

*THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
CENTRAL STATISTICAL AUTHORITY*

**AGRICULTURAL SAMPLE SURVEY
1995/96 (1988 E.C.)**

VOLUME IV

**REPORT ON
CROP LAND UTILISATION**

(PRIVATE PEASANT HOLDINGS, MEHER SEASON)

*ADDIS ABABA
SEPTEMBER, 1996*

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ABBREVIATIONS

AVG	-	AVERAGE
CSA	-	CENTRAL STATISTICAL AUTHORITY
CV	-	COEFFICIENT OF VARIATION
EC	-	ETHIOPIAN CALENDAR
EA	-	ENUMERATION AREA
HA	-	HECTARE
HH	-	HOUSEHOLD
NS	-	NOT STATED
PCs	-	PERSONAL COMPUTERS
PSUs	-	PRIMARY SAMPLING UNIT
SE	-	STANDARD ERROR
SNNPR-		SOUTHERN NATION, NATIONALITIES & PEOPLES' REGION

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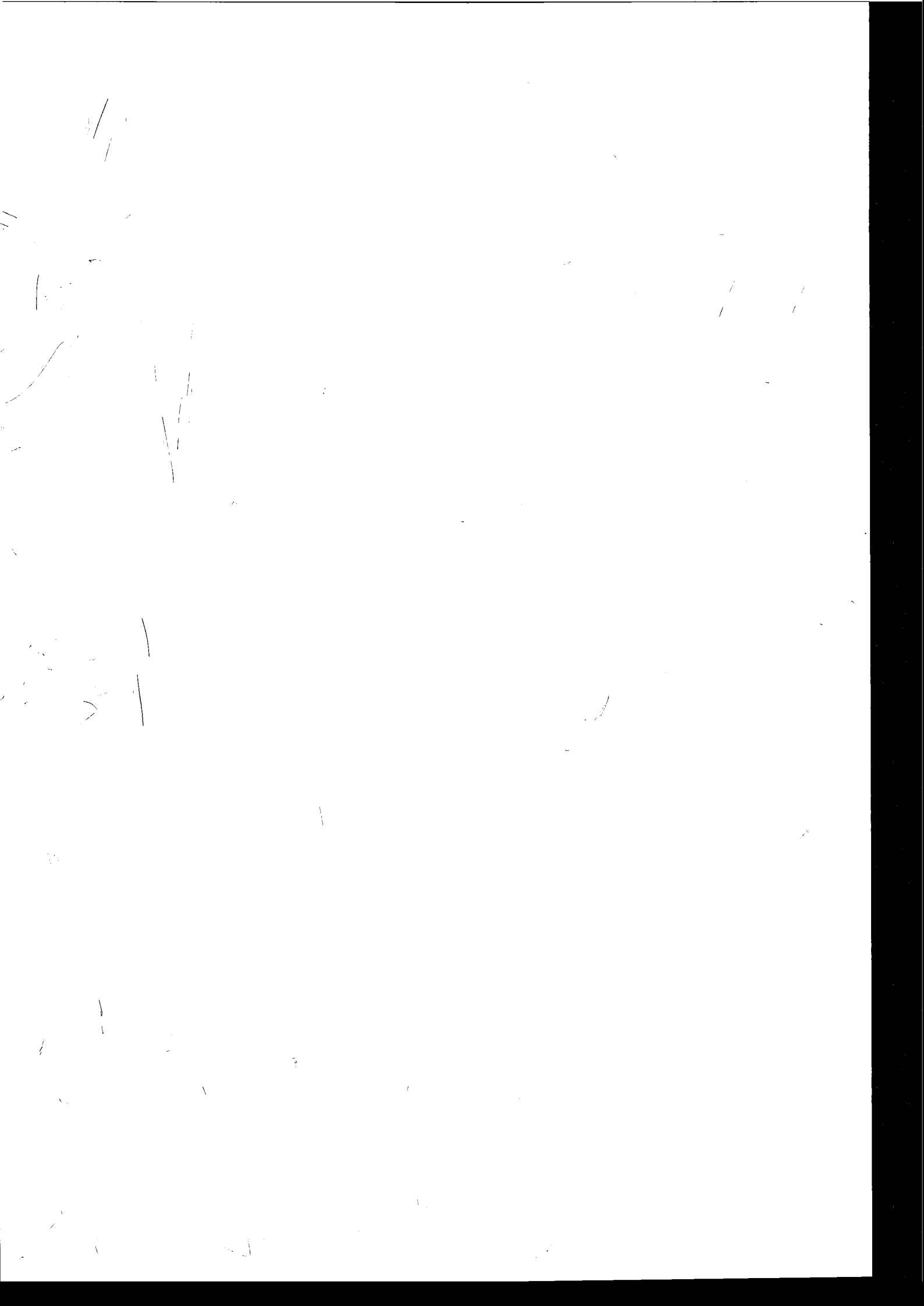
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REPORT ON CROP LAND UTILISATION

