

# Effect of crossbreeding on some productive traits in rabbits

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A crossbreeding experiment lasted for three consecutive reproduction years 1976/1977 - 1978/79, inclusive was conducted on the rabbit flock raised at Dokki Experimental Station belonging to the Animal Production Research Institute, Agriculture Research Center, Ministry of Agriculture. This experiment was carried out using Bauscat, Giza White, White Giant Flander and Baladi Red rabbits with the aim of studying the effect of crossbreeding in addition to those of breed group and some other factors on the main productive traits involved in rabbit raising. Other objective of this study was to evaluate heterosis, general and specific combining abilities as well as maternal and reciprocal (sex-linkage) effects and their importance for litter traits and body weight of rabbits of the four breeds involved. Data analysed were taken on 3254 rabbits born in 513 litters during the experimental period. Results can be summarized as follows: General Analysis Litter size: Among the four purebred groups used in this study, Giza White (G) rabbits ranked the first for litter size at birth and at weaning; while among the twelve crossbred groups obtained, Bauscat-Baladi Red (BR) crossbred litters were the best performing at both ages. Differences in litter size due to breed group effects were not significant either at birth or at weaning. Crossbreeding was generally associated with the improvement in litter size at birth and at weaning. Differences between reciprocal crosses indicate that maternal and sex-linkage effects on litter size at birth and at weaning were limited and non-significant. Litter size at birth and at weaning differed insignificantly with year of production. Litter size at both ages varied but not considerably with month of kindling, the differences were not significant at birth but significant ( $p < 0.05$ ) at weaning. The largest size was recorded by litters born during January - February month interval. Litter size increased, in general, as parity advanced at birth but did not show any consistent trend at weaning. Differences due to parity effects failed to prove significant at both ages. The advance of age of doe caused the decrease of litter size at birth and its increase at weaning, but with neither considerable nor significant differences at both ages.