

**FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA  
CENTRAL AGRICULTURAL CENSUS COMMISSION**

**ETHIOPIAN AGRICULTURAL  
SAMPLE ENUMERATION, 2001/02(1994 E.C.)  
RESULTS FOR TIGRAY REGION**



**STATISTICAL REPORT ON  
LIVESTOCK AND FARM IMPLEMENTS  
PART IV**

Addis Ababa  
May, 2003

230

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*STATISTICAL REPORT ON  
LIVESTOCK AND FARM IMPLEMENTS*  
**PART IV**

Addis Ababa  
May ,2003

1994-1995  
FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA  
CENTRAL STATISTICAL AUTHORITY

ETHIOPIAN AGRICULTURAL  
STATISTICS SURVEILLANCE (2001/02 (1994 E.C.))  
Oromia Region



STATISTICAL REPORT ON  
INDICATORS AND FARM IMPLEMENTS  
PART IV

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## **FOREWORD**

An agricultural census, which would serve as a source of a benchmark data for the 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 Committees 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 Tigray Region is the forth 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

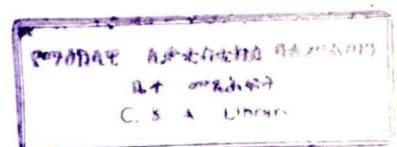
## BACKGROUND

### 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 woreda 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 Tigray Regional State. 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 are discussed. Finally, in Chapter

VIII the census results are presented on Farm Implements, Draught Animals and Storage Facilities.

As given above, the Agricultural Census report for Tigray Regional state constitutes eight Chapters presented on about 1,600 pages. Hence, it is neither possible nor comfortable to the reader to present it as a single report. Accordingly, the report is presented in Four Parts with the Introductory Chapter (i.e. Chapter I ) and The Census Methodology and Operations (i.e. Chapter II ) as common inputs to each Part. Thus, Part I constitutes the first two common Chapters and Chapters III and IV . Part II consists of the first two common Chapters and Chapter V . Part III comprises of the first two common Chapters and Chapter VI. Finally, Part IV constitutes the first two common Chapters and Chapters VII and VIII.

Also, each Part of the report encompasses Appendix I that shows the Estimation Procedures of Totals, Ratios and Sampling Errors; Appendix II gives the Number of EAs and Agricultural Households Sampled and Covered in the region by wereda; and Appendix III shows the Agricultural Sample Enumeration Questionnaires. Moreover, tables that show the Standard Errors ( S.E.) and Coefficients of Variations (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 including in Tigray Region, 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 woreda 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 woreda 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.

Tigray is a regional state with an estimated population of 3.901 millions in July 2002 and an area of 50,078.64 sq. kms. For administrative purposes, the Region is divided into five zones and 34 weredas. Agriculture is the dominant sector in the region and biggest employer of the economically active population. The sector in the Region is further characterized by extremely small holdings, mostly private peasant holdings, dispersion of cropland holdings, traditional farming and low level of literacy among the holders.

The Tigray Region 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 wereda 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 (EAs). These EAs 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.

At the time of the census, Tigray Regional State consists of five zones; (i.e four rural and one urban) 34 weredas and 70 towns. The rural parts of region have a total of 3,375 EAs while the urban parts have a total of 671 EAs.

In the five zones of the region, all the 34 weredas were covered in the census. In these weredas, 850 rural and 418 urban EAs. were sampled but the number of EAs which were completed and found to be acceptable for tabulation amounted to 849 in the rural areas and all the EAs. in urban areas. The remaining one EA (rural) was not fully or partially covered due to various reasons. With respect to ultimate sampling units (agricultural households), it was planned to cover 25,500 households in rural areas and 10,422 in urban areas but about 25,460 rural and 10,387 urban agricultural households were actually covered. Based on the results of the census, for the rural parts of the region, the over all coverage rate of sampled EAs was 99.9 percent and the response rate of sampled agricultural households was 99.8 percent. The response rate in the urban domain was 100% of the EAs and about 99.7% of the sampled agricultural households. The coverage of sampled EAs and agricultural households by wereda are given in Appendix II.

TABLE II:1 AREA COVERAGE OF THE 2001/02 (1994 E.C) AGRICULTURAL SAMPLE ENUMERATION IN TIGRAY REGION

ZONES	NUMBER OF WEREDAS AND TOWNS BY ZONE				NUMBER OF EAs COVERED IN THE CENSUS	
	TOTAL		COVERED IN THE CENSUS		RURAL	URBAN
	Weredas	Towns	Weredas	Towns		
Western Tigray	9	20	9	20	224	112
Central Tigray	10	20	10	20	250	95
Eastern Tigray	7	14	7	14	175	71
Southern Tigray	8	15	8	15	200	115
Mekele	-	1	-	1	-	25
TOTAL	34	70	34	70	849	418

## 2.2 Sampling Frame

The list of enumeration areas for each wereda was compiled from the 1994 Ethiopian Population and Housing Census cartographic work for Tigray Region and was used as a frame for the selection of the Primary Sampling Units (PSU). The 1994 Population and Housing Census enumeration area maps of the region for the selected 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 sampled 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 region, each wereda was treated as stratum for which major findings of the sample census are reported. The primary sampling units are the enumeration areas and the agricultural households are the secondary (ultimate) sampling units. Finally, after the selection of the sample agricultural households, the various census forms were administered to all agricultural holders within the sampled agricultural households.

For the private peasant holdings in the rural areas a fixed number (25) of sample EAs in each wereda and 30 agricultural households in each EA were randomly selected (determined). In urban areas, weredas with urban EAs less than or equal to 25, all the EAs were covered. For other weredas (with  $> 25$  urban EAs), a sample size of 25 EAs was selected. In each sampled urban EA, 30 agricultural households were selected for the census. The sample size determination in each wereda 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 wereda.

### **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 the urban parts of the region 418 E.A's in the 70 towns were covered. Then, the listing of households in each E.A. 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 E.A. 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 coefficient of variations 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 region constituting an office in Mekele and another temporary Branch Census Office in Shire. These two offices were augmented with supervisors, enumerators, other support staff, logistics and the temporary structures. The temporary structures included the establishment of census committees at the regional, zonal, wereda and establishment of this committee went down to 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 Tigray Region had a share of 936 enumerators, where 86 of them were held as reserves. For undertaking the census in the urban parts of the region 418 enumerators were selected out of those who were assigned in the rural EAs. 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 Tigray Region, a total of 160 supervisors and 850 enumerators were involved and various field equipment were given to these field staff. The equipment used include, 14 field vehicles, 856 programmable calculators, 860 field compasses, 860 measuring tapes, 860 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 region were held in Mekele and Shire Towns. 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 rigorous 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, involves 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 \*<sup>1</sup> 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.
- ◆ Form 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, quantitative 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 than 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 Tigray region, the editing, coding and verification of the filled-in forms in general took about 23 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 17 working days, while that of the filled-in forms on farm implements, demographic characteristics, Belg season and the urban forms took around 6 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 6<sup>th</sup> week of the launching of the operation and was further reduced to 50% from the 10<sup>th</sup> 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 Tigray region, 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 18.5 working days, while that of the filled-in forms on farm implements, demographic characteristics, Belg season and the urban forms took about 16.9 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 use them for any demand.

## 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. By 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

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 beehives were made based on the information obtained from the holders within the sampled agricultural households both in rural and urban areas 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 region as well as brief discussions made on the results are presented in this chapter. Also the census results at zonal and wereda levels are presented in statistical Tables 7.1–7.36. Moreover, the estimates, standard errors (SE), and coefficients of variation (CV) are given in Annex Tables 7.1-7.10 for some relevant variables.

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

This 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 Tigray Region was part of the national census and

that are found in the region 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 region. 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 Tigray Region are presented in Summary Table VII.1. As shown on the table, the total cattle population for the region is estimated to be 2,668,078. Out of this total cattle population, the female cattle constitute about 51.1 percent (1,362,540) and the remaining 48.9 percent (1,305,538) are male cattle. The majority (98.2 percent) of the cattle population is found in rural areas, while small proportion is accounted for urban areas (1.8 percent).

Regarding age groups, the majority of the cattle population (that is about 62.8 percent) is in the 3 years and under 10 years age category, with about 30.8 percent male and about 32.0 percent female. Moreover, about 32.6 percent are under three years and small portion, which is 4.4 percent, is over 10 years (also see Fig VII.1).

On the other hand, according to the results obtained, it can be said that almost no hybrid and exotic breeds are reported in the region and that virtually means all cattle in the region (99.6 percent) are local breeds.

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 accounted for 46.7 percent and the percentage share of beef cattle is the lowest that is about one percent.

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

Age, Breed, and Purpose	Cattle on Both Rural and Urban Holdings						Cattle on Rural Holdings						Cattle on Urban Holdings					
	Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Total.....	2,668,078	100	1,305,538	48.9	1,362,540	51.1	2,619,540	98.2	1,286,279	48.2	1,333,261	50.0	48,538	1.8	19,259	0.7	29,279	1.1
Under 6 months.....	219,728	8.2	104,699	3.9	115,029	4.3	214,683	8.0	102,301	3.8	112,382	4.2	5,045	0.2	2,398	0.1	2,647	0.1
6 months - under 1 year.....	265,382	9.9	125,940	4.7	139,442	5.2	259,728	9.7	123,190	4.6	136,538	5.1	5,654	0.2	2,750	0.1	2,904	0.1
1 year - under 3 years.....	387,879	14.5	184,427	6.9	203,452	7.6	380,160	14.2	180,957	6.8	199,203	7.5	7,719	0.3	3,470	0.1	4,249	0.2
3 years - under 10 years.....	1,676,596	62.8	822,476	30.8	854,121	32.0	1,647,823	61.8	812,398	30.4	835,426	31.3	28,773	1.1	10,078	0.4	18,695	0.7
10 years and older.....	118,491	4.4	67,997	2.5	50,496	1.9	117,145	4.4	67,434	2.5	49,712	1.9	1,346	0.1	563	0.0	784	0.0
Cattle by Breed																		
Total.....	2,668,078	100.0	1,305,538	48.9	1,362,540	51.1	2,619,540	98.2	1,286,279	48.2	1,333,261	50.0	48,538	1.8	19,259	0.7	29,279	1.1
Indigenous.....	2,658,383	99.6	1,301,678	48.8	1,356,705	50.8	2,612,654	97.9	1,283,063	48.1	1,329,591	49.8	45,729	1.7	18,615	0.7	27,114	1.0
Hybrid.....	7,190	0.3	3,048	0.1	4,141	0.2	5,853	0.2	2,780	0.1	3,073	0.1	1,337	0.1	268	0.0	1,068	0.0
Exotic.....	2,505	0.1	812	0.0	1,693	0.1	1,033	0.0	436	0.0	597	0.0	1,472	0.1	376	0.0	1,096	0.0
Aged 3 - 10 Years by Purpose																		
Total.....	1,676,596	100	822,476	49.1	854,121	50.9	1,647,823	98.3	812,398	48.5	835,426	49.8	28,773	1.7	10,078	0.6	18,695	1.1
Used for Milk.....	290,039	17.3			290,039	17.3	283,465	16.9			283,465	16.9	6,574	0.4			6,574	0.4
Used for Draught.....	783,469	46.7	775,004	46.2	8,465	0.5	774,588	46.2	766,183	45.7	8,406	0.5	8,881	0.5	8,821	0.5	59	0.0
Used for Beef.....	12,031	0.7	5,945	0.4	6,086	0.4	11,794	0.7	5,780	0.3	6,014	0.4	237	0.0	165	0.0	72	0.0
Used for Breeding.....	569,173	33.9	31,791	1.9	537,382	32.1	556,725	33.2	31,018	1.9	525,707	31.4	12,448	0.7	773	0.0	11,675	0.7
Used for Other.....	21,885	1.3	9,734	0.6	12,151	0.7	21,251	1.3	9,416	0.6	11,835	0.7	634	0.0	318	0.0	316	0.0
Dairy Animals																		
Dairy Cows.....	290,039	100			290,039	100	283,465	97.7			283,465	97.7	6,574	2.3			6,574	2.3
Milking Cows.....	482,599	100			482,599	100	470,636	97.5			470,636	97.5	11,963	2.5			11,963	2.5

FIGURE VII.1 DISTRIBUTION OF CATTLE BY AGE AND SEX

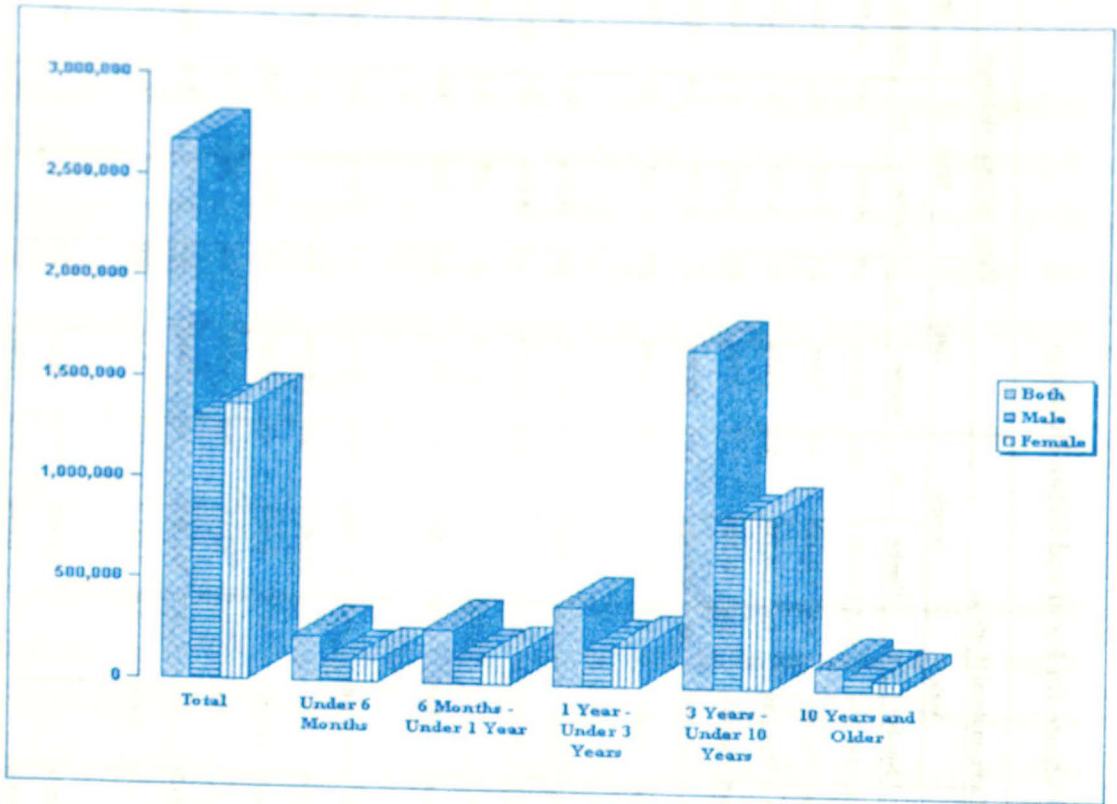
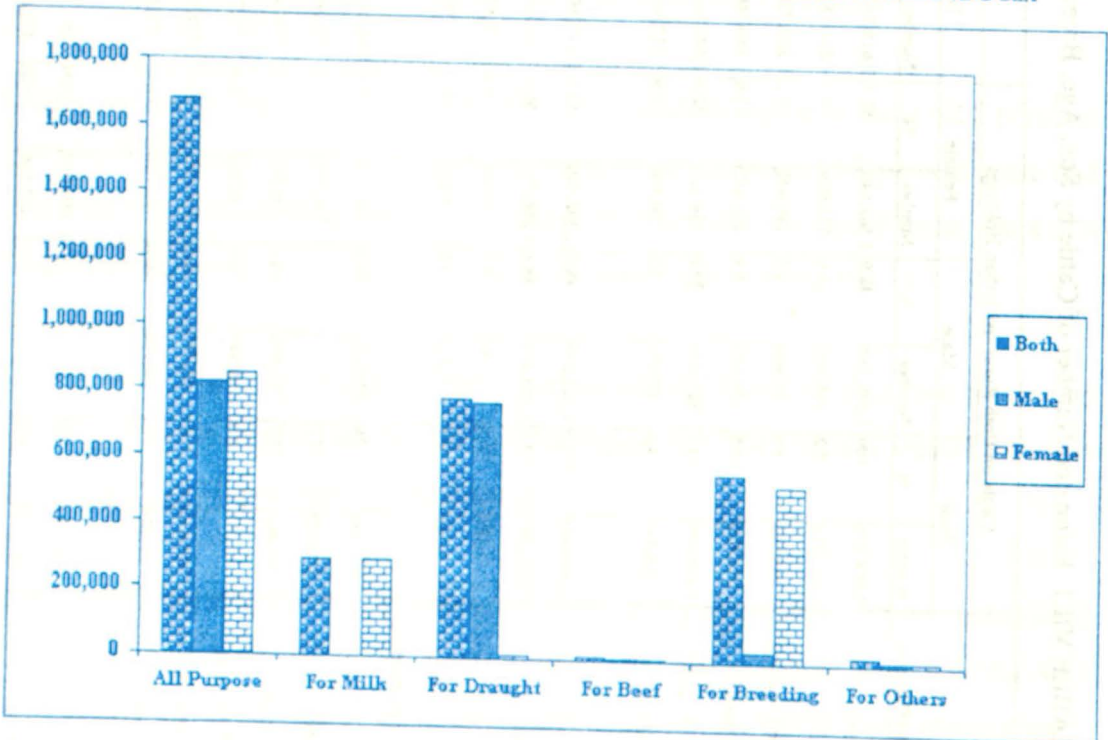


FIGURE VII.2 DISTRIBUTION OF CATTLE AGED 3 AND UNDER 10 YEARS BY PURPOSE AND SEX



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<sup>1</sup> is estimated to be about 290,039 and milking-cows<sup>2</sup> are about 482,599.

As to zonal level cattle distribution, West Tigray Zone contributes the largest share, that is 40.55 percent, and the remaining 23.66 percent, 23.53 percent, 12.15 percent, and 0.11 percent are accounted for South Tigray, Central Tigray, East Tigray, and Mekele Zones, respectively (See Figure VII.8). 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 687,212 sheep are estimated to be found in the region, out of which about 74.1 percent are females, and about 25.9 percent are males. Moreover, according to the census result, large number of goats is reported in the region, and it is estimated to be about 1,759,126. Out of these total goats, 69.6 percent are females and 30.4 percent are males (See Summary Table VII.2 and Fig. VII.3).

Among these totals reported in the region, 97.6 percent of the sheep and 99.4 percent of the goats are found in the rural areas. Urban areas accounted for only 2.4 percent and 0.6 percent of the sheep and goats, respectively.

Pertaining to the age distribution of both the sheep and the goats, the largest portions are in the age group of two years and older (50.0 percent and 48.2 percent, in that order), followed by the young stock under six months for both sheep and goats, that is about 26.1 percent and 24.0 percent, respectively (See Figure VII.3).

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<sup>1</sup> A Dairy Cow refers to a cow that primarily kept for milk and has milked previously 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.

<sup>2</sup> A Milking Cow refers to any type of cow that actually milked during the reference period (Feb. 9, 2001 to Feb. 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	687,212	100	178,291	25.9	508,921	74.1	670,801	97.6	173,635	25.3	497,166	72.3	16,411	2.4	4,656	0.7	11,755	1.7
Under 6 months	179,188	26.1	87,271	12.7	91,917	13.4	175,285	25.5	85,163	12.4	90,122	13.1	3,903	0.6	2,108	0.3	1,795	0.3
6 months - under 1 year	77,717	11.3	32,987	4.8	44,730	6.5	75,677	11.0	32,018	4.7	43,659	6.4	2,040	0.3	969	0.1	1,071	0.2
1 year - under 2 years	86,501	12.6	21,076	3.1	65,426	9.5	84,427	12.3	20,529	3.0	63,898	9.3	2,074	0.3	547	0.1	1,528	0.2
2 years and older	343,806	50.0	36,956	5.4	306,849	44.7	335,412	48.8	35,924	5.2	299,487	43.6	8,394	1.2	1,032	0.2	7,362	1.1
Sheep by Breed																		
Total	687,212	100	178,291	25.9	508,921	74.1	670,801	97.6	173,635	25.3	497,166	72.3	16,411	2.4	4,656	0.7	11,755	1.7
Indigenous	686,130	99.8	177,908	25.9	508,222	74.0	669,752	97.5	173,263	25.2	496,489	72.2	16,378	2.4	4,645	0.7	11,733	1.7
Hybrid																		
Exotic													12	0.0				
Sheep Aged 2 Years and Older by Purpose													21	0.0				
Total	343,806	100	36,956	10.7	306,849	89.3	335,412	97.6	35,924	10.4	299,487	87.1	8,394	2.4	1,032	0.3	7,362	2.1
Used for Mutton	11,126	3.2	6,971	2.0	4,155	1.2	10,808	3.1	6,716	2.0	4,092	1.2	318	0.1	255	0.1	63	0.0
Used for Wool	3,899	1.1	411	0.1	3,487	1.0	3,866	1.1	405	0.1	3,460	1.0	33	0.0			27	0.0
Used for Breeding	323,775	94.2	27,394	8.0	296,381	86.2	315,889	91.9	26,729	7.8	289,160	84.1	7,886	2.3	665	0.2	7,221	2.1
Used for Other	5,006	1.5	2,179	0.6	2,825	0.8	4,849	1.4	2,073	0.6	2,775	0.8	157	0.0	106	0.0		
Total Goats	1,759,126	100	535,466	30.4	1,223,662	69.6	1,748,296	99.4	532,403	30.3	1,215,894	69.1	10,830	0.6	3,063	0.2	7,768	0.4
Under 6 months	421,903	24.0	205,150	11.7	216,753	12.3	419,504	23.8	203,947	11.6	215,557	12.3	2,399	0.1	1,203	0.1	1,196	0.1
6 months - under 1 year	227,433	12.9	95,616	5.4	131,817	7.5	226,034	12.8	95,032	5.4	131,002	7.4	1,399	0.1	584	0.0	815	0.0
1 year - under 2 years	262,699	14.9	88,044	5.0	174,656	9.9	261,237	14.9	87,578	5.0	173,660	9.9	1,462	0.1	466	0.0	996	0.1
2 years and older	847,093	48.2	146,655	8.3	700,436	39.8	841,522	47.8	145,846	8.3	695,675	39.5	5,571	0.3	809	0.0	4,761	0.3
Goats by Breed																		
Total	1,759,126	100	535,466	30.4	1,223,662	69.6	1,748,296	99.4	532,403	30.3	1,215,894	69.1	10,830	0.6	3,063	0.2	7,768	0.4
Indigenous	1,758,500	100	535,302	30.4	1,223,199	69.5	1,747,670	99.3	532,239	30.3	1,215,431	69.1	10,830	0.6	3,063	0.2	7,768	0.4
Hybrid																		
Exotic																		
Goats Aged 2 Years and Older by Purpose																		
Total	847,093	100	146,655	17.3	700,436	82.7	841,522	99.3	145,846	17.2	695,675	82.1	5,571	0.7	809	0.1	4,761	0.6
Used for Milk	26,058	3.1			26,058	3.1	25,901	3.1			25,901	3.1	157	0.0			157	0.0
Used for Meat	50,203	5.9	37,922	4.5	12,281	1.4	49,985	5.9	37,761	4.5	12,224	1.4	218	0.0	161	0.0		
Used for Breeding	755,341	89.2	99,385	11.7	655,956	77.4	750,196	88.6	98,769	11.7	651,427	76.9	5,145	0.6	616	0.1	4,529	0.5
Used for Other	15,491	1.8	9,348	1.1	6,142	0.7	15,440	1.8	9,316	1.1	6,124	0.7	51	0.0			18	0.0

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

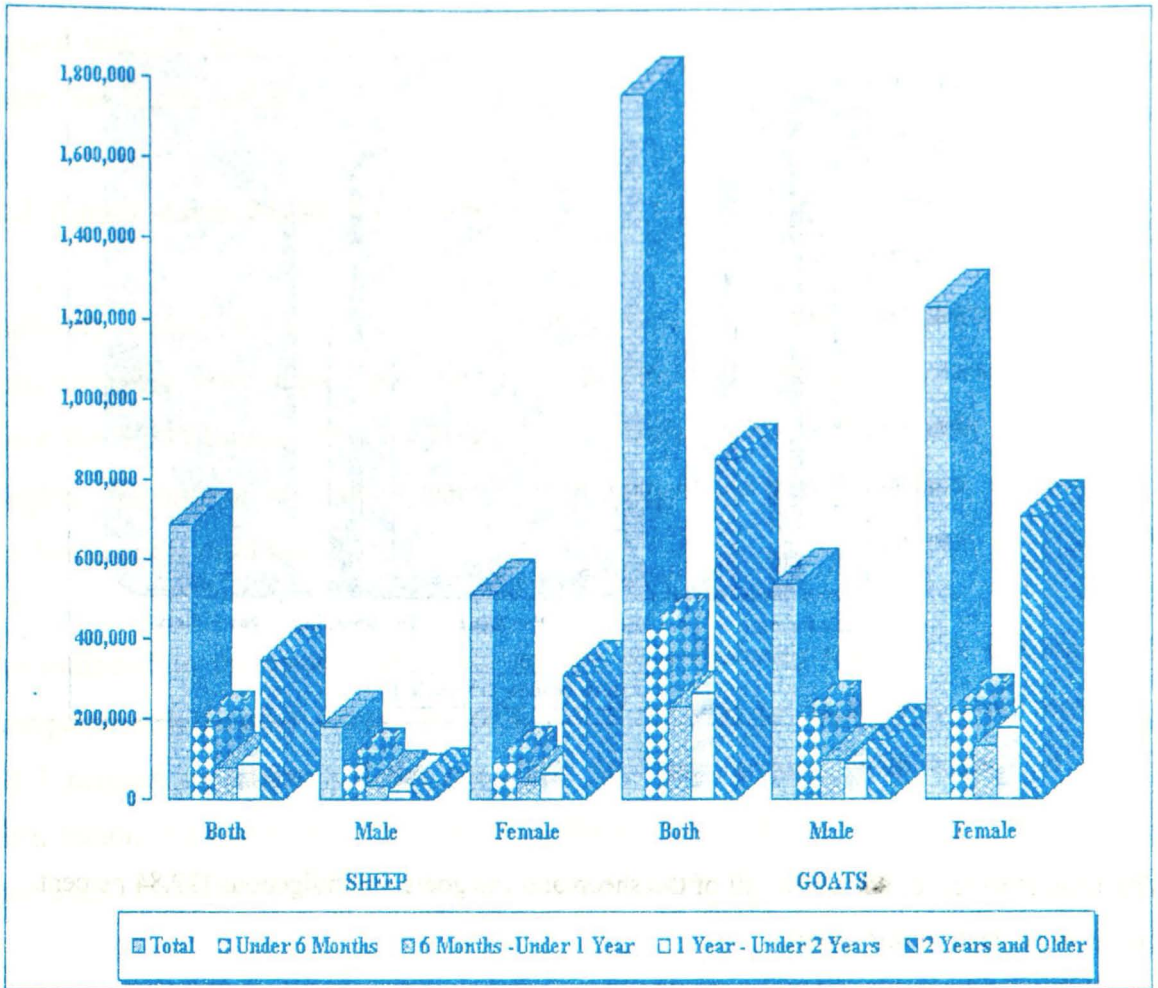


FIGURE VII.4 DISTRIBUTION OF SHEEP AGED TWO YEARS AND OLDER BY SEX AND PURPOSE

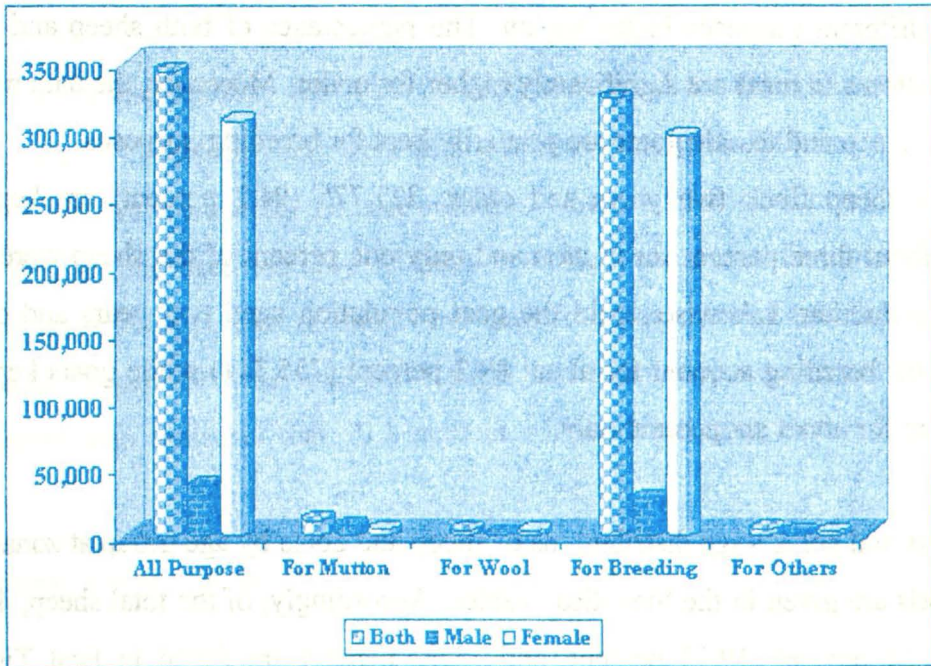
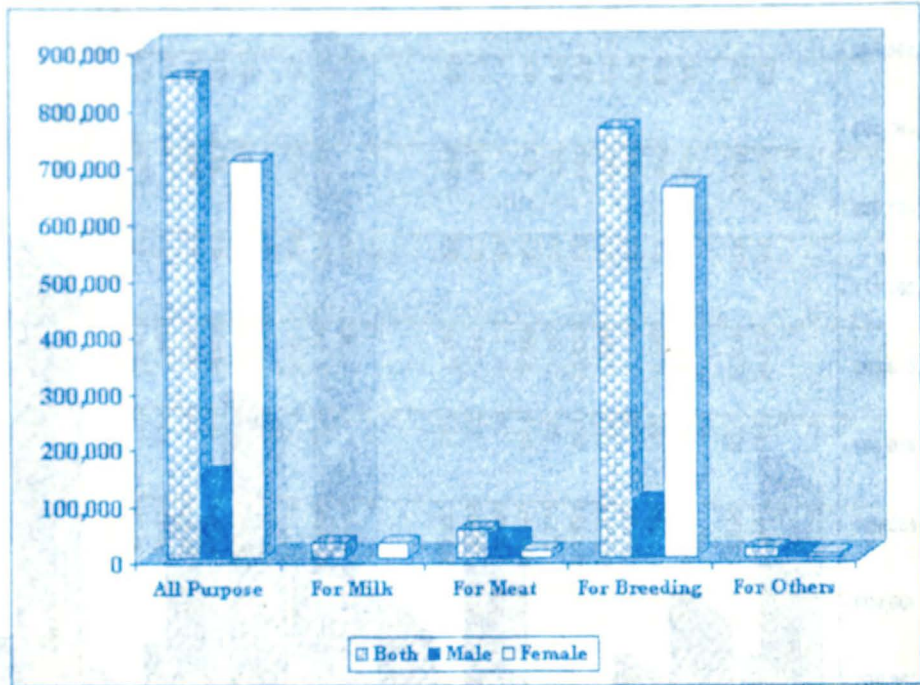


FIGURE VII.5 DISTRIBUTION OF GOATS AGED TWO YEARS AND OLDER BY SEX AND PURPOSE



With respect to breed, almost all of the sheep and the goats are indigenous (99.84 percent and 99.96 percent, in that order).

Summary Table VII.2 also discloses the numbers and percentages of sheep and goats raised for different purposes in the region. The percentages of both sheep and goats kept for mutton and meat are significantly higher for males. Moreover, the data reveals that female sheep and female goats are primarily kept for breeding purposes.

Among the sheep flock two years and older, 323,775 (94.2 percent) are kept for breeding; about three percent for mutton and only one percent of the sheep were kept for wool production. Likewise, amid the goat population aged two years and older, goats kept for breeding account for about 89.2 percent (755,341) while goats kept for meat account for about six percent only.

The numbers and percentage distributions of sheep and goats by age group at zonal and wereda levels are given in the Statistical Tables. Accordingly, of the total sheep, 43.94 percent, 22.53 percent, 19.53 percent, and 13.92 percent are found in East Tigray, South Tigray, Central Tigray, and West Tigray Zones, respectively. Regarding goat

population, both West and Central Tigray Zones are the greater contributors to the 2002 goat population of the region that is about 40.5 percent each. The remaining 11.14 percent and 7.92 percent are reported by South Tigray and East Tigray Zones, in that order (See Figure VII.8).

### 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 region for private holdings. According to the census result, there are 7,598 horses, 403,517 asses, 16,418 mules, and 39,791 camels in Tigray Region. 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, asses are the overwhelming majority in the region compared with the other draught animals. Out of the total ass population in the region, 53.3 percent are males and the remaining 46.7 are females. With respect to age distribution, the majorities of the horses, asses and mules are of the age group 3 years and older. Furthermore, 92.5 of the camels are of the age group 4 years and older.

The estimates of these animals (aged 4 years and older for camels and aged 3 years and older for others) by sex and purpose are also given in Summary Table VII.3. As indicated in the table, among the horses aged 3 years and older, 5,103 (85.3 percent) were used for transportation, 494\* (8.3 percent) were used for draught purposes, and the remaining 387\* (6.5 percent) were used for other purposes. With regard to asses, about 69.8 percent were used for transportation whereas 27.2 percent of them were used for draught purposes and only 3.1 percent of them were used for other purposes. As to the mules, 89.6 percent of them were used for transportation and the others 8.6 percent and 1.8 percent were used for draught and other purposes, respectively. The census result also indicates that 90.1 percent of the camels reported were used for

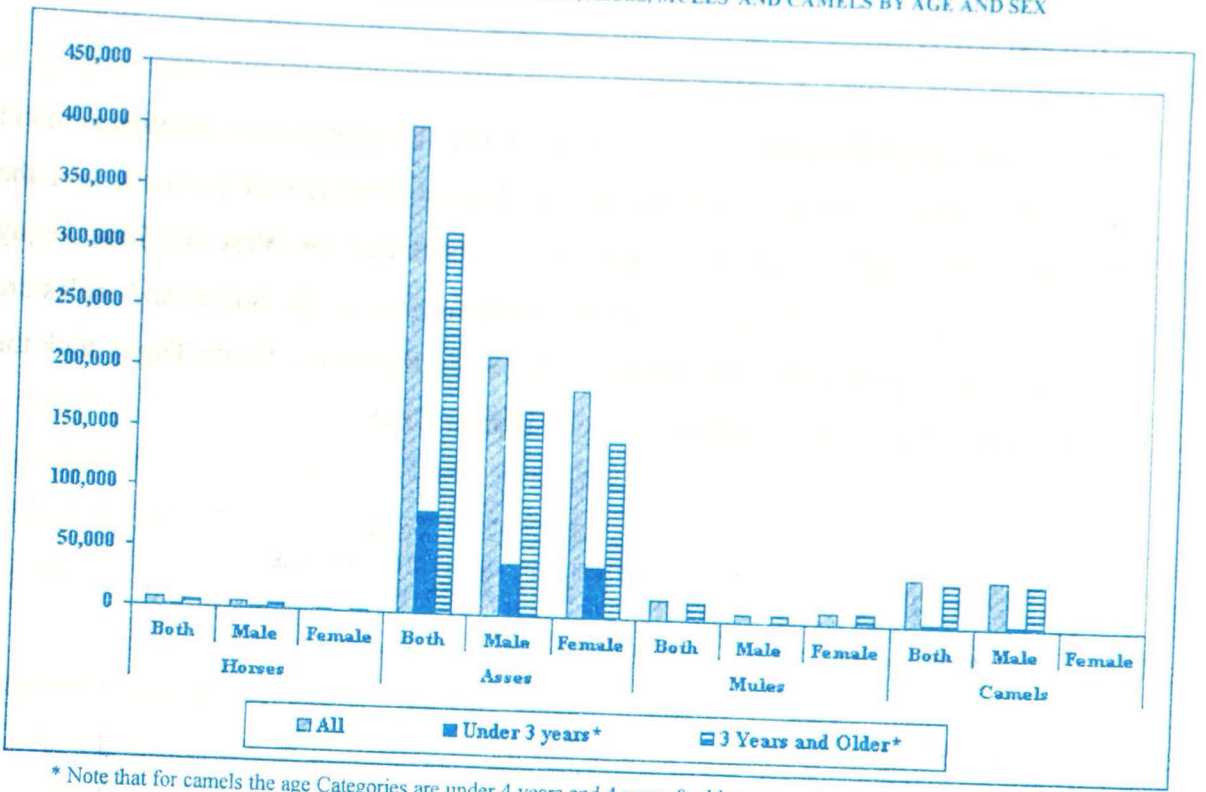
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\* The coefficients of variation of these estimates however, are over 50 percent.

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

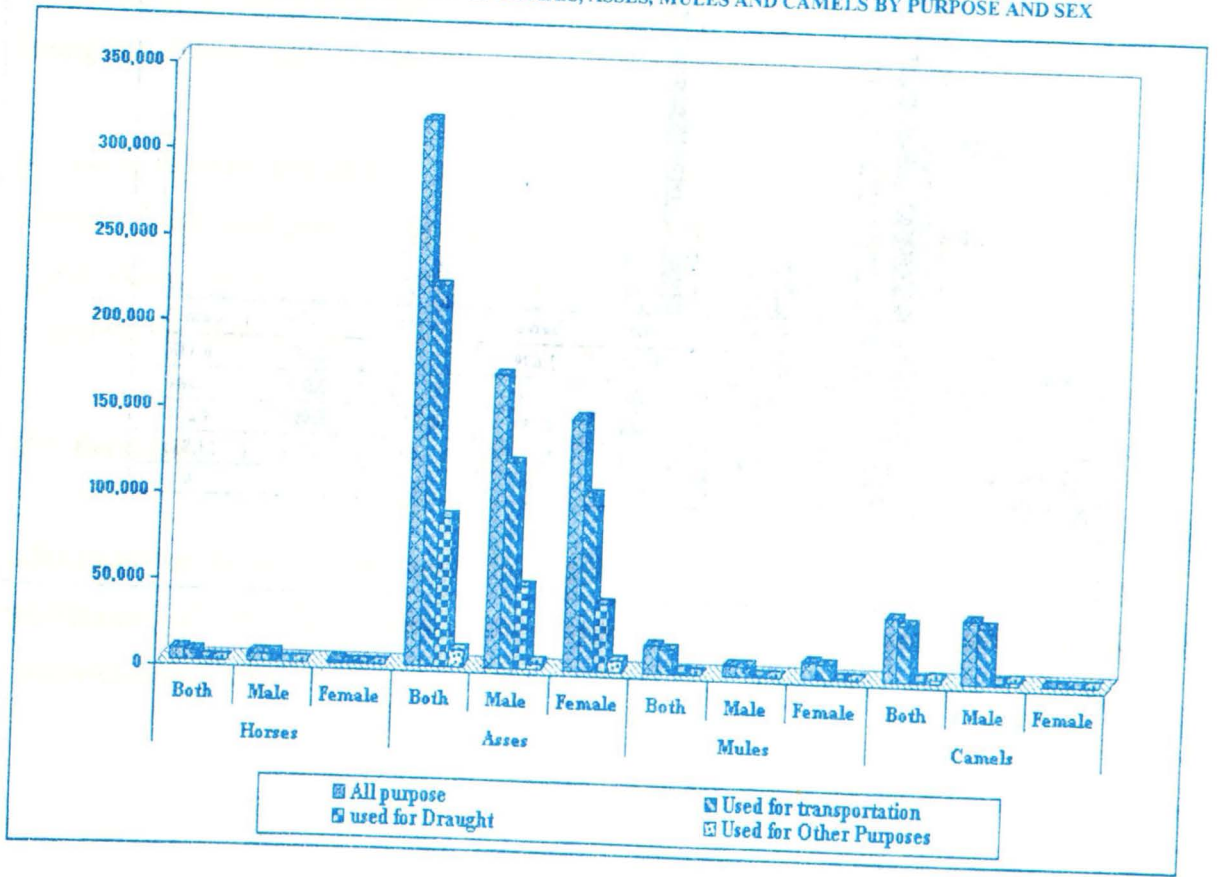
Age, Breed, and Purpose	Both Rural and Urban Holdings						Rural Holdings						Urban Holdings					
	Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Total Horses	7,598	100	5,835	76.8	1,762	23.2	7,458	98.2	5,707	75.1	1,750	23.0	140	1.8	128	1.7	12	0.2
Under 3 Years	1,617	21.3	1,342	17.7	274	3.6	1,597	21.0	1,324	17.4	272	3.6	*	*	*	*	*	*
3 years and older	5,981	78.7	4,493	59.1	1,488	19.6	5,861	77.1	4,383	57.7	1,478	19.5	120	1.6	110	1.4	10	0.1
Horses Aged 3 Years and Older by Purpose																		
All Uses	5,981	100	4,493	75.1	1,488	24.9	5,861	98.0	4,383	73.3	1,478	24.7	120	2.0	110	1.8	10	0.2
Transportation	5,103	85.3	4,389	73.4	712	11.9	4,995	83.5	4,287	71.7	708	11.8	108	1.8	102	1.7	*	*
Draught	*	*	*	*	468	7.8	*	*	*	*	466	7.8	*	*	*	*	*	*
Other Uses	*	*	79	1.3	*	*	*	*	78	1.3	*	*	5	0.1	*	*	4	0.1
Total Asses	403,517	100	215,030	53.3	188,488	46.7	397,198	98.4	210,027	52.0	187,171	46.4	6,319	1.6	5,003	1.2	1,317	0.3
Under 3 Years	85,748	21.3	43,898	10.9	41,849	10.4	85,053	21.1	43,505	10.8	41,547	10.3	695	0.2	393	0.1	302	0.1
3 years and older	317,770	78.8	171,132	42.4	146,637	36.3	312,145	77.4	166,522	41.3	145,623	36.1	5,625	1.4	4,610	1.1	1,014	0.3
Asses Aged 3 Years and Older by Purpose																		
All Uses	317,770	100	171,132	53.9	146,637	46.1	312,145	98.2	166,522	52.4	145,623	45.8	5,625	1.8	4,610	1.5	1,014	0.3
Transportation	221,716	69.8	119,885	37.7	101,830	32.0	217,370	68.4	116,319	36.6	101,051	31.8	4,346	1.4	3,566	1.1	779	0.2
Draught	86,342	27.2	47,611	15.0	38,732	12.2	85,377	26.9	46,852	14.7	38,525	12.1	965	0.3	759	0.2	207	0.1
Other Uses	9,712	3.1	3,636	1.1	6,075	1.9	9,398	3.0	3,351	1.1	6,047	1.9	314	0.1	285	0.1	28	0.0
Total Mules	16,418	100.0	6,629	40.4	9,789	59.6	16,285	99.2	6,585	40.1	9,700	59.1	133	0.8	44	0.3	89	0.5
Under 3 Years	641	3.9	274	1.7	366	2.2	637	3.9	274	1.7	362	2.2	*	*	*	*	*	
3 years and older	15,777	96.1	6,355	38.7	9,422	57.4	15,648	95.3	6,311	38.4	9,337	56.9	129	0.8	44	0.3	85	0.5
Mules Aged 3 Years and Older by Purpose																		
All Uses	15,777	100	6,355	40.3	9,422	59.7	15,648	99.2	6,311	40.0	9,337	59.2	129	0.8	44	0.3	85	0.5
Transportation	14,130	89.6	5,445	34.5	8,685	55.0	14,008	88.8	5,404	34.3	8,604	54.5	122	0.8	41	0.3	81	0.5
Draught	1,363	8.6	832	5.3	531	3.4	1,363	8.6	832	5.3	531	3.4	*	*	*	*	*	
Other Uses	285	1.8	*	*	207	1.3	278	1.8	*	*	203	1.3	7	0.0	*	*	*	*
Total Camels	39,791	100.0	39,510	99.3	281	0.7	39,122	98.3	38,864	97.7	258	0.6	669	1.7	646	1.6	23	0.1
Under 4 Years	2,971	7.5	2,873	7.2	*	*	2,927	7.4	2,836	7.1	*	*	44	0.1	37	0.1	*	*
4 years and older	36,820	92.5	36,638	92.1	183	0.5	36,195	91.0	36,029	90.5	*	*	625	1.6	609	1.5	16	0.0
Camels Aged 4 Years and Older by Purpose																		
All Uses	36,820	100	36,638	99.5	183	0.5	36,195	98.3	36,029	97.9	*	*	625	1.7	609	1.7	16	0.0
Transportation	33,179	90.1	33,067	89.8	*	*	32,807	89.1	32,700	88.8	*	*	372	1.0	367	1.0	*	*
Draught	1,287	3.5	1,249	3.4	*	*	1,231	3.3	1,200	3.3	*	*	56	0.2	49	0.1	*	*
Other Uses	2,354	6.4	2,322	6.3	*	*	2,157	5.9	2,129	5.8	*	*	197	0.5	193	0.5	*	*

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



\* Note that for camels the age Categories are under 4 years and 4 years & older

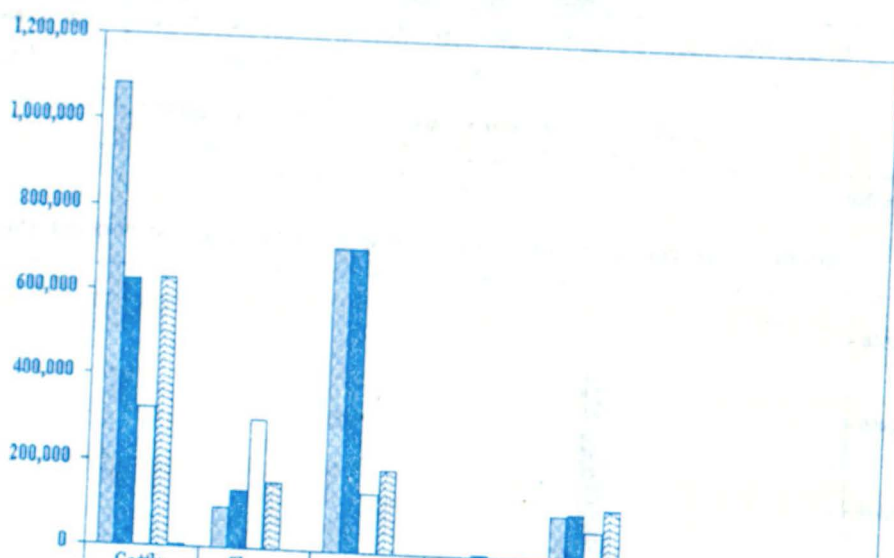
FIGURE VII.7 DISTRIBUTION OF HORSES, ASSES, MULES AND CAMELS BY PURPOSE AND SEX



transportation and only 3.5 percent were used for draught purposes (See also Figures VII.6 and VII.7)

Pertaining to zonal distribution, about 30.13 percent of the total ass population is found in South Tigray Zone followed by Central Tigray Zone (27.08 percent), and the remaining 25.37 percent and 17.35 percent are accounted for West and East Tigray zones, respectively. On the other hand, the predominance of the horses and mules are found in East Tigray Zone. With reference to camel population, South Tigray took the greater share that is 54.81 percent (See the Figure below).

FIGURE VII.8 DISTRIBUTION OF LIVESTOCK BY ZONE



	Cattle	Sheep	Goats	Horses	Asses	Mules	Camels
West Tigray	1,081,964	95,694	712,147	1,639	102,375	3,668	6,318
Central Tigray	627,830	134,223	711,624	104	109,263	3,016	7,384
East Tigray	324,150	301,989	139,366	3,784	69,993	5,093	4,278
South Tigray	631,186	154,836	195,953	2,013	121,585	4,639	21,811
Mehele	2,947	470	36	58	301	2	0

## 2.4 Poultry

Data on poultry population are collected as part of the livestock census, and the total poultry population in Tigray Region is estimated to be about 4,999,677. 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 chicks (1,903,905), followed by laying hens (1,411,830). Pullets are estimated to be 512,940 in the region. Cocks and cockerels are also estimated separately, and are 372,110 and 368,829, respectively. The others are non-laying hens that makeup 8.6 percent of the total poultry population in the region. Rural areas constitute about 81.0 percent of the total poultry, which is significant, while urban areas comprised of 19.0 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, the single average egg-laying period per hen is estimated to be about 22 days while average number of eggs laid per hen per egg-laying period is about 14 eggs in the region. Egg-laying period and number of eggs laid per period are higher in urban than in rural areas.

Pertaining to zonal distribution, 35.41 percent, 34.58 percent, 17.07 percent, and 11.49 percent of the total poultry population are found in West, Central, South, and East Tigray Zones, respectively. The remaining 1.45 percent of the total poultry population is reported by Mekele Zone (See Table7-1- a).

## 2.5 Beehives

Information on beehives was also collected during the livestock census. 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 the above beehives was enumerated if it produced honey at least once during the reference period (February 9, 2001 to February 8, 2002). Accordingly, the result of the census revealed that a total of 228,684 hives is estimated to be found in rural and urban areas of Tigray Region. From this total hives, 218,270 (95.45 percent) are traditional hives, 8,708 are intermediate hives, and the remaining 1,706 are modern hives.

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 .....	4,999,677	100	4,049,478	80.99	950,199	19.01
Cocks.....	372,110	7.44	321,798	6.44	50,312	1.01
Cockerels.....	368,829	7.38	316,158	6.32	52,671	1.05
Pullets.....	512,940	10.26	455,290	9.11	57,650	1.15
Non-Laying Hens .....	430,062	8.60	234,459	4.69	195,603	3.91
Chicks.....	1,903,905	38.08	1,793,730	35.88	110,175	2.20
Laying Hens .....	1,411,830	28.24	928,042	18.56	483,788	9.68
Average Number Days/Clutch.....	22		20		23	
Average Eggs/Hen/Clutch.....	14		13		15	

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 .....	228,684	100	211,581	92.52	17,103	7.48
Traditional Beehives.....	218,270	95.45	209,466	91.60	8,804	3.85
Intermediate Beehives .....	8,708	3.81	472	0.21	8,236	3.60
Modern Beehives.....	1,706	0.75	1,643	0.72	*	*

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
<b>Milk Production</b>			
<b>Cow Milk</b>			
Average Daily Milk Production (Liters/Cow).....	1,551	1,209	1,894
Average Lactation Period (Months).....	8	8	8
Total Milk Production (Liters).....	137,311,704	133,189,088	4,122,616
<b>Camel Milk</b>			
Average Daily Milk Production (Liters/Camel).....	-	-	-
Average Lactation Period (Months).....	-	-	-
Total Milk Production (Liters).....	-	-	-
<b>Honey Production</b>			
<b>All Types of Beehives</b>			
Production (Kilograms).....	1,938,408	1,828,792	109,616
Average Frequency (Harvests/Year).....		1	1
<b>Traditional Beehives</b>			
Production (Kilograms).....	1,903,184	1,794,504	108,680
Average Frequency (Harvests/Year).....		1	1
<b>Intermediate Beehives</b>			
Production (Kilograms).....	3,414	2,478	936
Average Frequency (Harvests/Year).....		2	1
<b>Modern Beehives</b>			
Production (Kilograms).....	31,811	31,811	
Average Frequency (Harvests/Year).....		1	

As indicated in Summary Table VII.5 and Figure VII.10, very significant portion of the beehives are reported in rural areas (92.52 percent). Although very little (7.48 percent), urban areas as well contributed to the beehives population of the region.

With regard to zonal distribution of hives, Central Tigray Zone has the largest share (31.84 percent), followed by South Tigray Zone (26.88 percent). West Tigray Zone and East Tigray also contribute significant portions to the hive population of the region, 25.64 percent and 15.01 percent, respectively.

FIGURE VII.9 DISTRIBUTION OF POULTRY BY TYPE

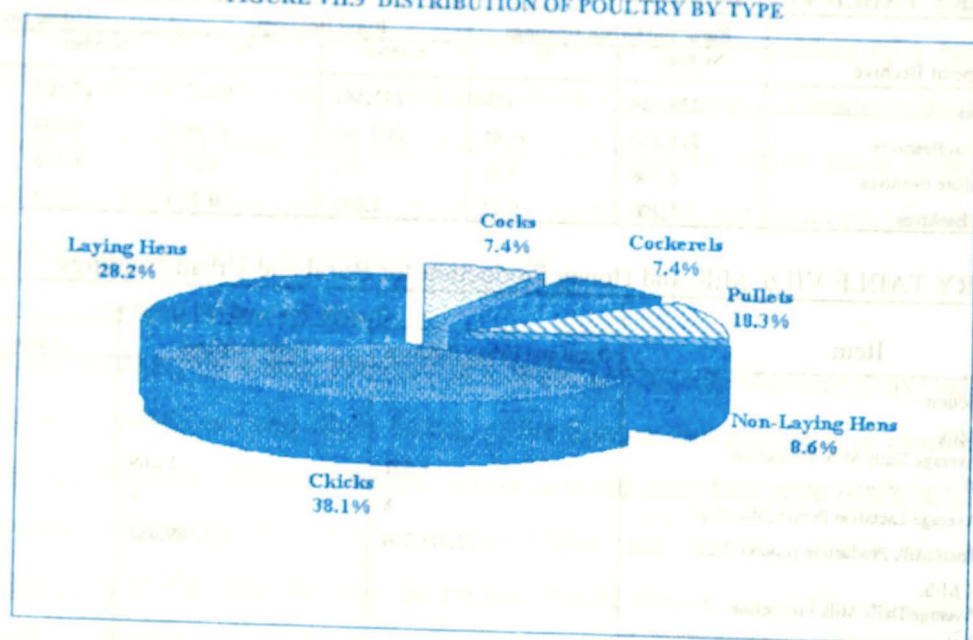
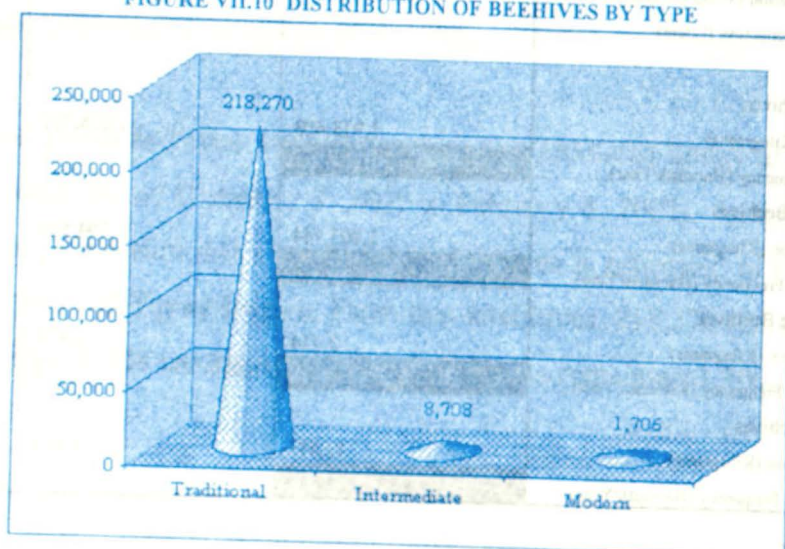


FIGURE VII.10 DISTRIBUTION OF BEEHIVES BY TYPE



### 3. LIVESTOCK PRODUCTS

This section summarizes results on livestock products. 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 region 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 in Summary Table VII.6, the estimate of total milk production for rural and urban areas in Tigray Region during the reference period, is about 137 million liters of which 133 million liters (97 percent) is attributed to rural areas. A total of about 4 million liters of milk was as well estimated for urban 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 region is estimated to be about eight months, and average milk yield per cow per day is about 1.551 liters.

### 3.2 Honey Production

To estimate honey production, number of hives, 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. As a result, the estimate of total honey production is about 2 million kilograms of which the greater portion (98.2 percent) is harvested from traditional hives (See Summary Table VII.6). According to the results and as expected, rural areas are the major purveyor of honey production in the region relative to the urban areas.

As can be seen from the census data, honey was harvested only once during the 12 months period (i.e. the reference period) from traditional and modern hives, and twice from intermediate hives in rural areas. However, in urban areas honey was harvested only once from all types of hives 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 bees 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. 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 of the total annual milk production, 43.26 percent was used for household consumption, 7.30 percent was sold, 0.59 percent was used for payment of wages and the rest, which is 48.84 percent was used for other purposes. With respect to the utilization of butter, 73.89 percent of the produce was used for household consumption although considerable portion (19.93 percent) was sold. Most of the total cheese produced was used for household consumption that is about 95.70 percent, and four percent was used for other purposes.

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

Type of Product	Rural and Urban Holdings					Rural Holdings					Urban Holdings				
	Total %	Percent of Product Utilized for:				Total %	Percent of Product Utilized for:				Total %	Percent of Product Utilized for:			
		Household Consumption	Sale	Wages in Kind	Other		Household Consumption	Sale	Wages in Kind	Other		Household Consumption	Sale	Wages in Kind	Other
Milk	100	43.26	7.30	0.59	48.84	100	37.32	0.67	0.71	61.31	100	49.20	13.94	0.48	36.38
Butter	100	73.89	19.93	0.23	5.95	100	65.97	28.18	0.08	5.77	100	81.80	11.69	0.38	6.14
Cheese	100	95.70	0.53	0.17	3.60	100	96.54	0.26	0.09	3.12	100	94.86	0.80	0.24	4.09
Beef	100	31.69	58.83	0.04	9.44	100	34.89	51.15	0.08	13.87	100	28.49	66.51	-	5.00
Mutton/Goat Meat	100	84.73	10.36	0.46	4.45	100	85.74	10.12	0.17	3.97	100	83.72	10.60	0.74	4.94
Eggs	100	40.45	34.32	0.03	25.20	100	25.71	44.15	0.05	30.09	100	55.19	24.50	-	20.31
Honey	100	48.99	48.39	0.33	2.30	100	39.45	57.98	0.20	2.37	100	58.53	38.79	0.45	2.22
Bees Wax	100	33.61	17.39	0.23	48.77	100	35.19	23.64	0.47	40.71	100	32.03	11.14	-	56.83
Wool	100	47.95	50.48	-	1.56	100	62.58	34.30	-	3.13	100	33.33	66.67	-	-
Hide	100	34.83	59.85	0.13	5.18	100	42.27	50.03	0.08	7.62	100	27.39	69.67	0.19	2.74
Skin	100	21.27	75.12	0.02	3.60	100	29.16	66.65	0.03	4.15	100	13.37	83.58	-	3.04

Of the total honey production, about 48.99 percent was used for household consumption, about 48.39 percent was sold, and less than one percent of the honey production was used as a payment (wage) in the region. On the other hand, 33.61 percent of the bees wax produced in the region was used for household consumption while 17.39 percent was used for sale. Similar usage patterns are also observed in both rural and urban areas.

Concerning utilization of egg production, 40.45 percent of the total egg production was used for household consumption while 34.32 percent of the total egg production was used for sale. About a quarter of the egg production in the region (25.20 percent) 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.

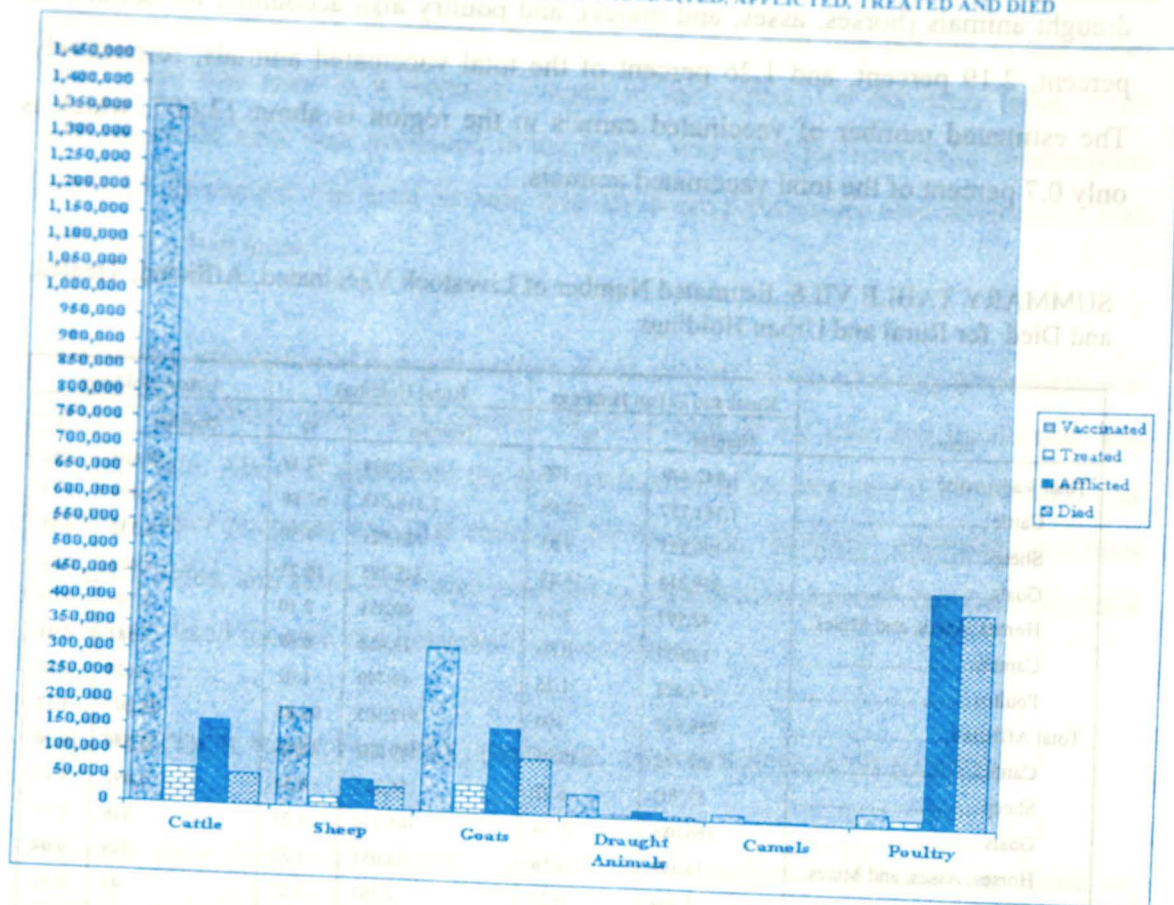
Data on these parameters specifically on number of vaccinated, afflicted, treated and dead animals were therefore collected and the results are shown in Summary Table VII.8. The estimated number of vaccinated animals within the reference period in rural and urban areas of Tigray Region is about 1,942,438. Out of these animals, about 69.59

percent were cattle followed by goats, which took about 16.43 percent share. Sheep, draught animals (horses, asses, and mules), and poultry also accounted for about 9.83 percent, 2.19 percent, and 1.26 percent of the total vaccinated animals, respectively. The estimated number of vaccinated camels in the region is about 13,607, which is only 0.7 percent of the total vaccinated animals.

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.....	1,942,438	100	1,891,834	97.39	50,604	2.61
Cattle.....	1,351,737	69.59	1,318,043	67.86	33,694	1.73
Sheep.....	190,853	9.83	184,521	9.50	6,332	0.33
Goats.....	319,218	16.43	315,195	16.23	4,023	0.21
Horses, Asses, and Mules.....	42,597	2.19	40,851	2.10	1,746	0.09
Camels.....	13,607	0.70	13,426	0.69	181	0.01
Poultry.....	24,428	1.26	19,799	1.02	4,629	0.24
Total Afflicted.....	858,912	100	832,105	96.88	26,807	3.12
Cattle.....	162,782	18.95	160,202	18.65	2,580	0.30
Sheep.....	57,703	6.72	56,211	6.54	1,492	0.17
Goats.....	166,088	19.34	165,172	19.23	916	0.11
Horses, Asses, and Mules.....	13,399	1.56	13,051	1.52	348	0.04
Camels.....	2,404	0.28	2,361	0.27	43	0.01
Poultry.....	456,535	53.15	435,108	50.66	21,427	2.49
Total Treated.....	161,018	100	155,817	96.77	5,201	3.23
Cattle.....	67,704	42.05	65,985	40.98	1,719	1.07
Sheep.....	19,840	12.32	19,149	11.89	691	0.43
Goats.....	53,238	33.06	52,795	32.79	443	0.28
Horses, Asses, and Mules.....	4,661	2.89	4,469	2.78	192	0.12
Camels.....	1,844	1.15	1,804	1.12	40	0.02
Poultry.....	13,730	8.53	11,614	7.21	2,116	1.31
Total Died.....	636,215	100	613,668	96.46	22,547	3.54
Cattle.....	60,657	9.53	59,722	9.39	935	0.15
Sheep.....	43,387	6.82	42,376	6.66	1,011	0.16
Goats.....	108,786	17.10	108,216	17.01	570	0.09
Horses, Asses, and Mules.....	6,053	0.95	5,861	0.92	192	0.03
Camels.....	387	0.06	364	0.06	•	•
Poultry.....	416,945	65.54	397,129	62.42	19,816	3.11

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



In the same table, it is indicated that about 858,912 animals were diseased/afflicted by different types of diseases during the reference period and only 161,018 of them were treated. The cattle constituted about 42.05 percent of the total treated animals and substantial number of goats was treated as well (53,238 heads).

According to the census data, greater number of animals died during the reference period in the region due to diseases of which 65.54 percent is poultry. In addition, the estimated numbers of dead goats and dead cattle in the region are about 108,786 and 60,657, respectively. The number of sheep estimated dead is also considerable that is about 43,387 heads. (See Summary Table VII.8).

If we take a look at the zonal results to see the distributions among the zones, 29.03 percent of the total vaccinated-animals are reported in Central Tigray zone. The rest 25.14 percent, 24.47 percent, 21.24 percent, and 0.12 percent are found in South, West, East Tigray, and Mekele Zones, respectively. Regarding diseased animals, the majorities are accounted for West Tigray Zone followed by Central Tigray Zone. Similar distribution patterns are also observed for treated and dead animals.

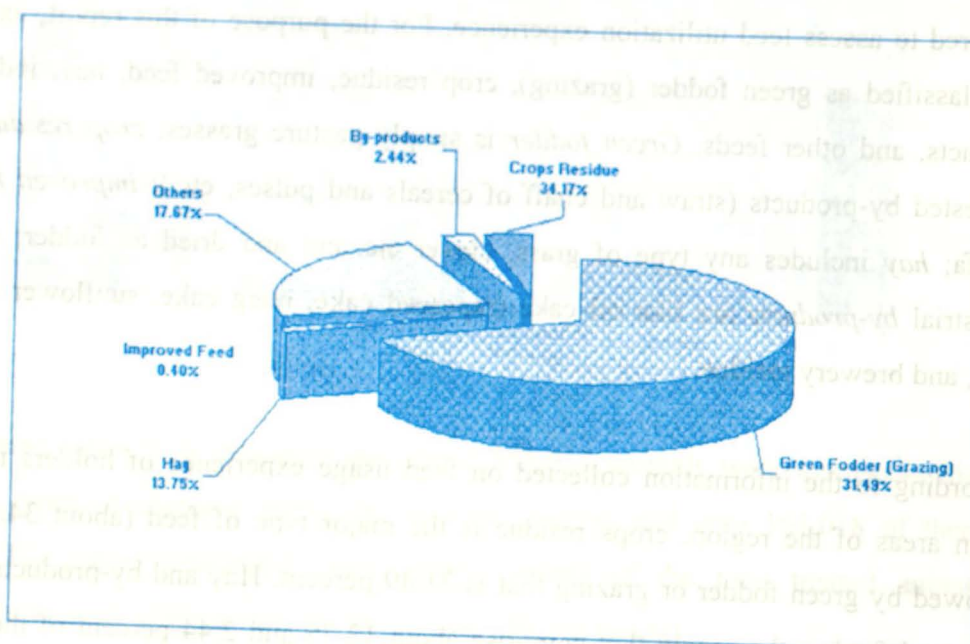
## 6. ANIMAL FEED

Data on animal feed practices of holders in both the rural and urban areas of the region were gathered 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 by-products, and other feeds. *Green fodder* is simply pasture grasses; *crop residue* includes harvested by-products (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 *by-products* 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 region, crops residue is the major type of feed (about 34.17 percent) followed by green fodder or grazing that is 31.49 percent. Hay and by-products were used as animal feed in the region that comprise about 13.75 and 2.44 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 0.40 percent) was used as animal feed and other types of feed that accounted for about 17.67 percent were also used in the region.

