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*Tanta University
Faculty of Agriculture,
Department of Animal Production*

SV 75

**SELECTION INDEXES OF SOME
ECONOMIC TRAITS ON FRIESIAN
CATTLE IN EGYPT**

BY

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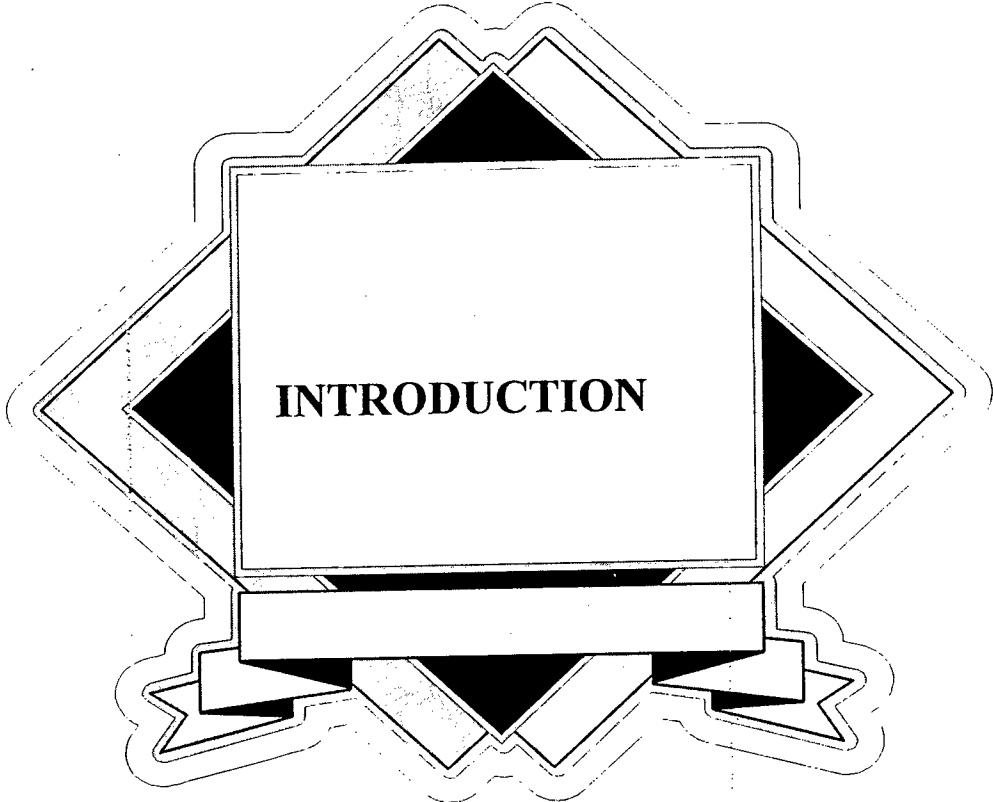
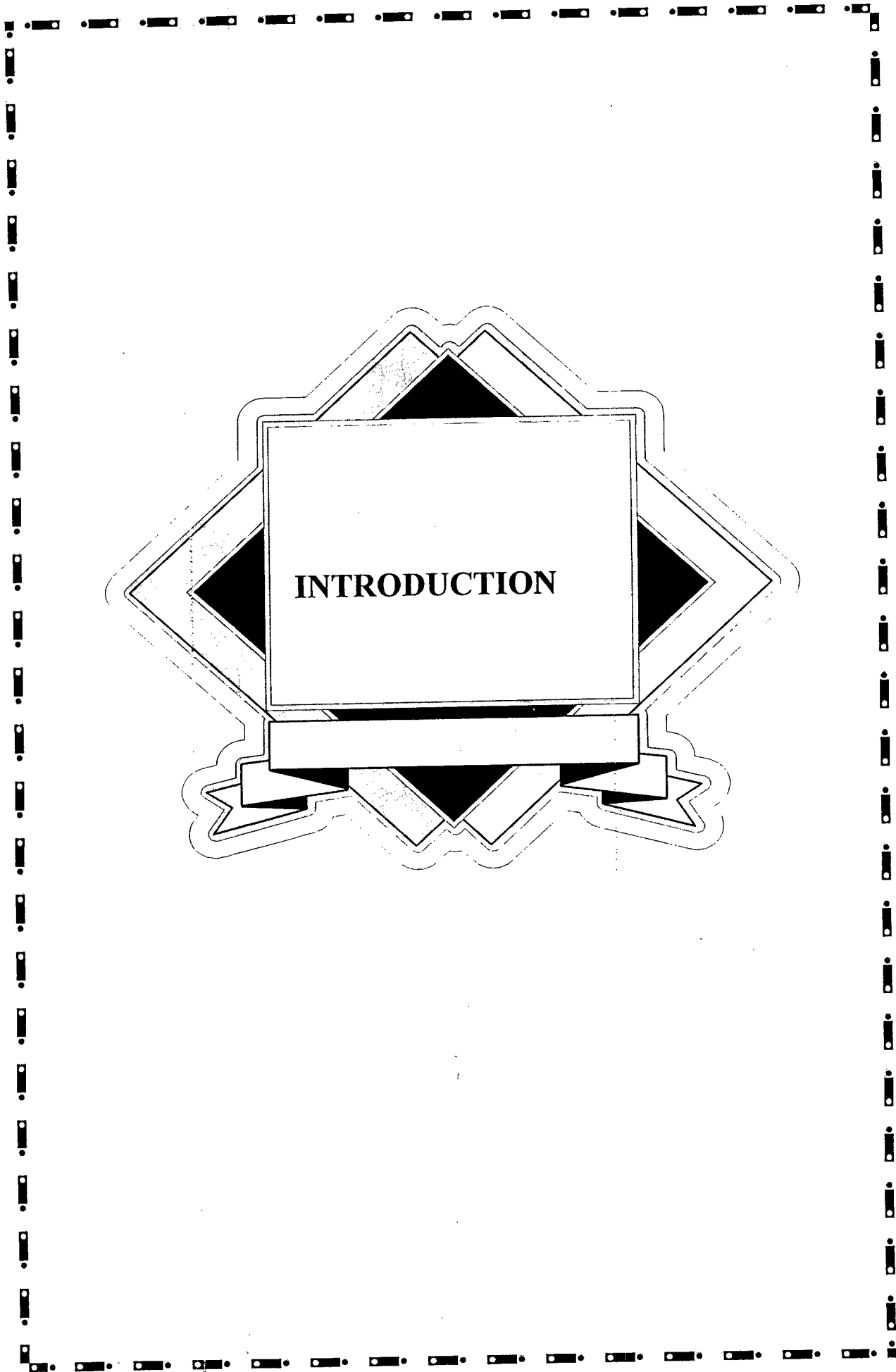
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ARABIC SUMMARY



