FAO STATISTICAL DEVELOPMENT SERIES 7

Multiple frame agricultural surveys

Volume 1

Current surveys based on area and list sampling methods

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FOREWORD

Article 1 of the FAO Constitution states 'The Organization shall collect, analyse, interpret and disseminate information relating to nutrition, food and agriculture'. Much of the required information assembled by FAO for the agricultural sector, such as crop production, livestock inventories, and basic social and economic data is obtained from National Agricultural Statistical Systems. Data is collected through periodic, national multi-purpose, agriculture data collection programmes called 'Current Agricultural Surveys'.

The Statistics Division of FAO is charged with cooperating with member countries to improve consistency and quality of data and help develop and improve agriculture statistics. This publication "Multiple Frame Agricultural Surveys", Volume 1, has been developed to provide countries with a manual on new technology and survey methods to improve the national agricultural data collection programmes.

This project began with the Statistical Development Service conducting an International Expert Consultation on Multiple Frame Agricultural Surveys using a draft document prepared by Consultant, Mr. Montie Wallace, as a focus for discussion. In attendance were experts from ten countries and several international organizations. In addition, experts in several countries were contracted to prepare case studies on multiple frame surveys which will be published in Volume II.

FAO wishes to acknowledge the contributions of the staff of the Statistical Development Service and in particular that of Mr. A. González-Villalobos, Senior Officer, Statistical Development Service who coordinated the activities and co-authored with Messrs. Montie Wallace, Fred Vogel, Jim Cotter and Rick Kestle of the U.S. Department of Agriculture, National Agricultural Statistics Service. FAO is grateful to all who have provided input and would hope that member countries find that this manual leads to improvements in the conduct of their Current Agricultural Surveys.

The Director
Statistics Division

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INTRODUCTION

With the global shift towards market economies, the need for timely and reliable agricultural information has become more important than ever before in the decision making process at international and national levels. Much of the required information for the agricultural sector, such as crop production estimates, livestock inventories and basic social and economic data pertaining to the sector, is obtained through *Current Agricultural Surveys,* which are periodic (annual or seasonal), national (or large-scale), multiple-purpose, agricultural data collection programmes. The establishment and development of such survey programmes is, therefore, a fundamental component of the agricultural information system.

From one source or another, annual estimates are available for most types of agricultural commodities in almost every country. Moreover, several estimates may exist for the same commodity. Often these estimates are based on nothing more than an educated, or worse an uneducated, guess. There is usually no way to judge their accuracy because they are not based on any procedure that allows for statistical analysis or evaluation.

The reasons why current agricultural statistics are poor for many countries are many. Lack of political support for data collection, the high cost of agricultural surveys, the shortage of requisite skills and the failure to identify the most appropriate methods are among the most commonly identified. Timely and reliable national statistics of a country's agricultural sector can only be provided by the establishment of an adequate, periodic, national agricultural survey based on probability sampling methods.

The *Current Agricultural Surveys* considered are based on probability sampling and estimation methods, which are the only ones that could provide timely and reliable basic data of a country's agricultural sector.

This manual describes the sample design, organization and implementation procedures of current agricultural surveys based on *Multiple Frame Probability Sampling Methods*.

Procedures are presented in the context of the considerations and steps needed