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	539,684	31.49	524,194	36.04	15,490	26.94
Crops Residue	578,966	34.17	564,913	42.65	14,053	25.69
Improved Feed	6,884	0.40	6,526	0.18	358	0.63
Hay	409,853	13.75	399,882	14.49	9,971	13.02
By-products	76,605	2.44	73,773	1.53	2,832	3.36
Others	141,683	17.67	126,299	4.98	15,384	30.35

FIGURE VII.12 ANIMAL FEED PRACTICES OF HOLDERS



Summary Table VII.9 also highlights the number of holders reported each type of feed. According to the data, about 578,966 holders have used crops residue to feed their animals. Significant number of holders (539,684) both in rural and urban areas of the region also reported that they used to feed green fodder or grazing for their animals. Moreover, about 409,853 and 76,605 holders have reported hay and by-products, respectively. Quite a number of holders (about 141,683) as well reported other types of feeds while only 6,884 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, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Area	ALL LIVESTOCK								
	CATTLE	SHEEP	GOATS	HORSES	ASSES	MULES	CAMELS	POULTRY	BEEHIVES
Tigray Region.....	2,668,078	687,212	1,759,126	7,598	403,517	16,418	39,791	4,999,677	228,683
West Tigray Zone.....	1,081,964	95,694	712,147	1,639	102,375	3,668	6,318	1,770,181	58,632
Kafta.....	54,391	14,115	24,972	-	7,176	90	361	145,278	548
Tahtay Adiyabo.....	120,422	16,067	64,194	-	15,123	115	777	191,174	3,502
Lalay Adiyabo.....	107,530	9,080	70,187	-	15,392	115	1,348	179,431	5,211
Tahtay Koraro.....	58,016	7,045	31,376	-	8,027	200	-	121,117	4,580
Medebay Zana.....	79,735	20,686	62,876	-	10,991	439	1,215	211,728	10,338
Asegede Tsimbela.....	175,758	9,279	148,735	-	12,957	735	585	258,336	6,661
Tselemti.....	147,358	6,061	159,605	-	9,677	567	180	293,444	12,832
Welkait.....	196,171	1,937	77,518	142	11,993	581	890	221,318	6,948
Tsegedde.....	142,582	11,423	72,684	1,360	11,041	826	741	148,355	8,013
Central Tigray Zone.....	627,830	134,223	711,624	104	109,263	3,016	7,384	1,728,998	72,808
Mereb Lehe.....	53,039	21,739	52,981	-	9,921	171	1,087	203,529	2,849
Ahiferom.....	78,371	7,862	69,910	-	12,284	518	1,660	235,075	12,765
Werie Lehe.....	75,485	8,447	72,396	-	11,989	-	613	167,054	8,936
Adwa.....	68,021	21,615	60,531	-	16,249	755	668	166,779	7,537
Lalay Maychew.....	36,548	9,840	25,241	-	10,904	95	-	178,257	3,875
Tahtay Maychew.....	39,269	8,686	34,459	-	6,892	166	469	118,458	3,211
Naeder Adet.....	71,262	6,624	89,259	-	7,945	-	-	153,899	8,764
Kola Temben.....	86,549	12,186	123,393	-	10,713	284	845	243,196	9,373
Degua Temben.....	61,142	4,107	35,282	-	12,129	736	-	92,250	7,589
Tanqu Abergele.....	58,145	33,117	148,171	-	10,237	190	389	170,502	7,909
East Tigray Zone.....	324,150	301,989	139,366	3,784	69,993	5,093	4,278	574,476	34,332
Gulumahada.....	36,171	35,307	19,857	963	8,823	468	433	86,929	2,686
Erob.....	12,854	8,398	15,121	-	3,992	86	20	18,153	2,895
Saesi Tsaedamba.....	64,320	75,460	26,823	-	11,585	253	-	100,434	7,568
Ganta Afeshum.....	44,486	40,749	29,730	1,142	6,673	568	539	94,691	4,737
Hawzen.....	54,603	47,597	15,347	-	10,835	444	1,105	97,089	6,510
Wukro.....	53,452	13,594	10,207	-	11,450	828	629	76,723	3,782
Atsbi Wenberta.....	58,264	80,882	22,281	937	16,635	2,446	1,529	100,457	6,154
South Tigray Zone.....	631,186	154,836	195,953	2,013	121,585	4,639	21,811	853,540	61,462
Seharte Samre.....	79,291	42,021	74,120	-	15,755	944	-	182,975	9,322
Enderta.....	74,881	1,738	10,234	-	20,906	1,393	2,147	108,504	3,415
Hintalo Wajirat.....	91,294	7,252	21,248	-	21,139	636	3,531	110,001	13,115
Ambalagge.....	49,957	21,044	17,355	242	11,682	277	-	78,720	9,540
Endamehoni.....	40,132	24,285	13,968	-	12,793	189	-	61,565	10,685
Rayazebo.....	139,127	4,904	16,969	152	13,460	240	13,379	100,079	4,636
Alamata.....	83,579	3,822	14,398	-	8,527	325	1,153	114,449	1,751
Wofla.....	72,924	49,772	27,660	908	17,322	636	919	97,248	8,999
Mekele Zone.....	2,947	470	-	-	301	-	-	72,482	1,450
Mekele.....	2,947	470	-	-	301	-	-	72,482	1,450

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C. S. A. Office

## b) Rural Holdings

Geographic Area	ALL LIVESTOCK								
	CATTLE	SHEEP	GOATS	HORSES	ASSES	MULES	CAMELS	POULTRY	BEEHIVES
Tigray Region.....	2,619,540	670,801	1,748,296	7,458	397,198	16,285	39,122	4,049,478	211,581
West Tigray Zone.....	1,064,584	91,534	708,210	1,615	100,443	3,640	5,986	1,574,903	56,717
Kafta.....	52,315	12,024	24,391	-	6,596	90	293	82,090	548
Tahtay Adiyabo.....	115,106	15,490	63,011	-	14,576	115	608	157,820	3,396
Laelay Adiyabo.....	106,464	8,977	70,080	-	15,311	115	1,339	175,043	5,211
Tahtay Koraro.....	56,416	6,460	31,333	-	7,920	186	-	103,915	4,422
Medebay Zana.....	79,012	20,401	62,719	-	10,912	439	1,203	190,951	9,977
Asegede Tsimbela.....	173,864	9,030	148,039	-	12,749	735	575	240,642	6,284
Tselemti.....	145,407	6,043	158,915	-	9,546	557	173	276,773	12,012
Welkait.....	193,532	1,910	77,037	142	11,818	581	842	201,885	6,948
Tsegedde.....	142,468	11,199	72,684	1,342	11,015	822	741	145,785	7,920
Central Tigray Zone.....	616,803	130,891	706,167	-	106,955	2,970	7,194	1,305,483	65,057
Mereb Lehe.....	51,974	20,999	51,868	-	9,633	162	978	150,006	2,717
Ahiferom.....	76,309	7,662	69,399	-	12,006	512	1,595	195,288	10,147
Werie Lehe.....	74,813	8,370	71,891	-	11,823	-	613	132,108	8,046
Adwa.....	67,080	21,407	60,342	-	16,181	745	668	122,841	7,411
Laelay Maychew.....	34,397	9,068	24,978	-	10,528	75	-	72,352	2,508
Tahtay Maychew.....	38,790	8,385	34,263	-	6,838	166	463	98,187	2,916
Naeder Adet.....	70,856	6,613	89,015	-	7,868	-	-	141,088	8,764
Kola Temben.....	85,072	11,812	122,599	-	10,203	284	845	181,185	8,866
Degua Temben.....	60,826	3,836	35,189	-	12,050	735	-	79,778	7,246
Tanqu Abergele.....	56,686	32,738	146,623	-	9,826	190	389	132,650	6,435
East Tigray Zone.....	320,170	298,288	139,134	3,770	69,372	5,071	4,265	492,813	32,037
Gulumahada.....	36,029	35,173	19,852	963	8,806	468	433	84,005	2,686
Erob.....	12,795	8,299	15,109	-	3,963	86	20	17,361	2,741
Saesi Tsaedamba.....	63,900	74,410	26,781	-	11,531	249	-	86,866	7,040
Ganta Afeshum.....	43,840	39,908	29,699	1,138	6,569	568	539	82,025	4,737
Hawzen.....	53,778	46,754	15,301	-	10,656	444	1,105	83,018	5,544
Wukro.....	52,048	13,378	10,127	-	11,304	815	616	54,645	3,225
Atsbi Wenberta.....	57,780	80,365	22,264	930	16,544	2,441	1,529	84,893	6,063
South Tigray Zone.....	617,984	150,088	194,786	1,971	120,427	4,604	21,677	676,279	57,770
Seharte Samre.....	78,486	41,932	73,859	-	15,587	944	-	149,983	8,647
Enderta.....	73,663	1,440	10,206	-	20,712	1,393	2,147	76,287	3,143
Hintalo Wajirat.....	89,947	7,176	21,220	-	20,980	621	3,531	93,002	12,969
Ambalagge.....	49,030	20,742	17,129	242	11,613	275	-	63,647	8,311
Endamehoni.....	39,511	23,469	13,933	-	12,710	189	-	49,303	10,343
Rayazebo.....	137,312	4,269	16,825	152	13,325	234	13,314	91,894	4,291
Alamata.....	78,174	2,907	13,979	-	8,279	316	1,085	63,758	1,244
Wofla.....	71,861	48,153	27,635	888	17,220	633	919	88,406	8,823

c) Urban Holdings

Geographic Area	ALL LIVESTOCK								
	CATTLE	SHEEP	GOATS	HORSES	ASSES	MULES	CAMELS	POULTRY	BEEHIVES
Tigray .....	48,538	16,411	10,830	140	6,319	133	669	950,199	17,103
West Tigray Zone.....	17,380	4,160	3,937	25	1,932	29	332	195,278	1,915
Kafta.....	2,075	2,091	581	-	580	-	68	63,188	-
Tahtay Adiyabo.....	5,316	577	1,183	-	547	-	169	33,354	-
Lalay Adiyabo.....	1,066	104	107	-	81	-	8	4,388	-
Tahtay Koraro.....	1,600	585	43	-	107	14	-	17,202	-
Medebay Zana.....	723	285	157	-	78	-	-	20,777	361
Asegede Tsimbela.....	1,894	249	696	-	207	-	10	17,695	-
Tselemti.....	1,952	-	690	-	131	-	-	16,671	820
Welkait.....	2,640	-	480	-	175	-	48	19,433	-
Tsegedde.....	114	224	-	19	26	5	-	2,570	93
Central Tigray Zone.....	11,027	3,332	5,457	-	2,308	45	190	423,516	7,751
Mereb Lehe.....	1,065	740	1,113	-	288	-	109	53,523	-
Ahiferom.....	2,062	201	511	-	278	-	65	39,787	2,618
Werie Lehe.....	672	-	505	-	166	-	-	34,946	890
Adwa.....	941	208	189	-	68	10	-	43,938	-
Lalay Maychew.....	2,151	772	263	-	376	20	-	105,906	1,367
Tahtay Maychew.....	478	301	196	-	54	-	-	20,271	-
Naeder Adet.....	407	-	244	-	77	-	-	12,811	-
Kola Temben.....	1,477	374	795	-	510	-	-	62,011	506
Degua Temben.....	317	270	-	-	79	-	-	12,472	-
Tanqu Abergele.....	1,458	380	1,548	-	410	-	-	37,852	-
East Tigray Zone.....	3,980	3,701	233	14	620	22	-	81,663	2,295
Gulumahada.....	142	134	-	-	18	-	-	2,923	-
Erob.....	58	99	12	-	29	-	-	792	154
Saesi Tsaedamba.....	420	1,049	-	-	55	-	-	13,568	-
Ganta Afeshum.....	646	842	-	-	103	-	-	12,666	-
Hawzen.....	825	843	-	-	179	-	-	14,071	966
Wukro.....	1,404	217	-	-	146	14	-	22,078	556
Atsbi Wenberta.....	485	517	-	-	91	-	-	15,564	-
South Tigray Zone.....	13,203	4,748	1,167	42	1,158	35	134	177,261	3,692
Seharte Samre.....	805	-	261	-	169	-	-	32,992	675
Enderta.....	1,218	297	-	-	194	-	-	32,217	-
Hintalo Wajirat.....	1,347	76	28	4	160	15	-	16,999	146
Ambalagge.....	927	302	226	-	69	-	-	15,073	1,229
Endamehoni.....	622	816	-	7	83	-	-	12,262	342
Rayaazebo.....	1,816	636	145	-	135	-	-	8,185	345
Alamata.....	5,405	915	419	-	248	8	68	50,691	507
Wofla.....	1,063	1,618	25	20	101	-	-	8,842	-
Mekele Zone.....	2,947	470	-	-	301	-	-	72,482	1,450
Mekele.....	2,947	470	-	-	301	-	-	72,482	1,450

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

a) Both Rural and Urban Holdings

Geographic Area	CATTLE										
	ALL CATTLE	MALE					FEMALE				
		< 6 Months	6 Mo < 1 yr	1 - <3 yrs	3 - <10 yrs	10 yrs & Over	< 6 Months	6 Mo < 1 yr	1 - <3 yrs	3 - <10 yrs	10 yrs & Over
Tigray Region	2,668,078	104,699	125,941	184,427	822,475	67,996	115,029	139,442	203,453	854,121	50,495
West Tigray Zone	1,081,964	44,427	63,211	76,116	266,719	22,616	51,297	71,163	89,480	369,611	27,324
Kafta	54,391	2,460	3,422	4,081	8,406	779	2,959	4,173	4,833	21,338	1,940
Tahtay Adiyabo	120,422	4,587	6,726	7,800	27,803	1,515	5,375	8,684	9,941	45,810	2,182
Lalay Adiyabo	107,530	3,925	6,218	7,930	31,972	1,830	3,852	5,732	8,416	35,465	2,189
Tahtay Koraro	58,016	1,402	3,232	3,352	19,049	2,325	1,688	2,988	3,764	18,658	1,558
Medebay Zana	79,735	1,891	2,741	5,776	28,470	2,951	2,609	3,730	6,171	23,257	2,141
Asegede Tsimbela	175,758	8,180	10,126	12,655	45,054	3,019	8,778	11,176	15,794	57,190	3,787
Tselemti	147,358	6,393	7,486	8,975	39,351	4,131	7,517	8,738	9,935	51,083	3,751
Welkait	196,171	7,161	15,597	14,231	37,647	3,736	8,850	16,806	17,706	68,441	5,997
Tsegedde	142,582	8,428	7,665	11,316	28,967	2,331	9,670	9,138	12,920	48,368	3,778
Central Tigray Zone	627,830	16,771	22,282	43,114	241,451	21,885	18,358	25,338	43,452	184,073	11,106
Mereb Lehe	53,039	1,102	1,922	3,522	21,848	1,786	1,698	1,983	3,366	15,447	364
Ahiferom	78,371	1,979	2,641	5,322	33,326	1,636	2,478	3,551	5,262	21,559	617
Wene Lehe	75,485	2,362	2,317	5,499	29,688	3,631	2,302	2,650	5,337	19,868	1,831
Adwa	68,021	1,688	2,457	4,822	28,516	3,187	1,957	2,192	4,130	17,490	1,583
Lalay Maychew	36,548	977	1,062	1,941	15,428	2,525	985	1,241	2,328	9,410	652
Tahtay Maychew	39,269	1,158	962	2,703	17,140	877	933	787	2,419	11,964	324
Naeder Adet	71,262	1,756	3,241	5,069	22,769	2,194	1,990	3,849	4,903	23,267	2,225
Kola Temben	86,549	2,274	3,381	5,900	29,274	1,649	3,203	3,651	6,992	29,129	1,096
Degua Temben	61,142	2,134	2,317	4,258	23,545	2,011	1,487	2,698	4,431	17,228	1,032
Tanqu Abergele	58,145	1,341	1,982	4,077	19,916	2,388	1,325	2,737	4,284	18,712	1,382
East Tigray Zone	324,150	13,791	13,748	23,953	106,824	6,325	14,134	15,337	23,652	103,826	2,560
Gulumahada	36,171	1,578	1,256	2,503	14,541	544	1,787	1,376	2,491	9,835	260
Erob	12,854	617	695	693	2,796	155	845	893	1,234	4,844	81
Saesi Tsaedamba	64,320	3,259	2,049	4,296	20,305	753	3,125	2,629	4,115	23,500	290
Ganta Afeshum	44,486	1,777	1,808	3,327	16,515	1,415	1,896	1,946	2,848	12,397	557
Hawzen	54,603	1,982	2,588	4,028	17,231	1,662	2,449	2,778	4,356	17,070	459
Wukro	53,452	1,935	2,842	4,698	17,472	1,062	1,457	2,295	3,908	17,378	405
Atsbi Wenberta	58,264	2,642	2,510	4,408	17,964	734	2,576	3,421	4,699	18,803	509
South Tigray Zone	631,186	29,543	26,540	41,080	207,202	17,137	30,993	27,399	46,552	195,308	9,432
Seharte Samre	79,291	3,501	3,008	6,041	25,504	3,223	2,931	2,703	6,644	24,054	1,682
Enderta	74,881	2,178	3,091	5,678	25,424	3,861	2,176	3,060	6,497	21,658	1,260
Hintalo Wajirat	91,294	3,353	3,501	5,526	33,105	3,205	3,418	3,445	5,573	28,568	1,601
Ambalagge	49,957	2,006	2,737	3,476	17,514	1,326	1,298	2,328	3,616	14,803	851
Endamehoni	40,132	1,532	1,664	1,909	15,868	1,553	1,963	2,094	2,128	11,063	357
Rayaazebo	139,127	9,568	5,646	8,831	36,924	1,098	11,529	6,953	11,001	46,174	1,403
Alamata	83,579	4,386	3,445	5,216	23,839	1,496	4,655	4,027	7,040	27,968	1,507
Wofla	72,924	3,018	3,449	4,403	29,025	1,375	3,023	2,789	4,052	21,019	771
Mekele Zone	2,947	168	159	164	280	•	247	203	317	1,303	74
Mekele	2,947	168	159	164	280	•	247	203	317	1,303	74

b) Rural Holdings

Geographic Area	CATTLE										
	ALL CATTLE	MALE					FEMALE				
		< 6 Months	6 Mo < 1yr	1 - <3 yrs	3 - <10 yrs	10 yrs & Over	< 6 Months	6 Mo < 1yr	1 - <3 yrs	3 - <10 yrs	10 yrs & Over
Tigray Region.....	2,619,540	102,301	123,190	180,957	812,398	67,434	112,382	136,538	199,203	835,426	49,712
West Tigray Zone.....	1,064,584	43,648	62,012	74,837	263,969	22,551	50,438	69,888	87,943	362,194	27,104
Kafta.....	52,315	2,311	3,255	3,939	8,290	776	2,835	3,983	4,641	20,371	1,914
Tahtay Adiyabo.....	115,106	4,325	6,423	7,409	26,789	1,511	5,073	8,344	9,503	43,595	2,132
Laelay Adiyabo.....	106,464	3,867	6,120	7,841	31,825	1,823	3,813	5,660	8,323	35,010	2,183
Tahtay Koraro.....	56,416	1,322	3,117	3,239	18,754	2,307	1,595	2,884	3,633	18,051	1,515
Medebay Zana.....	79,012	1,858	2,705	5,721	28,329	2,951	2,572	3,671	6,119	22,983	2,104
Asegede Tsimbela.....	173,864	8,112	10,004	12,484	44,729	3,016	8,721	11,066	15,621	56,342	3,768
Tselemti.....	145,407	6,326	7,334	8,856	39,009	4,120	7,391	8,604	9,806	50,229	3,732
Welkait.....	193,532	7,101	15,390	14,043	37,310	3,717	8,780	16,543	17,383	67,287	5,977
Tsegedde.....	142,468	8,426	7,663	11,304	28,935	2,331	9,656	9,133	12,916	48,326	3,778
Central Tigray Zone.....	616,803	16,347	21,699	42,244	238,807	21,733	17,872	24,742	42,408	180,072	10,879
Mereb Lehe.....	51,974	1,068	1,878	3,477	21,533	1,771	1,660	1,945	3,266	15,022	354
Ahiferom.....	76,309	1,919	2,536	5,141	32,861	1,602	2,378	3,379	5,105	20,813	575
Werie Lehe.....	74,813	2,334	2,283	5,441	29,448	3,625	2,288	2,621	5,264	19,684	1,825
Adwa.....	67,080	1,640	2,405	4,732	28,356	3,169	1,902	2,138	4,023	17,163	1,553
Laelay Maychew.....	34,397	870	978	1,767	14,895	2,475	877	1,118	2,097	8,721	600
Tahtay Maychew.....	38,790	1,136	931	2,675	17,039	876	912	774	2,363	11,762	323
Naeder Adet.....	70,856	1,740	3,209	5,027	22,728	2,194	1,980	3,833	4,851	23,079	2,214
Kola Temben.....	85,072	2,227	3,286	5,757	28,990	1,643	3,151	3,571	6,868	28,549	1,033
Degua Temben.....	60,826	2,116	2,295	4,241	23,449	2,006	1,467	2,685	4,412	17,126	1,030
Tanqu Abergele.....	56,686	1,298	1,898	3,988	19,509	2,371	1,257	2,680	4,158	18,153	1,374
East Tigray Zone.....	320,170	13,555	13,504	23,692	106,089	6,281	13,891	15,120	23,286	102,257	2,496
Gulumahada.....	36,029	1,566	1,252	2,495	14,493	543	1,783	1,367	2,488	9,781	260
Erob.....	12,795	610	691	690	2,790	154	838	891	1,232	4,821	79
Saesi Tsaedamba.....	63,900	3,233	2,018	4,270	20,251	753	3,087	2,606	4,093	23,302	287
Ganta Afeshum.....	43,840	1,736	1,764	3,293	16,462	1,412	1,852	1,905	2,768	12,106	543
Hawzen.....	53,778	1,944	2,532	3,977	16,988	1,660	2,406	2,745	4,280	16,790	457
Wukro.....	52,048	1,841	2,773	4,596	17,252	1,026	1,368	2,207	3,782	16,834	368
Atsbi Wenberta.....	57,780	2,625	2,474	4,371	17,852	733	2,557	3,398	4,643	18,624	503
South Tigray Zone.....	617,984	28,751	25,976	40,184	203,533	16,868	30,181	26,788	45,567	190,903	9,232
Seharte Samre.....	78,486	3,478	2,976	5,924	25,301	3,210	2,906	2,678	6,580	23,772	1,661
Enderta.....	73,663	2,142	3,055	5,568	25,140	3,721	2,119	3,029	6,382	21,309	1,199
Hintalo Wajirat.....	89,947	3,289	3,420	5,438	32,701	3,186	3,360	3,369	5,491	28,118	1,575
Ambalagge.....	49,030	1,957	2,679	3,392	17,268	1,314	1,256	2,298	3,563	14,459	844
Endamehoni.....	39,511	1,476	1,631	1,884	15,746	1,550	1,918	2,057	2,089	10,810	351
Rayaaazebo.....	137,312	9,403	5,575	8,725	36,453	1,058	11,399	6,896	10,851	45,566	1,387
Alamata.....	78,174	4,054	3,240	4,913	22,204	1,465	4,272	3,720	6,652	26,186	1,467
Wofla.....	71,861	2,954	3,401	4,339	28,719	1,365	2,951	2,741	3,959	20,683	749

## c) Urban Holdings

Geographic Area	CATTLE										
	ALL CATTLE	MALE					FEMALE				
		< 6 Months	6 Mo < 1 yr	1 - <3 yrs	3 - <10 yrs	10 yrs & Over	< 6 Months	6 Mo < 1 yr	1 - <3 yrs	3 - <10 yrs	10 yrs & Over
Tigray Region.....	48,538	2,398	2,750	3,470	10,078	563	2,647	2,904	4,249	18,695	784
West Tigray Zone.....	17,380	779	1,199	1,279	2,750	64	859	1,275	1,537	7,417	221
Kafta.....	2,075	149	167	142	116	*	123	189	192	968	*
Tahtay Adiyabo.....	5,316	261	302	391	1,014	*	302	339	438	2,215	49
Lalay Adiyabo.....	1,066	58	98	89	147	*	39	73	94	455	6
Tahtay Koraro.....	1,600	80	114	113	295	18	93	104	131	608	44
Medebay Zana.....	723	33	36	55	141	-	37	58	52	274	37
Asegede Tsimbela.....	1,894	68	121	171	325	*	56	110	173	847	19
Tselemti.....	1,952	67	151	119	342	*	126	134	129	854	19
Welkait.....	2,640	60	207	188	337	*	*	263	323	1,153	20
Tsegedde.....	114	2	2	12	33	-	14	5	5	42	-
Central Tigray Zone.....	11,027	424	583	870	2,644	152	486	596	1,044	4,002	226
Mereb Lehe.....	1,065	34	44	46	315	*	37	38	100	425	*
Ahiferom.....	2,062	61	104	182	465	*	100	172	157	746	42
Werne Lehe.....	672	28	34	59	240	*	*	29	73	184	*
Adwa.....	941	48	53	90	160	17	55	54	107	327	30
Lalay Maychew.....	2,151	107	84	174	533	50	108	123	231	689	52
Tahtay Maychew.....	478	22	31	28	102	*	20	13	56	203	*
Naeder Adet.....	407	*	31	41	42	-	*	*	52	187	*
Kola Temben.....	1,477	47	95	143	284	7	53	80	124	581	63
Degua Temben.....	317	18	22	*	96	5	21	13	19	102	*
Tanqu Abergele.....	1,458	43	84	89	407	*	68	58	125	558	*
East Tigray Zone.....	3,980	236	244	261	735	44	243	217	366	1,569	64
Gulumahada.....	142	12	*	8	48	*	4	*	*	54	-
Erob.....	58	8	4	3	6	1	7	2	2	23	2
Saesi Tsaedamba.....	420	26	31	27	53	-	38	23	22	198	*
Ganta Afeshum.....	646	41	45	34	54	*	43	41	80	291	14
Hawzen.....	825	38	55	51	243	*	44	33	77	280	*
Wukro.....	1,404	94	69	101	220	36	89	87	126	544	36
Atsbi Wenberta.....	485	18	35	37	111	*	19	23	56	179	*
South Tigray Zone.....	13,203	792	564	896	3,668	269	812	611	985	4,405	199
Seharte Samre.....	805	23	32	117	202	13	25	25	64	282	21
Enderta.....	1,218	36	37	109	284	140	57	31	115	349	62
Hintalo Wajirat.....	1,347	64	81	88	404	19	58	75	82	450	26
Ambalagge.....	927	49	58	85	246	*	42	30	53	344	*
Endamehoni.....	622	56	33	26	121	*	45	38	40	253	6
Rayaazebo.....	1,816	166	71	106	470	40	130	58	150	609	16
Alamata.....	5,405	333	205	303	1,634	31	384	307	388	1,782	39
Wofla.....	1,063	65	48	64	306	10	72	48	93	336	22
Mekele Zone.....	2,947	168	159	164	280	*	247	203	317	1,303	74
Mekele.....	2,947	168	159	164	280	*	247	203	317	1,303	74

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

a) Both Rural and Urban Holdings

Geographic Area	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
Tigray Region .....	687,212	87,271	32,988	21,076	36,956	91,916	44,730	65,425	306,849
West Tigray Zone .....	95,694	14,390	4,167	1,901	3,948	14,460	6,156	8,456	42,214
Kafta .....	14,115	2,240	548	318	331	2,172	1,398	1,233	5,875
Tahtay Adiyabo .....	16,067	2,200	848	389	686	2,251	842	1,062	7,789
Lalay Adiyabo.....	9,080	1,322	750	179	197	1,412	469	481	4,270
Tahtay Koraro.....	7,045	1,038	271	147	306	763	427	781	3,313
Medebay Zana .....	20,686	3,127	941	443	1,196	2,485	1,341	2,531	8,622
Asegede Tsimbela.....	9,279	1,038	352	•	827	1,744	776	776	3,558
Tselemti .....	6,061	•	•	•	•	1,146	•	1,056	•
Welkait .....	1,937	341	•	•	•	323	209	•	910
Tsegedde.....	11,423	1,998	•	•	223	2,163	506	535	5,843
Central Tigray Zone.....	134,223	16,558	6,705	4,813	6,716	18,576	7,340	14,325	59,190
Mereb Lehe.....	21,739	3,276	532	539	1,090	3,112	841	3,096	9,254
Ahiferom.....	7,862	990	822	•	•	1,215	434	576	3,607
Werie Lehe .....	8,447	1,201	307	325	•	746	507	1,117	4,048
Adwa .....	21,615	1,915	1,527	493	842	3,152	1,053	2,604	10,030
Lalay Maychew.....	9,840	1,152	543	217	306	1,193	882	953	4,594
Tahtay Maychew .....	8,686	885	433	437	496	947	540	1,210	3,738
Naeder Adet.....	6,624	739	105	376	285	944	449	699	3,026
Kola Temben .....	12,186	1,523	1,085	532	505	1,346	669	815	5,711
Degua Temben.....	4,107	479	337	•	•	•	152	337	1,882
Tanqu Abergele .....	33,117	4,398	1,015	1,742	2,628	5,304	1,813	2,916	13,301
East Tigray Zone .....	301,989	35,964	13,630	8,495	17,318	37,599	20,098	27,817	141,068
Gulumahada.....	35,307	4,628	1,715	894	1,527	5,239	2,592	3,774	14,938
Erob .....	8,398	1,025	396	297	629	767	539	738	4,008
Saesi Tsadamba.....	75,460	8,746	2,527	1,688	5,495	8,363	4,577	5,066	38,998
Ganta Afeshum.....	40,749	4,920	3,091	1,144	1,885	5,011	2,679	5,065	16,955
Hawzen.....	47,597	4,983	2,240	1,379	2,234	6,188	3,503	4,458	22,612
Wukro.....	13,594	2,210	424	289	139	1,921	1,254	1,408	5,949
Atsbi Wenberta .....	80,882	9,452	3,237	2,805	5,408	10,110	4,954	7,308	37,608
South Tigray Zone.....	154,836	20,300	8,448	5,825	8,943	21,236	11,089	14,756	64,240
Seharte Samre.....	42,021	5,867	1,204	1,233	2,229	7,923	3,173	3,645	16,748
Enderta.....	1,738	•	556	•	314	•	•	26	118
Hintalo Wajirat .....	7,252	1,242	794	433	497	557	594	•	2,469
Ambalagge.....	21,044	2,140	1,827	830	821	2,348	1,751	2,386	8,940
Endamehoni.....	24,285	3,093	1,432	1,196	1,225	3,387	1,147	2,409	10,396
Rayaazebo.....	4,904	490	707	606	605	395	200	505	1,396
Alamata .....	3,822	371	•	172	294	412	142	374	1,940
Wofla.....	49,772	6,548	1,813	1,270	2,958	6,134	4,072	4,744	22,233
Mekele Zone.....	470	60	38	41	•	45	47	72	137
Mekele.....	470	60	38	41	•	45	47	72	137

## b) Rural Holdings

Geographic Area	SHEEP									
	ALL SHEEP	MALE				FEMALE				
		< 6 Months	6 Mo < 1 yr	1 - <2 yrs	2 yrs & Over	< 6 Months	6 Mo < 1 yr	1 - <2 yrs	2 yrs & Over	
Tigray Region	670,801	85,163	32,018	20,529	35,924	90,122	43,659	63,898	299,487	
West Tigray Zone	91,534	13,813	3,977	1,805	3,794	13,921	5,893	8,066	40,266	
Kafta	12,024	1,919	457	277		1,907	1,267	1,067	4,848	
Tahtay Adiyabo	15,490	2,124	833	368	629	2,163	819	1,011	7,543	
Laelay Adiyabo	8,977	1,308	748	179		1,401	460	477	4,210	
Tahtay Koraro	6,460	968	235	132	288	692	387	704	3,054	
Medebay Zana	20,401	3,098	920	437	1,188	2,452	1,315	2,511	8,479	
Asegode Tsimbela	9,030	1,027	326		814	1,727	751	721	3,467	
Tselemti	6,043					1,141		1,054		
Welkait	1,910	337				318	209		895	
Tsegedde	11,199	1,947			218	2,121	494	521	5,742	
Central Tigray Zone	130,891	16,132	6,539	4,728	6,540	18,231	7,136	13,950	57,636	
Mereb Lehe	20,999	3,136	488	537	1,069	3,037	793	3,019	8,920	
Ahiferom	7,662	975	814			1,196		556	3,503	
Wene Lehe	8,370	1,190	302	322		730	507	1,117	4,007	
Adwa	21,407	1,883	1,521	488	837	3,135	1,046	2,575	9,923	
Laelay Maychew	9,068	1,075	512	206	279	1,096	816	887	4,195	
Tahtay Maychew	8,385	873	412	410	472	923	509	1,168	3,619	
Naeder Adet	6,613	739	105	376	285	944	449	694	3,021	
Kola Temben	11,812	1,492	1,064	526	481	1,305		795	5,501	
Degua Temben	3,836	454	324				142	285	1,762	
Tanqu Abergele	32,738	4,316	997	1,726	2,595	5,261	1,804	2,853	13,186	
East Tigray Zone	298,288	35,510	13,449	8,415	17,114	37,192	19,856	27,500	139,252	
Gulumahada	35,173	4,610	1,706	890	1,525	5,225	2,557	3,767	14,892	
Erob	8,299	1,010	393	296	627	754	534	732	3,953	
Saesi Tsaedamba	74,410	8,621	2,489	1,671	5,419	8,250	4,542	5,003	38,415	
Ganta Afeshum	39,908	4,814	3,051	1,120	1,859	4,917	2,618	4,958	16,571	
Hawzen	46,754	4,906	2,187	1,376	2,200	6,082	3,435	4,387	22,182	
Wukro	13,378	2,181	404	281	119	1,901	1,235	1,386	5,871	
Atsbi Wenberta	80,365	9,367	3,218	2,782	5,365	10,062	4,934	7,268	37,368	
South Tigray Zone	150,088	19,708	8,054	5,581	8,477	20,777	10,775	14,383	62,333	
Seharte Samre	41,932	5,847	1,199	1,233	2,215	7,913	3,173	3,645	16,708	
Enderta	1,440		506							
Hintalo Wajirat	7,176	1,230	764	430	495	553	576		2,461	
Ambalagge	20,742	2,100	1,809	813	797	2,310	1,736	2,360	8,817	
Endamehoni	23,469	3,000	1,361	1,131	1,150	3,319	1,086	2,336	10,086	
Rayaazebo	4,269	426	619	546		347	187	477	1,194	
Alamata	2,907	263		144	234	347	80		1,523	
Wofla	48,153	6,331	1,740	1,228	2,859	5,932	3,937	4,639	21,488	

c) Urban Holdings

Geographic Area	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
Tigray Region.....	16,411	2,108	969	547	1,032	1,795	1,071	1,528	7,362
West Tigray Zone.....	4,160	577	191	96	155	539	264	390	1,948
Kafta.....	2,091	321	91	41	48	265	131	167	1,027
Tahtay Adiyabo.....	577	77	•	•	•	88	•	•	246
Lalay Adiyabo.....	104	14	•	•	•	11	9	•	60
Tahtay Koraro.....	585	70	36	•	•	71	•	77	259
Medebay Zana.....	285	28	20	•	8	33	26	20	143
Asegede Tsimbela.....	249	11	•	•	•	•	•	•	91
Tselemti.....	•	•	•	•	•	•	•	•	•
Welkait.....	•	•	•	•	•	•	•	•	•
Tsegedde.....	224	51	•	•	5	42	12	14	100
Central Tigray Zone.....	3,332	426	165	85	176	346	204	375	1,554
Mereb Lehe.....	740	140	43	•	20	75	48	77	334
Ahiferom.....	201	•	•	•	•	•	•	•	104
Werie Lehe.....	•	•	•	•	•	•	•	•	•
Adwa.....	208	32	6	•	•	17	8	29	107
Lalay Maychew.....	772	76	31	10	27	97	65	66	399
Tahtay Maychew.....	301	12	•	•	•	24	31	43	119
Naeder Adet.....	•	•	•	•	•	•	•	•	•
Kola Temben.....	374	32	21	•	23	42	20	•	210
Degua Temben.....	270	25	13	•	31	13	•	52	120
Tanqu Abergele.....	380	•	•	•	•	•	•	•	•
East Tigray Zone.....	3,701	453	182	81	204	407	242	317	1,815
Gulumahada.....	134	18	•	•	•	14	•	•	46
Erob.....	99	14	2	1	2	13	6	6	55
Saesi Tsaedamba.....	1,049	125	39	17	76	113	35	63	582
Ganta Afeshum.....	842	106	40	24	26	94	61	107	384
Hawzen.....	843	77	53	•	34	106	68	71	430
Wukro.....	217	29	21	•	20	20	18	23	78
Atsbi Wenberta.....	517	85	19	24	43	47	20	41	240
South Tigray Zone.....	4,748	592	394	244	466	459	314	373	1,906
Seharte Samre.....	•	•	•	•	•	•	•	•	•
Enderta.....	297	38	50	29	60	24	•	26	61
Hintalo Wajirat.....	76	11	•	•	•	•	•	•	•
Ambalagge.....	302	39	•	18	24	38	•	27	123
Endamehoni.....	816	93	71	65	75	68	61	73	310
Rayazebo.....	636	64	89	60	133	48	13	28	201
Alamata.....	915	108	59	28	60	66	63	113	418
Wofla.....	1,618	217	73	42	99	202	136	104	746
Mekele Zone.....	470	60	38	41	•	45	47	72	137
Mekele.....	470	60	38	41	•	45	47	72	137

TABLE 7-4: NUMBER OF GOATS BY AGE AND SEX OF ANIMAL, ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	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
Tigray Region.....	1,759,126	205,150	95,616	88,044	146,656	216,753	131,817	174,656	700,436
West Tigray Zone.....	712,147	81,217	40,635	34,398	59,681	86,108	63,134	72,960	274,013
Kafta.....	24,972	3,547	1,055	989	1,604	2,750	1,677	1,960	11,390
Tahtay Adiyabo.....	64,194	7,477	3,394	2,290	4,322	7,513	5,700	7,830	25,668
Laelay Adiyabo.....	70,187	8,211	3,620	2,814	3,942	8,069	6,494	7,606	29,431
Tahtay Koraro.....	31,376	3,451	1,939	1,941	2,285	3,392	2,409	3,677	12,282
Medebay Zana.....	62,876	6,861	3,725	3,340	4,944	6,130	5,377	6,376	26,123
Asegede Tsimbela.....	148,735	15,111	10,665	7,486	11,887	18,225	16,077	15,487	53,797
Tselemti.....	159,605	19,039	8,902	8,698	17,022	20,429	13,896	15,702	55,917
Welkait.....	77,518	8,940	4,294	2,816	6,250	9,230	6,508	7,229	32,250
Tsegedde.....	72,684	8,581	3,040	4,024	-	10,369	4,996	7,093	27,156
Central Tigray Zone.....	711,624	79,610	36,720	38,905	64,548	85,848	46,193	69,249	290,550
Mereb Lehe.....	52,981	5,844	2,434	2,224	4,367	6,799	3,924	5,716	21,673
Ahiferom.....	69,910	7,850	4,616	3,571	6,061	8,846	4,992	7,172	26,801
Werie Lehe.....	72,396	8,253	3,847	3,709	5,834	8,537	4,801	7,268	30,147
Adwa.....	60,531	7,638	4,217	3,030	3,802	7,427	4,104	6,769	23,543
Laelay Maychew.....	25,241	2,653	1,609	799	1,306	3,136	1,822	2,535	11,380
Tahtay Maychew.....	34,459	3,042	2,470	1,516	2,492	3,586	2,485	4,033	14,834
Naeder Adet.....	89,259	8,853	4,460	5,632	8,021	9,523	5,750	8,815	38,205
Kola Temben.....	123,393	13,310	5,714	8,439	13,754	14,045	8,042	11,000	49,090
Degua Temben.....	35,282	4,463	1,119	2,042	2,821	4,791	1,226	2,933	15,886
Tanqu Abergele.....	148,171	17,703	6,234	7,943	16,089	19,158	9,047	13,007	58,991
East Tigray Zone.....	139,366	17,077	8,012	5,929	9,211	16,127	8,957	13,505	60,546
Gulumahada.....	19,857	3,104	1,346	723	864	2,790	844	1,657	8,530
Erob.....	15,121	1,830	785	837	1,429	1,936	1,064	1,406	5,834
Saesi Tsaedamba.....	26,823	2,527	1,218	-	2,868	2,516	1,747	1,556	13,820
Ganta Afeshum.....	29,730	3,600	1,689	1,818	1,799	3,056	2,955	4,318	10,496
Hawzen.....	15,347	1,752	1,113	894	869	1,563	881	841	7,433
Wukro.....	10,207	1,526	585	368	309	1,285	568	1,242	4,324
Atsbi Wenberta.....	22,281	2,738	1,276	719	1,073	2,981	899	2,485	10,109
South Tigray Zone.....	195,953	27,243	10,245	8,811	13,215	28,668	13,531	18,921	75,319
Seharte Samre.....	74,120	8,870	3,512	3,863	5,443	11,515	4,704	6,922	29,291
Enderta.....	10,234	1,266	435	-	731	1,271	651	859	4,895
Hintalo Wajirat.....	21,248	3,556	1,206	966	1,123	3,360	1,767	2,316	6,954
Ambalagge.....	17,355	2,375	1,202	532	1,835	2,149	1,215	1,574	6,474
Endamehoni.....	13,968	1,658	877	892	911	1,936	919	1,688	5,088
Rayaazebo.....	16,969	2,708	1,026	789	1,030	3,036	1,024	1,363	5,993
Alamata.....	14,398	2,286	669	527	984	2,094	973	1,257	5,607
Wofla.....	27,660	4,524	1,318	1,117	1,157	3,308	2,277	2,942	11,017
Mekele Zone.....	-	-	-	-	-	-	-	-	-
Mekele.....	-	-	-	-	-	-	-	-	-

## b) Rural Holdings

Geographic Area	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
Tigray Region.....	1,748,296	203,947	95,032	87,578	145,846	215,557	131,002	173,660	695,675
West Tigray Zone.....	708,210	80,796	40,449	34,278	59,454	85,647	62,824	72,622	272,141
Kafta.....	24,391	3,469	1,028	971	1,596	2,664	1,646	1,922	11,095
Tahtay Adiyabo.....	63,011	7,342	3,367	2,274	4,219	7,365	5,641	7,757	25,046
Laelay Adiyabo.....	70,080	8,203	3,613	2,812	3,939	8,063	6,483	7,593	29,375
Tahtay Koraro.....	31,333	3,448	1,939	1,941	2,280	3,391	2,402	3,677	12,254
Medebay Zana.....	62,719	6,851	3,715	3,340	4,931	6,110	5,352	6,358	26,061
Asegede Tsimbela.....	148,039	15,057	10,604	7,462	11,850	18,178	15,991	15,424	53,472
Tselemti.....	158,915	18,953	8,872	8,676	16,995	20,318	13,842	15,633	55,627
Welkait.....	77,037	8,892	4,273	2,777	6,219	9,189	6,470	7,164	32,054
Tsegedde.....	72,684	8,581	3,040	4,024	•	10,369	4,996	7,093	27,156
Central Tigray Zone.....	706,167	79,014	36,412	38,631	64,118	85,289	45,774	68,703	288,225
Mereb Lehe.....	51,868	5,719	2,380	2,179	4,315	6,668	3,865	5,612	21,131
Ahiferom.....	69,399	7,777	4,598	3,534	6,008	8,800	4,951	7,158	26,574
Werie Lehe.....	71,891	8,222	3,803	3,667	5,812	8,501	4,714	7,220	29,953
Adwa.....	60,342	7,610	4,212	3,030	3,785	7,409	4,090	6,756	23,449
Laelay Maychew.....	24,978	2,633	1,576	796	1,295	3,096	1,791	2,520	11,270
Tahtay Maychew.....	34,263	3,023	2,445	1,499	2,477	3,561	2,474	3,997	14,787
Naeder Adet.....	89,015	8,817	4,450	5,621	8,021	9,518	5,729	8,790	38,068
Kola Temben.....	122,599	13,250	5,669	8,406	13,676	13,968	7,989	10,936	48,704
Degua Temben.....	35,189	4,455	1,117	2,042	2,812	4,784	1,215	2,916	15,847
Tanqu Abergele.....	146,623	17,508	6,162	7,858	15,917	18,984	8,956	12,797	58,441
East Tigray Zone.....	139,134	17,046	7,989	5,908	9,176	16,094	8,951	13,485	60,484
Gulumhada.....	19,852	3,103	1,346	723	864	2,790	844	1,657	8,526
Erob.....	15,109	1,826	785	837	1,429	1,935	1,063	1,406	5,827
Saesi Tsaedamba.....	26,781	2,520	1,215	•	2,863	2,510	1,747	1,556	13,800
Ganta Afeshum.....	29,699	3,597	1,687	1,813	1,798	3,051	2,950	4,315	10,488
Hawzen.....	15,301	1,752	1,102	877	869	1,557	881	841	7,422
Wukro.....	10,127	1,512	582	368	284	1,270	568	1,225	4,318
Atsbi Wenberta.....	22,264	2,736	1,272	719	1,069	2,981	899	2,485	10,103
South Tigray Zone.....	194,786	27,090	10,181	8,760	13,099	28,527	13,453	18,849	74,826
Seharte Samre.....	73,859	8,847	3,503	3,849	5,405	11,492	4,700	6,902	29,160
Enderta.....	10,206	1,266	433	•	726	1,268	645	856	4,889
Hintalo Wajirat.....	21,220	3,554	1,206	966	1,123	3,357	1,767	2,305	6,942
Ambalagge.....	17,129	2,343	1,187	523	1,833	2,129	1,184	1,555	6,375
Endamehoni.....	13,933	1,654	874	891	906	1,932	919	1,685	5,072
Rayaazebo.....	16,825	2,676	1,020	787	1,018	3,008	1,013	1,356	5,947
Alamata.....	13,979	2,231	641	504	934	2,033	955	1,248	5,434
Wofla.....	27,635	4,520	1,318	1,117	1,155	3,308	2,270	2,942	11,006

c) Urban Holdings

Geographic Area	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
Tigray Region.....	10,830	1,203	584	466	809	1,196	815	996	4,761
West Tigray Zone.....	3,937	421	186	120	227	461	311	338	1,873
Kafta.....	581	78	27	17	•	86	31	38	295
Tahtay Adiyabo.....	1,183	135	27	16	•	148	59	73	622
Lalay Adiyabo.....	107	•	•	•	•	•	•	•	•
Tahtay Koraro.....	43	•	•	•	•	•	•	•	•
Medebay Zana.....	157	9	•	•	•	•	•	•	61
Asegede Tsimbela.....	696	54	61	23	37	47	86	62	325
Tselemti.....	690	86	31	22	28	111	54	68	290
Welkait.....	480	48	•	•	•	41	•	65	196
Tsegedde.....	•	•	•	•	•	•	•	•	•
Central Tigray Zone.....	5,457	596	308	274	430	559	419	546	2,325
Mereb Lehe.....	1,113	125	53	45	52	131	59	104	542
Ahiferom.....	511	73	•	•	54	47	•	•	227
Werie Lehe.....	505	31	44	43	•	37	87	47	194
Adwa.....	189	27	•	•	17	18	•	•	94
Lalay Maychew.....	263	20	34	•	•	40	31	•	110
Tahtay Maychew.....	196	•	•	•	•	•	•	36	47
Naeder Adet.....	244	36	•	•	•	•	21	•	136
Kola Temben.....	795	60	•	•	78	76	•	64	386
Degua Temben.....	•	•	•	•	•	•	•	•	•
Tanqu Abergele.....	1,548	195	•	•	172	174	90	210	550
East Tigray Zone.....	233	31	•	•	•	33	•	•	62
Gulumahada.....	•	•	•	•	•	•	•	•	•
Erob.....	12	3	•	•	•	1	1	•	7
Saesi Tsaedamba.....	•	•	•	•	•	•	•	•	•
Ganta Afeshum.....	•	•	•	•	•	•	•	•	•
Hawzen.....	•	•	•	•	•	•	•	•	•
Wukro.....	•	•	•	•	•	•	•	•	•
Atsbi Wenberta.....	•	•	•	•	•	•	•	•	•
South Tigray Zone.....	1,167	153	63	51	116	141	77	72	493
Seharte Samre.....	261	•	•	•	•	•	•	•	131
Enderta.....	•	•	•	•	•	•	•	•	•
Hintalo Wajirat.....	28	•	•	•	•	•	•	•	•
Ambalagge.....	226	•	•	•	•	20	•	•	98
Endamehoni.....	•	•	•	•	5	•	•	•	•
Rayaaazebo.....	145	33	•	•	•	27	•	•	45
Alamata.....	419	55	28	•	51	61	18	•	174
Wofla.....	25	•	•	•	•	•	•	•	11
Mekele Zone.....	•	•	•	•	•	•	•	•	•
Mekele.....	•	•	•	•	•	•	•	•	•

TABLE 7-5: NUMBER OF HORSES AND ASSES BY AGE AND SEX OF ANIMAL, ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	HORSES AND ASSES									
	ALL HORSES	HORSES				ALL ASSES	ASSES			
		MALE		FEMALE			MALE		FEMALE	
		< 3 Years	3 Yrs & more	< 3 Years	3 Yrs & more		< 3 Years	3 Yrs & more	< 3 Years	3 Yrs & more
Tigray Region.....	7,598	1,342	4,493	274	1,488	403,517	43,898	171,132	41,849	146,638
West Tigray Zone.....	1,639	386	604	128	520	102,375	10,296	45,492	9,564	37,024
Kafta.....						7,176	803	4,601	497	1,275
Tahtay Adiyabo.....						15,123	2,123	3,581	2,139	7,280
Laelay Adiyabo.....						15,392	1,933	4,194	1,699	7,566
Tahtay Koraro.....						8,027	870	3,429	783	2,946
Medebay Zana.....						10,991	775	4,779	600	4,835
Asegede Tsimbela.....						12,957	1,140	6,100	830	4,886
Tselemti.....						9,677	1,231	2,841	1,202	4,404
Welkait.....	142				142	11,993	746	9,289	838	1,120
Tsegedde.....	1,360	386	503	96		11,041	674	6,676	977	2,713
Central Tigray Zone.....						109,263	12,884	40,921	11,897	43,561
Mereb Lehe.....						9,921	670	4,051	801	4,398
Ahiferom.....						12,284	1,155	5,773	1,079	4,277
Werie Lehe.....						11,989	2,015	2,919	1,660	5,394
Adwa.....						16,249	2,873	4,246	2,396	6,734
Laelay Maychew.....						10,904	1,466	3,782	1,336	4,320
Tahtay Maychew.....						6,892	557	3,446	648	2,242
Naeder Adet.....						7,945	785	3,116	907	3,136
Kola Temben.....						10,713	1,055	3,416	1,042	5,201
Degua Temben.....						12,129	1,511	4,817	1,315	4,485
Tanqu Abergele.....						10,237	797	5,355	713	3,372
East Tigray Zone.....	3,784	502	2,696		545	69,993	7,426	30,330	7,428	24,809
Gulumahada.....	963	473	471			8,823	1,215	2,217	1,274	4,118
Erob.....						3,992	413	1,645	334	1,600
Saesi Tsaedamba.....						11,585	1,143	4,597	1,045	4,800
Ganta Afeshum.....	1,142		1,142			6,673	522	2,594	644	2,912
Hawzen.....						10,835	1,668	2,965	1,555	4,646
Wukro.....						11,450	878	6,269	1,215	3,087
Atsbi Wenberta.....	937		796			16,635	1,586	10,043	1,360	3,646
South Tigray Zone.....	2,013	390	1,146	105	371	121,585	13,283	54,101	12,960	41,242
Seharte Samre.....						15,755	1,162	9,190	1,424	3,980
Enderta.....						20,906	549	19,572	178	607
Hintalo Wajirat.....						21,139	2,154	10,582	1,734	6,670
Ambalagge.....	242					11,682	1,872	2,975	1,874	4,960
Endamehoni.....						12,793	2,277	2,290	2,084	6,142
Rayaazebo.....	152		152			13,460	1,788	3,523	1,722	6,427
Alamata.....						8,527	955	1,900	1,229	4,443
Wofla.....	908	338	423			17,322	2,525	4,068	2,715	8,013
Mekele Zone.....			46			301		288		
Mekele.....			46			301		288		

## b) Rural Holdings

Geographic Area	HORSES AND ASSES									
	ALL HORSES	HORSES				ALL ASSES	ASSES			
		MALE		FEMALE			MALE		FEMALE	
		< 3 Years	3 Yrs & more	< 3 Years	3 Yrs & more		< 3 Years	3 Yrs & more	< 3 Years	3 Yrs & more
Tigray Region.....	7,458	1,324	4,383	272	1,478	397,198	43,505	166,522	41,547	145,623
West Tigray Zone.....	1,615	382	590	128	515	100,443	10,125	44,247	9,435	36,636
Kafta.....						6,596	717	4,325	438	1,116
Tahtay Adiyabo.....						14,576	2,089	3,192	2,115	7,179
Laelay Adiyabo.....						15,311	1,925	4,140	1,697	7,548
Tahtay Koraro.....						7,920	858	3,361	778	2,924
Medebay Zana.....						10,912	769	4,741	592	4,811
Asegede Tsimbela.....						12,749	1,131	5,925	830	4,863
Tselemti.....						9,546	1,222	2,755	1,182	4,387
Welkait.....	142				142	11,818	740	9,143	831	1,104
Tsegedde.....	1,342	382	492	96		11,015	674	6,665	973	2,704
Central Tigray Zone.....						106,955	12,800	39,033	11,819	43,303
Mereb Lehe.....						9,633	662	3,830	794	4,348
Ahiferom.....						12,006	1,149	5,563	1,070	4,225
Werie Lehe.....						11,823	2,003	2,796	1,643	5,380
Adwa.....						16,181	2,865	4,207	2,390	6,719
Laelay Maychew.....						10,528	1,453	3,499	1,309	4,266
Tahtay Maychew.....						6,838	555	3,401	645	2,236
Naeder Adet.....						7,868	780	3,054	907	3,126
Kola Temben.....						10,203	1,040	2,937	1,035	5,191
Degua Temben.....						12,050	1,505	4,764	1,313	4,467
Tanqu Abergele.....						9,826	788	4,980	713	3,346
East Tigray Zone.....	3,770	502	2,682		544	69,372	7,370	29,937	7,398	24,668
Gulumahada.....	963	473	471			8,806	1,211	2,210	1,273	4,112
Erob.....						3,963	412	1,627	333	1,591
Saesi Tsaedamba.....						11,531	1,141	4,558	1,044	4,788
Ganta Afeshum.....	1,138		1,138			6,569	517	2,508	642	2,902
Hawzen.....						10,656	1,635	2,890	1,537	4,594
Wukro.....						11,304	872	6,184	1,209	3,039
Atsbi Wenberta.....	930		788			16,544	1,583	9,960	1,360	3,641
South Tigray Zone.....	1,971	389	1,111		368	120,427	13,210	53,306	12,895	41,016
Seharte Samre.....						15,587	1,155	9,055	1,418	3,958
Enderta.....						20,712	540	19,392	178	602
Hintalo Wajirat.....						20,980	2,147	10,458	1,724	6,650
Ambalagge.....	242					11,613	1,871	2,945	1,866	4,931
Endamehoni.....						12,710	2,271	2,245	2,075	6,120
Rayazebo.....	152		152			13,325	1,776	3,432	1,716	6,402
Alamata.....						8,279	930	1,759	1,219	4,371
Wofla.....	888	337	408			17,220	2,520	4,019	2,699	7,982

c) Urban Holdings

Geographic Area	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
Tigray Region.....	140	110	10	6,319	393	4,610	302	1,014		
West Tigray Zone.....	25	5	15	5	1,932	171	1,245	129	387	
Kafta.....					580	86	276	58	159	
Tahtay Adiyabo.....					547	34	389	24	101	
Lalay Adiyabo.....					81	8	54		17	
Tahtay Koraro.....					107		68		22	
Medebay Zana.....					78		39		24	
Asegede Tsimbela.....					207		175		23	
Tselemti.....					131		86	20	16	
Welkait.....					175		146			
Tsegedde.....	19	5	12	2	26		12	5	9	
Central Tigray Zone.....					2,308	84	1,888	78	257	
Mereb Lehe.....					288		221		50	
Ahiferom.....					278		210		52	
Werie Lehe.....					166		123			
Adwa.....					68		39		16	
Lalay Maychew.....					376	13	282	27	54	
Tahtay Maychew.....					54		45			
Naeder Adet.....					77		62			
Kola Temben.....					510	15	478			
Degua Temben.....					79		52		19	
Tanqu Abergele.....					410		375		26	
East Tigray Zone.....	14	13			620	55	394	30	141	
Gulumahada.....					18		7			
Erob.....					29	1	18	1	9	
Saesi Tsaedamba.....					55		39		12	
Ganta Afeshum.....					103		86		10	
Hawzen.....					179	34	74		52	
Wukro.....					146		85		49	
Atsbi Wenberta.....					91		84			
South Tigray Zone.....	42	35			1,158	72	795	65	225	
Seharte Samre.....					169		135		22	
Enderta.....					194		180			
Hintalo Wajirat.....	4				160		124	10	19	
Ambalagge.....					69		30		29	
Endamehoni.....	7	7			83	7	45	9	22	
Rayaazebo.....					135	12	91		25	
Alamata.....					248	25	141	9	72	
Wofla.....	20	15			101	5	49	16	31	
Mekele Zone.....		46			301		288			
Mekele.....		46			301		288			

TABLE 7-6: NUMBER OF MULES AND CAMELS BY AGE AND SEX OF ANIMAL, ZONE, AND WEREDA  
a) Both rural and Urban Holdings

Geographic Area	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
Tigray Region	16,418	274	6,355	366	9,423	39,791	2,873	36,638	183	
West Tigray Zone	3,668		1,434		2,007	6,318	251	5,915		
Kafta	90		90			361		337		
Tahtay Adiyabo	115				115	777		695		
Laclay Adiyabo	115					1,348		1,302		
Tahtay Koraro	200					116				
Medebay Zana	439				439	1,215		1,152		
Asegede Tsimbela	735		210		524	585		582		
Tselemti	567		262		306	180		174		
Welkait	581		299		282	890		857		
Tsegedde	826		487		133	741		666		
Central Tigray Zone	3,016		1,511		1,411	7,384	153	7,168		
Mereb Lehe	171				148	1,087		1,064		
Ahiferom	518		432			1,660		1,617		
Werie Lehe						613		613		
Adwa	755		635			668		641		
Laclay Maychew	95		79		16					
Tahtay Maychew	166				145	469		428		
Naeder Adet					284	845		845		
Kola Temben	284									
Degua Temben	736									
Tanqu Abergele	190		134			389		371		
East Tigray Zone	5,093	105	1,912		2,986	4,278		4,254		
Gulumahada	468				468	433		433		
Erob	86		20		58	20		20		
Saesi Tsaedamba	253									
Ganta Afeshum	568				568	539		539		
Hawzen	444		393			1,105		1,081		
Wukro	828		436		392	629		629		
Atsbi Wenberta	2,446		932		1,391	1,529		1,529		
South Tigray Zone	4,639		1,496		3,019	21,811	2,444	19,300		
Seharte Samre	944		316		628					
Enderta	1,393		446		947	2,147		1,917		
Hintalo Wajirat	636		387		188	3,531		3,403		
Ambalagge	277				219					
Endamehoni	189				117					
Rayaazebo	240		156			13,379	2,033	11,316		
Alamata	325				295	1,153		1,063		
Wofla	636				541	919		919		
Mekkele Zone										
Mekkele										

b) Rural Holdings

Geographic Area	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
Tigray Region.....	16,285	274	6,311	362	9,337	39,122	2,836	36,029	*	*
West Tigray Zone.....	3,640	*	1,427	*	1,985	5,986	221	5,636	*	*
Kafta.....	90	*	90	*	*	293	*	284	*	*
Tahtay Adiyabo.....	115	*	*	*	115	608	*	547	*	*
Lalay Adiyabo.....	115	*	*	*	*	1,339	*	1,294	*	*
Tahtay Koraro.....	186	*	*	*	109	*	*	*	*	*
Medebay Zana.....	439	*	*	*	439	1,203	*	1,143	*	*
Asegede Tsimbela.....	735	*	210	*	524	575	*	575	*	*
Tselemti.....	557	*	260	*	297	173	*	173	*	*
Welkait.....	581	*	299	*	282	842	*	813	*	*
Tsegedde.....	822	*	487	*	129	741	*	666	*	*
Central Tigray Zone.....	2,970	*	1,499	*	1,376	7,194	153	6,978	*	*
Mereb Lehe.....	162	*	*	*	*	978	*	956	*	*
Ahiferom.....	512	*	432	*	*	1,595	*	1,552	*	*
Werie Lehe.....	*	*	*	*	*	613	*	613	*	*
Adwa.....	745	*	629	*	*	668	*	641	*	*
Lalay Maychew.....	75	*	75	*	*	*	*	*	*	*
Tahtay Maychew.....	166	*	*	*	145	463	*	422	*	*
Naeder Adet.....	*	*	*	*	*	*	*	*	*	*
Kola Temben.....	284	*	*	*	284	845	*	845	*	*
Degua Temben.....	735	*	*	*	*	*	*	*	*	*
Tanqu Abergele.....	190	*	134	*	*	389	*	371	*	*
East Tigray Zone.....	5,071	105	1,901	*	2,974	4,265	*	4,241	*	*
Gulumahada.....	468	*	*	*	468	433	*	433	*	*
Erob.....	86	*	20	*	58	20	*	20	*	*
Saesi Tsaedamba.....	249	*	*	*	*	*	*	*	*	*
Ganta Afeshum.....	568	*	*	*	568	539	*	539	*	*
Hawzen.....	444	*	393	*	*	1,105	*	1,081	*	*
Wukro.....	815	*	430	*	385	616	*	616	*	*
Atsbi Wenberta.....	2,441	*	929	*	1,389	1,529	*	1,529	*	*
South Tigray Zone.....	4,604	*	1,483	*	3,001	21,677	2,437	19,174	*	*
Seharte Samre.....	944	*	316	*	628	*	*	*	*	*
Enderta.....	1,393	*	446	*	947	2,147	*	1,917	*	*
Hintalo Wajirat.....	621	*	386	*	178	3,531	*	3,403	*	*
Ambalagge.....	275	*	*	*	217	*	*	*	*	*
Endamehoni.....	189	*	*	*	117	*	*	*	*	*
Rayazebo.....	234	*	151	*	*	13,314	2,033	11,250	*	*
Alamata.....	316	*	*	*	293	1,085	*	1,002	*	*
Wofla.....	633	*	*	*	538	919	*	919	*	*

## c) Urban Holdings

Geographic Area	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
Tigray Region.....	133		44		85	669	37	609		16
West Tigray Zone.....	29		8		21	332	30	279		16
Kafta.....						68		53		
Tahtay Adiyabo.....						169		148		
Laelay Adiyabo.....						8		8		
Tahtay Koraro.....	14		6		8					
Medebay Zana.....										
Asegede Tsimbela.....						10		7		
Tselemti.....										
Welkait.....						48		44		
Tsegedde.....	5				5					
Central Tigray Zone.....	45		11		34	190		190		
Mereb Lehe.....						109		109		
Ahiferom.....						65		65		
Werie Lehe.....										
Adwa.....	10		6							
Laelay Maychew.....	20				16					
Tahtay Maychew.....										
Naeder Adet.....										
Kola Temben.....										
Degua Temben.....										
Tanqu Abergele.....										
East Tigray Zone.....	22		11		12					
Gulumahada.....										
Erob.....										
Saesi Tsaedamba.....										
Ganta Afeshum.....										
Hawzen.....										
Wukro.....	14									
Atsbi Wenberta.....										
South Tigray Zone.....	35		13		18	134		127		
Seharte Samre.....										
Enderta.....										
Hintalo Wajirat.....	15				10					
Ambalagge.....										
Endamehoni.....										
Rayazebo.....										
Alamata.....	8					68		61		
Wofla.....										
Mekkele Zone.....										
Mekkele.....										

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

## a) Both Rural and Urban Holdings

Geographic Area	CATTLE AGED 3 – 10 YEARS										
	Total	MALE					FEMALE				
		Draught	Beef	Breeding	Other	Milk	Draught	Beef	Breeding	Other	
Tigray Region.....	1,676,596	775,004	5,945	31,792	9,734	290,038	8,465	6,086	537,381	12,150	
West Tigray Zone.....	636,330	241,355	3,821	19,580	1,963	69,918	3,301	4,105	289,968	2,318	
Kafta.....	29,744	6,786	•	1,332	•	2,494	•	177	18,020	•	
Tahtay Adiyabo.....	73,614	25,678	448	1,582	96	14,728	227	522	30,253	•	
Laelay Adiyabo.....	67,437	30,887	353	499	•	2,120	•	358	32,732	•	
Tahtay Koraro.....	37,707	17,818	326	722	183	7,929	157	164	9,792	617	
Medebay Zana.....	51,727	26,925	241	1,274	•	2,978	136	147	19,966	•	
Asegede Tsimbela.....	102,244	42,227	192	2,073	561	1,432	•	665	54,252	528	
Tselemti.....	90,433	34,368	•	3,459	455	27,609	•	889	21,180	•	
Welkait.....	106,088	33,788	•	3,637	•	•	•	•	61,246	•	
Tsegedde.....	77,335	22,876	•	5,003	•	4,635	•	•	42,528	744	
Central Tigray Zone.....	425,524	233,381	744	4,852	2,474	54,938	2,523	937	122,247	3,428	
Mereb Lehe.....	37,295	21,153	118	482	•	5,374	•	•	9,590	283	
Ahiferom.....	54,885	32,396	•	•	547	6,669	243	•	13,835	572	
Werie Lehe.....	49,556	28,805	•	502	348	2,853	292	•	16,246	•	
Adwa.....	46,006	27,532	•	827	•	6,467	287	•	10,199	•	
Laelay Maychew.....	24,838	15,205	•	178	•	2,248	•	•	6,956	•	
Tahtay Maychew.....	29,105	16,887	•	178	•	420	224	•	11,226	•	
Naeder Adet.....	46,036	21,870	•	442	458	9,055	165	•	13,771	•	
Kola Temben.....	58,403	27,976	331	624	343	15,582	601	•	12,496	•	
Degua Temben.....	40,774	22,864	•	297	382	3,472	•	•	13,046	328	
Tanqu Abergele.....	38,628	18,693	•	1,031	153	2,799	256	119	14,881	658	
East Tigray Zone.....	210,650	101,141	608	3,263	1,812	30,679	1,188	454	69,567	1,938	
Gulumahada.....	24,376	14,004	155	228	154	4,072	115	•	5,453	174	
Erob.....	7,640	2,558	18	205	16	670	•	•	4,033	100	
Saesi Tsaedamba.....	43,804	19,360	•	470	443	6,971	314	•	15,003	1,114	
Ganta Afeshum.....	28,912	14,830	•	1,208	331	4,601	205	•	7,393	143	
Hawzen.....	34,301	16,345	137	484	265	482	164	•	16,320	•	
Wukro.....	34,850	16,624	•	310	492	3,817	247	•	12,936	312	
Atsbi Wenberta.....	36,766	17,421	•	359	110	10,068	•	•	8,430	•	
South Tigray Zone.....	402,510	198,971	730	4,033	3,467	133,658	1,453	590	55,163	4,444	
Seharte Samre.....	49,558	24,500	188	726	•	15,918	150	154	7,388	445	
Enderta.....	47,082	24,499	•	672	148	9,518	310	•	11,444	292	
Hintalo Wajirat.....	61,673	31,237	•	480	1,250	21,299	364	•	5,697	1,208	
Ambalagge.....	32,317	16,557	•	660	227	9,589	206	•	4,921	•	
Endamehoni.....	26,931	15,631	24	•	192	6,074	•	•	4,703	•	
Rayaazebo.....	83,098	35,143	•	484	1,200	38,473	•	•	6,208	1,376	
Alamata.....	51,807	22,705	•	833	225	14,460	171	•	12,849	404	
Wofla.....	50,044	28,699	•	157	•	18,328	•	•	1,954	478	
Mekele Zone.....	1,583	156	•	63	•	845	•	•	436	•	
Mekele.....	1,583	156	•	63	•	845	•	•	436	•	

## b) Rural Holdings

Geographic Area	CATTLE AGED 3 - 10 YEARS									
	Total	MALE				FEMALE				
		Draught	Beef	Breeding	Other	Milk	Draught	Beef	Breeding	Other
Tigray Region	1,647,823	766,183	5,780	31,018	9,416	283,465	8,406	6,014	525,707	11,835
West Tigray Zone	626,162	239,077	3,776	19,218	1,898	68,314	3,277	4,059	284,238	2,307
Kafta	28,660	6,734	•	1,280	•	2,323	•	177	17,224	•
Tahtay Adiyabo	70,384	24,807	434	1,485	•	14,421	215	511	28,371	•
Laelay Adiyabo	66,835	30,758	347	493	•	1,960	•	357	32,443	•
Tahtay Koraro	36,805	17,567	316	691	180	7,661	156	160	9,461	613
Medebay Zana	51,312	26,788	239	1,272	•	2,944	136	144	19,729	•
Asegede Tsimbela	101,071	41,977	191	2,002	559	1,277	•	653	53,572	528
Tselemti	89,238	34,112	•	3,392	451	27,293	•	881	20,657	•
Welkait	104,597	33,488	•	3,603	•	•	•	•	60,285	•
Tsegedde	77,261	22,846	•	5,000	•	4,626	•	•	42,495	744
Central Tigray Zone	418,878	230,922	724	4,719	2,441	53,694	2,522	926	119,567	3,364
Mereb Lehe	36,555	20,853	112	473	•	5,233	•	•	9,313	276
Ahiferom	53,674	31,950	•	•	541	6,321	243	•	13,442	572
Werie Lehe	49,132	28,586	•	481	348	2,808	292	•	16,111	•
Adwa	45,519	27,391	•	808	•	6,284	287	•	10,060	•
Laelay Maychew	23,616	14,693	•	163	•	1,937	•	•	6,585	•
Tahtay Maychew	28,800	16,804	•	166	•	408	224	•	11,035	•
Naeder Adet	45,807	21,828	•	442	458	8,973	165	•	13,671	•
Kola Temben	57,538	27,730	331	590	339	15,535	600	•	11,979	•
Degua Temben	40,575	22,774	•	293	382	3,455	•	•	12,964	326
Tanqu Abergele	37,662	18,313	•	1,022	•	2,742	256	119	14,406	631
East Tigray Zone	208,346	100,492	598	3,222	1,777	30,336	1,185	445	68,374	1,917
Gulumahada	24,275	13,956	155	228	154	4,042	115	•	5,429	174
Erob	7,611	2,556	18	205	•	668	•	•	4,011	100
Saesi Tsaedamba	43,553	19,311	•	465	443	6,888	314	•	14,888	1,114
Ganta Afeshum	28,567	14,791	•	1,201	329	4,454	205	•	7,252	143
Hawzen	33,778	16,106	137	483	263	474	164	•	16,049	•
Wukro	34,086	16,437	•	292	478	3,772	244	•	12,466	291
Atsbi Wenberta	36,476	17,335	•	348	•	10,039	•	•	8,280	•
South Tigray Zone	394,436	195,691	683	3,859	3,300	131,121	1,422	584	53,528	4,248
Seharte Samre	49,073	24,307	188	723	•	15,870	146	154	7,157	445
Enderta	46,449	24,253	•	668	•	9,412	310	•	11,238	255
Hintalo Wajirat	60,819	30,860	•	463	1,245	21,071	357	•	5,482	1,208
Ambalagge	31,727	16,321	•	653	224	9,437	206	•	4,746	•
Endamehoni	26,557	15,539	•	•	187	5,894	•	•	4,631	•
Rayaazebo	82,019	34,737	•	484	1,144	38,051	•	•	6,086	1,322
Alamata	48,390	21,256	•	704	175	13,315	160	•	12,298	327
Wofla	49,402	28,418	•	145	•	18,072	•	•	1,889	466

c) Urban Holdings

Geographic Area	CATTLE AGED 3 – 10 YEARS									
	Total	MALE				FEMALE				
		Draught	Beef	Breeding	Other	Milk	Draught	Beef	Breeding	Other
Tigray Region.....	28,773	8,821	165	773	318	6,574	59	72	11,675	316
West Tigray Zone.....	10,167	2,278	46	362	64	1,604	24	46	5,731	11
Kafta.....	1,084	52	-	52	-	171	-	-	796	-
Tahtay Adiyabo.....	3,230	871	-	96	34	307	13	-	1,882	-
Laelay Adiyabo.....	603	130	-	7	-	160	-	-	289	-
Tahtay Koraro.....	903	251	10	31	-	268	-	-	331	-
Medebay Zana.....	415	138	-	-	-	34	-	-	237	-
Asegede Tsimbela.....	1,172	250	-	72	-	155	-	-	680	-
Tselemti.....	1,196	257	14	67	-	316	-	-	523	-
Welkait.....	1,491	299	-	34	-	186	-	-	961	-
Tsegedde.....	75	30	-	2	-	9	-	-	33	-
Central Tigray Zone.....	6,646	2,459	20	133	33	1,245	-	-	2,680	65
Mereb Lehe.....	740	299	-	-	-	142	-	-	277	-
Ahiferom.....	1,211	446	-	-	-	348	-	-	393	-
Werie Lehe.....	424	219	-	21	-	46	-	-	135	-
Adwa.....	487	141	-	19	-	183	-	-	139	-
Laelay Maychew.....	1,222	512	-	15	-	311	-	-	371	7
Tahtay Maychew.....	305	84	-	-	-	12	-	-	191	-
Naeder Adet.....	229	42	-	-	-	82	-	-	100	-
Kola Temben.....	865	246	-	34	-	47	-	-	517	15
Degua Temben.....	198	90	-	-	-	17	-	-	83	-
Tanqu Abergele.....	966	380	-	-	-	57	-	-	475	-
East Tigray Zone.....	2,304	649	10	42	35	343	-	-	1,193	-
Gulumahada.....	101	48	-	-	-	29	-	-	24	-
Erob.....	29	2	-	-	3	1	-	-	22	-
Saesi Tsaedamba.....	251	48	-	-	-	83	-	-	115	-
Ganta Afeshum.....	345	39	-	7	-	147	-	-	141	-
Hawzen.....	523	239	-	-	-	-	-	-	271	-
Wukro.....	765	187	-	17	-	46	-	-	470	-
Atsbi Wenberta.....	290	86	-	11	13	29	-	-	150	-
South Tigray Zone.....	8,074	3,280	47	174	167	2,537	31	-	1,635	197
Seharte Samre.....	485	193	-	-	-	48	-	-	231	-
Enderta.....	633	245	-	-	32	106	-	-	206	38
Hintalo Wajirat.....	854	378	-	17	-	227	-	-	215	-
Ambalagge.....	590	236	-	-	-	152	-	-	175	-
Endamehoni.....	375	91	24	-	-	180	-	-	72	-
Rayazebo.....	1,079	407	-	-	56	422	-	-	121	55
Alamata.....	3,417	1,449	7	129	50	1,145	-	-	551	76
Wofla.....	642	281	-	-	12	256	-	-	65	12
Mekele Zone.....	1,583	156	-	63	-	845	-	-	436	-
Mekele.....	1,583	156	-	63	-	845	-	-	436	-

TABLE 7-8: SHEEP AGED 2 YEARS AND OLDER BY SEX AND PURPOSE, ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	SHEEP AGED 2 YEARS AND OLDER								
	Total	MALE				FEMALE			
		Mutton/Meat	Wool	Breeding	Other	Mutton/Meat	Wool	Breeding	Other
Tigray Region	343,805	6,971	411	27,394	2,180	4,156	3,488	296,381	2,825
West Tigray Zone	46,163	421		3,413		850		40,634	360
Kafta	6,207			238		270		5,461	
Tahtay Adiyabo	8,474			548				7,584	
Laelay Adiyabo	4,467							4,246	
Tahtay Koraro	3,618			201				3,285	
Medebay Zana	9,818			1,080				8,298	
Asegede Tsimbela	4,385			827				3,447	
Tselemti	2,158							1,937	
Welkait	969							846	
Tsegedde	6,066			190				5,529	
Central Tigray Zone	65,906	1,360		4,966	316	553	311	57,802	524
Mereb Lehe	10,343	500		537				8,971	
Ahiferom	3,758							3,463	
Werie Lehe	4,243							4,016	
Adwa	10,871			732				9,683	
Laelay Maychew	4,900	54		234		38		4,476	
Tahtay Maychew	4,234	154		21				3,634	
Naeder Adet	3,312							2,932	
Kola Temben	6,215			339		208		5,498	
Degua Temben	2,099							1,880	
Tanqu Abergele	15,930			2,217				13,250	
East Tigray Zone	158,386	2,906		13,642	468	1,718	2,022	135,982	1,346
Gulumahada	16,466	183		1,162				14,679	
Erob	4,637			564				3,955	
Saesi Tsaedamba	44,493	563		4,891			550	37,971	
Ganta Afeshum	18,840			1,358			562	16,225	
Hawzen	24,846			1,849		168	524	21,636	
Wukro	6,088			93				5,866	
Atsbi Wenberta	43,016	1,576		3,725		990		35,649	805
South Tigray Zone	73,182	2,284		5,357	1,265	1,031	783	61,836	589
Seharte Samre	18,977			1,649				16,450	
Enderta	432								
Hintalo Wajirat	2,966							2,361	
Ambalagge	9,761	215		575				8,396	
Endamehoni	11,621	436		731				9,990	
Rayazebo	2,001	237						1,334	
Alamata	2,234			157				1,857	
Wofla	25,191	469		1,552				21,360	
Mekelle Zone	168							128	
Mekelle	168							128	

b) Rural Holdings

Geographic Area	SHEEP AGED 2 YEARS AND OLDER								
	Total	MALE				FEMALE			
		Mutton/Meat	Wool	Breeding	Other	Mutton/Meat	Wool	Breeding	Other
Tigray Region.....	335,412	6,716	405	26,729	2,073	4,092	3,460	289,160	2,775
West Tigray Zone.....	44,060	417		3,269		841		38,724	330
Kafta.....	5,131					266		4,440	
T..ahay Adiyabo.....	8,172			491				7,362	
Lalay Adiyabo.....	4,403							4,186	
Tahtay Koraro.....	3,342			184				3,035	
Medebay Zana.....	9,667			1,073				8,155	
Asegede Tsimbela.....	4,282			814				3,356	
Tselemti.....	2,151							1,929	
Welkait.....	952							831	
Tsegedde.....	5,961			186				5,429	
Central Tigray Zone.....	64,175	1,318		4,834	316	530	295	56,294	517
Mereb Lehe.....	9,989	500		517				8,642	
Ahiferom.....	3,641							3,361	
Werie Lehe.....	4,202							3,974	
Adwa.....	10,760			728				9,576	
Lalay Maychew.....	4,474			215				4,105	
Tahtay Maychew.....	4,091	150		276				3,522	
Naeder Adet.....	3,306							2,926	
Kola Temben.....	5,982			320		208		5,292	
Degua Temben.....	1,949							1,762	
Tanqu Abergele.....	15,781			2,183				13,134	
East Tigray Zone.....	156,366	2,864		13,487	461	1,705	2,016	134,189	1,342
Gulumahada.....	16,418	183		1,160				14,633	
Erob.....	4,580			562				3,900	
Saesi Tsaedamba.....	43,834	543		4,834			550	37,394	
Ganta Afeshum.....	18,430			1,333			559	15,845	
Hawzen.....	24,381			1,827		166	520	21,214	
Wukro.....	5,990			81				5,788	
Atsbi Wenberta.....	42,733	1,569		3,690		984		35,415	805
South Tigray Zone.....	70,810	2,117		5,138	1,188	1,016	779	59,953	586
Sharte Samre.....	18,923			1,635				16,410	
Enderta.....	311								
Hintalo Wajirat.....	2,956							2,353	
Ambalagge.....	9,614	212		560				8,278	
Endamehoni.....	11,236	408		689				9,686	
Rayazebo.....	1,667							1,139	
Alamata.....	1,757			126				1,444	
Wofla.....	24,347	435		1,498				20,615	

c) Urban Holdings

Geographic Area	SHEEP AGED 2 YEARS AND OLDER								
	Total	MALE				FEMALE			
		Mutton/Meat	Wool	Breeding	Other	Mutton/Meat	Wool	Breeding	Other
Tigray Region	8,394	255		665	106	63	27	7,221	
West Tigray Zone	2,103			144				1,909	
Kafta	1,076			43				1,021	
Tahtay Adiyabo	303							222	
Laelay Adiyabo	65							60	
Tahtay Koraro	276							250	
Medebay Zana	151			7				143	
Asegede Tsimbela	403							91	
Tselemti									
Welkait									
Tsegedde	105								
Central Tigray Zone	1,730	42		5				100	
Mereb Lehe	354			132		23		1,508	
Ahiferom	116			20				329	
Werie Lehe								102	
Adwa	111								
Laelay Maychew	426							107	
Tahtay Maychew	143			20		20		371	
Naeder Adet								112	
Kola Temben	233								
Degua Temben	150			19				206	
Tanqu Abergele								119	
East Tigray Zone	2,020	42		155				1,793	
Gulumahada	48							46	
Erob	57			2				55	
Saesi Tsaedamba	658	19		57				577	
Ganta Afeshum	410			25				380	
Hawzen	465			21				422	
Wukro	98			12				78	
Atsbi Wenberta	283			35				235	
South Tigray Zone	2,372	167		218	77	15		1,883	
Seharte Samre									
Enderta	121			29				61	
Hintalo Wajirat									
Ambalagge	147			15				117	
Endamehoni	385	28		42				304	
Rayazebo	334			32				196	
Alamata	477			30				413	
Wofla	845	34		54	11			745	
Mekele Zone	168							128	
Mekele	168							128	

TABLE 7-9: GOATS AGED 2 YEARS AND OLDER BY SEX AND PURPOSE, ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	GOATS AGED 2 YEARS AND OLDER							
	Total	MALES			FEMALES			
		Meat	Breeding	Other	Meat	Milk	Breeding	Other
Tigray Region.....	847,092	37,922	99,385	9,349	12,281	26,057	655,957	6,142
West Tigray Zone.....	333,694	14,281	42,569	2,831	6,530	3,531	261,667	2,285
Kafta.....	12,994	364	566		108		10,802	
Tahtay Adiyabo.....	29,990	996	3,213	113	829		24,313	
Laelay Adiyabo.....	33,373	1,018	2,901		590		28,315	
Tahtay Koraro.....	14,567	739	1,417	130			11,902	
Medebay Zana.....	31,066	855	4,000		414		25,382	
Asegede Tsimbela.....	65,685	1,540	9,899	448	650		52,722	
Tselemti.....	72,939	4,020	12,329	674	2,398		50,726	
Welkait.....	38,500	1,103	4,693		726		31,253	
Tsegedde.....	34,581				756		26,252	
Central Tigray Zone.....	355,099	17,764	41,570	5,214	3,577	6,367	277,415	3,191
Mereb Lehe.....	26,041	1,824	2,388		192		21,120	
Ahiferom.....	32,862	2,389	3,149	524			25,959	
Werie Lehe.....	35,981	1,783	3,607		281		29,321	
Adwa.....	27,345	1,205	2,563				22,616	
Laelay Maychew.....	12,686	415	726				11,066	
Tahtay Maychew.....	17,326	670	1,801				14,676	
Naeder Adet.....	46,226	1,862	5,336	823			36,918	743
Kola Temben.....	62,844	1,943	10,161	1,651	578	2,673	45,084	
Degua Temben.....	18,707	1,554	1,238				14,634	
Tanqu Abergele.....	75,080	4,119	10,601	1,369	410		56,021	
East Tigray Zone.....	69,758	1,679	7,128	405	944	5,690	53,600	312
Gulumahada.....	9,394		486			358	8,069	
Erob.....	7,263	209	1,120	100		1,045	4,677	81
Saesi Tsaedamba.....	16,688		2,657				13,310	
Ganta Afeshum.....	12,295	255	1,441			847	9,108	
Hawzen.....	8,303		746				7,294	
Wukro.....	4,633		163				4,204	
Atsbi Wenberta.....	11,182	501	514		320	2,822	6,938	
South Tigray Zone.....	88,534	4,199	8,117	899	1,229	10,470	63,267	354
Seharte Samre.....	34,734	1,446	3,879			8,753	20,330	
Enderta.....	5,626		555				4,636	
Hintalo Wajirat.....	8,077		552				5,546	
Ambalagge.....	8,308	594	1,174				6,151	
Endamehoni.....	5,999	468	416				4,826	
Rayaazebo.....	7,023	474	300				5,794	
Alamata.....	6,592	172	708				5,452	
Wofla.....	12,174	559	533				10,532	
Mekele Zone.....								
Mekele.....								

## b) Rural Holdings

Geographic Area	GOATS AGED 2 YEARS AND OLDER							
	Total	MALES			FEMALES			
		Meat	Breeding	Other	Meat	Milk	Breeding	Other
Tigray Region .....	841,522	37,761	98,769	9,316	12,224	25,901	651,427	6,124
West Tigray Zone .....	331,594	14,270	42,360	2,823	6,530	3,508	259,826	2,277
Kafta .....	12,691	364	557	-	108	-	10,524	-
Tahtay Adiyabo .....	29,265	996	3,110	113	829	-	23,693	-
Lalay Adiyabo .....	33,314	1,018	2,898	-	590	-	28,260	-
Tahtay Koraro .....	14,534	738	1,413	130	-	-	11,876	-
Medebay Zana .....	30,993	851	3,991	-	414	-	25,320	-
Asegede Tsimbela .....	65,323	1,537	9,865	448	650	-	52,397	-
Tselemti .....	72,622	4,020	12,303	672	2,398	-	50,444	-
Welkait .....	38,273	1,100	4,671	-	726	-	31,060	-
Tsegedde .....	34,581	-	-	-	756	-	26,252	-
Central Tigray Zone .....	352,343	17,638	41,275	5,205	3,521	6,275	275,248	3,181
Mereb Lehe .....	25,446	1,810	2,350	-	192	-	20,611	-
Ahiferom .....	32,582	2,353	3,131	524	-	-	25,736	-
Wene Lehe .....	35,766	1,775	3,594	-	272	-	29,136	-
Adwa .....	27,234	1,205	2,546	-	-	-	22,522	-
Lalay Maychew .....	12,565	413	723	-	-	-	10,964	-
Tahtay Maychew .....	17,263	666	1,790	-	-	-	14,628	-
Naeder Adet .....	46,089	1,862	5,336	823	-	-	36,825	743
Kola Temben .....	62,380	1,920	10,108	1,648	575	2,618	44,759	-
Degua Temben .....	18,659	1,552	1,231	-	-	-	14,596	-
Tanqu Abergele .....	74,358	4,082	10,466	1,369	410	-	55,471	-
East Tigray Zone .....	69,660	1,679	7,092	405	944	5,688	53,540	312
Gulumahada .....	9,390	-	486	-	-	358	8,065	-
Erob .....	7,256	209	1,120	100	-	1,045	4,670	81
Saesi Tsaedamba .....	16,663	-	2,652	-	-	-	13,290	-
Ganta Afeshum .....	12,287	255	1,440	-	-	845	9,103	-
Hawzen .....	8,292	-	746	-	-	-	7,282	-
Wukro .....	4,601	-	137	-	-	-	4,198	-
Atsbi Wenberta .....	11,171	501	510	-	320	2,822	6,932	-
South Tigray Zone .....	87,925	4,175	8,042	883	1,228	10,430	62,814	354
Seharte Samre .....	34,565	1,443	3,859	-	-	8,740	20,212	-
Enderta .....	5,615	-	555	-	-	-	4,630	-
Hintalo Wajirat .....	8,065	-	552	-	-	-	5,533	-
Ambalagge .....	8,208	594	1,172	-	-	-	6,054	-
Endamehoni .....	5,979	467	412	-	-	-	4,810	-
Rayazebo .....	6,965	474	288	-	-	-	5,749	-
Alamata .....	6,367	157	672	-	-	-	5,305	-
Wofla .....	12,161	558	532	-	-	-	10,520	-

c) Urban Holdings

Geographic Area	GOATS AGED 2 YEARS AND OLDER							
	Total	MALES			FEMALES			
		Meat	Breeding	Other	Meat	Milk	Breeding	Other
Tigray Region .....	5,571	161	616					
West Tigray Zone .....	2,100		210		157	4,529	18	
Kafta .....	303				23	1,842		
Tahtay Adiyabo .....	725					278		
Lalay Adiyabo .....						620		
Tahtay Koraro .....								
Medebay Zana .....	74							
Asegede Tsimbela .....	362					61		
Tselemti .....	317					325		
Welkait .....	227					282		
Tsegedde .....						193		
Central Tigray Zone .....	2,756	127	295					
Mereb Lehe .....	595	14	38			2,168		
Ahiferom .....	281					509		
Werie Lehe .....	216					223		
Adwa .....	111					186		
Lalay Maychew .....	121		17			94		
Tahtay Maychew .....	63					103		
Naeder Adet .....	136					47		
Kola Temben .....	464		52			93		
Degua Temben .....						325		
Tanqu Abergele .....	722		136					
East Tigray Zone .....	98					550		
Gulumahada .....						60		
Erob .....	7							
Saesi Tsaedamba .....						7		
Ganta Afeshum .....								
Hawzen .....								
Wukro .....								
Atsbi Wenberta .....								
South Tigray Zone .....	610	24	76					
Seharte Samre .....	170				40	452		
Enderta .....						118		
Hintalo Wajirat .....								
Ambalagge .....	100							
Endamehoni .....						97		
Rayaaazebo .....	58							
Alamata .....	224		36			45		
Wofla .....	13					147		
Mekele Zone .....						11		
Mekele .....								

