Federal Democratic Republic Of Ethiopia

CENTRAL AGRICULTURAL CENSUS COMMISSION

ETHIOPIAN AGRICULTURAL SAMPLE ENUMERATION, 2001/02(1994 E.C.)

Results for Addis Ababa City Administration

STATISTICAL REPORT ON SOCIO-ECONOMIC CHARACTERISTICS OF THE POPULATION IN AGRICULTURAL HOUSEHOLDS, LAND USE, AREA AND PRODUCTION OF CROPS, FARM MANAGEMENT PRACTICES, LIVESTOCK AND FARM IMPLEMENTS

Addis Ababa
July ,2003

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Addis Ababa
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FOREWORD

An agricultural census, which would serve as a source of a benchmark data for sector has not been conducted in Ethiopia. However, in order to provide basic agricultural information to data users, annual agricultural sample surveys have been carried-out since 1980/81 by the Central Statistical Authority (CSA). Although, these annual sample surveys have some limitations in terms of scope, coverage and level of disaggregation, these surveys have served as a means of narrowing the data gap in the sector.

Considering the importance of the agricultural sector and the need for a comprehensive data, the CSA has requested the concerned government authority to initiate the undertaking of a National Agricultural Census several times. That is, it has submitted a project proposal immediately after the launching of the 1984 National Population and Housing Census. Moreover, it has also attempted to materialize this census in late 1980's and in early 1990's i.e. immediately after the undertaking of the 1994 National Population and Housing Census. The attempt continued till CSA got a positive response from the government in 1998. Hence, the CSA has been carrying out the Agricultural Census preparatory activities from September 1999, to August 2001.

Thus, in order to overcome the above-mentioned limitations on the data generated from the Annual Agricultural Sample Surveys and provide a benchmark data on the agriculture sector, the CSA launched the fieldwork of the first ever Ethiopian Agricultural Sample Enumeration in September 2001. Prior to launching the sample enumeration a number of preparatory activities such as the preparation of the census documents, undertaking the pretests and the pilot censuses,...etc were also carried-out.

The 2001/02 Ethiopian Agricultural Sample Enumeration was launched under the auspices of the Ethiopian Agricultural Census Commission that was set up under Proclamation No. 238/2001. The Commission is chaired by the Prime Minister and the members of the Commission are drawn from various relevant Federal Ministries and other government organizations. The Central Statistical Authority serves as the Secretariat

Office of the Commission. Hence the collection, processing, evaluation and analysis of the census data as well as its dissemination are the responsibilities of this office.

The 2001/02 Ethiopian Agricultural Sample Enumeration is a huge nation wide operation, which could not be undertaken by a single organization. Hence, in order to enhance and facilitate the census enumeration activities Regional, Zonal, and Wereda Census Commissions have been established and Census Committies were set-up at Kebele levels. In the conduct of this census, full cooperation and assistance of governmental and non-governmental organizations, external donor agencies and the public in general have been obtained.

It is worth mentioning that the 2001/02 Crop Production Forecast Report, which is the first phase of the Agricultural Census was prepared, printed and disseminated to agricultural data users in December, 2001.

On the other hand, the census data on area under crop, production and yield of temporary crops consisted of cereals, pulses, oil seeds, vegetables and root crops for Meher Season was processed, compiled, evaluated and a report has been prepared and printed. This report entitled as a "Report on the Preliminary Results of Area, Production and Yield of Temporary Crops" (Meher Season, Private Peasant Holdings) is the Second Census Report so far published printed and disseminated to agricultural data users in October, 2002. It should be noted that during the census, huge sets of data on agriculture and related topics were collected. Given the limited resources (skilled manpower, computers...) available at the head quarters, data processing and summarization of results require quite longer period, than originally expected.

Since the release of the above mentioned Census Preliminary Report, the CSA, have put all the necessary efforts and made all the available resources, (skilled manpower computers,...) at the disposal of the census data processing activities. Consequently, the Authority has reached a stage where the agricultural census data processing activities have advanced to a stage where the data can be evaluated, reports can be prepared and released at regional levels and eventually at national level.

Thus, the Agricultural Census Report on Addis Ababa City Administration is the tenth series of this census report. This regional report is a comprehensive one and it consists all the agricultural data collected during the 2001/02 Ethiopian Agricultural Sample Enumeration. These data include: the socio-economic characteristics of the population in agricultural households; land use; area, production and yield of temporary and permanent crops; farm management practices; livestock, poultry and beehives; and farm implements, draught animals and storage facilities. Similar comprehensive reports for the other regions will follow and would be released consecutively.

The Office of the Ethiopian Agricultural Census Commission would like to thank all government and non-government agencies who participated in the organization of the census, the supervision of the field work, the data collection, and the respondents who participated in providing the necessary census data. The Ethiopian government has given huge financial and unreserved administrative support in undertaking the 2001/02 Ethiopian Agricultural Sample Enumeration. This indicates the continuous commitment and high priority offered by the Ethiopian Government for the development of the agricultural sector statistics as well as the other socio-economic and demographic statistics.

Finally, the Office would also like to take this opportunity to express its many thanks to the United States Agency for International Development (USAID) for its generous financial and technical assistance for the census. Moreover, thanks are due to the European Union (EU) for its financial assistance and the British Department for International Development (DFID) for its material assistance for the census.

Abdulahi Hassen (Ph.D.)

Member and Secretary,

Central Agricultural Census Commission

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CHAPTER I

BACKGROUND

1. INTRODUCTION

A nation has to feed its people adequately to have healthy and wealthy citizens for the promotion of its development and growth. A government concerned with the well being of its people and aiming at the rectification of the national economy makes agriculture its top priority for the achievement of the above goals. Policy making and decision taking are essential in this regard. But there are recognized constraints such as the availability of adequate and comprehensive statistical data on agriculture that guides policies and decisions for attaining development targets in the agricultural sector.

In recognition of these constraints, and in an effort to provide accurate, reliable and timely data on the nation's agriculture that policies and decisions entail, the Central Statistical Authority (CSA) has been conducting annual agricultural sample surveys since 1980/81 (1973 E.C.). As a result, data on area, production and yield of major crops, farm management practices, land use, livestock, poultry and beehives have been produced at country, regional and zonal levels for both Meher and Belg seasons on a yearly basis.

Despite this effort, the economic policy has recently focused on agricultural sector and data users became more sophisticated demanding for various data in greater detail on timely basis, with improved accuracy and reliability and highly disaggregated to levels where project planning and implementation take place. Hence, the existing data that has resulted from the regular annual agricultural sample survey could not meet these demands. Accordingly, these needs led the CSA to reappraise the agricultural data it has produced so far and realized the gap between the demand for agricultural data and the data supplied is widening. Thus, as an organization situated between the data and its users, the CSA was prompted by the gravity of the demand for more detailed data to embark upon a census of agriculture in the year 2001/02 and narrow the existing data gap.

Development and monitoring of the agricultural sector require data on a wide range of indicators. A census of agriculture is the leading source of such data. It provides an image of a nation's farming and agricultural activity at a particular point in time (an agricultural production year) for the data disaggregated at the lowest level of reporting.

In Ethiopia, prospects and policies regarding agriculture have evolved significantly over recent years. Economic problems have been the major factor in development and implementation of these policies and programs. The agricultural policies and programs are targeted at ensuring that food crops will be made available to those who need it and don't obtain enough of it or guaranteeing everyone access to safe and nutritious food. To put it in a nutshell: it is to create and maintain food security. The realization of this goal requires the implementation of the policies and programs at wereda level and make available agricultural statistics at corresponding administrative level. It is against this background that the census was conducted to monitor the trends and the changing patterns in agricultural production with the acquisition of agricultural statistics at wereda, zonal, regional and country levels.

2. OBJECTIVES OF THE CENSUS

There are fundamental problems prevailing in the agricultural sector that are especially affecting the rural population and often perceived as the maladies of the Ethiopian economy. In order to solve these problems gradually but steadily, the Ethiopian government has been developing various agricultural programs and schemes. To effect these programs and meet other objectives, the census is the appropriate method of data collection for providing much needed and more detailed statistical information on agriculture.

2.1 The general objectives are to: -

- Provide benchmark data on the structure of agriculture for planning, policy making and other uses during intercensal years,
- Provide detailed data at lower administrative level,

- Use the census as a vehicle for developing the national agricultural statistics system,
- Secure data for items whose production is limited (rare crops),
- Secure benchmark data for improving the annual agricultural sample survey in the future,
- Make use of the census experience and trained personnel for capacity building and strengthening the Ethiopian Statistical Authority in the field of agricultural statistics, and
- Develop data bank with facility for updating consistency checks and retrieval of data in various forms tailored to the needs of the users.

2.2 The specific objectives are to provide: -

- Basic information on the country's agriculture to the government for formulating and implementing timely food security measures and to alert policy makers about the food situation in the country,
- Information to the government to develop and monitor farm programs, study historical trends, appraise current conditions and plan for the future,
- Information for the government to design and allocate funding for extension service projects, and
- Data for the private sector in order to execute the effective production and distribution system in the agricultural sector.

This report presents the Agricultural Sample Enumeration results for Addis Ababa City Administration. It comprises of eight chapters: Chapter I presents the Background and the Objectives of the Census, Chapter II discusses the Census Methodology and Operations which is composed of Scope and Coverage of the Census, Sampling Frame, Sample Design, Sample Selection, Organization of Field Work, Training of Field Staff, Method of Enumeration, Concepts and Definitions and Data Processing. Chapter III deals with Socio-Economic Characteristics of the Population in Agricultural Households. Chapter IV covers Land Utilization and Chapter V deals with Area and Production of Crops and Crop Utilization .

Moreover, Chapter VI treats Farm Management Practices. Further, in Chapter VII of this report, Size, Characteristics and Purpose of Livestock and Livestock Products are discussed. Finally, in Chapter VIII the census results are presented on Farm Implements, Draught Animals and Storage Facilities.

Also, the report encompasses Appendix I that shows the Estimation Procedures of Totals, Ratios and Sampling Errors and Appendix II shows the Agricultural Sample Enumeration Questionnaires. Moreover, tables that show the Standard Errors (S.E.) and Coefficients of Variation (C.V.) are given as an annex at the end of the relevant chapters.

CHAPTER II

CENSUS METHODOLOGY AND OPERATIONS

1. INTRODUCTION

As explained in the introductory chapter of this publication, the census of Agriculture is a large-scale, periodic statistical operation for the collection of quantitative information on the structure of agriculture. Such a huge operation demands sequence of standard activities. In order to collect, process and produce reliable and internationally comparable data, the different technical procedures and operations that have to be applied during the census should follow what has been globally recommended.

Hence, this chapter highlights what has been exercised before and during the census operations in areas of subject and area coverage, census methodology, (such as sampling frame, sample design, listing and selection of primary sampling units and households), and census operations that included organization of field work, training, method of enumeration, quality control and data processing.

The scope of the agricultural census concerns the type and dimension of data to be collected. When the CSA has launched the planning of the census, it solicited the demand of data from various government and non-government organizations which are the major users of the resulting census data. The response was just overwhelming and put the CSA in an awkward position to decide on the scope. The decision on the range and extent of data items to be dealt with by the census is really hard to make given the size of the country's population engaged in agriculture, the limited human and financial resources, and the magnitude of the census work. The CSA had to strike a balance between the scope on the one hand and the available resources and time on the other hand so that there was a trade-off between the two.

Since the census of agriculture is not a frequent data collection activity, it is best suited for collecting more data on various characteristics relating to area and production of crops. It

lends the opportunity of capturing as much data as possible, especially when it is conducted for the first time. But agricultural census is not a practical means of providing all data. Not all agricultural statistics can be collected through a census of agriculture. Hence, there was caution against overloading the agricultural census forms with extensive scope. Thus, with regard to the scope, the census had to be restricted to a coherent and manageable range of data items.

In this census the data collected include: demographic and economic characteristics of population in agricultural households and holders during the reference period; area, production and yield of both temporary and permanent crops harvested in the farming of Meher as well as Belg Seasons; farm management practices envisaged during both seasons; land use under major categories; and livestock, poultry and beehives. It also includes data on farm tools, implements, draught animals and storage facilities. The data collection on the production of vegetables and root crops, which was not covered by the annual agricultural sample survey, was also included in this census.

The cost of data collection is one of the most important factors in the planning and execution of a census. In a country like Ethiopia where in addition to the problems mentioned above, transportation and communications are poor and the resources available are limited to meet the cost of a census tend to be major problems. The problem is more pronounced when deciding on the extent of census coverage.

A decision whether to carry out a complete enumeration or to plan a sample enumeration of holdings depends on the availability of resources and the level at which the census results are required. This holds true whether the results will be provided at wereda level or higher administrative hierarchies. With these constraints and extremely large number of holdings in the country's agricultural system and considering the huge cost required and timely production of the data, with the aim of providing the results at wereda level where almost all the agriculture is undertaken by small holders, a census of agriculture on the basis of sample enumeration was adopted by the CSA. In a census that aims in securing data on more agricultural items with reasonable accuracy at wereda level, a well-defined sample

enumeration is more manageable, efficient and is expected to produce equal or better quality data than a complete enumeration and is able to provide results in a more timely fashion.

Addis Ababa is a City Administration with an estimated population of 2.725 million in July 2003 and an area of 530.14 sq. kms. In the sub-urban areas of Addis Ababa City Administration agriculture is the dominant sector and biggest employer of the economically active population. The sector in the City Administration is further characterized by traditional farming and low level of literacy among the holders.

The Addis Ababa City Administration Agricultural Sample Enumeration has covered adequately representative and sufficiently large number of units (holdings) engaged in agriculture both in rural and urban areas to produce relatively reliable data at the city adminitrative level. For the purpose of this census, three farming categories have been identified: rural private holdings, urban private holdings and commercial farms. All the categories have been treated in the census on sample bases except the last one that was enumerated completely. These farming categories were enumerated at different times of the census year in order to capture the data as the events happened. The census data collection operation took about six months for Meher seasons and 2 months for Belg season to cover the rural private holdings, about 10 days to cover the urban private holdings and about one month to cover the commercial farms.

In order to improve the coverage, there has been extensive census publicity in the census operation exercise. This helped to sensitize and gain the cooperation of the respondents during data collection. In these efforts, adhoc census committees have been established and replicated to the lowest level of administration that is Farmers Associations and this helped the smooth conduct of the census and raising public awareness to achieve the intended coverage.

2. CENSUS METHODOLOGY

2.1 Scope and Coverage

The 2001/02 (1994 E.C.) Ethiopian Agricultural Sample Enumeration (EASE) was designed to cover the rural and urban parts of all weredas in the country on a large-scale sample basis. This coverage encompasses 460 weredas in 58 administrative zones of the country excluding the pastoralist areas of the Afar and Somali Regional States. In these weredas the originally selected primary sampling units amounted to 11,292 rural and 4,378 urban Enumeration Areas (EA's).These EA's were selected at wereda level to be covered in the EASE, in order to provide data on agriculture at these administrative levels in the country.

Addis Ababa City Administration consists of two reporting domains: urban and rural. The rural parts of the City Administration have a total of 35 EAs while the urban parts have a total of 2,307 EAs . In this City Administration, all 35 rural and urban EAs numbering 79 were covered. With respect to ultimate sampling units (agricultural households), it was planned to cover 1,080 agricultural households in rural areas and 1,970 in urban areas but about 1,050 rural and 1,970 urban agricultural households were actually covered. Based on the results of the census, in the urban parts of the City Administration, the response rate of sampled agricultural households was 97.2 percent. The response rate in the urban domain was 100 percent.

TABLE II:1 AREA COVERAGE OF THE 2001/02 (1994 E.C.) AGRICULTURAL SAMPLE ENUMERATION IN **ADDIS ABABA** CITY ADMINISTRATION

ADDIS ABABA				EAs Covered		Agricultural Households			
Total		Covered				Sampled		Covered	
Wereda	Town	Wereda	Town	Rural	Urban	Rural	Urban	Rural	Urban
1	1	1	1	35	79	1080	1970	1050	1970
Total				35	79	1080	1970	1050	1970

2.2 Sampling Frame

The list of enumeration areas was compiled from the 1994 Ethiopian Population and Housing Census cartographic work for Addis Ababa City Administration and was used as the frame for the selection of the Primary Sampling Units (PSU). The 1994 Population and Housing Census enumeration maps of the region for the sample EAs were updated, and the EA boundaries and descriptions were further clarified to reflect the current physical situation. The sampling frame used for the selection of ultimate sampling units (agricultural households) was a fresh list of households, which was prepared by the enumerator assigned in the sample EAs using a prescribed listing instruction at the beginning of the launching of the census enumeration.

2.3 Sample Design

In order to meet the objectives and requirements of the EASE, a stratified two-stage cluster sample design was used for the selection of ultimate sampling units. Thus, in the Administrative Council, urban - rural domain was treated as stratum for which major findings of the sample census are reported. The primary sampling units are enumeration areas and agricultural households are the secondary (ultimate) sampling units. Finally, after the selection of sample households, the various census forms were administered to all agricultural holders within the sampled agricultural households.

For the private peasant holdings a fixed number (25) of sample EAs in each urban and rural domain, and 30 agricultural households in each EA were randomly selected (determined). The sample size determination in each domain and thereby in each EA was based upon the required precision level of the major estimates and the cost consideration. The pilot survey and the previous year annual agricultural sample survey results were used to determine the required sample sizes per urban - rural domain.

2.4 Sample Selection of Primary Sampling Units

Within each wereda (stratum) in the region, the selection of EAs was carried out using probability proportional to size. In this case, size being total number of agricultural households in each EA obtained from the listing exercise undertaken in the 1994 Ethiopian Population and Housing Census of the region.

2.5 Listing of Households and Selection of Agricultural Households

In each sampled enumeration area of the region, a complete and fresh listing of households was carried out by canvassing the households in the EA. After a complete listing of the households and screening of the agricultural households during the listing operation in the selected EA, the agricultural households were serially numbered. From this list, a total of 30 agricultural households were selected systematically using a random start from the pre-assigned column table of random numbers. The sampling interval for each EA was determined by dividing the total number of agricultural households by 30. For crop cutting exercise purposes (rural domain) a total of 20 agricultural households were randomly selected from the 30 sampled agricultural households. The systematic random sampling technique was employed in this case, because its application is simple and flexible, and it can easily yield a proportionate sample.

In urban domain, 79 EA's in the Addis Ababa City were covered. Then, the listing of households in each sampled EA was carried-out. In the listing exercise households that are considered agricultural households were identified. Then, the agricultural households listed in the E.A. amounted upto 30, all such households were covered in the enumeration. However, if such households exceeded 30, then 30 households were systematically selected among the listed and identified agricultural households in the EA and were covered in the enumeration.

Estimation procedure of parameters of interest like total, yield and ratio and their sampling errors is presented in Appendix I. Standard Errors and Coefficients of Variation of estimates for selected variables are given as an annex at the end of the relevant chapter.

3. CENSUS OPERATIONS

3.1 Organization of Field Work

The magnitude of the census operation was a challenge to the CSA to organize and mobilize human, material and financial resources. But the CSA's capacity was enhanced to cope with these limitations, especially the logistics involved in the operation by the issuance of the Agricultural Census Act and establishment of adhoc structures.

Since the census operation was too large to direct and control effectively from the Head Quarters, field organization was used as a link between the sources of data and the central office. Field organization comprised the branch statistical office in the City Administration constituting an office in Addis Ababa city. This office was augmented with supervisors, enumerators, other support staff, logistics and the temporary structures. The temporary structures included the establishment of census committees at the regional, and at the lowest administrative hierarchies, i.e. to the peasant association levels in order to enlist support and cooperation from the local people.

In addition to the committees, commendable cooperation and assistance were also extended by other governmental and non-governmental organizations in the region at different stages of the census.

The field organization was required for the data collection operations and for the strict control and supervision of the fieldwork. The enumerators were the responsible field staff for data collection. They were full time enumerators hired on a contract basis. Most of them were recruited from localities in which they were assigned to undertake the data collection activities. At country level, for census undertaking in the rural parts of the region, a total of 12,398 enumerators were recruited, trained and hired for the census data collection and 1,199 of whom were held as reserve. Moreover, for undertaking the census in the urban parts of the country, a total of 4,378 enumerators were selected from those who were hired for the rural parts of the country. Of this total, the Addis Ababa City Administration had a share of 38 enumerators, where 3 of them were held as reserves. For undertaking the census

in the urban parts of the City Administration, the same enumerators who were assigned in the rural EA's were used. The enumerators had an educational background of grade 12 and above. During the data collection operation, the enumerators lived in their places of assignment i.e. the sample EA. During the census, each enumerator was accompanied by a guide and an assistant who are familiar with the people and well informed about the agricultural practices in the area.

The CSA permanent supervisors in the region were responsible for recruitment, selection, and training of enumerators, and census supervisors. Moreover, they were responsible for supervision of data collection, remuneration, retrieving and dispatching the completed forms to their respective Branch Statistical Offices. They were also responsible for handling administrative and other technical problems. At country level, a total of 2,240 supervisors were involved in the census. The supervisor-enumerator ratio was 1:5 and supervision was carried out on regular basis. The supervision was coordinated and monitored by professional staff of the CSA. The logistics equipment of the census included programmable calculators, field compasses, measuring tapes and kitchen balances each numbering about 14,000. Moreover, it included 273 four wheel drive vehicles and numerous other instruments. Each enumerator was provided with all the necessary logistics equipment for the data collection. In Addis Ababa City Administration, a total of 7 supervisors and 38 enumerators were involved and various field equipment were given to these field staff. The equipment used include 3 field vehicle, 38 programmable calculators, 38 field compasses, 38 measuring tapes, 38 kitchen balances, ... etc.

3.2 Training

The success of a census operation and data quality depend on the type of training given to the enumerators and supervisors. The training helps the enumerators and supervisors secure a common understanding of the tasks to be performed and the standard procedures to be followed in census undertaking. Good data quality is assured when the training meets its objectives and the enumerators and supervisors show a sense of responsibility and enthusiasm in the exercise of the census operation.

In view of the above point, the CSA organized a two stage training programme, that is, training of trainers followed by training of the field staff. The first stage training was given at the CSA Head Quarters in Addis Ababa, to the trainers consisting of professional staff from the CSA Head Quarters and the CSA Branch Statistical Offices and other relevant federal, regional and zonal government organizations and senior CSA supervisors. The training that lasted for 30 days, included classroom sessions, field practices and demonstrations 550 trainers took part in the training.

The first stage training was then followed by the second stage training, which took place in 47 training centers located in different zones and the training exercises for the City Administration were held in Addis Ababa City. Extensive training was given to the field staff. The instructions in the training focused more on the procedures and techniques of data collection and the responsibility shouldered both by the enumerators and the supervisors. The instructions, details of techniques and procedures of enumeration were covered in the manual. The manual served as an instruction text and a reference guide. The rigorous theoretical training was emphasized by a series of field practice and demonstrations. After about 50 days of training and field practice, a regorous examination prepared at the census headquarters, in Addis Ababa, was given to the enumerators and supervisors at each training center. Based on the examination results only those enumerators who passed the exam were hired and assigned to their enumeration areas.

3.3 Method of Enumeration

In Ethiopia, where a significant number of the farming population live in remote and inaccessible areas, data collection is time consuming and cumbersome. The problem is further aggravated by the large number of peasant holding operators, their geographical spread, high level of illiteracy among the operators and scattered land holdings. In such a situation where the agricultural statistics system has not been fully developed, besides the above problems, the appropriate enumeration method is house to house interviewing of holders and objective measurement of their holdings and crop yields.

Accordingly, most of the information on crop area and yield was elicited from the holders through interview and the remaining information was obtained by physically measuring the data items of interest. This was done by enumerators who identified the selected holders, interviewed them, measured all their crop fields using measuring tapes, field compasses, and scientific calculators. Moreover, they harvested and weighed the yields obtained using kitchen balances from plots of randomly selected crop fields.

As in many countries, a phased approach to the census was also used in Ethiopia in order to make the workload of manageable size and capture the data as the events unfolded. The first phase of the census was collection of data on demographic and economic characteristics of the rural peasant household; the second one was farm management practices of these rural peasant households using an interview method for both seasons. Data on crop area and yield of temporary and permanent crops was collected in the third phase of the census by visiting the farm operators and physically measuring the crop fields since the farmers are not familiar with standard units.

All crop fields of the randomly selected holders in each enumeration area were measured using the FAO recommended method. That is, first by identifying the boundaries of the fields, determining their shape which was mostly irregular and taking compass bearings of each side with respect to the north. This is followed by measuring the length of each side of the field and using a programmable calculator to arrive at both the area of the field and the closure error. The objective of arriving at the closure error is to find out how well the field was measured.

The responses to the interview and results of the measurement were recorded on a structured questionnaire. The interview method helped on the spot clarification of objectives, concepts and form of information sought from the respondents during the interview.

Since crop production is a function of area and yield, yield measurement was done using the crop-cutting method. The method involved crop-cutting from small subplots of rectangular

shape of different sizes randomly placed in the selected crop field for each crop type and subsequent threshing, drying and weighing and recording the weight of the harvest. The crop cutting was performed for a sub-sample of 20 out of the 30 households selected in each enumeration area. A 4x4 meter plot was randomly demarcated for cereals, pulses, and oil seeds and one square meter or 1 meter x 2 rows plot was designated for vegetables and root crops for the crop-cutting exercise.

The yields harvested from the plots were immediately weighed (green weight) and /or weighed again after two weeks of drying to conform to the normal holder harvesting and drying practices. The green and dry weights were recorded on the appropriate form.

Data collection activity on livestock, poultry and beehives in the rural areas; all agricultural data in urban areas; commercial farms; and farm implements including miscellaneous items were the fourth, the fifth, the sixth and the seventh phases of the census, respectively, where subjective approach was applied for all these phases. However, the Belg season area, production and farm management practices data, which was the eighth phase of the census, involved both objective and subjective methods, i.e., fields under temporary crops were objectively measured while the production and farm management practices data were collected by interviewing the sample agricultural holders.

3.4 Census Forms And Field Equipment

3.4.1 Census Forms

Forms and equipment are instrumental in gathering information from various sources. The census forms are the vehicle and basic document for collecting the desired data. These include general-purpose forms covering farm management practices, demographic and economic characteristics, area, production of both temporary and permanent crops; livestock, poultry and beehives, ...etc. These forms are formulated for recording data generated through interview as well as objective measurements.

Although the planning, organization and execution of the census were the responsibilities that rested within the CSA, development of the census forms was a tedious task that

involved the formation of a working group composed of members of government and non government organizations who are major users of agricultural data. Members of the working group were given the opportunity to identify their data requirements, define the needs of others and determine the specific questions that the forms should contain. The working group included the staff of the organizations that are involved in agricultural planning, collection of agricultural statistics and the use of data within the agricultural sector.

The working group designed different forms for the various data items on crop area production, and other variables of interest to meet the needs of current data users and also considered the future expectations. Attempt was made to make the content of the forms of acceptable length by distributing the variables to be collected in the different census forms. As can be observed in the census questionnaires presented in Appendix III, the rural census questionnaires/forms include:-

- The listing forms 94/0 and 94/1 that are used to record all households in the enumeration area, identify the agricultural households and select the units to be covered by the census.
- Form 94/2 is developed to list all the members of the sampled agricultural households and record the demographic and economic characteristics of each of the members.
- Forms 94/3A, 94/3B, 94/3C and 94/3D *[1] are prepared to enumerate crop data through interview and objective measurement.
- Form 94/5 is designed to record crop area data via the physical or objective measurement of crop fields.
- Form 94/6 is used to list all the fields under crop and select a crop field for each type of crop randomly for crop cutting exercise.

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* *Form 94/4 was the questionnaire used for collecting data on crop production forecast for 2001/02 and the data collected using this form was published in December 2001*

- Forms 94/7A, 94/7B, and 94/7C are developed for recording yield data on cereals, oil seeds, pulses, vegetables root crops and permanent crops by weighing their yields obtained from sub-plots and/or trees selected for crop-cuttings.

- Form 94/8 is prepared to enumerate livestock, poultry and beehives data by type, age, sex and purpose including products through interview (subjective approach).

- Forms 94/9, 94/10 and 94/11 are used to collect data on crop and livestock product usage; miscellaneous items and farm tools, implements, draught animals and storage facilities, in that order, by interviewing the sample holders.

- The last but not least forms are the Belg season questionnaires identified as :- 94/12A and 94/12B that are used to record data on farm management practices of the season subjectively, while 94/12C is for recording Belg season crop area through objective measurement and volume of production through interview approach.

- On the other hand, the census questionnaires/forms used in the urban areas include:-

- Form U-94/1 which used to record all households in the EA, identify the agricultural households and select the units to be covered by the census.

- Form U-94/2 is developed to list all the members of the sampled agricultural household and record the demographic and economic characteristics of each of the members.

- From U-94/3 is prepared to enumerate crop data through interview method.

- Form U-94/4 is prepared to enumerate livestock, poultry and beehives data by type, sex, age and purpose including products through interview (subjective approach).

- Form U-94/5 is used to collect data on crop and livestock usage.

The clarity of the forms was reinforced by the enumerators' as well as the supervisors' instruction manuals that dealt with an extensive elaboration on data collection with regard to the variables in the various forms.

3.4.2 Field Equipment

A census of agriculture involves the coverage of a large number of variables. Moreover, most of the data (variables) needed are of quantitative nature. But, as in most developing countries where illiteracy is high, in Ethiopia and thereby in the region, holders neither keep the records of the size of their holdings' and amount of their crop production, nor do they know standard units to measure the size of land they operate and volume of crop they produce. Under such circumstances, collecting data only through an interview has many limitations and it is not easy for an enumerator to obtain relatively accurate information on the volume of production and area under crops.

In order to overcome these shortcomings in the census, quantitave data on area under crop and yield of crops have been collected through objective measurements from designated plots of crop field. Fields under crops were measured by compass traversing. That is, by measuring the lengths of the sides of each crop field and taking compass bearings. Measuring tapes each 20-50 meters, compasses with a half degree precision, metal pegs and programmable calculators for computing the area were used. Besides the above equipment, balance scales and bags made of cloth were used for yield measurements and drying. Area and yield measurements were the most cumbersome and time consuming aspects of the census as the enumerators had to visit all the fragmented and scattered crop fields of the holders.

3.5 Quality Control in Data Collection

The quality of official agricultural statistics should be relatively high in order to provide maximum benefit to users. The CSA, as a producer of statistics, has been concerned about the quality of the data right from the conception of the agricultural census. It has made

every endeavor to maintain the data quality by lending more attention to those aspects of the census that affect the quality of the data.

Nearly all census activities starting from the designing of the questionnaires to data processing have significant impact on the quality of data. Efforts have been put into each activity of the census to assure data quality. Forms were designed sufficiently in advance of the commencement of the census enumeration in the field in order to have ample time for pre-testing, under-taking the pilot census and providing training to the enumerators. The forms were pre-tested in different parts of the country for about three times in addition to their application in the pilot census. Concepts and definitions used in the forms were expounded in the instruction manual. Attempts were made to formulate the questions with clarity and logical order. Questions about different subjects were written on different forms to avoid the mix of issues and restrict the length of the forms.

An enumerators' instruction manual was prepared and used as a training and reference guide to help the enumerators in understanding clearly all the details and procedures followed in the census and answer questions raised during the interviews. It contained questions on the forms with explanations, concepts, definitions, techniques of interviewing, duties and obligations of enumerators. A separate instruction manual was also prepared for supervisors in a similar fashion to all intents and purposes of supervision.

Training and supervision are also factors that affect data quality. The standard of training given to enumerators and supervisors is well reflected in the census results. With this in mind, the CSA offered a rigorous and thorough training to the enumerators and supervisors. Ample time has been allotted to it to help the trainees grasp the theoretical and practical aspects of data collection. The training sessions were repeatedly supplemented by field practice and demonstrations to reinforce the trainees understanding of the course. A written examination was given to all the trainees to screen and assign the best ones for the census. The supervisors have had a separate training in supervision in which the responsibilities of supervisors, field supervision, checking and editing completed forms and preparations of progress reports were reiterated. The supervisors reviewed the enumerators' work, re-

interviewed samples of holders and re-measured samples of fields as part of supervision to verify the enumerators' work.

Data quality is also contingent on the cooperation and willingness of the holders to provide the desired information. In order to seek the cooperation of the holders (respondents) promotional efforts have been made using the electronic and print media. Thus, regarding the census publicity, poems, dramas and other programs were presented on the country's TV, Radio and the Press. The CSA prepared, customized and distributed census materials such as brochures, fact sheets, posters, caps with census emblem, calendars and other items to relevant institutions and government officials. Moreover, with respect to the progress of the census operations, CSA gave a number of press releases to foster public support and cooperation. Branch offices and supervisors worked with local officials and adhoc committees to obtain written and verbal support of the census operations in their speeches and public appearances.

3.5.1 Concepts and Definitions

Information on all items of agriculture is not useful until the items are distinctly defined and understood. The procedure of stating data items and related terms is a prerequisite for making standards and definitions for collection and compilation of agricultural data. The intent of using standard concepts and definitions is not only to provide quality data but also to ensure that the right items are enumerated and measured accurately to reflect the agricultural situation.

Standard concepts and definitions used in a census setup provide clear linkages between various tables of the census and previous surveys and maintain consistent enumeration and measurement of variables of interest. To this end, the CSA has put a lot of efforts into communicating concepts and definitions to the census field staff through training and instruction manuals. The concepts and definitions used in the census were made to conform to the FAO standard with a slight adaptation of a few of them to suit the agricultural situation in Ethiopia. The concepts and definitions used in the census included the following: -

Enumeration Area (EA): an enumeration area in the rural parts of the country is a locality that is in most of the cases less than and only in some cases 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 multi-person household or

b) a multi-person household, that is, a group of two or more persons who live together and make common provisions for food and other essentials of living. The persons in the group may pool their incomes and have a common budget to a 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.

Agriculture: the growing of crops and/or raising of animals for own consumption and/or sale.

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

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.

Holder: a holder is a person who exercises management control over the operation of the agricultural holding and makes the major decision regarding the utilization of the available resources. He/she has primary technical and economic responsibility for the holding. He/she may operate the holding directly as an owner or 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 and/or raises livestock in his/her own right, i.e. the person who decides on which, where, when, and how to grow crops or raise livestock or both and has the right to determine the utilization of the products.

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 holding.

Crop: includes cereals, pulses, oilseeds, vegetables, root crops, fruits, coffee, enset, chat, hops, sugar cane, cotton, tobacco, . . . etc produced for food, making drinks, stimulation and making fabrics or clothings.

Crop production: the processes of growing and harvesting of the above crops for own consumption and/or sale.

Temporary Crops/Annual: Annual temporary crops are 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 as temporary crops since each is harvested and destroyed by ploughing in preparation for each successive crop.

Permanent Crops: Crops which are grown and occupy land for a long period of time, not requiring replanting for several years after each harvest, are considered as permanent crops. All fruit trees (i.e., oranges, mandarin, banana, …etc.) and trees for beverages (i.e., coffee, tea, Gesho, … etc.) are considered permanent crops but meadows and pastures are excluded.

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

Belg Season Crop: Any crop harvested during the months of March (Megabit) and August (Nehase) is considered to be Belg season crop.

Fallow Land: land which has been or intended to be kept at rest for at least one agricultural year and a maximum idleness of less them five years is considered fallow land.

Grazing Land: Land used for growing herbaceous forage crops, either through cultivation or naturally is considered to be grazing land.

Wood Land: All tracts of timber, natural or planted as part of the holding, which has a value as wood, timber, other wood products and/or used for protection. Forest land used for recreational purposes would not be included as Wood land.

Other Land Uses: Land occupied by the holders' houses and/or buildings, parking areas, gardens, barn, wells and ponds would be included as other land uses.

Irrigated Area: refers to the area of land purposely and actually provided with water, other than by rain, for improving the production of crops. The uncontrolled flooding of land by the over flow of rivers or streams is not categorized as irrigation practice although sometimes farmers use this incidence for production.

Improved Seed: is defined as crop variety which gives significantly higher yield, better quality and/or better benefit compared to traditional varieties of seeds, and usually produced by the Ethiopian Seed Enterprise (ESE) in Ethiopia.

Fertilizer: refers to anything added to the soil intended to increase the amount of plant nutrients available for crop growth. Usually, fertilizers are divided into two parts, natural and commercial. Examples of natural fertilizers are farmyard manure, wood ashes,...etc.,

while commercial fertilizers are DAP (Di- Ammonium Phosphate), UREA (Ammonium Nitrate), …etc.

Pesticides: pesticides are chemicals useful for mitigation, control or elimination of pests which are troublesome or harmful to crops. Insecticides, herbicides and fungicides are all considered as pesticides.

Draught Animal: Refers to animals that are engaged in activities such as ploughing, threshing, …etc

Dairy Cow: Refers to any type of cow used to give milk previously and/or provide milk currently or have never given milk before and pregnant now. Heifers are not included in this category.

Milking Cow: Refers to cows actually milked during the reference period, i.e. February 10, 2001 to February 9, 2002.

Laying Hens: Refers to all hens and pullets of all types which have laid eggs during the reference period, i.e., Feb 10, 2001 to Feb 9,2002.

Extension Package Programs: Are outreach programs operating in rural areas for private holdings aiming to transfer modern agricultural technologies to increase crop and livestock productivity.

4. DATA PROCESSING

4.1 Editing, Coding and Verification

In the 2001/2002 Ethiopian Agricultural Sample Enumeration (EASE), the filled-in forms that were retrieved from 47 Branch Statistical Offices were primarily received and systematically registered at the documentation unit of the CSA head quarters in Addis Ababa. Before launching the actual editing and coding activities, the Natural Resources and Agricultural Statistics Department staff gave adequate training to the 157 editors and coders.

These editors and coders carried out the manual editing, coding and verification of the filled-in EASE questionnaires in two shifts.

At the outset, the editing and coding activities for the filled-in forms on area and agricultural practices took place, this was followed up by the editing and coding of the forms on the production of temporary crops (cereals, pulses, oil seeds, vegetables and root crops), livestock, farm implements, permanent crops, Belg and miscellaneous questionnaires region by region. For the filled-in forms on area and agricultural practices, verification was carried out on 100% basis for the first five weeks from the launching of the activity and then considering the quality performance of editor-coders the activity was dropped to 66% of the forms gradually. On the other hand, the verification activity has been carried out on 100% basis for the filled-in forms on production of the temporary and permanent crops, livestock, farm implements and all other completed forms.

For Addis Ababa City Administration, the editing, coding and verification of the filled-in forms in general took about 1.1 working days. That is, the editing, coding and verification of the filled-in forms for area, agricultural practice, the production of the temporary and permanent crops, and livestock took about 0.7 working days, while that of the filled-in forms on farm implements, demographic characteristics, Belg season and the urban forms took around 0.4 working days.

4.2 Data Entry, Cleaning and Tabulation

About 144 data encoders were assigned to undertake the data entry activity of 2001/02 EASE and it has been carried out on two-shift basis. Before the starting of the data entry operation data encoders were trained for about 5 days using computer programs developed by the Data Processing Department staff. The Programmers prepared the data entry programs using CENTRY, which is a data entry module of IMPS (Integrated Microcomputer Processing System).

The data entry exercise has been carried out using 76 personal computers (PC's). Like that of the manual editing and coding activity, the filled-in forms on area and agricultural

practices were entered first and this was followed by entry of the filled-in forms on the production of temporary crops, livestock, farm implements, permanent crops, Belg and miscellaneous questionnaires region by region.

In order to ensure the quality of the data entry work, verification exercise was carried out. The entry of the filled-in forms on area and agricultural practices were verified on 100 % basis. Then the verification exercise was dropped to 66 % from the 6th week of the launching of the operation and was further reduced to 50% from the 10th week onwards by observing and assessing the magnitude of the percentage of errors. Later on verification process was carried out on 100% basis for the filled-in forms on the production of temporary and permanent crops, livestock, farm implements and all other completed forms. The verification activity was carried out through the process of re-entering the data.

For Addis Ababa City Administration, the whole data entry process of the filled-in forms on area, agricultural practice, the production of the temporary and permanent crops, and livestock took around 0.8 working days, while that of the filled-in forms on farm implements, demographic characteristics, Belg season and the urban forms took about 2.2 working days.

Data entered into the computer needs to be checked for completeness, consistency and validity. For this purpose computer edit programs were prepared by programmers using CONCOR, which is the editing module of IMPS. Using print-outs from these programs and referring to the filled-in census forms, corrections were made by nine trained manual data cleaning technicians. Moreover, nine other data-cleaning computer operators were involved in making the actual corrections of the data on the computer.

Additionally, an intermediate set of instructions or programs were made available and applied on the data to prepare information suitable for tabulation. These programs were prepared using CSPro and IMPS softwares. Like IMPS Software, CSPro is used as a tool for entering, editing and tabulating data. CSA used the CSPro software for data editing and calculation of CVs.

Data made ready for tabulation through the process of cleaning and intermediate programs was finally used to generate the required tables. This was done using tabulation programs developed by the senior programmers of the Data Processing Department. The CENTS software, a tabulation component of IMPS, was used in producing the 2001/02 EASE results.

5. MEASURES OF PRECISION

These are measures that indicate the variable error that may be expected in the estimates derived from the sample. The common measures are variances, standard errors and coefficients of variation (CV). Out of these measures, the results of standard errors and coefficients of variation of estimates for selected variables are presented as an annex at the end of each chapter.

For comparing the variability of different crop estimates or of the same crop estimates in different reporting domains, the coefficient of variation (the standard deviation expressed as a percentage of the estimate), should be used since it is a unit-less measure.

In general, estimates with CV less than 30% are considered as reliable estimates (assuming no bias). Estimates between the ranges of 30% to 50% CV's are considered less reliable and users are advised to use them cautiously. This is due to the fact that the higher the CV the more unreliable the estimate will be. Estimates with CV greater than 50% are not shown or were suppressed, and instead they are marked with asterisk (*), because these estimates (with CV > 50%) are not reliable to be used for any demand.

CHAPTER III

SOCIO-ECONOMIC CHARACTERISTICS OF THE POPULATION IN AGRICULTURAL HOUSEHOLDS

1 INTRODUCTION

Population as a producer and consumer is closely related with agriculture. On the one hand, population affects production in general and agricultural outputs in particular by furnishing the required labour. On the other hand, the size of a population and its anticipated growth is the main factor determining food consumption requirements. Regarding the balance between population and consumption, if more people are to be fed than the food or services produced, saving and capital investments will be negatively affected. Moreover, population growth also negatively influences agriculture by putting pressure on the environment, such as water, fertility of land, etc. Population size further influence productivity mainly through the diversification and specialization of the economy, the size of the market and the importance of foreign trade.

Not only the size, but also the socio-economic characteristics of the population of the agricultural households are important to the agricultural production. Study of the nature of the agricultural sector of a country will not be complete without proper understanding of the socio-economic characteristics of the population engaged in it. The population statistics of the agricultural households can be used to describe the characteristics and distribution of the population in space, its density and degree of concentration, the fluctuation in its rate of growth and the movement from one area to another. Data on population and agriculture will also help in finding out what percentage of resources will be needed at a particular time for the meeting of basic needs of the people and what amount of socially useful and productive labour is available in the country, regardless of whether labour or capital intensive techniques will suit the nation's economy.

Generally, an analysis of statistical data on population residing in agricultural households is important to assess the size, structure and characteristics of the human resources involved in and supported by the sector. Such kind of information will provide the

human background for planners and policy makers in their attempt to formulate policies that helps improve the sector's output as well as the living conditions of the rural population.

Cognizant of this fact, the 2001/2002 Ethiopian Agricultural Sample Enumeration has collected basic social and economic characteristics of the population in agricultural households in October 2001. This chapter assesses the resulting data for the Addis Ababa City Administration related to the size, the structure and distribution of the population in agricultural households with some selected variables. These variables include size and age-sex structure, household size, relationship to the head of the household, marital status, literacy, educational level, working status, reason for not working, type of occupation, and employment status. In the Annex to this chapter are given tables showing Estimates, Standard Errors (S.E) and Coefficient of Variation (C.V.) for some relevant variables.

2 SIZE AND AGE-SEX STRUCTURE OF THE POPULATION IN AGRICULTURAL HOUSEHOLDS

In this section, the size and age-sex composition of the population in agricultural households of Addis Ababa city Administration will be assessed. The population in agricultural households comprises of all persons residing in households with at least one agricultural holder, where a holder is defined as a person who exercises management and control over the operation of the agricultural holding such as land and livestock and makes the major decision regarding the utilization of the available resources (detailed explanation of holder and holdings are provided in Chapter II of this report in the section that deals with concepts and definitions). Whenever is appropriate the assessment will be done separately for non-holders, holders and type of holding.

2.1 Size of the Population in Agricultural Households

Summary Table III.1 presents the estimated population size of the agricultural households in Addis Ababa City Administration classified by sex, place of residence and holding status. According to the result of this sample enumeration, the population in

agricultural households of the Addis Ababa City Administration is estimated to be 148,575. Of the total the population in agricultural households, 79,056 are residing in rural areas and the remaining 69,518, that is, about 47 percent of the population in agricultural households are residing in urban areas. The above pattern is peculiar to Addis Ababa City Administration because of the fact that the city is predominately urban.

The enumeration results show that there were 28,002 agricultural holders in the Addis Ababa City Administration, making up about 19 percent of the total population residing in agricultural households. Further breakdown of agricultural holder by type of holding is presented in Summary Table III.2. Accordingly, holders practicing crop and livestock farms constitute the largest proportion (49.6 percent) of the total holders. Holders practicing only livestock agriculture follow closely, making up about 44 percent, while those practicing crop only agriculture is less common in the City Administration (6.4 percent).

The enumeration result further shows that the proportion of holders among the males to be significantly higher than their female counterparts. In both rural and urban areas the proportions of the holders among the males are about three times higher than that of the females.

Summary Table III.1 Size of Population in Agricultural Households by Sex, Holding Status and Place of Residence

Place of Residence/ Sex	Total Population in Agricultural Households		Holders		Members Other Than Holders	
	No.	%	No.	%	No.	%
Rural + Urban						
Both Sexes	148,575	100.0	28,002	18.8	120,573	81.2
Male	74,503	100.0	20,733	27.8	53,770	72.2
Female	74,071	100.0	7,269	9.8	66,802	90.2
Rural						
Both Sexes	79,056	100.0	16,281	20.6	62,776	79.4
Male	40,430	100.0	12,031	29.8	28,398	70.2
Female	38,626	100.0	4,249	11.0	34,377	89.0
Urban						
Both Sexes	69,518	100.0	11,721	16.9	57,797	83.1
Male	34,073	100.0	8,701	25.5	25,372	74.5
Female	35,445	100.0	3,020	8.5	32,425	91.5

Summary Table III.2 Size of Population in Agricultural Holders by Sex, Type of Holding and Place of Residence

Place of Residence/ Sex	Total Holders		Crop Only		Livestock Only		Crop and Livestock	
	No.	%	No.	%	No.	%	No.	%
Rural + Urban								
Both Sexes	28,002	100.0	1,798	6.4	12,325	44.0	13,880	49.6
Male	20,733	100.0	1,458	7.0	8,441	40.7	10,834	52.3
Female	7,269	100.0	340	4.7	3,884	53.4	3,045	41.9
Rural		100.0						
Both Sexes	16,281	100.0	1,352	8.3	3,500	21.5	11,428	70.2
Male	12,031	100.0	1,065	8.9	2,106	17.5	8,860	73.6
Female	4,249	100.0	287	6.8	1,394	32.8	2,568	60.4
Urban		100.0						
Both Sexes	11,721	100.0	446	3.8	8,825	75.3	2,451	20.9
Male	8,701	100.0	393	4.5	6,335	72.8	1,974	22.7
Female	3,020	100.0	53	1.8	2,490	82.5	477	15.8

2.2 Age-Sex Structure of the Population in Agricultural Households

Age and sex are among the important factors that determine the status of individuals in their community in general and their involvement in production process in particular. The age-sex composition of a population of an area is the product of past fertility, mortality and migration trends. Age and sex structure are important for the functioning of the economy including the agricultural economy, since these two attributes constitute main criteria for determining entrance into the work force and the division of labour. It is also important for several purposes. Among others, age-sex data is useful for in-depth analysis of socio-economic characteristics of a given population. Also, age-sex data is vital for making component and sectorial projections.

The percentage distribution of the population in agricultural households by sex, age group, place of residence, and holding status and type is presented in Summary Table III.3. Also, the single year age and five years age distribution of the population in agricultural households are presented in Figure III.1 and Figure III.2, respectively. The population in agricultural households in both rural and urban areas is characterized by young age. As the data in the table shows, 51.9 percent and 42.5 percent of rural and urban population in agricultural households are under 18 years of age. Those persons

aged 60 years and above constitute only small proportion (4.6 percent in rural and 6.3 percent in urban areas). Figure III.2 reveals that the age pyramid of the population has already started narrowing at age 10-15 years and continued to be so thereafter. This could be a reflection of decline in fertility during the last 15 years in the City Administration. On the others hand, the age pyramid of the city Administration's population in agricultural households appears to be shrinking after age group 15-19 years. This could partly be explained by change of household by older members to non-agricultural households due to marriage, education search of job etc., (see Figures III.1 to III.3). As can be seen from Fig III.3, holders are concentrated in the age groups 25 years and above for males and 30 years and above for females.

The age pattern observed for total holders also holds true for those engaged in live stock agriculture. The majority of holders of crop only farms concentrated in the age group 20 years and above, with a peak at age group 25-29 years. The involvement of young population who are under age 18 years is found to be negligible and statistical insignificant (see Summary Table III.3). In the City Administration a significant proportion of women appear to be holder starting at age 25-29 years (see Summary Table III.2)

The sex distribution of a population can be studied using indices called "sex ratios" that are calculated as a ratio of males per 100 females. When the ratio is over 100, the males are in excess and when less than 100 the females predominate. The sex ratio of the population in agricultural households by holding status and type of holding are calculated and presented at the bottom of Summary Table III.3 In a population where there is no sex selective migration, the overall sex ratio is expected to be around 100. In addition, sex ratio for the population in agricultural households will be affected by movements of people between agricultural and non-agricultural households within the City Administration itself. For the population in agricultural households of Addis Ababa City Administration the overall sex ratio is found to be 100.6, showing a balance between males and females in agricultural households. The situation in urban areas, where the result shows a sex ratio of 96.1 is, however, different from that of rural areas (104.7) indicating that there are more females than males in urban areas of City Administration.

Figure III.1 Distribution of Population of Agricultural Households by Sex and age in Single year (Urban + Rural)

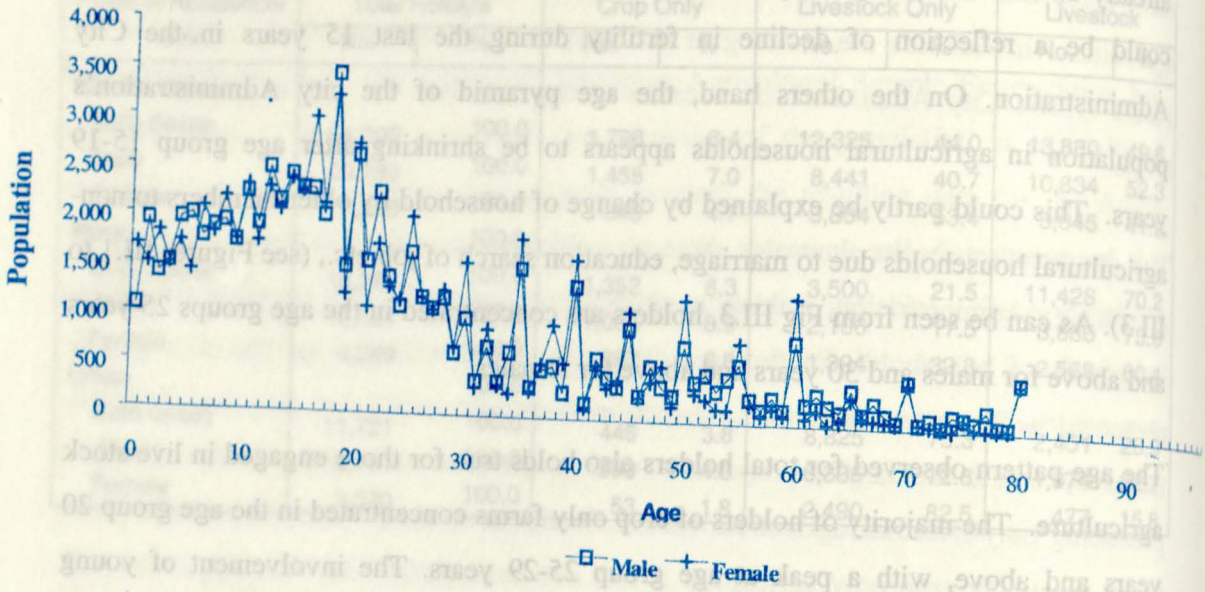


Figure III.2 Age-Sex Distribution of Population in Agricultural Households (urban + rural)

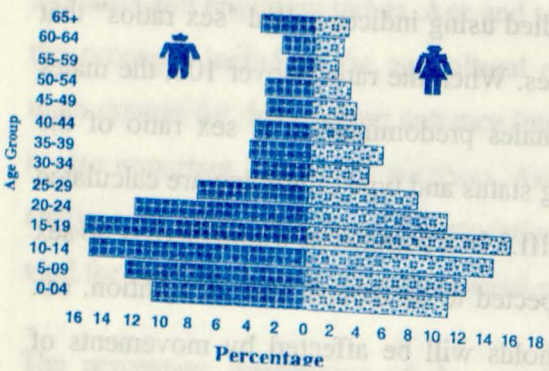
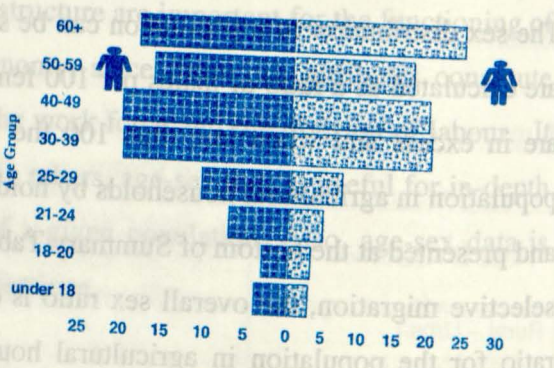


Figure III.3 Age-Sex Distribution of Population of Agricultural Holders (urban + rural)



Summary Table III.3 Distribution of Population in Agricultural Households by Sex, Age Group, Holding Status, Type of Holding and Place of Residence

Age Group And Sex	Rural + Urban					Rural					Urban				
	Total Population In Agricultural HHs	Total Holders	Holders by Type of Holding			Total Population In Agricultural HHs	Total Holders	Holders by Type of Holding			Total Population In Agricultural HHs	Total Holders	Holders by Type of Holding		
			Crop Only	Livestock Only	Crop and Livestock			Crop Only	Livestock Only	Crop and Livestock			Crop Only	Livestock Only	Crop and Livestock
Both Sexes															
All Ages	148,575	28,002	1,798	12,325	13,880	79,056	16,281	1,352	3,500	11,428	69,518	11,721	446	8,825	2,451
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Under 18	47.5	*	2.7	*	0.4	51.9	*	3.3	*	0.4	42.5	1.2	*	1.5	*
18 - 20	9.9	3.2	4.9	4.0	2.2	9.1	4.4	6.0	10.4	2.3	10.9	1.5	*	1.5	1.6
21 - 24	7.8	6.5	15.7	4.1	7.6	7.4	9.8	19.5	*	*	8.2	2.1	*	1.2	4.8
25 - 29	8.1	9.7	20.9	5.3	12.1	7.9	12.6	23.2	6.3	13.2	8.3	5.7	13.7	4.8	7.1
30 - 39	9.2	20.1	16.3	19.1	21.4	8.9	22.0	17.5	21.7	22.6	9.5	17.4	12.6	18.0	16.2
40 - 49	7.2	20.1	20.2	21.7	18.7	6.3	17.4	15.2	14.9	18.4	8.2	23.8	35.2	24.4	19.7
50 - 59	4.9	16.8	10.8	18.6	15.9	3.9	12.4	9.4	5.3	14.8	6.1	22.9	15.2	23.9	20.6
60+	5.4	19.9	8.5	19.5	21.7	4.6	16.0	5.8	6.9	20.0	6.3	25.3	16.6	24.6	29.7
Male															
All Ages	74,503	20,733	1,458	8,441	10,834	40,430	12,031	1,065	2,106	8,860	34,073	8,701	393	6,335	1,974
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Under 18	46.9	*	2.8	*	0.4	50.5	*	3.5	*	0.4	42.8	1.4	*	1.8	*
18 - 20	10.2	3.1	5.3	3.6	2.5	9.7	4.2	6.6	9.0	2.7	10.8	1.7	*	1.8	1.5
21 - 24	8.5	7.1	17.5	2.8	9.1	8.2	10.6	22.2	*	*	8.8	2.4	*	1.2	5.6
25 - 29	7.7	10.5	20.8	4.9	13.4	7.7	14.2	23.5	6.4	14.9	7.8	5.3	13.5	4.4	6.6
30 - 39	8.3	20.1	14.4	18.0	22.4	8.8	22.6	14.9	22.6	23.5	7.7	16.6	13.0	16.5	17.5
40 - 49	7.1	20.3	18.1	22.9	18.6	6.4	17.3	12.2	16.0	18.2	7.8	24.5	34.4	25.2	20.4
50 - 59	5.2	16.6	12.6	18.8	15.4	4.2	12.6	11.2	3.6	14.9	6.4	22.1	16.3	23.8	17.9
60+	6.1	18.5	8.4	20.6	18.2	4.6	13.0	6.0	6.0	15.5	7.9	26.0	15.3	25.4	30.0
Female															
All Ages	74,071	7,269	340	3,884	3,045	38,626	4,249	287	1,394	2,568	35,445	3,020	53	2,490	477
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Under 18	48.0	*	*	*	*	53.3	*	*	*	*	42.3	*	-	*	-
18 - 20	9.7	*	*	*	*	8.5	*	*	*	*	11.0	1.0	-	0.8	*
21 - 24	7.1	*	*	*	2.1	6.6	*	*	*	2.3	7.7	1.3	-	1.4	*
25 - 29	8.4	7.5	20.9	6.1	7.7	8.1	8.0	22.0	6.1	7.4	8.7	6.7	*	6.1	9.0
30 - 39	10.1	20.1	24.4	21.4	17.9	9.0	20.2	27.5	20.4	*	11.3	19.9	9.4	21.9	10.5
40 - 49	7.3	19.6	29.1	19.2	19.0	6.2	17.8	26.8	13.2	19.4	8.5	22.0	41.5	22.5	17.2
50 - 59	4.7	17.2	*	18.3	17.4	3.7	11.7	*	8	14.7	5.8	25.0	*	24.1	31.7
60+	4.7	24.3	8.5	17.8	34.5	4.6	25.0	*	9.5	*	4.8	23.4	26.4	22.4	28.5
Sex Ratio	100.6	285.2	428.8	217.3	355.8	104.7	283.1	371.1	151.1	345.0	96.1	288.1	741.5	254.4	413.8

The table further shows a sex ratio of 285.2 for agricultural holders. That is, for every 1 female holders there are 285 male holders. The excess of male holders over female holders extremely large among those practicing crop holding. The pattern observed at C Administrational level also holds true in rural and urban areas. Crop only holders show t highest sex ratios in both urban and rural areas. For all types of holdings, the excess of ma holder over female holder is more pronounced in urban than rural areas.

2.3 Household Size

Size of household refers to the entire number of persons- related or unrelated who comprise one private household. In this survey a household is defined as either single person who makes provisions for his own or a group of two or more persons who live together and make common provisions for food and other essentials of living.

Summary Table III.4 presents the distribution of the agricultural households by number of persons per household and average household size for male and female-headed households. According to the sample enumeration, on September 2001 there were 25,741 agricultural households in Addis Ababa City Administration. These households all together accommodate 148,575 persons, resulting in average household size of 5.8 persons per agricultural household. Regarding the distribution of persons per household, the data in the table shows that, the majority of households have 6-9 persons (40.2 percent) followed by those with 4-5 persons (32.4 percent) and 2-3 persons (16.8 percent). Single person households and households with 10 and more persons each comprise about 2 percent and 9 percent, respectively.

Average household size for agricultural households in urban areas is slightly higher than that in rural areas. The enumeration results further show that the size of households differs by the sex of head. In both rural and urban areas, male-headed agricultural households appear to have larger household size, with equal difference observed in both urban and rural areas. As can be observed in Summary Table III.4, on average, male-headed agricultural households in both rural and urban areas of the City Administration have about one more

persons. In rural and urban areas, women living alone, respectively, occupy 2.5 percent and 3 percent of female-headed agricultural households.

Summary Table III.4 Distribution of Agricultural Households by Household Size, Sex of Head and Place of Residence

Rural/ Urban and Sex of Head	Total population in Agricultural HHs	Total Agricultural Households		Household Sizes					Average Household Size
		Nº	%	One Member HHs	2-3 Members HHs	4-5 Members HHs	6-9 Members HHs	10 & above Members HHs	
Rural + Urban									
Total	148,575	25,741	100.0	1.6	16.8	32.4	40.2	8.9	5.8
Male Head	119,707	19,726	100.0	1.3	14.4	29.5	44.4	10.4	6.1
Female Head	28,867	6,015	100.0	2.7	24.9	42.0	26.5	3.9	4.8
Rural									
Total	79,056	14,195	100.0	1.5	18.2	36.2	35.6	8.6	5.6
Male Headed	63,475	10,843	100.0	1.1	17.3	31.7	39.6	10.3	5.9
Female Head	15,581	3,351	100.0	2.5	21.3	*	22.4	3.0	4.6
Urban									
Total	69,518	11,546	100.0	1.8	15.1	27.7	46.0	9.3	6.0
Male Head	56,232	8,883	100.0	1.5	10.9	26.7	50.3	10.6	6.3
Female Head	13,287	2,663	100.0	3.0	29.4	30.9	31.6	5.1	5.0

3 SOCIO-ECONOMIC CHARACERTITICS OF THE POPULATION IN AGRICULTURAL HOUSEHOLDS

In addition, the 2001/2002 Ethiopian Agricultural Sample Enumeration has collected some basic social and economic characteristics of the population residing in agricultural households. The information collected included relationship to the head of the household, marital status, literacy status and educational level, work status, employment status and type of occupation. In this respect, this section of the chapter presents some of the major findings of the sample census for the population in Agricultural households of the City Administration.

3.1 Relationship with the Head of Household

Relationship to the head of the household is an important measure of household formation and hence it is a pivot on which modern method of projecting households and families turns.

Relationship to the head of the household is considered in this report for its influence on agricultural holding status and certain decision to be taken related to agricultural activities. In the sample census, the head of a household is any member of the household who is recognized as a head by the other members.

Summary Table III.5 presents the distribution of the population in agricultural households by sex, relationship to the head of the household, holding status and type of holdings for Addis Ababa City Administration. Among both the males and the females the majority of the population in agricultural households are children of heads. Next to children of heads are the heads (17.3 percent) and the spouses (12.7 percent). The proportion of heads among the males is substantially higher than that of the females, reflecting the fact that males in most societies assume execution of the major roles of the agricultural activities and the head is considered as the main bread winner in the household as well as the one who merely bear responsibility.

The overwhelming majority of both male and female holders (90.3 percent and 81.1 percent, respectively) are heads of households and this dominancy of heads of households is highly pronounced in the crop and livestock and livestock only holdings. Children, spouses and relatives of heads have relatively better contribution among crop only holdings and this phenomenon is more pronounced in the rural areas than urban areas.

3.2 Marital Status

This section presents the level and pattern of marital status of the population in the agricultural households in Addis Ababa City Administration. In addition to being one of the important proximate determinants of fertility, marriage has economic and social implications. Generally, marriage is basic to family formation. In countries like Ethiopia, where the agriculture is subsistence farming, families play central role in the production processes, income maintenance, economic status ...etc.

Summary Table III.5 Size of Population in Agricultural Households by Sex, Relationship to the Head of Household, Holding Status and Type of Holding

Sex and Relationship to The Head	Rural + Urban					Rural					Urban				
	Total Population in Agricultural Households	Total Holders	Holders by Type of Holding			Total Population in Agricultural Households	Total Holders	Holders by Type of Holding			Total Population in Agricultural Households	Total Holders	Holders by Type of Holding		
			Crop Only	Livestock Only	Crop and Livestock			Crop Only	Livestock Only	Crop and Livestock			Crop Only	Livestock Only	Crop and Livestock
Both Sexes															
All Persons	148,575	28,002	1,798	12,325	13,880	79,056	16,281	1,352	3,500	11,428	69,518	11,721	446	8,825	2,451
Head	17.3	88.0	73.6	82.8	94.4	18.0	83.5	66.1	56.7	93.7	16.6	94.2	96.2	93.2	97.6
Spouse	12.7	3.4	6.5	4.5	2.0	13.2	3.7	8.3	6.5	2.3	12.1	3.0	1.1	3.7	*
Children	52.9	*	16.2	*	3.0	51.0	*	20.7	*	3.3	55.0	2.4	2.7	2.6	1.6
Mother/Father	0.7	*	-	*	-	0.5	*	-	*	-	0.8	-	-	-	-
Sister/Brother	2.4	0.2	-	0.4	*	2.6	0.3	-	*	*	2.3	*	-	*	-
Other Relatives	8.5	0.4	2.4	0.2	0.3	7.6	0.7	3.3	*	0.4	9.5	*	-	*	-
Non-Relative	5.5	0.2	*	*	0.1	7.2	0.3	*	*	*	3.7	*	-	*	*
Male															
All Persons	74,503	20,733	1,458	8,441	10,834	40,430	12,031	1,065	2,106	8,860	34,073	8,701	393	6,335	1,974
Head	26.5	90.3	75.8	86.2	95.6	26.8	85.8	68.5	55.8	95.0	26.1	96.6	95.7	96.3	97.9
Spouse	0.8	*	*	-	*	0.5	*	*	-	*	1.1	0.1	1.3	-	-
Children	54.7	8.5	19.2	*	3.7	51.9	*	25.2	*	4.1	57.9	2.9	3.1	3.2	1.9
Mother/Father	0.3	*	-	*	-	*	*	-	*	-	0.4	-	-	-	-
Sister/Brother	2.1	0.2	-	0.4	*	2.3	*	-	*	*	1.9	*	-	*	-
Other Relatives	8.8	0.5	2.7	*	0.4	8.2	0.8	3.7	*	0.5	9.5	*	-	*	-
Non-Relative	6.8	0.3	*	*	0.2	9.9	0.3	*	*	*	3.1	*	-	*	*
Female															
All Persons	74,071	7,269	340	3,884	3,045	38,626	4,249	287	1,394	2,568	35,445	3,020	53	2,490	477
Head	8.1	81.1	63.8	75.5	90.2	8.7	76.8	57.1	58.0	89.1	7.5	87.2	100.0	85.2	96.2
Spouse	24.7	13.0	30.9	14.3	9.2	26.4	14.0	36.6	16.4	10.2	22.7	11.5	-	13.2	*
Children	51.0	*	*	*	*	50.0	*	*	*	*	52.2	0.9	-	1.0	-
Mother/Father	1.0	-	-	-	-	0.8	-	-	-	-	1.2	-	-	-	-
Sister/Brother	2.8	*	-	*	-	2.9	*	-	*	-	2.7	*	-	*	-
Other Relatives	8.2	*	*	*	-	7.0	*	*	*	-	9.4	-	-	-	-
Non-Relative	4.2	*	-	*	-	4.3	*	-	*	-	4.2	*	-	*	-

In the census questionnaire, information was collected on the marital status of the population 10 years of age and older. The marital status was categorized into four main groups, namely never married (single), married, divorced and widowed. A person who had never been married is considered to be single, whereas married persons include couples who are living together bonded by any kind of marital engagement at the time of the census (traditional, religious or civil marriage). Separated couples are also considered to be married, unless they had dissolved their marriage agreement legally. A person who had been married but whose marriage was dissolved through divorce before the census day is categorized as divorced, and a person whose marriage was dissolved through the death of the spouse is categorized as widowed.

Summary Table III.6 presents the distribution of the population in agricultural households by marital status and broad age group. As the data in the table indicate that more than one-third of the population in the agricultural households in the City Administration is in marital union at the time of the enumeration. Those who never married constitute about 57 percent while about 8 percent have dissolved their marriage due to divorce or the death of the spouse. The data further shows that a higher proportion of the males to be in single-hood status while the incidence of dissolution of marriage are significantly higher among the females than the males. Regarding the marital status of the agricultural holders in the City Administration, the data in the table shows that, the majority (69.1 percent) is currently in marital union at the time of the census.

A higher proportion, i.e., about 98 percent and 96 percent of the young (age10-17 years) male and female population in agricultural households, respectively, are single, indicating relatively late start of marriage in the population of the City Administration. Further, marriage is universal as evidenced by the fact that at age 50 and over the proportion of single is less than two percent for both the males and the females.

Summary Table III.6a Population Aged 10 Years and Over in Agricultural Households by Sex, Age Group, Marital Status* and Holding Status, In Addis Ababa City Administration

Age Group and Holding Status	Total			Never Married			Married			Divorced			Widowed		
	M + F	M	F	M + F	M	F	M + F	M	F	M + F	M	F	M + F	M	F
All Population in Agricultural HHs															
All Ages	113,948	57,313	56,635	56.7	62.0	51.4	35.6	35.1	36.0	2.9	1.7	4.0	4.6	0.9	8.3
10 - 17	35,917	17,784	18,133	95.9	98.2	93.8	3.3	1.2	5.3	*	*	*	*	-	*
18 - 29	38,310	19,635	18,675	71.5	82.2	60.2	25.2	16.9	34.0	2.6	*	4.7	0.5	0.1	0.9
30 - 49	24,302	11,440	12,863	10.5	15.4	6.1	77.3	79.6	75.3	5.9	4.2	7.3	6.3	0.7	11.2
50+	15,418	8,454	6,964	1.4	1.7	1.0	70.6	88.7	48.7	4.9	4.4	5.5	22.8	5.0	44.5
Holders															
All Ages	28,002	20,733	7,269	12.3	13.3	9.2	69.1	83.8	27.2	3.6	1.2	10.4	14.9	1.6	53.0
10 - 17	*	*	*	*	*	*	*	-	*	-	-	-	-	-	-
18 - 29	5,434	4,296	1,137	35.4	34.1	39.8	59.1	63.5	42.3	*	*	6.2	2.6	*	11.7
30 - 49	11,250	8,368	2,881	4.4	5.2	2.3	78.4	93.2	35.4	4.9	1.1	15.9	12.2	0.5	46.2
50+	10,290	7,268	3,022	0.7	0.9	*	70.3	94.2	12.8	2.9	1.0	7.4	25.9	3.9	79.0

Summary Table III.6b Population Aged 10 year and over in Agricultural Households by Sex, Age Group, Marital Status* and Holding Status, Rural Areas

Age Group and Holding Status	Total			Never Married			Married			Divorced			Widowed		
	M + F	M	F	M + F	M	F	M + F	M	F	M + F	M	F	M + F	M	F
All Population in Agricultural HHs															
All Ages	57,359	27,946	29,412	59.9	63.9	56.0	32.8	33.2	32.5	2.9	1.3	4.4	4.0	1.2	6.7
10-17	17,401	8,448	8,953	96.1	96.8	95.4	2.9	2.1	3.6	*	-	*	*	-	*
18-29	19,019	9,311	9,708	82.8	91.4	74.5	13.6	8.0	18.9	2.9	0.3	5.4	0.5	0.2	0.8
30-49	12,296	5,296	7,000	13.7	19.6	9.3	75.9	75.8	76.1	5.4	3.7	6.7	4.9	0.8	7.9
50+	8,642	4,891	3,751	2.0	2.6	1.4	74.3	88.7	55.4	4.9	2.9	7.5	18.7	5.8	35.6
Holders															
All Ages	11,721	8,701	3,020	6.7	7.5	4.5	75.0	88.9	35.1	3.5	1.1	10.2	14.8	2.5	50.2
10-17	144	124	*	100.0	100.0	*	-	-	-	-	-	-	-	-	-
18-29	1,087	816	271	38.0	42.5	24.4	54.0	56.9	45.4	3.1	-	12.5	5.0	*	17.7
30-49	4,838	3,572	1,265	3.5	3.3	3.9	82.1	94.7	46.7	3.9	1.3	11.1	10.5	*	38.4
50+	5,652	4,189	1,463	1.1	1.4	-	74.9	92.9	23.7	3.3	1.2	9.2	20.7	4.5	67.2

Summary Table III.6c Population Aged 10 Years and over in Agricultural Households by Sex, Age Group, Marital Status* and Holding Status, In Urban Areas

Age Group and Holding Status	Total			Never Married			Married			Divorced			Widowed		
	M + F	M	F	M + F	M	F	M + F	M	F	M + F	M	F	M + F	M	F
All Population in Agricultural HHs															
All Ages	56,589	29,367	27,223	53.5	60.1	46.4	38.3	37.0	39.7	2.9	*	3.6	5.2	0.6	10.1
10-17	18,517	9,337	9,180	95.8	99.3	92.2	3.6	0.4	*	*	*	*	-	-	-
18-29	19,291	10,324	8,967	60.4	73.9	44.8	36.7	24.9	50.4	2.3	*	3.8	0.5	*	1.0
30-49	12,006	6,144	5,862	7.2	11.9	2.3	78.7	82.9	74.3	6.3	*	8.1	*	0.6	*
50+	6,776	3,563	3,213	*	*	*	66.0	88.7	40.8	4.9	6.5	3.2	28.0	3.9	54.8
Holders															
All Ages	16,281	12,031	4,249	16.3	17.6	12.5	64.8	80.1	21.5	3.7	*	10.5	15.1	1.0	54.9
10-17	*	*	*	*	*	*	*	-	*	-	-	-	-	-	-
18-29	4,347	3,480	866	34.7	32.2	44.8	60.4	65.1	41.3	*	*	4.2	2.0	*	9.8
30-49	6,412	4,796	1,616	5.2	6.5	*	75.6	92.1	26.6	5.6	0.9	19.7	*	*	*
50+	4,638	3,079	1,559	*	*	*	64.6	96.0	*	2.4	0.7	5.8	32.3	3.0	90.1

*Percentages of persons who do not state their Marital Status are not shown in the table.

3.3 Level of Education of the Population in Agricultural Households

Education is another important social characteristic that affect the well being of individuals or societies in general. Level of education is associated with the participation as well as the productivity of agriculture. Education improves knowledge and use of agricultural practices and applied technology in agricultural operations. Therefore, compiling and analyzing data on the educational attainment of the population in the agricultural households is essential for development planning.

The 2001/02 Agriculture Sample Enumeration of Ethiopia provides two types of data regarding education, namely, literacy status and educational attainment of persons aged 5 years or more. In the census a person is considered as literate if he/she can read and write simple sentence in any language. Educational attainment was obtained by asking individuals who can read and write concerning the highest grade completed and response were classified as non-formal education and grades completed in the formal school system. Formal education /regular school/ is used to describe the educational system that provides a ladder by which individuals may progress from primary school through universities. On the other hand, the non-formal education that are entertained in this census includes those persons that were not in the formal schools such as self directed, or religious/socially directed learning or teachings to read and write, with any of the languages.

The population in the agricultural households aged 10 years and over in Addis Ababa City Administration classified by sex, literacy status and level of education, holding status and type of holding and place of residence is presented in Summary Table III. 7. The level of education in this table is classified as: primary level education which include grades 1-6, and above primary level education.

The data in the table reveals that 59.8 percent of the population in the agricultural households of Addis Ababa City Administration to be literate. The literacy level among the

Summary Table III.7 Distribution of Population in Agricultural Household Aged 10 Years and Over by Sex, Literacy Status* and Educational Level, Holdings Status, Type of Holding and Place of Residence

Level of Education and Sex	Total Population in Agricultural Households	Non-Holders	All Holders	Type of Holding		
				Crop Only	Livestock Only	Crop & Livestock
Rural + Urban						
Male + Female						
Total	113,948	85,946	28,002	1,798	12,325	13,880
	100.0	100.0	100.0	100.0	100.0	100.0
Illiterate	40.2	37.1	49.7	43.6	35.3	63.2
Non-Formal	6.8	5.5	10.7	8.2	11.5	10.3
Primary	27.7	29.7	21.5	22.7	28.4	15.3
Above Primary	25.4	27.7	18.1	25.4	24.9	11.1
Male						
Total	57,313	36,580	20,733	1,458	8,441	10,834
	100.0	100.0	100.0	100.0	100.0	100.0
Illiterate	34.7	29.9	43.3	42.5	23.9	58.5
Non-Formal	7.4	5.0	11.6	9.8	12.2	11.3
Primary	30.0	33.3	24.2	23.3	33.3	17.3
Above Primary	27.9	31.8	20.9	24.4	30.6	12.9
Female						
Total	56,635	49,366	7,269	340	3,884	3,045
	100.0	100.0	100.0	100.0	100.0	100.0
Illiterate	45.7	42.4	68.0	48.5	60.0	80.3
Non-Formal	6.1	5.8	8.2	1.5	9.8	7.0
Primary	25.3	27.0	13.9	20.6	17.8	8.3
Above Primary	22.8	24.7	9.9	29.4	12.4	4.5
Rural						
Male + Female						
Total	56,589	40,309	16,281	1,352	3,500	11,428
	100.0	100.0	100.0	100.0	100.0	100.0
Illiterate	59.3	59.4	58.9	44.5	38.1	67.0
Non-Formal	7.2	6.2	9.7	6.9	10.1	9.9
Primary	22.5	23.7	19.5	24.0	36.0	13.9
Above Primary	11.1	10.7	11.9	24.7	15.9	9.2
Male						
Total	29,367	17,335	12,031	1,065	2,106	8,860
	100.0	100.0	100.0	100.0	100.0	100.0
Illiterate	53.2	53.0	53.6	45.0	18.5	62.9
Non-Formal	8.3	6.4	11.0	8.7	12.5	10.9
Primary	25.4	27.7	22.0	23.8	48.7	15.5
Above Primary	13.1	12.9	13.4	22.4	20.2	10.7

Summary Table III.7 (Cont'd)

Level of Education and Sex	Total Population in Agricultural Households	Non-Holders	All Holders	Type of Holding		
				Crop Only	Livestock Only	Crop & Livestock
Female						
Total	27,223	22,973	4,249	287	1,394	2,568
	100.0	100.0	100.0	100.0	100.0	100.0
Illiterate	65.8	64.3	74.1	42.2	67.7	81.2
Non-Formal	6.0	6.0	6.0	-	6.2	6.4
Primary	19.3	20.7	12.2	24.4	-	8.4
Above Primary	8.9	9.1	7.8	33.1	9.4	4.0
Urban						
Male + Female						
Total	57,359	45,637	11,721	446	8,825	2,451
	100.0	100.0	100.0	100.0	100.0	100.0
Illiterate	21.4	17.4	36.8	41.0	34.2	45.7
Non-Formal	6.4	4.9	12.1	12.3	12.0	12.4
Primary	32.8	35.0	24.4	19.3	25.4	22.0
Above Primary	39.4	42.7	26.6	27.4	28.5	19.9
Male						
Total	27,946	19,245	8,701	393	6,335	1,974
	100.0	100.0	100.0	100.0	100.0	100.0
Illiterate	15.3	9.1	29.0	35.6	25.7	38.5
Non-Formal	6.4	3.8	12.3	12.7	12.1	13.0
Primary	34.8	38.3	27.2	21.9	28.1	25.5
Above Primary	43.4	48.9	31.4	29.8	34.1	23.0
Female						
Total	29,412	26,392	3,020	53	2,490	477
	100.0	100.0	100.0	100.0	100.0	100.0
Illiterate	27.1	23.5	59.3	81.1	55.7	75.7
Non-Formal	6.3	5.7	11.4	9.4	11.8	9.6
Primary	30.9	32.6	16.4	-	18.4	8.0
Above Primary	35.7	38.3	12.9	9.4	14.2	6.7

* Percentages of persons who do not state their Literacy Status are not shown in the table.

urban dwellers (78.6 percent) are nearly two times compared to that of rural areas (40.7 percent). The census result also shows that, relatively more males than females are found to be literate in both rural and urban areas. For instance in rural areas 46.8 percent of males against 34.2 percent of females were literate.

About 7 percent and 6 percent, respectively, of the rural and the urban population aged 10 years and over in agricultural households were able to read and write through non-formal education. Those who attained primary level education make up 22.5 percent and 32.8 percent of the population in agricultural households of the rural and urban areas, respectively. On the other hand, small proportion (only 11.1 percent) of the population in the rural areas of agricultural households and a substantial proportion (39.4 percent) of the population in the urban agricultural households have attained an educational level of above primary school.

The proportion of literates is higher for the agricultural holders than that of non-holders in urban areas. On the other hand, except among rural females, those who are only livestock holders are relatively better off in terms of level of education than those engaged in crop only and those practicing crop and livestock.

3.4 Work Status of the Population in Agricultural Households

All persons aged 10 years and over who are members of the agricultural households in both urban and rural areas were asked whether or not they have been engaged in productive activity during most of the 12 months prior to the census date. In the census economic or productive activity was defined in terms of production of goods and services that fall within the United Nations System of National Accounts (SNA) production boundary (ILO, 1990). Hence, in the 2001/2002 Agricultural Sample Enumeration, economic activity or productive activity is defined as a work that involves the production of goods and/or services for sale or exchange and production of certain products for own consumption. According to the above general definition, economic activity covers production of goods and services intended for sale on the market, production of other goods and services such as government activities; production and processing of primary products (agriculture, hunting, fishing, forestry and logging; and mining and quarrying) for own consumption, processing of primary products

by the producers themselves, production of other commodities where part of it is sold on the market; and own account construction and fixed asset formation (expected life use of one year or more). Such economic activities could be performed for an individual, family or private enterprise, government establishment or public organization. The remuneration may be on daily, weekly, monthly, yearly or contract basis.

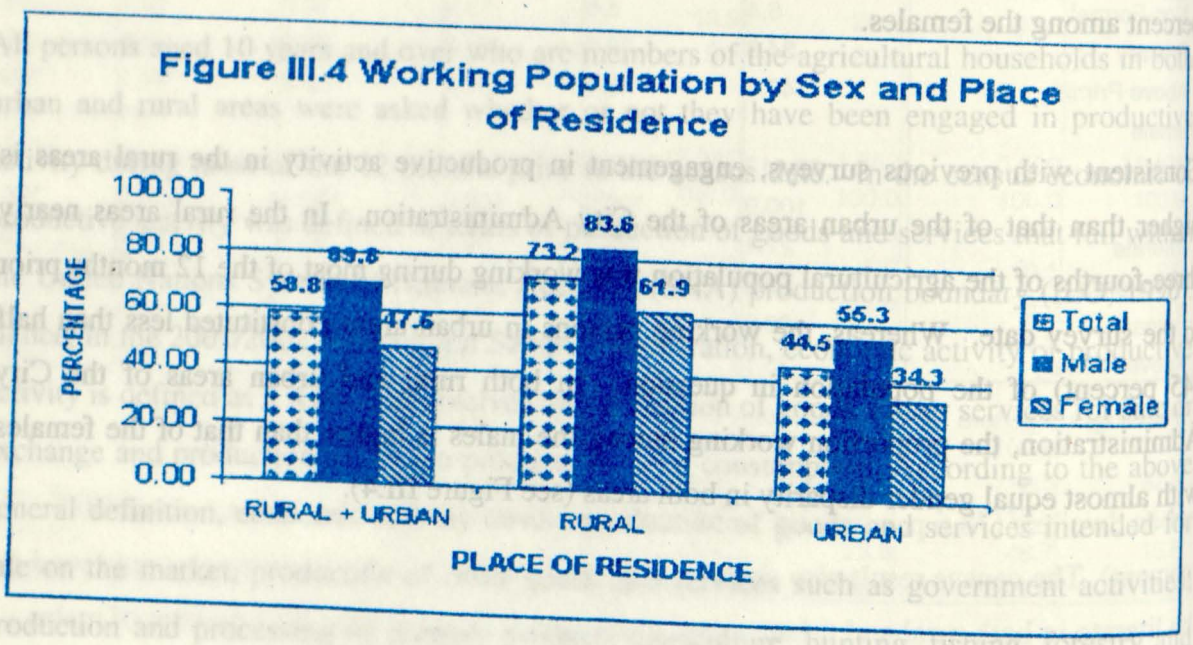
For a person to be counted as working during most of the last 12 months, he/she has to be engaged in any kind of economic activity at least for half of the reference year. In the case of persons engaged in agriculture, it was decided to consider them as being engaged in economic activity during most of the last 12 months if they have worked during most of the main agricultural season of the reference year. The distribution of the population aged 10 years and over in agricultural households of Addis Ababa City Administration classified by sex, age group work status, and is presented in Summary Table III.8. According to the census result, out of the total 113,948 persons aged 10 years and over who are members of the agricultural households in the City Administration, 58.8 percent were reported to have engaged in some kind of productive activity during the 12 months prior to the enumeration date. The proportion of working population among the male is 69.8 percent against 47.6 percent among the females.

Consistent with previous surveys, engagement in productive activity in the rural areas is higher than that of the urban areas of the City Administration. In the rural areas nearly three-fourths of the agricultural population was working during most of the 12 months prior to the survey date. Whereas, the working persons in urban areas constituted less than half (45 percent) of the population in question. In both rural and urban areas of the City Administration, the proportion working among the males is higher than that of the females with almost equal gender disparity in both areas (see Figure III.4).

Summary Table III.8 Percentage Distribution of Population Aged 10 Years and Over in Agricultural Households by Sex, Age Group, Working Status* and Place of Residence

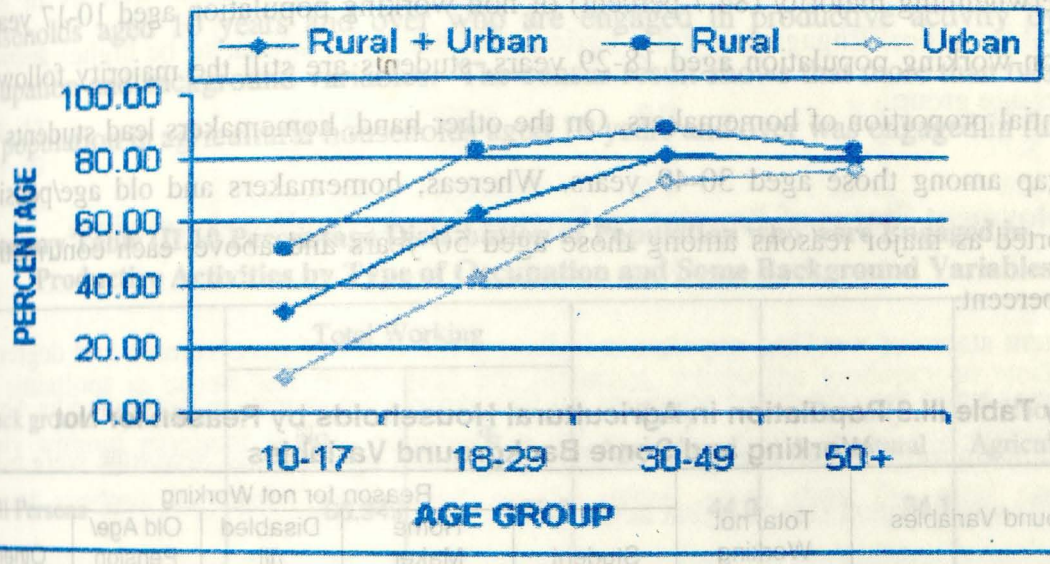
Sex/Age Group	RURAL + URBAN				RURAL				URBAN			
	Total		Percent Working	Percent Not Working	Total		Percent Working	Percent Not Working	Total		Percent Working	Percent Not Working
	No	%			No	%			No	%		
Total												
All Ages	113,948	100	58.8	41.0	56,589	100	73.2	26.7	57,359	100	44.5	55.1
10-17	35,917	100	31.9	67.5	18,517	100	51.1	48.8	17,401	100	11.6	87.5
18-29	38,310	100	62.2	37.7	19,291	100	81.8	18.2	19,019	100	42.3	57.6
30-49	24,302	100	80.4	19.6	12,006	100	88.6	11.4	12,296	100	72.4	27.7
50+	15,418	100	78.6	21.2	6,776	100	81.7	17.9	8,642	100	76.2	23.7
Male												
All Ages	57,313	100	69.8	30.0	29,367	100	83.6	16.3	27,946	100	55.3	44.3
10-17	17,784	100	39.4	60.0	9,337	100	61.7	38.3	8,448	100	14.8	84.9
18-29	19,635	100	72.7	27.2	10,324	100	91.8	8.2	9,311	100	51.6	48.3
30-49	11,440	100	94.9	5.1	6,144	100	96.9	*	5,296	100	92.6	7.4
50+	8,454	100	93.0	6.9	3,563	100	94.6	5.0	4,891	100	91.7	8.3
Female												
All Ages	56,635	100	47.6	52.2	27,223	100	61.9	38.0	29,412	100	34.3	65.4
10-17	18,133	100	24.6	74.9	9,180	100	40.3	59.5	8,953	100	8.5	90.7
18-29	18,675	100	51.1	48.8	8,967	100	70.2	29.8	9,708	100	33.4	66.5
30-49	12,863	100	67.4	32.5	5,862	100	79.9	20.0	7,000	100	57.0	43.0
50+	6,964	100	61.2	38.4	3,213	100	67.3	32.2	3,751	100	56.0	43.8

* Percentages of persons who do not state their Work Status are not shown in the table.



As can be seen from Figure III.5, engagement in productive activity is highest for persons of middle age (30-49 years). As expected, the proportion working is lowest for the children aged 10-17 years. This phenomenon holds true for both the males and the females in rural as well as in urban areas. One special feature in urban areas is that the proportion of the working children aged 10-17 years is very low compared to those persons in the upper age groups (see Figure III.5).

Figure III.5 Proportion Working by Age Group and Place of Residence



3.5 Reason for Not Working

The distribution of non-working population in agricultural households by main reason for not working and selected background variables is presented in Summary Table III.9. In both the rural and the urban areas of the City Administration, the two most important reasons for not working are homemaking and attending school or being a student, together constituting 89.1 percent (28.2% + 60.9%). About 3 Percent of non-working persons reported old age/pension as a reason. Disability or illness has very little contribution. The

patterns, in the urban and the rural areas are similar, with higher proportion of students in urban areas.

The distribution of reasons for not working among the male population is different from that of the females. Students make up the overwhelming majority (82.4 percent) among non-working males, while homemaking came in to picture (42 percent) next to students among the females.

The pattern of reason for not working varies as age increases. As expected, students make up the overwhelming majority (84.7 percent) of non-working population aged 10-17 years. Among non-working population aged 18-29 years, students are still the majority followed by substantial proportion of homemakers. On the other hand, homemakers lead students by a wider gap among those aged 30-49 years. Whereas, homemakers and old age/pension were reported as major reasons among those aged 50 years and above, each contributing about 43 percent.

Summary Table III.9 Population in Agricultural Households by Reason for Not Working and Some Background Variables

Back ground Variables	Total not Working	Reason for not Working				
		Student	Home Maker	Disabled /ill	Old Age/ Pension	Others
All Persons	46,747	60.9	28.2	1.1	3.1	6.8
Place of Residence						
Rural	15,126	52.7	37.5	*	4.0	4.3
Urban	31,621	64.8	23.7	0.9	2.6	7.9
Sex						
Male	17,183	82.4	4.4	1.2	2.7	9.4
Female	29,564	48.4	42.0	1.1	3.3	5.3
Age						
10 - 17	24,260	84.7	13.5	*	*	1.0
18 - 29	14,461	53.8	31.7	0.9	*	13.6
30 - 49	4,764	2.6	81.7	2.0	0.8	13.0
50+	3,261	-	43.8	3.1	42.6	10.5

3.6 Type of Occupation for Working population

Data on type of occupation was collected for all persons who have reported to have been engaged in productive activity during most of the last 12 months. The response to the question is classified as fully agricultural, partially agricultural and non-agricultural activities. This information provides the extent to which the agricultural population is engaged in other activities.

Summary Table III.10 presents the distribution of the population in the agricultural households aged 10 years and over who are engaged in productive activity by type of occupation and background variables. The census result shows that more than two-fifths of the population in agricultural households aged 10 years and over was engaged in fully

Summary Table III.10 Percentage Distribution of Population who were Engaged in Productive Activities by Type of Occupation and Some Background Variables

Back ground Variables	Total Working		Fully Agricultural	Partially Agricultural	Non Agricultural
	No.	%			
All Persons	66,949	100.0	44.0	34.1	21.9
Place of Residence					
Rural	41,406	100.0	50.3	34.2	15.5
Urban	25,543	100.0	33.8	33.9	32.3
Sex					
Male	40,007	100.0	52.0	27.5	20.5
Female	26,943	100.0	32.1	43.9	24.0
Age					
10 - 17	11,471	100.0	56.7	28.5	14.8
18 - 29	23,828	100.0	39.9	25.3	34.8
30 - 49	19,531	100.0	36.6	42.9	20.5
50+	12,119	100.0	51.8	42.6	5.6

agricultural activities, while about 34.1 percent of the population was engaged in partially agricultural activities. The proportion of population engaged in non-agricultural activities was sizable, amounting about 22 percent. As expected, in urban areas of the City Administration the proportion engaged in partial or non-agricultural activities was much higher than those who were engaged in fully agricultural activities.

Some variation in the pattern of type of occupation was observed among the males and the females. The males appear to be engaged more in fully agricultural activities, while females tend to be engaged more in partially agricultural activities. Higher proportion of females than males tend to get engaged in partially agricultural activities as well as in non-agricultural activities. Engaging in fully agricultural activities appear to be higher at lower and higher age group.

3.7 Employment Status of Population Engaged in Agricultural Activities

Employment status of working population indicates the level of involvement and degree of decision-making in the respective activities. In this sample enumeration for the Addis Ababa City Administration persons engaged in fully or partially agricultural activities were asked to report the employment status in that activity.

