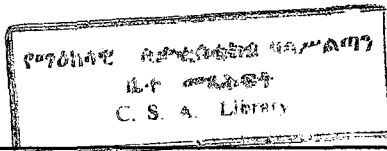


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**THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
CENTRAL STATISTICAL AUTHORITY**



**AGRICULTURAL SAMPLE SURVEY
1999/2000 (1992 E.C.)**

(September 1999 – February 2000)

VOLUME III

REPORT ON

FARM MANAGEMENT PRACTICES

(PRIVATE PEASANT HOLDINGS, MEHER SEASON)

**Addis Ababa
September, 2000**

227

STATISTICAL BULLETIN

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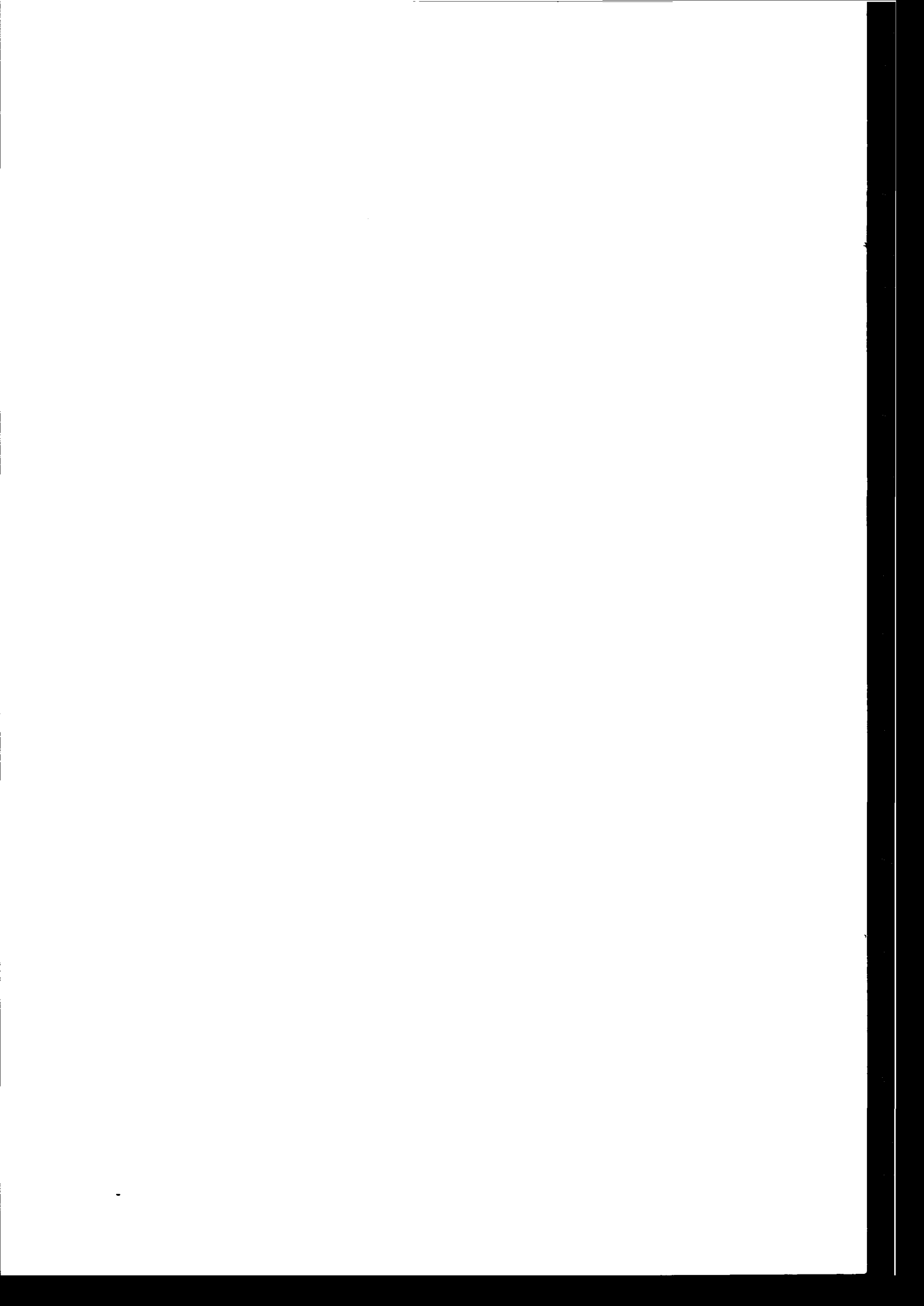
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PART I

INTRODUCTION AND OBJECTIVES OF THE SURVEY

1. Introduction

The issue of food security has continual national importance in Ethiopia. To achieve social and political stability the government has to be able to create and maintain food security by issuing the appropriate agricultural policy. Agricultural statistics is just one element that enters into this policy to formulate, monitor, assess and evaluate the policy. The collection of reliable, comprehensive and timely data on agriculture is thus essential for the above purposes. In this regard the Central Statistical Authority (CSA) has exerted effort to provide policy makers and users with reliable and timely agricultural data.