TABLE 7-10: HORSES AGED 3 YEARS AND OLDER BY SEX, PURPOSE, ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	HORSES AGED 3 YEARS AND OLDER						
	Total	MALES			FEMALES		
		Transportation	Draught	Other	Transportation	Draught	Other
Tigray Region.....	5,981	4,389		79	712	468	
West Tigray Zone.....	1,124	569			284		
Kafta.....							
Tahtay Adiyabo.....							
Lalay Adiyabo.....							
Tahtay Koraro.....							
Medebay Zana.....							
Asegede Tsimbela.....							
Tselemti.....							
Welkait.....	142						
Tsegedde.....	878	467			142		
Central Tigray Zone.....							
Mereb Lehe.....							
Ahiferom.....							
Werie Lehe.....							
Adwa.....							
Lalay Maychew.....							
Tahtay Maychew.....							
Naeder Adet.....							
Kola Temben.....							
Degua Temben.....							
Tanqu Abergele.....							
East Tigray Zone.....	3,241	2,655					
Gulumahada.....	490	451				466	
Erob.....							
Saesi Tsaedamba.....							
Ganta Afeshum.....	1,142	1,142					
Hawzen.....							
Wukro.....							
Atsbi Wenberta.....	896	775					
South Tigray Zone.....	1,518	1,122					
Seharte Samre.....					297		
Enderta.....							
Hintalo Wajirat.....							
Ambalage.....	217						
Endamehoni.....							
Rayazebo.....	152	152					
Alamata.....							
Wofla.....	511	417					
Mekele Zone.....	46	44					
Mekele.....	46	44					

b) Rural Holdings

Geographic Area	HORSES AGED 3 YEARS AND OLDER						
	TOTAL	MALES			FEMALES		
		Transportation	Draught	Other	Transportation	Draught	Other
Tigray Region .....	5,861	4,287		78	708	466	
West Tigray Zone .....	1,104	554			281		
Kafta .....							
Tahtay Adiyabo .....							
Laelay Adiyabo .....							
Tahtay Koraro .....							
Medebay Zana .....							
Asegede Tsimbela .....							
Tselemti .....							
Welkait .....							
Tsegedde .....	142						
Central Tigray Zone .....	864	456			142		
Mereb Lehe .....							
Ahiferom .....							
Werie Lehe .....							
Adwa .....							
Laelay Maychew .....							
Tahtay Maychew .....							
Naeder Adet .....							
Kola Temben .....							
Degua Temben .....							
Tanqu Abergele .....							
East Tigray Zone .....	3,227	2,641				466	
Gulumahada .....	490	451					
Erob .....							
Saesi Tsaedamba .....							
Ganta Afeshum .....							
Hawzen .....	1,138	1,138					
Wukro .....							
Atsbi Wenberta .....	889	768					
South Tigray Zone .....	1,479	1,092			297		
Scharte Samre .....							
Enderta .....							
Hintalo Wajirat .....							
Ambalagge .....	217						
Endamehoni .....							
Rayazebo .....	152	152					
Alamata .....							
Wofla .....	494	408					

c) Urban Holdings

Geographic Area	HORSES AGED 3 YEARS AND OLDER						
	TOTAL	MALES			FEMALES		
		Transportation	Draught	Other	Transportation	Draught	Other
Tigray Region	120	102					
West Tigray Zone	20	15					
Kafta							
Tahtay Adiyabo							
Laelay Adiyabo							
Tahtay Koraro							
Medebay Zana							
Asegede Tsimbela							
Tselemti							
Welkait							
Tsegedde							
Central Tigray Zone	14	12					
Mereb Lehe							
Ahiferom							
Werie Lehe							
Adwa							
Laelay Maychew							
Tahtay Maychew							
Naeder Adet							
Kola Temben							
Degua Temben							
Tanqu Abergele							
East Tigray Zone	14	13					
Gulumahada							
Erob							
Saesi Tsaedamba							
Ganta Afeshum							
Hawzen							
Wukro							
Atsbi Wenberta							
South Tigray Zone	39	29					
Scharte Samre							
Enderta							
Hintalo Wajirat	4						
Ambalagge							
Endamehoni	7	7					
Rayaazebo							
Alamata							
Wofla	17	9					
Mekele Zone	46	44					
Mekele	46	44					

TABLE 7-11: ASSES AGED 3 YEARS AND OLDER BY SEX, PURPOSE, ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	ASSES AGED 3 YEARS AND OLDER						
	TOTAL	MALES			FEMALES		
		Transportation	Draught	Other	Transportation	Draught	Other
Tigray Region.....	317,770	119,885	47,611	3,636	101,831	38,732	6,075
West Tigray Zone .....	82,515	32,998	12,238	257	28,272	7,906	845
Kafta .....	5,876	4,222	279	-	1,205	-	-
Tahtay Adiyabo.....	10,861	3,539	-	-	7,185	-	-
Lalay Adiyabo.....	11,760	3,819	-	-	5,407	1,996	-
Tahtay Koraro .....	6,375	1,916	1,444	-	1,647	1,098	201
Medebay Zana.....	9,615	4,527	-	-	4,244	-	-
Asegede Tsimbela.....	10,986	4,653	1,416	-	3,103	1,734	-
Tselemti .....	7,245	2,114	727	-	3,474	902	-
Welkait.....	10,409	3,529	5,760	-	643	477	-
Tsegedde.....	9,389	4,677	1,999	-	1,363	1,055	-
Central Tigray Zone.....	84,482	33,068	6,417	1,436	33,667	7,251	2,642
Mereb Lehe.....	8,450	4,038	-	-	4,316	-	-
Ahiferom.....	10,050	4,779	972	22	2,625	1,609	-
Werie Lehe.....	8,313	2,688	231	-	4,393	794	-
Adwa.....	10,981	2,052	2,194	-	4,652	1,906	-
Lalay Maychew.....	8,102	2,670	1,107	-	2,401	1,303	616
Tahtay Maychew.....	5,688	3,247	170	-	1,690	-	363
Naeder Adet.....	6,252	2,435	397	284	1,730	725	-
Kola Temben.....	8,617	3,326	-	90	5,133	-	-
Degua Temben.....	9,302	4,756	-	-	4,234	-	-
Tanqu Abergele.....	8,727	3,076	1,336	942	2,493	559	321
East Tigray Zone.....	55,139	22,025	6,644	1,661	18,555	4,574	1,681
Gulumahada.....	6,334	1,730	-	-	3,511	277	330
Erob.....	3,245	1,193	443	-	1,181	410	-
Saesi Tsaedamba.....	9,397	4,345	-	-	4,162	-	581
Ganta Afeshum.....	5,506	2,428	159	-	2,839	-	-
Hawzen .....	7,611	2,799	-	-	3,901	-	-
Wukro .....	9,357	3,311	2,917	-	1,233	1,767	-
Atsbi Wenberta .....	13,689	6,219	2,848	976	1,728	1,325	593
South Tigray Zone .....	95,343	31,615	22,204	282	21,333	19,001	908
Seharte Samre .....	13,169	3,725	5,421	-	771	3,122	-
Enderta.....	20,179	13,381	6,163	-	179	-	191
Hintalo Wajirat.....	17,252	6,491	4,015	-	3,208	3,010	-
Ambalagge.....	7,936	1,271	1,705	-	2,909	2,051	-
Endamehoni.....	8,432	1,404	830	-	3,636	2,488	-
Rayazebo.....	9,950	2,292	1,231	-	3,982	2,413	-
Alamata.....	6,344	882	941	-	2,401	1,913	-
Wofla .....	12,082	2,170	1,898	-	4,247	3,767	-
Mekele Zone .....	291	179	108	-	-	-	-
Mekele .....	291	179	108	-	-	-	-

## b) Rural Holdings

Geographic Area	ASSES AGED 3 YEARS AND OLDER						
	TOTAL	MALES			FEMALES		
		Transportation	Draught	Other	Transportation	Draught	Other
Tigray Region	312,145	116,319	46,852	3,351	101,051	38,525	6,047
West Tigray Zone	80,883	31,836	12,164	247	27,914	7,888	835
Kafta	5,441	3,974			1,071		
Tahtay Adiyabo	10,372	3,154			7,086		
Laelay Adiyabo	11,688	3,770			5,391	1,996	
Tahtay Koraro	6,285	1,850	1,441		1,627	1,096	201
Medebay Zana	9,552	4,488			4,219		
Asegede Tsimbela	10,788	4,484	1,413		3,081	1,734	
Tselemti	7,142	2,028	727		3,457	902	
Welkait	10,247	3,422	5,721		627	477	
Tsegedde	9,368	4,666	1,999		1,354	1,055	
Central Tigray Zone	82,336	31,585	6,252	1,195	33,448	7,226	2,630
Mereb Lehe	8,178	3,830			4,265		
Ahiferom	9,788	4,617	946		2,573	1,609	
Wene Lehe	8,177	2,565	231		4,379	794	
Adwa	10,926	2,013	2,194		4,638	1,906	
Laelay Maychew	7,765	2,478	1,022		2,378	1,282	606
Tahtay Maychew	5,638	3,207	165		1,685		363
Naeder Adet	6,180	2,378	392	284	1,725	720	
Kola Temben	8,128	2,904			5,123		
Degua Temben	9,231	4,705			4,216		
Tanqu Abergele	8,326	2,888	1,302	790	2,466	559	321
East Tigray Zone	54,604	21,711	6,579	1,647	18,471	4,518	1,679
Gulumahada	6,322	1,725			3,505	277	330
Erob	3,218	1,186	432		1,178	405	
Saesi Tsaedamba	9,346	4,311			4,153		579
Ganta Afeshum	5,410	2,350	158		2,829		
Hawzen	7,485	2,725			3,849		
Wukro	9,223	3,272	2,871		1,230	1,722	
Atsbi Wenberta	13,601	6,141	2,844	974	1,727	1,322	593
South Tigray Zone	94,322	31,187	21,857	262	21,219	18,894	904
Scharte Samre	13,013	3,631	5,387		761	3,114	
Enderta	19,994	13,333	6,030		177		191
Hintalo Wajirat	17,108	6,437	3,945		3,202	2,997	
Ambalagge	7,876	1,248	1,696		2,886	2,045	
Endamehoni	8,365	1,369	821		3,629	2,474	
Rayaazebo	9,834	2,227	1,205		3,968	2,404	
Alamata	6,130	800	894		2,359	1,883	
Wofla	12,002	2,142	1,878		4,237	3,745	

c) Urban Holdings

Geographic Area	ASSES AGED 3 YEARS AND OLDER						
	TOTAL	MALES			FEMALES		
		Transportation	Draught	Other	Transportation	Draught	Other
Tigray Region.....	5,625	3,566	759	285	779	207	28
West Tigray Zone.....	1,632	1,161	74	10	358	19	
Kafta.....	435	248	23		134	17	
Tahtay Adiyabo.....	489	385			100		
Laelay Adiyabo.....	72	50			16		
Tahtay Koraro.....	90	66			21		
Medebay Zana.....	63	39			24		
Asegede Tsimbela.....	198	169			23		
Tselemti.....	102	86			16		
Welkait.....	161	107	39				
Tsegedde.....	21	12			9		
Central Tigray Zone.....	2,146	1,483	165	241	219	26	12
Mereb Lehe.....	272	209			50		
Ahiferom.....	262	161		22	52		
Werie Lehe.....	137	123					
Adwa.....	55	39			14		
Laelay Maychew.....	337	192	85		23	21	11
Tahtay Maychew.....	50	40					
Naeder Adet.....	72	57					
Kola Temben.....	489	421		57			
Degua Temben.....	71	51			19		
Tanqu Abergele.....	401	188	34	152	26		
East Tigray Zone.....	535	314	65	14	84	55	
Gulumahada.....	12	5					
Erob.....	26	7	11		3	6	
Saesi Tsaedamba.....	51	34			8		
Ganta Afeshum.....	96	77			10		
Hawzen.....	126	74			52		
Wukro.....	134	39	46			46	
Atsbi Wenberta.....	89	78					
South Tigray Zone.....	1,021	428	347		115	107	
Seharte Samre.....	156	94	33				
Enderta.....	185	47	132				
Hintalo Wajirat.....	144	54	70			14	
Ambalage.....	59	22			23	6	
Endamehoni.....	68	35	10		8	15	
Rayaazebo.....	116	65	26		15	9	
Alamata.....	214	82	47		42	30	
Wofla.....	80	28	21		10	22	
Mekele Zone.....	291	179	108				
Mekele.....	291	179	108				

TABLE 7-12: MULES AGED 3 YEARS AND OLDER BY SEX, PURPOSE, ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	MULES AGED 3 YEARS AND OLDER						
	TOTAL	MALES			FEMALES		
		Transportation	Draught	Other	Transportation	Draught	Other
Tigray Region.....	15,777	5,445	832		8,685	531	
West Tigray Zone.....	3,441	1,333			1,723	284	
Kafta.....	90	90					
Tahtay Adiyabo.....	115				115		
Laelay Adiyabo.....	115						
Tahtay Koraro.....	179				99		
Medebay Zana.....	439				439		
Asegede Tsimbela.....	735	170			524		
Tselemti.....	567	214				267	
Welkait.....	581	299			282		
Tsegedde.....	620	474			133		
Central Tigray Zone.....	2,921	907	602		1,328		
Mereb Lehe.....	171				148		
Ahiferom.....	518	432					
Werie Lehe.....							
Adwa.....	732		602				
Laelay Maychew.....	95	79			16		
Tahtay Maychew.....	166				145		
Naeder Adet.....							
Kola Temben.....	284				284		
Degua Temben.....	664						
Tanqu Abergele.....	190	134					
East Tigray Zone.....	4,898	1,888			2,909		
Gulumahada.....	468				468		
Erob.....	78	20			58		
Saesi Tsaedamba.....	219						
Ganta Afeshum.....	568				568		
Hawzen.....	414	393					
Wukro.....	828	412			390		
Atsbi Wenberta.....	2,323	932			1,319		
South Tigray Zone.....	4,516	1,316	145		2,725	200	
Seharte Samre.....	944		115		541		
Enderta.....	1,393	446			916		
Hintalo Wajirat.....	575	357			158		
Ambalagge.....	245				133		
Endamehoni.....	158				117		
Rayaazebo.....	240	156					
Alamata.....	325				236		
Wofla.....	636				541		
Mekele Zone.....							
Mekele.....							

b) Rural Holdings

Geographic Area	MULES AGED 3 YEARS AND OLDER						
	TOTAL	MALES			FEMALES		
		Transportation	Draught	Other	Transportation	Draught	Other
Tigray Region.....	15,648	5,404	832		8,604	531	203
West Tigray Zone.....	3,412	1,326			1,701	284	
Kafta.....	90	90					
Tahtay Adiyabo.....	115				115		
Laelay Adiyabo.....	115						
Tahtay Koraro.....	165						
Medebay Zana.....	439				92		
Asegede Tsimbela.....	735	170			439		
Tselemti.....	557	212			524		
Welkait.....	581	299				267	
Tsegedde.....	615	474			282		
Central Tigray Zone.....	2,876	897	602		1,294		
Mereb Lehe.....	162						
Ahiferom.....	512	432					
Werie Lehe.....							
Adwa.....	722		602				
Laelay Maychew.....	75	75					
Tahtay Maychew.....	166						
Naeder Adet.....					145		
Kola Temben.....	284						
Degua Temben.....	663				284		
Tanqu Abergele.....	190	134					
East Tigray Zone.....	4,876	1,877			2,902		
Gulumahada.....	468				468		
Erob.....	78	20			58		
Saesi Tsacedamba.....	215						
Ganta Afeshum.....	568						
Hawzen.....	414	393			568		
Wukro.....	815	406					
Atsbi Wenberta.....	2,317	929			385		
South Tigray Zone.....	4,485	1,303	145		1,316		
Sharte Samre.....	944		115		2,707	200	
Enderta.....	1,393	446			541		
Hintalo Wajirat.....	564	356			916		
Ambalagge.....	243				148		
Endamehoni.....	158				131		
Rayazebo.....	234				117		
Alamata.....	316	151					
Wofla.....	633				234		
					538		

## c) Urban Holdings

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Geographic Area	MULES AGED 3 YEARS AND OLDER						
	TOTAL	MALES			FEMALES		
		Transportation	Draught	Other	Transportation	Draught	Other
Tigray Region .....	129	41			81		
West Tigray Zone .....	29	8			21		
Kafta .....							
Tahtay Adiyabo .....							
Laelay Adiyabo .....							
Tahtay Koraro .....							
Medebay Zana .....	14	6			8		
Asegede Tsimbela .....							
Tselemti .....							
Welkait .....							
Tsegedde .....	5						
Central Tigray Zone .....	45	10			34		
Mereb Lehe .....							
Ahiferom .....							
Werie Lehe .....							
Adwa .....	10						
Laelay Maychew .....	20				16		
Tahtay Maychew .....							
Naeder Adet .....							
Kola Temben .....							
Degua Temben .....							
Tanqu Abergele .....							
East Tigray Zone .....	22	11					
Gulumahada .....							
Erob .....							
Saesi Tsaedamba .....							
Ganta Afeshum .....							
Hawzen .....							
Wukro .....	14						
Atsbi Wenberta .....							
South Tigray Zone .....	31	13			18		
Scharte Samre .....							
Enderta .....							
Hintalo Wajirat .....	11				10		
Ambalagge .....							
Endamehoni .....							
Rayazebo .....							
Alamata .....	8						
Wofla .....							
Mekele Zone .....							
Mekele .....							

TABLE 7-13: CAMELS AGED 4 YEARS AND OLDER BY SEX, PURPOSE, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Area	CAMELS AGED 4 YEARS AND OLDER							
	TOTAL	MALES			FEMALES			
		Transportation	Draught	Other	Milk	Transportation	Draught	Other
Tigray Region.....	36,820	33,067	1,249	2,322				
West Tigray Zone.....	5,999	4,057	313	1,545				
Kafta.....	339		36	200				
Tahtay Adiyabo.....	745	566		92				
Lacalay Adiyabo.....	1,302	1,077						
Tahtay Koraro.....								
Medebay Zana.....	1,152	1,063						
Asegede Tsimbela.....	583	429						
Tselemti.....	174	174						
Welkait.....	860			585				
Tsegedde.....	694	327						
Central Tigray Zone.....	7,232	6,216	859					
Mereb Lehe.....	1,064	1,061						
Ahiferom.....	1,617	1,572						
Werie Lehe.....	613	539						
Adwa.....	641	641						
Lacalay Maychew.....		170						
Tahtay Maychew.....	428	428						
Naeder Adet.....								
Kola Temben.....	845	845						
Degua Temben.....								
Tanqu Abergele.....	371							
East Tigray Zone.....	4,254	4,254						
Gulumahada.....	433	433						
Erob.....	20	20						
Saesi Tsaedamba.....								
Ganta Afeshum.....	539	539						
Hawzen.....	1,081	1,081						
Wukro.....	629	629						
Atsbi Wenberta.....	1,529	1,529						
South Tigray Zone.....	19,336	18,541						
Seharte Samre.....								
Enderta.....	1,917	1,917						
Hintalo Wajirat.....	3,439	3,403						
Ambalagge.....								
Endamehoni.....								
Rayaazebo.....	11,316	10,599						
Alamata.....	1,063	1,020						
Wofla.....	919	919						
Mekele Zone.....								
Mekele.....								

b) Rural Holdings

CAMELS AGED 4 YEARS AND OLDER

Geographic Area	CAMELS AGED 4 YEARS AND OLDER							
	TOTAL	MALES			FEMALES			
		Transportation	Draught	Other	Milk	Transportation	Draught	Other
Tigray Region.....	36,195	32,700	1,200	2,129				
West Tigray Zone.....	5,704	3,945	271	1,421				
Kafta.....	284			180				
Tahtay Adiyabo.....	587	488						
Lalay Adiyabo.....	1,294	1,072						
Tahtay Koraro.....								
Medebay Zana.....								
Asegede Tsimbela.....	1,143	1,058						
Tselemti.....	575	427						
Welkait.....	173	173						
Tsegedde.....	813			550				
Central Tigray Zone.....	694	327						
Mereb Lehe.....	7,041	6,040	859					
Ahiferom.....	956	956						
Werie Lehe.....	1,552	1,507						
Adwa.....	613	539						
Lalay Maychew.....	641	641						
Tahtay Maychew.....		170						
Nacder Adet.....	422	422						
Kola Temben.....								
Degua Temben.....	845	845						
Tanqu Abergele.....								
East Tigray Zone.....	371							
Gulumahada.....	4,241	4,241						
Erob.....	433	433						
Saesi Tsadamba.....	20	20						
Ganta Afeshum.....								
Hawzen.....	539	539						
Wukro.....	1,081	1,081						
Atsbi Wenberta.....	616	616						
South Tigray Zone.....	1,529	1,529						
Seharte Samre.....	19,209	18,475						
Enderta.....								
Hintalo Wajirat.....	1,917	1,917						
Ambalage.....	3,439	3,403						
Endamehoni.....								
Rayazebo.....								
Alamata.....	11,250	10,574						
Wofla.....	1,002	979						
	919	919						

## c) Urban Holdings

Geographic Area	CAMELS AGED 4 YEARS AND OLDER							
	TOTAL	MALES			FEMALES			
		Transportation	Draught	Other	Milk	Transportation	Draught	Other
Tigray Region.....	625	367	49	193				
West Tigray Zone.....	295	112	43	125				
Kafta.....	55		25	20				
Tahtay Adiyabo.....	158	78	18	52				
Lalay Adiyabo.....	8							
Tahtay Koraro.....				5				
Medebay Zana.....								
Asegede Tsimbela.....	8			6				
Tselemti.....								
Welkait.....	46			35				
Tsegedde.....								
Central Tigray Zone.....	190	176						
Mereb Lehe.....	109	105						
Ahiferom.....	65	65						
Werie Lehe.....								
Adwa.....								
Lalay Maychew.....								
Tahtay Maychew.....								
Naeder Adet.....								
Kola Temben.....								
Degua Temben.....								
Tanqu Abergele.....								
East Tigray Zone.....								
Gulumahada.....								
Erob.....								
Saesi Tsadamba.....								
Ganta Afeshum.....								
Hawzen.....								
Wukro.....								
Atsbi Wenberta.....								
South Tigray Zone.....	127	66						
Sharte Samre.....								
Enderta.....								
Hintalo Wajirat.....								
Ambalagge.....								
Endamehoni.....								
Rayazebo.....								
Alamata.....	61	41						
Wofla.....								
Mekele Zone.....								
Mekele.....								

TABLE 7-14: POULTRY INVENTORY BY TYPE, ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	Total Poultry	Cocks	Cockerels	Pullets	Non-Laying Hens	Chicks	Laying Hens	Avg. Number of Clutches	Avg. Egg Production Hen/Clutch
Tigray Region	4,999,677	372,111	368,829	512,940	430,062	1,903,905	1,411,830	22	14
West Tigray Zone	1,770,181	121,636	123,642	176,029	124,962	810,015	413,898	18	12
Kafta	145,278	10,236	8,140	10,105	17,800	49,184	49,813	17	11
Tahtay Adiyabo	191,174	13,750	12,168	21,274	17,098	79,446	47,439	18	13
Laelay Adiyabo	179,431	11,602	11,039	17,780	10,281	91,580	37,149	19	13
Tahtay Koraro	121,117	8,024	8,594	11,132	9,718	52,355	31,293	17	12
Medebay Zana	211,728	12,315	19,130	27,144	14,326	93,339	45,474	21	12
Asegede Tsimbela	258,336	17,422	20,419	24,660	12,564	129,370	53,901	18	13
Tselemti	293,444	23,759	23,429	30,055	21,173	131,403	63,625	18	12
Welkait	221,318	14,105	12,356	18,600	15,606	108,811	51,841	19	11
Tsegedde	148,355	10,422	8,367	15,279	6,396	74,527	33,363	20	11
Central Tigray Zone	1,728,998	117,936	139,154	191,338	160,108	615,606	504,857	20	13
Mereb Lehe	203,529	15,625	14,624	21,426	18,101	77,407	56,345	21	13
Ahiferom	235,075	16,435	19,890	24,889	17,013	82,054	74,794	24	15
Werie Lehe	167,054	11,918	13,195	20,706	18,192	53,307	49,735	22	14
Adwa	166,779	14,413	14,521	18,806	15,304	55,513	48,221	21	13
Laelay Maychew	178,257	8,219	9,925	18,540	24,103	46,489	70,982	19	13
Tahtay Maychew	118,458	7,731	8,921	12,396	8,036	51,517	29,856	17	13
Naeder Adet	153,899	8,955	11,429	17,144	12,331	70,205	33,834	21	14
Kola Temben	243,196	17,918	21,103	25,311	23,730	86,921	68,212	20	14
Degua Temben	92,250	6,527	6,896	10,594	8,764	30,358	29,111	21	14
Tanqu Abergele	170,502	10,195	18,650	21,525	14,532	61,834	43,766	20	14
East Tigray Zone	574,476	59,567	37,339	50,099	58,399	157,365	211,706	23	15
Gulumahada	86,929	8,173	7,766	9,719	5,602	28,122	27,546	23	13
Erob	18,153	2,488	1,011	1,683	1,586	4,834	6,551	25	22
Saesi Tsaedamba	100,434	11,355	6,146	6,872	10,584	25,897	39,580	21	15
Ganta Afeshum	94,691	10,936	5,418	6,777	12,348	28,617	30,595	23	14
Hawzen	97,089	9,450	6,099	7,510	11,013	20,776	42,240	23	14
Wukro	76,723	5,160	5,057	7,371	8,301	20,292	30,542	22	14
Atsbi Wenberta	100,457	12,005	5,842	10,168	8,965	28,826	34,651	23	13
South Tigray Zone	853,540	68,594	63,090	89,369	71,559	312,886	248,042	23	14
Scharte Samre	182,975	12,886	15,237	21,722	15,800	70,464	46,865	24	18
Enderta	108,504	8,688	6,349	8,706	12,579	36,476	35,707	24	15
Hintalo Wajirat	110,001	8,413	6,916	12,746	9,069	42,877	29,979	24	15
Ambalagge	78,720	4,762	6,885	9,317	6,398	29,025	22,333	25	15
Endamehoni	61,565	4,722	5,280	6,945	5,007	21,834	17,776	23	14
Rayaaebo	100,079	11,867	8,357	11,125	4,293	38,735	25,701	22	14
Alamata	114,449	8,675	9,752	10,517	14,336	31,024	40,146	23	15
Wofla	97,248	8,581	4,314	8,290	4,077	42,451	29,535	24	12
Mekele Zone	72,482	4,377	5,605	*	15,034	8,034	33,328	27	19
Mekele	72,482	4,377	5,605	*	15,034	8,034	33,328	27	19

b) Rural Holdings

Geographic Area	Total Poultry	Cocks	Cockerels	Pullets	Non-Laying Hens	Chicks	Laying Hens	Avg. Number of Clutches	Avg. Egg Production/Hen/Clutch
Tigray Region .....	4,049,478	321,798	316,158	455,290	234,459	1,793,730	928,042	20	13
West Tigray Zone .....	1,574,903	106,438	115,371	165,210	87,477	793,244	307,163	18	11
Kafta .....	82,090	3,966	5,484	7,280	7,152	43,948	14,260	17	11
Tahtay Adiyabo .....	157,820	10,482	10,578	18,788	10,949	77,028	29,995	18	12
Lalay Adiyabo.....	175,043	11,306	10,954	17,578	9,401	91,282	34,522	19	12
Tahtay Koraro.....	103,915	6,320	7,781	10,245	6,632	50,785	22,152	16	12
Medebay Zana .....	190,951	11,399	18,637	24,858	11,351	89,816	34,890	20	12
Asegede Tsimbela.....	240,642	16,584	19,616	24,103	8,008	127,805	44,526	17	12
Tselemti.....	276,773	22,406	22,600	28,948	17,400	130,661	54,758	17	11
Welkait.....	201,885	13,577	11,517	18,154	10,863	107,515	40,259	18	11
Tsegedde.....	145,785	10,398	8,204	15,256	5,721	74,404	31,802	20	10
Central Tigray Zone.....	1,305,483	100,416	117,741	165,869	72,133	557,689	291,634	20	13
Mereb Lehe.....	150,006	12,491	12,912	18,829	8,447	69,631	27,697	20	12
Ahiferom.....	195,288	15,319	17,960	23,285	7,573	79,210	51,941	24	16
Werie Lehe.....	132,108	11,203	11,938	18,352	9,647	47,649	33,318	21	12
Adwa.....	122,841	9,280	12,325	14,918	7,852	49,498	28,968	19	13
Lalay Maychew.....	72,352	4,635	5,378	10,837	3,871	30,418	17,212	17	13
Tahtay Maychew.....	98,187	5,914	7,722	11,295	4,396	48,984	19,876	18	12
Naeder Adet.....	141,088	8,394	10,956	16,370	9,519	67,975	27,874	20	12
Kola Temben .....	181,185	17,104	17,195	22,250	8,274	78,119	38,243	21	13
Degua Temben.....	79,778	6,013	6,107	10,270	5,994	29,331	22,064	18	13
Tanqu Abergele .....	132,650	10,065	15,248	19,463	6,559	56,873	24,441	19	13
East Tigray Zone.....	492,813	54,334	32,617	46,602	39,895	150,526	168,839	20	14
Gulumahada.....	84,005	8,143	7,624	9,486	4,771	27,993	25,989	21	11
Erob .....	17,361	2,488	945	1,639	1,322	4,790	6,177	19	14
Saesi Tsaedamba.....	86,866	10,166	5,218	6,393	7,477	25,582	32,030	19	13
Ganta Afeshum.....	82,025	9,128	4,576	6,186	10,428	27,325	24,382	21	15
Hawzen.....	83,018	9,240	5,417	7,297	6,660	19,864	34,540	19	13
Wukro.....	54,645	4,336	3,774	6,085	3,506	17,629	19,315	22	15
Atsbi Wenberta .....	84,893	10,834	5,064	9,516	5,731	27,342	26,406	19	14
South Tigray Zone .....	676,279	60,610	50,429	77,609	34,954	292,271	160,406	22	14
Seharte Samre .....	149,983	11,727	13,237	18,887	8,419	64,404	33,309	20	14
Enderta.....	76,287	6,741	4,580	6,376	6,602	32,329	19,660	22	14
Hintalo Wajirat .....	93,002	7,745	5,733	11,340	5,795	41,281	21,108	24	14
Ambalagge.....	63,647	4,617	6,021	8,296	2,819	27,710	14,184	24	14
Endamehoni .....	49,303	4,061	4,503	6,264	3,050	20,393	11,032	20	13
Rayazebo.....	91,894	11,349	7,670	10,860	2,617	37,644	21,753	21	14
Alamata.....	63,758	6,510	5,058	7,602	3,191	26,913	14,483	22	14
Wofla .....	88,406	7,860	3,626	7,985	2,462	41,597	24,876	22	12

## c) Urban Holdings

Geographic Area	Total Poultry	Cocks	Cockerels	Pullets	Non-Laying Hens	Chicks	Laying Hens	Avg. Number of Clutches	Avg. Egg Production/Hen/Clutch
Tigray Region	950,199	50,312	52,671	57,650	195,603	110,175	483,788	23	15
West Tigray Zone	195,278	15,198	8,271	10,820	37,485	16,771	106,734	19	12
Kafta	63,188	6,270	2,656	2,825	10,648	5,236	35,553	17	11
Tahtay Adiyabo	33,354	3,268	1,590	2,486	6,149	2,417	17,444	17	13
Laelay Adiyabo	4,388	296	86	203	880	298	2,626	19	13
Tahtay Koraro	17,202	1,704	813	888	3,086	1,570	9,141	17	12
Medebay Zana	20,777	916	492	2,285	2,975	3,523	10,585	21	12
Asegede Tsimbela	17,695	838	803	557	4,557	1,565	9,375	18	13
Tselemti	16,671	1,353	829	1,107	3,773	742	8,867	19	12
Welkait	19,433	528	839	446	4,742	1,296	11,582	19	11
Tsegedde	2,570	23	163	23	676	123	1,561	20	11
Central Tigray Zone	423,516	17,520	21,412	25,469	87,975	57,917	213,223	21	14
Mereb Lehe	53,523	3,135	1,711	2,597	9,654	7,777	28,649	21	13
Ahiferom	39,787	1,116	1,930	1,604	9,440	2,843	22,853	23	14
Werie Lehe	34,946	716	1,257	2,354	8,545	5,657	16,417	23	15
Adwa	43,938	5,134	2,196	3,889	7,452	6,015	19,253	23	12
Laelay Maychew	105,906	3,584	4,546	7,703	20,232	16,071	53,770	20	13
Tahtay Maychew	20,271	1,817	1,199	1,102	3,640	2,533	9,980	16	13
Naeder Adet	12,811	561	473	775	2,812	2,230	5,961	21	15
Kola Temben	62,011	814	3,909	3,061	15,456	8,802	29,969	19	15
Degua Temben	12,472	514	789	324	2,771	1,027	7,047	24	14
Tanqu Abergele	37,852	*	3,402	2,062	7,973	4,961	19,325	20	14
East Tigray Zone	81,663	5,233	4,722	3,497	18,504	6,839	42,867	25	16
Gulumahada	2,923	*	143	*	831	*	1,557	25	14
Erob	792	-	66	44	264	44	374	30	29
Saesi Tsaedamba	13,568	1,189	928	479	3,108	315	7,550	23	16
Ganta Afeshum	12,666	1,808	843	590	1,920	1,292	6,213	25	13
Hawzen	14,071	210	683	213	4,353	912	7,700	27	14
Wukro	22,078	824	1,283	1,286	4,795	2,662	11,227	21	13
Atsbi Wenberta	15,564	1,172	777	651	3,234	1,484	8,246	26	12
South Tigray Zone	177,261	7,984	12,661	11,760	36,605	20,614	87,637	25	15
Scharte Samre	32,992	1,159	2,001	2,836	7,381	6,060	13,556	27	21
Enderta	32,217	1,947	1,769	2,330	5,977	4,146	16,047	25	16
Hintalo Wajirat	16,999	668	1,183	1,406	3,275	1,597	8,871	23	15
Ambalagge	15,073	*	864	1,021	3,579	1,315	8,149	25	15
Endamechoni	12,262	662	777	681	1,957	1,441	6,744	26	15
Rayaazebo	8,185	518	687	265	1,677	1,091	3,948	22	14
Alamata	50,691	2,165	4,693	2,915	11,145	4,111	25,663	24	15
Wofla	8,842	721	688	305	1,615	854	4,659	25	11
Mekele Zone	72,482	4,377	5,605	*	15,034	8,034	33,328	27	19
Mekele	72,482	4,377	5,605	*	15,034	8,034	33,328	27	19

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

a) Both Rural and Urban Holdings

Geographic Area	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
Tigray Region.....	228,683	1,938,408	218,270	1	1,903,183	8,708	2	3,414	1,706	1	31,811
West Tigray Zone.....	58,632	556,718	57,195	2	551,095	1,119	2		317	1	
Kafta.....	548	4,118	519	2	3,930		3			2	
Tahtay Adiyabo.....	3,502	32,514	3,362	3	31,825	78	3			2	
Laelay Adiyabo.....	5,211	55,735	5,147	2	55,307					1	
Tahtay Koraro.....	4,580	32,150	4,429	1	30,959					1	
Medebay Zana.....	10,338	84,532	10,072	1	81,405	181				1	
Asegede Tsimbela.....	6,661	47,887	6,453	1	47,887						
Tselemti.....	12,832	94,017	12,298	1	94,017	534	1				
Welkait.....	6,948	69,945	6,948	2	69,945						
Tsegedde.....	8,013		7,966	2		47					
Central Tigray Zone.....	72,808	641,637	68,553	1	632,410	3,691	1		564	1	8,291
Mereb Lehe.....	2,849	25,993	2,640	1	22,849					1	
Ahiferom.....	12,765	79,317	11,539	1	77,696	1,145				1	
Werie Lehe.....	8,936	68,057	8,491	1	68,057	402	1			1	
Adwa.....	7,537	58,718	7,229	1	55,192				245	1	3,526
Laelay Maychew.....	3,875	36,364	3,184	1	36,364	691				1	
Tahtay Maychew.....	3,211	23,944	3,063	1	23,944					1	
Naeder Adet.....	8,764	72,702	8,764	1	72,702						
Kola Temben.....	9,373	86,488	9,040	1	86,488	299				1	
Degua Temben.....	7,589	60,775	7,429	1	59,839		1			2	
Tanqu Abergele.....	7,909	129,279	7,172	1	129,279						
East Tigray Zone.....	34,332	234,067	32,370	2	216,775	1,276	1		686	2	16,371
Gulumahada.....	2,686	8,643	2,491	1	7,528					2	
Erob.....	2,895	13,221	2,770	2	12,781	77				2	
Saesi Tsaedamba.....	7,568	57,396	7,194	2	55,953		1			2	
Ganta Afeshum.....	4,737	28,951	4,679	1	28,665					2	
Hawzen.....	6,510	49,811	5,939	2	43,833	483	2			2	
Wukro.....	3,782	37,182	3,444	2	34,919	260	2			1	
Atsbi Wenberta.....	6,154	38,864	5,853	2	33,095		1			2	
South Tigray Zone.....	61,462	493,057	59,427	1	489,973	1,896	2		138	1	
Seharte Samre.....	9,322	79,531	8,959	1	78,878	337	1			1	
Enderta.....	3,415	30,286	3,247	1	30,286						
Hintalo Wajirat.....	13,115	75,094	13,042	1	75,094	73					
Ambalagge.....	9,540	71,557	8,921	1	70,766	578	1			1	
Endamehoni.....	10,685		10,500	1		185	3			2	
Rayaazebo.....	4,636	48,554	4,435	2	48,399	201	1				
Alamata.....	1,751	7,674	1,453	1	6,871	298	3			1	
Wofla.....	8,999	43,879	8,871	1	43,283					1	
Mekele Zone.....	1,450		725	2		725					
Mekele.....	1,450		725	2		725					

b) Rural Holdings

Geographic Area	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
Tigray Region	211,581	1,828,792	209,466	1	1,794,504	472	2	2,478	1,643	1	31,811
West Tigray Zone	56,717	546,941	56,233	2	541,318		2		317	1	
Kafta	548	4,118	519	2	3,930		3			2	
Tahtay Adiyabo	3,396	32,232	3,309	3	31,543		3			2	
Laelay Adiyabo	5,211	55,735	5,147	2	55,307					1	
Tahtay Koraro	4,422	31,464	4,351	1	30,273					1	
Medebay Zana	9,977	83,209	9,892	1	80,082					1	
Asegede Tsimbela	6,284	44,593	6,260	1	44,593					1	
Tselemti	12,012	89,974	11,888	1	89,974						
Welkait	6,948	69,945	6,948	2	69,945						
Tsegedde	7,920		7,920	2							
Central Tigray Zone	65,057	591,291	64,535	1	583,000		1		503	1	8,291
Mereb Lehe	2,717	25,333	2,574	1	22,189					1	
Ahiferom	10,147	71,920	10,066	1	70,299					1	
Werie Lehe	8,046	65,025	8,046	1	65,025		1			1	
Adwa	7,411	57,998	7,166	1	54,473				245	1	3,526
Laelay Maychew	2,508	25,248	2,489	1	25,248					1	
Tahtay Maychew	2,916	21,306	2,916	1	21,306					1	
Naeder Adet	8,764	72,702	8,764	1	72,702					1	
Kola Temben	8,866	84,671	8,832	1	84,671						
Degua Temben	7,246	56,101	7,246	1	56,101		1				
Tanqu Abergele	6,435	110,987	6,435	1	110,987						
East Tigray Zone	32,037	226,720	31,184	2	209,429		1		684	2	16,371
Gulumahada	2,686	8,643	2,491	1	7,528					2	
Erob	2,741	13,177	2,693	2	12,737					2	
Saesi Tsaedamba	7,040	56,481	6,917	2	55,038		1			2	
Ganta Afeshum	4,737	28,951	4,679	1	28,665					2	
Hawzen	5,544	45,079	5,456	2	39,102		2			2	
Wukro	3,225	35,590	3,141	2	33,327		2			2	
Atsbi Wenberta	6,063	38,800	5,807	2	33,031		1			1	
South Tigray Zone	57,770	463,840	57,514	1	460,756		2		138	1	
Seharte Samre	8,647	78,107	8,596	1	77,454		1			1	
Enderata	3,143	29,821	3,111	1	29,821					1	
Hintalo Wajirat	12,969	74,971	12,969	1	74,971						
Ambalagge	8,311	66,703	8,270	1	65,912		1			1	
Endamehoni	10,343		10,324	1			3			1	
Rayaazebo	4,291	40,701	4,262	2	40,546						
Alamata	1,244	6,281	1,199	1	5,478		1				
Wofla	8,823	31,689	8,783	1	31,093		3				

c) Urban Holdings

Geographic Area	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
Tigray Region.....	17,103	109,616	8,804	1	108,680	8,236	1			1	
West Tigray Zone.....	1,915	9,776	962	2	9,776	952					
Kafta.....				3							
Tahtay Adiyabo.....				1							
Laelay Adiyabo.....				1							
Tahtay Koraro.....				1							
Medebay Zana.....	361		181	1		181					
Asegede Tsimbela.....				3							
Tselemti.....	820		410	1		410					
Welkait.....											
Tsegedde.....	93	150	47	1	150	47					
Central Tigray Zone.....	7,751	50,346	4,018	1	49,410	3,672	1			1	
Mereb Lehe.....				1							
Ahiferom.....	2,618	7,397	1,473	1	7,397	1,145				1	
Werie Lehe.....	890	3,032	445	1	3,032	402	1				
Adwa.....				1							
Laelay Maychew.....	1,367	11,117	695	1	11,117	672				1	
Tahtay Maychew.....				1							
Naeder Adet.....											
Kola Temben.....	506		208	1		299				1	
Degua Temben.....			183	2			2			2	
Tanqu Abergele.....				1							
East Tigray Zone.....	2,295	7,347	1,186	1	7,347	1,107				1	
Gulumahada.....											
Erob.....	154	44	77	1	44	77					
Saesi Tsaedamba.....		914		1	914					1	
Ganta Afeshum.....											
Hawzen.....	966		483	1		483					
Wukro.....	556	1,592	303	2	1,592	251				1	
Atsbi Wenberta.....				1							
South Tigray Zone.....	3,692	29,217	1,913	1	29,217	1,779				1	
Scharte Samre.....	675		363	1						1	
Enderta.....				2							
Hintalo Wajirat.....	146		73	2		73					
Ambalagge.....	1,229		651	1		578					
Endamehoni.....	342		176	2		166				2	
Rayazebo.....	345		172	2		172					
Alamata.....	507	1,393	254	1	1,393	254				1	
Wofla.....				2							
Mekele Zone.....	1,450		725	2		725					
Mekele.....	1,450		725	2		725					

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

a) Both Rural and Urban Holdings

Geographic Area	Number Of	Number Of	Average	Average	Total Milk	Number	Number Of	Average	Average	Total Milk
	Dairy Cows	Cows	Daily Milk Prod.	Lactation Period(Mn)	Production(Lt)	Of Dairy Camels	Camels	Daily Milk Prod.	Lactation Period(Mn)	Production(Lt)
Tigray Region	290,038	482,599	1.551	8	137,311,704					
West Tigray Zone	69,918	213,702	1.423	7	69,174,145					
Kafta	2,494	12,492	1.582	7	3,803,011					
Tahtay Adiyabo	14,728	27,784	1.724	7	10,475,587					
Laelay Adiyabo	2,120	19,563	1.249	8	5,318,162					
Tahtay Koraro	7,929	9,290	1.306	9	2,627,623					
Medebay Zana	2,978	13,122	1.600	8						
Asegede Tsimbela	1,432	32,030	1.296	8	11,082,896					
Tselemti	27,609	26,683	1.125	6	5,264,516					
Welkait		42,518	1.642	6	13,705,789					
Tsegedde	4,635	30,221	1.289	8	9,881,325					
Central Tigray Zone	54,938	93,383	1.132	8	18,793,789					
Mereb Lehe	5,374	6,882	1.221	6	1,314,048					
Ahiferom	6,669	13,742	1.119	7	3,051,690					
Werie Lehe	2,853	11,844	1.213	9	2,641,947					
Adwa	6,467	7,609	1.246	7	1,524,546					
Laelay Maychew	2,248	4,932	1.563	8	1,147,635					
Tahtay Maychew	420	5,501	0.984	8	1,019,708					
Naeder Adet	9,055	10,717	1.392	7	2,003,774					
Kola Temben	15,582	15,435	0.966	9	3,155,904					
Degua Temben	3,472	9,440	0.728	8	1,467,881					
Tanqu Abergele	2,799	7,283	0.894	9	1,466,657					
East Tigray Zone	30,679	54,394	1.590	7	15,265,398					
Gulumahada	4,072	5,015	1.788	7	1,348,780					
Erob	670	2,668	0.906	7	429,373					
Saesi Tsaedamba	6,971	11,960	1.927	7	3,694,234					
Ganta Afeshum	4,601	5,240	2.186	7	1,334,589					
Hawzen	482	8,675	1.159	8	2,029,131					
Wukro	3,817	9,462	1.509	8	3,091,922					
Atsbi Wenberta	10,068	11,374	1.657	7	3,337,368					
South Tigray Zone	133,658	120,126	1.319	8	33,326,170					
Seharte Samre	15,918	11,944	0.935	10	2,482,242					
Enderta	9,518	10,764	1.299	9	3,011,834					
Hintalo Wajirat	21,299	18,502	1.336	9	4,910,545					
Ambalagge	9,589	9,823	1.145	9	2,576,941					
Endamehoni	6,074	7,827	1.984	9	2,601,960					
Rayaazebo	38,473	33,978	1.507	8	10,231,753					
Alamata	14,460	13,183	1.300	8	4,791,989					
Wofla	18,328	14,105	1.049	8	2,718,905					
Mekele Zone	845	993	3.375	8	752,202					
Mekele	845	993	3.375	8	752,202					

b) Rural Holdings

Geographic Area	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)
Tigray Region.....	283,465	470,636	1.209	8	133,189,088					
West Tigray Zone.....	68,314	209,090	1.535	7	67,920,105					
Kafta.....	2,323	11,905	1.602	6	3,640,182					
Tahtay Adiyabo.....	14,421	26,455	1.768	7	10,092,598					
Laelay Adiyabo.....	1,960	19,261	1.334	8	5,249,773					
Tahtay Koraro.....	7,661	8,854	1.075	9	2,456,893					
Medebay Zana.....	2,944	12,905	2.293	7	*					
Asegede Tsimbela.....	1,277	31,548	1.324	8	10,940,715					
Tselemti.....	27,293	26,149	1.299	6	5,181,032					
Welkait.....	*	41,826	1.637	7	13,516,244					
Tsegedde.....	4,626	30,188	1.479	9	9,875,482					
Central Tigray Zone.....	53,694	90,997	0.936	7	18,104,793					
Mereb Lehe.....	5,233	6,639	0.913	6	1,255,053					
Ahiferom.....	6,321	13,258	1.116	7	2,938,416					
Werie Lehe.....	2,808	11,709	0.913	8	2,587,310					
Adwa.....	6,284	7,334	0.847	7	1,431,272					
Laelay Maychew.....	1,937	4,432	1.032	8	931,932					
Tahtay Maychew.....	408	5,418	0.951	7	1,006,962					
Naeder Adet.....	8,973	10,640	0.986	7	1,990,895					
Kola Temben.....	15,535	15,142	1.022	8	3,092,843					
Degua Temben.....	3,455	9,389	0.698	7	1,460,349					
Tanqu Abergele.....	2,742	7,037	0.884	9	1,409,761					
East Tigray Zone.....	30,336	53,367	1.255	7	14,817,337					
Gulumahada.....	4,042	4,998	1.146	7	1,342,114					
Erob.....	668	2,646	0.937	7	425,034					
Saesi Tsaedamba.....	6,888	11,833	1.534	7	3,631,141					
Ganta Afeshum.....	4,454	5,032	1.256	6	1,179,145					
Hawzen.....	474	8,486	1.309	7	1,993,555					
Wukro.....	3,772	9,105	1.246	8	2,947,726					
Atsbi Wenberta.....	10,039	11,268	1.356	7	3,298,622					
South Tigray Zone.....	131,121	117,181	1.111	9	32,346,852					
Seharte Samre.....	15,870	11,790	0.893	9	2,448,947					
Enderta.....	9,412	10,502	0.993	8	2,923,445					
Hintalo Wajirat.....	21,071	18,206	0.992	9	4,783,165					
Ambalage.....	9,437	9,548	1.070	9	2,501,810					
Endamehoni.....	5,894	7,643	1.334	9	2,496,091					
Rayazebo.....	38,051	33,609	1.462	8	10,135,221					
Alamata.....	13,315	12,022	1.293	8	4,401,454					
Wofla.....	18,072	13,860	0.851	8	2,656,720					

c) Urban Holdings

Geographic Area	Number Of	Number Of	Average	Average	Total Milk	Number	Number Of	Average	Average	Total Milk
	Dairy Cows	Milking Cows	Daily Milk Prod.	Lactation Period(Mn)	Production(Lt)	Of Dairy Camels	Milking Camels	Daily Milk Prod.	Lactation Period(Mn)	Production(Lt)
Tigray Region	6,574	11,963	1.894	8	4,122,616					
West Tigray Zone	1,604	4,612	1.312	7	1,254,040					
Kafta	171	587	1.561	7	162,828					
Tahtay Adiyabo	307	1,329	1.679	6	382,988					
Lalay Adiyabo	160	302	1.164	8	68,389					
Tahtay Koraro	268	435	1.536	9	170,731					
Medebay Zana	34	217	0.907	9	48,050					
Asegede Tsimbela	155	483	1.268	8	142,181					
Tselemti	316	533	0.951	6	83,484					
Welkait	186	692	1.646	5	189,545					
Tsegedde	9	33	1.098	6	5,844					
Central Tigray Zone	1,245	2,386	1.329	8	688,995					
Mereb Lehe	142	243	1.528	6	58,995					
Ahiferom	348	484	1.122	7	113,273					
Werie Lehe	46	135	1.513	9	54,637					
Adwa	183	276	1.644	7	93,274					
Lalay Maychew	311	499	2.094	8	215,703					
Tahtay Maychew	12	84	1.017	8	12,746					
Naeder Adet	82	77	1.798	6	12,879					
Kola Temben	47	292	0.909	9	63,061					
Degua Temben	17	51	0.757	8	7,532					
Tanqu Abergele	57	245	0.904	8	56,896					
East Tigray Zone	343	1,026	1.925	7	448,061					
Gulumahada	29	17	2.429	6	4,340					
Erob	1	22	0.874	6	63,093					
Saesi Tsaedamba	83	127	2.320	7	155,445					
Ganta Afeshum	147	208	3.115	7	35,576					
Hawzen	•	189	1.008	8	144,195					
Wukro	46	357	1.771	8	38,746					
Atsbi Wenberta	29	106	1.957	7	979,319					
South Tigray Zone	2,537	2,945	1.527	8	33,296					
Scharte Samre	48	154	0.977	10	88,389					
Enderta	106	262	1.605	9	127,380					
Hintalo Wajirat	227	296	1.680	9	75,132					
Ambalagge	152	275	1.219	8	105,869					
Endamehoni	180	184	2.634	8	96,532					
Rayaaazebo	422	369	1.551	7	390,535					
Alamata	1,145	1,161	1.306	8	62,186					
Wofla	256	245	1.247	8	752,202					
Mekele Zone	845	993	3.375	8						
Mekele	845	993	3.375	8						

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

## a) Both Rural and Urban Holdings

Geographic Area	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Tigray Region.....	2,668,078	1,301,678	3,048	812	1,356,706	4,142	1,693
West Tigray Zone.....	1,081,964	472,758	278	52	608,527	205	144
Kafta.....	54,391	19,129	*	*	35,205	*	*
Tahtay Adiyabo.....	120,422	48,430	-	-	71,991	-	-
Laelay Adiyabo.....	107,530	51,691	184	-	55,551	*	-
Tahtay Koraro.....	58,016	29,319	11	*	28,514	45	98
Medebay Zana.....	79,735	41,768	*	-	37,880	*	*
Asegede Tsimbela.....	175,758	79,010	*	*	96,719	-	*
Tselemti.....	147,358	66,332	*	-	80,992	*	*
Welkait.....	196,171	78,371	-	-	117,800	-	-
Tsegedde.....	142,582	58,708	-	-	83,874	-	-
Central Tigray Zone.....	627,830	344,449	900	154	281,011	1,015	301
Mereb Lehe.....	53,039	30,001	*	-	22,668	*	*
Ahiferom.....	78,371	44,777	*	*	33,265	*	*
Werie Lehe.....	75,485	43,497	-	-	31,949	*	-
Adwa.....	68,021	40,616	*	*	27,319	*	23
Laelay Maychew.....	36,548	21,328	466	138	14,078	312	226
Tahtay Maychew.....	39,269	22,818	*	-	16,333	*	*
Naeder Adet.....	71,262	35,024	-	*	36,233	-	-
Kola Temben.....	86,549	42,448	*	*	44,037	*	*
Degua Temben.....	61,142	34,236	*	-	26,726	*	-
Tanqu Abergele.....	58,145	29,705	-	-	28,402	-	*
East Tigray Zone.....	324,150	162,808	1,455	378	156,956	1,886	668
Gulumahada.....	36,171	20,237	167	*	15,523	*	*
Erob.....	12,854	4,928	28	-	7,869	*	*
Saesi Tsaedamba.....	64,320	30,230	*	*	33,015	*	222
Ganta Afeshum.....	44,486	24,109	*	*	18,823	660	161
Hawzen.....	54,603	27,334	*	*	26,835	257	*
Wukro.....	53,452	27,890	79	41	25,329	*	49
Atsbi Wenberta.....	58,264	28,080	*	*	29,562	*	*
South Tigray Zone.....	631,186	321,081	309	112	309,022	447	215
Seharte Samre.....	79,291	41,276	-	-	38,015	-	-
Enderta.....	74,881	40,133	*	*	34,439	*	104
Hintalo Wajirat.....	91,294	48,625	*	-	42,569	*	*
Ambalagge.....	49,957	26,990	*	*	22,863	*	*
Endamechoni.....	40,132	22,438	*	16	17,423	*	49
Rayaaazebo.....	139,127	62,036	-	*	77,035	*	*
Alamata.....	83,579	38,353	*	*	45,140	*	*
Wofla.....	72,924	41,229	*	8	31,538	*	14
Mekele Zone.....	2,947	581	106	116	1,190	589	365
Mekele.....	2,947	581	106	116	1,190	589	365

## b) Rural Holdings

Geographic Area	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Tigray Region	2,619,540	1,283,063	2,780	436	1,329,591	3,073	597
West Tigray Zone	1,064,584	466,720	263	*	597,323	157	*
Kafta	52,315	18,552	-	*	33,708	-	*
Tahtay Adiyabo	115,106	46,458	-	*	68,648	-	*
Laelay Adiyabo	106,464	51,293	183	-	54,886	-	*
Tahtay Koraro	56,416	28,722	-	*	27,626	-	*
Medebay Zana	79,012	41,503	*	-	37,423	*	-
Asegede Tsimbela	173,864	78,325	*	-	95,518	-	*
Tselemti	145,407	65,645	-	-	79,734	*	-
Welkait	193,532	77,561	-	-	115,971	-	*
Tsegedde	142,468	58,659	-	-	83,809	-	*
Central Tigray Zone	616,803	339,947	842	*	275,092	842	*
Mereb Lehe	51,974	29,546	*	-	22,068	*	-
Ahiferom	76,309	43,933	*	-	32,050	*	-
Werie Lehe	74,813	43,132	-	-	31,642	*	-
Adwa	67,080	40,256	*	-	26,778	-	*
Laelay Maychew	34,397	20,507	437	*	13,230	*	-
Tahtay Maychew	38,790	22,633	*	-	16,041	*	-
Naeder Adet	70,856	34,899	-	-	35,957	-	*
Kola Temben	85,072	41,901	-	-	43,171	-	*
Degua Temben	60,826	34,077	*	-	26,572	*	-
Tanqu Abergele	56,686	29,064	-	-	27,584	-	*
East Tigray Zone	320,170	161,409	1,406	304	154,881	1,747	422
Gulumahada	36,029	20,166	165	*	15,456	*	-
Erob	12,795	4,906	28	-	7,833	-	*
Saesi Tsaedamba	63,900	30,117	*	*	32,808	*	-
Ganta Afeshum	43,840	23,984	-	*	18,560	-	*
Hawzen	53,778	26,946	*	*	26,400	256	*
Wukro	52,048	27,406	*	*	24,514	*	-
Atsbi Wenberta	57,780	27,884	*	*	29,310	*	-
South Tigray Zone	617,984	314,987	270	*	302,295	327	*
Seharte Samre	78,486	40,889	-	-	37,597	-	*
Enderta	73,663	39,545	*	-	33,912	*	-
Hintalo Wajirat	89,947	47,969	*	-	41,885	*	-
Ambalage	49,030	26,545	*	*	22,393	*	-
Endamehoni	39,511	22,231	*	-	17,141	*	-
Rayaazebo	137,312	61,185	-	*	76,081	-	*
Alamata	78,174	35,876	-	-	42,298	-	*
Wofla	71,861	40,747	*	-	30,988	*	-

c) Urban Holdings

Geographic Area	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Tigray Region.....	48,538	18,615	268	376	27,114	1,068	1,096
West Tigray Zone.....	17,380	6,039	15	17	11,204	48	57
Kafta.....	2,075	576	*	-	1,496	*	-
Tahtay Adiyabo.....	5,316	1,972	-	-	3,344	-	-
Laelay Adiyabo.....	1,066	398	*	-	666	*	-
Tahtay Koraro.....	1,600	596	11	14	888	45	47
Medebay Zana.....	723	264	-	-	457	-	*
Asegede Tsimbela.....	1,894	684	-	*	1,201	-	*
Tselemti.....	1,952	688	*	-	1,258	*	*
Welkait.....	2,640	810	-	-	1,829	-	-
Tsegedde.....	114	49	-	-	65	-	-
Central Tigray Zone.....	11,027	4,502	58	113	5,918	173	263
Mereb Lehe.....	1,065	455	-	-	600	-	*
Ahiferom.....	2,062	844	-	*	1,215	-	*
Werie Lehe.....	672	366	-	-	306	-	-
Adwa.....	941	360	-	*	542	*	23
Laelay Maychew.....	2,151	822	29	97	848	129	226
Tahtay Maychew.....	478	185	-	-	292	-	*
Naeder Adet.....	407	125	-	*	277	-	-
Kola Temben.....	1,477	547	*	*	866	*	*
Degua Temben.....	317	159	*	-	154	*	-
Tanqu Abergele.....	1,458	641	-	-	818	-	-
East Tigray Zone.....	3,980	1,399	48	73	2,075	139	246
Gulumahada.....	142	71	*	-	67	*	-
Erob.....	58	22	-	-	36	-	-
Saesi Tsaedamba.....	420	113	*	18	207	33	43
Ganta Afeshum.....	646	126	24	26	263	74	134
Hawzen.....	825	388	*	-	435	*	-
Wukro.....	1,404	484	13	24	815	19	49
Atsbi Wenberta.....	485	196	*	*	252	*	20
South Tigray Zone.....	13,203	6,094	40	56	6,727	120	165
Seharte Samre.....	805	387	-	-	418	-	-
Enderta.....	1,218	588	-	*	527	*	81
Hintalo Wajirat.....	1,347	656	-	-	683	*	*
Ambalagge.....	927	445	*	*	470	*	*
Endamehoni.....	622	207	17	16	283	50	49
Rayaazebo.....	1,816	851	-	*	954	*	*
Alamata.....	5,405	2,477	*	*	2,843	*	*
Wofla.....	1,063	482	*	8	550	*	14
Mekele Zone.....	2,947	581	106	116	1,190	589	365
Mekele.....	2,947	581	106	116	1,190	589	365

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

a) Both Rural and Urban Holdings

Geographic Area	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Tigray Region	687,212	177,908			508,222		
West Tigray Zone	95,694	24,275			70,952		
Kafta	14,115	3,398			10,497		
Tahtay Adiyabo	16,067	4,123			11,944		
Laelay Adiyabo	9,080	2,448			6,633		
Tahtay Koraro	7,045	1,761			5,284		
Medebay Zana	20,686	5,706			14,979		
Asegede Tsimbela	9,279	2,425			6,854		
Tselemti	6,061				4,273		
Welkait	1,937	495			1,442		
Tsegedde	11,423	2,376			9,047		
Central Tigray Zone	134,223	34,792			99,431		
Mereb Lehe	21,739	5,436			16,303		
Ahiferom	7,862	2,030			5,833		
Werie Lehe	8,447	2,028			6,419		
Adwa	21,615	4,776			16,839		
Laelay Maychew	9,840	2,218			7,622		
Tahtay Maychew	8,686	2,251			6,435		
Naeder Adet	6,624	1,505			5,119		
Kola Temben	12,186	3,645			8,542		
Degua Temben	4,107	1,121			2,986		
Tanqu Abergele	33,117	9,783			23,334		
East Tigray Zone	301,989	75,191			226,230		
Gulumahada	35,307	8,764			26,544		
Erob	8,398	2,346			6,053		
Saesi Tsaedamba	75,460	18,241			56,657		
Ganta Afeshum	40,749	11,040			29,707		
Hawzen	47,597	10,836			36,761		
Wukro	13,594	3,063			10,529		
Atsbi Wenberta	80,882	20,902			59,980		
South Tigray Zone	154,836	43,485			111,320		
Scharte Samre	42,021	10,532			31,489		
Enderta	1,738	1,474			233		
Hintalo Wajirat	7,252	2,966			4,286		
Ambalagge	21,044	5,618			15,425		
Endamehoni	24,285	6,946			17,339		
Rayaazebo	4,904	2,408			2,496		
Alamata	3,822	953			2,869		
Wofla	49,772	12,588			37,183		
Mekele Zone	470	164			289		
Mekele	470	164			289		

b) Rural Holdings

Geographic Area	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Tigray Region.....	670,801	173,263	•	•	496,489	•	•
West Tigray Zone.....	91,534	23,257	•	•	67,810	•	•
Kafta.....	12,024	2,897	-	-	8,907	-	-
Tahtay Adiyabo.....	15,490	3,954	-	-	11,536	-	-
Laelay Adiyabo.....	8,977	2,428	-	-	6,549	-	-
Tahtay Koraro.....	6,460	1,623	-	-	4,837	-	-
Medebay Zana.....	20,401	5,644	-	-	14,757	-	-
Asegede Tsimbela.....	9,030	2,364	-	-	6,666	-	-
Tselemti.....	6,043	•	•	-	4,258	•	-
Welkait.....	1,910	490	-	-	1,421	-	-
Tsegedde.....	11,199	2,320	-	-	8,879	-	-
Central Tigray Zone.....	130,891	33,939	-	-	96,952	-	-
Mereb Lehe.....	20,999	5,230	-	-	15,769	-	-
Ahiferom.....	7,662	1,986	-	-	5,676	-	-
Werie Lehe.....	8,370	2,008	-	-	6,361	-	-
Adwa.....	21,407	4,729	-	-	16,679	-	-
Laelay Maychew.....	9,068	2,073	-	-	6,995	-	-
Tahtay Maychew.....	8,385	2,167	-	-	6,218	-	-
Naeder Adet.....	6,613	1,505	-	-	5,108	-	-
Kola Temben.....	11,812	3,563	-	-	8,250	-	-
Degua Temben.....	3,836	1,045	-	-	2,791	-	-
Tanqu Abergele.....	32,738	9,634	-	-	23,104	-	-
East Tigray Zone.....	298,288	74,274	•	•	223,459	•	•
Gulumahada.....	35,173	8,731	-	-	26,442	-	-
Erob.....	8,299	2,326	-	-	5,973	-	-
Saesi Tsaedamba.....	74,410	17,987	•	•	55,869	•	•
Ganta Afeshum.....	39,908	10,844	-	-	29,064	-	-
Hawzen.....	46,754	10,669	-	-	36,085	-	-
Wukro.....	13,378	2,984	-	-	10,393	-	-
Atsbi Wenberta.....	80,365	20,732	-	-	59,633	-	-
South Tigray Zone.....	150,088	41,792	•	-	108,268	-	-
Seharte Samre.....	41,932	10,494	-	-	31,439	-	-
Enderta.....	1,440	1,300	•	-	•	-	-
Hintalo Wajirat.....	7,176	2,919	-	-	4,257	-	-
Ambalage.....	20,742	5,519	-	-	15,223	-	-
Endamehoni.....	23,469	6,642	-	-	16,827	-	-
Rayaazebo.....	4,269	2,064	-	-	2,205	-	-
Alamata.....	2,907	697	-	-	2,209	-	-
Wofla.....	48,153	12,157	-	-	35,996	-	-

c) Urban Holdings

Geographic Area	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Tigray Region	16,411	4,645			11,733		
West Tigray Zone	4,160	1,018			3,142		
Kafta	2,091	501			1,590		
Tahtay Adiyabo	577	170			407		
Laelay Adiyabo	104	20			84		
Tahtay Koraro	585	138			446		
Medebay Zana	285	63			222		
Asegode Tsimbela	249	61			188		
Tselemti							
Welkait							
Tsegedde	224	56					
Central Tigray Zone	3,332	853			2,480		
Mereb Lehe	740	207			533		
Ahiferom	201				157		
Werie Lehe							
Adwa	208	47					
Laelay Maychew	772	145			627		
Tahtay Maychew	301	84			217		
Naeder Adet							
Kola Temben	374	82			292		
Degua Temben	270	76			194		
Tanqu Abergele	380	150			230		
East Tigray Zone	3,701	917			2,771		
Gulumahada	134	32			102		
Erob	99	20			79		
Saesi Tsaedamba	1,049	253			788		
Ganta Afeshum	842	196			643		
Hawzen	843	167			676		
Wukro	217	78			136		
Atsbi Wenberta	517	170			347		
South Tigray Zone	4,748	1,693			3,052		
Scharte Samre							
Enderta	297	174			121		
Hintalo Wajirat	76	47					
Ambalagge	302	99			203		
Endamehoni	816	304			512		
Rayaazebo	636	345			291		
Alamata	915	255			660		
Wofla	1,618	431			1,187		
Mekele Zone	470	164			289		
Mekele	470	164			289		

TABLE 7-19: NUMBER OF GOATS BY SEX, BREED, ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Tigray Region .....	1,759,126	535,301	*	*	1,223,199	*	*
West Tigray Zone .....	712,147	215,767	*	*	495,774	*	*
Kafta .....	24,972	7,136	*	*	17,778	*	*
Tahtay Adiyabo .....	64,194	17,377	*	*	46,269	*	*
Laelay Adiyabo .....	70,187	18,587	*	*	51,600	*	*
Tahtay Koraro .....	31,376	9,617	*	*	21,760	*	*
Medebay Zana .....	62,876	18,870	*	*	44,006	*	*
Asegede Tsimbela .....	148,735	45,149	*	*	103,586	*	*
Tselemti .....	159,605	53,661	*	*	105,944	*	*
Welkait .....	77,518	22,300	*	*	55,218	*	*
Tsegedde .....	72,684	23,070	*	*	49,614	*	*
Central Tigray Zone .....	711,624	219,783	*	*	491,840	*	*
Mereb Lehe .....	52,981	14,869	*	*	38,112	*	*
Ahiferom .....	69,910	22,099	*	*	47,812	*	*
Werie Lehe .....	72,396	21,643	*	*	50,753	*	*
Adwa .....	60,531	18,687	*	*	41,844	*	*
Laelay Maychew .....	25,241	6,368	*	*	18,874	*	*
Tahtay Maychew .....	34,459	9,520	*	*	24,938	*	*
Naeder Adet .....	89,259	26,967	*	*	62,293	*	*
Kola Temben .....	123,393	41,217	*	*	82,177	*	*
Degua Temben .....	35,282	10,446	*	*	24,836	*	*
Tanqu Abergele .....	148,171	47,969	*	*	100,202	*	*
East Tigray Zone .....	139,366	40,230	*	*	99,116	*	*
Gulumahada .....	19,857	6,037	*	*	13,821	*	*
Erob .....	15,121	4,880	*	*	10,240	*	*
Saesi Tsaedamba .....	26,823	7,183	*	*	19,640	*	*
Ganta Afeshum .....	29,730	8,906	*	*	20,824	*	*
Hawzen .....	15,347	4,629	*	*	10,718	*	*
Wukro .....	10,207	2,789	*	*	7,398	*	*
Atsbi Wenberta .....	22,281	5,807	*	*	16,474	*	*
South Tigray Zone .....	195,953	59,514	*	*	136,439	*	*
Scharte Samre .....	74,120	21,689	*	*	52,431	*	*
Enderta .....	10,234	2,558	*	*	7,676	*	*
Hintalo Wajirat .....	21,248	6,851	*	*	14,397	*	*
Ambalagge .....	17,355	5,943	*	*	11,412	*	*
Endamehoni .....	13,968	4,337	*	*	9,631	*	*
Rayazebo .....	16,969	5,554	*	*	11,416	*	*
Alamata .....	14,398	4,466	*	*	9,931	*	*
Wofla .....	27,660	8,116	*	*	19,545	*	*
Mekele Zone .....	*	*	*	*	*	*	*
Mekele .....	*	*	*	*	*	*	*

## b) Rural Holdings

Geographic Area	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Tigray Region	1,748,296	532,239			1,215,431		
West Tigray Zone	708,210	214,813			492,791		
Kafta	24,391	7,005			17,327		
Tahtay Adiyabo	63,011	17,097			45,366		
Laelay Adiyabo	70,080	18,567			51,514		
Tahtay Koraro	31,333	9,608			21,725		
Medebay Zana	62,719	18,838			43,881		
Asegede Tsimbela	148,039	44,974			103,065		
Tselemti	158,915	53,495			105,420		
Welkait	77,037	22,160			54,877		
Tsegedde	72,684	23,070			49,614		
Central Tigray Zone	706,167	218,176			487,991		
Mereb Lehe	51,868	14,592			37,276		
Ahiferom	69,399	21,917			47,483		
Werie Lehe	71,891	21,504			50,387		
Adwa	60,342	18,638			41,704		
Laelay Maychew	24,978	6,300			18,678		
Tahtay Maychew	34,263	9,444			24,819		
Naeder Adet	89,015	26,909			62,105		
Kola Temben	122,599	41,001			81,597		
Degua Temben	35,189	10,426			24,762		
Tanqu Abergele	146,623	47,444			99,179		
East Tigray Zone	139,134	40,119			98,994		
Gulumahada	19,852	6,036			13,817		
Erob	15,109	4,877			10,232		
Saesi Tsaedamba	26,781	7,169			19,612		
Ganta Afeshum	29,699	8,895			20,804		
Hawzen	15,301	4,600			10,701		
Wukro	10,127	2,746			7,361		
Atsbi Wenberta	22,264	5,796			16,468		
South Tigray Zone	194,786	59,130			135,655		
Seharte Samre	73,859	21,604			52,255		
Enderta	10,206	2,548			7,658		
Hintalo Wajirat	21,220	6,849			14,371		
Ambalagge	17,129	5,886			11,244		
Endamehoni	13,933	4,325			9,608		
Rayaazebo	16,825	5,500			11,324		
Alamata	13,979	4,309			9,670		
Wofla	27,635	8,109			19,526		

c) Urban Holdings

Geographic Area	Total	MALE			FEMALE		
		Indigenous	Hybrid	Exotic	Indigenous	Hybrid	Exotic
Tigray Region.....	10,830	3,063			7,768		
West Tigray Zone.....	3,937	954			2,983		
Kafta.....	581	131			450		
Tahtay Adiyabo.....	1,183	280			902		
Laelay Adiyabo.....	107	*			87		
Tahtay Koraro.....	42	*			35		
Medebay Zana.....	157	32			124		
Asegede Tsimbela.....	696	175			521		
Tselemti.....	690	167			523		
Welkait.....	480	140			340		
Tsegedde.....							
Central Tigray Zone.....	5,457	1,607			3,850		
Mereb Lehe.....	1,113	276			836		
Ahiferom.....	511	182			329		
Werie Lehe.....	505	139			366		
Adwa.....	189	49			140		
Laelay Maychew.....	263	67			196		
Tahtay Maychew.....	196	77			119		
Naeder Adet.....	244	57			187		
Kola Temben.....	795	215			579		
Degua Temben.....	*	*			*		
Tanqu Abergele.....	1,548	525			1,023		
East Tigray Zone.....	233	111			122		
Gulumahada.....	*	*			*		
Erob.....	12	3			9		
Saesi Tsaedamba.....	*	*			*		
Ganta Afeshum.....	*	*			*		
Hawzen.....	*	*			*		
Wukro.....	*	*			*		
Atsbi Wenberta.....	*	*			*		
South Tigray Zone.....	1,167	384			784		
Seharte Samre.....	261	85			176		
Enderta.....	*	*			*		
Hintalo Wajirat.....	28	*			26		
Ambalagge.....	226	57			169		
Endamechoni.....	*	*			*		
Rayaaazebo.....	145	53			91		
Alamata.....	419	157			262		
Wofla.....	25	*			*		
Mekele Zone.....	*	*			*		
Mekele.....	*	*			*		

TABLE 7-20 ESTIMATED NUMBER OF LIVESTOCK VACCINATED BY ZONE, AND WEREDA  
a) Both Urban Rural Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region	1,351,737	190,853	319,218	42,597	13,607	24,428
West Tigray Zone	375,626	9,426	79,456	5,873	431	4,410
Kafta	25,822	2,264	•	861	•	•
Tahtay Adiyabo	58,838	973	6,245	809	49	710
Laelay Adiyabo	51,878	409	12,330	533	•	•
Tahtay Koraro	37,802	1,037	4,563	1,007	•	297
Medebay Zana	30,485	1,858	4,338	644	•	•
Asegede Tsimbela	52,582	•	14,613	•	•	•
Tselemti	48,081	•	24,980	•	•	•
Welkait	60,725	•	9,173	266	•	•
Tsegedde	9,413	1,270	1,244	•	•	•
Central Tigray Zone	350,872	29,434	162,947	14,694	1,346	4,689
Mereb Lehe	39,095	5,539	21,394	1,129	402	•
Ahiferom	49,853	•	23,088	3,096	•	•
Werie Lehe	42,594	1,823	21,173	2,024	•	•
Adwa	33,555	3,595	14,291	1,510	•	162
Laelay Maychew	24,266	1,917	3,334	1,604	•	595
Tahtay Maychew	28,511	1,445	5,472	207	•	•
Naeder Adet	42,060	984	22,238	460	•	•
Kola Temben	52,854	4,394	35,813	1,769	•	•
Degua Temben	23,847	•	1,876	1,063	•	•
Tanqu Abergele	14,237	4,389	14,267	1,832	•	•
East Tigray Zone	230,605	120,921	44,758	10,783	537	5,052
Gulumahada	28,420	14,945	7,046	1,216	•	•
Erob	4,772	2,031	1,280	489	•	994
Saesi Tsaedamba	44,519	12,165	•	•	•	•
Ganta Afeshum	36,509	18,197	11,686	567	•	•
Hawzen	44,324	23,918	6,626	4,488	•	•
Wukro	36,632	6,347	1,972	1,105	•	•
Atsbi Wenberta	35,428	43,319	6,058	2,576	•	•
South Tigray Zone	392,745	31,026	32,057	11,189	11,292	10,003
Seharte Samre	40,205	13,432	17,197	3,581	•	539
Enderta	37,276	121	•	839	•	406
Hintalo Wajirat	63,778	476	•	1,802	1,695	•
Ambalagge	23,736	2,074	496	251	•	166
Endamechoni	12,929	2,338	553	202	•	43
Rayaazebo	106,238	1,501	6,462	2,590	9,235	2,019
Alamata	65,200	1,013	•	307	•	•
Wofla	43,383	10,072	5,179	1,616	•	1,904
Mekele Zone	1,885	47	•	58	•	274
Mekele	1,885	47	•	58	•	274

Note: Draught animals in this and the following tables refer to Horses, Asses, and Mules.

