



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

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

Title:

**Effect of different levels of energy and pro-
tein on performance of Khazak hen during
phase I of laying period**

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Abstract

This study was conducted to investigate the effect of 2700 and 2900 kcal levels per kg of metabolizable energy and levels of 15% and 19% of crude dietary protein on the performance of khazak-laying hens in the first stage of laying. For this purpose, 160 Khazak-laying hens aged 25 weeks were selected and subjected to 4 treatments and 4 replications during 91 days in a factorial experiment based on a completely randomized design. Chickens were weighed at the beginning and end of the experiment. Percentage of egg production, egg mass, feed intake, feed conversion ratio and Haugh unit were significantly affected by different energy levels ($P < 0.05$); with increasing the energy level of the feed to 2900 kcal / kg, the egg production percentage and egg mass increased. But Haugh unit, conversion ratio and feed consumption decreased. Also, different energy levels had no significant effect on average egg weight and egg quality. Different protein levels had a significant effect on Percentage of egg production, egg mass, egg units, egg quality parameters and average egg weight ($P > 0.05$); However, with increasing protein percentage, feed intake and feed conversion ratio showed a significant decrease. The interaction effect of different levels of metabolizable energy and dietary crude protein on egg production percentage, egg mass, egg Haugh unit, feed intake, conversion ratio and egg quality parameters was significant ($P < 0.05$); At the level of 2900 metabolizable energy and 19% protein, the highest Percentage of egg production and egg mass was observed, but Haugh unit, egg quality parameters, feed conversion ratio and feed intake at the level of 2700 metabolizable energy and 15% protein increased.

Keywords: Egg mass, Feed conversion ratio, Khazak hen, Haugh unit