

INTRODUCTION

General Introduction and Objectives.

In its recent agricultural policy, the National Planning Commission of Trinidad and Tobago has emphasised the need to achieve a greater degree of self-sufficiency in total food consumption (Draft Second Five-Year Plan, 1964-68). This policy is a challenge to the present and potential milk producers of Trinidad and Tobago to increase production economically in order to offset dairy imports and to meet the increasing demand for liquid fresh milk.

There are three main types of dairy farmer in Trinidad : the peasant, the large scale, and the specialised producer. The majority of the milk producers are peasant farmers, who having satisfied their own requirements, sell what little surplus they produce to the liquid market. Similarly, there are a number of large scale producers, private or government-owned dairies which again only supply the liquid market with surplus milk, if any. The specialised dairy farmers (usually operating on a medium or small scale) though a minority at the present, are potentially the most important milk producers. It is from this group, the writer believes, the future growth of the Trinidad dairy industry will generate. The merits of specialisation need not be stressed here.

If given the incentive by the appropriate authorities many of the peasant producers will evolve into specialised dairy producers, and with specialisation the eventual change from hand to machine milking will be inevitable.

Present facts and data concerning machine milking techniques, performances, and milking installation designs have been derived essentially from studies in temperate regions, under temperate conditions and on temperate breeds (Bos taurus) dairy cows.

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With the above views in mind, the main objectives of this study (using milking rate and associated measures as indicators) are to find out :-

- (a) whether Holstein-Zebu (Bos taurus x Bos indicus) dairy cows in Trinidad differ in their milking characteristics from temperate breeds (Bos taurus) of dairy cows, and if so;
- (b) whether recommendations for machine milking performance, as suggested by Clough & Dodd (1959) are applicable to local conditions; and if not
- (c) whether performance standards can be calculated to suit local conditions from the data collected in this study.

In the following review of literature factors affecting the machine milking rate of a cow and the use of certain measures associated with machine milking rate in assessing the performance of a milking installation are discussed.