b) Rural Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region .....	1,318,043	184,521	315,195	40,851	13,426	19,799
West Tigray Zone .....	364,902	8,529	78,273	5,545	367	3,366
Kafta .....	24,946	1,988	*	847	*	*
Tahtay Adiyabo .....	55,018	863	5,839	636	*	*
Lalay Adiyabo .....	51,165	380	12,248	520	*	*
Tahtay Koraro .....	36,545	711	4,539	938	*	*
Medebay Zana .....	30,003	1,800	4,305	637	*	*
Asegede Tsimbela .....	51,416	*	14,380	*	*	*
Tselemti .....	47,064	*	24,869	*	*	*
Welkait .....	59,362	*	9,041	*	*	*
Tsegedde .....	9,382	1,221	1,244	*	*	*
Central Tigray Zone .....	343,385	27,917	160,450	13,791	1,315	3,618
Mereb Lehe .....	38,340	5,226	21,004	1,090	382	*
Ahiferom .....	48,465	*	22,892	3,027	*	*
Werie Lehe .....	42,072	1,799	21,032	1,969	*	*
Adwa .....	33,055	3,543	14,234	1,470	*	*
Lalay Maychew .....	22,813	1,482	3,194	1,505	*	*
Tahtay Maychew .....	28,136	1,381	5,366	196	*	*
Naeder Adet .....	41,710	973	22,175	407	*	*
Kola Temben .....	51,692	4,137	35,403	1,505	*	*
Degua Temben .....	23,589	*	1,826	1,042	*	*
Tanqu Abergele .....	13,514	4,262	13,325	1,581	*	*
East Tigray Zone .....	227,723	119,346	44,680	10,573	537	4,844
Gulumahada .....	28,295	14,874	7,041	1,208	*	*
Erob .....	4,772	2,031	1,280	489	*	994
Saesi Tsaedamba .....	44,267	11,885	*	*	*	*
Ganta Afeshum .....	36,077	17,860	11,682	522	*	*
Hawzen .....	43,588	23,509	6,626	4,395	*	*
Wukro .....	35,533	6,213	*	1,065	*	*
Atsbi Wenberta .....	35,190	42,974	6,058	2,558	*	*
South Tigray Zone .....	382,034	28,729	31,792	10,942	11,207	7,971
Scharte Samre .....	39,605	13,398	17,163	3,553	*	*
Enderta .....	36,356	*	*	796	*	*
Hintalo Wajirat .....	62,598	*	*	1,755	1,691	*
Ambalagge .....	22,920	1,937	428	243	*	*
Endamehoni .....	12,532	*	544	*	*	*
Rayaazebo .....	104,703	*	6,363	2,551	9,166	*
Alamata .....	60,785	*	*	276	*	*
Wofla .....	42,535	9,303	5,170	1,575	*	1,885

c) Urban Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region	33,694	6,332	4,023	1,746	181	4,629
West Tigray Zone	10,724	897	1,183	328	64	1,044
Kafa	876	276	162	14		
Tahtay Adiyabo	3,819	110	406	173	32	478
Lalay Adiyabo	713	29	82	13		
Tahtay Koraro	1,257	325		69		237
Medebay Zana	481	58	33	7		
Asegede Tsimbela	1,167	39	233	13		
Tselemti	1,017		111			
Welkait	1,363		132			
Tsegedde	30	49		2		
Central Tigray Zone	7,487	1,517	2,497	903	31	1,071
Mereb Lehe	755	312	390	39	19	
Ahiferom	1,389	107	196	69		
Werie Lehe	522			56		
Adwa	500	52				
Lalay Maychew	1,453	435	140	99		576
Tahtay Maychew	375	64				
Naeder Adet	350			53		
Kola Temben	1,162	257	411	264		
Degua Temben	258	129		20		
Tanqu Abergele	723		942	251		
East Tigray Zone	2,882	1,575		210		208
Gulumahada	125	71		8		
Erob						
Saesi Tsacedamba	252	280				
Ganta Afeshum	432	337		46		
Hawzen	736	409		93		
Wukro	1,099	134		40		
Atsbi Wenberta	238	344				
South Tigray Zone	10,711	2,296	266	246		2,032
Scharte Samre	600			28		539
Enderta	920	121		43		206
Hintalo Wajirat	1,180			47		
Ambalagge	816	136	68			120
Endamehoni	397	319		8		43
Rayaazebo	1,535	423	98	39		537
Alamata	4,415	489	42	32		567
Wofla	848	769		42		19
Mekele Zone	1,885	47		58		274
Mekele	1,885	47		58		274

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

a) Both Rural and Urban Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region .....	162,782	57,703	166,088	13,400	2,404	456,534
West Tigray Zone .....	94,689	13,932	66,384	5,204	322	308,245
Kafta .....	5,603	1,779	2,572	754	*	52,176
Tahtay Adiyabo .....	8,025	4,077	6,217	553	*	20,030
Lalalay Adiyabo .....	14,409	2,659	10,117	624	*	44,533
Tahtay Koraro .....	4,818	463	903	644	*	10,212
Medebay Zana .....	9,428	1,938	7,845	685	*	36,691
Asegede Tsimbela .....	12,363	*	12,933	*	*	11,546
Tselemti .....	10,470	*	11,957	*	-	42,376
Welkait .....	17,497	*	8,606	379	*	65,118
Tsegedde .....	12,077	*	5,236	550	-	25,564
Central Tigray Zone .....	30,090	19,298	72,262	3,677	605	85,427
Mereb Lehe .....	5,584	7,595	13,452	500	*	40,550
Ahiferom .....	3,917	*	7,773	492	*	6,748
Werie Lehe .....	4,056	*	13,380	502	*	9,509
Adwa .....	3,864	2,455	7,128	701	-	4,740
Lalalay Maychew .....	1,984	380	972	179	-	2,553
Tahtay Maychew .....	2,292	411	1,723	*	*	5,625
Naeder Adet .....	2,296	*	8,015	*	-	*
Kola Temben .....	3,493	862	7,849	515	*	5,608
Degua Temben .....	979	*	*	*	-	*
Tanqu Abergele .....	1,626	3,261	9,217	351	-	6,444
East Tigray Zone .....	9,859	14,752	10,876	972	*	9,658
Gulumahada .....	2,289	4,579	3,855	291	-	3,706
Erob .....	534	453	1,956	187	-	*
Saesi Tsaedamba .....	1,681	1,447	*	-	-	*
Ganta Afeshum .....	1,231	955	*	*	-	1,249
Hawzen .....	1,312	2,560	1,082	*	-	*
Wukro .....	1,105	*	*	*	*	*
Atsbi Wenberta .....	1,707	4,387	374	280	-	575
South Tigray Zone .....	28,041	9,622	16,566	3,534	1,436	53,048
Seharte Samre .....	4,779	*	5,952	804	*	2,562
Enderta .....	4,633	*	*	993	*	2,182
Hintalo Wajirat .....	3,993	*	*	349	*	2,234
Ambalage .....	1,852	*	*	*	-	859
Endamehoni .....	2,689	1,058	1,311	*	-	1,100
Rayaazebo .....	4,984	*	805	665	731	26,184
Alamata .....	2,627	*	*	*	-	*
Wofla .....	2,484	1,335	2,521	551	-	10,987
Mekele Zone .....	103	*	-	*	-	156
Mekele .....	103	*	-	*	-	156

b) Rural Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region	160,202	56,211	165,172	13,051	2,361	435,108
West Tigray Zone	93,488	13,292	66,092	5,082	289	296,491
Kafta	5,398	1,409	2,488	703	-	46,254
Tahtay Adiyabo	7,734	3,916	6,145	517	-	18,487
Laelay Adiyabo	14,308	2,655	10,104	616	-	44,062
Tahtay Koraro	4,711	-	903	637	-	9,525
Medebay Zana	9,340	1,869	7,810	676	-	35,641
Asegode Tsimbela	12,227	-	12,912	-	-	10,200
Tselemti	10,371	-	11,953	-	-	42,302
Welkait	17,331	-	8,541	379	-	64,458
Tsegedde	12,068	-	5,236	550	-	25,561
Central Tigray Zone	29,511	19,041	71,772	3,546	596	79,369
Mereb Lehe	5,504	7,497	13,298	489	-	38,743
Ahiferom	3,838	-	7,768	470	-	6,157
Werie Lehe	3,982	-	13,334	490	-	8,873
Adwa	3,822	2,447	7,124	687	-	4,175
Laelay Maychew	1,875	280	960	173	-	-
Tahtay Maychew	2,257	395	1,723	-	-	-
Naeder Adet	2,251	-	8,000	-	-	5,285
Kola Temben	3,436	853	7,834	502	-	5,020
Degua Temben	977	-	-	-	-	-
Tanqu Abergele	1,570	3,242	8,978	319	-	5,860
East Tigray Zone	9,698	14,476	10,864	952	-	9,059
Gulumahada	2,284	4,570	3,850	291	-	3,647
Erob	531	445	1,949	183	-	-
Saesi Tsacedamba	1,656	1,417	-	-	-	-
Ganta Afeshum	1,214	944	-	-	-	1,049
Hawzen	1,273	2,516	1,082	-	-	-
Wukro	1,070	-	-	-	-	-
Atsbi Wenberta	1,671	4,275	374	271	-	-
South Tigray Zone	27,505	9,403	16,444	3,471	1,435	50,188
Scharte Samre	4,745	-	5,912	801	-	2,165
Enderta	4,578	-	-	983	-	1,570
Hintalo Wajirat	3,949	-	-	337	-	2,116
Ambalagge	1,843	-	-	-	-	739
Endamehoni	2,661	1,032	1,307	-	-	942
Rayaazebo	4,853	-	770	655	729	25,663
Alamata	2,465	-	-	-	-	-
Wofla	2,412	1,298	2,519	528	-	10,941

c) Urban Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region .....	2,580	1,492	916	348	43	21,427
West Tigray Zone .....	1,200	640	293	122	33	11,754
Kafta .....	205	370	83	51	*	5,922
Tahtay Adiyabo .....	290	*	73	37	*	1,543
Lalay Adiyabo .....	100	*	*	*	*	472
Tahtay Koraro .....	107	*	*	*	*	686
Medebay Zana .....	87	69	*	*	*	1,050
Asegede Tsimbela .....	136	*	*	*	*	1,346
Tselemti .....	99	*	*	*	*	73
Welkait .....	167	*	*	*	*	659
Tsegedde .....	9	7	*	*	*	2
Central Tigray Zone .....	580	257	490	132	*	6,058
Mereb Lehe .....	80	99	154	11	*	1,807
Ahiferom .....	78	*	*	*	*	591
Werie Lehe .....	74	*	*	*	*	636
Adwa .....	42	*	*	*	*	565
Lalay Maychew .....	110	101	12	*	*	709
Tahtay Maychew .....	35	17	*	*	*	340
Naeder Adet .....	46	*	*	*	*	239
Kola Temben .....	57	*	*	*	*	588
Degua Temben .....	*	*	*	*	*	*
Tanqu Abergele .....	57	*	*	*	*	583
East Tigray Zone .....	161	276	13	20	*	598
Gulumahada .....	5	*	*	*	*	59
Erob .....	3	8	8	3	*	7
Saesi Tsaedamba .....	25	30	*	*	*	*
Ganta Afeshum .....	17	11	*	*	*	199
Hawzen .....	39	*	*	*	*	*
Wukro .....	35	63	*	*	*	67
Atsbi Wenberta .....	36	112	*	*	*	212
South Tigray Zone .....	536	219	121	63	*	2,860
Seharte Samre .....	34	*	*	*	*	397
Enderta .....	56	21	*	*	*	612
Hintalo Wajirat .....	44	*	*	*	*	118
Ambalage .....	*	*	*	*	*	119
Endamehoni .....	28	26	*	*	*	157
Rayaazebo .....	131	119	*	11	*	521
Alamata .....	162	8	*	*	*	888
Wofla .....	71	38	*	*	*	46
Mekele Zone .....	103	*	*	*	*	156
Mekele .....	103	*	*	*	*	156

TABLE 7-22: ESTIMATED NUMBER OF LIVESTOCK TREATED BY ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region.....	67,704	19,840	53,239	4,661	1,844	13,730
West Tigray Zone.....	32,317	3,279	14,683	1,996	232	8,544
Kafta.....	1,731	222	*	225	*	*
Tahtay Adiyabo.....	3,668	*	1,204	157	*	1,189
Laclay Adiyabo.....	4,763	*	2,734	255	*	351
Tahtay Koraro.....	3,470	*	*	459	*	*
Medebay Zana.....	5,086	844	1,546	262	*	*
Asegede Tsimbela.....	3,396	*	*	*	*	*
Tselemti.....	4,631	*	2,759	*	*	*
Welkait.....	4,603	*	1,662	*	*	*
Tsegedde.....	969	*	*	*	*	*
Central Tigray Zone.....	17,285	6,470	28,290	1,416	470	*
Mereb Lehe.....	3,906	1,988	5,720	216	*	*
Ahiferom.....	3,094	*	*	*	*	*
Werie Lehe.....	1,806	*	5,640	*	*	*
Adwa.....	2,289	1,301	2,722	*	*	*
Laclay Maychew.....	815	153	*	*	*	149
Tahtay Maychew.....	939	*	*	*	*	*
Naeder Adet.....	1,206	*	1,260	*	*	*
Kola Temben.....	2,404	*	4,331	*	*	*
Degua Temben.....	410	*	*	*	*	*
Tanqu Abergele.....	417	*	2,736	*	*	*
East Tigray Zone.....	5,569	7,081	5,537	253	*	*
Gulumahada.....	*	1,947	2,076	*	*	*
Erob.....	172	*	459	46	*	*
Saesi Tsaedamba.....	824	22	*	*	*	*
Ganta Afeshum.....	*	*	*	*	*	*
Hawzen.....	788	1,328	808	*	*	*
Wukro.....	407	*	*	*	*	*
Atsbi Wenberta.....	1,147	3,140	*	*	*	*
South Tigray Zone.....	12,442	3,002	4,728	991	1,101	1,639
Seharte Samre.....	1,235	*	1,589	*	*	89
Enderta.....	1,373	17	*	152	*	*
Hintalo Wajirat.....	2,182	*	*	*	*	*
Ambalagge.....	1,346	*	*	*	*	*
Endamehoni.....	1,658	*	*	*	*	*
Rayaaazebo.....	2,263	*	227	320	614	590
Alamata.....	1,043	*	*	*	*	*
Wofla.....	1,343	150	1,837	*	*	*
Mekele Zone.....	91	*	*	*	*	*
Mekele.....	91	*	*	*	*	*

b) Rural Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region.....	65,985	19,149	52,795	4,469	1,804	11,614
West Tigray Zone.....	31,498	3,063	14,570	1,931	201	7,643
Kafta.....	1,615	160	•	207	•	•
Tahtay Adiyabo.....	3,410	•	1,154	127	•	679
Lalay Adiyabo.....	4,689	•	2,724	253	•	•
Tahtay Koraro.....	3,386	•	•	454	•	•
Medebay Zana.....	5,030	•	1,538	260	•	•
Asegede Tsimbela.....	3,329	•	•	•	•	•
Tselemti.....	4,551	•	2,756	•	•	•
Welkait.....	4,530	•	1,660	•	•	•
Tsegedde.....	959	•	•	•	•	•
Central Tigray Zone.....	16,870	6,320	28,064	1,335	461	•
Mereb Lehe.....	3,858	1,944	5,720	205	•	•
Ahiferom.....	3,033	•	•	•	•	•
Werie Lehe.....	1,749	•	5,603	•	•	•
Adwa.....	2,257	1,294	2,722	•	•	•
Lalay Maychew.....	735	•	•	•	•	•
Tahtay Maychew.....	913	•	•	•	•	•
Naeder Adet.....	1,160	•	1,245	•	•	•
Kola Temben.....	2,354	•	4,322	•	•	•
Degua Temben.....	410	•	•	•	•	•
Tanqu Abergele.....	401	•	2,571	•	•	•
East Tigray Zone.....	5,453	6,930	5,533	241	•	•
Gulumahada.....	•	1,943	2,076	•	•	•
Erob.....	172	•	455	45	•	•
Saesi Tsaedamba.....	804	•	•	•	•	•
Ganta Afeshum.....	•	•	•	•	•	•
Hawzen.....	768	1,315	808	•	•	•
Wukro.....	377	•	•	•	•	•
Atsbi Wenberta.....	1,119	3,067	•	•	•	•
Southl Tigray Zone.....	12,162	2,836	4,629	962	1,101	•
Scharte Samre.....	1,213	•	1,565	•	•	•
Enderta.....	1,333	•	•	142	•	•
Hintalo Wajirat.....	2,153	•	•	•	•	•
Ambalagge.....	1,337	•	•	•	•	•
Endamechoni.....	1,632	•	•	•	•	•
Rayaazebo.....	2,188	•	•	•	•	•
Alamata.....	1,007	•	•	312	614	•
Wofla.....	1,300	•	1,837	•	•	•

c) Urban Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region.....	1,719	691	443	192	40	2,116
West Tigray Zone.....	818	216	113	65	31	901
Kafta.....	117	62	*	18	*	*
Tahtay Adiyabo.....	258	*	51	30	*	510
Laelay Adiyabo.....	74	*	*	*	*	*
Tahtay Koraro.....	84	*	*	*	*	*
Medebay Zana.....	*	*	*	*	*	*
Asegede Tsimbela.....	67	*	*	*	*	*
Tselemti.....	80	*	*	*	*	*
Welkait.....	73	*	*	*	*	*
Tsegedde.....	9	7	*	*	*	*
Central Tigray Zone.....	415	151	*	80	*	451
Mereb Lehe.....	48	*	*	11	*	*
Ahiferom.....	61	*	*	*	*	*
Werie Lehe.....	57	*	*	*	*	*
Adwa.....	32	*	*	*	*	*
Laelay Maychew.....	80	74	*	*	*	149
Tahtay Maychew.....	25	13	*	*	*	*
Naeder Adet.....	46	*	*	*	*	*
Kola Temben.....	50	*	*	*	*	68
Degua Temben.....	*	*	*	*	*	*
Tanqu Abergele.....	*	*	*	*	*	*
East Tigray Zone.....	115	151	4	*	*	*
Gulumahada.....	*	*	*	*	*	*
Erob.....	*	2	4	1	*	*
Saesi Tsaedamba.....	20	22	*	*	*	*
Ganta Afeshum.....	16	*	*	*	*	*
Hawzen.....	20	*	*	*	*	*
Wukro.....	30	31	*	*	*	*
Atsbi Wenberta.....	27	74	*	*	*	*
South Tigray Zone.....	280	165	99	29	*	682
Seharte Samre.....	22	*	*	*	*	89
Enderta.....	40	17	*	*	*	*
Hintalo Wajirat.....	29	*	*	*	*	*
Ambalagge.....	*	*	*	*	*	*
Endamechoni.....	26	16	*	*	*	24
Rayaazebo.....	75	*	*	8	*	378
Alamata.....	35	*	*	*	*	*
Wofla.....	43	34	*	*	*	*
Mekele Zone.....	91	*	*	*	*	*
Mekele.....	91	*	*	*	*	*

TABLE 7-23: ESTIMATED NUMBER OF LIVESTOCK DIED BY ZONE, AND WEREDA  
a) Both Rural and Urban Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region.....	60,658	43,387	108,786	6,052	387	416,944
West Tigray Zone.....	33,329	10,165	41,851	2,103	*	281,913
Kafta.....	1,900	1,329	1,939	258	*	48,256
Tahtay Adiyabo.....	2,899	2,871	3,367	162	-	16,648
Laelay Adiyabo.....	3,935	2,393	6,304	259	-	42,387
Tahtay Koraro.....	1,577	*	656	116	-	9,626
Medebay Zana.....	3,593	1,389	6,563	471	-	32,416
Asegede Tsimbela.....	5,052	-	8,102	342	*	9,861
Tselemti.....	3,755	*	6,371	*	-	39,992
Welkait.....	5,626	*	5,085	*	*	59,540
Tsegedde.....	4,993	*	3,463	347	-	23,187
Central Tigray Zone.....	10,177	16,683	51,440	2,244	*	77,933
Mereb Lehe.....	1,619	6,728	9,702	342	*	36,433
Ahiferom.....	2,030	*	6,540	*	-	6,459
Werie Lehe.....	543	*	9,514	*	*	8,331
Adwa.....	1,166	1,935	4,678	*	-	4,609
Laelay Maychew.....	459	311	404	162	-	2,451
Tahtay Maychew.....	755	364	1,060	*	-	5,498
Naeder Adet.....	944	*	6,591	*	-	*
Kola Temben.....	1,078	655	4,150	227	-	4,943
Degua Temben.....	599	*	*	-	-	*
Tanqu Abergele.....	985	2,529	6,389	299	-	5,656
East Tigray Zone.....	3,360	10,308	5,312	252	-	7,968
Gulumahada.....	393	2,882	2,171	-	-	3,359
Erob.....	256	325	1,349	117	-	32
Saesi Tsaedamba.....	*	911	*	-	-	*
Ganta Afeshum.....	*	*	*	-	-	884
Hawzen.....	170	1,682	652	*	-	*
Wukro.....	690	*	*	-	-	120
Atsbi Wenberta.....	887	3,953	*	*	-	569
South Tigray Zone.....	13,770	6,138	10,183	1,447	*	49,007
Seharte Samre.....	2,265	*	*	193	-	1,938
Enderta.....	3,094	*	*	551	*	1,968
Hintalo Wajirat.....	2,376	*	*	*	-	1,953
Ambalagge.....	706	*	*	-	-	581
Endamehoni.....	432	436	*	*	-	861
Rayaazebo.....	2,240	*	602	378	*	25,198
Alamata.....	1,876	*	*	*	-	*
Wofla.....	781	*	*	*	-	9,866
Mekele Zone.....	22	*	-	*	-	124
Mekele.....	22	*	-	*	-	124

## b) Rural Holdings

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region.....	59,722	42,376	108,216	5,861	364	397,129
West Tigray Zone.....	32,913	9,654	41,659	2,036	*	271,002
Kafta.....	1,785	1,034	1,886	223	-	42,779
Tahtay Adiyabo.....	2,835	2,744	3,337	151	-	15,246
Lacalay Adiyabo.....	3,909	2,389	6,291	255	-	41,926
Tahtay Koraro.....	1,544	*	656	113	-	9,020
Medebay Zana.....	3,557	1,329	6,529	463	-	31,425
Asegede Tsimbela.....	4,979	-	8,087	338	*	8,558
Tselemti.....	3,739	*	6,371	*	-	39,923
Welkait.....	5,576	*	5,039	*	-	58,940
Tsegedde.....	4,988	*	3,463	347	-	23,187
Central Tigray Zone.....	9,994	16,570	51,125	2,169	*	72,308
Mereb Lehe.....	1,601	6,667	9,604	335	*	34,640
Ahiferom.....	2,022	*	6,535	*	-	5,880
Werie Lehe.....	517	*	9,473	*	*	7,786
Adwa.....	1,154	1,934	4,678	*	-	4,095
Lacalay Maychew.....	429	280	391	155	-	*
Tahtay Maychew.....	736	353	1,060	*	-	5,198
Naeder Adet.....	939	*	6,586	*	-	*
Kola Temben.....	1,053	651	4,144	225	-	4,378
Degua Temben.....	598	-	*	-	-	*
Tanqu Abergele.....	946	2,529	6,242	267	-	5,173
East Tigray Zone.....	3,302	10,122	5,303	243	-	7,383
Gulumahada.....	389	2,874	2,166	-	-	3,300
Erob.....	254	321	1,346	114	-	*
Saesi Tsaedamba.....	*	892	*	-	-	*
Ganta Afeshum.....	*	*	*	-	-	*
Hawzen.....	156	1,667	652	*	-	*
Wukro.....	686	*	*	-	-	*
Atsbi Wenberta.....	860	3,850	*	*	-	*
South Tigray Zone.....	13,514	6,030	10,128	1,413	*	46,435
Scharte Samre.....	2,262	*	*	*	-	1,563
Enderta.....	3,072	*	*	547	*	1,424
Hintalo Wajirat.....	2,343	*	*	*	-	1,841
Ambalagge.....	706	*	*	-	-	*
Endamehoni.....	427	419	*	-	-	720
Rayazebo.....	2,159	*	571	374	*	24,813
Alamata.....	1,784	*	*	-	-	*
Wofla.....	762	*	*	*	-	9,820

c) Urban Holders

Geographic Area	Cattle	Sheep	Goats	Draught Animals	Camels	Poultry
Tigray Region.....	935	1,011	570	192	•	19,816
West Tigray Zone.....	416	511	192	67	•	10,911
Kafta.....	115	294	•	35	•	5,477
Tahtay Adiyabo.....	64	•	•	•	•	1,402
Laclay Adiyabo.....	25	•	•	•	•	462
Tahtay Koraro.....	32	•	•	•	•	606
Medebay Zana.....	36	•	•	•	•	991
Asegede Tsimbela.....	73	•	•	•	•	1,303
Tselemti.....	17	•	•	•	•	70
Welkait.....	49	•	•	•	•	601
Tsegedde.....	5	•	•	•	•	•
Central Tigray Zone.....	183	113	315	75	•	5,624
Mereb Lehe.....	•	61	98	•	•	1,794
Ahiferom.....	•	•	•	•	•	579
Werie Lehe.....	•	•	•	•	•	544
Adwa.....	•	•	•	•	•	514
Laclay Maychew.....	30	31	12	•	•	622
Tahtay Maychew.....	•	•	•	•	•	300
Naeder Adet.....	•	•	•	•	•	223
Kola Temben.....	24	•	•	•	•	566
Degua Temben.....	•	•	•	•	•	•
Tanqu Abergele.....	•	•	•	•	•	483
East Tigray Zone.....	59	186	•	9	•	585
Gulumahada.....	4	•	•	•	•	59
Erob.....	2	3	3	3	•	7
Saesi Tsaedamba.....	•	19	•	•	•	•
Ganta Afeshum.....	•	•	•	•	•	198
Hawzen.....	•	•	•	•	•	•
Wukro.....	•	37	•	•	•	67
Atsbi Wenberta.....	27	102	•	•	•	206
South Tigray Zone.....	256	108	•	34	•	2,571
Sharte Samre.....	•	•	•	•	•	376
Enderta.....	22	•	•	•	•	544
Hintalo Wajirat.....	33	•	•	•	•	112
Ambalagge.....	•	•	•	•	•	108
Endamehoni.....	•	•	•	•	•	141
Rayaaazebo.....	82	67	•	•	•	385
Alamata.....	92	8	•	•	•	859
Wofla.....	19	•	•	•	•	46
Mekele Zone.....	22	•	•	•	•	124
Mekele.....	22	•	•	•	•	124

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

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Tigray Region	100	31.49	34.17	0.40	13.75	2.44	17.67
West Tigray Zone	100	50.52	26.14	0.50	12.40	4.62	5.75
Kafta	100	58.43	26.87	0.27	1.48	6.46	6.48
Tahtay Adiyabo	100	60.70	20.94	0.83	11.86	1.87	3.79
Laelay Adiyabo	100	44.55	27.68	0.37	16.86	7.34	3.14
Tahtay Koraro	100	30.43	37.21	1.51	16.70	6.98	7.19
Medebay Zana	100	35.33	31.36	0.29	14.30	3.34	15.40
Asegede Tsimbela	100	45.27	27.48	0.67	19.44	3.76	3.37
Tselemti	100	48.65	29.30	0.55	15.48	1.47	4.54
Welkait	100	54.93	22.58	0.04	11.28	6.94	4.20
Tsegedde	100	76.45	11.91	0.01	4.18	3.45	3.70
Central Tigray Zone	100	25.25	35.61	0.11	16.63	0.88	21.45
Mereb Lehe	100	34.67	25.88	0.13	23.15	0.47	15.72
Ahiferom	100	32.51	36.08	0.00	21.33	1.03	9.05
Werie Lehe	100	32.04	27.93	0.20	15.53	0.45	23.82
Adwa	100	16.21	34.45	0.04	19.36	0.64	29.32
Laelay Maychew	100	16.46	44.25	0.06	7.02	1.16	31.06
Tahtay Maychew	100	21.88	40.18	0.07	12.74	0.21	24.83
Naeder Adet	100	23.61	25.88	0.40	23.95	2.19	24.00
Kola Temben	100	34.36	33.47	0.02	15.92	0.48	15.64
Degua Temben	100	14.83	41.10	0.11	18.03	0.48	25.21
Tanqu Abergele	100	25.91	46.95	0.07	9.28	1.67	15.84
East Tigray Zone	100	29.89	31.41	0.64	12.97	1.49	23.52
Gulumahada	100	31.71	28.61	1.26	7.87	3.31	26.91
Erob	100	22.24	21.46	0.02	9.59	0.24	46.44
Saesi Tsaedamba	100	36.50	23.93	0.59	10.05	1.92	26.98
Ganta Afeshum	100	21.57	38.20	0.53	13.39	2.04	24.30
Hawzen	100	24.47	43.28	0.94	18.88	1.44	11.01
Wukro	100	33.56	32.33	0.33	17.14	0.89	15.63
Atsbi Wenberta	100	39.18	32.09	0.81	13.91	0.62	13.40
South Tigray Zone	100	27.15	44.94	0.47	11.13	0.97	15.26
Seharte Samre	100	17.89	43.32	2.05	19.40	0.53	16.81
Enderta	100	23.72	41.91	0.27	11.36	2.09	20.66
Hintalo Wajirat	100	20.21	47.59	0.36	15.95	1.15	14.76
Ambalagge	100	27.51	39.89	0.07	17.90	0.43	14.20
Endamehoni	100	29.00	40.61	0.42	8.89	2.46	18.59
Rayazebo	100	35.06	41.56	0.03	8.54	0.33	14.40
Alamata	100	32.02	53.03	0.52	4.51	0.51	9.34
Wofla	100	31.81	51.67	0.04	2.54	0.26	13.35
Mekele Zone	100	13.26	22.83	0.43	16.77	6.99	39.73
Mekele	100	13.26	22.83	0.43	16.77	6.99	39.73

b) Rural Holdings

Geographic Area	Total (%)	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Tigray Region.....	100	36.04	42.65	0.18	14.49	1.53	4.98
West Tigray Zone.....	100	54.85	29.45	0.18	11.32	3.10	0.98
Kafta.....	100	63.76	24.98	0.06	1.65	7.60	1.90
Tahtay Adiyabo.....	100	62.53	20.09	0.06	13.37	2.72	1.18
Laclay Adiyabo.....	100	57.31	27.66	0.17	13.80	0.80	0.10
Tahtay Koraro.....	100	40.95	37.56	0.88	15.94	3.33	1.34
Medebay Zana.....	100	40.07	39.75	0.23	16.51	2.46	0.97
Asegede Tsimbela.....	100	44.25	32.94	0.14	18.73	2.59	1.29
Tselemti.....	100	48.02	39.40	0.04	9.09	1.94	1.48
Welkait.....	100	61.87	23.23	0.04	9.62	4.99	0.15
Tsegedde.....	100	74.89	19.41	0.02	3.15	1.49	0.39
Central Tigray Zone.....	100	32.18	45.58	0.10	19.07	0.88	2.02
Mereb Lehe.....	100	40.51	30.61	0.13	27.14	0.86	0.75
Ahiferom.....	100	26.33	47.25	-	23.22	1.96	1.24
Werie Lehe.....	100	44.55	33.95	0.24	17.01	0.89	3.28
Adwa.....	100	23.56	51.24	0.07	23.52	0.22	1.38
Laclay Maychew.....	100	23.63	65.91	0.06	7.01	0.60	2.78
Tahtay Maychew.....	100	29.28	51.81	0.13	15.82	0.08	2.68
Naeder Adet.....	100	35.49	33.32	0.22	27.93	0.33	2.72
Kola Temben.....	100	42.79	40.04	0.03	15.86	0.21	0.82
Degua Temben.....	100	23.54	48.96	0.13	23.63	0.38	2.84
Tanqu Abergele.....	100	32.09	52.72	0.03	9.57	3.26	1.72
East Tigray Zone.....	100	32.73	37.84	0.30	14.21	1.30	13.57
Gulumahada.....	100	30.06	38.81	0.25	10.73	2.07	18.08
Erob.....	100	29.48	23.62	0.04	4.34	0.48	42.01
Saesi Tsaedamba.....	100	42.52	30.62	0.09	12.26	1.95	12.47
Ganta Afeshum.....	100	25.81	44.85	0.23	15.22	0.94	12.95
Hawzen.....	100	25.04	46.02	0.75	23.21	1.93	3.06
Wukro.....	100	39.42	36.12	0.28	17.39	1.07	5.44
Atsbi Wenberta.....	100	36.77	44.84	0.49	16.29	0.65	0.97
South Tigray Zone.....	100	24.41	57.74	0.15	13.35	0.83	3.37
Seharte Samre.....	100	21.09	55.89	0.05	20.78	0.88	1.25
Enderta.....	100	27.01	49.33	0.32	15.07	0.47	7.79
Hintalo Wajirat.....	100	13.20	58.08	0.51	21.64	1.30	5.27
Ambalagge.....	100	27.81	48.99	0.03	20.90	0.72	1.51
Endamechoni.....	100	22.81	58.56	0.10	11.33	2.30	4.81
Rayaaazebo.....	100	31.55	53.80	0.04	9.99	0.39	4.06
Alamata.....	100	34.01	59.29	0.04	5.05	0.40	1.04
Wofla.....	100	17.77	78.00	0.07	2.02	0.21	1.23

## c) Urban Holdings

Geographic Area	Total (%)	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Tigray Region.....	100	26.94	25.69	0.63	13.02	3.36	30.35
West Tigray Zone.....	100	46.20	22.84	0.82	13.47	6.14	10.53
Kafta.....	100	53.09	28.76	0.48	1.30	5.32	11.05
Tahtay Adiyabo.....	100	58.87	21.78	1.60	10.34	1.02	6.39
Lalay Adiyabo.....	100	31.79	27.69	0.57	19.92	13.87	6.17
Tahtay Koraro.....	100	19.90	36.85	2.14	17.46	10.63	13.03
Medebay Zana.....	100	30.58	22.97	0.34	12.09	4.21	29.82
Asegede Tsimbela.....	100	46.29	22.01	1.19	20.15	4.92	5.45
Tselemti.....	100	49.28	19.20	1.05	21.87	1.00	7.60
Welkait.....	100	47.99	21.92	0.03	12.93	8.88	8.25
Tsegedde.....	100	78.00	4.40	-	5.20	5.40	7.00
Central Tigray Zone.....	100	18.32	25.65	0.11	14.19	0.87	40.87
Mereb Lehe.....	100	28.83	21.15	0.12	19.16	0.07	30.68
Ahiferom.....	100	38.69	24.91	-	19.43	0.10	16.86
Werie Lehe.....	100	19.53	21.91	0.15	14.05	-	44.36
Adwa.....	100	8.85	17.65	-	15.19	1.06	57.26
Lalay Maychew.....	100	9.29	22.58	0.06	7.02	1.72	59.33
Tahtay Maychew.....	100	14.48	28.55	-	9.66	0.34	46.97
Naeder Adet.....	100	11.72	18.43	0.58	19.96	4.04	45.27
Kola Temben.....	100	25.92	26.89	-	15.98	0.75	30.46
Degua Temben.....	100	6.12	33.23	0.09	12.42	0.57	47.57
Tanqu Abergele.....	100	19.72	41.17	0.11	8.98	0.07	29.96
East Tigray Zone.....	100	27.05	24.98	0.97	11.74	1.68	33.48
Gulumahada.....	100	33.36	18.41	2.27	5.01	4.54	35.74
Erob.....	100	15.00	19.30	-	14.83	-	50.87
Saesi Tsaedamba.....	100	30.48	17.23	1.09	7.84	1.88	41.49
Ganta Afeshum.....	100	17.32	31.54	0.82	11.55	3.14	35.64
Hawzen.....	100	23.89	40.53	1.13	14.55	0.94	18.96
Wukro.....	100	27.69	28.54	0.37	16.88	0.70	25.82
Atsbi Wenberta.....	100	41.59	19.34	1.13	11.53	0.58	25.82
South Tigray Zone.....	100	29.89	32.15	0.79	8.92	1.10	27.15
Seharte Samre.....	100	14.68	30.74	4.05	18.01	0.17	32.36
Enderta.....	100	20.42	34.49	0.21	7.65	3.71	33.52
Hintalo Wajirat.....	100	27.21	37.09	0.21	10.26	0.99	24.24
Ambalagge.....	100	27.20	30.78	0.10	14.89	0.14	26.89
Endamehoni.....	100	35.18	22.65	0.74	6.45	2.62	32.37
Rayaazebo.....	100	38.57	29.31	0.02	7.08	0.27	24.74
Alamata.....	100	30.02	46.77	1.00	3.97	0.61	17.63
Wofla.....	100	45.84	25.33	0.01	3.05	0.31	25.46
Mekele Zone.....	100	13.26	22.83	0.43	16.77	6.99	39.73
Mekele.....	100	13.26	22.83	0.43	16.77	6.99	39.73

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

a) Both Rural and Urban Holdings

Geographic Area	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Tigray Region.....	539,684	578,966	6,884	409,853	76,604	141,684
West Tigray Zone.....	159,383	154,328	1,996	99,600	37,541	14,781
Kafta.....	9,186	7,920	*	1,108	4,463	1,385
Tahtay Adiyabo.....	15,980	15,078	86	12,498	2,452	2,311
Laelay Adiyabo.....	19,420	19,298	206	15,004	2,707	436
Tahtay Koraro.....	12,411	12,151	857	10,095	2,889	2,212
Medebay Zana.....	19,466	20,409	170	17,807	4,016	2,855
Asegede Tsimbela.....	19,831	20,115	*	15,981	4,636	2,154
Tselemti.....	25,848	25,187	170	12,568	5,735	2,049
Welkait.....	22,122	20,246	*	11,283	8,295	627
Tsegedde.....	15,117	13,925	*	3,257	2,349	753
Central Tigray Zone.....	170,943	179,369	1,262	145,614	15,130	34,359
Mereb Lehe.....	15,242	14,589	159	14,749	889	2,487
Ahiferom.....	24,109	26,002	*	25,494	5,809	4,896
Werie Lehe.....	24,780	22,538	130	19,664	2,574	6,895
Adwa.....	17,005	19,331	156	16,934	364	3,337
Laelay Maychew.....	11,509	11,739	73	5,201	743	4,445
Tahtay Maychew.....	13,028	13,908	*	9,129	*	2,147
Naeder Adet.....	18,636	18,282	369	17,900	380	2,232
Kola Temben.....	23,276	22,216	*	14,991	*	2,803
Degua Temben.....	12,881	16,892	*	15,420	*	3,452
Tanqu Abergele.....	10,477	13,872	*	6,132	2,435	1,664
East Tigray Zone.....	94,982	96,284	2,225	76,057	13,869	48,737
Gulumahada.....	12,597	12,881	183	7,608	1,518	9,407
Erob.....	3,904	3,311	*	1,556	243	3,582
Saesi Tsaedamba.....	19,012	19,225	*	13,857	5,578	12,121
Ganta Afeshum.....	15,257	15,343	438	12,306	1,966	11,512
Hawzen.....	14,681	16,052	684	15,039	2,321	4,546
Wukro.....	13,690	13,292	*	12,517	1,256	5,888
Atsbi Wenberta.....	15,840	16,180	227	13,173	987	1,680
South Tigray Zone.....	113,607	148,237	1,360	87,900	9,617	42,595
Seharte Samre.....	16,566	20,036	*	18,435	1,570	4,404
Endera.....	18,085	18,885	286	14,392	846	11,583
Hintalo Wajirat.....	12,224	22,225	399	20,081	2,106	10,015
Ambalagge.....	13,871	14,879	*	12,962	751	2,226
Endamehoni.....	10,929	12,398	*	7,515	2,615	5,333
Rayaazebo.....	13,825	19,189	*	8,556	*	4,371
Alamata.....	12,745	16,109	95	3,680	460	1,400
Wofla.....	15,362	24,517	*	2,279	*	3,263
Mekele Zone.....	770	748	41	683	447	1,212
Mekele.....	770	748	41	683	447	1,212

## b) Rural Holdings

Geographic Area	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Tigray Region.....	524,194	564,913	6,526	399,882	73,773	126,299
West Tigray Zone.....	154,369	149,974	1,813	96,499	35,906	12,418
Kafta.....	8,172	7,083	*	987	4,169	868
Tahtay Adiyabo.....	14,614	13,935	*	11,663	2,326	1,825
Laelay Adiyabo.....	19,142	19,025	204	14,759	2,504	*
Tahtay Koraro.....	12,079	11,725	743	9,740	2,552	1,949
Medebay Zana.....	19,175	20,146	165	17,557	3,904	2,609
Asegede Tsimbela.....	19,317	19,678	*	15,568	4,497	2,028
Tselemti.....	25,273	24,772	*	12,093	5,691	1,753
Welkait.....	21,536	19,698	*	10,895	7,931	268
Tsegedde.....	15,061	13,913	*	3,236	2,333	739
Central Tigray Zone.....	167,011	175,429	1,239	142,242	14,793	28,395
Mereb Lehe.....	14,646	14,038	155	14,175	884	1,745
Ahiferom.....	23,417	25,403	*	24,898	5,791	4,261
Werie Lehe.....	24,441	22,259	130	19,418	2,569	6,422
Adwa.....	16,770	19,066	156	16,709	336	2,764
Laelay Maychew.....	10,914	11,079	73	4,775	596	2,964
Tahtay Maychew.....	12,861	13,720	*	8,975	*	1,868
Naeder Adet.....	18,495	18,126	364	17,740	291	1,989
Kola Temben.....	22,662	21,594	*	14,422	*	2,014
Degua Temben.....	12,818	16,769	*	15,333	*	3,281
Tanqu Abergele.....	9,989	13,375	*	5,797	2,427	1,087
East Tigray Zone.....	93,462	94,933	2,178	74,947	13,721	46,901
Gulumahada.....	12,539	12,849	183	7,599	1,513	9,337
Erob.....	3,871	3,283	*	1,528	243	3,549
Saesi Tsaedamba.....	18,801	19,074	*	13,744	5,547	11,827
Ganta Afeshum.....	15,008	15,044	425	12,111	1,901	11,132
Hawzen.....	14,400	15,787	661	14,812	2,306	4,241
Wukro.....	13,238	12,875	*	12,127	1,233	5,400
Atsbi Wenberta.....	15,604	16,022	222	13,025	978	1,414
South Tigray Zone.....	109,353	144,577	1,296	86,195	9,353	38,586
Seharte Samre.....	16,237	19,784	*	18,185	1,568	4,008
Enderta.....	17,526	18,487	279	14,115	734	10,982
Hintalo Wajirat.....	11,894	21,893	392	19,807	2,063	9,664
Ambalagge.....	13,520	14,593	*	12,706	745	1,856
Endamehoni.....	10,526	12,165	*	7,375	2,568	4,928
Rayaaazebo.....	13,371	18,790	*	8,348	*	3,975
Alamata.....	11,416	14,684	*	3,453	431	398
Wofla.....	14,862	24,182	*	2,206	*	2,775

c) Urban Holdings

Geographic Area	Green Fodder	Crop Residue	Improved Feed	Hay	By-Product	Others
Tigray Region.....	15,490	14,053	358	9,971	2,832	15,384
West Tigray Zone.....	5,014	4,354	183	3,102	1,635	2,363
Kafta.....	1,014	837	13	120	294	518
Tahtay Adiyabo.....	1,366	1,142	31	835	127	486
Laelay Adiyabo.....	278	273	*	244	203	56
Tahtay Koraro.....	332	427	114	355	337	263
Medebay Zana.....	291	263	*	250	112	246
Asegede Tsimbela.....	514	436	*	413	138	126
Tselemti.....	575	416	*	475	44	296
Welkait.....	586	548	*	388	365	358
Tsegedde.....	56	12	-	21	16	14
Central Tigray Zone.....	3,932	3,940	23	3,372	337	5,964
Mereb Lehe.....	595	551	*	574	*	742
Ahiferom.....	692	599	-	597	*	635
Werie Lehe.....	339	278	-	245	*	474
Adwa.....	236	264	-	225	29	573
Laelay Maychew.....	596	660	-	426	147	1,481
Tahtay Maychew.....	167	188	-	154	7	279
Naeder Adet.....	141	156	*	161	89	244
Kola Temben.....	614	622	-	569	*	789
Degua Temben.....	64	123	*	88	9	170
Tanqu Abergele.....	488	497	*	335	*	577
East Tigray Zone.....	1,520	1,351	47	1,110	148	1,837
Gulumahada.....	58	33	-	9	*	70
Erob.....	33	28	-	29	-	33
Saesi Tsaedamba.....	211	151	*	113	31	295
Ganta Afeshum.....	249	299	13	194	65	380
Hawzen.....	281	266	23	226	15	304
Wukro.....	452	417	*	390	23	488
Atsbi Wenberta.....	235	158	*	148	9	266
South Tigray Zone.....	4,254	3,660	64	1,705	264	4,009
Seharte Samre.....	329	252	-	250	*	396
Enderta.....	559	398	*	277	112	601
Hintalo Wajirat.....	330	332	*	274	42	351
Ambalagge.....	351	286	*	256	*	370
Endamehoni.....	403	233	13	140	47	405
Rayaaazebo.....	454	399	*	208	7	396
Alamata.....	1,328	1,425	33	226	29	1,003
Wofla.....	500	335	*	74	19	488
Mekele Zone.....	770	748	41	683	447	1,212
Mekele.....	770	748	41	683	447	1,212

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

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	43.26	7.30	0.59	48.84
West Tigray Zone .....	100	43.21	2.51	0.60	53.69
Kafta .....	100	62.18	6.63	0.20	31.00
Tahtay Adiyabo .....	100	41.99	1.94	0.10	55.98
Laelay Adiyabo.....	100	31.99	2.40	1.31	64.31
Tahtay Koraro.....	100	41.49	7.50	0.54	50.47
Medebay Zana .....	100	56.20	0.73	0.79	42.28
Asegede Tsimbela.....	100	45.32	1.20	0.05	53.45
Tselemti .....	100	53.96	0.92	0.23	44.91
Welkait .....	100	47.95	1.10	1.84	49.12
Tsegedde.....	100	7.79	0.17	0.33	91.72
Central Tigray Zone.....	100	51.01	3.19	0.23	45.57
Mereb Lehe.....	100	62.01	1.27	0.26	36.48
Ahiferom.....	100	54.27	1.64	0.20	43.91
Werie Lehe .....	100	47.00	6.18	0.39	46.43
Adwa.....	100	58.97	3.83	0.05	37.17
Laelay Maychew.....	100	44.43	7.16	-	48.42
Tahtay Maychew .....	100	54.58	2.72	-	42.71
Naeder Adet.....	100	39.28	2.04	0.06	58.63
Kola Temben .....	100	55.09	4.64	0.15	40.13
Degua Temben.....	100	61.10	0.36	0.98	37.57
Tanqu Abergele .....	100	33.43	2.08	0.24	64.26
East Tigray Zone.....	100	47.31	4.86	0.57	47.26
Gulumahada.....	100	56.02	3.58	-	40.40
Erob .....	100	56.84	0.17	2.08	40.93
Saesi Tsaedamba.....	100	46.06	6.80	0.07	47.08
Ganta Afeshum.....	100	46.18	12.19	0.14	41.49
Hawzen.....	100	35.22	1.64	0.48	62.68
Wukro.....	100	38.52	2.33	1.24	57.93
Atsbi Wenberta .....	100	52.34	7.32	-	40.36
South Tigray Zone.....	100	35.53	4.83	1.05	58.59
Seharte Samre .....	100	20.31	0.14	0.96	78.61
Enderta.....	100	27.42	3.92	2.16	66.50
Hintalo Wajirat .....	100	31.82	4.47	0.43	63.30
Ambalagge.....	100	30.66	1.53	1.99	65.82
Endamehoni.....	100	36.11	13.78	0.69	49.43
Rayazebo.....	100	39.91	5.42	1.22	53.45
Alamata.....	100	44.72	4.27	0.28	50.74
Wofla .....	100	53.32	5.09	0.71	40.88
Mekele Zone.....	100	41.15	41.62	0.32	16.91
Mekele .....	100	41.15	41.62	0.32	16.91

b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	37.32	0.67	0.71	61.31
West Tigray Zone .....	100	35.08	0.89	0.34	63.68
Kafta .....	100	48.58	4.56	0.26	46.60
Tahtay Adiyabo .....	100	39.16	0.53	0.05	60.25
Lalay Adiyabo .....	100	30.02	0.19	0.39	69.40
Tahtay Koraro .....	100	33.88	1.05	0.90	64.17
Medebay Zana .....	100	51.23	0.11	0.01	48.65
Asegede Tsimbela .....	100	39.08	0.16	0.09	60.68
Tselemti .....	100	41.19	0.65	0.20	57.96
Welkait .....	100	25.75	0.47	1.18	72.61
Tsegedde .....	100	6.84	0.33	0.01	92.82
Central Tigray Zone .....	100	45.73	0.40	0.33	53.54
Mereb Lehe .....	100	60.50	0.09	0.31	39.10
Ahiferom .....	100	54.10	0.80	0.04	45.07
Werie Lehe .....	100	35.79	0.14	0.06	64.01
Adwa .....	100	63.43	0.30	0.09	36.18
Lalay Maychew .....	100	32.00	0.64	0.00	67.36
Tahtay Maychew .....	100	52.14	0.66	0.00	47.20
Naeder Adet .....	100	35.25	0.30	0.11	64.34
Kola Temben .....	100	55.98	0.69	0.29	43.04
Degua Temben .....	100	39.53	0.36	1.95	58.16
Tanqu Abergele .....	100	28.56	0.00	0.47	70.97
East Tigray Zone .....	100	36.86	0.67	0.63	61.84
Gulumahada .....	100	39.09	1.19	0.00	59.71
Erob .....	100	50.97	0.33	1.42	47.28
Saesi Tsaedamba .....	100	39.30	0.19	0.14	60.37
Ganta Afeshum .....	100	36.92	1.27	0.14	61.67
Hawzen .....	100	27.39	0.21	0.60	71.80
Wukro .....	100	21.85	0.23	2.11	75.81
Atsbi Wenberta .....	100	42.49	1.26	0.00	56.26
South Tigray Zone .....	100	31.61	0.70	1.52	66.16
Seharte Samre .....	100	19.76	0.27	1.91	78.06
Enderta .....	100	23.80	0.30	3.12	72.78
Hintalo Wajirat .....	100	32.41	1.18	0.86	65.55
Ambalagge .....	100	26.03	0.47	3.21	70.29
Endamchoni .....	100	30.40	0.00	1.26	68.34
Rayaaazebo .....	100	28.30	0.86	0.84	69.99
Alamata .....	100	45.58	2.40	0.21	51.81
Wofla .....	100	46.62	0.15	0.73	52.49

c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	49.20	13.94	0.48	36.38
West Tigray Zone .....	100	51.33	4.12	0.85	43.70
Kafta .....	100	75.78	8.70	0.14	15.39
Tahtay Adiyabo .....	100	44.81	3.35	0.14	51.71
Lalay Adiyabo .....	100	33.96	4.60	2.23	59.21
Tahtay Koraro .....	100	49.10	13.95	0.18	36.77
Medebay Zana .....	100	61.17	1.35	1.56	35.91
Asegede Tsimbela .....	100	51.55	2.24	-	46.21
Tselemti .....	100	66.72	1.18	0.25	31.85
Welkait .....	100	70.14	1.73	2.50	25.63
Tsegedde .....	100	8.74	-	0.64	90.61
Central Tigray Zone .....	100	56.30	5.98	0.13	37.59
Mereb Lehe .....	100	63.51	2.44	0.20	33.85
Ahiferom .....	100	54.43	2.48	0.35	42.74
Werie Lehe .....	100	58.20	12.22	0.72	28.85
Adwa .....	100	54.50	7.35	-	38.15
Lalay Maychew .....	100	56.86	13.67	-	29.47
Tahtay Maychew .....	100	57.01	4.77	-	38.21
Naeder Adet .....	100	43.30	3.78	-	52.91
Kola Temben .....	100	54.19	8.59	-	37.22
Degua Temben .....	100	82.66	0.35	-	16.98
Tanqu Abergele .....	100	38.29	4.16	-	57.55
East Tigray Zone .....	100	57.76	9.05	0.51	32.69
Gulumahada .....	100	72.95	5.96	-	21.09
Erob .....	100	62.70	-	2.73	34.57
Saesi Tsaedamba .....	100	52.82	13.40	-	33.78
Ganta Afeshum .....	100	55.44	23.11	0.14	21.31
Hawzen .....	100	43.04	3.06	0.35	53.55
Wukro .....	100	55.18	4.42	0.36	40.04
Atsbi Wenberta .....	100	62.18	13.37	-	24.46
South Tigray Zone .....	100	39.45	8.95	0.59	51.01
Seharte Samre .....	100	20.85	-	-	79.15
Enderta .....	100	31.04	7.54	1.20	60.22
Hintalo Wajirat .....	100	31.22	7.75	-	61.04
Ambalagge .....	100	35.29	2.59	0.77	61.35
Endamehoni .....	100	41.82	27.56	0.11	30.51
Rayaazebo .....	100	51.51	9.98	1.60	36.91
Alamata .....	100	43.86	6.14	0.35	49.66
Wofla .....	100	60.02	10.03	0.68	29.26
Mekele Zone .....	100	41.15	41.62	0.32	16.91
Mekele .....	100	41.15	41.62	0.32	16.91

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

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	73.89	19.93	0.23	5.95
West Tigray Zone .....	100	79.68	17.05	0.11	3.16
Kafta .....	100	78.25	18.98	-	2.78
Tahtay Adiyabo .....	100	77.74	20.37	0.26	1.63
Laelay Adiyabo .....	100	86.54	8.07	0.03	5.36
Tahtay Koraro .....	100	73.89	20.22	0.16	5.74
Medebay Zana .....	100	87.19	11.95	0.21	0.65
Asegede Tsimbela .....	100	86.42	11.52	0.03	2.05
Tselemti .....	100	76.18	19.56	0.12	4.15
Welkait .....	100	66.18	30.25	0.11	3.47
Tsegedde .....	100	84.75	12.52	0.09	2.65
Central Tigray Zone .....	100	76.16	14.09	0.03	9.73
Mereb Lehe .....	100	82.73	10.00	-	7.28
Ahiferom .....	100	66.31	25.52	-	8.18
Werie Lehe .....	100	73.99	16.32	0.04	9.66
Adwa .....	100	84.03	10.22	0.18	5.58
Laelay Maychew .....	100	65.79	8.81	0.01	25.40
Tahtay Maychew .....	100	75.10	13.49	-	11.43
Naeder Adet .....	100	78.19	11.79	0.01	10.01
Kola Temben .....	100	74.42	18.16	-	7.42
Degua Temben .....	100	82.90	12.80	-	4.30
Tanqu Abergele .....	100	78.18	13.76	0.04	8.03
East Tigray Zone .....	100	66.85	24.42	0.38	8.34
Gulumahada .....	100	63.60	23.11	-	13.30
Erob .....	100	70.78	6.76	2.11	20.37
Saesi Tsaedamba .....	100	60.33	32.97	-	6.71
Ganta Afeshum .....	100	67.37	26.36	0.07	6.21
Hawzen .....	100	67.84	26.91	0.21	5.05
Wukro .....	100	76.09	18.52	0.24	5.17
Atsbi Wenberta .....	100	61.95	36.37	0.07	1.62
South Tigray Zone .....	100	72.39	23.57	0.11	3.93
Seharte Samre .....	100	73.74	18.52	-	7.74
Enderta .....	100	85.15	9.86	0.24	4.76
Hintalo Wajirat .....	100	67.54	29.42	0.03	3.01
Ambalagge .....	100	70.41	28.82	0.09	0.70
Endamehoni .....	100	71.82	25.07	0.08	3.04
Rayaazebo .....	100	70.22	26.43	0.27	3.10
Alamata .....	100	70.99	27.24	0.18	1.60
Wofla .....	100	69.27	23.20	-	7.54
Mekele Zone .....	100	82.73	12.90	0.94	3.43
Mekele .....	100	82.73	12.90	0.94	3.43

b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	65.97	28.18	0.08	5.77
West Tigray Zone .....	100	70.68	26.17	0.10	3.05
Kafta .....	100	70.90	27.12	-	1.97
Tahtay Adiyabo .....	100	65.30	33.17	0.12	1.41
Laelay Adiyabo .....	100	81.46	13.64	0.06	4.83
Tahtay Koraro .....	100	63.87	31.62	0.23	4.28
Medebay Zana .....	100	78.34	20.35	-	1.30
Asegede Tsimbela .....	100	76.54	19.73	0.06	3.67
Tselemti .....	100	58.57	35.56	0.19	5.68
Welkait .....	100	69.14	29.34	0.03	1.49
Tsegedde .....	100	72.02	25.03	0.17	2.78
Central Tigray Zone .....	100	68.46	21.84	0.04	9.68
Mereb Lehe .....	100	79.43	11.83	-	8.74
Ahiferom .....	100	62.45	29.64	-	7.91
Werie Lehe .....	100	62.63	28.36	0.07	8.94
Adwa .....	100	77.05	16.04	0.20	6.72
Laelay Maychew .....	100	50.17	12.47	-	37.36
Tahtay Maychew .....	100	74.32	18.26	-	7.43
Naeder Adet .....	100	74.53	19.80	0.02	5.65
Kola Temben .....	100	66.95	30.14	-	2.91
Degua Temben .....	100	66.75	25.60	-	7.65
Tanqu Abergele .....	100	70.28	26.21	0.07	3.44
East Tigray Zone .....	100	63.39	30.98	0.11	5.52
Gulumahada .....	100	68.86	27.04	-	4.10
Erob .....	100	74.61	13.51	0.02	11.86
Saesi Tsaedamba .....	100	49.92	47.28	-	2.80
Ganta Afeshum .....	100	64.67	30.56	-	4.77
Hawzen .....	100	72.71	20.57	0.12	6.60
Wukro .....	100	62.28	30.94	0.47	6.31
Atsbi Wenberta .....	100	50.68	46.97	0.14	2.21
South Tigray Zone .....	100	61.35	33.73	0.08	4.84
Seharte Samre .....	100	57.47	32.28	-	10.25
Enderta .....	100	80.58	14.89	0.19	4.34
Hintalo Wajirat .....	100	51.94	44.02	0.06	3.98
Ambalagge .....	100	54.73	44.03	0.12	1.12
Endamechoni .....	100	60.56	37.21	-	2.22
Rayaaazebo .....	100	61.21	35.21	0.08	3.51
Alamata .....	100	70.23	26.90	0.19	2.68
Wofla .....	100	54.07	35.28	-	10.65

c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	81.80	11.69	0.38	6.14
West Tigray Zone .....	100	88.68	7.92	0.12	3.28
Kafta .....	100	85.59	10.83	-	3.58
Tahtay Adiyabo .....	100	90.17	7.57	0.40	1.85
Lalay Adiyabo .....	100	91.61	2.50	-	5.89
Tahtay Koraro .....	100	83.91	8.82	0.08	7.19
Medebay Zana .....	100	96.04	3.55	0.41	-
Asegede Tsimbela .....	100	96.29	3.30	-	0.42
Tselemti .....	100	93.79	3.55	0.05	2.61
Welkait .....	100	63.22	31.15	0.18	5.45
Tsegedde .....	100	97.48	-	-	2.52
Central Tigray Zone .....	100	83.87	6.34	0.02	9.78
Mereb Lehe .....	100	86.02	8.17	-	5.81
Ahiferom .....	100	70.17	21.39	-	8.44
Werie Lehe .....	100	85.35	4.27	-	10.38
Adwa .....	100	91.00	4.40	0.15	4.44
Lalay Maychew .....	100	81.41	5.14	0.02	13.43
Tahtay Maychew .....	100	75.87	8.71	-	15.42
Naeder Adet .....	100	81.85	3.78	-	14.37
Kola Temben .....	100	81.89	6.18	-	11.93
Degua Temben .....	100	99.05	-	-	0.95
Tanqu Abergele .....	100	86.08	1.31	-	12.61
East Tigray Zone .....	100	70.31	17.87	0.66	11.17
Gulumahada .....	100	58.33	19.17	-	22.50
Erob .....	100	66.94	-	4.19	28.87
Saesi Tsadamba .....	100	70.74	18.65	-	10.62
Ganta Afeshum .....	100	70.06	22.16	0.14	7.64
Hawzen .....	100	62.97	33.24	0.30	3.49
Wukro .....	100	89.89	6.09	-	4.02
Atsbi Wenberta .....	100	73.22	25.76	-	1.02
South Tigray Zone .....	100	83.43	13.41	0.14	3.02
Seharte Samre .....	100	90.01	4.76	-	5.23
Enderta .....	100	89.71	4.83	0.28	5.18
Hintalo Wajirat .....	100	83.14	14.82	-	2.04
Ambalagge .....	100	86.08	13.60	0.05	0.27
Endamehoni .....	100	83.07	12.92	0.15	3.86
Rayaazebo .....	100	79.23	17.64	0.46	2.68
Alamata .....	100	71.75	27.58	0.16	0.51
Wofla .....	100	84.47	11.11	-	4.42
Mekele Zone .....	100	82.73	12.90	0.94	3.43
Mekele .....	100	82.73	12.90	0.94	3.43

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

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	95.70	0.53	0.17	3.60
West Tigray Zone .....	100	96.45	0.13	0.06	3.36
Kafta .....	100	95.35	0.02	0.01	4.63
Tahtay Adiyabo .....	100	97.63	-	-	2.38
Laelay Adiyabo .....	100	97.69	0.13	-	2.18
Tahtay Koraro .....	100	93.23	0.26	0.01	6.51
Medebay Zana .....	100	99.49	-	-	0.51
Asegede Tsimbela .....	100	98.58	0.40	0.03	1.00
Tselemti .....	100	98.70	0.37	0.14	0.79
Welkait .....	100	89.43	-	0.35	10.23
Tsegedde .....	100	97.93	-	-	2.08
Central Tigray Zone .....	100	96.18	0.26	0.04	3.53
Mereb Lehe .....	100	98.49	0.29	-	1.22
Ahiferom .....	100	98.44	-	-	1.56
Werie Lehe .....	100	95.97	0.07	0.06	3.91
Adwa .....	100	97.14	0.69	0.12	2.06
Laelay Maychew .....	100	97.59	0.78	-	1.63
Tahtay Maychew .....	100	98.73	0.54	-	0.74
Naeder Adet .....	100	93.43	-	0.04	6.54
Kola Temben .....	100	96.45	-	-	3.56
Degua Temben .....	100	98.62	-	-	1.38
Tanqu Abergele .....	100	86.93	0.23	0.16	12.69
East Tigray Zone .....	100	93.00	1.50	0.36	5.14
Gulumahada .....	100	95.95	1.49	-	2.56
Erob .....	100	92.02	-	1.39	6.59
Saesi Tsaedamba .....	100	96.06	0.05	-	3.89
Ganta Afeshum .....	100	87.75	8.56	0.04	3.66
Hawzen .....	100	92.55	0.24	0.31	6.92
Wukro .....	100	90.60	0.15	0.77	8.49
Atsbi Wenberta .....	100	96.04	0.05	0.04	3.88
South Tigray Zone .....	100	96.93	0.23	0.32	2.51
Scharte Samre .....	100	99.22	-	-	0.79
Enderta .....	100	95.48	0.13	0.24	4.16
Hintalo Wajirat .....	100	93.61	0.42	1.77	4.21
Ambalagge .....	100	99.96	-	-	0.05
Endamehoni .....	100	96.71	0.17	0.18	2.95
Rayaazebo .....	100	94.99	-	-	5.02
Alamata .....	100	96.89	1.14	0.39	1.58
Wofla .....	100	98.62	-	-	1.38
Mekele Zone .....	100	95.36	0.80	-	3.84
Mekele .....	100	95.36	0.80	-	3.84

b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	96.54	0.26	0.09	3.12
West Tigray Zone .....	100	96.42	0.10	0.03	3.45
Kafta .....	100	95.77	0.03	0.02	4.18
Tahtay Adiyabo .....	100	96.98	-	-	3.02
Laelay Adiyabo .....	100	98.16	0.26	-	1.58
Tahtay Koraro .....	100	91.03	0.21	0.02	8.74
Medebay Zana .....	100	99.33	-	-	0.67
Asegede Tsimbela .....	100	98.57	0.14	0.06	1.23
Tselemti .....	100	98.29	0.22	0.13	1.36
Welkait .....	100	93.84	-	0.08	6.08
Tsegedde .....	100	95.85	-	-	4.15
Central Tigray Zone .....	100	96.61	0.36	0.05	2.98
Mereb Lehe .....	100	97.83	0.58	-	1.59
Ahiferom .....	100	96.88	-	-	3.12
Werie Lehe .....	100	95.32	0.13	0.11	4.44
Adwa .....	100	95.94	1.38	-	2.69
Laelay Maychew .....	100	99.48	-	-	0.52
Tahtay Maychew .....	100	98.33	1.07	-	0.60
Naeder Adet .....	100	99.37	-	0.07	0.56
Kola Temben .....	100	97.49	-	-	2.51
Degua Temben .....	100	97.24	-	-	2.76
Tanqu Abergele .....	100	88.23	0.45	0.32	11.00
East Tigray Zone .....	100	95.87	0.48	0.26	3.39
Gulumahada .....	100	99.12	0.20	-	0.68
Erob .....	100	96.26	-	-	3.74
Saesi Tsaedamba .....	100	98.75	0.10	-	1.15
Ganta Afeshum .....	100	94.94	2.68	0.08	2.30
Hawzen .....	100	96.29	-	0.20	3.52
Wukro .....	100	88.76	0.29	1.48	9.48
Atsbi Wenberta .....	100	96.95	0.09	0.08	2.89
South Tigray Zone .....	100	97.25	0.09	0.01	2.65
Seharte Samre .....	100	98.93	-	-	1.07
Enderta .....	100	95.45	0.25	-	4.29
Hintalo Wajirat .....	100	94.18	0.09	0.03	5.70
Ambalagge .....	100	99.91	-	-	0.09
Endamehoni .....	100	97.39	0.18	-	2.43
Rayaazebo .....	100	96.00	-	-	4.00
Alamata .....	100	97.86	0.22	0.02	1.90
Wofla .....	100	98.31	-	-	1.69

## c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	94.86	0.80	0.24	4.09
West Tigray Zone .....	100	96.47	0.16	0.09	3.28
Kafta .....	100	94.93	-	-	5.07
Tahtay Adiyabo .....	100	98.27	-	-	1.73
Laelay Adiyabo .....	100	97.22	-	-	2.78
Tahtay Koraro .....	100	95.42	0.31	-	4.27
Medebay Zana .....	100	99.65	-	-	0.35
Asegede Tsimbela .....	100	98.59	0.65	-	0.76
Tselemti .....	100	99.11	0.52	0.15	0.21
Welkait .....	100	85.01	-	0.62	14.37
Tsegedde .....	100	100	-	-	-
Central Tigray Zone .....	100	95.74	0.16	0.02	4.08
Mereb Lehe .....	100	99.15	-	-	0.85
Ahiferom .....	100	100	-	-	-
Werie Lehe .....	100	96.62	-	-	3.38
Adwa .....	100	98.33	-	0.24	1.43
Laelay Maychew .....	100	95.70	1.55	-	2.74
Tahtay Maychew .....	100	99.13	-	-	0.87
Naeder Adet .....	100	87.48	-	-	12.52
Kola Temben .....	100	95.40	-	-	4.60
Degua Temben .....	100	100	-	-	-
Tanqu Abergele .....	100	85.62	-	-	14.38
East Tigray Zone .....	100	90.12	2.53	0.47	6.89
Gulumahada .....	100	92.78	2.78	-	4.44
Erob .....	100	87.78	-	2.78	9.44
Saesi Tsaedamba .....	100	93.37	-	-	6.63
Ganta Afeshum .....	100	80.56	14.43	-	5.01
Hawzen .....	100	88.80	0.47	0.42	10.31
Wukro .....	100	92.44	-	0.06	7.50
Atsbi Wenberta .....	100	95.13	-	-	4.87
South Tigray Zone .....	100	96.61	0.37	0.64	2.38
Seharte Samre .....	100	99.50	-	-	0.50
Enderta .....	100	95.51	-	0.47	4.02
Hintalo Wajirat .....	100	93.03	0.75	3.51	2.71
Ambalagge .....	100	100	-	-	-
Endamehoni .....	100	96.03	0.15	0.35	3.47
Rayaazebo .....	100	93.97	-	-	6.03
Alamata .....	100	95.92	2.05	0.76	1.26
Wofla .....	100	98.93	-	-	1.07
Mekele Zone .....	100	95.36	0.80	-	3.84
Mekele .....	100	95.36	0.80	-	3.84

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

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	31.69	58.83	0.04	9.44
West Tigray Zone .....	100	22.19	61.21	0.01	16.60
Kafta .....	100	34.53	55.30	-	10.18
Tahtay Adiyabo .....	100	16.37	68.53	0.03	15.07
Laelay Adiyabo .....	100	19.53	53.27	-	27.21
Tahtay Koraro .....	100	24.49	57.55	-	17.97
Medebay Zana .....	100	12.99	79.85	-	7.17
Asegede Tsimbela .....	100	10.77	75.79	0.03	13.42
Tselemti .....	100	29.83	61.56	-	8.61
Welkait .....	100	34.24	24.33	-	41.43
Tsegedde .....	100	16.53	57.01	-	26.45
Central Tigray Zone .....	100	26.86	69.21	0.13	3.81
Mereb Lehe .....	100	63.43	33.20	-	3.38
Ahiferom .....	100	28.76	54.12	-	17.12
Werie Lehe .....	100	17.17	67.85	-	14.98
Adwa .....	100	29.37	70.63	-	-
Laelay Maychew .....	100	14.49	82.52	-	3.00
Tahtay Maychew .....	100	12.01	87.61	-	0.38
Naeder Adet .....	100	11.26	85.09	0.09	3.58
Kola Temben .....	100	9.76	90.03	-	0.22
Degua Temben .....	100	29.20	70.80	-	-
Tanqu Abergele .....	100	48.94	48.69	1.19	1.19
East Tigray Zone .....	100	30.85	59.79	-	9.36
Gulumahada .....	100	56.59	43.41	-	-
Erob .....	100	44.18	44.18	-	11.64
Saesi Tsaedamba .....	100	41.98	58.02	-	-
Ganta Afeshum .....	100	21.20	64.32	-	14.48
Hawzen .....	100	28.48	57.40	-	14.12
Wukro .....	100	28.17	61.32	-	10.52
Atsbi Wenberta .....	100	40.37	51.13	-	8.51
South Tigray Zone .....	100	45.99	43.48	0.03	10.49
Seharte Samre .....	100	100	-	-	-
Enderta .....	100	12.98	67.32	-	19.69
Hintalo Wajirat .....	100	32.20	63.16	-	4.65
Ambalagge .....	100	62.23	33.19	-	4.59
Endamehoni .....	100	43.36	48.23	-	8.41
Rayazebo .....	100	42.99	31.36	0.27	25.38
Alamata .....	100	34.48	46.29	-	19.24
Wofla .....	100	48.33	43.16	-	8.52
Mekele Zone .....	100	30.22	69.78	-	-
Mekele .....	100	30.22	69.78	-	-

b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	34.89	51.15	0.08	13.87
West Tigray Zone .....	100	25.92	49.58	0.01	24.48
Kafta .....	100	47.97	35.28	-	16.75
Tahtay Adiyabo .....	100	20.37	58.82	0.06	20.74
Laelay Adiyabo .....	100	19.53	53.27	-	27.21
Tahtay Koraro .....	100	21.32	58.73	-	19.95
Medebay Zana .....	100	25.97	59.69	-	14.33
Asegede Tsimbela .....	100	21.53	51.58	0.06	26.83
Tselemti .....	100	30.80	51.98	-	17.22
Welkait .....	100	29.29	19.83	-	50.88
Tsegedde .....	100	16.53	57.01	-	26.45
Central Tigray Zone .....	100	28.11	67.48	0.25	4.17
Mereb Lehe .....	100	50.67	42.57	-	6.76
Ahiferom .....	100	22.49	68.31	-	9.20
Werie Lehe .....	100	17.17	67.85	-	14.98
Adwa .....	100	27.97	72.03	-	-
Laelay Maychew .....	100	19.48	80.52	-	-
Tahtay Maychew .....	100	24.02	75.22	-	0.76
Naeder Adet .....	100	17.54	75.14	0.17	7.15
Kola Temben .....	100	19.51	80.06	-	0.43
Degua Temben .....	100	22.12	77.88	-	-
Tanqu Abergele .....	100	60.09	35.17	2.37	2.37
East Tigray Zone .....	100	41.40	49.44	-	9.16
Gulumahada .....	100	56.59	43.41	-	-
Erob .....	100	44.18	44.18	-	11.64
Saesi Tsaedamba .....	100	41.98	58.02	-	-
Ganta Afeshum .....	100	29.07	50.30	-	20.63
Hawzen .....	100	28.48	57.40	-	14.12
Wukro .....	100	24.93	74.38	-	0.69
Atsbi Wenberta .....	100	64.57	18.42	-	17.01
South Tigray Zone .....	100	44.12	38.12	0.07	17.69
Seharte Samre .....	100	100	-	-	-
Enderta .....	100	12.98	67.32	-	19.69
Hintalo Wajirat .....	100	39.37	51.33	-	9.30
Ambalagge .....	100	52.54	38.28	-	9.17
Endamehoni .....	100	42.72	40.46	-	16.81
Rayaazebo .....	100	53.25	15.17	0.54	31.04
Alamata .....	100	5.41	56.11	-	38.48
Wofla .....	100	46.65	36.32	-	17.03

c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	28.49	66.51	-	5.00
West Tigray Zone .....	100	18.45	72.84	-	8.71
Kafta .....	100	21.09	75.31	-	3.60
Tahtay Adiyabo .....	100	12.37	78.24	-	9.39
Laelay Adiyabo .....	-	-	-	-	-
Tahtay Koraro .....	100	27.65	56.36	-	15.99
Medebay Zana .....	100	-	100	-	-
Asegede Tsimbela .....	100	-	100	-	-
Tselemti .....	100	28.86	71.14	-	-
Welkait .....	100	39.19	28.83	-	31.98
Tsegedde .....	-	-	-	-	-
Central Tigray Zone .....	100	25.61	70.94	-	3.45
Mereb Lehe .....	100	76.18	23.82	-	-
Ahiferom .....	100	35.03	39.93	-	25.04
Werie Lehe .....	-	-	-	-	-
Adwa .....	100	30.77	69.23	-	-
Laelay Maychew .....	100	9.49	84.51	-	6.00
Tahtay Maychew .....	100	-	100	-	-
Naeder Adet .....	100	4.97	95.03	-	-
Kola Temben .....	100	-	100	-	-
Degua Temben .....	100	36.28	63.72	-	-
Tanqu Abergele .....	100	37.79	62.21	-	-
East Tigray Zone .....	100	20.30	70.14	-	9.56
Gulumahada .....	-	-	-	-	-
Erob .....	-	-	-	-	-
Saesi Tsaedamba .....	-	-	-	-	-
Ganta Afeshum .....	100	13.33	78.33	-	8.33
Hawzen .....	-	-	-	-	-
Wukro .....	100	31.40	48.26	-	20.35
Atsbi Wenberta .....	100	16.17	83.83	-	-
South Tigray Zone .....	100	47.87	48.85	-	3.29
Seharte Samre .....	-	-	-	-	-
Enderta .....	-	-	-	-	-
Hintalo Wajirat .....	100	25.02	74.98	-	-
Ambalage .....	100	71.91	28.09	-	-
Endamehoni .....	100	44.00	56.00	-	-
Rayazebo .....	100	32.73	47.54	-	19.72
Alamata .....	100	63.54	36.46	-	-
Wofla .....	100	50	50	-	-
Mekele Zone .....	100	30.22	69.78	-	-
Mekele .....	100	30.22	69.78	-	-

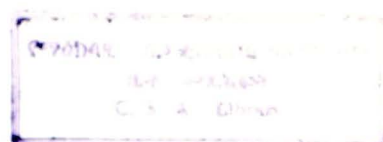
TABLE 7-30: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES OF GOAT MEAT/MUTTON BY TYPE OF USE, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region	100	84.73	10.36	0.46	4.45
West Tigray Zone	100	79.35	12.09	0.13	8.44
Kafta	100	67.04	25.86	0.31	6.79
Tahtay Adiyabo	100	78.06	13.56	0.43	7.97
Laelay Adiyabo	100	93.96	4.00	-	2.05
Tahtay Koraro	100	85.38	3.87	0.19	10.56
Medebay Zana	100	86.57	12.05	-	1.39
Asegede Tsimbela	100	80.51	12.38	0.18	6.95
Tselemti	100	81.80	15.43	0.04	2.74
Welkait	100	77.61	14.25	-	8.15
Tsegedde	100	63.20	7.43	0.02	29.36
Central Tigray Zone	100	81.56	13.92	0.21	4.31
Mereb Lehe	100	71.82	25.75	-	2.44
Ahiferom	100	77.78	10.92	1.01	10.31
Werie Lehe	100	78.08	18.28	0.17	3.49
Adwa	100	96.37	2.70	-	0.94
Laelay Maychew	100	82.34	15.82	0.89	0.95
Tahtay Maychew	100	78.56	19.21	-	2.24
Naeder Adet	100	69.95	17.15	0.04	12.88
Kola Temben	100	88.05	10.54	-	1.42
Degua Temben	100	87.88	4.46	-	7.68
Tanqu Abergele	100	84.77	14.43	0.02	0.80
East Tigray Zone	100	92.19	3.66	1.81	2.35
Gulumahada	100	98.73	1.02	-	0.25
Erob	100	84.90	0.65	12.62	1.84
Saesi Tsaedamba	100	93.40	2.60	-	4.01
Ganta Afeshum	100	92.71	6.56	-	0.74
Hawzen	100	96.30	3.14	-	0.57
Wukro	100	84.66	9.83	-	5.52
Atsbi Wenberta	100	94.65	1.80	0.04	3.51
South Tigray Zone	100	87.79	9.18	0.05	2.98
Seharte Samre	100	94.68	3.51	-	1.82
Enderta	100	81.42	13.71	-	4.87
Hintalo Wajirat	100	81.85	14.59	0.28	3.29
Ambalagge	100	90.36	7.62	-	2.03
Endamechoni	100	88.99	9.72	-	1.30
Rayaazebo	100	91.23	4.44	0.14	4.20
Alamata	100	82.18	12.49	-	5.34
Wofla	100	91.60	7.38	-	1.03
Mekele Zone	100	79.81	15.81	-	4.39
Mekele	100	79.81	15.81	-	4.39

b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region.....	100	85.74	10.12	0.17	3.97
West Tigray Zone.....	100	82.43	11.19	0.19	6.18
Kafta.....	100	77.03	15.83	-	7.14
Tahtay Adiyabo.....	100	74.85	16.56	0.85	7.74
Laelay Adiyabo.....	100	87.92	7.99	-	4.09
Tahtay Koraro.....	100	86.02	6.72	0.38	6.88
Medebay Zana.....	100	92.24	6.36	-	1.40
Asegede Tsimbela.....	100	78.02	14.40	0.35	7.23
Tselemti.....	100	84.31	10.13	0.08	5.48
Welkait.....	100	85.12	7.90	-	6.98
Tsegedde.....	100	76.40	14.85	0.03	8.72
Central Tigray Zone.....	100	80.86	14.85	0.42	3.87
Mereb Lehe.....	100	70.62	25.95	-	3.43
Ahiferom.....	100	75.80	17.11	2.01	5.09
Werie Lehe.....	100	77.90	14.80	0.33	6.98
Adwa.....	100	95.58	2.55	-	1.87
Laelay Maychew.....	100	80.29	16.65	1.78	1.28
Tahtay Maychew.....	100	78.76	19.97	-	1.27
Naeder Adet.....	100	79.81	18.61	0.07	1.52
Kola Temben.....	100	78.23	21.07	-	0.70
Degua Temben.....	100	75.75	8.91	-	15.35
Tanqu Abergele.....	100	95.85	2.88	0.03	1.24
East Tigray Zone.....	100	92.58	5.48	0.01	1.92
Gulumahada.....	100	97.46	2.04	-	0.50
Erob.....	100	95.02	1.29	-	3.68
Saesi Tsaedamba.....	100	94.63	3.34	-	2.03
Ganta Afeshum.....	100	90.23	8.72	-	1.05
Hawzen.....	100	92.59	6.28	-	1.13
Wukro.....	100	82.58	14.83	-	2.59
Atsbi Wenberta.....	100	95.57	1.88	0.08	2.46
South Tigray Zone.....	100	87.08	8.97	0.07	3.89
Seharte Samre.....	100	89.35	7.01	-	3.64
Enderta.....	100	77.76	17.60	-	4.64
Hintalo Wajirat.....	100	90.55	3.86	0.56	5.03
Ambalagge.....	100	89.80	8.87	-	1.33
Endamehoni.....	100	90.26	7.15	-	2.60
Rayaazebo.....	100	93.21	1.66	-	5.13
Alamata.....	100	72.70	19.43	-	7.88
Wofla.....	100	93.00	6.17	-	0.83



