version 9.1 and the means were compared using Tukey test at a significance level of 5%. The results showed that the consumption of diet containing barley (with and without enzymes) on feed conversion ratio, egg production, egg weight, some egg characteristics, egg mass and serum triglyceride were significantly different compared to diet containing corn ($P< 0.05$). While in terms of bird feed consumption, mean egg weight and characteristics of reproductive organs, this difference were not significant ($P> 0.05$). For egg traits including egg production, egg mass and egg weight, the effect of diet in the second week of the experiment were not significant ($P> 0.05$). According to the results of the present study, the most suitable diet for practical use could be the use of diets containing 25% barley with enzymes.

**Keywords**: Barley, Japanese quail, Rawabio, Egg mass, Feed conversion ratio