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Effect of Crossing Indigenous Awassi Sheep Breed with Mutton and Prolific Sire Breeds on Growth Performance of Lamb in Jordan.

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Abstract

The objective of this study was to evaluate the effect of crossing on body weight and growth ability of lambs from birth to weaning, including the effect of litter size, sex, dam age, dam weight at mating, dam weight after lambing and year of rearing.

The study was carried out on the Awassi sheep flock and their crossbreds with the breeds Charollais and Romanov maintained at the Agriculture Centre for research and production at Jordan University of Science and Technology, Irbid.

In the years 1999 and 2000 the live weight was determined in 192 lambs (70 Awassi, 63 Awassi × Charollais F1 crossbred and 59 Awassi × Romanov F1 crossbred) at birth and subsequently every fortnight until weaning by weighing on digital scales with accuracy of 0.1 kg. Average live weight of lambs at birth was 4.20 ± 1.15 kg and at the age of 15, 30, 45 and 60 days 8.72 ± 2.12 kg, 12.12 ± 2.77 kg, 15.50 ± 3.70 kg and 19.27 ± 4.59 kg, respectively. ADG of lambs from birth until weaning was 248 ± 0.07 g.

Genotype of lambs, litter size affected ADG, live weight of lambs at birth, 15, 30, 45 and 60 days significantly ($p \leq 0.05 - 0.001$).

Investigation of the effect of sex on live weight of lambs at birth and at 60 days showed that the differences between males and females were statistically significant ($p \leq 0.05 - 0.01$). Differences in ADG and live weight at 15, 30 and 45 days according to dam age were significant ($p \leq 0.05 - 0.01$).

The effect of dam weight at lambing on ADG, live weight of lambs at birth, at 45 days of age and until weaning was not confirmed. Regressions of BW, ADG and weight at 15, 30, 45 and 60 days age of lambs on dam weight after lambing were significant ($p \leq 0.001$).

Likewise, live weight of lambs at birth, ADG until weaning and live weight at 15, 30 and 45 days of age were affected by the seasons of lambing ($p \leq 0.01 - 0.001$).

Keywords: Awassi, Charollais, crossing, growth ability, Romanov, sheep, systematic effects