1. INTRODUCTION

Ethiopia's economy is predominantly agrarian and the majority of the population in the country is engaged in agriculture. In this respect, the collection of reliable, comprehensive and timely statistical information on agriculture is very essential. The information is expected to be used for the formulation of agricultural policy.

The Central Statistical Authority (CSA) has been conducting Agricultural Sample Surveys on annual basis since 1980/81 (1973 E.C.) to produce some of the statistical data that can be used in planning and policy making activities. The survey was interrupted in 1992/93(1985 E.C.) and 1993/94(1986 E.C.) because during these two years the CSA was fully engaged in undertaking the preparatory activities for the 1994 Population and Housing Census. However, after undertaking the 1994 Population and Housing Census, the annual agricultural survey was resumed in 1994/95 (1987 E.C.) and also conducted for the year 1995/96 (1988 E.C.).

This volume presents the objectives of the survey; coverage and content of the survey; concepts and definitions; sample design; field organization; training of field staff; method of data collection and survey results on all land uses, number of agricultural households, number of holders, number of household members, average household size and land by size of holding, number of holders by type of holding, age and sex. In addition the reader is referred to *Volume I* of the same survey which is " **Report on Area and Production of Major Crops; Private Holdings, Main Season, Addis Ababa, June 1996.**" That volume presents in its appendices survey questionnaires; number of sampled EAs, number of EAs that are actually

covered and not covered in the survey; number of households planned to be covered and those actually covered in the survey for the purpose of **crop land** use, area and production of major crops and number of fields measured. Moreover, estimation procedures, standard errors and coefficient of variations for all estimates on crop land use, number of households by size of holding and household members by type of holding, age and sex are presented in this report.

2. OBJECTIVES OF THE SURVEY

The general objective of the agricultural sample survey was to collect basic quantitative information on the nation's agriculture that are considered essential for development planning and socio-economic policy formulation.

In particular, the objectives of the survey were to estimate the total cultivated land; total production and yield of major crops per hectare; crop land uses (temporary and permanent); quantity and cost of agricultural inputs by type; number of livestock and poultry by type, purpose, sex and age; number of beehives and honey production in the private peasant holdings for the nation, regions and group of zones.

3. COVERAGE AND CONTENT

The 1995/96 (1988 E.C) annual agricultural sample survey was designed to cover sedentary rural agricultural population in all regions of the country. Urban and nomadic areas were, however, not included in the survey. Accordingly, a total of 54 zones and 367 weredas were covered by the survey. The areal coverage of the survey in each region is given on *Page 3 of Volume I or Volume III of the same survey.*

Moreover, for the survey 620 enumeration areas were selected to be covered in all regions. Nevertheless, during the data collection stage the survey succeeded to cover only 612 enumeration areas (EAs). For details see *Appendix II of Volume I*. Furthermore, from each of the selected EAs a sample of 25 agricultural households were taken.

From these households, information on area under crops, production of major crops (temporary or annual), crop land utilisation, agricultural practices, crop damage, quantity and cost of agricultural inputs used, number of livestock and poultry by type, purpose, age and sex and number of beehives by type were collected. In addition, it was attempted for the second time to collect information on the total number of permanent crop trees and number of yielding trees during the survey year. For details refer to survey questionnaires in *Appendix I of Volume I*.