## c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region	100	83.72	10.60	0.74	4.94
West Tigray Zone	100	76.26	12.98	0.07	10.69
Kafta	100	57.05	35.89	0.61	6.44
Tahtay Adiyabo	100	81.26	10.55	-	8.19
Laelay Adiyabo	100	100	-	-	-
Tahtay Koraro	100	84.74	1.02	-	14.24
Medebay Zana	100	80.90	17.73	-	1.37
Asegede Tsimbela	100	83.00	10.35	-	6.66
Tselemti	100	79.28	20.72	-	-
Welkait	100	70.10	20.59	-	9.31
Tsegedde	100	50	-	-	50
Central Tigray Zone	100	82.25	13.00	-	4.75
Mereb Lehe	100	73.01	25.55	-	1.44
Ahiferom	100	79.75	4.73	-	15.52
Werie Lehe	100	78.25	21.75	-	-
Adwa	100	97.15	2.85	-	-
Laelay Maychew	100	84.39	14.99	-	0.62
Tahtay Maychew	100	78.35	18.44	-	3.21
Naeder Adet	100	60.08	15.68	-	24.24
Kola Temben	100	97.86	-	-	2.14
Degua Temben	100	100	-	-	-
Tanqu Abergele	100	73.68	25.97	-	0.35
East Tigray Zone	100	91.80	1.83	3.60	2.77
Gulumahada	100	10	-	-	-
Erob	100	74.77	-	25.23	-
Saesi Tsaedamba	100	92.16	1.86	-	5.98
Ganta Afeshum	100	95.18	4.40	-	0.42
Hawzen	100	100	-	-	-
Wukro	100	86.73	4.82	-	8.44
Atsbi Wenberta	100	93.73	1.72	-	4.55
South Tigray Zone	100	88.50	9.39	0.03	2.08
Seharte Samre	100	100	-	-	-
Enderta	100	85.08	9.82	-	5.10
Hintalo Wajirat	100	73.14	25.31	-	1.55
Ambalagge	100	90.91	6.36	-	2.73
Endamehoni	100	87.72	12.28	-	-
Rayaazebo	100	89.25	7.22	0.27	3.26
Alamata	100	91.66	5.54	-	2.80
Wofla	100	90.20	8.58	-	1.22
Mekele Zone	100	79.81	15.81	-	4.39
Mekele	100	79.81	15.81	-	4.39

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

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	40.45	34.32	0.03	25.20
West Tigray Zone .....	100	38.86	15.72	0.02	45.40
Kafta .....	100	38.63	8.06	0.03	53.30
Tahtay Adiyabo .....	100	40.43	24.12	0.01	35.45
Lalay Adiyabo.....	100	29.36	19.72	0.02	50.90
Tahtay Koraro.....	100	31.88	22.28	-	45.85
Medebay Zana .....	100	32.25	21.28	0.09	46.39
Asegede Tsimbela.....	100	46.52	17.43	0.01	36.05
Tselemti .....	100	60.12	12.01	-	27.88
Welkait .....	100	49.70	12.04	0.04	38.22
Tsegedde.....	100	20.89	4.53	-	74.59
Central Tigray Zone.....	100	44.06	29.77	0.03	26.14
Mereb Lehe.....	100	44.61	17.40	-	38.00
Ahiferom.....	100	40.43	39.94	0.01	19.63
Werie Lehe .....	100	44.99	37.22	0.04	17.75
Adwa.....	100	57.59	33.75	-	8.68
Lalay Maychew.....	100	40.35	25.88	0.09	33.69
Tahtay Maychew .....	100	30.82	20.37	-	48.82
Naeder Adet.....	100	20.14	27.93	0.04	51.90
Kola Temben .....	100	52.59	33.27	0.03	14.12
Degua Temben.....	100	51.63	37.91	-	10.47
Tanqu Abergele .....	100	57.47	24.06	0.07	18.42
East Tigray Zone.....	100	37.74	53.57	0.03	8.66
Gulumahada .....	100	35.06	54.02	-	10.93
Erob .....	100	52.02	42.99	0.11	4.90
Saesi Tsaedamba.....	100	32.73	63.69	-	3.59
Ganta Afeshum .....	100	46.36	38.55	-	15.10
Hawzen.....	100	32.35	62.76	0.11	4.79
Wukro.....	100	27.86	57.64	0.01	14.49
Atsbi Wenberta.....	100	37.82	55.37	-	6.82
South Tigray Zone.....	100	37.73	36.24	0.02	26.00
Seharte Samre .....	100	34.10	29.87	-	36.03
Enderta.....	100	42.51	32.71	0.20	24.59
Hintalo Wajirat .....	100	44.69	42.95	-	12.37
Ambalagge.....	100	34.38	33.40	-	32.23
Endamehoni .....	100	28.45	41.45	-	30.11
Rayaazebo.....	100	37.67	17.94	-	44.40
Alamata.....	100	45.17	36.91	-	17.93
Wofla .....	100	34.92	54.73	-	10.35
Mekele Zone.....	100	61.99	28.50	-	9.51
Mekele .....	100	61.99	28.50	-	9.51

b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region.....	100	25.71	44.15	0.05	30.09
West Tigray Zone.....	100	27.88	22.22	0.04	49.86
Kafta.....	100	34.28	10.74	0.05	54.94
Tahtay Adiyabo.....	100	35.33	25.40	0.01	39.25
Laelay Adiyabo.....	100	18.47	26.43	0.03	55.06
Tahtay Koraro.....	100	20.27	39.34	-	40.39
Medebay Zana.....	100	19.55	34.76	0.17	45.51
Asegede Tsimbela.....	100	41.15	23.04	0.01	35.79
Tselemti.....	100	38.25	22.17	-	39.58
Welkait.....	100	36.87	9.02	0.08	54.03
Tsegedde.....	100	6.78	9.05	-	84.17
Central Tigray Zone.....	100	28.20	44.58	0.05	27.16
Mereb Lehe.....	100	34.49	29.97	-	35.54
Ahiferom.....	100	31.39	52.80	0.02	15.79
Werie Lehe.....	100	28.18	56.13	0.08	15.60
Adwa.....	100	33.62	55.48	-	10.90
Laelay Maychew.....	100	24.88	36.52	0.17	38.43
Tahtay Maychew.....	100	19.71	31.22	-	49.07
Naeder Adet.....	100	13.53	45.57	0.08	40.82
Kola Temben.....	100	35.05	50.26	0.05	14.64
Degua Temben.....	100	28.82	50.91	-	20.27
Tanqu Abergele.....	100	32.35	36.94	0.13	30.58
East Tigray Zone.....	100	25.24	64.17	0.06	10.53
Gulumahada.....	100	21.61	62.54	-	15.85
Erob.....	100	40.23	51.73	0.21	7.83
Saesi Tsadamba.....	100	15.28	79.88	-	4.84
Ganta Afeshum.....	100	32.72	55.44	-	11.84
Hawzen.....	100	25.46	66.03	0.22	8.29
Wukro.....	100	18.60	65.39	0.02	15.98
Atsbi Wenberta.....	100	22.76	68.19	-	9.05
South Tigray Zone.....	100	21.52	45.63	0.05	32.81
Seharte Samre.....	100	18.54	44.25	-	37.20
Enderta.....	100	27.05	45.73	0.39	26.83
Hintalo Wajirat.....	100	22.01	57.75	-	20.24
Ambalage.....	100	22.71	38.55	-	38.74
Endamechoni.....	100	13.80	49.39	-	36.81
Rayaazebo.....	100	21.66	16.51	-	61.83
Alamata.....	100	34.73	37.39	-	27.88
Wofla.....	100	11.63	75.46	-	12.91

c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	55.19	24.50	-	20.31
West Tigray Zone .....	100	49.84	9.21	-	40.95
Kafta .....	100	42.98	5.37	-	51.65
Tahtay Adiyabo .....	100	45.52	22.84	-	31.64
Laelay Adiyabo .....	100	40.25	13.01	-	46.74
Tahtay Koraro .....	100	43.49	5.21	-	51.31
Medebay Zana .....	100	44.94	7.80	-	47.26
Asegede Tsimbela .....	100	51.88	11.81	-	36.31
Tselemti .....	100	81.98	1.84	-	16.18
Welkait .....	100	62.53	15.05	-	22.41
Tsegedde .....	100	34.99	-	-	65.01
Central Tigray Zone .....	100	59.92	14.96	-	25.13
Mereb Lehe .....	100	54.72	4.83	-	40.45
Ahiferom .....	100	49.47	27.07	-	23.46
Werie Lehe .....	100	61.80	18.31	-	19.89
Adwa .....	100	81.55	12.01	-	6.45
Laelay Maychew .....	100	55.82	15.24	-	28.95
Tahtay Maychew .....	100	41.93	9.51	-	48.56
Naeder Adet .....	100	26.74	10.29	-	62.98
Kola Temben .....	100	70.13	16.28	-	13.59
Degua Temben .....	100	74.43	24.90	-	0.67
Tanqu Abergele .....	100	82.58	11.17	-	6.25
East Tigray Zone .....	100	50.24	42.97	-	6.79
Gulumahada .....	100	48.50	45.50	-	6.00
Erob .....	100	63.80	34.24	-	1.96
Saesi Tsaedamba .....	100	50.18	47.49	-	2.34
Ganta Afeshum .....	100	59.99	21.66	-	18.35
Hawzen .....	100	39.24	59.48	-	1.28
Wukro .....	100	37.11	49.89	-	13.00
Atsbi Wenberta .....	100	52.87	42.54	-	4.59
South Tigray Zone .....	100	53.95	26.86	-	19.20
Seharte Samre .....	100	49.65	15.49	-	34.86
Enderta .....	100	57.97	19.68	-	22.35
Hintalo Wajirat .....	100	67.36	28.14	-	4.50
Ambalagge .....	100	46.04	28.24	-	25.72
Endamehoni .....	100	43.09	33.50	-	23.41
Rayaaazebo .....	100	53.68	19.37	-	26.96
Alamata .....	100	55.60	36.43	-	7.97
Wofla .....	100	58.21	34.00	-	7.79
Mekeie Zone .....	100	61.99	28.50	-	9.51
Mekele .....	100	61.99	28.50	-	9.51

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

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	48.99	48.39	0.33	2.30
West Tigray Zone .....	100	53.11	44.32	0.07	2.51
Kafta .....	100	52.40	45.01	-	2.59
Tahtay Adiyabo .....	100	73.07	26.42	-	0.51
Laelay Adiyabo .....	100	51.58	47.02	-	1.40
Tahtay Koraro .....	100	20.54	78.34	0.15	0.98
Medebay Zana .....	100	49.35	42.22	0.43	8.00
Asegede Tsimbela .....	100	53.63	43.11	-	3.26
Tselemti .....	100	38.05	61.44	-	0.51
Welkait .....	100	43.37	53.88	-	2.76
Tsegedde .....	100	79.05	19.47	0.04	1.45
Central Tigray Zone .....	100	48.69	47.35	0.17	3.79
Mereb Lehe .....	100	61.35	26.82	0.86	10.99
Ahiferom .....	100	41.44	55.62	-	2.93
Werie Lehe .....	100	53.29	44.21	0.16	2.35
Adwa .....	100	58.37	41.13	0.10	0.41
Laelay Maychew .....	100	48.72	48.36	-	2.93
Tahtay Maychew .....	100	35.87	58.22	-	5.92
Naeder Adet .....	100	32.33	65.69	-	1.99
Kola Temben .....	100	44.20	54.76	0.54	0.51
Degua Temben .....	100	41.20	56.95	-	1.86
Tanqu Abergele .....	100	54.52	39.22	0.07	6.19
East Tigray Zone .....	100	38.73	58.19	0.09	2.99
Gulumahada .....	100	32.97	59.23	-	7.80
Erob .....	100	38.07	60.43	0.08	1.43
Saesi Tsaedamba .....	100	43.79	55.75	-	0.47
Ganta Afeshum .....	100	48.81	45.88	0.17	5.14
Hawzen .....	100	36.20	63.08	0.16	0.57
Wukro .....	100	48.45	42.48	-	9.08
Atsbi Wenberta .....	100	23.65	75.38	0.33	0.65
South Tigray Zone .....	100	47.10	50.68	1.20	1.02
Scharte Samre .....	100	26.45	65.13	7.04	1.39
Enderta .....	100	34.15	61.94	0.21	3.71
Hintalo Wajirat .....	100	44.47	54.32	-	1.21
Ambalagge .....	100	40.13	58.98	-	0.90
Endamehoni .....	100	50.88	48.43	0.23	0.47
Rayazebo .....	100	63.45	33.66	0.88	2.03
Alamata .....	100	33.51	66.30	0.20	-
Wofla .....	100	74.17	25.67	-	0.17
Mekele Zone .....	100	75.19	24.81	-	-
Mekele .....	100	75.19	24.81	-	-

b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	39.45	57.98	0.20	2.37
West Tigray Zone .....	100	45.81	52.04	0.13	2.01
Kafta .....	100	52.40	45.01	-	2.59
Tahtay Adiyabo .....	100	57.77	41.21	-	1.02
Laelay Adiyabo .....	100	51.58	47.02	-	1.40
Tahtay Koraro .....	100	31.30	66.44	0.29	1.96
Medebay Zana .....	100	31.93	66.29	0.85	0.92
Asegede Tsimbela .....	100	44.64	51.82	-	3.54
Tselemti .....	100	41.24	57.74	-	1.01
Welkait .....	100	43.37	53.88	-	2.76
Tsegedde .....	100	58.10	38.94	0.07	2.89
Central Tigray Zone .....	100	33.80	63.90	0.34	1.96
Mereb Lehe .....	100	42.69	53.63	1.71	1.97
Ahiferom .....	100	36.85	60.05	-	3.09
Werie Lehe .....	100	29.50	69.14	0.31	1.06
Adwa .....	100	34.78	64.21	0.20	0.81
Laelay Maychew .....	100	33.76	62.31	-	3.93
Tahtay Maychew .....	100	32.07	67.79	-	0.14
Naeder Adet .....	100	32.33	65.69	-	1.99
Kola Temben .....	100	21.29	76.61	1.08	1.01
Degua Temben .....	100	33.65	62.64	-	3.71
Tanqu Abergele .....	100	41.04	56.92	0.14	1.90
East Tigray Zone .....	100	37.37	58.71	0.19	3.73
Gulumahada .....	100	32.97	59.23	-	7.80
Erob .....	100	51.14	45.85	0.16	2.85
Saesi Tsaedamba .....	100	26.07	73.00	-	0.93
Ganta Afeshum .....	100	48.81	45.88	0.17	5.14
Hawzen .....	100	34.89	63.66	0.31	1.14
Wukro .....	100	37.95	55.10	-	6.94
Atsbi Wenberta .....	100	29.78	68.26	0.66	1.30
South Tigray Zone .....	100	40.82	57.27	0.13	1.78
Sharte Samre .....	100	29.78	67.45	-	2.77
Enderta .....	100	34.15	61.94	0.21	3.71
Hintalo Wajirat .....	100	26.00	71.58	-	2.42
Ambalagge .....	100	39.57	58.63	-	1.80
Endamehoni .....	100	37.76	60.85	0.45	0.94
Rayaazebo .....	100	49.17	48.54	-	2.30
Alamata .....	100	57.08	42.53	0.39	-
Wofla .....	100	53.02	46.65	-	0.33

c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	58.53	38.79	0.45	2.22
West Tigray Zone .....	100	60.40	36.59		3.01
Kafta .....					
Tahtay Adiyabo .....	100	88.37	11.63		
Lalay Adiyabo .....					
Tahtay Koraro .....	100	9.77	90.23		
Medebay Zana .....	100	66.77	18.15		15.08
Asegede Tsimbela .....	100	62.62	34.40		2.98
Tselemti .....	100	34.86	65.14		
Welkait .....					
Tsegedde .....	100	100			
Central Tigray Zone .....	100	63.58	30.80		5.61
Mereb Lehe .....	100	80			20
Ahiferom .....	100	46.03	51.19		2.77
Wene Lehe .....	100	77.08	19.28		3.64
Adwa .....	100	81.95	18.05		
Lalay Maychew .....	100	63.67	34.41		1.92
Tahtay Maychew .....	100	39.67	48.64		11.69
Naeder Adet .....					
Kola Temben .....	100	67.10	32.90		
Degua Temben .....	100	48.75	51.25		
Tanqu Abergele .....	100	68.00	21.52		10.47
East Tigray Zone .....	100	40.09	57.67		2.24
Gulumahada .....					
Erob .....	100	25.00	75.00		
Saesi Tsaedamba .....	100	61.51	38.49		
Ganta Afeshum .....					
Hawzen .....	100	37.50	62.50		
Wukro .....	100	58.94	29.85		11.21
Atsbi Wenberta .....	100	17.51	82.49		
South Tigray Zone .....	100	53.39	44.10	2.26	0.25
Seharta Samre .....	100	23.12	62.80	14.08	
Enderta .....					
Hintalo Wajirat .....	100	62.94	37.06		
Ambalagge .....	100	40.68	59.32		
Endamehoni .....	100	64.00	36.00		
Rayaazebo .....	100	77.72	18.77	1.75	1.75
Alamata .....	100	9.94	90.06		
Wofla .....	100	95.32	4.68		
Mekele Zone .....	100	75.19	24.81		
Mekele .....	100	75.19	24.81		

TABLE 7-33: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES OF BEES WAX BY TYPE OF USE, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	33.61	17.39	0.23	48.77
West Tigray Zone .....	100	13.85	10.64	0.05	75.46
Kafta .....	100	-	-	-	10-
Tahtay Adiyabo .....	100	27.37	2.78	-	69.85
Lalay Adiyabo .....	100	27.27	18.36	-	54.37
Tahtay Koraro .....	100	45.89	30.52	-	23.59
Medebay Zana .....	100	47.77	47.94	-	4.28
Asegede Tsimbela .....	100	9.56	50.82	-	39.62
Tselemti .....	100	21.83	15.38	0.95	61.85
Welkait .....	100	35.27	14.31	-	50.42
Tsegedde .....	100	3.52	4.28	-	92.21
Central Tigray Zone .....	100	41.58	28.16	0.71	29.55
Mereb Lehe .....	100	23.29	28.72	12.79	35.20
Ahiferom .....	100	50	-	-	50
Werie Lehe .....	100	39.17	-	-	60.83
Adwa .....	100	90.89	-	-	9.11
Lalay Maychew .....	100	28.70	29.83	-	41.48
Tahtay Maychew .....	100	62.06	19.49	-	18.44
Naeder Adet .....	100	65.89	0.65	-	33.46
Kola Temben .....	100	77.14	8.93	-	13.94
Degua Temben .....	100	39.19	60.81	-	-
Tanqu Abergele .....	100	27.20	46.72	-	26.09
East Tigray Zone .....	100	56.06	17.00	0.17	26.77
Gulumahada .....	100	17.35	82.65	-	-
Erob .....	100	47.35	46.92	-	5.74
Saesi Tsaedamba .....	100	21.79	44.02	-	34.19
Ganta Afeshum .....	100	51.26	18.56	-	30.18
Hawzen .....	100	67.52	8.78	-	23.70
Wukro .....	100	49.89	2.56	1.20	46.35
Atsbi Wenberta .....	100	32.45	31.92	-	35.63
South Tigray Zone .....	100	22.94	13.77	-	63.29
Seharte Samre .....	100	22.45	47.01	-	30.54
Enderta .....	100	71.94	5.63	-	22.43
Hintalo Wajirat .....	100	15.77	15.48	-	68.75
Ambalagge .....	100	9.29	9.20	-	81.52
Endamehoni .....	100	8.17	2.00	-	89.84
Rayaazebo .....	100	19.64	40.23	-	40.13
Alamata .....	100	8.99	27.31	-	63.70
Wofla .....	100	41.53	17.71	-	40.77
Mekele Zone .....	-	-	-	-	-
Mekele .....	-	-	-	-	-

## b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	35.19	23.64	0.47	40.71
West Tigray Zone .....	100	27.71	21.27	0.11	50.92
Kafta .....	100	-	-	-	100
Tahtay Adiyabo .....	100	54.74	5.56	-	39.70
Laelay Adiyabo .....	100	27.27	18.36	-	54.37
Tahtay Koraro .....	100	45.89	30.52	-	23.59
Medebay Zana .....	100	47.77	47.94	-	4.28
Asegede Tsimbela .....	100	9.56	50.82	-	39.62
Tselemti .....	100	21.83	15.38	0.95	61.85
Welkait .....	100	35.27	14.31	-	50.42
Tsegedde .....	100	7.03	8.55	-	84.42
Central Tigray Zone .....	100	51.66	17.12	1.42	29.80
Mereb Lehe .....	100	23.29	28.72	12.79	35.20
Ahiferom .....	-	-	-	-	-
Werie Lehe .....	100	39.17	-	-	60.83
Adwa .....	100	90.89	-	-	9.11
Laelay Maychew .....	100	12.87	16.35	-	70.78
Tahtay Maychew .....	100	62.06	19.49	-	18.44
Naejer Adet .....	100	65.89	0.65	-	33.46
Kola Temben .....	100	77.14	8.93	-	13.94
Degua Temben .....	100	39.19	60.81	-	-
Tanqu Abergele .....	100	54.40	19.16	-	26.44
East Tigray Zone .....	100	37.56	34.00	0.34	28.10
Gulumahada .....	100	17.35	82.65	-	-
Erob .....	100	47.35	46.92	-	5.74
Saesi Tsaedamba .....	100	21.79	44.02	-	34.19
Ganta Afeshum .....	100	51.26	18.56	-	30.18
Hawzen .....	100	67.52	8.78	-	23.70
Wukro .....	100	25.23	5.12	2.40	67.25
Atsbi Wenberta .....	100	32.45	31.92	-	35.63
South Tigray Zone .....	100	23.83	22.17	-	54.01
Seharte Samre .....	100	22.45	47.01	-	30.54
Enderta .....	100	71.94	5.63	-	22.43
Hintalo Wajirat .....	100	15.77	15.48	-	68.75
Ambalagge .....	100	18.57	18.40	-	63.03
Endamehoni .....	100	16.34	3.99	-	79.67
Rayazebo .....	100	19.64	40.23	-	40.13
Alamata .....	100	8.99	27.31	-	63.70
Wofla .....	100	16.92	19.28	-	63.80

c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	32.03	11.14		56.83
West Tigray Zone .....	100				100
Kafla .....					
Tahtay Adiyabo .....	100				100
Laelay Adiyabo .....					
Tahtay Koraro .....					
Medebay Zana .....					
Asegede Tsimbela .....					
Tselemti .....					
Welkait .....					
Tsegedde .....	100				100
Central Tigray Zone .....	100	31.51	39.19		29.30
Mereb Lehe .....					
Ahiferom .....	100	50			50
Werie Lehe .....					
Adwa .....					
Laelay Maychew .....	100	44.52	43.31		12.17
Tahtay Maychew .....					
Naeder Adet .....					
Kola Temben .....					
Degua Temben .....					
Tanqu Abergele .....	100		74.27		25.73
East Tigray Zone .....	100	74.55			25.45
Gulumahada .....					
Erob .....					
Saesi Tsaedamba .....					
Ganta Afeshum .....					
Hawzen .....					
Wukro .....	100	74.55			25.45
Atsbi Wenberta .....					
South Tigray Zone .....	100	22.04	5.38		72.58
Scharte Samre .....					
Enderta .....					
Hintalo Wajirat .....					
Ambalage .....	100				100
Endamehoni .....	100				100
Rayaazebo .....					
Alamata .....					
Wofla .....	100	66.13	16.13		17.74
Mekele Zone .....					
Mekele .....					

TABLE 7-34: LIVESTOCK PRODUCT UTILIZATION - PERCENTAGE OF USES OF WOOL BY TYPE OF USE, ZONE, AND WEREDA

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	47.95	50.48	-	1.56
West Tigray Zone .....	100	87.50	-	-	12.50
Kafta .....	100	100	-	-	-
Tahtay Adiyabo .....	-	-	-	-	-
Laelay Adiyabo .....	-	-	-	-	-
Tahtay Koraro .....	-	-	-	-	-
Medebay Zana .....	100	100	-	-	-
Asegede Tsimbela .....	-	-	-	-	-
Tselemti .....	100	100	-	-	-
Welkait .....	-	-	-	-	-
Tsegedde .....	100	50	-	-	50
Central Tigray Zone .....	100	87.24	12.76	-	-
Mereb Lehe .....	-	-	-	-	-
Ahiferom .....	-	-	-	-	-
Wene Lehe .....	-	-	-	-	-
Adwa .....	100	68.39	31.61	-	-
Laelay Maychew .....	-	-	-	-	-
Tahtay Maychew .....	100	100	-	-	-
Naeder Adet .....	-	-	-	-	-
Kola Temben .....	-	-	-	-	-
Degua Temben .....	-	-	-	-	-
Tanqu Abergele .....	100	93.34	6.66	-	-
East Tigray Zone .....	100	-	100	-	-
Gulumahada .....	-	-	-	-	-
Erob .....	100	-	100	-	-
Saesi Tsaedamba .....	100	-	100	-	-
Ganta Afeshum .....	-	-	-	-	-
Hawzen .....	100	-	100	-	-
Wukro .....	-	-	-	-	-
Atsbi Wenberta .....	100	-	100	-	-
South Tigray Zone .....	100	37.78	62.22	-	-
Scharte Samre .....	-	-	-	-	-
Enderta .....	-	-	-	-	-
Hintalo Wajirat .....	100	100	-	-	-
Ambalage .....	-	-	-	-	-
Endamchoni .....	100	25.56	74.44	-	-
Rayaazebo .....	-	-	-	-	-
Alamata .....	-	-	-	-	-
Wofla .....	100	-	100	-	-
Mekele Zone .....	100	100	-	-	-
Mekele .....	100	100	-	-	-

b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	62.58	34.30		3.13
West Tigray Zone .....	100	87.50			12.50
Kafta .....	100	100			
Tahtay Adiyabo .....					
Laelay Adiyabo .....					
Tahtay Koraro .....					
Medebay Zana .....	100	100			
Asegede Tsimbela .....					
Tselemti .....	100	100			
Welkait .....					
Tsegedde .....	100	50.00			50.00
Central Tigray Zone .....	100	87.24	12.76		
Mereb Lehe .....					
Ahiferom .....					
Werie Lehe .....					
Adwa .....	100	68.39	31.61		
Laelay Maychew .....					
Tahtay Maychew .....	100	100			
Naeder Adet .....					
Kola Temben .....					
Degua Temben .....					
Tanqu Abergele .....	100	93.34	6.66		
East Tigray Zone .....	100		100		
Gulumahada .....					
Erob .....	100		100		
Saesi Tsaedamba .....	100		100		
Ganta Afeshum .....					
Hawzen .....	100		100		
Wukro .....					
Atsbi Wenberta .....	100		100		
South Tigray Zone .....	100	75.56	24.44		
Scharte Samre .....					
Enderta .....					
Hintalo Wajirat .....	100	100			
Ambalagge .....					
Endamchoni .....	100	51.12	48.88		
Rayaazebo .....					
Alamata .....					
Wofla .....					

c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	33.33	66.67		
West Tigray Zone .....					
Kafta .....					
Tahtay Adiyabo .....					
Laelay Adiyabo .....					
Tahtay Koraro .....					
Medebay Zana .....					
Asegede Tsimbela .....					
Tselemti .....					
Welkait .....					
Tsegedde .....					
Central Tigray Zone .....					
Mereb Lehe .....					
Ahiferom .....					
Werie Lehe .....					
Adwa .....					
Laelay Maychew .....					
Tahtay Maychew .....					
Naeder Adet .....					
Kola Temben .....					
Degua Temben .....					
Tanqu Abergele .....					
East Tigray Zone .....	100		100		
Gulumahada .....					
Erob .....					
Saesi Tsaedamba .....					
Ganta Afeshum .....					
Hawzen .....					
Wukro .....					
Atsbi Wenberta .....	100		100		
South Tigray Zone .....	100		100		
Seharte Samre .....					
Enderta .....					
Hintalo Wajirat .....					
Ambalagge .....					
Endamehoni .....	100		100		
Rayazebo .....					
Alamata .....					
Wofla .....	100		100		
Mekele Zone .....	100	100			
Mekele .....	100	100			

c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	33.33	66.67		
West Tigray Zone .....					
Kafta .....					
Tahtay Adiyabo .....					
Laelay Adiyabo .....					
Tahtay Koraro .....					
Medebay Zana .....					
Asegede Tsimbela .....					
Tselemti .....					
Welkait .....					
Tsegedde .....					
Central Tigray Zone .....					
Mereb Lehe .....					
Ahiferom .....					
Werie Lehe .....					
Adwa .....					
Laelay Maychew .....					
Tahtay Maychew .....					
Naeder Adet .....					
Kola Temben .....					
Degua Temben .....					
Tanqu Abergele .....					
East Tigray Zone .....	100		100		
Gulumahada .....					
Erob .....					
Saesi Tsaedamba .....					
Ganta Afeshum .....					
Hawzen .....					
Wukro .....					
Atsbi Wenberta .....	100		100		
South Tigray Zone .....	100		100		
Seharte Samre .....					
Enderta .....					
Hintalo Wajirat .....					
Ambalagge .....					
Endamehoni .....	100		100		
Rayaazebo .....					
Alamata .....					
Wofla .....	100		100		
Mekele Zone .....	100				
Mekele .....	100	100			

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

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	34.83	59.85	0.13	5.18
West Tigray Zone .....	100	37.46	53.15	0.63	8.76
Kafta .....	100	59.67	34.96	-	5.38
Tahtay Adiyabo .....	100	23.57	74.58	0.13	1.72
Laelay Adiyabo .....	100	43.44	48.78	1.01	6.77
Tahtay Koraro .....	100	34.89	53.26	4.07	7.78
Medebay Zana .....	100	26.18	73.02	-	0.81
Asegede Tsimbela .....	100	14.86	75.14	-	1-
Tselemti .....	100	58.38	37.59	-	4.04
Welkait .....	100	36.61	29.24	-	34.16
Tsegedde .....	100	79.30	9.07	-	11.62
Central Tigray Zone .....	100	47.93	42.03	-	10.04
Mereb Lehe .....	100	49.30	43.50	-	7.21
Ahiferom .....	100	53.80	40.73	-	5.48
Werie Lehe .....	100	38.57	58.84	-	2.59
Adwa .....	100	90.94	9.02	-	0.05
Laelay Maychew .....	100	11.39	48.37	-	40.25
Tahtay Maychew .....	100	85.60	13.29	-	1.12
Naeder Adet .....	100	82.96	16.11	-	0.93
Kola Temben .....	100	20.59	61.55	-	17.87
Degua Temben .....	100	12.50	71.18	-	16.33
Tanqu Abergele .....	100	33.67	57.72	-	8.62
East Tigray Zone .....	100	19.85	79.46	-	0.69
Gulumahada .....	100	32.66	65.44	-	1.90
Erob .....	100	22.40	77.56	-	0.05
Saesi Tsaedamba .....	100	2.76	96.43	-	0.82
Ganta Afeshum .....	100	24.49	73.66	-	1.86
Hawzen .....	100	10.24	89.77	-	-
Wukro .....	100	24.80	75.20	-	-
Atsbi Wenberta .....	100	21.59	78.20	-	0.21
South Tigray Zone .....	100	22.80	74.60	-	2.60
Scharte Samre .....	100	12.31	84.35	-	3.35
Enderta .....	100	29.38	66.49	-	4.14
Hintalo Wajirat .....	100	57.84	37.72	-	4.44
Ambalagge .....	100	10.40	87.90	-	1.71
Endamehoni .....	100	20.73	77.75	-	1.53
Rayazebo .....	100	32.01	67.99	-	-
Alamata .....	100	7.33	89.05	-	3.63
Wofla .....	100	10.65	87.47	-	1.88
Mekele Zone .....	100	50	50	-	-
Mekele .....	100	50	50	-	-

b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region	100	42.27	50.03	0.08	7.62
West Tigray Zone	100	53.29	34.66	0.31	11.73
Kafta	100	90.16	9.84	-	-
Tahtay Adiyabo	100	47.13	49.16	0.26	3.44
Lalay Adiyabo	100	43.44	48.78	1.01	6.77
Tahtay Koraro	100	27.87	55.01	1.56	15.56
Medebay Zana	100	52.36	46.03	-	1.62
Asegede Tsimbela	100	29.72	50.28	-	2-
Tselemti	100	71.52	20.41	-	8.07
Welkait	100	38.11	23.37	-	38.52
Tsegedde	100	79.30	9.07	-	11.62
Central Tigray Zone	100	50.98	32.97	-	16.05
Mereb Lehe	100	70.31	28.98	-	0.71
Ahiferom	100	57.61	37.70	-	4.69
Wene Lehe	100	77.14	17.67	-	5.18
Adwa	100	81.88	18.03	-	0.10
Lalay Maychew	100	5.73	20.06	-	74.21
Tahtay Maychew	100	71.20	26.57	-	2.23
Naeder Adet	100	65.91	32.22	-	1.86
Kola Temben	100	28.26	36.01	-	35.73
Degua Temben	100	-	67.35	-	32.65
Tanqu Abergele	100	51.78	45.06	-	3.17
East Tigray Zone	100	35.01	63.84	-	1.15
Gulumahada	100	65.32	30.88	-	3.80
Erob	100	44.79	55.12	-	0.09
Saesi Tsaedamba	100	3.87	96.13	-	-
Ganta Afeshum	100	31.79	64.49	-	-
Hawzen	100	20.47	79.53	-	3.72
Wukro	100	49.60	50.40	-	-
Atsbi Wenberta	100	29.23	70.35	-	-
South Tigray Zone	100	29.81	68.65	-	0.42
Seharte Samre	100	12.31	84.35	-	1.54
Enderta	100	37.91	59.39	-	3.35
Hintalo Wajirat	100	74.56	25.44	-	2.70
Ambalagge	100	20.79	76.79	-	2.42
Endamehoni	100	26.26	70.69	-	3.05
Rayazebo	100	46.33	53.67	-	-
Alamata	100	6.45	92.74	-	-
Wofla	100	13.88	86.12	-	0.81

c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region.....	100	27.39	69.67	0.19	2.74
West Tigray Zone.....	100	21.63	71.64	0.94	5.79
Kafta.....	100	29.18	60.07	-	10.75
Tahtay Adiyabo.....	100	-	100	-	-
Lalay Adiyabo.....	0	-	-	-	-
Tahtay Koraro.....	100	41.90	51.51	6.58	-
Medebay Zana.....	100	-	100	-	-
Asegede Tsimbela.....	100	-	100	-	-
Tselemti.....	100	45.23	54.77	-	-
Welkait.....	100	35.10	35.10	-	29.79
Tsegedde.....	0	-	-	-	-
Central Tigray Zone.....	100	44.88	51.09	-	4.03
Mereb Lehe.....	100	28.28	58.02	-	13.70
Ahiferom.....	100	49.98	43.75	-	6.27
Werie Lehe.....	100	-	100	-	-
Adwa.....	100	100	-	-	-
Lalay Maychew.....	100	17.05	76.67	-	6.29
Tahtay Maychew.....	100	100	-	-	-
Naeder Adet.....	100	100	-	-	-
Kola Temben.....	100	12.92	87.08	-	-
Degua Temben.....	100	25.00	75	-	-
Tanqu Abergele.....	100	15.55	70.37	-	14.07
East Tigray Zone.....	100	4.68	95.08	-	0.23
Gulumahada.....	100	-	100	-	-
Erob.....	100	-	100	-	-
Saesi Tsaedamba.....	100	1.64	96.72	-	1.64
Ganta Afeshum.....	100	17.18	82.82	-	-
Hawzen.....	100	-	100	-	-
Wukro.....	100	-	100	-	-
Atsbi Wenberta.....	100	13.95	86.05	-	-
South Tigray Zone.....	100	15.78	80.55	-	3.66
Seharte Samre.....	-	-	-	-	-
Enderta.....	100	20.85	73.58	-	5.57
Hintalo Wajirat.....	100	41.12	50	-	8.88
Ambalagge.....	100	-	99.01	-	0.99
Endamehoni.....	100	15.20	84.80	-	-
Rayazebo.....	100	17.69	82.31	-	-
Alamata.....	100	8.21	85.35	-	6.44
Wofla.....	100	7.42	88.82	-	3.76
Mekele Zone.....	100	50	50	-	-
Mekele.....	100	50	50	-	-

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

a) Both Rural and Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region.....	100	21.27	75.12	0.02	3.60
West Tigray Zone.....	100	17.22	75.64	0.07	7.07
Kafta.....	100	23.51	76.42	-	0.07
Tahtay Adiyabo.....	100	14.28	82.75	0.18	2.80
Laelay Adiyabo.....	100	20.56	78.43	-	1.02
Tahtay Koraro.....	100	20.96	77.38	0.32	1.36
Medebay Zana.....	100	22.78	76.14	-	1.09
Asegede Tsimbela.....	100	7.10	88.11	0.02	4.79
Tselemti.....	100	20.44	78.06	0.08	1.42
Welkait.....	100	8.93	43.17	-	47.92
Tsegedde.....	100	16.49	80.34	-	3.18
Central Tigray Zone.....	100	31.61	63.19	-	5.19
Mereb Lehe.....	100	43.42	56.02	-	0.57
Ahiferom.....	100	25.32	72.24	-	2.45
Werie Lehe.....	100	71.94	26.88	-	1.20
Adwa.....	100	70.48	29.25	-	0.27
Laelay Maychew.....	100	14.50	70.16	-	15.35
Tahtay Maychew.....	100	24.34	71.44	-	4.23
Naeder Adet.....	100	21.51	78.06	-	0.43
Kola Temben.....	100	13.47	76.66	-	9.88
Degua Temben.....	100	8.69	88.80	-	2.52
Tanqu Abergele.....	100	22.47	62.47	-	15.07
East Tigray Zone.....	100	20.26	79.37	-	0.37
Gulumahada.....	100	13.88	86.12	-	-
Erob.....	100	34.77	64.19	-	1.04
Saesi Tsaedamba.....	100	13.14	86.86	-	-
Ganta Afeshum.....	100	18.76	80.17	-	1.08
Hawzen.....	100	30.08	69.83	-	0.10
Wukro.....	100	23.24	76.11	-	0.65
Atsbi Wenberta.....	100	14.92	84.94	-	0.15
South Tigray Zone.....	100	22.67	76.51	-	0.82
Seharte Samre.....	100	15.41	80.89	-	3.70
Enderta.....	100	6.44	92.28	-	1.29
Hintalo Wajirat.....	100	26.16	73.85	-	-
Ambalagge.....	100	41.69	57.91	-	0.41
Endamehoni.....	100	26.71	73.01	-	0.28
Rayaaazebo.....	100	42.51	57.10	-	0.39
Alamata.....	100	14.25	85.13	-	0.62
Wofla.....	100	8.09	90.23	-	1.69
Meckele Zone.....	100	-	95.09	-	4.91
Mekele.....	100	-	95.09	-	4.91

b) Rural Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region .....	100	29.16	66.65	0.03	4.15
West Tigray Zone .....	100	28.92	64.22	0.13	6.73
Kafta .....	100	36.94	62.91	-	0.14
Tahtay Adiyabo .....	100	25.64	68.41	0.35	5.59
Laelay Adiyabo .....	100	41.11	56.86	-	2.03
Tahtay Koraro .....	100	17.39	79.27	0.63	2.71
Medebay Zana .....	100	36.15	61.68	-	2.18
Asegede Tsimbela .....	100	11.35	79.05	0.03	9.57
Tselemti .....	100	40.88	56.11	0.16	2.84
Welkait .....	100	17.85	53.00	-	29.16
Tsegedde .....	100	32.97	60.67	-	6.36
Central Tigray Zone .....	100	34.79	57.52	-	7.69
Mereb Lehe .....	100	57.13	41.74	-	1.13
Ahiferom .....	100	25.62	69.48	-	4.90
Werie Lehe .....	100	71.32	26.30	-	2.39
Adwa .....	100	40.96	58.50	-	0.54
Laelay Maychew .....	100	3.84	65.46	-	30.69
Tahtay Maychew .....	100	46.39	45.15	-	8.45
Naeder Adet .....	100	38.82	60.32	-	0.86
Kola Temben .....	100	26.93	53.31	-	19.76
Degua Temben .....	100	6.85	88.12	-	5.03
Tanqu Abergele .....	100	30.04	66.78	-	3.18
East Tigray Zone .....	100	23.16	76.20	-	0.64
Gulumahada .....	100	13.88	86.12	-	-
Erob .....	100	34.77	64.19	-	1.04
Saesi Tsadamba .....	100	14.85	85.15	-	-
Ganta Afeshum .....	100	10.04	88.08	-	1.88
Hawzen .....	100	33.49	66.51	-	-
Wukro .....	100	30.22	68.48	-	1.30
Atsbi Wenberta .....	100	24.86	74.85	-	0.29
South Tigray Zone .....	100	29.79	68.68	-	1.53
Seharte Samre .....	100	15.41	80.89	-	3.70
Enderta .....	100	12.88	84.55	-	2.57
Hintalo Wajirat .....	100	52.31	47.69	-	-
Ambalagge .....	100	47.84	51.35	-	0.81
Endamehoni .....	100	33.68	65.76	-	0.56
Rayaazebo .....	100	50.14	49.86	-	-
Alamata .....	100	9.85	88.91	-	1.24
Wofla .....	100	16.18	80.45	-	3.37

c) Urban Holdings

Geographic Area	Total (%)	PERCENT UTILIZED FOR:			
		Household Consumption	Sale	Wages in Kind	Other
Tigray Region	100	13.37	83.58		3.04
West Tigray Zone	100	5.53	87.06		7.41
Kafta	100	10.07	89.93		
Tahtay Adiyabo	100	2.91	97.09		
Laelay Adiyabo	100		100		
Tahtay Koraro	100	24.52	75.48		
Medebay Zana	100	9.41	90.59		
Asegede Tsimbela	100	2.84	97.16		
Tselemti	100		100		
Welkait	100		33.33		66.67
Tsegedde	100		100		
Central Tigray Zone	100	28.43	68.87		2.70
Mereb Lehe	100	29.71	70.29		
Ahiferom	100	25.01	74.99		
Werie Lehe	100	72.55	27.45		
Adwa	100	100			
Laelay Maychew	100	25.15	74.85		
Tahtay Maychew	100	2.28	97.72		
Naeder Adet	100	4.20	95.80		
Kola Temben	100		100		
Degua Temben	100	10.53	89.47		
Tanqu Abergele	100	14.89	58.15		26.96
East Tigray Zone	100	17.36	82.55		0.09
Gulumahada					
Erob					
Saesi Tsaedamba	100	11.43	88.57		
Ganta Afeshum	100	27.47	72.26		
Hawzen	100	26.66	73.14		0.27
Wukro	100	16.26	83.74		0.20
Atsbi Wenberta	100	4.98	95.02		
South Tigray Zone	100	15.54	84.34		0.11
Seharte Samre					
Enderta	100		100		
Hintalo Wajirat	100		100		
Ambalagge	100	35.54	64.46		
Endamehoni	100	19.74	80.26		
Rayaazebo	100	34.88	64.34		0.78
Alamata	100	18.65	81.35		
Wofla	100		100		
Mekele Zone	100		95.09		4.91
Mekele	100		95.09		4.91

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

**Annex Tables 7.1-7.10**

Annex Table 7.1- Estimates of Livestock, Standard Errors and Coefficients of Variation by Type, Zone, and Wereda

Geographic Area	CATTLE			SHEEP			GOATS		
	Number	SE	CV	Number	SE	CV	Number	SE	CV
Tigray Region.....	2,668,078	48,766		2,687,212	26,959				
West Tigray Zone.....	1,081,964	43,492		95,694	8,175		1,759,126	50,631	3
Kafta.....	54,391	7,672	4	14,115	2,734	9	712,147	37,777	5
Tahtay Adiyabo.....	120,422	11,479	14	16,067	3,331	19	24,972	5,068	20
Laelay Adiyabo.....	107,530	7,444	10	9,080	2,081	21	64,194	9,085	14
Tahtay Koraro.....	58,016	3,474	7	7,045	1,622	23	70,187	6,597	9
Medebay Zana.....	79,735	5,001	6	20,686	3,937	23	31,376	3,399	11
Asegede Tsimbela.....	175,758	13,524	6	9,279	2,368	19	62,876	6,911	11
Tselemti.....	147,358	11,598	8	6,061	2,662	26	148,735	17,954	12
Welkait.....	196,171	23,355	8	1,937	724	44	159,605	18,833	12
Tsegedde.....	142,582	27,305	12	11,423	3,549	37	77,518	8,338	11
Central Tigray Zone.....	627,830	11,658	19	134,223	9,569	31	72,684	21,669	30
Mereb Lehe.....	53,039	2,374	2	21,739	3,798	7	711,624	27,373	4
Ahiferom.....	78,371	4,460	4	7,862	1,790	17	52,981	3,422	6
Werie Lehe.....	75,485	4,095	6	8,447	1,705	23	69,910	6,271	9
Adwa.....	68,021	4,475	5	21,615	3,939	20	72,396	7,978	11
Laclay Maychew.....	36,548	1,259	7	9,840	1,288	18	60,531	6,581	11
Tahtay Maychew.....	39,269	2,494	3	8,686	1,621	13	25,241	2,787	11
Naeder Adet.....	71,262	4,401	6	6,624	1,453	19	34,459	4,191	12
Kola Temben.....	86,549	4,579	6	12,186	3,736	22	89,259	8,804	10
Degua Temben.....	61,142	4,150	5	4,107	1,453	31	123,393	9,945	8
Tanqu Abergele.....	58,145	2,867	7	33,117	5,750	35	35,282	9,233	26
East Tigray Zone.....	324,150	7,680	5	301,989	14,270	17	148,171	17,445	12
Gulumahada.....	36,171	1,700	2	35,307	3,050	5	139,366	11,174	8
Erob.....	12,854	359	5	8,398	395	9	19,857	2,882	15
Saesi Tsaedamba.....	64,320	4,020	3	75,460	5,859	5	15,121	848	6
Ganta Afeshum.....	44,486	2,857	6	40,749	5,746	8	26,823	8,534	32
Hawzen.....	54,603	2,482	6	47,597	4,716	14	29,730	4,183	14
Wukro.....	53,452	2,623	5	13,594	3,939	10	15,347	3,152	21
Atsbi Wenberta.....	58,264	4,313	5	80,882	9,438	29	10,207	1,697	17
South Tigray Zone.....	631,186	17,073	7	154,836	19,097	12	22,281	3,563	16
Scharte Samre.....	79,291	6,135	3	42,021	16,582	12	195,953	16,195	8
Enderta.....	74,881	4,912	8	1,738	506	39	74,120	13,964	19
Hintalo Wajirat.....	91,294	6,208	7	7,252	2,084	29	10,234	2,451	24
Ambalagge.....	49,957	2,530	7	21,044	3,373	29	21,248	4,105	19
Endamehoni.....	40,132	2,295	5	24,285	3,664	16	17,355	2,561	15
Rayaazebo.....	139,127	10,802	6	4,904	967	15	13,968	2,364	17
Alamata.....	83,579	6,640	8	3,822	748	20	16,969	3,257	19
Wofla.....	72,924	4,329	8	49,772	7,672	20	14,398	2,436	17
Mekele Zone.....	2,947	388	6	470	129	15	27,660	3,966	14
			13			27	36	23	62

cont'd

Geographic Area	HORSES			ASSES			MULES			CAMELS		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Tigray Region.....	7,598	891	12	403,517	6,420	2	16,418	1,045	6	39,791	3,439	9
West Tigray Zone.....	1,639	496	30	102,375	3,186	3	3,668	422	12	6,318	675	11
Kafta.....	-	-	-	7,176	991	14	90	43	47	361	85	23
Tahtay Adiyabo.....	-	-	-	15,123	1,103	7	115	50	43	777	159	21
Laelay Adiyabo.....	-	-	-	15,392	1,256	8	115	55	48	1,348	276	21
Tahtay Koraro.....	135	111	82	8,027	657	8	200	63	32	223	120	54
Medebay Zana.....	2	2	100	10,991	911	8	439	161	37	1,215	369	30
Asegede Tsimbela.....	-	-	-	12,957	1,070	8	735	167	23	585	146	25
Tselemti.....	-	-	-	9,677	1,031	11	567	171	30	180	73	41
Welkait.....	142	70	49	11,993	1,269	11	581	140	24	890	264	30
Tsegedde.....	1,360	478	35	11,041	1,138	10	826	253	31	741	317	43
Central Tigray Zone.....	103	74	72	109,263	3,675	3	3,016	536	18	7,384	1,118	15
Mereb Lehe.....	-	-	-	9,921	552	6	171	73	43	1,087	211	19
Ahiferom.....	-	-	-	12,284	1,771	14	518	189	37	1,660	633	38
Werie Lehe.....	-	-	-	11,989	1,166	10	102	76	74	613	225	37
Adwa.....	1	1	100	16,249	2,090	13	755	352	47	668	303	45
Laelay Maychew.....	-	-	-	10,904	583	5	95	36	38	189	96	51
Tahtay Maychew.....	-	-	-	6,892	545	8	166	71	43	469	178	38
Naeder Adet.....	-	-	-	7,945	818	10	-	-	-	90	46	51
Kola Temben.....	-	-	-	10,713	1,286	12	284	112	39	845	304	36
Degua Temben.....	102	74	72	12,129	944	8	736	308	42	1,374	705	51
Tanqu Abergele.....	-	-	-	10,237	698	7	190	59	31	389	171	44
East Tigray Zone.....	3,784	623	16	69,993	2,263	3	5,093	592	12	4,278	636	15
Gulumahada.....	963	279	29	8,823	719	8	468	139	30	433	139	32
Erob.....	-	-	-	3,992	118	3	86	20	23	20	10	48
Saesi Tsaedamba.....	50	37	73	11,585	1,071	9	253	105	42	23	25	107
Ganta Afeshum.....	1,142	371	32	6,673	812	12	568	186	33	539	186	35
Hawzen.....	51	34	67	10,835	806	7	444	124	28	1,105	356	32
Wukro.....	641	333	52	11,450	807	7	828	295	36	629	235	37
Atsbi Wenberta.....	937	244	26	16,635	1,218	7	2,446	427	17	1,529	409	27
South Tigray Zone.....	2,013	392	19	121,585	3,526	3	4,639	526	11	21,811	3,118	14
Seharte Samre.....	-	-	-	15,755	1,391	9	944	254	27	607	339	56
Enderta.....	167	88	52	20,906	1,579	8	1,393	321	23	2,147	557	26
Hintalo Wajirat.....	150	80	53	21,139	1,402	7	636	186	29	3,531	911	26
Ambalagge.....	242	118	49	11,682	755	6	277	105	38	-	-	-
Endamehoni.....	313	179	57	12,793	1,125	9	189	82	43	75	75	100
Rayaazebo.....	152	68	45	13,460	1,114	8	240	93	39	13,379	2,857	21
Alamata.....	81	44	55	8,527	814	10	325	114	35	1,153	343	30
Wofla.....	908	294	32	17,322	1,517	9	636	187	29	919	424	46
Mekele Zone.....	58	31	53	301	63	21	2	2	119	-	-	-

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

## Male 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
Tigray Region	104,699	3,603	3	125,941	4,012	3	184,427	4,719	3	822,475	10,608	1	67,996	2,811	4
West Tigray Zone	44,427	3,007	7	63,211	3,554	6	76,116	4,008	5	266,719	7,720	3	22,616	1,619	7
Kafta	2,460	465	19	3,422	554	16	4,081	573	14	8,406	1,450	17	779	268	34
Tahtay Adiyabo	4,587	494	11	6,726	650	10	7,800	988	13	27,803	2,026	7	1,515	299	20
Laelay Adiyabo	3,925	601	15	6,218	752	12	7,930	820	10	31,972	2,089	7	1,830	383	21
Tahtay Koraro	1,402	213	15	3,232	332	10	3,352	349	10	19,049	916	5	2,325	429	18
Medebay Zana	1,891	191	10	2,741	291	11	5,776	702	12	28,470	1,621	6	2,951	643	22
Asegode Tsimbela	8,180	1,086	13	10,126	1,041	10	12,655	1,373	11	45,054	2,409	5	3,019	448	15
Tselemti	6,393	782	12	7,486	843	11	8,975	904	10	39,351	3,396	9	4,131	788	19
Welkait	7,161	1,127	16	15,597	2,739	18	14,231	2,094	15	37,647	3,050	8	3,736	815	22
Tsegedde	8,428	2,253	27	7,665	1,356	18	11,316	2,526	22	28,967	4,349	15	2,331	479	21
Central Tigray Zone	16,771	902	5	22,282	1,001	4	43,114	1,474	3	241,451	4,763	2	21,885	1,570	7
Mereb Lehe	1,102	236	21	1,922	291	15	3,522	363	10	21,848	980	4	1,786	522	29
Ahiferom	1,979	292	15	2,641	384	15	5,322	515	10	33,326	2,270	7	1,636	397	24
Werie Lehe	2,362	287	12	2,317	303	13	5,499	556	10	29,688	1,576	5	3,631	777	21
Adwa	1,688	287	17	2,457	342	14	4,822	592	12	28,516	2,253	8	3,187	607	19
Laelay Maychew	977	132	14	1,062	148	14	1,941	196	10	15,428	655	4	2,525	403	16
Tahtay Maychew	1,158	202	17	962	200	21	2,703	331	12	17,140	1,119	7	877	252	29
Naeder Adet	1,756	252	14	3,241	388	12	5,069	462	9	22,769	1,327	6	2,194	525	24
Kola Temben	2,274	374	16	3,381	402	12	5,900	554	9	29,274	1,477	5	1,649	442	27
Degua Temben	2,134	439	21	2,317	363	16	4,258	543	13	23,545	1,569	7	2,011	413	21
Tanqu Abergele	1,341	233	17	1,982	235	12	4,077	389	10	19,916	962	5	2,388	443	19
East Tigray Zone	13,791	818	6	13,748	735	5	23,953	1,036	4	106,824	2,734	3	6,325	735	12
Gulumahada	1,578	214	14	1,256	167	13	2,503	213	9	14,541	794	5	544	141	26
Erob	617	56	9	695	56	8	693	56	8	2,796	102	4	155	25	16
Saesi Tsaedamba	3,259	552	17	2,049	265	13	4,296	586	14	20,305	1,182	6	753	309	41
Ganta Afeshum	1,777	281	16	1,808	292	16	3,327	420	13	16,515	943	6	1,415	420	30
Hawzen	1,982	268	14	2,588	334	13	4,028	372	9	17,231	1,186	7	1,662	383	23
Wukro	1,935	231	12	2,842	331	12	4,698	345	7	17,472	907	5	1,062	259	24
Atsbi Wenberta	2,642	335	13	2,510	363	14	4,408	498	11	17,964	1,523	8	734	186	25
South Tigray Zone	29,543	1,566	5	26,540	1,387	5	41,080	1,721	4	207,202	4,773	2	17,137	1,509	9
Seharte Samre	3,501	576	16	3,008	518	17	6,041	552	9	25,504	1,692	7	3,223	658	20
Enderta	2,178	386	18	3,091	423	14	5,678	600	11	25,424	1,720	7	3,861	694	18
Hintalo Wajirat	3,353	540	16	3,501	417	12	5,526	698	13	33,105	1,983	6	3,205	820	26
Ambalagge	2,006	280	14	2,737	316	12	3,476	391	11	17,514	794	5	1,326	353	27
Endamehoni	1,532	172	11	1,664	216	13	1,909	256	13	15,868	1,187	7	1,553	281	18
Rayaaazebo	9,568	1,017	11	5,646	916	16	8,831	1,016	12	36,924	2,226	6	1,098	244	22
Alamata	4,386	549	13	3,445	372	11	5,216	512	10	23,839	1,620	7	1,496	521	35
Wofla	3,018	484	16	3,449	423	12	4,403	545	12	29,025	1,846	6	1,375	393	29
Mekele Zone	168	35	21	159	30	19	164	35	22	280	63	23	33	17	53

## 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
Tigray Region.....	115,029	4,331	4	139,442	4,814	3	203,453	5,665	3	854,121	18,280	2	50,495	2,962	6
West Tigray Zone.....	51,297	3,848	8	71,163	4,299	6	89,480	4,759	5	369,611	16,249	4	27,324	2,594	9
Kafta.....	2,959	718	24	4,173	699	17	4,833	710	15	21,338	2,874	13	1,940	482	25
Tahtay Adiyabo.....	5,375	555	10	8,684	1,063	12	9,941	1,511	15	45,810	5,396	12	2,182	547	25
Laelay Adiyabo.....	3,852	663	17	5,732	561	10	8,416	953	11	35,465	2,546	7	2,189	503	23
Tahtay Koraro.....	1,688	258	15	2,988	340	11	3,764	403	11	18,658	1,360	7	1,558	297	19
Medebay Zana.....	2,609	297	11	3,730	559	15	6,171	843	14	23,257	1,640	7	2,141	465	22
Asegede Tsimbela.....	8,778	1,201	14	11,176	1,122	10	15,794	1,548	10	57,190	5,073	9	3,787	743	20
Tselemti.....	7,517	1,047	14	8,738	1,109	13	9,935	1,117	11	51,083	3,815	7	3,751	725	19
Welkait.....	8,850	1,736	20	16,806	3,263	19	17,706	2,690	15	68,441	8,722	13	5,997	1,872	31
Tsegedde.....	9,670	2,800	29	9,138	1,729	19	12,920	2,684	21	48,368	9,963	21	3,778	1,029	27
Central Tigray Zone.....	18,358	863	5	25,338	1,198	5	43,452	1,557	4	184,073	4,181	2	11,106	979	9
Mereb Lehe.....	1,698	263	15	1,983	301	15	3,366	338	10	15,447	926	6	364	120	33
Ahiferom.....	2,478	306	12	3,551	546	15	5,262	510	10	21,559	1,476	7	617	181	29
Werie Lehe.....	2,302	307	13	2,650	325	12	5,337	500	9	19,868	1,385	7	1,831	426	23
Adwa.....	1,957	269	14	2,192	325	15	4,130	387	9	17,490	1,426	8	1,583	330	21
Laelay Maychew.....	985	130	13	1,241	138	11	2,328	206	9	9,410	437	5	652	140	21
Tahtay Maychew.....	933	131	14	787	159	20	2,419	254	11	11,964	1,019	9	324	113	35
Naeder Adet.....	1,990	267	13	3,849	390	10	4,903	487	10	23,267	1,501	6	2,225	628	28
Kola Temben.....	3,203	450	14	3,651	586	16	6,992	944	14	29,129	1,784	6	1,096	250	23
Degua Temben.....	1,487	220	15	2,698	444	16	4,431	481	11	17,228	1,489	9	1,032	249	24
Tanqu Abergele.....	1,325	244	18	2,737	317	12	4,284	427	10	18,712	1,268	7	1,382	267	19
East Tigray Zone.....	14,134	710	5	15,337	876	6	23,652	962	4	103,826	3,176	3	2,560	295	12
Gulumahada.....	1,787	189	11	1,376	185	13	2,491	234	9	9,835	597	6	260	68	26
Erob.....	845	62	7	893	67	8	1,234	84	7	4,844	160	3	81	18	22
Saesi Tsaedamba.....	3,125	396	13	2,629	318	12	4,115	480	12	23,500	2,103	9	290	125	43
Ganta Afeshum.....	1,896	294	15	1,946	366	19	2,848	347	12	12,397	1,052	8	557	153	27
Hawzen.....	2,449	250	10	2,778	382	14	4,356	354	8	17,070	847	5	459	124	27
Wukro.....	1,457	211	14	2,295	257	11	3,908	306	8	17,378	1,070	6	405	99	24
Atsbi Wenberta.....	2,576	337	13	3,421	530	15	4,699	542	12	18,803	1,519	8	509	134	26
South Tigray Zone.....	30,993	1,642	5	27,399	1,576	6	46,552	2,467	5	195,308	6,521	3	9,432	998	11
Scharte Samre.....	2,931	438	15	2,703	412	15	6,644	939	14	24,054	2,592	11	1,682	369	22
Enderta.....	2,176	284	13	3,060	414	14	6,497	695	11	21,658	1,638	8	1,260	267	21
Hintalo Wajirat.....	3,418	439	13	3,445	439	13	5,573	675	12	28,568	2,408	8	1,601	487	30
Ambalagge.....	1,298	186	14	2,328	327	14	3,616	408	11	14,803	991	7	851	240	28
Endamehoni.....	1,963	243	12	2,094	229	11	2,128	219	10	11,063	767	7	357	112	31
Rayaazebo.....	11,529	1,255	11	6,953	1,173	17	11,001	1,654	15	46,174	3,942	9	1,403	343	24
Alamata.....	4,655	625	13	4,027	518	13	7,040	1,034	15	27,968	2,772	10	1,507	481	32
Wofla.....	3,023	418	14	2,789	382	14	4,052	495	12	21,019	1,593	8	771	365	47
Mekele Zone.....	247	48	19	203	37	18	317	46	15	1,303	211	16	74	26	35

Annex Table 7.3- Estimates of Sheep, Standard Errors and Coefficients 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
Tigray Region.....	87,271	3,889	4	32,988	1,587	5	21,076	1,330	6	36,956	2,269	6
West Tigray Zone.....	14,390	1,433	10	4,167	476	11	1,901	294	15	3,948	628	16
Kafta.....	2,240	525	23	548	146	27	318	96	30	331	159	48
Tahtay Adiyabo.....	2,200	473	22	848	234	28	389	160	41	686	181	26
Laelay Adiyabo.....	1,322	299	23	750	177	24	179	76	43	197	97	49
Tahtay Koraro.....	1,038	280	27	271	84	31	147	67	46	306	87	28
Medebay Zana.....	3,127	719	23	941	223	24	443	145	33	1,196	480	40
Asegede Tsimbela.....	1,038	315	30	352	143	41	208	104	50	827	271	33
Tselemti.....	1,086	562	52	320	186	58	105	74	70	123	70	57
Welkait.....	341	142	42	64	66	104	32	33	105	59	41	70
Tsegedde.....	1,998	658	33	74	54	73	81	49	61	223	93	42
Central Tigray Zone.....	16,558	1,358	8	6,705	705	11	4,813	531	11	6,716	793	12
Mereb Lehe.....	3,276	614	19	532	160	30	539	142	26	1,090	281	26
Ahiferom.....	990	272	27	822	263	32	66	58	87	151	78	52
Werie Lehe.....	1,201	304	25	307	111	36	325	159	49	195	116	60
Adwa.....	1,915	366	19	1,527	446	29	493	170	35	842	268	32
Laelay Maychew.....	1,152	194	17	543	105	19	217	70	32	306	97	32
Tahtay Maychew.....	885	210	24	433	149	35	437	149	34	496	129	26
Naeder Adet.....	739	249	34	105	51	48	376	122	32	285	94	33
Kola Temben.....	1,523	594	39	1,085	302	28	532	196	37	505	232	46
Degua Temben.....	479	176	37	337	131	39	87	58	66	218	122	56
Tanqu Abergele.....	4,398	799	18	1,015	216	21	1,742	349	20	2,628	595	23
East Tigray Zone.....	35,964	2,015	6	13,630	1,007	7	8,495	906	11	17,318	1,550	9
Gulumahada.....	4,628	438	9	1,715	274	16	894	227	25	1,527	259	17
Erob.....	1,025	80	8	396	47	12	297	37	12	629	67	11
Saesi Tsaedamba.....	8,746	1,035	12	2,527	404	16	1,688	326	19	5,495	792	14
Ganta Afeshum.....	4,920	835	17	3,091	556	18	1,144	291	25	1,885	531	28
Hawzen.....	4,983	610	12	2,240	310	14	1,379	382	28	2,234	466	21
Wukro.....	2,210	670	30	424	142	33	289	135	47	139	59	43
Atsbi Wenberta.....	9,452	1,128	12	3,237	590	18	2,805	642	23	5,408	1,097	20
South Tigray Zone.....	20,300	2,677	13	8,448	884	10	5,825	761	13	8,943	1,313	15
Seharte Samre.....	5,867	2,308	39	1,204	411	34	1,233	524	43	2,229	1,012	45
Enderta.....	549	358	65	556	217	39	85	56	65	314	141	45
Hintalo Wajirat.....	1,242	327	26	794	241	30	433	137	32	497	246	50
Ambalagge.....	2,140	379	18	1,827	435	24	830	226	27	821	161	20
Endamehoni.....	3,093	519	17	1,432	307	21	1,196	294	25	1,225	239	20
Rayaazebo.....	490	176	36	707	189	27	606	209	34	605	285	47
Alamata.....	371	82	22	116	60	52	172	65	38	294	105	36
Wofla.....	6,548	1,073	16	1,813	431	24	1,270	313	25	2,958	666	23
Mekele Zone.....	60	21	35	38	13	36	41	18	44	31	16	50

## Female Sheep

Geographic Area	<6MONTHS			6MONTHS - <1YEAR			1-<2YEARS			2 YEARS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Tigray Region.....	91,916	4,933	5	44,730	2,563	6	65,425	3,331	5	306,849	11,791	4
West Tigray Zone.....	14,460	1,361	9	6,156	689	11	8,456	999	12	42,214	3,752	9
Kafta.....	2,172	477	22	1,398	338	24	1,233	351	28	5,875	1,026	17
Tahtay Adiyabo.....	2,251	508	23	842	224	27	1,062	267	25	7,789	1,683	22
Laelay Adiyabo.....	1,412	378	27	469	177	38	481	182	38	4,270	1,043	24
Tahtay Koraro.....	763	227	30	427	116	27	781	221	28	3,313	907	27
Medebay Zana.....	2,485	477	19	1,341	349	26	2,531	681	27	8,622	1,612	19
Asegede Tsimbela.....	1,744	466	27	776	276	36	776	202	26	3,558	954	27
Tselemti.....	1,146	503	44	190	145	76	1,056	434	41	2,035	1,019	50
Welkait.....	323	132	41	209	87	42	-	-	-	910	328	36
Tsegedde.....	2,163	677	31	506	199	39	535	170	32	5,843	1,905	33
Central Tigray Zone.....	18,576	1,613	9	7,340	700	10	14,325	1,310	9	59,190	4,260	7
Mereb Lehe.....	3,112	563	18	841	193	23	3,096	702	23	9,254	1,722	19
Ahiferom.....	1,215	343	28	434	211	49	576	276	48	3,607	831	23
Werie Lehe.....	746	240	32	507	174	34	1,117	328	29	4,048	929	23
Adwa.....	3,152	736	23	1,053	235	22	2,604	553	21	10,030	1,887	19
Laelay Maychew.....	1,193	199	17	882	176	20	953	195	20	4,594	621	14
Tahtay Maychew.....	947	186	20	540	142	26	1,210	260	22	3,738	794	21
Naeder Adet.....	944	249	26	449	152	34	699	224	32	3,026	666	22
Kola Temben.....	1,346	389	29	669	331	49	815	382	47	5,711	1,710	30
Degua Temben.....	615	322	52	152	62	41	337	136	40	1,882	726	39
Tanqu Abergele.....	5,304	1,084	20	1,813	367	20	2,916	644	22	13,301	2,272	17
East Tigray Zone.....	37,599	2,219	6	20,098	1,469	7	27,817	1,945	7	141,068	7,112	5
Gulumahada.....	5,239	512	10	2,592	418	16	3,774	478	13	14,938	1,384	9
Erob.....	767	66	9	539	59	11	738	80	11	4,008	221	6
Saesi Tsaedamba.....	8,363	1,174	14	4,577	545	12	5,066	673	13	38,998	3,467	9
Ganta Afeshum.....	5,011	873	17	2,679	610	23	5,065	874	17	16,955	2,664	16
Hawzen.....	6,188	779	13	3,503	571	16	4,458	769	17	22,612	2,306	10
Wukro.....	1,921	653	34	1,254	422	34	1,408	506	36	5,949	1,606	27
Atsbi Wenberta.....	10,110	1,219	12	4,954	898	18	7,308	1,218	17	37,608	4,647	12
South Tigray Zone.....	21,236	3,867	18	11,089	1,856	17	14,756	2,144	15	64,240	7,498	12
Seharte Samre.....	7,923	3,618	46	3,173	1,481	47	3,645	1,560	43	16,748	6,182	37
Enderta.....	80	56	69	9	5	51	26	8	31	118	41	35
Hintalo Wajirat.....	557	231	42	594	202	34	667	482	72	2,469	824	33
Ambalagge.....	2,348	377	16	1,751	389	22	2,386	642	27	8,940	1,554	17
Endamehoni.....	3,387	627	19	1,147	246	21	2,409	552	23	10,396	1,902	18
Rayazebo.....	395	156	39	200	70	35	505	157	31	1,396	329	24
Alamata.....	412	142	34	142	45	32	374	183	49	1,940	400	21
Wofla.....	6,134	1,110	18	4,072	996	24	4,744	1,075	23	22,233	3,320	15
Mekele Zone.....	45	19	42	47	22	48	72	28	39	137	38	28

Annex Table 7.4- Estimates of Goats, Standard Errors and Coefficients 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
Tigray Region.....	205,150	6,749	3	95,616	3,472	4	88,044	3,777	4	146,656	6,740	5
West Tigray Zone.....	81,217	4,775	6	40,635	2,570	6	34,398	2,657	8	59,681	5,504	9
Kafta.....	3,547	813	23	1,055	258	24	989	302	31	1,604	654	41
Tahtay Adiyabo.....	7,477	972	13	3,394	651	19	2,290	557	24	4,322	949	22
Laelay Adiyabo.....	8,211	860	10	3,620	577	16	2,814	418	15	3,942	731	19
Tahtay Koraro.....	3,451	444	13	1,939	288	15	1,941	290	15	2,285	331	15
Medebay Zana.....	6,861	710	10	3,725	565	15	3,340	598	18	4,944	905	18
Asegede Tsimbela.....	15,111	2,127	14	10,665	1,760	17	7,486	1,094	15	11,887	1,879	16
Tselemti.....	19,039	3,084	16	8,902	1,259	14	8,698	1,493	17	17,022	2,910	17
Welkait.....	8,940	1,029	12	4,294	624	15	2,816	506	18	6,250	1,028	16
Tsegedde.....	8,581	2,158	25	3,040	555	18	4,024	1,536	38	7,425	3,801	51
Central Tigray Zone.....	79,610	4,011	5	36,720	1,927	5	38,905	2,363	6	64,548	3,343	5
Mereb Lehe.....	5,844	569	10	2,434	326	13	2,224	327	15	4,367	541	12
Ahiferom.....	7,850	910	12	4,616	631	14	3,571	654	18	6,061	891	15
Werie Lehe.....	8,253	1,326	16	3,847	537	14	3,709	493	13	5,834	965	17
Adwa.....	7,638	951	12	4,217	783	19	3,030	589	19	3,802	522	14
Laelay Maychew.....	2,653	373	14	1,609	268	17	799	179	22	1,306	247	19
Tahtay Maychew.....	3,042	443	15	2,470	424	17	1,516	382	25	2,492	430	17
Naeder Adet.....	8,853	1,098	12	4,460	572	13	5,632	695	12	8,021	1,088	14
Kola Temben.....	13,310	1,340	10	5,714	783	14	8,439	1,271	15	13,754	1,755	13
Degua Temben.....	4,463	1,070	24	1,119	203	18	2,042	867	42	2,821	889	32
Tanqu Abergele.....	17,703	2,791	16	6,234	1,038	17	7,943	1,197	15	16,089	1,894	12
East Tigray Zone.....	17,077	1,318	8	8,012	887	11	5,929	667	11	9,211	1,192	13
Gulumahada.....	3,104	455	15	1,346	273	20	723	228	31	864	249	29
Erob.....	1,830	135	7	785	68	9	837	98	12	1,429	130	9
Saesi Tsaedamba.....	2,527	709	28	1,218	537	44	571	289	51	2,868	982	34
Ganta Afeshum.....	3,600	615	17	1,689	467	28	1,818	438	24	1,799	418	23
Hawzen.....	1,752	413	24	1,113	261	23	894	217	24	869	317	36
Wukro.....	1,526	279	18	585	251	43	368	120	33	309	109	35
Atsbi Wenberta.....	2,738	618	23	1,276	265	21	719	216	30	1,073	301	28
South Tigray Zone.....	27,243	2,220	8	10,245	975	10	8,811	1,084	12	13,215	1,593	12
Seharte Samre.....	8,870	1,615	18	3,512	610	17	3,863	816	21	5,443	1,355	25
Enderta.....	1,266	323	26	435	185	43	127	72	57	731	256	35
Hintalo Wajirat.....	3,556	718	20	1,206	289	24	966	378	39	1,123	354	31
Ambalage.....	2,375	538	23	1,202	255	21	532	170	32	1,835	401	22
Endamehoni.....	1,658	328	20	877	212	24	892	342	38	911	210	23
Rayaaazebo.....	2,708	557	21	1,026	474	46	789	238	30	1,030	377	37
Alamata.....	2,286	410	18	669	154	23	527	211	40	984	243	25
Wofla.....	4,524	908	20	1,318	322	24	1,117	337	30	1,157	322	28
Mekele Zone.....	3	3	105	3	3	105	-	-	-	-	-	-

## Female Goats

Geographic Area	<6MONTHS			6MONTHS - <1YEAR			1-<2YEARS			2 YEARS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Tigray Region .....	216,753	7,232	3	131,817	4,971	4	174,656	6,364	4	700,436	19,807	3
West Tigray Zone .....	86,108	5,018	6	63,134	3,993	6	72,960	4,701	6	274,013	13,950	5
Kafta .....	2,750	468	17	1,677	545	32	1,960	476	24	11,390	2,389	21
Tahtay Adiyabo .....	7,513	879	12	5,700	1,042	18	7,830	1,319	17	25,668	3,925	15
Laelay Adiyabo .....	8,069	1,000	12	6,494	964	15	7,606	1,272	17	29,431	2,409	8
Tahtay Koraro .....	3,392	477	14	2,409	370	15	3,677	616	17	12,282	1,366	11
Medebay Zana .....	6,130	716	12	5,377	869	16	6,376	859	13	26,123	3,025	12
Asegede Tsimbela .....	18,225	2,518	14	16,077	2,397	15	15,487	2,249	15	53,797	6,331	12
Tselemti .....	20,429	2,412	12	13,896	2,228	16	15,702	2,313	15	55,917	6,139	11
Welkait .....	9,230	1,191	13	6,508	1,006	15	7,229	1,288	18	32,250	3,351	10
Tsegedde .....	10,369	2,978	29	4,996	1,008	20	7,093	2,308	33	27,156	8,226	30
Central Tigray Zone .....	85,848	3,998	5	46,193	2,383	5	69,249	3,486	5	290,550	11,430	4
Mereb Lehe .....	6,799	665	10	3,924	420	11	5,716	623	11	21,673	1,550	7
Ahiferom .....	8,846	1,248	14	4,992	639	13	7,172	1,155	16	26,801	2,331	9
Werie Lehe .....	8,537	1,239	15	4,801	654	14	7,268	999	14	30,147	3,581	12
Adwa .....	7,427	1,199	16	4,104	674	16	6,769	880	13	23,543	2,443	10
Laelay Maychew .....	3,136	438	14	1,822	247	14	2,535	311	12	11,380	1,397	12
Tahtay Maychew .....	3,586	561	16	2,485	385	15	4,033	687	17	14,834	1,772	12
Naeder Adet .....	9,523	1,262	13	5,750	746	13	8,815	999	11	38,205	3,985	10
Kola Temben .....	14,045	1,535	11	8,042	1,314	16	11,000	1,665	15	49,090	3,479	7
Degua Temben .....	4,791	1,106	23	1,226	251	20	2,933	733	25	15,886	4,865	31
Tanqu Abergele .....	19,158	2,309	12	9,047	1,288	14	13,007	1,944	15	58,991	6,876	12
East Tigray Zone .....	16,127	1,449	9	8,957	1,037	12	13,505	1,398	10	60,546	5,436	9
Gulumahada .....	2,790	475	17	844	200	24	1,657	341	21	8,530	1,291	15
Erob .....	1,936	137	7	1,064	103	10	1,406	110	8	5,834	311	5
Saesi Tsaedamba .....	2,516	1,026	41	1,747	709	41	1,556	666	43	13,820	4,223	31
Ganta Afeshum .....	3,056	511	17	2,955	607	21	4,318	940	22	10,496	1,800	17
Hawzen .....	1,563	363	23	881	248	28	841	289	34	7,433	1,588	21
Wukro .....	1,285	221	17	568	158	28	1,242	269	22	4,324	957	22
Atsbi Wenberta .....	2,981	600	20	899	259	29	2,485	586	24	10,109	1,811	18
South Tigray Zone .....	28,668	3,006	10	13,531	1,419	10	18,921	2,074	11	75,319	6,125	8
Seharte Samre .....	11,515	2,632	23	4,704	1,035	22	6,922	1,593	23	29,291	5,311	18
Enderta .....	1,271	377	30	651	242	37	859	353	41	4,895	1,075	22
Hintalo Wajirat .....	3,360	741	22	1,767	495	28	2,316	590	25	6,954	1,398	20
Ambalagge .....	2,149	430	20	1,215	264	22	1,574	439	28	6,474	951	15
Endamehoni .....	1,936	422	22	919	280	30	1,688	374	22	5,088	981	19
Rayaazebo .....	3,036	637	21	1,024	278	27	1,363	419	31	5,993	1,034	17
Alamata .....	2,094	405	19	973	311	32	1,257	533	42	5,607	861	15
Wofla .....	3,308	696	21	2,277	562	25	2,942	707	24	11,017	1,588	14
Mekele Zone .....	1	2	121	1	2	121	20	17	85	8	7	88