INTRODUCTION

INTRODUCTION

Genetic improvement of a certain milk trait using selection may affect the other traits, increasing or decreasing due to high genetic correlation between them. In this situation, the most efficient tool for several traits selection. Using the available information is usually to construct a selection index (Hazel, 1943 and Cunningham, 1969).

Selection index is used when the breeder selects for several traits simultaneously by using a total score that ideally should encompass all advantages and disadvantages of an individual. Also, genetic improvement in several traits can be most accomplished if the information about those traits is combined into index of net merit or total score. Hazel and Lush (1943) showed that the selection index was the most efficient method for selection in farm animals. Many different forms of selection indexes have been suggested. The traits to be considered in selection may not be equally important and this requires some kind of weightings. The amount of weight given to each trait depends upon its relative economic value and genetic and phenotypic variance and covariance among these traits.

Several workers (Johair and Bhat, 1978 and Sharma, 1982) constructed selection indexes in different breeds of dairy cattle, based upon cost of milk production and selling price of milk rather than net profit from milk and as a result the estimates were unrealistic.

The purposes of this study were to (1) investigate non genetic factors affecting 60 day milk yield (60 d MY), 305 day milk yield (305 d MY), lactation period (LP), days open (DO) and age at first calving (AFC), (2) estimate phenotypic and genetic parameters for these traits and (3) constructed selection indexes combining four first lactation economic traits