According to the data presented in Summary Table III.11, unpaid family workers constituted the highest proportion (41.7 percent) of the population in agricultural households who are engaged in agricultural activities. About 36 percent of the population were own account workers working in their own farms alone or with the help of family members but with out hiring labour. The proportion who hire others in their farm are about 13 percent, showing relatively better capacity of the City Administration's agricultural industry to create employment opportunity for non-holders. On the other hand, about 10 percent of the population in agricultural households engaged in agricultural activities was employees.

Summary Table III.11 Percentage Distribution of Population in Agricultural Households Engaged in Agricultural Activities by Employment Status and Some Background Variables

Place of Residence Age/Sex	Total Engaged in Agricultural Activities		Employer	Own Account Worker	Employee	Unpaid Family Worker
	No.	%				
All Persons	52,275	100.0	12.9	35.6	9.7	41.7
Place of Residence						
Rural	34,979	100.0	16.3	23.5	12.0	47.9
Urban	17,296	100.0	5.9	60.0	4.9	29.0
Sex						
Male	31,804	100.0	16.4	42.4	13.6	27.2
Female	20,471	100.0	7.4	24.9	3.5	64.2
Age						
10 - 17	9,773	100.0	0.5	2.5	25.7	71.2
18 - 29	15,531	100.0	9.3	21.2	11.9	57.0
30 - 49	15,531	100.0	16.5	52.1	3.2	27.9
50+	11,441	100.0	23.3	60.7	1.7	14.2

The situations in urban and rural areas are different, where the tendency to work for the family without payment is less common in urban areas. Also, being self-employed/own account workers is more pronounced in the urban areas than the rural areas. The overwhelming majority (64.2 percent) of female respondents in agricultural households who are engaged in agricultural activities are unpaid family workers, while self-employment (own account) is the common type of employment status (42.4 percent) among males, showing the dominance of males over females in the tradition/culture of the society.

Sex	Residence	Total Engaged in Agricultural Activities		Employer	Own Account Worker	Employee	Unpaid Family Worker
		No.	%				
		52,275	100.0	12.9	35.8	9.7	41.7
		34,979	100.0	16.3	23.5	12.0	47.9
		17,296	100.0	5.9	60.0	4.9	29.0
		31,804	100.0	16.4	42.4	13.8	27.2
		20,471	100.0	7.4	24.9	3.5	64.2
		9,773	100.0	0.5	2.5	25.7	71.2
		15,531	100.0	9.3	21.2	11.9	57.0
		15,531	100.0	16.5	52.1	3.2	27.9
		11,442	100.0	23.3	60.7	1.7	14.2

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENTS OF VARIATION FOR SELECTED SOCIO-ECONOMIC CHARACTERISTICS OF THE POPULATION IN AGRICULTURAL HOUSEHOLDS VARIABLES

Annex Table 3.1

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENTS OF VARIATION FOR SELECTED SOCIO-ECONOMIC CHARACTERISTICS OF THE POPULATION IN AGRICULTURAL HOUSEHOLDS VARIABLES

Annex Table 3.1

Annex Table 3.1 Distribution of Population in Agricultural Household by Status and Type of Holding, Percent Female, Rural and Urban Areas, Zone and Wereda

Geographic Area	Total Agricultural Population			All Non-Holders			Agricultural Holders											
							All Holders			Type of Holdings								
										Crop Only			Livestock only			Crop & Livestock		
	Total	SE	CV	Total	SE	CV	Total	SE	CV	Total	SE	CV	Total	SE	CV	Total	SE	CV
Addis Ababa City Administration																		
Rural + Urban	148,575	20,153	14	120,573	15,729	13	28,002	4,468	16	1,798	213	12	12,325	978	8	13,880	3,675	26
Rural	79,056	19,993	25	62,776	15,585	25	16,281	4,446	27	1,352	202	15	3,500	907	26	11,428	3,668	32
Urban	69,518	2,538	4	57,797	2,123	4	11,721	444	4	446	68	15	8,825	366	4	2,451	216	9

Annex Table 3.1 Distribution of Population in Agricultural Households by Status and Type of Holding, Percent Female, Rural and Urban Areas, Zone and Woreda

Geographic Area	Total Agricultural Population			Agricultural Households											
				All Non-Holders			All Holders			Type of Holding					
										Crop Only			Livestock only		
	Total	SE	CV	Total	SE	CV	Total	SE	CV	Total	SE	CV	Total	SE	CV
Addis Ababa City Administration															
Rural + Urban	448,575	20,153	5	120,573	15,729	13	28,002	4,488	16	1,758	213	12	12,352	978	8
Rural	79,068	19,983	25	62,776	15,585	25	16,291	4,445	27	1,362	202	15	3,500	907	25
Urban	69,518	2,528	4	57,797	2,153	4	11,721	444	4	396	68	15	8,852	366	4

Geographic Area	Crop & Livestock			Total Holders		
	Total	SE	CV	Total	SE	CV
Addis Ababa City Administration						
Rural + Urban	11,422	1,888	16	73,688	3,675	25
Rural	8	0	0	8	0	0
Urban	2,451	216	9			

CHAPTER IV

LAND UTILIZATION

1. INTRODUCTION

From agricultural point of view, land is an indispensable factor for production of crops, raising of livestock and other ancillary agricultural activities. The proper utilization of land holdings under different components will contribute to the development of the nation's agricultural products. In order to scrutinize this development as well as farmers' attitude towards land use practices, a timely and comprehensive land use data has paramount importance for governmental, non-governmental and private sector data users. According to the international recommendations for Agricultural Census, the total land use is categorized into five main land use types, which are land under temporary crops, land under permanent crops, grazing land, fallow land, woodland and land for other purposes. Based on these major land use categories, the 2001/02 (1994 E.C.) Ethiopian Agricultural Sample Enumeration (EASE) provides quantitative information on land utilization at Regional, Zonal and Wereda levels.

The 2001/02(1994 E.C.) EASE covered all land holdings i.e., rural and urban holdings. In urban areas, size of land holdings was restricted to only cropland area and urban agricultural households were required to have a minimum size of 250 square meters in order to be covered in the census. On the other hand, in the rural areas land use data were collected without any size limitation of land holdings.

The coverage of land use data items in rural private holdings included all the categories of land used. However, in urban private holdings, the coverage of land use data item is limited to cropland area, which includes land under temporary and permanent crops. To have consistent and comparable land use information, a standard concepts and definitions were applied for the aforementioned data items.

In the 2001/02 EASE, a number of land use data was collected based on objective and subjective methods of enumeration. That is, in rural private holdings land area was obtained by forwarding relevant questions on size of land to the holder and by objective area

measurement using compass, measuring tape and programmable calculator. On the other hand, in urban private holdings data on land area was collected subjectively by interviewing the holder /responsible operator/ in standard or metric units (in some cases, local measuring units were reported).

This chapter deals with the data on land holding for rural and urban private holdings on land use findings from the results of the agricultural census for Addis Ababa City Administration. It covers data on farm holdings by type and size of land holdings; population in agricultural households both in rural and urban areas of private holding that are disaggregated by size of land holdings; land area and fragmentation by type of land use and size of holding; cropland area by crop categories and finally it treats data on area under land tenure systems.

Furthermore, since Addis Ababa is an Administration with a small area size, only tables providing different results at Administration level are presented in statistical Tables 4.1-4.7. Moreover, estimates, standard errors (SE) and coefficient of variations (CV) are given in Annex Tables 4.1-4.4.2 for some variables.

2. FARM HOLDINGS BY TYPE AND SIZE OF LAND HOLDINGS

Farm holding is referred to all land or livestock holdings, which are mainly used for both crop and livestock production. Depending on the type of activities, an agricultural holder is engaged with farm holding has been categorized into three groups. These are "crop only" (crop production), "livestock only" and " both crop and livestock" (the production of both crop and livestock). All three types of holdings are practiced in both rural and urban private holdings. Furthermore, the total area of land holdings under different uses is classified into seven-area size of holdings in hectare. The classification is given as follows:

i- Under 0.10 hectare,
ii- 0.10-0.50 hectare,
iii- 0.51-1.00 hectare,
iv- 1.01-2.00 hectares,
v- 2.01-5.00 hectares,
vi- 5.01-10.00 hectares, and
vii- Above 10 hectares.

Hence, the number of agricultural holders is disaggregated by type and previous size of land holdings. From this point of view, one can realize that the total number of farm holdings within a given size of land holding is equal in magnitude with the corresponding reported number of agricultural holders.

The total number of agricultural holders that are involved in all types of farm-holding activities and the reported land use of Addis Ababa City Administration was estimated to be about 17,775. Out of the total holders those who are engaged in crop production, livestock, and both crop and livestock productions were estimated to be about 1,747(9.8%), 1,829 (10.3%) and 14,199 (79.9%) respectively. In general, most of agricultural holders (28.3%) had a total size of land holdings that ranges from 2.01 to 5.00 hectare and followed by 20.6% of the total holders with area size of holding that fall under 0.1 hectare. Moreover, with regard to type of farm activities, holders that are engaged in "crop only", "livestock only" and "both crop and livestock production" are reported to have land holdings of less than 0.1 hectare (42.2% for " crop only"), the same size of less than 0.1 hectare (77.8% for "livestock only" and 2.01 to 5.00 hectare (35.1% for crop and livestock production), respectively (See Summary Table IV.1 and Figure IV.1).

In rural areas of Addis Ababa City Administration, the total number of agricultural holders was estimated to be 14,878 (83.7%) and this total is composed of holders engaged in crop production (8.7%), livestock (12.3%) and holders that are engaged in crop and livestock production (79.0%). In general, the majority of agricultural holders (31.0%) had a total size of land holdings that ranges from 2.01 to 5.00 hectare, followed by size of land holdings that fall within 1.01 to 2.00 hectare (20.9%). Similarly, agricultural holders that are involved in crop, livestock, and crop and livestock production are estimated to have an area size of holdings that is below 0.10 hectare (39.0% for "crop only"), the same holding size of less than 0.1 hectare (77.8% for "livestock Only") and 2.01 to 5.00 hectare (38.9% for "crop and livestock production"), respectively (For details refer to Summary Table IV.1).

On the other hand, in urban areas of the Addis Ababa City Administration, the type of land use considered during the census were only crop field i.e., temporary and permanent crops.

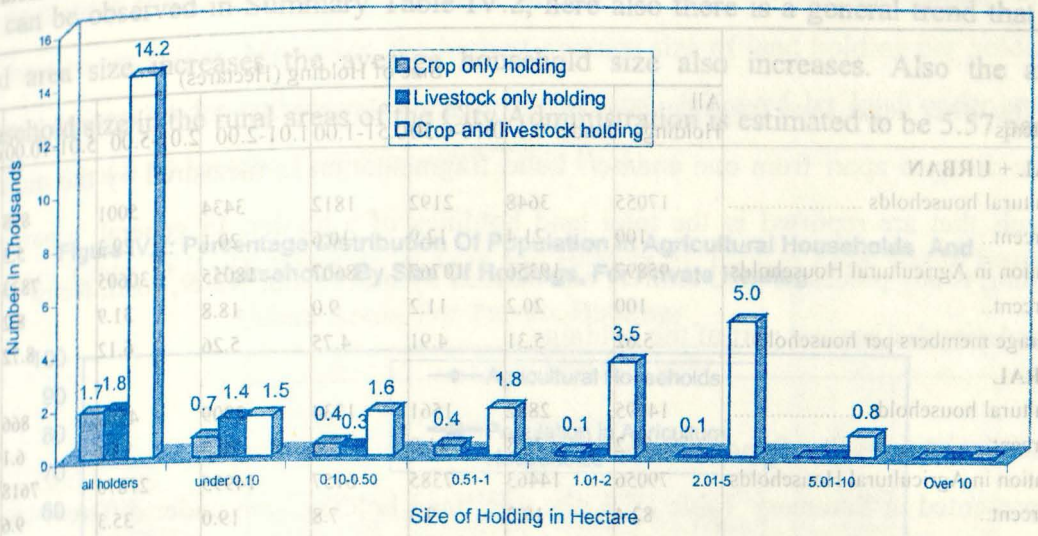
Thus, the census result indicates that 2,897 agricultural holders (16.3%) are reported in the urban areas of the City Administration. Of this total, 15.4 percent are only crop growing holders while the remaining 84.6 percent are practicing both crop and livestock production. Most of the holders (26.6%) in the urban areas had a land holding that is under 0.10 hectare. Among the total 446 (15.4%) crop-producing holders, 51.6% were holders with a holding size of below 0.10 hectare, followed by those between 0.1and 0.50 hectare (26.5%). Furthermore, among holders with crop and livestock production, the highest number is reported with holding size of below 0.10 hectare (22.0%) followed by holding size below 0.1 hectare (15.6%). See Summary Table IV.1.

Summary Table IV.1 Distribution Of Agricultural Holders By Type And Size Of Holdings Rural And Urban Areas, For Private Holdings

Items	All Holders	Size of holding in hectare						
		Under 0.1	0.1-0.50	0.51-1.00	1.01-2.00	2.01-5.00	5.01-10	over 10
RURAL + URBAN								
All holders	17775	3666	2411	2182	3634	5035	808	38
Percent..	100	20.6	13.6	12.3	20.4	28.3	4.5	0.2
Crop only holding	1747	738	440	373	146	51	0	0
Percent..	9.8	42.2	25.2	21.4	8.4	2.9	0.0	0.0
Livestock only holding	1829	1423	325	*	*	*	0	0
Percent..	10.3	77.8	17.8	*	*	*	0.0	0.0
Crop and livestock holding	14199	1505	1646	1761	3461	4980	808	38
Percent..	79.9	10.6	11.6	12.4	24.4	35.1	5.7	0.3
RURAL								
All holders	14878	2896	1762	1692	3105	4613	780	*
Percent..	83.7	19.5	11.8	11.4	20.9	31.0	5.2	*
Crop only holding	1301	508	322	*	123	35	0	0
Percent..	8.7	39.0	24.8	*	9.5	2.7	0.0	0.0
Livestock only holding	1829	1423	325	*	*	*	0	0
Percent..	12.3	77.8	17.8	*	*	*	0.0	0.0
Crop and livestock holding	11748	965	1115	1330	2954	4574	780	*
Percent..	79.0	8.2	9.5	11.3	25.1	38.9	6.6	*
URBAN								
All holders	2897	770	649	489	529	422	28	*
Percent..	16.3	26.6	22.4	16.9	18.3	14.6	1.0	*
Crop only holding	446	230	118	59	*	*	0	0
Percent..	15.4	51.6	26.5	13.2	*	*	0.0	0.0
Crop and livestock holding	2451	540	530	430	506	406	28	*
Percent..	84.6	22.0	21.6	17.5	20.6	16.6	1.1	*

Note: *Those holders with "Livestock only" reported land holding that might include grazing, woodland or land for other purposes.*

Figure IV.1: Distribution Of Agricultural Holders By Type And Size of Holdings, For private Holding



3. POPULATION IN AGRICULTURAL HOUSEHOLDS AND SIZE OF LAND HOLDING

The census data shows that the total population in agricultural households that depend on agricultural holdings are estimated and classified by area size of holdings. However, the total area size of holdings that are associated with agricultural households does not necessarily indicate the owner of the land, since the total land holding might include other land tenure systems at the time of enumeration.

The population in agricultural households is composed of agricultural and non-agricultural holders residing within the agricultural households. As the data in Summary Table IV.2 depicts, the total population in agricultural households in the City Administration were estimated to be about 95,897. The results also indicate that out of the total population in agricultural households, 17,775 were agricultural holders found in 17,055 agricultural households that have reported land holding. As shown in Summary Table IV.2, about 29.3% of agricultural households reported to have an estimated land area size between 2.01 and 5.00 hectare. This is followed by 21.4% of agricultural households who reported to have an area size of below 0.10 hectare and about 20.1% to have a land area size that fall between 1.01 to 2.00 hectares. The data also indicated that the average household size for the City Administration was estimated to be 5.62 persons or 562 members per 100 agricultural households.

Summary Table IV.2: Distribution Of Population In Agricultural Households And Agricultural Households By Size Of Holdings In Rural And Urban Areas, For Private Holdings

Items	Size of Holding (Hectares)							
	All Holdings	Under 0.1	0.10-0.50	0.51-1.00	1.01-2.00	2.01-5.00	5.01-10.00	over 10
RURAL + URBAN								
Agricultural households	17055	3648	2192	1812	3434	5001	898	70
Percent..	100	21.4	12.9	10.6	20.1	29.3	5.3	0.4
Population in Agricultural Households	95897	19356	10767	8607	18055	30605	7833	674
Percent..	100	20.2	11.2	9.0	18.8	31.9	8.2	0.7
Average members per household	5.62	5.31	4.91	4.75	5.26	6.12	8.72	9.63
RURAL								
Agricultural households	14195	2882	1561	1334	2909	4583	866	61
Percent..	83.2	20.3	11.0	9.4	20.5	32.3	6.1	0.4
Population in Agricultural Households	79056	14463	7385	6157	14995	27876	7618	562
Percent..	82.4	18.3	9.3	7.8	19.0	35.3	9.6	0.7
Average members per household	5.57	5.02	4.73	4.62	5.15	6.08	8.80	9.21
URBAN								
Agricultural households	2860	766	631	478	526	418	32	.
Percent..	16.8	26.8	22.1	16.7	18.4	14.6	1.1	.
Population in Agricultural Households	16841	4893	3381	2450	3060	2729	216	.
Percent..	17.6	29.1	20.1	14.6	18.2	16.2	1.3	.
Average members per household	5.89	6.39	5.36	5.13	5.82	6.53	6.75	.

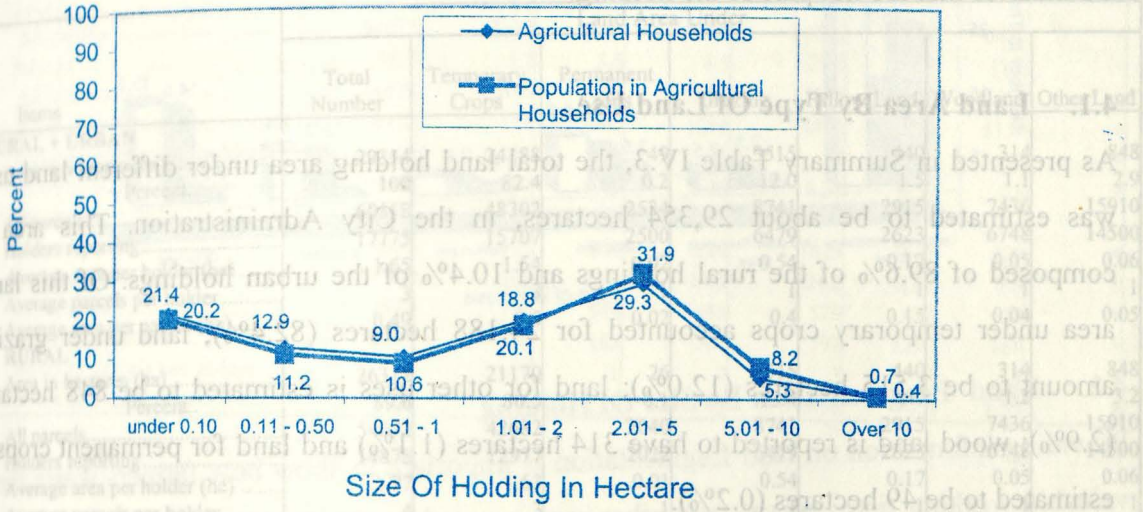
Note: *In the urban areas, the number of agricultural households, holders and all members presented in Chapter III are considered as agricultural households whether they have or do not have land holdings. Whereas in this chapter the number of agricultural households are those who reported to have land holdings. Due to this reason estimate of agricultural households, holders and all members are slightly different in these two chapters.*

Furthermore, the largest average household size (9.63 persons) was reported for those households with an average area size of holding of more than 10.00 hectares. The result shows that there is a general trend of increase in average household size with an increase in land holdings (See Summary Table IV.2 and Figure IV.2).

In the rural areas of the City Administration, the total (79,056) population is reported to be in 14,195 agricultural households. About 32.3 percent of the agricultural households are operating on the land area size that ranges from 2.01 to 5.00 hectare. Few numbers of

households (6.1%) are reported to operate on an average land holding of over 5.0 hectares. As can be observed in Summary Table IV.2, here also there is a general trend that as the land area size increases the average household size also increases. Also the average household size in the rural areas of the City Administration is estimated to be 5.57 persons.

Figure IV.2: Percentage Distribution Of Population in Agricultural Households And Households By Size Of Holdings, For Private Holding



The contribution of the urban areas to the total agricultural households and population in agricultural households is estimated to be 16.8% and 17.6%, respectively. Compared to the rural areas of the City Administration, larger numbers of urban agricultural households (about 26.8%) are reported to operate on land area size of below 0.10 hectare. Furthermore, the average household size of urban areas is 5.89 persons which is higher than that reported in the rural areas (See Summary Table IV.2).

4. LAND AREA AND FRAGMENTATION BY TYPE OF LAND USE AND SIZE OF HOLDING

Land area is referred to area under all private holdings. In general, the total area of a holding consists of land in the following classifications:

i. Agricultural land (that includes land under temporary as well as permanent crops, fallow land and grazing land),

ii. Woodland or forest, and

iii. All other land that is, unused and undeveloped potentially productive land, homestead, etc.

On the other hand, land fragmentation is the breaking down of land holdings into parts with some distance apart from one another. Land fragmentation is measured by the number of parcels that are reported in the total land holdings of a holder. In general, a parcel of a holding is any pieces of land entirely surrounded by other land, water, road, forest or other boundaries that are not part of the holding.

4.1. Land Area By Type Of Land Use

As presented in Summary Table IV.3, the total land holding area under different land uses was estimated to be about 29,354 hectares, in the City Administration. This area is composed of 89.6% of the rural holdings and 10.4% of the urban holdings. Of this land, area under temporary crops accounted for 24,188 hectares (82.4%); land under grazing amount to be 3,515 hectares (12.0%); land for other uses is estimated to be 848 hectares (2.9%); wood land is reported to have 314 hectares (1.1%) and land for permanent crops is estimated to be 49 hectares (0.2%).

The census result indicated that out of the total estimated holders (17,775) very great number of them (15,707) used their holding to cultivate temporary crops, which is followed by 14,500 holders who had used their holding for other land purposes. The number of holders who had reported woodland was also observed to be 6,748. It was reported that 6,479 and 2,623 holders used their land as grazing and fallow during the census year respectively. On the other hand, the number of holders who had used their land for cultivating permanent crops was only 2,500. In general, the average size of land holding per holder was estimated to be 1.65 hectare. The result also shows that the highest average size of land holding area per holder is ascribed for the cultivation of temporary crops that was estimated as 1.54 hectare and followed by grazing land, which is about 0.54 hectare. (For details, refer to Summary Table IV.3 and Figure IV.3).

In rural private holdings, the total land area under different land uses was estimated to be 26,312 hectares contributing 89.6% to the total land area. Out of this total land area, the

highest (80.5%) and lowest (0.1%) proportions of areas were used for cultivating temporary and permanent crops, respectively. The average size of land holding was estimated to be 1.77 hectare per holder. Moreover, the highest average size of land holding per holder was reported as area under temporary crops (1.63 hectare), followed by land under grazing, which is about 0.54 hectare (See Summary Table IV.3).

Summary Table IV.3. Distribution of Area and Holders by Type of Land Use in Rural And Urban Areas, For Private Holdings

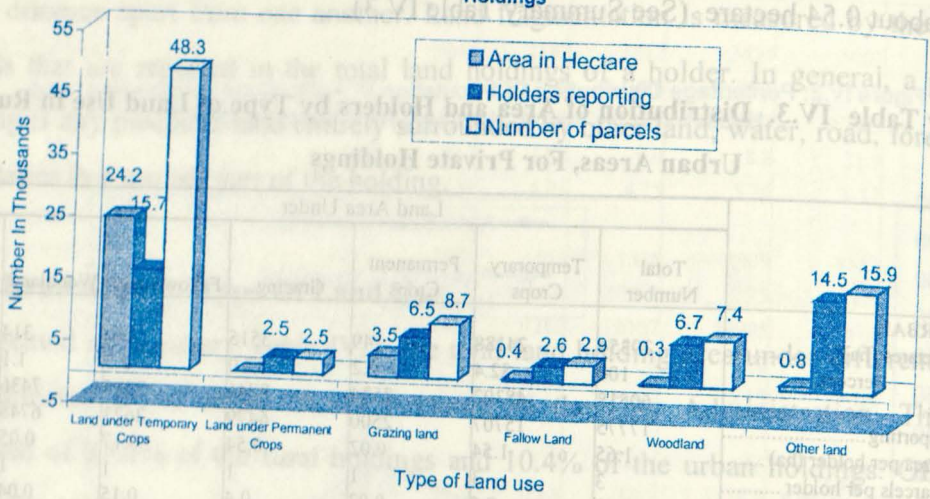
Items	Land Area Under						
	Total Number	Temporary Crops	Permanent Crops	Grazing	Fallow Land	Woodland	Other Land
RURAL + URBAN							
Area in hectares (ha)	29354	24188	49	3515	440	314	848
Percent..	100	82.4	0.2	12.0	1.5	1.1	2.9
All parcels	60518	48302	2534	8741	2915	7436	15910
Holders reporting	17775	15707	2500	6479	2623	6748	14500
Average area per holder (ha)	1.65	1.54	0.02	0.54	0.17	0.05	0.06
Average parcels per holder	3	3	1	1	1	1	1
Average area per parcel (ha)	0.49	0.5	0.02	0.4	0.15	0.04	0.05
RURAL							
Area in hectares (ha)	26312	21170	26	3515	440	314	848
Percent..	89.6	80.5	0.1	13.4	1.7	1.2	3.2
All parcels	54672	42682	2040	8741	2915	7436	15910
Holders reporting	14878	12977	2022	6479	2623	6748	14500
Average area per holder (ha)	1.77	1.63	0.01	0.54	0.17	0.05	0.06
Average parcels per holder	4	3	1	1	1	1	1
Average area per parcel (ha)	0.48	0.5	0.01	0.4	0.15	0.04	0.05
URBAN							
Area in hectares (ha)	3042	3018	24				
Percent..	10.4	99.2	0.8				
All parcels	5846	5620	494				
Holders reporting	2897	2730	478				
Average area per holder (ha)	1.05	1.11	0.05				
Average parcels per holder	2	2	1				
Average area per parcel (ha)	0.52	0.54	0.05				

Note: *The number of holders and parcels that reported under land use classification are not mutually exclusive.*

On the other hand, in urban private holdings, the total land area under both temporary and permanent crops was estimated to be 3,042 hectares contributing 10.4% to the total land area. Out of which temporary crops accounted for 3,018 (99.2%) hectares and permanent crops accounted for only 24 (0.8%) hectares. From the census data one can observe that the majority of urban holders in Addis Ababa City Administration tend to use most of their land for growing temporary crops (2,730), which is followed by permanent crops (478). In general, the average size of land area per holder was estimated to be 1.05 hectare. With

regards to temporary and permanent crops, average size of land holding per holder was estimated to be 1.11 hectare and 0.05 hectare, respectively (See Summary Table IV.3).

Figure IV.3: Distribution of Area, Holders and Parcels by Type of Land use, For Private Holdings



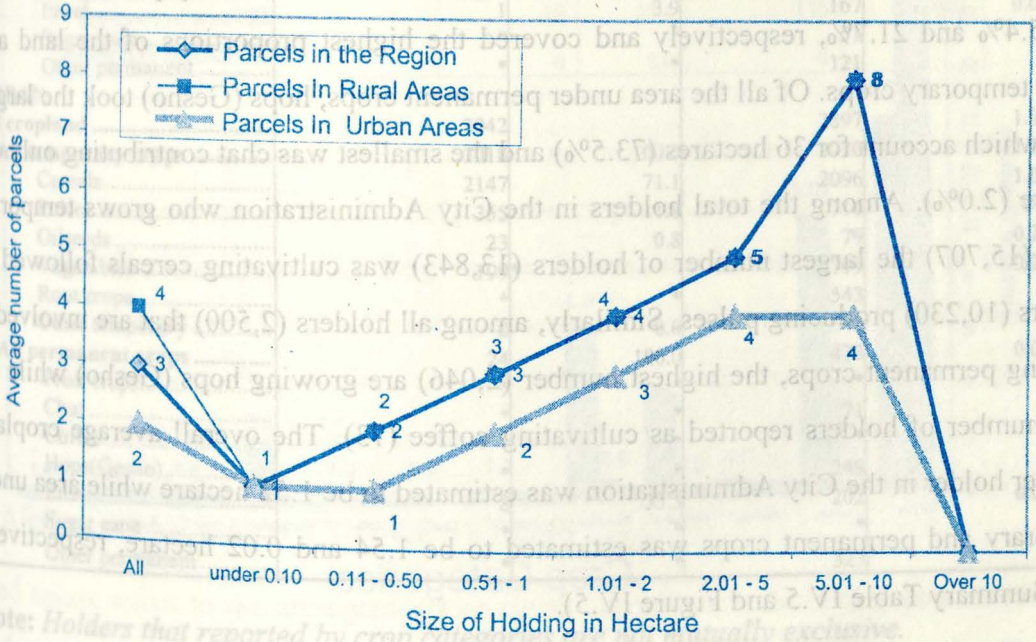
4.2. Land Fragmentation By Size Of Holding

Providing information on land fragmentation is important to show how farmers waste their valuable working time, energy and other resources when the number of parcels are many and very far apart from one another. Taking this into consideration in the 2001/2002 EASE, data on number of parcels was collected for private holding in rural and urban areas of the City Administration. Accordingly, the census result indicates that 60,518 parcels were estimated under the total land holdings in the City Administration, which constituted 90.3% of rural holdings and 9.7% of urban holdings. Of this total parcels, the highest and smallest number of parcels or fragmentation of land are reported in area size of holding 2.01 to 5.00 hectare (44.6%) and 0.10 to 0.50 hectares (6.5%), respectively. Generally, temporary and permanent crops were cultivated on 48,302 parcels and 2,534 parcels, respectively. Moreover, fallow land, woodland, grazing land, and land for other purpose were found on 2,915 parcels, 7,436 parcels, 8,741 parcels, and 15,910 parcels, respectively. However, the number of parcels reported by land use categories is not mutually exclusive. The average size of land area per parcel and average number of parcels per holder were estimated to be about 0.49 hectare and three parcels, respectively (See Summary Table IV.3, Summary Table IV.4 and Figure IV.4).

Summary Table IV.4. Distribution Of Parcels By Size Of Holdings In Rural And Urban Areas, For Private Holdings

Items	All Number	Size of holding in hectare						
		Under 0.1	0.1-0.50	0.51-1.00	1.01-2.00	2.01-5.0	5.01-10	over 10
RURAL + URBAN								
All parcels	60518	4096	3930	5489	13248	26988	6531	*
Percent..	100	6.8	6.5	9.1	21.9	44.6	10.8	*
All holders	17775	3666	2411	2182	3634	5035	808	38
All area in hectare	29354	137	719	1615	5246	15777	5323	*
Average parcels per holder	3	1	2	3	4	5	8	*
Average area per parcels	0.49	0.03	0.18	0.29	0.4	0.58	0.82	*
RURAL								
All parcels	54672	3123	3050	4660	11835	25365	6422	*
Percent..	90.3	5.7	5.6	8.5	21.7	46.4	11.8	*
All holders	14878	2896	1762	1692	3105	4613	780	*
All area in hectare	26312	111	535	1254	4454	14480	5154	*
Average parcels per holder..	4	1	2	3	4	5	8	*
Average area per parcels	0.48	0.04	0.18	0.27	0.38	0.57	0.8	*
URBAN								
All parcels	5846	973	880	829	1413	1623	109	*
Percent..	9.7	16.6	15.1	14.2	24.2	27.8	1.9	*
All holders	2897	770	649	489	529	422	28	*
All area in hectare	3042	26	183	361	792	1297	169	*
Average parcels per holder..	2	1	1	2	3	4	4	*
Average area per parcels	0.52	0.03	0.21	0.44	0.56	0.8	1.55	*

Figure IV.4: Average Number Of Parcels By Size Of Holdings In Rural And Urban Areas, For Private Holdings



In rural areas, the average number of parcels per holder was estimated at 4 parcels and the average area per parcel was 0.48 hectare. On the other hand, in urban areas, the extent of land fragmentation is estimated and the average number of parcels per holder is found to be two while the average size of land area per parcel is 0.52 hectare. For details refer to Summary Table IV.4.

5. CROPLAND AREA BY CROP CATEGORIES

The 2001/02 (1994 E.C.) Agricultural Sample Enumeration covered the area under temporary and permanent crops in Meher/main and Belg seasons. In general, cropland area is described as part of the total land area, which comprises land under temporary and permanent crops.

5.1. Cropland Area Under Meher/Main Season

The data in Summary Table IV.5 illustrates that the total cropland area for Meher/ main season in the City Administration was estimated to be 24,238 hectares, which consisted of 87.4% in rural and 12.6% in urban areas of private holdings. Out of the total cropland, area under temporary crops accounted to 99.8% and the remaining was the share of permanent crops. Considering the area under temporary crops, cereals, followed by pulses, accounted for 75.4% and 21.7%, respectively and covered the highest proportions of the land area under temporary crops. Of all the area under permanent crops, hops (Gesho) took the largest area, which account for 36 hectares (73.5%) and the smallest was chat contributing only one hectare (2.0%). Among the total holders in the City Administration who grows temporary crops (15,707) the largest number of holders (13,843) was cultivating cereals followed by holders (10,230) producing pulses. Similarly, among all holders (2,500) that are involved in growing permanent crops, the highest number (2,046) are growing hops (Gesho) while the least number of holders reported as cultivating coffee (73). The overall average cropland area per holder in the City Administration was estimated to be 1.52 hectare while area under temporary and permanent crops was estimated to be 1.54 and 0.02 hectare, respectively. (See Summary Table IV.5 and Figure IV.5).

Summary Table IV.5. Distribution Of Cropland Area And Holders By Crop Categories In Rural And Urban Areas, For Private Holdings

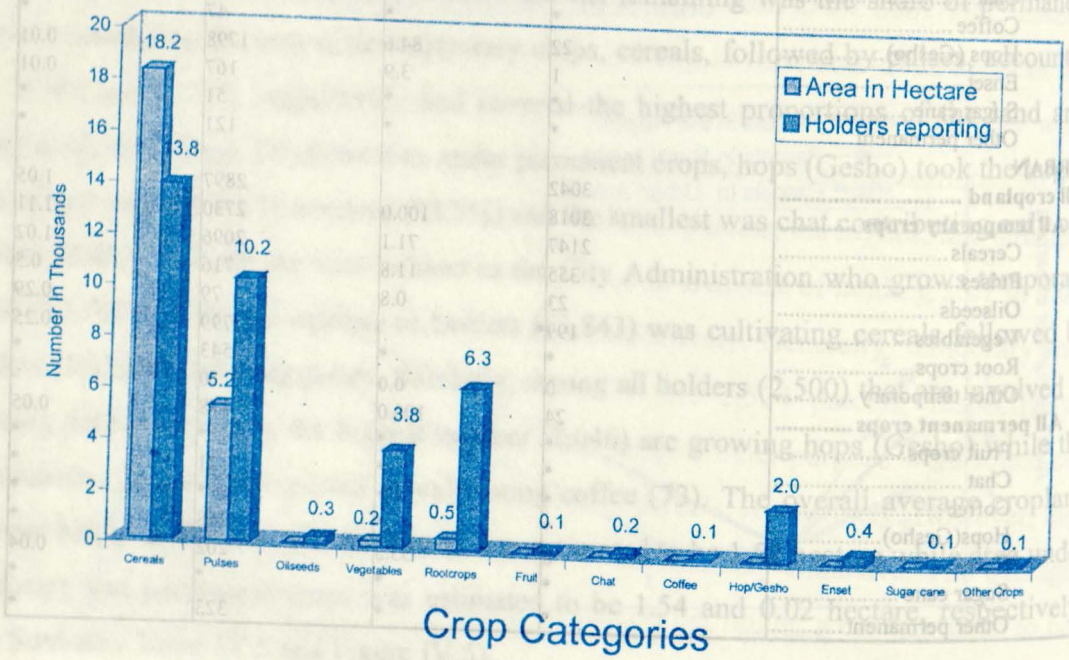
Crop Categories	Area in Hectare		Holders Reporting	Average Area per Holder(in Hectare)
	Number	Percent		
RURAL + URBAN				
All cropland	24238		15946	1.52
All temporary crops	24188	100.0	15707	1.54
Cereals	18225	75.4	13843	1.32
Pulses	5244	21.7	10230	0.51
Oilseeds	37	0.2	308	0.12
Vegetables	231	1.0	3767	0.06
Root crops	451	0.4	6261	0.07
Other temporary	*	*	*	*
All permanent crops	49	100.0	2500	0.02
Fruit crops	*	*	126	*
Chat	1	2.0	181	0.01
Coffee	*	*	73	*
Hops (Gesho)	36	73.5	2046	0.02
Enset	10	20.4	370	0.03
Sugar cane	*	0.0	87	*
Other permanent	*	*	125	*
RURAL				
All cropland	21196		13049	1.62
All temporary crops	21170	100.0	12977	1.63
Cereals	16078	76.0	11747	1.37
Pulses	4889	23.1	9513	0.51
Oilseeds	14	0.1	229	0.06
Vegetables	33	0.2	2968	0.01
Root crops	157	0.7	5718	0.03
Other temporary	*	*	*	*
All permanent crops	26	0.1	2022	0.01
Fruit crops	*	100.0	91	*
Chat	1	3.9	110	0.01
Coffee	*	*	47	*
Hops (Gesho)	22	84.6	1798	0.01
Enset	1	3.9	167	0.01
Sugar cane	*	*	51	*
Other permanent	*	*	121	*
URBAN				
All cropland	3042		2897	1.05
All temporary crops	3018	100.0	2730	1.11
Cereals	2147	71.1	2096	1.02
Pulses	355	11.8	716	0.5
Oilseeds	23	0.8	79	0.29
Vegetables	199*		799	0.25
Root crops	*	*	543	*
Other temporary	0	0.0	0	-
All permanent crops	24	100.0	478	0.05
Fruit crops	*	*	*	*
Chat	*	*	71	*
Coffee	*	*	*	*
Hops(Gesho)	*	*	248	*
Enset	8	33.3	202	0.04
Sugar cane	*	*	*	*
Other permanent	*	*	323	*

Note: *Holders that reported by crop categories are not mutually exclusive.*

In rural areas, temporary and permanent crops contribute about 99.9% and 0.1%, for private holdings, respectively. Out of the total area under temporary crops, the largest cultivated area was under cereal crops, followed by pulses, which contribute about 16,078 hectares (76.0%) and 4,889 hectares (23.1%), respectively. The number of holders producing these crops was estimated to be about 11,747 and 9,513 with corresponding average size of land area per holder of about 1.37 hectare and 0.51 hectare, respectively. (For details, refer to Summary Table IV.5).

In urban areas, the total cropland area is estimated to be 3,042 hectares, of which temporary crops and permanent crops accounted for 99.2% and 0.8%, for private holdings, respectively. Considering the total areas under temporary crops, cereals accounted for 2,147 hectares (71.1%) and the corresponding holders that cultivated cereal crops are estimated to be 2,096. Among land under permanent crops, enset crops took the highest cultivated area i.e., 8 hectares (33.3%) and operated by 202 holders (See Summary Table IV.5).

Figure IV.5: Distribution of Cropland Area And Holders By Crop Categories For Private Holdings, Meher Season



5.2. Cropland Area Under Belg Season

The census result indicated that in the rural private holdings about 49 hectares of land was cultivated under temporary crops during Belg season and the estimated total number of holders practicing Belg season crops were found to be 323. Of the total temporary cropland area, root crops took the highest share of the cultivated area (20.4%). The overall average area per holder during Belg season was estimated at 0.15 hectare (See Summary Table IV.6).

Summary Table IV.6: Area Under Crop Categories And Number Of Holders- Belg season

Type of Crop Categories	Area in Hectare		Holders reporting	Average area per holder
	Number	%		
RURAL				
All temporary crops	49	100.0	323	0.15
Cereals	*	*	68	*
Pulses	*	*	32	*
Oilseeds	0	0.0	0	-
Vegetables	*	*	232	*
Root crops	10	20.4	170	0.06
Other temporary crops	0	0.0	0	-

Note: Data users should not attempt to sum up cropland area under Belg season to the total land use area since the Belg season cropland area is part of the total land use area. However, providing Belg season information in this section is to show only how the holders shift the Meher/main season cropland area, fallow land and/or any other land into Belg season. On the other hand, data on Belg season crops of the urban area was not covered in the census.

6. AREA UNDER LAND TENURE SYTEMS

Land tenure refers to the arrangements or rights under which the holder uses or owns the land of the holding. In this Agricultural Sample Census, tenure system is classified into

three categories. The first is land owned or held in owner like possession having recognition from local government/Kebele; the second is land rented from other person either in cash or proper share of the produce or other rental agreement and the third is land possession in other forms (neither owned nor rented such as land given temporarily to others without any rental agreement or any other means). Based on this concept, data on land tenure systems was collected and the result indicates that, of the total land area (29,354 hectares), land owned by the operators accounted for 24,313 hectares (82.8%) land rented from other person accounted for 3,670 hectares (12.5%) and land obtained from other system was estimated to be 1,371 hectares (4.7%) in the City Administration. Of the total holders (17,775) in the City Administration, 16,378 holders owned the land they operated, while 3,908 holders operated the land by rental agreement and 2,846 holders used the land in other system of tenure. The average size of area per holder by type of tenure is estimated to be 1.48 hectare (for land owned), 0.94 hectare (for rented land) and 0.48 hectare (for other tenure). (Refer Summary Table IV.7 and Figure IV.6).

Similarly in rural private holdings, of the total area (26,312 hectares), most of the land area was accounted to the title of ownership, which is estimated to be 21,957 hectares (83.5%) and operated by 14,002 holders. The average size of land area per holder under land owned and rented is 1.57 hectare and 0.94 hectare, respectively. Result for those who are cultivating their land under other tenure system is observed to be not reliable (See Summary Table IV.7).

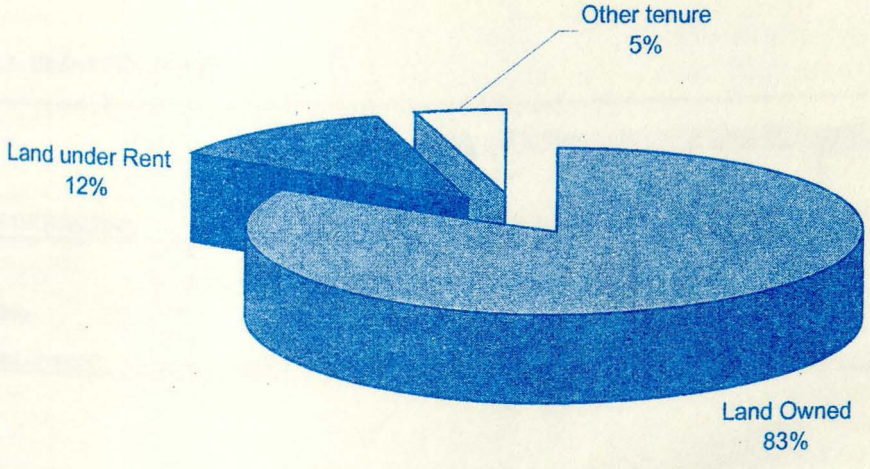
In urban private holdings, the tenure system is more or less similar to the rural. The proportion of land owned and rented is 77.5% and 16.4%, and that of other tenure system is 6.2%. On the other hand, the average size of land holding by type of tenure for land owned, land rented and land under other tenure system is estimated to be about 0.99 hectare, 0.91 hectare and 0.97 hectare per holder, respectively. The average size of owned land area per holder is higher in rural (1.57) than in urban, which is 0.99 (See Summary Table IV.7).

Summary Table IV.7: Distribution of Land Area and Holders by Tenure Systems In Rural And Urban Areas, For Private Holdings

Items	All Number	Type of Land Tenure Systems		
		Land Owned	Land Rented	Other Tenure
RURAL + URBAN				
All area in hectare	29354	24313	3670	1371
Percent	100	82.8	12.5	4.7
All holder	17775	16378	3908	2846
Average area per holder	1.65	1.48	0.94	0.48
RURAL				
All area in hectare	26312	21957	3171	1184
Percent	89.6	83.5	12.1	4.5
All holder	14878	14002	3361	*
Average area per holder	1.77	1.57	0.94	*
URBAN				
All area in hectare	3042	2356	499	187
Percent	10.4	77.5	16.4	6.2
All holder	2897	2376	548	192
Average area per holder	1.05	0.99	0.91	0.97

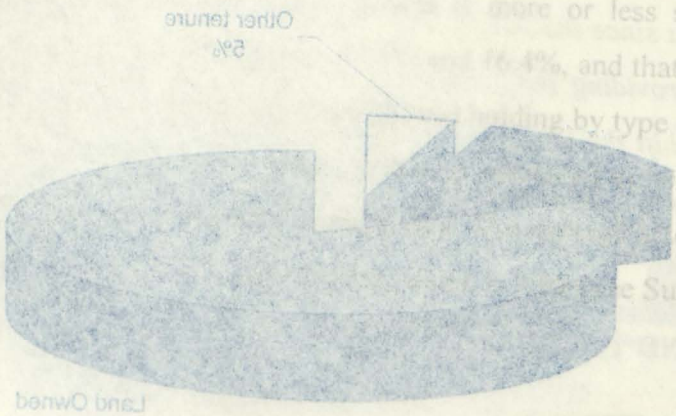
Note: *Since holders in each tenure systems are not mutually exclusive, holders that reported different type of land tenure systems should not be summed up to get the total number of holders.*

Figure IV.6: Percentage Distribution Of Total Area By Tenure Systems, For Private Holdings



Items	All Number	Type of Land Tenure Systems		
		Land Owned	Land Rented	Other Tenure
All holder	20324	24315	3670	1371
Percent	100	82.8	12.5	4.7
All holder	17775	16378	3908	2846
Average area per holder	1.65	1.48	0.94	0.48
All holder	26312	21957	3171	1184
Percent	89.6	83.5	12.1	4.5
All holder	14878	14002	3361	*
Average area per holder	1.77	1.57	0.94	*
All holder	3042	2356	499	187
Percent	10.4	72.5	16.4	6.2
All holder	2897	2376	548	192
Average area per holder	1.05	0.99	0.91	0.97

Figure IV.6: Percentage Distribution Of Total Area By Tenure Systems, For Private Holdings



STATISTICAL TABLES PRESENTING RESULTS AT CITY ADMINISTRATION LEVEL

Tables 4.1– 4.7

STATISTICAL TABLES PRESENTING RESULTS AT CITY ADMINISTRATION LEVEL

Tables 4.1 – 4.7

TABLE 4.1 NUMBERS OF AGRICULTURAL HOLDERS BY TYPE AND SIZE OF HOLDING

BOTH RURAL AND URBAN HOLDINGS

TYPE OF HOLDING	All Number	Number of holders by size of holdings (In hectares)						
		Under 0.10	0.1 - 0.50	0.51 - 1.00	1.01 - 2.00	2.01 - 5.00	5.01 - 10	Over 10
All	17775	3666	2411	2182	3634	5035	808	38
Crop Only	1747	738	440	373	146	51	-	-
Livestock Only	1829	1423	325	*	*	*	-	-
Crop and Livestock	14199	1505	1646	1761	3461	4980	808	38

TABLE 4.1.1 RURAL HOLDINGS

TYPE OF HOLDING	All Number	Number of holders by size of holdings (In hectares)						
		Under 0.10	0.1 - 0.50	0.51 - 1.00	1.01 - 2.00	2.01 - 5.00	5.01 - 10	Over 10
All	14878	2896	1762	1692	3105	4613	780	*
Crop Only	1301	508	322	*	123	35	-	-
Livestock Only	1829	1423	325	*	*	*	-	-
Crop and Livestock	11748	965	1115	1330	2954	4574	780	*

TABLE 4.1.2 URBAN HOLDINGS

TYPE OF HOLDING	All Number	Number of holders by size of holdings (In hectares)						
		Under 0.10	0.1 - 0.50	0.51 - 1.00	1.01 - 2.00	2.01 - 5.00	5.01 - 10	Over 10
All	2897	770	649	489	529	422	28	*
Crop Only	446	230	118	59	*	*	-	-
Crop and Livestock	2451	540	530	430	506	406	28	*

TABLE 4.2 NUMBERS OF AGRICULTURAL HOUSEHOLD MEMBERS AND AGRICULTURAL HOOUSEHOLDS BY SIZE OF HOLDING

BOTH RURAL AND URBAN HOLDINGS

Size of Holdings	All		Number of Households				
	Number of Members	Number of Household s	Households with One Member	Households with 2-3 Members	Households with 4-5 Members	Households with 6-9 Members	Households with 10 or More Members
All Holdings	95897	17055	310	3062	5898	6259	1526
Under 0.10 Hectare	19356	3648	81	655	1410	1246	256
0.10 – 0.50 Hectare	10767	2192	63	585	793	630	120
0.51 – 1.00 Hectare	8607	1812	60	538	661	498	54
1.01 – 2.00 Hectares	18055	3434	65	725	1421	1058	*
2.01 – 5.00 Hectares	30605	5001	*	511	1526	2384	558
5.01 – 10.00 Hectares	7833	898	*	*	87	405	341
Over 10 Hectares	674	70	-	-	-	39	*

TABLE 4.2.1 RURAL HOLDINGS

Size of Holdings	All		Number of Households				
	Number of Members	Number of Household s	Households with One Member	Households with 2-3 Members	Households with 4-5 Members	Households with 6-9 Members	Households with 10 or More Members
All Holdings	79056	14195	206	2585	5137	5048	1219
Under 0.10 Hectare	14463	2882	58	551	1231	933	108
0.10 – 0.50 Hectare	7385	1561	49	431	612	385	84
0.51 – 1.00 Hectare	6157	1334	37	438	458	378	*
1.01 – 2.00 Hectares	14995	2909	37	647	1294	802	*
2.01 – 5.00 Hectares	27876	4583	*	*	*	2130	516
5.01 – 10.00 Hectares	7618	866	*	*	87	380	337
Over 10 Hectares	562	61	-	-	-	39	*

TABLE 4.2.2 URBAN HOLDINGS

Size of Holdings	All		Number of Households				
	Number of Members	Number of Household s	Households with One Member	Households with 2-3 Members	Households with 4-5 Members	Households with 6-9 Members	Households with 10 or More Members
All Holdings	16841	2860	104	476	761	1212	307
Under 0.10 Hectare	4893	766	23	104	179	313	148
0.10 – 0.50 Hectare	3381	631	*	154	181	245	36
0.51 – 1.00 Hectare	2450	478	23	100	204	120	30
1.01 – 2.00 Hectares	3060	526	28	78	128	255	37
2.01 – 5.00 Hectares	2729	418	*	36	70	254	43
5.01 – 10.00 Hectares	216	32	-	*	-	*	*
Over 10 Hectares	*	*	-	-	-	-	*

TABLE 4.3. NUMBER OF HOLDERS, AREA OF HOLDING AND NUMBER OF PARCELS BY LAND USE AND SIZE OF HOLDING

BOTH RURAL AND URBAN HOLDINGS

Land Use By Size Of Holdings	Number Of Holders	Holding Area in Hectares	Number Of Parcels
Holdings Of All Sizes			
All	17775	29354	60518
Land Under Temporary Crops	15707	24188	48302
Land Under Permanent Crops	2500	49	2534
Grazing Land	6479	3515	8741
Fallow Land	2623	440	2915
Woodland	6748	314	7436
All Other Land	14500	848	15910
Holdings Under 0.10 Hectares Sizes			
All	3666	137	4096
Land Under Temporary Crops	2081	39	2290
Land Under Permanent Crops	467	4	475
Grazing Land	222	10	222
Fallow Land	45	1	45
Woodland	478	7	478
All Other Land	2874	76	2901
Holdings Of 0.10-0.50 Hectares Sizes			
All	2411	719	3930
Land Under Temporary Crops	2010	500	2848
Land Under Permanent Crops	226	*	234
Grazing Land	637	85	679
Fallow Land	171	17	194
Woodland	608	19	608
All Other Land	1597	84	1684
Holdings Of 0.51-1.00 Hectares Sizes			
All	2182	1615	5489
Land Under Temporary Crops	2133	1341	3911
Land Under Permanent Crops	325	1	325
Grazing Land	625	103	712
Fallow Land	255	*	278
Woodland	*	*	*
All Other Land	1602	96	2008
Holdings Of 1.01-2.00 Hectares Sizes			
All	3634	5246	13248
Land Under Temporary Crops	3606	4545	11070
Land Under Permanent Crops	473	*	473
Grazing Land	1309	452	1548
Fallow Land	431	53	446
Woodland	1593	*	*
All Other Land	3043	142	3332
Holdings Of 2.01-5.00 Hectares Sizes			
All	5035	15777	26988
Land Under Temporary Crops	5031	13309	22479
Land Under Permanent Crops	863	13	876
Grazing Land	3011	1752	4174
Fallow Land	1307	212	1456
Woodland	*	154	3193
All Other Land	4575	337	5082
Holdings Of 5.01-10.00 Hectares			
All	808	5323	6531
Land Under Temporary Crops	808	4027	5490
Land Under Permanent Crops	134	4	140
Grazing Land	646	1018	1363
Fallow Land	406	111	481
Woodland	534	57	616
All Other Land	780	106	860
Holdings Over 10.00 Hectares			
All	38	*	*
Land Under Temporary Crops	38	*	*
Land Under Permanent Crops	*	*	*
Grazing Land	*	*	*
Fallow Land	*	*	*
Woodland	*	*	*
All Other Land	*	*	*

TABLE 4.3.1 RURAL HOLDINGS

Land Use By Size Of Holdings	Number Of Holders	Holding Area in Hectares	Number Of Parcels
Holdings Of All Sizes			
All	14878	26312	54672
Land Under Temporary Crops	12977	21170	42682
Land Under Permanent Crops	2022	26	2040
Grazing Land	6479	3515	8741
Fallow Land	2623	440	2915
Woodland	6748	314	7436
All Other Land	14500	848	15910
Holdings Under 0.10 Hectares Sizes			
All	2896	111	3123
Land Under Temporary Crops	1435	17	1469
Land Under Permanent Crops	248	1	248
Grazing Land	222	10	222
Fallow Land	45	1	45
Woodland	478	7	478
All Other Land	2874	76	2901
Holdings Of 0.10-0.50 Hectares Sizes			
All	1762	535	3050
Land Under Temporary Crops	1403	328	2026
Land Under Permanent Crops	130	2	130
Grazing Land	637	85	679
Fallow Land	171	17	194
Woodland	608	19	608
All Other Land	1597	84	1684
Holdings Of 0.51-1.00 Hectares Sizes			
All	1692	1254	4660
Land Under Temporary Crops	1644	981	3096
Land Under Permanent Crops	284	1	284
Grazing Land	625	103	712
Fallow Land	255	*	278
Woodland	*	*	*
All Other Land	1602	96	2008
Holdings Of 1.01-2.00 Hectares Sizes			
All	3105	4454	11835
Land Under Temporary Crops	3077	3755	9657
Land Under Permanent Crops	422	*	422
Grazing Land	1309	452	1548
Fallow Land	431	53	446
Woodland	1593	*	*
All Other Land	3043	142	3332
Holdings Of 2.01-5.00 Hectares Sizes			
All	4613	14480	25365
Land Under Temporary Crops	4608	12013	20856
Land Under Permanent Crops	804	12	817
Grazing Land	3011	1752	4174
Fallow Land	1307	212	1456
Woodland	*	154	3193
All Other Land	4575	337	5082
Holdings Of 5.01-10.00 Hectares			
All	780	5154	6422
Land Under Temporary Crops	780	3859	5381
Land Under Permanent Crops	126	2	131
Grazing Land	646	1018	1363
Fallow Land	406	111	481
Woodland	534	57	616
All Other Land	780	106	860
Holdings Over 10.00 Hectares			
All	*	*	*
Land Under Temporary Crops	*	*	*
Land Under Permanent Crops	*	*	*
Grazing Land	*	*	*
Fallow Land	*	*	*
Woodland	*	*	*
All Other Land	*	*	*

TABLE 4.3.2 URBAN HOLDINGS

Land Use By Size Of Holdings	Number Of Holders	Holding Area in Hectares	Number Of Parcels
Holdings Of All Sizes			
All	2897	3042	5846
Land Under Temporary Crops	2730	3018	5620
Land Under Permanent Crops	478	24	494
Holdings Under 0.10 Hectares Sizes			
All	770	26	973
Land Under Temporary Crops	645	22	821
Land Under Permanent Crops	219	3	227
Holdings Of 0.10-0.50 Hectares Sizes			
All	649	183	880
Land Under Temporary Crops	606	171	822
Land Under Permanent Crops	96	*	104
Holdings Of 0.51-1.00 Hectares Sizes			
All	489	361	829
Land Under Temporary Crops	489	361	814
Land Under Permanent Crops	40	*	40
Holdings Of 1.01-2.00 Hectares Sizes			
All	529	792	1413
Land Under Temporary Crops	529	789	1413
Land Under Permanent Crops	50	*	50
Holdings Of 2.01-5.00 Hectares Sizes			
All	422	1297	1623
Land Under Temporary Crops	422	1296	1623
Land Under Permanent Crops	59	*	59
Holdings Of 5.01-10.00 Hectares			
All	28	169	109
Land Under Temporary Crops	28	167	109
Land Under Permanent Crops	*	*	*
Holdings Over 10.00 Hectares			
All	*	*	*
Land Under Temporary Crops	*	*	*
Land Under Permanent Crops	*	*	*

TABLE 4.4 NUMBER OF HOLDERS AND AREA OF HOLDING BY TYPE OF CROP AND SIZE OF HOLDING

BOTH RURAL AND URBAN HOLDINGS

Type of Crop	Number Of Holders Reporting	All Area In Hectare	Area By Size Of Holdings (In Hectare)						
			Under 0.10	0.1 - 0.50	0.51 - 1.00	1.01 - 2.00	2.01 - 5.00	5.01 - 10	Over 10
Total Cropland	15946	24238	57	668	1605	6179	12721	2793	*
Temporary Crops	15707	24188	51	655	1604	6168	12710	2789	*
Grain Crops	14449	23507	29	621	1565	6046	12499	2747	*
Cereals	13843	18225	24	457	1267	4587	9771	2119	*
Barley	1104	403	2	32	64	145	141	*	-
Maize	2567	65	12	*	*	8	25	1	-
Millet	*	*	-	-	*	*	*	-	-
Oats/'Aja'	*	*	-	*	*	*	*	*	-
Rice	-	-	-	-	-	-	-	-	-
Sorghum	190	42	-	*	*	*	30	*	-
Teff	11606	9183	8	251	729	2391	4609	1194	*
Wheat	10446	8523	2	165	459	2038	*	897	*
Pulses	10230	5244	4	*	297	1454	2704	622	*
Chick Peas	7361	2668	*	*	*	734	1360	339	*
Fenugreek	2082	219	*	*	*	18	*	37	-
Field Peas	437	94	*	*	*	25	37	15	-
Gibto	-	-	-	-	-	-	-	-	-
Haricot beans	142	2	*	*	-	-	*	*	-
Horse beans	2503	283	3	9	*	77	130	28	*
Soya beans	-	-	-	-	-	-	-	-	-
Lentils	*	*	-	3	7	*	*	38	*
Vetch	6838	1414	*	29	99	454	669	164	*
Other Pulses	-	-	-	-	-	-	-	-	-
Oilseeds	308	37	*	*	*	*	25	*	-
Groundnuts	-	-	-	-	-	-	-	-	-
Linseed	73	12	-	*	*	*	*	*	-
Neug	82	25	-	-	-	*	18	*	-
Rape seed	117	1	*	*	*	*	*	*	-
Sesame	-	-	-	-	-	-	-	-	-
Sufflower	36	*	*	-	-	-	*	*	-
Other Grains	*	*	*	-	-	-	-	-	-
Vegetables	3767	231	13	17	14	58	*	*	*
Head Cabbage	147	10	*	*	-	*	*	*	-
Green peppers	431	1	*	*	-	-	*	*	-
Ethiopian	2345	90	6	8	10	*	*	*	-
Lettuce	457	26	2	1	*	*	*	*	-
Red peppers	-	-	-	-	-	-	-	-	-
Swiss chard	666	*	3	7	*	10	*	*	-
Tomatoes	*	*	*	-	-	-	-	-	-
Other vegetables	1719	31	1	*	*	*	9	*	-
Root Crops	6261	451	10	16	24	64	112	35	*
Beet root	308	14	*	*	*	*	*	*	-
Carrot	1545	*	5	11	19	49	61	33	*
Garlic	4469	13	3	1	1	3	*	*	-
Taro/'Godere'	-	-	-	-	-	-	-	-	-
Onion	866	*	1	*	3	*	*	*	-
Potatoes	247	41	1	3	*	*	*	*	-
Sweet Potatoes	*	*	*	-	-	-	-	-	-
Other root	*	*	*	*	-	-	*	-	-
Permanent Crops	2500	49	6	*	1	11	11	4	-
Fruit crops	126	*	*	*	-	*	*	-	-
Avocados	*	*	*	*	-	-	*	-	-
Bananas	*	*	*	-	-	-	-	-	-
Guavas	*	*	*	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-	-
Oranges	63	*	*	-	-	-	-	-	-
Papayas	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-
Other fruits	*	*	*	-	-	-	-	-	-
Stimulant crops	2136	37	4	*	1	*	11	4	-
Chat	181	1	*	*	-	*	*	-	-
Coffee	73	*	*	-	-	-	*	-	-
Hops/'Gesho'	2046	36	4	*	1	*	10	3	-
Other stimulants	-	-	-	-	-	-	-	-	-
Other permanent	539	11	2	2	*	3	*	*	-
Enset	370	10	2	*	*	3	*	*	-
Sugar Cane	87	*	*	*	*	*	*	-	-
Other s	125	*	*	*	-	*	*	-	-

TABLE 4.4.1 RURAL HOLDINGS

Type of Crop	Number Of Holders Reporting	All Area In Hectare	Area By Size Of Holdings (In Hectare)						
			Under 0.10	0.1 - 0.50	0.51 - 1.00	1.01 - 2.00	2.01 - 5.00	5.01 - 10	Over 10
Total Cropland	13049	21196	32	485	1244	5387	11424	2624	
Temporary Crops	12977	21170	29	484	1243	5378	11415	2621	
Grain Crops	12318	20981	21	470	1229	5325	11357	2579	
Cereals	11747	16078	16	315	951	3960	8833	2003	
Barley	477	148	*	10	22	48	50	*	
Maize	2316	47	9	*	*	7	19	1	
Millet	*	*	-	-	*	-	*	-	
Oats/'Aia'	*	*	-	*	*	*	*	*	
Rice	-	-	-	-	-	-	-	-	
Sorghum	140	27	-	*	*	*	20	*	
Teff	10061	7983	6	182	550	2067	4076	1102	
Wheat	9096	7864	*	119	366	1836	*	878	
Pulses	9513	4889	4	*	277	1363	2517	575	
Chick Peas	7029	2544	*	*	*	708	1295	320	
Fenugreek	2020	205	*	*	*	10	*	37	
Field Peas	319	54	*	*	*	14	12	*	
Gibto	-	-	-	-	-	-	-	-	
Haricot beans	136	1	*	-	-	*	*	*	
Horse beans	2311	231	3	9	*	59	103	21	
Sova beans	-	-	-	-	-	-	-	-	
Lentils	*	*	-	*	7	*	*	38	
Vetch	6462	1295	*	26	92	427	605	146	
Other Pulses	-	-	-	-	-	-	-	-	
Oilseeds	229	14	*	*	*	*	*	*	
Groundnuts	-	-	-	-	-	-	-	-	
Linseed	70	12	-	*	*	*	*	*	
Neug	*	*	-	-	-	-	*	-	
Rape seed	117	1	*	*	*	*	*	-	
Sesame	-	-	-	-	-	-	-	-	
Sufflower	36	*	*	-	-	-	-	*	
Other Grains	*	*	*	-	-	-	*	*	
Vegetables	2968	33	2	2	2	*	8	*	
Head Cabbage	105	3	*	*	-	*	*	*	
Green peppers	391	1	*	*	-	*	*	*	
Ethiopian	1704	14	1	*	*	4	*	*	
Lettuce	*	*	*	-	*	*	*	-	
Red peppers	-	-	-	-	-	-	-	-	
Swiss chard	192	*	*	*	-	*	*	-	
Tomatoes	*	*	-	-	-	-	-	*	
Other vegetables	1659	*	1	*	*	*	*	*	
Root Crops	5718	157	6	11	13	*	49	35	
Beet root	251	4	*	*	*	*	*	*	
Carrot	1218	136	*	*	11	*	*	33	
Garlic	4327	12	2	1	1	3	*	*	
Taro/'Godere'	-	-	-	-	-	-	-	-	
Onion	786	2	*	*	*	*	*	*	
Potatoes	72	2	*	*	*	*	*	*	
Sweet Potatoes	*	*	*	-	-	-	-	-	
Other root	-	-	-	-	-	-	-	-	
Permanent Crops	2022	26	3	1	1	*	*	2	
Fruit crops	91	*	*	-	-	-	*	-	
Avocados	*	*	*	-	-	-	-	-	
Bananas	*	*	*	-	-	-	-	-	
Guavas	-	-	-	-	-	-	-	-	
Lemons	-	-	-	-	-	-	-	-	
Mangoes	-	-	-	-	-	-	-	-	
Oranges	63	*	*	-	-	-	-	-	
Papayas	-	-	-	-	-	-	-	-	
Pineapples	-	-	-	-	-	-	-	-	
Other fruits	*	*	*	-	-	-	*	-	
Stimulant crops	1813	23	3	1	1	*	*	2	
Chat	110	1	*	*	*	*	*	*	
Coffee	47	*	*	-	-	*	*	-	
Hops/'Gesho'	1798	22	2	*	1	*	*	2	
Other	-	-	-	-	-	-	-	-	
Other permanent	301	2	*	*	*	*	*	*	
Enset	167	1	*	*	*	*	*	*	
Sugar Cane	51	*	*	*	*	*	*	*	
Other s	121	*	*	*	-	*	*	-	

TABLE 4.4.2 URBAN HOLDINGS

Type of Crop	Number Of Holders Reporting	All Area In Hectare	Area By Size Of Holdings (In Hectare)						
			Under 0.10	0.1 - 0.50	0.51 - 1.00	1.01 - 2.00	2.01 - 5.00	5.01 - 10	Over 10
Total Cropland	2897	3042	26	183	361	792	1297	169	*
Temporary Crops	2730	3018	22	171	361	789	1296	167	*
Grain Crops	2131	2526	8	151	337	720	1142	167	
Cereals	2096	2147	8	142	316	627	938	116	
Barley	627	255	1	22	43	96	91	*	
Maize	252	17	3	*	1	2	6	-	
Millet	-	-	-	-	-	-	-	-	
Oats/'Aia'	*	*	-	-	-	*	*	-	
Rice	-	-	-	-	-	-	-	-	
Sorghum	-	-	-	-	-	*	*	-	
Teff	50	15	-	*	-	-	*	*	
Wheat	1545	1200	*	69	180	324	533	92	
Pulses	1351	659	1	46	93	202	298	*	
Chick Peas	716	355	*	9	20	91	187	47	
Fenugreek	332	124	*	*	9	26	65	20	
Field Peas	63	*	-	*	*	*	*	-	
Gibto	118	40	-	-	*	10	25	*	
Haricot beans	-	-	-	-	-	-	-	-	
Horse beans	*	*	-	*	-	-	-	-	
Sova beans	193	53	*	-	*	17	27	*	
Lentils	-	-	-	-	-	-	-	-	
Vetch	40	*	-	*	*	*	*	-	
Other Pulses	376	119	-	*	7	27	64	18	
Oilseeds	-	-	-	-	-	-	-	-	
Groundnuts	79	23	-	-	-	*	17	*	
Linseed	-	-	-	-	-	-	-	-	
Neug	*	*	-	-	-	-	*	-	
Rape seed	77	23	-	-	-	*	16	*	
Sesame	-	-	-	-	-	-	-	-	
Sufflower	-	-	-	-	-	-	-	-	
Other Grains	-	-	-	-	-	-	-	-	
Vegetables	-	-	-	-	-	-	-	-	
Head Cabbage	799	199	10	15	13	*	*	-	
Green peppers	42	*	*	*	-	*	*	-	
Ethiopian	41	*	*	-	-	*	-	-	
Lettuce	640	*	5	6	*	*	*	-	
Red peppers	289	26	2	1	*	*	*	-	
Swiss chard	-	-	-	-	-	-	-	-	
Tomatoes	474	*	3	7	*	10	*	-	
Other vegetables	*	*	*	-	-	-	-	-	
Root Crops	60	*	*	*	*	*	*	-	
Beet root	543	*	4	5	*	22	*	-	
Carrot	57	*	*	*	-	*	*	-	
Garlic	327	*	3	2	*	12	*	-	
Taro/'Godere'	142	1	*	-	*	*	*	-	
Onion	-	-	-	-	-	-	-	-	
Potatoes	80	*	*	-	*	*	*	-	
Sweet Potatoes	176	39	*	2	*	*	*	-	
Other root	-	-	-	-	-	-	-	-	
Permanent Crops	*	*	*	*	-	-	*	-	
Fruit crops	478	24	3	*	*	*	*	*	
Avocados	*	*	*	*	-	-	-	-	
Bananas	*	*	-	*	-	-	-	-	
Guavas	-	-	-	-	-	-	-	-	
Lemons	*	*	*	-	-	-	-	-	
Mangoes	-	-	-	-	-	-	-	-	
Oranges	-	-	-	-	-	-	-	-	
Papayas	-	-	-	-	-	-	-	-	
Pineapples	-	-	-	-	-	-	-	-	
Other fruits	-	-	-	-	-	-	-	-	
Stimulant crops	*	*	*	-	-	-	-	-	
Chat	323	*	2	*	*	*	*	*	
Coffee	71	*	*	*	*	*	*	*	
Hops/'Gesho'	*	*	*	*	-	-	-	-	
Other	248	*	1	*	*	*	*	*	
Other permanent	-	-	-	-	-	-	-	-	
Enset	238	9	2	*	*	*	*	-	
Sugar Cane	202	8	2	*	*	*	*	-	
Other s	*	*	*	-	-	-	-	-	
	*	*	-	*	-	-	-	-	

TABLE 4.5 NUMBER OF HOLDERS UNDER ALL LAND TENURE SYSTEMS BY LAND USE AND SIZE OF HOLDING

BOTH RURAL AND URBAN HOLDINGS

Land Use By Size of Holding	All Holders	Number of Holders By Type of Land Tenures		
		Land Owned	Land Rented	Other Tenure
Holdings Of All Sizes				
All	17775	16378	3908	2846
Land Under Temporary Crops	15707	13707	3730	*
Land under Permanent Crops	2500	2434	*	*
Grazing Land	6479	6098	207	454
Fallow Land	2623	2359	215	49
Woodland	6748	6249	*	*
All Other Land	14500	13558	158	*
Holdings Under 0.10 Hectares Sizes				
All	3666	3245	215	275
Land Under Temporary Crops	2081	1883	84	128
Land under Permanent Crops	467	406	*	*
Grazing Land	222	167	*	*
Fallow Land	45	30	*	-
Woodland	478	465	*	*
All Other Land	2874	2542	131	229
Holdings Of 0.10-0.50 Hectares Sizes				
All	2411	2116	271	307
Land Under Temporary Crops	2010	1577	271	268
Land under Permanent Crops	226	226	-	-
Grazing Land	637	597	-	40
Fallow Land	171	137	*	*
Woodland	608	568	-	*
All Other Land	1597	1482	*	101
Holdings Of 0.51-1.00 Hectares Sizes				
All	2182	1739	483	*
Land Under Temporary Crops	2133	1448	483	*
Land under Permanent Crops	325	325	-	-
Grazing Land	625	614	*	*
Fallow Land	255	255	-	-
Woodland	*	571	-	*
All Other Land	1602	1335	-	*
Holdings Of 1.01-2.00 Hectares Sizes				
All	3634	3474	986	*
Land Under Temporary Crops	3606	3237	979	*
Land under Permanent Crops	473	473	-	-
Grazing Land	1309	1222	*	86
Fallow Land	431	374	*	23
Woodland	1593	1400	-	*
All Other Land	3043	2833	-	*
Holdings Of 2.01-5.00 Hectares Sizes				
All	5035	4973	1560	661
Land Under Temporary Crops	5031	4731	1534	*
Land under Permanent Crops	863	858	-	*
Grazing Land	3011	2842	76	*
Fallow Land	1307	1243	58	*
Woodland	*	*	-	*
All Other Land	4575	4562	*	*
Holdings Of 5.01-10.00 Hectares				
All	808	797	379	72
Land Under Temporary Crops	808	797	365	58
Land under Permanent Crops	134	134	-	
Grazing Land	646	627	83	*
Fallow Land	406	313	*	-
Woodland	534	534	-	-
All Other Land	780	776	*	*
Holdings Over 10.00 Hectares				
All	38	34	*	*
Land Under Temporary Crops	38	34	*	*
Land under Permanent Crops	*	*	-	-
Grazing Land	*	*	-	-
Fallow Land	*	*	-	-
Woodland	*	*	-	-
All Other Land	*	*	-	-

TABLE 4.5.1 RURAL HOLDINGS

Land Use By Size of Holding	All Holders	Number of Holders By Type of Land Tenures		
		Land Owned	Land Rented	Other Tenure
Holdings Of All Sizes				
All	14878	14002	3361	*
Land Under Temporary Crops	12977	11501	3191	*
Land under Permanent Crops	2022	1985	*	*
Grazing Land	6479	6098	207	*
Fallow Land	2623	2359	215	454
Woodland	6748	6249	*	49
All Other Land	14500	13558	158	*
Holdings Under 0.10 Hectares Sizes				*
All	2896	2580	148	229
Land Under Temporary Crops	1435	1334	*	81
Land under Permanent Crops	248	216	*	*
Grazing Land	222	167	*	*
Fallow Land	45	30	*	-
Woodland	478	465	*	*
All Other Land	2874	2542	131	229
Holdings Of 0.10-0.50 Hectares Sizes				
All	1762	1612	178	251
Land Under Temporary Crops	1403	1116	178	212
Land under Permanent Crops	130	130	-	-
Grazing Land	637	597	-	40
Fallow Land	171	137	*	*
Woodland	608	568	-	*
All Other Land	1597	1482	*	101
Holdings Of 0.51-1.00 Hectares Sizes				
All	1692	1385	332	*
Land Under Temporary Crops	1644	1104	332	*
Land under Permanent Crops	284	284	-	-
Grazing Land	625	614	*	*
Fallow Land	255	255	-	*
Woodland	*	571	-	*
All Other Land	1602	1335	-	*
Holdings Of 1.01-2.00 Hectares Sizes				
All	3105	3027	858	*
Land Under Temporary Crops	3077	2791	851	*
Land under Permanent Crops	422	422	-	-
Grazing Land	1309	1222	*	86
Fallow Land	431	374	*	23
Woodland	1593	1400	-	*
All Other Land	3043	2833	-	*
Holdings Of 2.01-5.00 Hectares Sizes				
All	4613	4592	1459	634
Land Under Temporary Crops	4608	4351	1433	*
Land under Permanent Crops	804	800	-	*
Grazing Land	3011	2842	76	*
Fallow Land	1307	1243	58	*
Woodland	*	*	-	*
All Other Land	4575	4562	*	*
Holdings Of 5.01-10.00 Hectares				
All	780	776	373	72
Land Under Temporary Crops	780	776	359	58
Land under Permanent Crops	126	126	-	*
Grazing Land	646	627	83	*
Fallow Land	406	313	*	-
Woodland	534	534	-	*
All Other Land	780	776	*	*
Holdings Over 10.00 Hectares				
All	*	*	*	*
Land Under Temporary Crops	*	*	*	-
Land under Permanent Crops	*	*	-	-
Grazing Land	*	*	-	-
Fallow Land	*	*	-	-
Woodland	*	*	-	-
All Other Land	*	*	-	-

TABLE 4.5.2 URBAN HOLDINGS

Land Use By Size of Holding	All Holders	Number of Holders By Type of Land Tenures		
		Land Owned	Land Rented	Other Tenure
Holdings Of All Sizes				
All	2897	2376	548	192
Land Under Temporary Crops	2730	2206	539	192
Land under Permanent Crops	478	449	*	-
Holdings Under 0.10 Hectares Sizes				
All	770	665	68	*
Land Under Temporary Crops	645	549	59	*
Land under Permanent Crops	219	190	*	-
Holdings Of 0.10-0.50 Hectares Sizes				
All	649	503	93	*
Land Under Temporary Crops	606	461	93	*
Land under Permanent Crops	96	96	-	-
Holdings Of 0.51-1.00 Hectares Sizes				
All	489	355	151	37
Land Under Temporary Crops	489	343	151	37
Land under Permanent Crops	40	40	-	-
Holdings Of 1.01-2.00 Hectares Sizes				
All	529	447	128	22
Land Under Temporary Crops	529	447	128	22
Land under Permanent Crops	50	50	-	-
Holdings Of 2.01-5.00 Hectares Sizes				
All	422	380	101	27
Land Under Temporary Crops	422	380	101	27
Land under Permanent Crops	59	59	-	-
Holdings Of 5.01-10.00 Hectares				
All	28	*	*	-
Land Under Temporary Crops	28	*	*	-
Land under Permanent Crops	*	*	-	-
Holdings Over 10.00 Hectares				
All	*	*	-	*
Land Under Temporary Crops	*	*	-	*
Land under Permanent Crops	*	*	-	-

TABLE 4.6. AREA OF HOLDINGS UNDER ALL LAND TENURE SYSTEMS BY LAND USE AND SIZE OF HOLDING

BOTH RURAL AND URBAN HOLDINGS

Land Use By Size of Holding	Total Area	Area In Hectares By Type of Land Tenures		
		Land Owned	Land Rented	Other Tenure
Holdings Of All Sizes				
All	29354	24313	3670	1371
Land Under Temporary Crops	24188	19486	3526	1177
Land under Permanent Crops	49	48	*	*
Grazing Land	3515	3275	112	128
Fallow Land	440	407	*	*
Woodland	314	295	*	*
All Other Land	848	802	5	*
Holdings Under 0.10 Hectares Sizes				
All	137	121	6	10
Land Under Temporary Crops	39	34	2	3
Land under Permanent Crops	4	4*	*	-
Grazing Land	10	7*	*	-
Fallow Land	1*	*	-	-
Woodland	7	7*	*	-
All Other Land	76	69	2	4
Holdings Of 0.10-0.50 Hectares Sizes				
All	719	549	84	87
Land Under Temporary Crops	500	350	83	67
Land under Permanent Crops	*	*	-	-
Grazing Land	85	77	*	*
Fallow Land	17	12	*	*
Woodland	19	18	*	*
All Other Land	84	78	*	6
Holdings Of 0.51-1.00 Hectares Sizes				
All	1615	1066	240	*
Land Under Temporary Crops	1341	824	240	*
Land under Permanent Crops	1	1	-	-
Grazing Land	103	102	*	*
Fallow Land	*	*	-	-
Woodland	*	15	-	*
All Other Land	96	79	-	*
Holdings Of 1.01-2.00 Hectares Sizes				
All	5246	4173	723	350
Land Under Temporary Crops	4545	3520	712	313
Land under Permanent Crops	*	*	-	-
Grazing Land	452	423	*	23
Fallow Land	53	47	*	*
Woodland	*	*	-	*
All Other Land	142	133	-	*
Holdings Of 2.01-5.00 Hectares Sizes				
All	15777	13552	1793	433
Land Under Temporary Crops	13309	11211	1752	345
Land under Permanent Crops	13	12	-	*
Grazing Land	1752	1634	35	82
Fallow Land	212	206	5	*
Woodland	154	154	-	*
All Other Land	337	333	*	*
Holdings Of 5.01-10.00 Hectares				
All	5323	4446	793	84
Land Under Temporary Crops	4027	3251	705	71
Land under Permanent Crops	4	4	-	*
Grazing Land	1018	938	68	*
Fallow Land	111	93	*	-
Woodland	57	57	-	*
All Other Land	106	102	*	*
Holdings Over 10.00 Hectares				
All	*	*	*	*
Land Under Temporary Crops	*	*	*	-
Land under Permanent Crops	*	*	-	-
Grazing Land	*	*	-	-
Fallow Land	*	*	-	-
Woodland	*	*	-	-
All Other Land	*	*	-	-

TABLE 4.6.1 RURAL HOLDINGS

Land Use By Size of Holding	Total Area	Area In Hectares By Type of Land Tenures		
		Land Owned	Land Rented	Other Tenure
Holdings Of All Sizes				
All	26312	21957	3171	1184
Land Under Temporary Crops	21170	17153	3027	990
Land under Permanent Crops	26	25	*	*
Grazing Land	3515	3275	112	128
Fallow Land	440	407	*	*
Woodland	314	295	*	*
All Other Land	848	802	5	*
Holdings Under 0.10 Hectares Sizes				
All	111	99	4	8
Land Under Temporary Crops	17	15	*	1
Land under Permanent Crops	1	1	*	*
Grazing Land	10	7	*	*
Fallow Land	1	*	*	-
Woodland	7	7	*	*
All Other Land	76	69	2	4
Holdings Of 0.10-0.50 Hectares Sizes				
All	535	406	*	73
Land Under Temporary Crops	328	219	*	*
Land under Permanent Crops	2	2	-	-
Grazing Land	85	77	*	*
Fallow Land	17	12	*	*
Woodland	19	18	*	*
All Other Land	84	78	*	6
Holdings Of 0.51-1.00 Hectares Sizes				
All	1254	824	*	*
Land Under Temporary Crops	981	583	*	*
Land under Permanent Crops	1	1	-	-
Grazing Land	103	102	*	*
Fallow Land	*	*	-	-
Woodland	*	15	-	*
All Other Land	96	79	-	*
Holdings Of 1.01-2.00 Hectares Sizes				
All	4454	3564	574	316
Land Under Temporary Crops	3755	2913	563	*
Land under Permanent Crops	*	*	-	-
Grazing Land	452	423	*	23
Fallow Land	53	47	*	*
Woodland	*	*	-	*
All Other Land	142	133	-	*
Holdings Of 2.01-5.00 Hectares Sizes				
All	14480	12501	1601	378
Land Under Temporary Crops	12013	*	1561	290
Land under Permanent Crops	12	11	-	*
Grazing Land	1752	1634	35	82
Fallow Land	212	206	5	*
Woodland	154	154	-	*
All Other Land	337	333	*	*
Holdings Of 5.01-10.00 Hectares				
All	5154	4310	760	84
Land Under Temporary Crops	3859	3117	672	71
Land under Permanent Crops	2	2	-	-
Grazing Land	1018	938	68	*
Fallow Land	111	93	*	-
Woodland	57	57	-	-
All Other Land	106	102	*	*
Holdings Over 10.00 Hectares				
All	*	*	*	*
Land Under Temporary Crops	*	*	*	*
Land under Permanent Crops	*	*	-	-
Grazing Land	*	*	-	-
Fallow Land	*	*	-	-
Woodland	*	*	-	-
All Other Land	*	*	-	-

TABLE 4.6.2 URBAN HOLDINGS

Land Use By Size of Holding	Total Area	Area In Hectares By Type of Land Tenures		
		Land Owned	Land Rented	Other Tenure
Holdings Of All Sizes				
All	3042	2356	499	187
Land Under Temporary Crops	3018	2333	499	187
Land under Permanent Crops	24	23	*	-
Holdings Under 0.10 Hectares Sizes				
All	26	22	2	*
Land Under Temporary Crops	22	19	2	*
Land under Permanent Crops	3	3	*	-
Holdings Of 0.10-0.50 Hectares Sizes				
All	183	142	27	14
Land Under Temporary Crops	171	130	27	14
Land under Permanent Crops	*	*	-	-
Holdings Of 0.51-1.00 Hectares Sizes				
All	361	242	96	23
Land Under Temporary Crops	361	241	96	23
Land under Permanent Crops	*	*	-	-
Holdings Of 1.01-2.00 Hectares Sizes				
All	792	609	149	34
Land Under Temporary Crops	789	607	149	34
Land under Permanent Crops	*	*	-	-
Holdings Of 2.01-5.00 Hectares Sizes				
All	1297	1051	191	55
Land Under Temporary Crops	1296	1049	191	55
Land under Permanent Crops	*	*	-	-
Holdings Of 5.01-10.00 Hectares				
All	169	*	*	-
Land Under Temporary Crops	167	*	*	-
Land under Permanent Crops	*	*	-	-
Holdings Over 10.00 Hectares				
All	*	*	-	*
Land Under Temporary Crops	*	*	-	*
Land under Permanent Crops	*	*	-	-

TABLE 4.7. NUMBER OF HOLDERS AND AREA OF HOLDING UNDER ALL CROPLAND AND SIZE OF HOLDING

RURAL HOLDINGS-BELG SEASON

TYPE OF CROP	Number Of Holders Reporting	All Area In Hectare	Area By Size Of Holdings in Hectare						
			Under 0.10	0.1 - 0.50	0.51 - 1.00	1.01 - 2.00	2.01-5.00	5.01 - 10	Over 10
Temporary Crops	323	49	12	19	*	*	-	-	-
Grain Crops	82	*	*	*	*	*	-	-	-
Cereals	68	*	*	*	*	*	-	-	-
Barley	*	*	*	*	*	*	-	-	-
Maize	*	*	*	-	-	-	-	-	-
Millet	-	-	-	-	-	-	-	-	-
Oats/'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-	-	-	-
Teff	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Pulses	32	*	-	*	*	*	-	-	-
Chick Peas	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Field Peas	*	*	-	*	*	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Haricot beans	*	*	-	*	-	-	-	-	-
Horse beans	*	*	-	*	*	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Lentils	*	*	-	-	-	*	-	-	-
Vetch	-	-	-	-	-	-	-	-	-
Other Pulses	-	-	-	-	-	-	-	-	-
Oilseeds	-	-	-	-	-	-	-	-	-
Groundnuts	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Neug	-	-	-	-	-	-	-	-	-
Rape seed	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-	-	-	-
Other Grains	-	-	-	-	-	-	-	-	-
Vegetables	232	*	*	*	-	-	-	-	-
Head Cabbage	*	*	*	*	-	-	-	-	-
Green peppers	*	*	-	*	-	-	-	-	-
Ethiopian Cabbage	30	*	*	*	-	-	-	-	-
Lettuce	*	*	*	-	-	-	-	-	-
Red peppers	-	-	-	-	-	-	-	-	-
Swiss chard	*	*	*	*	-	-	-	-	-
Tomatoes	56	*	*	*	-	-	-	-	-
Other vegetables	*	*	*	-	-	-	-	-	-
Root Crops	170	10	2	5	*	-	-	-	-
Beet root	32	*	*	*	-	-	-	-	-
Carrot	40	1	*	*	-	-	-	-	-
Garlic	37	*	*	*	-	-	-	-	-
Taro/'Godere'	-	-	-	-	-	-	-	-	-
Onion	*	*	*	*	-	-	-	-	-
Potatoes	55	*	*	*	*	-	-	-	-
Sweet Potatoes	-	-	-	-	-	-	-	-	-
Other root	*	*	*	*	-	-	-	-	-

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENTS OF VARIATION FOR SELECTED LAND USE VARIABLES

Annex Table 4.1 - 4.4.2

Type OF CROP	Number Of Holders Reporting	All Area In Hectare	Area By Size Of Holdings in Hectare						
			Under 0.10	0.1 - 0.50	0.51 - 1.00	1.01 - 2.00	2.01-5.00	5.01 - 10	Over 10
Any Crops	323	49	12	19					
Crops	82								
ials	68								
Barley									
Maize									
Millet									
Oats/'Aja'									
Rice									
Sorghum	27								
Teff	27								
Wheat									
ses	32								
Chick Peas									
Fenugreek	96								
Field Peas	96								
Gibto									
Harcot beans									
Horse beans	149								
Soya beans	149								
Lentils									
Vetch									
Other Pulses	191								
ipeeds	191								
Groundnuts									
Linseed									
Neug									
Rape seed									
Sesame									
Sunflower									
ther Grains									
ables	232								
Head Cabbage									
Green peppers									
Ethiopian Cabbage	30								
Lettuce									
Red pepper									
Swiss chard									
Tomatoes	56								
Other vegetables									
Crops	170		10	2	5				
Beet root	32								
Carrot	40	1							
Garlic	37								
Taro/'Godere'									
Onion									
Potatoes	55								
Sweet Potatoes									
Other root									

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENTS OF VARIATION FOR SELECTED LAND USE VARIABLES

Annex Tables 4.1 - 4.4.2

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENTS OF VARIATION FOR SELECTED LAND USE VARIABLES

Annex Tables 4.1 - 4.4.2

Annex Table 4.1: Estimates of Agricultural holders by Type of holdings and their Standard errors and Coefficients of Variation

Both Rural and Urban holdings

Type of holding	All Numbers			Size of Holding In Hectare								
				Under 0.10			0.10-0.50			0.51-1.00		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
All	17774	3943	22	3666	500	14	2411	353	15	2182	560	26
Crop only	1748	212	12	738	112	15	440	57	13	373	166	45
Livestock only	1829	309	17	1423	275	19	325	79	24	48	30	61
Crop and Livestock	14199	3745	26	1505	264	18	1646	336	20	1761	426	24

Table 4.1 Continued

Type of holding	Size of Holding In Hectare											
	1.01-2.00			2.01-5.00			5.01-10.00			Over 10		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
All	3634	1110	31	5035	1859	37	808	155	19	38	18	47
Crop only	146	34	23	51	19	37	-	-	-	-	-	-
Livestock only	28	23	82	5	6	116	-	-	-	-	-	-
Crop and Livestock	3461	1121	32	4980	1859	37	808	155	19	38	18	47

Annex Table 4.1.1 Rural holdings

Type of holding	All Numbers			Size of Holding In Hectare								
				Under 0.10			0.10-0.50			0.51-1.00		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
All	14877	3936	26	2896	485	17	1762	342	19	1692	555	33
Crop only	1302	201	15	508	103	20	322	47	15	314	165	53
Livestock only	1829	309	17	1423	275	19	325	79	24	48	30	61
Crop and Livestock	11747	3739	32	965	244	25	1115	328	29	1330	421	32

Table 4.1.1 Continued

Type of holding	Size of Holding In Hectare											
	1.01-2.00			2.01-5.00			5.01-10.00			Over 10		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
All	3105	1108	36	4613	1858	40	780	154	20	29	16	54
Crop only	123	31	25	35	17	48	-	-	-	-	-	-
Livestock only	28	23	82	5	6	116	-	-	-	-	-	-
Crop and Livestock	2954	1119	38	4574	1858	41	780	154	20	29	16	54

Annex Table 4.1.2 Urban holdings

Type of holding	All Numbers			Size of Holding In Hectare								
				Under 0.10			0.10-0.50			0.51-1.00		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
All	2896	246	9	770	121	16	649	87	13	489	72	15
Crop only	446	68	15	230	44	19	118	31	26	59	21	35
Livestock only	-	-	-	-	-	-	-	-	-	-	-	-
Crop and Livestock	2449	216	9	540	101	19	530	73	14	430	66	15

Table 4.1.2 Continued

Type of holding	Size of Holding In Hectare											
	1.01-2.00			2.01-5.00			5.01-10.00			Over 10		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
All	529	65	12	422	61	14	28	13	46	9	9	99
Crop only	23	14	60	16	8	53	-	-	-	-	-	-
Livestock only	-	-	-	-	-	-	-	-	-	-	-	-
Crop and Livestock	506	64	13	406	60	15	28	13	46	9	9	99

Annex Table 4.2 : Estimates of Agricultural holders, Area of holding and number of parcels by Type of Land use and their Standard errors and Coefficients of Variation

Both Rural and Urban holdings

Land Use By Size Of Holding	Number of Holders			Holding Area in Hectare			Number Of Parcels		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
Holdings Of All Sizes									
All	17775	3943	22	29354	8690	30	60518	17269	29
Land Under Temporary Crops	15707	3826	24	24188	7409	31	48302	14448	30
Land Under Permanent Crops	2500	635	25	49	12	25	2534	635	25
Grazing Land	6479	1667	26	3515	976	28	8741	1925	22
Fallow Land	2623	763	29	440	102	23	2915	766	26
Woodland	6748	2919	43	314	103	33	7436	3207	43
All Other Land	14500	3941	27	848	173	20	15910	4411	28
Holdings Under 0.10 Hectares									
All	3666	500	14	137	17	13	4096	625	15
Land Under Temporary Crops	2081	335	16	39	5	12	2290	365	16
Land Under Permanent Crops	467	77	16	4	1	24	475	78	16
Grazing Land	222	45	20	10	2	24	222	45	20
Fallow Land	45	18	41	1	-	49	45	18	41
Woodland	478	152	32	7	2	30	478	152	32
All Other Land	2874	486	17	76	13	17	2901	494	17
Holdings Of 0.10-0.50 Hectares									
All	2411	353	15	719	140	19	3930	707	18
Land Under Temporary Crops	2010	341	17	500	111	22	2848	579	20
Land Under Permanent Crops	226	51	22	14	8	56	234	52	22
Grazing Land	637	170	27	85	20	23	679	171	25
Fallow Land	171	40	23	17	6	37	194	46	24
Woodland	608	255	42	19	7	37	608	255	42
All Other Land	1597	341	21	84	16	19	1684	411	24
Holdings Of 0.51-1.00 Hectares									
All	2182	560	26	1615	409	25	5489	1739	32
Land Under Temporary Crops	2133	565	26	1341	339	25	3911	1045	27
Land Under Permanent Crops	325	142	44	1		33	325	142	44
Grazing Land	625	134	21	103	29	28	712	141	20
Fallow Land	255	88	35	44	24	55	278	92	33
Woodland	825	437	53	28	15	53	831	437	53
All Other Land	1602	555	35	96	46	48	2008	858	43
Holdings Of 1.01-2.00 Hectares									
All	3634	1110	31	5246	1581	30	13248	4191	32
Land Under Temporary Crops	3606	1113	31	4545	1413	31	11070	3614	33
Land Under Permanent Crops	473	192	41	9	5	51	473	192	41
Grazing Land	1309	345	26	452	131	29	1548	342	22
Fallow Land	431	130	30	53	13	26	446	132	30
Woodland	1593	795	50	45	25	55	1689	858	51
All Other Land	3043	1109	36	142	38	27	3332	1254	38
Holdings Of 2.01-5.00 Hectares									
All	5035	1859	37	15777	6025	38	26988	9861	37
Land Under Temporary Crops	5031	1859	37	13309	5210	39	22479	8434	38
Land Under Permanent Crops	863	316	37	13	5	39	876	315	36
Grazing Land	3011	1112	37	1752	625	36	4174	1296	31
Fallow Land	1307	509	39	212	63	30	1456	509	35
Woodland	2690	1391	52	154	66	43	3193	1553	49
All Other Land	4575	1861	41	337	93	27	5082	1940	38
Holdings Of 5.01-10.00 Hectares									
All	808	155	19	5323	1008	19	6531	1413	22
Land Under Temporary Crops	808	155	19	4027	722	18	5490	1184	22
Land Under Permanent Crops	134	31	23	4	2	46	140	32	23
Grazing Land	646	150	23	1018	306	30	1363	326	24
Fallow Land	406	142	35	111	33	30	481	150	31
Woodland	534	147	28	57	13	23	616	153	25
All Other Land	780	154	20	106	20	19	860	159	18
Holdings Over 10.00 Hectares									
All	38	18	47	539	278	52	235	120	51
Land Under Temporary Crops	38	18	47	428	239	56	214	108	50
Land Under Permanent Crops	12	8	70	3	3	98	12	8	70
Grazing Land	29	16	54	94	68	73	44	25	57
Fallow Land	8	10	120	3	4	120	16	19	120
Woodland	21	13	60	3	2	69	21	13	60
All Other Land	29	16	54	7	4	61	44	25	57