This report contains survey results on agricultural practices such as use of improved seeds, irrigation, application of pesticides and fertilizers with in the private peasant holding sector of the economy. The report consists of three parts where Part I encompasses the objectives of this annual survey, Part II includes coverage and content of the survey, sample design, field organization, training of field staff, method of data collection and Part III deals with survey estimates of farm inputs applied areas as well as the quantities of inputs applied.

Estimation procedures and formulations for estimates of totals and variances for the agricultural practices and crop areas during the main (Meher) season are presented in Appendix I and estimates of the standard errors with the corresponding coefficients of variations (CVs) for farm inputs applied area and quantity of inputs applied are presented in Appendix II.

2. OBJECTIVES OF THE SURVEY

The general objective of CSA's Agricultural Sample Survey (AgSS) is to collect basic quantitative information on the country's agriculture that is considered essential for development planning, socio-economic policy formulation and other purposes. The AgSS is composed of four components: crop production forecast survey, Meher season survey, livestock survey, and Belg season crop production survey.

In particular, the objectives of the Meher season farm management practices survey are to estimate the total farm inputs applied area and quantity of inputs applied by type for major temporary and permanent crops. This report is based on the private peasant holdings in the sedentary rural areas of the country, further sub-divided by regions and zones.

PART II

SURVEY METHODOLOGY, DATA COLLECTION AND PROCESSING

1. Scope, Coverage and Content of the Survey

The 1999/2000 (1992 E.C.) annual Agricultural Sample Survey used a sampling frame which was designed to cover the sedentary rural agricultural population in all regions of the country (urban and nomadic areas were not included in the survey). A breakdown of the sample distribution as expressed by regions, zones and weredas is shown in table A. A total of 56 zones and 415 weredas were actually covered by the survey.

The area sampling unit used for this survey is defined as an Enumeration Area (EA) as defined for the 1994 Population and Housing Census. for the 1999/2000 AgSS a total of 1450 E.As was selected from all regions of the country. Due to various reasons 5 E.As were not covered in the survey which resulted in the survey actually covering 1445 E.As. From each of the selected E.As a representative sample of forty agricultural households was selected to estimate the various agricultural population items of interest of the sampled E.A.

Of these forty agricultural households, the first twenty-five were used for obtaining information on area under crops, Meher and Belg season

production of major crops, land use, agricultural practices, crop damage, and quantity of agricultural inputs used. It is important to note that of the total forty agricultural households sampled in each of the selected E.As, data on crop cutting were collected for only the fifteen households (11th - 25th households selected) for the area and production survey.

Table A Area Coverage of the 1999/2000 Agricultural Sample Survey

| REGION | NUMBER OF ZONES / SP. WEREDAS | | | NUMBER OF WEREDAS | | |
|--------------------------|-------------------------------|---------|-------------|--------------------|---------|-------------|
| | TOTAL | COVERED | NOT COVERED | TOTAL ³ | COVERED | NOT COVERED |
| TIGRAY ¹ | 5 | 4 | 1 | 33 | 33 | - |
| AFAR ² | 5 | 3 | 2 | 8 | 8 | - |
| AMHARA ¹ | 11 | 10 | 1 | 93 | 92 | 1 |
| OROMIYA | 12 | 12 | - | 171 | 170 | 1 |
| SOMALIE ² | 9 | 3 | 6 | 9 | 9 | - |
| BENISHANGUL GUMUZ | 3 | 3 | - | 18 | 18 | - |
| SNNP | 14 | 14 | - | 73 | 73 | - |
| GAMBELA ² | 4 | 3 | 1 | 5 | 5 | - |
| HARARI | 1 | 1 | - | 1 | 1 | - |
| ADDIS ABABA ¹ | 6 | 2 | 4 | 5 | 5 | - |
| DIRE DAWA | 1 | 1 | - | 1 | 1 | - |
| TOTAL | 71 | 56 | 15 | 417 | 415 | 2 |

Note

1= Zones not covered in these regions are urban.

2 = Zones not covered in these regions are not inhabited by significant number of sedentary population.

3 = Numbers of total weredas signify those weredas in covered zones of the respective regions.

SNNPR = Southern Nations, Nationalities and Peoples Region

2. Concepts and and Definitions

In order to collect standardized data of acceptable quality, the same concepts and definitions must be used by all field enumerators during data collections. Hence some of the more important concepts and definitions used in the survey are given below.

