

## **IS MILK PRODUCTION A SINGLE TRAIT?**

**H. Mansour**

Department of Animal Production, Faculty of Agriculture, Ain Shams University, Shoubra Alkhaima, Egypt.

There have been indications in the dairy literature for many years that the relationships between total lactational milk production over various pairs of lactations of milk cows are not homogenous. Genetic correlations differing significantly from unity are evidence that the traits are not genetically identical. Modeling different covariance structure of repeated measurements were considered. Some genetical and nongenetical assumptions implied by these models were discussed. Model parameters were estimated by maximum likelihood and adaptive random search.

Our primary motivation and examples used came from dairy cows, but it is believed that the methodology employed could be profitably used in other scientific areas.