Annex Table 4.2.1 Rural Holdings

Land Use By Size Of Holding	Number of Holders			Holding Area in Hectare			Number Of Parcels		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
Holdings Of All Sizes									
All	14878	3936	26	26312	8680	33	54672	17260	32
Land Under Temporary Crops	12977	3819	29	21170	7397	35	42682	14438	34
Land Under Permanent Crops	2022	629	31	26	8	31	2040	628	31
Grazing Land	6479	1667	26	3515	976	28	8741	1925	22
Fallow Land	2623	763	29	440	102	23	2915	766	26
Woodland	6748	2919	43	314	103	33	7436	3207	43
All Other Land	14500	3941	27	848	173	20	15910	4411	28
Holdings Under 0.10 Hectares									
All	2896	485	17	111	17	15	3123	594	19
Land Under Temporary Crops	1435	316	22	17	3	17	1469	317	22
Land Under Permanent Crops	248	54	22	1	-	26	248	54	22
Grazing Land	222	45	20	10	2	24	222	45	20
Fallow Land	45	18	41	1	-	48	45	18	41
Woodland	478	152	32	7	2	30	478	152	32
All Other Land	2874	486	17	76	13	17	2901	494	17
Holdings Of 0.10-0.50 Hectares									
All	1762	342	19	535	138	26	3050	697	23
Land Under Temporary Crops	1403	332	24	328	109	33	2026	569	28
Land Under Permanent Crops	130	36	28	2	1	40	130	36	28
Grazing Land	637	170	27	85	20	23	679	171	25
Fallow Land	171	40	23	17	6	37	194	46	24
Woodland	608	255	42	19	7	37	608	255	42
All Other Land	1597	341	21	84	16	19	1684	411	24
Holdings Of 0.51-1.00 Hectares									
All	1692	555	33	1254	406	32	4660	1735	37
Land Under Temporary Crops	1644	561	34	981	335	34	3096	1039	34
Land Under Permanent Crops	284	141	50	1	-	42	284	141	50
Grazing Land	625	134	21	103	29	28	712	141	20
Fallow Land	255	88	35	44	24	55	278	92	33
Woodland	825	437	53	28	15	53	831	437	53
All Other Land	1602	555	35	96	46	48	2008	858	43
Holdings Of 1.01-2.00 Hectares									
All	3105	1108	36	4454	1578	35	11835	4187	35
Land Under Temporary Crops	3077	1111	36	3755	1409	38	9657	3609	37
Land Under Permanent Crops	422	191	45	7	5	65	422	191	45
Grazing Land	1309	345	26	452	131	29	1548	342	22
Fallow Land	431	130	30	53	13	26	446	132	30
Woodland	1593	795	50	45	25	55	1689	858	51
All Other Land	3043	1109	36	142	38	27	3332	1254	38
Holdings Of 2.01-5.00 Hectares									
All	4613	1858	40	14480	6022	42	25365	9858	39
Land Under Temporary Crops	4608	1858	40	12013	5207	43	20856	8429	40
Land Under Permanent Crops	804	316	39	12	5	43	817	314	38
Grazing Land	3011	1112	37	1752	625	36	4174	1296	31
Fallow Land	1307	509	39	212	63	30	1456	509	35
Woodland	2690	1391	52	154	66	43	3193	1553	49
All Other Land	4575	1861	41	337	93	27	5082	1940	38
Holdings Of 5.01-10.00 Hectares									
All	780	154	20	5154	1005	20	6422	1412	22
Land Under Temporary Crops	780	154	20	3859	717	19	5381	1183	22
Land Under Permanent Crops	126	30	24	2	1	47	131	31	24
Grazing Land	646	150	23	1018	306	30	1363	326	24
Fallow Land	406	142	35	111	33	30	481	150	31
Woodland	534	147	28	57	13	23	616	153	25
All Other Land	780	154	20	106	20	19	860	159	18
Holdings Over 10.00 Hectares									
All	29	16	54	324	177	55	217	119	55
Land Under Temporary Crops	29	16	54	216	112	52	196	106	54
Land Under Permanent Crops	7	7	93	-	-	93	7	7	93
Grazing Land	29	16	54	94	68	73	44	25	57
Fallow Land	8	10	120	3	4	120	16	19	120
Woodland	21	13	60	3	2	69	21	13	60
All Other Land	29	16	54	7	4	61	44	25	57

Annex Table 4.2.2 Urban Holdings

Land Use By Size Of Holding	Number of Holders			Holding Area in Hectare			Number Of Parcels		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
Holdings Of All Sizes									
All	2897	246	9	3042	427	14	5846	556	10
Land Under Temporary Crops	2730	234	9	3018	425	14	5620	541	10
Land Under Permanent Crops	478	91	19	24	9	39	494	94	19
Holdings Under 0.10 Hectares									
All	770	121	16	26	4	15	973	193	20
Land Under Temporary Crops	645	113	17	22	4	16	821	181	22
Land Under Permanent Crops	219	54	25	3	1	31	227	56	25
Holdings Of 0.10-0.50 Hectares									
All	649	87	13	183	25	14	880	117	13
Land Under Temporary Crops	606	77	13	171	22	13	822	108	13
Land Under Permanent Crops	96	36	37	12	8	66	104	37	36
Holdings Of 0.51-1.00 Hectares									
All	489	72	15	361	51	14	829	122	15
Land Under Temporary Crops	489	72	15	361	51	14	814	116	14
Land Under Permanent Crops	40	16	40	-	-	53	40	16	40
Holdings Of 1.01-2.00 Hectares									
All	529	65	12	792	100	13	1413	188	13
Land Under Temporary Crops	529	65	12	789	100	13	1413	188	13
Land Under Permanent Crops	50	17	34	2	1	56	50	17	34
Holdings Of 2.01-5.00 Hectares									
All	422	61	14	1297	200	15	1623	274	17
Land Under Temporary Crops	422	61	14	1296	200	15	1623	274	17
Land Under Permanent Crops	59	20	34	1	1	71	59	20	34
Holdings Of 5.01-10.00 Hectares									
All	28	13	46	169	80	48	109	53	49
Land Under Temporary Crops	28	13	46	167	80	48	109	53	49
Land Under Permanent Crops	9	8	94	1	1	94	9	8	94
Holdings Over 10.00 Hectares									
All	9	9	99	215	214	100	18	18	100
Land Under Temporary Crops	9	9	99	212	211	100	18	18	100
Land Under Permanent Crops	4	5	105	3	3	105	4	5	105

Annex Table 4.3: Estimates of Agricultural holders by Type of Land tenure systems and Land use and their Standard errors and Coefficients of Variation

Both Rural and Urban holdings

Land Use By Size Of Holding	All Number			Number of Holders By Tenure Systems								
				Land Owned			Land Rented			Other Tenure		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
Holdings Of All Sizes												
All	17775	3943	22	16378	3845	23	3908	1244	32	2846	1416	50
Land Under Temporary Crops	15707	3826	24	13707	3545	26	3730	1245	33	2030	1024	50
Land Under Permanent Crops	2500	635	25	2434	635	26	38	21	54	27	14	53
Grazing Land	6479	1667	26	6098	1653	27	207	49	24	454	171	38
Fallow Land	2623	763	29	2359	744	32	215	88	41	49	17	35
Woodland	6748	2919	43	6249	2717	43	5	4	79	501	403	80
All Other Land	14500	3941	27	13558	3781	28	158	49	31	1358	878	65
Holdings Under 0.10 Hectares												
All	3666	500	14	3245	492	15	215	47	22	275	53	19
Land Under Temporary Crops	2081	335	16	1883	334	18	84	26	31	128	35	27
Land Under Permanent Crops	467	77	16	406	69	17	38	21	54	22	14	61
Grazing Land	222	45	20	167	39	23	18	12	67	37	21	57
Fallow Land	45	18	41	30	14	48	15	9	60	-	-	-
Woodland	478	152	32	465	152	33	5	4	79	8	7	93
All Other Land	2874	486	17	2542	478	19	131	42	32	229	46	20
Holdings Of 0.10-0.50 Hectares												
All	2411	353	15	2116	345	16	271	90	33	307	96	31
Land Under Temporary Crops	2010	341	17	1577	267	17	271	90	33	268	93	35
Land Under Permanent Crops	226	51	22	226	51	22	-	-	-	-	-	-
Grazing Land	637	170	27	597	167	28	-	-	-	40	17	43
Fallow Land	171	40	23	137	34	25	14	12	82	20	13	65
Woodland	608	255	42	568	254	45	-	-	-	40	21	53
All Other Land	1597	341	21	1482	337	23	14	12	82	101	33	33
Holdings Of 0.51-1.00 Hectares												
All	2182	560	26	1739	360	21	483	168	35	664	479	72
Land Under Temporary Crops	2133	565	26	1448	276	19	483	168	35	583	400	69
Land Under Permanent Crops	325	142	44	325	142	44	-	-	-	-	-	-
Grazing Land	625	134	21	614	136	22	11	9	87	7	9	135
Fallow Land	255	88	35	255	88	35	-	-	-	-	-	-
Woodland	825	437	53	571	276	48	-	-	-	253	242	96
All Other Land	1602	555	35	1335	356	27	-	-	-	512	482	94
Holdings Of 1.01-2.00 Hectares												
All	3634	1110	31	3474	1109	32	986	395	40	847	557	66
Land Under Temporary Crops	3606	1113	31	3237	1088	34	979	396	40	513	318	62
Land Under Permanent Crops	473	192	41	473	192	41	-	-	-	-	-	-
Grazing Land	1309	345	26	1222	345	28	19	14	75	86	27	31
Fallow Land	431	130	30	374	132	35	35	25	72	23	10	45
Woodland	1593	795	50	1400	676	48	-	-	-	193	163	84
All Other Land	3043	1109	36	2833	1034	36	-	-	-	393	323	82
Holdings Of 2.01-5.00 Hectares												
All	5035	1859	37	4973	1859	37	1560	546	35	661	316	48
Land Under Temporary Crops	5031	1859	37	4731	1827	39	1534	547	36	461	238	52
Land Under Permanent Crops	863	316	37	858	316	37	-	-	-	5	4	88
Grazing Land	3011	1112	37	2842	1096	39	76	29	38	275	164	60
Fallow Land	1307	509	39	1243	508	41	58	23	40	6	6	92
Woodland	2690	1391	52	2690	1391	52	-	-	-	8	9	120
All Other Land	4575	1861	41	4562	1861	41	7	6	92	110	83	76
Holdings Of 5.01-10.00Hectares												
All	808	155	19	797	155	19	379	98	26	72	26	36
Land Under Temporary Crops	808	155	19	797	155	19	365	96	26	58	24	42
Land Under Permanent Crops	134	31	23	134	31	23	-	-	-	-	-	-
Grazing Land	646	150	23	627	150	24	83	27	32	10	6	64
Fallow Land	406	142	35	313	131	42	93	83	89	-	-	-
Woodland	534	147	28	534	147	28	-	-	-	-	-	-
All Other Land	780	154	20	776	154	20	7	6	92	13	9	68
Holdings Over 10.00 Hectares												
All	38	18	47	34	17	49	14	9	66	20	12	64
Land Under Temporary Crops	38	18	47	34	17	49	14	9	66	20	12	64
Land Under Permanent Crops	12	8	70	12	8	70	-	-	-	-	-	-
Grazing Land	29	16	54	29	16	54	-	-	-	-	-	-
Fallow Land	8	10	120	8	10	120	-	-	-	-	-	-
Woodland	21	13	60	21	13	60	-	-	-	-	-	-
All Other Land	29	16	54	29	16	54	-	-	-	-	-	-

Annex Table 4.3.1 Rural holdings

Land Use By Size Of Holding	All Number			Number of Holders By Tenure Systems								
				Land Owned			Land Rented			Other Tenure		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
Holdings Of All Sizes												
All	14878	3936	26	14002	3839	27	3361	1241	37	2654	1415	53
Land Under Temporary Crops	12977	3819	29	11501	3539	31	3191	1243	39	1838	1023	56
Land Under Permanent Crops	2022	629	31	1985	629	32	10	7	77	27	14	53
Grazing Land	6479	1667	26	6098	1653	27	207	49	24	454	171	38
Fallow Land	2623	763	29	2359	744	32	215	88	41	49	17	35
Woodland	6748	2919	43	6249	2717	43	5	4	79	501	403	80
All Other Land	14500	3941	27	13558	3781	28	158	49	31	1358	878	65
Holdings Under 0.10 Hectares												
All	2896	485	17	2580	478	19	148	42	29	229	46	20
Land Under Temporary Crops	1435	316	22	1334	316	24	25	16	63	81	24	30
Land Under Permanent Crops	248	54	22	216	50	23	10	7	77	22	14	61
Grazing Land	222	45	20	167	39	23	18	12	67	37	21	57
Fallow Land	45	18	41	30	14	48	15	9	60	-	-	-
Woodland	478	152	32	465	152	33	5	4	79	8	7	94
All Other Land	2874	486	17	2542	478	19	131	42	32	229	46	20
Holdings Of 0.10-0.50 Hectares												
All	1762	342	19	1612	337	21	178	86	48	251	92	37
Land Under Temporary Crops	1403	332	24	1116	260	23	178	86	48	212	88	42
Land Under Permanent Crops	130	36	28	130	36	28	-	-	-	-	-	-
Grazing Land	637	170	27	597	167	28	-	-	-	40	17	43
Fallow Land	171	40	23	137	34	25	14	12	82	20	13	65
Woodland	608	255	42	568	254	45	-	-	-	40	21	53
All Other Land	1597	341	21	1482	337	23	14	12	82	101	33	33
Holdings Of 0.51-1.00 Hectares												
All	1692	555	33	1385	356	26	332	164	50	628	479	76
Land Under Temporary Crops	1644	561	34	1104	271	25	332	164	50	546	400	73
Land Under Permanent Crops	284	141	50	284	141	50	-	-	-	-	-	-
Grazing Land	625	134	21	614	136	22	11	9	87	7	9	135
Fallow Land	255	88	35	255	88	35	-	-	-	-	-	-
Woodland	825	437	53	571	276	48	-	-	-	253	242	96
All Other Land	1602	555	35	1335	356	27	-	-	-	512	482	94
Holdings Of 1.01-2.00 Hectares												
All	3105	1108	36	3027	1108	37	858	394	46	826	557	67
Land Under Temporary Crops	3077	1111	36	2791	1086	39	851	395	46	492	318	65
Land Under Permanent Crops	422	191	45	422	191	45	-	-	-	-	-	-
Grazing Land	1309	345	26	1222	345	28	19	14	75	86	27	31
Fallow Land	431	130	30	374	132	35	35	25	72	23	10	45
Woodland	1593	795	50	1400	676	48	-	-	-	193	163	84
All Other Land	3043	1109	36	2833	1034	36	-	-	-	393	323	82
Holdings Of 2.01-5.00 Hectares												
All	4613	1858	40	4592	1858	40	1459	545	37	634	316	50
Land Under Temporary Crops	4608	1858	40	4351	1826	42	1433	547	38	434	237	55
Land Under Permanent Crops	804	316	39	800	315	39	-	-	-	5	4	88
Grazing Land	3011	1112	37	2842	1096	39	76	29	38	275	164	60
Fallow Land	1307	509	39	1243	508	41	58	23	40	6	6	92
Woodland	2690	1391	52	2690	1391	52	-	-	-	8	9	120
All Other Land	4575	1861	41	4562	1861	41	7	6	92	110	83	76
Holdings Of 5.01-10.00 Hectares												
All	780	154	20	776	154	20	373	98	26	72	26	36
Land Under Temporary Crops	780	154	20	776	154	20	359	96	27	58	24	42
Land Under Permanent Crops	126	30	24	126	30	24	-	-	-	-	-	-
Grazing Land	646	150	23	627	150	24	83	27	32	10	6	64
Fallow Land	406	142	35	313	131	42	93	83	89	-	-	-
Woodland	534	147	28	534	147	28	-	-	-	-	-	-
All Other Land	780	154	20	776	154	20	7	6	92	13	9	68
Holdings Over 10.00 Hectares												
All	29	16	54	29	16	54	14	9	66	15	11	76
Land Under Temporary Crops	29	16	54	29	16	54	14	9	66	15	11	76
Land Under Permanent Crops	7	7	93	7	7	93	-	-	-	-	-	-
Grazing Land	29	16	54	29	16	54	-	-	-	-	-	-
Fallow Land	8	10	120	8	10	120	-	-	-	-	-	-
Woodland	21	13	60	21	13	60	-	-	-	-	-	-
All Other Land	29	16	54	29	16	54	-	-	-	-	-	-

Annex Table 4.3.2 Urban holdings

Land Use By Size Of Holding	All Number			Number of Holders By Tenure Systems								
				Land Owned			Land Rented			Other Tenure		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
Holdings Of All Sizes												
All	2897	246	9	2376	221	9	548	82	15	192	56	29
Land Under Temporary Crops	2730	234	9	2206	205	9	539	83	15	192	56	29
Land Under Permanent Crops	478	91	19	449	87	19	29	20	68	-	-	-
Holdings Under 0.10 Hectares												
All	770	121	16	665	115	17	68	21	31	47	25	53
Land Under Temporary Crops	645	113	17	549	108	20	59	21	35	47	25	53
Land Under Permanent Crops	219	54	25	190	48	25	29	20	68	-	-	-
Holdings Of 0.10-0.50 Hectares												
All	649	87	13	503	72	14	93	27	29	56	28	51
Land Under Temporary Crops	606	77	13	461	62	13	93	27	29	56	28	51
Land Under Permanent Crops	96	36	37	96	36	37	-	-	-	-	-	-
Holdings Of 0.51-1.00 Hectares												
All	489	72	15	355	56	16	151	37	25	37	14	37
Land Under Temporary Crops	489	72	15	343	51	15	151	37	25	37	14	37
Land Under Permanent Crops	40	16	40	40	16	40	-	-	-	-	-	-
Holdings Of 1.01-2.00 Hectares												
All	529	65	12	447	58	13	128	28	22	22	9	44
Land Under Temporary Crops	529	65	12	447	58	13	128	28	22	22	9	44
Land Under Permanent Crops	50	17	34	50	17	34	-	-	-	-	-	-
Holdings Of 2.01-5.00 Hectares												
All	422	61	14	380	59	16	101	23	23	27	12	44
Land Under Temporary Crops	422	61	14	380	59	16	101	23	23	27	12	44
Land Under Permanent Crops	59	20	34	59	20	34	-	-	-	-	-	-
Holdings Of 5.01-10.0 Hectares												
All	28	13	46	22	12	56	6	6	88	-	-	-
Land Under Temporary Crops	28	13	46	22	12	56	6	6	88	-	-	-
Land Under Permanent Crops	9	8	94	9	8	94	-	-	-	-	-	-
Holdings Over 10.00 Hectares												
All	9	9	99	4	5	105	-	-	-	4	5	105
Land Under Temporary Crops	9	9	99	4	5	105	-	-	-	4	5	105
Land Under Permanent Crops	4	5	105	4	5	105	-	-	-	-	-	-

Annex Table 4.4 Estimates of Area of holdings by Type of Land tenure systems and Land use and their Standard errors and Coefficients of Variation

Both Rural and Urban holdings

Land Use By Size Of Holding	Area in Hectare			Area of Holding In hectare By Tenure Systems								
				Land Owned			Land Rented			Other Tenure		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
Holdings Of All Sizes												
All	29354	8690	30	24313	8362	34	3670	955	26	1371	496	36
Land Under Temporary Crops	24188	7409	31	19486	7115	37	3526	936	27	1177	440	37
Land Under Permanent Crops	49	12	25	48	12	25	-	-	63	1	1	76
Grazing Land	3515	976	28	3275	969	30	112	39	35	128	41	32
Fallow Land	440	102	23	407	92	23	28	17	61	6	5	82
Woodland	314	103	33	295	93	31	-	-	100	18	16	88
All Other Land	848	173	20	802	158	20	5	2	46	42	26	62
Holdings Under 0.10 Hectares												
All	137	17	13	121	16	13	6	2	25	10	2	23
Land Under Temporary Crops	39	5	12	34	4	12	2	1	31	3	1	38
Land Under Permanent Crops	4	1	24	4	1	26	-	-	63	-	-	69
Grazing Land	10	2	24	7	2	29	1	1	78	2	1	57
Fallow Land	1	-	49	1	-	58	-	-	79	-	-	-
Woodland	7	2	30	7	2	30	-	-	100	-	-	-
All Other Land	76	13	17	69	12	17	2	1	39	4	1	32
Holdings Of 0.10-0.50 Hectares												
All	719	140	19	549	94	17	84	30	35	87	32	36
Land Under Temporary Crops	500	111	22	350	70	20	83	30	36	67	30	44
Land Under Permanent Crops	14	8	56	14	8	56	-	-	-	-	-	-
Grazing Land	85	20	23	77	18	23	-	-	-	9	5	58
Fallow Land	17	6	37	12	4	33	1	1	81	4	5	109
Woodland	19	7	37	18	7	39	-	-	-	1	1	79
All Other Land	84	16	19	78	16	20	-	-	86	6	2	39
Holdings Of 0.51-1.00 Hectares												
All	1615	409	25	1066	226	21	240	83	35	309	207	67
Land Under Temporary Crops	1341	339	25	824	203	25	240	83	35	277	180	65
Land Under Permanent Crops	1	-	33	1	-	33	-	-	-	-	-	-
Grazing Land	103	29	28	102	29	28	1	1	106	1	1	135
Fallow Land	44	24	55	44	24	55	-	-	-	-	-	-
Woodland	28	15	53	15	6	38	-	-	-	13	13	96
All Other Land	96	46	48	79	31	39	-	-	-	18	16	92
Holdings Of 1.01-2.00 Hectares												
All	5246	1581	30	4173	1455	35	723	200	28	350	157	45
Land Under Temporary Crops	4545	1413	31	3520	1284	36	712	200	28	313	146	47
Land Under Permanent Crops	9	5	51	9	5	51	-	-	-	-	-	-
Grazing Land	452	131	29	423	131	31	6	5	83	23	11	47
Fallow Land	53	13	26	47	14	29	4	3	69	1	1	53
Woodland	45	25	55	41	21	52	-	-	-	4	4	88
All Other Land	142	38	27	133	34	25	-	-	-	9	7	78
Holdings Of 2.01-5.00 Hectares												
All	15777	6025	38	13552	5927	44	1793	568	32	433	128	29
Land Under Temporary Crops	13309	5210	39	11211	5136	46	1752	568	32	345	105	30
Land Under Permanent Crops	13	5	39	12	5	41	-	-	-	1	1	88
Grazing Land	1752	625	36	1634	622	38	35	14	40	82	36	44
Fallow Land	212	63	30	206	63	30	5	2	45	-	-	91
Woodland	154	66	43	154	66	43	-	-	-	-	-	133
All Other Land	337	93	27	333	92	27	-	-	90	4	3	87
Holdings Of 5.01-10.00 Hectares												
All	5323	1008	19	4446	944	21	793	172	22	84	34	41
Land Under Temporary Crops	4027	722	18	3251	655	20	705	153	22	71	32	46
Land Under Permanent Crops	4	2	46	4	2	46	-	-	-	-	-	-
Grazing Land	1018	306	30	938	298	32	68	30	44	12	8	70
Fallow Land	111	33	30	93	32	34	17	17	97	-	-	-
Woodland	57	13	23	57	13	23	-	-	-	-	-	-
All Other Land	106	20	19	102	20	19	2	2	92	1	1	65
Holdings Over 10.00 Hectares												
All	539	278	52	406	217	53	32	21	65	100	75	75
Land Under Temporary Crops	428	239	56	296	178	60	32	21	65	100	75	75
Land Under Permanent Crops	3	3	98	3	3	98	-	-	-	-	-	-
Grazing Land	94	68	73	94	68	73	-	-	-	-	-	-
Fallow Land	3	4	120	3	4	120	-	-	-	-	-	-
Woodland	3	2	69	3	2	69	-	-	-	-	-	-
All Other Land	7	4	61	7	4	61	-	-	-	-	-	-

Annex Table 4.4.1 Rural Holdings

Land Use By Size Of Holding	Area in Hectare			Area of Holding In hectare By Tenure Systems								
				Land Owned			Land Rented			Other Tenure		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
Holdings Of All Sizes												
All	26312	8680	33	21957	8355	38	3171	950	30	1184	491	42
Land Under Temporary Crops	21170	7397	35	17153	7106	41	3027	931	31	990	434	44
Land Under Permanent Crops	26	8	31	25	8	32	-	-	78	1	1	76
Grazing Land	3515	976	28	3275	969	30	112	39	35	128	41	32
Fallow Land	440	102	23	407	92	23	28	17	61	6	5	82
Woodland	314	103	33	295	93	31	-	-	79	18	16	88
All Other Land	848	173	20	802	158	20	5	2	46	42	26	62
Holdings Under 0.10 Hectares												
All	111	17	15	99	16	16	4	1	35	8	2	25
Land Under Temporary Crops	17	3	17	15	3	18	-	-	61	1	-	35
Land Under Permanent Crops	1	-	26	1	-	28	-	-	78	-	-	70
Grazing Land	10	2	24	7	2	29	1	1	78	2	1	57
Fallow Land	1	-	48	1	-	59	-	-	78	-	-	-
Woodland	7	2	30	7	2	30	-	-	79	-	-	94
All Other Land	76	13	17	69	12	17	2	1	39	4	1	32
Holdings Of 0.10-0.50 Hectares												
All	535	138	26	406	91	22	56	29	51	73	31	42
Land Under Temporary Crops	328	109	33	219	68	31	56	29	51	54	29	54
Land Under Permanent Crops	2	1	40	2	1	40	-	-	-	-	-	-
Grazing Land	85	20	23	77	18	23	-	-	-	9	5	57
Fallow Land	17	6	37	12	4	33	1	1	82	4	5	109
Woodland	19	7	37	18	7	39	-	-	-	1	1	80
All Other Land	84	16	19	78	16	20	-	-	82	6	2	39
Holdings Of 0.51-1.00 Hectares												
All	1254	406	32	824	223	27	144	79	55	286	207	73
Land Under Temporary Crops	981	335	34	583	200	34	144	79	55	254	179	70
Land Under Permanent Crops	1	-	42	1	-	42	-	-	-	-	-	-
Grazing Land	103	29	28	102	29	28	1	1	104	1	1	135
Fallow Land	44	24	55	44	24	55	-	-	-	-	-	-
Woodland	28	15	53	15	6	38	-	-	-	13	13	96
All Other Land	96	46	48	79	31	39	-	-	-	18	16	92
Holdings Of 1.01-2.00 Hectares												
All	4454	1578	35	3564	1453	41	574	197	34	316	156	49
Land Under Temporary Crops	3755	1409	38	2913	1282	44	563	197	35	279	145	52
Land Under Permanent Crops	7	5	65	7	5	65	-	-	-	-	-	-
Grazing Land	452	131	29	423	131	31	6	5	83	23	11	47
Fallow Land	53	13	26	47	14	29	4	3	70	1	1	53
Woodland	45	25	55	41	21	52	-	-	-	4	4	88
All Other Land	142	38	27	133	34	25	-	-	-	9	7	78
Holdings Of 2.01-5.00 Hectares												
All	14480	6022	42	12501	5925	47	1601	566	35	378	125	33
Land Under Temporary Crops	12013	5207	43	10162	5133	51	1561	566	36	290	102	35
Land Under Permanent Crops	12	5	43	11	5	45	-	-	-	1	1	88
Grazing Land	1752	625	36	1634	622	38	35	14	40	82	36	44
Fallow Land	212	63	30	206	63	30	5	2	45	-	-	92
Woodland	154	66	43	154	66	43	-	-	-	-	-	120
All Other Land	337	93	27	333	92	27	-	-	92	4	3	87
Holdings Of 5.01-10.0 Hectares												
All	5154	1005	20	4310	941	22	760	169	22	84	34	41
Land Under Temporary Crops	3859	717	19	3117	650	21	672	150	22	71	32	46
Land Under Permanent Crops	2	1	47	2	1	47	-	-	-	-	-	-
Grazing Land	1018	306	30	938	298	32	68	30	44	12	8	70
Fallow Land	111	33	30	93	32	34	17	17	97	-	-	-
Woodland	57	13	23	57	13	23	-	-	-	-	-	-
All Other Land	106	20	19	102	20	19	2	2	92	1	1	65
Holdings Over 10.00 Hectares												
All	324	177	55	252	143	57	32	21	65	40	41	103
Land Under Temporary Crops	216	112	52	144	79	55	32	21	65	40	41	103
Land Under Permanent Crops	-	-	93	-	-	93	-	-	-	-	-	-
Grazing Land	94	68	73	94	68	73	-	-	-	-	-	-
Fallow Land	3	4	120	3	4	120	-	-	-	-	-	-
Woodland	3	2	69	3	2	69	-	-	-	-	-	-
All Other Land	7	4	61	7	4	61	-	-	-	-	-	-

Annex Table 4.4.2 Urban Holdings

Land Use By Size Of Holding	Area in Hectare			Area of Holding In hectare By Tenure Systems								
				Land Owned			Land Rented			Other Tenure		
	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %	Estimate	S.E	C.V In %
Holdings Of All Sizes												
All	3042	427	14	2356	349	15	499	100	20	187	70	38
Land Under Temporary Crops	3018	425	14	2333	347	15	499	100	20	187	70	38
Land Under Permanent Crops	24	9	39	23	9	39	-	-	63	-	-	-
Holdings Under 0.10 Hectares												
All	26	4	15	22	4	16	2	1	31	2	1	62
Land Under Temporary Crops	22	4	16	19	3	17	2	1	34	2	1	62
Land Under Permanent Crops	3	1	31	3	1	32	-	-	63	-	-	-
Holdings Of 0.10-0.50 Hectares												
All	183	25	14	142	21	15	27	7	27	14	6	46
Land Under Temporary Crops	171	22	13	130	19	14	27	7	27	14	6	46
Land Under Permanent Crops	12	8	66	12	8	66	-	-	-	-	-	-
Holdings Of 0.51-1.00 Hectares												
All	361	51	14	242	34	14	96	25	26	23	10	42
Land Under Temporary Crops	361	51	14	241	34	14	96	25	26	23	10	42
Land Under Permanent Crops	-	-	53	-	-	53	-	-	-	-	-	-
Holdings Of 1.01-2.00 Hectares												
All	792	100	13	609	81	13	149	34	23	34	15	44
Land Under Temporary Crops	789	100	13	607	81	13	149	34	23	34	15	44
Land Under Permanent Crops	2	1	56	2	1	56	-	-	-	-	-	-
Holdings Of 2.01-5.00 Hectares												
All	1297	200	15	1051	178	17	191	51	26	55	24	44
Land Under Temporary Crops	1296	200	15	1049	178	17	191	51	26	55	24	44
Land Under Permanent Crops	1	1	71	1	1	71	-	-	-	-	-	-
Holdings Of 5.01-10.00 Hectares												
All	169	80	48	136	77	57	33	29	88	-	-	-
Land Under Temporary Crops	167	80	48	134	76	57	33	29	88	-	-	-
Land Under Permanent Crops	1	1	94	1	1	94	-	-	-	-	-	-
Holdings Over 10.00 Hectares												
All	215	214	100	154	163	105	-	-	-	60	63	105
Land Under Temporary Crops	212	211	100	152	160	105	-	-	-	60	63	105
Land Under Permanent Crops	3	3	105	3	3	105	-	-	-	-	-	-

CHAPTER V

AREA AND PRODUCTION OF CROPS AND CROP UTILIZATION

1 INTRODUCTION

Ethiopian farming largely produces only enough food for the peasant holder and his family for consumption, leaving little to sell. This inadequate volume of production is ascribed to the tardy progress in the farming methods and scattered pieces of land holdings. Under this traditional sector, agriculture is practiced on public land and most of the produce is mainly for own consumption. The diverse climate of the country and the multiple utilizations of crops have prompted the vast majority of agricultural holders to grow various temporary and permanent crops. Despite the variation in the volume of production, the relative importance and pattern of growth of these crops are largely similar across many of the regions. This similarity is well observed and demonstrated in the statistical tables presented in this report. In some regions there seems to be a shift in choice of crops grown. In Addis Ababa City Administration, Teff and wheat are the major crops that are grown in greater volume.

There is a general agreement that the performance of an agricultural system should achieve a steady supply of food to the people of a country. But, unless special attention is focused on agriculture, its performance can be impeded by vagaries of nature, population growth and scarcity and fragmentation of land, thus, affecting food supply and posing a challenge to the federal and regional governments. This situation calls for an overhaul of the agricultural system in the country or the regions.

In order to have a flourishing agriculture, which sustains reliable food supply, the federal and regional governments have to formulate and implement farm

programs that ensure food security. The preparation, execution, monitoring and assessment of these programs entail statistics on agriculture particularly crop production since it is the prime target that national or regional agricultural policies aim at.

The collection of data on crop production should encompass all crop seasons in the agricultural calendar and farming activities in both rural and urban areas. It should also include the wide range of crops that are grown and embodied in the food security system, which are indispensable for a sustained provision of staple diet and other cash crops like coffee and Chat.

In view of this, crop production data for private peasant holdings for both Meher and Belg seasons in both rural and urban areas were collected in the census to provide the basis for decision making in the process of implementing timely food security measures and to make policy makers aware of the food situation in the country.

Thus, in this chapter the census data on production of temporary crops/annual crops such as cereals, pulses, oilseeds, vegetables and root crops are presented in Section 2. Also production of permanent crops that included fruit crops, stimulant crops and other permanent crops are dealt with in Section 3. Moreover, the utilization of temporary crops as well as permanent crops for various purposes such as household consumption, seed, sale, paying wages in kind ...etc are indicated in Section 4. Furthermore Standard Error (S.E.) and Coefficient of Variation (C.V.) are provided as an annex to this chapter.

2. PRODUCTION OF TEMPORARY / ANNUAL CROPS

The types of temporary crops on which data were collected during the census are those that food security embraces: that is, the crops that are the staple diets in the country. In the statistical tables, these crops have been categorized into

five groups for simplicity of description and comparison purposes. The groups are cereals, pulses, oilseeds, vegetables and root crops. The crops within each group have some similarity, which made the categorization necessary.

2.1 Cereals

These are crops that are produced in greater volume compared to the other crops because these are the principal staple crops every year and export commodities at times of bumper harvest in the country. Between the months of September 2001 and August 2002 it was learned that 242,794 quintals of cereals worth 106,028,521 Birr was exported from Ethiopia to various countries. (CSA,External Trade Statistics).

Cereals are grown in almost all regions of Ethiopia with notable variation in the extent of areas planted and the volume of production obtained. This variation is seemingly caused by a shift in choice of crops by the holders and difference in weather conditions.Teff and wheat are the major crops in the region.

Summary Tables V-1 and V-2 show that 77.54% of the regional grain crop area was devoted to cereals and 79.19% of the grain production was that of cereals. Out of all area under grain, teff and wheat took up 39.02% and 36.22%, yielding 33.34% and 14.41% of the regional grain production, respectively.

As the census result depicts, agricultural households in urban areas of the region contributed 10.73% and 10.13% of the regional grain crop area and grain production, respectively. Out of the total area and production under cereals, 3.51% and 5.1% were added by urban agricultural households, in the same order.

2.2 Pulses

These crops are essential part of the dietary requirements for most Ethiopians. These crops also form a significant commodity group of export, earning a considerable amount of foreign exchange for the country and cash for peasant farmers. In 2001/02 (1994 E.C.) between the months of September and August, 1,229,366 quintals of pulses valued at 351,997,759 Birr was exported from Ethiopia to various countries. (CSA,External Trade Statistics). These are some of the grounds for growing various pulses in all regions of the country with varying quantities. There is no doubt that economic benefits can accrue to the country from the production and export of more pulses if the agriculture in Ethiopia is given due attention in this regard.

A view of Summary Tables V-1 and V-2 enables to detect that 22.3% of the regional grain crop area was under pulses and 20.79% of the grain production consisted of the same crops. Of the regional area under grain crops, 11.34% was planted to chickpeas, and the remaining area was under other pulses. The production obtained from chickpeas, was 11.92% of the regional grain total. Out of the total area and production of pulses, 6.77% and 4.05% were added by Urban agricultural households, in the same order.

2.3 Oilseeds

These crops are also of paramount importance as a source of cooking oil used to provide the fat required in the food consumed by the residents in the region. Moreover, oil crops have become a major commodity of export earning a great deal of foreign exchange. Between September 2001 and August 2002, Ethiopia exported 953,088 quintals of oilseeds valued at 351,952,634 Birr signaling that an increase in the production and export of these crops will definitely generate more money. (CSA,External Trade Statistics).

Summary Tables V-1 and V-2 indicate that only 0.16 % of the regional grain crop area was under oilseeds and 0.01 % of the regional grain production was that of the oil seeds.

2.4 Vegetables

These crops like fruits are also a good source of nourishment necessary for the healthy growth of humans. Dieticians often advise people to eat more of vegetables for their nutritional values. Vegetables are relatively cheaper and better available than other farm products in urban centers because these crops are usually grown as garden produces sometimes using irrigation.

It may be worth to know that a certain amount of foreign exchange is drawn from vegetable exports. For instance between September 2001 - August 2002 Ethiopia exported 61,070 quintals of vegetables worth 11,543,144 Birr to various countries. Thus, on the grounds that vegetables are nutritionally and economically important, it is worth expanding vegetable farming. When one looks at Summary Tables V-1 – V-2 to have a picture of the vegetable production in Addis ababa City Administration one realizes that a lot has to be done in this regard.

Summary Tables V-1 and V-2 show that only 0.88 % of the regional crop area and production is under vegetables, respectively.

2.5 Root Crops

Some root crops like onion and garlic are indispensable part of the daily meal of the Ethiopian population. These crops are essential to improve the taste and scent of the food. Potato, which is one of nature's precious gifts, is also very common in the dishes of most Ethiopians. This importance necessitated the

the use of irrigation. Root crops are also a good source of cash and foreign exchange for the growers and the country, respectively. In 2001/02 (1994 E.C) the country has acquired a sum of 22,423,972 million Birr by exporting 120,497 quintals of root crops. (CSA,External Trade Statistics). The economic and nutritional importance of root crops has been a factor for practicing the agriculture in all the regions and growing the crops more than one time in a year.

Summary Tables V-1 and V-2 indicate the root crop situation in Addis Ababa City Administration . As the tables show, root crops covered only 1.9 % of the city Administration crop area and 10.72% of the production volume. Potatoes shared 10.05% of the total root crop area. Carrot added 72.44% to the total volume of root crop production in the City Administration.

3. PRODUCTION OF PERMANENT CROPS

Permanent crops are long term crops that occupy the field planted for a long period of time and largely harvested every year and do not have to be replanted for several years after each harvest. These include tree crops such as coffee, Enset, Chat, oranges, mangoes, bananas, papayas, avocados… etc. The trees that yield fruits like oranges, mangoes, papayas, apples and others are also known as fruit trees.

Permanent crops are a good source of cash both for the holders and the country generating handsome income and foreign exchange at the best of times. For instance, between September 2001 and August 2002 Ethiopia exported 53,142 quintals of fruits and nuts and 91,705 quintals of Chat valued at 16.5 and 426.7 million Birr, respectively. (CSA,External Trade Statistics). With these bits of information and the dietary and economic importance of the crops in mind, it is not difficult to project the profits that can be reaped from the permanent crops if the farming in this regard is well developed and managed.

SUMMARY TABLE V-1 AREA UNDER TEMPORARY CROPS BY CROP TYPE FOR PRIVATE PEASANT HOLDINGS

Addis Ababa City Administration

Crop	All		Rural		Urban
			Area (HA)		Area (HA)
	Area (HA)	%	Meher	Belg	Meher
All	24202.6		21155.18	46.24	3001.18
Grain Crops	23530.88	100	20980.58	*	2525.67
Cereals	18245.72	77.54	16077.97	*	2147.24
Teff	9182.78	39.02	7982.95	-	1199.83
Barley	423.16	1.8	148.28	*	254.71
Wheat	8522.92	36.22	7864.34	-	658.58
Maize	64.95	0.28	47.39	*	17.22
Sorghum	41.85	0.18	26.51	-	15.34
Finger Millet	*	*	*	-	-
Oats/"Aja"	*	*	*	-	*
Rice	-	-	-	-	-
Pulses	5247.78	22.3	4888.55	*	355.1
Horse beans	283.44	1.2	230.59	*	52.72
Field peas	94.17	0.4	53.54	*	40.47
Haricot beans	3.28	0.01	1.39	*	*
Chick-peas	2668.07	11.34	2544.09	-	123.98
Lentils	*	*	*	*	*
Vetch	1414.32	6.01	1295.38	-	118.94
Soya beans	-	-	-	-	-
Fenugreek	219.12	0.93	204.71	-	*
Gibto	-	-	-	-	-
Oilseeds	37.38	0.16	14.06	-	23.32
Neug	24.59	0.1	*	-	22.92
Linseed	11.95	0.05	11.54	-	*
Groundnuts	-	-	-	-	-
Sunflower	*	*	*	-	-
Sesame	-	-	-	-	-
Rapeseed	0.71	-	0.71	-	-
Vegetables	212.11	100	18.03	*	181.64
Lettuce	26.23	12.37	0.21	*	25.96
Head cabbage	19.73	9.3	2.7	*	*
Ethiopian cabbage	90.59	42.71	13.61	*	*
Tomatoes	*	*	*	*	*
Green peppers	1.48	0.7	0.78	*	*
Red peppers	-	-	-	-	-
Swiss chard	*	*	0.46	*	*
Root crops	459.61	100	156.57	9.17	*
Beetroot	16.4	3.57	4.32	*	*
Carrot	*	*	136.13	1.41	*
Onion	*	*	1.99	*	*
Potatoes	46.17	10.05	2.01	*	39.39
Garlic	13.43	2.92	12.07	*	1.21
Taro/'Godere'	-	-	-	-	-
Sweet potatoes	0.05	0.01	0.05	-	-

SUMMARY TABLE V-2 PRODUCTION UNDER TEMPORARY CROPS BY CROP TYPE FOR PRIVATE PEASANT HOLDINGS

Addis Ababa City Administration

Crop	All		Rural		Urban
	Production(QT)		Production(QT)		Production (QT)
		%	Meher	Belg	Meher
All	259191.2		228668.4	*	26265.75
Grain Crops	224330.3	100	207463.5	*	15777.83
Cereals	177651.8	79.19	163765.1	*	13882.09
Teff	74798.84	33.34	69957.23	-	4841.61
Barley	3348.21	1.49	1052.02	*	2291.57
Wheat	98944.17	44.11	92449.44	-	6494.73
Maize	190.41	0.08	46.18	-	144.23
Sorghum	294.34	0.13	195.91	-	*
Finger Millet	*	*	*	-	-
Oats/"Aja"	71.73	0.03	*	-	*
Rice	-	-	-	-	-
Pulses	46648.27	20.79	43676.78	*	1887.15
Horse beans	*	*	1272.51	*	172.68
Field peas	435.68	0.19	228.18	-	207.5
Haricot beans	*	*	2.03	-	*
Chick-peas	26748.6	11.92	25715.48	-	1033.12
Lentils	*	*	*	*	*
Vetch	12823.87	5.72	12410.53	-	413.34
Soya beans	-	-	-	-	-
Fenugreek	783.56	0.35	756.06	-	*
Gibto	-	-	-	-	-
Oilseeds	30.23	0.01	*	-	*
Neug	*	*	-	-	*
Linseed	*	*	*	-	*
Groundnuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Rapeseed	2.35	-	2.35	-	-
Vegetables	7068.34	100	1810.84	*	4405.36
Lettuce	*	*	*	*	334.1
Head cabbage	937.6	13.26	324.04	*	*
Ethiopian cabbage	4381.2	61.98	1360.52	*	3012.6
Tomatoes	*	*	-	-	*
Green peppers	111.68	1.58	*	*	*
Red peppers	-	-	-	-	-
Swiss chard	763.33	10.8	51.29	*	709.17
Root crops	27792.52	100	19394.05	*	6082.56
Beetroot	1330.06	4.79	561.05	*	*
Carrot	20131.73	72.44	16608.38	*	3504.69
Onion	3624.9	13.04	261.92	*	*
Potatoes	778.09	2.8	197.75	*	576.89
Garlic	1925.21	6.93	1762.45	*	*
Taro/'Godere'	-	-	-	-	-
Sweet potatoes	*	*	*	-	-

Figure V-1 Area Under Temporary Crops for Private Peasant Holdings

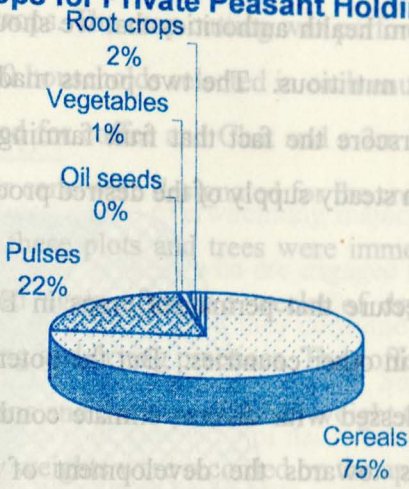
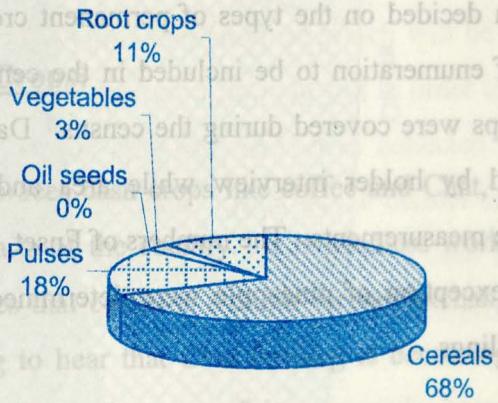


Figure V-2 Production Of Temporary Crops for Private Peasant holdings



Fruits are not only a source of cash but are also a reliable source of nutrition that is essential for the health and growth of humans. There has even been an oft-repeated advice from health authorities that we should include fruits in our daily meals to make it nutritious. The two points made on the importance of permanent crops underscore the fact that fruit farming should be encouraged and expanded to have a steady supply of the desired products.

It is possible to conjecture that permanent crops in Ethiopia are not as well developed as they are in other countries. But the potential to develop them is great as Ethiopia is blessed with diverse climate conducive to the crops. In order to direct efforts towards the development of permanent crops, one requires statistical data regarding this sector of the agriculture. Adequate data on type and volume of production, area under permanent crops and their distribution have not been available. Hence, to bridge up this gap and alleviate the chagrin to data users the CSA has collected data on permanent crops.

Prior to the census, the CSA surveyed the situation about permanent crops in the country and then decided on the types of permanent crops, range of data items and method of enumeration to be included in the census. Hence, only major permanent crops were covered during the census. Data on the types of crops were collected by holder interview while area and yield data were recorded by objective measurements. The numbers of Enset, Hops (Gesho) and fruit trees with the exception of pineapple were determined by counting the plants excluding seedlings.

In estimating the production of permanent crops, area, yield per unit area, yield per tree and number of fruit bearing trees are essential ingredients. These inputs were determined by physically measuring the area under crops in question, picking fruits, coffee berries and Chat produce from randomly demarcated plots or selected trees. The method involved crop cutting from small plots of rectangular shape of different sizes randomly placed in the selected crop field

and a tree of fruit bearing age selected from all fruit bearing trees for each crop type and subsequent husking, drying weighing and recording the weight of the harvest of permanent crops. The crop cutting was performed for a sub sample of 20 households of the 30 households selected in each enumeration area. A 4m X 4m plot was demarcated for coffee and Chat and a 2m X 2m for pineapple and 1m X 1m plot for sugar cane were designated for the crop cutting exercise. The yields harvested from these plots and trees were immediately weighed (green weight) and/or weighed again after two weeks of drying to conform to the normal holder harvesting and drying practices. The coffee weight registered was that of clean coffee beans and the hops (Gesho) weight taken was that of the dry one. The green and dry weights were recorded on the appropriate forms.

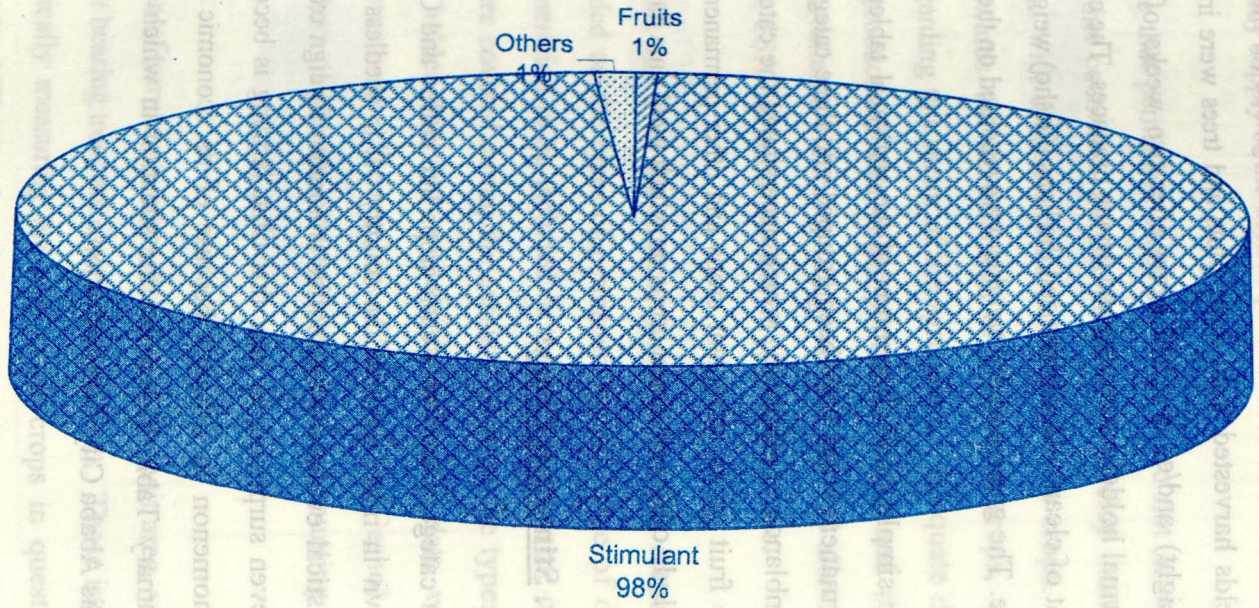
For simplicity of description of the statistical tables and comparison purposes permanent crops have been grouped into three categories. Each category has a semblance of similarity, which necessitated the categorization. The categories are fruit crops, stimulant crops and other permanent crops. These categories include only permanent crops on which yield data have been collected.

3.1. Stimulant Crops:

This category embraces cash crops like coffee and Chat, which are extensively grown in many parts of the country. It is needless work to verify by quoting statistical evidences that coffee is a major foreign exchange earner. It may not be even surprising to hear that Chat farming is becoming a rapidly expanding phenomenon in Ethiopia because of its economic importance. The data in Summary Table V-3 shows the situation in which coffee, Chat, are found in Addis Ababa City Administration.

The data in the table demonstrates, that 98.31% of the regional permanent crop area is under stimulant crops. Of the total area under stimulant crops in the City Administration, 95.28% is that of hops/gesho resulting in 97.38% of the volume

FigureV-3 Area Under Permanent Crops



of stimulant crop production. About 59.08% of the regional stimulant crop area and 92.79% of the production were that of hops in the rural parts of the City Administration.

4. CROP UTILIZATION

Agriculture is the livelihood of the overwhelming majority of the Ethiopians. It is the source of food and cash for those who are engaged in the sector and others. Most agricultural holders acquire the food they consume and the cash they need to cover other expenses only from farming activities. Since farming in Ethiopia is often precarious and usually at the mercy of nature, it is invariably an arduous struggle for the holders to make ends meet. This, it often transpires, is true to the frequent shortfalls in the volume of production that occur in the country.

It is often said that what most Ethiopian agricultural holders produce is only enough to live, ie,subsistence. This would be better said if it was statistically substantiated. There is plenty of information on the volume of crops produced within the private peasant holdings. But there is hardly any information on how the peasants utilize the crops they produce which will be indicative of the fact whether the holders have enough or little to sell in order to meet other expenses for living. Hence data on crop utilization was collected in 2001/02 Ethiopian Agricultural sample Enumeration. Thus in the census taking, crop utilization was defined as the amount of agricultural produce used for own consumption, sale, seed, and wages in kind, animal feed and other purposes.

In light of this information gap, the CSA has collected some data on how holders use their agricultural produce in the agricultural year to provide some information on the subject. The data were collected by interviewing the holders. They were asked to quantify their yearly crop utilization experience in percent based on common practice. Summary Table V-4 convey this information to shed some light on how holders utilize their crop produce. Information was

SUMMARY TABLE V-3 AREA AND PRODUCTION OF PERMANENT CROPS BY CROP TYPE FOR PRIVATE PEASANT HOLDINGS

Addis Ababa City Administration

Crop type	All				Rural		Urban	
	Area in Crop (HA)	%	Production (QT)	%	Area in Crop (HA)	Production (QT)	Area in Crop (HA)	Production (QT)
All	37.93				23.18		*	
Fruit Crops	0.22	100	*	*	0.07	-	*	*
Avocados	*	*	-	-	*	-	*	-
Bananas	*	*	-	-	*	-	-	-
Guavas	-	-	*	*	-	-	*	*
Lemons	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-
Oranges	*	*	-	-	*	-	-	-
Papayas	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-
Stimulant Crops	37.29	100	570.41	100	22.93	517.49	*	52.92
Chat	1.41	3.78	*	*	0.76	2.07	*	*
Coffee	*	*	*	*	*	-	*	*
Hops	35.53	95.28	555.49	97.38	22.03	515.42	*	*
Other Permanent	0.42	100	*	*	*	-	*	*
Sugar cane	0.42	100	*	*	*	-	*	*

sought for each crop type produced during the census year. The resulting data may help users to have some idea about crop usages by agricultural holders. In order to detect the differences in utilization of the various crops, it is better to look into the data by group of crops as categorized in the summary tables for simplicity and analogy.

Needless to say, as Summary Table V-4 points out, most of the cereal crops produced were used for household consumption. In Addis Ababa City Administration more than 55% of the cereals produced were used for household consumption. About 17 % and 25 % were used for seed and sale, respectively. The remaining 3 % of the cereals produced was used for other purposes such as for paying wages, animal feed, etc. When the utilization is considered by crop type, it is easy to realize that between 51 % and 100 % of the crops in the cereals group were used for own consumption and between 2 % and 27 % of these crops were used for sale. Moreover, between 5 % and 15 % of the same crops in the same group were used for seed.

As shown in Summary Table V-4 the data reveal that about 78 % of pulses were used for household consumption, 14 % for seed and about 7 % for sale. The remaining 1 % of pulses were used for the purpose of paying wages, animal feed and others. Considering utilization by crop type within the pulses group, between 30 % and 91 % of the crops were utilized for household consumption and between 1 % and 53 % in the pulse group were sold in 2001/02 (1994 E.C.). Moreover, between 8 and 23 % of these crops in the pulses group were also used for seed in the same year.

As portrayed in Summary Table V-4, the data show that about 61 %, 22 % and 17 % were used for, household consumption, seed and sale respectively. Taking utilization by crop type into account, between 54 % and 73 % of each crop type

in the oilseeds category were used for household consumption, between 16 % and 19 % for sale and between 9% and 100 % for seed.

More over, about 71 % and 26 % of the vegetables produced were used for household consumption and sale, respectively. The remaining percent were used for seed, wages, animal feed and others. The percent used by crop type with in the vegetables group were 35 % - 85 % for household consumption, 1 % and 62 % for sale and 1 % and 19% for seed. For details, refer to Summary Table V-4.

As indicated in the regional Summary Table V-4, about 62 % of the root crops were used for household consumption, 33 % for sale and about 5 % for seed. The ranges of percent utilized by crop type within the root crops category fall between 19 % and 100 % for consumption, 8 % and 64 % for sale and 1 % and 64% for seed.

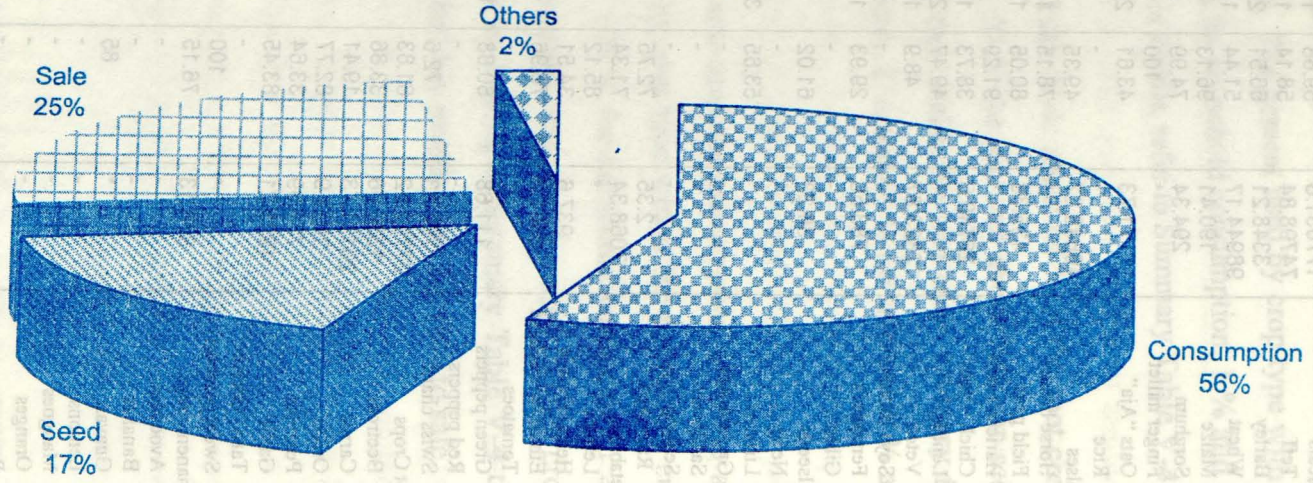
About 76 % of the permanent crops was used for consumption at home and about 21 % for sale. The utilization by crop type within the permanent crop group ranges between 23 % and 100 % for household consumption and between 20 % and 77 % for sale. Permanent crops are also used as cash crops like oilseeds. It is rational to conclude by looking at Summary Table V-4 that the peasant farmers consume most of what they produce leaving little to sale.

SUMMARY TABLE V-4 CROP PRODUCTION AND PERCENT OF UTILIZATION
ALL HOLDINGS

Addis Ababa City Administration

Type of Crop	Total Production (Quintal)	Percent Utilized For					
		Household Consumption	Seed	Sale	Wages In kind	Animal Feed	Others
Total							
Grain Crops	224330.3	55.35	17.08	25.49	*	0.75	1.34
Cereals	177651.8	59.68	17.21	20.75	0.3	0.49	1.56
Teff	74798.84	58.14	17.46	22.48	0.3	-	1.62
Barley	3348.21	66.51	22.95	2.37	*	7.26	0.91
Wheat	98944.17	51.44	19.64	26.82	0.44	0.06	1.61
Maize	190.41	96.13	2.2	-	-	-	1.66
Sorghum	294.34	74.99	9.13	15	-	-	0.88
Finger millet	*	100	-	-	-	-	-
Oats "Aja"	71.73	43.61	28.67	26.65	-	-	1.06
Rice	-	-	-	-	-	-	-
Pulses	46648.27	49.35	16.8	31.48	0.18	1.11	1.06
Horse beans	*	78.15	14.05	6.73	0.04	-	1.03
Field peas	435.68	80.05	12.31	5.09	-	-	2.54
Haricot beans	*	91.29	7.66	0.09	-	-	0.96
Chick – peas	26748.6	38.73	16.96	42.52	0.49	0.14	1.16
Lentils	*	49.47	23.29	25.92	0.05	-	1.26
Vetch	12823.87	48.9	16.09	30.47	0.07	3.32	1.14
Soya beans	-	-	-	-	-	-	-
Fenugreek	783.56	29.93	17.49	52.52	-	*	0.05
Gibto	-	-	-	-	-	-	-
Oilseeds	30.23	61.02	22	16.99	-	-	-
Neug	*	-	100	-	-	-	-
Linseed	*	53.65	30.45	15.9	-	-	-
Groundnuts	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-
Rapeseed	2.35	72.75	8.53	18.72	-	-	-
Vegetables	7068.34	71.34	1.82	25.63	0.02	0.25	0.94
Lettuce	*	85.12	0.34	13.82	0.14	0.17	0.4
Head cabbage	937.6	34.51	-	62.05	-	1.85	1.6
Ethiopian cabbage	4381.2	76.96	1.11	21.04	0.01	0.01	0.87
Tomatoes	*	-	-	-	-	-	-
Green peppers	111.68	80.88	18.81	0.31	-	-	-
Red peppers	-	-	-	-	-	-	-
Swiss chard	763.33	72.6	0.21	25.91	0.05	0.05	1.17
Root Crops	27792.52	61.83	4.88	32.55	-	*	0.73
Beetroot	1330.06	33.86	0.01	66.12	-	*	*
Carrot	20131.73	19.41	0.01	79.44	-	*	1.14
Onion	3624.9	82.77	7.92	8.89	-	-	0.41
Potatoes	778.09	33.64	2.12	64.19	-	-	0.05
Garlic	1925.21	83.45	7.4	8.43	-	-	0.71
Taro / Godere	-	-	-	-	-	-	-
Sweet potatoes	*	100	-	-	-	-	-
Permanent crops	575.13	76.15	1.54	21.28	-	-	1.03
Avocados	-	-	-	-	-	-	-
Bananas	-	-	-	-	-	-	-
Guavas	*	85	-	-	-	-	15
Lemons	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-
Oranges	-	-	-	-	-	-	-
Papayas	-	-	-	-	-	-	-
Pineapple	-	-	-	-	-	-	-
Chat	*	23.04	-	76.96	-	-	-
Coffee	*	100	-	-	-	-	-
Hops	555.49	77.52	1.58	19.85	-	-	1.05
Sugar Cane	*	-	-	-	-	-	-

Figure V-4 Percent Of Grain Crops Utilized



STATISTICAL TABLES PRESENTING RESULTS AT REGIONAL LEVEL

Tables 5.1 – 5.10

STATISTICAL TABLES PRESENTING RESULTS AT REGIONAL LEVEL

Tables 5.1 – 5.10

TABLE 5.1- ESTIMATE OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDINGS FOR MEHER SEASON

RURAL HOLDINGS

Addis Ababa City Administration

Crop	Number of Holders	Area		Production		Yield
		Hectares	%	Quintals	%	QT / HA
TOTAL	323	46.24		*		
Grain Crops	82	*	*	*	*	
Cereals	68	*	*	*	*	
Teff	-	-	*	-	*	-
Barley	*	*	*	*	*	*
Wheat	-	-	*	-	*	-
Maize	*	*	*	-	*	-
Sorghum	-	-	*	-	*	-
Finger Millet	-	-	*	-	*	-
Oats / "Aja"	-	-	*	-	*	-
Rice	-	-	*	-	*	-
Pulses	32	*	*	*	*	
Horse beans	*	*	*	*	*	*
Field peas	*	*	*	-	*	-
Haricot beans	*	*	*	-	*	-
Chick – peas	-	-	*	-	*	-
Lentils	*	*	*	*	*	*
Vetch	-	-	*	-	*	-
Soya beans	-	-	*	-	*	-
Fenugreek	-	-	*	-	*	-
Gibto.	-	-	*	-	*	-
Oilseeds	-	-	*	-	*	-
Neug.	-	-	*	-	*	-
Linseed	-	-	*	-	*	-
Groundnuts	-	-	*	-	*	-
Safflower	-	-	*	-	*	-
Sesame	-	-	*	-	*	-
Rapeseed	-	-	*	-	*	-
Vegetables	217	*	*	*	*	*
Lettuce	*	*	*	*	*	*
Head cabbage	*	*	*	*	*	*
Ethiopian cabbage	30	*	*	*	*	*
Tomatoes	56	*	*	-	*	-
Green peppers	*	*	*	*	*	*
Red peppers	-	-	*	-	*	-
Swiss chard	*	*	*	*	*	*
Root Crops	141	9.17	100	*	*	*
Beetroot	32	*	*	*	*	*
Carrot	40	1.41	15.38	*	*	*
Onion	*	*	*	*	*	*
Potatoes	55	*	*	*	*	*
Garlic	37				*	-
Taro / "Godere"	-	-	-	-	*	-
Sweet pod	-	-	-	-		

TABLE 5.2- ESTIMATES OF HOLDERS, AREA PRODUCTION AND YIEDL OF TEMPORARY CROP FOR PRIVATE PEASANT HOLDERS FOR BELG SEASON 2001/02 (1994 E.C.) RURAL.

Addis Ababa City Administration

Crop	Holders	Area Hectares	%	Quintals	%	Production Yield QT/HA
TOTAL	323	46.24				
Grain Crop	82	*	*	*	*	
Cereals	68	*	*	*	*	
Teff	-	-	*	-	*	*
Barley	*	*	*	*	*	
Wheat	-	-	*	-	*	-
Maize	*	*	*	*	*	-
Sorghum	-	-	*	-	*	-
Finger Millet	-	-	*	-	*	-
Oats/'Aja'	-	-	*	-	*	-
Rice	-	-	*	-	*	-
Pulses	32	*	*	*	*	
Horse beans	*	*	*	*	*	*
Field peas	*	*	*	*	*	
Haricot beans	*	*	*	-	*	-
Chick-peas	-	-	*	-	*	-
Lentils	*	*	*	*	*	*
Vetch	-	-	*	-	*	-
Soya bean	-	-	*	-	*	-
Fenugreek	-	-	*	-	*	-
Gibto	-	-	*	-	*	-
Oilseeds	-	-	*	-	*	-
Neug	-	-	*	-	*	-
Linseed	-	-	*	-	*	-
Groundnut	-	-	*	-	*	-
Sunflower	-	-	*	-	*	-
Sesame	-	-	*	-	*	-
Rapeseed	-	-	*	-	*	-
Vegetables	217	*	*	*	*	
Lettuce	*	*	*	*	*	*
Head Cabbage	*	*	*	*	*	*
Ethiopian	30	*	*	*	*	*
Tomatoes	56	*	*	-	*	-
Green pepper	*	*	*	*	*	*
Red pepper	-	-	*	-	*	-
Swiss chan	*	*	*	*	*	*
Root crops	141	9.17	100	*	*	
Beetroot	32	*	*	*	*	*
Carrot	40	1.41	15.38	-	*	*
Onion	*	*	*	*	*	*
Potatoes	55	*	*	*	*	*
Garlic	37	*	*	*	*	*
Taro/Godere	-	-	-	-	*	-
Sweet potatoes	-	-	-	-	*	-

TABLE 5.3- ESTIMATE OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDINGS FOR MEHER SEASON

URBAN HOLDINGS

Addis Ababa City Administration

Crop	Number of Holders	Area		Production		Yield
		Hectares	%	Quintals	%	QT / HA
TOTAL	2730	3001.18		26265.75		
Grain Crops	2131	2525.67	100	15777.83	100	
Cereals	2096	2147.24	85.02	13882.09	87.98	
Teff	1545	1199.83	47.51	4841.61	30.69	4.04
Barley	627	254.71	10.08	2291.57	14.52	9
Wheat	1351	658.58	26.08	6494.73	41.16	9.86
Maize	252	17.22	0.68	144.23	0.91	8.38
Sorghum	50	15.34	0.61	*	*	*
Finger Millet	-	-	-	-	-	-
Oats / 'Aja'	*	*	*	*	*	*
Rice	-	-	-	-	-	-
Pulses	716	355.1	14.06	1887.15	11.96	
Horse beans	193	52.72	2.09	172.68	1.09	3.28
Field peas	118	40.47	1.6	207.5	1.32	5.13
Haricot beans	*	*	*	*	*	*
Chick – peas	332	123.98	4.91	1033.12	6.55	8.33
Lentils	40	*	*	*	*	*
Vetch	376	118.94	4.71	413.34	2.62	3.48
Soya beans	-	-	-	-	-	-
Fenugreek	63	*	*	*	*	*
Gibto	-	-	-	-	-	-
Oilseeds	79	23.32	0.92	*	*	
Neug	77	22.92	0.91	*	*	*
Linseed	*	*	*	*	*	*
Groundnuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	782	181.64	100	4405.36	100	
Lettuce	289	25.96	14.29	334.1	7.58	12.87
Head cabbage	42	*	*	*	*	*
Ethiopian cabbage	640	*	*	3012.6	68.38	*
Tomatoes	*	*	*	*	*	*
Green peppers	41	*	*	*	*	*
Red peppers	-	-	-	-	-	-
Swiss chard	474	*	*	709.17	16.1	*
Root Crops	543	*	*	6082.56	100	
Beetroot	57	*	*	*	*	*
Carrot	327	*	*	3504.69	57.62	*
Onion	80	*	*	*	*	*
Potatoes	176	39.39	*	576.89	9.48	14.65
Garlic	142	1.21	*	*	*	*
Taro / 'Godere'	-	-	*	-	-	-
Sweet potatoes	-	-	*	-	-	-

TABLE 5.4 - ESTIMATE OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDINGS FOR BOTH SEASONS
ALL HOLDINGS

Addis Ababa City Administration

Crop	Number of Holders	Area		Production		Yield
		Hectares	%	Quintals	%	QT / HA
TOTAL	15683	24202.6		259191.2		
Grain Crops	14449	23530.88	100	224330.3	100	
Cereals	13860	18245.72	77.54	177651.8	79.19	
Teff	11606	9182.78	39.02	74798.84	33.34	8.15
Barley	1107	423.16	1.8	3348.21	1.49	7.91
Wheat	10446	8522.92	36.22	98944.17	44.11	11.61
Maize	2585	64.95	0.28	190.41	0.08	2.93
Sorghum	190	41.85	0.18	294.34	0.13	7.03
Finger Millet	*	*	*	*	*	*
Oats / "Aja"	*	*	*	71.73	0.03	*
Rice	-	-	-	-	-	-
Pulses	10230	5247.78	22.3	46648.27	20.79	
Horse beans	2503	283.44	1.2	*	*	*
Field peas	437	94.17	0.4	435.68	0.19	4.63
Haricot beans	162	3.28	0.01	*	*	*
Chick – peas	7361	2668.07	11.34	26748.6	11.92	10.03
Lentils	*	*	*	*	*	*
Vetch	6838	1414.32	6.01	12823.87	5.72	9.07
Soya beans	-	-	-	-	-	-
Fenugreek	2082	219.12	0.93	783.56	0.35	3.58
Gibto.	-	-	-	-	-	-
Oilseeds	308	37.38	0.16	30.23	0.01	
Neug.	82	24.59	0.1	*	*	*
Linseed	73	11.95	0.05	*	*	*
Groundnuts	-	-	-	-	-	-
Safflower	36	*	*	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	117	0.71	-	2.35	-	3.31
Vegetables	2815	212.11	100	7068.34	100	
Lettuce	457	26.23	12.37	*	*	*
Head cabbage	265	19.73	9.3	937.6	13.26	47.52
Ethiopian cabbage	2356	90.59	42.71	4381.2	61.98	48.36
Tomatoes	68	*	*	*	*	*
Green peppers	437	1.48	0.7	111.68	1.58	75.46
Red peppers	-	-	-	-	-	-
Swiss chard	672	*	*	763.33	10.8	*
Root Crops	6281	459.61	100	27792.52	100	
Beetroot	335	16.4	3.57	1330.06	4.79	81.1
Carrot	1556	*	*	20131.73	72.44	*
Onion	898	*	*	3624.9	13.04	*
Potatoes	297	46.17	10.05	778.09	2.8	16.85
Garlic	4492	13.43	2.92	1925.21	6.93	143.35
Taro / "Godere"	-	-	-	-	-	-
Sweet potatoes	*	0.05	0.01	*	*	*

TABLE 5.5 - ESTIMATE OF HOLDERS, AREA, PRODUCTION AND YIELD OF PERMANENT CROPS FOR PRIVATE PEASANT HOLDINGS

RURAL HOLDINGS

Addis Ababa City Administration

PERMANENT CROPS	NUMBER OF HOLDERS REPORTING	AREA IN CROP (HA)	%	TOTAL NUMBER OF TREES	NUMBER OF TREES PER HECTARE	NUMBER OF TREES BEARING	PRODUCTION (QT)	%	YIELD (QT / HA)
ALL	1874	23.18							
Fruit Crops	79	0.07	100	206	2943	167	-	-	
Avocados	*	*	*	*	*	*	-	-	-
Bananas	*	*	*	*	*	*	-	-	-
Guavas	-	-	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-	-
Oranges	63	*	*	*	*	*	-	-	-
Papayas	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-
Stimulant Crops	1813	22.93	100	144569	6305	106868	517.49	100	
Chat	110	0.76	3.31				2.07	0.4	2.72
Coffee	47	*	*				-	-	-
Hops (Gesho)	1798	22.03	96.08	144406	6555	106827	515.42	99.6	23.4
Other Permanent	51	*	*	51	*	-	-	-	
Sugar Cane	-	-	-	-	-	-	-	-	-

TABLE 5.6 - ESTIMATE OF HOLDERS, AREA, PRODUCTION AND YIELD OF PERMANENT CROPS FOR PRIVATE PEASANT HOLDINGS

URBAN HOLDINGS

Addis Ababa City Administration

PERMANENT CROPS	NUMBER OF HOLDERS REPORTING	AREA IN CROP (HA)	%	TOTAL NUMBER OF TREES	NUMBER OF TREES PER HECTARE	NUMBER OF TREES BEARING	PRODUCTION (QT)	%	YIELD (QT / HA)
ALL	336	*						-	
Fruit Crops	*	*	*	*	*	*	*	*	
Avocados	*	*	*	*	*	-	-	-	-
Bananas	-	-	-	-	-	-	-	-	-
Guavas	*	*	*	*	*	*	*	*	*
Lemons	-	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-	-
Oranges	-	-	-	-	-	-	-	-	-
Papayas	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-
Stimulant Crops	323	*	*	*	*	*	52.92	100	
Chat	71	*	*	*	*	*	*	*	*
Coffee	*	*	*	*	*	*	*	*	*
Hops (Gesho)	248	*	*	*	*	*	*	*	*
Other Permanent	*	*	*	*	*	*	*	*	
Sugar Cane	-	-	*	-	-	-	-	*	-

TABLE 5.7 - ESTIMATE OF HOLDERS, AREA, PRODUCTION AND YIELD OF PERMANENT CROPS FOR PRIVATE PEASANT HOLDINGS

ALL HOLDINGS

Addis Ababa City Administration

PERMANENT CROPS	NUMBER OF HOLDERS REPORTING	AREA IN CROP (HA)	%	TOTAL NUMBER OF TREES	NUMBER OF TREES PER HECTARE	NUMBER OF TREES BEARING	PRODUCTION (QT)	%	YIELD (QT / HA)
ALL	2211	37.93							
Fruit Crops	96	0.22	100	264	1200	197	*	*	
Avocados	*	*	*	60	*	*	-	-	-
Bananas	*	*	*	*	*	*	-	-	-
Guavas	*	-	-	*	-	*	*	*	-
Lemons	-	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-	-
Oranges	63	*	*	*	*	*	-	-	-
Papayas	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-
Stimulant Crops	2136	37.29	100	164055	4399	122090	570.41	100	*
Chat	181	1.41	3.78				*	*	*
Coffee	73	*	*				*	*	*
Hops (Gesho)	2046	35.53	95.28	161630	4549	120073	555.49	97.38	15.63
Other Permanent	87	0.42	100	*	*	*	*	*	
Sugar Cane	87	0.42	100		*	*	*	*	*

TABLE 5.8 - CROP PRODUCTION AND PERCENT OF UTILIZATION
RURAL HOLDINGS

Addis Ababa City Administration

Type of Crop	Total Production (Quintal)	Percent Utilized For					
		Household Consumption	Seed	Sale	Wages In kind	Animal Feed	Others
Total	208552.48	55.31	17.08	25.52	-	0.75	1.34
Grain Crops	163769.71	59.64	17.21	20.79	0.3	0.49	1.57
Cereals	69957.23	58.09	17.46	22.52	0.3	-	1.62
Teff	1056.64	66.46	22.96	2.35	-	7.32	0.92
Barley	92449.44	51.38	19.64	26.86	0.44	0.06	1.61
Wheat	46.18	96.15	2.18	-	-	-	1.67
Maize	195.91	75	9.12	15	-	-	0.88
Sorghum	*	100	-	-	-	-	-
Finger millet	*	43.61	28.7	26.62	-	-	1.06
Oats/aja	-	-	-	-	-	-	-
Rice	44761.12	49.34	16.8	31.5	0.18	1.11	1.06
Pulses	*	78.16	14.04	6.73	0.04	-	1.03
Horse beans	228.18	80.12	12.22	5.1	-	-	2.55
Field peas	2.03	91.37	7.67	-	-	-	0.96
Haricot beans	25715.48	38.72	16.96	42.53	0.49	0.14	1.16
Chick – peas	*	49.47	23.29	25.92	0.05	-	1.26
Lentils	12410.53	48.89	16.09	30.48	0.07	3.32	1.15
Vetch	-	-	-	-	-	-	-
Soya beans	756.06	29.93	17.49	52.53	-	-	0.05
Fenugreek	-	-	-	-	-	-	-
Gibto	*	61.03	21.97	17	-	-	-
Oilseeds	-	-	-	-	-	-	-
Neug	*	53.64	30.45	15.91	-	-	-
Linseed	-	-	-	-	-	-	-
Groundnuts	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-
Sesame	2.35	72.75	8.53	18.72	-	-	-
Rapeseed	2662.98	72.07	1.79	24.98	-	0.24	0.91
Vegetables	*	96.48	-	3.52	-	-	-
Lettuce	646.13	34.59	-	61.96	-	1.85	1.59
Head Cabbage	1368.6	77.4	1.07	20.67	-	-	0.86
Ethiopian	-	-	-	-	-	-	-
Tomatoes	*	81.09	18.91	-	-	-	-
Green Peppers	-	-	-	-	-	-	-
Red peppers	54.16	75.02	-	23.93	-	-	1.05
Swiss chard	21709.96	61.95	4.88	32.44	-	-	0.73
Root Crops	590.18	33.92	-	66.08	-	-	-
Beetroot	16627.04	19.44	-	79.43	-	-	1.13
Carrot	*	82.96	7.95	8.71	-	-	0.38
Onion	201.2	33.34	2.09	64.57	-	-	-
Potatoes	1767.48	83.49	7.4	8.4	-	-	0.71
Garlic	-	-	-	-	-	-	-
Taro/Godere	*	100	-	-	-	-	-
Sweet potatoes	517.49	76.19	1.54	21.27	-	-	1
Permanent crops	-	-	-	-	-	-	-
Avocados	-	-	-	-	-	-	-
Bananas	-	-	-	-	-	-	-
Guavas	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-
Oranges	-	-	-	-	-	-	-
Papayas	-	-	-	-	-	-	-
Pineapple	-	-	-	-	-	-	-
Chat	2.07	23.2	-	76.8	-	-	-
Coffee	-	-	-	-	-	-	-
Hops	515.42	77.54	1.58	19.85	-	-	1.03
Sugar Cane	-	-	-	-	-	-	-

TABLE 5.9 - CROP PRODUCTION AND PERCENT OF UTILIZATION
URBAN HOLDINGS

Addis Ababa City Administration

Type of Crop	Total Production (Quintal)	Percent Utilized For					
		Household Consumption	Seed	Sale	Wages In kind	Animal Feed	Others
Total							
Grain Crops	15777.83	69.82	17.83	11	0.37	0.41	0.57
Cereals	13882.09	73.5	17.51	8.1	0.34	0.05	0.5
Teff	4841.61	75.01	16.05	8.23	0.27	-	0.45
Barley	2291.57	71.99	22.26	4.86	0.12	0.23	0.54
Wheat	6494.73	69.84	18.51	10.39	0.59	0.02	0.66
Maize	144.23	89.84	10.16	-	-	-	-
Sorghum	*	71.18	13.25	15.57	-	-	-
Finger millet	-	-	-	-	-	-	-
Oats/aja	*	45	5	50	-	-	-
Rice	-	-	-	-	-	-	-
Pulses	1887.15	57.29	18.47	21.25	0.48	1.67	0.83
Horse beans	172.68	73.06	20.59	5.97	-	-	0.38
Field peas	207.5	70.78	24.08	3.7	-	-	1.45
Haricot beans	*	-	-	100	-	-	-
Chick – peas	1033.12	49.98	17.59	29.4	1.53	-	1.5
Lentils	*	58.62	10.04	27.58	-	-	3.75
Vetch	413.34	56.14	17.66	21.99	0.08	3.93	0.2
Soya beans	-	-	-	-	-	-	-
Fenugreek	*	32.08	17.59	43.92	-	6.41	-
Gibto	-	-	-	-	-	-	-
Oilseeds	*	28.74	71.26	-	-	-	-
Neug	*	-	100	-	-	-	-
Linseed	*	100	-	-	-	-	-
Groundnuts	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-
Vegetables	4405.36	26.22	3.97	64.9	1.14	0.92	2.85
Lettuce	334.1	20.46	2.26	72.49	0.95	1.14	2.71
Head Cabbage	*	11.47	-	84.98	-	-	3.56
Ethiopian cabbage	3012.6	33.37	4.64	57.5	1.38	0.82	2.29
Tomatoes	*	-	-	-	-	-	-
Green Peppers	*	42.11	0.78	57.11	-	-	-
Red peppers	-	-	-	-	-	-	-
Swiss chard	709.17	21.21	4.73	68.14	1.13	1.06	3.74
Root Crops	6082.56	29.59	4.08	63.17	-	0.1	3.06
Beetroot	*	17.29	3.81	77.37	-	0.64	0.89
Carrot	3504.69	14.22	2.13	79.93	-	0.15	3.56
Onion	*	30.61	1.32	59.66	-	-	8.41
Potatoes	576.89	42.94	3.03	52.27	-	-	1.76
Garlic	*	51.58	11.31	35.96	-	-	1.15
Taro/Godere	-	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-	-
Permanent crops	57.64	67.25	1.18	24.6	-	-	6.97
Avocados	-	-	-	-	-	-	-
Bananas	-	-	-	-	-	-	-
Guavas	*	85	-	-	-	-	15
Lemons	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-
Oranges	-	-	-	-	-	-	-
Papayas	-	-	-	-	-	-	-
Pineapple	-	-	-	-	-	-	-
Chat	*	-	-	100	-	-	-
Coffee	*	100	-	-	-	-	-
Hops	*	67.63	-	21.69	-	-	10.67
Sugar Cane	*	-	-	-	-	-	-

TABLE 5.10 - CROP PRODUCTION AND PERCENT OF UTILIZATION
ALL HOLDINGS

Addis Ababa City Administration

Type of Crop	Total Production (Quintal)	Percent Utilized For					
		Household Consumption	Seed	Sale	Wages In kind	Animal Feed	Others
Total	224330.3	55.35	17.08	25.49	*	0.75	1.34
Grain Crops	177651.8	59.68	17.21	20.75	0.3	0.49	1.56
Cereals	74798.84	58.14	17.46	22.48	0.3	-	1.62
Teff	3348.21	66.51	22.95	2.37	*	7.26	0.91
Barley	98944.17	51.44	19.64	26.82	0.44	0.06	1.61
Wheat	190.41	96.13	2.2	-	-	-	1.66
Maize	294.34	74.99	9.13	15	-	-	0.88
Sorghum	*	100	-	-	-	-	-
Finger millet	71.73	43.61	28.67	26.65	-	-	1.06
Oats "Aja"	-	-	-	-	-	-	-
Rice	46648.27	49.35	16.8	31.48	0.18	1.11	1.06
Pulses	*	78.15	14.05	6.73	0.04	-	1.03
Horse beans	435.68	80.05	12.31	5.09	-	-	2.54
Field peas	*	91.29	7.66	0.09	-	-	0.96
Haricot beans	26748.6	38.73	16.96	42.52	0.49	0.14	1.16
Chick – peas	*	49.47	23.29	25.92	0.05	-	1.26
Lentils	12823.87	48.9	16.09	30.47	0.07	3.32	1.14
Vetch	-	-	-	-	-	-	-
Soya beans	783.56	29.93	17.49	52.52	-	*	0.05
Fenugreek	-	-	-	-	-	-	-
Gibto	30.23	61.02	22	16.99	-	-	-
Oilseeds	*	-	100	-	-	-	-
Neug	*	53.65	30.45	15.9	-	-	-
Linseed	-	-	-	-	-	-	-
Groundnuts	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-
Sesame	2.35	72.75	8.53	18.72	-	-	-
Rapeseed	7068.34	71.34	1.82	25.63	0.02	0.25	0.94
Vegetables	*	85.12	0.34	13.82	0.14	0.17	0.4
Lettuce	937.6	34.51	-	62.05	-	1.85	1.6
Head cabbage	4381.2	76.96	1.11	21.04	0.01	0.01	0.87
Ethiopian cabbage	*	-	-	-	-	-	-
Tomatoes	111.68	80.88	18.81	0.31	-	-	-
Green peppers	-	-	-	-	-	-	-
Red peppers	763.33	72.6	0.21	25.91	0.05	0.05	1.17
Swiss chard	27792.52	61.83	4.88	32.55	-	*	0.73
Root Crops	1330.06	33.86	0.01	66.12	-	*	*
Beetroot	20131.73	19.41	0.01	79.44	-	*	1.14
Carrot	3624.9	82.77	7.92	8.89	-	-	0.41
Onion	778.09	33.64	2.12	64.19	-	-	0.05
Potatoes	1925.21	83.45	7.4	8.43	-	-	0.71
Garlic	-	-	-	-	-	-	-
Taro / Godere	*	100	-	-	-	-	-
Sweet potatoes	575.13	76.15	1.54	21.28	-	-	1.03
Permanent crops	-	-	-	-	-	-	-
Avocados	-	-	-	-	-	-	-
Bananas	*	85	-	-	-	-	15
Guavas	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-
Oranges	-	-	-	-	-	-	-
Papayas	-	-	-	-	-	-	-
Pineapple	*	23.04	-	76.96	-	-	-
Chat	*	100	-	-	-	-	-
Coffee	555.49	77.52	1.58	19.85	-	-	1.05
Hops	*	-	-	-	-	-	-
Sugar cane							

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENTS OF VARIATION FOR SELECTED AREA AND PRODUCTION VARIABLES

Tables 5.1-5.2

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENTS OF VARIATION FOR SELECTED AREA AND PRODUCTION VARIABLES

Tables 5.1-5.2

Annex Table 5.1

Estimate of Area, Production and their Standard Errors and Coefficients of Variation for Temporary Crops

All Holdings

Addis Ababa City Administration

Crop	Holders	S.E.	C.V.	Area	S.E.	C.V	Production	S.E.	C.V.
Total	15683	3825	24	24202.6	740 3	31	259191.2	66836	26
Grain Crops	14449	3693	26	23530.88	737 6	31	224330.3	62622	28
Cereals	13860	3585	26	18245.72	558 9	31	177651.8	50109	28
Teff	11606	3456	30	9182.78	222 5	24	74798.84	18410	25
Barley	1107	146	13	423.16	71	17	3348.21	570	17
Wheat	10446	3435	33	8522.92	348 0	41	98944.17	32119	32
Maize	2585	674	26	64.95	14	21	190.41	64	34
Sorghum	190	35	19	41.85	10	23	294.34	76	26
Finger millet	19	10	53	1.35	1	68	4.09	3	67
Oats / 'Aja'	130	83	64	8.69	5	52	71.73	33	46
Rice	-	-	-	-	-	-	-	-	-
Pulses	10230	3363	33	5247.78	179 2	34	46648.27	12749	27
Horse beans	2503	653	26	283.44	59	21	2525.57	1345	53
Field peas	437	107	24	94.17	19	20	435.68	91	21
Haricot beans	162	51	31	3.28	1	38	7.86	5	64
Chick-peas	7361	2916	40	2668.07	975	37	26748.6	8230	31
Lentils	2502	1346	54	565.39	406	72	3323.12	2523	76
Vetch	6838	2442	36	1414.32	387	27	12823.87	2868	22
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	2082	854	41	219.12	79	36	783.56	285	36
Gibto	-	-	-	-	-	-	-	-	-
Oilseeds	308	52	17	37.38	10	26	30.23	12	40
Neug	82	25	30	24.59	8	33	7.14	5	69
Linseed	73	28	39	11.95	6	47	20.74	11	53
Groundnuts	-	-	-	-	-	-	-	-	-
Safflower	36	17	46	0.14	0	71	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	117	36	30	0.71	0	34	2.35	1	46
Vegetables	2815	662	24	212.11	84	39	7068.34	958	14
Lettuce	457	99	22	26.23	13	49	869.63	456	52
Head cabbage	265	78	29	19.73	7	35	937.6	278	30
Ethiopian cabbage	2356	581	25	90.59	39	43	4381.2	612	14
Tomatoes	68	26	38	1.96	1	54	4.89	5	92
Green peppers	437	171	39	1.48	1	45	111.68	49	44
Red peppers	-	-	-	-	-	-	-	-	-
Swiss chard	672	138	21	72.13	43	60	763.33	178	23
Root crops	6281	1945	31	459.61	222	48	27792.52	7092	26
Beet root	335	91	27	16.4	7	42	1330.06	567	43
Carrot	1556	568	37	328.34	166	51	20131.73	6437	32
Onion	898	260	29	55.23	45	81	3624.9	1782	49
Potatoes	297	51	17	46.17	17	36	778.09	295	38
Garlic	4492	1691	38	13.43	4	33	1925.21	681	35
Taro / 'Godere'	-	-	-	-	-	-	-	-	-
Sweet potatoes	66	35	54	0.05	0	40	2.51	2	64

Annex Table 5.2

Estimates of Holders, Area, Production and their Standard Errors and Coefficients of Variations for Permanent crops

All Holdings

Addis Ababa City Administration

Crop	Holders	S.E.	C.V.	Area	S.E	C.V	Production	S.E.	C.V.
Avocados	32	16	52	-	-	60	-	-	-
Bananas	10	8	87	-	-	100	-	-	-
Guavas	10	9	95	-	-	-	0.5	-	94
Lemons	-	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-	-
Oranges	63	30	47	-	-	50	-	-	-
Papayas	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-
Chat									
Coffee	181	38	21	1	1	39	14.21	9	66
Hops	73	29	40	-	-	59	0.71	1	80
Enset	2046	635	31	36	12	33	555.49	144	26
Sugar cane	87	30	35	-	-	48	4.22	4	91

CHAPTER VI

FARM MANAGEMENT PRACTICES

1 INTRODUCTION

Ethiopia is endowed with abundant resources suitable for agriculture. As result of which the agricultural activity in Ethiopia is quite varied being conditioned by such factors as climate, soils topography, ... etc that have favored not only the employment of the majority of the country's population but also served as the main source of input (raw material) for the large and medium scale industries as well as the main generator of the country's foreign currency earnings.

Though agriculture is the backbone of Ethiopian economy it is characterized by low level of productivity and subsistence farming system that have resulted hand to mouth production. Nowadays the problem mentioned has become more acute as a result of two factors. First the number of people is increasing at a rate that doubles the present population of the country in about a generation. Secondly this is occurring at a time when the area of new land suitable for cultivation is rapidly diminishing.

Till recently traditional practice such as use of animal dung and crop residue crop rotation and expanding cultivable crop land had helped a lot to increase productivity, however, the problem mentioned above has become more acute and beyond the limits of the traditional practices which of course had already been exhausted. Hence, the scale of severity of the country's food and other related problems will be so great that a massive short and long-range innovative efforts will be required to solve it.

As a result, increasing productivity on various field crops is the only realistic option to raise the living standards of the rural population and to ensure food security and poverty alleviation. There are many modern techniques and technologies of achieving enhanced crop productivity. Accordingly, the major factors behind achieving high level of crop productivity increases are greater and more efficient use of fertilizers, wide spread uses of

improved variety seeds, pesticides, expanded use of irrigation and effective extension services. Thus, during the 2001/02 Agricultural Sample Enumeration, basic data on agricultural inputs and practices were collected, processed and the results are presented in this chapter.

This chapter is therefore, deals with the agricultural census data that indicates the type of inputs applied, quantity of inputs applied, the irrigated cropland area, estimates of cropland area damage, number of holders who applied different agricultural inputs and farm management practices, and number of holders covered by extension package programs in Addis Ababa City Administration. Data are presented for private holdings in rural areas for both Meher and Belg seasons, and urban areas of holdings for Meher season. For urban areas, data are collected and presented only to the inputs applied and the irrigated cropland area and number of holders who applied farm inputs. Moreover, this chapter presents statistical Tables 6.1 – 6.5.4 that show the results of the census. In the Annex to this chapter are also given tables showing estimates, standard errors (S.E) and coefficient of variation (C.V), i.e. in Tables 6.1 and 6.2 for some relevant variables.

