1.INTRODUCTION

The introduction of improved new standard exotic breeds (Friesian , Brown Swiss , Holstein , ----------etc) is one of the options for improving dairy cattle production in Egypt . Holstein cattle has been imported to Egypt in large numbers during the last 25 years and maintained in large-scale commercial farms . In these farms , intensive farming and feeding practices in addition to good housing and veterinary care are followed at a high level to provide relatively comfortable conditions for the imported animals to avoid the adverse effect of high climatic temperature , limited feed resources and widespread of the endemic diseases . Also , to enhance the animals adaptability to the new environment and conditions . Since that time and till now several investigators have screened some of the genetic and non-genetic aspects of productive and reproductive pontentialities of that breed under the Egyptian conditions (e.g. Mokhtar et al , 1993 ; Gad , 1995 ; Mokhtar , 1995 ; Ahmed , 1996 ; Salem and Abdel-Raouf , 1999 ; Abdel-Salam , 2000 ; Amin et al , 2000 ; Abdel-Salam et al , 2001 ; Mousa et al , 2002 ; Afifi et al , 2002 a&b ; Safaa Ibrahim , 2002 ; Shitta et al , 2002 ; Abou-bakr , 2003 ; Attalla , 2003 , El-Arian et al , 2003 ; Nigm et al , 2003 ; Zahed et al , 2003 ; Afifi et al , 2004 ; Nadia Fahim , 2004 ; Alhammad , 2005 ; Gad , 2005 ; Salem et al , 2006 ; others) . Research effort spent by those investigators in this respect are deemed to be not sufficient enough to get all information needed to design and plan for appropriate programs for genetic improvement of males and females of that breed under either purebreeding or crossbreeding system . Also , to assess the importance

of the non-genetic effects influencing milk production and reproductive traits and formulate the appropriate correct factors to adjust performance records for those non-genetic effects . And to establish an appropriate managerial strategy for herds of that breed .

The present work is concerned with : (1) testing significance of the sire in addition to the non-genetic factors influencing milk production traits (year of calving , season of calving , age of cow at calving , days open) and calving interval (year of calving , season of calving , age of the cow at calving) once when using data of all lactations and another time when using data of only the first lactation in addition to the non-genetic factors affecting and age at first calving (year of birth , season of birth and the interaction between year and season of birth ; (2) calculating the heritability estimates for milk production traits of the study and calving interval once when using data of all available lactations and another time when using data of only the first lactation . Also , heritability magnitude of age at first calving was calculated ; (3) estimating cow , sire and dam breeding values for milk production traits of the study (305-day milk yield ; length of lactation period ; dry period) and calving interval once when using all available lactations and another time when using data of only the first lactation in addition to cow , sire and dam breeding values of age at first calving .