

**COMPARATIVE STUDY ON MILK PRODUCTION TRAITS IN TWO BREEDS OF
 RABBITS
 BY**

Attalah, G.E.Y.

Department of Animal Production, Faculty of Agriculture, Al-Azhar University, Nasr City,
 Cairo, Egypt.

ABSTRACT

This study was carried out at the Experimental Rabbit Farm, Department of Animal Production, Faculty of Agriculture, Al-Azhar University, Nasr City, Cairo, Egypt, during two consecutive years of production starting from September 2002. Records of 575 lactation from 300 Californian (CAL) and 275 Baladi Red (BR) rabbits were used to assess the effects of genetic and non-genetic factors affecting milk production.

Milk production traits (g) of each doe were recorded during the period from the first to fourth week of lactation (MP₁, MP₂, MP₃, MP₄), during the whole lactation period (TMY) and milk coefficient (MC) during the whole lactation period was calculated as (total milk yield /litter weight gain from birth to weaning).

Data were analyzed for each breed separately using the mixed model of the Least-Squares and Maximum Likelihood Program (Harvey 1990). Females of CAL rabbits had better values as compared with those of BR ones in all milk production traits studied values were 674.2, 1031.7, 1121.6, 797.2, 3624.2 and 3.3 (g) in CAL and 563.8, 682.2, 786.7, 535.5, 2567.5 and 2.7 (g) in BR rabbits for MP₁, MP₂, MP₃, MP₄, TMY and MC respectively. Milk production was increased gradually from the 1st week up to the 3rd week of lactation, and then declined in the 4th week. However, the coefficients of variation (CV%) for milk production during different weeks of lactation were moderate and varied from 24.9 to 33.3% in CAL rabbits and from 25.8 to 36.3 % in BR ones.

Year of kindling had no significant effect on all milk production traits studied in both breeds except for MP₁ and MC in CAL rabbits which were significant (P<0.05). The first year showed higher milk production than the second year in both breeds.

Season of kindling effects on milk production traits were non-significant in the two breeds except for MP₁ in CAL rabbits (P<0.05) and MP₁, MP₂ and MC in BR rabbits (P<0.05, P<0.05 and P<0.01), respectively. The highest milk production was recorded mostly by does kindling during Autumn and Winter, then followed by those kindling during Spring and Summer seasons in the two breeds of rabbits.

Differences in all milk production traits studied due to parity effect were not-significant in both breeds except for MC in BR rabbits (P<0.05). Milk production traits generally, increased with the advance of parity from the 1st to the 5th parity, then relatively decreased during the 6th parity. Estimated linear regression of milk production traits at certain week of lactation on their litter size at that week was significant (P<0.001) for most traits studied.

Sire of the doe had no significant effect on milk production traits in both breeds of rabbits. Percentages of variance components (V%) for milk production traits were generally low and the highest percent was (2.5%) for MC in BR rabbits.

Heritability estimates for milk production were generally low or moderate and ranged from 0.03 to 0.06 in CAL rabbits and from 0.05 to 0.09 in BR rabbits. Repeatability estimates were low or moderate and ranged from 0.09 to 0.31 in CAL rabbits and low or high and ranged from 0.05 to 0.76 in BR rabbits. Estimates of genetic