2 CROPLAND AREA UNDER AGRICULTURAL INPUTS AND FARM MANAGEMENT PRACTICES

This section of the chapter deals with the agricultural inputs applied and the irrigated cropland area for both rural and urban areas of Addis Ababa City Administration. Agricultural holders in the sampled households were asked whether they have applied agricultural inputs on their fields or not and the area of all plots operated by the holders were actually measured objectively for private holdings in rural areas. While in urban areas all types of data on farm practices were obtained by interview methods. This helped to estimate area under total crop, irrigated land, fertilizers, pesticides and improved seeds used during the agricultural year. Following data on area under agricultural farm inputs for Addis Ababa City Administration are briefly discussed.

SUMMARY TABLE VI.1: Total Area Under Improved Farm Management Practices by Crop Categories in Rural and Urban Areas, Both Seasons, for Private Holdings.

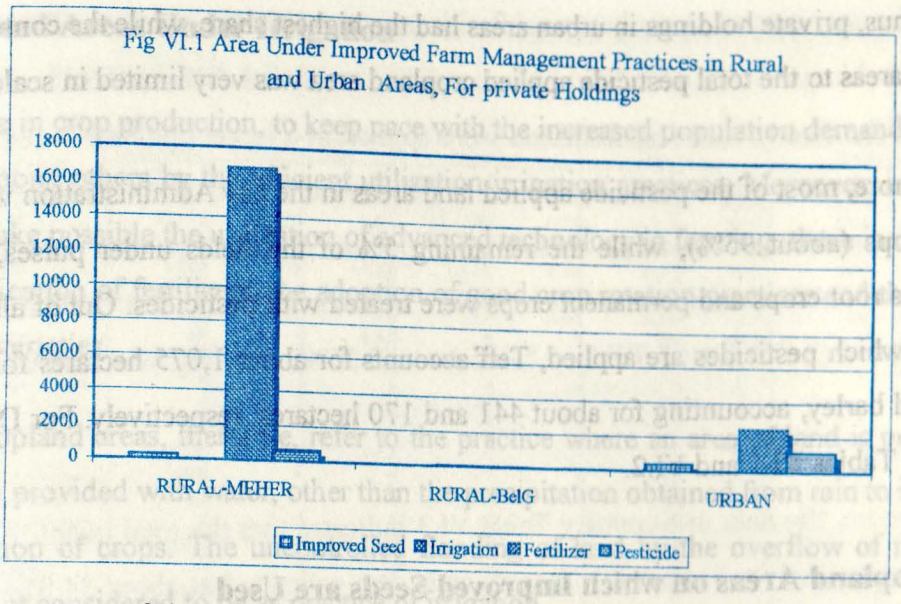
ITEM	Area in Hectares									
	Total	Grains				Vegetables	Root Crops	Permanent Crops		
		Cereals	Pulses	Oilseeds	Others			Fruits	Stimulant	Other
Total Area										
Rural and Urban..	24286	18246	5248	37	*	245	461	*	37	11
Rural	21244	16099	4893	14	*	46	167	*	23	2
Meher	21196	16078	4889	14	*	33	157	*	23	2
Belg.....	49	*	*	*	*	*	10	*	*	*
Urban (Meher)....	3042	2147	355	23	*	199	*	*	*	9
Improved Seeds										
Rural and Urban..	719	427	9	*	*	*	*	*	*	*
Percent..	100	59.39	1.25	*	*	*	*	*	*	*
Rural	292	259	8	*	*	4	21	*	*	*
Percent..	40.61	88.70	2.74	*	*	1.37	7.19	*	*	*
Meher	285	259	*	*	*	*	18	*	*	*
Percent..	39.64	90.88	*	*	*	*	6.32	*	*	*
Belg.....	7	*	*	*	*	3	*	*	*	*
Percent..	0.97	*	*	*	*	42.86	*	*	*	*
Urban (Meher)....	427	168	*	*	*	*	*	*	*	*
Percent..	59.39	39.34	*	*	*	*	*	*	*	*
Irrigation										
Rural and Urban..	*	24	*	*	*	203	*	*	*	*
Percent..	*	*	*	*	*	*	*	*	*	*
Rural	39	*	*	*	*	18	19	*	*	*
Percent..	*	*	*	*	*	46.15	48.72	*	*	*
Meher	15	*	*	*	*	4	*	*	*	*
Percent..	*	*	*	*	*	26.67	*	*	*	*
Belg.....	24	*	*	*	*	*	10	*	*	*
Percent..	*	*	*	*	*	*	41.67	*	*	*
Urban (Meher)....	*	24	*	*	*	186	*	*	*	*
Percent..	*	*	*	*	*	*	*	*	*	*
Fertilizer										
Rural and Urban..	19400	17847	903	11	*	206	*	*	11	8
Percent..	100	91.99	4.65	0.06	*	1.06	*	*	0.06	0.04
Rural	16862	15857	835	*	*	27	129	*	8	1
Percent..	86.92	94.04	4.95	*	*	0.16	0.77	*	0.05	0.01
Meher	16834	15851	834	*	*	14	122	*	8	1
Percent..	86.77	94.16	4.95	*	*	0.08	0.72	*	0.05	0.01
Belg.....	27	*	*	*	*	*	7	*	*	*
Percent..	0.14	*	*	*	*	*	25.93	*	*	*
Urban (Meher)....	2539	1990	69	*	*	179	*	*	*	6
Percent..	13.09	78.38	2.72	*	*	7.05	*	*	*	0.24
Pesticides										
Rural and Urban..	1779	1690	19	*	*	*	16	*	*	*
Percent..	100	95.00	1.07	*	*	*	0.90	*	*	*
Rural	633	619	*	*	*	*	*	*	*	*
Percent..	35.58	97.79	*	*	*	*	*	*	*	*
Meher	623	619	*	*	*	*	*	*	*	*
Percent..	35.02	99.36	*	*	*	*	*	*	*	*
Belg.....	*	*	*	*	*	*	*	*	*	*
Percent..	*	*	*	*	*	*	*	*	*	*
Urban (Meher)....	1145	1072	17	*	*	*	*	*	*	*
Percent..	64.36	93.62	1.48	*	*	*	*	*	*	*

The census data show that Addis Ababa City Administration predominantly produces grain crops and the major crops either in terms of the magnitude of area and volume of production includes Teff, wheat and barley that accounted for about 74.65% of the area cultivated under all crops. On the other hand, vegetables, root crops and permanent crops are not widely grown as grains in the region in terms of both area coverage and production obtained. As a result, the agricultural inputs were applied to a great extent on the area under grain crops in order to increase the volume of production. Among different types of agricultural inputs that were applied, it is found that fertilizers application had relatively high coverage of area under crops. Moreover, the census data indicate that vast majority of agricultural holders have used agricultural inputs on small size of holdings. In general, the holders in the region as a whole have practiced modern agricultural techniques and technologies but in a much smaller extent.

2.1 Fertilized Cropland Areas

The effects of fertilizers on improving the efficiency of crop production as well known and can be hardly over emphasized. More over, the fertilizing materials and mixture are not restricted to in organic Chemicals but include organic substances such as crop residue animal dung, .. etc. Therefore, fertilizers refer to anything added to the soil with the intention of increasing the amount of plant nutrients available for crop growth. In the census, data on application, type and quantity of natural and chemical fertilizers were collected. The natural fertilizers consisted of animal dung and compost while chemical fertilizers consisted of DAP (Di-Ammonium phosphate) and UREA (Ammonium Nitrate).

Although fertilizer is one of the very important agricultural inputs to increase the level of production, in Addis Ababa City Administration, fertilizers were applied on 19,400 hectares (79.88%) of the total cultivated cropland area. Of this total area fertilized cropland, the share of rural and urban areas was found to be 86.77% and 13.09%, respectively. Moreover, the proportion of total fertilized cropland areas in rural areas for Meher season was 16,834 hectares (86.77%) as compared to only 27 hectares (0.14%) for Belg season. Regarding private holdings in urban areas, data are collected and presented only for Meher season. For details, refer to Summary Table VI.1 and Fig VI.1.



Furthermore, out of the total fertilized cropland areas, 91.99% were under cereals, 4.65% under pulses, 0.06% under oil seeds and 1.06% under vegetables while fruits and stimulants contributed 0.06% and 0.04%, respectively. Most of the fertilized cropland areas in the region were allotted to cereals in both rural and urban areas (See Summary Table VI.1)

With regard to a specific crop, Teff is the most important fertilized crop that comprised an area of 46.63% of the total cropland area under fertilizers. The second important fertilized crop is wheat covering 43.49% of the total cropland area under fertilizers. Chickpeas ranks third taking up 2.45% of the total cropland area under fertilizers. For details, refer to Summary Table VI.2.

2.2 Cropland Areas Treated with Pesticides

Pesticides are chemicals that are used for the control of mitigation or elimination of pests that are detrimental to crops. Examples of pesticides are insecticides, herbicides and fungicides. Summary Table VI.1 reveals that the total cropland area treated with pesticides was estimated to be 1,779 hectares. Of the total cropland areas treated with pesticides, the share of rural areas was found to be 35.58% while the rest 64.36% is the share of urban

areas. Thus, private holdings in urban areas had the highest share, while the contribution of the rural areas to the total pesticide applied cropland area was very limited in scale.

Furthermore, most of the pesticide applied land areas in the city Administration were under cereal crops (about 95%), while the remaining 5% of the fields under pulses, oilseeds, vegetables root crops and permanent crops were treated with pesticides. Out of all cropland areas on which pesticides are applied, Teff accounts for about 1,075 hectares followed by wheat and barley, accounting for about 441 and 170 hectares, respectively. For Details, see Summary Tables VI.1 and VI.2.

2.3 Cropland Areas on which Improved Seeds are Used

Improved seeds are defined as crop varieties that give significantly higher yield and better quality compared to locally produced varieties of seeds. As illustrated in Summary Table VI.1, the total cultivated cropland area was estimated at 24,286 hectares. Of this total, only 719 hectares (2.96%) was sown with improved variety of seeds. The share of rural and urban areas was found to be 40.61 percent and 159.39 percent of the total cropland areas on which improved seeds are used, respectively. Consequently, the private holdings in the urban areas during Meher season had the highest share; while the contribution of the private holdings in urban areas to the total improved seeds applied cropland area in the administration was limited in scale. The share of Belg season to the total improved seed applied cropland area was also found to be 0.97% (See Fig VI.1)

Summary Table VI.1 also presents the total cropland area with application of improved agricultural practices and inputs by crop category for private holdings in rural and urban areas. The data in this table indicate that the highest area under improved seed was reported for cereal that account for about 59.39% while the remaining 40.61% was reported to be under pulses, oil seeds vegetables, root crops and permanent crops altogether.

2.4 Cropland Areas Under Irrigation

The increase in crop production, to keep pace with the increased population demand, can be achieved among others by the efficient utilization irrigation practices. Moreover, irrigation practices make possible the utilization of advanced technology in farming: these include the proper application of fertilizers, the adoption of good crop rotation practices and the use of better seed varieties.

Irrigated cropland areas, therefore, refer to the practice where an area of land is purposely and actually provided with water, other than the precipitation obtained from rain to improve the production of crops. The uncontrolled flooding of land by the overflow of rivers or streams is not considered to be as practice of irrigation.

The observation on irrigated cropland areas was very low and estimates that are obtained from the census of the Addis Ababa City Administration were insignificant and as a result it is represented with asterikes in this report. However, the data indicates that the peasants in the city Administration used to practice irrigation scheme to increase production in 2001/02(1994 E.C) both seasons.

3 HOLDERS APPLYING FERTILIZERS, AREA, AND QUANTITY OF FERTILIZERS APPLIED

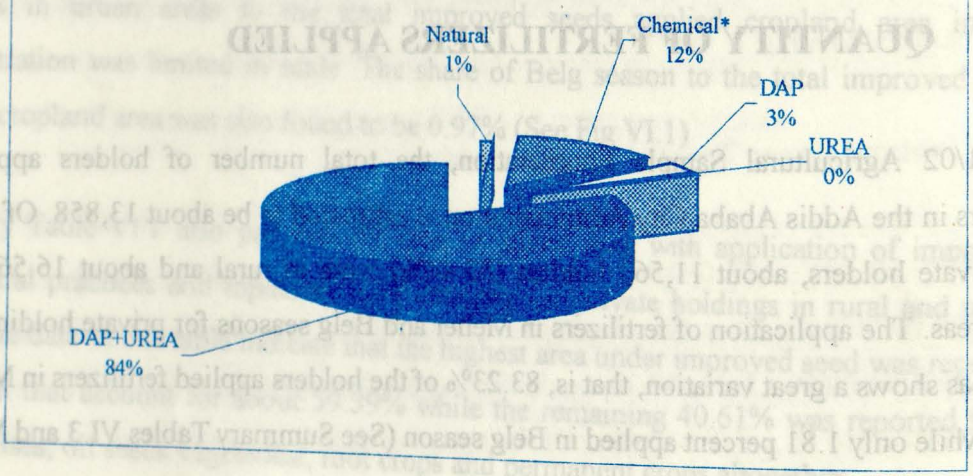
In 2001/02 Agricultural Sample Enumeration, the total number of holders applying fertilizers in the Addis Ababa City Administration is estimated to be about 13,858. Of these total private holders, about 11,563 holders (83.44%) were in rural and about 16.56% in urban areas. The application of fertilizers in Meher and Belg seasons for private holdings in rural areas shows a great variation, that is, 83.23% of the holders applied fertilizers in Meher season while only 1.81 percent applied in Belg season (See Summary Tables VI.3 and VI.4).

With regard to the type of fertilizers applied, the great majority of holders applied chemical fertilizers (13,025). When we come to the utilization of natural fertilizers, about 2,439

holders were reported to apply natural fertilizers in the 2001/02-crop year. In urban areas for private holdings, a total of 2,295 holders applied natural and chemical fertilizers. Among the types of fertilizers, chemical fertilizers were applied in a larger cultivated area of cropland, which is about 2,422 hectares (12.48% of fertilized cropland area). Among the chemical fertilizers used in rural areas, considerable amount of cropland area was covered by a mixture of DAP and UREA which is 16,079 hectares (82.88%) and DAP was applied on 635 hectares (3.27%) and UREA on 51 hectares (0.26%), (See Fig VI.2 and Summary Table VI.3)

Furthermore, the data in Summary Table VI.3 indicates that the total quantity of chemical fertilizers applied by holders in the rural areas was estimated at about 34,074 quintals, of which, the share of the mixture of DAP and UREA was the highest accounting for about 97.43 percent of the total volume of chemical fertilizers applied. This is followed by DAP accounting for about 2.44 percent and then UREA with about 0.11 percent (See Fig VI.3 and Summary Table VI.3)

FiG VI.2 Fertilizers Applied Area by type in Rural and Urban Areas For Private Holdings

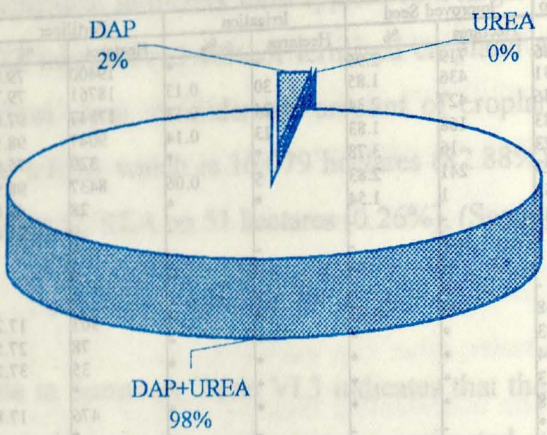


* Refers to urban areas only

SUMMARY TABLE VI.2: Total Area Under Improved Seed, Irrigation, Fertilizer, and Pesticide by Type of Crops in Rural and Urban Areas, for Private Holdings

TYPE OF CROP	Total Crop	Improved Seed		Irrigation		Fertilizer		Pesticide	
	Hectares	Hectares	%	Hectares	%	Hectares	%	Hectares	%
TOTAL	24286	719	2.96	*	*	19400	79.88	1779	7.33
Grain Crops	23531	436	1.85	30	0.13	18761	79.73	1710	7.27
Cereals	18246	427	2.34	24	0.13	17847	97.81	1690	9.26
Teff	9183	168	1.83	13	0.14	9047	98.52	1075	11.71
Barley	423	16	3.78	*	*	320	75.65	170	40.19
Wheat	8523	241	2.83	5	0.06	8437	98.99	441	5.17
Maize	65	1	1.54	*	*	28	43.08	*	*
Sorghum	42	-	-	-	-	9	21.43	*	*
Finger millet	*	-	-	-	-	*	*	-	-
Oats ('Aja')	*	-	-	-	-	*	*	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulses	5248	9	0.17	*	*	903	17.21	19	0.36
Horse beans	283	*	*	*	*	78	27.56	*	*
Field peas	94	*	*	*	*	35	37.23	*	*
Haricot beans	3	*	*	*	*	*	*	-	-
Chick peas	2668	*	*	*	*	476	17.84	13	0.49
Lentils	*	-	-	-	-	*	*	-	-
Vetch	1414	-	-	-	-	*	*	*	*
Soya	-	-	-	-	-	-	-	-	-
Fenugreek	219	-	-	-	-	76	34.7	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil Seeds	37	-	-	-	-	10	27.03	*	*
Neug	25	-	-	-	-	*	*	-	-
Linseed	12	-	-	-	-	*	*	*	*
Ground nuts	-	-	-	-	-	-	-	-	-
Sufflower	*	-	-	-	-	*	*	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	1	-	-	-	-	*	*	-	-
Other Grains	*	-	-	-	-	*	*	-	-
Vegetables	245	*	*	203	82.86	206	84.08	*	*
Lettuce	26	*	*	*	*	*	*	*	*
Head cabbage	20	5	25	18	90	18	90	12	60
Kale	91	*	*	*	*	75	82.42	*	*
Tomatoes	*	*	*	*	*	*	*	-	-
Green peppers	1	-	-	*	*	*	*	*	*
Red peppers	-	-	-	-	-	-	-	-	-
Swiss chard	*	*	*	*	*	*	*	*	*
Others	33	*	*	*	*	20	60.61	*	*
Root Crops	461	*	*	*	*	*	*	16	3.47
Beet root	16	*	*	*	*	14	87.5	*	*
Carrot	*	*	*	*	*	*	*	*	*
Onions	*	*	*	*	*	*	*	*	*
Potatoes	46	*	*	42	91.3	39	84.78	*	*
Garlic	13	-	-	*	*	5	38.46	*	*
Taro	-	-	-	-	-	-	-	-	-
Sweet potatoes	*	-	-	*	*	*	*	*	*
Others	*	*	*	*	*	*	*	*	*
Permanent Crops	49	*	*	*	*	20	40.82	*	*
Fruit Crops	*	*	*	*	*	*	*	-	-
Avocado	*	*	*	*	*	*	*	-	-
Bananas	*	*	*	*	*	-	-	-	-
Guava	*	-	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-	-	-
Mangoes	-	*	*	*	*	*	*	-	-
Oranges	*	*	*	*	*	*	*	-	-
Papayas	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-
Others	*	*	*	*	*	*	*	*	*
Stimulant Crops	37	*	*	*	*	11	29.73	*	*
Chat	1	-	-	*	*	1	100	-	-
Coffee	*	*	*	*	*	*	*	*	*
Hops	36	-	-	-	-	10	27.78	*	*
Others	-	-	-	-	-	-	-	-	-
Other Permanent	11	*	*	*	*	8	72.73	-	-
Enset	10	*	*	*	*	8	80	-	-
Sugar Cane	*	*	*	*	*	*	*	-	-
Others	*	*	*	-	-	*	*	-	-

FIG VI.3 Quantity of Fertilizer Applied By Type in Rural Areas, For Private Holdings.



3.1 Application of Natural Fertilizers in the Rural and Urban Areas

According to the census findings, about 2,062 holders in rural areas and 377 holders in urban areas applied natural fertilizers on 212 hectares of cropland (comprising 1.09% of the total fertilized land area). Of the total cropland area on which natural fertilizers are applied, the share of Meher and Belg seasons in rural areas was 0.47 and 0.14 percent, respectively. Moreover, of the total land area on which natural fertilizers are applied 64.62% was under cereals, 12.26% under pulses, 7.55% under vegetables, 8.49% under root crops, 5.19% under stimulants and 1.42% under other permanent crops. For details, refer to Summary Tables VI.3 and VI.5.

3.2 Application of DAP in the Rural Areas

As illustrated in Summary Table VI.3, about 10,965 holders in rural areas have applied chemical fertilizers on a total of 16,766 hectares of cultivated cropland area, of which DAP on about 635 hectares, which is about 3.27% of the total fertilized land area. DAP applied cropland area varied markedly from one group of crops to another, i.e., of the total DAP applied cropland area 42.91% and 50.79% were for cereals and pulses, respectively. Variations in the application of fertilizers with respect to specific crops are also

considerable, i.e., relatively it is higher for chickpeas at 195 hectares and Teff at 129 hectares (For details, refer to Summary Tables VI.3 and VI.4).

Furthermore, the total quantity of DAP applied in rural areas is estimated to be about 832 quintals, which is 2.44% of the total quantity of chemical fertilizers applied. In general, the quantity of DAP applied was the highest for cereals which was about 481 quintals followed by pulses that amounted to 200 quintals, during the 2001/02 (1994 E.C) Meher season only.

3.3 Application of UREA in the Rural Areas

About 488 holders in rural areas have applied UREA, and the cropland areas under UREA application occupied 51 hectares, which is 0.26% of the total fertilizers applied cropland area. Out of this total UREA applied area, it is reported that 54.9 % was under cereals, 33.33% under pulses and 9.8% under root crops. Among all crops, the largest UREA applied area was under wheat at 20 hectares, which accounts for about 39.22% of the total UREA applied cropland area. Moreover, the data in the table shows that the total quantity of UREA applied was about 43 quintals in which the highest amount was applied for cereals at 24 quintals, while the share of pulses and root crops was 6 and 11 quintals of UREA, respectively. during the 2001/02 (1994 E.C) Meher season only (See Summary Table VI.3).

3.4 Application of a Mixture of DAP and UREA in the Rural Areas

The census findings depicts the fact that holders have applied a mixture of DAP and UREA on their crop fields. As presented in Summary Table VI.3 there were about 10,568 holders in the city Adminstration who applied a mixture of DAP and UREA on 16,079 hectares, which is 82.88% of the total area on which fertilizers were applied. The application of a mixture of DAP and UREA to cereals and pulses was on 15,509 and 469 hectares, respectively. It was observed that the application of a mixture of UREA and DAP is low in other crops relative to cereals and pulses. For instance, the application of a mixture of DAP and UREA for vegetables and root crops were only on 18 and 79 hectares, respectively.

In addition, out of the total quantity of chemical fertilizers applied, the amount of a mixture of DAP and UREA was 33,198 quintals, which is 97.43% of the total quantity of chemical fertilizers applied. The application of a mixture of DAP and UREA to cereals, pulses vegetables and root crops amounted to about 32,607; 373; 75 and 129 quintals, in that order. Of the total quantity of mixed chemical fertilizers applied, Teff took the highest proportion accounting for about 52.56% (17,448 quintals). For details, refer to Summary Table VI.3 and VI.4.

4 HOLDERS UTILIZING IMPROVED SEEDS AND QUANTITY OF IMPROVED SEEDS USED

In the 2001/02 Agricultural Sample Enumeration, data on number of holders that have used improved seeds and quantity of seeds used was collected. Hence, the number of holders that have used improved variety seeds and quantity of improved cereals, pulses and oil seeds are presented in Summary Table VI.5.

4.1 Number of Holders using Improved Seeds.

As presented in Summary Table VI.5 the use of improved seeds is limited to only 730 in rural and 466 holders in urban areas of the region. Of the total holders using improved seeds, 35.84% utilized improved wheat seeds, 33.36% improved Teff seeds, 16.81% improved variety of carrot seeds.

4.2 Quantity of Improved Seeds Used

Information on quantity of improved varieties of seeds is also limited to grain crops. As can be seen from Summary Table VI.5, the total quantity of improved seeds was estimated to be 269 quintals. The total quantity of improved seeds used has been low for private holdings in

SUMMARY TABLE VI.3: Number of Holders Applying Fertilizers, Area Under Fertilizers and Quantity of Fertilizers Applied by Type in Rural and Urban Areas, for Private Holdings

Type of Fertilizer	Total	Grains				Vegetables	Root Crops	Permanent Crops		
		Cereals	Pulses	Oilseeds	Others			Fruits	Stimulant	Other
	Number of Holders Applying Fertilizer by Type									
Rural and Urban	13858	12702	2908	76	*	1914	2837	46	570	309
Percent	100									
Natural	2439	793	319	*	-	810	966	42	542	288
Chemical	13025	12418	2602	46	-	1178	-	-	-	-
DAP	1670	534	922	*	-	*	*	-	-	*
UREA	488	143	117	*	-	82	227	-	-	-
DAP+UREA	10568	10430	1600	*	*	*	*	*	*	-
Urban	2295	1776	146	24	-	507	332	15	89	92
Percent	16.56									
Natural	377	167	-	-	-	88	60	15	78	81
Chemical	2061	1689	146	24	-	419	273	-	*	*
Rural Meher	11534	10908	2758	51	*	1320	2458	*	481	216
Percent	83.23									
Natural	2043	605	315	*	-	712	870	*	464	208
Chemical	10950	10729	2456	*	*	*	*	*	*	*
DAP	1665	529	922	*	-	*	*	-	-	*
UREA	477	143	117	*	-	71	221	-	-	-
DAP+UREA	10525	10430	1600	*	*	*	*	*	*	-
Rural Belg	251	*	*	-	-	208	126	-	-	-
Percent	1.81									
Natural	54	*	*	-	-	*	46	-	-	-
Chemical	197	*	*	-	-	181	80	-	-	-
DAP	*	*	-	-	-	-	-	-	-	-
UREA	*	-	-	-	-	-	*	-	-	-
DAP+UREA	186	-	*	-	-	*	80	-	-	-
	Area in Hectares									
Rural and Urban	19400	17847	903	10	*	206	*	*	11	8
Percent	100	91.99	4.65	0.05	*	1.06	*	*	0.06	0.04
Natural	212	137	26	*	-	16	18	*	11	3
Percent	1.09	64.62	12.26	*	-	7.55	8.49	*	5.19	1.42
Chemical	19188	17710	877	9	-	190	-	-	-	-
Percent	98.91	92.3	4.57	0.05	-	0.99	-	-	-	-
DAP	635	271	322	*	-	*	*	-	-	*
Percent	3.27	42.74	50.79	*	-	*	*	-	-	*
UREA	51	28	17	*	-	*	5	-	-	-
Percent	0.26	54.90	33.33	*	-	*	9.80	-	-	-
DAP+UREA	16079	15509	469	*	*	5	78	*	*	-
Percent	82.88	96.46	2.92	*	*	0.03	0.49	*	*	-
Urban	2539	1990	69	*	-	179	*	*	*	6
Percent	13.09	78.38	2.72	*	-	7.05	*	*	*	0.24
Natural	116	89	-	-	-	*	*	*	*	2
Percent	0.60	76.72	-	-	-	*	*	*	*	1.72
Chemical (Urban)	2422	1901	69	*	-	170	*	-	*	*
Percent	12.48	78.49	2.85	*	-	7.02	*	-	*	*
Rural Meher	16834	15851	834	*	*	14	122	*	7	1
Percent	86.77	94.16	4.95	*	*	0.08	0.72	*	0.04	0.01
Natural	90	42	26	*	-	7	5	*	7	1
Percent	0.46	46.67	28.89	*	-	7.78	5.56	*	7.78	1.11
Chemical	16744	15808	808	*	*	7	117	*	*	*
Percent	86.31	94.41	4.83	*	*	0.04	0.7	*	*	*
DAP	634	271	322	*	-	*	*	-	-	*
Percent	3.27	42.74	50.79	*	-	*	*	-	-	*
UREA	51	28	17	*	-	*	5	-	-	-
Percent	0.26	54.9	33.33	*	-	*	9.8	-	-	-
DAP+UREA	16060	15509	469	*	*	5	72	*	*	-
Percent	82.78	96.57	2.92	*	*	0.03	0.45	*	*	-
Rural Belg	27	*	*	-	-	*	7	-	-	-
Percent	0.14	*	*	-	-	*	25.93	-	-	-
Natural	*	*	*	-	-	*	*	-	-	-
Percent	*	*	*	-	-	*	*	-	-	-
Chemical	22	*	*	-	-	*	7	-	-	-
Percent	0.11	*	*	-	-	*	31.82	-	-	-
DAP	*	*	-	-	-	-	-	-	-	-
Percent	*	*	-	-	-	-	-	-	-	-
UREA	*	-	-	-	-	*	*	-	-	-
Percent	*	-	-	-	-	*	*	-	-	-
DAP+UREA	19	*	*	-	-	*	6	-	-	-
Percent	0.10	*	*	-	-	*	31.58	-	-	-

SUMMARY TABLE VI.3: Cont.

Quantity in Quintals

Rural	34074	33113	579				281		
Percent	100	0.97	0.02				0.01		
DAP	832	481	200						
Percent	2.44	57.81	24.04						
UREA	39	24	6			1			
Percent	0.11	61.54	15.38			2.56			
DAP+UREA	33198	32607	373			15	130		
Percent	97.43	98.22	1.12			0.05	0.39		
Rural Meher	33988	33113	579				258		
Percent	99.75	97.43	1.7				0.76		
DAP	832	481	200						
Percent	2.44	57.81	24.04						
UREA	39	24	6			1			
Percent	0.11	61.54	15.38			2.56			
DAP+UREA	33117	32607	373			15	109		
Percent	97.19	98.46	1.13			0.05	0.33		
Rural Belg	86						23		
Percent	0.25								
DAP									
Percent									
UREA									
Percent									
DAP+UREA	81						21		
Percent	0.24						25.93		

To avoid duplication number of holders that applied fertilizers in rural and urban areas for private holdings do not add up to the totals. Hence, the sum of estimates may not be equal to the totals.

rural areas of the region. As can be seen from the data, the utilization of improved seeds is very low that indicates the holders continued reliance on low yielding local/traditional seeds.

5 FARM MANAGEMENT PRACTICES AND EDUCATIONAL ATTAINMENT OF HOLDERS

This section of the chapter presents data on educational attainment of holders in relation to their farm management practices. At the time of enumeration all holders in the sampled households were asked to state their educational attainment. As presented in Summary Table VI.6 data on literacy status and highest grade completed for literate holders were collected.

The census findings indicate that the level of educational attainment of the holders in Addis Ababa City Administration is very low. Thus, this situation may have a direct impact on the level of awareness of the holders with respect to better and improved farming technologies and this is a typical characteristic of peasant community in developing countries. A large number of holders (64.25% in rural and 45.01 % in urban areas) were found to be illiterate, while 9.60% in rural and 12.36% in urban areas have participated in informal education.

SUMMARY TABLE VI.4: Number of Holders Applying Fertilizers, Fertilized Area, and Quantity of Fertilizers by Crop Type in Rural and Urban Areas, for Private Holdings

CROP	Application of total Fertilizers		Application of Fertilizers by Type and Quantity				
			Natural		Chemical – DAP		
	Holders	Hectares	Holders	Hectares	Holders	Hectares	Quintals
TOTAL	13858	19400	2439	212	1670	635	832
Grain Crops	12835	18761	1014	164	1403	595	682
Cereals	12702	17847	793	137	534	273	482
Teff	11414	9047	126	61	296	129	239
Barley	788	320	75	21	96	26	43
Wheat	10232	8437	76	35	318	117	199
Maize	776	28	580	15	*	*	*
Sorghum	32	9	*	*	-	-	-
Finger millet	*	*	*	*	-	-	-
Oats ('Aja')	*	*	-	-	-	-	-
Rice	-	-	-	-	-	-	-
Pulses	2908	903	319	26	922	322	200
Horse beans	661	78	300	17	*	*	*
Field peas	122	35	*	*	-	-	-
Haricot beans	46	*	-	-	-	-	-
Chick peas	1384	476	*	*	561	195	108
Lentils	600	*	-	-	*	16	*
Vetch	464	*	-	-	301	*	*
Soya	-	-	-	-	-	-	-
Fenugreek	666	76	*	*	229	17	*
Gibto	-	-	-	-	-	-	-
Oil Seeds	76	10	*	*	*	*	-
Neug	24	*	-	-	-	-	-
Linseed	*	*	*	*	-	-	-
Ground nuts	-	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-
Rapeseed	36	*	*	*	*	*	-
Other Grains	*	*	-	-	-	-	-
Vegetables	1914	206	810	16	*	*	*
Lettuce	279	*	83	*	*	*	-
Head cabbage	222	18	26	*	-	-	-
Kale	1380	75	461	9	*	*	*
Tomatoes	54	*	*	*	-	-	-
Green peppers	212	*	113	*	-	-	-
Red peppers	-	-	-	-	-	-	-
Swiss chard	421	*	100	1	-	-	-
Others	441	20	342	2	*	*	*
Root Crops	2837	*	966	18	*	*	*
Beet root	143	14	42	*	-	-	-
Carrot	1050	*	89	8	*	*	*
Onions	297	*	204	3	*	*	*
Potatoes	137	39	36	*	-	-	-
Garlic	1585	5	686	2	*	*	*
Taro ('Godere')	-	-	-	-	-	-	-
Sweet potatoes	*	*	*	*	-	-	-
Others	*	*	-	-	-	-	-
Permanent Crops	796	20	743	14	*	*	-
Fruit Crops	46	*	42	*	-	-	-
Avocado	*	*	*	*	-	-	-
Bananas	-	-	-	-	-	-	-
Guava (Zeytuna)	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-
Oranges	*	*	*	*	-	-	-
Papayas	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-
Others	13	*	*	*	-	-	-
Stimulant Crops	570	11	542	11	-	-	-
Chat	70	1	70	1	-	-	-
Coffee	57	*	57	*	-	-	-
Hops	534	10	506	10	-	-	-
Others	-	-	-	-	-	-	-
Other Permanent	309	8	288	3	*	*	-
Enset	216	8	205	3	-	-	-
Sugar Cane	*	*	*	*	-	-	-
Others	74	*	66	*	*	*	-

SUMMARY TABLE VI.4. Contd.

CROP	Application of Fertilizers by Type and Quantity						Chemical Fertilizer (Urb)	
	Chemical – UREA			Chemical - DAP & UREA				
	Holders	Hectares	Quintals	Holders	Hectares	Quintals	Holders	Hectares
TOTAL	488	51	43	10568	16079	33198	2061	2422
Grain Crops	238	45	30	10459	15982	32993	1689	1975
Cereals	143	28	24	10430	15509	32607	1689	1901
Teff	*	*	*	9787	7767	17448	1337	1085
Barley	21	*	*	131	*	*	480	213
Wheat	56	20	*	8705	7670	15009	1197	595
Maize	*	*	*	99	*	*	35	2
Sorghum	-	-	-	*	*	*	*	*
Finger millet	-	-	-	-	-	-	-	-
Oats ('Aja')	-	-	-	*	*	*	*	*
Rice	-	-	-	-	-	-	-	-
Pulses	117	17	6	1600	469	373	146	69
Horse beans	*	*	*	*	*	*	34	10
Field peas	*	*	*	-	-	-	79	29
Haricot beans	*	*	*	*	*	*	-	-
Chick peas	*	*	*	857	246	171	*	*
Lentils	*	*	*	*	*	*	*	*
Vetch	*	*	*	*	*	*	14	*
Sova	-	-	-	-	-	-	-	-
Fenugreek	*	*	*	*	*	14	*	*
Gibto	-	-	-	-	-	-	-	-
Oil Seeds	*	*	*	*	*	*	24	*
Neug	-	-	-	*	*	*	24	*
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	*	*	*	*	*	*	-	-
Other Grains	-	-	-	-	-	-	-	-
Vegetables	82	1	*	*	18	75	419	170
Lettuce	-	-	-	-	-	-	189	*
Head cabbage	*	*	-	160	12	*	32	*
Kale	66	*	1	*	*	*	330	*
Tomatoes	-	-	-	*	*	*	*	*
Green peppers	-	-	-	*	*	*	-	-
Red peppers	-	-	-	-	-	-	-	-
Swiss chard	*	*	*	*	*	-	303	*
Others	-	-	-	*	*	*	48	*
Root Crops	227	5	11	*	79	129	273	*
Beet root	*	*	*	48	3	*	42	*
Carrot	77	4	*	*	68	95	212	*
Onions	*	*	*	*	*	*	*	*
Potatoes	-	-	-	25	*	*	76	*
Garlic	*	*	*	*	*	*	*	*
Taro	-	-	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-	-	-
Others	-	-	-	*	*	*	*	*
Permanent Crops	-	-	-	*	*	*	*	*
Fruit Crops	-	-	-	*	*	*	-	-
Avocado	-	-	-	-	-	-	-	-
Bananas	*	*	*	*	*	*	*	*
Guava	-	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-
Oranges	-	-	-	-	-	-	-	-
Papayas	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-
Others	-	-	-	*	*	*	*	*
Stimulant Crops	-	-	-	*	*	*	*	*
Chat	-	-	-	-	-	-	-	-
Coffee	-	-	-	-	-	-	-	-
Hops	-	-	-	*	*	*	*	*
Others	-	-	-	-	-	-	-	-
Other Permanent	-	-	-	-	-	-	*	*
Enset	-	-	-	-	-	-	-	-
Sugar Cane	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-

Moreover, the data shows that 15.52% of the holders in rural and 21.61% of holders in urban areas have completed grades 1 to 6 and only 10.46% of the holders in rural and 18.57 % in urban areas have completed grades 7-12. These estimates show that holders in urban areas are relatively more literate than those in the rural areas. This could probably be due to better access to school and/or better awareness of the importance of education among the holders in the urban than those in the rural areas.

Moreover, the total number of holders participating in the agricultural extension package programs was 93, which is only about 0.58 percent of the total holders in the city Administration. Of the total holders participating in the extension programs, 93 were in Meher season. The distribution of extension package program participants by educational status shows that 49.46% have completed grades 1 to 6.

As a result of insignificant number of holders who have been exposed to extension packages as well as to education, the impact of education on the use of improved farm practices was not clearly exhibited by the census data. The data indicates that out of all holders who have used improved seeds, practiced irrigation, and applied fertilizers and pesticides, 52.26, 43.50, 63.45 and 45.11 percents were illiterate, respectively (For details, refer to Summary Table VI.6).

6 DAMAGED CROPLAND AREAS AND SIZE OF HOLDINGS IN RURAL AREAS

This section of the chapter deals with the estimates of damaged cropland areas by size of holdings in Addis Ababa City Administration. Cropland area damage includes any cropland planted or sown with intension to harvest crops, but failed to produce crop partly or fully due to various reasons. Out of the total cultivated cropland area, 4.80% was affected by crop damage in both Meher and Belg seasons. The cropland area damage that accounted for 51.86% fall under holders in rural areas who had holding size that ranges from 2.01 to 5 hectares, followed by holders in rural areas who had holding size of between 1.01 and 2 hectares accounted for 26.47 % of the total cropland area damaged.

SUMMARY TABLE VI.5: Number of Holders Utilizing Improved Seeds and Quantity of Improved Seeds Applied by Crop Type in Rural and Urban Areas, for Private Holdings

Type of Crop	Holders Applying Improved Seeds					Quantity in Quintals			
	Total	%	Rural		Urban	Rural	%	Meher	Belg
			Meher	Belg	Meher				
Total	1196	100	674	72	466	269	100	269	
Grain Crops	831	69.48	546	*	270	269	100.00	269	
Cereals	792	66.22	526		266	262	97.40	262	
Teff	399	33.36	278		121	61	22.68	61	
Barley	47	3.93	*		43	*	*	*	
Wheat	425	35.54	288		137	201	74.72	201	
Maize	22	1.84	-		22	-	-	-	
Sorghum	-	-	-		-	-	-	-	
Finger millet	-	-	-		-	-	-	-	
Oats ('Aja')	-	-	-		-	-	-	-	
Rice	-	-	-		-	-	-	-	
Pulses	57	4.77	35	*	*	*	*	*	
Horse beans	21	1.76	*		*	*	*	*	
Field peas	*	*	*		*	*	*	*	
Haricot beans	*	*	-	*	-	-	-	-	
Chick peas	*	*	*		-	*	*	*	
Lentils	-	-	-		-	-	-	-	
Vetch	-	-	-		-	-	-	-	
Soya	-	-	-		-	-	-	-	
Fenugreek	-	-	-		-	-	-	-	
Oil Seeds	-	-	-		-	-	-	-	
Neug	-	-	-		-	-	-	-	
Linseed	-	-	-		-	-	-	-	
Ground nuts	-	-	-		-	-	-	-	
Sufflower	-	-	-		-	-	-	-	
Sesame	-	-	-		-	-	-	-	
Rapeseed	-	-	-		-	-	-	-	
Other Grains	-	-	-		-	-	-	-	
Vegetables	245	20.48	46	61	149	-	-	-	
Lettuce	61	5.10	*	*	*	-	-	-	
Head cabbage	67	5.60	34	*	*	-	-	-	
Kale	101	8.44	*	*	69	-	-	-	
Tomatoes	*	*	-	*	-	-	-	-	
Green peppers	-	-	-		-	-	-	-	
Red peppers	-	-	-		-	-	-	-	
Swiss chard	165	13.80	*	*	134	-	-	-	
Others	*	*	*		*	-	-	-	
Root Crops	230	19.23	125	*	88	-	-	-	
Beet root	46	3.85	*	*	*	-	-	-	
Carrot	201	16.81	113	*	76	-	-	-	
Onions	50	4.18	*	-	43	-	-	-	
Potatoes	*	*	-	-	*	-	-	-	
Garlic	-	-	-		-	-	-	-	
Taro ('Godere')	-	-	-		-	-	-	-	
Sweet potatoes	-	-	-		-	-	-	-	
Others	*	*	-		*	-	-	-	
Permanenet Crops	33	2.76	*	72	45	-	-	-	
Fruit Crops	*	*	*	*	15	-	-	-	
Avocado	-	-	*		*	-	-	-	
Bananas	-	-	-		-	-	-	-	
Guava (Zeytuna)	-	-	-		-	-	-	-	
Lemons	-	-	-		-	-	-	-	
Mangoes	*	*	-		-	-	-	-	
Oranges	-	-	*		-	-	-	-	
Papayas	-	-	-		-	-	-	-	
Pineapples	*	*	-		-	-	-	-	
Others	*	-	-		*	-	-	-	
Stimulant Crops	*	*	*	*	-	*	-	-	
Chat	-	-	-		-	-	-	-	
Coffee	-	-	*		-	-	-	-	
Other Permanent Crops	44	3.68	-	*	37	-	-	-	

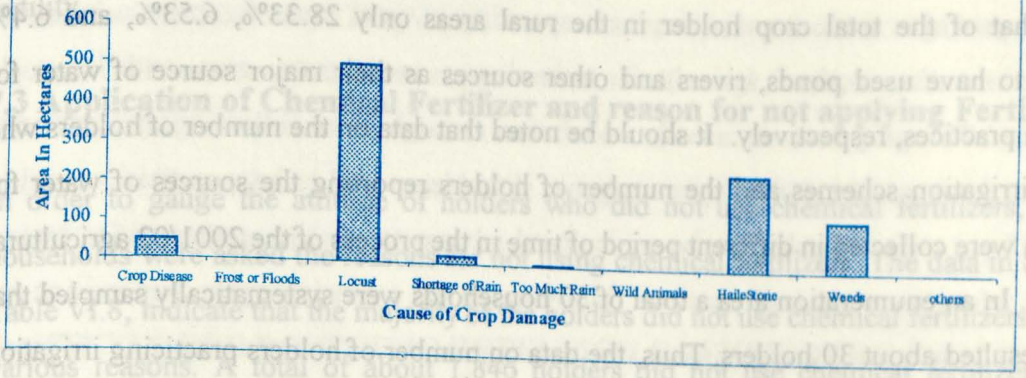
SUMMARY TABLE VI.6: Holders Applying Agricultural Inputs and Participating in Extension Programs by Level of Education in Rural and Urban Areas, for Private Holdings

Place of Residence/Season	Total		Educational Level of Holder									
			Illiterate		Literate, but no Formal Education		Grade 1 – 6		Grade 7 – 12		Above Grade 12	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
All Crop Holders												
Rural and Urban	15960	100	9697	60.76	1612	10.10	2653	16.62	1904	11.93	94	0.59
Rural	13063	100	8393	64.25	1254	9.60	2027	15.52	1366	10.46	*	*
Meher	13049	100	8393	64.32	1254	9.61	2012	15.42	1366	10.47	*	*
Belg	323	100	128	39.63	46	14.24	97	30.03	53	16.41	*	*
Urban	2897	100	1304	45.01	358	12.36	626	21.61	538	18.57	71	2.45
Improved Seeds												
Rural and Urban	1196	7.49	625	52.26	99	8.28	276	23.08	191	15.97	*	*
Rural	729	5.58	371	50.89	48	6.58	167	22.91	144	19.75	*	*
Meher	674	5.17	351	52.08	48	7.12	145	21.51	130	19.29	*	*
Belg	73	22.60	26	35.62	*	*	27	36.99	*	*	*	*
Urban	467	16.12	254	54.39	51	10.92	109	23.34	47	10.06	*	*
Irrigation												
Rural and Urban	1193	7.47	519	43.50	107	8.97	244	20.45	299	25.06	*	*
Rural	451	3.45	159	35.25	*	*	134	29.71	121	26.83	*	*
Meher	275	2.11	95	34.55	*	*	66	24.00	91	33.09	*	*
Belg	248	76.78	84	33.87	*	*	88	35.48	44	17.74	*	*
Urban	743	25.65	360	48.45	74	9.96	110	14.80	178	23.96	*	*
Fertilizer												
Rural and Urban	13859	86.84	8793	63.45	1404	10.13	2249	16.23	1369	9.88	44	0.32
Rural	11563	88.52	7702	66.61	1140	9.86	1733	14.99	978	8.46	*	*
Meher	11534	88.39	7702	66.78	1140	9.88	1709	14.82	973	8.44	*	*
Belg	251	77.71	96	38.25	*	*	84	33.47	*	*	*	*
Urban	2296	79.25	1090	47.47	264	11.50	515	22.43	392	17.07	35	1.52
Pesticides												
Rural and Urban	1687	10.57	761	45.11	188	11.14	417	24.72	314	18.61	*	*
Rural	718	5.50	336	46.80	74	10.31	183	25.49	125	17.41	*	*
Meher	610	4.67	307	50.33	59	9.67	143	23.44	101	16.56	*	*
Belg	141	43.65	*	*	*	*	*	*	30	21.28	*	*
Urban	970	33.48	425	43.81	114	11.75	234	24.12	188	19.38	*	*
Extension Program												
Rural	93	0.58	*	*	*	*	46	49.46	*	*	*	*
Meher	93	0.71	*	*	*	*	46	49.46	*	*	*	*
Belg	*	*	*	*	*	*	*	*	*	*	*	*

SUMMARY TABLE VI.7: Causes of Damage of Cropland Area by Size of Holdings and Seasons in Rural Areas, for Private Holdings

Cause of Damage	Size of Holding (Hectares)							
	Total	Under 0.1	0.1 – 0.5	0.51 – 1.0	1.01 – 2.0	2.01 – 5.00	5.01 – 10.0	Over 10
	Both Seasons							
Total	1020	3	19	39	143	529	270	*
Percent,,	100	0.29	1.86	3.82	14.02	51.86	26.47	*
Crop Disease	48	1	*	*	7	21	16	-
Percent..	4.71	2.08						
Frost or Floods	*	*	*	-	*	*	*	-
Percent,,	*	*	*	-	*	*	*	-
Locust	500	1	4	23	*	249	*	*
Percent,,	49.02	0.20	0.80	4.60	*	49.80	*	*
Shortage of Rain	20	*	*	*	4	7	5	*
Percent,,	1.96	*	*	*	20.00	35.00	25.00	*
Too Much Rain	4	*	*	*	*	*	*	-
Percent,,	0.39	*	*	*	*	*	*	-
Wild Animals	*	*	*	*	*	*	*	-
Percent,,	*	*	*	*	*	*	*	-
Birds	-	-	-	-	-	-	-	-
Percent,,	-	-	-	-	-	-	-	-
Hailstone	246	*	*	7	29	141	53	*
Percent,,	24.12	*	*	2.85	11.79	57.32	21.54	*
Pests and Insects	-	-	-	-	-	-	-	-
Percent,,	-	-	-	-	-	-	-	-
Weeds	132	*	*	*	17	48	54	*
Percent,,	12.94	*	*	*	12.88	36.36	40.91	*
Others	-	-	-	-	-	-	-	-
Percent,,	-	-	-	-	-	-	-	-
	Meher Season							
Total	1019	3	19	39	143	528	270	*
Crop Disease	47	1	*	*	7	20	16	-
Frost or Floods	*	*	*	-	*	*	*	-
Locust	499	1	4	23	*	249	*	*
Shortage of Rain	20	*	*	*	4	7	5	*
Too Much Rain	4	*	*	*	*	*	*	-
Wild Animals	*	*	*	*	*	*	*	-
Birds	-	-	-	-	-	-	-	-
Hailstone	246	*	*	7	29	141	53	*
Pests and Insects	-	-	-	-	-	-	-	-
Weeds	132	*	*	*	17	48	54	*
Others	-	-	-	-	-	-	-	-
	Belg Season							
Total	*	*	*	-	-	-	-	-
Crop Disease	*	*	*	-	-	-	-	-
Frost or Floods	-	-	-	-	-	-	-	-
Locust	*	*	-	-	-	-	-	-
Shortage of Rain	*	*	-	-	-	-	-	-
Too Much Rain	*	*	-	-	-	-	-	-
Wild Animals	-	-	-	-	-	-	-	-
Birds	-	-	-	-	-	-	-	-
Hailstone	-	-	-	-	-	-	-	-
Pests and Insects	-	-	-	-	-	-	-	-
Weeds	*	*	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-

Fig VI.4 Damaged Crop Land Area by Cause of Damage in Rural Areas,For private holdings



With regard to the causes of crop damage, it is reported that 49.02% was damaged due to locust, 24.12% was caused by hail stone and 12.94% was due to weeds. (For details see Summary Table VI.8 and Fig VI.3).

7 FARM MANAGEMENT PRACTICES OF HOLDERS IN RURAL AREAS

In order to obtain more detailed information concerning the various types of farm practices of holders in rural areas, data were collected subjectively by interviewing sampled agricultural holders on the sources of water for irrigation schemes, method to improve soil fertility, method of ploughing and soil conservation, participation in extension package programs, as well as use of credit and/or advisory services. Hence, the total number of holders reporting different farm management practices and their percentage distribution by type of farm management practices is presented in Summary Table VI.8. Following are discussions of the major findings with respect to these data.

7.1 Sources of Water for Irrigation Schemes

In a country like Ethiopia, where the amount, timing and distribution of rainfall is irregular, use of irrigation would significantly improve and raise the level of crop production.

However, irrigation is not extensive in Addis Ababa City Administration. Even though the coverage of irrigation scheme is very limited both in rural and urban areas, the census data reveals that of the total crop holder in the rural areas only 28.33%, 6.53%, and 6.4% reported to have used ponds, rivers and other sources as their major source of water for irrigation practices, respectively. It should be noted that data on the number of holders who practice irrigation schemes and the number of holders reporting the sources of water for irrigation were collected in different period of time in the process of the 2001/02 agricultural activities. In an enumeration area a total of 30 households were systematically sampled that mainly resulted about 30 holders. Thus, the data on number of holders practicing irrigation was collected in September 2001 (for ten households) and in December 2001 (for twenty households). However, the data on the holders reporting the sources of water for irrigation was collected only in March. Hence, some discrepancy is observed in the total numbers of holders who have reported the use of irrigation practices presented in Summary Table VI.6 and VI.8.

During the 2001/02 EASE, an attempt has also been made to asses the extent of irrigation practice in urban areas. Thus, sources of water for irrigation under permanent crops in urban areas for Meher season have been assessed and the data are presented in Summary Table V1.9. The data in the table shows that only 25.65 percent of the total holders reported as practicing irrigation during the Meher season and of these holders the sources of water for irrigation for 20.16%, and 1.28 percent were from rivers, and lakes, respectively. While the remaining 2.79% holders used tap water, well and other sources to irrigate their cropped fields. In the same summary table, out of the total holders, it is found that only 567 (19.57 percent) holders in urban areas practiced Belg crop production in the past three years prior to 2001/02 (1994 E.C.).

7.2 Methods Used to Improve Soil Fertility

The fertility of the soil in Ethiopia is being depleted slowly as time passes because of continuous cropping. In the census, holders were asked to state their method of improving soil fertility, that is whether they use crop rotation or burning of soil. Hence, the data

showed that of the total holders about 88.08% have reported practicing crop rotation, while very few holders reported practicing burning of soil as their main method for improving soil fertility.

7.3 Application of Chemical Fertilizer and reason for not applying Fertilizers

In order to gauge the attitude of holders who did not use chemical fertilizers, sampled households were asked the reasons for not using chemical fertilizers. The data in Summary Table VI.8, indicate that the majority of the holders did not use chemical fertilizers due to various reasons. A total of about 1,846 holders did not use chemical fertilizers due to shortage of money, about 1,025 holders due to lack of knowledge regarding the advantage, about 283 holders due to high cost of fertilizers, about 277 holders due to insufficient supply of fertilizers in their area, and about 8,380 holders which is the highest mentioned "other reasons" for not using chemical fertilizers.

7.4 Method of Ploughing

One aspect to increase agricultural production is through mechanization. The replacement of hand digging and ox/horse driven ploughing method by tractor is of paramount importance for increasing the volume of agricultural production. In light of this, an attempt has been made to collect some basic information on method of ploughing by the holders at the time of the census enumeration. Thus, the majority of the holders (85.08%) reported to have used ox/horse driven ploughing method and 11.3% of the holders reported to have used hand digging methods. Nevertheless, holders who used both hand dug and ox/horse driven ploughing methods accounted for about 3.05%.

7.5 Methods Used for Soil Conservation

According to the data in Summary Table VI.8, the majority of the holders reported using different methods of soil conservation. Of which, 4.97, 2.7 and 55.89 percent of holders have practiced terracing, water catchments and ploughing along the contour, respectively. On the other hand about 25.64% of holders reported that they have other methods for soil conservation.

7.6 Extension Packages, and Use of Agricultural Credit and Advisory Services

Extension packages are outreach programs operating in rural areas for private holdings aiming to transfer modern agricultural technologies to increase crop and livestock productivity. The programs are usually undertaken through close follow-up and advisory services by the agricultural development agents. A holder is said to be a participant of this program if and only if he/she obtains agricultural advices, apply the recommended inputs and other related services such as close follow up by the extension agent, supervision by wereda and zonal agricultural bureaus...etc on a regular basis. The prevalence of different types of extension packages were assessed during the Agricultural Sample Enumeration. These include, rain shortage area packages, rain abundant area packages, post harvest technology packages, ...etc. Thus, the data showed that about 1.47% and 0.92% of the agricultural holders were covered by rain abundant areas extension packages and economically important crop extension packages, respectively. In response to why they have not been covered by these extension packages from the inception of the program, holders reported the reasons as follows: that is 7.61% of the holders reported shortage of money, 7.18% reported no knowledge about the advantage, 69.6% which is the highest reported program not available, 2.01% were suspicious of its efficiency and 8.68% reported not sufficient arable land available and 2.16% due to other reasons.

In the rural Ethiopia, there are institutions that provide credit and assist peasants by furnishing short and intermediate term loans for the purchase of chemical fertilizers, improved variety seeds, and pesticides. These institutions not only give great emphasis to providing loans to peasants but also aiding them with advice on farming practices. Then, data are collected by interviewing sampled holders on use of credit and advisory services and are presented in Summary Table VI.8. Thus, the data in this table shows that about 2.24 percent of the holders have obtained advice on agricultural practices, while about 22.45 percent of the holders reported to have used credit services. However, the observed number of holders proved that the use of credit and advisory services were limited in scope.

7.7 SOURCES AND COST OF CHEMICAL FERTILIZERS.

As illustrated in Summary Table V1.10, it is estimated that a total of 5,859 holders (45.08%) reported "Government" as their major sources of chemical fertilizers, while about 1,301 (10.01%) holders mentioned traders as their major sources of chemical fertilizers, respectively. Regardless of the source, the average cost was 279.64 Birr/Quintal for DAP and 223.85 Birr/Quintal for UREA.

8 USES OF CROP SPECIFIC EXTENSION PACKAGE PROGRAMS

Extension package is one of the means by which productivity improves and thereby food production increases. Moreover, Agricultural Development Agents (ADA) assist the peasants by operating demonstration plots to provide information to agricultural holders on improved seed varieties, on use of fertilizers and pesticides, and improvements in production practices to increase yields. Further, advisory services are provided to holders to those who are willing to participate in the extension package programs.

8.1 Holders Participating in Crop Specific Extension Package Programs

In rural areas of the Addis Ababa City Administration, data on the distributions of holders participating in crop specific extension package programs are presented in Summary Table VI.11 Accordingly, about 93 holders have been participating in crop specific package, where, about 46 and 61 holders who considered Teff and wheat, respectively.

8.2 Area Under Crop Specific Extension Package Programs

In the 2001/02 EASE, data on cropland area under extension package programs was collected. Thus, Summary Table VI.12 shows that a total of 54 hectares (0.22% of the total cropland area) was under extension package programs. Out of the total cropland area under extension package programs, 37.04% was observed under Teff while wheat contributed about 61.11% . For details, see Summary Table VI.11.

SUMMARY TABLE VI.8: Number of Holders by Type of Farm Management Practices in Rural Areas, for Private Holdings

Farm Practices	Number of Holders Reporting	Percentage
Total Crop Holders	12998	100
Source of Water for Irrigation	766	5.89
Holders who Practice Irrigation	50	6.53
River	*	*
Lake	217	28.33
Pond	49	6.4
Other		
Method to Improve Soil Fertility	11449	88.08
Crop Rotation	*	*
Burning of Soil		
Reason for Not Using Chemical Fertilizer	1025	
Do Not Know Advantages	283	
Too Expensive	1846	
Shortage of Money	277	
Insufficient Supply	*	
No Credit Service	*	
Suspicious of Efficacy	8380	
Other		
Method of Ploughing	1469	11.3
Hand Dug	11059	85.08
Ox/Horse Driven	-	-
Tractor	396	3.05
Hand Dug and Ox/Horse Driven	*	*
Tractor and Ox/Horse Driven		
Method of Soil Conservation	581	4.47
Terracing	351	2.7
Water Catchments	*	*
Afforestation	7264	55.89
Ploughing Along the Contour	3333	25.64
Others	16051	100
All Holders		
Participation in Extension Package by Type	-	-
Rain Shortage Areas Package	236	1.47
Rain Abundant Areas Package	*	*
Post Harvest Technology Package	-	-
Livestock Development Package	148	0.92
Economically Important Crops Package	-	-
Any Two or More Packages		
Reason For Not Participating in Extension Packages	1152	7.18
Do Not Know the Advantages	1222	7.61
Shortage of Money	322	2.01
Suspicious of Efficacy	11171	69.6
Programs Not Available	1394	8.68
Not Sufficient Arable Land	347	2.16
Others		
Use of Credit or Advisory Services	3604	22.45
Credit Services	360	2.24
Advisory Services		

Summary Table VI.9 Holders who Practice Irrigation by Sources of Water in Meher Season and Holders who Practice Belg From 1999/2000 to 2001/02 in Urban Areas

Sources of Water	Number of Holders	Percent
Those who Practice Irrigation in Meher Season (2001/02)		
Crop Holders.....	2897	100
Holders who Practice Irrigation	743	25.65
Sources		
River.....	584	20.16
Lake.....	37	1.28
Well.....	*	*
Tap Water.....	*	*
Others.....	*	*
Not Stated.....	41	1.42
Those who Practice Belg from 1999/2000 to 2001/02		
Crop Holders.....	2897	100.00
Holders who Practice Belg.....	567	19.57
Male.....	441	15.22
Female.....	126	4.35

Summary Table VI.10: Holders by Sources of Chemical Fertilizers and Cost of Chemical Fertilizers in Rural Areas for Private Holdings.

Sources and Type of Fertilizers	Number of Holders	Percent
Crop Holders.....	12998	100.00
Sources		
Government.....	5859	45.08
Private Organization	*	*
Traders.....	1301	10.01
Others.....	*	*
Do not Buy.....	2184	16.80
Not Reported.....	50	0.38
Type of Fertilizers	**Cost in Birr/Quintal**	
DAP.....	279.64	
UREA.....	223.88	

Summary Table VI.11: Number of Holders Participating Crop Specific Extension Package Program and Area under Crop Specific Extension Package Program By Season in Rural Areas, for Private Holdings.

Area in Hectares

Ext. Package by Crop	Rural				Meher		Belg	
	Holder	%	Area	%	Holder	Area	Holder	Area
Total	93	100	54	100	93	54	-	-
Teff	46	49.46	20	37.04	46	20	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	61	65.59	33	61.11	61	33	-	-
Maize	-	-	-	-	-	-	-	-
Sorguhm	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	-	-
Chick peas	*	*	*	*	*	*	-	-
Lentils	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Other Grains	-	-	-	-	-	-	-	-
Tomatoes	-	-	-	-	-	-	-	-
Red Papper	-	-	-	-	-	-	-	-
Onion	-	-	-	-	-	-	-	-
Potatoes	*	*	*	*	*	*	-	-
Sweet potatoes	-	-	-	-	-	-	-	-
Enset	-	-	-	-	-	-	-	-
Other Permanent	-	-	-	-	-	-	-	-

STATISTICAL TABLES PRESENTING RESULTS AT CITY ADMINISTRATION LEVEL

Tables 6.1– 6.5.4

Ext. Package by Crop	Rural				Maber		Bang	
	Holder	%	Area	%	Holder	Area	Holder	
Total	93	100	54	100	93	54		
Teff	46	49.46	20	37.04	46	20		
Barley	-	-	-	-	-	-		
Wheat	61	65.59	33	61.11	61	33		
Maize	-	-	-	-	-	-		
Sorgahm	-	-	-	-	-	-		
Rice	-	-	-	-	-	-		
Field pea	-	-	-	-	-	-		
Haricot beans	-	-	-	-	-	-		
Chick pea	-	-	-	-	-	-		
Lentils	-	-	-	-	-	-		
Nuog	-	-	-	-	-	-		
Linseed	-	-	-	-	-	-		
Ground nuts	-	-	-	-	-	-		
Sesame	-	-	-	-	-	-		
Rapeseed	-	-	-	-	-	-		
Other Oilsds	-	-	-	-	-	-		
Tomatoes	-	-	-	-	-	-		
Red Pepper	-	-	-	-	-	-		
Onion	-	-	-	-	-	-		
Potatoes	-	-	-	-	-	-		
Sweet potatoes	-	-	-	-	-	-		
Enset	-	-	-	-	-	-		
Other Perennial	-	-	-	-	-	-		

TABLE 6.1: AREA OF CROPLAND UNDER IMPROVED FARM MANAGEMENT PRACTICES BY TYPE OF CROPS IN RURAL AREAS, BOTH SEASONS, FOR PRIVATE HOLDINGS

TYPE OF CROP	Total Crop	Improved Seed		Irrigation		Fertilizer		Pesticide	
	Hectares	Hectares	%	Hectares	%	Hectares	%	Hectares	%
TOTAL	21244	292	1.37	39	0.18	16861	79.37	633	2.98
Grain Crops	21005	267	1.27	*	*	16696	79.49	622	2.96
Cereals	16098	259	1.61	*	*	15857	98.5	619	3.85
Teff	7983	99	1.24	-	-	7916	99.16	475	5.95
Barley	168	*	*	-	-	94	55.95	*	*
Wheat	7864	160	2.03	-	-	7816	99.39	134	1.7
Maize	48	-	-	*	*	21	43.75	-	-
Sorghum	27	-	-	-	-	*	*	-	-
Finger millet	*	-	-	-	-	*	*	-	-
Oats ('Aja')	*	-	-	-	-	*	*	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulses	4893	8	0.16	*	*	835	17.07	*	*
Horse beans	231	*	*	-	-	*	*	-	-
Field peas	54	*	*	-	-	*	*	-	-
Haricot beans	2	*	*	*	*	*	*	-	-
Chick peas	2544	*	*	-	-	454	17.85	-	-
Lentils	*	-	-	-	-	*	*	-	-
Vetch	1295	-	-	-	-	*	*	*	*
Soya	-	-	-	-	-	-	-	-	-
Fenugreek	205	-	-	-	-	75	36.59	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil Seeds	14	-	-	-	-	*	*	*	*
Neug	*	-	-	-	-	-	-	-	-
Linseed	12	-	-	-	-	*	*	*	*
Ground nuts	-	-	-	-	-	-	-	-	-
Sufflower	*	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	1	-	-	-	-	*	*	-	-
Other Grains	*	-	-	-	-	*	*	-	-
Vegetables	46	4	8.7	18	39.13	27	58.7	*	*
Lettuce	*	*	*	*	*	*	*	-	-
Head cabbage	12	3	25	*	*	12 100.00		*	
Kale	14	*	*	1	7.14	9	64.29	*	*
Tomatoes	*	*	*	*	*	*	*	-	-
Green peppers	1	-	-	-	-	*	*	-	-
Red peppers	-	-	-	-	-	-	-	-	-
Swiss chard	1	*	*	*	*	*	*	*	*
Others	16	*	*	*	*	4	25	*	*
Root Crops	167	21	12.57	19	11.38	129	77.25	*	*
Beet root	7	3	42.86	*	*	4	57.14	*	*
Carrot	138	18	13.04	*	*	113	81.88	*	*
Onions	2	*	*	*	*	1	50	*	*
Potatoes	7	-	-	*	*	*	*	-	-
Garlic	12	-	-	*	*	4	33.33	*	*
Taro ('Godere')	-	-	-	-	-	-	-	-	-
Sweet potatoes	*	-	-	*	*	*	*	-	-
Others	*	-	-	*	*	*	*	*	*
Permanent Crops	26	*	*	*	*	10	38.46	*	*
Fruit Crops	*	*	*	*	*	*	*	-	-
Avocado	*	*	*	*	*	*	*	-	-
Bananas	*	-	-	-	-	-	-	-	-
Guava (Zeytuna)	-	-	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-	-
Oranges	*	*	*	*	*	*	*	-	-
Papayas	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-
Others	*	-	-	-	-	*	*	*	*
Stimulant Crops	23	*	*	*	*	7	30.43	-	-
Chat	1	-	-	*	*	1 100.00		-	-
Coffee	*	*	*	*	*	*	*	-	-
Hops	22	-	-	*	*	7	31.82	*	*
Others	-	-	-	-	-	-	-	-	-
Other Permanent Crops	2	*	*	*	*	1	50	-	-
Enset	1	-	-	*	*	*	*	-	-
Sugar Cane	*	*	*	*	*	*	*	-	-
Others	*	-	-	*	*	*	*	-	-

TABLE 6.1.1: RURAL MEHER

TYPE OF CROP	Total Crop	Improved Seed		Irrigation		Fertilizer		Pesticide	
	Hectares	Hectares	%	Hectares	%	Hectares	%	Hectares	%
TOTAL	21196	285	1.34	15	0.07	16834	79.42	623	2.94
Grain Crops	20981	266	1.27	*	*	16689	79.54	622	2.96
Cereals	16078	259	1.61	*	*	15851	98.59	619	3.85
Teff	7983	99	1.24	-	-	7916	99.16	475	5.95
Barley	148	*	*	-	-	88	59.46	*	*
Wheat	7864	160	2.03	-	-	7816	99.39	134	1.7
Maize	47	-	-	*	*	21	44.68	-	-
Sorghum	27	-	-	-	-	*	*	-	-
Finger millet	*	-	-	-	-	*	*	-	-
Oats ('Aja')	*	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	834	17.06	*	*
Pulses	4889	*	*	-	-	*	*	-	-
Horse beans	231	*	*	-	-	*	*	-	-
Field peas	54	*	*	-	-	*	*	-	-
Haricot beans	1	-	-	-	-	454	17.85	-	-
Chick peas	2544	*	*	-	-	*	*	-	-
Lentils	*	-	-	-	-	*	*	*	*
Vetch	1295	-	-	-	-	-	-	-	-
Soya	-	-	-	-	-	75	36.59	-	-
Fenugreek	205	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	*	*	*	*
Oil Seeds	14	-	-	-	-	-	-	*	*
Neug	*	-	-	-	-	*	*	-	-
Linseed	12	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Sufflower	*	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	*	*	-	-
Rapeseed	1	-	-	-	-	*	*	-	-
Other Grains	*	-	-	-	-	*	*	*	*
Vegetables	33	*	*	4	12.12	14	42.42	*	*
Lettuce	*	*	*	*	*	*	*	-	-
Head cabbage	3	*	*	*	*	3 100.00	*	*	*
Kale	14	*	*	*	*	8	57.14	*	*
Tomatoes	*	-	-	-	-	*	*	-	-
Green peppers	1	-	-	-	-	*	*	-	-
Red peppers	-	-	-	-	-	-	-	-	-
Swiss chard	*	*	*	*	*	*	*	*	*
Others	*	*	*	*	*	3	*	*	*
Root Crops	157	18	11.46	*	*	122	77.71	*	*
Beet root	4	*	*	*	*	4 100.00	*	*	*
Carrot	136	18	13.24	*	*	112	82.35	-	-
Onions	2	*	*	-	-	1	50	*	*
Potatoes	2	-	-	2 100.00	*	*	*	-	-
Garlic	12	-	-	*	*	4	33.33	*	*
Taro ('Godere')	-	-	-	-	-	-	-	-	-
Sweet potatoes	*	-	-	*	*	*	*	-	-
Others	-	-	-	-	-	-	-	-	-
Permanent Crops	26	*	*	*	*	10	38.46	*	*
Fruit Crops	*	*	*	*	*	*	*	-	-
Avocado	*	*	*	*	*	*	*	-	-
Bananas	*	-	-	-	-	-	-	-	-
Guava (Zeytuna)	-	-	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-	-
Oranges	*	*	*	*	*	*	*	-	-
Papayas	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-
Others	*	-	-	-	-	*	*	-	-
Stimulant Crops	23	*	*	*	*	7	30.43	*	*
Chat	1	-	-	*	*	1 100.00	-	-	-
Coffee	*	*	*	*	*	*	*	-	-
Hops	22	-	-	*	*	7	31.82	*	*
Others	-	-	-	*	*	-	-	-	-
Other Permanent Crops	2	*	*	*	*	1	50	-	-
Enset	1	-	-	*	*	*	*	-	-
Sugar Cane	*	*	*	*	*	*	*	-	-
Others	*	-	-	*	*	*	*	-	-

TABLE 6.1.2: RURAL BELG

TYPE OF CROP	Total Crop	Improved Seed		Irrigation		Fertilizer		Pesticide	
	Hectares	Hectares	%	Hectares	%	Hectares	%	Hectares	%
TOTAL	49	7	14.29	24	48.98	27	55.1	*	*
Grain Crops	*	*	*	*	*	*	*	-	-
Cereals	*	-	-	-	-	*	*	-	-
Teff	-	-	-	-	-	-	-	-	-
Barley	*	-	-	-	-	*	*	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	-	-	-	-	*	*	-	-
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats ('Aja')	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulses	*	*	*	*	*	*	*	-	-
Horse beans	*	-	-	-	-	*	*	-	-
Field peas	*	-	-	-	-	*	*	-	-
Haricot beans	*	*	*	*	*	*	*	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentils	*	-	-	-	-	-	-	-	-
Vetch	-	-	-	-	-	-	-	-	-
Soya	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil Seeds	-	-	-	-	-	-	-	-	-
Neug	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Other Grains	-	-	-	-	-	-	-	-	-
Vegetables	*	3	*	*	*	*	*	*	*
Lettuce	*	*	*	*	*	*	*	-	-
Head cabbage	*	*	*	*	*	*	*	*	*
Kale	*	*	*	*	*	*	*	*	*
Tomatoes	*	*	*	*	*	*	*	-	-
Green peppers	*	-	-	-	-	-	-	-	-
Red peppers	-	-	-	-	-	-	-	-	-
Swiss chard	*	*	*	*	*	*	*	-	-
Others	*	-	-	*	*	*	*	-	-
Root Crops	10	*	*	10	100	7	70	*	*
Beet root	*	*	*	*	*	*	*	*	*
Carrot	1	*	*	1	100	1	100	*	*
Onions	*	-	-	*	*	*	*	-	-
Potatoes	*	-	-	*	*	*	*	-	-
Garlic	*	-	-	*	*	*	*	-	-
Taro ('Godere')	-	-	-	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-	-	-	-
Others	*	-	-	*	*	*	*	*	*

TABLE 6.2: AREA OF CROPLAND UNDER IMPROVED FARM MANAGEMENT PRACTICES BY TYPE OF CROPS IN URBAN AREAS, MEHER SEASON

TYPE OF CROP	Total Crop	Improved Seed		Irrigation		Fertilizer		Pesticide	
	Hectares	Hectares	%	Hectares	%	Hectares	%	Hectares	%
TOTAL	3042	427	14.04	29	1.15	2539	83.46	1145	37.64
Grain Crops	2526	169	6.69	24	1.12	2065	81.75	1088	43.07
Cereals	2147	168	7.82	13	1.08	1990	92.69	1072	49.93
Teff	1200	69	5.75	*	*	1132	94.33	600	50
Barley	255	16	6.27	*	*	226	88.63	161	63.14
Wheat	659	81	12.29	5	0.76	621	94.23	307	46.59
Maize	17	1	5.88	*	*	6	35.29	*	*
Sorghum	15	-	-	-	-	*	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats ('Aja')	*	-	-	-	-	*	*	-	-
Rice	-	-	-	-	-	69	19.44	17	4.79
Pulses	355	*	*	*	*	10	18.87	*	*
Horse beans	53	*	*	*	*	29	72.5	*	*
Field peas	40	-	-	-	-	*	*	13	10.48
Haricot beans	*	-	-	*	*	*	*	-	-
Chick peas	124	-	-	-	-	*	*	-	-
Lentils	*	-	-	-	-	*	*	-	-
Vetch	119	-	-	-	-	*	*	-	-
Soya	*	-	-	-	-	*	*	-	-
Fenugreek	-	-	-	-	-	*	*	-	-
Gibto	23	-	-	-	-	*	*	-	-
Oil Seeds	23	-	-	-	-	-	-	-	-
Neug	*	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Other Grains	-	-	-	186	93.47	179	89.95	*	*
Vegetables	199	*	*	*	*	*	*	*	*
Lettuce	26	*	*	*	*	*	*	*	*
Head cabbage	*	*	*	*	*	*	*	*	*
Kale	*	*	*	*	*	*	*	*	*
Tomatoes	*	*	*	*	*	*	*	*	*
Green peppers	*	*	*	*	*	*	*	*	*
Red peppers	-	-	-	-	-	-	-	-	-
Swiss chard	*	*	*	*	*	*	*	*	*
Others	*	*	*	*	*	*	*	*	*
Root Crops	*	*	*	*	*	*	*	*	*
Beet root	*	*	*	*	*	*	*	*	*
Carrot	-	-	-	-	-	-	-	-	-
Onions	*	*	*	*	*	*	*	*	*
Potatoes	39	*	*	36	92.31	34	87.18	*	*
Garlic	1	-	-	*	*	*	*	-	-
Taro ('Godere')	-	-	-	-	-	-	-	-	-
Sweet potatoes	*	*	*	*	*	*	*	*	*
Others	*	*	*	*	*	10	41.67	*	*
Permanent Crops	24	*	*	*	*	*	*	*	*
Fruit Crops	*	*	*	*	*	*	*	*	*
Avocado	*	*	*	*	*	*	*	*	*
Bananas	-	-	-	-	-	-	-	-	-
Guava (Zeytuna)	*	*	*	*	*	*	*	*	*
Lemons	-	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-	-
Oranges	-	-	-	-	-	-	-	-	-
Papayas	-	-	-	-	-	-	-	-	-
Pineapples	*	*	*	*	*	*	*	*	*
Others	*	*	*	*	*	*	*	*	*
Stimulant Crops	*	*	*	*	*	*	*	*	*
Chat	*	*	*	*	*	*	*	*	*
Coffee	*	*	*	*	*	*	*	*	*
Hops	-	-	-	-	-	-	-	-	-
Others	*	*	*	*	*	*	*	*	*
Other Permanent Crops	9	*	*	*	*	6	66.67	*	*
Enset	8	*	*	*	*	6	75	*	*
Sugar Cane	*	*	*	*	*	*	*	*	*
Others	*	*	*	*	*	*	*	*	*

TABLE 6.3: AREA OF CROPLAND UNDER IMPROVED FARM MANAGEMENT PRACTICES BY TYPE OF CROPS IN RURAL & URBAN AREAS, BOTH SEASON

TYPE OF CROP	Total Crop	Improved Seed		Irrigation		Fertilizer		Pesticide	
	Hectares	Hectares	%	Hectares	%	Hectares	%	Hectares	%
TOTAL	24286	719	2.96	*	*	19400	79.88	1779	7.33
Grain Crops	23531	436	1.85	30	0.13	18761	79.73	1710	7.27
Cereals	18246	427	2.34	24	0.13	17847	97.81	1690	9.26
Teff	9183	168	1.83	13	0.14	9047	98.52	1075	11.71
Barley	423	16	3.78	*	*	320	75.65	170	40.19
Wheat	8523	241	2.83	5	0.06	8437	98.99	441	5.17
Maize	65	1	1.54	*	*	28	43.08	*	*
Sorghum	42	-	-	-	-	9	21.43	*	*
Finger millet	*	-	-	-	-	*	*	-	-
Oats ('Aja')	*	-	-	-	-	*	*	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulses	5248	9	0.17	*	*	903	17.21	19	0.36
Horse beans	283	*	*	*	*	78	27.56	*	*
Field peas	94	*	*	*	*	35	37.23	*	*
Haricot beans	3	*	*	*	*	*	*	-	-
Chick peas	2668	*	*	*	*	476	17.84	13	0.49
Lentils	*	-	-	-	-	*	*	-	-
Vetch	1414	-	-	-	-	*	*	*	*
Soya	-	-	-	-	-	-	-	-	-
Fenugreek	219	-	-	-	-	76	34.7	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil Seeds	37	-	-	-	-	10	27.03	*	*
Neug	25	-	-	-	-	*	*	-	-
Linseed	12	-	-	-	-	*	*	*	*
Ground nuts	-	-	-	-	-	-	-	-	-
Sufflower	*	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	1	-	-	-	-	*	*	-	-
Other Grains	*	-	-	-	-	*	*	-	-
Vegetables	245	*	*	203	82.86	206	84.08	*	*
Lettuce	26	*	*	*	*	*	*	-	-
Head cabbage	20	5	25	18	90	18	90	12	60
Kale	91	*	*	*	*	75	82.42	*	*
Tomatoes	*	*	*	*	*	*	*	-	-
Green peppers	1	-	-	*	*	*	*	*	*
Red peppers	-	-	-	-	-	-	-	-	-
Swiss chard	*	*	*	*	*	*	*	*	*
Others	33	*	*	*	*	20	60.61	*	*
Root Crops	461	*	*	*	*	*	*	16	3.47
Beet root	16	*	*	*	*	14	87.5	*	*
Carrot	*	*	*	*	*	*	*	*	*
Onions	*	*	*	*	*	*	*	-	-
Potatoes	46	*	*	42	91.3	39	84.78	*	*
Garlic	13	-	-	*	*	5	38.46	*	*
Taro ('Godere')	-	-	-	-	-	-	-	-	-
Sweet potatoes	*	-	-	*	*	*	*	-	-
Others	*	*	*	*	*	*	*	*	*
Permanent Crops	49	*	*	*	*	20	40.82	*	*
Fruit Crops	*	*	*	*	*	*	*	-	-
Avocado	*	*	*	*	*	*	*	-	-
Bananas	*	-	-	-	-	-	-	-	-
Guava (Zeytuna)	*	-	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-	-
Oranges	*	*	*	*	*	*	*	-	-
Papayas	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-
Others	*	*	*	*	*	*	*	-	-
Stimulant Crops	37	*	*	*	*	11	29.73	*	*
Chat	1	-	-	*	*	1	100.00	-	-
Coffee	*	*	*	*	*	*	*	-	-
Hops	36	-	-	*	*	10	27.78	*	*
Others	-	-	-	-	-	-	-	-	-
Other Permanent Crops	11	*	*	*	*	8	72.73	-	-
Enset	10	*	*	*	*	8	80	-	-
Sugar Cane	*	*	*	*	*	*	*	-	-
Others	*	*	*	-	-	*	*	-	-

TABLE 6.3: NUMBER OF HOLDERS APPLYING FERTILIZERS, FERTILIZED AREA, AND QUANTITY OF FERTILIZERS BY CROP TYPE IN RURAL AREAS FOR BOTH SEASONS

CROP	Application of total Fertilizers		Application of Fertilizers by Type and Quantity				
			Natural		Chemical – DAP		
	Holders	Hectares	Holders	Hectares	Holders	Hectares	Quintals
TOTAL	11563	16861	2061	96	1670	635	832
Grain Crops	11059	16696	847	74	1403	595	682
Cereals	10926	15857	627	47	534	273	482
Teff	10012	7916	53	*	296	129	239
Barley	271	94	38	*	96	26	43
Wheat	8988	7816	*	*	318	117	199
Maize	698	21	537	11	*	*	*
Sorghum	*	*	*	*	-	-	-
Finger millet	*	*	*	*	-	-	-
Oats ('Aja')	*	*	-	-	-	-	-
Rice	-	-	-	-	-	-	-
Pulses	2761	835	319	26	922	322	200
Horse beans	626	*	300	17	*	*	*
Field peas	*	*	*	*	-	-	-
Haricot beans	46	*	-	-	-	-	-
Chick peas	1348	454	*	*	561	195	108
Lentils	590	*	-	-	*	16	*
Vetch	450	*	-	-	301	*	*
Soya	-	-	-	-	-	-	-
Fenugreek	664	75	*	*	229	17	*
Gibto	-	-	-	-	-	-	-
Oil Seeds	51	*	*	*	*	*	-
Neug	-	-	-	-	-	-	-
Linseed	*	*	*	*	-	-	-
Ground nuts	-	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-
Rapeseed	36	*	*	*	*	*	-
Other Grains	*	*	-	-	-	-	-
Vegetables	1407	27	722	7	*	*	*
Lettuce	36	*	29	*	*	*	-
Head cabbage	190	12	26	*	-	-	-
Kale	975	9	385	*	*	1	*
Tomatoes	48	*	*	*	-	-	-
Green peppers	207	*	108	*	-	-	-
Red peppers	-	-	-	-	-	-	-
Swiss chard	67	*	50	*	-	-	-
Others	393	4	342	2	*	*	*
Root Crops	2505	129	906	6	*	*	*
Beet root	90	4	31	*	-	-	-
Carrot	792	113	43	*	*	*	*
Onions	233	1	197	1	*	*	*
Potatoes	50	*	26	*	-	-	-
Garlic	*	4	671	2	*	*	*
Taro ('Godere')	-	-	-	-	-	-	-
Sweet potatoes	*	*	*	*	-	-	-
Others	*	*	-	-	-	-	-
Permanent Crops	621	10	590	9	*	*	-
Fruit Crops	*	*	*	*	-	-	-
Avocado	*	*	*	*	-	-	-
Bananas	-	-	-	-	-	-	-
Guava (Zeytuna)	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-
Oranges	*	*	*	*	-	-	-
Papayas	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-
Others	*	*	-	-	-	-	-
Stimulant Crops	481	7	464	7	-	-	-
Chat	59	1	59	1	-	-	-
Coffee	47	*	47	*	-	-	-
Hops	466	7	449	7	-	-	-
Others	-	-	-	-	-	-	-
Other Permanent Crops	216	1	208	1	*	*	-
Enset	124	*	124	*	-	-	-
Sugar Cane	*	*	*	*	-	-	-
Others	74	*	66	*	*	*	-

TABLE 6.3 CONTD.

CROP	Application of Fertilizers by Type and Quantity					
	Chemical – UREA			Chemical - DAP & UREA		
	Holders	Hectares	Quintals	Holders	Hectares	Quintals
TOTAL	488	51	43	10568	16079	33198
Grain Crops	238	45	30	10459	15982	32993
Cereals	143	28	24	10430	15509	32607
Teff	*	*	*	9787	7767	17448
Barley	21	*	*	131	*	*
Wheat	56	20	*	8705	7670	15009
Maize	*	*	*	99	*	*
Sorghum	-	-	-	*	*	*
Finger millet	-	-	-	-	-	-
Oats ('Aja')	-	-	-	*	*	*
Rice	-	-	-	-	-	-
Pulses	117	17	6	1600	469	373
Horse beans	*	*	*	*	*	*
Field peas	*	*	*	-	-	-
Haricot beans	*	*	*	*	*	*
Chick peas	*	*	*	857	246	171
Lentils	*	*	*	*	*	*
Vetch	*	*	*	*	*	*
Soya	-	-	-	-	-	-
Fenugreek	*	*	*	*	*	14
Gibto	-	-	-	-	-	-
Oil Seeds	*	*	-	*	*	*
Neug	-	-	-	-	-	-
Linseed	-	-	-	*	*	*
Ground nuts	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	*	*	-	-	-	-
Other Grains	-	-	-	*	*	*
Vegetables	82	1	*	*	18	75
Lettuce	-	-	-	-	-	-
Head cabbage	*	*	-	160	12	*
Kale	66	*	1	*	*	*
Tomatoes	-	-	-	*	*	*
Green peppers	-	-	-	*	*	*
Red peppers	-	-	-	-	-	-
Swiss chard	*	*	*	*	*	-
Others	-	-	-	*	*	*
Root Crops	227	5	11	*	79	129
Beet root	*	*	*	48	3	*
Carrot	77	4	*	*	68	95
Onions	*	*	*	*	*	*
Potatoes	-	-	-	25	*	*
Garlic	*	*	*	*	*	*
Taro ('Godere')	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-
Others	-	-	-	*	*	*
Permanent Crops	-	-	-	*	*	*
Fruit Crops	-	-	-	*	*	*
Avocado	-	-	-	-	-	-
Bananas	-	-	-	-	-	-
Guava (Zeytuna)	-	-	-	-	-	-
Lemons	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-
Oranges	-	-	-	-	-	-
Papayas	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-
Others	-	-	-	*	*	*
Stimulant Crops	-	-	-	*	*	*
Chat	-	-	-	-	-	-
Coffee	-	-	-	*	*	*
Hops	-	-	-	-	-	-
Others	-	-	-	-	-	-
Other Permanent Crops	-	-	-	-	-	-
Enset	-	-	-	-	-	-
Sugar Cane	-	-	-	-	-	-
Others	-	-	-	-	-	-

TABLE 6.3.1: RURRAL MEHER

CROP	Application of total Fertilizers		Application of Fertilizers by Type and Quantity				
			Natural		Chemical – DAP		
	Holders	Hectares	Holders	Hectares	Holders	Hectares	Quintals
TOTAL	11534	16834	2043	90	1665	634	832
Grain Crops	11041	16689	830	69	1398	593	682
Cereals	10908	15851	605	42	529	271	481
Teff	10012	7916	53	*	296	129	239
Barley	263	88	*	*	91	25	42
Wheat	8988	7816	*	*	318	117	199
Maize	680	21	519	11	*	*	*
Sorghum	*	*	*	*	-	-	-
Finger millet	*	*	*	*	-	-	-
Oats ('Aja')	*	*	-	-	-	-	-
Rice	-	-	-	-	-	-	-
Pulses	2758	834	315	26	922	322	200
Horse beans	622	*	296	17	*	*	*
Field peas	*	*	*	*	-	-	-
Haricot beans	*	*	-	-	-	-	-
Chick peas	1348	454	*	*	561	195	108
Lentils	590	*	-	-	*	16	*
Vetch	450	*	-	-	301	*	*
Soya	-	-	-	-	-	-	-
Fenugreek	664	75	*	*	229	17	*
Gibto	-	-	-	-	-	-	-
Oil Seeds	51	*	*	*	*	*	-
Neug	-	-	-	-	-	-	-
Linseed	*	*	*	*	-	-	-
Ground nuts	-	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-
Rapeseed	36	*	*	*	*	*	-
Other Grains	*	*	-	-	-	-	-
Vegetables	1320	14	712	7	*	*	*
Lettuce	*	*	*	*	*	*	-
Head cabbage	75	3	26	*	-	-	-
Kale	954	8	375	*	*	1	*
Tomatoes	*	*	-	-	-	-	-
Green peppers	207	*	108	*	-	-	-
Red peppers	-	-	-	-	-	-	-
Swiss chard	46	*	41	*	-	-	-
Others	365	3	342	2	*	*	*
Root Crops	2458	122	870	5	*	*	*
Beet root	84	4	31	*	-	-	-
Carrot	781	112	43	*	*	*	*
Onions	219	1	183	1	*	*	*
Potatoes	25	*	*	*	-	-	-
Garlic	*	4	653	2	*	*	*
Taro ('Godere')	-	-	-	-	-	-	-
Sweet potatoes	*	*	*	*	-	-	-
Others	-	-	-	-	-	-	-
Permanent Crops	621	10	590	9	*	*	-
Fruit Crops	*	*	*	*	-	-	-
Avocado	*	*	*	*	-	-	-
Bananas	-	-	-	-	-	-	-
Guava (Zeytuna)	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-
Oranges	*	*	*	*	-	-	-
Papayas	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-
Others	*	*	-	-	-	-	-
Stimulant Crops	481	7	464	7	-	-	-
Chat	59	1	59	1	-	-	-
Coffee	47	*	47	*	-	-	-
Hops	466	7	449	7	-	-	-
Others	-	-	-	-	-	-	-
Other Permanent Crops	216	1	208	1	*	*	-
Enset	124	*	124	*	-	-	-
Sugar Cane	*	*	*	*	-	-	-
Others	74	*	66	*	*	*	-

TABLE 6.3.1 CONTD.

CROP	Application of Fertilizers by Type and Quantity					
	Chemical – UREA			Chemical - DAP & UREA		
	Holders	Hectares	Quintals	Holders	Hectares	Quintals
TOTAL	477	51	39	10525	16060	33117
Grain Crops	238	45	30	10459	15981	32993
Cereals	143	28	24	10430	15509	32607
Teff	*	*	*	9787	7767	17448
Barley	21	*	*	131	*	*
Wheat	56	20	*	8705	7670	15009
Maize	*	*	*	99	*	*
Sorghum	-	-	-	*	*	*
Finger millet	-	-	-	-	-	-
Oats ('Aja')	-	-	-	*	*	*
Rice	-	-	-	-	-	-
Pulses	117	17	6	1600	469	373
Horse beans	*	*	*	*	*	*
Field peas	*	*	*	-	-	-
Haricot beans	*	*	*	*	*	*
Chick peas	*	*	*	857	246	171
Lentils	*	*	*	*	*	*
Vetch	*	*	*	*	*	*
Soya	-	-	-	-	-	-
Fenugreek	*	*	*	*	*	14
Gibto	-	-	-	-	-	-
Oil Seeds	*	*	-	*	*	*
Neug	-	-	-	-	-	-
Linseed	-	-	-	*	*	*
Ground nuts	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	*	*	-	-	-	-
Other Grains	-	-	-	*	*	*
Vegetables	71	*	1	*	5	15
Lettuce	-	-	-	-	-	-
Head cabbage	*	*	-	45	2	8
Kale	66	*	1	*	*	*
Tomatoes	-	-	-	*	*	*
Green peppers	-	-	-	*	*	*
Red peppers	-	-	-	-	-	-
Swiss chard	-	-	-	*	*	-
Others	-	-	-	*	*	*
Root Crops	221	5	*	*	72	109
Beet root	*	*	-	48	3	*
Carrot	71	4	*	*	67	89
Onions	*	*	*	*	*	*
Potatoes	-	-	-	*	*	*
Garlic	*	*	*	*	*	*
Taro ('Godere')	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-
Others	-	-	-	-	-	-
Permanent Crops	-	-	-	*	*	*
Fruit Crops	-	-	-	*	*	-
Avocado	-	-	-	-	-	-
Bananas	-	-	-	-	-	-
Guava (Zeytuna)	-	-	-	-	-	-
Lemons	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-
Oranges	-	-	-	-	-	-
Papayas	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-
Others	-	-	-	*	*	-
Stimulant Crops	-	-	-	*	*	*
Chat	-	-	-	-	-	-
Coffee	-	-	-	*	*	*
Hops	-	-	-	-	-	-
Others	-	-	-	-	-	-
Other Permanent Crops	-	-	-	-	-	-
Enset	-	-	-	-	-	-
Sugar Cane	-	-	-	-	-	-
Others	-	-	-	-	-	-

TABLE 6.3.2: RURAL BELG

CROP	Application of total Fertilizers		Application of Fertilizers by Type and Quantity				
			Natural		Chemical – DAP		
	Holders	Hectares	Holders	Hectares	Holders	Hectares	Quintals
TOTAL	251	27	54	*	*	*	*
Grain Crops	45	*	*	*	*	*	*
Cereals	*	-	*	*	-	-	-
Teff	-	-	-	-	*	*	*
Barley	*	*	*	-	-	-	-
Wheat	-	-	-	*	-	-	-
Maize	*	*	*	-	-	-	-
Sorghum	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-
Oats ('Aja')	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-
Pulses	*	*	*	*	-	-	-
Horse beans	*	*	*	*	-	-	-
Field peas	*	*	*	-	-	-	-
Haricot beans	*	*	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-
Vetch	-	-	-	-	-	-	-
Soya	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-
Oil Seeds	-	-	-	-	-	-	-
Neug	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-
Other Grains	-	-	-	-	-	-	-
Vegetables	208	*	*	*	-	-	-
Lettuce	*	*	*	*	-	-	-
Head cabbage	*	*	-	-	-	-	-
Kale	*	*	*	*	-	-	-
Tomatoes	42	*	*	*	-	-	-
Green peppers	-	-	-	-	-	-	-
Red peppers	-	-	-	-	-	-	-
Swiss chard	*	*	*	*	-	-	-
Others	*	*	-	-	-	-	-
Root Crops	126	7	46	*	-	-	-
Beet root	*	*	-	-	-	-	-
Carrot	40	1	-	-	-	-	-
Onions	*	*	*	*	-	-	-
Potatoes	26	*	*	*	-	-	-
Garlic	*	*	*	*	-	-	-
Taro ('Godere')	-	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-	-
Others	*	*	-	-	-	-	-
Permanent Crops	251	27	54	*	*	*	*
Fruit Crops	45	*	*	*	*	*	*
Avocado	*	*	*	*	*	*	*
Bananas	-	-	-	-	-	-	-
Guava (Zeytuna)	*	*	*	*	*	*	*
Lemons	-	-	-	-	-	-	-
Mangoes	*	*	*	*	-	-	-
Oranges	-	-	-	-	-	-	-
Papayas	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-
Stimulant Crops	*	*	*	*	-	-	-
Chat	*	*	*	*	-	-	-
Coffee	*	*	*	*	-	-	-
Hops	*	*	-	-	-	-	-
Others	-	-	-	-	-	-	-
Other Permanent Crops	-	-	-	-	-	-	-
Enset	-	-	-	-	-	-	-
Sugar Cane	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-

TABLE 6.3.2 CONTD.

