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**Assessment of Dietary Energy and Protein on Laying Performance of Golpayegan
Native Hens**

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Abstract:

The response of Golpayegan and Isfahan native hens to diets containing different levels of protein and metabolizable energy (ME) was evaluated by using 240 laying hens in a factorial 5*3 with five native hens population (Isfahani and four Golpayegani (M, H, Y and Z)) and three diets (containing 2700 Kcal/Kg ME and 16.5% protein, 2750 Kcal/Kg ME and 17% protein, 2800 Kcal/Kg ME and 17.5% protein), in a completely randomized design with 15 treatments, 4 replications and 4 birds per each. The results showed that egg production, egg mass and feed intake were higher than Golpayegani hens ($P < 0.05$). Isfahani Hens fed on diet containing 2800 Kcal/Kg ME and 17.5% protein improved egg production and feed conversion ratio ($P < 0.05$). Diet with 2750 Kcal/Kg ME and 17% protein improved egg production and egg mass for Golpayegani H and Y hens while for Golpayegani M hens, diet with 2800 Kcal/Kg ME and 17.5% protein was the best ($P < 0.05$). Haugh unit, Yolk color, egg shell thickness and egg surface area in Golpayegani M hens were higher than Golpayegani H hens ($P < 0.05$). Haugh unit and shell weight were lower in Isfahani hens in comparison of Golpayegani M ($P < 0.05$). Yolk color increased by using diet containing 2700 Kcal/Kg ME and 17% protein ($P < 0.05$). In conclusion, feeding Isfahani and Golpayegani native hens by diets containing 2750 Kcal/Kg ME and 17% protein, was resulted good laying performance, so the mentioned dietary energy and protein levels are recommended for these native hens population.

Keyword: Energy, Protein, Performance, egg quality, Layer native hens.