

PART I - INTRODUCTION

This report gives an account of the sample survey of sugar cane farmers supplying cane to the Orange Grove Factory in North Trinidad, which was undertaken during the session 1960-61 at the Imperial College of Tropical Agriculture. The planning and organisation of the survey and the analysis of results was the responsibility of a team consisting of Messrs. R.W. Bell, E.C. Bush, I. McMartin and C.J.H. Rogers. Other post-graduate students at the College assisted with the collection of data from the field.

The two-fold aim of the project was:-

1. To provide practice and experience for the team and other post-graduate students in
 - (i) the organisation and planning of sample surveys
 - (ii) interviewing farmers and recording accurate information
 - (iii) making eye observations in the field - e.g. yield of cane/acre and degree of froghopper damage.
2. To obtain information of the size, scope and productivity of peasant cane farming in the Orange Grove area in relation to the agronomic factors affecting productivity.

The importance of survey technique has long been realised as a method for obtaining reliable statistics on agriculture and other industries. Surveys are of particular importance in underdeveloped countries where their results are used as a basis for development programmes. The collection of data is an expensive, time-consuming process - further complicated in underdeveloped countries by high illiteracy rates and inadequate postal systems necessitating personal communication with farmers. Scattered habitation and inadequate

communications preclude the use of interviewers (enumerators) due to high costs, so that unless some form of sampling technique is utilised, surveys in underdeveloped countries become prohibitively expensive.

During the Second World War the necessity for rapid collection of accurate information from all sources of production gave rise to much improved sample survey methods. With the advent of reliable methods for the selection of samples from a population and the estimation of sampling errors, it became possible to reduce errors to a minimum and to define, within fine limits, the accuracy of any sample survey. Basically the principle of sampling involves the selection of a representative fraction of the population (the population being any aggregate of material). Careful selection of samples results in accurate representation of the population. The probable extent by which the estimates of the population value (derived from sample data) differ from the true population value, can be calculated without a knowledge of the true population value: this calculation indicates the accuracy of the sample survey.

The importance attached to sample survey projects at the College is illustrated by the large number of surveys which have been conducted there. The fact that all post-graduate students are expected to take part in some aspect of these surveys indicates the importance of gaining experience in such work before proceeding to the underdeveloped colonies and other countries. Thus this report follows a pattern similar to many which have gone before, e.g.

(i) Sample Survey of Bananas by Denness (1959), (ii) Sample Survey of Citrus by Alexander (1958).