CROP	Application of Fertilizers by Type and Quantity					
	Chemical – UREA			Chemical - DAP & UREA		
	Holders	Hectares	Quintals	Holders	Hectares	Quintals
TOTAL	*	*	*	186	19	81
Grain Crops	-	-	-	*	*	*
Cereals	-	-	-	-	-	-
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-
Oats ('Aja')	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulses	-	-	-	*	*	*
Horse beans	-	-	-	-	-	-
Field peas	-	-	-	-	-	-
Haricot beans	-	-	-	*	*	*
Chick peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
Soya	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oil Seeds	-	-	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Grains	-	-	-	-	-	-
Vegetables	*	*	*	*	*	*
Lettuce	-	-	-	-	-	-
Head cabbage	-	-	-	*	*	*
Kale	-	-	-	*	*	*
Tomatoes	-	-	-	*	*	*
Green peppers	-	-	-	-	-	-
Red peppers	-	-	-	-	-	-
Swiss chard	*	*	*	-	-	-
Others	-	-	-	*	*	*
Root Crops	*	*	*	80	6	21
Beet root	*	*	*	-	-	-
Carrot	*	*	*	40	*	6
Onions	-	-	-	-	-	-
Potatoes	-	-	-	*	*	*
Garlic	-	-	-	-	-	-
Taro ('Godere')	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-
Others	-	-	-	*	*	*
Permanent Crops	*	*	*	186	19	81
Fruit Crops	-	-	-	*	*	*
Avocado	-	-	-	-	-	-
Bananas	-	-	-	-	-	-
Guava (Zeytuna)	-	-	-	-	-	-
Lemons	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-
Oranges	-	-	-	-	-	-
Papayas	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-
Others	-	-	-	-	-	-
Stimulant Crops	-	-	-	*	*	*
Chat	-	-	-	-	-	-
Coffee	-	-	-	-	-	-
Hops	-	-	-	*	*	*
Others	-	-	-	-	-	-
Other Permanent Crops	-	-	-	-	-	-
Enset	-	-	-	-	-	-
Sugar Cane	-	-	-	-	-	-
Others	-	-	-	-	-	-

TABLE 6.4: NUMBER OF HOLDERS APPLYING FERTILIZERS, FERTILIZED AREA, AND QUANTITY OF FERTILIZERS BY CROP TYPE IN URBAN AREAS FOR MEHER SEASON

CROP	Application of total Fertilizers		Application of Fertilizers by Type and Quantity					
			Natural		Natural & Chemical DAP		Chemical	
	Holders	Hectares	Holders	Hectares	Holders	Hectares	Holders	Hectares
TOTAL	2295	2539	377	116	1863	2013	256	*
Grain Crops	1776	2065	167	89	1657	1919	75	56
Cereals	1776	1990	167	89	1657	1844	75	56
Teff	1402	1132	*	*	1320	1079	*	*
Barley	516	226	36	13	427	186	54	*
Wheat	1244	621	63	27	1144	572	54	*
Maize	78	6	43	4	31	2	*	*
Sorghum	*	*	-	-	*	*	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats ('Aja')	*	*	-	-	*	*	-	-
Rice	-	-	-	-	-	-	-	-
Pulses	146	69	-	-	146	69	-	-
Horse beans	34	10	-	-	34	10	-	-
Field peas	79	29	-	-	79	29	-	-
Haricot beans	-	-	-	-	-	-	-	-
Chick peas	*	*	-	-	*	*	-	-
Lentils	*	*	-	-	*	*	-	-
Vetch	14	*	-	-	14	*	-	-
Soya	-	-	-	-	-	-	-	-
Fenugreek	*	*	-	-	*	*	-	-
Gibto	-	-	-	-	-	-	-	-
Oil Seeds	24	*	-	-	24	*	-	-
Neug	24	*	-	-	24	*	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Sufflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Other Grains	-	-	-	-	-	-	-	-
Vegetables	507	179	88	*	262	67	162	*
Lettuce	243	*	54	*	94	*	95	*
Head cabbage	32	*	-	-	*	*	20	*
Kale	405	*	75	*	216	*	118	*
Tomatoes	*	*	-	-	-	-	*	*
Green peppers	*	*	*	*	-	-	-	-
Red peppers	-	-	-	-	-	-	-	-
Swiss chard	353	*	50	1	185	16	118	*
Others	48	*	-	-	*	*	23	*
Root Crops	332	*	60	*	128	26	149	*
Beet root	53	*	*	*	*	*	19	*
Carrot	258	*	46	*	96	14	116	*
Onions	*	*	*	*	30	5	*	*
Potatoes	86	34	*	*	25	4	55	*
Garlic	*	*	*	*	*	*	*	*
Taro ('Godere')	-	-	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-	-	-
Others	*	*	-	-	*	*	5	*
Permanent Crops	175	10	152	*	*	*	*	*
Fruit Crops	15	*	15	*	-	-	-	-
Avocado	*	*	*	*	-	-	-	-
Bananas	-	-	-	-	-	-	-	-
Guava (Zeytuna)	-	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-	-
Mangoes	-	-	-	-	-	-	-	-
Oranges	-	-	-	-	-	-	-	-
Papayas	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-
Others	*	*	*	*	-	-	-	-
Stimulant Crops	89	*	78	*	-	-	*	*
Chat	*	*	*	*	-	-	-	-
Coffee	*	*	*	*	-	-	-	-
Hops	68	*	57	*	-	-	*	*
Others	-	-	-	-	-	-	-	-
Other Permanent Crops	92	6	81	2	*	*	*	*
Enset	92	6	81	2	*	*	*	*
Sugar Cane	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-

TABLE 6.5:Holders Applying Agricultural Inputs and Participating in Extension Programs by Level of Education in Rural andUrban Areas, for Private Holdings

EDUCATIONAL ATTAINMENT	All Crop Holders		Holders Applying Agricultural Inputs								Number and Percentage of Holders Participating in Agriculture Extension Programs	
			Improved Seed		Irrigation		Fertilizer		Pesticide			
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
ALL	15960	100	1196	7.49	1193	7.47	13858	86.83	1687	10.57	93	0.58
Illiterate	9697	100	625	6.45	519	5.35	8793	90.68	761	7.85	*	*
Literate, but no formal Education	1612	100	99	6.14	106	6.58	1404	87.1	188	11.66	*	*
Completed Grade 1	227	100	*	*	14	6.17	222	97.8	25	11.01	-	-
Completed Grade 2	380	100	31	8.16	*	*	*	*	*	*	*	*
Completed Grade 3	693	100	30	4.33	*	*	574	82.83	63	9.09	-	-
Completed Grade 4	441	100	90	20.41	64	14.51	366	82.99	98	22.22	*	*
Completed Grade 5	397	100	26	6.55	59	14.86	327	82.37	107	26.95	*	*
Completed Grade 6	514	100	88	17.12	60	11.67	463	90.08	100	19.46	*	*
Completed Grade 7	430	100	43	10	97	22.56	341	79.3	115	26.74	-	-
Completed Grade 8	624	100	48	7.69	47	7.53	440	70.51	53	8.49	-	-
Completed Grade 9	232	100	43	18.53	*	*	176	75.86	*	*	*	*
Completed Grade 10	137	100	*	*	*	*	77	56.2	*	*	-	-
Completed Grade 11	128	100	*	*	45	35.16	111	86.72	57	44.53	-	-
Completed Grade 12	353	100	*	*	55	15.58	225	63.74	63	17.85	*	*
Above Grade 12	94	100	*	*	*	*	44	46.81	*	*	-	-
Not Reported	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 6.5.1: RURAL HOLDINGS

EDUCATIONAL ATTAINMENT	All Crop Holders		Number of Holders Applying Agricultural Inputs								Number and Percentage of Holders Participating in Agriculture Extension Programs	
			Improved Seed		Irrigation		Fertilizer		Pesticide			
	Holders	%	Holders	%	Holders	%	Holders	%	Holder	%	Holders	%
ALL	13063	100	729	5.58	450	3.44	11563	88.52	717	5.49	93	0.71
Illiterate.....	8393	100	371	4.42	159	1.89	7702	91.77	336	4	*	*
Literate, but no formal Education.....	1254	100	48	3.83	*	*	1140	90.91	74	5.9	*	*
Completed Grade 1 .	190	100	-	-	-	-	185	97.37	*	*	-	-
Completed Grade 2 .	341	100	*	*	*	*	*	*	*	*	*	*
Completed Grade 3 .	591	100	30	5.08	*	*	493	83.42	*	*	-	-
Completed Grade 4 .	302	100	71	23.51	45	14.9	243	80.46	51	16.89	*	*
Completed Grade 5 .	248	100	*	*	*	*	213	85.89	58	23.39	*	*
Completed Grade 6 .	355	100	34	9.58	*	*	323	90.99	30	8.45	*	*
Completed Grade 7 .	251	100	35	13.94	*	*	215	85.66	33	13.15	-	-
Completed Grade 8 .	*	*	27	*	*	*	333	*	*	*	*	*
Completed Grade 9 .	191	100	40	20.94	*	*	148	77.49	*	*	*	*
Completed Grade 10	110	100	*	*	*	*	59	53.64	-	-	-	-
Completed Grade 11	79	100	-	-	*	*	68	86.08	*	*	*	*
Completed Grade 12	257	100	*	*	*	*	156	60.7	45	17.51	*	*
Above Grade 12.....	*	*	-	-	*	*	*	*	-	-	-	-
Not Reported	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 6.5.2: RURAL MEHER

EDUCATIONAL ATTAINMENT	All Crop Holders		Number of Holders Applying Agricultural Inputs								Number and Percentage of Holders Participating in Agriculture Extension Programs	
			Improved Seed		Irrigation		Fertilizer		Pesticide			
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
ALL	13049	100	674	5.17	275	2.11	11534	88.39	610	4.67	93	0.71
Illiterate	8393	100	351	4.18	95	1.13	7702	91.77	307	3.66	*	*
Literate, but no formal Education	1254	100	48	3.83	*	*	1140	90.91	59	4.7	*	*
Completed Grade 1	190	100	-	-	-	-	185	97.37	*	*	-	-
Completed Grade 2	341	100	*	*	*	*	*	*	*	*	*	*
Completed Grade 3	591	100	*	*	*	*	*	*	*	*	-	-
Completed Grade 4	302	100	65	21.52	*	*	243	80.46	51	16.89	*	*
Completed Grade 5	233	100	*	*	*	*	199	85.41	29	12.45	*	*
Completed Grade 6	355	100	34	9.58	-	-	323	90.99	24	6.76	*	*
Completed Grade 7	251	100	*	*	*	*	215	85.66	*	*	-	-
Completed Grade 8	*	*	27	*	*	*	333	*	*	*	-	-
Completed Grade 9	191	100	40	20.94	*	*	143	74.87	*	*	*	*
Completed Grade 10	110	100	*	*	*	*	59	53.64	-	-	-	-
Completed Grade 11	79	100	-	-	*	*	68	86.08	*	*	-	-
Completed Grade 12	257	100	*	*	*	*	156	60.7	35	13.62	*	*
Above Grade 12	*	*	-	-	*	*	*	*	-	-	-	-
Not Reported	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 6.5.3: RURAL BELG

EDUCATIONAL ATTAINMENT	All Crop Holders		Number of Holders Applying Agricultural Inputs								Number and Percentage of Holders Participating in Agriculture Extension Programs	
			Improved Seed		Irrigation		Fertilizer		Pesticide			
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
ALL.....	323	100	72	22.29	248	76.78	251	77.71	141	43.65	.....	.....
Illiterate.....	128	100	26	20.31	84	65.63	95	74.22	*	*	*	*
Literate, but no formal Education.....	46	100	-	-	-	-	*	*	*	*	*	*
Completed Grade 1 .	-	-	-	-	-	-	-	-	-	-	-	-
Completed Grade 2 .	*	*	*	*	*	*	*	*	*	*	*	*
Completed Grade 3 .	*	*	*	*	*	*	*	*	*	*	*	*
Completed Grade 4 .	*	*	*	*	*	*	*	*	*	*	*	*
Completed Grade 5 .	*	*	-	-	*	*	*	*	*	*	*	*
Completed Grade 6 .	*	*	*	*	*	*	*	*	*	*	*	*
Completed Grade 7 .	*	*	*	*	*	*	*	*	*	*	*	*
Completed Grade 8 .	-	-	-	-	-	-	-	-	-	-	-	-
Completed Grade 9 .	*	*	*	*	*	*	*	*	*	*	*	*
Completed Grade 10	-	-	-	-	-	-	-	-	-	-	-	-
Completed Grade 11	-	-	-	-	-	-	-	-	-	-	-	-
Completed Grade 12	*	*	*	*	*	*	*	*	*	*	*	*
Above Grade 12.....	-	-	-	-	-	-	-	-	-	-	-	-
Not Reported	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 6.5.4: URBAN HOLDINGS

EDUCATIONAL ATTAINMENT	All Crop Holders		Number & Percentage of Holders in Education Category who Applied:							
			Improved Seed		Irrigation		Fertilizer		Pesticide	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
ALL	2897	100	466	16.09	743	25.65	2295	79.22	970	33.48
Illiterate	1304	100	254	19.48	360	27.61	1090	83.59	425	32.59
Literate, but no formal Education	358	100	51	14.25	74	20.67	264	73.74	114	31.84
Completed Grade 1	37	100	*	*	14	37.84	37	100	*	*
Completed Grade 2	39	100	*	*	-	-	20	51.28	*	*
Completed Grade 3	103	100	-	-	-	-	81	78.64	43	41.75
Completed Grade 4	139	100	19	13.67	*	*	123	88.49	47	33.81
Completed Grade 5	150	100	12	8	*	*	114	76	49	32.67
Completed Grade 6	159	100	54	33.96	55	34.59	140	88.05	70	44.03
Completed Grade 7	178	100	*	*	57	32.02	126	70.79	83	46.63
Completed Grade 8	146	100	*	*	40	27.4	108	73.97	43	29.45
Completed Grade 9	41	100	*	*	*	*	28	68.29	*	*
Completed Grade 10	27	100	-	-	*	*	*	*	*	*
Completed Grade 11	49	100	*	*	18	36.73	43	87.76	29	59.18
Completed Grade 12	97	100	-	-	41	42.27	69	71.13	19	19.59
Above Grade 12	70	100	*	*	*	*	35	50	*	*
Not Reported	-	-	-	-	-	-	-	-	-	-

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENTS OF VARIATIONS FOR SELECTED FARM MANAGEMENT PRACTICES VARIABLES

Annex Tables 6.1 and 6.2

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENTS OF VARIATIONS FOR SELECTED FARM MANAGEMENT PRACTICES VARIABLES

Annex Tables 6.1 and 6.2

Annex - TABLE 6.1: AREA UNDER FARM MANAGEMENT PRACTICES WITH THEIR STANDAD ERRORS AND COEFFICIENT OF VARIATION IN RURAL AREAS FOR MEHER SEASON

Type of crop	Improved Seed Applied			Irrigation			Feretilizer Applied			Pesticide Applied		
	Hectare	S.E	C.V	Hectare	S.E	C.V	Hectare	S.E	C.V	Hectare	S.E	C.V
TOTAL	21196	7404	35	285	42	15	15	7	49	16834	5697	34
Grains Crops	20981	7369	35	266	41	16	-	-	116	16689	5687	34
Cereals	16078	5583	35	259	41	16	-	-	116	15851	5543	35
Teff	7983	2218	28	99	30	30	-	-	-	7916	2192	28
Barley	148	47	32	-	-	114	-	-	-	88	36	42
Wheat	7864	3478	44	160	25	15	-	-	-	7816	3479	45
Maize	47	13	27	-	-	-	-	-	116	21	9	44
Sorghum	27	7	27	-	-	-	-	-	-	5	4	74
Millet	1	1	69	-	-	-	-	-	-	-	-	116
Oats	7	4	61	-	-	-	-	-	-	5	4	79
Rice	-	-	-	-	-	-	-	-	-	-	-	-
Pulse	4889	1791	37	7	3	52	-	-	-	834	225	27
Horse beans	231	58	25	1	1	85	-	-	-	69	37	54
Field peas	54	15	29	-	-	114	-	-	-	5	3	58
Haricot beans	1	1	45	-	-	-	-	-	-	-	-	70
Chick peas	2544	975	38	5	3	62	-	-	-	454	134	29
Lentiles	559	406	73	-	-	-	-	-	-	121	80	66
Vetch	1295	386	30	-	-	-	-	-	-	108	61	57
Sova	-	-	-	-	-	-	-	-	-	-	-	-
Fenugreek	205	79	38	-	-	-	-	-	-	75	32	43
Gibto	-	-	-	-	-	-	-	-	-	-	-	-
Oile seed	14	6	41	-	-	-	-	-	-	4	4	89
Nueg	2	2	90	-	-	-	-	-	-	-	-	-
Linseed	12	6	49	-	-	-	-	-	-	4	4	93
Ground nuts	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	72	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-	-	-	-
Rapeseed.	1	-	34	-	-	-	-	-	-	-	-	48
Other Grain	-	-	76	-	-	-	-	-	-	-	-	89
Vegetables.	33	11	35	1	1	62	4	2	50	14	4	28
Lettuce	-	-	45	-	-	101	-	-	53	-	-	65
Cabbage	3	1	41	1	1	66	1	1	76	3	1	43
Kale	14	5	37	-	-	102	-	-	37	8	3	42
Tomatoes	-	-	91	-	-	-	-	-	-	-	-	91
Green pepper	1	-	47	-	-	-	-	-	-	-	-	30
Red paper	-	-	-	-	-	-	-	-	-	-	-	-
Swiss chard	-	-	37	-	-	92	-	-	85	-	-	48
Others	15	7	50	-	-	121	3	2	74	3	1	32
Root Crops	157	55	35	18	5	25	10	5	54	122	39	32
Beet root	4	2	36	1	-	78	-	-	79	4	2	39
Carrot	136	52	39	18	5	26	8	5	66	112	37	34
Onion	2	-	24	-	-	92	-	-	-	1	-	24
Potatoes	2	1	38	-	-	-	2	1	41	1	1	60
Garlic	12	4	37	-	-	-	-	-	79	4	2	43
Godere	-	-	-	-	-	-	-	-	-	-	-	-
Sweet potatoes	-	-	45	-	-	-	-	-	57	-	-	64
Others	-	-	-	-	-	-	-	-	-	-	-	-
Permanet crops	26	8	31	-	-	70	1	-	59	10	2	21
Fruit Crops	1	1	80	-	-	80	-	-	80	1	1	85
Avocado	-	-	61	-	-	80	-	-	80	-	-	80
Bannas	-	-	87	-	-	-	-	-	-	-	-	-
Guava(Zevtuna)	-	-	-	-	-	-	-	-	-	-	-	-
Lemons	-	-	-	-	-	-	-	-	-	-	-	-
Mangos	-	-	-	-	-	-	-	-	-	-	-	-
Oranges	-	-	52	-	-	80	-	-	80	-	-	69
Papavas	-	-	-	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-	-	-	-
Others	1	1	87	-	-	-	-	-	-	1	1	88
Stimulant Crop	23	8	35	-	-	71	1	-	63	7	2	23
Chat	1	-	41	-	-	-	-	-	73	1	-	47
Coffee	-	-	59	-	-	71	-	-	80	-	-	59
Gesho.	22	8	36	-	-	-	-	-	54	7	2	24
Others	-	-	-	-	-	-	-	-	-	-	-	-
Other Permanent	2	1	39	-	-	134	-	-	62	1	1	47
Enset	1	1	47	-	-	-	-	-	116	1	1	52
Sugar Cane	-	-	65	-	-	134	-	-	85	-	-	63
Others	-	-	39	-	-	-	-	-	79	-	-	56

Annex - TABLE 6.2: AREA UNDER FARM MANAGEMENT PRACTICES WITH THEIR STANDAD ERRORS AND COEFFICIENT OF VARIATION IN URBAN AREAS FOR MEHER SEASON

Type of crop	Improved Seed Applied			Irrigation			Feretilizer Applied			Pesticide Applied		
	Hectare	S.E	C.V	Hectare	S.E	C.V	Hectare	S.E	C.V	Hectare	S.E	C.V
TOTAL	3042	427	14	427	206	48	514	291	57	2539	385	15
Grains Crops	2526	315	12	169	39	23	29	10	34	2065	256	12
Cereals	2147	260	12	168	39	23	24	8	33	1990	249	13
Teff	1200	179	15	69	21	30	13	6	43	1132	173	15
Barley	255	44	17	16	7	41	5	3	50	226	40	18
Wheat	659	90	14	81	29	36	5	2	45	621	87	14
Maize	17	6	32	1	1	47	1	-	65	6	2	32
Sorghum	15	6	42	-	-	-	-	-	-	4	2	58
Millet	-	-	-	-	-	-	-	-	-	-	-	-
Oats	2	1	93	-	-	-	-	-	-	1	1	93
Rice	-	-	-	-	-	-	-	-	-	-	-	-
Pulse	355	62	17	1	1	58	5	3	61	69	20	29
Horse beans	53	13	25	1	1	72	1	1	72	10	3	31
Field peas	40	10	25	-	-	94	-	-	94	29	8	27
Haricot beans	1	1	85	-	-	-	-	-	-	-	-	-
Chick peas	124	31	25	-	-	-	4	3	72	22	14	66
Lentiles	4	2	53	-	-	-	-	-	-	-	-	94
Vetch	119	26	22	-	-	-	-	-	-	7	4	58
Sova	-	-	-	-	-	-	-	-	-	-	-	-
Fenugreek	14	8	56	-	-	-	-	-	-	1	1	93
Gibto	-	-	-	-	-	-	-	-	-	-	-	-
Oile seed	23	8	34	-	-	-	-	-	-	6	3	53
Nuer	23	8	35	-	-	-	-	-	-	6	3	53
Linseed	-	-	93	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-	-	-	-
Rapeseed.	-	-	-	-	-	-	-	-	-	-	-	-
Other Grain	-	-	-	-	-	-	-	-	-	-	-	-
Vegetables.	199	88	44	63	35	56	186	88	47	179	83	46
Lettuce	26	13	49	6	3	55	25	13	51	25	13	51
Cabbage	7	4	53	2	2	94	7	4	53	6	4	62
Kale	76	39	51	10	6	58	73	39	53	67	35	53
Tomatoes	-	-	92	-	-	-	-	-	92	-	-	92
Green pepper	1	1	81	-	-	-	1	1	92	-	-	93
Red paper	-	-	-	-	-	-	-	-	82	-	-	-
Swiss chard	71	43	60	40	26	66	70	43	-	64	42	66
Others	17	10	59	5	3	74	9	7	62	17	10	59
Root Crops	294	215	73	191	167	88	289	215	75	284	215	76
Beet root	10	6	68	8	6	79	10	6	74	10	6	68
Carrot	191	157	83	148	133	90	190	157	68	187	157	84
Onion	53	45	84	26	21	81	53	45	83	53	45	85
Potatoes	39	17	42	9	9	102	36	16	85	34	16	48
Garlic	1	-	34	-	-	-	-	-	46	-	-	71
Godere	-	-	-	-	-	-	-	-	92	-	-	-
Sweet potatoes	-	-	-	-	-	-	-	-	-	-	-	-
Others	24	9	78	4	3	94	10	6	-	-	-	78
Permanet crops	-	-	39	-	-	71	-	-	78	10	4	40
Fruit Crops	-	-	61	-	-	67	-	-	59	-	-	67
Avocado	-	-	69	-	-	69	-	-	66	-	-	69
Bannas	-	-	-	-	-	-	-	-	69	-	-	-
Guava(Zevtuna)	-	-	-	-	-	-	-	-	-	-	-	-
Lemons	-	-	95	-	-	-	-	-	-	-	-	-
Mangos	-	-	-	-	-	-	-	-	-	-	-	-
Oranges	-	-	-	-	-	-	-	-	-	-	-	-
Papavas	-	-	-	-	-	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	78	-	-	56	-	-	-	-	-	56
Stimulant Crop	14	8	59	-	-	-	7	5	95	4	3	74
Chat	1	-	71	-	-	-	-	-	75	-	-	100
Coffee	-	-	94	-	-	-	-	-	100	-	-	95
Gesho.	14	8	62	-	-	-	7	5	94	4	3	79
Others	-	-	-	-	-	-	-	-	78	-	-	-
Other Permanent	9	3	37	4	3	73	3	3	-	6	3	48
Enset	8	3	41	3	3	89	3	3	94	6	3	48
Sugar Cane	-	-	64	-	-	-	-	-	102	-	-	-
Others	1	1	94	1	1	94	-	-	65	-	-	-

CHAPTER VII

SIZE, CHARACTERISTICS AND PURPOSE OF LIVESTOCK AND USE OF LIVESTOCK PRODUCTS

1 INTRODUCTION

Ethiopia is one of the most populous countries in Africa, having an estimated population of about 67.2 million in July 2002 with annual growth rate of 2.9%. This growing population demands much better economic performance than in the past, at least to ensure food security and other basic needs. The dominant economic feature of the country is the agriculture sector of which livestock is a very important and essential component. The highlanders raise livestock together with crop cultivation for their livelihood whereas the lowlanders or the 'pastoralists' subsistence is based mainly on livestock and livestock products. Consequently, the government should give due attention to this sector in order to take advantage of its contribution to the economic growth and as a result to meet the needs of the expanding population.

The livestock sector has been contributing significant portion to the economy of Ethiopia, but still has great potential to assist the economic development of this country. It is well known that livestock products and byproducts in the form of meat, milk, honey, eggs, cheese, and butter supply the needed animal protein that contribute to the improvement of the nutritional status of the people. Livestock also plays an important role in providing export commodities, such as live animals, hides and skins to earn foreign exchanges to the country. On the other hand, draught animals provide power for the cultivation of the small holdings and for crop threshing virtually all over the country and are also essential modes of transport to take holders and their families long-distances, to convey their agricultural products to the market places and bring back their domestic necessities. Livestock as well confer a certain degree of security in times of crop failure, as they are a "near-cash" capital stock. Furthermore, livestock

provides farmyard manure that is commonly applied to improve soil fertility and also used as a source of energy.

By virtue of the important role that the livestock sector plays in the economy of the country, formulation of development plan regarding the sector is vital. It is therefore imperative that livestock development plans should be formulated on the basis of reliable statistical data, and hence, timely and accurate livestock data are required for the formulation, implementation, monitoring, and evaluation of development plan and program in the sector. These livestock data can be generated more often than not using surveys and censuses. The Central Statistical Authority (CSA) has been generating livestock data through sample surveys since 1981 (1973 E.C.). However, based on the results of these surveys, CSA was not able to satisfy the growing demand of the data users regarding the sector. Realizing this fact, CSA proposed and conducted the first agricultural census in the year 2001/02.

As mentioned earlier in Chapter II, agricultural censuses are classified into two categories: censuses conducted by complete enumeration or conducted by sample enumeration. In agricultural censuses conducted by complete enumeration, data are collected from all holders and the result for each variable is obtained by totaling the values of the respective variable from all holders. On the other hand, agricultural censuses conducted based on sample enumeration are probability sample surveys for which a sample is selected and the method of estimation for each census variable permits establishing its statistical precision. Therefore, conducting complete enumeration is more expensive, time consuming and requires large number of personnel. Likewise, quantity of data to be processed is very large (FAO, 1996). By considering these realities and the economic condition of the country, the sample enumeration was favored.

The livestock census was carried-out as part of the agricultural census. The general objective of the livestock census is to establish benchmark data that could be used for development planning and policy formulation regarding the sector, and the specific objectives are to purvey quantitative information on the size and characteristics of the

livestock in rural and urban areas at wereda level, and to provide estimates on size and characteristics of livestock for pastoral areas and commercial farms. In order to meet these objectives, data on: livestock number by type, age, sex, purpose and breed; livestock products particularly milk, egg, and honey; livestock diseases and vaccination; livestock product utilization; and animal feed were collected from sampled agricultural households in rural and urban areas as well as from all commercial farms. In addition, these same data will be collected from pastoral areas in the near future.

The expected users of these data are government organizations involved in planning purposes, individuals or firms raising livestock, non-governmental organizations that provide technical and financial assistance, international organizations which are interested in livestock, and research organizations.

In this chapter of the report: estimates of livestock that include cattle, sheep, goats, draught animals (horses, mules, asses and camels), poultry and bees were made based on the information obtained from the holders within the selected agricultural households both in rural and urban areas of the Addis Ababa City Administration as to the reference date (February 8,2002) and reference period (February 9,2001 to February 8, 2002). Thus, the results obtained from the livestock census for the rural and urban areas of the City Administration as well as brief discussions made on the results are presented. Also the census results at zonal and wereda levels are provided in Statistical Tables 7.1–7.36. Moreover, the estimates, standard errors (SE) and coefficients of variation (CV) are given in Annex Tables 7.1-7.9 for some relevant variables.

2. LIVESTOCK NUMBER BY BREED, AGE, SEX, AND PURPOSE

The livestock census is the first of its kind in the nation to supply data on the size and characteristics of livestock for rural and urban areas and commercial farms at wereda level, and also for pastoral areas though the census not yet conducted. The livestock census that was carried-out in Addis Ababa City Administration was part of the

national census and covered both rural and urban areas of the City Administration on sample basis. Commercial farms that are found in the City Administration were also covered on complete enumeration basis though the results are not presented here.

The total number of each type of livestock as well as the numbers disaggregated by breed, age, sex, and purpose possessed by holders on the reference date (February 8, 2002), irrespective of ownership, were recorded by interviewing each holder in the sampled agricultural households both in rural and urban areas of the Addis Ababa City Administration. The numbers also include the livestock belonging to the holding but temporarily away or in transit at the time of the enumeration.

2.1 Cattle

The estimates of cattle for rural and urban areas in Addis Ababa City Administration are presented in Summary Table VII.1. As shown on the table, the total cattle population for the region is estimated to be 97,215. Out of this total cattle population, the female cattle constitute about 50.9 percent (49,487) and the remaining 49.1 percent (47,728) are male cattle. The majority (68 percent) of the cattle population is found in rural areas, while 32 percent is accounted for urban areas.

Regarding age groups, the majority of the cattle population (that is about 64.2 percent) is in the 3 years and under 10 years age category, with about 32.5 percent male and about 31.8 percent female. Moreover, about 29.8 percent are under three years and small portion, which is about 6 percent, is in 10 years and older category (also see Fig VII.1). On the other hand, according to the results obtained, 87.5 percent of the cattle population are indigenous. Hybrid and exotic breeds accounted for 5.7 percent and 6.8 percent, respectively.

The distribution of cattle by purpose is indicated in the same table. Among cattle aged three years and under ten years, those used for draught purposes are the highest that is 46.8 percent followed by cattle used for milk purposes which accounted for 28.4 percent. The percentage share of cattle used for beef purposes is about 3.3 percent.

SUMMARY TABLE VII.1: Estimated Number of Cattle by Sex, Age, Breed, and Purpose for Rural and Urban Holdings

	Cattle on Both Rural and Urban Holdings						Cattle on Rural Holdings						Cattle on Urban Holdings					
	Total		Male		Female		Total		Male		Female		Total		Male		Female	
Age,Breed,and Purpose	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Total.....	97,215	100	47,728	49.10	49,487	50.90	66,091	67.98	38,670	39.78	27,421	28.21	31,123	32.01	9,058	9.32	22,065	22.70
Under 6 months	8,294	8.53	3,670	3.78	4,624	4.76	4,046	4.16	1,804	1.86	2,242	2.31	4,248	4.37	1,866	1.92	2,382	2.45
6 months-under 1 year ...	7,154	7.36	3,027	3.11	4,127	4.25	3,814	3.92	1,603	1.65	2,211	2.27	3,340	3.44	1,424	1.46	1,916	1.97
1 year-under 3 years ...	13,504	13.89	5,085	5.23	8,419	8.66	8,441	8.68	3,563	3.67	4,878	5.02	5,063	5.21	1,522	1.57	3,542	3.64
3 years-under 10 years ...	62,452	64.24	31,574	32.48	30,878	31.76	44,591	45.87	27,524	28.31	17,067	17.56	17,862	18.37	4,050	4.17	13,811	14.21
10 years and older	5,810	5.98	4,372	4.50	1,438	1.48	5,200	5.35	4,176	4.30	1,023	1.05	610	0.63	196	0.20	415	0.43
Cattle by Breed																		
Total	97,215	100	47,728	49.10	49,487	50.90	66,091	67.98	38,670	39.78	27,421	28.21	31,123	32.01	9,058	9.32	22,065	22.70
Indigenous	85,012	87.45	44,921	46.21	40,091	41.24	62,547	64.34	37,023	38.08	25,524	26.26	22,465	23.11	7,898	8.12	14,567	14.98
Hybrid	5,569	5.73	*	*	3,815	3.92	*	*	*	*	*	*	2,259	2.32	168	0.17	2,091	2.15
Exotic	6,634	6.82	1,053	1.08	5,581	5.74	234	0.24	61	0.06	174	0.18	6,400	6.58	993	1.02	5,407	5.56
Aged 3-10 Years by Purpose																		
Total	62,452	100	31,574	50.56	30,878	49.44	44,591	71.40	27,524	44.07	17,067	27.33	17,862	28.60	4,050	6.48	13,811	22.11
Used for Milk	17,730	28.39			17,730	28.39	7,267	11.64			7,267	11.64	10,463	16.75			10,463	16.75
Used for Draught	29,194	46.75	28,809	46.13	*	*	25,781	41.28	25,429	40.72	*	*	3,413	5.46	3,379	5.41	*	*
Used for Beef	2,082	3.33	1,676	2.68	406	0.65	1,519	2.43	1,413	2.26	106	0.17	562	0.90	263	0.42	300	0.48
Used for Breeding ...	11,859	18.99	677	1.08	11,182	17.90	9,087	14.55	394	0.63	8,693	13.92	2,772	4.44	282	0.45	2,489	3.99
Used for Other ...	1,587	2.54	413	0.66	1,174	1.88	936	1.50	287	0.46	649	1.04	651	1.04	126	0.20	526	0.84
Dairy Animals																		
Dairy Cows	17,730	100			17,730	100	7,267	40.99			7,267	40.99	10,463	59.01			10,463	59.01
Milking Cows	20,160	100			20,160	100	10,535	52.26			10,535	52.26	9,625	47.74			9,625	47.74

FIGURE VII.1 DISTRIBUTION OF CATTLE BY AGE AND SEX

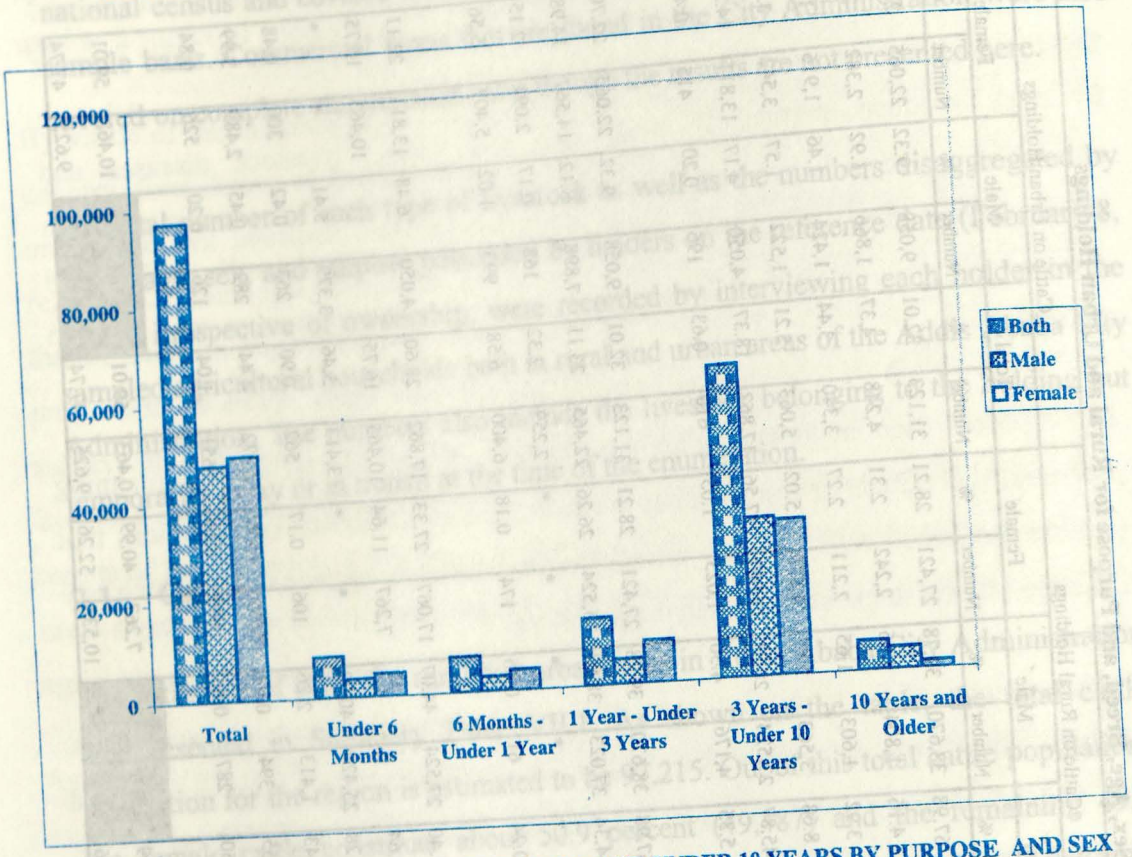
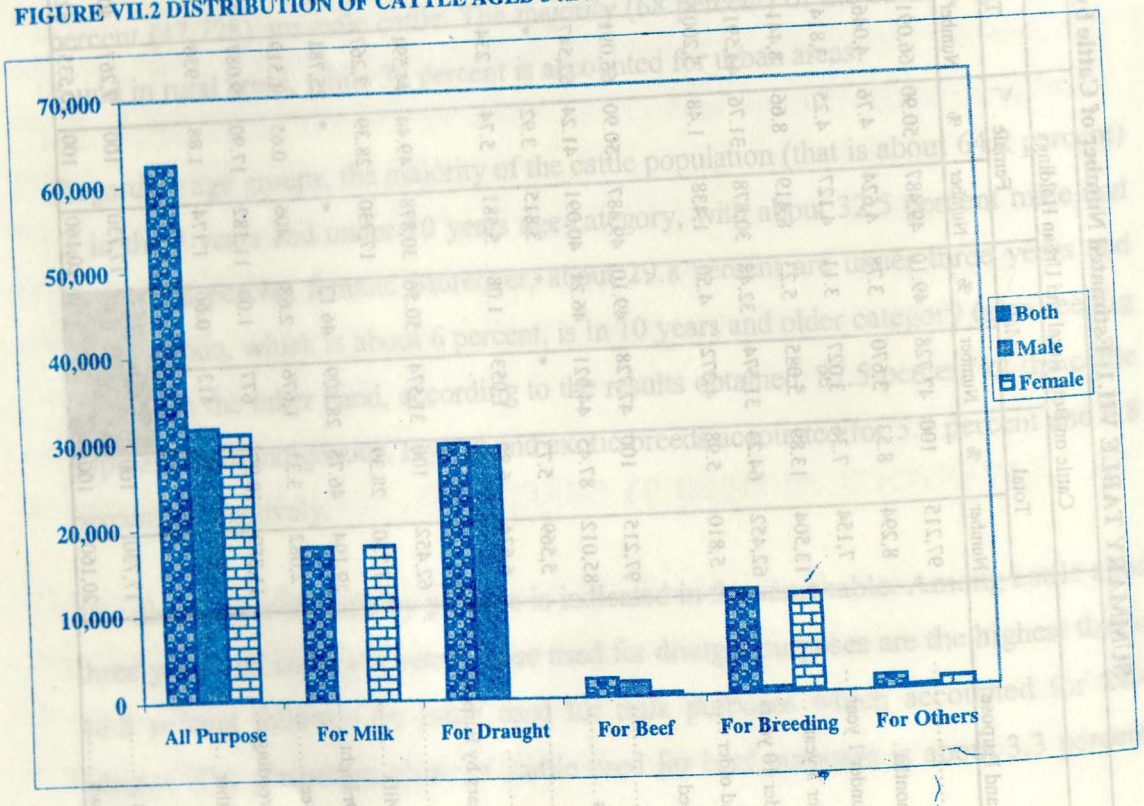


FIGURE VII.2 DISTRIBUTION OF CATTLE AGED 3 AND UNDER 10 YEARS BY PURPOSE AND SEX



Beef cattle here refer to all cattle reared exclusively for meat that is used either for home consumption or for sale. Further, the number of dairy-cows[1] is estimated to be about 17,730 and milking-cows[2] are about 20,160 (See Fig. VII.2).

As to zonal level the distribution of cattle in the Addis Ababa City Administration, out of the two zones covered in the census, Zone 3 contributes the largest share, 64,470 that is 66.3 percent followed by Zone 6, 15,403 (15.8 percent). Moreover, cattle population by sex, age, breed, and purpose are estimated for each wereda in each zone and presented in the Statistical Tables given at the end of this chapter.

2.2 Sheep and Goats

The estimated numbers and percentage distributions of sheep and goats for rural and urban areas are given in Summary Table VII.2. As pointed out in this table, about 29,682 sheep are estimated to be found in the City Administration, out of which about 68.4 percent are females, and about 31.6 percent are males. Moreover, according to the census result, the number of goats reported in the region are estimated to be about 18,861. Out of these total goats, 65.5 percent are females and 34.5 percent are males. (See Fig. VII.3).

Among these totals reported in the City Administration, 85.4 percent of the goats and 41.9 percent of the sheep are found in the rural areas. Urban areas accounted for 58.1 percent and 14.6 percent of the sheep and goats, respectively.

Pertaining to the age distribution of the sheep, the largest portions are in the age group of two years and older (47.4 percent) followed by the young stock under six months, that is 27.9 percent (See Figures VII.3).

With respect to breed, almost all the sheep are indigenous (99.9 percent). Summary Table VII.2 also discloses the numbers and percentages of sheep and goats raised for

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1 *A Dairy Cow refers to a cow that primarily kept for milk and has milked previously.and/or milking at the time of enumeration or has never been milked before but expected to be milked in the future or pregnant at the time of enumeration.*

2 *A Milking Cow refers to any type of cow that actually milked during the reference period (February 9, 2001 to February 8, 2002).*

SUMMARY TABLE VII.2: Estimated Number of Sheep and Goats by Sex, Age, Breed, and Purpose for Rural and Urban Holdings

Age,Breed,and Purpose	Both Rural and Urban Holdings						Rural Holdings						Urban Holdings					
	Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Total Sheep.....	29,682	100	9,386	31.62	20,296	68.38	12,432	41.88	4,151	13.98	8,281	27.90	17,250	58.12	5,235	17.64	12,014	40.48
Under 6 months	8,276	27.88	4,243	14.29	4,034	13.59	3,435	11.57	1,858	6.26	1,577	5.31	4,841	16.31	2,385	8.04	2,456	8.27
6 months-under 1 year ...	3,786	12.76	1,697	5.72	2,090	7.04	1,458	4.91	555	1.87	903	3.04	2,328	7.84	1,142	3.85	1,187	4.00
1 year-under 2 years ...	3,551	11.96	1,302	4.39	2,249	7.58	1,455	4.90	503	1.69	953	3.21	2,095	7.06	799	2.69	1,296	4.37
2 years and older	14,068	47.40	2,145	7.23	11,923	40.17	6,084	20.50	1,235	4.16	4,848	16.33	7,985	26.90	910	3.07	7,075	23.84
Sheep by Breed																		
Total	29,682	100	9,386	31.62	20,296	68.38	12,432	41.88	4,151	13.98	8,281	27.90	17,250	58.12	5,235	17.64	12,014	40.48
Indigenous	29,651	99.90	9,371	31.57	20,280	68.32	12,401	41.78	4,136	13.93	8,266	27.85	17,250	58.12	5,235	17.64	12,014	40.48
Hybrid	*	*	*	*	*	*	*	*	*	*	*	*	-	-	-	-	-	-
Exotic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheep Aged 2 Years and Older by Purpose																		
Total	14,068	100	2,145	15.25	11,923	84.75	6,084	43.25	1,235	8.78	4,848	34.46	7,985	56.76	910	6.47	7,075	50.29
Used for Mutton	1,675	11.91	1,470	10.45	205	1.46	*	*	*	*	86	0.61	684	4.86	564	4.01	119	0.85
Used for Wool	59	0.42	-	-	59	0.42	*	*	-	-	*	*	49	0.35	-	-	49	0.35
Used for Breeding ...	12,270	87.22	653	4.64	11,617	82.58	5,025	35.72	314	2.23	4,711	33.49	7,245	51.50	339	2.41	6,906	49.09
Used for Other	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	-	-
Total Goats	18,861*	100	6,507*	34.50	12,354*	65.50	16,102*	85.37	5,673*	30.08	10,429*	55.29	2,759	14.63	834	4.42	1,925	10.21
Under 6 months	3,792	20.10	2,122	11.25	1,670	8.85	3,015	15.99	1,704	9.03	1,311	6.95	777	4.12	418	2.22	359	1.90
6 months-under 1 year ...	*	*	*	*	*	*	*	*	*	*	*	*	501	2.66	190	1.01	311	1.65
1 year-under 2 years ...	*	*	*	*	1,613	8.55	*	*	*	*	*	*	306	1.62	*	*	247	1.31
2 years and older	*	*	1,296	6.87	*	*	*	*	*	*	*	*	1,175	6.23	168	0.89	1,008	5.34
Goats by Breed																		
Total	18,861*	100	6,507*	34.50	12,354*	65.50	16,102*	85.37	5,673*	30.08	10,429*	55.29	2,759	14.63	834	4.42	1,925	10.21
Indigenous	*	*	*	*	*	*	16,102*	85.37	5,673*	30.08	10,429*	55.29	2,719	14.42	819	4.34	1,900	10.07
Hybrid	40	0.21	15	0.08	25	0.13	-	-	-	-	-	-	40	0.21	15	0.08	25	0.13
Exotic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Goats Aged 2 Years and Older by Purpose																		
Total	7,938*	100	1,296*	16.33	6,642*	83.67	6,762*	85.19	1,128*	14.21	5,634*	70.98	1,175	14.80	168	2.12	1,008	12.70
Used for Milk	*	*			*	*	*	*			*	*	-	-			-	-
Used for Meat	551	6.94	489	6.16	61	1.77	425	5.35	393	4.95	*	*	126	1.59	96	1.21	30	0.38
Used for Breeding ...	*	*	*	*	*	*	*	*	*	*	*	*	1,049	13.21	71	0.89	978	12.32
Used for Other	-	*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* CV greater than 50 %.

FIGURE VII.3 DISTRIBUTION OF SHEEP AND GOATS BY AGE AND SEX

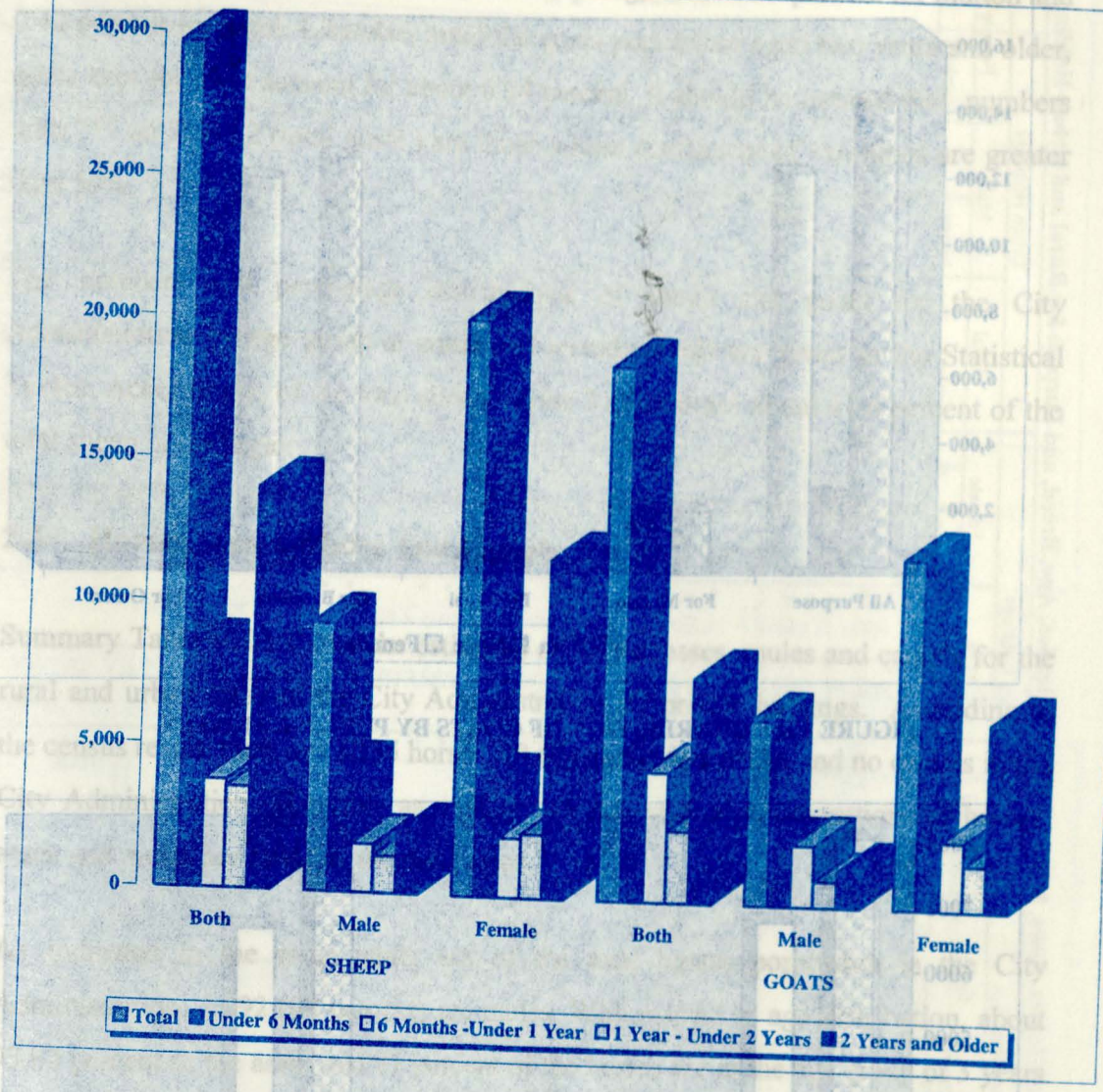


FIGURE VII.4 DISTRIBUTION OF SHEEP BY PURPOSE AND SEX
AGED 2 AND OLDER

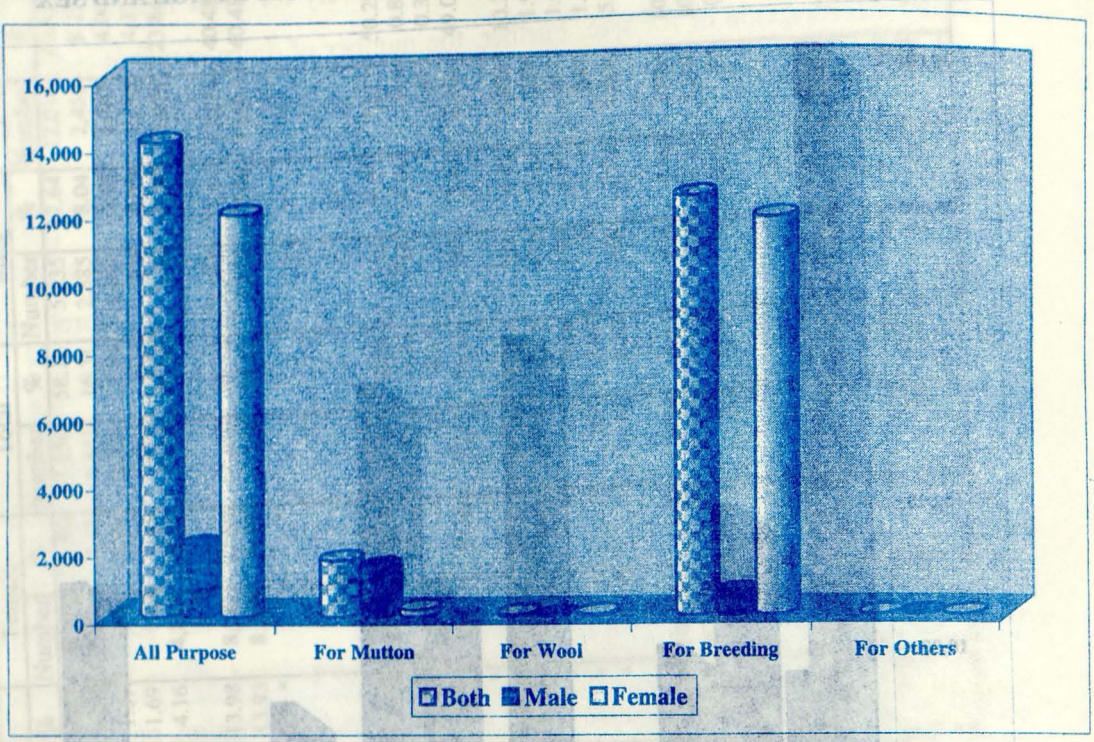
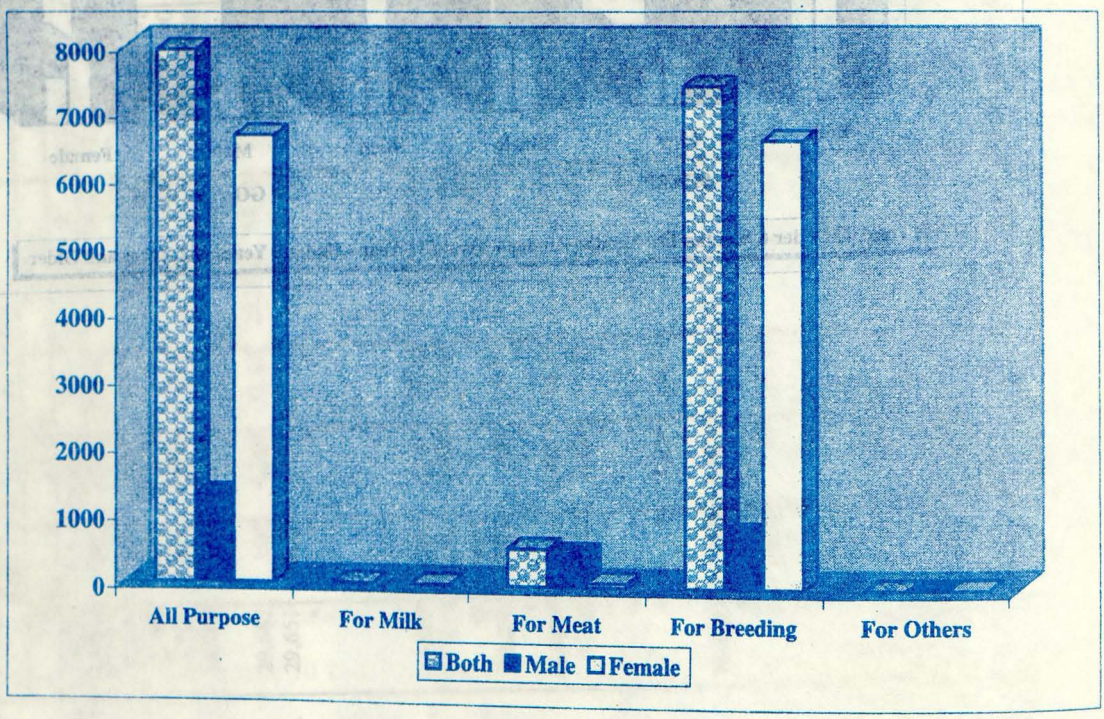


FIGURE VII.5 DISTRIBUTION OF GOATS BY PURPOSE AND SEX
AGED 2 AND OLDER



different purposes in the City Administration. Among the sheep flock two years and older, 12,270 (87.2 percent) were kept for breeding, about 11.9 percent for mutton and 0.42 percent for wool. Likewise, amid the goats population aged two years and older, goats kept for meat account for about 6.94 percent. It should be noticed that numbers with "*" on Table 2 (total goats) are those whose coefficient of variations are greater than 50%.

The numbers and percentage distributions of sheep and goats for the City Administration by age group at zonal and wereda levels are given in the Statistical Tables. Accordingly, of the total sheep Zone 3 contributes about 41.6 percent of the total sheep in the region.

2.3. Horses, Asses, Mules And Camels

Summary Table VII.3 shows the estimates of horses, asses, mules and camels for the rural and urban areas of the City Administration for private holdings. According to the census result, there are 2,135 horses, 19,623 asses, 809 mules and no camels in the City Administration. The table as well shows that very high proportions of horses, asses and mules are found in the rural areas.

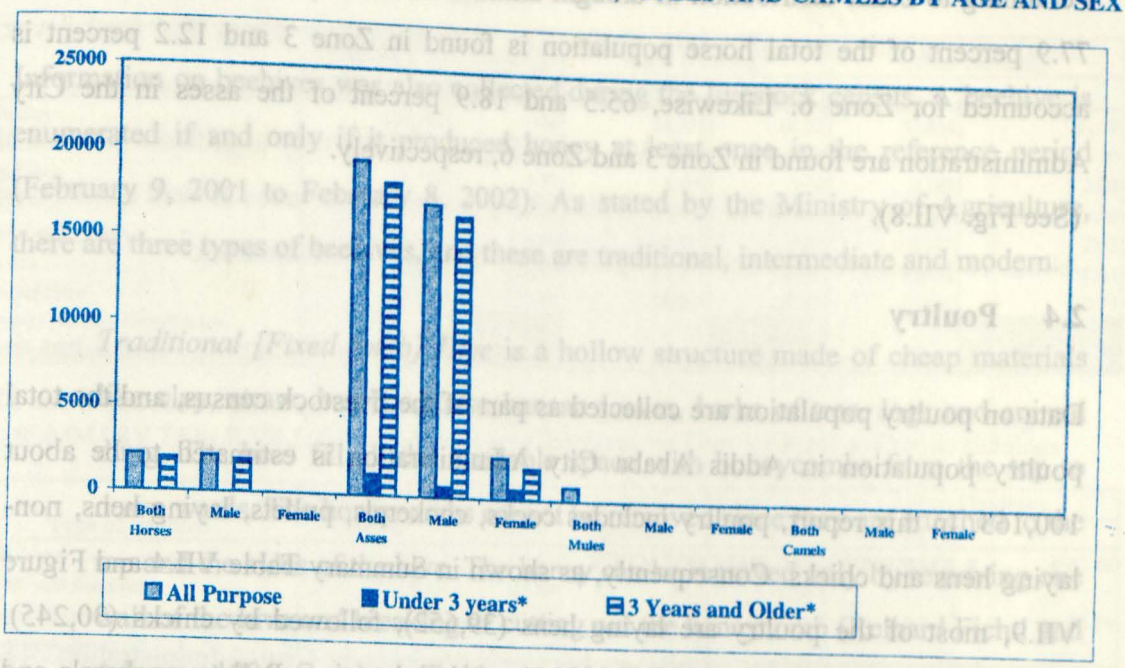
As indicated in the same table, out of the total horses population in the City Administration, 2,092 (98 percent) are males. With respect to age distribution, about 93.62 percent of the asses and 91 percent of the horses are in the age group of 3 years and older category.

The estimates of these animals (aged 3 years and older) by sex and purpose are also given in Summary Table VII.3. As indicated in the table, among the horses and asses aged three years and older, 1,932 (99 percent) and 8,877 (48.3 percent) are used for transportation, respectively. Moreover, 9,291 (50.6 percent) of the asses are used for draught purposes. (See also Figures VII.6 and VII.7).

SUMMARY TABLE VII.3: Estimated Number of Horses, Asses, Mules and Camels by Sex, Age, Breed, and Purpose for Rural and Urban Holdings

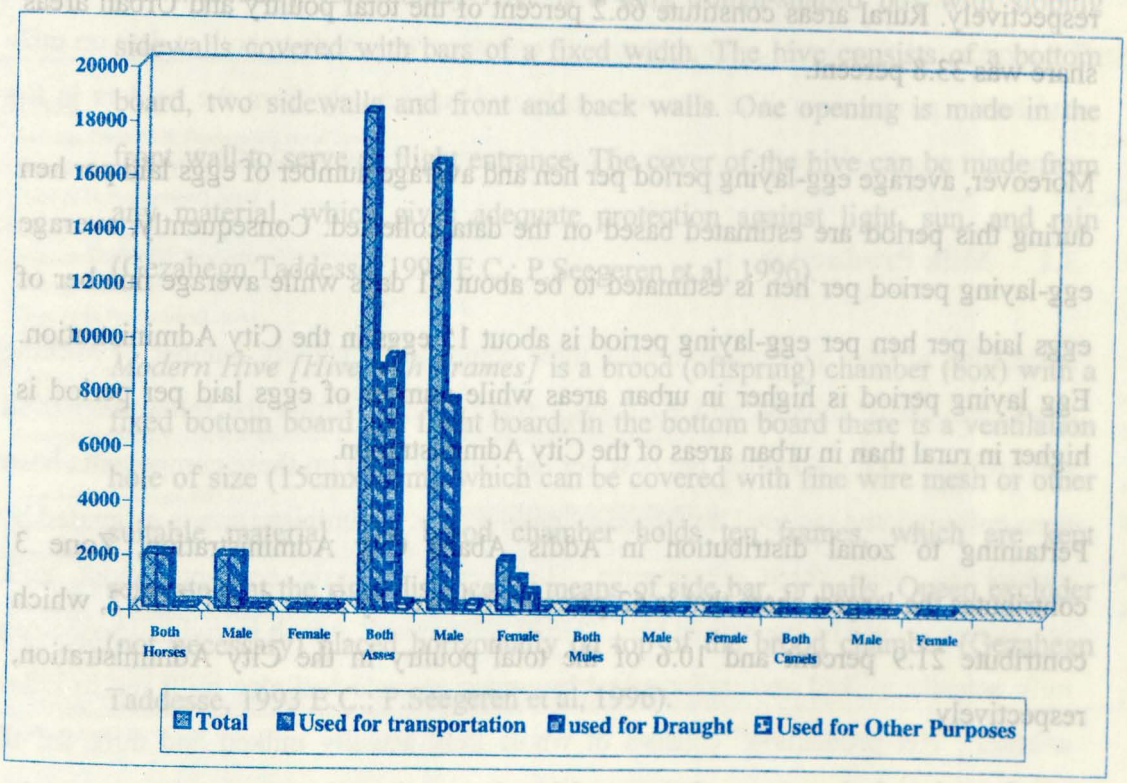
Age,Breed,and Purpose	Both Rural and Urban Holdings						Rural Holdings						Urban Holdings					
	Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Total Horses.....	2,135	100	2,092	98	*	*	1,846	86.46	1,815	85.01	*	*	289	13.54	277	12.97	*	*
Under 3 Years	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	-	-
3 years and older	1,944	91	1,905	89	*	*	1,659	77.70	1,631	76.39	*	*	285	13.35	274	12.83	*	*
Horses Aged 3 years and Older by Purpose																		
All Uses	1,944	100	1,905	98	*	*	1,659	85.34	1,631	83.90	*	*	285	14.66	274	14.09	*	*
Transportation	1,932	99	1,892	97	*	*	1,646	84.67	1,618	83.23	*	*	285	14.66	274	14.09	*	*
Draught	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Uses	*	*	*	*	-	-	*	*	*	*	-	-	-	-	-	-	-	-
Total Asses	19,623	100	17,189	87.60	2,434	12.40	15,025	76.57	13,598	69.30	1,427	7.27	4,598	23.43	3,591	18.30	1,007	5.13
Under 3 Years	1,251	6.38	649	3.31	602	3.07	788	4.02	425	2.17	363	1.85	464	2.36	224	1.14	239	1.22
3 years and older	18,372	93.62	16,540	84.29	1,832	9.34	14,238	72.56	13,173	67.13	1,064	5.42	4,134	21.07	3,366	17.15	768	3.91
Asses Aged 3 Years and older by Purpose																		
All Uses	18,372	100	16,540	90.03	1,832	9.97	14,238	77.50	13,173	71.70	1,064	5.79	4,134	22.50	3,366	18.32	768	4.18
Transportation	8,877	48.32	7,710	41.97	1,166	6.35	5,518	30.03	4,919	26.77	599	3.26	3,358	18.28	2,791	15.19	567	3.09
Draught	9,291	50.57	*	*	666	3.63	*	*	*	*	465	2.53	578	3.15	377	2.05	*	*
Other Uses	204	1.11	204	1.11	-	-	*	*	*	*	-	-	198	1.08	198	1.08	-	-
Total Mules	809	100	*	*	*	*	800	98.89	*	*	*	*	*	*	*	*	-	-
Under 3 Years	*	*	*	*	-	-	*	*	*	*	-	-	-	-	-	-	-	-
3 Years and older	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	-	-
Mules Aged 3 Years and Older by Purpose																		
All Uses	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	-	-
Transportation.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	-	-
Draught	*	*	*	*	-	-	*	*	*	*	-	-	-	-	-	-	-	-
Other Uses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Camels.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Under 4 Years	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 years and older	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Camels Aged 4 Years and Older by Purpose																		
All Uses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transportation.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Draught	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Milk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Uses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FIGURE VII.6 DISTRIBUTION OF HORSES, ASSES, MULES AND CAMELS BY AGE AND SEX



* Note :- for camels the age Categories are under 4 years and 4 years & older.

FIGURE VII.7 DISTRIBUTION OF HORSES, ASSES, MULES AND CAMELS BY PURPOSE AND SEX



Pertaining to zonal distribution in draught animals in the City Administration, about 77.9 percent of the total horse population is found in Zone 3 and 12.2 percent is accounted for Zone 6. Likewise, 65.5 and 18.9 percent of the asses in the City Administration are found in Zone 3 and Zone 6, respectively.

(See Fig. VII.8).

2.4 Poultry

Data on poultry population are collected as part of the livestock census, and the total poultry population in Addis Ababa City Administration is estimated to be about 100,163. In this report, poultry includes cocks, cockerels, pullets, laying hens, non-laying hens and chicks. Consequently, as shown in Summary Table VII.4 and Figure VII.9, most of the poultry are laying hens (39,652), followed by chicks (30,245). Cocks are estimated to be 11,731 in the City Administration. Pullets, cockerels and non-laying hens are also estimated separately, and are 7,764, 5,778 and 4,994, respectively. Rural areas constitute 66.2 percent of the total poultry and Urban areas share was 33.8 percent.

Moreover, average egg-laying period per hen and average number of eggs laid per hen during this period are estimated based on the data collected. Consequently, average egg-laying period per hen is estimated to be about 21 days while average number of eggs laid per hen per egg-laying period is about 15 eggs in the City Administration. Egg laying period is higher in urban areas while number of eggs laid per period is higher in rural than in urban areas of the City Administration.

Pertaining to zonal distribution in Addis Ababa City Administration, Zone 3 contributes the largest share that is 62 percent, followed by Zone 6 and Zone 2, which contribute 21.9 percent and 10.6 of the total poultry in the City Administration, respectively.

2.5 Beehives

Information on beehives was also collected during the livestock census. A beehive is enumerated if and only if it produced honey at least once in the reference period (February 9, 2001 to February 8, 2002). As stated by the Ministry of Agriculture, there are three types of beehives, and these are traditional, intermediate and modern.

Traditional [Fixed comb] Hive is a hollow structure made of cheap materials like clay, straw, bamboo, false banana leaves, barks of tree, logs and animal dung. The bees fill all the available space with honeycombs from the top to down wards. The honeycombs cannot be removed since they are attached to the top and the sides of the hive. The honey can be removed only by removing one wall of the hive and breaking or cutting out the honeycomb (Reihard Fichtl and Admasu, 1994; Gezahegn Taddesse, 1993 E.C.).

Intermediate [Transitional] Hive is a long trough-shaped box with sloping sidewalls covered with bars of a fixed width. The hive consists of a bottom board, two sidewalls and front and back walls. One opening is made in the front wall to serve as flight entrance. The cover of the hive can be made from any material, which gives adequate protection against light, sun, and rain (Gezahegn Taddesse, 1993 E.C.; P.Seegeren et al, 1996).

Modern Hive [Hive with Frames] is a brood (offspring) chamber (box) with a fixed bottom board and flight board. In the bottom board there is a ventilation hole of size (15cmx30cm), which can be covered with fine wire mesh or other suitable material. The brood chamber holds ten frames, which are kept separately at the right distance by means of side bar, or nails. Queen excluder (not necessary) placed horizontally on top of the brood chamber (Gezahegn Taddesse, 1993 E.C.; P.Seegeren et al, 1996).

Any type of these beehives that produced honey at least once during the reference period (February 9, 2001 to February 8, 2002) was enumerated. Accordingly, the

result of the census revealed that a total of 4,231 beehives are estimated to be found in rural and urban areas of Addis Ababa City Administration. From this total hives, 3,543 (83.7 percent) are intermediate hives and 670 are traditional hives.

As indicated in Summary Table VII.5 and Figure VII.10, very significant portion of the beehives are reported in urban areas (83.9 percent). Rural areas as well contributed about 16 percent to the beehives population of the City Administration.

With regard to zonal distribution of hives in the City Administration, Zone 6 has the largest share (32.8 percent), followed by Zone 2 and Zone 3, which accounted for 31 percent and 28 percent, respectively.

3. LIVESTOCK PRODUCTS

This section summarizes results on livestock products in City Administration. The various animal products include milk and milk products, eggs, wool, meat, hides and skins. Although data on such livestock products are not easily obtainable in the Ethiopian traditional agricultural sector, an endeavor was made to collect data on milk and honey productions. The data were collected subjectively from the holders in the sampled households and the results obtained are briefly discussed below.

3.1 Milk Production

Estimation of milk production entails three components, namely number of milking cows, number of months milking cows actually milked within the reference period and average milk production per cow per day. Hence, data on these components have been collected and the total milk production in the City Administration is estimated by multiplying these three components. However, two basic concepts about milk production should be mentioned here. "Gross production", which includes whole fresh milk actually milked and milk sucked by young animals and also milk fed to other animals. "Net production" consists of whole milk actually milked and milk fed to other animals but excludes milk sucked by young animals. Therefore, in our case, milk production is estimated based on the concept "net production", and as indicated

SUMMARY TABLE VII.4: Estimated number of Poultry by Type for Rural and Urban Holdings

Type of Poultry	Rural and Urban Holdings		Rural Holdings		Urban Holdings	
	Number	%	Number	%	Number	%
All Poultry	100,163	100	66,325	66.22	33,838	33.78
Cocks	11,731	11.71	8,024	8.01	3,707	3.70
Cockerels	5,778	5.77	3,490	3.48	2,288	2.28
Pullets	7,764	7.75	3,865	3.86	3,898	3.89
Non-Laying Hens	4,994	4.99	2,465	2.46	2,529	2.52
Chicks	30,245	30.20	19,593	19.56	10,651	10.63
Laying Hens	39,652	39.59	28,887	28.84	10,765	10.75
Average Number Days/Clutch	21		20		24	
Average Eggs/Hen/Clutch...	15		15		14	

SUMMARY TABLE VII.5: Estimated number of Beehives by Type for Rural and Urban Holdings

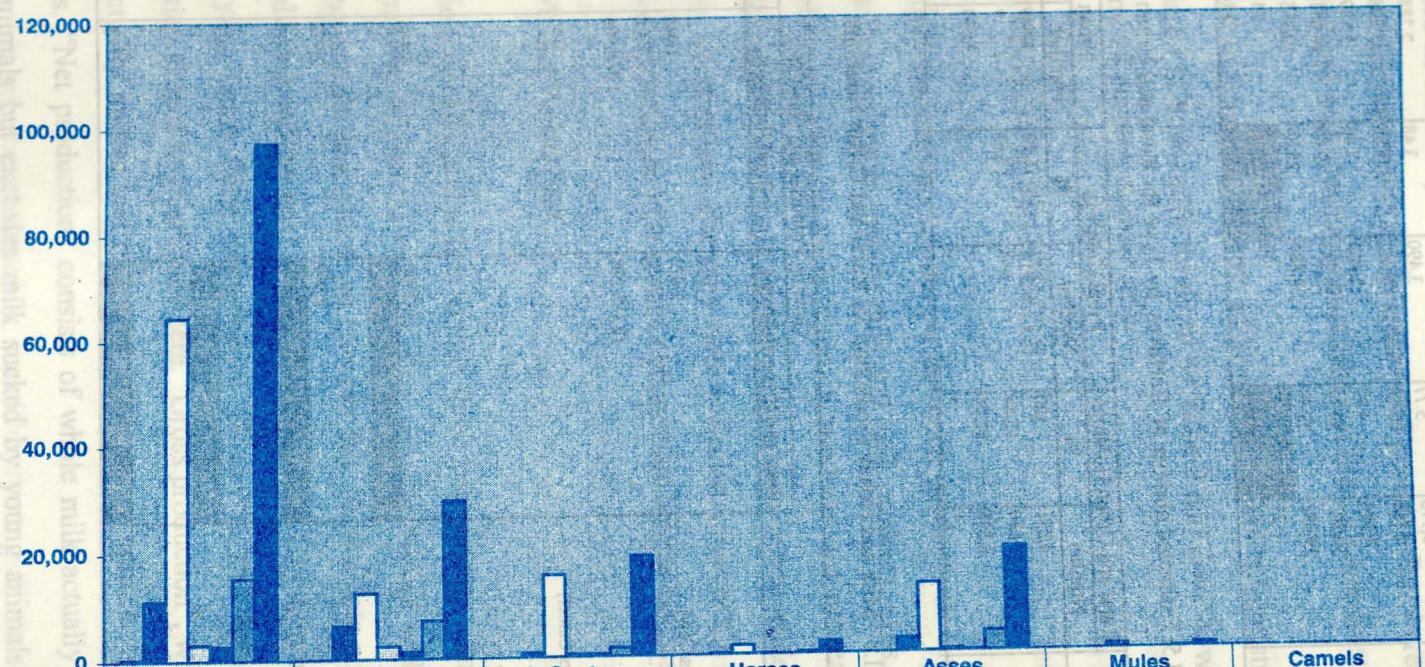
Type of Beehive	Rural and Urban Holdings		Rural Holdings		Urban Holdings	
	Number	%	Number	%	Number	%
All Beehives	4,231	100	681	16.10	3,549	83.88
Traditional Beehives ...	670	15.84	664	15.69	*	*
Intermediate Beehives ...	3,543	83.74	-	-	3,543	83.74
Modern Beehives	*	*	*	*	-	-

SUMMARY TABLE VII.6 : Milk and Honey Production for Rural and Urban Holdings

Item	Quantity Produced and Frequency		
	Rural and Urban Holdings	Rural Holdings	Urban Holdings
Cow Milk			
Average Daily Milk Producton(Liters/Cow)	2.621	1.948	3.354
Average Lactation Period (Months)	8	8	7
Total Milk Production(Liters)	12,175,288	4,368,904	7,806,384
Camel Milk			
Average Daily Milk Production(Liters/Camel)	-	-	-
Average Lactation Period (Months)	-	-	-
Total Milk Production(Liters)	-	-	-
Honey Production			
All Types of Beehives			
Production (Kilograms).....	11159*	3,182	*
Average Frequency (Harvest/Year)		2	2
Traditional Beehives			
Production (Kilograms).....	2,998	2,972	*
Average Frequency(Harvest./Year)...		2	2
Intermediate Beehives			
Production (Kilograms).....	*	-	*
Average Frequency(Harvest/Year)...		-	2
Modern Beehives			
Production (Kilograms).....	*	*	-
Average Frequency(Harvest/Year)...		2	2

* CV Greater than 50%.

FIGURE VII.8 DISTRIBUTION OF LIVESTOCK BY ZONE



	Cattle	Sheep	Goats	Horses	Asses	Mules	Camels
Zone 1	325	31	0	0	0	0	0
Zone 2	11,258	6,383	852	161	2,518	0	0
Zone 3	64,470	12,335	15,481	1,663	12,858	658	0
Zone 4	3,057	2,416	458	37	379	0	0
Zone 5	2,701	1,374	468	14	167	0	0
Zone 6	15,403	7,143	1,602	261	3,701	150	0
Total	97,214	29,682	18,861	2,135	19,623	809	0

FIGURE VII. 9 DISTRIBUTION OF POULTRY BY TYPE

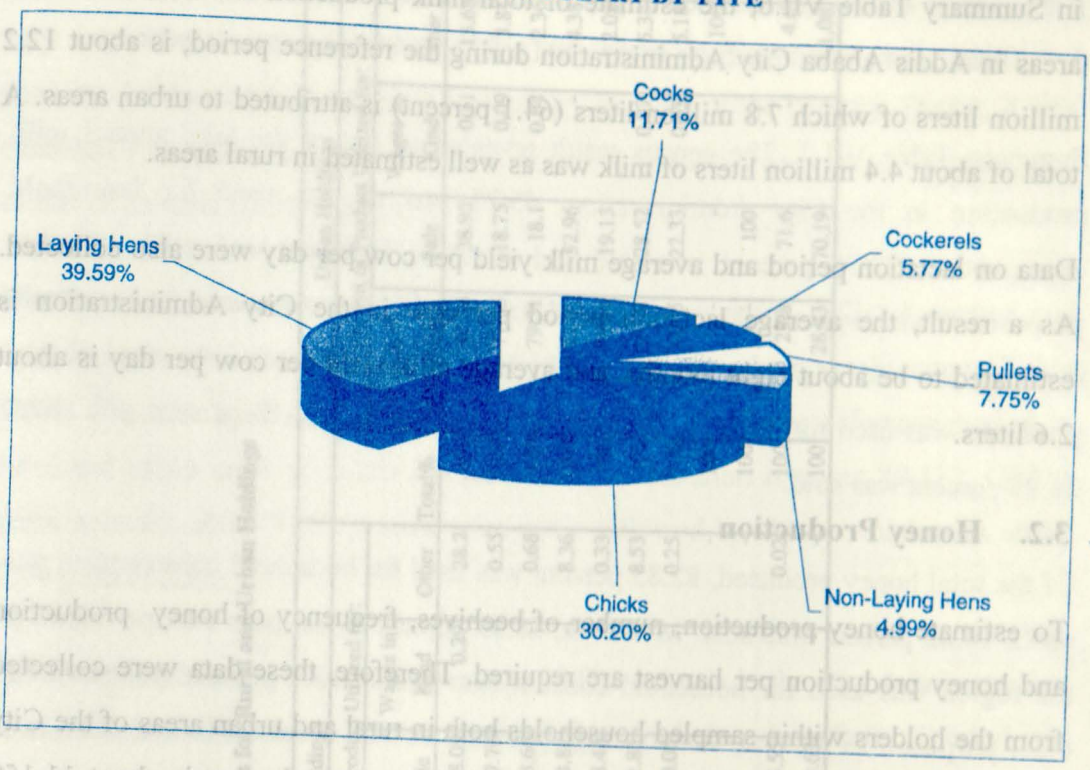
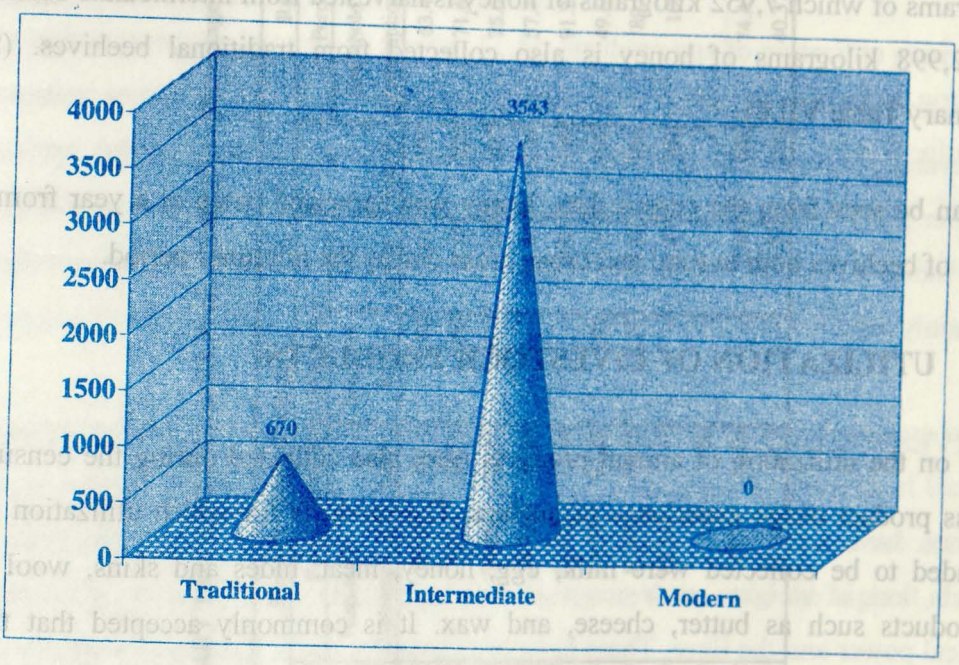


FIGURE VII. 10 DISTRIBUTION OF BEEHIVES BY TYPE



in Summary Table VII.6, the estimate of total milk production for rural and urban areas in Addis Ababa City Administration during the reference period, is about 12.2 million liters of which 7.8 million liters (64.1 percent) is attributed to urban areas. A total of about 4.4 million liters of milk was as well estimated in rural areas.

Data on lactation period and average milk yield per cow per day were also collected. As a result, the average lactation period per cow in the City Administration is estimated to be about eight months, and average milk yield per cow per day is about 2.6 liters.

3.2. Honey Production

To estimate honey production, number of beehives, frequency of honey production and honey production per harvest are required. Therefore, these data were collected from the holders within sampled households both in rural and urban areas of the City Administration. As a result, the estimate of total honey production is about 11,159 kilograms of which 7,952 kilograms of honey is harvested from intermediate beehives and 2,998 kilograms of honey is also collected from traditional beehives. (See Summary Table VII.6).

As can be seen from the census data, honey was harvested twice in a year from all types of beehives both in rural and urban areas during the reference period.

4. UTILIZATION OF LIVESTOCK PRODUCTS

Data on the utilization of animal products were also collected during the census to assess product usage experience of holders. The products for which utilization data intended to be collected were milk, egg, honey, meat, hides and skins, wool and byproducts such as butter, cheese, and wax. It is commonly accepted that these products are often used for household consumption and/or sold to finance the purchase of basic household commodities such as coffee, salt, cooking oil, sugar, etc.

SUMMARY TABLE VII.7: Livestock Product Utilization - Percentage of Uses for Rural and Urban Holdings

	Rural and Urban Holdings					Rural Holdings					Urban Holdings				
		Percent of Product Utilized for:					Percent of Product Utilized for:					Percent of Product Utilized for:			
Type of Product	Total%	Household Consumption	Sale	Wages in Kind	Other	Total%	Household Consumption	Sale	Wages in Kind	Other	Total%	Household Consumption	Sale	Wages in Kind	Other
Milk	100	55.75	22.75	0.2	21.3	100	63.42	8.09	0.29	28.2	100	47.26	38.95	0.11	13.68
Butter	100	73.6	24.71	0.03	1.65	100	71.69	27.76	-	0.55	100	77.35	18.75	0.09	3.81
Cheese	100	76.86	21.93	0.01	1.2	100	75.66	23.66	-	0.68	100	79.51	18.1	0.04	2.36
Beef	100	53.73	38.98	-	7.29	100	57.77	33.87	-	8.36	100	42.66	52.96	-	4.38
Mutton/Goat Meat	100	87.53	11.64	-	0.83	100	91.22	8.45	-	0.33	100	78.85	19.13	-	2.02
Eggs	100	54.53	37.87	0.02	7.57	100	49.61	41.86	-	8.53	100	66.08	28.52	0.07	5.33
Honey	100	82.85	14.82	0.17	2.16	100	89.7	10.05	-	0.25	100	72.05	22.33	0.45	5.18
Bees Wax	100	88.53	-	-	11.47	100	100	-	-	-	100	-	-	-	100
Wool	100	-	100	-	-	-	-	-	-	-	100	-	100	-	-
Hide	100	47.7	49.86	-	2.44	100	74.43	25.55	-	0.02	100	23.8	71.6	-	4.6
Skin	100	37.43	62.3	-	0.27	100	40.37	59.63	-	-	100	28.73	70.19	-	1.08

The products are sometimes used as payments and gifts to others. The census data on the utilization of animal products in the rural and urban areas are presented in

Summary Table VII.7. The census result reveals that out of the total annual milk production in the City Administration, 55.75 percent was used for household consumption, 22.75 percent was sold and about 21.3 percent was used for other purposes. With respect to the utilization of butter 73.6 percent was used for household consumption and 24.71 percent was sold. The greater portion of the total cheese produced was used for household consumption that is about 76.86 percent, and about 21.93 percent was sold.

Of the total honey produced, 82.85 percent was used for household consumption and about 14.82 percent was sold. Moreover, 88.53 percent of the bees wax produced in the region was used for household consumption while 11.47 percent was used for other purposes. In general, similar usage patterns are also observed in both rural and urban areas of the City Administration.

Concerning utilization of egg products, 54.53 percent of the total egg produced in City Administration was used for household consumption and 37.87 percent was sold. Moreover, 7.57 percent of the total egg produced in the City Administration was used for other purposes and that could be for hatching. Holders' utilization practices on wool, hides, and skins were also assessed and the results showed that these products are mainly used for sale and household consumption.

5 LIVESTOCK VACCINATION, DISEASE, TREATMENT AND DEATH

Diseases have numerous negative impacts on productivity of herds i.e. death of animals, loss of weights, slow down growth, poor fertility performance, decrease in physical power and the likes. There have been many ways of fighting against diseases and among these, vaccinations (preventive measures) and treatments (curative measures) are the major ones. However, no efficient fight against disease or disease prevention is possible if descriptive data on prevalence of diseases, deaths,

vaccinations, and treatments are not available. The availability of these data is also very important to set-up strategies that can assist in preventing and controlling diseases, by and large in improving veterinary services of the country. Hence, it was considered desirable to collect information on vaccinations, treatments, diseases, and deaths of animals during the census.

Data on these parameters specifically on number of vaccinated, afflicted, treated and dead animals were therefore collected and the results are shown in Summary Table VII.8. The estimated number of vaccinated animals within the reference period in rural and urban areas of Addis Ababa City Administration is about 49,112. Out of these animals, about 94.92 percent were cattle followed by sheep, which took about 2.74 percent share.

In the same table, it is indicated that about 54,065 animals in the City Administration were diseased/afflicted by different types of diseases during the reference period and only 3,157 of them were treated. Cattle constituted about 49 percent of the total treated animals followed by poultry 37.8 percent.

According to the census data, greater of animals died during the reference period in the City Administration due to diseases of which 82.7 percent was poultry. In addition, the estimated numbers of dead sheep and dead cattle were about 4,245 and 3,082, respectively. The number of goats estimated dead was about 915 heads. (See Summary Table VII.8).

If we take a look at the zonal results to see the distributions among the zones in City Administration, Zone 3 and Zone 6 reported 71 percent and 14.7 percent of the total vaccinated-animals, respectively. Regarding diseased treated and dead animals, similar patterns are observed, that is Zone 3 and Zone 6 reported the highest share in their order.

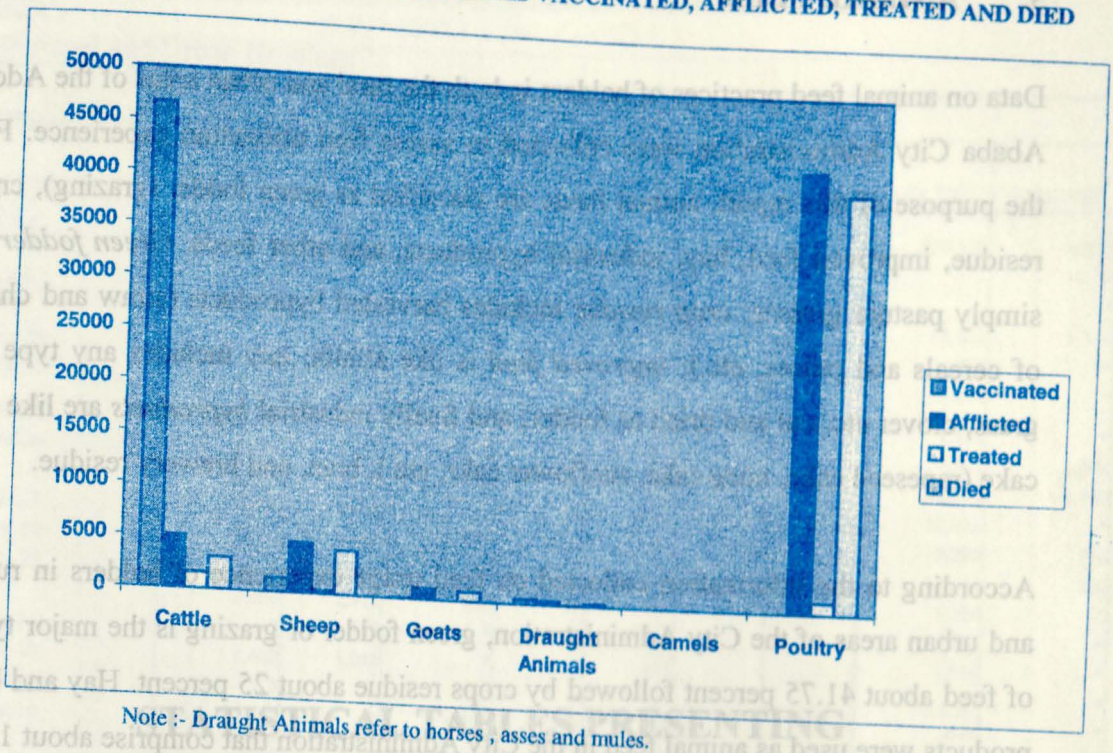
SUMMARY TABLE VII.8: Estimated number of Livestock Vaccinated, Afflicted,Treated, and Died for Rural and Urban Holdings

Item	Rural and Urban Holdings		Rural Holdings		Urban Holdings	
	Number	%	Number	%	Number	%
Total Vaccinated	49,112	100	36,297	73.91	12,815	26.09
Cattle	46,618	94.92	35,520	72.32	11,098	22.60
Sheep	1,344	2.74	*	*	1,243	2.53
Goats	86	0.18	-	-	86	0.18
Horses,Asses, and Mules	473	0.96	*	*	182	0.37
Camels	-	-	-	-	-	-
Poultry	*	*	*	*	206	0.42
Total Afflicted	54,065	100	35,230	65.16	18,836	34.84
Cattle	5,018	9.28	2,984	5.52	2,035	3.76
Sheep	4,786	8.85	3,301	6.11	1,484	2.74
Goats	1,030	1.91	681	1.26	*	*
Horses,Asses, and Mules	402	0.74	319	0.59	83	0.15
Camels	-	-	-	-	-	-
Poultry	42,830	79.22	27,945	51.69	14,885	27.53
Total Treated	3,157	100	1,490	47.20	1,667	52.80
Cattle	1,547	49.00	660	20.91	887	28.10
Sheep	359	11.37	144	4.56	215	6.81
Goats	*	*	-	-	*	*
Horses,Asses, and Mules	38	1.20	*	*	*	*
Camels	-	-	-	-	-	-
Poultry	1,193	37.79	662	20.97	531	16.82
Total Died	49,239	100	32,277	65.55	16,962	34.45
Cattle	3,083	6.26	1,962	3.98	1,120	2.27
Sheep	4,245	8.62	*	*	1,242	2.52
Goats	915	1.86	580	1.18	*	*
Horses,Asses, and Mules	282	0.57	231	0.47	51	0.10
Camels	-	-	-	-	-	-
Poultry	40,714	82.69	26,501	53.82	14,213	28.87

SUMMARY TABLE VII.9: Animal Feed Practices for Rural and Urban Holdings

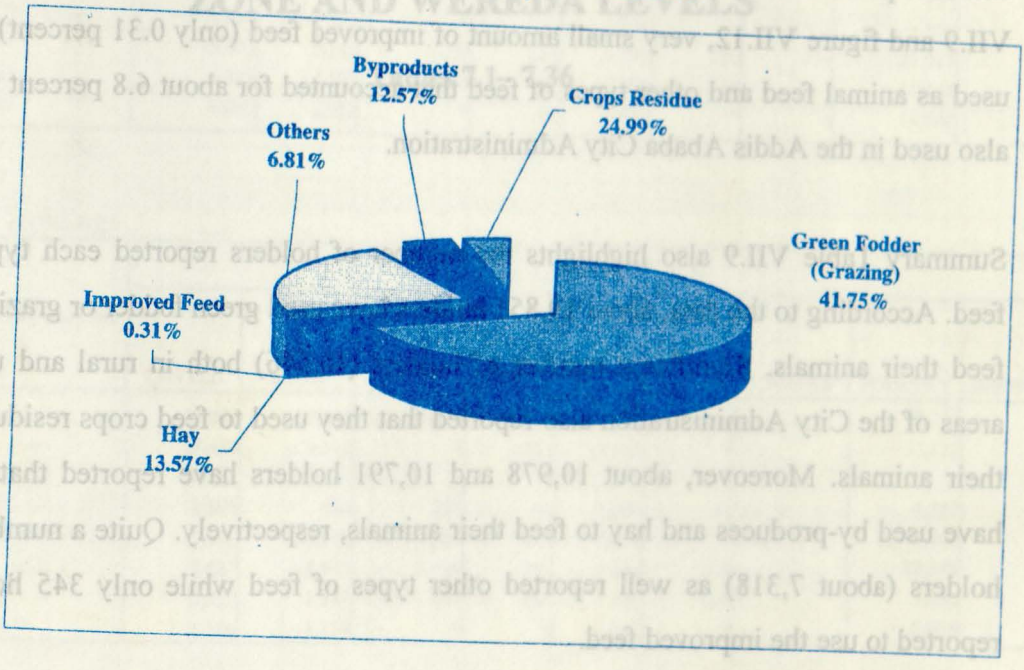
Item	Rural and Urban Holdings		Rural Holdings		Urban Holdings	
	Number Reporting	Percentage That Use:	Number Reporting	Percentage That Use:	Number Reporting	Percentage That Use:
Total		100		100		100
Green Fodder/Grazing	19,851	41.75	12,571	49.97	7,280	32.1
Crops Residue	16,546	24.99	11,641	33.35	4,904	15.18
Improved Feed	345	0.31	109	0.13	236	0.52
Hay	10,791	13.57	4,643	8.4	6,148	19.65
By-products	10,978	12.57	4,152	6.07	6,826	20.19
Others	7,318	6.81	2,160	2.07	5,158	12.37

FIGURE VII.11 DISTRIBUTION OF ANIMALS VACCINATED, AFFLICTED, TREATED AND DIED



Note :- Draught Animals refer to horses , asses and mules.

