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Reproductive Performance and Growth Ability of Thamary and Tahami Sheep Breeds and their Crossbreds in Yemen

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Abstract

The aim of this study was to evaluate the effect of crossbreeding of Thamary and Tahami purebred sheep and their crossbreds on production and reproduction performance including the effect of litter size, sex, dam age and year of rearing on lamb birth weight, weaning weight, daily weight gain, mortality rate, fertility rate and the rate of twins. In total, 447 two to six-year old multiparous ewes of two breeds were allocated to three groups [Thamary, (Th; n = 100), Tahami, (T; n = 110), F1 Thamary × Tahami (F1ThT; n = 121), F1 Tahami × Thamary (F1TTh; n = 126)]. The study was conducted at the Regional Research Station of the Central Highlands in Yemen, located in the northern part of Yemen at an altitude of 510 m a.s.l. and annual rainfall ranging from 300–2000 mm. The results of this study indicate that the effect of genotype on production performance was highly significant ($P \leq 0.01$). Lamb birth weight, weaning weight of lambs were greater ($p < 0.05$) in the F1ThT and F1TTh group (2.74, 2.59 kg at birth, resp., and 11.43, 12.28 kg at weaning, resp.) as compared to the T group, which amounted to 2.21 kg at birth and 8.66 kg at weaning. In general, the results of this study demonstrated that F1 crossbreeds ThT and F1 crossbreeds TTh had a positive effect lamb weight at birth, at weaning and on daily growth rate as compared to the local sheep Althammeh.

Keywords: Crossing, effect, growth ability, reproductive performance, sheep, Tahami, Thamary