Annex Table 7.5- Estimates of Horses, Standard Errors and Coefficients 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
Tigray Region.....	1,342	278	21	4,493	553	12	274	84	31	1,488	335	23
West Tigray Zone.....	386	182	47	604	196	32	128	54	42	520	207	40
Kafta.....	-	-	-	-	-	-	-	-	-	-	-	-
Tahtay Adiyabo.....	-	-	-	-	-	-	-	-	-	-	-	-
Laelay Adiyabo.....	-	-	-	-	-	-	-	-	-	-	-	-
Tahtay Koraro.....	-	-	-	101	84	83	33	31	95	1	1	100
Medebay Zana.....	-	-	-	-	-	-	-	-	-	2	2	100
Asegede Tsimbela.....	-	-	-	-	-	-	-	-	-	-	-	-
Tselemti.....	-	-	-	-	-	-	-	-	-	-	-	-
Welkait.....	-	-	-	-	-	-	-	-	-	142	70	49
Tsegedde.....	386	182	47	503	177	35	96	44	46	375	194	52
Central Tigray Zone.....	51	37	72	1	1	100	-	-	-	51	37	72
Mereb Lehe.....	-	-	-	-	-	-	-	-	-	-	-	-
Ahiferom.....	-	-	-	-	-	-	-	-	-	-	-	-
Werie Lehe.....	-	-	-	-	-	-	-	-	-	-	-	-
Adwa.....	-	-	-	1	1	100	-	-	-	-	-	-
Laelay Maychew.....	-	-	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew.....	-	-	-	-	-	-	-	-	-	-	-	-
Naeder Adet.....	-	-	-	-	-	-	-	-	-	-	-	-
Kola Temben.....	-	-	-	-	-	-	-	-	-	-	-	-
Degua Temben.....	51	37	72	-	-	-	-	-	-	51	37	72
Tanqu Abergele.....	-	-	-	-	-	-	-	-	-	-	-	-
East Tigray Zone.....	502	143	29	2,696	470	17	41	40	96	545	233	43
Gulumahada.....	473	141	30	471	140	30	-	-	-	19	17	89
Erob.....	-	-	-	-	-	-	-	-	-	-	-	-
Saesi Tsaedamba.....	-	-	-	50	37	73	-	-	-	-	-	-
Ganta Afeshum.....	-	-	-	1,142	371	32	-	-	-	-	-	-
Hawzen.....	29	28	94	22	21	98	-	-	-	-	-	-
Wukro.....	-	-	-	215	111	52	-	-	-	426	222	52
Atsbi Wenberta.....	-	-	-	796	222	28	41	40	96	100	70	69
South Tigray Zone.....	390	149	38	1,146	216	19	105	51	49	371	119	32
Seharte Samre.....	-	-	-	-	-	-	-	-	-	-	-	-
Enderta.....	-	-	-	167	88	52	-	-	-	-	-	-
Hintalo Wajirat.....	-	-	-	148	80	54	-	-	-	1	1	100
Ambalagge.....	-	-	-	104	57	54	25	25	100	113	65	57
Endamehoni.....	40	42	106	84	49	58	20	21	106	169	88	52
Rayazebo.....	-	-	-	152	68	45	-	-	-	-	-	-
Alamata.....	12	13	101	69	36	53	-	-	-	-	-	-
Wofla.....	338	142	42	423	145	34	59	39	66	88	48	54
Mekele Zone.....	12	13	109	46	21	46	-	-	-	-	-	-

Annex Table 7.6- Estimates of Asses, Standard Errors and Coefficients 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
Tigray Region.....	43,898	1,426	3	171,132	4,038	2	41,849	1,396	3	146,638	3,144	2
West Tigray Zone.....	10,296	691	7	45,492	1,832	4	9,564	727	8	37,024	1,573	4
Kafta.....	803	274	34	4,601	438	10	497	182	37	1,275	354	28
Tahtay Adiyabo.....	2,123	318	15	3,581	301	8	2,139	263	12	7,280	674	9
Laclay Adiyabo.....	1,933	289	15	4,194	518	12	1,699	357	21	7,566	695	9
Tahtay Koraro.....	870	125	14	3,429	441	13	783	141	18	2,946	307	10
Medebay Zana.....	775	189	24	4,779	573	12	600	108	18	4,835	651	13
Asegede Tsimbela.....	1,140	211	18	6,100	740	12	830	180	22	4,886	486	10
Tselemti.....	1,231	238	19	2,841	598	21	1,202	255	21	4,404	507	12
Welkait.....	746	202	27	9,289	830	9	838	314	37	1,120	419	37
Tsegedde.....	674	157	23	6,676	832	12	977	268	27	2,713	476	18
Central Tigray Zone.....	12,884	857	7	40,921	1,987	5	11,897	738	6	43,561	1,835	4
Mereb Lehe.....	670	152	23	4,051	323	8	801	135	17	4,398	302	7
Ahiferom.....	1,155	307	27	5,773	1,033	18	1,079	281	26	4,277	899	21
Werie Lehe.....	2,015	391	19	2,919	609	21	1,660	283	17	5,394	516	10
Adwa.....	2,873	464	16	4,246	757	18	2,396	387	16	6,734	905	13
Laclay Maychew.....	1,466	180	12	3,782	298	8	1,336	170	13	4,320	350	8
Tahtay Maychew.....	557	125	23	3,446	450	13	648	131	20	2,242	259	12
Naeder Adet.....	785	170	22	3,116	397	13	907	190	21	3,136	485	15
Kola Temben.....	1,055	236	22	3,416	493	14	1,042	185	18	5,201	674	13
Degua Temben.....	1,511	290	19	4,817	989	21	1,315	257	20	4,485	577	13
Tanqu Abergele.....	797	181	23	5,355	402	8	713	189	27	3,372	410	12
East Tigray Zone.....	7,426	514	7	30,330	1,660	5	7,428	540	7	24,809	1,184	5
Gulumahada.....	1,215	159	13	2,217	315	14	1,274	171	13	4,118	390	9
Erob.....	413	41	10	1,645	72	4	334	37	11	1,600	73	5
Saesi Tsadamba.....	1,143	283	25	4,597	770	17	1,045	229	22	4,800	616	13
Ganta Afeshum.....	522	149	29	2,594	401	15	644	185	29	2,912	410	14
Hawzen.....	1,668	196	12	2,965	372	13	1,555	241	15	4,646	457	10
Wukro.....	878	164	19	6,269	775	12	1,215	227	19	3,087	385	12
Atsbi Wenberta.....	1,586	263	17	10,043	1,076	11	1,360	255	19	3,646	583	16
South Tigray Zone.....	13,283	747	6	54,101	2,498	5	12,960	764	6	41,242	1,625	4
Seharte Samre.....	1,162	197	17	9,190	1,375	15	1,424	313	22	3,980	591	15
Enderta.....	549	192	35	19,572	1,491	8	178	84	47	607	149	25
Hintalo Wajirat.....	2,154	292	14	10,582	1,050	10	1,734	313	18	6,670	816	12
Ambalagge.....	1,872	239	13	2,975	417	14	1,874	221	12	4,960	336	7
Endamehoni.....	2,277	350	15	2,290	356	16	2,084	290	14	6,142	596	10
Rayaazebo.....	1,788	238	13	3,523	552	16	1,722	288	17	6,427	640	10
Alamata.....	955	177	18	1,900	255	13	1,229	181	15	4,443	494	11
Wofla.....	2,525	358	14	4,068	595	15	2,715	364	13	8,013	696	9
Mekele Zone.....	10	5	51	288	62	21	-	-	-	3	4	103

Annex Table 7.7- Estimates of Mules, Standard Errors and Coefficients 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
Tigray Region.....	274	106	39	6,355	614	10	366	131	36	9,423	695	7
West Tigray Zone.....	98	56	57	1,434	241	17	130	96	74	2,007	263	13
Kafla.....	-	-	-	90	43	47	-	-	-	-	-	-
Tahtay Adiyabo.....	-	-	-	-	-	-	-	-	-	115	50	43
Laelay Adiyabo.....	-	-	-	24	24	97	-	-	-	90	51	56
Tahtay Koraro.....	-	-	-	62	31	50	21	21	100	116	46	39
Medebay Zana.....	-	-	-	-	-	-	-	-	-	439	161	37
Asegede Tsimbela.....	-	-	-	210	102	48	-	-	-	524	130	25
Tselemti.....	-	-	-	262	90	34	-	-	-	306	95	31
Welkait.....	-	-	-	299	99	33	-	-	-	282	82	29
Tsegedde.....	98	56	57	487	163	33	109	94	87	133	60	45
Central Tigray Zone.....	71	74	103	1,511	375	25	23	24	104	1,411	312	22
Mereb Lehe.....	-	-	-	23	23	102	-	-	-	148	70	47
Ahiferom.....	-	-	-	432	187	43	-	-	-	85	55	65
Werie Lehe.....	-	-	-	-	-	-	-	-	-	102	76	74
Adwa.....	-	-	-	635	300	47	23	24	104	97	64	66
Laelay Maychew.....	-	-	-	79	36	46	-	-	-	16	5	29
Tahtay Maychew.....	-	-	-	21	22	104	-	-	-	145	69	48
Naeder Adet.....	-	-	-	-	-	-	-	-	-	-	-	-
Kola Temben.....	-	-	-	-	-	-	-	-	-	284	112	39
Degua Temben.....	71	74	103	187	101	54	-	-	-	478	248	52
Tanqu Abergele.....	-	-	-	134	54	40	-	-	-	56	32	57
East Tigray Zone.....	105	52	49	1,912	328	17	90	49	55	2,986	379	13
Gulumahada.....	-	-	-	-	-	-	-	-	-	468	139	30
Erob.....	-	-	-	20	9	43	8	8	100	58	16	27
Saesi Tsaedamba.....	-	-	-	131	84	64	34	35	104	88	64	74
Ganta Afeshum.....	-	-	-	-	-	-	-	-	-	568	186	33
Hawzen.....	30	31	102	393	115	29	-	-	-	21	20	95
Wukro.....	-	-	-	436	157	36	-	-	-	392	154	39
Atsbi Wenberta.....	75	41	55	932	251	27	48	33	69	1,391	248	18
South Tigray Zone.....	-	-	-	1,496	267	18	123	70	57	3,019	416	14
Seharte Samre.....	-	-	-	316	113	36	-	-	-	628	194	31
Enderta.....	-	-	-	446	166	37	-	-	-	947	266	28
Hintalo Wajirat.....	-	-	-	387	138	36	61	55	92	188	74	39
Ambalagge.....	-	-	-	27	24	89	32	30	94	219	81	37
Endamehoni.....	-	-	-	41	42	104	31	30	98	117	52	45
Rayaazebo.....	-	-	-	156	68	43	-	-	-	84	51	61
Alamata.....	-	-	-	30	24	82	-	-	-	295	114	39
Wofla.....	-	-	-	94	65	68	-	-	-	541	185	34
Mekele Zone.....	-	-	-	2	2	119	-	-	-	-	-	-

Annex Table 7.8- Estimates of Camels, Standard Errors and Coefficients of Variation by Age group, Zone, and Wereda

Geographic Area	MALE						FEMALE					
	<4YEARS			4YEARS & OLDER			<4YEARS			4YEARS & OLDER		
	Number	SE	CV	Number	SE	CV	Number	SE	CV	Number	SE	CV
Tigray Region.....	2,873	653	23	36,638	3,182	9	98	53	54	183	90	49
West Tigray Zone.....	251	80	32	5,915	635	11	68	44	65	84	49	59
Kafta.....	15	12	77	337	83	25	7	7	100	2	2	100
Tahtay Adiyabo.....	32	22	68	695	133	19	-	-	-	50	40	80
Laelay Adiyabo.....	46	30	65	1,302	273	21	-	-	-	-	-	-
Tahtay Koraro.....	39	25	66	152	88	58	33	31	95	-	-	-
Medebay Zana.....	63	54	86	1,152	339	29	-	-	-	-	-	-
Asegede Tsimbela.....	2	1	70	582	146	25	-	-	-	1	1	100
Tselemti.....	6	6	100	174	73	42	-	-	-	-	-	-
Welkait.....	30	29	95	857	259	30	-	-	-	2	2	100
Tsegedde.....	19	20	106	666	296	44	28	30	108	28	28	101
Central Tigray Zone.....	153	66	43	7,168	1,079	15	-	-	-	63	67	105
Mereb Lehe.....	23	20	91	1,064	210	20	-	-	-	-	-	-
Ahiferom.....	43	43	98	1,617	599	37	-	-	-	-	-	-
Werie Lehe.....	-	-	-	613	225	37	-	-	-	-	-	-
Adwa.....	27	28	103	641	301	47	-	-	-	-	-	-
Laelay Maychew.....	-	-	-	189	96	51	-	-	-	-	-	-
Tahtay Maychew.....	41	30	72	428	168	39	-	-	-	-	-	-
Naeder Adet.....	-	-	-	90	46	51	-	-	-	-	-	-
Kola Temben.....	-	-	-	845	304	36	-	-	-	-	-	-
Degua Temben.....	-	-	-	1,310	679	52	-	-	-	63	67	105
Tanqu Abergele.....	18	20	108	371	168	45	-	-	-	-	-	-
East Tigray Zone.....	24	24	99	4,254	633	15	-	-	-	-	-	-
Gulumahada.....	-	-	-	433	139	32	-	-	-	-	-	-
Erob.....	-	-	-	20	10	48	-	-	-	-	-	-
Saesi Tsaedamba.....	-	-	-	23	25	107	-	-	-	-	-	-
Ganta Afeshum.....	-	-	-	539	186	35	-	-	-	-	-	-
Hawzen.....	24	24	99	1,081	350	32	-	-	-	-	-	-
Wukro.....	-	-	-	629	235	37	-	-	-	-	-	-
Atsbi Wenberta.....	-	-	-	1,529	409	27	-	-	-	-	-	-
South Tigray Zone.....	2,444	644	26	19,300	2,856	15	31	31	100	36	35	98
Seharte Samre.....	-	-	-	607	339	56	-	-	-	-	-	-
Enderta.....	230	142	62	1,917	501	26	-	-	-	-	-	-
Hintalo Wajirat.....	92	64	70	3,403	892	26	-	-	-	36	35	98
Ambalagge.....	-	-	-	-	-	-	-	-	-	-	-	-
Endamehoni.....	-	-	-	75	75	100	-	-	-	-	-	-
Rayaazebo.....	2,033	621	31	11,316	2,591	23	31	31	100	-	-	-
Alamata.....	90	67	75	1,063	309	29	-	-	-	-	-	-
Wofla.....	-	-	-	919	424	46	-	-	-	-	-	-
Mekele Zone.....	-	-	-	-	-	-	-	-	-	-	-	-

Annex Table 7.9- Estimates of Poultry, Standard Errors and Coefficients 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
	Tigray Region	4,999,677	72,849	1	372,111	7,433	2	368,829	9,208	3	512,940	12,881	3	430,062	10,406	2	1,903,905	35,624	2	1,411,830	19,736
West Tigray Zone	1,770,181	51,493	3	121,636	4,552	4	123,642	6,332	5	176,029	8,864	5	124,962	6,568	5	810,015	27,206	3	413,898	10,468	3
Kafta	145,278	10,519	7	10,236	846	8	8,140	939	12	10,105	1,292	13	17,800	1,850	10	49,184	6,267	13	49,813	2,556	5
Tahtay Adiyabo	191,174	16,242	9	13,750	1,491	11	12,168	1,742	14	21,274	2,605	12	17,098	2,382	14	79,446	7,976	10	47,439	3,323	7
Laelay Adiyabo	179,431	14,234	8	11,602	984	8	11,039	1,475	13	17,780	2,326	13	10,281	1,834	18	91,580	8,232	9	37,149	2,725	7
Tahtay Koraro	121,117	5,953	5	8,024	783	10	8,594	807	9	11,132	1,165	10	9,718	1,239	13	52,355	3,960	8	31,293	1,626	5
Medebay Zana	211,728	16,826	8	12,315	1,298	11	19,130	3,077	16	27,144	3,869	14	14,326	2,746	19	93,339	7,888	8	45,474	2,801	6
Asegede Tsimbela	258,336	15,422	6	17,422	1,181	7	20,419	3,029	15	24,660	3,033	12	12,564	1,438	11	129,370	8,748	7	53,901	2,553	5
Tselemti	293,444	23,896	8	23,759	2,498	11	23,429	2,587	11	30,055	3,708	12	21,173	3,211	15	131,403	13,757	10	63,625	4,979	8
Welkait	221,318	17,882	8	14,105	1,603	11	12,356	2,033	16	18,600	2,782	15	15,606	2,419	16	108,811	9,211	8	51,841	3,483	7
Tseggeda	148,355	25,045	17	10,422	2,076	20	8,367	1,969	24	15,279	4,207	28	6,396	1,838	29	74,527	11,874	16	33,363	5,536	17
Central Tigray Zone	1,728,998	31,777	2	117,936	3,646	3	139,154	5,113	4	191,338	6,809	4	160,108	5,067	3	615,606	17,317	3	504,857	8,345	2
Mereb Lehe	203,529	9,814	5	15,625	919	6	14,624	1,691	12	21,426	2,124	10	18,101	1,465	8	77,407	4,769	6	56,345	2,855	5
Ahiferom	235,075	16,155	7	16,435	1,709	10	19,890	2,106	11	24,889	2,385	10	17,013	2,120	12	82,054	9,202	11	74,794	4,400	6
Werie Lehe	167,054	11,267	7	11,918	1,381	12	13,195	1,511	11	20,706	3,202	15	18,192	2,373	13	53,307	5,300	10	49,735	2,418	5
Adwa	166,779	12,370	7	14,413	1,359	9	14,521	2,091	14	18,806	2,567	14	15,304	1,921	13	55,513	5,750	10	48,221	2,723	6
Laelay Maychew	178,257	4,451	3	8,219	449	5	9,925	781	8	18,540	1,193	6	24,103	1,026	4	46,489	2,434	5	70,982	1,942	3
Tahtay Maychew	118,458	8,617	7	7,731	851	11	8,921	1,211	14	12,396	1,766	14	8,036	898	11	51,517	5,196	10	29,856	1,897	6
Naeder Adet	153,899	9,304	6	8,955	845	9	11,429	1,238	11	17,144	1,984	12	12,331	1,701	14	70,205	5,636	8	33,834	2,423	7
Kola Temben	243,196	9,491	4	17,918	1,729	10	21,103	2,279	11	25,311	2,578	10	23,730	1,325	6	86,921	5,796	7	68,212	2,508	4
Degua Temben	92,250	6,789	7	6,527	725	11	6,896	1,058	15	10,594	1,375	13	8,764	1,181	13	30,358	4,000	13	29,111	1,694	6
Tanqu Abergele	170,502	7,462	4	10,195	789	8	18,650	1,507	8	21,525	1,517	7	14,532	1,348	9	61,834	4,125	7	43,766	2,544	6
East Tigray Zone	574,476	15,281	3	59,567	2,490	4	37,339	2,189	6	50,099	2,598	5	58,399	2,522	4	157,365	7,219	5	211,706	4,668	2
Gulumahada	86,929	6,262	7	8,173	970	12	7,766	1,087	14	9,719	1,239	13	5,602	867	15	28,122	2,209	8	27,546	1,817	7
Erob	18,153	586	3	2,488	151	6	1,011	100	10	1,683	139	8	1,586	105	7	4,834	293	6	6,551	193	3
Saesi Tsaedamba	100,434	7,714	8	11,355	1,021	9	6,146	1,063	17	6,872	1,108	16	10,584	1,181	11	25,897	4,117	16	39,580	1,978	5
Ganta Afeshum	94,691	5,466	6	10,936	1,034	9	5,418	792	15	6,777	915	14	12,348	1,256	10	28,617	2,781	10	30,595	1,581	5
Hawzen	97,089	6,309	7	9,450	821	9	6,099	948	16	7,510	1,011	13	11,013	1,082	10	20,776	2,807	14	42,240	2,195	5
Wukro	76,723	3,688	5	5,160	544	11	5,057	581	12	7,371	929	13	8,301	632	8	20,292	1,894	9	30,542	1,548	5
Atsbi Wenberta	100,457	7,154	7	12,005	1,468	12	5,842	776	13	10,168	1,117	11	8,965	1,028	11	28,826	3,317	12	34,651	2,197	6
South Tigray Zone	853,540	25,051	3	68,594	3,396	5	63,090	3,098	5	89,369	4,612	5	71,559	3,079	4	312,886	12,721	4	248,042	6,130	2
Seharte Samre	182,975	17,566	10	12,886	1,951	15	15,237	1,894	12	21,722	2,918	13	15,800	1,876	12	70,464	8,218	12	46,865	3,447	7
Enderata	108,504	6,558	6	8,688	854	10	6,349	735	12	8,706	869	10	12,579	1,320	10	36,476	3,498	10	35,707	2,207	6
Hintalo Wajirat	110,001	10,289	9	8,413	1,358	16	6,916	983	14	12,746	2,075	16	9,069	1,229	14	42,877	5,066	12	29,979	2,374	8
Ambalage	78,720	6,148	8	4,762	551	12	6,885	1,110	16	9,317	1,381	15	6,398	710	11	29,025	3,227	11	22,333	1,416	6
Endamehoni	61,565	3,468	6	4,722	510	11	5,280	793	15	6,945	1,026	15	5,007	720	14	21,834	1,970	9	17,776	1,219	7
Rayazebo	100,079	5,587	6	11,867	1,563	13	8,357	990	12	11,125	1,354	12	4,293	630	15	38,735	3,067	8	25,701	1,725	7
Alamata	114,449	6,248	5	8,675	1,137	13	9,752	1,072	11	10,517	1,249	12	14,336	947	7	31,024	3,204	10	40,146	2,098	5
Wofla	97,248	7,073	7	8,581	923	11	4,314	721	17	8,290	1,158	14	4,077	626	15	42,451	4,738	11	29,535	2,078	7
Mekele Zone	72,482	28,011	39	4,377	1,870	43	5,605	2,041	36	6,104	3,601	59	15,034	4,861	32	8,034	3,885	48	33,328	12,285	37

Annex Table 7.10- Estimates of Beehives, Standard Errors and Coefficients 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
Tigray Region.....	228,683	7,615	3	218,270	7,472	3	8,708	816	9	1,706	300	18
West Tigray Zone.....	58,632	4,316	7	57,195	4,292	8	1,119	279	25	317	114	36
Kafta.....	548	186	34	519	183	35	18	22	121	11	12	112
Tahtay Adiyabo.....	3,502	503	14	3,362	503	15	78	37	47	62	49	78
Laelay Adiyabo.....	5,211	759	15	5,147	755	15	-	-	-	64	43	67
Tahtay Koraro.....	4,580	621	14	4,429	603	14	79	58	74	72	43	60
Medebay Zana.....	10,338	1,797	17	10,072	1,802	18	181	71	39	85	79	93
Asegede Tsimbela.....	6,661	936	14	6,453	906	14	184	132	72	24	23	97
Tselemti.....	12,832	1,520	12	12,298	1,473	12	534	224	42	-	-	-
Welkait.....	6,948	1,294	19	6,948	1,294	19	-	-	-	-	-	-
Tsegedde.....	8,013	3,047	38	7,966	3,047	38	47	-	-	-	-	-
Central Tigray Zone.....	72,808	3,312	5	68,553	3,146	5	3,691	563	15	564	178	31
Mereb Lehe.....	2,849	530	19	2,640	484	18	66	46	69	143	89	62
Ahiferom.....	12,765	1,828	14	11,539	1,748	15	1,145	312	27	81	79	98
Werie Lehe.....	8,936	844	9	8,491	799	9	402	152	38	43	43	100
Adwa.....	7,537	872	12	7,229	826	11	63	40	64	245	118	48
Laelay Maychew.....	3,875	441	11	3,184	346	11	691	159	23	-	-	-
Tahtay Maychew.....	3,211	578	18	3,063	563	18	148	77	52	-	-	-
Naeder Adet.....	8,764	1,153	13	8,764	1,153	13	-	-	-	-	-	-
Kola Temben.....	9,373	1,133	12	9,040	1,109	12	299	131	44	34	34	100
Degua Temben.....	7,589	1,309	17	7,429	1,301	18	141	78	55	18	18	100
Tanqu Abergele.....	7,909	1,009	13	7,172	776	11	737	373	51	-	-	-
East Tigray Zone.....	34,332	2,274	7	32,370	2,215	7	1,276	287	22	686	204	30
Gulumahada.....	2,686	507	19	2,491	449	18	137	123	90	59	53	90
Erob.....	2,895	157	5	2,770	153	6	77	-	-	49	31	65
Saesi Tsaedamba.....	7,568	1,196	16	7,194	1,173	16	251	139	56	123	74	60
Ganta Afeshum.....	4,737	864	18	4,679	849	18	-	-	-	58	41	71
Hawzen.....	6,510	1,018	16	5,939	964	16	483	200	41	88	83	94
Wukro.....	3,782	485	13	3,444	468	14	260	82	31	78	42	54
Atsbi Wenberta.....	6,154	1,199	19	5,853	1,199	20	69	36	52	232	149	64
South Tigray Zone.....	61,462	4,782	8	59,427	4,745	8	1,896	315	17	138	64	46
Seharte Samre.....	9,322	1,523	16	8,959	1,493	17	337	166	49	26	28	108
Enderta.....	3,415	744	22	3,247	714	22	136	86	63	31	30	97
Hintalo Wajirat.....	13,115	2,458	19	13,042	2,457	19	73	34	46	-	-	-
Ambalage.....	9,540	1,245	13	8,921	1,195	13	578	198	34	41	27	66
Endamehoni.....	10,685	2,856	27	10,500	2,852	27	185	74	40	-	-	-
Rayaazebo.....	4,636	970	21	4,435	944	21	201	76	38	-	-	-
Alamata.....	1,751	320	18	1,453	271	19	298	100	33	-	-	-
Wofla.....	8,999	1,789	20	8,871	1,792	20	88	50	57	40	40	101
Mekele Zone.....	1,450	597	41	725	299	41	725	299	41	-	-	-

## 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. Seeding 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 modern farm implements and machineries, which the private peasant holders can afford to rent or buy.

In general, effective development of farm implements and machineries takes place when land is abundant and labour is being rapidly absorbed by non-agricultural sector, (WB, 1984)

Since development programmes are in progress in Ethiopia, data generated from censuses and sample surveys on different types of agricultural outputs and inputs are necessary for assessments, evaluation and formulation of programmes and policies in the sector. One of the objectives of this census was to provide benchmark data that can help to assess the growth, quantity, quality and value of farm implements and other farm equipment used by the private peasant holders so as to easily identify the implements that are abundant and those that are in short supply. The structural characteristics of these farm implements and other farm equipment do not change much from year to year and such data are usually obtained from a census of agriculture, which is conducted every 5 or 10 years. Data on farm implements and other farm equipment were not collected in Ethiopia and much is not known about the status and growth of these implements. Thus, in the Ethiopian agricultural census conducted in 2001/2002, data was collected on farm implements and other farm equipment. These farm implements include, implements used for clearing land, cultivation, harvesting, threshing and others. In this census draught animals comprises animals engaged specifically in ploughing, threshing and farm transport facilities. Replacement value was one of the variables covered by this census. Replacement value is the amount it would cost to replace farm implements, equipment, draught animals and storage facilities with those that are similar in terms of origin, age, quality or condition.

In this chapter the classification of farm implements, farm equipment, draught animals and storage facilities are presented in Section 2. Brief discussions of data on Summary Tables VIII.1 to VIII.4 are also provided in Section 3. Statistical Tables presenting the census results at zonal and wereda levels are also given as Table series 8.1A- 8.34A and 8.1B-8.34B. Finally, the estimates, Standard Errors (S.E.) and Coefficients of Variation (C.V.) on number of holders reporting, number of farm implements reported and total value are presented in the Annex Tables.

## **2. CLASSIFICATION OF FARM IMPLEMENTS, OTHER FARM EQUIPMENT AND DRAUGHT ANIMALS**

The farm implements and draught animals reported were classified into the following eight groups: -

- Implements used for clearing land,
- Implements used for cultivation,
- Parts for traditional plough,
- Implements used for harvesting,
- Implements used for threshing,
- Other farm equipment,
- Draught animals for farm activity, and
- Storage facilities.

These eight groups further broken down to include the following implements and other farm equipment:

### **2.1 Implements used for clearing land**

- a) Axes,
- b) 'Gejera '(Chopper), and
- c) Shovel.

### **2.2 Implements used for cultivation**

- a) Hoe,
- b) 'Mekeskesha',
- c) Pick-Axe, and
- d) Tractor.

### **2.3 Parts for traditional plough**

- a) 'Diger',
- b) ' Erfe',
- c) Plough-Beam,
- d) Plough-Tip, and
- e) 'Wegel'-Tip.

## 2.4 Implements used for harvesting

- a) Sickle.

## 2.5 Implements used for threshing

- a) Hay- Fork (metal or wood),
- b) Threshing stick, and
- c) Winnowing (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) 'Debignet' (Local storage),
- b) 'Gottera' (Local storage),
- c) 'Gudguad' (Local storage), and
- d) Modern storage.

### Definitions of storage facilities

'Debignet':- Is a round vessel of earthenware storage attached with the wall of a house. The shape of 'Debignet' is similar to the shape of a barrel. Debignet is usually around 1 metre high and 0.5-1 metres wide.

'Gottera':- Is a storage made of bamboo plant. The bamboo is splited and then criss-crossed and woven like a giant basket. Finally, it is laminated with a mixture of animal dung and dry grass (straw). '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 region. 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 and 'Gejera'(Chopper). In Tigray Region it is estimated that there were about 671,737 crop holders in rural areas of which about 481,318(71.65%) reported to own axes, about 43.30% reporting shovels, and 42.26% 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 the highest followed by 'Gejeras' and shovels. The expected duration of service of an axe and 'Gejera' was estimated to be 12 years each, 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, 'Meakeshesha', pick-axe, and traditional plough. Among these farm implements and tools in Tigray region pick-axe was the highest in terms of number of holders reporting, total number of implements reported and total value. The second highest was 'Meakeshesha' while hoe was the lowest.

The data in Summary Table VIII.4 revealed that the percentage distributions of the number of crop holders that owned one, two, three, four and five and above pick-axe were 39.44%, 8.34%, 2.22%, 0.72% and 0.40% respectively. On the other hand the percentage distributions of the number of crop holders that did not own hoe, 'Meakeshesha', pick-axe and tractor were 91.41%, 86.87%, 48.88% and 100% respectively. It is also shown that sickle is reported as the only harvesting tool. For details, see Summary Table VIII.1.

### 3.2 Draught Animals

Peasants in Ethiopia use domestic animals for draught purposes. In several parts of the country since most of the 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 in Summary Table VIII.2 among the domestic animals 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 643.5 million Birr. The second highest used for ploughing was ass. The table also

indicates that the average number of oxen per holder was 1.26, which shows serious scarcity of oxen in the region. About 487,143 holders (72.52% of the total rural agricultural crop holders in the region) reported 1,162,895 cattle (working age cattle) used for threshing and these cattle had a total value of over 823.6 million Birr and the average replacement value of a working age cattle was about 318.03 Birr. It was also indicated that significant number of asses and Camels were used by the holders for transportation.

The estimated number and percentage distributions of crop holders that owned implements, equipment and draught animal are shown in Summary Table VIII.4. The census result shows that there were about 671,737 rural crop holders in Tigray region. Among these 31.58%, 33.05%, 3.62%, 2.01% and 0.5% of the holders owned one, two, three, four and five and above oxen respectively. On the hand about 29.24% of the crop 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 holders 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. The second highest storage facility reported was 'Gottera' and the third was Gudguad. On the other hand, Modern Storage was reported by insignificant number of holders. The total value of all reported storage facilities was assessed to be 24,492,402 Birr, of which 54.4% and 41.68% comprises of Debignit and Gottera, respectively. The percentage distributions of the number of crop holders that owned 'Debignit' and 'Gottera' are 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 Service of Implement, for Private holdings.

Implements and Equipment	Number of Holders Reporting	Percent of Total Holders Reporting	Number of Implements and Equipment		Total Value of Imp. & Eq. (Birr)	Average Replacement Value Per Imp. & Eq. (Birr)	Average Duration of Service of Imp. & Eq. (Years)
			Total Reported	#Average Per Holder			
Used for Clearing Land							
Axes.....	481,318	71.65	715,388	1.06	8,779,927	8.47	12
'Gejeras' (Choppers).....	283,849	42.26	317,408	0.47	3,949,718	11.14	12
Shovels.....	290,835	43.30	310,158	0.46	3,767,765	11.41	10
Used for Cultivation							
Hoes.....	57,671	8.59	72,753	0.11	810,516	9.58	10
'Mekeskeshas'.....	88,223	13.13	148,712	0.22	890,892	4.11	5
Pick-Axes.....	343,376	51.12	458,163	0.68	4,329,010	7.71	8
Tractors.....	-	-	-	-	-	-	-
Parts for traditional Plough							
'Degers'.....	531,360	79.10	1,350,149	2.01	4,272,091	1.32	1
'Erfes'.....	529,977	78.90	1,034,078	1.54	4,608,222	2.37	2
Plow-beams.....	536,480	79.86	876,036	1.30	15,058,688	10.93	7
Plow- tips.....	535,927	79.78	682,770	1.02	18,685,929	21.51	5
'Wegel' - tips.....	530,386	78.96	719,884	1.07	4,210,038	4.38	3
Yokes.....	531,578	79.13	734,456	1.09	9,112,985	9.33	8
Used for Harvesting							
Sickles.....	589,958	87.83	1,396,916	2.08	11,109,346	3.60	5
Used for Threshing							
Hay-Forks (metal).....	6,621	0.99	9,845	0.01	100,422	7.64	9
Hay-Forks (wood).....	464,284	69.12	883,446	1.32	5,284,671	3.17	5
Threshing Sticks.....	60,233	8.97	113,046	0.17	324,870	1.77	2
Winnowers (metal).....	3,703	0.55	4,027	0.01	48,784	11.13	10
Winnowers (wood).....	112,031	16.68	130,588	0.19	1,461,764	9.86	11
Other farm Equipment							
Carts.....	1,097	0.16	1,207	0.00	2,025,109	1,657.08	17
Sprayers (Hand operated).....	3,096	0.46	5,468	0.01	60,010	7.60	5
Sprayers (Power operated).....	*	*	*	*	*	*	*
Tying Tools.....	-	-	-	-	-	-	-
Wheelbarrows.....	799	0.12	872	0.00	112,450	127.53	18

# Average per holder is the ratio of total number of each implement reported to total number of rural crop holders 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 Duration of Service of Implement, for Private Holdings.

Animals	Number of Holders Reporting	Percent of Total Holders Reporting	Number of Animals		Total Value of Animals (Birr)	Average Replacement Value Per Animal (Birr)	Average Age of Animal (Years)
			Total Reported	#Average Per Holder			
<b>Used for Ploughing</b>							
Asses.....	3,085	0.46	3,743	0.01	1,817,973	364.55	8
Camels.....	514	0.08	539	0.00	907,200	1,636.36	11
Horses.....	•	-	•	•	•	•	•
Mules.....	151	0.02	•	•	•	•	10
Oxen.....	475,321	70.76	844,845	1.26	643,505,551	447.67	8
<b>Used for Threshing or Transportation</b>							
Asses.....	224,091	33.36	293,767	0.44	80,452,942	218.45	8
Camels.....	10,494	1.56	23,639	0.04	31,380,177	650.64	11
Cattle.....	487,143	72.52	1,162,895	1.73	823,638,127	318.03	8
Horses.....	1,138	0.17	1,290	0.00	595,014	423.71	10
Mules.....	5,030	0.75	6,024	0.01	5,822,048	809.84	10

# Average per holder is the ratio of total number of each animal reported to total number of rural crop holders in the region.

- Total number of rural 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.

Storage 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'.....	407,035	60.59	1,388,697	2.07	13,327,857	2.77	5
'Gotteras'.....	213,453	31.78	549,341	0.82	10,209,638	8.83	8
'Gudguads'.....	22,633	3.37	31,182	0.05	912,175	23.52	18
Modern Storage Structures..	1,141	0.17	2,785	0.00	42,732	6.95	7

# Average per holder is the ratio of total number of each storage facility reported to total number of rural crop holders in the region.

- Total number of rural 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, and 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 .....	190,419	28.35	316,419	47.10	131,391	19.56	23,935	3.56	7,071	1.05	2,502	0.37
'Gejera' .....	387,888	57.74	253,126	37.68	28,621	4.26	1,756	0.26	257	0.04	89	0.01
Shovel .....	380,901	56.70	273,463	40.71	16,108	2.40	980	0.15	170	0.03	115	0.02
Used for Cultivation												
Hoes .....	614,067	91.41	46,023	6.85	9,301	1.38	1,562	0.23	539	0.08	245	0.04
'Mekeskeshas' .....	583,513	86.87	49,152	7.32	25,382	3.78	8,795	1.31	3,029	0.45	1,866	0.28
Pick- Axes .....	328,361	48.88	264,926	39.44	56,000	8.34	14,922	2.22	4,827	0.72	2,701	0.40
Tractors .....	671,737	100.00	-	-	-	-	-	-	-	-	-	-
Parts for traditional Plough												
'Degers' .....	140,377	20.90	149,921	22.32	211,811	31.53	36,050	5.37	90,889	13.53	42,689	6.36
'Erfes' (Handle) .....	141,760	21.10	222,030	33.05	194,694	28.98	67,658	10.07	29,238	4.35	16,357	2.44
Plough-Beam .....	135,257	20.14	288,348	42.93	184,777	27.51	44,451	6.62	13,215	1.97	5,689	0.85
Plough -Tips .....	135,809	20.22	405,535	60.37	117,807	17.54	10,326	1.54	1,624	0.24	636	0.09
'Wegel' -Tips .....	141,351	21.04	378,997	56.42	128,436	19.12	15,791	2.35	5,181	0.77	1,981	0.29
Yokes .....	140,159	20.87	359,812	53.56	149,049	22.19	16,703	2.49	4,939	0.74	1,075	0.16
Used for Harvesting												
Sickles .....	81,778	12.17	150,397	22.39	235,452	35.05	112,209	16.70	55,141	8.21	36,760	5.47
Used for Threshing												
Hay-Forks (Metal) .....	665,116	99.01	4,405	0.66	1,500	0.22	477	0.07	185	0.03	54	0.01
Hay-Forks (Wood) .....	207,452	30.88	183,620	27.34	187,186	27.87	62,751	9.34	22,043	3.28	8,685	1.29
Threshing Sticks .....	611,504	91.03	27,951	4.16	19,581	2.91	6,977	1.04	4,502	0.67	1,222	0.18
Winnowers (Metal) .....	668,033	99.45	3,418	0.51	267	0.04	-	-	19	0.00	-	-
Winnowers (Wood) .....	559,706	83.32	96,881	14.42	12,591	1.87	1,934	0.29	536	0.08	89	0.01
Other Farm Equipment												
Carts .....	670,641	99.84	1,006	0.15	70	0.01	20	0.00	-	-	-	-
Sprayers (Hand Operated) .....	668,641	99.54	1,685	0.25	962	0.14	183	0.03	194	0.03	72	0.01
Sprayers (Power Operated) .....	671,716	100.00	21	0.00	-	-	-	-	-	-	-	-
Tying Tools .....	-	-	-	-	-	-	-	-	-	-	-	-
Wheelbarrows .....	670,938	99.88	761	0.11	20	0.00	-	-	18	0.00	-	-
Animals Used for Ploughing												
Asses .....	668,653	99.54	2,573	0.38	401	0.06	74	0.01	36	0.01	-	-
Camels .....	671,223	99.92	489	0.07	25	0.00	-	-	-	-	-	-
Horses .....	671,713	100.00	-	-	24	0.00	-	-	-	-	-	-
Mules .....	671,586	99.98	59	0.01	68	0.01	24	0.00	-	-	-	-
Oxen .....	196,416	29.24	212,166	31.58	221,998	33.05	24,296	3.62	13,506	2.01	3,355	0.50
Animals Used for Threshing or Transportation												
Asses .....	447,646	66.64	174,425	25.97	41,573	6.19	6,594	0.98	820	0.12	679	0.10
Camels .....	661,243	98.44	5,931	0.88	1,668	0.25	985	0.15	642	0.10	1,268	0.19
Cattle .....	184,594	27.48	159,136	23.69	181,882	27.08	69,510	10.35	41,845	6.23	34,770	5.18
Horses .....	670,599	99.83	1,025	0.15	93	0.01	-	-	20	0.00	-	-
Mules .....	666,706	99.25	4,331	0.64	506	0.08	126	0.02	36	0.01	32	0.00
Storage Structure												
'Dibignits' .....	264,702	39.41	61,201	9.11	105,883	15.76	88,456	13.17	61,878	9.21	89,617	13.34
'Gotteras' .....	458,285	68.22	65,499	9.75	62,959	9.37	40,787	6.07	21,549	3.21	22,658	3.37
'Gudguads' .....	649,104	96.63	17,832	2.65	3,375	0.50	646	0.10	267	0.04	513	0.08
Modern Storages .....	670,595	99.83	384	0.06	324	0.05	184	0.03	156	0.02	94	0.01

STATISTICAL TABLES PRESENTING THE CENSUS  
RESULTS AT  
ZONAL AND WOREDA LEVELS

Tables 8.1A- 8.34A

TABLE 8.1A: - Number of Holders Reporting Axe Owned, Quantity Reported, Replacement Value, and Duration of Service of Implement, 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)
Tigray Region	671,737	481,318	715,388	1.06	8,779,927	8.47	12
West Tigray Zone	166,544	140,348	211,374	1.27	3,594,307	11.55	11
Kafta	10,056	9,114	17,400	1.73	277,089	8.71	10
Tahtay Adiyabo	15,775	13,876	20,931	1.33	405,443	13.02	13
Laelay Adiyabo	20,677	17,059	23,997	1.16	449,795	14.03	14
Tahtay Koraro	13,471	10,768	15,906	1.18	258,702	10.96	13
Medebay Zana	22,348	17,399	25,539	1.14	319,403	8.30	12
Asegede Tsimbela	20,570	18,265	25,752	1.25	431,413	11.80	10
Tselemti	27,248	21,447	31,414	1.15	431,257	10.70	10
Welkait	21,875	19,073	30,545	1.40	617,306	12.56	9
Tsegede	14,525	13,346	19,889	1.37	403,900	13.64	13
Central Tigray Zone	215,944	156,480	243,492	1.13	2,599,341	7.07	13
Mereb Lehe	18,067	15,267	26,295	1.46	372,486	8.63	14
Ahiferom	33,102	22,024	38,300	1.16	400,820	7.23	12
Werie Lehe	26,501	20,023	30,765	1.16	349,473	7.21	15
Adwa	23,097	16,691	25,988	1.13	315,983	7.75	14
Laelay Maychew	14,111	9,827	16,725	1.19	156,651	6.09	14
Tahtay Maychew	17,434	11,332	14,499	0.83	140,894	7.43	12
Naeder Adet	21,093	13,538	18,340	0.87	162,880	6.47	18
Kola Temben	26,373	20,101	28,806	1.09	257,128	6.35	12
Degua Temben	21,674	15,666	24,101	1.11	224,383	6.05	10
Tanqu Abergele	14,492	12,010	19,675	1.36	218,643	7.02	11
East Tigray Zone	118,426	68,481	87,559	0.74	1,173,225	10.84	10
Gulumahada	15,512	7,975	10,684	0.69	147,771	10.29	13
Erob	3,581	2,595	3,370	0.94	87,107	20.46	8
Saesi Tsaedamba	23,698	13,710	16,557	0.70	214,134	11.07	7
Ganta Afeshum	20,201	10,721	12,212	0.60	176,876	13.12	10
Hawzen	20,539	11,408	14,234	0.69	213,273	12.43	11
Wukro	14,563	8,392	11,618	0.80	101,197	6.66	14
Atsbi Wenberta	20,332	13,681	18,885	0.93	232,867	9.11	7
South Tigray Zone	170,821	116,008	172,963	1.01	1,413,054	5.46	11
Seharte Samre	22,394	16,242	26,852	1.20	183,067	4.88	12
Enderta	21,353	13,334	18,894	0.88	128,452	4.80	13
Hintalo Wajirat	27,944	17,721	24,363	0.87	261,607	7.71	10
Ambalage	19,962	11,621	17,593	0.88	131,268	5.73	13
Endamehoni	16,810	11,109	20,398	1.21	205,025	4.68	12
Rayaazebo	19,926	15,448	26,009	1.31	242,360	5.46	10
Alamata	14,537	10,638	14,374	0.99	121,035	6.01	9
Wofla	27,895	19,896	24,480	0.88	140,239	4.49	12

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)
Tigray Region.....	671,206	283,687	317,247	0.47	3,945,102	11.13	12
West Tigray Zone.....	166,544	82,956	95,240	0.57	1,492,943	13.61	11
Kafta.....	10,056	2,052	2,593	0.26	39,622	12.05	11
Tahtay Adiyabo.....	15,775	3,894	4,126	0.26	52,083	12.08	14
Laelay Adiyabo.....	20,677	9,627	10,390	0.50	167,373	14.94	12
Tahtay Köraro.....	13,471	6,293	7,231	0.54	86,930	10.44	11
Medebay Zana.....	22,348	14,711	16,982	0.76	201,264	10.40	11
Asegede Tsimbela.....	20,570	9,562	11,840	0.58	197,816	13.34	11
Tselermi.....	27,248	19,715	22,860	0.84	415,435	15.65	10
Welkait.....	21,875	11,531	13,156	0.60	237,511	15.61	8
Tsegede.....	14,525	5,570	6,062	0.42	94,910	14.33	10
Central Tigray Zone.....	215,944	110,501	124,383	0.58	1,244,150	9.06	13
Mereb Lehe.....	18,067	12,142	13,475	0.75	163,561	10.91	12
Ahiferom.....	33,102	17,074	18,615	0.56	168,736	9.62	12
Werie Lehe.....	26,501	12,305	13,403	0.51	120,703	8.30	16
Adwa.....	23,097	10,848	12,708	0.55	136,742	9.30	14
Laelay Maychew.....	14,111	7,505	8,411	0.60	84,054	8.84	14
Tahtay Maychew.....	17,434	6,505	6,985	0.40	60,442	8.06	11
Naeder Adet.....	21,093	14,469	16,596	0.79	188,619	9.94	19
Koia Temben.....	26,373	13,919	16,606	0.63	158,182	7.93	14
Degua Temben.....	21,674	5,984	6,355	0.29	50,048	7.38	10
Tanqu Abergele.....	14,492	9,750	11,228	0.77	113,065	8.63	10
East Tigray Zone.....	117,896	14,526	15,616	0.13	173,406	10.26	12
Gulumahada.....	15,512	2,675	2,962	0.19	31,494	9.91	14
Erob.....	3,581	129	139	0.04	2,210	15.56	11
Saesi Tsaedamba.....	23,698	2,124	2,188	0.09	27,915	11.74	8
Ganta Afeshum.....	20,201	6,995	7,666	0.38	79,933	9.35	12
Hawzen.....	20,008	506	547	0.03	9,491	16.82	14
Wukro.....	14,563	1,809	1,828	0.13	18,634	10.06	17
Atsbi Wenberta.....	20,332	287	287	0.01	3,729	12.99	9
South Tigray Zone.....	170,821	75,704	82,007	0.48	1,034,603	11.55	10
Seharte Samre.....	22,394	8,202	9,176	0.41	93,637	9.02	12
Enderta.....	21,353	3,134	3,260	0.15	35,513	10.39	16
Hintalo Wajirat.....	27,944	10,223	11,108	0.40	162,562	13.62	9
Ambalage.....	19,962	11,313	12,539	0.63	128,047	9.12	10
Endamehoni.....	16,810	8,256	8,717	0.52	100,990	10.99	10
Rayaazebo.....	19,926	9,822	10,868	0.55	233,397	19.21	8
Alamata.....	14,537	9,395	10,290	0.71	133,060	11.53	8
Wofla.....	27,895	15,360	16,050	0.58	147,396	8.81	12

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)
Tigray Region.....	671,737	290,835	310,158	0.46	3,767,765	11.41	10
West Tigray Zone.....	166,544	74,908	80,865	0.49	1,141,187	13.13	10
Kafta.....	10,056	3,580	4,336	0.43	72,225	13.73	11
Tahtay Adiyabo.....	15,775	11,408	12,810	0.81	193,115	13.40	11
Lalay Adiyabo.....	20,677	11,470	11,973	0.58	191,160	15.33	11
Tahtay Koraro.....	13,471	6,463	7,079	0.53	98,631	12.79	9
Medebay Zana.....	22,348	13,761	14,615	0.65	167,894	10.83	10
Assegede Tsimbela.....	20,570	12,118	13,322	0.65	200,074	13.88	10
Tselemti.....	27,248	7,384	7,870	0.29	98,223	12.05	10
Welkait.....	21,875	5,149	5,179	0.24	72,544	13.95	9
Tsegede.....	14,525	3,575	3,680	0.25	47,322	12.62	10
Central Tigray Zone.....	215,944	102,752	109,112	0.51	1,121,969	9.71	11
Mereb Lehe.....	18,067	9,117	9,343	0.52	107,918	11.24	11
Ahiferom.....	33,102	14,263	14,832	0.45	170,642	11.11	10
Werie Lehe.....	26,501	13,566	14,875	0.56	131,014	8.06	13
Adwa.....	23,097	11,639	12,335	0.53	156,793	12.02	10
Lalay Maychew.....	14,111	7,646	8,090	0.57	86,791	10.24	11
Tahtay Maychew.....	17,434	9,084	9,554	0.55	87,084	8.61	10
Naeder Adet.....	21,093	11,284	12,083	0.57	116,841	8.93	15
Kola Temben.....	26,373	12,685	13,853	0.53	115,079	7.66	10
Degua Temben.....	21,674	6,036	6,373	0.29	65,015	9.64	10
Tanqu Abergele.....	14,492	7,431	7,772	0.54	84,793	10.47	11
East Tigray Zone.....	118,426	58,638	62,828	0.53	887,859	13.25	8
Gulumahada.....	15,512	7,579	8,036	0.52	117,805	13.51	10
Erob.....	3,581	2,311	2,404	0.67	46,363	18.58	6
Saesi Tsaedamba.....	23,698	12,969	13,767	0.58	210,879	14.46	6
Ganta Afeshum.....	20,201	10,194	10,941	0.54	118,099	10.12	8
Hawzen.....	20,539	11,318	12,661	0.62	200,481	14.61	9
Wukro.....	14,563	5,590	5,817	0.40	63,695	10.44	10
Atsbi Wenberta.....	20,332	8,677	9,202	0.45	130,538	13.41	7
South Tigray Zone.....	170,821	54,537	57,353	0.34	616,750	10.22	10
Seharte Samre.....	22,394	9,968	10,726	0.48	78,185	6.78	10
Enderta.....	21,353	8,709	9,010	0.42	85,121	9.08	9
Hintalo Wajirat.....	27,944	7,164	7,750	0.28	92,648	11.16	8
Ambalage.....	19,962	4,102	4,173	0.21	43,089	10.14	14
Endamehoni.....	16,810	3,770	3,839	0.23	43,477	11.10	11
Rayaazebo.....	19,926	7,655	8,026	0.40	127,527	15.20	10
Alamata.....	14,537	5,089	5,359	0.37	75,405	13.24	10
Wofla.....	27,895	8,081	8,470	0.30	71,298	7.94	12

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)
Tigray Region.....	671,737	57,671	72,753	0.11	810,516	9.58	10
West Tigray Zone.....	166,544	23,469	29,275	0.18	330,053	9.69	8
Kafta.....	10,056	1,899	2,110	0.21	42,801	18.65	15
Tahtay Adiyabo.....	15,775	608	626	0.04	8,451	12.90	9
Laelay Adiyabo.....	20,677	3,571	4,165	0.20	55,638	12.20	7
Tahtay Koraro.....	13,471	2,365	3,377	0.25	31,838	7.58	8
Medebay Zana.....	22,348	2,462	3,020	0.14	25,987	7.20	11
Asegede Tsimbela.....	20,570	4,055	5,691	0.28	46,388	6.65	7
Tselemti.....	27,248	4,462	5,426	0.20	45,889	7.19	6
Welkait.....	21,875	2,706	3,304	0.15	51,791	12.75	9
Tsegede.....	14,525	1,341	1,556	0.11	21,270	12.33	9
Central Tigray Zone.....	215,944	18,263	24,840	0.12	223,625	7.10	9
Mereb Lehe.....	18,067	2,867	3,657	0.20	43,873	9.33	12
Ahiferom.....	33,102	*	*	*	*	*	*
Werie Lehe.....	26,501	410	495	0.02	13,746	26.34	14
Adwa.....	23,097	1,139	1,767	0.08	29,905	11.73	18
Laelay Maychew.....	14,111	264	282	0.02	3,177	11.07	10
Tahtay Maychew.....	17,434	1,571	2,809	0.16	16,343	3.47	5
Naeder Adet.....	21,093	377	431	0.02	3,522	6.91	9
Kola Temben.....	26,373	5,724	8,057	0.31	63,281	6.18	7
Degua Temben.....	21,674	2,722	3,417	0.16	21,025	5.18	7
Tanqu Abergele.....	14,492	3,040	3,743	0.26	25,599	5.93	10
East Tigray Zone.....	118,426	5,038	6,335	0.05	113,018	16.05	11
Gulumahada.....	15,512	1,341	1,554	0.10	27,689	16.97	12
Erob.....	3,581	100	100	0.03	1,856	18.56	6
Saesi Tsaedamba.....	23,698	1,184	*	*	36,118	*	7
Ganta Afeshum.....	20,201	1,404	1,963	0.10	*	*	11
Hawzen.....	20,539	691	897	0.04	13,493	13.01	11
Wukro.....	14,563	264	264	0.02	4,810	18.22	16
Atsbi Wenberta.....	20,332	*	*	*	*	*	*
South Tigray Zone.....	170,821	10,901	12,304	0.07	143,821	10.98	13
Scharte Samre.....	22,394	1,554	2,299	0.10	18,229	6.80	10
Enderta.....	21,353	1,074	1,131	0.05	33,312	29.09	*
Hintalo Wajirat.....	27,944	1,417	1,417	0.05	20,857	14.72	11
Ambalage.....	19,962	498	521	0.03	4,012	7.48	7
Endamehoni.....	16,810	468	610	0.04	7,498	10.14	9
Rayazebo.....	19,926	3,713	4,032	0.20	38,749	8.80	13
Alamata.....	14,537	1,037	1,075	0.07	7,831	7.02	10
Wofla.....	27,895	1,140	1,219	0.04	13,334	10.37	9

TABLE 8.5A: - Number of Holders Reporting 'Mekesksha' Owned, Quantity Reported, Replacement Value, and Duration of Service of 'Mekesksha', for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Mekeskshas' Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Mekesksha' (Birr)	Average Duration of Service of 'Mekesksha' (Years)
Tigray Region.....	671,737	88,223	148,712	0.22	890,892	4.11	5
West Tigray Zone.....	166,544	27,363	48,834	0.29	333,824	4.50	5
Kafta.....	10,056	1,552	2,452	0.24	21,732	6.36	6
Tahtay Adiyabo.....	15,775	2,733	3,110	0.20	23,887	7.00	7
Lacalay Adiyabo.....	20,677	3,983	6,671	0.32	46,728	4.96	3
Tahtay Koraro.....	13,471	4,358	10,134	0.75	62,641	3.37	5
Medebay Zana.....	22,348	4,937	10,558	0.47	80,769	4.59	4
Asegede Tsimbela.....	20,570	5,780	10,306	0.50	50,498	3.00	4
Tselemti.....	27,248	3,178	4,518	0.17	34,772	5.56	5
Welkait.....	21,875	•	•	-	•	•	•
Tsagede.....	14,525	•	•	-	•	•	•
Central Tigray Zone.....	215,944	25,816	45,484	0.21	235,827	3.47	6
Mereb Lehe.....	18,067	2,418	3,026	0.17	18,594	5.07	6
Ahiferom.....	33,102	2,367	•	-	27,425	•	9
Werie Lehe.....	26,501	3,640	5,593	0.21	39,496	5.18	7
Adwa.....	23,097	3,493	4,729	0.20	33,690	5.90	9
Lacalay Maychew.....	14,111	1,036	1,338	0.09	8,073	5.03	5
Tahtay Maychew.....	17,434	1,923	3,399	0.19	13,609	2.42	4
Naeder Adet.....	21,093	•	•	-	18,946	•	•
Kola Temben.....	26,373	5,915	13,459	0.51	43,963	1.64	3
Degua Temben.....	21,674	1,037	•	-	6,465	•	6
Tanqu Abergele.....	14,492	2,296	4,833	0.33	25,566	2.69	5
East Tigray Zone.....	118,426	22,011	34,839	0.29	206,215	4.20	5
Gulumahada.....	15,512	2,453	3,703	0.24	22,613	4.26	5
Erob.....	3,581	565	675	0.19	5,547	6.86	5
Saesi Tsaedamba.....	23,698	6,646	9,677	0.41	69,286	5.40	5
Ganta Afeshum.....	20,201	1,099	1,417	0.07	11,656	6.75	5
Hawzen.....	20,539	4,946	8,734	0.43	46,404	3.43	6
Wukro.....	14,563	3,636	6,353	0.44	25,671	2.65	6
Atsbi Wenberta.....	20,332	2,665	4,279	0.21	25,038	4.00	5
South Tigray Zone.....	170,821	13,033	19,555	0.11	115,025	4.49	6
Seharte Samre.....	22,394	3,517	7,044	0.31	32,254	2.49	5
Enderta.....	21,353	2,315	3,150	0.15	19,194	4.93	6
Hintalo Wajirat.....	27,944	1,604	2,571	0.09	15,140	4.44	7
Ambalage.....	19,962	1,554	2,018	0.10	10,927	4.41	6
Endamechoni.....	16,810	1,784	2,303	0.14	11,372	3.90	5
Rayaazebo.....	19,926	1,554	1,641	0.08	18,044	10.75	8
Alamata.....	14,537	241	241	0.02	•	•	•
Wofla.....	27,895	•	•	-	4,369	•	•

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)
Tigray Region	671,737	343,376	458,163	0.68	4,329,010	7.71	8
West Tigray Zone	166,544	89,843	124,907	0.75	1,267,860	8.11	8
Kafta	10,056	3,007	5,011	0.50	63,295	8.92	10
Tahtay Adiyabo	15,775	10,572	11,473	0.73	169,688	13.39	11
Laelay Adiyabo	20,677	9,954	13,144	0.64	179,485	11.34	12
Tahtay Koraro	13,471	6,895	10,797	0.80	99,154	6.69	9
Medebay Zana	22,348	14,308	20,598	0.92	158,515	6.00	7
Asegede Tsimbela	20,570	12,262	15,919	0.77	175,159	9.27	8
Tselemti	27,248	15,161	25,840	0.95	171,440	4.30	5
Welkait	21,875	11,693	15,251	0.70	156,892	8.13	6
Tsegede	14,525	5,991	6,874	0.47	94,232	12.61	10
Central Tigray Zone	215,944	108,031	157,142	0.73	1,169,637	5.71	9
Mereb Lehe	18,067	9,286	9,986	0.55	121,730	11.57	11
Ahiferom	33,102	15,068	21,037	0.64	176,610	6.63	9
Werie Lehe	26,501	11,960	13,625	0.51	104,740	6.91	11
Adwa	23,097	11,616	16,182	0.70	155,631	7.47	10
Laelay Maychew	14,111	7,210	11,717	0.83	94,818	5.61	9
Tahtay Maychew	17,434	7,674	9,347	0.54	68,621	6.31	8
Naeder Adet	21,093	13,127	20,402	0.97	119,748	4.17	9
Kola Temben	26,373	16,227	29,646	1.12	164,310	3.34	5
Degua Temben	21,674	7,105	9,959	0.46	67,432	5.41	8
Tanqu Abergele	14,492	8,756	15,241	1.05	95,997	4.25	7
East Tigray Zone	118,426	57,065	63,291	0.53	897,598	12.87	8
Gulumahada	15,512	7,242	8,175	0.53	107,651	11.88	10
Erob	3,581	2,474	2,756	0.77	56,395	18.29	8
Saesi Tsaedamba	23,698	10,823	11,585	0.49	187,725	15.10	7
Ganta Afeshum	20,201	11,342	12,846	0.64	146,452	10.24	8
Hawzen	20,539	10,100	10,827	0.53	167,613	14.46	8
Wukro	14,563	5,829	6,354	0.44	71,738	10.41	11
Atsbi Wenberta	20,332	9,255	10,748	0.53	160,025	12.84	7
South Tigray Zone	170,821	88,438	112,823	0.66	993,915	7.14	9
Seharte Samre	22,394	10,951	14,784	0.66	78,963	4.01	8
Enderta	21,353	9,438	11,720	0.55	107,153	7.92	10
Hintalo Wajirat	27,944	13,796	18,233	0.65	158,768	7.18	6
Ambalage	19,962	12,297	14,748	0.74	159,520	9.18	8
Endamehoni	16,810	11,491	14,327	0.85	149,194	8.42	9
Rayaazebo	19,926	6,215	7,693	0.39	93,158	9.64	9
Alamata	14,537	4,553	5,250	0.36	47,428	7.88	9
Wofla	27,895	19,697	26,069	0.93	199,731	5.78	9

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)
Tigray Region.....	671,737	531,360	1,350,149	2.01	4,272,091	1.32	1
West Tigray Zone.....	166,544	140,724	329,589	1.98	1,034,492	1.43	1
Kafta.....	10,056	5,208	7,717	0.77	37,498	3.69	1
Tahtay Adiyabo.....	15,775	12,884	36,354	2.30	127,716	1.42	1
Laelay Adiyabo.....	20,677	17,779	45,002	2.18	179,645	1.72	1
Tahtay Koraro.....	13,471	11,728	38,406	2.85	141,853	1.27	1
Medebay Zana.....	22,348	18,695	52,895	2.37	147,109	0.99	1
Asegede Tsimbela.....	20,570	19,064	49,668	2.41	111,287	0.93	1
Tselemti.....	27,248	24,485	51,653	1.90	151,916	1.51	1
Welkait.....	21,875	18,058	28,826	1.32	94,191	2.00	1
Tsegede.....	14,525	12,823	19,069	1.31	43,278	1.62	1
Central Tigray Zone.....	215,944	169,430	525,796	2.43	1,647,228	1.08	1
Mereb Lehe.....	18,067	15,022	41,759	2.31	165,661	1.52	1
Ahiferom.....	33,102	23,318	70,164	2.12	210,195	1.05	1
Werie Lehe.....	26,501	20,322	84,506	3.19	220,662	0.63	1
Adwa.....	23,097	18,767	63,636	2.76	235,390	1.19	1
Laelay Maychew.....	14,111	10,412	32,154	2.28	137,097	1.49	2
Tahtay Maychew.....	17,434	13,281	31,760	1.82	123,590	1.64	1
Naeder Adet.....	21,093	16,947	43,805	2.08	121,799	1.21	2
Kola Temben.....	26,373	21,883	72,930	2.77	210,732	0.90	1
Degua Temben.....	21,674	16,849	43,174	1.99	98,240	0.96	1
Tanqu Abergele.....	14,492	12,629	41,907	2.89	123,862	0.93	1
East Tigray Zone.....	118,426	88,829	212,513	1.79	850,331	1.78	2
Gulumahada.....	15,512	11,119	23,898	1.54	114,888	2.28	1
Erob.....	3,581	2,614	5,054	1.41	35,111	3.95	3
Saesi Tsaedamba.....	23,698	17,841	46,526	1.96	169,215	1.51	2
Ganta Afeshum.....	20,201	14,990	27,633	1.37	123,756	2.59	2
Hawzen.....	20,539	15,803	45,146	2.20	163,532	1.33	1
Wukro.....	14,563	11,136	25,880	1.78	68,154	1.29	2
Atsbi Wenberta.....	20,332	15,326	38,377	1.89	175,675	1.81	2
South Tigray Zone.....	170,821	132,377	282,251	1.65	740,040	1.29	1
Seharte Samre.....	22,394	18,159	50,350	2.25	117,636	0.91	1
Enderta.....	21,353	16,306	35,148	1.65	111,364	1.61	1
Hintalo Wajirat.....	27,944	22,235	51,162	1.83	160,988	1.39	1
Ambalage.....	19,962	14,066	26,631	1.33	60,444	1.21	1
Endamehoni.....	16,810	11,589	25,153	1.50	51,872	1.02	1
Rayaazebo.....	19,926	17,026	33,431	1.68	112,994	1.84	1
Alamata.....	14,537	12,112	23,859	1.64	60,243	1.41	1
Wofla.....	27,895	20,884	36,517	1.31	64,499	1.02	1

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 'Erfe's Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Erfe' (Birr)	Average Duration of Service of 'Erfe' (Years)
Tigray Region.....	671,737	529,977	1,034,078	1.54	4,608,222	2.37	2
West Tigray Zone.....	166,544	138,873	253,585	1.52	751,127	1.64	1
Kafta.....	10,056	5,097	6,450	0.64	22,364	2.74	1
Tahtay Adiyabo.....	15,775	12,732	23,117	1.47	79,577	2.00	2
Laelay Adiyabo.....	20,677	17,865	35,919	1.74	129,878	1.82	2
Tahtay Koraro.....	13,471	11,445	26,570	1.97	109,208	1.92	1
Medebay Zana.....	22,348	18,369	38,632	1.73	103,060	1.26	1
Asegede Tsimbela.....	20,570	18,770	39,067	1.90	86,905	1.07	1
Tselemti.....	27,248	23,893	41,633	1.53	123,449	1.78	1
Welkait.....	21,875	17,983	25,553	1.17	67,914	1.84	1
Tsegede.....	14,525	12,718	16,643	1.15	28,774	1.40	1
Central Tigray Zone.....	215,944	170,480	377,840	1.75	1,476,323	1.79	2
Mereb Lehe.....	18,067	14,870	29,830	1.65	129,702	2.24	1
Ahiferom.....	33,102	23,879	55,149	1.67	189,875	1.58	2
Werie Lehe.....	26,501	20,992	49,409	1.86	190,535	1.75	3
Adwa.....	23,097	18,576	42,888	1.86	210,878	2.13	2
Laelay Maychew.....	14,111	10,457	27,167	1.93	182,148	2.49	2
Tahtay Maychew.....	17,434	13,165	24,239	1.39	86,218	1.90	1
Naeder Adet.....	21,093	17,050	40,597	1.92	117,341	1.27	3
Kola Temben.....	26,373	21,927	46,397	1.76	141,326	1.47	2
Degua Temben.....	21,674	16,894	34,399	1.59	138,423	1.99	3
Tanqu Abergele.....	14,492	12,672	27,764	1.92	89,877	1.49	2
East Tigray Zone.....	118,426	87,885	148,930	1.26	1,146,189	4.82	3
Gulumahada.....	15,512	11,003	19,350	1.25	155,016	4.79	4
Erob.....	3,581	2,558	3,941	1.10	40,717	6.95	4
Saesi Tsaedamba.....	23,698	17,373	26,805	1.13	177,733	4.53	3
Ganta Afeshum.....	20,201	15,025	23,980	1.19	158,653	4.40	4
Hawzen.....	20,539	15,820	28,272	1.38	274,105	5.88	4
Wukro.....	14,563	11,040	18,683	1.28	125,500	4.07	4
Atsbi Wenberta.....	20,332	15,066	27,898	1.37	214,466	4.63	3
South Tigray Zone.....	170,821	132,738	253,723	1.49	1,234,582	2.51	3
Seharte Samre.....	22,394	18,501	39,798	1.78	151,427	1.68	2
Enderta.....	21,353	16,206	27,681	1.30	204,249	4.37	3
Hintalo Wajirat.....	27,944	22,304	44,428	1.59	279,835	3.17	2
Ambalage.....	19,962	13,902	24,666	1.24	96,193	2.14	3
Endamehoni.....	16,810	11,532	20,529	1.22	89,006	2.39	3
Rayaazebo.....	19,926	16,963	38,445	1.93	184,798	2.13	2
Alamata.....	14,537	12,219	21,686	1.49	99,222	2.55	2
Wofla.....	27,895	21,111	36,490	1.31	129,852	1.92	3

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)
Tigray Region.....	671,737	536,480	876,036	1.30	15,058,688	10.93	7
West Tigray Zone.....	166,544	141,294	217,574	1.31	2,209,800	6.57	3
Kafta.....	10,056	5,134	6,537	0.65	88,396	11.17	3
Tahtay Adiyabo.....	15,775	13,021	19,098	1.21	213,798	7.53	4
Laelay Adiyabo.....	20,677	18,359	27,536	1.33	345,371	8.41	3
Tahtay Koraro.....	13,471	11,825	22,309	1.66	289,650	6.82	5
Medebay Zana.....	22,348	18,733	33,265	1.49	316,734	5.28	4
Asegede Tsimbela.....	20,570	19,173	34,004	1.65	286,678	4.62	3
Tselemti.....	27,248	24,375	35,397	1.30	359,839	7.19	3
Welkait.....	21,875	18,002	23,209	1.06	227,740	7.58	3
Tsegede.....	14,525	12,672	16,218	1.12	81,594	4.09	2
Central Tigray Zone.....	215,944	174,326	327,548	1.52	4,468,422	7.31	7
Mereb Lehe.....	18,067	15,343	27,559	1.53	313,016	6.41	5
Ahiferom.....	33,102	24,384	42,999	1.30	726,306	10.06	8
Werie Lehe.....	26,501	21,356	45,087	1.70	552,384	6.19	7
Adwa.....	23,097	19,124	37,069	1.60	668,654	9.27	9
Laelay Maychew.....	14,111	10,827	23,478	1.66	506,879	9.55	11
Tahtay Maychew.....	17,434	13,364	22,992	1.32	260,633	6.63	5
Naeder Adet.....	21,093	17,257	31,797	1.51	310,775	5.18	7
Kola Temben.....	26,373	23,085	41,164	1.56	341,045	4.80	4
Degua Temben.....	21,674	16,813	30,402	1.40	527,302	9.51	7
Tanqu Abergele.....	14,492	12,773	25,001	1.73	261,429	5.40	5
East Tigray Zone.....	118,426	88,234	118,764	1.00	4,094,540	26.04	11
Gulumahada.....	15,512	10,949	16,467	1.06	422,198	17.15	11
Erob.....	3,581	2,595	3,003	0.84	97,062	27.84	7
Saesi Tsaedamba.....	23,698	17,684	21,590	0.91	646,976	25.06	8
Ganta Afeshum.....	20,201	15,285	20,848	1.03	569,332	20.28	13
Hawzen.....	20,539	15,673	21,060	1.03	908,481	33.58	10
Wukro.....	14,563	11,064	15,631	1.07	481,371	21.46	13
Atsbi Wenberta.....	20,332	14,983	20,165	0.99	969,121	35.70	11
South Tigray Zone.....	170,821	132,626	212,150	1.24	4,285,926	12.54	7
Seharte Samre.....	22,394	18,553	36,670	1.64	533,439	7.34	7
Enderta.....	21,353	16,197	24,571	1.15	958,609	26.23	11
Hintalo Wajirat.....	27,944	22,211	36,786	1.32	1,062,973	17.03	8
Ambalage.....	19,962	13,972	21,639	1.08	322,605	9.16	7
Endamehoni.....	16,810	11,498	17,442	1.04	187,050	6.92	5
Rayaazebo.....	19,926	17,112	27,725	1.39	695,494	15.35	6
Alamata.....	14,537	12,185	16,294	1.12	277,251	13.04	6
Wofla.....	27,895	20,899	31,023	1.11	248,505	5.28	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)
Tigray Region.....	671,737	535,927	682,770	1.02	18,685,929	21.51	5
West Tigray Zone.....	166,544	140,238	175,650	1.05	6,279,145	28.67	5
Kafta.....	10,056	5,195	6,141	0.61	274,029	37.51	8
Tahtay Adiyabo.....	15,775	13,010	17,184	1.09	636,141	27.76	3
Laelay Adiyabo.....	20,677	17,803	20,634	1.00	741,282	31.22	3
Tahtay Koraro.....	13,471	11,817	16,988	1.26	548,250	22.46	5
Medebay Zana.....	22,348	18,845	23,643	1.06	658,579	22.31	4
Asegede Tsimbela.....	20,570	19,015	27,039	1.31	907,375	23.73	3
Tselemti.....	27,248	24,270	28,647	1.05	995,025	29.25	5
Welkait.....	21,875	18,007	21,353	0.98	977,019	38.51	8
Tsegede.....	14,525	12,276	14,021	0.97	541,444	33.79	10
Central Tigray Zone.....	215,944	174,272	226,536	1.05	5,647,314	19.19	5
Mereb Lehe.....	18,067	15,426	19,220	1.06	558,313	23.32	3
Ahiferom.....	33,102	25,013	32,713	0.99	951,851	22.62	6
Werie Lehe.....	26,501	21,172	27,485	1.04	768,713	21.45	5
Adwa.....	23,097	18,943	27,455	1.19	821,155	21.54	4
Laelay Maychew.....	14,111	10,789	16,964	1.20	472,633	17.35	6
Tahtay Maychew.....	17,434	13,168	15,706	0.90	376,276	20.32	5
Naeder Adet.....	21,093	17,150	20,981	0.99	373,700	15.02	5
Kola Temben.....	26,373	22,723	27,517	1.04	516,234	15.35	3
Degua Temben.....	21,674	17,164	21,228	0.98	492,271	18.68	7
Tanqu Abergele.....	14,492	12,724	17,267	1.19	316,167	13.45	3
East Tigray Zone.....	118,426	90,130	117,703	0.99	3,167,553	20.68	4
Gulumahada.....	15,512	11,450	16,074	1.04	440,988	19.24	4
Erob.....	3,581	2,645	3,052	0.85	88,612	25.56	4
Saesi Tsaedamba.....	23,698	17,858	21,503	0.91	471,031	18.32	3
Ganta Afeshum.....	20,201	15,619	21,121	1.05	494,941	17.62	5
Hawzen.....	20,539	15,920	19,970	0.97	639,517	26.04	3
Wukro.....	14,563	11,188	14,676	1.01	352,471	18.35	6
Atsbi Wenberta.....	20,332	15,450	21,307	1.05	679,994	23.09	4
South Tigray Zone.....	170,821	131,287	162,881	0.95	3,591,916	17.61	5
Seharte Samre.....	22,394	18,579	25,672	1.15	545,460	15.40	4
Enderta.....	21,353	16,383	21,085	0.99	518,459	19.19	7
Hintalo Wajirat.....	27,944	22,201	28,191	1.01	814,646	22.66	3
Ambalage.....	19,962	13,793	15,781	0.79	341,807	18.96	6
Endamehoni.....	16,810	11,245	12,921	0.77	258,669	17.39	6
Rayaazebo.....	19,926	16,888	23,084	1.16	543,086	17.39	6
Alamata.....	14,537	11,374	13,281	0.91	244,761	15.72	5
Wofla.....	27,895	20,824	22,867	0.82	325,028	12.89	7

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)
Tigray Region.....	671,737	530,386	719,884	1.07	4,210,038	4.38	3
West Tigray Zone.....	166,544	139,449	183,547	1.10	1,411,592	5.99	3
Kafta.....	10,056	5,061	5,924	0.59	57,322	8.28	4
Tahtay Adiyabo.....	15,775	12,673	17,649	1.12	133,538	5.57	2
Laelay Adiyabo.....	20,677	17,587	23,068	1.12	154,891	5.22	2
Tahtay Koraro.....	13,471	11,673	17,125	1.27	123,535	5.21	3
Medebay Zana.....	22,348	18,863	24,328	1.09	151,777	4.84	3
Asegede Tsimbela.....	20,570	19,053	29,146	1.42	189,082	4.30	2
Tselemti.....	27,248	24,091	29,788	1.09	225,646	6.20	3
Welkait.....	21,875	18,162	22,449	1.03	243,017	8.88	5
Tsegede.....	14,525	12,287	14,069	0.97	132,783	8.16	6
Central Tigray Zone.....	215,944	172,277	244,202	1.13	1,252,213	3.68	3
Mereb Lehe.....	18,067	15,355	21,948	1.21	133,172	4.26	2
Ahiferom.....	33,102	24,562	33,050	1.00	187,808	4.26	4
Werie Lehe.....	26,501	20,915	30,596	1.15	156,894	3.43	3
Adwa.....	23,097	18,829	31,905	1.38	173,164	3.51	3
Laelay Maychew.....	14,111	10,516	16,910	1.20	88,640	3.32	4
Tahtay Maychew.....	17,434	13,170	16,064	0.92	89,109	4.52	3
Naeder Adet.....	21,093	16,955	21,178	1.00	98,902	3.74	4
Kola Temben.....	26,373	22,810	30,196	1.14	138,794	3.52	2
Degua Temben.....	21,674	16,965	22,545	1.04	102,287	3.43	4
Tanqu Abergele.....	14,492	12,200	19,811	1.37	83,442	2.84	3
East Tigray Zone.....	118,426	87,204	118,707	1.00	663,462	4.17	3
Gulumahada.....	15,512	11,135	15,122	0.97	89,406	4.34	3
Erob.....	3,581	2,611	2,958	0.83	23,999	7.23	3
Saesi Tsaedamba.....	23,698	17,523	21,773	0.92	121,132	4.49	3
Ganta Afeshum.....	20,201	14,947	19,204	0.95	103,850	4.28	4
Hawzen.....	20,539	15,006	21,206	1.03	118,783	4.01	2
Wukro.....	14,563	10,892	14,333	0.98	66,585	3.59	4
Atsbi Wenberta.....	20,332	15,090	24,111	1.19	139,707	3.80	2
South Tigray Zone.....	170,821	131,456	173,428	1.02	882,771	3.82	4
Sharte Samre.....	22,394	18,645	25,600	1.14	126,225	3.51	3
Enderta.....	21,353	15,635	23,889	1.12	127,844	3.44	4
Hintalo Wajirat.....	27,944	21,757	29,262	1.05	172,637	4.41	3
Ambalage.....	19,962	13,955	16,870	0.85	89,431	4.38	4
Endamehoni.....	16,810	11,542	14,157	0.84	73,536	4.22	4
Rayaazebo.....	19,926	17,007	23,595	1.18	124,373	3.80	5
Alamata.....	14,537	12,142	14,835	1.02	70,382	3.93	4
Wofla.....	27,895	20,774	25,219	0.90	98,342	3.17	5