FIGURE VII.12 ANIMAL FEED PRACTICES OF HOLDERS



5. ANIMAL FEED

Data on animal feed practices of holders in both the rural and urban areas of the Addis Ababa City Administration were collected to assess feed utilization experience. For the purpose of this report, animal feeds are classified as green fodder (grazing), crop residue, improved feed, hay, industrial byproducts, and other feeds. *Green fodder* is simply pasture grasses; *crop residue* includes harvested byproducts (straw and chaff of cereals and pulses, etc.); *improved feed* is like alfalfa; *hay* includes any type of grass, clover etc. cut and dried as fodder; and finally industrial *byproducts* are like oil cake (rapeseed cake, nueg cake, sunflower cake, etc.), bran, and brewery residue.

According to the information collected on feed usage experience of holders in rural and urban areas of the City Administration, green fodder or grazing is the major type of feed about 41.75 percent followed by crops residue about 25 percent. Hay and by-products were used as animal feed in the City Administration that comprise about 13.6 and 12.6 percent of the total feed, respectively. Moreover, as shown in summary Table VII.9 and figure VII.12, very small amount of improved feed (only 0.31 percent) was used as animal feed and other types of feed that accounted for about 6.8 percent were also used in the Addis Ababa City Administration.

Summary Table VII.9 also highlights the number of holders reported each type of feed. According to the data, about 19,851 holders have used green fodder or grazing to feed their animals. Significant number of holders (16,546) both in rural and urban areas of the City Administration also reported that they used to feed crops residue for their animals. Moreover, about 10,978 and 10,791 holders have reported that they have used by-produces and hay to feed their animals, respectively. Quite a number of holders (about 7,318) as well reported other types of feed while only 345 holders reported to use the improved feed.

STATISTICAL TABLES PRESENTING RESULTS AT ZONE AND WEREDA LEVELS

Tables 7.1– 7.36

Data on animal feed practices of holders in both the rural and urban areas of the Addis Ababa City Administration were collected to assess feed utilization practices. For the purpose of this report, animal feeds are classified as green fodder, crop residue, improved feed, hay, industrial byproducts, and other feeds. *Green fodder* includes simply pasture grasses; *crop residue* includes harvested by-products (straw and stover of cereals and pulses, etc.); *improved feed* is like alfalfa, vetch, rhodes grass, clover etc. cut and dried as fodder; and finally industrial by-products include oil cake (rapeseed cake, noug cake, sunflower cake, etc.), bran, and molasses.

According to the information collected on feed usage experience of holders in both the rural and urban areas of the City Administration, green fodder or grazing is the major source of feed about 41.75 percent followed by crops residue about 25.3 percent. Industrial by-products were used as animal feed in the City Administration by about 15.4 percent of holders and 12.6 percent of the total feed requirement is provided by these products (see table VII.9 and figure VII.12, very small amount of improved feed (about 0.2 percent) is also used as animal feed and other types of feed like molasses accounted for about 4.7 percent is also used in the Addis Ababa City Administration.

Summary Table VII.9 also highlights the number of holders using different types of feed. According to the data, about 19,851 holders have used green fodder to feed their animals. Significant number of holders (18,540) in both the rural and urban areas of the City Administration also reported that they used crop residue to feed their animals. Moreover, about 10,978 and 10,791 holders in the City Administration have used by-products and hay to feed their animals, respectively. Only few holders (about 7,318) as well reported other types of feed while only 1,000 holders reported to use the improved feed.

STATISTICAL TABLES PRESENTING
RESULTS AT
ZONE AND WEREDA LEVELS
Tables 7.1 – 7.36

TABLE 7-1: NUMBER OF LIVESTOCK BY TYPE OF ANIMAL, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	ALL LIVESTOCK								
	CATTLE	SHEEP	GOATS	HORSES	ASSES	MULES	CAMELS	POULTRY	BEEHIVES
Addis Ababa	97,215	29,682	*	2,135	19,623	809	-	100,163	4,231
Zone 1	325	31	-	-	-	-	-	-	*
Wereda 6	325	31	-	-	-	-	-	-	*
Zone 2	11,258	6,383	852	161	2,518	-	-	10,621	1,336
Wereda 20	512	220	*	*	*	-	-	278	*
Wereda 21	8	264	-	-	-	-	-	-	*
Wereda 23	2,239	652	*	-	*	-	-	1,218	*
Wereda 24	8,499	5,248	752	136	2,243	-	-	9,125	1,039
Zone 3	64,470	12,335	*	1,663	12,858	*	-	62,151	1,167
Wereda 17	42,694	4,472	*	*	9,066	*	-	38,211	*
Wereda 19	6,964	1,861	965	44	1,279	31	-	9,296	246
Wereda 28	14,813	6,002	2,654	276	2,513	*	-	14,644	210
Zone 4	3,057	2,416	458	37	379	-	-	3,024	*
Wereda 11	*	969	*	-	*	-	-	728	*
Wereda 12	1,440	1,048	*	*	143	-	-	1,594	*
Wereda 15	237	29	15	-	-	-	-	24	*
Wereda 16	911	*	122	21	165	-	-	678	*
Zone 5	2,701	1,374	*	*	167	-	-	2,450	*
Wereda 8	860	209	*	*	*	-	-	*	*
Wereda 10	228	243	59	-	-	-	-	183	*
Wereda 25	1,614	922	*	-	101	-	-	1,579	*
Zone 6	15,403	7,143	1,602	261	3,701	150	-	21,917	1,387
Wereda 26	9,338	4,191	870	194	2,264	118	-	10,258	1,027
Wereda 27	6,065	2,952	*	67	1,437	*	-	11,660	360

b) Rural Holdings

Geographic Areas	ALL LIVESTOCK								
	CATTLE	SHEEP	GOATS	HORSES	ASSES	MULES	CAMELS	POULTRY	BEEHIVES
Addis Ababa	66,091	12,432	*	1,846	15,025	800	-	66,325	681
Zone 3	57,454	9,516	*	1,663	12,387	*	-	53,777	429
Wereda 17	40,151	*	*	*	*	*	-	*	*
Wereda 19	3,891	464	857	44	1,024	31	-	4,353	*
Wereda 28	13,412	5,212	2,345	276	2,454	*	-	12,900	210
Zone 6	8,637	2,916	1,188	183	2,639	141	-	12,548	252
Wereda 26	5,532	1,737	681	150	1,588	108	-	5,880	161
Wereda 27	3,106	1,179	*	*	1,051	*	-	6,668	91

c) Urban Holdings

Geographic Areas	ALL LIVESTOCK								
	CATTLE	SHEEP	GOATS	HORSES	ASSES	MULES	CAMELS	POULTRY	BEEHIVES
Addis Ababa	31,123	17,250	2,759	289	4,598	*	-	33,838	3,549
Zone 1	325	31	-	-	-	-	-	-	*
Wereda 6	325	31	-	-	-	-	-	-	*
Zone 2	11,258	6,383	852	161	2,518	-	-	10,621	1,336
Wereda 20	512	220	*	*	*	-	-	278	*
Wereda 21	8	264	-	-	-	-	-	-	*
Wereda 23	2,239	652	*	-	*	-	-	1,218	*
Wereda 24	8,499	5,248	752	136	2,243	-	-	9,125	1,039
Zone 3	7,017	2,819	567	-	471	-	-	8,374	*
Wereda 17	2,543	632	*	-	*	-	-	*	*
Wereda 19	3,073	1,397	108	-	255	-	-	4,943	*
Wereda 28	1,401	789	*	-	*	-	-	1,744	*
Zone 4	3,057	2,416	458	37	379	-	-	3,024	*
Wereda 11	*	969	*	-	*	-	-	728	*
Wereda 12	1,440	1,048	*	*	143	-	-	1,594	*
Wereda 15	237	29	15	-	-	-	-	24	*
Wereda 16	911	*	122	21	165	-	-	678	*
Zone 5	2,701	1,374	*	*	167	-	-	2,450	*
Wereda 8	860	209	*	*	*	-	-	*	*
Wereda 10	228	243	59	-	-	-	-	183	*
Wereda 25	1,614	922	*	-	101	-	-	1,579	*
Zone 6	6,766	4,227	*	78	1,062	*	-	9,369	1,135
Wereda 26	3,806	2,454	*	43	676	*	-	4,377	867
Wereda 27	2,959	1,773	*	*	*	-	-	4,991	*

TABLE 7-2: NUMBER OF CATTLE BY AGE AND SEX OF ANIMAL, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	CATTLE										
	ALL CATTLE	MALE					FEMALE				
		< 6 Months	6 Mo < 1yr	1 - <3 yrs	3yrs - <10 yrs	10 yrs &Over	< 6 Months	6 Mo < 1yr	1- <3 yrs	3yrs - <10 yrs	10 yrs &Over
Addis Ababa	97,215	3,670	3,027	5,085	31,574	4,372	4,624	4,127	8,419	30,878	1,438
Zone 1	325	-	-	-	-	-	46	46	62	170	-
Wereda 6	325	-	-	-	-	-	46	46	62	170	-
Zone 2	11,258	665	546	607	2,102	116	661	604	1,124	4,724	110
Wereda 20	512	*	*	*	*	-	42	*	58	260	-
Wereda 21	8	-	-	-	-	-	-	-	8	-	-
Wereda 23	2,239	212	133	76	*	-	161	161	273	1,125	*
Wereda 24	8,499	442	379	520	1,973	116	459	382	785	3,339	105
Zone 3	64,470	1,794	1,728	3,306	24,184	3,609	2,717	2,416	5,207	18,436	1,075
Wereda 17	42,694	926	1,017	2,178	*	*	1,406	1,380	3,361	10,811	609
Wereda 19	6,964	325	227	432	1,510	354	477	368	637	2,409	223
Wereda 28	14,813	543	484	696	4,555	368	833	668	1,208	5,215	*
Zone 4	3,057	228	194	118	139	-	285	186	383	1,485	*
Wereda 11	*	*	*	*	*	-	*	*	*	*	*
Wereda 12	1,440	119	108	54	*	-	115	95	227	695	*
Wereda 15	237	19	10	5	5	-	53	15	19	106	5
Wereda 16	911	73	36	*	62	-	88	51	76	471	*
Zone 5	2,701	229	152	162	103	*	213	203	315	1,250	68
Wereda 8	860	62	*	62	47	-	59	85	87	341	54
Wereda 10	228	25	5	-	5	-	30	20	40	99	5
Wereda 25	1,614	142	83	*	52	*	124	*	189	810	*
Zone 6	15,403	754	407	891	5,046	641	702	672	1,328	4,813	148
Wereda 26	9,338	415	239	556	3,602	487	308	354	684	2,640	54
Wereda 27	6,065	339	169	335	1,444	155	394	318	644	2,173	94

b) Rural Holdings

Geographic Areas	CATTLE										
	ALL CATTLE	MALE					FEMALE				
		< 6 Months	6 Mo < 1yr	1 - <3 yrs	3yrs - <10 yrs	10 yrs &Over	< 6 Months	6 Mo < 1yr	1 - <3 yrs	3yrs - <10 yrs	10 yrs &Over
Addis Ababa	66,091	1,804	1,603	3,563	27,524	4,176	2,242	2,211	4,878	17,067	1,023
Zone 3	57,454	1,410	1,424	3,027	23,755	3,582	2,003	1,943	4,373	14,994	943
Wereda 17	40,151	775	*	2,104	*	*	1,112	*	*	9,442	577
Wereda 19	3,891	175	108	281	1,209	328	172	144	294	1,045	135
Wereda 28	13,412	459	441	642	4,501	368	718	542	1,004	4,506	*
Zone 6	8,637	394	179	537	3,768	594	239	268	505	2,073	80
Wereda 26	5,532	208	107	344	2,714	459	105	146	254	1,159	36
Wereda 27	3,106	186	72	193	1,055	135	134	122	251	914	44

c) Urban Holdings

Geographic Areas	CATTLE										
	ALL CATTLE	MALE					FEMALE				
		< 6 Months	6 Mo < 1yr	1 - <3 yrs	3yrs - <10 yrs	10 yrs &Over	< 6 Months	6 Mo < 1yr	1 - <3 yrs	3yrs - <10 yrs	10 yrs &Over
Addis Ababa	31,123	1,866	1,424	1,522	4,050	196	2,382	1,916	3,542	13,811	415
Zone 1	325	-	-	-	-	-	46	46	62	170	-
Wereda 6	325	-	-	-	-	-	46	46	62	170	-
Zone 2	11,258	665	546	607	2,102	116	661	604	1,124	4,724	110
Wereda 20	512	*	*	*	*	-	42	*	58	260	-
Wereda 21	8	-	-	-	-	-	-	-	8	-	-
Wereda 23	2,239	212	133	76	*	-	161	161	273	1,125	*
Wereda 24	8,499	442	379	520	1,973	116	459	382	785	3,339	105
Zone 3	7,017	384	304	280	428	*	714	472	834	3,442	132
Wereda 17	2,543	151	*	74	*	-	294	122	285	1,369	*
Wereda 19	3,073	150	120	151	301	*	305	224	344	1,364	88
Wereda 28	1,401	84	*	54	*	-	115	126	*	709	*
Zone 4	3,057	228	194	118	139	-	285	186	383	1,485	*
Wereda 11	*	*	*	*	*	-	*	*	*	*	*
Wereda 12	1,440	119	108	54	*	-	115	95	227	695	*
Wereda 15	237	19	10	5	5	-	53	15	19	106	5
Wereda 16	911	73	36	*	62	-	88	51	76	471	*
Zone 5	2,701	229	152	162	103	*	213	203	315	1,250	68
Wereda 8	860	62	*	62	47	-	59	85	87	341	54
Wereda 10	228	25	5	-	5	-	30	20	40	99	5
Wereda 25	1,614	142	83	*	52	*	124	*	189	810	*
Zone 6	6,766	360	228	355	1,277	*	462	404	823	2,740	68
Wereda 26	3,806	207	131	213	888	*	202	208	430	1,481	*
Wereda 27	2,959	153	97	*	389	*	260	196	394	1,259	50

TABLE 7-3: NUMBER OF SHEEP BY AGE AND SEX OF ANIMAL, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	SHEEP								
	ALL SHEEP	MALE				FEMALE			
		< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over	< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over
Addis Ababa	29,682	4,243	1,697	1,302	2,145	4,034	2,090	2,249	11,923
Zone 1	31	-	-	-	-	15	15	-	-
Wereda 6	31	-	-	-	-	15	15	-	-
Zone 2	6,383	822	541	241	271	954	269	461	2,824
Wereda 20	220	*	20	-	*	53	-	20	84
Wereda 21	264	50	25	17	-	25	8	25	116
Wereda 23	652	84	64	*	*	103	37	*	269
Wereda 24	5,248	655	433	189	244	773	224	375	2,355
Zone 3	12,335	1,692	573	499	1,258	1,482	930	921	4,981
Wereda 17	4,472	*	*	*	*	*	288	260	*
Wereda 19	1,861	263	82	95	94	252	187	143	747
Wereda 28	6,002	716	320	295	440	849	456	518	2,408
Zone 4	2,416	328	69	78	189	386	179	119	1,068
Wereda 11	969	107	*	*	*	132	*	*	430
Wereda 12	1,048	148	34	36	*	183	91	50	448
Wereda 15	29	5	-	-	5	5	-	-	15
Wereda 16	*	*	*	*	*	*	*	*	*
Zone 5	1,374	243	53	97	110	219	88	68	496
Wereda 8	209	44	22	15	-	*	23	*	*
Wereda 10	243	54	25	10	-	30	15	30	79
Wereda 25	922	144	*	*	110	140	50	*	382
Zone 6	7,143	1,158	461	388	317	977	608	679	2,555
Wereda 26	4,191	683	290	192	188	506	361	338	1,633
Wereda 27	2,952	475	170	195	129	470	248	342	922

b) Rural Holdings

Geographic Areas	SHEEP								
	ALL SHEEP	MALE				FEMALE			
		< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over	< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over
Addis Ababa	12,432	1,858	555	503	1,235	1,577	903	953	4,848
Zone 3	9,516	1,337	428	292	*	1,117	711	675	3,878
Wereda 17	*	*	*	*	*	*	*	*	*
Wereda 19	464	87	*	35	*	63	*	44	182
Wereda 28	5,212	647	274	251	371	758	424	454	2,034
Zone 6	2,916	521	127	211	156	460	192	278	970
Wereda 26	1,737	309	90	106	116	267	89	167	591
Wereda 27	1,179	212	37	*	*	193	103	110	379

c) Urban Holdings

Geographic Areas	SHEEP								
	ALL SHEEP	MALE				FEMALE			
		< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over	< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over
Addis Ababa	17,250	2,385	1,142	799	910	2,456	1,187	1,296	7,075
Zone 1	31	-	-	-	-	15	15	-	-
Wereda 6	31	-	-	-	-	15	15	-	-
Zone 2	6,383	822	541	241	271	954	269	461	2,824
Wereda 20	220	*	20	-	*	53	-	20	84
Wereda 21	264	50	25	17	-	25	8	25	116
Wereda 23	652	84	64	*	*	103	37	*	269
Wereda 24	5,248	655	433	189	244	773	224	375	2,355
Zone 3	2,819	356	145	206	179	365	219	246	1,103
Wereda 17	632	112	*	*	*	85	*	82	163
Wereda 19	1,397	175	68	60	87	189	155	99	565
Wereda 28	789	68	46	*	69	91	31	65	374
Zone 4	2,416	328	69	78	189	386	179	119	1,068
Wereda 11	969	107	*	*	*	132	*	*	430
Wereda 12	1,048	148	34	36	*	183	91	50	448
Wereda 15	29	5	-	-	5	5	-	-	15
Wereda 16	*	*	*	*	*	*	*	*	*
Zone 5	1,374	243	53	97	110	219	88	68	496
Wereda 8	209	44	22	15	-	*	23	*	*
Wereda 10	243	54	25	10	-	30	15	30	79
Wereda 25	922	144	*	*	110	140	50	*	382
Zone 6	4,227	637	333	177	160	516	416	402	1,585
Wereda 26	2,454	374	200	86	71	239	272	170	1,042
Wereda 27	1,773	263	133	91	*	277	145	231	544

TABLE 7-4: NUMBER OF GOATS BY AGE AND SEX OF ANIMAL, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	GOATS								
	ALL Goats	MALE				FEMALE			
		< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over	< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over
Addis Ababa	*	2,122	*	*	1,296	1,670	*	1,613	*
Zone 1	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-
Zone 2	852	136	40	*	57	135	61	77	342
Wereda 20	*	-	-	-	-	-	-	-	*
Wereda 21	-	-	-	-	-	-	-	-	-
Wereda 23	*	*	*	-	-	*	-	*	*
Wereda 24	752	119	31	*	57	117	61	68	296
Zone 3	*	1,512	*	*	*	1,189	*	*	*
Wereda 17	*	*	*	*	*	*	*	*	*
Wereda 19	965	146	89	58	88	98	93	92	301
Wereda 28	2,654	373	117	154	281	331	244	156	998
Zone 4	458	73	*	-	*	31	*	*	229
Wereda 11	*	*	-	-	*	-	-	-	*
Wereda 12	*	*	*	-	*	*	*	*	*
Wereda 15	15	5	-	-	-	5	-	-	5
Wereda 16	122	15	*	-	-	*	-	*	71
Zone 5	*	*	*	*	*	29	*	5	*
Wereda 8	*	*	*	*	*	*	*	-	*
Wereda 10	59	10	10	-	-	15	5	5	15
Wereda 25	*	*	*	-	*	*	*	-	*
Zone 6	1,602	319	118	*	100	286	*	193	436
Wereda 26	870	149	79	*	89	139	*	*	281
Wereda 27	*	*	*	-	*	*	*	*	*

b) Rural Holdings

Geographic Areas	GOATS								
	ALL Goats	MALE				FEMALE			
		< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over	< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over
Addis Ababa	*	1,704	*	*	*	1,311	*	*	*
Zone 3	*	*	*	*	*	1,063	*	*	*
Wereda 17	*	*	*	*	*	*	*	*	*
Wereda 19	857	146	83	51	59	89	93	64	272
Wereda 28	2,345	347	101	*	254	257	239	135	886
Zone 6	1,188	261	52	*	100	247	33	*	341
Wereda 26	681	125	52	*	89	111	33	*	226
Wereda 27	*	*	-	-	*	*	-	*	*

c) Urban Holdings

Geographic Areas	GOATS								
	ALL Goats	MALE				FEMALES			
		< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over	< 6 Months	6 Mo < 1yr	1 - <2 yrs	2 yrs &Over
Addis Ababa	2,759	418	190	*	168	359	311	247	1,008
Zone 1	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-
Zone 2	852	136	40	*	57	135	61	77	342
Wereda 20	*	-	-	-	-	-	-	-	*
Wereda 21	-	-	-	-	-	-	-	-	-
Wereda 23	*	*	*	-	-	*	-	*	*
Wereda 24	752	119	31	*	57	117	61	68	296
Zone 3	567	*	*	*	*	125	*	81	*
Wereda 17	*	*	-	*	*	*	-	*	*
Wereda 19	108	-	*	*	*	*	-	*	*
Wereda 28	*	26	*	*	*	74	*	*	*
Zone 4	458	73	*	-	*	31	*	*	229
Wereda 11	*	*	-	-	*	-	-	-	*
Wereda 12	*	*	*	-	*	*	*	*	*
Wereda 15	15	5	-	-	-	5	-	-	5
Wereda 16	122	15	*	-	-	*	-	*	71
Zone 5	*	*	*	*	*	29	*	5	*
Wereda 8	*	*	*	*	*	*	*	-	*
Wereda 10	59	10	10	-	-	15	5	5	15
Wereda 25	*	*	*	-	*	*	*	-	*
Zone 6	*	*	*	*	-	*	*	*	*
Wereda 26	*	*	*	*	-	*	*	*	*
Wereda 27	*	*	*	-	-	*	*	*	*

TABLE 7-5: NUMBER OF HORSES AND ASSES BY AGE AND SEX OF ANIMAL, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	HORSES AND ASSES										
	HORSES					ASSES					
	ALL HORSES	MALE		FEMALE		ALL ASSES	MALE		FEMALE		
		< 3 Years	3 Yrs & more	< 3 Years	3 Yrs & more		< 3 Years	3 Yrs & more	< 3 Years	3 Yrs & more
Addis Ababa	2,135	*	1,905	*	*	19,623	649	16,540	602	1,832
Zone 1	-	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-	-
Zone 2	161	*	157	-	-	2,518	*	2,403	-	93
Wereda 20	*	-	*	-	-	*	-	*	-	-
Wereda 21	-	-	-	-	-	-	-	-	-	-
Wereda 23	-	-	-	-	-	*	*	*	-	*
Wereda 24	136	*	132	-	-	2,243	*	2,141	-	88
Zone 3	1,663	*	1,456	*	*	12,858	235	12,161	107	355
Wereda 17	*	*	*	-	-	9,066	*	*	*	223
Wereda 19	44	-	44	-	-	1,279	69	1,010	67	132
Wereda 28	276	*	233	*	*	2,513	*	2,458	-	-
Zone 4	37	-	25	-	*	379	*	316	*	26
Wereda 11	-	-	-	-	-	*	*	*	-	-
Wereda 12	*	-	*	-	*	143	*	127	*	*
Wereda 15	-	-	-	-	-	-	-	-	-	-
Wereda 16	21	-	21	-	-	165	-	125	*	21
Zone 5	*	-	*	-	-	167	*	117	*	*
Wereda 8	*	-	*	-	-	*	*	*	*	*
Wereda 10	-	-	-	-	-	-	-	-	-	-
Wereda 25	-	-	-	-	-	101	-	101	-	-
Zone 6	261	*	252	-	-	3,701	360	1,543	456	1,342
Wereda 26	194	*	185	-	-	2,264	161	1,236	204	662
Wereda 27	67	-	67	-	-	1,437	199	307	251	680

b) Rural Holdings

Geographic Areas	HORSES AND ASSES									
	HORSES					ASSES				
	ALL HORSES	MALE		FEMALE		ALL ASSES	MALE		FEMALE	
		< 3 Years	3 Yrs & more	< 3 Years	3 Yrs & more		< 3 Years	3 Yrs & more	< 3 Years	3 Yrs & more
Addis Ababa	1,846	*	1,631	*	*	15,025	425	13,173	363	1,064
Zone 3	1,663	*	1,456	*	*	12,387	213	11,925	45	203
Wereda 17	*	*	*	-	-	*	*	*	*	*
Wereda 19	44	-	44	-	-	1,024	56	863	32	73
Wereda 28	276	*	233	*	*	2,454	*	2,399	-	-
Zone 6	183	*	175	-	-	2,639	212	1,248	318	861
Wereda 26	150	*	142	-	-	1,588	95	1,038	110	345
Wereda 27	*	-	*	-	-	1,051	116	210	207	517

c) Urban Holdings

Geographic Areas	HORSES AND ASSES									
	HORSES					ASSES				
		MALE		FEMALE			MALE		FEMALE	
	ALL HORSES	< 3 Years	3 Yrs & more	< 3 Years	3 Yrs & more	ALL ASSES	< 3 Years	3 Yrs & more	< 3 Years	3 Yrs & more
Addis Ababa	289	*	274	-	*	4,598	224	3,366	239	768
Zone 1	-	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-	-
Zone 2	161	*	157	-	-	2,518	*	2,403	-	93
Wereda 20	*	-	*	-	-	*	-	*	-	-
Wereda 21	-	-	-	-	-	-	-	-	-	-
Wereda 23	-	-	-	-	-	*	*	*	-	*
Wereda 24	136	*	132	-	-	2,243	*	2,141	-	88
Zone 3	-	-	-	-	-	471	*	235	62	152
Wereda 17	-	-	-	-	-	*	*	*	*	*
Wereda 19	-	-	-	-	-	255	*	147	35	*
Wereda 28	-	-	-	-	-	*	-	*	-	-
Zone 4	37	-	25	-	*	379	*	316	*	26
Wereda 11	-	-	-	-	-	*	*	*	-	-
Wereda 12	*	-	*	-	*	143	*	127	*	*
Wereda 15	-	-	-	-	-	-	-	-	-	-
Wereda 16	21	-	21	-	-	165	-	125	*	21
Zone 5	*	-	*	-	-	167	*	117	*	*
Wereda 8	*	-	*	-	-	*	*	*	*	*
Wereda 10	-	-	-	-	-	-	-	-	-	-
Wereda 25	-	-	-	-	-	101	-	101	-	-
Zone 6	78	-	78	-	-	1,062	149	295	138	480
Wereda 26	43	-	43	-	-	676	66	198	94	318
Wereda 27	*	-	*	-	-	*	*	*	*	*

TABLE 7-6: NUMBER OF MULES AND CAMELS BY AGE AND SEX OF ANIMAL BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	MULES					CAMELS				
	All Mules	MALE		FEMALE		All Camels	MALE		FEMALE	
		< 3 Years	3 Years and Older	< 3 Years	3 Years and Older		< 4 Years	4 Years and Older	< 4 Years	4 Years and Older
Addis Ababa	809	*	*	-	*	-	-	-	-	-
Zone 1	-	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-	-
Zone 2	-	-	-	-	-	-	-	-	-	-
Wereda 20	-	-	-	-	-	-	-	-	-	-
Wereda 21	-	-	-	-	-	-	-	-	-	-
Wereda 23	-	-	-	-	-	-	-	-	-	-
Wereda 24	-	-	-	-	-	-	-	-	-	-
Zone 3	*	*	*	-	*	-	-	-	-	-
Wereda 17	*	-	*	-	*	-	-	-	-	-
Wereda 19	31	*	27	-	-	-	-	-	-	-
Wereda 28	*	*	*	-	*	-	-	-	-	-
Zone 4	-	-	-	-	-	-	-	-	-	-
Wereda 11	-	-	-	-	-	-	-	-	-	-
Wereda 12	-	-	-	-	-	-	-	-	-	-
Wereda 15	-	-	-	-	-	-	-	-	-	-
Wereda 16	-	-	-	-	-	-	-	-	-	-
Zone 5	-	-	-	-	-	-	-	-	-	-
Wereda 8	-	-	-	-	-	-	-	-	-	-
Wereda 10	-	-	-	-	-	-	-	-	-	-
Wereda 25	-	-	-	-	-	-	-	-	-	-
Zone 6	150	*	137	-	*	-	-	-	-	-
Wereda 26	118	*	105	-	*	-	-	-	-	-
Wereda 27	*	-	*	-	-	-	-	-	-	-

b) Rural Holdings

Geographic Areas	MULES					CAMELS				
	All Mules	MALE		FEMALE		All Camels	MALE		FEMALE	
		< 3 Years	3 Years and Older	< 3 Years	3 Years and Older		< 4 Years	4Years and Older	< 4 Years	4 Years and Older
Addis Ababa	800	*	*	-	*	-	-	-	-	-
Zone 3	*	*	*	-	*	-	-	-	-	-
Wereda 17	*	-	*	-	*	-	-	-	-	-
Wereda 19	31	*	27	-	-	-	-	-	-	-
Wereda 28	*	*	*	-	*	-	-	-	-	-
Zone 6	141	*	128	-	*	-	-	-	-	-
Wereda 26	108	*	95	-	*	-	-	-	-	-
Wereda 27	*	-	*	-	-	-	-	-	-	-

c) Urban Holdings

Geographic Areas	MULES					CAMELS				
	All Mules	MALE		FEMALE		All Camels	MALE		FEMALE	
		< 3 Years	3 Years and Older	< 3 Years	3 Years and Older		< 4 Years	4 Years and Older	< 4 Years	4 Years and Older
Addis Ababa	*	-	*	-	-	-	-	-	-	-
Zone 1	-	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-	-
Zone 2	-	-	-	-	-	-	-	-	-	-
Wereda 20	-	-	-	-	-	-	-	-	-	-
Wereda 21	-	-	-	-	-	-	-	-	-	-
Wereda 23	-	-	-	-	-	-	-	-	-	-
Wereda 24	-	-	-	-	-	-	-	-	-	-
Zone 3	-	-	-	-	-	-	-	-	-	-
Wereda 17	-	-	-	-	-	-	-	-	-	-
Wereda 19	-	-	-	-	-	-	-	-	-	-
Wereda 28	-	-	-	-	-	-	-	-	-	-
Zone 4	-	-	-	-	-	-	-	-	-	-
Wereda 11	-	-	-	-	-	-	-	-	-	-
Wereda 12	-	-	-	-	-	-	-	-	-	-
Wereda 15	-	-	-	-	-	-	-	-	-	-
Wereda 16	-	-	-	-	-	-	-	-	-	-
Zone 5	-	-	-	-	-	-	-	-	-	-
Wereda 8	-	-	-	-	-	-	-	-	-	-
Wereda 10	-	-	-	-	-	-	-	-	-	-
Wereda 25	-	-	-	-	-	-	-	-	-	-
Zone 6	*	-	*	-	-	-	-	-	-	-
Wereda 26	*	-	*	-	-	-	-	-	-	-
Wereda 27	-	-	-	-	-	-	-	-	-	-

TABLE 7-7: CATTLE AGED 3 – 10 YEARS BY SEX AND PURPOSE, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	CATTLE AGED 3 – 10 YEARS									
		MALE				FEMALE				
	Total	Draught	Beef	Breeding	Other	Milk	Draught	Beef	Breeding	Other
Addis Ababa	62,452	28,809	1,676	677	413	17,730	*	406	11,182	1,174
Zone 1	170	-	-	-	-	108	-	62	-	-
Wereda 6	170	-	-	-	-	108	-	62	-	-
Zone 2	6,826	1,969	*	64	*	4,122	*	*	458	129
Wereda 20	293	-	*	*	-	238	-	-	*	14
Wereda 21	-	-	-	-	-	-	-	-	-	-
Wereda 23	1,221	*	-	-	*	1,065	-	*	*	*
Wereda 24	5,312	1,878	*	56	*	2,819	*	*	438	70
Zone 3	42,619	22,300	1,110	464	309	9,061	*	*	8,159	692
Wereda 17	28,930	*	810	*	*	3,614	*	*	*	*
Wereda 19	3,919	1,308	92	88	*	1,682	*	20	664	*
Wereda 28	9,771	4,069	208	132	147	3,766	*	55	1,132	252
Zone 4	1,624	56	*	*	34	1,239	-	*	*	63
Wereda 11	*	*	-	*	-	91	-	-	*	-
Wereda 12	717	*	*	-	*	617	-	*	*	*
Wereda 15	111	-	5	-	-	92	-	-	-	15
Wereda 16	533	*	*	-	*	439	-	-	-	32
Zone 5	1,353	*	*	80	-	919	-	*	254	*
Wereda 8	388	-	-	47	-	227	-	-	*	-
Wereda 10	104	-	-	5	-	89	-	-	10	-
Wereda 25	861	*	*	28	-	603	-	*	*	*
Zone 6	9,859	4,479	465	*	*	2,281	82	89	2,134	227
Wereda 26	6,242	3,171	395	*	-	1,032	82	66	1,324	*
Wereda 27	3,617	1,308	*	*	*	1,249	-	*	811	91

b) Rural Holdings

Geographic Areas	CATTLE AGED 3 – 10 YEARS									
		MALE				FEMALE				
	Total	Draught	Beef	Breeding	Other	Milk	Draught	Beef	Breeding	Other
Addis Ababa	44,591	25,429	1,413	394	287	7,267	*	106	8,693	649
Zone 3	38,749	22,055	1,052	372	276	6,503	*	71	*	549
Wereda 17	27,488	*	795	*	*	2,648	*	*	*	*
Wereda 19	2,254	1,138	54	*	-	715	*	*	319	-
Wereda 28	9,007	4,031	202	126	142	3,140	*	*	1,069	241
Zone 6	5,841	3,374	361	*	*	764	64	35	1,109	100
Wereda 26	3,872	2,365	344	*	-	388	64	29	633	44
Wereda 27	1,969	1,009	*	*	*	376	-	*	476	56

c) Urban Holdings

Geographic Areas	CATTLE AGED 3 – 10 YEARS									
		MALE				FEMALE				
	Total	Draught	Beef	Breeding	Other	Milk	Draught	Beef	Breeding	Other
Addis Ababa	17,862	3,379	263	282	126	10,463	*	300	2,489	526
Zone 1	170	-	-	-	-	108	-	62	-	-
Wereda 6	170	-	-	-	-	108	-	62	-	-
Zone 2	6,826	1,969	*	64	*	4,122	*	*	458	129
Wereda 20	293	-	*	*	-	238	-	-	*	14
Wereda 21	-	-	-	-	-	-	-	-	-	-
Wereda 23	1,221	*	-	-	*	1,065	-	*	*	*
Wereda 24	5,312	1,878	*	56	*	2,819	*	*	438	70
Zone 3	3,870	245	58	92	*	2,558	*	*	575	144
Wereda 17	1,442	*	*	*	*	966	-	*	*	*
Wereda 19	1,665	170	38	*	*	966	*	*	344	*
Wereda 28	763	*	*	*	*	625	-	*	*	*
Zone 4	1,624	56	*	*	34	1,239	-	*	*	63
Wereda 11	*	*	-	*	-	91	-	-	*	-
Wereda 12	717	*	*	-	*	617	-	*	*	*
Wereda 15	111	-	5	-	-	92	-	-	-	15
Wereda 16	533	*	*	-	*	439	-	-	-	32
Zone 5	1,353	*	*	80	-	919	-	*	254	*
Wereda 8	388	-	-	47	-	227	-	-	*	-
Wereda 10	104	-	-	5	-	89	-	-	10	-
Wereda 25	861	*	*	28	-	603	-	*	*	*
Zone 6	4,018	1,105	104	*	*	1,516	*	54	1,025	*
Wereda 26	2,370	806	52	*	-	644	*	37	691	*
Wereda 27	1,648	299	*	-	*	872	-	*	334	*

TABLE 7-8: SHEEP AGED 2 AND OLDER BY SEX AND PURPOSE, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	SHEEP AGED 2 AND OLDER								
		MALE				FEMALE			
	Total	Mutton/Meat	Wool	Breeding	Other	Mutton/Meat	Wool	Breeding	Other
Addis Ababa	14,068	1,470	-	653	*	205	59	11,617	*
Zone 1	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-
Zone 2	3,095	180	-	91	-	*	*	2,796	-
Wereda 20	93	*	-	-	-	-	-	84	-
Wereda 21	116	-	-	-	-	-	-	116	-
Wereda 23	288	*	-	-	-	-	*	257	-
Wereda 24	2,599	153	-	91	-	*	-	2,339	-
Zone 3	6,238	*	-	338	*	106	*	4,828	*
Wereda 17	*	*	-	*	-	*	-	*	-
Wereda 19	841	59	-	29	*	*	-	726	-
Wereda 28	2,848	184	-	247	*	50	*	2,311	*
Zone 4	1,257	98	-	91	-	*	*	1,045	-
Wereda 11	538	*	-	*	-	-	*	417	-
Wereda 12	506	*	-	*	-	*	-	438	-
Wereda 15	19	-	-	5	-	-	-	15	-
Wereda 16	*	*	-	*	-	-	-	*	-
Zone 5	606	*	-	*	-	-	*	483	-
Wereda 8	*	-	-	-	-	-	-	*	-
Wereda 10	79	-	-	-	-	-	-	79	-
Wereda 25	493	*	-	*	-	-	*	369	-
Zone 6	2,872	236	-	75	*	74	*	2,465	*
Wereda 26	1,821	135	-	53	-	*	*	1,598	-
Wereda 27	1,051	101	-	*	*	*	-	868	*

b) Rural Holdings

Geographic Areas	SHEEP AGED 2 AND OLDER								
		MALE				FEMALE			
	Total	Mutton/Meat	Wool	Breeding	Other	Mutton/Meat	Wool	Breeding	Other
Addis Ababa	6,084	*	-	314	*	86	*	4,711	*
Zone 3	4,957	*	-	260	*	43	*	3,790	*
Wereda 17	*	*	-	*	-	*	-	*	-
Wereda 19	189	*	-	-	-	-	-	182	-
Wereda 28	2,405	146	-	216	*	36	*	1,952	*
Zone 6	1,126	97	-	54	*	43	-	921	*
Wereda 26	708	80	-	*	-	*	-	577	-
Wereda 27	419	*	-	*	*	*	-	345	*

c) Urban Holdings

Geographic Areas	SHEEP AGED 2 AND OLDER								
		MALE				FEMALE			
	Total	Mutton/Meat	Wool	Breeding	Other	Mutton/Meat	Wool	Breeding	Other
Addis Ababa	7,985	564	-	339	*	119	49	6,906	-
Zone 1	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-
Zone 2	3,095	180	-	91	-	*	*	2,796	-
Wereda 20	93	*	-	-	-	-	-	84	-
Wereda 21	116	-	-	-	-	-	-	116	-
Wereda 23	288	*	-	-	-	-	*	257	-
Wereda 24	2,599	153	-	91	-	*	-	2,339	-
Zone 3	1,281	95	-	78	*	64	-	1,039	-
Wereda 17	186	*	-	*	-	*	-	135	-
Wereda 19	652	52	-	29	*	*	-	544	-
Wereda 28	443	*	-	*	-	*	-	359	-
Zone 4	1,257	98	-	91	-	*	*	1,045	-
Wereda 11	538	*	-	*	-	-	*	417	-
Wereda 12	506	*	-	*	-	*	-	438	-
Wereda 15	19	-	-	5	-	-	-	15	-
Wereda 16	*	*	-	*	-	-	-	*	-
Zone 5	606	*	-	*	-	-	*	483	-
Wereda 8	*	-	-	-	-	-	-	*	-
Wereda 10	79	-	-	-	-	-	-	79	-
Wereda 25	493	*	-	*	-	-	*	369	-
Zone 6	1,746	139	-	*	-	*	*	1,544	-
Wereda 26	1,113	55	-	*	-	*	*	1,021	-
Wereda 27	633	*	-	*	-	*	-	523	-

TABLE 7-9: GOATS AGED 2 AND OLDER BY SEX AND PURPOSE, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	GOATS AGED 2 AND OLDER							
	Total	MALES			FEMALES			
		Meat	Breeding	Other	Meat	Milk	Breeding	Other
Addis Ababa	*	489	*	-	61	*	*	-
Zone 1	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-
Zone 2	399	*	*	-	*	-	326	-
Wereda 20	*	-	-	-	-	-	*	-
Wereda 21	-	-	-	-	-	-	-	-
Wereda 23	*	-	-	-	-	-	*	-
Wereda 24	352	*	*	-	*	-	279	-
Zone 3	*	325	*	-	*	*	*	-
Wereda 17	*	*	*	-	*	*	*	-
Wereda 19	389	54	*	-	-	-	301	-
Wereda 28	1,278	*	63	-	*	-	974	-
Zone 4	246	*	-	-	-	-	229	-
Wereda 11	*	*	-	-	-	-	*	-
Wereda 12	163	*	-	-	-	-	*	-
Wereda 15	5	-	-	-	-	-	5	-
Wereda 16	71	-	-	-	-	-	71	-
Zone 5	*	*	*	-	-	-	*	-
Wereda 8	*	*	-	-	-	-	*	-
Wereda 10	15	-	-	-	-	-	15	-
Wereda 25	*	-	*	-	-	-	*	-
Zone 6	536	94	*	-	-	-	436	-
Wereda 26	369	82	*	-	-	-	281	-
Wereda 27	167	*	-	-	-	-	*	-

b) Rural Holdings

Geographic Areas	GOATS AGED 2 AND OLDER							
	Total	MALES			FEMALES			
		Meat	Breeding	Other	Meat	Milk	Breeding	Other
Addis Ababa	*	393	*	-	*	*	*	-
Zone 3	*	299	*	-	*	*	*	-
Wereda 17	*	*	*	-	*	*	*	-
Wereda 19	331	54	*	-	-	-	272	-
Wereda 28	1,140	*	*	-	*	-	868	-
Zone 6	441	94	*	-	-	-	341	-
Wereda 26	315	82	*	-	-	-	226	-
Wereda 27	*	*	-	-	-	-	*	-

c) Urban Holdings

Geographic Areas	GOATS AGED 2 AND OLDER							
		MALES			FEMALES			
	Total	Meat	Breeding	Other	Meat	Milk	Breeding	Other
Addis Ababa	1,175	96	71	-	30	-	978	-
Zone 1	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-
Zone 2	399	*	*	-	*	-	326	-
Wereda 20	*	-	-	-	-	-	*	-
Wereda 21	-	-	-	-	-	-	-	-
Wereda 23	*	-	-	-	-	-	*	-
Wereda 24	352	*	*	-	*	-	279	-
Zone 3	226	*	*	-	*	-	*	-
Wereda 17	*	*	-	-	*	-	*	-
Wereda 19	*	-	*	-	-	-	*	-
Wereda 28	*	*	*	-	*	-	*	-
Zone 4	246	*	-	-	-	-	229	-
Wereda 11	*	*	-	-	-	-	*	-
Wereda 12	163	*	-	-	-	-	*	-
Wereda 15	5	-	-	-	-	-	5	-
Wereda 16	71	-	-	-	-	-	71	-
Zone 5	*	*	*	-	-	-	*	-
Wereda 8	*	*	-	-	-	-	*	-
Wereda 10	15	-	-	-	-	-	15	-
Wereda 25	*	-	*	-	-	-	*	-
Zone 6	*	-	-	-	-	-	*	-
Wereda 26	*	-	-	-	-	-	*	-
Wereda 27	*	-	-	-	-	-	*	-

TABLE 7-10: HORSES BY SEX AND PURPOSE, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	HORSES AGED 3 AND OLDER						
		MALES			FEMALES		
	Total	Transportation	Draught	Other	Transportation	Draught	Other
Addis Ababa	1,944	1,892	-	*	*	-	-
Zone 1	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-
Zone 2	157	157	-	-	-	-	-
Wereda 20	*	*	-	-	-	-	-
Wereda 21	-	-	-	-	-	-	-
Wereda 23	-	-	-	-	-	-	-
Wereda 24	132	132	-	-	-	-	-
Zone 3	1,484	1,456	-	-	*	-	-
Wereda 17	*	*	-	-	-	-	-
Wereda 19	44	44	-	-	-	-	-
Wereda 28	261	233	-	-	*	-	-
Zone 4	37	25	-	-	*	-	-
Wereda 11	-	-	-	-	-	-	-
Wereda 12	*	*	-	-	*	-	-
Wereda 15	-	-	-	-	-	-	-
Wereda 16	21	21	-	-	-	-	-
Zone 5	*	*	-	-	-	-	-
Wereda 8	*	*	-	-	-	-	-
Wereda 10	-	-	-	-	-	-	-
Wereda 25	-	-	-	-	-	-	-
Zone 6	252	240	-	*	-	-	-
Wereda 26	185	173	-	*	-	-	-
Wereda 27	67	67	-	-	-	-	-

b) Rural Holdings

Geographic Areas	HORSES AGED 3 AND OLDER						
		MALES			FEMALES		
	TOTAL	Transportation	Draught	Other	Transportation	Draught	Other
Addis Ababa	1,659	1,618	-	*	*	-	-
Zone 3	1,484	1,456	-	-	*	-	-
Wereda 17	*	*	-	-	-	-	-
Wereda 19	44	44	-	-	-	-	-
Wereda 28	261	233	-	-	*	-	-
Zone 6	175	162	-	*	-	-	-
Wereda 26	142	129	-	*	-	-	-
Wereda 27	*	*	-	-	-	-	-

c) Urban Holdings

Geographic Areas	HORSES AGED 3 AND OLDER						
		MALES			FEMALES		
	TOTAL	Transportation	Draught	Other	Transportation	Draught	Other
Addis Ababa	285	274	-	-	*	-	-
Zone 1	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-
Zone 2	157	157	-	-	-	-	-
Wereda 20	*	*	-	-	-	-	-
Wereda 21	-	-	-	-	-	-	-
Wereda 23	-	-	-	-	-	-	-
Wereda 24	132	132	-	-	-	-	-
Zone 3	-	-	-	-	-	-	-
Wereda 17	-	-	-	-	-	-	-
Wereda 19	-	-	-	-	-	-	-
Wereda 28	-	-	-	-	-	-	-
Zone 4	37	25	-	-	*	-	-
Wereda 11	-	-	-	-	-	-	-
Wereda 12	*	*	-	-	*	-	-
Wereda 15	-	-	-	-	-	-	-
Wereda 16	21	21	-	-	-	-	-
Zone 5	*	*	-	-	-	-	-
Wereda 8	*	*	-	-	-	-	-
Wereda 10	-	-	-	-	-	-	-
Wereda 25	-	-	-	-	-	-	-
Zone 6	78	78	-	-	-	-	-
Wereda 26	43	43	-	-	-	-	-
Wereda 27	*	*	-	-	-	-	-

TABLE 7-11: ASSES AGED 3 YEARS AND OVER BY SEX AND PURPOSE, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	ASSES AGED 3 YEARS AND OLDER						
		MALES			FEMALES		
	TOTAL	Transportation	Draught	Other	Transportation	Draught	Other
Addis Ababa	18,372	7,710	*	204	1,166	666	-
Zone 1	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-
Zone 2	2,496	2,032	173	198	70	*	-
Wereda 20	*	*	-	-	-	-	-
Wereda 21	-	-	-	-	-	-	-
Wereda 23	*	*	*	*	*	-	-
Wereda 24	2,228	1,791	168	181	64	*	-
Zone 3	12,516	4,191	*	-	333	*	-
Wereda 17	8,916	1,459	*	-	223	-	-
Wereda 19	1,143	954	56	-	110	*	-
Wereda 28	2,458	1,777	681	-	-	-	-
Zone 4	341	304	*	-	26	-	-
Wereda 11	*	*	*	-	-	-	-
Wereda 12	132	127	-	-	*	-	-
Wereda 15	-	-	-	-	-	-	-
Wereda 16	146	125	-	-	21	-	-
Zone 5	134	117	-	-	*	-	-
Wereda 8	*	*	-	-	*	-	-
Wereda 10	-	-	-	-	-	-	-
Wereda 25	101	101	-	-	-	-	-
Zone 6	2,885	1,066	470	*	722	620	-
Wereda 26	1,898	947	282	*	493	169	-
Wereda 27	986	119	188	-	229	450	-

b) Rural Holdings

Geographic Areas	ASSES AGED 3 YEARS AND OLDER						
		MALES			FEMALES		
	TOTAL	Transportation	Draught	Other	Transportation	Draught	Other
Addis Ababa	14,238	4,919	*	*	599	465	-
Zone 3	12,128	3,989	*	-	194	*	-
Wereda 17	*	1,430	*	-	*	-	-
Wereda 19	936	841	*	-	64	*	-
Wereda 28	2,399	1,718	681	-	-	-	-
Zone 6	2,109	930	312	*	405	457	-
Wereda 26	1,382	840	191	*	221	124	-
Wereda 27	727	90	121	-	184	333	-

c) Urban Holdings

Geographic Areas	ASSES AGED 3 YEARS AND OLDER						
		MALES			FEMALES		
	TOTAL	Transportation	Draught	Other	Transportation	Draught	Other
Addis Ababa	4,134	2,791	377	198	567	*	
Zone 1	-	-	-	-	-	-	
Wereda 6	-	-	-	-	-	-	
Zone 2	2,496	2,032	173	198	70	*	
Wereda 20	*	*	-	-	-	-	
Wereda 21	-	-	-	-	-	-	
Wereda 23	*	*	*	*	*	-	
Wereda 24	2,228	1,791	168	181	64	*	
Zone 3	388	202	*	-	139	*	
Wereda 17	122	*	-	-	*	-	
Wereda 19	206	113	*	-	*	*	
Wereda 28	*	*	-	-	-	-	
Zone 4	341	304	*	-	26	-	
Wereda 11	*	*	*	-	-	-	
Wereda 12	132	127	-	-	*	-	
Wereda 15	-	-	-	-	-	-	
Wereda 16	146	125	-	-	21	-	
Zone 5	134	117	-	-	*	-	
Wereda 8	*	*	-	-	*	-	
Wereda 10	-	-	-	-	-	-	
Wereda 25	101	101	-	-	-	-	
Zone 6	775	136	*	-	317	*	
Wereda 26	516	107	*	-	272	*	
Wereda 27	*	29	*	-	45	*	

TABLE 7-12: MULES AGED 3 YEARS AND ABOVE BY SEX AND PURPOSE, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	MULES AGED 3 YEARS AND OLDER						
		MALES			FEMALES		
	TOTAL	Transportation	Draught	Other	Transportation	Draught	Other
Addis Ababa	*	*	*	-	*	-	
Zone 1	-	-	-	-	-	-	
Wereda 6	-	-	-	-	-	-	
Zone 2	-	-	-	-	-	-	
Wereda 20	-	-	-	-	-	-	
Wereda 21	-	-	-	-	-	-	
Wereda 23	-	-	-	-	-	-	
Wereda 24	-	-	-	-	-	-	
Zone 3	*	*	*	-	*	-	
Wereda 17	*	*	-	-	*	-	
Wereda 19	27	27	-	-	-	-	
Wereda 28	*	*	*	-	*	-	
Zone 4	-	-	-	-	-	-	
Wereda 11	-	-	-	-	-	-	
Wereda 12	-	-	-	-	-	-	
Wereda 15	-	-	-	-	-	-	
Wereda 16	-	-	-	-	-	-	
Zone 5	-	-	-	-	-	-	
Wereda 8	-	-	-	-	-	-	
Wereda 10	-	-	-	-	-	-	
Wereda 25	-	-	-	-	-	-	
Zone 6	142	137	-	-	*	-	
Wereda 26	109	105	-	-	*	-	
Wereda 27	*	*	-	-	-	-	

b) Rural Holdings

Geographic Areas	MULES AGED 3 YEARS AND OLDER						
		MALES			FEMALES		
	TOTAL	Transportation	Draught	Other	Transportation	Draught	Other
Addis Ababa	*	*	*	-	*	-	-
Zone 3	*	*	*	-	*	-	-
Wereda 17	*	*	-	-	*	-	-
Wereda 19	27	27	-	-	-	-	-
Wereda 28	*	*	*	-	*	-	-
Zone 6	133	128	-	-	*	-	-
Wereda 26	100	95	-	-	*	-	-
Wereda 27	*	*	-	-	-	-	-

c) Urban Holdings

Geographic Areas	MULES AGED 3 YEARS AND OLDER						
		MALES			FEMALES		
	TOTAL	Transportation	Draught	Other	Transportation	Draught	Other
Addis Ababa	*	*	-	-	-	-	-
Zone 1	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-
Zone 2	-	-	-	-	-	-	-
Wereda 20	-	-	-	-	-	-	-
Wereda 21	-	-	-	-	-	-	-
Wereda 23	-	-	-	-	-	-	-
Wereda 24	-	-	-	-	-	-	-
Zone 3	-	-	-	-	-	-	-
Wereda 17	-	-	-	-	-	-	-
Wereda 19	-	-	-	-	-	-	-
Wereda 28	-	-	-	-	-	-	-
Zone 4	-	-	-	-	-	-	-
Wereda 11	-	-	-	-	-	-	-
Wereda 12	-	-	-	-	-	-	-
Wereda 15	-	-	-	-	-	-	-
Wereda 16	-	-	-	-	-	-	-
Zone 5	-	-	-	-	-	-	-
Wereda 8	-	-	-	-	-	-	-
Wereda 10	-	-	-	-	-	-	-
Wereda 25	-	-	-	-	-	-	-
Zone 6	*	*	-	-	-	-	-
Wereda 26	*	*	-	-	-	-	-
Wereda 27	-	-	-	-	-	-	-

TABLE 7-13: CAMELS BY SEX AND PURPOSE, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	CAMELS AGED 4 YEARS AND OLDER									
	TOTAL	MALES				FEMALES				
		Meat	Draught	Transportation	Other	Meat	Draught	Milk	Transportation	Other
Addis Ababa										
Zone 1										
Wereda 6										
Zone 2										
Wereda 20										
Wereda 21										
Wereda 23										
Wereda 24										
Zone 3										
Wereda 17										
Wereda 19										
Wereda 28										
Zone 4										
Wereda 11										
Wereda 12										
Wereda 15										
Wereda 16										
Zone 5										
Wereda 8										
Wereda 10										
Wereda 25										
Zone 6										
Wereda 26										
Wereda 27										

b) Rural Holdings

Geographic Areas	CAMELS AGED 4 YEARS AND OLDER									
	TOTAL	MALES				FEMALES				
		Meat	Draught	Transportation	Other	Meat	Draught	Milk	Transportation	Other
Addis Ababa										
Zone 3										
Wereda 17										
Wereda 19										
Wereda 28										
Zone 6										
Wereda 26										
Wereda 27										

c) Urban Holdings

Geographic Areas	CAMELS AGED 4 YEARS AND OLDER									
		MALES				FEMALES				
	TOTAL	Meat	Draught	Transportation	Other	Meat	Draught	Milk	Transportation	Other
Addis Ababa	-	-	-	-	-	-	-	-	-	-
Zone 1	-	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-	-
Zone 2	-	-	-	-	-	-	-	-	-	-
Wereda 20	-	-	-	-	-	-	-	-	-	-
Wereda 21	-	-	-	-	-	-	-	-	-	-
Wereda 23	-	-	-	-	-	-	-	-	-	-
Wereda 24	-	-	-	-	-	-	-	-	-	-
Zone 3	-	-	-	-	-	-	-	-	-	-
Wereda 17	-	-	-	-	-	-	-	-	-	-
Wereda 19	-	-	-	-	-	-	-	-	-	-
Wereda 28	-	-	-	-	-	-	-	-	-	-
Zone 4	-	-	-	-	-	-	-	-	-	-
Wereda 11	-	-	-	-	-	-	-	-	-	-
Wereda 12	-	-	-	-	-	-	-	-	-	-
Wereda 15	-	-	-	-	-	-	-	-	-	-
Wereda 16	-	-	-	-	-	-	-	-	-	-
Zone 5	-	-	-	-	-	-	-	-	-	-
Wereda 8	-	-	-	-	-	-	-	-	-	-
Wereda 10	-	-	-	-	-	-	-	-	-	-
Wereda 25	-	-	-	-	-	-	-	-	-	-
Zone 6	-	-	-	-	-	-	-	-	-	-
Wereda 26	-	-	-	-	-	-	-	-	-	-
Wereda 27	-	-	-	-	-	-	-	-	-	-

TABLE 7-14: POULTRY INVENTORY BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total Poultry	Cocks	Cockerels	Pullets	Non-Laying Hens	Chicks	Laying Hens	Avg. Number of Clutches	Avg. Egg Production/ Hen/Clutch
Addis Ababa	100,163	11,731	5,778	7,764	4,994	30,245	39,652	21	15
Zone 1	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-
Zone 2	10,621	1,413	610	975	682	3,187	3,752	24	15
Wereda 20	278	-	*	*	*	*	58	26	18
Wereda 21	-	-	-	-	-	-	-	-	-
Wereda 23	1,218	134	*	*	155	393	322	23	14
Wereda 24	9,125	1,280	588	723	504	2,658	3,372	24	15
Zone 3	62,151	7,743	3,284	3,153	2,672	18,728	26,570	20	15
Wereda 17	38,211	*	1,295	674	1,289	*	-	19	15
Wereda 19	9,296	1,062	928	1,145	805	2,619	2,737	24	15
Wereda 28	14,644	1,638	1,062	1,335	579	4,478	5,552	23	15
Zone 4	3,024	438	109	389	196	939	954	24	14
Wereda 11	728	154	*	*	*	*	277	25	15
Wereda 12	1,594	170	70	271	*	603	447	22	11
Wereda 15	24	5	-	-	-	-	19	70	57
Wereda 16	678	109	*	*	*	227	210	24	14
Zone 5	2,450	236	262	565	227	616	544	23	15
Wereda 8	*	*	*	*	*	*	-	21	15
Wereda 10	183	35	5	30	5	25	84	24	15
Wereda 25	1,579	160	147	357	*	392	315	24	16
Zone 6	21,917	1,900	1,513	2,681	1,216	6,774	7,833	23	15
Wereda 26	10,258	814	795	1,354	505	3,034	3,756	25	15
Wereda 27	11,660	1,086	718	1,327	711	3,740	4,077	22	15

b) Rural Holdings

Geographic Areas	Total Poultry	Cocks	Cockerels	Pullets	Non-Laying Hens	Chicks	Laying Hens	Avg. Number of Clutches	Avg. Egg Production/ Hen/Clutch
Addis Ababa	66,325	8,024	3,490	3,865	2,465	19,593	28,887	20	15
Zone 3	53,777	6,827	2,597	2,254	1,745	16,094	24,260	20	15
Wereda 17	*	*	1,244	*	1,029	*	-	18	15
Wereda 19	4,353	542	400	589	216	1,096	1,510	23	14
Wereda 28	12,900	1,455	952	1,139	500	4,002	4,852	23	15
Zone 6	12,548	1,197	894	1,611	720	3,499	4,627	23	15
Wereda 26	5,880	479	473	803	328	1,714	2,083	24	14
Wereda 27	6,668	719	421	808	392	1,785	2,544	22	15

c) Urban Holdings

Geographic Areas	Total Poultry	Cocks	Cockerels	Pullets	Non-Laying Hens	Chicks	Laying Hens	Avg. Number of Clutches	Avg. Egg Production/Hen/ Clutch
Addis Ababa	33,838	3,707	2,288	3,898	2,529	10,651	10,765	24	14
Zone 1	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-
Zone 2	10,621	1,413	610	975	682	3,187	3,752	24	15
Wereda 20	278	-	*	*	*	*	58	26	18
Wereda 21	-	-	-	-	-	-	-	-	-
Wereda 23	1,218	134	*	*	155	393	322	23	14
Wereda 24	9,125	1,280	588	723	504	2,658	3,372	24	15
Zone 3	8,374	916	688	899	927	2,634	2,310	24	14
Wereda 17	*	*	*	148	*	*	382	22	13
Wereda 19	4,943	520	*	556	589	1,523	1,228	26	15
Wereda 28	1,744	183	110	*	*	476	700	22	13
Zone 4	3,024	438	109	389	196	939	954	24	14
Wereda 11	728	154	*	*	*	*	277	25	15
Wereda 12	1,594	170	70	271	*	603	447	22	11
Wereda 15	24	5	-	-	-	-	19	70	57
Wereda 16	678	109	*	*	*	227	210	24	14
Zone 5	2,450	236	262	565	227	616	544	23	15
Wereda 8	*	*	*	*	*	*	-	21	15
Wereda 10	183	35	5	30	5	25	84	24	15
Wereda 25	1,579	160	147	357	*	392	315	24	16
Zone 6	9,369	703	619	1,070	496	3,275	3,205	24	15
Wereda 26	4,377	335	322	550	177	1,320	1,672	25	15
Wereda 27	4,991	368	297	*	319	1,955	1,533	23	14

TABLE 7-15: BEEHIVE INVENTORY AND PRODUCTION OF HONEY BY REGION, ZONE,AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	All Beehives		Traditional Beehives			Intermediate Beehives			Modern Beehives		
	Number of hives	Total annual honey production	Number of hives	Avg. frequency of production	Total annual honey production	Number of hives	Avg. frequency of production	Total annual honey production	Number of hives	Avg. frequency of production	Total annual honey production
Addis Ababa	4,231	3,605	670	2	2,998	3,543	2	*	*	2	*
Zone 1	-	-	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-	-	-
Zone 2	1,336	-	-	2	-	1,336	-	-	-	-	-
Wereda 20	-	-	-	-	-	-	-	-	-	-	-
Wereda 21	-	-	-	-	-	-	-	-	-	-	-
Wereda 23	*	-	-	2	-	*	-	-	-	-	-
Wereda 24	1,039	-	-	2	-	1,039	-	-	-	-	-
Zone 3	1,167	2,313	420	2	1,722	*	2	*	*	2	*
Wereda 17	*	*	*	1	*	*	2	*	-	1	-
Wereda 19	246	*	*	2	*	*	-	-	-	2	-
Wereda 28	210	918	200	1	725	-	-	-	*	2	*
Zone 4	*	-	-	1	-	*	-	-	-	-	-
Wereda 11	*	-	-	1	-	*	-	-	-	-	-
Wereda 12	*	-	-	1	-	*	-	-	-	-	-
Wereda 15	-	-	-	-	-	-	-	-	-	-	-
Wereda 16	-	-	-	-	-	-	-	-	-	-	-
Zone 5	*	-	-	2	-	*	-	-	-	-	-
Wereda 8	*	-	-	2	-	*	-	-	-	-	-
Wereda 10	-	-	-	-	-	-	-	-	-	-	-
Wereda 25	*	-	-	-	-	*	-	-	-	-	-
Zone 6	1,387	1,292	250	2	1,276	1,129	-	-	*	1	*
Wereda 26	1,027	907	159	2	891	860	-	-	*	1	*
Wereda 27	360	*	91	2	*	*	-	-	-	-	-

b) Rural Holdings

Geographic Areas	All Beehives		Traditional Beehives			Intermediate Beehives			Modern Beehives		
	Number of hives	Total annual honey production	Number of hives	Avg. frequency of production	Total annual honey production	Number of hives	Avg. frequency of production	Total annual honey production	Number of hives	Avg. frequency of production	Total annual honey
Addis Ababa	681	3,182	664	2	2,972	-	-	-	*	2	*
Zone 3	429	1,916	420	2	1,722	-	-	-	*	2	*
Wereda 17	*	*	*	1	*	-	-	-	-	-	-
Wereda 19	*	*	*	2	*	-	-	-	-	-	-
Wereda 28	210	918	200	1	725	-	-	-	*	2	*
Zone 6	252	1,266	244	2	1,250	-	-	-	*	1	*
Wereda 26	161	881	153	2	866	-	-	-	*	1	*
Wereda 27	91	*	91	2	*	-	-	-	-	-	-

c) Urban Holdings

Geographic Areas	All Beehives		Traditional Beehives			Intermediate Beehives			Modern Beehives		
	Number of hives	Total annual honey production	Number of hives	Avg. frequency of production	Total annual honey production	Number of hives	Avg. frequency of production	Total annual honey production	Number of hives	Avg. frequency of production	Total annual honey production
Addis Ababa	3,549	*	*	2	*	3,543	2	*	-	2	-
Zone 1	-	-	-	-	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-	-	-	-	-
Zone 2	1,336	-	-	2	-	1,336	-	-	-	-	-
Wereda 20	-	-	-	-	-	-	-	-	-	-	-
Wereda 21	-	-	-	-	-	-	-	-	-	-	-
Wereda 23	*	-	-	2	-	*	-	-	-	-	-
Wereda 24	1,039	-	-	2	-	1,039	-	-	-	-	-
Zone 3	*	*	-	1	-	*	2	*	-	2	-
Wereda 17	*	*	-	1	-	*	2	*	-	1	-
Wereda 19	*	-	-	1	-	*	-	-	-	2	-
Wereda 28	-	-	-	-	-	-	-	-	-	2	-
Zone 4	*	-	-	1	-	*	-	-	-	-	-
Wereda 11	*	-	-	1	-	*	-	-	-	-	-
Wereda 12	*	-	-	1	-	*	-	-	-	-	-
Wereda 15	-	-	-	-	-	-	-	-	-	-	-
Wereda 16	-	-	-	-	-	-	-	-	-	-	-
Zone 5	*	-	-	2	-	*	-	-	-	-	-
Wereda 8	*	-	-	2	-	*	-	-	-	-	-
Wereda 10	-	-	-	-	-	-	-	-	-	-	-
Wereda 25	*	-	-	-	-	*	-	-	-	-	-
Zone 6	1,135	*	*	2	*	1,129	-	-	-	-	-
Wereda 26	867	*	*	2	*	860	-	-	-	-	-
Wereda 27	*	-	-	2	-	*	-	-	-	-	-

TABLE 7-16: NUMBER OF DAIRY ANIMALS, MILK PRODUCTION AND LACTATION PERIOD BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Number Of Dairy Cows	Number Of Milking Cows	Average Daily Milk Prod.	Average Lactation Period (Mn)	Total Milk Production(Lt)	Number Of Dairy Camels	Number Of Milking Camels	Average Daily Milk Prod.	Average Lactation Period(Mn)	Total Milk Production (Lt)
Addis Ababa	17,730	20,160	2.621	8	12,175,288	-	*	-	-	-
Zone 1	108	108	1.997	7	45,511	-	-	-	-	-
Wereda 6	108	108	1.997	7	45,511	-	-	-	-	-
Zone 2	4,122	3,209	2.807	7	1,975,178	-	*	-	-	-
Wereda 20	238	171	4.436	6	*	-	*	-	-	-
Wereda 21	-	-	-	8	-	-	-	-	-	-
Wereda 23	1,065	838	2.692	6	486,357	-	-	-	-	-
Wereda 24	2,819	2,200	2.564	7	1,366,606	-	-	-	-	-
Zone 3	9,061	11,783	2.353	8	6,636,680	-	*	-	-	-
Wereda 17	3,614	6,369	2.084	8	3,026,636	-	*	-	-	-
Wereda 19	1,682	1,870	2.974	7	1,615,717	-	-	-	-	-
Wereda 28	3,766	3,544	2.571	8	1,994,328	-	-	-	-	-
Zone 4	1,239	1,073	3.119	7	835,399	-	-	-	-	-
Wereda 11	91	107	2.524	7	81,974	-	-	-	-	-
Wereda 12	617	514	3.608	7	475,450	-	-	-	-	-
Wereda 15	92	116	2.456	6	65,921	-	-	-	-	-
Wereda 16	439	336	2.772	7	*	-	-	-	-	-
Zone 5	919	783	2.223	7	434,278	-	-	-	-	-
Wereda 8	227	191	2.738	9	*	-	-	-	-	-
Wereda 10	89	79	5.198	8	70,686	-	-	-	-	-
Wereda 25	603	513	1.811	7	220,392	-	-	-	-	-
Zone 6	2,281	3,204	3.207	8	2,248,242	-	-	-	-	-
Wereda 26	1,032	1,667	2.481	8	912,470	-	-	-	-	-
Wereda 27	1,249	1,537	3.979	8	1,335,772	-	-	-	-	-

b) Rural Holdings

Geographic Areas	Number Of Dairy Cows	Number Of Milking Cows	Average Daily Milk Prod.	Average Lactation Period(Mn)	Total Milk Production(Lt)	Number Of Dairy Camels	Number Of Milking Camels	Average Daily Milk Producton	Average Lactation Period (Mn)	Total Milk Production (Lt)
Addis Ababa	7,267	10,535	1.948	8	4,368,904	-	*	-	-	-
Zone 3	6,503	9,224	1.919	8	3,846,562	-	*	-	-	-
Wereda 17	2,648	5,420	1.891	8	2,140,168	-	*	-	-	-
Wereda 19	715	759	1.352	7	227,523	-	-	-	-	-
Wereda 28	3,140	3,045	2.143	8	1,478,871	-	-	-	-	-
Zone 6	764	1,311	2.111	8	522,342	-	-	-	-	-
Wereda 26	388	728	1.247	8	177,311	-	-	-	-	-
Wereda 27	376	583	3.123	8	345,031	-	-	-	-	-

c) Urban Holdings

Geographic Areas	Number Of Dairy Cows	Number Of Milking Cows	Average Daily Milk Prod.	Average Lactation Period(Mn)	Total Milk Production(Lt)	Number Of Dairy Camels	Number Of Milking Camels	Average Daily Milk Prod.	Average Lactation Period (Mn)	Total Milk Production (Lt)
Addis Ababa	10,463	9,625	3.354	7	7,806,384	-	*	-	-	-
Zone 1	108	108	1.997	7	45,511	-	-	-	-	-
Wereda 6	108	108	1.997	7	45,511	-	-	-	-	-
Zone 2	4,122	3,209	2.807	7	1,975,178	-	*	-	-	-
Wereda 20	238	171	4.436	6	*	-	*	-	-	-
Wereda 21	-	-	-	8	-	-	-	-	-	-
Wereda 23	1,065	838	2.692	6	486,357	-	-	-	-	-
Wereda 24	2,819	2,200	2.564	7	1,366,606	-	-	-	-	-
Zone 3	2,558	2,559	4.023	7	2,790,118	-	-	-	-	-
Wereda 17	966	949	3.562	7	886,467	-	-	-	-	-
Wereda 19	966	1,111	4.104	7	1,388,194	-	-	-	-	-
Wereda 28	625	500	4.484	7	515,456	-	-	-	-	-
Zone 4	1,239	1,073	3.119	7	835,399	-	-	-	-	-
Wereda 11	91	107	2.524	7	81,974	-	-	-	-	-
Wereda 12	617	514	3.608	7	475,450	-	-	-	-	-
Wereda 15	92	116	2.456	6	65,921	-	-	-	-	-
Wereda 16	439	336	2.772	7	*	-	-	-	-	-
Zone 5	919	783	2.223	7	434,278	-	-	-	-	-
Wereda 8	227	191	2.738	9	*	-	-	-	-	-
Wereda 10	89	79	5.198	8	70,686	-	-	-	-	-
Wereda 25	603	513	1.811	7	220,392	-	-	-	-	-
Zone 6	1,516	1,893	3.994	8	1,725,900	-	-	-	-	-
Wereda 26	644	938	3.447	8	735,159	-	-	-	-	-
Wereda 27	872	954	4.541	8	990,741	-	-	-	-	-

TABLE 7-17: NUMBER OF CATTLE BY SEX AND BREED, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Addis Ababa	97,215	44,921	*	1,053	40,091	3,815	5,581
Zone 1	325	-	-	-	108	217	-
Wereda 6	325	-	-	-	108	217	-
Zone 2	11,258	3,610	*	385	5,370	*	1,590
Wereda 20	512	82	*	-	242	*	*
Wereda 21	8	-	-	-	-	-	8
Wereda 23	2,239	320	*	167	806	*	742
Wereda 24	8,499	3,208	*	218	4,321	*	718
Zone 3	64,470	33,049	*	257	25,915	2,160	1,775
Wereda 17	42,694	*	*	105	15,926	*	511
Wereda 19	6,964	2,719	63	67	2,843	526	746
Wereda 28	14,813	6,416	145	85	7,146	503	517
Zone 4	3,057	553	*	121	1,680	75	622
Wereda 11	*	*	*	-	*	*	*
Wereda 12	1,440	246	-	58	770	*	358
Wereda 15	237	10	-	29	102	5	92
Wereda 16	911	174	-	34	490	45	*
Zone 5	2,701	556	*	66	1,660	140	249
Wereda 8	860	212	-	22	513	23	89
Wereda 10	228	30	5	-	50	64	79
Wereda 25	1,614	314	*	*	1,097	*	*
Zone 6	15,403	7,154	361	225	5,358	962	1,344
Wereda 26	9,338	5,080	117	101	3,201	320	520
Wereda 27	6,065	2,074	244	123	2,157	642	825

b)Rural Holdings

Geographic Areas	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Addis Ababa	66,091	37,023	*	61	25,524	*	174
Zone 3	57,454	31,914	*	*	22,760	*	*
Wereda 17	40,151	*	*	-	14,443	*	-
Wereda 19	3,891	2,059	*	*	1,681	93	*
Wereda 28	13,412	6,266	*	*	6,635	348	*
Zone 6	8,637	5,108	314	49	2,764	261	140
Wereda 26	5,532	3,746	78	*	1,663	*	-
Wereda 27	3,106	1,362	236	*	1,102	223	140

c) Urban Holdings

Geographic Areas	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Addis Ababa	31,123	7,898	168	993	14,567	2,091	5,407
Zone 1	325	-	-	-	108	217	-
Wereda 6	325	-	-	-	108	217	-
Zone 2	11,258	3,610	*	385	5,370	*	1,590
Wereda 20	512	82	*	-	242	*	*
Wereda 21	8	-	-	-	-	-	8
Wereda 23	2,239	320	*	167	806	*	742
Wereda 24	8,499	3,208	*	218	4,321	*	718
Zone 3	7,017	1,135	43	246	3,155	697	1,742
Wereda 17	2,543	325	*	105	1,483	*	511
Wereda 19	3,073	660	*	60	1,161	*	730
Wereda 28	1,401	149	*	80	511	*	500
Zone 4	3,057	553	*	121	1,680	75	622
Wereda 11	*	*	*	-	*	*	*
Wereda 12	1,440	246	-	58	770	*	358
Wereda 15	237	10	-	29	102	5	92
Wereda 16	911	174	-	34	490	45	*
Zone 5	2,701	556	*	66	1,660	140	249
Wereda 8	860	212	-	22	513	23	89
Wereda 10	228	30	5	-	50	64	79
Wereda 25	1,614	314	*	*	1,097	*	*
Zone 6	6,766	2,045	46	176	2,594	701	1,204
Wereda 26	3,806	1,334	39	94	1,538	282	520
Wereda 27	2,959	*	*	82	1,056	419	684

TABLE 7-18: NUMBER OF SHEEP BY SEX AND BREED, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Addis Ababa	29,682	9,371	*	-	20,280	*	-
Zone 1	31	-	-	-	31	-	-
Wereda 6	31	-	-	-	31	-	-
Zone 2	6,383	1,875	-	-	4,508	-	-
Wereda 20	220	62	-	-	158	-	-
Wereda 21	264	91	-	-	173	-	-
Wereda 23	652	201	-	-	451	-	-
Wereda 24	5,248	1,521	-	-	3,727	-	-
Zone 3	12,335	4,006	*	-	8,298	*	-
Wereda 17	4,472	*	-	-	2,755	-	-
Wereda 19	1,861	533	-	-	1,328	-	-
Wereda 28	6,002	1,756	*	-	4,215	*	-
Zone 4	2,416	664	-	-	1,752	-	-
Wereda 11	969	262	-	-	707	-	-
Wereda 12	1,048	276	-	-	772	-	-
Wereda 15	29	10	-	-	19	-	-
Wereda 16	*	*	-	-	*	-	-
Zone 5	1,374	503	-	-	871	-	-
Wereda 8	209	81	-	-	*	-	-
Wereda 10	243	89	-	-	153	-	-
Wereda 25	922	333	-	-	590	-	-
Zone 6	7,143	2,323	-	-	4,820	-	-
Wereda 26	4,191	1,353	-	-	2,837	-	-
Wereda 27	2,952	969	-	-	1,982	-	-

b) Rural Holdings

Geographic Areas	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Addis Ababa	12,432	4,136	*	-	8,266	*	-
Zone 3	9,516	3,120	*	-	6,366	*	-
Wereda 17	*	*	-	-	*	-	-
Wereda 19	464	144	-	-	320	-	-
Wereda 28	5,212	1,528	*	-	3,654	*	-
Zone 6	2,916	1,016	-	-	1,900	-	-
Wereda 26	1,737	622	-	-	1,115	-	-
Wereda 27	1,179	394	-	-	785	-	-

c) Urban Holdings

Geographic Areas	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Addis Ababa	17,250	5,235	-	-	12,014	-	-
Zone 1	31	-	-	-	31	-	-
Wereda 6	31	-	-	-	31	-	-
Zone 2	6,383	1,875	-	-	4,508	-	-
Wereda 20	220	62	-	-	158	-	-
Wereda 21	264	91	-	-	173	-	-
Wereda 23	652	201	-	-	451	-	-
Wereda 24	5,248	1,521	-	-	3,727	-	-
Zone 3	2,819	886	-	-	1,933	-	-
Wereda 17	632	269	-	-	364	-	-
Wereda 19	1,397	389	-	-	1,008	-	-
Wereda 28	789	228	-	-	561	-	-
Zone 4	2,416	664	-	-	1,752	-	-
Wereda 11	969	262	-	-	707	-	-
Wereda 12	1,048	276	-	-	772	-	-
Wereda 15	29	10	-	-	19	-	-
Wereda 16	*	*	-	-	*	-	-
Zone 5	1,374	503	-	-	871	-	-
Wereda 8	209	81	-	-	*	-	-
Wereda 10	243	89	-	-	153	-	-
Wereda 25	922	333	-	-	590	-	-
Zone 6	4,227	1,307	-	-	2,919	-	-
Wereda 26	2,454	731	-	-	1,723	-	-
Wereda 27	1,773	576	-	-	1,197	-	-

TABLE 7-19: NUMBER OF GOATS BY SEX AND BREED, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Addis Ababa	*	*	15	-	*	25	-
Zone 1	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-
Zone 2	852	237	-	-	616	-	-
Wereda 20	*	-	-	-	*	-	-
Wereda 21	-	-	-	-	-	-	-
Wereda 23	*	*	-	-	*	-	-
Wereda 24	752	210	-	-	541	-	-
Zone 3	*	*	-	-	*	-	-
Wereda 17	*	*	-	-	*	-	-
Wereda 19	965	380	-	-	585	-	-
Wereda 28	2,654	925	-	-	1,729	-	-
Zone 4	458	111	-	-	348	-	-
Wereda 11	*	*	-	-	*	-	-
Wereda 12	*	67	-	-	*	-	-
Wereda 15	15	5	-	-	10	-	-
Wereda 16	122	28	-	-	94	-	-
Zone 5	*	*	15	-	*	25	-
Wereda 8	*	*	-	-	*	-	-
Wereda 10	59	5	15	-	15	25	-
Wereda 25	*	*	-	-	*	-	-
Zone 6	1,602	561	-	-	1,041	-	-
Wereda 26	870	341	-	-	529	-	-
Wereda 27	*	*	-	-	*	-	-

b) Rural Holdings

Geographic Areas	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Addis Ababa	*	*	-	-	*	-	-
Zone 3	*	*	-	-	*	-	-
Wereda 17	*	*	-	-	*	-	-
Wereda 19	857	339	-	-	518	-	-
Wereda 28	2,345	829	-	-	1,516	-	-
Zone 6	1,188	428	-	-	760	-	-
Wereda 26	681	280	-	-	401	-	-
Wereda 27	*	*	-	-	*	-	-

c) Urban Holdings

Geographic Areas	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Addis Ababa	2,759	819	15	-	1,900	25	-
Zone 1	-	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-	-
Zone 2	852	237	-	-	616	-	-
Wereda 20	*	-	-	-	*	-	-
Wereda 21	-	-	-	-	-	-	-
Wereda 23	*	*	-	-	*	-	-
Wereda 24	752	210	-	-	541	-	-
Zone 3	567	195	-	-	373	-	-
Wereda 17	*	*	-	-	*	-	-
Wereda 19	108	*	-	-	67	-	-
Wereda 28	*	*	-	-	*	-	-
Zone 4	458	111	-	-	348	-	-
Wereda 11	*	*	-	-	*	-	-
Wereda 12	*	67	-	-	*	-	-
Wereda 15	15	5	-	-	10	-	-
Wereda 16	122	28	-	-	94	-	-
Zone 5	*	*	15	-	*	25	-
Wereda 8	*	*	-	-	*	-	-
Wereda 10	59	5	15	-	15	25	-
Wereda 25	*	*	-	-	*	-	-
Zone 6	*	*	-	-	*	-	-
Wereda 26	*	*	-	-	*	-	-
Wereda 27	*	*	-	-	*	-	-

TABLE 7-20: ESTIMATED NUMBER OF LIVESTOCK VACCINATED BY REGION, ZONE, AND WEREDA

a) Both Urban Rural Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	46,618	1,344	86	473	-	*
Zone 1	217	-	-	-	-	-
Wereda 6	217	-	-	-	-	-
Zone 2	4,064	759	*	78	-	*
Wereda 20	*	*	-	-	-	-
Wereda 21	-	58	-	-	-	-
Wereda 23	476	*	-	*	-	-
Wereda 24	3,450	623	*	72	-	*
Zone 3	33,979	177	*	*	-	*
Wereda 17	*	*	-	*	-	*
Wereda 19	3,259	*	-	-	-	*
Wereda 28	5,509	*	*	*	-	*
Zone 4	800	-	-	-	-	-
Wereda 11	*	-	-	-	-	-
Wereda 12	634	-	-	-	-	-
Wereda 15	53	-	-	-	-	-
Wereda 16	99	-	-	-	-	-
Zone 5	924	53	*	*	-	*
Wereda 8	*	*	*	-	-	-
Wereda 10	163	20	-	-	-	-
Wereda 25	*	*	-	*	-	*
Zone 6	6,635	355	-	150	-	*
Wereda 26	3,025	249	-	*	-	-
Wereda 27	3,609	106	-	119	-	*

b) Rural Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	35,520	*	-	*	-	*
Zone 3	31,445	*	-	*	-	*
Wereda 17	*	-	-	*	-	*
Wereda 19	2,082	-	-	-	-	-
Wereda 28	4,892	*	-	*	-	*
Zone 6	4,075	*	-	91	-	-
Wereda 26	1,712	-	-	-	-	-
Wereda 27	2,364	*	-	91	-	-

c) Urban Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	11,098	1,243	86	182	-	206
Zone 1	217	-	-	-	-	-
Wereda 6	217	-	-	-	-	-
Zone 2	4,064	759	*	78	-	*
Wereda 20	*	*	-	-	-	-
Wereda 21	-	58	-	-	-	-
Wereda 23	476	*	-	*	-	-
Wereda 24	3,450	623	*	72	-	*
Zone 3	2,534	87	*	-	-	*
Wereda 17	*	*	-	-	-	-
Wereda 19	1,177	*	-	-	-	*
Wereda 28	617	*	-	-	-	-
Zone 4	800	-	-	-	-	-
Wereda 11	*	-	-	-	-	-
Wereda 12	634	-	-	-	-	-
Wereda 15	53	-	-	-	-	-
Wereda 16	99	-	-	-	-	-
Zone 5	924	53	*	*	-	*
Wereda 8	*	*	*	-	-	-
Wereda 10	163	20	-	-	-	-
Wereda 25	*	*	-	*	-	*
Zone 6	2,559	343	-	*	-	*
Wereda 26	1,314	249	-	*	-	-
Wereda 27	1,246	*	-	*	-	*

TABLE 7-21: ESTIMATED NUMBER OF LIVESTOCK AFFLICTED/DISEASED BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	5,018	4,786	1,030	402	-	42,830
Zone 1	15	-	-	-	-	-
Wereda 6	15	-	-	-	-	-
Zone 2	394	421	*	33	-	2,793
Wereda 20	*	*	-	*	-	*
Wereda 21	-	33	-	-	-	-
Wereda 23	*	*	-	-	-	*
Wereda 24	168	315	*	25	-	2,482
Zone 3	3,120	*	681	198	-	20,691
Wereda 17	*	*	*	*	-	*
Wereda 19	469	163	223	60	-	4,399
Wereda 28	1,034	720	173	*	-	4,859
Zone 4	236	182	*	*	-	694
Wereda 11	*	*	-	-	-	*
Wereda 12	118	*	-	*	-	*
Wereda 15	34	5	-	-	-	-
Wereda 16	62	82	*	*	-	375
Zone 5	312	120	*	-	-	1,291
Wereda 8	213	*	*	-	-	*
Wereda 10	40	54	-	-	-	411
Wereda 25	59	*	-	-	-	*
Zone 6	941	889	*	154	-	17,361
Wereda 26	508	619	*	127	-	9,061
Wereda 27	433	270	-	*	-	8,300

b) Rural Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	2,984	3,301	681	319	-	27,945
Zone 3	2,502	*	676	*	-	16,810
Wereda 17	*	*	*	*	-	*
Wereda 19	215	69	223	43	-	1,919
Wereda 28	899	608	168	*	-	4,478
Zone 6	482	362	*	138	-	11,135
Wereda 26	272	220	*	127	-	4,494
Wereda 27	209	*	-	*	-	6,641

c) Urban Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	2,035	1,484	*	83	-	14,885
Zone 1	15	-	-	-	-	-
Wereda 6	15	-	-	-	-	-
Zone 2	394	421	*	33	-	2,793
Wereda 20	*	*	-	*	-	*
Wereda 21	-	33	-	-	-	-
Wereda 23	*	*	-	-	-	*
Wereda 24	168	315	*	25	-	2,482
Zone 3	618	233	*	*	-	3,881
Wereda 17	*	27	-	-	-	*
Wereda 19	254	94	-	*	-	2,480
Wereda 28	135	*	*	-	-	*
Zone 4	236	182	*	*	-	694
Wereda 11	*	*	-	-	-	*
Wereda 12	118	*	-	*	-	*
Wereda 15	34	5	-	-	-	-
Wereda 16	62	82	*	*	-	375
Zone 5	312	120	*	-	-	1,291
Wereda 8	213	*	*	-	-	*
Wereda 10	40	54	-	-	-	411
Wereda 25	59	*	-	-	-	*
Zone 6	459	528	*	*	-	6,226
Wereda 26	236	399	*	-	-	4,568
Wereda 27	223	*	-	*	-	*

TABLE 7-22: ESTIMATED NUMBER OF LIVESTOCK TREATED BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	1,547	359	*	38	-	1,193
Zone 1	15	-	-	-	-	-
Wereda 6	15	-	-	-	-	-
Zone 2	61	119	-	*	-	*
Wereda 20	*	-	-	*	-	-
Wereda 21	-	17	-	-	-	-
Wereda 23	*	*	-	-	-	-
Wereda 24	20	*	-	-	-	*
Zone 3	795	*	*	*	-	489
Wereda 17	*	-	-	-	-	-
Wereda 19	246	*	-	-	-	345
Wereda 28	234	*	*	*	-	*
Zone 4	54	*	-	-	-	*
Wereda 11	-	-	-	-	-	-
Wereda 12	32	*	-	-	-	*
Wereda 15	10	5	-	-	-	-
Wereda 16	*	-	-	-	-	*
Zone 5	199	*	*	-	-	-
Wereda 8	186	*	*	-	-	-
Wereda 10	-	-	-	-	-	-
Wereda 25	*	-	-	-	-	-
Zone 6	422	160	-	*	-	*
Wereda 26	128	*	-	*	-	*
Wereda 27	294	*	-	*	-	*

b) Rural Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	660	144	-	*	-	662
Zone 3	492	*	-	*	-	390
Wereda 17	*	-	-	-	-	-
Wereda 19	93	*	-	-	-	*
Wereda 28	191	*	-	*	-	*
Zone 6	167	*	-	*	-	*
Wereda 26	57	*	-	*	-	-
Wereda 27	110	*	-	-	-	*

c) Urban Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	887	215	*	*	-	531
Zone 1	15	-	-	-	-	-
Wereda 6	15	-	-	-	-	-
Zone 2	61	119	-	*	-	*
Wereda 20	*	-	-	*	-	-
Wereda 21	-	17	-	-	-	-
Wereda 23	*	*	-	-	-	-
Wereda 24	20	*	-	-	-	*
Zone 3	303	*	*	-	-	*
Wereda 17	*	-	-	-	-	-
Wereda 19	154	*	-	-	-	*
Wereda 28	43	-	*	-	-	-
Zone 4	54	*	-	-	-	*
Wereda 11	-	-	-	-	-	-
Wereda 12	32	*	-	-	-	*
Wereda 15	10	5	-	-	-	-
Wereda 16	*	-	-	-	-	*
Zone 5	199	*	*	-	-	-
Wereda 8	186	*	*	-	-	-
Wereda 10	-	-	-	-	-	-
Wereda 25	*	-	-	-	-	-
Zone 6	255	48	-	*	-	*
Wereda 26	*	*	-	-	-	*
Wereda 27	184	*	-	*	-	*

TABLE 7-23: ESTIMATED NUMBER OF LIVESTOCK DIED BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	3,083	4,245	915	282	-	40,714
Zone 1	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-
Zone 2	250	368	*	*	-	2,693
Wereda 20	64	*	-	*	-	*
Wereda 21	-	17	-	-	-	-
Wereda 23	*	*	-	-	-	*
Wereda 24	141	286	*	*	-	2,396
Zone 3	2,048	*	580	*	-	19,430
Wereda 17	*	*	*	*	-	*
Wereda 19	200	112	218	37	-	4,155
Wereda 28	601	476	173	*	-	4,411
Zone 4	169	152	*	*	-	548
Wereda 11	*	*	-	-	-	*
Wereda 12	81	*	-	*	-	*
Wereda 15	24	5	-	-	-	-
Wereda 16	49	82	*	*	-	*
Zone 5	130	107	-	-	-	1,260
Wereda 8	*	-	-	-	-	*
Wereda 10	35	54	-	-	-	406
Wereda 25	*	*	-	-	-	*
Zone 6	486	758	*	107	-	16,783
Wereda 26	301	551	*	95	-	8,620
Wereda 27	185	206	-	*	-	8,163

b) Rural Holdings

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	1,962	*	580	231	-	26,501
Zone 3	*	*	575	*	-	15,674
Wereda 17	*	*	*	*	-	*
Wereda 19	135	*	218	24	-	1,763
Wereda 28	476	379	168	*	-	4,067
Zone 6	234	306	*	95	-	10,827
Wereda 26	167	220	*	95	-	4,303
Wereda 27	67	*	-	-	-	6,524

c) Urban Holders

Geographic Areas	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Addis Ababa	1,120	1,242	*	51	-	14,213
Zone 1	-	-	-	-	-	-
Wereda 6	-	-	-	-	-	-
Zone 2	250	368	*	*	-	2,693
Wereda 20	64	*	-	*	-	*
Wereda 21	-	17	-	-	-	-
Wereda 23	*	*	-	-	-	*
Wereda 24	141	286	*	*	-	2,396
Zone 3	320	*	*	*	-	3,756
Wereda 17	*	*	-	-	-	*
Wereda 19	65	*	-	*	-	2,393
Wereda 28	125	*	*	-	-	*
Zone 4	169	152	*	*	-	548
Wereda 11	*	*	-	-	-	*
Wereda 12	81	*	-	*	-	*
Wereda 15	24	5	-	-	-	-
Wereda 16	49	82	*	*	-	*
Zone 5	130	107	-	-	-	1,260
Wereda 8	*	-	-	-	-	*
Wereda 10	35	54	-	-	-	406
Wereda 25	*	*	-	-	-	*
Zone 6	252	452	*	*	-	5,956
Wereda 26	135	331	*	-	-	4,317
Wereda 27	117	*	-	*	-	*