As mentioned in the introduction, this report, which is one of the series of other volumes of the 1995/96 Annual Agricultural Sample Survey, presents the survey results on crop land uses, number of households, holders and household members by size of holding, number of holders by age and sex.

4. BASIC CONCEPTS AND DEFINITIONS

In order to standardize the data, the same concepts and definitions should be applied during data collection. Hence, some of the concepts and definitions used in the survey are given below.

Enumeration Area (EA): An Enumeration Area in rural parts of the country is a locality that is less than or equal to a farmer's association area and usually consists of 150 - 200 households.

Holder: A holder is a person who exercises management control over the operations of the agricultural holding and takes the major decision regarding the utilization of the available resources. He has 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 utilisation of the products.

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

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

Household: A household may be either;

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

b) a multi-person household, that is, a group of two or more persons who live together and make common provision for food or other essentials for 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.

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 partnership with others.

Temporary Crops: Temporary crops are those crops which are grown with a cycle of under one year, sometimes only a few months with a view to be sown or planted anew for further production after the harvest. Similarly, crops grown in rotation are also considered temporary crops as these are destroyed when land is ploughed.

Permanent Crops: Crops which occupy land for a long period of time and are not planted for several years after each harvest are considered as permanent crops. All fruit trees (e.g. oranges, mandarins, apples, ...etc.) and trees used for beverages (like coffee, tea, ... etc.) are considered as permanent crops. Permanent meadows and pastures, however, are excluded.

5. SAMPLE DESIGN

A two stage stratified sample design was used for the 1995/96 (1988 E.C.) agricultural sample survey. In three regions, namely in Amhara, Oromiya and Southern Nations, Nationalities and Peoples' Region, group of contiguous zones were treated as strata/reporting

levels of the survey results. In the remaining regions, the reporting levels were the regions themselves. The primary sampling units in all strata were Enumeration Areas (EAs). Agricultural households were the ultimate sampling units. The survey questionnaires were administered to all agricultural holders in the sampled agricultural households.

A fixed number of sample EAs was determined for each stratum/ reporting level based on precision of estimates, population size of the stratum and cost considerations. The overall sample number of EAs in a stratum was proportionately allocated to zones/special weredas within the stratum to their population size. From within each zone/special wereda sample EAs were selected with probability proportional to size, size being the total number of households of EAs as obtained from the 1994 census map work. From each sample EA, 25 agricultural households were picked systematically without replacement from a fresh list of agricultural households and the required information was collected from these selected agricultural households.

A total of 620 EAs (1.1 % of the total agricultural EAs) in the country were planned to be covered by the survey. But 8 of the sampled EAs were closed due to various reasons and the survey covered 612 EAs effectively.

Estimation procedures of totals and ratios of estimates and their measure of precision are given in *Appendix I and II*.

6. FIELD ORGANIZATION.

CSA branch statistical office heads, field supervisors and enumerators were fully involved in the survey. Hence, 15 statistical branch office heads, about 140 field supervisors, each supervising 5 enumerators in most cases and about 651 enumerators stationed in each of the selected EAs, experts from head office, other support staff and about 62 drivers were involved in the operation.

For all enumerators the necessary survey equipment, such as compasses, protractors, rulers, measuring tapes, balance scales, poles, ropes, sample bags,...etc. were made available and to facilitate the field work about 62 vehicles were put on operation.

7. TRAINING OF FIELD STAFF.

At the outset all relevant materials, like equipment were procured, questionnaires and instruction manuals were prepared and printed. Then the training program for the field staff was carried out in two stages. In the first stage, about 90 trainees, i.e. experts from the head office, branch statistical office heads and some of the field supervisors were given training for one week at the head office. Those trained in the first stage conducted similar training for about 140 field supervisors and about 651 enumerators for 10 days in all the 15 branch offices all over the country. During the training, the field staff were given detailed class room instruction on the purpose of the survey, concept and definitions of terms used, method of area measurement, method of crop cutting, interviewing procedures,... etc. The training sessions included thorough field practices with regard to data collection.