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)
Tigray Region.....	671,737	531,578	734,456	1.09	9,112,985	9.33	8
West Tigray Zone.....	166,544	140,843	200,252	1.20	1,668,631	5.86	4
Kafta.....	10,056	4,721	5,994	0.60	67,402	9.29	3
Tahtay Adiyabo.....	15,775	13,121	18,556	1.18	183,436	7.01	5
Laelay Adiyabo.....	20,677	18,241	26,540	1.28	313,061	8.11	4
Tahtay Koraro.....	13,471	11,840	18,582	1.38	207,179	7.17	5
Medebay Zana.....	22,348	18,810	27,194	1.22	211,493	5.40	4
Asegede Tsimbela.....	20,570	19,016	31,714	1.54	193,962	3.65	4
Tselemti.....	27,248	24,256	33,331	1.22	258,699	5.71	4
Welkait.....	21,875	18,076	22,814	1.04	166,638	5.70	3
Tsegede.....	14,525	12,760	15,527	1.07	66,761	3.63	3
Central Tigray Zone.....	215,944	173,228	255,849	1.18	2,559,085	6.89	8
Mereb Lehe.....	18,067	15,401	24,026	1.33	246,329	6.71	6
Ahiferom.....	33,102	23,698	30,676	0.93	407,926	10.34	9
Werie Lehe.....	26,501	21,148	31,900	1.20	256,574	5.30	9
Adwa.....	23,097	19,067	27,042	1.17	409,565	10.54	11
Laelay Maychew.....	14,111	10,850	14,845	1.05	231,161	11.32	11
Tahtay Maychew.....	17,434	13,276	18,028	1.03	156,269	6.37	6
Naeder Adet.....	21,093	17,123	25,433	1.21	170,520	4.54	7
Kola Temben.....	26,373	22,974	36,576	1.39	273,068	4.77	5
Degua Temben.....	21,674	16,866	23,967	1.11	220,759	6.45	9
Tanqu Abergele.....	14,492	12,825	23,357	1.61	186,913	4.40	5
East Tigray Zone.....	118,426	87,543	105,082	0.89	2,430,145	19.62	12
Gulumahada.....	15,512	10,784	12,288	0.79	306,975	21.54	15
Erob.....	3,581	2,649	2,958	0.83	82,413	25.00	8
Saesi Tsaedamba.....	23,698	17,656	21,449	0.91	453,686	18.47	9
Ganta Afeshum.....	20,201	14,901	17,796	0.88	377,208	17.84	13
Hawzen.....	20,539	15,770	18,996	0.92	375,376	17.20	12
Wukro.....	14,563	10,701	13,081	0.90	290,152	18.51	15
Atsbi Wenberta.....	20,332	15,081	18,513	0.91	544,334	23.81	12
South Tigray Zone.....	170,821	129,965	173,273	1.01	2,455,125	10.70	10
Seharte Samre.....	22,394	18,382	27,880	1.24	249,449	6.01	9
Enderta.....	21,353	15,466	19,152	0.90	567,631	24.03	17
Hintalo Wajirat.....	27,944	21,966	29,148	1.04	680,569	17.86	11
Ambalage.....	19,962	13,462	17,595	0.88	150,144	6.29	8
Endamechoni.....	16,810	11,167	14,591	0.87	98,610	5.29	6
Rayaaazebo.....	19,926	16,989	24,205	1.21	409,177	11.57	8
Alamata.....	14,537	12,161	15,455	1.06	161,669	8.33	7
Wofla.....	27,895	20,372	25,246	0.91	137,876	4.31	8

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)
Tigray Region.....	671,737	589,958	1,396,916	2.08	11,109,346	3.60	5
West Tigray Zone.....	166,544	153,278	318,906	1.91	4,116,652	6.46	4
Kafta.....	10,056	9,154	20,499	2.04	268,893	6.08	4
Tahtay Adiyabo.....	15,775	13,922	27,940	1.77	407,684	7.25	5
Laelay Adiyabo.....	20,677	18,440	36,466	1.76	497,289	7.31	4
Tahtay Koraro.....	13,471	12,248	32,257	2.39	271,565	3.19	4
Medebay Zana.....	22,348	21,108	50,222	2.25	385,339	3.23	4
Asegede Tsimbela.....	20,570	19,338	43,196	2.10	549,505	5.86	4
Tselemti.....	27,248	25,835	46,295	1.70	763,660	9.23	5
Welkait.....	21,875	19,655	36,083	1.65	593,599	8.77	5
Tsegede.....	14,525	13,578	25,948	1.79	379,119	7.90	5
Central Tigray Zone.....	215,944	195,135	538,178	2.49	3,228,786	2.22	5
Mereb Lehe.....	18,067	16,652	40,371	2.23	313,724	3.34	4
Ahiferom.....	33,102	29,376	80,626	2.44	607,600	2.84	4
Werie Lehe.....	26,501	23,776	78,254	2.95	401,081	1.55	6
Adwa.....	23,097	20,092	60,648	2.63	418,067	2.26	4
Laelay Maychew.....	14,111	12,537	37,222	2.64	231,514	2.12	5
Tahtay Maychew.....	17,434	14,918	32,772	1.88	212,362	2.96	4
Naeder Adet.....	21,093	19,874	50,576	2.40	232,795	1.85	7
Kola Temben.....	26,373	25,009	76,663	2.91	349,832	1.45	5
Degua Temben.....	21,674	19,478	47,508	2.19	222,988	1.94	6
Tanqu Abergele.....	14,492	13,422	33,538	2.31	238,823	2.91	5
East Tigray Zone.....	118,426	96,309	221,054	1.87	1,674,209	3.37	4
Gulumahada.....	15,512	12,220	29,472	1.90	229,920	3.21	4
Erob.....	3,581	3,111	6,844	1.91	64,612	4.51	5
Saesi Tsaedamba.....	23,698	18,656	38,179	1.61	296,595	3.87	3
Ganta Afeshum.....	20,201	16,727	39,586	1.96	294,792	3.35	4
Hawzen.....	20,539	17,223	45,883	2.23	353,751	2.86	5
Wukro.....	14,563	12,081	27,960	1.92	148,497	2.32	5
Atsbi Wenberta.....	20,332	16,290	33,131	1.63	286,042	4.31	3
South Tigray Zone.....	170,821	145,236	318,779	1.87	2,089,698	3.22	6
Scharte Samre.....	22,394	19,923	55,254	2.47	289,727	1.84	6
Enderta.....	21,353	17,748	48,080	2.25	230,649	2.06	5
Hintalo Wajirat.....	27,944	23,282	53,974	1.93	370,421	3.03	5
Ambalage.....	19,962	15,692	29,494	1.48	204,568	3.71	6
Endamehoni.....	16,810	13,762	25,586	1.52	213,979	4.72	7
Rayaaazebo.....	19,926	17,837	32,006	1.61	382,934	6.71	6
Alamata.....	14,537	12,659	23,201	1.60	197,876	5.24	6
Wofla.....	27,895	24,333	51,183	1.83	199,544	1.85	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)
Tigray Region	671,737	6,621	9,845	0.01	100,422	7.64	9
West Tigray Zone	166,544	1,383	2,194	0.01	13,621	4.39	5
Kafta	10,056	*	*	*	*	*	*
Tahtay Adiyabo	15,775	254	313	0.02	3,633	10.61	5
Laelay Adiyabo	20,677	109	157	0.01	890	4.14	*
Tahtay Koraro	13,471	91	181	0.01	1,535	4.24	4
Medebay Zana	22,348	223	329	0.01	*	*	2
Asegede Tsimbela	20,570	264	598	0.03	3,467	3.31	*
Tselemti	27,248	246	363	0.01	*	4.24	4
Welkait	21,875	113	*	*	*	*	*
Tsegede	14,525	*	*	*	*	*	*
Central Tigray Zone	215,944	1,842	2,559	0.01	26,197	8.41	15
Mereb Lehe	18,067	326	497	0.03	4,575	6.80	5
Ahiferom	33,102	*	*	*	*	*	*
Werie Lehe	26,501	*	*	*	*	*	*
Adwa	23,097	442	560	0.02	7,695	12.27	27
Laelay Maychew	14,111	391	497	0.04	8,367	14.51	25
Tahtay Maychew	17,434	125	155	0.01	990	5.25	*
Naeder Adet	21,093	245	353	0.02	*	*	5
Kola Temben	26,373	*	*	*	*	*	*
Degua Temben	21,674	*	*	*	*	*	*
Tanqu Abergele	14,492	125	*	*	*	*	6
East Tigray Zone	118,426	1,642	2,423	0.02	34,689	10.27	7
Gulumahada	15,512	382	599	0.04	11,555	14.31	6
Erob	3,581	43	82	0.02	885	5.60	3
Saesi Tsaedamba	23,698	314	446	0.02	4,949	7.89	7
Ganta Afeshum	20,201	204	394	0.02	4,319	6.06	*
Hawzen	20,539	351	496	0.02	7,924	11.46	6
Wukro	14,563	95	*	*	*	*	2
Atsbi Wenberta	20,332	252	252	0.01	3,706	14.71	9
South Tigray Zone	170,821	1,754	2,670	0.02	25,916	7.19	8
Seharte Samre	22,394	155	*	*	1,767	*	6
Enderta	21,353	396	631	0.03	7,607	9.69	7
Hintalo Wajirat	27,944	461	743	0.03	10,463	9.40	6
Ambalage	19,962	128	128	0.01	1,145	8.94	17
Endamehoni	16,810	149	*	*	*	*	*
Rayaazebo	19,926	*	*	*	*	*	*
Alamata	14,537	175	195	0.01	1,217	5.51	7
Wofla	27,895	174	214	0.01	*	4.79	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)
Tigray Region	671,737	464,284	883,446	1.32	5,284,671	3.17	5
West Tigray Zone	166,544	114,688	204,606	1.23	941,846	2.62	4
Kafta	10,056	2,332	3,425	0.34	16,634	3.38	3
Tahtay Adiyabo	15,775	9,881	16,216	1.03	88,822	3.53	4
Lalay Adiyabo	20,677	15,693	32,599	1.58	155,823	2.42	4
Tahtay Koraro	13,471	9,567	19,379	1.44	122,630	3.32	4
Medebay Zana	22,348	16,307	30,207	1.35	147,605	2.63	4
Asegede Tsimbela	20,570	17,452	36,821	1.79	133,119	1.73	3
Tselemti	27,248	19,578	32,481	1.19	146,679	2.78	4
Welkait	21,875	13,577	18,741	0.86	78,602	2.98	3
Tsegede	14,525	10,301	14,737	1.01	51,932	2.39	4
Central Tigray Zone	215,944	155,545	307,911	1.43	1,708,131	2.82	5
Mereb Lehe	18,067	13,845	27,203	1.51	143,797	2.79	4
Ahiferom	33,102	21,804	40,567	1.23	263,744	3.53	5
Werie Lehe	26,501	19,488	45,030	1.70	226,378	2.13	5
Adwa	23,097	14,412	28,697	1.24	185,916	3.25	5
Lalay Maychew	14,111	10,030	19,423	1.38	174,085	4.52	6
Tahtay Maychew	17,434	12,324	19,940	1.14	122,619	3.74	4
Naeder Adet	21,093	15,892	30,212	1.43	144,665	2.52	7
Kola Temben	26,373	20,556	39,915	1.51	161,383	2.11	4
Degua Temben	21,674	16,555	38,661	1.78	193,759	2.17	5
Tanqu Abergele	14,492	10,640	18,262	1.26	91,786	2.94	6
East Tigray Zone	118,426	79,995	155,999	1.32	1,419,326	4.81	5
Gulumahada	15,512	9,697	18,913	1.22	190,436	5.25	4
Erob	3,581	2,443	4,556	1.27	54,001	6.38	4
Saesi Tsaedamba	23,698	15,713	30,548	1.29	265,178	4.61	4
Ganta Afeshum	20,201	13,517	24,774	1.23	226,356	5.14	6
Hawzen	20,539	14,002	28,051	1.37	286,222	5.36	5
Wukro	14,563	10,140	19,741	1.36	132,878	3.43	5
Atsbi Wenberta	20,332	14,482	29,416	1.45	264,253	4.60	5
South Tigray Zone	170,821	114,057	214,930	1.26	1,215,368	3.00	5
Seharte Samre	22,394	16,979	36,172	1.62	163,386	2.07	5
Enderta	21,353	14,451	29,094	1.36	229,774	3.99	5
Hintalo Wajirat	27,944	18,209	33,088	1.18	244,553	4.13	5
Ambalage	19,962	13,451	23,270	1.17	127,234	3.11	6
Endamehoni	16,810	11,324	20,316	1.21	99,859	2.71	5
Rayaazebo	19,926	11,909	22,766	1.14	125,139	2.91	5
Alamata	14,537	7,466	12,801	0.88	77,070	3.45	6
Wofla	27,895	20,267	37,423	1.34	148,353	2.13	6

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)
Tigray Region	671,737	60,233	113,046	0.17	324,870	1.77	2
West Tigray Zone	166,544	22,660	43,848	0.26	97,802	1.35	2
Kafta	10,056	*	*	*	*	*	*
Tahtay Adiyabo	15,775	730	1,205	0.08	5,885	3.15	3
Laelay Adiyabo	20,677	5,967	12,439	0.60	23,797	0.91	1
Tahtay Koraro	13,471	1,900	4,332	0.32	10,120	0.96	2
Medebay Zana	22,348	1,805	2,450	0.11	*	*	*
Asegede Tsimbela	20,570	4,792	10,818	0.53	13,321	0.61	2
Tselemti	27,248	6,485	10,824	0.40	31,682	2.12	2
Welkait	21,875	*	*	*	4,300	*	*
Tsegede	14,525	*	*	*	*	*	*
Central Tigray Zone	215,944	16,721	32,085	0.15	69,677	1.31	2
Mereb Lehe	18,067	948	1,682	0.09	4,340	1.42	2
Ahiferom	33,102	660	*	*	*	*	2
Werie Lehe	26,501	*	*	*	4,621	*	*
Adwa	23,097	230	442	0.02	1,802	2.13	6
Laelay Maychew	14,111	721	1,041	0.07	*	*	*
Tahtay Maychew	17,434	*	*	*	*	*	*
Naeder Adet	21,093	2,913	5,222	0.25	8,469	0.93	2
Kola Temben	26,373	6,102	13,995	0.53	23,682	0.76	2
Degua Temben	21,674	*	1,214	*	*	*	*
Tanqu Abergele	14,492	2,421	4,403	0.30	9,016	1.14	1
East Tigray Zone	118,426	13,832	25,638	0.22	82,619	2.25	2
Gulumahada	15,512	1,765	3,112	0.20	6,842	1.24	2
Erob	3,581	248	278	0.08	4,698	15.80	5
Saesi Tsaedamba	23,698	2,794	4,486	0.19	7,962	1.10	2
Ganta Afeshum	20,201	663	816	0.04	6,837	6.70	2
Hawzen	20,539	2,768	4,238	0.21	17,897	2.76	2
Wukro	14,563	1,314	1,650	0.11	*	*	2
Atsbi Wenberta	20,332	4,281	11,059	0.54	20,120	0.96	1
South Tigray Zone	170,821	7,020	11,474	0.07	74,773	3.57	4
Scharte Samre	22,394	1,511	2,064	0.09	7,551	*	2
Enderata	21,353	498	988	0.05	6,124	3.01	3
Hintalo Wajirat	27,944	1,715	*	*	*	*	3
Ambalage	19,962	393	441	0.02	2,975	6.20	7
Endamehoni	16,810	581	754	0.04	4,371	4.09	4
Rayaazebo	19,926	859	1,489	0.07	*	*	*
Alamata	14,537	901	2,255	0.16	5,914	1.23	2
Wofla	27,895	561	772	0.03	3,851	3.88	*

TABLE 8.17A: - Number of Holders Reporting Winnower (Metal) 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)
Tigray Region.....	671,737	3,703	4,027	0.01	48,784	11.13	10
West Tigray Zone	166,544	916	969	0.01	10,751	10.90	8
Kafta.....	10,056	•	•	•	•	•	•
Tahtay Adiyabo.....	15,775	•	•	•	•	•	•
Lalay Adiyabo.....	20,677	•	•	•	•	•	•
Tahtay Koraro.....	13,471	-	-	-	-	-	-
Medebay Zana.....	22,348	-	-	-	-	-	-
Asegede Tsimbela.....	20,570	•	•	•	•	•	•
Tselemti.....	27,248	•	•	•	•	•	•
Welkait.....	21,875	139	139	0.01	1,543	11.10	9
Tsegede.....	14,525	•	•	•	•	•	•
Central Tigray Zone	215,944	•	•	•	•	•	•
Mereb Lehe.....	18,067	-	-	-	-	-	-
Ahiferom.....	33,102	•	•	•	•	•	•
Werie Lehe.....	26,501	•	•	•	•	•	•
Adwa.....	23,097	-	-	-	-	-	-
Lalay Maychew.....	14,111	-	-	-	-	-	-
Tahtay Maychew.....	17,434	•	•	•	•	•	•
Naeder Adet.....	21,093	•	•	•	•	•	•
Kola Temben.....	26,373	•	•	•	•	•	•
Degua Temben.....	21,674	•	•	•	•	•	•
Tanqu Abergele.....	14,492	•	•	•	•	•	•
East Tigray Zone	118,426	1,001	1,172	0.01	15,699	11.36	7
Gulumahada.....	15,512	-	-	-	-	-	-
Erob.....	3,581	-	-	-	-	-	-
Saesi Tsaedamba.....	23,698	•	•	•	•	•	•
Ganta Afeshum.....	20,201	•	•	•	•	•	•
Hawzen.....	20,539	•	•	•	•	•	•
Wukro.....	14,563	•	•	•	•	•	•
Atsbi Wenberta.....	20,332	•	•	•	•	•	•
South Tigray Zone	170,821	952	1,015	0.01	16,953	15.45	14
Seharte Samre.....	22,394	•	•	•	•	•	•
Enderta.....	21,353	•	•	•	•	•	•
Hintalo Wajirat.....	27,944	•	•	•	•	•	•
Ambalage.....	19,962	•	•	•	•	•	•
Endamehoni.....	16,810	•	•	•	•	•	•
Rayaazebo.....	19,926	•	•	•	•	•	•
Alamata.....	14,537	261	261	0.02	•	•	•
Wofla.....	27,895	•	•	•	•	•	7

TABLE 8.18A:- 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)
Tigray Region.....	671,737	112,031	130,588	0.19	1,461,764	9.86	11
West Tigray Zone.....	166,544	33,662	39,401	0.24	235,254	5.16	5
Kafta.....	10,056	1,984	2,379	0.24	12,939	4.70	4
Tahtay Adiyabo.....	15,775	501	571	0.04	6,057	9.38	6
Laelay Adiyabo.....	20,677	*	*	*	*	*	*
Tahtay Koraro.....	13,471	737	1,706	0.13	6,554	1.60	4
Medebay Zana.....	22,348	*	*	*	*	*	*
Asegede Tsimbela.....	20,570	984	*	*	8,687	*	3
Tselemti.....	27,248	10,604	11,534	0.42	81,384	6.54	6
Welkait.....	21,875	9,061	10,530	0.48	76,298	6.12	5
Tsegede.....	14,525	9,004	9,990	0.69	40,140	3.69	6
Central Tigray Zone.....	215,944	9,595	13,886	0.06	96,378	5.11	9
Mereb Lehe.....	18,067	*	*	*	*	*	*
Ahiferom.....	33,102	*	*	*	*	*	*
Werie Lehe.....	26,501	*	*	*	*	*	*
Adwa.....	23,097	2,298	4,391	0.19	25,412	3.09	3
Laelay Maychew.....	14,111	-	-	-	-	-	-
Tahtay Maychew.....	17,434	*	*	*	*	*	*
Naeder Adet.....	21,093	*	*	*	*	*	*
Kola Temben.....	26,373	*	*	*	*	*	*
Degua Temben.....	21,674	1,440	1,513	0.07	19,970	12.60	16
Tanqu Abergele.....	14,492	4,828	6,704	0.46	40,895	4.51	10
East Tigray Zone.....	118,426	4,535	6,341	0.05	94,014	12.72	12
Gulumahada.....	15,512	*	*	*	*	*	*
Erob.....	3,581	222	233	0.07	2,503	10.07	5
Saesi Tsaedamba.....	23,698	*	*	*	*	*	*
Ganta Afeshum.....	20,201	*	*	*	*	*	*
Hawzen.....	20,539	175	221	0.01	2,377	8.24	*
Wukro.....	14,563	1,402	1,485	0.10	39,514	24.74	22
Atsbi Wenberta.....	20,332	2,488	4,129	0.20	45,628	8.79	8
South Tigray Zone.....	170,821	64,239	70,960	0.42	1,036,118	13.15	14
Seharte Samre.....	22,394	7,844	8,696	0.39	57,344	5.95	11
Enderta.....	21,353	5,352	5,609	0.26	112,294	19.20	18
Hintalo Wajirat.....	27,944	8,952	9,955	0.36	196,013	18.08	12
Ambalage.....	19,962	7,203	7,456	0.37	96,832	12.43	15
Endamehoni.....	16,810	8,203	8,611	0.51	136,236	15.06	14
Rayaaazebo.....	19,926	7,687	9,913	0.50	193,401	15.08	12
Alamata.....	14,537	6,165	7,326	0.50	91,188	10.39	11
Wofla.....	27,895	12,832	13,395	0.48	152,810	10.87	17

TABLE 8.19A:- Number of Holders Reporting Cart Owned, Quantity Reported, Replacement Value, and Duration of Service of Cart, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Carts Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Cart (Birr)	Average Duration of Service of Cart (Years)
Tigray Region.....	671,737	1,097	1,207	0.00	2,025,109	1,657.08	17
West Tigray Zone.....	166,544	831	914	0.01	1,902,366	2,054.18	19
Kafta.....	10,056	752	752	0.07	1,831,537	2,435.55	21
Tahtay Adiyabo.....	15,775	-	-	-	-	-	-
Lalay Adiyabo.....	20,677	-	-	-	-	-	-
Tahtay Koraro.....	13,471	-	-	-	-	-	-
Medebay Zana.....	22,348	-	-	-	-	-	-
Asegede Tsimbela.....	20,570	-	-	-	-	-	-
Tselemti.....	27,248	-	-	-	-	-	-
Welkait.....	21,875	-	-	-	-	-	-
Tsegede.....	14,525	-	-	-	-	-	-
Central Tigray Zone.....	215,944	-	-	-	-	-	-
Mereb Lehe.....	18,067	-	-	-	-	-	-
Ahiferom.....	33,102	-	-	-	-	-	-
Werie Lehe.....	26,501	-	-	-	-	-	-
Adwa.....	23,097	-	-	-	-	-	-
Lalay Maychew.....	14,111	-	-	-	-	-	-
Tahtay Maychew.....	17,434	-	-	-	-	-	-
Naeder Adet.....	21,093	-	-	-	-	-	-
Kola Temben.....	26,373	-	-	-	-	-	-
Degua Temben.....	21,674	-	-	-	-	-	-
Tanqu Abergele.....	14,492	-	-	-	-	-	-
East Tigray Zone.....	118,426	-	-	-	-	-	-
Gulumahada.....	15,512	-	-	-	-	-	-
Erob.....	3,581	-	-	-	-	-	-
Saesi Tsadamba.....	23,698	-	-	-	-	-	-
Ganta Afeshum.....	20,201	-	-	-	-	-	-
Hawzen.....	20,539	-	-	-	-	-	-
Wukro.....	14,563	-	-	-	-	-	-
Atsbi Wenberta.....	20,332	-	-	-	-	-	-
South Tigray Zone.....	170,821	178	178	0.00	-	-	-
Seharte Samre.....	22,394	-	-	-	-	-	-
Enderta.....	21,353	-	-	-	-	-	-
Hintalo Wajirat.....	27,944	-	-	-	-	-	-
Ambalage.....	19,962	-	-	-	-	-	-
Endamehoni.....	16,810	-	-	-	-	-	-
Rayazebo.....	19,926	-	-	-	-	-	-
Alamata.....	14,537	-	-	-	-	-	-
Wofla.....	27,895	-	-	-	-	-	-

TABLE 8. 20A: - 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)
Tigray Region	671,737	3,096	5,468	0.01	60,010	7.60	5
West Tigray Zone	166,544	707	1,215	0.01	18,393	9.77	6
Kafta	10,056	*	*	*	*	*	*
Tahtay Adiyabo	15,775	*	*	*	*	*	*
Laelay Adiyabo	20,677	172	*	*	*	*	*
Tahtay Koraro	13,471	117	217	2	2,463	8.34	4
Medebay Zana	22,348	*	*	*	*	*	*
Asegede Tsimbela	20,570	*	*	*	*	*	*
Tselemti	27,248	*	*	*	*	*	*
Welkait	21,875	*	*	*	*	*	*
Tsegede	14,525	*	*	*	*	*	*
Central Tigray Zone	215,944	932	1,601	0.01	11,739	5.82	5
Mereb Lehe	18,067	86	105	0.01	1,770	15.21	3
Ahiferom	33,102	*	*	*	*	*	*
Werie Lehe	26,501	276	602	0.02	3,693	4.77	4
Adwa	23,097	100	*	*	*	*	*
Laelay Maychew	14,111	*	*	*	*	*	*
Tahtay Maychew	17,434	*	*	*	*	*	*
Naeder Adet	21,093	*	*	*	*	*	*
Kola Temben	26,373	*	*	*	*	*	*
Degua Temben	21,674	*	*	*	*	*	*
Tanqu Abergele	14,492	*	*	*	*	*	*
East Tigray Zone	118,426	560	1,193	0.01	11,469	4.78	3
Gulumahada	15,512	79	246	0.02	2,303	3.23	4
Erob	3,581	16	*	*	*	*	4
Saesi Tsaedamba	23,698	*	*	*	*	*	*
Ganta Afeshum	20,201	146	434	0.02	3,851	*	2
Hawzen	20,539	*	*	*	*	*	*
Wukro	14,563	*	*	*	*	*	*
Atsbi Wenberta	20,332	182	269	0.01	2,676	7.08	3
South Tigray Zone	170,821	897	1,459	0.01	18,409	10.07	5
Seharte Samre	22,394	*	*	*	*	*	*
Enderta	21,353	*	*	*	*	*	*
Hintalo Wajirat	27,944	386	*	*	*	*	*
Ambalage	19,962	*	*	*	*	*	*
Endamehoni	16,810	*	*	*	*	*	*
Rayaaebo	19,926	*	*	*	*	*	*
Alamata	14,537	*	*	*	*	*	*
Wofla	27,895	*	*	*	*	*	*

TABLE 8.21A: - Number of Holders Reporting Wheelbarrow Owned, Quantity Reported, Replacement Value and Duration of Service of Wheelbarrow, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Wheelbarrows Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Wheelbarrow (Birr)	Average Duration of Service of Wheelbarrow (Years)
Tigray Region	671,737	799	872	0.00	112,450	127.53	18
West Tigray Zone	166,544	131	184	0.00	-	-	-
Kafta	10,056	-	-	-	-	-	-
Tahtay Adiyabo	15,775	-	-	-	-	-	-
Laelay Adiyabo	20,677	-	-	-	-	-	-
Tahtay Koraro	13,471	-	-	-	-	-	-
Medebay Zana	22,348	-	-	-	-	-	-
Asegede Tsimbela	20,570	-	-	-	-	-	-
Tselemti	27,248	-	-	-	-	-	-
Welkait	21,875	-	-	-	-	-	-
Tsegede	14,525	-	-	-	-	-	-
Central Tigray Zone	215,944	255	255	0.00	30,471	119.49	31
Mereb Lehe	18,067	-	-	-	-	-	-
Ahiferom	33,102	-	-	-	-	-	-
Werie Lehe	26,501	-	-	-	-	-	-
Adwa	23,097	226	226	0.01	26,175	115.82	32
Laelay Maychew	14,111	-	-	-	-	-	-
Tahtay Maychew	17,434	-	-	-	-	-	-
Naeder Adet	21,093	-	-	-	-	-	-
Kola Temben	26,373	-	-	-	-	-	-
Degua Temben	21,674	-	-	-	-	-	-
Tanqu Abergele	14,492	-	-	-	-	-	-
East Tigray Zone	118,426	301	321	0.00	60,844	186.65	8
Gulumahada	15,512	-	-	-	-	-	-
Erob	3,581	116	121	0.03	36,344	293.44	6
Saesi Tsaedamba	23,698	-	-	-	-	-	-
Ganta Afeshum	20,201	-	-	-	-	-	-
Hawzen	20,539	-	-	-	-	-	-
Wukro	14,563	-	-	-	-	-	-
Atsbi Wenberta	20,332	-	-	-	-	-	-
South Tigray Zone	170,821	-	-	-	-	-	-
Scharte Samre	22,394	-	-	-	-	-	-
Enderta	21,353	-	-	-	-	-	-
Hintalo Wajirat	27,944	-	-	-	-	-	-
Ambalage	19,962	-	-	-	-	-	-
Endamehoni	16,810	-	-	-	-	-	-
Rayaazebo	19,926	-	-	-	-	-	-
Alamata	14,537	-	-	-	-	-	-
Wofla	27,895	-	-	-	-	-	-

TABLE 8.22A: - Number of Holders Reporting Ass (Specifically for ploughing) 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)
Tigray Region	671,737	3,085	3,743	0.01	1,817,973	364.55	8
West Tigray Zone	166,544	677	762	0.00	435,701	485.02	9
Kafta	10,056	*	*	*	*	*	*
Tahtay Adiyabo	15,775	*	*	*	*	*	*
Laelay Adiyabo	20,677	*	*	*	*	*	*
Tahtay Koraro	13,471	*	*	*	*	*	*
Medebay Zana	22,348	*	*	*	*	*	*
Asegede Tsimbela	20,570	-	-	-	-	-	-
Tselemti	27,248	*	*	*	*	*	*
Welkait	21,875	*	*	*	*	*	*
Tsegede	14,525	-	-	-	-	-	-
Central Tigray Zone	215,944	760	893	0.00	384,293	339.61	7
Mereb Lehe	18,067	-	-	-	-	-	-
Ahiferom	33,102	191	*	*	*	*	*
Werie Lehe	26,501	*	*	*	*	*	*
Adwa	23,097	-	-	-	-	-	-
Laelay Maychew	14,111	-	-	-	-	-	-
Tahtay Maychew	17,434	*	*	*	*	*	*
Naeder Adet	21,093	*	*	*	*	*	*
Kola Temben	26,373	-	-	-	-	-	-
Degua Temben	21,674	*	*	*	*	*	*
Tanqu Abergele	14,492	*	*	*	*	*	*
East Tigray Zone	118,426	816	1,077	0.01	596,032	392.63	8
Gulumahada	15,512	*	*	*	*	*	*
Erob	3,581	137	232	0.06	234,884	581.39	9
Saesi Tsaedamba	23,698	*	*	*	*	*	*
Ganta Afeshum	20,201	-	-	-	-	-	-
Hawzen	20,539	-	-	-	-	-	-
Wukro	14,563	207	251	0.02	144,876	421.67	8
Atsbi Wenberta	20,332	*	*	*	*	*	*
South Tigray Zone	170,821	831	1,012	0.01	401,947	265.60	9
Seharte Samre	22,394	*	*	*	*	*	*
Enderta	21,353	253	339	0.02	86,398	187.04	7
Hintalo Wajirat	27,944	*	*	*	*	*	*
Ambalage	19,962	*	*	*	96,878	*	*
Endamehoni	16,810	*	*	*	*	*	*
Rayaazebo	19,926	-	-	-	-	-	-
Alamata	14,537	-	-	-	-	-	-
Wofla	27,895	-	-	-	-	-	-

TABLE 8.23A: - Number of Holders Reporting Camel (Specifically for ploughing) Owned, Quantity Reported, Replacement Value and Average age of Camel, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Camels Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Camel (Birr)	Average Age of Camel (Years)
Tigray Region.....	671,737	514	539	0.00	907,200	1,636.36	11
West Tigray Zone.....	166,544	381	381	0.00	665,841	1,747.61	11
Kafta.....	10,056	•	•	•	•	•	•
Tahtay Adiyabo.....	15,775	•	•	•	•	•	•
Laelay Adiyabo.....	20,677	•	•	•	•	•	•
Tahtay Koraro.....	13,471	•	•	•	•	•	•
Medebay Zana.....	22,348	•	•	•	•	•	•
Asegede Tsimbela.....	20,570	•	•	•	•	•	•
Tselemti.....	27,248	-	-	-	-	-	-
Welkait.....	21,875	-	-	-	-	-	-
Tsegede.....	14,525	-	-	-	-	-	-
Central Tigray Zone.....	215,944	•	•	•	•	•	•
Mereb Lehe.....	18,067	•	•	•	•	•	•
Ahiferom.....	33,102	-	-	-	-	-	-
Werie Lehe.....	26,501	-	-	-	-	-	-
Adwa.....	23,097	-	-	-	-	-	-
Laelay Maychew.....	14,111	-	-	-	-	-	-
Tahtay Maychew.....	17,434	-	-	-	-	-	-
Naeder Adet.....	21,093	-	-	-	-	-	-
Kola Temben.....	26,373	-	-	-	-	-	-
Degua Temben.....	21,674	-	-	-	-	-	-
Tanqu Abergele.....	14,492	-	-	-	-	-	-
East Tigray Zone.....	118,426	-	-	-	-	-	-
Gulumahada.....	15,512	-	-	-	-	-	-
Erob.....	3,581	-	-	-	-	-	-
Saesi Tsaedamba.....	23,698	-	-	-	-	-	-
Ganta Afeshum.....	20,201	-	-	-	-	-	-
Hawzen.....	20,539	-	-	-	-	-	-
Wukro.....	14,563	-	-	-	-	-	-
Atsbi Wenberta.....	20,332	-	-	-	-	-	-
South Tigray Zone.....	170,821	-	-	-	-	-	-
Seharte Samre.....	22,394	-	-	-	-	-	-
Enderta.....	21,353	-	-	-	-	-	-
Hintalo Wajirat.....	27,944	-	-	-	-	-	-
Ambalage.....	19,962	-	-	-	-	-	-
Endamechoni.....	16,810	-	-	-	-	-	-
Rayaazebo.....	19,926	-	-	-	-	-	-
Alamata.....	14,537	-	-	-	-	-	-
Wofla.....	27,895	-	-	-	-	-	-

TABLE 8.24A: - Number of Holders Reporting Mule (Specifically for ploughing) 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)
Tigray Region	671,737	151	•	•	•	•	10
West Tigray Zone	166,544	-	-	-	-	-	-
Kafta	10,056	-	-	-	-	-	-
Tahtay Adiyabo	15,775	-	-	-	-	-	-
Laelay Adiyabo	20,677	-	-	-	-	-	-
Tahtay Koraro	13,471	-	-	-	-	-	-
Medebay Zana	22,348	-	-	-	-	-	-
Asegede Tsimbela	20,570	-	-	-	-	-	-
Tselemti	27,248	-	-	-	-	-	-
Welkait	21,875	-	-	-	-	-	-
Tsegede	14,525	-	-	-	-	-	-
Central Tigray Zone	215,944	-	-	-	-	-	-
Mereb Lehe	18,067	-	-	-	-	-	-
Ahiferom	33,102	-	-	-	-	-	-
Werie Lehe	26,501	-	-	-	-	-	-
Adwa	23,097	-	-	-	-	-	-
Laelay Maychew	14,111	-	-	-	-	-	-
Tahtay Maychew	17,434	-	-	-	-	-	-
Naeder Adet	21,093	-	-	-	-	-	-
Kola Temben	26,373	-	-	-	-	-	-
Degua Temben	21,674	-	-	-	-	-	-
Tanqu Abergele	14,492	-	-	-	-	-	-
East Tigray Zone	118,426	•	•	•	•	•	•
Gulumahada	15,512	-	-	-	-	-	-
Erob	3,581	-	-	-	-	-	-
Saesi Tsaedamba	23,698	-	-	-	-	-	-
Ganta Afeshum	20,201	-	-	-	-	-	-
Hawzen	20,539	-	-	-	-	-	-
Wukro	14,563	-	-	-	-	-	-
Atsbi Wenberta	20,332	•	•	•	•	•	•
South Tigray Zone	170,821	•	•	•	•	•	•
Seharte Samre	22,394	-	-	-	-	-	-
Enderta	21,353	•	•	•	•	•	•
Hintalo Wajirat	27,944	-	-	-	-	-	-
Ambalage	19,962	-	-	-	-	-	-
Endamehoni	16,810	-	-	-	-	-	-
Rayaazebo	19,926	-	-	-	-	-	-
Alamata	14,537	-	-	-	-	-	-
Wofla	27,895	-	-	-	-	-	-

TABLE 8.25A: - Total Number of Holders, Number of Holders Reporting Ox (Specifically 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 of Ox Per Holder	Total Value (Birr)	Average Replacement Value Per Ox (Birr)	Average Age of Ox (Years)
Tigray Region	671,737	475,321	844,845	1.26	643,505,551	447.67	8
West Tigray Zone	166,544	131,411	256,809	1.54	205,336,967	428.76	8
Kafta	10,056	3,868	13,397	1.33	6,520,698	251.55	9
Tahtay Adiyabo	15,775	12,017	23,754	1.51	21,877,942	479.25	8
Laelay Adiyabo	20,677	16,998	27,547	1.33	24,883,739	558.09	8
Tahtay Koraro	13,471	10,932	21,251	1.58	17,486,799	432.16	8
Medebay Zana	22,348	17,441	29,714	1.33	25,053,706	486.37	8
Asegede Tsimbela	20,570	17,960	43,031	2.09	30,217,421	338.32	8
Tselemti	27,248	22,914	40,039	1.47	32,001,504	456.82	8
Welkait	21,875	17,400	35,328	1.61	29,834,578	409.14	8
Tsegede	14,525	11,880	22,748	1.57	17,460,579	397.50	9
Central Tigray Zone	215,944	152,389	253,307	1.17	196,007,297	484.47	8
Mereb Lehe	18,067	13,150	21,785	1.21	20,046,937	560.78	8
Ahiferom	33,102	21,814	30,746	0.93	27,573,150	624.11	8
Weric Lehe	26,501	19,434	32,472	1.23	24,359,673	445.91	9
Adwa	23,097	17,115	28,488	1.23	24,451,399	515.65	8
Laelay Maychew	14,111	9,673	17,591	1.25	15,680,135	498.40	8
Tahtay Maychew	17,434	11,844	21,296	1.22	14,552,078	470.55	7
Naeder Adet	21,093	14,824	22,379	1.06	16,564,794	484.85	7
Kola Temben	26,373	18,254	28,599	1.08	20,205,435	461.86	7
Degua Temben	21,674	14,514	29,412	1.36	18,298,985	378.45	8
Tanqu Abergele	14,492	11,766	20,539	1.42	14,274,492	397.65	8
East Tigray Zone	118,426	73,288	105,464	0.89	82,624,976	546.00	8
Gulumahada	15,512	10,089	13,632	0.88	11,247,300	611.39	7
Erob	3,581	2,105	2,798	0.78	2,699,474	745.56	7
Saesi Tsadamba	23,698	15,005	20,893	0.88	14,611,126	503.42	7
Ganta Afeshum	20,201	12,008	16,043	0.79	13,158,606	610.58	9
Hawzen	20,539	12,712	19,377	0.94	14,426,345	490.97	8
Wukro	14,563	10,249	16,948	1.16	13,119,880	468.91	6
Atsbi Wenberta	20,332	11,120	15,772	0.78	13,362,245	595.29	9
South Tigray Zone	170,821	118,233	229,265	1.34	159,536,311	382.96	8
Scharte Samre	22,394	16,498	28,136	1.26	19,325,356	409.55	8
Enderta	21,353	15,246	27,805	1.30	21,905,928	437.47	8
Hintalo Wajirat	27,944	19,807	34,836	1.25	30,142,455	486.29	9
Ambalage	19,962	12,035	35,148	1.76	13,210,818	234.85	8
Endamechoni	16,810	10,954	18,881	1.12	12,271,386	378.48	8
Rayaazebo	19,926	15,530	34,113	1.71	29,674,277	395.78	9
Alamata	14,537	10,397	20,581	1.42	15,278,748	369.93	8
Wofla	27,895	17,767	29,765	1.07	17,727,343	358.07	8

TABLE 8.26A: - Number of Holders Reporting Ass (For 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)
Tigray Region	671,737	224,091	293,767	0.44	80,452,942	218.45	8
West Tigray Zone	166,544	63,181	81,025	0.49	25,731,451	265.49	8
Kafta	10,056	4,728	5,447	0.54	2,586,767	421.26	9
Tahtay Adiyabo	15,775	8,420	9,993	0.63	3,534,661	301.19	9
Laclay Adiyabo	20,677	9,263	11,096	0.54	3,819,720	293.76	9
Tahtay Koraro	13,471	4,415	6,080	0.45	1,903,354	229.71	8
Medebay Zana	22,348	6,462	8,034	0.36	2,492,551	250.03	10
Asegede Tsimbela	20,570	7,214	13,266	0.64	2,734,533	170.68	7
Tselemti	27,248	6,232	7,703	0.28	2,276,706	238.91	7
Welkait	21,875	9,347	11,397	0.52	3,919,498	283.34	7
Tsegede	14,525	7,100	8,009	0.55	2,463,662	275.71	10
Central Tigray Zone	215,944	56,602	73,719	0.34	20,860,142	220.77	8
Mereb Lehe	18,067	6,478	7,811	0.43	2,446,673	262.46	8
Ahiferom	33,102	7,251	8,977	0.27	2,621,224	241.24	7
Werie Lehe	26,501	4,828	7,307	0.28	1,890,519	175.61	7
Adwa	23,097	5,557	7,745	0.34	2,295,965	219.76	8
Laclay Maychew	14,111	5,203	6,830	0.48	1,968,552	220.54	9
Tahtay Maychew	17,434	4,264	5,420	0.31	1,584,829	232.08	7
Naeder Adet	21,093	4,218	5,499	0.26	1,445,206	211.12	8
Kola Temben	26,373	5,631	7,411	0.28	2,019,207	206.98	7
Degua Temben	21,674	6,661	9,051	0.42	2,684,495	219.55	7
Tanqu Abergele	14,492	6,512	7,669	0.53	1,903,471	212.26	8
East Tigray Zone	118,426	34,043	42,393	0.36	11,547,435	221.65	7
Gulumahada	15,512	3,675	4,843	0.31	1,422,787	229.00	6
Erob	3,581	1,753	2,101	0.59	716,231	286.27	6
Saesi Tsaedamba	23,698	6,396	8,664	0.37	2,325,971	198.38	5
Ganta Afeshum	20,201	2,900	3,582	0.18	978,150	241.77	6
Hawzen	20,539	4,154	5,083	0.25	1,273,134	204.21	6
Wukro	14,563	6,716	8,045	0.55	2,049,455	217.44	6
Atsbi Wenberta	20,332	8,449	10,074	0.50	2,781,706	229.69	8
South Tigray Zone	170,821	70,264	96,630	0.57	22,313,914	175.82	8
Seharte Samre	22,394	9,772	11,757	0.53	2,901,108	206.23	8
Enderta	21,353	14,657	19,236	0.90	5,790,221	228.23	8
Hintalo Wajirat	27,944	13,596	17,273	0.62	4,570,525	208.89	8
Ambalage	19,962	6,052	11,902	0.60	1,813,159	110.44	8
Endamehoni	16,810	6,590	10,057	0.60	2,040,467	135.31	8
Rayaaazebo	19,926	7,567	9,502	0.48	2,136,916	179.58	9
Alamata	14,537	3,734	5,319	0.37	1,072,124	143.14	9
Wofla	27,895	8,295	11,584	0.42	1,989,395	122.90	9

TABLE 8.27A: - Number of Holders Reporting Camel (For transportation) Owned, Quantity Reported, Replacement Value and Average age of Camel, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Camels Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Camel (Birr)	Average Age of Camel (Years)
Tigray Region	671,737	10,494	23,639	0.04	31,380,177	650.64	11
West Tigray Zone	166,544	3,392	4,062	0.02	7,073,511	1,447.75	12
Kafta	10,056	180	180	0.02	333,648	1,853.60	9
Tahtay Adiyabo	15,775	333	333	0.02	570,259	1,712.49	14
Laelay Adiyabo	20,677	621	645	0.03	1,001,983	1,493.18	10
Tahtay Koraro	13,471	.	.	.	.	.	.
Medebay Zana	22,348	649	738	0.03	1,121,971	1,357.06	15
Asegede Tsimbela	20,570	.	.	.	.	.	.
Tselemti	27,248	.	.	.	.	.	.
Welkait	21,875	.	.	.	.	.	.
Tsegede	14,525	194	194	0.01	346,485	1,786.01	10
Central Tigray Zone	215,944	2,872	3,637	0.02	5,314,082	1,243.07	10
Mereb Lehe	18,067	745	745	0.04	1,265,110	1,698.13	10
Ahiferom	33,102	1,214	1,257	0.04	1,977,948	1,564.67	11
Werie Lehe	26,501	.	.	.	.	.	.
Adwa	23,097	.	.	.	.	.	.
Laelay Maychew	14,111	.	.	.	.	.	.
Tahtay Maychew	17,434	290	290	0.02	422,532	1,457.01	.
Naeder Adet	21,093	.	.	.	.	.	.
Kola Temben	26,373	.	.	.	.	.	.
Degua Temben	21,674	.	.	.	.	.	.
Tanqu Abergele	14,492	.	.	.	.	.	.
East Tigray Zone	118,426	222	542	0.00	740,515	549.47	.
Gulumahada	15,512	.	.	.	.	.	.
Erob	3,581	.	.	.	.	.	.
Saesi Tsaedamba	23,698	.	.	.	.	.	.
Ganta Afeshum	20,201	.	.	.	.	.	.
Hawzen	20,539	.	.	.	.	.	.
Wukro	14,563	.	.	.	.	.	.
Atsbi Wenberta	20,332	.	.	.	.	.	.
South Tigray Zone	170,821	4,008	15,398	0.09	18,252,070	304.00	11
Seharte Samre	22,394	.	.	.	.	.	.
Enderta	21,353	159	432	0.02	663,620	523.85	11
Hintalo Wajirat	27,944	760	2,790	0.10	3,874,641	370.97	10
Ambalage	19,962	.	.	.	.	.	.
Endamehoni	16,810	.	.	.	.	.	.
Rayaazebo	19,926	2,797	11,592	0.58	12,901,053	260.88	10
Alamata	14,537	.	.	.	.	.	.
Wofla	27,895	.	.	.	.	.	.

TABLE 8.28A: - Number of Holders Reporting Cattle (Working Age for Threshing and 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)
Tigray Region	671,737	487,143	1,162,895	1.73	823,638,127	318.03	8
West Tigray Zone	166,544	133,126	345,372	2.07	262,311,508	312.29	8
Kafta	10,056	4,010	12,458	1.24	9,941,943	275.04	9
Tahtay Adiyabo	15,775	12,202	34,221	2.17	31,616,723	341.13	8
Laelay Adiyabo	20,677	16,872	37,108	1.79	27,724,332	401.94	8
Tahtay Koraro	13,471	11,029	26,885	2.00	20,774,969	339.36	8
Medebay Zana	22,348	17,790	40,527	1.81	33,050,494	355.86	9
Asegede Tsimbela	20,570	18,291	57,420	2.79	41,542,040	241.79	8
Tselemti	27,248	23,331	55,420	2.03	41,489,159	320.52	8
Welkait	21,875	17,613	46,921	2.14	38,266,139	303.83	8
Tsegede	14,525	11,987	34,412	2.37	17,905,710	243.90	9
Central Tigray Zone	215,944	157,212	379,036	1.76	260,823,538	314.69	8
Mereb Lehe	18,067	13,368	27,767	1.54	24,603,377	432.20	8
Ahiferom	33,102	22,914	59,208	1.79	35,195,201	314.13	8
Werie Lehe	26,501	20,160	54,611	2.06	36,206,406	254.10	8
Adwa	23,097	17,533	44,085	1.91	33,359,333	312.78	8
Laelay Maychew	14,111	10,095	21,817	1.55	19,288,868	406.48	8
Tahtay Maychew	17,434	12,431	28,406	1.63	18,880,967	354.76	7
Naeder Adet	21,093	15,695	36,763	1.74	24,889,306	296.76	8
Kola Temben	26,373	17,812	38,476	1.46	24,925,008	308.06	7
Degua Temben	21,674	15,387	40,290	1.86	25,216,471	279.13	8
Tanqu Abergele	14,492	11,818	27,614	1.91	18,258,599	291.82	8
East Tigray Zone	118,426	74,215	152,893	1.29	107,262,447	362.63	8
Gulumahada	15,512	10,084	23,835	1.54	14,561,333	333.12	7
Erob	3,581	1,978	3,437	0.96	2,888,469	512.43	7
Saesi Tsaedamba	23,698	14,776	31,937	1.35	21,263,971	312.32	7
Ganta Afeshum	20,201	11,270	18,874	0.93	14,094,473	458.79	9
Hawzen	20,539	13,235	29,388	1.43	20,404,759	320.82	8
Wukro	14,563	10,276	20,748	1.42	15,765,171	383.91	7
Atsbi Wenberta	20,332	12,598	24,673	1.21	18,284,272	393.78	9
South Tigray Zone	170,821	122,590	285,595	1.67	193,240,634	305.51	8
Seharte Samre	22,394	17,494	41,164	1.84	25,684,927	274.94	9
Enderta	21,353	15,702	29,452	1.38	23,243,019	421.06	8
Hintalo Wajirat	27,944	19,980	44,743	1.60	35,786,521	370.59	9
Ambalage	19,962	12,647	28,246	1.41	18,023,580	290.61	9
Endamehoni	16,810	11,146	23,872	1.42	15,011,818	305.82	8
Rayaazebo	19,926	15,617	36,303	1.82	31,026,285	369.82	9
Alamata	14,537	10,733	29,986	2.06	16,378,651	248.92	8
Wofla	27,895	19,270	51,829	1.86	28,085,833	203.60	9

TABLE 8.29A:- Number of Holders Reporting Horse (For 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)
Tigray Region.....	671,737	1,138	1,290	0.00	595,014	423.71	10
West Tigray Zone.....	166,544	304	338	0.00	198,949	517.66	8
Kafta.....	10,056	-	-	-	-	-	-
Tahtay Adiyabo.....	15,775	-	-	-	-	-	-
Laelay Adiyabo.....	20,677	-	-	-	-	-	-
Tahtay Koraro.....	13,471	-	-	-	-	-	-
Medebay Zana.....	22,348	-	-	-	-	-	-
Asegede Tsimbela.....	20,570	-	-	-	-	-	-
Tselemti.....	27,248	-	-	-	-	-	-
Welkait.....	21,875	-	-	-	-	-	-
Tsegede.....	14,525	288	306	0.02	166,269	518.39	8
Central Tigray Zone.....	215,944	-	-	-	-	-	-
Mereb Lehe.....	18,067	-	-	-	-	-	-
Ahiferom.....	33,102	-	-	-	-	-	-
Werie Lehe.....	26,501	-	-	-	-	-	-
Adwa.....	23,097	-	-	-	-	-	-
Laelay Maychew.....	14,111	-	-	-	-	-	-
Tahtay Maychew.....	17,434	-	-	-	-	-	-
Naeder Adet.....	21,093	-	-	-	-	-	-
Kola Temben.....	26,373	-	-	-	-	-	-
Degua Temben.....	21,674	-	-	-	-	-	-
Tanqu Abergele.....	14,492	-	-	-	-	-	-
East Tigray Zone.....	118,426	186	205	0.00	92,816	438.46	-
Gulumahada.....	15,512	58	-	-	21,662	-	-
Erob.....	3,581	-	-	-	-	-	-
Saesi Tsaedamba.....	23,698	-	-	-	-	-	-
Ganta Afeshum.....	20,201	-	-	-	-	-	-
Hawzen.....	20,539	-	-	-	-	-	-
Wukro.....	14,563	-	-	-	-	-	-
Atsbi Wenberta.....	20,332	-	-	-	-	-	-
South Tigray Zone.....	170,821	581	681	0.00	293,392	399.24	12
Seharte Samre.....	22,394	-	-	-	-	-	-
Enderta.....	21,353	-	-	-	-	-	-
Hintalo Wajirat.....	27,944	-	-	-	-	-	-
Ambalage.....	19,962	137	137	0.01	67,429	492.18	-
Endamehoni.....	16,810	-	-	-	-	-	-
Rayaazebo.....	19,926	-	-	-	-	-	-
Alamata.....	14,537	-	-	-	-	-	-
Wofla.....	27,895	-	-	-	-	-	-

TABLE 8.30A:- Number of Holders Reporting Mule (For 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)
Tigray Region.....	671,737	5,030	6,024	0.01	5,822,048	809.84	10
West Tigray Zone.....	166,544	1,064	1,128	0.01	1,146,202	960.96	11
Kafta.....	10,056	-	-	-	-	-	-
Tahtay Adiyabo.....	15,775	*	*	*	*	*	*
Laelay Adiyabo.....	20,677	*	*	*	*	*	*
Tahtay Koraro.....	13,471	74	*	*	*	*	10
Medebay Zana.....	22,348	*	*	*	*	*	*
Asegede Tsimbela.....	20,570	308	308	0.01	319,306	1,036.71	10
Tselemti.....	27,248	*	*	*	*	*	*
Welkait.....	21,875	257	257	0.01	245,774	956.32	13
Tsegede.....	14,525	205	220	0.02	192,930	816.86	11
Central Tigray Zone.....	215,944	1,158	1,405	0.01	1,262,797	753.39	11
Mereb Lehe.....	18,067	*	*	*	*	*	*
Ahiferom.....	33,102	*	*	*	*	*	*
Werie Lehe.....	26,501	*	*	*	*	*	*
Adwa.....	23,097	*	*	*	*	*	*
Laelay Maychew.....	14,111	-	-	-	-	-	-
Tahtay Maychew.....	17,434	*	*	*	*	*	*
Naeder Adet.....	21,093	-	-	-	-	-	-
Kola Temben.....	26,373	-	-	-	-	-	-
Degua Temben.....	21,674	450	568	0.03	*	*	11
Tanqu Abergele.....	14,492	130	130	0.01	91,175	701.35	13
East Tigray Zone.....	118,426	851	1,195	0.01	1,172,604	700.44	8
Gulumahada.....	15,512	*	*	*	*	*	*
Erob.....	3,581	*	*	*	*	*	*
Saesi Tsaedamba.....	23,698	*	*	*	*	*	*
Ganta Afeshum.....	20,201	*	*	*	*	*	*
Hawzen.....	20,539	*	*	*	*	*	*
Wukro.....	14,563	203	*	*	*	*	4
Atsbi Wenberta.....	20,332	385	632	0.03	660,432	654.69	11
South Tigray Zone.....	170,821	1,957	2,296	0.01	2,240,446	827.08	11
Seharte Samre.....	22,394	406	550	0.02	509,180	660.71	8
Enderta.....	21,353	446	522	0.02	505,634	827.20	11
Hintalo Wajirat.....	27,944	273	345	0.01	425,347	987.74	11
Ambalage.....	19,962	*	*	*	*	*	*
Endamehoni.....	16,810	*	*	*	*	*	*
Rayaazebo.....	19,926	204	251	0.01	*	*	8
Alamata.....	14,537	*	*	*	*	*	*
Wofla.....	27,895	359	359	0.01	294,743	821.01	10

TABLE 8.31A:- Number of Holders Reporting 'Debignit' Owned, Quantity Reported, Replacement Value and Storage Capacity, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Debignit' Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Debignit' (Birr)	Average Storage Capacity Per 'Debignit' (Quintal)
Tigray Region.....	671,737	407,035	1,388,697	2.07	13,327,857	2.77	5
West Tigray Zone.....	166,544	98,999	270,340	1.62	2,391,484	3.10	7
Kafta.....	10,056	2,760	4,237	0.42	29,694	4.75	4
Tahtay Adiyabo.....	15,775	11,524	33,272	2.11	487,260	5.11	5
Laclay Adiyabo.....	20,677	11,860	54,410	2.63	495,457	1.86	24
Tahtay Koraro.....	13,471	10,619	28,961	2.15	269,888	3.66	17
Medebay Zana.....	22,348	15,031	46,784	2.09	276,461	1.74	3
Asegede Tsimbela.....	20,570	14,646	39,292	1.91	337,806	3.04	3
Tselemti.....	27,248	15,198	31,620	1.16	275,592	3.96	3
Welkait.....	21,875	8,071	15,354	0.70	136,200	4.46	4
Tsegede.....	14,525	9,291	16,410	1.13	83,125	2.79	2
Central Tigray Zone.....	215,944	186,325	793,572	3.67	7,734,881	2.21	3
Mereb Lehe.....	18,067	17,409	66,805	3.70	816,119	3.11	3
Ahiferom.....	33,102	25,463	100,526	3.04	855,260	2.19	3
Werie Lehe.....	26,501	25,578	138,352	5.22	1,269,337	1.66	4
Adwa.....	23,097	21,594	93,749	4.06	1,040,031	2.41	2
Laelay Maychew.....	14,111	13,378	64,173	4.55	1,097,023	3.28	5
Tahtay Maychew.....	17,434	14,382	51,786	2.97	483,396	2.53	3
Naeder Adet.....	21,093	19,492	79,610	3.77	584,383	1.73	3
Kola Temben.....	26,373	23,911	109,865	4.17	734,101	1.39	3
Degua Temben.....	21,674	12,259	35,704	1.65	333,247	3.06	4
Tanqu Abergele.....	14,492	12,860	53,002	3.66	521,986	2.43	4
East Tigray Zone.....	118,426	61,673	198,731	1.68	1,995,417	3.29	7
Gulumahada.....	15,512	10,737	34,244	2.21	375,043	3.34	13
Erob.....	3,581	1,538	5,169	1.44	76,799	4.77	16
Saesi Tsaedamba.....	23,698	7,982	22,644	0.96	190,477	3.05	3
Ganta Afeshum.....	20,201	16,211	59,269	2.93	577,487	2.71	6
Hawzen.....	20,539	8,422	29,244	1.42	314,841	3.27	3
Wukro.....	14,563	9,778	32,202	2.21	193,146	1.83	•
Atsbi Wenberta.....	20,332	7,005	15,958	0.78	267,623	8.17	3
South Tigray Zone.....	170,821	60,037	126,054	0.74	1,206,076	4.76	4
Seharte Samre.....	22,394	9,908	24,072	1.07	173,621	3.13	7
Enderta.....	21,353	3,856	6,642	0.31	72,888	6.64	4
Hintalo Wajirat.....	27,944	3,565	6,245	0.22	134,369	15.59	7
Ambalage.....	19,962	6,191	11,308	0.57	57,216	2.60	3
Endamehoni.....	16,810	5,777	12,154	0.72	•	•	2
Rayaazebo.....	19,926	8,682	16,358	0.82	192,408	6.07	3
Alamata.....	14,537	8,875	17,004	1.17	119,242	3.81	4
Wofla.....	27,895	13,182	32,270	1.16	274,213	3.68	5

TABLE 8.32A: - Number of Holders Reporting 'Gottera' Owned, Quantity Reported, Replacement Value and Storage Capacity, 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 Per 'Gottera' (Quintal)
Tigray Region	671,737	213,453	549,341	0.82	10,209,638	8.83	8
West Tigray Zone	166,544	113,707	305,231	1.83	5,595,052	7.22	6
Kafta	10,056	3,501	4,811	0.48	127,454	19.59	10
Tahtay Adiyabo	15,775	4,497	10,212	0.65	351,202	14.52	7
Laelay Adiyabo	20,677	14,377	42,021	2.03	709,070	6.06	6
Tahtay Koraro	13,471	9,058	36,367	2.70	512,760	4.15	5
Medebay Zana	22,348	15,799	56,722	2.54	575,593	2.86	4
Asegede Tsimbela	20,570	14,837	36,609	1.78	935,084	10.44	6
Tselemti	27,248	21,350	54,100	1.99	1,010,029	7.21	5
Welkait	21,875	16,737	34,590	1.58	767,086	10.12	8
Tsegede	14,525	13,551	29,800	2.05	606,774	9.09	7
Central Tigray Zone	215,944	28,050	95,710	0.44	1,626,550	7.25	9
Mereb Lehe	18,067	485	1,169	0.06	*	*	3
Ahiferom	33,102	3,136	15,106	0.46	*	2.26	2
Werie Lehe	26,501	*	*	*	*	*	*
Adwa	23,097	*	*	*	*	*	*
Laelay Maychew	14,111	129	516	0.04	*	4.64	*
Tahtay Maychew	17,434	3,393	11,298	0.65	129,596	3.42	6
Naeder Adet	21,093	*	*	*	*	*	*
Kola Temben	26,373	7,272	29,882	1.13	409,626	3.11	5
Degua Temben	21,674	5,114	11,468	0.53	142,618	5.39	5
Tanqu Abergele	14,492	4,244	10,640	0.73	216,947	8.15	6
East Tigray Zone	118,426	19,199	61,989	0.52	829,925	5.28	5
Gulumahada	15,512	1,387	4,079	0.26	30,157	2.59	*
Erob	3,581	344	809	0.23	20,553	13.10	3
Saesi Tsaedamba	23,698	4,356	10,429	0.44	132,669	5.56	3
Ganta Afeshum	20,201	*	*	*	*	*	*
Hawzen	20,539	10,439	41,340	2.01	456,283	2.65	4
Wukro	14,563	570	1,627	0.11	20,956	4.65	6
Atsbi Wenberta	20,332	1,880	3,098	0.15	165,269	42.01	7
South Tigray Zone	170,821	52,496	86,410	0.51	2,158,110	18.84	14
Seharte Samre	22,394	8,201	21,301	0.95	205,149	3.68	9
Enderta	21,353	399	557	0.03	*	*	*
Hintalo Wajirat	27,944	9,422	17,430	0.62	437,824	17.19	12
Ambalage	19,962	5,124	8,397	0.42	155,820	13.89	9
Endamehoni	16,810	6,157	10,272	0.61	210,718	14.65	10
Rayaazebo	19,926	8,275	9,551	0.48	552,914	49.80	23
Alamata	14,537	6,167	7,317	0.50	240,209	27.84	14
Wofla	27,895	8,750	11,586	0.42	332,365	24.43	15

TABLE 8.33A: - Number of Holders Reporting 'Gudguad' Owned, Quantity Reported, Replacement Value and Storage Capacity, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of 'Gudguads' Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per 'Gudguad' (Birr)	Average Storage Capacity Per 'Gudguad' (Quintal)
Tigray Region.....	671,737	22,633	31,182	0.05	912,175	23.52	18
West Tigray Zone.....	166,544	324	•	•	•	•	•
Kafta.....	10,056	•	•	•	•	•	•
Tahtay Adiyabo.....	15,775	-	-	-	-	-	-
Laelay Adiyabo.....	20,677	-	-	-	-	-	-
Tahtay Koraro.....	13,471	•	•	•	•	•	•
Medebay Zana.....	22,348	•	•	•	•	•	•
Asegede Tsimbela.....	20,570	•	•	•	•	•	•
Tselemti.....	27,248	-	-	-	-	-	-
Welkait.....	21,875	-	-	-	-	-	-
Tsegede.....	14,525	•	•	•	•	•	•
Central Tigray Zone.....	215,944	944	2,683	0.01	47,623	9.61	5
Mereb Lehe.....	18,067	•	•	•	•	•	•
Ahiferom.....	33,102	•	•	•	•	•	•
Werie Lehe.....	26,501	-	-	-	-	-	-
Adwa.....	23,097	•	•	•	•	•	•
Laelay Maychew.....	14,111	•	•	•	12,151	•	•
Tahtay Maychew.....	17,434	•	•	•	•	•	•
Naeder Adet.....	21,093	401	•	•	•	•	•
Kola Temben.....	26,373	•	•	•	19,309	•	•
Degua Temben.....	21,674	•	•	•	•	•	•
Tanqu Abergele.....	14,492	89	•	•	•	•	•
East Tigray Zone.....	118,426	830	1,928	0.02	25,137	6.10	•
Gulumahada.....	15,512	•	•	•	•	•	•
Erob.....	3,581	-	-	-	-	-	-
Saesi Tsaedamba.....	23,698	•	•	•	•	•	•
Ganta Afeshum.....	20,201	145	•	•	•	•	•
Hawzen.....	20,539	-	-	-	-	-	2
Wukro.....	14,563	-	-	-	-	-	-
Atsbi Wenberta.....	20,332	•	•	•	12,230	•	•
South Tigray Zone.....	170,821	20,535	25,159	0.15	769,200	25.42	19
Seharte Samre.....	22,394	•	•	•	7,270	•	•
Enderta.....	21,353	190	245	0.01	•	20.24	5
Hintalo Wajirat.....	27,944	535	801	0.03	•	•	•
Ambalage.....	19,962	•	•	•	•	•	•
Endamehoni.....	16,810	-	-	-	-	-	-
Rayaaazebo.....	19,926	13,730	15,989	0.80	546,271	29.12	21
Alamata.....	14,537	5,600	6,847	0.47	130,453	16.76	14
Wofla.....	27,895	173	•	•	1,459	•	•

TABLE 8. 34 A - Number of Holders Reporting Modern Storage Facilities Owned, Quantity Reported, Replacement Value and Storage Capacity, for Private Holdings.

Geographic Area	Total Number of Crop Holders	Number of Holders Reporting	Number of Modern Storages Reported	Average Number Per Holder	Total Value (Birr)	Average Replacement Value Per Modern Storage (Birr)	Average Storage Capacity Per Modern Storage (Quintal)
Tigray Region	671,737	1,141	2,785	0.00	42,732	6.95	7
West Tigray Zone	166,544	524	1,044	0.01	17,731	8.14	5
Kafta	10,056	-	-	-	-	-	-
Tahtay Adiyabo	15,775	-	-	-	-	-	-
Laelay Adiyabo	20,677	-	-	-	-	-	-
Tahtay Koraro	13,471	-	-	-	-	-	-
Medebay Zana	22,348	-	-	-	-	-	-
Asegede Tsimbela	20,570	-	-	-	-	-	-
Tselemti	27,248	-	-	-	-	-	-
Welkait	21,875	189	280	0.01	2,758	6.70	5
Tsegede	14,525	-	-	-	-	-	-
Central Tigray Zone	215,944	213	827	0.00	-	2.35	3
Mereb Lehe	18,067	-	-	-	-	-	-
Ahiferom	33,102	-	-	-	-	-	-
Werie Lehe	26,501	-	-	-	-	-	-
Adwa	23,097	-	-	-	-	-	-
Laelay Maychew	14,111	-	-	-	-	-	-
Tahtay Maychew	17,434	-	-	-	-	-	-
Naeder Adet	21,093	-	-	-	-	-	-
Kola Temben	26,373	-	-	-	-	-	-
Degua Temben	21,674	-	-	-	-	-	-
Tanqu Abergele	14,492	-	-	-	-	-	-
East Tigray Zone	118,426	-	-	-	-	-	-
Gulumahada	15,512	-	-	-	-	-	-
Erob	3,581	11	11	0.00	-	-	-
Saesi Tsaedamba	23,698	-	-	-	-	-	-
Ganta Afeshum	20,201	-	-	-	-	-	-
Hawzen	20,539	-	-	-	-	-	-
Wukro	14,563	-	-	-	-	-	-
Atsbi Wenberta	20,332	-	-	-	-	-	-
South Tigray Zone	170,821	220	431	0.00	9,357	-	-
Seharte Samre	22,394	-	-	-	-	-	-
Enderta	21,353	-	-	-	-	-	-
Hintalo Wajirat	27,944	-	-	-	-	-	-
Ambalage	19,962	-	-	-	-	-	-
Endamehoni	16,810	-	-	-	-	-	-
Rayaazebo	19,926	-	-	-	-	-	-
Alamata	14,537	-	-	-	-	-	-
Wofla	27,895	-	-	-	-	-	-

STATISTICAL TABLES PRESENTING THE CENSUS  
RESULTS AT  
ZONAL AND WOREDA LEVELS

Tables 8.1B- 8.34B

Table 8.1B:- Number distribution 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	%
Tigray Region	190,419	28.35	316,419	47.10	131,391	19.56	23,935	3.56	7,071	1.05	2,502	0.37
West Tigray Zone	26,196	15.73	90,113	54.11	39,103	23.48	7,229	4.34	2,905	1.74	998	0.60
Kafta	942	9.37	4,296	42.72	2,963	29.46	890	8.85	632	6.28	333	3.31
Tahtay Adiyabo	1,899	12.04	8,252	52.31	4,483	28.42	874	5.54	246	1.56	21	0.13
Laelay Adiyabo	3,618	17.50	11,947	57.78	4,382	21.19	499	2.41	141	0.68	90	0.44
Tahtay Koraro	2,703	20.07	7,216	53.57	2,546	18.90	562	4.17	306	2.27	138	1.02
Medebay Zana	4,949	22.15	10,694	47.85	5,500	24.61	1,003	4.49	175	0.78	27	0.12
Asegede Tsimbela	2,305	11.21	12,559	61.05	4,610	22.41	622	3.02	415	2.02	59	0.29
Tselemti	5,800	21.29	16,277	59.74	4,077	14.96	846	3.10	212	0.78	36	0.13
Welkait	2,803	12.81	11,118	50.83	5,690	26.01	1,329	6.08	658	3.01	277	1.27
Tsegede	1,180	8.12	7,754	53.38	4,851	33.40	603	4.15	119	0.82	18	0.12
Central Tigray Zone	59,462	27.54	95,378	44.17	47,590	22.04	9,450	4.38	3,072	1.42	992	0.46
Mereb Lehe	2,800	15.50	7,220	39.96	6,113	33.84	1,204	6.66	591	3.27	139	0.77
Ahiferom	11,078	33.47	13,471	40.70	6,599	19.94	1,448	4.37	271	0.82	235	0.71
Werie Lehe	6,478	24.44	12,067	45.53	6,026	22.74	1,260	4.75	560	2.11	110	0.42
Adwa	6,406	27.74	9,728	42.12	5,345	23.14	1,053	4.56	440	1.91	125	0.54
Laelay Maychew	4,284	30.36	6,034	42.76	2,906	20.59	557	3.95	219	1.55	111	0.79
Tahtay Maychew	6,102	35.00	8,600	49.33	2,339	13.42	351	2.01	42	0.24	-	-
Naeder Adet	7,555	35.82	9,579	45.41	3,297	15.63	521	2.47	104	0.49	37	0.18
Kola Temben	6,271	23.78	13,253	50.25	5,609	21.27	857	3.25	314	1.19	69	0.26
Degua Temben	6,008	27.72	9,209	42.49	4,995	23.05	1,167	5.38	166	0.77	129	0.60
Tanqu Abergele	2,482	17.13	6,217	42.90	4,360	30.09	1,030	7.11	366	2.53	37	0.26
East Tigray Zone	49,944	42.17	52,352	44.21	13,700	11.57	2,019	1.70	302	0.26	109	0.09
Gulumahada	7,537	48.59	5,610	36.17	2,043	13.17	299	1.93	23	0.15	-	-
Erob	986	27.53	1,950	54.45	523	14.60	116	3.24	6	0.17	-	-
Saesi Tsaedamba	9,988	42.15	11,034	46.56	2,506	10.57	170	0.72	-	-	-	-
Ganta Afeshum	9,480	46.93	9,284	45.96	1,382	6.84	55	0.27	-	-	-	-
Hawzen	9,131	44.46	9,294	45.25	1,682	8.19	238	1.16	106	0.52	88	0.43
Wukro	6,170	42.37	5,669	38.93	2,291	15.73	384	2.64	28	0.19	21	0.14
Atsbi Wenberta	6,652	32.72	9,512	46.78	3,273	16.10	756	3.72	139	0.68	-	-
South Tigray Zone	54,814	32.09	78,576	46.00	30,998	18.15	5,238	3.07	792	0.46	403	0.24
Scharte Samre	6,153	27.48	10,016	44.73	5,118	22.85	843	3.76	144	0.64	120	0.54
Enderta	8,021	37.56	8,640	40.46	3,953	18.51	612	2.87	127	0.59	-	-
Hintalo Wajirat	10,223	36.58	12,224	43.74	4,529	16.21	864	3.09	33	0.12	71	0.25
Ambalage	8,341	41.78	8,548	42.82	2,775	13.90	215	1.08	57	0.29	26	0.13
Endamehoni	5,702	33.92	8,338	49.60	2,409	14.33	289	1.72	41	0.24	31	0.18
Rayazebo	4,477	22.47	7,632	38.30	5,783	29.02	1,529	7.67	350	1.76	155	0.78
Alamata	3,900	26.83	7,311	50.29	2,916	20.06	410	2.82	-	-	-	-
Wofla	8,000	28.68	15,866	56.88	3,514	12.60	476	1.71	39	0.14	-	-

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	%
Tigray Region.....	387,888	57.74	253,126	37.68	28,621	4.26	1,756	0.26	257	0.04	89	0.01
West Tigray Zone.....	83,587	50.19	71,690	43.05	10,359	6.22	825	0.50	54	0.03	29	0.02
Kafta.....	8,004	79.59	1,624	16.15	335	3.33	82	0.82	-	-	11	0.11
Tahtay Adiyabo.....	11,881	75.32	3,662	23.21	232	1.47	-	-	-	-	-	-
Lalay Adiyabo.....	11,050	53.44	8,928	43.18	634	3.07	65	0.31	-	-	-	-
Tahtay Koraro.....	7,178	53.28	5,498	40.81	688	5.11	89	0.66	-	-	18	0.13
Medebay Zana.....	7,637	34.17	12,547	56.14	2,084	9.33	55	0.25	25	0.11	-	-
Asegede Tsimbela.....	11,008	53.51	7,601	36.95	1,672	8.13	261	1.27	28	0.14	-	-
Tselemti.....	7,533	27.65	16,773	61.56	2,740	10.06	202	0.74	-	-	-	-
Welkait.....	10,344	47.29	9,977	45.61	1,483	6.78	71	0.32	-	-	-	-
Tsegede.....	8,955	61.65	5,079	34.97	491	3.38	-	-	-	-	-	-
Central Tigray Zone.....	105,443	48.83	98,128	45.44	11,431	5.29	736	0.34	146	0.07	60	0.03
Mereb Lehe.....	5,925	32.79	10,828	59.93	1,295	7.17	19	0.11	-	-	-	-
Ahiferom.....	16,028	48.42	15,682	47.37	1,268	3.83	99	0.30	25	0.08	-	-
Werie Lehe.....	14,196	53.57	11,238	42.41	1,036	3.91	31	0.12	-	-	-	-
Adwa.....	12,249	53.03	9,399	40.69	1,301	5.63	26	0.11	99	0.43	23	0.10
Lalay Maychew.....	6,606	46.81	6,653	47.15	798	5.66	54	0.38	-	-	-	-
Tahtay Maychew.....	10,929	62.69	6,049	34.70	433	2.48	23	0.13	-	-	-	-
Naeder Adet.....	6,624	31.40	12,461	59.08	1,890	8.96	118	0.56	-	-	-	-
Kola Temben.....	12,454	47.22	11,772	44.64	1,863	7.06	247	0.94	-	-	37	0.14
Degua Temben.....	15,690	72.39	5,641	26.03	314	1.45	29	0.13	-	-	-	-
Tanqu Abergele.....	4,742	32.72	8,406	58.00	1,233	8.51	89	0.61	22	0.15	-	-
East Tigray Zone.....	103,738	87.60	13,673	11.55	939	0.79	76	0.06	-	-	-	-
Gulumahada.....	12,837	82.76	2,416	15.58	232	1.50	27	0.17	-	-	-	-
Erob.....	3,451	96.37	125	3.49	-	-	5	0.14	-	-	-	-
Saesi Tsaedamba.....	21,574	91.04	2,060	8.69	64	0.27	-	-	-	-	-	-
Ganta Afeshum.....	13,206	65.37	6,368	31.52	583	2.89	44	0.22	-	-	-	-
Hawzen.....	19,871	96.75	627	3.05	41	0.20	-	-	-	-	-	-
Wukro.....	12,754	87.58	1,790	12.29	19	0.13	-	-	-	-	-	-
Atsbi Wenberta.....	20,045	98.59	287	1.41	-	-	-	-	-	-	-	-
South Tigray Zone.....	95,117	55.68	69,636	40.77	5,892	3.45	119	0.07	57	0.03	-	-
Seharte Samre.....	14,192	63.37	7,228	32.28	974	4.35	-	-	-	-	-	-
Enderta.....	18,220	85.33	3,007	14.08	126	0.59	-	-	-	-	-	-
Hintalo Wajirat.....	17,720	63.41	9,446	33.80	706	2.53	36	0.13	36	0.13	-	-
Ambalage.....	8,649	43.33	10,088	50.54	1,225	6.14	-	-	-	-	-	-
Endamehoni.....	8,555	50.89	7,837	46.62	397	2.36	-	-	21	0.12	-	-
Rayaazebo.....	10,104	50.71	8,859	44.46	879	4.41	84	0.42	-	-	-	-
Alamata.....	5,142	35.37	8,500	58.47	895	6.16	-	-	-	-	-	-
Wofla.....	12,535	44.94	14,671	52.59	689	2.47	-	-	-	-	-	-

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	%
Tigray Region.....	380,901	56.70	273,463	40.71	16,10	2.40	98	0.15	170	0.03	115	0.02
West Tigray Zone.....	91,635	55.02	69,960	42.01	4,41	2.65	33	0.20	102	0.06	95	0.06
Kafta.....	6,477	64.41	3,203	31.85	21	2.09	9	0.89	29	0.29	47	0.47
Tahtay Adiyabo.....	4,367	27.68	10,093	63.98	1,26	8.01	1	0.11	35	0.22	-	-
Laelay Adiyabo.....	9,207	44.53	10,994	53.17	45	2.18	2	0.13	-	-	-	-
Tahtay Koraro.....	7,008	52.02	5,897	43.78	51	3.83	5	0.37	-	-	-	-
Medebay Zana.....	8,587	38.42	12,936	57.88	79	3.57	2	0.13	-	-	-	-
Asegede Tsimbela.....	8,451	41.08	11,111	54.02	84	4.12	12	0.59	38	0.18	-	-
Tselemti.....	19,864	72.90	7,138	26.20	19	0.73	-	-	-	-	48	0.18
Welkait.....	16,727	76.47	5,118	23.40	3	0.14	-	-	-	-	-	-
Tsegede.....	10,950	75.39	3,470	23.89	10	0.72	-	-	-	-	-	-
Central Tigray Zone.....	113,192	52.42	96,933	44.89	5,41	2.51	38	0.18	-	-	20	0.01
Mereb Lehe.....	8,950	49.54	8,890	49.21	22	1.26	-	-	-	-	-	-
Ahiferom.....	18,840	56.91	13,766	41.59	42	1.28	7	0.22	-	-	-	-
Werie Lehe.....	12,935	48.81	12,256	46.25	1,31	4.94	-	-	-	-	-	-
Adwa.....	11,458	49.61	10,991	47.59	60	2.60	4	0.20	-	-	-	-
Laelay Maychew.....	6,465	45.82	7,238	51.29	37	2.64	3	0.25	-	-	-	-
Tahtay Maychew.....	8,351	47.90	8,840	50.71	15	0.89	6	0.38	-	-	20	0.11
Naeder Adet.....	9,810	46.51	10,575	50.14	61	2.93	9	0.43	-	-	-	-
Kola Temben.....	13,688	51.90	11,587	43.94	1,02	3.90	6	0.26	-	-	-	-
Degua Temben.....	15,638	72.15	5,699	26.29	33	1.55	-	-	-	-	-	-
Tanqu Abergele.....	7,060	48.72	7,091	48.93	34	2.35	-	-	-	-	-	-
East Tigray Zone.....	59,788	50.49	54,668	46.16	3,79	3.20	14	0.12	39	0.03	-	-
Gulumahada.....	7,933	51.14	7,122	45.91	45	2.95	-	-	-	-	-	-
Erob.....	1,270	35.46	2,217	61.91	9	2.62	-	-	-	-	-	-
Saesi Tsadamba.....	10,728	45.27	12,204	51.50	73	3.10	3	0.14	-	-	-	-
Ganta Afeshum.....	10,007	49.54	9,470	46.88	70	3.48	2	0.11	-	-	-	-
Hawzen.....	9,222	44.90	10,026	48.81	1,23	6.03	5	0.25	-	-	-	-
Wukro.....	8,974	61.62	5,407	37.13	15	1.07	-	0.06	17	0.12	-	-
Atsbi Wenberta.....	11,655	57.32	8,222	40.44	40	2.00	2	0.13	22	0.11	-	-
South Tigray Zone.....	116,283	68.07	51,902	30.38	2,48	1.45	12	0.07	29	0.02	-	-
Seharte Samre.....	12,427	55.49	9,236	41.24	70	3.15	2	0.12	-	-	-	-
Enderta.....	12,644	59.21	8,407	39.37	30	1.41	-	-	-	-	-	-
Hintalo Wajirat.....	20,780	74.36	6,651	23.80	43	1.57	7	0.26	-	-	-	-
Ambalage.....	15,861	79.46	4,030	20.19	7	0.36	-	-	-	-	-	-
Endamehoni.....	13,040	77.57	3,701	22.02	6	0.41	-	-	-	-	-	-
Rayazebo.....	12,271	61.58	7,341	36.84	28	1.43	-	-	29	0.15	-	-
Alamata.....	9,448	64.99	4,842	33.31	22	1.55	2	0.15	-	-	-	-
Wofla.....	19,814	71.03	7,692	27.57	38	1.39	-	-	-	-	-	-