TABLE 7-24: ANIMAL FEED PRACTICES OF PEASANT HOLDERS – PERCENTAGE USED BY TYPE OF FEED, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Addis Ababa	100	41.75	24.99	0.31	13.57	12.57	6.81
Zone 1	100	25	8.33	-	-	16.67	50
Wereda 6	100	25	8.33	-	-	16.67	50
Zone 2	100	41.77	10.31	0.21	21.09	16.81	9.81
Wereda 20	100	30.74	0.84	-	23.6	19.2	25.62
Wereda 21	100	*	-	-	25.63	28.75	45.63
Wereda 23	100	29.69	3.21	0.23	35.67	26	5.2
Wereda 24	100	49.83	14.94	0.23	14.23	12.09	8.69
Zone 3	100	47.46	26.84	0.32	12.39	9.35	3.64
Wereda 17	100	53.32	31.39	0.01	7.2	6.75	1.33
Wereda 19	100	39.8	16.45	1.13	15.98	17.52	9.12
Wereda 28	100	36.84	21.56	0.61	23.91	10.87	6.2
Zone 4	100	44.31	4.06	0.31	24.57	19.98	6.76
Wereda 11	100	56.35	5.7	0.34	13.43	13.34	10.85
Wereda 12	100	50.7	4	0.47	17.85	21.41	5.57
Wereda 15	100	16.47	9.71	-	28.82	32.06	12.94
Wereda 16	100	26.83	1.29	-	48.2	19.48	4.21
Zone 5	100	32.52	8.82	-	19.82	19.41	19.43
Wereda 8	100	24.17	5.66	-	17.17	29.99	23.01
Wereda 10	100	11.43	5.71	-	33.04	23.57	26.25
Wereda 25	100	40.31	10.64	-	17.67	14.78	16.6
Zone 6	100	28.05	37.87	0.39	8.1	15.07	10.53
Wereda 26	100	26.64	51.41	0.16	3.77	11.79	6.22
Wereda 27	100	29.72	21.76	0.66	13.24	18.97	15.66

b) Rural Holdings

Geographic Areas	Total (%)	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Addis Ababa	100	49.97	33.35	0.13	8.4	6.07	2.07
Zone 3	100	52.39	31.25	0.11	8.65	5.92	1.68
Wereda 17	100	55.31	33.61	0.01	4.82	5.51	0.74
Wereda 19	100	61.99	23.97	0.39	8.72	4.58	0.36
Wereda 28	100	40.76	26.14	0.32	20.29	7.58	4.91
Zone 6	100	37.45	44.23	0.23	7.14	6.85	4.1
Wereda 26	100	29.36	58.31	0.1	3.51	6.24	2.49
Wereda 27	100	49.74	22.86	0.43	12.65	7.78	6.54

c) Urban Holdings

Geographic Areas	Total (%)	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Addis Ababa	100	32.1	15.18	0.52	19.65	20.19	12.37
Zone 1	100	25	8.33	-	-	16.67	50
Wereda 6	100	25	8.33	-	-	16.67	50
Zone 2	100	41.77	10.31	0.21	21.09	16.81	9.81
Wereda 20	100	30.74	0.84	-	23.6	19.2	25.62
Wereda 21	100	*	-	-	25.63	28.75	45.63
Wereda 23	100	29.69	3.21	0.23	35.67	26	5.2
Wereda 24	100	49.83	14.94	0.23	14.23	12.09	8.69
Zone 3	100	26.01	7.64	1.24	28.67	24.26	12.18
Wereda 17	100	27.97	3.11	-	37.58	22.6	8.74
Wereda 19	100	27.93	12.42	1.52	19.87	24.45	13.81
Wereda 28	100	19.35	1.12	1.9	40.09	25.58	11.97
Zone 4	100	44.31	4.06	0.31	24.57	19.98	6.76
Wereda 11	100	56.35	5.7	0.34	13.43	13.34	10.85
Wereda 12	100	50.7	4	0.47	17.85	21.41	5.57
Wereda 15	100	16.47	9.71	-	28.82	32.06	12.94
Wereda 16	100	26.83	1.29	-	48.2	19.48	4.21
Zone 5	100	32.52	8.82	-	19.82	19.41	19.43
Wereda 8	100	24.17	5.66	-	17.17	29.99	23.01
Wereda 10	100	11.43	5.71	-	33.04	23.57	26.25
Wereda 25	100	40.31	10.64	-	17.67	14.78	16.6
Zone 6	100	21.56	33.48	0.5	8.76	20.74	14.96
Wereda 26	100	24.39	45.71	0.21	3.99	16.4	9.31
Wereda 27	100	18.71	21.15	0.79	13.56	25.13	20.67

TABLE 7-25: ANIMAL FEED PRACTICES OF PEASANT HOLDERS – NUMBER OF HOLDERS REPORTING BY TYPE OF FEED, REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Addis Ababa	19,851	16,546	345	10,791	10,978	7,318
Zone 1	31	15	-	-	15	31
Wereda 6	31	15	-	-	15	31
Zone 2	2,424	1,293	31	1,949	1,777	1,153
Wereda 20	*	*	-	142	128	177
Wereda 21	-	-	-	41	33	58
Wereda 23	528	129	*	712	666	319
Wereda 24	1,776	1,155	*	1,054	950	599
Zone 3	11,953	10,547	174	5,678	5,001	2,477
Wereda 17	7,942	*	*	2,359	*	647
Wereda 19	1,507	1,204	81	1,099	1,114	803
Wereda 28	2,504	1,898	*	2,220	1,187	1,026
Zone 4	941	251	*	784	779	453
Wereda 11	223	*	*	89	82	59
Wereda 12	544	148	*	348	439	220
Wereda 15	44	29	-	63	73	48
Wereda 16	*	15	-	284	*	*
Zone 5	724	369	-	592	563	564
Wereda 8	135	54	-	110	138	*
Wereda 10	69	50	-	114	94	74
Wereda 25	520	266	-	368	332	407
Zone 6	3,778	4,071	127	1,787	2,842	2,641
Wereda 26	2,266	2,499	29	539	1,401	1,100
Wereda 27	1,513	1,571	98	1,248	1,440	1,541

b) Rural Holdings

Geographic Areas	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Addis Ababa	12,571	11,641	109	4,643	4,152	2,160
Zone 3	10,557	9,802	61	3,919	3,251	1,374
Wereda 17	*	*	*	*	*	453
Wereda 19	694	593	*	293	230	25
Wereda 28	2,283	1,872	*	1,797	818	896
Zone 6	2,014	1,839	*	724	901	786
Wereda 26	1,242	1,221	*	229	543	368
Wereda 27	773	618	*	495	358	418

c) Urban Holdings

Geographic Areas	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Addis Ababa	7,280	4,904	236	6,148	6,826	5,158
Zone 1	31	15	-	-	15	31
Wereda 6	31	15	-	-	15	31
Zone 2	2,424	1,293	31	1,949	1,777	1,153
Wereda 20	*	*	-	142	128	177
Wereda 21	-	-	-	41	33	58
Wereda 23	528	129	*	712	666	319
Wereda 24	1,776	1,155	*	1,054	950	599
Zone 3	1,396	745	113	1,759	1,750	1,103
Wereda 17	362	*	-	530	497	*
Wereda 19	813	611	65	806	884	778
Wereda 28	221	*	*	423	369	131
Zone 4	941	251	*	784	779	453
Wereda 11	223	*	*	89	82	59
Wereda 12	544	148	*	348	439	220
Wereda 15	44	29	-	63	73	48
Wereda 16	*	15	-	284	*	*
Zone 5	724	369	-	592	563	564
Wereda 8	135	54	-	110	138	*
Wereda 10	69	50	-	114	94	74
Wereda 25	520	266	-	368	332	407
Zone 6	1,764	2,231	*	1,063	1,941	1,855
Wereda 26	1,024	1,278	*	311	859	732
Wereda 27	740	953	*	753	1,082	1,123

TABLE 7-26: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF MILK UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	55.75	22.75	0.2	21.3
Zone 1	100	50	25	-	25
Wereda 6	100	50	25	-	25
Zone 2	100	49.93	30.69	0.05	19.33
Wereda 20	100	74.12	19.85	0.36	5.67
Wereda 21	-	-	-	-	-
Wereda 23	100	51.17	42.8	-	6.03
Wereda 24	100	45.96	25.55	0.03	28.45
Zone 3	100	62.58	16.18	0.3	20.93
Wereda 17	100	70.19	8.78	0.49	20.54
Wereda 19	100	61.84	27.56	-	10.6
Wereda 28	100	46.61	25.68	0.07	27.65
Zone 4	100	49.48	44.82	-	5.7
Wereda 11	100	73.24	26.76	-	-
Wereda 12	100	30.44	65.91	-	3.65
Wereda 15	100	57.5	42.5	-	-
Wereda 16	100	65.4	21.85	-	12.75
Zone 5	100	49.11	41.73	0.12	9.04
Wereda 8	100	16.62	82.73	-	0.65
Wereda 10	100	52.49	41.25	-	6.26
Wereda 25	100	58.13	29.94	0.17	11.77
Zone 6	100	43.06	25.52	0.12	31.3
Wereda 26	100	41.63	18.88	0.03	39.46
Wereda 27	100	44.66	32.94	0.22	22.18

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF MILK UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	63.42	8.09	0.29	28.2
Zone 3	100	66.72	8.44	0.34	24.5
Wereda 17	100	74.53	2.56	0.52	22.39
Wereda 19	100	70.78	9.42	-	19.79
Wereda 28	100	47.19	22	-	30.81
Zone 6	100	43.27	5.96	-	50.77
Wereda 26	100	37.04	2.5	-	60.47
Wereda 27	100	51.64	10.6	-	37.76

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF MILK UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	47.26	38.95	0.11	13.68
Zone 1	100	50	25	-	25
Wereda 6	100	50	25	-	25
Zone 2	100	49.93	30.69	0.05	19.33
Wereda 20	100	74.12	19.85	0.36	5.67
Wereda 21	-	-	-	-	-
Wereda 23	100	51.17	42.8	-	6.03
Wereda 24	100	45.96	25.55	0.03	28.45
Zone 3	100	46.39	46.53	0.15	6.93
Wereda 17	100	34.44	60.02	0.21	5.33
Wereda 19	100	55.85	39.69	-	4.45
Wereda 28	100	43.99	42.07	0.36	13.57
Zone 4	100	49.48	44.82	-	5.7
Wereda 11	100	73.24	26.76	-	-
Wereda 12	100	30.44	65.91	-	3.65
Wereda 15	100	57.5	42.5	-	-
Wereda 16	100	65.4	21.85	-	12.75
Zone 5	100	49.11	41.73	0.12	9.04
Wereda 8	100	16.62	82.73	-	0.65
Wereda 10	100	52.49	41.25	-	6.26
Wereda 25	100	58.13	29.94	0.17	11.77
Zone 6	100	42.93	38.15	0.2	18.73
Wereda 26	100	45.04	31.04	0.05	23.87
Wereda 27	100	40.83	45.2	0.35	13.63

TABLE 7-27: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF BUTTER UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	73.6	24.71	0.03	1.65
Zone 1	100	100	-	-	-
Wereda 6	100	100	-	-	-
Zone 2	100	73.28	23.92	0.04	2.76
Wereda 20	100	68.56	31.44	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	94.31	5.48	0.22	-
Wereda 24	100	68.56	27.97	-	3.47
Zone 3	100	73.68	25.86	-	0.46
Wereda 17	100	77.67	22.03	-	0.29
Wereda 19	100	71.33	27.23	-	1.44
Wereda 28	100	66.68	32.97	-	0.35
Zone 4	100	92.45	7.55	-	-
Wereda 11	100	89.42	10.58	-	-
Wereda 12	100	82.73	17.27	-	-
Wereda 15	100	100	-	-	-
Wereda 16	100	97.47	2.53	-	-
Zone 5	100	77.39	17.06	-	5.56
Wereda 8	100	100	-	-	-
Wereda 10	100	74.97	25.03	-	-
Wereda 25	100	76.54	17.31	-	6.16
Zone 6	100	70.26	25.47	0.12	4.15
Wereda 26	100	66.73	29.02	0.04	4.21
Wereda 27	100	74.98	20.73	0.23	4.06

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF BUTTER UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	71.69	27.76	-	0.55
Zone 3	100	72.4	27.21	-	0.39
Wereda 17	100	77.34	22.36	-	0.3
Wereda 19	100	65.5	33.07	-	1.43
Wereda 28	100	63.5	36.26	-	0.24
Zone 6	100	68.56	30.15	-	1.29
Wereda 26	100	65.2	34.2	-	0.59
Wereda 27	100	73.15	24.62	-	2.23

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF BUTTER UTILIZED FOR: Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	77.35	18.75	0.09	3.81
Zone 1	100	100	-	-	-
Wereda 6	100	100	-	-	-
Zone 2	100	73.28	23.92	0.04	2.76
Wereda 20	100	68.56	31.44	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	94.31	5.48	0.22	-
Wereda 24	100	68.56	27.97	-	3.47
Zone 3	100	84.6	14.3	-	1.1
Wereda 17	100	88.73	11.27	-	-
Wereda 19	100	80.54	18	-	1.46
Wereda 28	100	88.35	10.54	-	1.1
Zone 4	100	92.45	7.55	-	-
Wereda 11	100	89.42	10.58	-	-
Wereda 12	100	82.73	17.27	-	-
Wereda 15	100	100	-	-	-
Wereda 16	100	97.47	2.53	-	-
Zone 5	100	77.39	17.06	-	5.56
Wereda 8	100	100	-	-	-
Wereda 10	100	74.97	25.03	-	-
Wereda 25	100	76.54	17.31	-	6.16
Zone 6	100	72.35	19.69	0.27	7.69
Wereda 26	100	68.65	22.49	0.08	8.79
Wereda 27	100	77.18	16.05	0.51	6.26

TABLE 7-28: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF CHEESE UTILIZED FOR: Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	76.86	21.93	0.01	1.2
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	77.8	21.9	-	0.3
Wereda 20	100	68.56	31.44	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	93.34	6.66	-	-
Wereda 24	100	74.75	24.88	-	0.38
Zone 3	100	77.95	21.51	-	0.53
Wereda 17	100	82.92	16.88	-	0.2
Wereda 19	100	74.86	23.11	-	2.03
Wereda 28	100	68.89	30.55	-	0.56
Zone 4	100	96.92	2.43	-	0.64
Wereda 11	100	94.75	5.25	-	-
Wereda 12	100	100	-	-	-
Wereda 15	100	100	-	-	-
Wereda 16	100	96.02	2.87	-	1.11
Zone 5	100	77.64	15.96	-	6.4
Wereda 8	-	-	-	-	-
Wereda 10	100	74.97	25.03	-	-
Wereda 25	100	77.8	15.39	-	6.81
Zone 6	100	71.18	25.65	0.05	3.11
Wereda 26	100	68.69	28.35	-	2.96
Wereda 27	100	74.5	22.07	0.12	3.31

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF CHEESE UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	75.66	23.66	-	0.68
Zone 3	100	77.15	22.55	-	0.3
Wereda 17	100	82.72	17.13	-	0.15
Wereda 19	100	67.8	30.49	-	1.7
Wereda 28	100	66.95	32.85	-	0.2
Zone 6	100	69	28.63	-	2.37
Wereda 26	100	66.91	30.29	-	2.79
Wereda 27	100	71.93	26.29	-	1.78

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF CHEESE UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	79.51	18.1	0.04	2.36
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	77.8	21.9	-	0.3
Wereda 20	100	68.56	31.44	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	93.34	6.66	-	-
Wereda 24	100	74.75	24.88	-	0.38
Zone 3	100	85.93	11.22	-	2.85
Wereda 17	100	96.39	-	-	3.61
Wereda 19	100	86.67	10.76	-	2.57
Wereda 28	100	82.37	14.6	-	3.03
Zone 4	100	96.92	2.43	-	0.64
Wereda 11	100	94.75	5.25	-	-
Wereda 12	100	100	-	-	-
Wereda 15	100	100	-	-	-
Wereda 16	100	96.02	2.87	-	1.11
Zone 5	100	77.64	15.96	-	6.4
Wereda 8	-	-	-	-	-
Wereda 10	100	74.97	25.03	-	-
Wereda 25	100	77.8	15.39	-	6.81
Zone 6	100	74.12	21.66	0.12	4.1
Wereda 26	100	71.21	25.59	-	3.21
Wereda 27	100	77.7	16.83	0.27	5.21

TABLE 7-29: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF BEEF UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	53.73	38.98	-	7.29
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	68.69	31.31	-	-
Wereda 20	100	74.98	25.02	-	-
Wereda 21	-	-	-	-	-
Wereda 23	-	-	-	-	-
Wereda 24	100	55.01	44.99	-	-
Zone 3	100	61.78	38.22	-	-
Wereda 17	100	75	25	-	-
Wereda 19	100	47.4	52.6	-	-
Wereda 28	100	43.16	56.84	-	-
Zone 4	100	-	100	-	-
Wereda 11	100	-	100	-	-
Wereda 12	-	-	-	-	-
Wereda 15	-	-	-	-	-
Wereda 16	-	-	-	-	-
Zone 5	100	-	73.98	-	26.02
Wereda 8	-	-	-	-	-
Wereda 10	-	-	-	-	-
Wereda 25	100	-	73.98	-	26.02
Zone 6	100	44.15	36.43	-	19.41
Wereda 26	100	24.23	67.76	-	8
Wereda 27	100	62.43	7.69	-	29.88

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF BEEF UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	57.77	33.87	-	8.36
Zone 3	100	61.68	38.32	-	-
Wereda 17	100	75	25	-	-
Wereda 19	100	47.7	52.3	-	-
Wereda 28	100	33.87	66.13	-	-
Zone 6	100	48.7	23.55	-	27.75
Wereda 26	100	25.56	59.88	-	14.56
Wereda 27	100	63.7	-	-	36.3

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF BEEF UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	42.66	52.96	-	4.38
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	68.69	31.31	-	-
Wereda 20	100	74.98	25.02	-	-
Wereda 21	-	-	-	-	-
Wereda 23	-	-	-	-	-
Wereda 24	100	55.01	44.99	-	-
Zone 3	100	62.48	37.52	-	-
Wereda 17	-	-	-	-	-
Wereda 19	100	47.01	52.99	-	-
Wereda 28	100	100	-	-	-
Zone 4	100	-	100	-	-
Wereda 11	100	-	100	-	-
Wereda 12	-	-	-	-	-
Wereda 15	-	-	-	-	-
Wereda 16	-	-	-	-	-
Zone 5	100	-	73.98	-	26.02
Wereda 8	-	-	-	-	-
Wereda 10	-	-	-	-	-
Wereda 25	100	-	73.98	-	26.02
Zone 6	100	34.98	62.41	-	2.61
Wereda 26	100	22.59	77.41	-	-
Wereda 27	100	58	34.54	-	7.46

TABLE 7-30: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF GOAT MEAT/ MUTTON UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	87.53	11.64	-	0.83
Zone 1	100	-	100	-	-
Wereda 6	100	-	100	-	-
Zone 2	100	77.39	21.38	-	1.24
Wereda 20	100	69.95	30.05	-	-
Wereda 21	100	36.67	63.33	-	-
Wereda 23	100	100	-	-	-
Wereda 24	100	77.42	20.66	-	1.91
Zone 3	100	91.03	8.92	-	0.05
Wereda 17	100	92.11	7.89	-	-
Wereda 19	100	89.52	10.48	-	-
Wereda 28	100	88.05	11.7	-	0.25
Zone 4	100	84.85	14.63	-	0.52
Wereda 11	100	76.4	22.53	-	1.07
Wereda 12	100	90.78	9.22	-	-
Wereda 15	-	-	-	-	-
Wereda 16	100	100	-	-	-
Zone 5	100	73.47	25.42	-	1.11
Wereda 8	100	72.72	27.28	-	-
Wereda 10	100	87.5	12.5	-	-
Wereda 25	100	65.24	32.84	-	1.92
Zone 6	100	83.15	11.97	-	4.87
Wereda 26	100	94.32	3.28	-	2.4
Wereda 27	100	62.87	27.76	-	9.37

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF GOAT MEAT/MUTTON UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	91.22	8.45	-	0.33
Zone 3	100	90.83	9.11	-	0.06
Wereda 17	100	92.12	7.88	-	-
Wereda 19	100	85.37	14.63	-	-
Wereda 28	100	86.88	12.82	-	0.3
Zone 6	100	94.44	2.98	-	2.58
Wereda 26	100	96.98	0.67	-	2.34
Wereda 27	100	86.84	9.87	-	3.29

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF GOAT MEAT/MUTTON UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	78.85	19.13	-	2.02
Zone 1	100	-	100	-	-
Wereda 6	100	-	100	-	-
Zone 2	100	77.39	21.38	-	1.24
Wereda 20	100	69.95	30.05	-	-
Wereda 21	100	36.67	63.33	-	-
Wereda 23	100	100	-	-	-
Wereda 24	100	77.42	20.66	-	1.91
Zone 3	100	92.95	7.05	-	-
Wereda 17	100	91.57	8.43	-	-
Wereda 19	100	92.29	7.71	-	-
Wereda 28	100	94.44	5.56	-	-
Zone 4	100	84.85	14.63	-	0.52
Wereda 11	100	76.4	22.53	-	1.07
Wereda 12	100	90.78	9.22	-	-
Wereda 15	-	-	-	-	-
Wereda 16	100	100	-	-	-
Zone 5	100	73.47	25.42	-	1.11
Wereda 8	100	72.72	27.28	-	-
Wereda 10	100	87.5	12.5	-	-
Wereda 25	100	65.24	32.84	-	1.92
Zone 6	100	66.03	25.62	-	8.35
Wereda 26	100	88.12	9.37	-	2.52
Wereda 27	100	45.15	40.99	-	13.86

TABLE 7-31: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF EGGS UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	54.53	37.87	0.02	7.57
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	53.4	42.22	-	4.38
Wereda 20	100	100	-	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	83.87	6.6	-	9.52
Wereda 24	100	48.48	47.77	-	3.76
Zone 3	100	53.75	40.38	-	5.87
Wereda 17	100	52.17	45.72	-	2.11
Wereda 19	100	64.43	27.08	-	8.49
Wereda 28	100	52.77	32.62	-	14.61
Zone 4	100	66.02	20.85	-	13.13
Wereda 11	100	86.69	8.12	-	5.19
Wereda 12	100	51.8	31.31	-	16.89
Wereda 15	100	100	-	-	-
Wereda 16	100	72.83	10.93	-	16.25
Zone 5	100	79.29	18.14	-	2.57
Wereda 8	100	93.22	6.43	-	0.35
Wereda 10	100	100	-	-	-
Wereda 25	100	64.95	30.38	-	4.67
Zone 6	100	53.58	33.12	0.1	13.21
Wereda 26	100	47.67	40.84	0.22	11.27
Wereda 27	100	58.23	27.04	-	14.73

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF EGGS UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	49.61	41.86	-	8.53
Zone 3	100	50.29	43.62	-	6.09
Wereda 17	100	51.06	46.92	-	2.03
Wereda 19	100	51.8	36.65	-	11.55
Wereda 28	100	47.57	35.65	-	16.78
Zone 6	100	46.85	34.7	-	18.44
Wereda 26	100	36.98	49.89	-	13.13
Wereda 27	100	54.74	22.57	-	22.69

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF EGGS UTILIZED FOR: Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	66.08	28.52	0.07	5.33
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	53.4	42.22	-	4.38
Wereda 20	100	100	-	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	83.87	6.6	-	9.52
Wereda 24	100	48.48	47.77	-	3.76
Zone 3	100	81.59	14.3	-	4.1
Wereda 17	100	91.41	3.55	-	5.04
Wereda 19	100	76.44	17.97	-	5.59
Wereda 28	100	85.72	13.4	-	0.87
Zone 4	100	66.02	20.85	-	13.13
Wereda 11	100	86.69	8.12	-	5.19
Wereda 12	100	51.8	31.31	-	16.89
Wereda 15	100	100	-	-	-
Wereda 16	100	72.83	10.93	-	16.25
Zone 5	100	79.29	18.14	-	2.57
Wereda 8	100	93.22	6.43	-	0.35
Wereda 10	100	100	-	-	-
Wereda 25	100	64.95	30.38	-	4.67
Zone 6	100	63.99	30.67	0.25	5.1
Wereda 26	100	64.56	26.53	0.57	8.34
Wereda 27	100	63.55	33.85	-	2.61

TABLE 7-32: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF HONEY UTILIZED FOR: Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	82.85	14.82	0.17	2.16
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	65.11	25.95	-	8.93
Wereda 20	-	-	-	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	74.6	22.71	-	2.69
Wereda 24	100	62.85	26.73	-	10.43
Zone 3	100	89.92	8.53	0.28	1.28
Wereda 17	100	96.82	2.65	-	0.53
Wereda 19	100	78.61	17.95	-	3.44
Wereda 28	100	76.48	20.03	1.03	2.46
Zone 4	100	100	-	-	-
Wereda 11	100	100	-	-	-
Wereda 12	100	100	-	-	-
Wereda 15	-	-	-	-	-
Wereda 16	-	-	-	-	-
Zone 5	100	100	-	-	-
Wereda 8	100	100	-	-	-
Wereda 10	-	-	-	-	-
Wereda 25	-	-	-	-	-
Zone 6	100	70.73	28.15	-	1.12
Wereda 26	100	52.54	45.64	-	1.82
Wereda 27	100	100	-	-	-

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF HONEY UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	89.7	10.05	-	0.25
Zone 3	100	93.89	6.04	-	0.07
Wereda 17	100	100	-	-	-
Wereda 19	100	73.73	26.27	-	-
Wereda 28	100	84.6	15.14	-	0.26
Zone 6	100	73.59	25.47	-	0.94
Wereda 26	100	49.18	49.02	-	1.8
Wereda 27	100	100	-	-	-

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF HONEY UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	72.05	22.33	0.45	5.18
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	65.11	25.95	-	8.93
Wereda 20	-	-	-	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	74.6	22.71	-	2.69
Wereda 24	100	62.85	26.73	-	10.43
Zone 3	100	76.61	16.87	1.2	5.32
Wereda 17	100	86.16	11.54	-	2.3
Wereda 19	100	89.15	-	-	10.85
Wereda 28	100	45	38.99	5	11.01
Zone 4	100	100	-	-	-
Wereda 11	100	100	-	-	-
Wereda 12	100	100	-	-	-
Wereda 15	-	-	-	-	-
Wereda 16	-	-	-	-	-
Zone 5	100	100	-	-	-
Wereda 8	100	100	-	-	-
Wereda 10	-	-	-	-	-
Wereda 25	-	-	-	-	-
Zone 6	100	66.9	31.72	-	1.37
Wereda 26	100	55.66	42.5	-	1.84
Wereda 27	100	100	-	-	-

TABLE 7-33: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF WAX UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	88.53	-	-	11.47
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	-	-	-	100
Wereda 20	-	-	-	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	-	-	-	100
Wereda 24	-	-	-	-	-
Zone 3	100	95.09	-	-	4.91
Wereda 17	100	94.27	-	-	5.73
Wereda 19	-	-	-	-	-
Wereda 28	100	100	-	-	-
Zone 4	-	-	-	-	-
Wereda 11	-	-	-	-	-
Wereda 12	-	-	-	-	-
Wereda 15	-	-	-	-	-
Wereda 16	-	-	-	-	-
Zone 5	-	-	-	-	-
Wereda 8	-	-	-	-	-
Wereda 10	-	-	-	-	-
Wereda 25	-	-	-	-	-
Zone 6	-	-	-	-	-
Wereda 26	-	-	-	-	-
Wereda 27	-	-	-	-	-

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF WAX UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	100	-	-	-
Zone 3	100	100	-	-	-
Wereda 17	100	100	-	-	-
Wereda 19	-	-	-	-	-
Wereda 28	100	100	-	-	-
Zone 6	-	-	-	-	-
Wereda 26	-	-	-	-	-
Wereda 27	-	-	-	-	-

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF WAX UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	-	-	-	100
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	-	-	-	100
Wereda 20	-	-	-	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	-	-	-	100
Wereda 24	-	-	-	-	-
Zone 3	100	-	-	-	100
Wereda 17	100	-	-	-	100
Wereda 19	-	-	-	-	-
Wereda 28	-	-	-	-	-
Zone 4	-	-	-	-	-
Wereda 11	-	-	-	-	-
Wereda 12	-	-	-	-	-
Wereda 15	-	-	-	-	-
Wereda 16	-	-	-	-	-
Zone 5	-	-	-	-	-
Wereda 8	-	-	-	-	-
Wereda 10	-	-	-	-	-
Wereda 25	-	-	-	-	-
Zone 6	-	-	-	-	-
Wereda 26	-	-	-	-	-
Wereda 27	-	-	-	-	-

TABLE 7-34: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BYREGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF WOOL UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	-	100	-	-
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	-	-	-	-	-
Wereda 20	-	-	-	-	-
Wereda 21	-	-	-	-	-
Wereda 23	-	-	-	-	-
Wereda 24	-	-	-	-	-
Zone 3	-	-	-	-	-
Wereda 17	-	-	-	-	-
Wereda 19	-	-	-	-	-
Wereda 28	-	-	-	-	-
Zone 4	100	-	100	-	-
Wereda 11	100	-	100	-	-
Wereda 12	-	-	-	-	-
Wereda 15	-	-	-	-	-
Wereda 16	-	-	-	-	-
Zone 5	-	-	-	-	-
Wereda 8	-	-	-	-	-
Wereda 10	-	-	-	-	-
Wereda 25	-	-	-	-	-
Zone 6	-	-	-	-	-
Wereda 26	-	-	-	-	-
Wereda 27	-	-	-	-	-

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF WOOL UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	-	-	-	-	-
Zone 3	-	-	-	-	-
Wereda 17	-	-	-	-	-
Wereda 19	-	-	-	-	-
Wereda 28	-	-	-	-	-
Zone 6	-	-	-	-	-
Wereda 26	-	-	-	-	-
Wereda 27	-	-	-	-	-

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF WOOL UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	-	100	-	-
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	-	-	-	-	-
Wereda 20	-	-	-	-	-
Wereda 21	-	-	-	-	-
Wereda 23	-	-	-	-	-
Wereda 24	-	-	-	-	-
Zone 3	-	-	-	-	-
Wereda 17	-	-	-	-	-
Wereda 19	-	-	-	-	-
Wereda 28	-	-	-	-	-
Zone 4	100	-	100	-	-
Wereda 11	100	-	100	-	-
Wereda 12	-	-	-	-	-
Wereda 15	-	-	-	-	-
Wereda 16	-	-	-	-	-
Zone 5	-	-	-	-	-
Wereda 8	-	-	-	-	-
Wereda 10	-	-	-	-	-
Wereda 25	-	-	-	-	-
Zone 6	-	-	-	-	-
Wereda 26	-	-	-	-	-
Wereda 27	-	-	-	-	-

TABLE 7-35: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF HIDES UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	47.7	49.86	-	2.44
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	19.03	71.5	-	9.47
Wereda 20	100	16.68	83.32	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	-	100	-	-
Wereda 24	100	20.18	68.6	-	11.22
Zone 3	100	67.33	32.66	-	0.02
Wereda 17	100	97.51	2.49	-	-
Wereda 19	100	44.09	55.91	-	-
Wereda 28	100	47.35	52.6	-	0.05
Zone 4	100	20.61	79.39	-	-
Wereda 11	100	14.12	85.88	-	-
Wereda 12	-	-	-	-	-
Wereda 15	100	-	100	-	-
Wereda 16	100	100	-	-	-
Zone 5	100	11.43	82.22	-	6.35
Wereda 8	100	-	54.53	-	45.47
Wereda 10	-	-	-	-	-
Wereda 25	100	13.29	86.71	-	-
Zone 6	100	58.74	41.26	-	-
Wereda 26	100	39.6	60.4	-	-
Wereda 27	100	76.14	23.86	-	-

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF HIDES UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	74.43	25.55	-	0.02
Zone 3	100	71.81	28.17	-	0.02
Wereda 17	100	100	-	-	-
Wereda 19	100	45.69	54.31	-	-
Wereda 28	100	48.86	51.08	-	0.06
Zone 6	100	84.6	15.4	-	-
Wereda 26	100	57.36	42.64	-	-
Wereda 27	100	100	-	-	-

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF HIDES UTILIZED FOR: Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	23.8	71.6	-	4.6
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	19.03	71.5	-	9.47
Wereda 20	100	16.68	83.32	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	-	100	-	-
Wereda 24	100	20.18	68.6	-	11.22
Zone 3	100	40.79	59.21	-	-
Wereda 17	100	50	50	-	-
Wereda 19	100	40.76	59.24	-	-
Wereda 28	100	35.14	64.86	-	-
Zone 4	100	20.61	79.39	-	-
Wereda 11	100	14.12	85.88	-	-
Wereda 12	-	-	-	-	-
Wereda 15	100	-	100	-	-
Wereda 16	100	100	-	-	-
Zone 5	100	11.43	82.22	-	6.35
Wereda 8	100	-	54.53	-	45.47
Wereda 10	-	-	-	-	-
Wereda 25	100	13.29	86.71	-	-
Zone 6	100	35.58	64.42	-	-
Wereda 26	100	29.69	70.31	-	-
Wereda 27	100	43.69	56.31	-	-

TABLE 7-36: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES BY REGION, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Areas	Total (%)	PERCENT OF SKIN UTILIZED FOR: Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	37.43	62.3	-	0.27
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	25.56	74.44	-	-
Wereda 20	-	-	-	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	18.28	81.72	-	-
Wereda 24	100	28.45	71.55	-	-
Zone 3	100	39.86	59.73	-	0.4
Wereda 17	100	42.42	56.93	-	0.65
Wereda 19	100	30.47	69.53	-	-
Wereda 28	100	36.71	63.29	-	-
Zone 4	100	36.08	63.92	-	-
Wereda 11	-	-	-	-	-
Wereda 12	100	34.74	65.26	-	-
Wereda 15	-	-	-	-	-
Wereda 16	100	50	50	-	-
Zone 5	100	38.51	61.49	-	-
Wereda 8	100	100	-	-	-
Wereda 10	100	74.95	25.05	-	-
Wereda 25	100	20	80	-	-
Zone 6	100	34.95	65.05	-	-
Wereda 26	100	28.9	71.1	-	-
Wereda 27	100	50.41	49.59	-	-

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF SKIN UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	40.37	59.63	-	-
Zone 3	100	41.02	58.98	-	-
Wereda 17	100	43.11	56.89	-	-
Wereda 19	100	34.41	65.59	-	-
Wereda 28	100	36.92	63.08	-	-
Zone 6	100	37.34	62.66	-	-
Wereda 26	100	30.48	69.52	-	-
Wereda 27	100	60.93	39.07	-	-

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF SKIN UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Addis Ababa	100	28.73	70.19	-	1.08
Zone 1	-	-	-	-	-
Wereda 6	-	-	-	-	-
Zone 2	100	25.56	74.44	-	-
Wereda 20	-	-	-	-	-
Wereda 21	-	-	-	-	-
Wereda 23	100	18.28	81.72	-	-
Wereda 24	100	28.45	71.55	-	-
Zone 3	100	28.2	67.31	-	4.49
Wereda 17	100	-	59.31	-	40.69
Wereda 19	100	28.32	71.68	-	-
Wereda 28	100	35.27	64.73	-	-
Zone 4	100	36.08	63.92	-	-
Wereda 11	-	-	-	-	-
Wereda 12	100	34.74	65.26	-	-
Wereda 15	-	-	-	-	-
Wereda 16	100	50	50	-	-
Zone 5	100	38.51	61.49	-	-
Wereda 8	100	100	-	-	-
Wereda 10	100	74.95	25.05	-	-
Wereda 25	100	20	80	-	-
Zone 6	100	28.48	71.52	-	-
Wereda 26	100	23.03	76.97	-	-
Wereda 27	100	35.61	64.39	-	-

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENTS OF VARIATION FOR SELECTED LIVESTOCK VARIABLES

Annex Tables 7.1 and 7.9

b) Rural Holdings

Geographic Areas	Total (%)	PERCENT OF SKIN UTILIZED FOR		
		Household Consumption	Sale	Wages in Kind
Addis Ababa	100	40.37	59.63	
Zone 3	100	41.02	58.98	
Woreda 17	100	43.11	56.89	
Woreda 19	100	34.41	65.59	
Woreda 28	100	36.92	63.08	
Zone 6	100	37.34	62.66	
Woreda 26	100	30.48	69.52	
Woreda 27	100	60.93	39.07	

c) Urban Holdings

Geographic Areas	Total (%)	PERCENT OF SKIN UTILIZED FOR		
		Household Consumption	Sale	Wages in Kind
Addis Ababa	100	28.73	70.19	
Zone 1	-	-	-	
Woreda 6	-	-	-	
Zone 2	100	25.56	74.44	
Woreda 20	-	-	-	
Woreda 21	-	-	-	
Woreda 23	-	-	-	
Woreda 24	-	-	-	
Zone 3	100	28.2	67.31	
Woreda 17	100	40.69	59.31	
Woreda 19	100	28.32	71.68	
Woreda 28	100	35.27	64.73	
Zone 4	100	36.08	63.92	
Woreda 11	-	-	-	
Woreda 12	100	34.74	65.26	
Woreda 13	-	-	-	
Woreda 16	100	50	50	
Zone 5	100	38.51	61.49	
Woreda 5	100	100	-	
Woreda 10	100	74.95	25.05	
Woreda 25	100	20	80	
Zone 6	100	28.48	71.52	
Woreda 26	100	23.03	76.97	
Woreda 27	100	35.61	64.39	

ANNEX TABLES PRESENTING ESTIMATES,
STANDARD ERRORS AND COEFFICIENTS OF VARIATION
FOR SELECTED LIVESTOCK VARIABLES

Annex Tables 7.1 and 7.9

Annex Table 7.1- Estimates of Livestock, Standard Error and Coefficient of Variation by Type, Zone, and Wereda

GEOGRAPHIC AREA	CATTLE			SHEEP			GOATS		
	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	97,215	19,625	20	29,682	2,640	9	18,861	9,856	52
Zone 1	325	-	-	31	-	-	-	-	-
Wereda 6	325	-	-	31	-	-	-	-	-
Zone 2	11,258	845	8	6,383	746	12	852	137	16
Wereda 20	512	70	14	220	58	26	17	14	87
Wereda 21	8	-	-	264	-	-	-	-	-
Wereda 23	2,239	304	14	652	218	33	84	46	54
Wereda 24	8,499	785	9	5,248	711	14	752	128	17
Zone 3	64,470	19,565	30	12,335	2,398	19	15,481	9,839	64
Wereda 17	42,694	19,488	46	4,472	2,219	50	11,863	9,811	83
Wereda 19	6,964	603	9	1,861	269	14	965	145	15
Wereda 28	14,813	1,623	11	6,002	870	14	2,654	723	27
Zone 4	3,057	382	12	2,416	449	19	458	169	37
Wereda 11	468	277	59	969	327	34	15	16	105
Wereda 12	1,440	258	18	1,048	190	18	307	160	52
Wereda 15	237	-	-	29	-	-	15	-	-
Wereda 16	911	49	5	370	243	66	122	51	42
Zone 5	2,701	498	18	1,374	192	14	467	270	58
Wereda 8	860	212	25	209	94	45	179	147	82
Wereda 10	228	-	-	243	-	-	59	-	-
Wereda 25	1,614	450	28	922	167	18	229	226	99
Zone 6	15,403	1,115	7	7,143	649	9	1,602	455	28
Wereda 26	9,338	680	7	4,191	465	11	870	234	27
Wereda 27	6,065	883	15	2,952	453	15	732	390	53

Cont'd

GEOGRAPHIC AREA	HORSES			ASSES			MULES			CAMELS		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	2,135	794	37	19,623	4,507	23	809	397	49	-	-	-
Zone 2	161	38	24	2,518	325	13	-	-	-	-	-	-
Wereda 20	25	22	87	33	28	84	-	-	-	-	-	-
Wereda 23	-	-	-	242	130	54	-	-	-	-	-	-
Wereda 24	136	32	23	2,243	296	13	-	-	-	-	-	-
Zone 3	1,663	791	48	12,858	4,478	35	658	395	60	-	-	-
Wereda 17	1,343	788	59	9,066	4,468	49	577	394	68	-	-	-
Wereda 19	44	16	35	1,279	125	10	31	14	44	-	-	-
Wereda 28	276	70	25	2,513	279	11	50	28	57	-	-	-
Zone 4	37	15	40	379	65	17	-	-	-	-	-	-
Wereda 11	-	-	-	71	46	65	-	-	-	-	-	-
Wereda 12	16	12	78	143	42	29	-	-	-	-	-	-
Wereda 16	21	8	38	165	18	11	-	-	-	-	-	-
Zone 5	14	14	101	167	78	47	-	-	-	-	-	-
Wereda 8	14	14	101	66	64	96	-	-	-	-	-	-
Wereda 25	-	-	-	101	46	45	-	-	-	-	-	-
Zone 6	261	47	18	3,701	378	10	150	37	24	-	-	-
Wereda 26	194	38	20	2,264	235	10	118	31	26	-	-	-
Wereda 27	67	28	42	1,437	297	21	33	20	62	-	-	-

Annex Table 7.2- Estimates of Cattle, Standard Error and Coefficient of Variation by Age group, Zone, and Wereda

Male Cattle

GEOGRAPHIC AREA	<6MONTHS			6MONTHS -<1YEAR			1-<3YEARS			3-<10YEARS			10YAERS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	3,670	352	10	3,027	515	17	5,085	1,020	20	31,574	9,422	30	4,372	1,536	35
Zone 2	665	87	13	546	69	13	607	73	12	2,102	267	13	116	33	28
Wereda 20	11	10	90	34	30	87	11	10	90	33	28	85	-	-	-
Wereda 23	212	64	30	133	39	30	76	18	23	96	77	81	-	-	-
Wereda 24	442	57	13	379	49	13	520	70	13	1,973	254	13	116	33	28
Zone 3	1,794	320	18	1,728	503	29	3,306	1,007	30	24,184	9,409	39	3,609	1,532	42
Wereda 17	926	308	33	1,017	494	49	2,178	999	46	18,119	9,390	52	2,887	1,526	53
Wereda 19	325	50	15	227	43	19	432	70	16	1,510	170	11	354	66	19
Wereda 28	543	70	13	484	83	17	696	103	15	4,555	575	13	368	113	31
Zone 4	228	44	19	194	36	18	118	36	30	139	39	28	-	-	-
Wereda 11	17	11	64	40	23	59	23	21	95	50	34	68	-	-	-
Wereda 12	119	41	35	108	26	24	54	17	31	22	12	56	-	-	-
Wereda 15	19	-	-	10	-	-	5	-	-	5	-	-	-	-	-
Wereda 16	73	12	17	36	9	24	37	23	63	62	13	21	-	-	-
Zone 5	229	43	19	152	44	29	162	65	40	103	30	29	7	7	100
Wereda 8	62	21	34	63	34	54	62	21	34	47	22	47	-	-	-
Wereda 10	25	-	-	5	-	-	-	-	-	5	-	-	-	-	-
Wereda 25	142	38	27	83	28	33	100	61	61	52	20	38	7	7	100
Zone 6	754	102	14	407	64	16	891	128	14	5,046	410	8	641	106	17
Wereda 26	415	58	14	239	37	15	556	72	13	3,602	301	8	487	82	17
Wereda 27	339	84	25	169	52	31	335	106	32	1,444	278	19	155	67	44

Female Cattle

GEOGRAPHIC AREA	<6MONTHS			6MONTHS -<1YEAR			1-<3YEARS			3-<10YAERS			10YAERS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	4,624	575	12	4,127	685	17	8,419	1,684	20	30,878	4,322	14	1,438	301	21
Zone 1	46	-	-	46	-	-	62	-	-	170	-	-	-	-	-
Wereda 6	46	-	-	46	-	-	62	-	-	170	-	-	-	-	-
Zone 2	661	79	12	604	86	14	1,124	119	11	4,724	343	7	110	35	32
Wereda 20	42	10	25	61	32	53	58	21	36	260	32	12	-	-	-
Wereda 21	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-
Wereda 23	161	26	16	161	52	33	273	68	25	1,125	116	10	5	5	101
Wereda 24	459	74	16	382	60	16	785	95	12	3,339	321	10	105	35	33
Zone 3	2,717	559	21	2,416	670	28	5,207	1,672	32	18,436	4,279	23	1,075	295	27
Wereda 17	1,406	541	38	1,380	655	47	3,361	1,655	49	10,811	4,227	39	609	244	40
Wereda 19	477	91	19	368	64	17	637	82	13	2,409	272	11	223	51	23
Wereda 28	833	107	13	668	129	19	1,208	222	18	5,215	604	12	242	157	65
Zone 4	285	35	12	186	36	19	383	88	23	1,485	188	13	38	20	54
Wereda 11	29	24	83	25	17	69	61	34	55	212	122	57	11	11	99
Wereda 12	115	23	20	95	21	22	227	73	32	695	130	19	4	4	104
Wereda 15	53	-	-	15	-	-	19	-	-	106	-	-	5	-	-
Wereda 16	88	10	11	51	24	48	76	36	47	471	62	13	17	17	96
Zone 5	213	62	29	203	67	33	315	61	19	1,250	237	19	68	17	25
Wereda 8	59	12	20	85	32	37	87	37	42	341	119	35	54	14	27
Wereda 10	30	-	-	20	-	-	40	-	-	99	-	-	5	-	-
Wereda 25	124	60	49	98	59	60	189	49	26	810	206	25	9	9	104
Zone 6	702	83	12	672	81	12	1,328	121	9	4,813	404	8	148	38	26
Wereda 26	308	52	17	354	57	16	684	74	11	2,640	229	9	54	23	42
Wereda 27	394	64	16	318	57	18	644	95	15	2,173	332	15	94	31	33

Annex Table 7.3- Estimates of Sheep, Standard Error and Coefficient of Variation by Age group, Zone, and Wereda

Male Sheep

GEOGRAPHIC AREA	<6MONTHS			6MONTHS - <1YEAR			1- < 2YEARS			2 YEARS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	4,243	468	11	1,697	161	10	1,302	145	11	2,145	585	27
Zone 2	822	95	12	541	95	18	241	46	19	271	55	20
Wereda 20	34	29	84	20	8	40	-	-	-	8	7	87
Wereda 21	50	-	-	25	-	-	17	-	-	-	-	-
Wereda 23	84	30	36	64	28	45	35	18	52	18	12	67
Wereda 24	655	86	13	433	91	21	189	42	22	244	53	22
Zone 3	1,692	428	25	573	114	20	499	102	20	1,258	571	45
Wereda 17	714	398	56	171	88	51	109	65	60	723	565	78
Wereda 19	263	52	20	82	26	31	95	24	26	94	23	24
Wereda 28	716	150	21	320	69	22	295	74	25	440	82	19
Zone 4	328	67	21	69	25	36	78	24	30	189	76	40
Wereda 11	107	31	29	22	17	77	25	18	73	107	68	63
Wereda 12	148	24	16	34	13	38	36	12	34	58	30	52
Wereda 15	5	-	-	-	-	-	-	-	-	5	-	-
Wereda 16	68	55	80	13	12	95	17	9	52	19	18	95
Zone 5	243	27	11	53	10	19	97	41	42	110	46	42
Wereda 8	44	13	30	22	8	36	15	4	27	-	-	-
Wereda 10	54	-	-	25	-	-	10	-	-	-	-	-
Wereda 25	144	24	17	7	7	100	72	40	57	110	46	42
Zone 6	1,158	147	13	461	56	12	388	80	21	317	66	21
Wereda 26	683	98	14	290	37	13	192	39	20	188	40	21
Wereda 27	475	109	23	170	42	25	195	69	35	129	53	41

Female Sheep

GEOGRAPHIC AREA	<6MONTHS			6MONTHS - <1YEAR			1- < 2YEARS			2 YEARS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	4,034	383	10	2,090	236	11	2,249	202	9	11,923	1,167	10
Zone 1	15	-	-	15	-	-	-	-	-	-	-	-
Wereda 6	15	-	-	15	-	-	-	-	-	-	-	-
Zone 2	954	132	14	269	55	20	461	68	15	2,824	380	13
Wereda 20	53	13	24	-	-	-	20	6	31	84	23	28
Wereda 21	25	-	-	8	-	-	25	-	-	116	-	-
Wereda 23	103	47	46	37	16	44	42	34	80	269	83	31
Wereda 24	773	122	16	224	52	23	375	59	16	2,355	370	16
Zone 3	1,482	318	21	930	192	21	921	164	18	4,981	1,044	21
Wereda 17	382	248	65	288	143	50	260	110	42	1,826	979	54
Wereda 19	252	58	23	187	40	22	143	40	28	747	139	19
Wereda 28	849	190	22	456	122	27	518	114	22	2,408	336	14
Zone 4	386	70	18	179	54	30	119	41	35	1,068	218	20
Wereda 11	132	36	27	82	47	57	63	33	53	430	169	39
Wereda 12	183	40	22	91	28	30	50	24	48	448	97	22
Wereda 15	5	-	-	-	-	-	-	-	-	15	-	-
Wereda 16	66	45	68	6	6	100	6	6	100	175	97	55
Zone 5	219	72	33	88	23	27	68	24	35	496	72	14
Wereda 8	50	32	66	23	11	47	21	20	98	34	33	96
Wereda 10	30	-	-	15	-	-	30	-	-	79	-	-
Wereda 25	140	64	46	50	21	42	18	13	73	382	64	17
Zone 6	977	136	14	608	111	18	679	85	13	2,555	276	11
Wereda 26	506	82	16	361	83	23	338	59	17	1,633	223	14
Wereda 27	470	109	23	248	74	30	342	61	18	922	162	18

Annex Table 7.4- Estimates of Goats, Standard Error and Coefficient of Variation by Age group, Zone, and Wereda

Male Goats

GEOGRAPHIC AREA	<6MONTHS			6MONTHS - <1YEAR			1- < 2YEARS			2 YEARS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	2,122	752	35	2,168	1,630	75	922	631	68	1,296	635	49
Zone 2	136	30	22	40	14	35	4	3	88	57	25	44
Wereda 23	17	14	79	9	9	105	-	-	-	-	-	-
Wereda 24	119	27	23	31	10	33	4	3	88	57	25	44
Zone 3	1,512	741	49	1,948	1,629	84	887	631	71	1,093	633	58
Wereda 17	992	732	74	1,742	1,628	93	675	626	93	725	620	86
Wereda 19	146	36	24	89	25	28	58	21	37	88	35	40
Wereda 28	373	113	30	117	43	37	154	75	48	281	123	44
Zone 4	73	26	36	21	14	67	-	-	-	17	10	56
Wereda 11	8	8	105	-	-	-	-	-	-	4	4	105
Wereda 12	46	24	53	8	5	68	-	-	-	13	9	65
Wereda 15	5	-	-	-	-	-	-	-	-	-	-	-
Wereda 16	15	6	40	13	13	100	-	-	-	-	-	-
Zone 5	82	51	62	42	25	60	7	7	101	29	21	71
Wereda 8	41	40	98	7	7	101	7	7	101	17	16	100
Wereda 10	10	-	-	10	-	-	-	-	-	-	-	-
Wereda 25	31	31	100	25	24	96	-	-	-	12	12	100
Zone 6	319	108	34	118	47	39	24	17	73	100	38	38
Wereda 26	149	42	28	79	33	41	24	17	73	89	36	40
Wereda 27	170	100	59	39	33	86	-	-	-	12	12	104

Female Goats

GEOGRAPHIC AREA	<6MONTHS			6MONTHS - <1YEAR			1- < 2 YEARS			2 YEARS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	1,670	501	30	2,429	1,629	67	1,613	741	46	6,641	3,449	52
Zone 2	135	30	22	61	17	28	77	22	29	342	64	19
Wereda 20	-	-	-	-	-	-	-	-	-	17	14	87
Wereda 23	18	13	71	-	-	-	9	6	67	30	22	72
Wereda 24	117	27	23	61	17	28	68	21	32	296	58	20
Zone 3	1,189	489	41	2,091	1,625	78	1,307	735	56	5,454	3,443	63
Wereda 17	760	482	63	1,754	1,622	92	1,059	732	69	4,156	3,431	83
Wereda 19	98	25	26	93	28	31	92	29	31	301	54	18
Wereda 28	331	84	25	244	94	39	156	56	36	998	276	28
Zone 4	31	12	41	58	60	103	31	23	73	229	85	37
Wereda 11	-	-	-	-	-	-	-	-	-	4	4	105
Wereda 12	21	12	54	58	60	103	12	12	103	149	80	54
Wereda 15	5	-	-	-	-	-	-	-	-	5	-	-
Wereda 16	4	5	106	-	-	-	19	19	100	71	28	39
Zone 5	29	10	35	94	64	68	5	-	-	180	129	72
Wereda 8	8	8	100	58	56	97	-	-	-	41	41	100
Wereda 10	15	-	-	5	-	-	5	-	-	15	-	-
Wereda 25	6	6	100	31	31	100	-	-	-	124	122	99
Zone 6	286	103	36	126	66	53	193	95	49	436	109	25
Wereda 26	139	43	31	70	37	53	39	21	54	281	76	27
Wereda 27	147	94	64	56	55	99	154	93	60	155	78	50

Annex Table 7.5- Estimates of Horses, Standard Error and Coefficient of Variation by Age group, Zone, and Wereda

GEOGRAPHIC AREA	MALE						FEMALE					
	<3YEARS			3YEARS & OLDER			<3YEARS			3YEARS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	187	163	87	1,905	674	35	4	5	125	40	23	59
Zone 2	4	3	88	157	38	24	-	-	-	-	-	-
Wereda 20	-	-	-	25	22	87	-	-	-	-	-	-
Wereda 24	4	3	88	132	31	23	-	-	-	-	-	-
Zone 3	175	163	93	1,456	672	46	4	5	125	28	20	72
Wereda 17	164	163	99	1,179	669	57	-	-	-	-	-	-
Wereda 19	-	-	-	44	16	35	-	-	-	-	-	-
Wereda 28	12	11	92	233	62	27	4	5	125	28	20	72
Zone 4	-	-	-	25	9	36	-	-	-	12	12	103
Wereda 12	-	-	-	4	4	99	-	-	-	12	12	103
Wereda 16	-	-	-	21	8	38	-	-	-	-	-	-
Zone 5	-	-	-	14	14	101	-	-	-	-	-	-
Wereda 8	-	-	-	14	14	101	-	-	-	-	-	-
Zone 6	8	8	100	252	47	18	-	-	-	-	-	-
Wereda 26	8	8	100	185	37	20	-	-	-	-	-	-
Wereda 27	-	-	-	67	28	42	-	-	-	-	-	-

Annex Table 7.6- Estimates of Asses, Standard Error and Coefficient of Variation by Age group, Zone, and Wereda

GEOGRAPHIC AREA	MALE						FEMALE					
	<3YEARS			3YEARS & OLDER			<3YEARS			3YEARS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	649	122	19	16,540	4,489	27	602	77	13	1,832	213	12
Zone 2	22	11	50	2,403	315	13	-	-	-	93	30	32
Wereda 20	-	-	-	33	28	84	-	-	-	-	-	-
Wereda 23	8	7	96	229	126	55	-	-	-	5	5	100
Wereda 24	15	9	58	2,141	287	13	-	-	-	88	29	33
Zone 3	235	89	38	12,161	4,475	37	107	37	35	355	101	28
Wereda 17	111	82	73	8,693	4,465	51	39	30	75	223	93	42
Wereda 19	69	21	31	1,010	104	10	67	23	34	132	39	30
Wereda 28	55	29	52	2,458	276	11	-	-	-	-	-	-
Zone 4	15	11	70	316	65	20	23	19	81	26	8	30
Wereda 11	8	7	98	64	40	63	-	-	-	-	-	-
Wereda 12	8	7	100	127	44	35	4	4	100	4	4	104
Wereda 16	-	-	-	125	24	19	19	18	95	21	6	29
Zone 5	17	16	97	117	48	41	17	16	100	17	16	97
Wereda 8	17	16	97	17	16	97	17	16	100	17	16	97
Wereda 25	-	-	-	101	46	45	-	-	-	-	-	-
Zone 6	360	80	22	1,543	133	9	456	63	14	1,342	184	14
Wereda 26	161	38	24	1,236	115	9	204	42	20	662	99	15
Wereda 27	199	70	35	307	66	22	251	47	19	680	155	23

Annex Table 7.7- Estimates of Mules, Standard Error and Coefficient of Variation by Age group, Zone, and Wereda

	MALE						FEMALE					
	<3YEARS			3YEARS & OLDER			<3YEARS			3YEARS & OLDER		
GEOGRAPHIC AREA	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	28	18	65	640	399	62	-	-	-	141	129	91
Zone 3	20	16	82	502	397	79	-	-	-	136	128	94
Wereda 17	-	-	-	449	397	88	-	-	-	128	128	100
Wereda 19	5	5	100	27	13	49	-	-	-	-	-	-
Wereda 28	15	16	102	26	16	60	-	-	-	8	10	125
Zone 6	8	8	100	137	34	25	-	-	-	5	5	100
Wereda 26	8	8	100	105	27	26	-	-	-	5	5	100
Wereda 27	-	-	-	33	20	62	-	-	-	-	-	-

Annex Table 7.8 - Estimates of Poultry, Standard Error and Coefficient of Variation By Type, Zone, and Wereda

GEOGRAPHIC AREA	Total Poultry			Cocks			Cockerels			Pullets			Non-laying Hens			Chicks			Laying Hens		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	100,163	18,646	19	11,731	2,816	24	5,778	688	12	7,764	740	10	4,994	658	13	30,245	6,678	22	39,652	9,375	24
Zone 2	10,621	1,100	10	1,413	161	11	610	115	19	975	195	20	682	146	21	3,187	466	15	3,752	395	11
Wereda 20	278	126	45	-	-	-	17	17	100	43	26	61	23	19	85	137	89	65	58	25	42
Wereda 23	1,218	407	33	134	49	37	5	5	101	210	125	59	155	76	49	393	169	43	322	118	37
Wereda 24	9,125	1,014	11	1,280	153	12	588	114	19	723	148	20	504	124	25	2,658	425	16	3,372	376	11
Zone 3	62,151	18,430	30	7,743	2,789	36	3,284	626	19	3,153	501	16	2,672	588	22	18,728	6,610	35	26,570	9,314	35
Wereda 17	38,211	18,306	48	5,043	2,776	55	1,295	481	37	674	274	41	1,289	540	42	11,631	6,551	56	18,280	9,285	51
Wereda 19	9,296	1,212	13	1,062	141	13	928	315	34	1,145	298	26	805	200	25	2,619	403	15	2,737	272	10
Wereda 28	14,644	1,752	12	1,638	223	14	1,062	248	23	1,335	295	22	579	115	20	4,478	787	18	5,552	680	12
Zone 4	3,024	496	16	438	93	21	109	39	36	389	129	33	196	84	43	939	170	18	954	197	21
Wereda 11	728	317	44	154	71	46	15	15	98	112	89	80	60	43	71	109	79	73	277	120	43
Wereda 12	1,594	356	22	170	50	29	70	33	47	271	93	34	33	17	50	603	143	24	447	154	34
Wereda 15	24	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-
Wereda 16	678	137	20	109	33	30	23	15	63	6	6	100	102	70	69	227	46	20	210	24	12
Zone 5	2,450	705	29	236	82	35	262	121	46	565	215	38	227	105	46	616	267	43	544	148	27
Wereda 8	688	649	94	41	39	95	110	105	95	179	170	95	14	13	97	200	190	95	144	136	94
Wereda 10	183	-	-	35	-	-	5	-	-	30	-	-	5	-	-	25	-	-	84	-	-
Wereda 25	1,579	276	17	160	72	45	147	60	41	357	131	37	208	104	50	392	188	48	315	56	18
Zone 6	21,917	2,462	11	1,900	335	18	1,513	226	15	2,681	443	17	1,216	219	18	6,774	761	11	7,833	956	12
Wereda 26	10,258	1,179	12	814	127	16	795	159	20	1,354	236	17	505	86	17	3,034	475	16	3,756	457	12
Wereda 27	11,660	2,161	19	1,086	310	29	718	161	22	1,327	375	28	711	201	28	3,740	595	16	4,077	840	21

Annex Table 7.9- Estimates of Beehives, Standard Error and Coefficient of variation by Type, Zone, and Wereda

GEOGRAPHIC AREA	ALL BEEHIVES			TRADITIONAL			INTERMEDIATE			MODERN		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Addis Ababa	4,231	756	18	670	139	21	3,543	743	21	18	12	68
Zone 2	1,336	393	29	-	-	-	1,336	393	29	-	-	-
Wereda 23	297	207	70	-	-	-	297	207	70	-	-	-
Wereda 24	1,039	334	32	-	-	-	1,039	334	32	-	-	-
Zone 3	1,167	479	41	420	117	28	738	464	63	10	9	93
Wereda 17	711	461	65	115	81	71	597	454	76	-	-	-
Wereda 19	246	114	47	105	57	54	141	99	71	-	-	-
Wereda 28	210	64	31	200	62	31	-	-	-	10	9	93
Zone 4	141	82	58	-	-	-	141	82	58	-	-	-
Wereda 11	62	62	100	-	-	-	62	62	100	-	-	-
Wereda 12	79	53	68	-	-	-	79	53	68	-	-	-
Zone 5	200	152	76	-	-	-	200	152	76	-	-	-
Wereda 8	138	139	101	-	-	-	138	139	101	-	-	-
Wereda 25	62	62	100	-	-	-	62	62	100	-	-	-
Zone 6	1,387	397	29	250	75	30	1,129	390	35	8	8	100
Wereda 26	1,027	363	35	159	66	41	860	357	41	8	8	100
Wereda 27	360	161	45	91	36	39	268	157	58	-	-	-

CHAPTER VIII
FARM IMPLEMENTS, DRAUGHT ANIMALS AND STORAGE FACILITIES

1. INTRODUCTION

Agriculture is the single largest sector in the Ethiopian economy. The position of the agricultural sector for the past few decades does not only concern the peasants, but on account of the extent of its inputs, outputs and its function as a largest employer of labour has a profound impact on the entire economy. It is worth to point-out that Ethiopia has large resources in terms of land, agricultural labour, draught animals... etc.

Despite all these facts, the average yield of the main food crops and livestock products attained by private peasant holders is very low and it is not adequate to feed the ever-growing population. Because of such prevailing conditions in the agricultural sector, the economy remained at subsistence level. Among the factors that hampered the country not to prosper is the use of primitive farm implements and tools by the peasants to operate their land and to raise livestock.

The role of improved agricultural implements and tools in raising the standard of farming efficiency and increasing average yield of production has been recognized for many years. Land preparation requires modern power source that results in considerable farm efficiency and expansion of production. Sowing and fertilization are among the agricultural operations where animal and tractor drawn machines appear to be capable of greater efficiency than only hand method. Power-driven line sowing and fertilization are more efficient than hand spreading and this is usually expected to result in higher yield for the same amount of fertilizers and seeds.

The traditional unimproved farm implements used by the peasants and the poor conditions of the draught animals are considered to be among the main factors that retarded the agricultural productivity in the country. On the other hand, the development of farm implements and machineries can also be crippled by small land size holdings, abundant labour in rural area and non-availability of adequate access to

2.3 Parts for traditional plough:-

a) 'Deger',

b) 'Erfe',

c) Plough-Beam,

d) Plough-Tip, and

e) 'Wegel'-Tip.

2.4 Implement used for harvesting:-

a) Sickle.

2.5 Implements used for threshing:-

a) Hay- Fork (metal or wood),

b) Threshing Stick, and

c) Winnower (metal or wood).

2.6 Other farm equipment:-

a) Cart (hauling),

b) Sprayer (hand operated),

c) Sprayer (power operated),

d) Tying Tool, and

e) Wheelbarrow.

2.7 Draught animals:-

a) Animals deployed specifically in ploughing.

- Ass/Donkey,
- Camel,
- Horse,
- Mule, and
- Ox.

b) Animals deployed in threshing or transportation: -

- Ass/Donkey,
- Camel,
- Cattle (Working Age),
- Horse, and
- Mule,

2.8 Storage facilities:-

a) 'Debignit'(Local storage),

b) 'Gottera' (Local storage),

c) 'Gudguad'(Local storage), and

d) Modern storage.

Definitions of storage facilities

'Debignit': - is a round vessel of earthenware storage attached with the wall of a house. The shape of 'Debignit' is similar to the shape of a barrel. Debignit is usually around 1 metre high and 0.5-1 metres wide.

'Gottera': - is storage made of bamboo plant. The bamboo is split and then crisscrossed and woven like a giant basket. Finally, it is laminated with a mixture of animal dung and dry grass. 'Gottera' is usually about 1-3 metres high and about 1 metre wide

'Gudguad':- is an underground storage, which is formed by digging the ground with certain depth and radius. The wall of 'Gudguad' is usually laminated with animal dung.

Modern storage: - is a storage that has a better quality in protecting grains from humidity and pests than the above-mentioned storages.

3. ESTIMATES OF FARM IMPLEMENTS, DRAUGHT ANIMALS AND STORAGE FACILITIES.

The type, quality and quantity of tools and implements in use usually indicate the level of farming practice and agricultural development of a country. Hence, the results of this census can give us some highlights to evaluate the farming system in the rural areas of Addis Ababa City Administration. In this report farm implements are grouped in terms of their operation and this can help to make appropriate comparisons.

3.1 Farm Implements and Tools

The data in Summary Table VIII.1 indicates that the number of holders reporting axe was the highest followed by shovel while 'Gejera' (Chopper) was the lowest. In the rural areas of Addis Ababa City Administration it is estimated that there were about 12,998 crop holders of which about 9,674 (74.43%) reported to own axes, about 53.43% reporting shovels, and 2.85% reporting 'Gejeras' (choppers). Among the farm implements used for clearing land the number of observation for axe was highest and the total value for axe was also the highest followed by shovels and 'Gejeras'. The expected duration of service of an axe was estimated to be 20 years, while for shovel it was 10 years.

One of the labour and power intensive farm activities is cultivation. It comprises digging, ploughing, sowing and weeding. In order to accomplish such operations, the Ethiopian peasants use hoe, 'Mekeskesha', pick-axe, and traditional plough. Among these farm implements and tools pick-axe was the highest in terms of number of holders reporting, total number of implements reported and total value. The second highest was hoe while 'Mekeskesha' was the lowest. The data in Summary Table VIII.4 reveled that the percentage distribution of the number of crop holders that owned one, two, three, and four pick-axes was 57.09%, 5.22%, 0.65%, and 0.15%, respectively.

3.2 Draught Animals

Peasants in Ethiopia use domestic animals for draught purpose. In several parts of the country since holdings are far from residence and as a result asses, horses, mules and camels are used to transport various types of goods and agricultural products from holding to residence and vice-versa. As it is indicated from the data in Summary Table VIII.2 among the draught animals in the City Administration that are used for ploughing, ox was the highest in terms of number of holders reporting, number of oxen reported and total value the oxen amounted to 24 million Birr. About 9,884 holders (76.04% of the total crop holders in the City Administration) reported 41,255 cattle used for threshing and these cattle had a value of over 32 million Birr and the average replacement value of a working age cattle was about 203.26 Birr. It was also indicated

that asses and horses were used by the holders for threshing and transportation. The estimated number and percentage distribution of crop holders in rural areas of Addis Ababa City Administration that owned implements, equipment and draught animals are shown in Summary Table VIII.4. Thus, the data resulting from the agricultural census shows that there were about 12,998 crop holders in rural areas of the City Administration. Among these 8.69%, 32.04%, 6.87%, 18.35%, and 6.02% holders owned one, two, three, four, and five and above oxen. On the other hand about 28.04% of the holders did not own ox. For details, see Summary Table VIII.4.

3.3 Storage Facilities

One of the methods that minimize post harvest production losses is the usage of modern storage facilities. During the census, data was collected on modern storage facilities and the unimproved local storage facilities such as 'Debignit', 'Gotera' and 'Gudguad'. In this census, buildings or any structure used as storage facilities and other containers that have better storage quality to protect agricultural products from humidity and pests are considered as modern storage facilities.

The data in Summary Table VIII.3 shows the number of crop holders in the City Administration reporting storage facilities and number of such facilities. Thus, the data in the table reveals that 'Debignit' was reported by the highest number of holders. On the other hand, 'Gudguad' and modern storage were reported by insignificant number of holders. The total value of all reported storage facilities was assessed to be 215,526 Birr,. of which 65.88% and 34.12% comprises of Debigint and Gottera, respectively. The percentage distribution of the number of crop holders that owned 'Gottera', 'Gudguad, 'Debignit' and modern storage is also presented in Summary Table VIII.4.

SUMMARY TABLE VIII.1: -Number and Percentage of Holders Reporting Implements and Other Farm Equipment by type, Quantity Reported, Replacement Value, and Duration of Implement, for Private Holdings.

Implements and Equipment	Number of Holders Reporting	Percent of Total Holders	Number of Implements and Equipment		Total Value of Imp. and Eq. (Birr)	Average Replacement Value Per Imp. and Eq. (Birr)	Average Duration of Service of Imp. and Eq. (Years)
			Total Reported	# Average Per Holder			
Used for Clearing Land							
Axes	9,674	74.43	14,257	1.10	170,633	8.06	20
'Gejeras' (Choppers)	370	2.85	377	0.03	6,354	16.22	*
Shovels	6,945	53.43	7,646	0.59	108,781	12.96	10
Used for Cultivation							
Hoes	3,289	25.30	3,590	0.28	61,384	15.26	14
'Mekeskeshas'	462	3.55	493	0.04	10,416	20.46	*
Pick-Axes	8,204	63.12	9,111	0.70	142,473	13.90	16
Tractor	-		-	-	-	-	-
Parts for traditional Plough							
' Degers'	10,121	77.87	27,237	2.10	116,105	1.64	2
' Erfes'	10,086	77.60	26,684	2.05	99,234	1.46	1
Plow-Beams	10,116	77.83	25,489	1.96	330,334	5.07	5
Plow- Tips	10,135	77.97	17,452	1.34	231,632	7.78	6
'Wegel' – Tips	9,993	76.88	17,000	1.31	85,626	3.00	5
Yokes	10,090	77.63	17,439	1.34	209,443	6.94	7
Used for Harvesting							
Sickles	11,271	86.71	22,406	1.72	375,795	8.53	5
Used for Threshing							
Hay-Forks (metal)	8,496	65.36	12,750	0.98	248,836	13.26	13
Hay-Forks (wood)	524	4.03	714	0.05	7,989	7.88	10
Threshing Sticks	146	1.12	248	0.02	883	2.89	2
Winnowers (metal)	*	-	*	-	*	*	*
Winnowers (wood)	6,663	51.26	7,530	0.58	139,518	16.25	11
Other farm Equipment							
Carts	*	-	*	-	*	*	*
Sprayers (Hand operated)	*	-	*	-	208,349	*	*
Sprayers (Power operated)	-	-	-	-	-	-	-
Tying Tools	-	-	-	-	-	-	-
Wheelbarrows	*	-	*	-	*	*	*

Average per holder is the ratio of total number of each implement reported to total number of crop holders in rural areas in the region.

- Total number of crop holders comprises, holders participated in crop production only and both crop production and livestock rearing.

SUMMARY TABLE VIII.2:-Number and Percentage of Holders Reporting Draught Animals, Quantity Reported, Replacement Value, and Average Age of Animal, for Private Holdings.

Animals	Number of Holders Reporting	Percent of Total Holders	Number of Animals		Total Value of Animals (Birr)	Average Replacement Value Per Animal (Birr)	Average Age of Animal (Years)
			Total Reported	# Average Per Holder			
Used for Ploughing							
Asses	*	-	*	-	*	*	*
Camels	-	-	-	-	-	-	-
Horses	-	-	-	-	-	-	-
Mules	-	-	-	-	-	-	-
Oxen	9,353	71.96	26,529	2.04	24,816,334	329.25	8
Used for Threshing or Transportation							
Asses	8,552	65.79	12,999	1.00	3,918,132	199.84	9
Camels	-	-	-	-	-	-	-
Cattle	9,884	76.04	41,255	3.17	32,700,841	203.26	8
Horses	175	1.35	183	0.01	136,564	720.12	7
Mules	64	0.49	69	0.01	88,607	1,220.25	15

Average per holder is the ratio of total number of each draught animal reported to total number of crop holders in rural areas in the region.
- Total number of crop holders comprises, holders participated in crop production only and both crop production and livestock rearing.

SUMMARY TABLE VIII.3: - Number and Percentage of Holders Reporting Storage facilities, Quantity Reported, Replacement Value, and Storage Capacity, for Private Holdings.

Sorage Structure	Number of Holders Reporting	Percent of Total Storage Holders	Number of Storages		Total Value of Storages (Birr)	Average Replacement Value Per Storage (Birr)	Average Storage Capacity Per Storage (Quintal)
			Total Reported	# Average Per Holder			
'Debignits'	3,734	28.73	8,769	0.67	141,998	6.44	10
'Gotteras'	685	5.27	1,176	0.09	73,528	36.65	13
'Gudguads'	*	-	*	-	*	*	*
Modern Storage Structures...	*	-	*	-	*	*	*

Average per holder is the ratio of total number of each storage facility reported to total number of crop holders in rural areas in the region.
- Total number of crop holders comprises, holders participated in crop production only and both crop production and livestock rearing.

SUMMARY TABLE VIII.4:-Number of Crop Holders that Owned Farm Implement, Equipment and Draught Animals.

Name of Implement, Equipment, and Draught Animal	Number of Crop Holders that Owned											
	No Implement, Equipment, or Draught Animal		One Implement, Equipment, and Draught Animal		Two Implements, Equipment, and Draught Animals		Three Implements, Equipment, and Draught Animals		Four Implements, Equipment, and Draught Animals		Five and above Implements, Equipment, and Draught Animals	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Used for Clearing Land												
Axes	3,325	25.58	5,961	45.86	3,104	23.88	386	2.97	200	1.54	22	0.17
'Gejera'	12,628	97.15	364	2.80	6	0.05	-	-	-	-	-	-
Shovel	6,053	46.57	6,330	48.70	547	4.21	50	0.38	18	0.14	-	-
Used for Cultivation												
Hoes	9,710	74.70	3,094	23.80	126	0.97	48	0.37	14	0.11	6	0.05
'Mekeskeshas'	12,535	96.44	432	3.32	31	0.24	-	-	-	-	-	-
Pick- Axes	4,794	36.88	7,421	57.09	679	5.22	84	0.65	20	0.15	-	-
Tractors	12,998	100.00	-	-	-	-	-	-	-	-	-	-
Parts for traditional Plough												
'Degers'	2,870	22.08	1,899	14.61	4,566	35.13	521	4.01	2,437	18.75	705	5.42
'Erfes' (Handle)	2,912	22.40	3,148	24.22	3,301	25.40	808	6.22	1,704	13.11	1,125	8.66
Plough-Beam.	2,883	22.18	3,042	23.40	3,580	27.54	1,287	9.90	1,293	9.95	913	7.02
Plough -Tips	2,863	22.03	4,755	36.58	4,286	32.97	625	4.81	303	2.33	166	1.28
'Wegel' -Tips	3,006	23.13	4,926	37.90	3,922	30.17	613	4.72	391	3.01	140	1.08
Yokes	2,908	22.37	4,692	36.10	4,215	32.43	605	4.65	435	3.35	143	1.10
Used for Harvesting												
Sickles	1,728	13.29	4,795	36.89	4,050	31.16	1,138	8.76	917	7.05	370	2.85
Used for Threshing												
Hay-Forks (Metal)	4,482	34.48	5,065	38.97	2,809	21.61	517	3.98	94	0.72	31	0.24
Hay-Forks (Wood)	12,475	95.98	360	2.77	153	1.18	-	-	5	0.04	5	0.04
Threshing Sticks	12,852	98.88	72	0.55	53	0.41	15	0.12	6	0.05	-	-
Winnowers (Metal)	12,594	100.00	*	-	-	-	-	-	-	-	-	-
Winnowers (Wood)	6,336	48.75	5,821	44.78	820	6.31	16	0.12	5	0.04	-	-
Other Farm Equipment												
Carts	12,990	100.00	*	-	-	-	-	-	-	-	-	-
Sprayers (Hand Operated)	12,423	95.58	575	4.42	-	-	-	-	-	-	-	-
Sprayers (Power Operated)	12,998	100.00	-	-	-	-	-	-	-	-	-	-
Tying Tools	12,998	100.00	-	-	-	-	-	-	-	-	-	-
Wheelbarrows	12,975	100.00	*	-	-	-	-	-	-	-	-	-
Animals Used for Ploughing												
Asses	12,723	100.00	*	-	-	-	-	-	-	-	-	-
Camels	12,998	100.00	-	-	-	-	-	-	-	-	-	-
Horses	12,998	100.00	-	-	-	-	-	-	-	-	-	-
Mules	12,998	100.00	-	-	-	-	-	-	-	-	-	-
Oxen	3,645	28.04	1,129	8.69	4,164	32.04	893	6.87	2,385	18.35	782	6.02
AnimalsUsed for Threshing or Transportation												
Asses	4,446	34.21	4,891	37.63	3,033	23.33	510	3.92	93	0.72	25	0.19
Camels	12,998	100.00										
Cattle	3,114	23.96	904	6.95	2,217	17.06	1,707	13.13	1,743	13.41	3,313	25.49
Horses	12,819	98.62	167	1.28	12	0.09	-	-	-	-	-	-
Mules	12,934	99.51	59	0.45	5	0.04	-	-	-	-	-	-
Storage Structure												
'Debignits'	9,264	71.27	946	7.28	1,503	11.56	714	5.49	327	2.52	244	1.88
'Gotteras'	12,312	94.72	325	2.50	266	2.05	71	0.55	12	0.09	12	0.09
'Gudguads'	12,985	100.00	*	-	-	-	-	-	-	-	-	-
Modern Storages	12,916	100.00	*	-	-	-	-	-	-	-	-	-

STATISTICAL TABLES PRESENTING THE CENSUS RESULTS AT ZONAL AND WOREDA LEVELS

Tables 8.1A- 8.25A

STATISTICAL TABLES PRESENTING THE CENSUS
RESULTS AT
ZONAL AND WOREDA LEVELS

Tables 8.1A- 8.25A

TABLE 8.1A: - Number of Holders Reporting Axe Owned, Quantity Reported, Replacement Value, and Duration of Service of Axe, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Axes Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Axe (Birr)	Average Duration of Service of Axe (Years)
Addis Ababa Region	12,998	9,67*4	14,257	1.10	170,633	8.06	20
Zone 3	10,293	8,046	11,800	1.15	138,506	7.90	*
Wereda 17	7,137	*	*	-	93,707	*	*
Wereda 19	812	501	895	1.10	12,770	8.23	16
Wereda 28	2,345	1,838	2,520	1.07	32,029	8.98	15
Zone 6	2,705	1,628	2,457	0.91	32,127	8.83	19
Wereda 26	1,430	838	1,284	0.90	14,292	7.53	13
Wereda 27	1,275	790	1,173	0.92	17,834	10.24	26

TABLE 8.2A: - Number of Holders Reporting 'Gejera' Owned, Quantity Reported, Replacement Value, and Duration of Service of 'Gejera', for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Gejeras' Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Gejera' (Birr)	Average Duration of Service of 'Gejera' (Years)
Addis Ababa Region	12,998	370	377	0.03	6,354	16.22	*
Zone 3	10,293	334	341	0.03	5,871	16.51	*
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	*	*	-	*	*	*
Wereda 28	2,345	145	145	0.06	1,650	11.38	17
Zone 6	2,705	36	36	0.01	484	13.43	13
Wereda 26	1,430	36	36	0.03	484	13.43	13
Wereda 27	1,275	-	-	-	-	-	-

TABLE 8.3A:- Number of Holders Reporting Shovel Owned, Quantity Reported, Replacement Value, and Duration of Service of Shovel, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Shovels Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Shovel (Birr)	Average Duration of Service of Shovel (Years)
Addis Ababa Region	12,998	6,945	7,646	0.59	108,781	12.96	10
Zone 3	10,293	5,807	6,415	0.62	91,609	13.02	9
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	308	352	0.43	5,335	13.26	9
Wereda 28	2,345	1,406	1,620	0.69	22,123	11.70	9
Zone 6	2,705	1,138	1,231	0.46	17,172	12.67	11
Wereda 26	1,430	483	500	0.35	6,252	12.00	9
Wereda 27	1,275	655	731	0.57	10,919	13.12	13

TABLE 8.4A: - Number of Holders Reporting Hoe Owned, Quantity Reported, Replacement Value, and Duration of Service of Hoe, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Hoes Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Hoe (Birr)	Average Duration of Service of Hoe (Years)
Addis Ababa Region	12,998	3,289	3,590	0.28	61,384	15.26	14
Zone 3	10,293	2,525	2,587	0.25	41,027	15.41	14
Wereda 17	7,137	*	1,727	0.24	27,838	16.06	*
Wereda 19	812	255	289	0.36	5,836	17.46	16
Wereda 28	2,345	549	571	0.24	7,353	12.41	13
Zone 6	2,705	765	1,003	0.37	20,358	14.88	15
Wereda 26	1,430	288	306	0.21	4,956	15.29	10
Wereda 27	1,275	477	698	0.55	15,402	14.67	18

TABLE 8.5A: - Number of Holders Reporting 'Mekeskesha' Owned, Quantity Reported, Replacement Value,and Duration of Service of 'Mekeskesha', for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Mekeskeshas' Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Mekeskesha' (Birr)	Average Duration of Service of 'Mekeskesha' (Years)
Addis Ababa Region	12,998	462	493	0.04	10,416	20.46	*
Zone 3	10,293	*	*	-	*	*	*
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	*	*	-	*	*	*
Wereda 28	2,345	118	136	0.06	2,398	16.32	10
Zone 6	2,705	145	150	0.06	2,792	18.31	*
Wereda 26	1,430	30	30	0.02	*	*	*
Wereda 27	1,275	*	*	-	*	*	*

TABLE 8.6A:- Number of Holders Reporting Pick-Axe Owned, Quantity Reported, Replacement Value, and Duration of Service of Pick-Axe, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Pick-Axes Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Pick-Axe (Birr)	Average Duration of Service of Pick-Axe (Years)
Addis Ababa Region	12,998	8,204	9,111	0.70	142,473	13.90	16
Zone 3	10,293	6,341	6,891	0.67	104,648	13.96	16
Wereda 17	7,137	4,149	4,310	0.60	67,238	*	*
Wereda 19	812	519	724	0.89	11,029	11.04	13
Wereda 28	2,345	1,673	1,857	0.79	26,381	12.66	12
Zone 6	2,705	1,863	2,220	0.82	37,825	13.71	17
Wereda 26	1,430	805	880	0.62	13,381	13.91	13
Wereda 27	1,275	1,058	1,340	1.05	24,444	13.58	20

TABLE 8.7A: - Number of Holders Reporting 'Deger' Owned, Quantity Reported, Replacement Value, and Duration of Service of 'Deger', for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Degers' Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Deger' (Birr)	Average Duration of Service of 'Deger' (Years)
Addis Ababa Region	12,998	10,121	27,237	2.10	116,105	1.64	2
Zone 3	10,293	8,641	23,757	2.31	99,541	1.57	2
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	467	1,729	2.13	7,010	1.11	2
Wereda 28	2,345	1,448	4,419	1.88	17,178	1.29	2
Zone 6	2,705	1,479	3,480	1.29	16,564	2.12	2
Wereda 26	1,430	1,072	2,772	1.94	12,875	1.84	2
Wereda 27	1,275	407	708	0.56	3,689	3.20	3

TABLE 8.8A:- Number of Holders Reporting 'Erfe'(Handle) Owned, Quantity Reported, Replacement Value, and Duration of Service of 'Erfe', for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Erfes' Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Erfe' (Birr)	Average Duration of Service of 'Erfe' (Years)
Addis Ababa Region	12,998	10,086	26,684	2.05	99,234	1.46	1
Zone 3	10,293	8,614	22,963	2.23	85,508	1.48	1
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	458	1,373	1.69	4,287	1.03	1
Wereda 28	2,345	1,441	4,407	1.88	15,011	1.09	2
Zone 6	2,705	1,473	3,721	1.38	13,726	1.39	1
Wereda 26	1,430	1,065	3,050	2.13	11,488	1.24	1
Wereda 27	1,275	407	671	0.53	2,238	2.07	2

TABLE 8. 9A:- Number of Holders Reporting Plough-Beam Owned, Quantity Reported, Replacement Value, and Duration of Service of Plough-Beam, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Plough-Beams Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Plough-Beam (Birr)	Average Duration of Service of Plough-Beam (Years)
Addis Ababa Region	12,998	10,116	25,489	1.96	330,334	5.07	5
Zone 3	10,293	8,636	22,003	2.14	282,306	4.92	5
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	467	1,338	1.65	21,647	5.50	3
Wereda 28	2,345	1,439	4,219	1.80	48,746	3.56	5
Zone 6	2,705	1,479	3,486	1.29	48,029	5.99	4
Wereda 26	1,430	1,072	2,828	1.98	37,666	5.06	3
Wereda 27	1,275	407	658	0.52	10,363	9.95	6

TABLE 8.10A: - Number of Holders Reporting Plough-Tip (Metal) Owned, Quantity Reported, Replacement Value, and Duration of Service of Plough-Tip, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Plough-Tips Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Plough-Tip (Birr)	Average Duration of Service of Plough-Tip (Years)
Addis Ababa Region	12,998	10,135	17,452	1.34	231,632	7.78	6
Zone 3	10,293	8,655	14,819	1.44	196,363	7.78	6
Wereda 17	7,137	*	*	-	134,002	*	*
Wereda 19	812	467	967	1.19	13,138	6.74	6
Wereda 28	2,345	1,462	2,684	1.14	49,223	9.75	7
Zone 6	2,705	1,479	2,633	0.97	35,270	7.78	8
Wereda 26	1,430	1,072	2,045	1.43	26,521	6.97	7
Wereda 27	1,275	407	588	0.46	8,748	10.61	12

TABLE 8.11A: - Number of Holders Reporting 'Wegel' -Tip Owned, Quantity Reported, Replacement Value, and Duration of Service of 'Wegel' -Tip, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Wegel' -Tips Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Wegel' -Tip (Birr)	Average Duration of Service of 'Wegel' -Tip (Years)
Addis Ababa Region	12,998	9,993	17,000	1.31	85,626	3.00	5
Zone 3	10,293	8,514	14,377	1.40	72,302	3.00	5
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	467	981	1.21	4,966	2.41	4
Wereda 28	2,345	1,453	2,571	1.10	14,904	3.26	5
Zone 6	2,705	1,479	2,623	0.97	13,325	3.01	7
Wereda 26	1,430	1,072	2,030	1.42	9,720	2.64	5
Wereda 27	1,275	407	594	0.47	3,604	4.27	12

TABLE 8.12A: - Number of Holders Reporting Yoke Owned, Quantity Reported, Replacement Value, and Duration of Service of Yoke, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Yokes Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Yoke (Birr)	Average Duration of Service of Yoke (Years)
Addis Ababa Region	12,998	10,090	17,439	1.34	209,443	6.94	7
Zone 3	10,293	8,623	14,927	1.45	171,866	6.62	7
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	467	921	1.13	13,430	7.18	8
Wereda 28	2,345	1,440	2,522	1.08	25,243	5.59	8
Zone 6	2,705	1,467	2,512	0.93	37,576	8.85	9
Wereda 26	1,430	1,059	1,938	1.36	28,533	8.14	7
Wereda 27	1,275	407	574	0.45	9,044	11.27	12

TABLE 8.13A: -Number of Holders Reporting Sickle Owned, Quantity Reported, Replacement Value, and Duration of Service of Sickle, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Sickles Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Sickle (Birr)	Average Duration of Service of Sickle (Years)
Addis Ababa Region	12,998	11,271	22,406	1.72	375,795	8.53	5
Zone 3	10,293	9,190	18,216	1.77	318,246	8.84	5
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	555	1,449	1.78	24,823	6.57	5
Wereda 28	2,345	1,898	4,346	1.85	73,955	7.21	5
Zone 6	2,705	2,081	4,190	1.55	57,549	7.20	6
Wereda 26	1,430	1,240	2,319	1.62	37,527	8.65	4
Wereda 27	1,275	841	1,871	1.47	20,022	5.41	7

TABLE 8.14A: - Number of Holders Reporting Hay-Fork (Metal) Owned, Quantity Reported, Replacement Value, and Duration of Service of Hay-Fork, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Hay-Forks Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Hay-Fork (Birr)	Average Duration of Service of Hay-Fork (Years)
Addis Ababa Region	12,998	8,496	12,750	0.98	248,836	13.26	13
Zone 3	10,293	7,302	10,802	1.05	212,832	13.58	13
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	362	619	0.76	10,903	10.50	10
Wereda 28	2,345	1,158	1,807	0.77	32,357	11.60	13
Zone 6	2,705	1,194	1,949	0.72	36,004	11.47	10
Wereda 26	1,430	926	1,532	1.07	28,542	11.42	10
Wereda 27	1,275	269	416	0.33	7,462	11.66	11

TABLE 8.15A: - Number of Holders Reporting Hay-Fork (Wood) Owned, Quantity Reported, Replacement Value, and Duration of Service of Hay-Fork,for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Hay-Forks Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Hay-Fork (Birr)	Average Duration of Service of Hay-Fork (Years)
Addis Ababa Region	12,998	524	714	0.05	7,989	7.88	10
Zone 3	10,293	386	471	0.05	4,574	7.91	7
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	116	154	0.19	1,454	6.79	7
Wereda 28	2,345	163	210	0.09	1,819	6.56	8
Zone 6	2,705	138	244	0.09	*	7.79	*
Wereda 26	1,430	39	64	0.04	172	*	8
Wereda 27	1,275	99	*	-	*	*	*

TABLE 8.16A: - Number of Holders Reporting Threshing Stick Owned, Quantity Reported, Replacement Value, and Duration of Service of Threshing Stick, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Threshing Sticks Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Threshing Stick (Birr)	Average Duration of Service of Threshing Stick (Years)
Addis Ababa Region	12,998	146	248	0.02	883	2.89	2
Zone 3	10,293	116	185	0.02	697	3.09	2
Wereda 17	7,137	61	*	-	*	*	2
Wereda 19	812	*	*	-	*	*	-
Wereda 28	2,345	*	*	-	*	*	*
Zone 6	2,705	31	63	0.02	*	*	*
Wereda 26	1,430	31	63	0.04	*	*	*
Wereda 27	1,275	-	-	-	-	-	-

TABLE 8.17A:- Number of Holders Reporting Winnower(Wood) Owned, Quantity Reported, Replacement Value, and Duration of Service of Winnower, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Winnowers Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Winnower (Birr)	Average Duration of Service of Winnower (Years)
Addis Ababa Region	12,998	6,663	7,530	0.58	139,518	16.25	11
Zone 3	10,293	5,636	6,263	0.61	116,597	16.61	11
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	316	397	0.49	7,548	14.79	14
Wereda 28	2,345	1,019	1,146	0.49	19,465	14.98	12
Zone 6	2,705	1,027	1,267	0.47	22,921	14.44	10
Wereda 26	1,430	747	928	0.65	17,804	15.21	9
Wereda 27	1,275	280	339	0.27	5,118	12.33	13

TABLE 8. 18A: - Number of Holders Reporting Sprayer (Hand operated) Owned, Quantity Reported, Replacement Value, Duration of Service of Sprayer, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Sprayers Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Sprayer (Birr)	Average Duration of Service of Sprayer (Years)
Addis Ababa Region	12,998	*	*	-	208,349	*	*
Zone 3	10,293	*	*	-	*	*	*
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	70	70	0.09	28,589	408.42	10
Wereda 28	2,345	66	66	0.03	28,145	426.44	*
Zone 6	2,705	80	80	0.03	32,122	401.52	10
Wereda 26	1,430	54	54	0.04	21,812	403.92	9
Wereda 27	1,275	26	26	0.02	*	*	10

TABLE 8.19A: -Number of Holders Reporting Ox (Specificaly for ploughing) Owned, Quantity Reported, Replacement Value and Average age of Ox, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Oxen Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Ox (Birr)	Average Age of Ox (Years)
Addis Ababa Region	12,998	9,353	26,529	2.04	24,816,334	329.25	8
Zone 3	10,293	7,920	22,569	2.19	21,330,051	331.59	8
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	462	1,366	1.68	1,100,134	267.50	8
Wereda 28	2,345	1,373	4,029	1.72	3,642,023	308.68	8
Zone 6	2,705	1,434	3,960	1.46	3,486,283	315.85	7
Wereda 26	1,430	1,043	2,922	2.04	2,610,075	316.29	6
Wereda 27	1,275	390	1,039	0.81	876,208	314.34	10

TABLE 8.20A: - Number of Holders Reporting Ass (For Threshing / Transportation) Owned, Quantity Reported, Replacement Value and Average age of Ass, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Asses Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Ass (Birr)	Average Age of Ass (Years)
Addis Ababa Region	12,998	8,552	12,999	1.00	3,918,132	199.84	9
Zone 3	10,293	7,301	10,817	1.05	3,269,238	204.71	9
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	424	751	0.92	205,645	154.95	9
Wereda 28	2,345	1,299	1,992	0.85	562,782	186.03	9
Zone 6	2,705	1,251	2,182	0.81	648,894	175.70	9
Wereda 26	1,430	875	1,442	1.01	452,259	194.38	8
Wereda 27	1,275	376	739	0.58	196,636	139.49	11

TABLE 8.21A: - Number of Holders Reporting Cattle (Working Age for Threshing / Transportation) Owned, Quantity Reported, Replacement Value and Average age of Cattle, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Cattle Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Cattle (Birr)	Average Age of Cattle (Years)
Addis Ababa Region	12,998	9,884	41,255	3.17	32,700,841	203.26	8
Zone 3	10,293	8,392	34,988	3.40	27,939,778	206.50	8
Wereda 17	7,137	*	26,001	3.64	*	*	*
Wereda 19	812	511	2,561	3.15	1,659,005	132.30	8
Wereda 28	2,345	1,460	6,426	2.74	4,766,148	182.17	8
Zone 6	2,705	1,492	6,267	2.32	4,761,063	185.17	7
Wereda 26	1,430	1,096	4,658	3.26	3,595,665	183.40	6
Wereda 27	1,275	396	1,609	1.26	1,165,397	190.29	10

TABLE 8.22A:- Number of Holders Reporting Horse (For Threshing / Transportation) Owned, Quantity Reported, Replacement Value and Average age of Horse, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Horses Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Horse (Birr)	Average Age of Horse (Years)
Addis Ababa Region	12,998	175	183	0.01	136,564	720.12	7
Zone 3	10,293	148	148	0.01	*	*	7
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	-	-	-	-	-	-
Wereda 28	2,345	87	87	0.04	59,873	688.20	*
Zone 6	2,705	27	*	-	26,190	*	6
Wereda 26	1,430	27	*	-	26,190	*	6
Wereda 27	1,275	-	-	-	-	-	-

TABLE 8.23A:- Number of Holders Reporting Mule (For threshing/ transportation) Owned, Quantity Reported, Replacement Value and Average age of Mule, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Mules Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Mule (Birr)	Average Age of Mule (Years)
Addis Ababa Region	12,998	64	69	0.01	88,607	1,220.25	15
Zone 3	10,293	*	*	-	*	*	*
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	*	*	-	*	*	*
Wereda 28	2,345	*	*	-	*	*	*
Zone 6	2,705	42	47	0.02	49,415	957.55	13
Wereda 26	1,430	42	47	0.03	49,415	957.55	13
Wereda 27	1,275	-	-	-	-	-	-

TABLE 8.24A:- Number of Holders Reporting 'Debignit' Owned, Quantity Reported, Replacement Value and Storage Capacity of 'Debignit', for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Debignits' Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Debignit' (Birr)	Average Storage Capacity of 'Debignit' (Quintal)
Addis Ababa Region	12,998	3,734	8,769	0.67	141,998	6.44	10
Zone 3	10,293	3,265	7,696	0.75	124,183	6.36	*
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	135	355	0.44	7,539	6.62	4
Wereda 28	2,345	530	1,358	0.58	21,101	6.13	4
Zone 6	2,705	469	1,072	0.40	17,815	7.02	4
Wereda 26	1,430	350	797	0.56	14,716	7.91	4
Wereda 27	1,275	119	275	0.22	3,100	4.44	4

TABLE 8.25A: - Number of Holders Reporting 'Gottera' Owned, Quantity Reported, Replacement Value and Storage Capacity of 'Gottera', for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Gotteras' Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Gottera' (Birr)	Average Storage Capacity of 'Gottera' (Quintal)
dis Ababa Region	12,998	685	1,176	0.09	73,528	36.65	13
one 3	10,293	329	549	0.05	17,487	20.94	11
Wereda 17	7,137	*	*	-	*	*	*
Wereda 19	812	81	123	0.15	4,008	22.02	8
Wereda 28	2,345	81	112	0.05	5,236	39.55	17
one 6	2,705	356	626	0.23	56,041	50.49	14
Wereda 26	1,430	312	571	0.40	51,168	47.11	15
Wereda 27	1,275	44	56	0.04	4,873	83.99	9

STATISTICAL TABLES PRESENTING THE CENSUS RESULTS AT ZONAL AND WOREDA LEVELS

Tables 8.1B- 8.25B

TABLE 8.23A - Number of Holders Reporting Mule (For threshing/ transportation) Owned, Quantity Repo
Replacement Value and Average age of Mule, for Private Holdings

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Mules Reported	Average Number Per Holder	Total Value (Birr)	Av. Age (Yr)
Addis Ababa Region	12,998	64	69	0.01		
Zone 3	10,293	*	*	-		
Wereda 17	7,137	*	*	-		
Wereda 19	812	*	*	-		
Wereda 28	2,345	*	*	-		
Zone 6	2,705	42	47	0.02	49,410	
Wereda 26	1,430	42	47	0.03	49,410	
Wereda 27	1,275	-	-	-	-	

TABLE 8.24A - Number of Holders Reporting 'Debignit' Owned, Quantity Reported, Replacement Value and Average Storage Capacity of 'Debignit', for Private Holdings

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Debignits' Reported	Average Number Per Holder	Total Value (Birr)	Average Storage Capacity of 'Debignit' (Quintal)
Addis Ababa Region	12,998	3,734	8,769	0.67	151,908	36.65
Zone 3	10,293	3,265	7,696	0.75	124,123	20.94
Wereda 17	7,137	*	*	-	-	-
Wereda 19	812	135	355	0.44	7,539	22.02
Wereda 28	2,345	530	1,358	0.58	21,161	39.55
Zone 6	2,705	469	1,072	0.40	17,815	50.49
Wereda 26	1,430	350	797	0.56	14,796	47.11
Wereda 27	1,275	119	275	0.22	3,019	83.99

STATISTICAL TABLES PRESENTING THE CENSUS RESULTS AT ZONAL AND WOREDA LEVELS

Tables 8.1B- 8.25B

STATISTICAL TABLES PRESENTING THE CENSUS RESULTS AT ZONAL AND WOREDA LEVELS

Tables 8.1B- 8.25B

Table 8.1B:- Number of Crop Holders that Owned Axe by Geographic area.

