# *1. INTRODUCTION*

Variation in productive traits among different rabbit breeds allows to improve their productive efficiency at a commercial scale through crossbreeding.

Crossbreeding has an advantage over the synthesis of breeds in utilizing the breed differences due to the expected segregation along with the recombination (Dickerson, 1969). Crossbreeding among standard and local breeds of rabbits has been widely used in Egypt in order to get genetic and economic potential benefits in terms of improvement in reproductive performance, growth rates and carcass thraits (Afifi, 1971; Tag El-Din, 1979; Khalil, 1980; Sallam and Hafez, 1984; El-Qen, 1988; Oudah, 1990; El-Desoki, 1991). For example, the New Zealand White breed was found to exhibit outstanding maternal abilities in relation to behaviour, fecundity and milk production (Rouvier, 1980; Lukefahr et al. 1983,a,b&c; Ozimba and Lukefahr, 1991). Therefore, crossing of New Zealand White does with bucks of certain local breeds (e.g. Baladi, Baladi Red, Baladi Black and Baladi White) was evident to be associated with the existence of marked heterotic effects on most economic productive traits (Hassan 1988; Oudah, 1990; El-Dosoki, 1991 Youssef, 1992).

Most of crossbreeding studies in Egypt have been carried out under favourable conditions of the Nile Valley. Results of crossbreeding might be changed or modified under other environmental conditions such as those common to the newly reclaimed lands or desert.

The present work was conducted to investigate the effect of crossbreeding between a local rabbit breed (Gabali) which was not used before in crossbreeding programs and an exotic one (New Zealand White)

and some nongenetic factors on doe litter, reproductive and, milk production traits in addition to growth, livability and carcass traits in Maryout Research Station which is located in a newly reclaimed area, 35 km to the south-west of Alexandria near Maryout Lake, Alexandia Governorate. This area is relatively different from the Nile Valley in the pattern of climatic conditions over certain seasons of the year.