Enumeration Area (E.A) an enumeration area in the rural parts of the country is a locality that is less than or equal to a farmers' association in geographical area and usually consists of 150-200 households.

Household: a household may be either;

a) a one person household, that is a person who makes provisions for his own living without combining with any other person to form part of a mufti-person household or

b) a mufti-person household, that is, a group of two or more persons who live together and make common provisions for food or other essentials of living. The persons in the group may pool their incomes and have a common budget to greater or lesser extent. They may be related or unrelated persons, or a combination of both. These persons are taken as members of the household.

Agricultural Household : a household is considered an agricultural household when at least one member of the household is engaged in growing crops and / or breeding and raising livestock in private or in combination with others.

Holder a holder is a person who exercises management control over the operations of the agricultural holding and makes the major decision regarding the utilization of the available resources. He has primary technical and economic responsibility for the holding. He may operate the holding directly as an owner or as a manager. Under conditions of traditional agricultural holding the holder may be regarded as the person, who with or without the help of others, operates land or raises livestock in his own right, i.e. the person who decides on what, when, where, and how to grow crops or raise livestock, and has the right to determine the utilization of the products.

Holding : a holding is all the land and / or livestock kept which is used wholly or partly for agricultural production and is operated as one legal entity by one person alone, or with others without regard to management, organization, size or location.

Size of Holding : in this report the size of holding is determined by total area under all different crops such as area under temporary crops and permanent crops.

Parcel : a parcel of holding is any piece of land entirely surrounded by land and / or water and / or road and / or forest, etc. which is not part of the holding. It may consist of one or more cadastral units, plots or fields adjacent to each other.

Field : a field is defined as any plot of land which is a parcel or part of a parcel under the same or mixed crops or any other form of private land holding.

Meher (main) Season crop : any crop harvested between Meskerem (September) and Yekatit (February) is considered as a Meher season crop.

Belg season crop : any crop harvested between the months of Megabit (March) and Nehase (August).

Temporary crops : crops which are grown in less than a year's time, sometimes only a few months with an objective to sow or replant again for additional production following the current harvest. Continuously grown crops planted in rotation are also considered temporary crops since each is harvested and destroyed by ploughing in preparation for each successive crop.

Permanent crops : are crops which are grown and occupy land for a long period of time, not requiring replanting for several years after each harvest. All fruit trees (i.e. oranges, mandarin, banana, etc) and trees for beverages

(i.e coffee, tea, etc) are considered permanent crops, but meadows and pastures are excluded.

3. SAMPLE DESIGN

The 1999/2000 (1992 E.C.) Meher season Agricultural Sample Survey covered the rural part of the country except two zones in Afar Region, one zone in Gambella Region and six zones in Somalie Region that are predominantly nomadic. A two-stage stratified sample design was used to select the sample. Each zone/special wereda was adopted as stratum for which major findings of the survey are reported except the four regions; namely, Gambela, Harari, Addis Ababa and Dire Dawa which were considered as strata/reporting levels. The primary sampling units (PSUs) were enumeration areas (EAs) and agricultural households were the secondary sampling units.

The survey questionnaires were administered to all agricultural holders within the sample households. A fixed number of sample EAs was determined for each stratum/reporting level based on precision of major estimates and cost considerations. Within each stratum EAs were selected using probability proportional to size; size being total number of households in the EAs as obtained from the 1994 Population and Housing Census. From each sample EA, 40 agricultural households were systematically selected for the annual agricultural sample survey from a fresh list of households prepared at the beginning of the field work of the annual agricultural

survey. Of the forty agricultural households, the first twenty five were used for obtaining information on area under crops, Meher and Belg season production of crops, land use, agricultural practices, crop damage, and quantity of agricultural inputs used. It is important to note that of the total forty agricultural households sampled in each of the selected EAs, data on crop cutting were collected for only the fifteen households (11th-25th households selected).

A total of 1,450 EAs (2.9 % of the total EAs in the rural areas of the country) was selected for the survey. However 5 EAs were closed for various reasons beyond the control of the Authority and the survey succeeded in covering 1445 (99.7 %) EAs. With respect to ultimate sampling units, for the Meher season agricultural sample survey, it was planned to cover 36,250 agricultural households. The response rate was found to be 98.5 % . Estimation procedures of parameters of interest (total and ratio) and their sampling error is presented in Appendix I.

4. FIELD ORGANIZATION

All the 22 Branch Statistical Offices of the CSA participated in the survey undertaking, especially in organizing the second stage training, in deploying the field staff to their respective sites of assignment, in supervising the data collection, and retrieving completed questionnaires and submitting them to the head office for data processing. They were also responsible in administering the financial and logistic aspect of the survey within the