

CROSSBREEDING OF SHEEP UNDER SEMI-ARID CONDITIONS

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SUMMARY

Data were obtained on 3028 lambs born during five successive years from 1961 to 1966 at Ras El-Hekma Desert Research Station in the Western Coastal Egyptian Desert. Breed groups involved in the study were Hungarian Merino, Syrian Awassi, native Barki sheep, and nine of their crosses. The characters studied were birth weight, weaning and yearling weights, pre- and post-weaning average daily gain and yearling greasy fleece weight. The effects of breed group, year of birth, sex, age of dam and type of birth on these characters were investigated.

The results obtained showed that Barki lambs excelled Merino lambs in all the traits related to body growth. Merino lambs, on the other hand, excelled Barkis in fleece weight. Barki lambs also excelled Awassi lambs in all traits except birth and weaning weights.

In all characters except pre-weaning gain, the first cross of Merino and Barki ($\frac{1}{2}M\frac{1}{2}B$) was markedly superior to all the other crosses and pure breeds. The two third-crosses, $\frac{2}{3}M\frac{1}{3}B$ and $\frac{1}{3}M\frac{2}{3}B$, were similar to each other in their productive traits and were slightly inferior to the first cross. The two back-crosses, $\frac{1}{4}M\frac{3}{4}B$ and $\frac{3}{4}M\frac{1}{4}B$, were markedly different from each other, the former being better than the latter. The three-eighths Merino group is suggested for developing a new strain of sheep for the semi-arid regions.

The effects of the environmental factors on the six characters studied were all highly significant except for the effect of sex on fleece weight and the effects of age of dam and type of birth on growth from weaning to yearling ages. The most important factor affecting the different traits was year of birth. Type of birth and age of dam were important sources of variation only for the characters studied till weaning age, but became of little importance thereafter. The effect of sex was pronounced only on yearling weight.

INTRODUCTION

ALONG the semi-arid expanse of land on the Western coastal desert of Egypt, sheep and goat raising constitute the main source of income for the semi-nomadic Bedouin inhabitants. However, the total wool and mutton production of this area is not satisfactory due to the low productivity of the native

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