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**STUDIES ON THE BUFFALOES AND COWS
MILK IN THE UPPER PART OF EGYPT**

By -

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INTRODUCTION

Milk is defined to be the lacteal secretion, practically free from colostrum, obtained by the complete milking of one or more healthy cows. In general, milk is the characteristic secretion of the mammary glands of all animals that suckle their young.

Several breeds of cattle are recognized as dairy breeds. They are especially well selected for production of milk. The composition of milk of different breeds varies in the gross composition. However, variations in the composition of milk among animals of the same breed may exceed the differences in the average composition of milk of different breeds.

Milk has a very complex composition, some of its constituents, such as fat, lactose and casein, are not found elsewhere, either in the body or in the nature. All milks contain the same kinds of constituents, but in a varying amounts. Within a given breed, genetic factors and environmental conditions influence the milk yield and its composition. Genetic factors determine the capacity of an

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animal to produce a certain amount of milk with certain composition. Environmental conditions such as climate and stage of lactation considerably affect the actual milk yield and its composition.

However, variations in the environmental temperature have been suggested to consider as a factor partially responsible for seasonal fluctuation occurred in milk yield and its constituents. Also, the milk yield as well as its composition may be influenced by the age of animal (number of lactation).

With this in view, this work was carried out to investigate the influence of some environmental factors, namely stage of lactation, and season of the year as well as the age of the animal (number of lactation) on the amount and the composition of the milk actually produced by the native buffaloes and Jersey cows in Upper Egypt. Beside, the relations that might exist between the milk yield and its composition or among individual constituents in these milks were statistically worked out.

REVIEW OF LITERATURE

1. Effect of stage of lactation on milk yield and its composition:

The milk yield of different dairy cattle was studied by many investigators to reveal the relationship between the stage of lactation and milk yield.

Malossini (1964) reported that the milk yield of buffaloes reached a maximum at the 3rd week, and then decreased throughout the lactation. Similar results were reported by Juna and Alsafar (1970) for buffaloes' milk in Iraq.

Pilla and Malossini (1964) found that the milk yield of Friesian cows linearly decreased throughout the lactation period with weekly decrease of 229 g milk.

Lampo et al. (1966) showed that milk yield of East Flanders Red Fied cows was nearly constant in the first

2 months of lactation and then slowly decreased till the 8th month. Thereafter, the decrease was rapid till the end of lactation.

Khalifa (1966) reported that the milk yield of Sudanese cows increased to a maximum in the 1st month of lactation.

Yusupov and Gadzhiev (1972) stated that the monthly milk yield increased up to the 2nd - 3rd month of lactation and then gradually declined for the buffaloes lactation.

Shehata et al. (1977) found that the average daily milk yield of buffaloes and cows reached the maximum level at the 5th and 1st week of lactation, respectively. It gradually decreased to the minimum values at the end of lactation in both types of cattle.