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Evaluation of performance of improved indigenous hens in rural areas of isfahan province

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Abstract

The study was carried out to investigate the growth, laying performance and liveability of native hens in rural areas of two different climate of Isfahan province. In this study, 2160 chicken were used that had been fed with a similar diet until 45 days of age. Two dominant climatical regions (cold and warm) were determined. The townships of Kashan and Varzane were selected from warm climate and Khansar and Chadegan were selected from cold region. Then three villages from each township and six families from each village were considered as experimental units (72 families). Each family received 26 pullets and 4 roosters (45 days old). During the experimental period (6 to 72 weeks of age), performance of the indigenous chickens were recorded. The results showed that, body weight of indigenous chickens were higher in warm climate ($P<0.05$) at 8 and 24 weeks of age. At the age of 48 and 72 there were not any significant differences between body weight of them. Climate did not affect egg production percentage significantly, and the least egg production belonged to Chadegan which was different from Varzane and Khansar significantly ($P<0.05$). Average egg weight of cold climate was significantly higher than warm climate ($P<0.05$). The highest average egg weight observed in khansar township which was significantly different from other townships ($P<0.05$). Average egg mass production was not affected by climate but Khansar had the highest average egg mass production which was significantly different from Kashan and Chadegan ($P<0.05$). Liveability of the native chicks were affected by climate in which warm climate had higher record along rearing period ($P<0.05$). Totally, average body weight of indigenous chickens reared under rural conditions at 8, 12, 24, 48, 72 weeks was 591.7, 909.5, 1537.3, 1792.7 and 1974.6 g. Sexual maturity age and average egg production percentage of indigenous chicken in this study at 21-72 weeks in Khansar, Chadegan, Kashasn and Varzane were 164.1, 199.1, 174.4, 166.4 days and 37.5, 25.9, 30.1, 35.9 percentage, respectively. Annual egg production number and egg weight in Khansar, Chadegan, Kashasn and Varzane were 121.2, 131.3, 94.3 and 136.9 eggs and 50.6, 49.4, 48.9, and 49.4 g, respectively. Liveability of indigenous hens during 6 to

72 weeks of age in Khansar, Chadegan, Kashasn and Varzane were 78.9, 38.8, 78.9 and 81.8 percentage, respectively.

Keywords: indigenous chicken, egg production, body weight, liveability, rural regions