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Fattening Performance and Carcass Characteristics of Awassi and their Crossbred Ram Lambs with Charollais and Romanov in an Intensive Feeding System

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Abstract

The objective of this study was to evaluate the effect of ram lambs genotype on fattening performance and carcass characteristics in an intensive feeding system.

Thirty ram lambs and two months old ram lambs of three genotypes Awassi (A) = 10, F1 crossbreds Charollais × Awassi (F1 ChA) = 10 and F1 crossbreds Romanov × Awassi (F1 RA) = 10 were placed in individual closed pen. All lambs were individually fed for seventy days on the same concentrate mixture. Live weight (LW) was recorded once weekly, daily was recorded feed offered and refused in individual lamb. At the end of study all thirty ram lambs were sacrificed to obtain slaughtering data. Daily weight gain (DWG), total weight gain (WG), feed conversion ratio (FCR) and cost on 1 kg weight gain were the best in F1 ChA and F1 RA, compared to A ($p \leq 0.001$). The height at withers, height at back, height at rump, diagonal body length, rump height, chest girth and cannon-bone girth were in favour of crossbreds F1 ChA ram lambs ($p \leq 0.01$). The F1 ChA hanging carcass recorded a higher body length, leg length, gigot width, width behind shoulder, Max. shoulder width ($p \leq 0.01$) than the other genotype groups. The best ($p \leq 0.001$) carcass meatiness was in F1 ChA group, while the lower carcass fatness was in F1 RA group ($p \leq 0.01$). The highest percentage proportions of leg and loin, which represent the prime quality of the carcass, 48.64% were in F1 ChA, 45.97% in F1 RA and 45.91% in A ($p \leq 0.001$). The EMA, fat depth over EMA, lion fat depth and shoulder fat depth displayed highly statistically significant differences between the genotypes. In conclusion, the results of this study document that F1 ram lambs crossbreds ChA and F1 ram lambs crossbreds RA were superior than Awassi ram lambs in daily weight gain and total weight gain, feed conversion, lower cost of 1 kg meat gain and in most of the carcass characteristics.

Keywords: Carcass characteristics, Crossbreeding, Lamb fattening, sheep