Geographic Area	Number of Crop holders that owned											
	No Axe		One Axe		Two Axes		Three Axes		Four Axes		Five and above Axes	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	3,325	25.58	5,961	45.86	3,104	23.88	386	2.97	200	1.54	22	0.17
Zone 3	2,247	21.83	5,037	48.94	2,515	24.43	284	2.76	188	1.83	22	0.21
Wereda 17	1,431	20.05	3,523	49.36	1,859	26.05	154	2.16	170	2.38	-	-
Wereda 19	311	38.30	225	27.71	214	26.35	40	4.93	5	0.62	17	2.09
Wereda 28	507	21.62	1,288	54.93	442	18.85	90	3.84	13	0.55	5	0.21
Zone 6	1,077	39.82	924	34.16	590	21.81	102	3.77	12	0.44	-	-
Wereda 26	592	41.40	489	34.20	258	18.04	85	5.94	6	0.42	-	-
Wereda 27	486	38.12	434	34.04	332	26.04	17	1.33	6	0.47	-	-

Table 8.2B:- Number of Crop Holders that Owned 'Gejera' by Geographic area.

Geographic area	Number of Crop holders that owned											
	No 'Gejera'		One 'Gejera'		Two 'Gejeras'		Three 'Gejeras'		Four 'Gejeras'		Five and above 'Gejeras'	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	12,628	97.15	364	2.80	6	0.05	-	-	-	-	-	-
Zone 3	9,959	96.76	328	3.19	6	0.06	-	-	-	-	-	-
Wereda 17	6,964	97.58	167	2.34	6	0.08	-	-	-	-	-	-
Wereda 19	796	98.03	16	1.97	-	-	-	-	-	-	-	-
Wereda 28	2,200	93.82	145	6.18	-	-	-	-	-	-	-	-
Zone 6	2,669	98.67	36	1.33	-	-	-	-	-	-	-	-
Wereda 26	1,394	97.48	36	2.52	-	-	-	-	-	-	-	-
Wereda 27	1,275	100.00	-	-	-	-	-	-	-	-	-	-

Table 8.3B:- Number of Crop Holders that Owned Shovel by Geographic area

Geographic area	Number of Crop holders that owned											
	No Shovel		One Shovel		Two Shovels		Three Shovels		Four Shovels		Five and above Shovels	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	6,053	46.57	6,330	48.70	547	4.21	50	0.38	18	0.14	-	-
Zone 3	4,486	43.58	5,270	51.20	483	4.69	36	0.35	18	0.17	-	-
Wereda 17	3,045	42.66	3,742	52.43	350	4.90	-	-	-	-	-	-
Wereda 19	504	62.07	264	32.51	44	5.42	-	-	-	-	-	-
Wereda 28	938	40.00	1,264	53.90	89	3.80	36	1.54	18	0.77	-	-
Zone 6	1,567	57.93	1,060	39.19	64	2.37	14	0.52	-	-	-	-
Wereda 26	947	66.22	467	32.66	16	1.12	-	-	-	-	-	-
Wereda 27	621	48.71	593	46.51	47	3.69	14	1.10	-	-	-	-

Table 8.4B: - Number of Crop Holders that Owned Hoe by Geographic area

Geographic area	Number of Crop holders that owned											
	No Hoe		One Hoe		Two Hoes		Three Hoes		Four Hoes		Five and above Hoes	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	9,710	74.70	3,094	23.80	126	0.97	48	0.37	14	0.11	6	0.05
Zone 3	7,769	75.48	2,468	23.98	51	0.50	5	0.05	-	-	-	-
Wereda 17	5,416	75.89	1,715	24.03	6	0.08	-	-	-	-	-	-
Wereda 19	558	68.72	226	27.83	23	2.83	5	0.62	-	-	-	-
Wereda 28	1,796	76.59	527	22.47	22	0.94	-	-	-	-	-	-
Zone 6	1,940	71.72	627	23.18	75	2.77	43	1.59	14	0.52	6	0.22
Wereda 26	1,142	79.86	270	18.88	18	1.26	-	-	-	-	-	-
Wereda 27	799	62.67	356	27.92	57	4.47	43	3.37	14	1.10	6	0.47

Table 8.5B: - Number of Crop Holders that Owned 'Mekeskesha' by Geographic area

Geographic area	Number of Crop holders that owned											
	No 'Mekeskesha'		One 'Mekeskesha'		Two 'Mekeskeshas'		Three 'Mekeskeshas'		Four 'Mekeskeshas'		Five and above 'Mekeskeshas'	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	12,535	96.44	432	3.32	31	0.24	-	-	-	-	-	-
Zone 3	9,975	96.91	293	2.85	25	0.24	-	-	-	-	-	-
Wereda 17	6,953	97.42	184	2.58	-	-	-	-	-	-	-	-
Wereda 19	796	98.03	9	1.11	7	0.86	-	-	-	-	-	-
Wereda 28	2,227	94.97	100	4.26	18	0.77	-	-	-	-	-	-
Zone 6	2,560	94.64	139	5.14	6	0.22	-	-	-	-	-	-
Wereda 26	1,400	97.90	30	2.10	-	-	-	-	-	-	-	-
Wereda 27	1,160	90.98	109	8.55	6	0.47	-	-	-	-	-	-

Table 8.6B:- Number of Crop Holders that Owned Pick-Axe by Geographic area

Geographic area	Number of Crop holders that owned											
	No Pick-Axe		One Pick-Axe		Two Pick-Axes		Three Pick-Axes		Four Pick-Axes		Five and above Pick-Axes	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	4,794	36.88	7,421	57.09	679	5.22	84	0.65	20	0.15	-	-
Zone 3	3,952	38.40	5,848	56.82	442	4.29	46	0.45	5	0.05	-	-
Wereda 17	2,988	41.87	4,002	56.07	134	1.88	13	0.18	-	-	-	-
Wereda 19	294	36.21	339	41.75	160	19.70	14	1.72	5	0.62	-	-
Wereda 28	672	28.66	1,507	64.26	148	6.31	18	0.77	-	-	-	-
Zone 6	842	31.13	1,574	58.19	237	8.76	38	1.40	14	0.52	-	-
Wereda 26	624	43.64	741	51.82	55	3.85	10	0.70	-	-	-	-
Wereda 27	217	17.02	833	65.33	182	14.27	29	2.27	14	1.10	-	-

Table 8.7B: - Number of Crop Holders that Owned 'Deger' by Geographic area

Geographic area	Number of Crop holders that owned											
	No 'Deger'		One 'Deger'		Two 'Degers'		Three 'Degers'		Four 'Degers'		Five and above 'Degers'	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	2,870	22.08	1,899	14.61	4,566	35.13	521	4.01	2,437	18.75	705	5.42
Zone 3	1,644	15.97	1,346	13.08	4,036	39.21	474	4.61	2,227	21.64	566	5.50
Wereda 17	410	5.74	1,016	14.24	3,373	47.26	402	5.63	1,634	22.89	302	4.23
Wereda 19	337	41.50	45	5.54	165	20.32	11	1.35	160	19.70	94	11.58
Wereda 28	897	38.25	285	12.15	498	21.24	61	2.60	434	18.51	170	7.25
Zone 6	1,226	45.32	554	20.48	530	19.59	47	1.74	209	7.73	139	5.14
Wereda 26	357	24.97	304	21.26	436	30.49	42	2.94	164	11.47	127	8.88
Wereda 27	867	68.00	250	19.61	94	7.37	6	0.47	46	3.61	12	0.94

Table 8.8B:- Number of Crop Holders that Owned 'Erfe' by Geographic area.

Geographic area	Number of Crop holders that owned											
	No 'Erfe'		One 'Erfe'		Two 'Erfes'		Three 'Erfes'		Four 'Erfes'		Five and above 'Erfes'	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	2,912	22.40	3,148	24.22	3,301	25.40	808	6.22	1,704	13.11	1,125	8.66
Zone 3	1,680	16.32	2,653	25.77	2,796	27.16	701	6.81	1,490	14.48	973	9.45
Wereda 17	423	5.93	2,165	30.33	2,212	30.99	498	6.98	1,150	16.11	689	9.65
Wereda 19	353	43.47	108	13.30	155	19.09	36	4.43	91	11.21	69	8.50
Wereda 28	904	38.55	380	16.20	430	18.34	167	7.12	249	10.62	215	9.17
Zone 6	1,232	45.55	495	18.30	505	18.67	107	3.96	214	7.91	152	5.62
Wereda 26	365	25.52	251	17.55	403	28.18	84	5.87	175	12.24	152	10.63
Wereda 27	867	68.00	244	19.14	102	8.00	23	1.80	39	3.06	-	-

Table 8.9B:- Number of Crop Holders that Owned Plow-Beam by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Plow-Beam		One Plow-Beam		Two Plow-Beams		Three Plow-Beams		Four Plow-Beams		Five and above Plow-Beams	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	2,883	22.18	3,042	23.40	3,580	27.54	1,287	9.90	1,293	9.95	913	7.02
Zone 3	1,657	16.10	2,486	24.15	3,150	30.60	1,086	10.55	1,114	10.82	800	7.77
Wereda 17	407	5.70	1,988	27.85	2,571	36.02	800	11.21	820	11.49	551	7.72
Wereda 19	344	42.36	122	15.02	149	18.35	65	8.00	62	7.64	70	8.62
Wereda 28	907	38.68	377	16.08	429	18.29	221	9.42	232	9.89	179	7.63
Zone 6	1,226	45.32	555	20.52	431	15.93	201	7.43	179	6.62	113	4.18
Wereda 26	358	25.03	291	20.35	355	24.83	157	10.98	162	11.33	107	7.48
Wereda 27	868	68.08	264	20.71	76	5.96	44	3.45	17	1.33	6	0.47

Table 8.10B:- Number of Crop Holders that Owned Plow-Tip by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Plow-Tip		One Plow-Tip		Two Plow-Tips		Three Plow-Tips		Four Plow-Tips		Five and above Plow-Tips	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	2,863	22.03	4,755	36.58	4,286	32.97	625	4.81	303	2.33	166	1.28
Zone 3	1,638	15.91	4,038	39.23	3,742	36.35	507	4.93	232	2.25	136	1.32
Wereda 17	411	5.76	3,201	44.85	2,982	41.78	321	4.50	120	1.68	102	1.43
Wereda 19	345	42.49	171	21.06	186	22.91	55	6.77	33	4.06	22	2.71
Wereda 28	882	37.61	666	28.40	574	24.48	132	5.63	79	3.37	12	0.51
Zone 6	1,226	45.32	716	26.47	544	20.11	118	4.36	70	2.59	31	1.15
Wereda 26	359	25.10	466	32.59	409	28.60	95	6.64	70	4.90	31	2.17
Wereda 27	867	68.00	250	19.61	135	10.59	23	1.80	-	-	-	-

Table 8.11B:- Number of Crop Holders that Owned 'wegel'-Tip by Geographic area.

Geographic area	Number of Crop holders that owned											
	No 'wegel'-Tip		One 'wegel'-Tip		Two 'wegel'-Tips		Three 'wegel'-Tips		Four 'wegel'-Tips		Five and above 'wegel'-Tips	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	3,006	23.13	4,926	37.90	3,922	30.17	613	4.72	391	3.01	140	1.08
Zone 3	1,779	17.28	4,227	41.07	3,368	32.72	498	4.84	302	2.93	119	1.16
Wereda 17	542	7.59	3,431	48.07	2,541	35.60	321	4.50	207	2.90	95	1.33
Wereda 19	345	42.49	147	18.10	210	25.86	55	6.77	38	4.68	17	2.09
Wereda 28	892	38.04	650	27.72	616	26.27	122	5.20	57	2.43	8	0.34
Zone 6	1,225	45.29	699	25.84	555	20.52	116	4.29	89	3.29	21	0.78
Wereda 26	358	25.03	449	31.40	420	29.37	99	6.92	83	5.80	21	1.47
Wereda 27	867	68.00	250	19.61	135	10.59	17	1.33	6	0.47	-	-

Table 8.12B:- Number of Crop Holders that Owned Yoke by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Yoke		One Yoke		Two Yokes		Three Yokes		Four Yokes		Five and above Yokes	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	2,908	22.37	4,692	36.10	4,215	32.43	605	4.65	435	3.35	143	1.10
Zone 3	1,669	16.21	3,951	38.39	3,704	35.99	476	4.62	363	3.53	130	1.26
Wereda 17	421	5.90	3,060	42.88	3,005	42.10	302	4.23	254	3.56	95	1.33
Wereda 19	346	42.61	188	23.15	167	20.57	72	8.87	22	2.71	17	2.09
Wereda 28	904	38.55	702	29.94	531	22.64	103	4.39	86	3.67	19	0.81
Zone 6	1,238	45.77	741	27.39	511	18.89	129	4.77	73	2.70	13	0.48
Wereda 26	370	25.87	477	33.36	391	27.34	106	7.41	73	5.10	13	0.91
Wereda 27	868	68.08	264	20.71	120	9.41	23	1.80	-	-	-	-

Table 8.13B:- Number of Crop Holders that Owned Sickle by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Sickle		One Sickle		Two Sickles		Three Sickles		Four Sickles		Five and above Sickles	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	1,728	13.29	4,795	36.89	4,050	31.16	1,138	8.76	917	7.05	370	2.85
Zone 3	1,103	10.72	3,884	37.73	3,374	32.78	900	8.74	751	7.30	281	2.73
Wereda 17	400	5.60	3,039	42.58	2,444	34.24	629	8.81	573	8.03	52	0.73
Wereda 19	257	31.65	183	22.54	208	25.62	60	7.39	21	2.59	83	10.22
Wereda 28	448	19.10	662	28.23	723	30.83	211	9.00	156	6.65	145	6.18
Zone 6	624	23.07	911	33.68	676	24.99	238	8.80	166	6.14	90	3.33
Wereda 26	191	13.36	536	37.48	484	33.85	105	7.34	86	6.01	28	1.96
Wereda 27	434	34.04	375	29.41	191	14.98	133	10.43	80	6.27	62	4.86

Table 8.14B:- Number of Crop Holders that Owned Hay-Fork(metal) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Hay-Fork (metal)		One Hay-Fork (metal)		Two Hay-Forks (metal)		Three Hay-Forks (metal)		Four Hay-Forks (metal)		Five and above Hay-Forks (metal)	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	4,482	34.48	5,065	38.97	2,809	21.61	517	3.98	94	0.72	31	0.24
Zone 3	2,972	28.87	4,432	43.06	2,410	23.41	383	3.72	65	0.63	31	0.30
Wereda 17	1,336	18.72	3,633	50.90	1,814	25.42	316	4.43	13	0.18	25	0.35
Wereda 19	449	55.30	164	20.20	158	19.46	22	2.71	19	2.34	-	-
Wereda 28	1,187	50.62	636	27.12	439	18.72	45	1.92	33	1.41	5	0.21
Zone 6	1,511	55.86	633	23.40	398	14.71	134	4.95	29	1.07	-	-
Wereda 26	505	35.31	468	32.73	331	23.15	102	7.13	24	1.68	-	-
Wereda 27	1,006	78.90	164	12.86	67	5.25	32	2.51	6	0.47	-	-

Table 8.15B:- Number of Crop Holders that Owned Hay-Fork (wood) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Hay-Fork (wood)		One Hay-Fork (wood)		Two Hay-Forks (wood)		Three Hay-Forks (wood)		Four Hay-Forks (wood)		Five and above Hay-Forks (wood)	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	12,475	95.98	360	2.77	153	1.18	-	-	5	0.04	5	0.04
Zone 3	9,908	96.26	328	3.19	47	0.46	-	-	5	0.05	5	0.05
Wereda 17	7,030	98.50	107	1.50	-	-	-	-	-	-	-	-
Wereda 19	696	85.71	95	11.70	16	1.97	-	-	-	-	5	0.62
Wereda 28	2,182	93.05	127	5.42	31	1.32	-	-	5	0.21	-	-
Zone 6	2,567	94.90	32	1.18	106	3.92	-	-	-	-	-	-
Wereda 26	1,391	97.27	15	1.05	24	1.68	-	-	-	-	-	-
Wereda 27	1,176	92.24	17	1.33	82	6.43	-	-	-	-	-	-

Table 8.22B:- Number of Crop Holders that Owned Horse (For threshing or transportation) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Horse		One Horse		Two Horses		Three Horses		Four Horses		Five and above Horses	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	12,819	98.62	167	1.28	12	0.09	-	-	-	-	-	-
Zone 3	10,141	98.52	148	1.44	4	0.04	-	-	-	-	-	-
Wereda 17	7,076	99.15	61	0.85	-	-	-	-	-	-	-	-
Wereda 19	812	100.00	-	-	-	-	-	-	-	-	-	-
Wereda 28	2,254	96.12	87	3.71	4	0.17	-	-	-	-	-	-
Zone 6	2,678	99.00	19	0.70	8	0.30	-	-	-	-	-	-
Wereda 26	1,403	98.11	19	1.33	8	0.56	-	-	-	-	-	-
Wereda 27	1,275	100.00	-	-	-	-	-	-	-	-	-	-

Table 8.23B:- Number of Crop Holders that Owned Mule (For threshing or transportation) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Mule		One Mule		Two Mules		Three Mules		Four Mules		Five and above Mules	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	12,934	99.51	59	0.45	5	0.04	-	-	-	-	-	-
Zone 3	10,270	99.78	23	0.22	-	-	-	-	-	-	-	-
Wereda 17	7,133	99.94	4	0.06	-	-	-	-	-	-	-	-
Wereda 19	807	99.38	5	0.62	-	-	-	-	-	-	-	-
Wereda 28	2,331	99.40	14	0.60	-	-	-	-	-	-	-	-
Zone 6	2,663	98.45	37	1.37	5	0.18	-	-	-	-	-	-
Wereda 26	1,388	97.06	37	2.59	5	0.35	-	-	-	-	-	-
Wereda 27	1,275	100.00	-	-	-	-	-	-	-	-	-	-

Table 8.24B:- Number of Crop Holders that Owned Local Storage 'Debignit' by Geographic area.

Geographic area	Number of Crop holders that owned											
	No 'Debignit'		One 'Debignit'		Two 'Debignits'		Three 'Debignits'		Four 'Debignits'		Five and above 'Debignits'	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	9,264	71.27	946	7.28	1,503	11.56	714	5.49	327	2.52	244	1.88
Zone 3	7,029	68.29	836	8.12	1,293	12.56	622	6.04	283	2.75	230	2.23
Wereda 17	4,537	63.57	697	9.77	1,032	14.46	518	7.26	183	2.56	170	2.38
Wereda 19	676	83.25	38	4.68	43	5.30	5	0.62	33	4.06	17	2.09
Wereda 28	1,815	77.40	101	4.31	218	9.30	100	4.26	67	2.86	44	1.88
Zone 6	2,236	82.66	110	4.07	210	7.76	92	3.40	44	1.63	13	0.48
Wereda 26	1,080	75.52	77	5.38	182	12.73	45	3.15	33	2.31	13	0.91
Wereda 27	1,157	90.75	33	2.59	27	2.12	47	3.69	11	0.86	-	-

Table 8.25B:- Number of Crop Holders that Owned Local Storage 'Gottera' by Geographic area.

Geographic area	Number of Crop holders that owned											
	No 'Gottera'		One 'Gottera'		Two 'Gudguads'		Three 'Gudguads'		Four 'Gudguads'		Five and above 'Gudguads'	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Addis Ababa Region	12,312	94.72	325	2.50	266	2.05	71	0.55	12	0.09	12	0.09
Zone 3	9,964	96.80	140	1.36	173	1.68	7	0.07	4	0.04	5	0.05
Wereda 17	6,970	97.66	19	0.27	148	2.07	-	-	-	-	-	-
Wereda 19	731	90.02	64	7.88	5	0.62	7	0.86	-	-	5	0.62
Wereda 28	2,264	96.55	57	2.43	20	0.85	-	-	4	0.17	-	-
Zone 6	2,348	86.80	186	6.88	93	3.44	64	2.37	8	0.30	6	0.22
Wereda 26	1,118	78.18	147	10.28	93	6.50	58	4.06	8	0.56	6	0.42
Wereda 27	1,230	96.47	39	3.06	-	-	6	0.47	-	-	-	-

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENT OF VARIATION FOR SELECTED FARM IMPLEMENT VARIABLES

Annex Tables 8.1-8.3

ANNEX TABLES PRESENTING ESTIMATES, STANDARD ERRORS AND COEFFICIENT OF VARIATION FOR SELECTED FARM IMPLEMENT VARIABLES

Annex Tables 8.1-8.3

ANNEX TABLE 8.1:- Standard Errors and Coefficient of Variation For the Number of Holders Reporting, Quantity Reported and Total Value, for Private Holdings, Addis Ababa City Administration.

Implements, Equipment, Farm animals and Storage facilities	Number of Holders			Number of Implements, Equipment, Farm animals and Storages			Total Value		
	Reporting	S.E	C.V	Reported	S.E	C.V	(Birr)	S.E	C.V
Used for Clearing Land									
Axes	9,674	2,938.39	30.38	14,257	4,324.85	30.33	170,633	4,738,668.69	27.77
'Gejeras'	370	134.94	36.43	377	134.81	35.77	6,354	257,463.93	40.52
Shovels	6,945	2,225.42	32.04	7,646	2,389.77	31.26	108,781	3,629,644.70	33.37
Used for Cultivation									
Hoes	3,289	873.58	26.56	3,590	886.88	24.71	61,384	1,374,408.77	22.39
'Mekeskeshas'	462	179.64	38.84	493	183.20	37.16	10,416	484,807.84	46.55
Pick Axes	8,204	2,099.79	25.59	9,111	2,146.32	23.56	142,473	3,418,755.01	24.00
Tractors	-	-	-	-	-	-	-	-	-
Parts for traditional Plough									
'Degers'	10,121	3,616.85	35.74	27,237	9,792.14	35.95	116,105	4,056,435.42	34.94
'Erfes' (Handle)	10,086	3,619.78	35.89	26,684	9,229.66	34.59	99,234	3,504,373.57	35.31
Plough-Beams	10,116	3,615.71	35.74	25,489	8,517.48	33.42	330,334	10,917,227.27	33.05
Plough -Tips (Metal)	10,135	3,616.84	35.69	17,452	5,868.65	33.63	231,632	6,693,676.45	28.90
'Wegel' -Tips	9,993	3,525.46	35.28	17,000	5,621.64	33.07	85,626	2,642,951.12	30.87
Yokes	10,090	3,617.73	35.85	17,439	6,153.48	35.29	209,443	6,933,363.93	33.10
Used for Harvesting									
Sickles	11,271	3,557.06	31.56	22,406	6,394.51	28.54	375,795	11,300,812.87	30.07
Used for Threshing									
Hay-Forks (Metal)	8,496	3,302.80	38.87	12,750	4,530.74	35.53	248,836	9,318,014.09	37.45
Hay-Forks (Wood)	524	105.61	20.17	714	147.59	20.66	7,989	216,333.81	27.08
Threshing Sticks	146	42.91	29.32	248	83.33	33.60	883	28,404.82	32.17
Winnowers (Metal)	*	*	*	*	*	*	*	*	*
Winnowers (Wood)	6,663	2,403.77	36.08	7,530	2,607.15	34.62	139,518	5,192,678.20	37.22
Other Farm Equipment									
Carts (Hauling)	*	*	*	*	*	*	*	*	*
Sprayers (Hand Operated)	*	*	*	*	*	*	208,349	9,835,229.55	47.21
Sprayers (Power Operated)	-	-	-	-	-	-	-	-	-
Tying Tools	-	-	-	-	-	-	-	-	-
Wheelbarrows	*	*	*	*	*	*	*	*	*
Animals Used for Ploughing									
Asses	*	*	*	*	*	*	*	*	*
Camels	-	-	-	-	-	-	-	-	-
Horses	-	-	-	-	-	-	-	-	-
Mules	-	-	-	-	-	-	-	-	-
Oxen	9,353	3,155.43	33.74	26,529	8,731.06	32.91	24,816,334	874,203,818.95	35.23
AnimalsUsed for Threshing or Transportation									
Asses	8,552	3,038.70	35.53	12,999	4,323.02	33.26	3,918,132	139,482,405.46	35.60
Camels	-	-	-	-	-	-	-	-	-
Cattle	9,884	3,386.48	34.26	41,255	12,915.01	31.31	32,700,841	1,151,889,314.74	35.23
Horses	175	72.45	41.33	183	73.60	40.15	136,564	5,739,815.48	42.03
Mules	64	20.52	31.87	69	21.87	31.57	88,607	2,993,473.29	33.78
Storage Structure									
'Debiginits'	3,734	1,358.42	36.38	8,769	3,269.23	37.28	141,998	5,712,840.60	40.23
'Gotteras'	685	135.12	19.71	1,176	267.68	22.77	73,528	1,331,620.67	18.11
'Gudguads'	*	*	*	*	*	*	*	*	*
Modern Storages	*	*	*	*	*	*	*	*	*

ANNEX TABLE 8.2:- Standard Errors and Coefficient of Variation For the Number of Holders Reporting, Quantity Reported and Total Value, for Private Holdings, Zone 3.

Implements, Equipment, Farm animals and Storage facilities	Number of Holders			Number of Implements, Equipment, Farm animals and Storages			Total Value		
	Reporting	S.E	C.V	Reported	S.E	C.V	(Birr)	S.E	C.V
Used for Clearing Land									
Axes	8,046	2,929.76	36.41	11,800	4,309.83	36.52	138,506	4,709,227.35	34.00
'Gejeras'	334	134.12	40.10	341	133.99	39.31	5,871	256,534.51	43.70
Shovels	5,807	2,215.62	38.16	6,415	2,379.81	37.10	91,609	3,617,696.39	39.49
Used for Cultivation									
Hoes	2,525	868.39	34.40	2,587	867.17	33.53	41,027	1,311,597.67	31.97
'Mekeskeshas'	*	*	*	*	*	*	*	*	*
Pick Axes	6,341	2,079.73	32.80	6,891	2,115.53	30.70	104,648	3,357,204.68	32.08
Tractors	-	-	-	-	-	-	-	-	-
Parts for traditional Plough									
'Degers'	8,641	3,616.36	41.85	23,757	9,790.16	41.21	99,541	4,055,300.07	40.74
'Erfes' (Handle)	8,614	3,619.29	42.02	22,963	9,227.25	40.18	85,508	3,503,053.89	40.97
Plough-Beams.	8,636	3,615.23	41.86	22,003	8,515.28	38.70	282,306	10,913,288.28	38.66
Plough -Tips (Metal)	8,655	3,616.35	41.78	14,819	5,867.19	39.59	196,363	6,691,398.21	34.08
'Wegel' -Tips	8,514	3,524.96	41.40	14,377	5,620.32	39.09	72,302	2,642,035.31	36.54
Yokes	8,623	3,617.24	41.95	14,927	6,152.27	41.22	171,866	6,930,447.74	40.32
Used for Harvesting									
Sickles	9,190	3,552.46	38.66	18,216	6,384.36	35.05	318,246	11,295,324.68	35.49
Used for Threshing									
Hay-Forks (Metal)	7,302	3,302.37	45.23	10,802	4,529.49	41.93	212,832	9,315,432.85	43.77
Hay-Forks (Wood)	386	92.66	24.01	471	107.79	22.90	4,574	122,807.75	26.85
Threshing Sticks	116	40.54	35.07	185	77.33	41.87	697	26,099.54	37.44
Winnowers (Metal)	*	*	*	*	*	*	*	*	*
Winnowers (Wood)	5,636	2,402.87	42.64	6,263	2,605.68	41.60	116,597	5,190,382.29	44.52
Other Farm Equipment									
Carts (Hauling)	-	-	-	-	-	-	-	-	-
Sprayers (Hand Operated)	*	*	*	*	*	*	*	*	*
Sprayers (Power Operated)	-	-	-	-	-	-	-	-	-
Tying Tools	-	-	-	-	-	-	-	-	-
Wheelbarrows	*	*	*	*	*	*	*	*	*
Animals Used for Ploughing									
Asses	*	*	*	*	*	*	*	*	*
Camels	-	-	-	-	-	-	-	-	-
Horses	-	-	-	-	-	-	-	-	-
Mules	-	-	-	-	-	-	-	-	-
Oxen	7,920	3,154.81	39.84	22,569	8,728.52	38.67	21,330,051	873,963,263.23	40.97
AnimalsUsed for Threshing or Transportation									
Asses	7,301	3,038.00	41.61	10,817	4,321.04	39.95	3,269,238	139,429,541.54	42.65
Camels	-	-	-	-	-	-	-	-	-
Cattle	8,392	3,385.93	40.35	34,988	12,909.69	36.90	27,939,778	1,151,538,978.07	41.22
Horses	148	71.35	48.08	148	71.35	48.08	*	*	*
Mules	*	*	*	*	*	*	*	*	*
Storage Structure									
'Debiginits'	3,265	1,357.10	41.57	7,696	3,266.17	42.44	124,183	5,707,260.99	45.96
'Gotteras'	329	128.47	39.05	549	254.36	46.31	17,487	516,194.18	29.52
'Gudguads'	*	*	*	*	*	*	*	*	*
Modern Storages	*	*	*	*	*	*	*	*	*

ANNEX TABLE 8.3:- Standard Errors and Coefficient of Variation For the Number of Holders Reporting, Quantity Reported and Total Value, for Private Holdings, Zone 6.

Implements, Equipment, Farm animals and Storage facilities	Number of Holders			Number of Implements, Equipment, Farm animals and Storages			Total Value		
	Reporting	S.E	C.V	Reported	S.E	C.V	(Birr)	S.E	C.V
Used for Clearing Land									
Axes	1,628	225.08	13.83	2,457	360.18	14.66	32,127	527,407.54	16.42
'Gejeras'	36	14.84	41.27	36	14.84	41.27	484	21,856.83	45.19
Shovels	1,138	208.62	18.33	1,231	217.95	17.71	17,172	294,267.66	17.14
Used for Cultivation									
Hoes	765	95.16	12.45	1,003	185.96	18.54	20,358	410,744.48	20.18
'Mekeskeshas'	145	65.26	45.09	150	64.91	43.16	2,792	104,744.46	37.52
Pick Axes	1,863	289.59	15.54	2,220	362.26	16.32	37,825	645,803.81	17.07
Tractors	-	-	-	-	-	-	-	-	-
Parts for traditional Plough									
'Degers'	1,479	59.50	4.02	3,480	196.79	5.65	16,564	95,967,11	5.79
'Erfes' (Handle)	1,473	59.59	4.05	3,721	210.51	5.66	13,726	96,164.49	7.01
Plough-Beams.	1,479	59.50	4.02	3,486	193.18	5.54	48,029	293,240.88	6.11
Plough -Tips (Metal)	1,479	59.50	4.02	2,633	130.62	4.96	35,270	174,626.78	4.95
'Wegel' -Tips	1,479	59.50	4.02	2,623	121.77	4.64	13,325	69,570.52	5.22
Yokes	1,467	59.82	4.08	2,512	122.09	4.86	37,576	201,070.93	5.35
Used for Harvesting									
Sickles	2,081	180.89	8.69	4,190	360.24	8.60	57,549	352,153.26	6.12
Used for Threshing									
Hay-Forks (Metal)	1,194	53.30	4.46	1,949	106.83	5.48	36,004	219,311.06	6.09
Hay-Forks (Wood)	138	50.67	36.77	244	100.82	41.35	*	*	*
Threshing Sticks	31	14.06	45.70	63	31.04	49.05	*	*	*
Winnowers (Metal)	-	-	-	-	-	-	-	-	-
Winnowers (Wood)	1,027	65.95	6.42	1,267	87.30	6.89	22,921	154,397.28	6.74
Other Farm Equipment									
Carts (Hauling)	*	*	*	*	*	*	*	*	*
Sprayers (Hand Operated)	80	21.41	26.82	80	21.41	26.82	32,122	906,632.30	28.22
Sprayers (Power Operated)	-	-	-	-	-	-	-	-	-
Tying Tools	-	-	-	-	-	-	-	-	-
Wheelbarrows	-	-	-	-	-	-	-	-	-
Animals Used for Ploughing									
Asses	-	-	-	-	-	-	-	-	-
Camels	-	-	-	-	-	-	-	-	-
Horses	-	-	-	-	-	-	-	-	-
Mules	-	-	-	-	-	-	-	-	-
Oxen	1,434	62.31	4.35	3,960	210.67	5.32	3,486,283	20,506,866.67	5.88
AnimalsUsed for Threshing or Transportation									
Asses	1,251	65.25	5.21	2,182	130.84	6.00	648,894	3,839,841.03	5.92
Camels	-	-	-	-	-	-	-	-	-
Cattle	1,492	60.58	4.06	6,267	370.89	5.92	4,761,063	28,407,312.10	5.97
Horses	27	12.63	46.92	*	*	*	26,190	1,278,181.10	48.80
Mules	42	15.75	37.68	47	17.48	37.42	49,415	1,847,403.46	37.39
Storage Structure									
'Debiginits'	469	60.05	12.81	1,072	141.30	13.18	17,815	252,427.76	14.17
'Gotteras'	356	41.88	11.75	626	83.39	13.31	56,041	1,227,500.37	21.90
'Gudguads'	-	-	-	-	-	-	-	-	-
Modern Storages	-	-	-	-	-	-	-	-	-

APPENDIXES

APPENDI X I - Estimation Procedures of Totals , Ratios and Sampling Errors

APPENDIX II - Census Questionnaires

APPENDIXES

APPENDIX I - Estimation Procedures of Totals, Ratios and Sampling Errors

APPENDIX II - Census Questionnaires

APPENDIX I:

Estimation Procedures of Totals, Ratios and Sampling Errors

The following formulas were used to estimate total land under specific crop, production and yield of specific crop, and totals (for other variables) in a stratum.

1. Estimation of Total Area of Land under Specific Crop:

$$\hat{A}_h = \sum_{i=1}^{n_h} W_{hi} a_{hi}$$

in which, $W_{hi} = \frac{M_h H_{hi}}{n_h m_{hi} h_{hi}}$ is the basic weight

Where:

h represents the stratum

n_h is the total number of sample EAs successfully covered in the h^{th} stratum.

M_h is the measure of size of the h^{th} stratum as obtained from the sampling frame.

m_{hi} is the measure of size of the i^{th} sample EA in the h^{th} stratum obtained from the sampling frame.

H_{hi} is the total number of agricultural households of the i^{th} sample EA in the h^{th} stratum.

h_{hi} is number of sample agricultural households successfully covered in the i^{th} sample EA in the h^{th} stratum.

a_{hi} is the sample total of values of area in the i^{th} EA in the h^{th} stratum under a specific crop.

$\hat{A}_h$ is estimate of total area under specific crop in the h^{th} stratum.

2. Estimation of Total Production:

$$\hat{P}_h = \sum_{i=1}^{n_h} W_{hi} P_{hi}$$

in which, $P_{hi} = a_{hi} * \overline{Y}_{hi}$

Where, $\overline{Y}_{hi}$ is average yield per square meter of a specific crop in the i^{th} EA in the h^{th} stratum as defined in the table below for different crops.

Crop	Formula for $\bar{Y}_{hi}$
Cereals, pulses, oilseeds, chat and coffee	$\bar{Y}_{hi} = \frac{Y_{hi}}{16C_{hi}}$
Pineapple	$\bar{Y}_{hi} = \frac{Y_{hi}}{4C_{hi}}$
Root-crops and vegetables (broadcast type), and sugar cane	$\bar{Y}_{hi} = \frac{Y_{hi}}{C_{hi}}$
Root-crops and vegetables (row type)	$\bar{Y}_{hi} = \frac{Y_{hi}}{d_{hi} * C_{hi}}$
Other permanent crops	$\bar{Y}_{hi} = \frac{Y_{hi}}{b_{hi} * C_{hi}}$

Where, d_{hi} is average sample area of root crop or vegetable (row type) used for crop-cutting in the i^{th} EA in the h^{th} stratum, or $d_{hi} = \frac{r}{n-1}$

r is distance measured from Row 1 to Row n in meter.

n is number of rows ($2 \leq n \leq 5$).

b_{hi} is average area of a fruit bearing tree in the i^{th} EA in the h^{th} stratum.

Y_{hi} is sampled total of production of a specific crop from defined area of land for crop cutting of crop in the i^{th} EA in the h^{th} stratum.

C_{hi} is number of crop cutting of a specific crop in the i^{th} EA in the h^{th} stratum.

$\bar{Y}_{hi}$ is average yield per square meter of a specific crop in the i^{th} EA in the h^{th} stratum.

P_{hi} is estimate of total production of a specific crop in the i^{th} EA in the h^{th} stratum.

$\hat{P}_h$ is estimate of total production quantity of a specific crop in the h^{th} stratum.

3. Estimate of Yield of a Specific Crop in Stratum h is given by:

$$\hat{Y}_h = \frac{\hat{P}_h}{\hat{A}_h}$$

4. Estimation of Totals (Livestock, Agricultural practices, etc.)

$$\hat{y}_h = \sum_{i=1}^{n_h} \frac{M_h H_{hi}}{n_h h_{hi}} \hat{y}_{hi}$$

5. Sampling Variance of Estimates:

Sampling variance of estimate of stratum total of area, production and yield for a specific crop, and totals for other variables are estimated by the following formulas, respectively.

$$Var(\hat{A}_h) = (1-f_h)\frac{n_h}{n_h-1}\sum_{i=1}^{n_h}\left(\hat{A}_{hi} - \frac{\hat{A}_h}{n_h}\right)^2 + f_h\sum_{i=1}^{n_h}(1-f_{hi})\left(\frac{h_{hi}}{h_{hi}-1}\right)\sum_{j=1}^{h_{hi}}\left(\hat{A}_{hij} - \frac{\hat{A}_{hi}}{h_{hi}}\right)^2$$

$$Var(\hat{P}_h) = (1-f_h)\frac{n_h}{n_h-1}\sum_{i=1}^{n_h}\left(\hat{p}_{hi} - \frac{\hat{p}_h}{n_h}\right)^2 + f_h\sum_{i=1}^{n_h}(1-f_{hi})\left(\frac{h_{hi}}{h_{hi}-1}\right)\sum_{j=1}^{h_{hi}}\left(\hat{P}_{hij} - \frac{\hat{P}_{hi}}{h_{hi}}\right)^2$$

$$Var(\hat{Y}_h) = \frac{1}{\hat{A}_h^2}[Var(\hat{P}_h) + \hat{Y}_h^2 Var(\hat{A}_h) - 2\hat{Y}_h Cov(\hat{P}_h, \hat{A}_h)]$$

Where, $Cov(\hat{P}_h, \hat{A}_h) = (1-f_h)\frac{n_h}{n_h-1}\sum_{i=1}^{n_h}(\hat{A}_{hi} - \frac{\hat{A}_h}{n_h})(\hat{P}_{hi} - \frac{\hat{P}_h}{n_h})$

$$+ f_h\sum_{i=1}^{n_h}(1-f_{hi})\left(\frac{h_{hi}}{h_{hi}-1}\right)\sum_{j=1}^{h_{hi}}\left(\hat{A}_{hij} - \frac{\hat{A}_{hi}}{h_{hi}}\right)\left(\hat{P}_{hij} - \frac{\hat{P}_{hi}}{h_{hi}}\right).$$

$$Var(\hat{y}_h) = (1-f_h)\frac{n_h}{n_h-1}\sum_{i=1}^{n_h}\left(\hat{y}_{hi} - \frac{\hat{y}_h}{n_h}\right)^2 + f_h\sum_{i=1}^{n_h}(1-f_{hi})\left(\frac{h_{hi}}{h_{hi}-1}\right)\sum_{j=1}^{h_{hi}}\left(\hat{y}_{hij} - \frac{\hat{y}_{hi}}{h_{hi}}\right)^2$$

f_h = average first stage probability of selection of EAs within Wereda h.

$f_{hi} = \frac{h_{hi}}{H_{hi}}$ = average second stage probability of selection within the i^{th} sample EA in Wereda h.

Since all strata are independent, the total variance at regional level is computed by aggregating the result obtained at domain level, i.e.

$$Var(\hat{Y}) = \sum_h^L Var(\hat{Y}_h), Var(\hat{P}) = \sum_h^L Var(\hat{P}_h) \text{ and } Var(\hat{A}) = \sum_h^L Var(\hat{A}_h)$$

Where, L is the number of strata.

In estimating the sampling variance by the above formula, selection of EAs within a stratum is assumed to be with replacement. By so doing the variance estimate may be slightly over estimated but it greatly simplifies the estimation procedure.

6. Coefficient of Variation (CV) of Estimates:

Coefficient of Variation (CV), in percentage, of estimate of stratum total of area, production and yield for a specific crop (other totals) are given respectively by:

$$CV(\hat{A}_h)=\frac{\sqrt{Var(\hat{A}_h)}}{\hat{A}_h}*100$$

$$CV(\hat{P}_h)=\frac{\sqrt{Var(\hat{P}_h)}}{\hat{P}_h}*100$$

$$CV(\hat{Y}_h)=\frac{\sqrt{Var(\hat{Y}_h)}}{\hat{Y}_h}*100$$

7. Ninety-five percent confidence interval (CI) of stratum total is:

$$\hat{Y}_h \pm 1.96 * S.E(\hat{Y}_h)$$

Where, $S.E(\hat{Y}_h)=\sqrt{Var(\hat{Y}_h)}$

In estimating the sampling variance by the above formula, selection of EAs within a stratum is assumed to be with replacement. By so doing the variance estimate may be slightly over estimated but it greatly simplifies the estimation procedure.

6. Coefficient of Variation (CV) of Estimates:

Coefficient of Variation (CV), in percentage, of estimate of stratum total of area, production and yield for a specific crop (other totals) are given respectively by:

$$CV(\hat{A}_h)=\frac{\sqrt{Var(\hat{A}_h)}}{\hat{A}_h}*100$$

$$CV(\hat{P}_h)=\frac{\sqrt{Var(\hat{P}_h)}}{\hat{P}_h}*100$$

$$CV(\hat{Y}_h)=\frac{\sqrt{Var(\hat{Y}_h)}}{\hat{Y}_h}*100$$

7. Ninety-five percent confidence interval (CI) of stratum total is:

$$\hat{Y}_h \pm 1.96 * S.E(\hat{Y}_h)$$

Where, $S.E(\hat{Y}_h)=\sqrt{Var(\hat{Y}_h)}$

APPENDIX II

APPENDIX II

URBAN

FORM EASE -U- 94/2

Agricultural Households Demographic Characteristics - 2001 /2002 (1994 E.C.)

PART I- IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7	8
REGION	ZONE	WEREDA	TOWN	HIGHER/WEREDA	KEBELE	ENUMERATIO AREA	HOUSEHOLD ID NO.

PART II - DEMOGRAPHIC CHARACTERISTICS OF EACH MEMBER OF THE AGRICULTURAL HOUSEHOLD (STARTING WITH THE HEAD OF THE HOUSEHOLD)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
								5 YEARS AND ABOVE		10 YEARS AND ABOVE			
SR. NO.	FULL NAME	IS MEMEBER OF THE HOUSEHOLD A HOLDER Yes =1 No =2 code	HOLDER ID	TYPE OF HOLDING CROP =1 LIVESTOCK =2 BOTH =3 code	SEX MALE = 1 FEMALE = 2 Code	RELATION TO THE HEAD OF HOUSEHOLD Code	AGE (IN COMP-LETED YEARS)	EDUCATIONAL ATTAINMENT (Highest Grade Completed) Code	MARITAL STATUS NEVER MARRIED = 1 CURRENTLY MARRIED= 2 DIVORCED = 3 WIDOWED = 4 Code	WERE YOU ENGAGED IN ECONOMIC ACTIVITY DURING THE LAST 12 MONTHS? Yes =1 No =2 Code	IF NOT ENGAGED (IN COL. 11 COD2) ECOMOMIC ACTIVITY WHAT WAS THE MAIN REASON? STUDENT =1 HOME MAKERS =2 HANDICAP =3 OLD AGE/PENSION =4 OTHERS =5 Code	IF ENGAGED IN ECONOMIC ACTIVITY WHAT WAS THE MAJOR ACTIVITY? FULLY AGRICULTURE = 1 PARTLY AGRICULTURE = 2 Fully in others =3 Code	IF IN COLUMN 13, CODE 1 OR 2, EMPLOYMENT STATUS EMPLOYER = 1 OWN-ACCOUNT WORKER = 2 EMPLOYEE = 3 UNPAID FAMILY WORKER = 4 OTHERS =5 Code
01													
02													
03													
04													
05													
06													
07													
08													
09													
10													

Head	= 1
Spouse	= 2
Son/Daughter of head & spouse	= 3
Son/Daughter of head	= 4
Son/Daughter of spouse	= 5
Mother/Father of head/spouse	= 6
Sister/Brother of head/spouse	= 7
Other relatives	= 8
Non relatives	= 9

Illiterate	= 1
Informal Education	= 2
Grade 1 Completed	= 3
Grade 2 Completed	= 4
Grade 3 Completed	= 5
Grade 4 Completed	= 6
Grade 5 Completed	= 7
Grade 6 Completed	= 8
Grade 7 Completed	= 9
Grade 8 Completed	= 10
Grade 9 Completed	= 11
Grade 10 Completed	= 12
Grade 11 Completed	= 13
Grade 12 Completed	= 14
Grade 12 +	= 15

FORM EASE-U-94/3

URBAN

ETHIOPIAN AGRICULTURAL SAMPLE ENUMERATION

LIST OF FIELDS UNDER TEMPORARY AND PERMANENT CROPS AND AGRICULTURAL PRACTICES- MEHER SEASON

2001/02 (1994 E.C)

PART I-IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7	8	9	10	11	12	13	14
REGION	ZONE	WEREDA	TOWN	HIGHER/ WEREDA	KEBELE	ENUMERATION AREA	HOUSEHOLD ID. NUMBER	HOLDER ID. NUMBER	HOLDER'S NAME	AGE	SEX M→1 F→2	TYPE OF HOLDING CROP → 1 LIVESTOCK →2 BOTH → 3	DID YOU PRODUCE CROP IN BELG SEASON YES → 1 NO → 2

PART II- AREA UNDER TEMPORARY CROPS AND AGRICULTURAL PRACTICES

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
					Use of Agricultural Inputs							If column 12 is blank			If column 15 is blank	
Parcel Number	Field Number	Name of crops	Type of Tenure Own → 1 Rented → 2 Others → 3	Location of field in Urban Boundary Within → 1 Outside → 2	Type of seeds used Improved seed → 1 Local seed → 2	Use of fertilizer: Did you use Fertilizer Yes → 1 No → 2	If yes in column 7 Type of fertilizer Natural → 1 Chemical → 2 Both → 3	Use: Did you apply Irrigation Yes → 1 No → 2	Source of water River → 1 Lake → 2 Pool → 3 Pipe water → 4 Others → 5	Did you use pesticides Yes → 1 No → 2	Field Area in Square Meters	Area in local units: Name of Local Units	Area	Production in kilograms	Production In Local units: Name of Local units	Quantity
		CODE										code				Code

Continued

Rural

FORM EASE -R- 94/2

Ethiopian Agricultural Sample Enmeration- Socio Economic characteristics of Population in Agricultural Households - 2001 /2002 (1994 E.C.)

PART I- IDENTIFICATION PARTICULARS

1 Region	2 Zone	3 Wereda	4	5 Farmers' Association	6 Enumeration Area	7 Household ID Number

PART II - DEMOGRAPHIC CHARACTERISTICS OF EACH MEMBER OF THE AGRICULTURAL HOUSEHOLD (STARTING WITH THE HEAD OF THE HOUSEHOLD)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
			If Column 3, Code 1					5 YEARS AND ABOVE		10 YEARS AND ABOVE			
SR. NO.	FULL NAME	IS MEMEBER OF THE HOUSEHOLD A HOLDER Yes =1 No =2	HOLDER ID	TYPE OF HOLDING CROP =1 LIVESTOCK =2 BOTH =3	SEX MALE = 1 FEMALE = 2	RELATION TO THE HEAD OF HOUSEHOLD	AGE (IN COMP-LETED YEARS)	EDUCATIONAL ATTAINMENT (Highest Grade Completed)	MARITAL STATUS NEVER MARRIED = 1 CURRENTLY MARRIED= 2 DIVORCED = 3 WIDOWED = 4	WERE YOU ENGAGED IN ECONOMIC ACTIVITY DURING THE LAST 12 MONTHS? Yes =1 No =2	IF NOT ENGAGED (IN COL. 11 COD2 ECOMOMIC ACTIVITY WHAT WAS THE MAIN REASON? STUDENT =1 HOME MAKERS =2 HANDICAP =3 OLD AGE/PENSION =4 OTHERS =5	IF ENGAGED IN ECONOMIC ACTIVITY WHAT WAS THE MAJOR ACTIVITY? FULLY AGRICULTURE = 1 PARTLY AGRICULTURE = 2 Fully in others =3	IF IN COLUMN 13, CODE 1 OR 2, EMPLOYMENT STATUS EMPLOYER = 1 OWN-ACCOUNT WORKER = 2 EMPLOYEE = 3 UNPAID FAMILY WORKER = 4 OTHERS =5
		code		code	Code	Code		Code	Code	Code	Code	Code	Code
0 1													
0 2													
0 3													
0 4													
0 5													
0 6													
0 7													
0 8													
0 9													
1 0													

Head	= 1
Spouse	= 2
Son/Daughter of head & spouse	= 3
Son/Daughter of head	= 4
Son/Daughter of spouse	= 5
Mother/Father of head/spouse	= 6
Sister/Brother of head/spouse	= 7
Other relatives	= 8
Non relatives	= 9

Illiterate	= 1
Informal Education	= 2
Grade 1 Completed	= 3
Grade 2 Completed	= 4
Grade 3 Completed	= 5
Grade 4 Completed	= 6
Grade 5 Completed	= 7
Grade 6 Completed	= 8
Grade 7 Completed	= 9
Grade 8 Completed	= 10
Grade 9 Completed	= 11
Grade 10 Completed	= 12
Grade 11 Completed	= 13
Grade 12 Completed	= 14
Grade 12 +	= 15

Form EASE-94/3A

RURAL

Ethiopian Agricultural Sample Enumeration

List of Fields Under Temporary Crops (Including Vegetables and Root Crops) and Agricultural Practices (Meher Season) - 2001/02 (1994 E.C.)

Part 1- IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7	8	9	10	11
Region	zone	Woreda	Farmers Association	Enumeration Areas	Household Number		Holder Name	Age	Sex male →1 Female →2	Type of Holding Crop →1 Livestock →2 Both →3

Part II - Area Under Temporary Crops and Agricultural Practice

1 Sr. No.	2 Questions	3 Parcel No / Field No. / crop name (code)	4 Parcel No. / filed NO. / crop name (code)	5 Parcel No. / filed NO. / crop name (code)	6 Parcel No. / filed NO. / crop name (code)
01	Type of Holding Private →1 Others →3 Rnted /contract →2				
02	Crop Area in local unit	Name (code) Area	Name (code) Area	Name (code) Area	Name (code) Area
03	Have the field been included in the extention Package program Yes →1 No →2				
04	Was the field Irrigated? Yes →1 No →2				
05	Variety of seeds used Improved →1 Indignores →2				
06	(For Cereals,Pulses and Oil seeds only) If indiginous seed was used, What was the total quantity	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram
07	(For Cereals,Pulses and Oil seeds only) If Improved seed was used, what was the total quantity	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram
08	(For Cereals,Pulses and Oil seeds only) If Improved seed was used what was the cost /price	Birr cent	Birr cent	Birr cent	Birr cent
09	Was the crop Damaged Yes →1 No →2				
10	If yes, what was the major cause of damage	Reason (code)	Reason (code)	Reason (code)	Reason (code)
11	Percentage of damage				
12	Any control/protection measure taken for crop damage? Yes →1 No →2				
13	If yes, what Type of measure? Chemical →1 Both →3 Non chemical →2				
14	If chemical Insecticide →1 1&3 →5 Herbicide →2 2&3 →6 Fungicide →3 All →7 1&2 →4				
15	Was the field fertilized? Yes →1 No →2				
16	If fertilized what type ? Natural →1 Bothe →3 Chemical →2				
17	One main reason for not using chemical fertilizer	Reason (Code)	Reason (Code)	Reason	Reason (Code)
18	If chemical fertilizer used 18.1 Type Urea →1 Both →3 Dap →2				
	18.2 Quantity in K.g	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram
19	If natural fertilizer used mainly What type? Manure →1 Both →3 compost →2 Others →4				
	If others specify/ →				

RURAL

Ethiopian Agricultural Sample Enumeration

Form EASE-94/3B

List of Fields Under Permanent Crops and their Agricultural Practices (Mehere Season) - 2001/02 (1994 E.C.)

Part 1 IDENTICATION PARTICULARS

1	2	3	4	5	6	7	8	9	10	11
Region	Zone	Wereda	Farmers' Association	Enumeration Areas	Household Number	Holder Number	Holder's Name	Age	Sex: male → 1, Female → 2	Type of Holding: crop → 1, Livestock → 2, Both → 3

Part II - Area Under Permanent Crops and Agricultural Practice

		1	2	3	4	5	6
		Question	parcel No / Field No / Crop Name code	parcel No / Field No / Crop Name code	parcel No / Field No / Crop Name code	parcel No / Field No / Crop Name code	parcel No / Field No / Crop Name code
0	1	Type of Holding Private → 1 Others → 3 Rented/ contract → 2					
0	2	Crop Area in Local unit	Name / Area	Name / Code / Area	Name / Code / Area	Name / Code / Area	Name / Code / Area
0	3	Has the field been included in the extention package program Yes → 1 No → 2					
0	4	Total number of trees in the field. (Excluding Coffe,Chat,Pineapple,Sugar-cane)	Quantity	Quantity	Quantity	Quantity	Quantity
0	5	Number of trees of fruit bearing age (Excluding Coffe,Chat,Pineapple,Sugar-cane)	Quantity	Quantity	Quantity	Quantity	Quantity
0	6	Was the field Irrigated Yes → 1 No → 2					
0	7	Variety of seeds used Improve → 1 Indiginous → 2					
0	8	Was the crop Damaged Yes → 1 No → 2					
0	9	If yes, what was the major cause of damage	Reason code	Reason code	Reason code	Reason code	Reason code
1	0	Persontage of Damage					
1	1	Any control /proventina measure taken for crop Damage Yes → 1 No → 2					
1	2	Chemical → 1 Both → 3 Non chemical → 2					
1	3	If chemica Incectide → 1 1&3 → 5 Herbicid → 2 2&3 → 6 Fungicids → 3 All → 7 1&2 → 4					
1	4	Was the field fertilized Yes → 1 No → 2					
1	5	If fertilized what type? Natural → 1 Both → 3 Chemical → 2					
1	6	Reason for not using chemical fertilizer	Reason Code	Reason Code	Reason Code	Reason Code	Reason Code
1	7	If chemical (comercial) fertilizer used 17.1 Type Urea → 1 Both → 3 Dap → 2					
		17.2 Quantity in Kg.	Kg. Gram	Kg. am	Kg. Gram	Kg. Gram	
1	8	If natural fertilizer used mainly what type? Manure → 1 Both → 3 Compost → 2 Others → 4 /If others specify/ →					

RURAL

Ethiopian Agricultural Sample Enumeration

List of Fields Under Mixed Crops and their Agricultural Practices

(Mehere Season) - 2001/02 (1994 E.C.)

Form EASE-94/3c

Part 1- IDENTIFICATION PARTICULARS

1 Region	2 Zone	3 Wereda	4 Farmers' Association	5 Enumeration Areas	6 Household Number	7 Holder Number	8 Holders' Name	9 Age	10 Sex (male → 1, Femal → 2)	11 Type of Holding (Crop → 1, Livestock → 2, Bothe → 3)

Part II - Area Under Mixed Crops and Agricultural Practice

1	2 Questions	3	4
		Parcel No. ____ Field No. ____	Parcel No. ____ Field No. ____
		Crop Name / code	Corp Name / code
01	Type of Holding (Private → 1, Rented/contract → 2, Others → 3)		
02	Total mixed corp area in local unit	Name of Local Unit / code / Area	Name of Local Unit / code / Area
03	Was the field been included in the extention pakage program (Yes → 1, No → 2)		
04	Area in percentag share for Each crop		
05	Number of trees for permanent crop (Excluding Coffee, Chat, Pinapple, Sugar-cane)	Quantity	Quantity
06	Number of trees of fruit of permanent crop (Excluding Coffee, Chat, Pinapple, Sugar-cane)	Quantity	Quantity
07	was the field Irrigated (yes → 1, No → 2)		
08	Variety of seeds used (Improved → 1, Indiginous → 2)		
09	If Indignous seed was used what was the quantity (for Cereals, Pulses & Oilseeds only)	Kg. Gram	Kg. Gram
10	If Improved seed was used, what was the quantity (for Cereals, Pulses & Oilseeds only)	Kg. Gram	Kg. Gram
11	If Improved seed was used what was the cost/price (for Cereals, Pulses & Oilseeds only)	Birr sent	Birr sent
12	was the crop Damaged (Yes → 1, No → 2)		
13	If, yes, what was the major cause of Damage	Reason Code	Reason Code
14	percentage of Damage		
15	Any control/ preventive measure Taken for crop damage → 1 → 2		
16	If yes, what type of measure (Chemical → 1, Non-chemical → 2, Both → 3)		
17	If chemical Insecticide (Insecticide → 1, Herbicide → 2, Fungicide → 3, 1&2 → 4, 1&3 → 5, 2&3 → 6, All → 7)		
18	Was the field fertilized (yes → 1, No → 2)		
19	If fertilized what type? (Natural → 1, Chemical → 2, Both → 3)		
20	One main Reson for not using Chemical fertilizer	Reason Code	Reason Code
21	If chemical fertilizer used 21.1 Type (Urea → 1, Dap → 2, Both → 3)		
	21.2 Quantity in kg.	Kg. Gram	Kg. Gram
22	If natural fertilizer used mainly what type (Manure → 1, Compost → 2, Both → 3, Others → 4) / If others specify/		

RURAL

Form EASE -94/3D

Ethiopian Agricultural Sample Enumeration
List of Fields Under Other Land Use (Fields not occupied by any type of Crop)
(Mehere Season) - 2001/02 (1994 E.C.)

part I- IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7	8	9	10	11
Region	Zone	Wereda	Farmer's Association	Enumeration Areas	Household Nubber	Holder Number	Holder's Name	Age	Sex: male → 1, Female → 2	Type of Holding: Crop → 1, Crop → 2, Crop → 3

Part II - Other Land UTILIZATION and Local Area Measurment units

1	2	3	4	5	6	7	8	9	10
sr. NO.	Parcel	Land Use	Type of Land use	code	Type of owner ship: Private → 1, Rented/contrat → 2, Other → 3	code	Area in Local unit: Local unit NAME	code	Area
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									

From EASE 94/4

Rural

Ethiopian Agricultral Sample Enumeration
Assessment of Crop Conditions - 2001/02 (1994 E.C.)

NOTE:- This Form should be Filled Out For Mixed Crops According to their Type in Pure Stands

Part I - Identification Particulars

1	2	3	4	5	6
Region	Zone	Wereda	Farmers' Association	Enumeration Area	Crop Name

Part II - Assessment of Crop Conditions (For Meher Season)

1	2	3	4	5	6	7	8	9		10	11
					Crop Productivity Compared to Last Year						
Sr. No.	Name of Holder	Household ID Number	Holder ID Number	Number of Fields	Increase =1 Equal / No change =2 Decrease =3	If Increase Quantity in Percent	If Decrease: Quantity In Percent	If Decrease: One Major Reason for Decrease	Code	Change In Percent	Remarks
0 1											
0 2											
0 3											
0 4											
0 5											
0 6											
0 7											
0 8											
0 9											
1 0											
1 1											
1 2											
1 3											
1 4											
1 5											
1 6											
1 7											
1 8											

FORM EASE-94/5

Rural

Ethiopian Agricultural Sample Enumeration
Area under Crop Fields and Other Land Uses
(1994 E.C)

Part 1: Identification Particular

1	2	3	4	5	6	7	8
Kilil	Zone	Wereda	FA	EA	Household ID NO	Holder ID.No.	Name of Holder

9	10	11	12	13	14	15	16
Parcel No.	Field No.	The Field or other land used Field Under Temp/Veg/Root Crops → 1 Permanent → 2 Mixed → 3 Other land use → 4 cod	SR. No.	Name of Crop or Type of Land use	If in col.11 code 1,2 or 3 Quantity of prod. In Local unit Identification particulars code / Name / Code / Quantity		Area in Percentage share for each Crop (If in Col. 11 Code 3)
			1				
			2				
			3				

Part II. Area Measurement Result

1	2	3	4	5
The field or other land use Date of measurement Date / Month	Area in Sq.m.	Area in Local Units Name of Local Area Unit / code / Area		Reason if area Measurment not conducted / Code

Part III. Bearing and Distances of the Measured Area

Side ID	A-B	B-C	C -	D -	E -	F-	G-
Bearing							
Distanse of							
Side ID	**H -**	**I -**	**J -**	**K -**	**L -**	**M-**	**N-**
Bearing							
Distances of							
Side ID	**O -**	**P-**	**Q-**	**R-**	**S-**	**T-**	**U-**
Bearing							
Distance of							

FORM EASE-R-94/6

Rural

Ethiopian Agricultural Sample Enumeration
List and Selection of Crop Fields - 2001/02 (1994 E.C.)

Part I- Identification Particulars

1	2	3	4	5	6	7	8	9	10	9
Region	Zone	Wereda	Farmers Association	Enumeration Area	Household ID Number	Holder ID Number	Holder Name	Age	Sex Male =1 Female =2	Type of Holding Crop =1 Livestock =2 Both =3

Part II- Selection of Fields for and Crop Cutting Experiment

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
		Type of Crop Temporary =1 Vegetable/ Root =2 Permanent =3 Mixed =4		Name of Crops																			
Serial No. of Parcel	Serial No. of Field		Crop Name*	CODE	FIELD No.	SL.FIEL No.	FIELD No.	SL.FIEL No.	FIELD No.	SL.FIELD No.	FIEL No.	SL.FIEL No.	FIELD No.	SL.FIELD No.	FIELD No.	SL.FIEL No.	FIELD No.	SL.FIEL No.	FIEL No.	SL.FIEL No.	FIELD No.	SL.FIEL No.	FIELD No.	SL.FIELD No.

Rural

Form EASE-R- 94/7A

Ethiopian Agricultural Sample Enumeration
Crop Cutting Results - Temporary Crops 2001/02 (1994 E.C.)
(Peasant Holdings)

Part I - Identification particulars

1	2	3	4	5	6	7	8	9	10	11
Region	Zone	Wereda	Farmers Association	Enumeration Area	Household ID Number	Holder ID Number	Name of Holder	Age	Sex Male =1 Female =2	Type of Holding Crop = 1 Livestock = 2 Both = 3

Part II - Details of Crop Cutting (For Temporary Crops only) (Excluding Vegetables and Root Crops)

1	2	3		4		5		6		7		8	9		10	11
Serial No. Of				Date of Harvest		Fresh Weight		Date of Recording Dry Weight		Dry Weight		Was Crop Damaged? Yes =1 No =2	If yes, Reason for Damage		Percentage Damaged	Type of Crop Stand Pure =1 Mixed =2
Parcel	Field	Crop Name	Code	Day	Month	Kg.	Grams	Day	Month	Kg.	Grams			Code		

Rural

Form EASE-R- 94/7B

Ethiopian Agricultural Sample Enumeration
Crop Cutting Results - Vegetables and Root Crops - 2001/02 - (1994 E.C)
(Peasant Holding)

PART I - IDENTIFICATION PARTICULARS

1	2	3	4	5	*	7	8	9	10	11
Region	Zone	Wereda	Farmers' Association	Enumeration Area	Household I Number	Holder ID Number	Name of Holder	Age	Sex Male =1 Female =2	Type of Holding Crop = 1 Livestock = 2 Both = 3

PART II - DETAILS OF CROP CUTTING OF PLOT PERPARATION (FOR VEGETABLES AND ROOT CROPS)

1	2	3	4	5	6	7	8	9	10	11	12	13
					For Rows only			For Broad Cast only				
					Selected Random Rows		Random Distance in Meter for the Selected Rows from Starting Point					
Ser. No.	Parcel No.	Field No.	Crop Name	Planting Pattern Rows =1 Broad cast=2	Serial N0	Distance in meter		Largest Field Side in meter	Random Distance in Meter for the Largest Side from Starting Point	Shortest Side Distance in Meter	From starting point to the center of the field	
			Code								Shortest Side Random Distance in Meter	Shortest Side Bearing
0 1												
0 2												
0 3												
0 4												
0 5												
0 6												
0 7												
0 8												
0 9												
1 0												

PART III - CROP CUTTING RESULT (FOR VEGETABLES AND ROOT CROPS)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
					For Rows Only			From 1m x 1m (for Broad cast) or 1m x 2 Rows (for Rows) Plot No. of Fruits and Quantity Harvested							
					Distance Between five or Below five Rows			First Visit		Second Visit		Third visit		Grand Total	
Line No.	Parcel No.	Field No.	Crop Name	Planting Pattern Row =1 Broad cast=2	No. of Rows	Total distance in Meter	Plant Category A = 1 Catatory B = 2	No. of Fruits		No. of Fruits		No. of Fruits		No. of Fruits	
			Code				Code	Quantity	Weight in Kg.	Quantity	Weight in Kg.	Quantity	Weight in Kg.	Quantity	Weight in Kg.
0 1															
0 2															
0 3															
0 4															
0 5															
0 6															
0 7															
0 8															
0 9															
1 0															

Form EASE -R- 94/7C

Ethiopian Agricultural Sample Enumeration
Crop Cutting Results - Permanent Crops 2001/02 (1994 E.C.)

Part I- Identification Particulars

1	2	3	4	5	6	7	8	9	10	11
Region	Zone	Wereda	Farmers' Association	Enumeration Area	Household ID Number	Holder ID Number	Name of Holder	Age	Sex Male =1 Female =2	Type of Holding Crop = 1 Livestock = 2 Both = 3

Part II- Details of Crop-Cutting (For Permanent Crops) (Excluding Coffee, Chat and Gesho)

1	2	3		4	5	6		7	8	9		10	11	12		13	14	15		16	17	18		19	20	
Serial No. Of		Fruit Type Picked			FIRST VISIT			SECOND VISIT				THIRD VISIT				FOURTH VISIT				FIFTH VISIT				TOTAL		
Parcel	Field		Code	Date	Number	Weight Kg.	Weight Gm.	Date	Number	Weight Kg.	Weight Gm.	Date	Number	Weight Kg.	Weight Gm.	Date	Number	Weight Kg.	Weight Gm.	Date	Number	Weight Kg.	Weight Gm.	Number	Weight Kg.	Weight Gm.
		Orange	47																							
		Banana	42																							
		Lemon	44																							
		Papaya	48																							
		Mango	46																							
		Guava	65																							
		Avocado	84																							
		Sugar cane	76																							
		Pineapple	49																							

PART III- DETAILS OF CROP-CUTTING FOR COFFEE, CHAT AND GESHO

1	2	3		4	5		6		7		8		9		10		11		12		13		14	
SERIAL No. OF		FRUIT / TWIGS PICKED		NUMBER OF TREES PICKED	FIRST VISIT DATE / /				SECOND VISIT DATE / /				WEIGHT OF COFFEE FRUITS DRIED AND BEANS (KG) THIRD VISIT DATE / /				FOURTH VISIT DATE / /				TOTAL			
					DATE WEIGHED / /				DATE WEIGHED / /				DATE WEIGHED / /				DATE WEIGHED / /							
					FRUITS		BEANS		FRUITS		BEANS		FRUITS		BEANS		FRUITS		BEANS		FRUITS		BEANS	
PARCE	FIELD		CODE		KG.	GRAMS	KG.	GRAMS	KG.	GRAMS	KG.	GRAMS	KG.	GRAMS	KG.	GRAMS	KG.	GRAMS	KG.	GRAMS	KG.	GRAMS	KG.	GRAMS
		COFFEE	72																					
					WEIGHT OF FRESH AND DRY TWIGS (KG) FIRST VISIT				SECOND VISIT				THIRD VISIT				FOURTH VISIT				TOTAL			
					DATE / /		DATE / /		DATE / /		DATE / /		DATE / /		DATE / /		DATE / /		DATE / /					
					FRESH		DRY		FRESH		DRY		FRESH		DRY		FRESH		DRY		FRESH		DRY	
		GESHO	75																					
					Date / /				Date / /				Date / /				Date / /				Date / /			
		CHAT	71																					

Rural

Form EASE-94/8

Ethiopian Agricultural Sample Enumeration
Livestock and Honey Production-2001/2002 (1994 E.C)

PART I - Idetification Particulars

1	2	3	4	5	6	7	8	9	10	11
REGION	ZONE	WEREDA	FARMERS' ASSOCIATION	ENUMERATION AREA	HOUSEHOLD ID. No	HOLDER ID. No	HOLDER'S NAME	Age	Sex Male=1 Female=2	TYPE OF HOLDING CROP = 1 LIVESTOCK = 2 BOTH = 3

PART II-LIVESTOCK, BEEHIVES AND LIVESTOCK PRODUCTS

Question No I- Did you have livestock, And/or beehives on February 8, 2002?

Yes → 1 Complete questions below
No → 2 Complet question No II ☐

Number of Cattle in Age & Purpose on February 8/2002

	None	Total	Male	Femal
1. Cattle of all ages on February 8,2002		1	2	3
a. Cattle < 6 months		4	5	6
b. Cattle 6 months & <1 years old		7	8	9
c. Cattle 1 year to <3 years old		10	11	12
d. Cattle 3 years to < 10 years		13	14	15
(1) Beef Cattle (for meat production purpose)		16	17	18
(2) For breeding purpose		19	20	21
(3) Dairy cows		22		23
(4) Cows gave milk for the last 12 months		24		25
(5) Draft Cattle (for work purpose)		26	27	28
(6) Cattle for other purposes		29	30	31
e. Cattle 10 years and older		32	33	34
f. Grand Total		35	36	37
1. Total Local breed		38	39	40
2. Total Exotic		41	42	43
3. Total Hybrid		44	45	46

Number of Sheep in Age & Purpose on February 8/2002

	None	Total	Male	Female
2. SHEEP of all ages on February 8, 2002		47	48	49
a. Sheep < 6 months		50	51	52
b. Sheep 6 months & < 1 years old		53	54	55
c. Sheep 1 year to < 2 years old		56	57	58
d. Sheep 2 years and older		59	60	61
(1) Sheep for meat (slaughter purpose)		62	63	64
(2) Sheep for wool only		65	66	67
(3) Sheep for breeding purpose only		68	69	70
(4) Sheep for other purposes		71	72	73
e. Grand Total		74	75	76
1. Total Local breed		77	78	79
2. Total Exotic		80	81	82
3. Total Hybrid		83	84	85

Number of Goats in Age & Purpose on February 8/2002

	None	Total	Male	Female
3. GOATS of all ages on February 8, 2002		86	87	88
a. Goats < 6 months		89	90	91
b. Goats 6 months & < 1 year old		92	93	94
c. Goats 1 year to < 2 years old		95	96	97
d. Goats 2 years and older		98	99	100
(1) Goats for meat (slaughter purpose)		101	102	103
(2) Dairy Goats		104		105
(3) Goats for breeding purpose only		106	107	108
(4) Goats for other purposes		109	110	111
e. Grand Total		112	113	114
1. Total Local breed		115	116	117
2. Total Exotic		118	119	120
3. Total Hybrid		121	122	123

Number of Pigs by age & purpose on February 8, 2002

	None	Total	Male	Female
4. Total Pigs		124	125	126
a. below 6 months		127	128	129
b. 6 months & above		130	131	132
b.1. For meat Purpose		133	134	135
b.2. Pigs for other purpose		136	137	138

Number of Horses, Asses,Mules & Camels in Age and Purpose (Feb. 9,2001-Feb. 8, 2002)

	None	Total	Male	Female
5. HORSES of all ages		139	140	141
a. Horses <3 years old		142	143	144
b. Horses 3 Years and older		145	146	147
b1) Horses used primarily for draft purpose		148	149	150
b2) Horses for Transportation		151	152	153
b3) Horses for other purpose		154	155	156
6. MULES of all ages		157	158	159
a. Mules <3 years old		160	161	162
b. Mules 3 years older		163	164	165
b1) Mules used primarily for draft purpose		166	167	168
b2) Mules for Transportation purposes		169	170	171
b3) Mules for Other Purpose		172	173	174
7. ASSES of all ages		175	176	177
a. Asses <3 years old		178	179	180
b. Asses 3 years and older		181	182	183
b1) Asses used for draft purpose		184	185	186
b2) Asses for Transportation purposes.		187	188	189
b3) Asses for Other Purpose		190	191	192
8. CAMELS of all ages		193	194	195
a. Camels <4 years old		196	197	198
b. Camels 4 years and older		199	200	201
b1) Camels for slaughter		202	203	204
b2) Camels used for draft purpose		205	206	207
b3) Camels for milk purpose		208		209
b4) Camels for Transportation purposes		210	211	212
b5) Camels for other purposes		213	214	215

CHICKENS

9. CHICKENS Total on February 8, 2002

None

a. Laying hens (over 20 weeks old)		216
b. Non-laying hens (over 20 weeks old)		217
c. Cocks - males (over 20 weeks old)		218
d. Cockerels (8 weeks to 20 weeks old)		219
e. Pullets (8 weeks to 20 weeks old)		220
f. Chicks (below 8 weeks old)		221
		222

Question No II: Did you have livestock, chickens, and/or beehives for the last 12 months (Feb. 9, 2001-Feb.8,2002)?

Yes ⟶ 1 Complet question below

No ⟶ 2 Complet question No. 11 'c' and 'g' only ☐

10. HONEY BEE COLONIES on February 8, 2002

None

a. Traditinal beehives		223
b. Intermediate beehives		224
c. Modern beehives		225
		226

MILK, EGG AND HONEY PRODUCTION FOR THE LAST 12 MONTHS (Feb. 9, 2001-Feb. 8, 2002)

11. Dairy cows & camels

None

a. Dairy cows gave milk		227
b. Lactation period of cows (in months)		228
c. Average milking month in a caw (traditional)		229
d. Milk production - per day per dairy cow in litres		230
e. Dairy camels gave milk		231
f. Lactation period of camels (in months)		232
g. Average milking month in a camel (traditional)		233
h. Milk production - per day per camel in litres		234

None

12. Egg production - per hen per clutch

'In nearest hole number of eggs

		235
		236

13. Average number of clutches (in days)

14. Honey production per beehive per year (Feb. 9, 2001 - Feb. 8, 2002) in Kg.

a. Average honey production from traditional beehive per season per beehive _____

Frequency of production per year per beehive. _____

b. Average honey production from intermediate beehive per season per beehive _____

Frequency of production per year per beehive. _____

c. Average honey production from modern beehive per season per beehive _____

Frequency of production per year per beehive. _____

None	

237	
238	
239	
240	
241	
242	

15. Livestock diseases & treatment Feb. 9, 2001-Feb. 8,2002)

1	2	3	4	5	6	7			8
Sr. No.	Type of **Livestock**	Total Vaccinated	Total Affected	Total Treated	Total Died	Major cause of death	Code 271	Code 272	Remark
1	Cattle								
2	Sheep								
3	Goats								
4	Equines								
5	Camels								
6	Pigs								
7	Chickens								

16. Source of Livestock feed

1	2		3		4
Sr. No.	TYPE OF FEED	Code	USE YES = 1 NO = 2	Code	IF YES, PERCENT
1	Natural grazing	1			
2	Crop Residue	2			
3	Improved pasture	3			
4	Hay	4			
6	Oil seed(noug cake)	5			
7	Other	6			

Rural

Form EASE -R- 94/9

Ethiopian Agricultural Sample Enumeration
Use of Crop, Livestock and Products - 2000/01 (1994 E.C.)
(Peasant Holding)

Job ID	1	2	3

Part I - Identification Particulars

1	2	3	4	5	6	7	8	9	10	11
Region	Zone	Wereda	Farmers' Association	Enumeration Area	Household ID. No.	Holder ID No.	Name of Holder	Age	Sex Male =1 Female =2	Type of Holding Crop =1 Livestock =2 Both =3

Part II - Crop Usage Proportions (Percentages)

1	2		3	4	5	6	7	8	9
Sr. No.	Name of Crop	Code	Household Consumption	Proportions of Total Product For Seed	Sale*	Wages in Kind	Animal Feed	Other (Gifts ...)	Total
0 1									
0 2									
0 3									
0 4									
0 5									
0 6									
0 7									
0 8									
0 9									
1 0									
1 1									
1 2									
1 3									
1 4									
1 5									

Part III - Livestock Product Usage Proportions (Percentages)

1	2		3	4	5	6	7
SR. No.	Name of Livestock & Livestock Products	Code	Proportions in Percentage Household Consumptio	Sale*	Wages in Kind	Others (Gifts ...)	Total
0 1							
0 2							
0 3							
0 4							
0 5							
0 6							
0 7							
0 8							
0 9							
1 0							
1 1							
1 2							
1 3							
1 4							
1 5							

*For sale includes the part of products that the holder sold for purchase of agricultural inputs, family clothings, ... etc.

Form NASE 94/10

Ethiopian Agricultural Sample Enumeration
Miscellaneous Questions - 2001/02 (1994 E.C.)

PART I- IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7	8	9	10	11
Region	Zone	Wereda	Farmers' Association	Enumeration Area	Household ID No.	Holder ID No.	Name of Holder	Age	Sex Male =1 Female =2	Type of Holding Crop =1 Livestock =2 Both =3

PART II - MISCELLANEOUS QUESTIONS

Q. No		Code
1.	Do you practice crop rotation on your holding? Yes = 1 No = 2	
2.	Do you practice burning of soil to increase fertility of the soil on your holding? Yes = 1 No = 2	
3.	If practice irrigation, what is the source of irrigation water? River = 1 Lake = 2 Pond = 3 Others = 4 Not Used = 5	
4.	Have you used hired labour on you holding during this agricultural year? (last 12 months) Yes = 1 No = 2	
5.	How many persons were engaged on the holding other than the holder ? (Last 12 /mths)	Number: Male / Female / Total
5.1	permanent paid workers (full time)	
5.2	Temporary (seasonal paid workers)	
5.3	Unpaid family workers	
5.4	partners (share holders paid/ unpaid)	
5.5	Total persons engaged at any time of the year	
6.	Which ploughing practice do you use on your holding?	
6.1	Hand dug = 1	
6.2	Oxen /horse driven /pulling = 2	
6.3	Mechanized /Tractor = 3	
6.4	Both hand dug & oxen/ Horse driven = 4	
6.5	Both Oxen/Horse driven & Mechanized = 5	
7.	What method do you practice to, preserve soil against degradation or erosion?	
	Terracing = 1	
	Water catchment = 2	
	Afforestation = 3	
	Ploughing along the contour = 4	
	Others /Specify/ = 5	
	Do not practice = 6	
8.	Have you ever been included in the extension package program? Yes = 1 No = 2 ERR	
9.	If yes in 8, which extension package?	
	Rain abundant areas extension package = 1	
	Rain shortage areas extension package = 2	
	Post harvest technology " " = 3	
	Economically important crops " " = 4	
	Livestock development " " = 5	
	Any two of the above = 6	

Q. No		Code
10.	If the answer is 6 in 9, specify	
11.	If Yes in 8, when? Specify	
12.	What percentage of your holding is under the extension package/ (excluding livestock)	
13.	For which crop are you useing the extension package? specify	
14.	If No in 8, why? specify	
15.	Are you beneficiary of Credit facilities for agricultural activities Yes =1 No = 2	
16	Advisory services Yes = 1 No = 2	
17	Where do you get chemical fertilizer? Government Enterprise =1 Private Enterprise =2 Private Seller =3 Others (Specify) =4 Not Purchased =5	
18	How much do you buy 50 kg Urea?	Birr / Cent
19	How much do you buy 50 kg Dap?	Birr / Cent
20	How far do you go to Purchase Fertilizer?	kilo meter
21	How much time do man & women spend in the household on each of the following agricultural activities? use the codes given below the table*.	Male / Female
21.1	Tilling	
21.2	Sowing	
21.3	Weeding	
21.4	Harvesting	
21.5	Feeding /Treating	
21.6	Milking	
21.7	Marketing of agricultural products	

* Not Participated = 1
One fourth of the time (1/4) = 2
One half of the time (1/2) = 3
Three fourth of the time (3/4) = 4
Full time = 5
Not applicable = 6

Rural

Form EASE-R- 94/11

Ethiopian Agricultural Sampe Enumeration
Farm Implements, Work Animals And Storage Facilities - 2001/02 (1994 E.C.)

PART I- IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7	8	9	10	11
Region	Zone	Wereda	Farmers' Association	Enumeration Area	Household ID No.	Holder ID No.	Name of Holder	Age	Sex Male =1 Female =2	Type of Holding Crop =1 Livestock =2 Both =3

PART II- FARM IMPLEMENTS, WORK ANIMALS, AND STORAGE FACILITIES

2.1 Farming Implements

1	2		3	4		5		6	7	8	
Line No.	Name of Implement	Code	Number Owned	Replacement Value (cost per unit)		Total Value		Average Age of Service (years)	Do you rent Farm Implements? Yes =1 No =2	If Yes,enter Rate /day	
				Birr	Ct.	Birr	Ct.			Birr	Ct.
01	Axe	01									
02	"Gejera"	02									
03	Hoe	04									
04	Shovel	05									
05	Pick axe	03									
06	Plow beam	06									
07	Yoke	07									
08	" Deger"	08									
09	Plow tip (Metal)	09									
10	"Wagel" tip	10									
11	"Erfe" (handle)	11									
12	Harrow	12									
13	Sprayer (hand operated)	17									
14	Reaper (sickle)	19									
15	Trashing stick	20									
16	Rake (all wood)	23									
17	Rake (any Metal)	24									
18	Winnower (wood)	25									
19	Winnower (Metal)	26									
20	Wheelbarrow	27									
21	Carts (hauling)	28									
22	Other (specify _____)										
23	Other (specify _____)										
24	Other (specify _____)										
25	Other (specify _____)										

2.2 Work Animals (including those used for transport)

1		2		3	4		5		6	7	8	
Line No.		Name of animal	Code	Number owned	Replacement Value (Cost Per Animal) Birr	Ct.	Total Value Birr	Ct.	Average age of animal? (Years)	Do you rent Work Animals? Yes=1 No=2	If yes rate per day Birr	Ct.
2	6	Oxen (all including cows)	42									
2	7	Donkeys	43									
2	8	Horses	44									
2	9	Mules	45									
3	0	Camels	46									
3	1	Other (specify _____)										
3	2	Other (specify _____)										
3	3	Other (specify _____)										
3	4	Other (specify _____)										

2.3 Work Animals used specifically for plowing

3	5	Oxen for plowing	42									
3	6	Other for plowing										
3	7	Other (specify)										
3	8	Other (specify)										
3	9	Other (specify)										

2.4 Storage Facilities (Buildings)

1		2		3	4		5		6	7	8	
Line No.		Storage facilities	Code	Number owned	Replacement Value (cost per building) Birr	Ct.	Total Value Birr	Ct.	Average storage capacity of buildings? (in Quintals)	Do you rent storage facilities? Yes =1 No =2	if yes, enter rate per month Birr	Ct.
4	0	Modern buildings	32									
4	1	" Gottera"	33									
4	2	" Debegnet"	34									
4	3	Under ground	35									
4	4	Other (specify _____)										
4	5	Other (specify _____)										
4	6	Other (specify _____)										
4	7	Other (specify _____)										

Note :- Sack, 'Silicha', 'Akumada', Plastic sack etc not used as storage facilities

Form EASE-R-94/12A

RURAL

Ethiopian Agricultural Sample Enumeration

List of Fields Under Temporary Crops (Including Vegetables and Root Crops) and Agricultural Practices (Belg Season) - 2001/02 (1994 E.C.)

Part 1- IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7	8	9	10	11
Region	zone	Wereda	Farmers Association	Enumeratio Areas	Household Number	Holder Number	Holder Name	Age	Sex male →1 Female →2	Type of Holding Crop →1 Livestack →2 Both →3

Part II - Area Under Temporary Crops and Agricultural Practice

Sr. No.	Questions	3	4	5	6
		Parcel No / Field No. / crop name code	Parcel No. / filed NO. / crop name code	Parcel No. / filed NO. / crop name code	Parcel No. / filed NO. / crop name code
01	Type of Holding Private → 1 Others → 3 Rnted /contract → 2				
02	Field Area in local unit	Local Unit / code / Area	Local Unit / code / Area	Local Unit / code / Area	Local Unit / code / Area
03	Production in Local Unit	Local Unit / code / Area	Local Unit / Code / Area	Local Unit / code / Area	Local Unit / code / Area
04	Have the field been included in the extention Package program Yes → 1 No → 2				
05	Was the field Irrigated? Yes →1 No → 2				
06	Variety of seeds used Improved → 1 Indignores → 2				
07	(For Cereals,Pulses and Oil seeds only) If indiginous seed was used, What was the total quantity	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram
08	(For Cereals,Pulses and Oil seeds only) If Improved seed was used, what was the total quantity	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram
09	(For Cereals,Pulses and Oil seeds only) If Improved seed was used what was the cost /price	Birr cent	Birr cent	Birr cent	Birr cent
10	Was the crop Damaged Yes →1 No → 2				
11	If yes, what was the major cause of damage	Reason code	Reason code	Reason code	Reason code
12	Percentage of damage				
13	Any control/protection measure taken for crop damage? Yes →1 No → 2				
14	If yes, what Type of measure? Chemical → 1 Both → 3 Non chemical → 2				
15	If chemical Insecticide → 1 1&3 → 5 Herbicide → 2 2&3 → 6 Fungicide → 3 All → 7 1&2 → 4				
16	Was the field fertilized? Yes →1 No → 2				
17	If fertilized what type ? Natural → 1 Bothe → 3 Chemical → 2				
18	One main reason for not using chemical fertilizer	Reason Code	Reason Code	Reason	Reason Code
19	If chemical fertilizer used 19.1 Type Urea → 1 Both → 3 Dap → 2				
	19.2 Quantity in K.g	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram
20	Money → 1 Both → 3 compost → 2 Others → 4 / If others specify/ →				

RURAL

Ethiopian Agricultural Sample Enumeration

List of Fields Under Mixed Crops and their Agricultural Practices

(Belg Season) - 2001/02 (1994 E.C.)

Form EASE-R-94/12B

Part 1- IDENTIFICATION PARTICULARS

1 Region	2 Zone	3 Wereda	4 Farmers' Association	5 Enumeration Areas	6 Household Number	7 Holder Number	8 Holders' Name	9 Age	10 Sex (male → 1, Femal → 2)	11 Type of Holding (Crop → 1, Livestock → 2, Bothe → 3)

Part II - Area Under Mixed Crops and Agricultural Practice

1	2 Questions	3	4
		Parcel No. / Field No.	Parcel No. / Field No.
		Crop Name / code	Corp Name / code
0 1	Type of Holding Private → 1 Others → 3 Rented/contract → 2		
0 2	Have the field been included in the extention pakage program Yes → 1 No → 2		
0 3	Total Mixed Crop Area in Local Unit	Name of Local Unit / code / Area	Name of Local Unit / code / Area
0 4	Production in Local Unit	Production Unit (Local Unit, Code) / Quantity	Production Unit (Local Unit, Code) / Quantity
0 5	Percentage shere of Area	Quantity	Quantity
0 6	was the field Irrigated yes → 1 No → 2		
0 7	Variety of seeds used Improved → 1 Indiginous → 2		
0 8	If Indignous seed was used what was (for Cereals, Pulses & Oilseeds) the quantity	Kg. / Gram	Kg. / Gram
0 9	If Improved seed was used, (for Cereals, Pulses & Oilseeds) what was the quantity	Kg. / Gram	Kg. / Gram
1 0	If Improved seed was used (for Cereals, Pulses & Oilseeds) what was the cost/price	Birr / Cent	Birr / Cent
1 1	was the crop Damaged Yes → 1 No → 2		
1 2	If, yes, what was the major cause of Damage	Reason / Code	Reason / Code
1 3	percentage of Damage		
1 4	Any control/ preventive measure Taken for crop damage → 1 → 2		
1 5	If yes, what type of measure Chemical → 1 Both → 3 Non-chemical → 2		
1 6	If chemical in 16, Insecticid → 1 1&3 → 5 Herbicide → 2 2&3 → 6 Fungicide → 3 All → 7 1&2 → 4		
1 7	Was the field fertilized yes → 1 No → 2		
1 8	If fertilized what type? Natural → 1 Both → 3 Chemical → 2		
1 9	One main Reson for not using Chemical fertilizer	Reason / Code	Reason / Code
2 0	If chemical fertilizer used 20.1 Type Urea → 1 Both → 3 Dap → 2		
	20.2 Quantity in Kilo gram	Kg. / Gram	Kg. / Gram
2 1	If natural fertilizer used mainly what type ? Manure → 1 Both → 3 Compost → 2 Others → 4 / If others specify/ →		

PART III- AREA UNDER PERMANENT CROPS AND AGRICULTURAL PRACTICES

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Parcel Number	Field Number	Name of crops	Type of Tenure Own → 1 Rented → 2 Others → 3	Location of field in Urban Boundary Within → 1 Outside → 2	Use of Agricultural Inputs Type of seeds used Improved seed → 1 Local seed → 2	Use of fertilizer Did you use Fertilizer Yes → 1 No → 2	If yes in column 7 Type of fertilizer Natural → 1 Chemical → 2 Both → 3	Use of Irrigation Did you apply Irrigation Yes → 1 No → 2	If yes in Column 9 Source of water River → 1 Lake → 2 Pool → 3 Pipe water → 4 Others → 5	Did you use pesticides Yes → 1 No → 2	Number of Trees Total trees	Fruit bearing	Field Area In square Meters	If column 14 is blank Area in local units Name of Local Units	Area	Production in kilograms	If column 17 is blank Production In Local units Name of Local units	Quantity
			CODE											code				Code

Addis Ababa city Administration

C-4/5

Call Number 316.63CSA.

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C-4/5

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