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	%
Tigray Region.....	614,067	91.41	46,023	6.85	9,301	1.38	1,562	0.23	539	0.08	245	0.04
West Tigray Zone.....	143,075	85.91	18,806	11.29	3,827	2.30	590	0.35	185	0.11	61	0.04
Kafta.....	8,157	81.12	1,720	17.10	147	1.46	32	0.32	-	-	-	-
Tahtay Adiyabo.....	15,167	96.15	589	3.73	19	0.12	-	-	-	-	-	-
Laelay Adiyabo.....	17,106	82.73	3,113	15.06	368	1.78	45	0.22	45	0.22	-	-
Tahtay Koraro.....	11,106	82.44	1,711	12.70	427	3.17	132	0.98	58	0.43	37	0.27
Medebay Zana.....	19,887	88.99	1,925	8.61	515	2.30	21	0.09	-	-	-	-
Asegede Tsimbela.....	16,516	80.29	2,869	13.95	824	4.01	297	1.44	40	0.19	24	0.12
Tselemti.....	22,785	83.62	3,582	13.15	839	3.08	-	-	42	0.15	-	-
Welkait.....	19,169	87.63	2,171	9.92	473	2.16	62	0.28	-	-	-	-
Tsegede.....	13,185	90.77	1,125	7.75	215	1.48	-	-	-	-	-	-
Central Tigray Zone.....	197,681	91.54	13,387	6.20	3,695	1.71	784	0.36	272	0.13	125	0.06
Mereb Lehe.....	15,200	84.13	2,334	12.92	404	2.24	24	0.13	81	0.45	24	0.13
Ahiferom.....	32,953	99.55	114	0.34	35	0.11	-	-	-	-	-	-
Werie Lehe.....	26,091	98.45	354	1.34	28	0.11	28	0.11	-	-	-	-
Adwa.....	21,959	95.07	703	3.04	339	1.47	48	0.21	-	-	48	0.21
Laelay Maychew.....	13,847	98.13	246	1.74	18	0.13	-	-	-	-	-	-
Tahtay Maychew.....	15,864	90.99	752	4.31	542	3.11	153	0.88	105	0.60	18	0.10
Naeder Adet.....	20,716	98.21	323	1.53	54	0.26	-	-	-	-	-	-
Kola Temben.....	20,650	78.30	4,076	15.46	1,099	4.17	446	1.69	68	0.26	34	0.13
Degua Temben.....	18,952	87.44	2,053	9.47	642	2.96	27	0.12	-	-	-	-
Tanqu Abergele.....	11,452	79.02	2,431	16.77	534	3.68	57	0.39	18	0.12	-	-
East Tigray Zone.....	113,387	95.75	3,934	3.32	944	0.80	129	0.11	32	0.03	-	-
Gulumahada.....	14,171	91.36	1,167	7.52	135	0.87	39	0.25	-	-	-	-
Erob.....	3,481	97.21	100	2.79	-	-	-	-	-	-	-	-
Saesi Tsaedamba.....	22,514	95.00	992	4.19	96	0.41	64	0.27	32	0.14	-	-
Ganta Afeshum.....	18,798	93.05	870	4.31	507	2.51	26	0.13	-	-	-	-
Hawzen.....	19,848	96.64	485	2.36	206	1.00	-	-	-	-	-	-
Wukro.....	14,299	98.19	264	1.81	-	-	-	-	-	-	-	-
Atsbi Wenberta.....	20,277	99.73	55	0.27	-	-	-	-	-	-	-	-
South Tigray Zone.....	159,920	93.62	9,897	5.79	835	0.49	59	0.03	51	0.03	59	0.03
Seharte Samre.....	20,841	93.07	1,165	5.20	240	1.07	59	0.26	30	0.13	59	0.26
Enderta.....	20,279	94.97	1,017	4.76	57	0.27	-	-	-	-	-	-
Hintalo Wajirat.....	26,527	94.93	1,417	5.07	-	-	-	-	-	-	-	-
Ambalage.....	19,464	97.51	475	2.38	23	0.12	-	-	-	-	-	-
Endamehoni.....	16,342	97.22	368	2.19	79	0.47	-	-	21	0.12	-	-
Rayaazebo.....	16,212	81.36	3,395	17.04	319	1.60	-	-	-	-	-	-
Alamata.....	13,500	92.87	999	6.87	38	0.26	-	-	-	-	-	-
Wofla.....	26,756	95.92	1,060	3.80	79	0.28	-	-	-	-	-	-

Table 8.5B: - Number of Crop Holders that Owned 'Mekesksha' by Geographic area

Geographic area	Number of Crop holders that owned											
	No 'Mekesksha'		One 'Mekesksha'		Two 'Mekeskshas'		Three 'Mekeskshas'		Four 'Mekeskshas'		Five and above 'Mekeskshas'	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	583,513	86.87	49,152	7.32	25,382	3.78	8,795	1.31	3,029	0.45	1,866	0.28
West Tigray Zone.....	139,180	83.57	13,908	8.35	8,339	5.01	3,376	2.03	1,010	0.61	731	0.44
Kafta.....	8,504	84.57	1,130	11.24	245	2.44	94	0.93	43	0.43	40	0.40
Tahtay Adiyabo.....	13,042	82.68	2,384	15.11	319	2.02	30	0.19	-	-	-	-
Laelay Adiyabo.....	16,693	80.73	1,972	9.54	1,506	7.28	377	1.82	87	0.42	42	0.20
Tahtay Koraro.....	9,113	67.65	1,161	8.62	1,610	11.95	856	6.35	488	3.62	243	1.80
Medebay Zana.....	17,411	77.91	1,663	7.44	1,943	8.69	820	3.67	188	0.84	323	1.45
Asegede Tsimbela.....	14,790	71.90	2,824	13.73	1,805	8.77	864	4.20	204	0.99	83	0.40
Tselemti.....	24,069	88.33	2,117	7.77	783	2.87	279	1.02	-	-	-	-
Welkait.....	21,150	96.69	554	2.53	115	0.53	56	0.26	-	-	-	-
Tsegede.....	14,408	99.19	104	0.72	13	0.09	-	-	-	-	-	-
Central Tigray Zone.....	190,127	88.04	13,716	6.35	7,565	3.50	2,625	1.22	1,240	0.57	671	0.31
Mereb Lehe.....	15,649	86.62	1,890	10.46	489	2.71	-	-	39	0.22	-	-
Ahiferom.....	30,734	92.85	1,237	3.74	583	1.76	388	1.17	40	0.12	120	0.36
Werie Lehe.....	22,862	86.27	2,347	8.86	920	3.47	247	0.93	92	0.35	33	0.12
Adwa.....	19,604	84.88	2,597	11.24	654	2.83	145	0.63	97	0.42	-	-
Laelay Maychew.....	13,075	92.66	780	5.53	211	1.50	45	0.32	-	-	-	-
Tahtay Maychew.....	15,510	88.96	836	4.80	796	4.57	195	1.12	97	0.56	-	-
Naeder Adet.....	19,403	91.99	612	2.90	776	3.68	302	1.43	-	-	-	-
Kola Temben.....	20,458	77.57	1,987	7.53	2,110	8.00	798	3.03	561	2.13	459	1.74
Degua Temben.....	20,637	95.22	613	2.83	244	1.13	108	0.50	72	0.33	-	-
Tanqu Abergele.....	12,195	84.15	818	5.64	781	5.39	396	2.73	242	1.67	60	0.41
East Tigray Zone.....	96,416	81.41	12,926	10.91	6,386	5.39	1,904	1.61	543	0.46	251	0.21
Gulumahada.....	13,059	84.19	1,490	9.61	779	5.02	120	0.77	27	0.17	37	0.24
Erob.....	3,016	84.22	486	13.57	53	1.48	21	0.59	5	0.14	-	-
Saesi Tsaedamba.....	17,051	71.95	4,320	18.23	1,706	7.20	535	2.26	86	0.36	-	-
Ganta Afeshum.....	19,101	94.55	864	4.28	184	0.91	22	0.11	30	0.15	-	-
Hawzen.....	15,593	75.92	2,553	12.43	1,436	6.99	639	3.11	199	0.97	119	0.58
Wukro.....	10,926	75.03	1,914	13.14	1,077	7.40	392	2.69	159	1.09	95	0.65
Atsbi Wenberta.....	17,668	86.90	1,300	6.39	1,152	5.67	175	0.86	37	0.18	-	-
South Tigray Zone.....	157,788	92.37	8,602	5.04	3,092	1.81	891	0.52	235	0.14	213	0.12
Seharte Samre.....	18,876	84.29	1,330	5.94	1,315	5.87	557	2.49	165	0.74	151	0.67
Enderta.....	19,038	89.16	1,723	8.07	459	2.15	105	0.49	-	-	28	0.13
Hintalo Wajirat.....	26,340	94.26	920	3.29	504	1.80	145	0.52	-	-	35	0.13
Ambalage.....	18,408	92.22	1,175	5.89	314	1.57	46	0.23	19	0.10	-	-
Endamehoni.....	15,026	89.39	1,344	8.00	381	2.27	38	0.23	21	0.12	-	-
Rayaazebo.....	18,372	92.20	1,467	7.36	87	0.44	-	-	-	-	-	-
Alamata.....	14,296	98.34	241	1.66	-	-	-	-	-	-	-	-
Wofla.....	27,430	98.33	403	1.44	31	0.11	-	-	31	0.11	-	-

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	%
Tigray Region.....	328,361	48.88	264,926	39.44	56,000	8.34	14,922	2.22	4,827	0.72	2,701	0.40
West Tigray Zone.....	76,701	46.05	65,848	39.54	17,041	10.23	4,670	2.80	1,400	0.84	884	0.53
Kafta.....	7,050	70.11	2,091	20.79	552	5.49	166	1.65	51	0.51	146	1.45
Tahtay Adiyabo.....	5,202	32.98	9,708	61.54	828	5.25	37	0.23	-	-	-	-
Laelay Adiyabo.....	10,724	51.86	7,762	37.54	1,542	7.46	509	2.46	105	0.51	35	0.17
Tahtay Koraro.....	6,575	48.81	4,816	35.75	1,072	7.96	552	4.10	308	2.29	148	1.10
Medebay Zana.....	8,040	35.98	9,728	43.53	3,276	14.66	1,013	4.53	176	0.79	115	0.51
Asegede Tsimbela.....	8,309	40.39	9,633	46.83	2,017	9.81	337	1.64	154	0.75	120	0.58
Tselemti.....	12,086	44.36	8,140	29.87	4,685	17.19	1,492	5.48	524	1.92	321	1.18
Welkait.....	10,183	46.55	8,732	39.92	2,445	11.18	435	1.99	80	0.37	-	-
Tsegede.....	8,534	58.75	5,237	36.06	625	4.30	129	0.89	-	-	-	-
Central Tigray Zone.....	107,914	49.97	77,266	35.78	19,630	9.09	7,311	3.39	2,493	1.15	1,330	0.62
Mereb Lehe.....	8,781	48.60	8,759	48.48	424	2.35	80	0.44	-	-	23	0.13
Ahiferom.....	18,034	54.48	10,956	33.10	2,672	8.07	1,122	3.39	221	0.67	97	0.29
Werie Lehe.....	14,541	54.87	10,534	39.75	1,246	4.70	120	0.45	60	0.23	-	-
Adwa.....	11,481	49.71	8,526	36.91	2,057	8.91	745	3.23	188	0.81	100	0.43
Laelay Maychew.....	6,901	48.91	5,356	37.96	1,130	8.01	408	2.89	226	1.60	90	0.64
Tahtay Maychew.....	9,759	55.98	6,563	37.64	718	4.12	252	1.45	117	0.67	25	0.14
Naeder Adet.....	7,965	37.76	7,894	37.42	3,881	18.40	1,061	5.03	170	0.81	122	0.58
Kola Temben.....	10,147	38.47	8,300	31.47	4,215	15.98	2,416	9.16	877	3.33	418	1.58
Degua Temben.....	14,569	67.22	5,384	24.84	1,177	5.43	217	1.00	118	0.54	209	0.96
Tanqu Abergele.....	5,737	39.59	4,994	34.46	2,110	14.56	888	6.13	517	3.57	246	1.70
East Tigray Zone.....	61,362	51.81	52,018	43.92	4,389	3.71	413	0.35	166	0.14	78	0.07
Gulumahada.....	8,270	53.31	6,389	41.19	792	5.11	41	0.26	20	0.13	-	-
Erob.....	1,106	30.89	2,198	61.38	272	7.60	5	0.14	-	-	-	-
Saesi Tsaedamba.....	12,875	54.33	10,162	42.88	584	2.46	53	0.22	24	0.10	-	-
Ganta Afeshum.....	8,859	43.85	10,067	49.83	1,068	5.29	184	0.91	23	0.11	-	-
Hawzen.....	10,439	50.83	9,550	46.50	497	2.42	32	0.16	-	-	21	0.10
Wukro.....	8,734	59.97	5,494	37.73	311	2.14	-	-	-	-	24	0.16
Atsbi Wenberta.....	11,077	54.48	8,158	40.12	866	4.26	99	0.49	99	0.49	33	0.16
South Tigray Zone.....	82,383	48.23	69,793	40.86	14,939	8.75	2,529	1.48	768	0.45	409	0.24
Seharte Samre.....	11,443	51.10	7,878	35.18	2,457	10.97	471	2.10	145	0.65	-	-
Enderta.....	11,915	55.80	8,019	37.55	1,040	4.87	225	1.05	93	0.44	61	0.29
Hintalo Wajirat.....	14,147	50.63	10,334	36.98	2,681	9.59	619	2.22	131	0.47	32	0.11
Ambalage.....	7,664	38.39	10,183	51.01	1,830	9.17	233	1.17	52	0.26	-	-
Endamehoni.....	5,319	31.64	9,135	54.34	2,080	12.37	188	1.12	37	0.22	51	0.30
Rayaazebo.....	13,711	68.81	5,199	26.09	836	4.20	29	0.15	86	0.43	65	0.33
Alamata.....	9,984	68.68	3,857	26.53	696	4.79	-	-	-	-	-	-
Wofla.....	8,198	29.39	15,189	54.45	3,319	11.90	765	2.74	224	0.80	200	0.72

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	%
Tigray Region.....	140,377	20.90	149,921	22.32	211,811	31.53	36,050	5.37	90,889	13.53	42,689	6.36
West Tigray Zone.....	25,820	15.50	46,214	27.75	56,040	33.65	8,519	5.12	21,620	12.98	8,331	5.00
Kafta.....	4,848	48.21	3,202	31.84	1,659	16.50	201	2.00	137	1.36	9	0.09
Tahtay Adiyabo.....	2,891	18.33	2,622	16.62	5,349	33.91	837	5.31	2,753	17.45	1,323	8.39
Lalay Adiyabo.....	2,898	14.02	4,204	20.33	8,157	39.45	1,389	6.72	3,069	14.84	960	4.64
Tahtay Koraro.....	1,743	12.94	2,242	16.64	3,799	28.20	922	6.84	3,046	22.61	1,719	12.76
Medebay Zana.....	3,653	16.35	2,664	11.92	8,817	39.45	1,428	6.39	3,690	16.51	2,096	9.38
Asegede Tsimbela.....	1,506	7.32	3,709	18.03	8,730	42.44	1,751	8.51	3,540	17.21	1,334	6.49
Tselemti.....	2,763	10.14	8,304	30.48	10,547	38.71	1,607	5.90	3,374	12.38	653	2.40
Welkait.....	3,818	17.45	10,504	48.02	5,993	27.40	251	1.15	1,121	5.12	188	0.86
Tsegede.....	1,702	11.72	8,762	60.32	2,990	20.59	133	0.92	889	6.12	49	0.34
Central Tigray Zone.....	46,515	21.54	29,786	13.79	63,148	29.24	16,772	7.77	35,469	16.43	24,254	11.23
Mereb Lehe.....	3,045	16.85	2,812	15.56	5,721	31.67	1,692	9.37	3,560	19.70	1,237	6.85
Ahiferom.....	9,785	29.56	3,220	9.73	8,882	26.83	2,178	6.58	6,375	19.26	2,662	8.04
Werie Lehe.....	6,179	23.32	2,869	10.83	5,451	20.57	1,981	7.48	4,365	16.47	5,656	21.34
Adwa.....	4,330	18.75	2,583	11.18	6,767	29.30	2,147	9.30	3,507	15.18	3,763	16.29
Lalay Maychew.....	3,698	26.21	1,716	12.16	3,698	26.21	1,389	9.84	2,096	14.85	1,514	10.73
Tahtay Maychew.....	4,153	23.82	3,730	21.39	5,629	32.29	1,470	8.43	1,792	10.28	660	3.79
Naeder Adet.....	4,145	19.65	3,440	16.31	7,925	37.57	1,563	7.41	2,837	13.45	1,183	5.61
Kola Temben.....	4,489	17.02	3,857	14.62	6,963	26.40	2,213	8.39	4,501	17.07	4,350	16.49
Degua Temben.....	4,824	22.26	4,216	19.45	7,513	34.66	613	2.83	3,320	15.32	1,188	5.48
Tanqu Abergele.....	1,862	12.85	1,343	9.27	4,601	31.75	1,527	10.54	3,117	21.51	2,042	14.09
East Tigray Zone.....	29,597	24.99	26,025	21.98	36,392	30.73	4,519	3.82	17,123	14.46	4,770	4.03
Gulumahada.....	4,393	28.32	3,085	19.89	5,558	35.83	760	4.90	1,440	9.28	276	1.78
Erob.....	967	27.00	1,063	29.68	1,124	31.39	191	5.33	167	4.66	69	1.93
Saesi Tsaedamba.....	5,857	24.72	4,806	20.28	5,677	23.96	758	3.20	5,873	24.78	727	3.07
Ganta Afeshum.....	5,212	25.80	5,859	29.00	6,951	34.41	981	4.86	1,109	5.49	89	0.44
Hawzen.....	4,737	23.06	2,985	14.53	6,635	32.30	684	3.33	3,958	19.27	1,540	7.50
Wukro.....	3,427	23.53	3,565	24.48	4,748	32.60	600	4.12	1,473	10.11	750	5.15
Atsbi Wenberta.....	5,005	24.62	4,663	22.93	5,699	28.03	544	2.68	3,103	15.26	1,318	6.48
South Tigray Zone.....	38,443	22.50	47,896	28.04	56,232	32.92	6,240	3.65	16,676	9.76	5,334	3.12
Seharte Samre.....	4,235	18.91	3,831	17.11	7,496	33.47	1,629	7.27	3,138	14.01	2,065	9.22
Enderta.....	5,048	23.64	5,532	25.91	7,303	34.20	516	2.42	2,427	11.37	527	2.47
Hintalo Wajirat.....	5,708	20.43	5,926	21.21	10,671	38.19	1,148	4.11	3,417	12.23	1,074	3.84
Ambalage.....	5,896	29.54	5,699	28.55	6,276	31.44	532	2.67	1,321	6.62	238	1.19
Endamehoni.....	5,220	31.05	2,869	17.07	6,426	38.23	389	2.31	1,683	10.01	223	1.33
Rayaazebo.....	2,900	14.55	6,954	34.90	7,009	35.18	962	4.83	1,712	8.59	389	1.95
Alamata.....	2,425	16.68	5,673	39.02	4,371	30.07	223	1.53	1,486	10.22	359	2.47
Wofla.....	7,010	25.13	11,412	40.91	6,679	23.94	842	3.02	1,493	5.35	459	1.65

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	%
Tigray Region.....	141,760	21.10	222,030	33.05	194,694	28.98	67,658	10.07	29,238	4.35	16,357	2.44
West Tigray Zone.....	27,671	16.61	65,936	39.59	48,479	29.11	14,176	8.51	7,076	4.25	3,206	1.93
Kafta.....	4,960	49.32	4,101	40.78	718	7.14	208	2.07	59	0.59	10	0.10
Tahtay Adiyabo.....	3,044	19.30	5,885	37.31	4,725	29.95	1,148	7.28	763	4.84	210	1.33
Laelay Adiyabo.....	2,812	13.60	6,515	31.51	7,453	36.04	2,143	10.36	1,338	6.47	416	2.01
Tahtay Koraro.....	2,026	15.04	3,334	24.75	4,511	33.49	1,744	12.95	1,048	7.78	808	6.00
Medebay Zana.....	3,980	17.81	5,481	24.53	8,276	37.03	3,001	13.43	1,018	4.56	592	2.65
Asegede Tsimbela.....	1,800	8.75	7,117	34.60	6,815	33.13	2,863	13.92	1,223	5.95	752	3.66
Tselemti.....	3,355	12.31	11,138	40.88	9,416	34.56	1,939	7.12	1,218	4.47	182	0.67
Welkait.....	3,892	17.79	12,791	58.47	3,993	18.25	701	3.20	320	1.46	178	0.81
Tsegede.....	1,806	12.43	9,573	65.91	2,571	17.70	429	2.95	89	0.61	57	0.39
Central Tigray Zone.....	45,463	21.05	50,722	23.49	71,746	33.22	28,252	13.08	12,207	5.65	7,554	3.50
Mereb Lehe.....	3,196	17.69	4,662	25.80	7,208	39.90	1,894	10.48	716	3.96	391	2.16
Ahiferom.....	9,223	27.86	7,021	21.21	9,689	29.27	4,206	12.71	1,280	3.87	1,683	5.08
Werie Lehe.....	5,509	20.79	5,577	21.04	7,382	27.86	4,451	16.80	2,402	9.06	1,180	4.45
Adwa.....	4,521	19.57	4,732	20.49	7,896	34.19	3,169	13.72	1,610	6.97	1,169	5.06
Laelay Maychew.....	3,654	25.89	2,330	16.51	3,931	27.86	2,177	15.43	1,065	7.55	954	6.76
Tahtay Maychew.....	4,268	24.48	5,652	32.42	5,050	28.97	1,574	9.03	705	4.04	185	1.06
Naeder Adet.....	4,043	19.17	5,382	25.52	7,832	37.13	2,503	11.87	864	4.10	469	2.22
Kola Temben.....	4,446	16.86	6,344	24.05	10,056	38.13	3,287	12.46	1,527	5.79	713	2.70
Degua Temben.....	4,781	22.06	5,883	27.14	7,034	32.45	2,451	11.31	959	4.42	566	2.61
Tanqu Abergele.....	1,819	12.55	3,139	21.66	5,668	39.11	2,542	17.54	1,079	7.45	245	1.69
East Tigray Zone.....	30,541	25.79	47,318	39.96	26,601	22.46	9,382	7.92	3,377	2.85	1,207	1.02
Gulumahada.....	4,510	29.07	5,333	34.38	3,700	23.85	1,493	9.62	321	2.07	155	1.00
Erob.....	1,024	28.60	1,497	41.80	791	22.09	234	6.53	25	0.70	10	0.28
Saesi Tsaedamba.....	6,325	26.69	11,086	46.78	4,082	17.23	1,425	6.01	619	2.61	161	0.68
Ganta Afeshum.....	5,175	25.62	8,727	43.20	4,470	22.13	1,344	6.65	320	1.58	165	0.82
Hawzen.....	4,720	22.98	7,189	35.00	5,761	28.05	2,122	10.33	577	2.81	170	0.83
Wukro.....	3,523	24.19	5,953	40.88	3,438	23.61	1,090	7.48	403	2.77	156	1.07
Atsbi Wenberta.....	5,265	25.90	7,533	37.05	4,360	21.44	1,673	8.23	1,112	5.47	389	1.91
South Tigray Zone.....	38,083	22.29	58,054	33.99	47,868	28.02	15,848	9.28	6,578	3.85	4,390	2.57
Seharte Samre.....	3,893	17.38	5,140	22.95	8,314	37.13	3,179	14.20	1,285	5.74	583	2.60
Enderta.....	5,146	24.10	8,354	39.12	5,700	26.69	1,521	7.12	355	1.66	277	1.30
Hintalo Wajirat.....	5,641	20.19	8,732	31.25	8,793	31.47	2,682	9.60	1,237	4.43	859	3.07
Ambalage.....	6,060	30.36	6,785	33.99	4,910	24.60	1,335	6.69	543	2.72	329	1.65
Endamehoni.....	5,278	31.40	5,767	34.31	3,621	21.54	1,478	8.79	411	2.44	255	1.52
Rayaazebo.....	2,963	14.87	5,833	29.27	6,295	31.59	2,154	10.81	1,424	7.15	1,257	6.31
Alamata.....	2,319	15.95	6,458	44.42	3,377	23.23	1,464	10.07	657	4.52	262	1.80
Wofla.....	6,784	24.32	10,986	39.38	6,858	24.59	2,035	7.30	666	2.39	566	2.03

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	%
Tigray Region.....	135,257	20.14	288,348	42.93	184,777	27.51	44,451	6.62	13,215	1.97	5,689	0.85
West Tigray Zone.....	25,250	15.16	82,035	49.26	47,744	28.67	8,203	4.93	2,150	1.29	1,162	0.70
Kafta.....	4,922	48.95	4,085	40.62	780	7.76	201	2.00	50	0.50	18	0.18
Tahtay Adiyabo.....	2,754	17.46	7,916	50.18	4,391	27.84	518	3.28	133	0.84	63	0.40
Lalay Adiyabo.....	2,319	11.22	10,847	52.46	6,495	31.41	757	3.66	160	0.77	99	0.48
Tahtay Koraro.....	1,645	12.21	4,757	35.31	4,811	35.71	1,523	11.31	475	3.53	260	1.93
Medcbay Zana.....	3,614	16.17	8,096	36.23	8,101	36.25	1,812	8.11	341	1.53	384	1.72
Asegede Tsimbela.....	1,396	6.79	8,374	40.71	8,138	39.56	1,874	9.11	535	2.60	253	1.23
Tselemti.....	2,873	10.54	14,710	53.99	8,605	31.58	795	2.92	234	0.86	31	0.11
Welkait.....	3,874	17.71	13,645	62.38	3,713	16.97	466	2.13	146	0.67	31	0.14
Tsegede.....	1,855	12.77	9,604	66.12	2,710	18.66	257	1.77	76	0.52	23	0.16
Central Tigray Zone.....	41,618	19.27	69,503	32.19	71,397	33.06	22,989	10.65	7,331	3.39	3,106	1.44
Mereb Lehe.....	2,725	15.08	6,055	33.51	7,155	39.60	1,632	9.03	391	2.16	109	0.60
Ahiferom.....	8,719	26.34	11,419	34.50	9,205	27.81	2,556	7.72	677	2.05	526	1.59
Werie Lehe.....	5,145	19.41	7,056	26.63	8,112	30.61	3,929	14.83	1,582	5.97	677	2.55
Adwa.....	3,974	17.21	7,498	32.46	7,100	30.74	3,202	13.86	980	4.24	343	1.49
Lalay Maychew.....	3,284	23.27	2,883	20.43	4,642	32.90	2,311	16.38	743	5.27	248	1.76
Tahtay Maychew.....	4,070	23.35	6,030	34.59	5,721	32.82	1,059	6.07	465	2.67	89	0.51
Naeder Adet.....	3,836	18.19	6,761	32.05	7,645	36.24	1,986	9.42	568	2.69	297	1.41
Kola Temben.....	3,288	12.47	10,298	39.05	9,049	34.31	2,503	9.49	914	3.47	321	1.22
Degua Temben.....	4,860	22.42	7,458	34.41	6,663	30.74	1,876	8.66	488	2.25	329	1.52
Tanqu Abergele.....	1,719	11.86	4,044	27.91	6,105	42.13	1,935	13.35	523	3.61	166	1.15
East Tigray Zone.....	30,192	25.49	64,051	54.09	19,600	16.55	3,592	3.03	613	0.52	378	0.32
Gulumahada.....	4,562	29.41	6,843	44.11	3,047	19.64	789	5.09	209	1.35	62	0.40
Erob.....	986	27.53	2,228	62.22	334	9.33	27	0.75	6	0.17	-	-
Saesi Tsaedamba.....	6,015	25.38	14,350	60.55	2,934	12.38	342	1.44	-	-	57	0.24
Ganta Afeshum.....	4,916	24.34	10,896	53.94	3,484	17.25	791	3.92	68	0.34	46	0.23
Hawzen.....	4,866	23.69	11,511	56.04	3,409	16.60	481	2.34	136	0.66	136	0.66
Wukro.....	3,498	24.02	7,208	49.50	3,258	22.37	504	3.46	76	0.52	19	0.13
Atsbi Wenberta.....	5,349	26.31	11,015	54.18	3,134	15.41	658	3.24	118	0.58	58	0.29
South Tigray Zone.....	38,195	22.36	72,760	42.59	46,035	26.95	9,667	5.66	3,120	1.83	1,044	0.61
Seharte Samre.....	3,841	17.15	5,942	26.53	8,771	39.17	2,659	11.87	882	3.94	299	1.34
Enderta.....	5,156	24.15	9,498	44.48	5,423	25.40	1,027	4.81	136	0.64	113	0.53
Hintalo Wajirat.....	5,732	20.51	11,398	40.79	8,122	29.07	1,935	6.92	477	1.71	280	1.00
Ambalage.....	5,989	30.00	8,153	40.84	4,539	22.74	925	4.63	276	1.38	80	0.40
Endamehoni.....	5,311	31.59	7,021	41.77	3,483	20.72	629	3.74	310	1.84	56	0.33
Rayaazebo.....	2,814	14.12	8,936	44.85	6,603	33.14	990	4.97	476	2.39	107	0.54
Alamata.....	2,353	16.19	8,639	59.43	3,115	21.43	321	2.21	87	0.60	22	0.15
Wofla.....	6,996	25.08	13,174	47.23	5,978	21.43	1,183	4.24	477	1.71	87	0.31

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	%
Tigray Region.....	135,809	20.22	405,535	60.37	117,807	17.54	10,326	1.54	1,624	0.24	636	0.09
West Tigray Zone.....	26,306	15.80	109,178	65.56	27,578	16.56	2,842	1.71	462	0.28	178	0.11
Kafta.....	4,861	48.34	4,379	43.55	705	7.01	91	0.90	20	0.20	-	-
Tahtay Adiyabo.....	2,765	17.53	9,175	58.16	3,563	22.59	227	1.44	26	0.16	19	0.12
Lacalay Adiyabo.....	2,874	13.90	15,150	73.27	2,475	11.97	178	0.86	-	-	-	-
Tahtay Koraro.....	1,654	12.28	7,399	54.93	3,836	28.48	496	3.68	51	0.38	35	0.26
Medebay Zana.....	3,502	15.67	14,699	65.77	3,714	16.62	270	1.21	106	0.47	57	0.26
Asegede Tsimbela.....	1,556	7.56	12,265	59.63	5,661	27.52	940	4.57	112	0.54	36	0.18
Tselemti.....	2,978	10.93	20,236	74.27	3,691	13.55	343	1.26	-	-	-	-
Welkait.....	3,868	17.68	15,307	69.97	2,263	10.35	259	1.18	147	0.67	31	0.14
Tsegede.....	2,249	15.48	10,568	72.76	1,671	11.50	37	0.25	-	-	-	-
Central Tigray Zone.....	41,672	19.30	128,173	59.35	41,618	19.27	3,631	1.68	621	0.29	229	0.11
Mereb Lehe.....	2,640	14.61	11,892	65.82	3,308	18.31	195	1.08	32	0.18	-	-
Ahiferom.....	8,089	24.44	17,976	54.30	6,511	19.67	426	1.29	62	0.19	38	0.11
Werie Lehe.....	5,329	20.11	15,507	58.51	5,366	20.25	167	0.63	65	0.25	67	0.25
Adwa.....	4,155	17.99	11,969	51.82	6,114	26.47	733	3.17	24	0.10	102	0.44
Lacalay Maychew.....	3,323	23.55	5,823	41.27	3,901	27.65	919	6.51	145	1.03	-	-
Tahtay Maychew.....	4,267	24.48	10,872	62.36	2,124	12.18	124	0.71	25	0.14	22	0.13
Naeder Adet.....	3,942	18.69	13,647	64.70	3,237	15.35	206	0.98	61	0.29	-	-
Kola Temben.....	3,650	13.84	18,315	69.45	4,058	15.39	315	1.19	35	0.13	-	-
Degua Temben.....	4,510	20.81	13,440	62.01	3,431	15.83	246	1.14	47	0.22	-	-
Tanqu Abergele.....	1,769	12.21	8,732	60.25	3,567	24.61	298	2.06	126	0.87	-	-
East Tigray Zone.....	28,296	23.89	65,422	55.24	22,420	18.93	1,895	1.60	240	0.20	153	0.13
Gulumahada.....	4,062	26.19	7,578	48.85	3,319	21.40	413	2.66	81	0.52	59	0.38
Erob.....	937	26.17	2,274	63.50	343	9.58	17	0.47	10	0.28	-	-
Saesi Tsaedamba.....	5,841	24.65	14,375	60.66	3,350	14.14	102	0.43	30	0.13	-	-
Ganta Afeshum.....	4,582	22.68	10,498	51.97	4,801	23.77	289	1.43	-	-	31	0.15
Hawzen.....	4,619	22.49	12,388	60.31	3,203	15.59	236	1.15	30	0.15	63	0.31
Wukro.....	3,375	23.18	7,811	53.64	3,266	22.43	111	0.76	-	-	-	-
Atsbi Wenberta.....	4,882	24.01	10,498	51.63	4,136	20.34	727	3.58	89	0.44	-	-
South Tigray Zone.....	39,534	23.14	102,763	60.16	26,191	15.33	1,957	1.15	300	0.18	76	0.04
Seharte Samre.....	3,815	17.04	12,516	55.89	5,527	24.68	401	1.79	59	0.26	76	0.34
Enderta.....	4,971	23.28	12,179	57.04	3,737	17.50	433	2.03	33	0.15	-	-
Hintalo Wajirat.....	5,743	20.55	16,811	60.16	4,861	17.40	458	1.64	71	0.25	-	-
Ambalage.....	6,169	30.90	11,878	59.50	1,843	9.23	72	0.36	-	-	-	-
Endamehoni.....	5,565	33.11	9,676	57.56	1,480	8.80	72	0.43	17	0.10	-	-
Rayaazebo.....	3,037	15.24	11,312	56.77	5,056	25.37	423	2.12	98	0.49	-	-
Alamata.....	3,163	21.76	9,608	66.09	1,645	11.32	99	0.68	22	0.15	-	-
Wofla.....	7,071	25.35	18,782	67.33	2,042	7.32	-	-	-	-	-	-

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	%
Tigray Region.....	141,351	21.04	378,997	56.42	128,436	19.12	15,791	2.35	5,181	0.77	1,981	0.29
West Tigray Zone.....	27,096	16.27	103,606	62.21	30,327	18.21	4,105	2.46	966	0.58	444	0.27
Kafta.....	4,995	49.67	4,292	42.68	683	6.79	77	0.77	9	0.09	-	-
Tahtay Adiyabo.....	3,102	19.66	8,423	53.39	3,700	23.45	372	2.36	178	1.13	-	-
Laelay Adiyabo.....	3,091	14.95	13,296	64.30	3,732	18.05	333	1.61	119	0.58	106	0.51
Tahtay Koraro.....	1,798	13.35	7,627	56.62	3,414	25.34	439	3.26	119	0.88	74	0.55
Medebay Zana.....	3,485	15.59	14,187	63.48	4,133	18.49	350	1.57	138	0.62	55	0.25
Asegede Tsimbela.....	1,517	7.37	11,733	57.04	5,172	25.14	1,694	8.24	309	1.50	145	0.70
Tselemti.....	3,156	11.58	19,141	70.25	4,360	16.00	539	1.98	-	-	52	0.19
Welkai.....	3,713	16.97	14,284	65.30	3,532	16.15	283	1.29	63	0.29	-	-
Tsegede.....	2,238	15.41	10,624	73.14	1,601	11.02	18	0.12	31	0.21	13	0.09
Central Tigray Zone.....	43,667	20.22	115,748	53.60	47,028	21.78	6,228	2.88	2,347	1.09	926	0.43
Mereb Lehe.....	2,712	15.01	10,112	55.97	4,329	23.96	704	3.90	80	0.44	130	0.72
Ahiferom.....	8,540	25.80	16,984	51.31	6,815	20.59	614	1.85	149	0.45	-	-
Werie Lehe.....	5,586	21.08	12,798	48.29	6,824	25.75	1,055	3.98	205	0.77	33	0.12
Adwa.....	4,268	18.48	10,145	43.92	6,204	26.86	1,161	5.03	984	4.26	335	1.45
Laelay Maychew.....	3,595	25.48	5,477	38.81	4,112	29.14	650	4.61	175	1.24	102	0.72
Tahtay Maychew.....	4,264	24.46	10,744	61.63	2,113	12.12	248	1.42	-	-	65	0.37
Naeder Adet.....	4,138	19.62	13,294	63.03	3,333	15.80	248	1.18	54	0.26	26	0.12
Kola Temben.....	3,564	13.51	16,513	62.61	5,337	20.24	830	3.15	129	0.49	-	-
Degua Temben.....	4,709	21.73	12,072	55.70	4,285	19.77	528	2.44	80	0.37	-	-
Tanqu Abergele.....	2,290	15.80	7,609	52.50	3,676	25.37	190	1.31	492	3.39	235	1.62
East Tigray Zone.....	31,222	26.36	62,628	52.88	20,157	17.02	2,784	2.35	1,186	1.00	449	0.38
Gulumahada.....	4,377	28.22	7,923	51.08	2,838	18.30	212	1.37	84	0.54	78	0.50
Erob.....	971	27.12	2,307	64.42	288	8.04	11	0.31	-	-	4	0.11
Saesi Tsaedamba.....	6,175	26.06	13,832	58.37	3,247	13.70	359	1.51	57	0.24	28	0.12
Ganta Afeshum.....	5,254	26.01	11,219	55.54	3,223	15.95	482	2.39	23	0.11	-	-
Hawzen.....	5,533	26.94	9,745	47.45	4,507	21.94	599	2.92	123	0.60	32	0.16
Wukro.....	3,672	25.21	7,978	54.78	2,436	16.73	427	2.93	50	0.34	-	-
Atsbi Wenberta.....	5,243	25.79	9,622	47.32	3,618	17.79	694	3.41	848	4.17	307	1.51
South Tigray Zone.....	39,365	23.04	97,016	56.79	30,923	18.10	2,672	1.56	682	0.40	163	0.10
Seharte Samre.....	3,749	16.74	12,658	56.52	5,243	23.41	570	2.55	149	0.67	25	0.11
Enderta.....	5,718	26.78	11,031	51.66	4,198	19.66	232	1.09	88	0.41	86	0.40
Hintalo Wajirat.....	6,188	22.14	15,286	54.70	5,681	20.33	543	1.94	246	0.88	-	-
Ambalage.....	6,007	30.09	11,358	56.90	2,304	11.54	268	1.34	25	0.13	-	-
Endamehoni.....	5,269	31.34	9,219	54.84	2,064	12.28	224	1.33	34	0.20	-	-
Rayaazebo.....	2,918	14.64	11,054	55.48	5,486	27.53	335	1.68	101	0.51	32	0.16
Alamata.....	2,395	16.48	9,735	66.97	2,171	14.93	205	1.41	12	0.08	19	0.13
Wofla.....	7,121	25.53	16,677	59.78	3,775	13.53	296	1.06	26	0.09	-	-

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	%
Tigray Region.....	140,159	20.87	359,812	53.56	149,049	22.19	16,703	2.49	4,939	0.74	1,075	0.16
West Tigray Zone.....	25,700	15.43	90,633	54.42	43,899	26.36	4,271	2.56	1,666	1.00	375	0.23
Kafta.....	5,335	53.05	3,862	38.40	596	5.93	183	1.82	61	0.61	19	0.19
Tahtay Adiyabo.....	2,654	16.82	8,264	52.39	4,536	28.75	200	1.27	82	0.52	39	0.25
Laelay Adiyabo.....	2,435	11.78	11,260	54.46	6,315	30.54	356	1.72	238	1.15	73	0.35
Tahtay Koraro.....	1,631	12.11	6,383	47.38	4,546	33.75	637	4.73	235	1.74	39	0.29
Medebay Zana.....	3,538	15.83	11,363	50.85	6,704	30.00	578	2.59	138	0.62	27	0.12
Asegede Tsimbela.....	1,554	7.55	8,883	43.18	8,247	40.09	1,354	6.58	386	1.88	146	0.71
Tselemti.....	2,992	10.98	16,298	59.81	7,111	26.10	609	2.24	207	0.76	31	0.11
Welkait.....	3,799	17.37	14,118	64.54	3,453	15.79	232	1.06	273	1.25	-	-
Tsegede.....	1,765	12.15	10,203	70.24	2,391	16.46	121	0.83	45	0.31	-	-
Central Tigray Zone.....	42,716	19.78	104,114	48.21	58,802	27.23	7,966	3.69	1,970	0.91	376	0.17
Mereb Lehe.....	2,666	14.76	7,945	43.98	6,501	35.98	761	4.21	175	0.97	19	0.11
Ahiferom.....	9,405	28.41	17,852	53.93	5,019	15.16	562	1.70	221	0.67	43	0.13
Werie Lehe.....	5,353	20.20	12,542	47.33	6,995	26.40	1,199	4.52	323	1.22	89	0.34
Adwa.....	4,031	17.45	12,347	53.46	5,824	25.22	757	3.28	82	0.36	56	0.24
Laelay Maychew.....	3,261	23.11	7,219	51.16	3,303	23.41	293	2.08	35	0.25	-	-
Tahtay Maychew.....	4,158	23.85	9,173	52.62	3,712	21.29	233	1.34	116	0.67	42	0.24
Naeder Adet.....	3,970	18.82	9,687	45.93	6,711	31.82	639	3.03	56	0.27	30	0.14
Kola Temben.....	3,399	12.89	11,774	44.64	9,267	35.14	1,503	5.70	393	1.49	37	0.14
Degua Temben.....	4,810	22.19	10,873	50.17	5,237	24.16	624	2.88	93	0.43	37	0.17
Tanqu Abergele.....	1,666	11.50	4,701	32.44	6,233	43.01	1,395	9.63	475	3.28	22	0.15
East Tigray Zone.....	30,883	26.08	72,707	61.39	13,049	11.02	987	0.83	728	0.61	72	0.06
Gulumahada.....	4,729	30.49	9,419	60.72	1,265	8.15	59	0.38	40	0.26	-	-
Erob.....	932	26.03	2,380	66.46	249	6.95	14	0.39	-	-	6	0.17
Saesi Tsaedamba.....	6,042	25.50	14,952	63.09	2,144	9.05	32	0.14	528	2.23	-	-
Ganta Afeshum.....	5,300	26.24	12,215	60.47	2,513	12.44	138	0.68	35	0.17	-	-
Hawzen.....	4,769	23.22	13,146	64.01	2,126	10.35	393	1.91	105	0.51	-	-
Wukro.....	3,861	26.51	8,486	58.27	2,069	14.21	128	0.88	19	0.13	-	-
Atsbi Wenberta.....	5,250	25.82	12,109	59.56	2,683	13.20	224	1.10	-	-	66	0.32
South Tigray Zone.....	40,856	23.92	92,358	54.07	33,299	19.49	3,480	2.04	576	0.34	252	0.15
Seharte Samre.....	4,013	17.92	10,377	46.34	6,860	30.63	914	4.08	144	0.64	86	0.38
Enderta.....	5,886	27.57	12,040	56.39	3,202	15.00	190	0.89	35	0.16	-	-
Hintalo Wajirat.....	5,978	21.39	16,035	57.38	5,213	18.66	520	1.86	119	0.43	79	0.28
Ambalage.....	6,499	32.56	9,933	49.76	3,065	15.35	378	1.89	60	0.30	27	0.14
Endamehoni.....	5,643	33.57	8,102	48.20	2,728	16.23	315	1.87	22	0.13	-	-
Rayazebo.....	2,938	14.74	10,598	53.19	5,754	28.88	475	2.38	132	0.66	29	0.15
Alamata.....	2,376	16.34	9,362	64.40	2,367	16.28	369	2.54	63	0.43	-	-
Wofla.....	7,523	26.97	15,911	57.04	4,110	14.73	320	1.15	-	-	31	0.11

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	%
Tigray Region	81,778	12.17	150,397	22.39	235,452	35.05	112,209	16.70	55,141	8.21	36,760	5.47
West Tigray Zone	13,267	7.97	49,789	29.90	65,898	39.57	22,497	13.51	10,158	6.10	4,935	2.96
Kafta	902	8.97	2,987	29.70	3,559	35.39	1,387	13.79	583	5.80	638	6.34
Tahtay Adiyabo	1,854	11.75	4,447	28.19	6,476	41.05	1,969	12.48	666	4.22	363	2.30
Laelay Adiyabo	2,237	10.82	6,603	31.93	7,762	37.54	2,846	13.76	849	4.11	380	1.84
Tahtay Koraro	1,223	9.08	2,053	15.24	4,985	37.01	2,533	18.80	1,599	11.87	1,078	8.00
Medebay Zana	1,239	5.54	4,286	19.18	10,027	44.87	3,510	15.71	2,289	10.24	997	4.46
Asegede Tsimbela	1,231	5.98	4,986	24.24	8,334	40.52	3,782	18.39	1,514	7.36	723	3.51
Tselermi	1,414	5.19	10,849	39.82	11,027	40.47	2,644	9.70	1,114	4.09	200	0.73
Welkait	2,220	10.15	8,065	36.87	8,298	37.93	2,202	10.07	749	3.42	341	1.56
Tsegede	946	6.51	5,514	37.96	5,430	37.38	1,625	11.19	795	5.47	215	1.48
Central Tigray Zone	20,809	9.64	28,532	13.21	73,173	33.89	46,348	21.46	27,310	12.65	19,772	9.16
Mereb Lehe	1,415	7.83	2,922	16.17	7,851	43.45	3,261	18.05	1,699	9.40	919	5.09
Ahiferom	3,726	11.26	4,077	12.32	10,944	33.06	7,359	22.23	4,329	13.08	2,667	8.06
Werie Lehe	2,725	10.28	1,949	7.35	6,591	24.87	6,138	23.16	4,384	16.54	4,714	17.79
Adwa	3,005	13.01	2,094	9.07	6,576	28.47	5,418	23.46	3,281	14.21	2,723	11.79
Laelay Maychew	1,573	11.15	2,129	15.09	3,881	27.50	2,713	19.23	1,958	13.88	1,857	13.16
Tahtay Maychew	2,515	14.43	3,911	22.43	6,800	39.00	2,319	13.30	1,353	7.76	536	3.07
Naeder Adet	1,220	5.78	3,160	14.98	8,104	38.42	5,177	24.54	2,541	12.05	891	4.22
Kola Temben	1,364	5.17	1,898	7.20	8,214	31.15	7,093	26.89	4,649	17.63	3,155	11.96
Degua Temben	2,196	10.13	3,863	17.82	8,582	39.60	3,991	18.41	1,671	7.71	1,371	6.33
Tanqu Abergele	1,070	7.38	2,528	17.44	5,630	38.85	2,880	19.87	1,445	9.97	939	6.48
East Tigray Zone	22,117	18.68	24,288	20.51	39,735	33.55	19,497	16.46	8,162	6.89	4,627	3.91
Gulumahada	3,292	21.22	2,708	17.46	4,914	31.68	2,656	17.12	1,228	7.92	714	4.60
Erob	470	13.12	1,003	28.01	1,150	32.11	529	14.77	250	6.98	179	5.00
Saesi Tsaedamba	5,042	21.28	5,833	24.61	8,141	34.35	3,319	14.01	889	3.75	474	2.00
Ganta Afeshum	3,473	17.19	3,818	18.90	7,005	34.68	3,834	18.98	1,274	6.31	797	3.95
Hawzen	3,316	16.14	2,148	10.46	7,042	34.29	4,233	20.61	2,611	12.71	1,189	5.79
Wukro	2,481	17.04	2,966	20.37	5,219	35.84	2,273	15.61	762	5.23	862	5.92
Atsbi Wenberta	4,042	19.88	5,812	28.59	6,265	30.81	2,653	13.05	1,148	5.65	412	2.03
South Tigray Zone	25,585	14.98	47,788	27.98	56,646	33.16	23,867	13.97	9,510	5.57	7,425	4.35
Seharte Samre	2,470	11.03	3,490	15.58	6,312	28.19	5,294	23.64	2,327	10.39	2,501	11.17
Enderta	3,605	16.88	4,337	20.31	7,529	35.26	3,322	15.56	1,513	7.09	1,047	4.90
Hintalo Wajirat	4,663	16.69	6,634	23.74	9,188	32.88	3,883	13.90	1,898	6.79	1,678	6.00
Ambalage	4,270	21.39	6,618	33.15	6,137	30.74	1,846	9.25	669	3.35	422	2.11
Endamehoni	3,049	18.14	5,775	34.35	5,346	31.80	1,837	10.93	531	3.16	272	1.62
Rayaazebo	2,089	10.48	8,176	41.03	6,758	33.92	1,855	9.31	678	3.40	370	1.86
Alamata	1,878	12.92	5,574	38.34	4,823	33.18	1,435	9.87	516	3.55	311	2.14
Wofla	3,562	12.77	7,183	25.75	10,553	37.83	4,395	15.76	1,379	4.94	823	2.95

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	%
Tigray Region.....	665,116	99.01	4,405	0.66	1,500	0.22	477	0.07	185	0.03	54	0.01
West Tigray Zone.....	165,161	99.17	790	0.47	428	0.26	113	0.07	52	0.03	-	-
Kafta.....	10,040	99.84	16	0.16	-	-	-	-	-	-	-	-
Tahtay Adiyabo.....	15,520	98.38	196	1.24	59	0.37	-	-	-	-	-	-
Lalay Adiyabo.....	20,568	99.47	85	0.41	-	-	24	0.12	-	-	-	-
Tahtay Koraro.....	13,380	99.32	-	-	91	0.68	-	-	-	-	-	-
Medebay Zana.....	22,125	99.00	116	0.52	107	0.48	-	-	-	-	-	-
Asegede Tsimbela.....	20,306	98.72	83	0.40	82	0.40	47	0.23	52	0.25	-	-
Tselemti.....	27,001	99.09	171	0.63	34	0.12	42	0.15	-	-	-	-
Welkait.....	21,762	99.48	56	0.26	57	0.26	-	-	-	-	-	-
Tsegede.....	14,458	99.54	67	0.46	-	-	-	-	-	-	-	-
Central Tigray Zone.....	214,103	99.15	1,296	0.60	412	0.19	114	0.05	-	-	19	0.01
Mereb Lehe.....	17,742	98.20	176	0.97	128	0.71	21	0.12	-	-	-	-
Ahiferom.....	33,067	99.89	35	0.11	-	-	-	-	-	-	-	-
Werie Lehe.....	26,431	99.74	70	0.26	-	-	-	-	-	-	-	-
Adwa.....	22,655	98.09	348	1.51	71	0.31	23	0.10	-	-	-	-
Lalay Maychew.....	13,720	97.23	318	2.25	39	0.28	34	0.24	-	-	-	-
Tahtay Maychew.....	17,309	99.28	96	0.55	29	0.17	-	-	-	-	-	-
Naeder Adet.....	20,847	98.83	138	0.65	108	0.51	-	-	-	-	-	-
Kola Temben.....	26,326	99.82	47	0.18	-	-	-	-	-	-	-	-
Degua Temben.....	21,638	99.83	-	-	-	-	36	0.17	-	-	-	-
Tanqu Abergele.....	14,367	99.14	69	0.48	37	0.26	-	-	-	-	19	0.13
East Tigray Zone.....	116,783	98.61	1,079	0.91	414	0.35	82	0.07	68	0.06	-	-
Gulumahada.....	15,130	97.54	248	1.60	93	0.60	-	-	41	0.26	-	-
Erob.....	3,538	98.80	15	0.42	23	0.64	-	-	5	0.14	-	-
Saesi Tsaedamba.....	23,384	98.67	213	0.90	69	0.29	32	0.14	-	-	-	-
Ganta Afeshum.....	19,996	98.99	59	0.29	124	0.61	-	-	22	0.11	-	-
Hawzen.....	20,188	98.29	237	1.15	84	0.41	30	0.15	-	-	-	-
Wukro.....	14,467	99.34	55	0.38	21	0.14	20	0.14	-	-	-	-
Atsbi Wenberta.....	20,080	98.76	252	1.24	-	-	-	-	-	-	-	-
South Tigray Zone.....	169,067	98.97	1,240	0.73	246	0.14	168	0.10	65	0.04	35	0.02
Seharte Samre.....	22,239	99.31	90	0.40	35	0.16	-	-	30	0.13	-	-
Enderta.....	20,957	98.15	296	1.39	-	-	65	0.30	35	0.16	-	-
Hintalo Wajirat.....	27,482	98.35	322	1.15	66	0.24	39	0.14	-	-	35	0.13
Ambalage.....	19,834	99.36	128	0.64	-	-	-	-	-	-	-	-
Endamehoni.....	16,661	99.11	55	0.33	63	0.37	31	0.18	-	-	-	-
Rayaazebo.....	19,809	99.41	61	0.31	23	0.12	33	0.17	-	-	-	-
Alamata.....	14,363	98.80	154	1.06	20	0.14	-	-	-	-	-	-
Wofla.....	27,721	99.38	134	0.48	40	0.14	-	-	-	-	-	-

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	%
Tigray Region	207,452	30.88	183,620	27.34	187,186	27.87	62,751	9.34	22,043	3.28	8,685	1.29
West Tigray Zone	51,856	31.14	53,587	32.18	42,495	25.52	11,951	7.18	4,665	2.80	1,990	1.19
Kafta	7,724	76.81	1,469	14.61	652	6.48	191	1.90	20	0.20	-	-
Tahtay Adiyabo	5,895	37.37	5,248	33.27	3,334	21.13	980	6.21	232	1.47	86	0.55
Laelay Adiyabo	4,985	24.11	5,294	25.60	6,730	32.55	1,968	9.52	1,084	5.24	616	2.98
Tahtay Koraro	3,906	29.00	3,222	23.92	4,166	30.93	1,294	9.61	600	4.45	283	2.10
Medebay Zana	6,041	27.03	6,721	30.07	6,787	30.37	1,758	7.87	764	3.42	277	1.24
Asegede Tsimbela	3,118	15.16	5,721	27.81	6,878	33.44	2,894	14.07	1,492	7.25	467	2.27
Tselemti	7,670	28.15	9,912	36.38	7,334	26.92	1,773	6.51	360	1.32	199	0.73
Welkait	8,298	37.93	9,496	43.41	3,340	15.27	679	3.10	-	-	62	0.28
Tsegede	4,223	29.07	6,503	44.77	3,274	22.54	414	2.85	111	0.76	-	-
Central Tigray Zone	60,400	27.97	55,684	25.79	64,555	29.89	23,336	10.81	8,600	3.98	3,369	1.56
Mereb Lehe	4,222	23.37	4,795	26.54	5,956	32.97	2,338	12.94	533	2.95	223	1.23
Ahiferom	11,297	34.13	9,035	27.29	8,914	26.93	2,570	7.76	741	2.24	545	1.65
Werie Lehe	7,012	26.46	4,726	17.83	7,944	29.98	4,266	16.10	1,768	6.67	785	2.96
Adwa	8,684	37.60	5,288	22.89	5,741	24.86	2,105	9.11	936	4.05	343	1.49
Laelay Maychew	4,081	28.92	3,616	25.63	4,362	30.91	1,391	9.86	509	3.61	152	1.08
Tahtay Maychew	5,110	29.31	6,834	39.20	3,969	22.77	1,021	5.86	397	2.28	103	0.59
Naeder Adet	5,202	24.66	5,726	27.15	7,060	33.47	2,243	10.63	803	3.81	59	0.28
Kola Temben	5,817	22.06	7,084	26.86	9,278	35.18	2,937	11.14	856	3.25	401	1.52
Degua Temben	5,120	23.62	3,620	16.70	7,136	32.92	3,334	15.38	1,797	8.29	667	3.08
Tanqu Abergele	3,851	26.57	4,961	34.23	4,196	28.95	1,133	7.82	260	1.79	91	0.63
East Tigray Zone	38,432	32.45	29,013	24.50	33,302	28.12	12,422	10.49	4,106	3.47	1,151	0.97
Gulumahada	5,816	37.49	3,356	21.63	4,256	27.44	1,385	8.93	643	4.15	56	0.36
Erob	1,139	31.81	972	27.14	1,005	28.06	330	9.22	112	3.13	23	0.64
Saesi Tsaedamba	7,984	33.69	5,601	23.63	6,524	27.53	2,802	11.82	570	2.41	217	0.92
Ganta Afeshum	6,683	33.08	5,481	27.13	5,630	27.87	1,825	9.03	394	1.95	188	0.93
Hawzen	6,537	31.83	4,558	22.19	6,369	31.01	2,056	10.01	761	3.71	258	1.26
Wukro	4,423	30.37	3,812	26.18	3,984	27.36	1,628	11.18	598	4.11	118	0.81
Atsbi Wenberta	5,849	28.77	5,233	25.74	5,533	27.21	2,397	11.79	1,028	5.06	292	1.44
South Tigray Zone	56,764	33.23	45,335	26.54	46,835	27.42	15,041	8.81	4,672	2.74	2,174	1.27
Seharte Samre	5,416	24.19	4,938	22.05	7,337	32.76	3,096	13.83	1,047	4.68	560	2.50
Enderta	6,901	32.32	4,895	22.92	6,237	29.21	2,199	10.30	737	3.45	384	1.80
Hintalo Wajirat	9,734	34.83	7,926	28.36	7,377	26.40	1,912	6.84	603	2.16	392	1.40
Ambalage	6,511	32.62	6,113	30.62	5,587	27.99	1,211	6.07	405	2.03	135	0.68
Endamehoni	5,485	32.63	4,922	29.28	4,378	26.04	1,560	9.28	366	2.18	99	0.59
Rayazebo	8,017	40.23	4,845	24.31	4,448	22.32	1,766	8.86	679	3.41	171	0.86
Alamata	7,070	48.63	3,788	26.06	2,601	17.89	690	4.75	241	1.66	147	1.01
Wofla	7,627	27.34	7,908	28.35	8,871	31.80	2,609	9.35	593	2.13	287	1.03

Table 8.16B:- Number of Crop Holders that Owned Threshing Stick by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Threshing Stick		One Threshing Stick		Two Threshing Sticks		Three Threshing Sticks		Four Threshing Sticks		Five and above Threshing Sticks	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	611,504	91.03	27,951	4.16	19,581	2.91	6,977	1.04	4,502	0.67	1,222	0.18
West Tigray Zone.....	143,884	86.39	9,227	5.54	8,218	4.93	2,961	1.78	2,000	1.20	254	0.15
Kafta.....	9,901	98.46	49	0.49	106	1.05	-	-	-	-	-	-
Tahtay Adiyabo.....	15,045	95.37	466	2.95	159	1.01	43	0.27	19	0.12	43	0.27
Lalay Adiyabo.....	14,710	71.14	1,950	9.43	2,283	11.04	1,081	5.23	585	2.83	68	0.33
Tahtay Koraro.....	11,571	85.90	724	5.37	492	3.65	256	1.90	314	2.33	114	0.85
Medebay Zana.....	20,542	91.92	1,290	5.77	451	2.02	-	-	65	0.29	-	-
Asegede Tsimbela.....	15,778	76.70	1,683	8.18	1,005	4.89	1,291	6.28	813	3.95	-	-
Tselemti.....	20,763	76.20	2,707	9.93	3,365	12.35	265	0.97	148	0.54	-	-
Welkait.....	21,066	96.30	339	1.55	359	1.64	26	0.12	56	0.26	29	0.13
Tsegede.....	14,507	99.88	18	0.12	-	-	-	-	-	-	-	-
Central Tigray Zone.....	199,223	92.26	7,388	3.42	5,771	2.67	1,826	0.85	1,216	0.56	520	0.24
Mereb Lehe.....	17,119	94.75	473	2.62	368	2.04	20	0.11	23	0.13	64	0.35
Ahiferom.....	32,442	98.01	342	1.03	208	0.63	65	0.20	-	-	45	0.14
Werie Lehe.....	25,261	95.32	772	2.91	263	0.99	148	0.56	57	0.22	-	-
Adwa.....	22,867	99.00	127	0.55	23	0.10	50	0.22	30	0.13	-	-
Lalay Maychew.....	13,390	94.89	507	3.59	143	1.01	36	0.26	35	0.25	-	-
Tahtay Maychew.....	16,915	97.02	99	0.57	420	2.41	-	-	-	-	-	-
Naeder Adet.....	18,180	86.19	1,518	7.20	886	4.20	105	0.50	404	1.92	-	-
Kola Temben.....	20,272	76.87	1,712	6.49	2,424	9.19	1,031	3.91	543	2.06	391	1.48
Degua Temben.....	20,705	95.53	812	3.75	97	0.45	30	0.14	30	0.14	-	-
Tanqu Abergele.....	12,072	83.30	1,026	7.08	939	6.48	341	2.35	95	0.66	19	0.13
East Tigray Zone.....	104,594	88.32	7,079	5.98	3,906	3.30	1,532	1.29	1,019	0.86	296	0.25
Gulumahada.....	13,746	88.62	924	5.96	480	3.09	219	1.41	143	0.92	-	-
Erob.....	3,334	93.10	217	6.06	30	0.84	-	-	-	-	-	-
Saesi Tsaedamba.....	20,903	88.21	1,427	6.02	1,165	4.92	115	0.49	54	0.23	34	0.14
Ganta Afeshum.....	19,538	96.72	597	2.96	23	0.11	-	-	43	0.21	-	-
Hawzen.....	17,770	86.52	1,739	8.47	714	3.48	246	1.20	42	0.20	28	0.14
Wukro.....	13,249	90.98	1,079	7.41	154	1.06	60	0.41	21	0.14	-	-
Atsbi Wenberta.....	16,052	78.95	1,098	5.40	1,340	6.59	892	4.39	716	3.52	234	1.15
South Tigray Zone.....	163,801	95.89	4,257	2.49	1,686	0.99	658	0.39	268	0.16	151	0.09
Seharte Samre.....	20,883	93.25	1,099	4.91	327	1.46	58	0.26	-	-	27	0.12
Enderta.....	20,854	97.66	220	1.03	152	0.71	78	0.37	13	0.06	36	0.17
Hintalo Wajirat.....	26,229	93.86	1,037	3.71	423	1.51	191	0.68	64	0.23	-	-
Ambalage.....	19,569	98.03	345	1.73	48	0.24	-	-	-	-	-	-
Endamehoni.....	16,229	96.54	408	2.43	173	1.03	-	-	-	-	-	-
Rayazebo.....	19,066	95.68	494	2.48	180	0.90	106	0.53	80	0.40	-	-
Alamata.....	13,636	93.80	271	1.86	237	1.63	193	1.33	112	0.77	88	0.61
Wofla.....	27,334	97.99	383	1.37	146	0.52	32	0.11	-	-	-	-

Table 8.17B:- Number of Crop Holders that Owned Winnowers (metal) by Geographic area

Geographic area	Number of Crop holders that owned											
	No Winnowers (metal)		One Winnowers (metal)		Two Winnowers (metal)		Three Winnowers (metal)		Four Winnowers (metal)		Five and above Winnowers (metal)	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region	668,033	99.45	3,418	0.51	267	0.04	-	-	19	0.00	-	-
West Tigray Zone	165,628	99.45	864	0.52	52	0.03	-	-	-	-	-	-
Kafta	9,984	99.28	72	0.72	-	-	-	-	-	-	-	-
Tahtay Adiyabo	15,331	97.19	423	2.68	21	0.13	-	-	-	-	-	-
Laelay Adiyabo	20,581	99.54	96	0.46	-	-	-	-	-	-	-	-
Tahtay Koraro	13,471	100.00	-	-	-	-	-	-	-	-	-	-
Medebay Zana	22,348	100.00	-	-	-	-	-	-	-	-	-	-
Asegede Tsimbela	20,542	99.86	28	0.14	-	-	-	-	-	-	-	-
Tselemti	27,131	99.57	86	0.32	31	0.11	-	-	-	-	-	-
Welkait	21,736	99.36	139	0.64	-	-	-	-	-	-	-	-
Tsegede	14,506	99.87	19	0.13	-	-	-	-	-	-	-	-
Central Tigray Zone	215,110	99.61	797	0.37	37	0.02	-	-	-	-	-	-
Mereb Lehe	18,067	100.00	-	-	-	-	-	-	-	-	-	-
Ahiferom	33,024	99.76	78	0.24	-	-	-	-	-	-	-	-
Werie Lehe	26,133	98.61	331	1.25	37	0.14	-	-	-	-	-	-
Adwa	23,097	100.00	-	-	-	-	-	-	-	-	-	-
Laelay Maychew	14,111	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew	17,405	99.83	29	0.17	-	-	-	-	-	-	-	-
Naeder Adet	21,065	99.87	28	0.13	-	-	-	-	-	-	-	-
Kola Temben	26,092	98.93	281	1.07	-	-	-	-	-	-	-	-
Degua Temben	21,642	99.85	32	0.15	-	-	-	-	-	-	-	-
Tanqu Abergele	14,474	99.88	18	0.12	-	-	-	-	-	-	-	-
East Tigray Zone	117,424	99.15	869	0.73	114	0.10	-	-	19	0.02	-	-
Gulumahada	15,512	100.00	-	-	-	-	-	-	-	-	-	-
Erob	3,581	100.00	-	-	-	-	-	-	-	-	-	-
Saesi Tsaedamba	23,615	99.65	62	0.26	21	0.09	-	-	-	-	-	-
Ganta Afeshum	20,180	99.90	21	0.10	-	-	-	-	-	-	-	-
Hawzen	20,371	99.18	168	0.82	-	-	-	-	-	-	-	-
Wukro	14,228	97.70	307	2.11	9	0.06	-	-	19	0.13	-	-
Atsbi Wenberta	19,936	98.05	312	1.53	84	0.41	-	-	-	-	-	-
South Tigray Zone	169,869	99.44	888	0.52	64	0.04	-	-	-	-	-	-
Seharte Samre	22,311	99.63	83	0.37	-	-	-	-	-	-	-	-
Enderta	21,297	99.74	56	0.26	-	-	-	-	-	-	-	-
Hintalo Wajirat	27,757	99.33	123	0.44	64	0.23	-	-	-	-	-	-
Ambalage	19,862	99.50	100	0.50	-	-	-	-	-	-	-	-
Endamehoni	16,788	99.87	22	0.13	-	-	-	-	-	-	-	-
Rayaazebo	19,770	99.22	156	0.78	-	-	-	-	-	-	-	-
Alamata	14,276	98.20	261	1.80	-	-	-	-	-	-	-	-
Wofla	27,807	99.68	88	0.32	-	-	-	-	-	-	-	-

Table 8.18B:- Number of Crop Holders that Owned Winnower (wood) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Winnower (wood)		One Winnower (wood)		Two Winnowers (wood)		Three Winnowers (wood)		Four Winnowers (wood)		Five and above Winnowers (wood)	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	559,706	83.32	96,881	14.42	12,591	1.87	1,934	0.29	536	0.08	89	0.01
West Tigray Zone.....	132,882	79.79	29,067	17.45	3,901	2.34	466	0.28	139	0.08	89	0.05
Kafta.....	8,072	80.27	1,761	17.51	201	2.00	-	-	-	-	22	0.22
Tahtay Adiyabo.....	15,273	96.82	432	2.74	70	0.44	-	-	-	-	-	-
Laelay Adiyabo.....	20,530	99.29	123	0.59	-	-	-	-	-	-	24	0.12
Tahtay Koraro.....	12,735	94.54	173	1.28	245	1.82	249	1.85	52	0.39	17	0.13
Medebay Zana.....	21,708	97.14	507	2.27	106	0.47	-	-	-	-	27	0.12
Asegede Tsimbela.....	19,585	95.21	474	2.30	436	2.12	75	0.36	-	-	-	-
Tselemti.....	16,644	61.08	9,706	35.62	866	3.18	32	0.12	-	-	-	-
Welkait.....	12,813	58.57	7,782	35.57	1,153	5.27	63	0.29	64	0.29	-	-
Tsegede.....	5,521	38.01	8,110	55.83	825	5.68	46	0.32	23	0.16	-	-
Central Tigray Zone.....	206,350	95.56	6,093	2.82	2,801	1.30	611	0.28	89	0.04	-	-
Mereb Lehe.....	18,046	99.88	-	-	21	0.12	-	-	-	-	-	-
Ahiferom.....	32,946	99.53	90	0.27	66	0.20	-	-	-	-	-	-
Werie Lehe.....	26,074	98.39	264	1.00	163	0.62	-	-	-	-	-	-
Adwa.....	20,799	90.05	737	3.19	1,077	4.66	437	1.89	47	0.20	-	-
Laelay Maychew.....	14,111	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew.....	17,337	99.44	97	0.56	-	-	-	-	-	-	-	-
Naeder Adet.....	21,043	99.76	50	0.24	-	-	-	-	-	-	-	-
Kola Temben.....	26,095	98.95	278	1.05	-	-	-	-	-	-	-	-
Degua Temben.....	20,234	93.36	1,386	6.39	36	0.17	18	0.08	-	-	-	-
Tanqu Abergele.....	9,663	66.68	3,192	22.03	1,439	9.93	156	1.08	42	0.29	-	-
East Tigray Zone.....	113,890	96.17	3,381	2.85	604	0.51	450	0.38	101	0.09	-	-
Gulumahada.....	15,494	99.88	18	0.12	-	-	-	-	-	-	-	-
Erob.....	3,359	93.80	212	5.92	10	0.28	-	-	-	-	-	-
Saesi Tsaedamba.....	23,590	99.54	82	0.35	26	0.11	-	-	-	-	-	-
Ganta Afeshum.....	20,079	99.40	122	0.60	-	-	-	-	-	-	-	-
Hawzen.....	20,363	99.14	130	0.63	46	0.22	-	-	-	-	-	-
Wukro.....	13,161	90.37	1,320	9.06	82	0.56	-	-	-	-	-	-
Atsbi Wenberta.....	17,843	87.76	1,498	7.37	440	2.16	450	2.21	101	0.50	-	-
South Tigray Zone.....	106,583	62.39	58,339	34.15	5,285	3.09	407	0.24	207	0.12	-	-
Seharte Samre.....	14,551	64.98	7,041	31.44	753	3.36	49	0.22	-	-	-	-
Enderta.....	16,001	74.94	5,095	23.86	257	1.20	-	-	-	-	-	-
Hintalo Wajirat.....	18,992	67.96	8,239	29.48	551	1.97	35	0.13	127	0.45	-	-
Ambalage.....	12,759	63.92	6,950	34.82	253	1.27	-	-	-	-	-	-
Endamehoni.....	8,607	51.20	7,796	46.38	407	2.42	-	-	-	-	-	-
Rayaazebo.....	12,238	61.42	5,860	29.41	1,488	7.47	282	1.42	58	0.29	-	-
Alamata.....	8,370	57.58	5,090	35.01	1,013	6.97	42	0.29	22	0.15	-	-
Wofla.....	15,063	54.00	12,270	43.99	562	2.01	-	-	-	-	-	-

Table 8.19B:- Number of Crop Holders that Owned Cart by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Cart		One Cart		Two Carts		Three Carts		Four Carts		Five and above Carts	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	670,641	99.84	1,006	0.15	70	0.01	20	0.00	-	-	-	-
West Tigray Zone.....	165,713	99.50	768	0.46	43	0.03	20	0.01	-	-	-	-
Kafta.....	9,304	92.52	752	7.48	-	-	-	-	-	-	-	-
Tahtay Adiyabo.....	15,775	100.00	-	-	-	-	-	-	-	-	-	-
Laclay Adiyabo.....	20,631	99.78	-	-	26	0.13	20	0.10	-	-	-	-
Tahtay Koraro.....	13,439	99.76	16	0.12	16	0.12	-	-	-	-	-	-
Medebay Zana.....	22,348	100.00	-	-	-	-	-	-	-	-	-	-
Asegede Tsimbeia.....	20,570	100.00	-	-	-	-	-	-	-	-	-	-
Tselemti.....	27,248	100.00	-	-	-	-	-	-	-	-	-	-
Welkait.....	21,875	100.00	-	-	-	-	-	-	-	-	-	-
Tsegede.....	14,525	100.00	-	-	-	-	-	-	-	-	-	-
Central Tigray Zone.....	215,890	99.97	27	0.01	27	0.01	-	-	-	-	-	-
Mereb Lehe.....	18,067	100.00	-	-	-	-	-	-	-	-	-	-
Ahiferom.....	33,102	100.00	-	-	-	-	-	-	-	-	-	-
Werie Lehe.....	26,501	100.00	-	-	-	-	-	-	-	-	-	-
Adwa.....	23,043	99.77	27	0.12	27	0.12	-	-	-	-	-	-
Laclay Maychew.....	14,111	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew.....	17,434	100.00	-	-	-	-	-	-	-	-	-	-
Naeder Adet.....	21,093	100.00	-	-	-	-	-	-	-	-	-	-
Kola Temben.....	26,373	100.00	-	-	-	-	-	-	-	-	-	-
Degua Temben.....	21,674	100.00	-	-	-	-	-	-	-	-	-	-
Tanqu Abergele.....	14,492	100.00	-	-	-	-	-	-	-	-	-	-
East Tigray Zone.....	118,393	99.97	33	0.03	-	-	-	-	-	-	-	-
Gulumahada.....	15,479	99.79	33	0.21	-	-	-	-	-	-	-	-
Erob.....	3,581	100.00	-	-	-	-	-	-	-	-	-	-
Saesi Tsaedamba.....	23,698	100.00	-	-	-	-	-	-	-	-	-	-
Ganta Afeshum.....	20,201	100.00	-	-	-	-	-	-	-	-	-	-
Hawzen.....	20,539	100.00	-	-	-	-	-	-	-	-	-	-
Wukro.....	14,563	100.00	-	-	-	-	-	-	-	-	-	-
Atsbi Wenberta.....	20,332	100.00	-	-	-	-	-	-	-	-	-	-
South Tigray Zone.....	170,643	99.90	178	0.10	-	-	-	-	-	-	-	-
Seharte Samre.....	22,394	100.00	-	-	-	-	-	-	-	-	-	-
Enderta.....	21,298	99.74	55	0.26	-	-	-	-	-	-	-	-
Hintalo Wajirat.....	27,911	99.88	33	0.12	-	-	-	-	-	-	-	-
Ambalage.....	19,941	99.89	21	0.11	-	-	-	-	-	-	-	-
Endamehoni.....	16,810	100.00	-	-	-	-	-	-	-	-	-	-
Rayazebo.....	19,889	99.81	37	0.19	-	-	-	-	-	-	-	-
Alamata.....	14,506	99.79	31	0.21	-	-	-	-	-	-	-	-
Wofla.....	27,895	100.00	-	-	-	-	-	-	-	-	-	-

Table 8.20B:- Number of Crop Holders that Owned Sprayer (hand operated) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Sprayer		One Sprayer		Two Sprayers		Three Sprayers		Four Sprayers		Five and above Sprayers	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	668,641	99.54	1,685	0.25	962	0.14	183	0.03	194	0.03	72	0.01
West Tigray Zone.....	165,837	99.58	291	0.17	339	0.20	60	0.04	17	0.01	-	-
Kafta.....	10,047	99.91	-	-	9	0.09	-	-	-	-	-	-
Tahtay Adiyabo.....	15,691	99.47	-	-	84	0.53	-	-	-	-	-	-
Laelay Adiyabo.....	20,506	99.17	121	0.59	25	0.12	25	0.12	-	-	-	-
Tahtay Koraro.....	13,355	99.14	66	0.49	17	0.13	16	0.12	17	0.13	-	-
Medebay Zana.....	22,297	99.77	21	0.09	30	0.13	-	-	-	-	-	-
Asegede Tsimbela.....	20,496	99.64	-	-	74	0.36	-	-	-	-	-	-
Tselemti.....	27,148	99.63	-	-	100	0.37	-	-	-	-	-	-
Welkait.....	21,793	99.63	82	0.37	-	-	-	-	-	-	-	-
Tsegede.....	14,507	99.88	-	-	-	-	18	0.12	-	-	-	-
Central Tigray Zone.....	215,012	99.57	581	0.27	225	0.10	56	0.03	40	0.02	30	0.01
Mereb Lehe.....	17,981	99.52	67	0.37	19	0.11	-	-	-	-	-	-
Ahiferom.....	32,999	99.69	63	0.19	-	-	-	-	40	0.12	-	-
Werie Lehe.....	26,224	98.95	131	0.49	116	0.44	-	-	-	-	30	0.11
Adwa.....	22,997	99.57	45	0.19	25	0.11	30	0.13	-	-	-	-
Laelay Maychew.....	14,030	99.43	42	0.30	39	0.28	-	-	-	-	-	-
Tahtay Maychew.....	17,415	99.89	19	0.11	-	-	-	-	-	-	-	-
Naeder Adet.....	21,044	99.77	49	0.23	-	-	-	-	-	-	-	-
Kola Temben.....	26,291	99.69	56	0.21	-	-	26	0.10	-	-	-	-
Degua Temben.....	21,574	99.54	73	0.34	27	0.12	-	-	-	-	-	-
Tanqu Abergele.....	14,457	99.76	35	0.24	-	-	-	-	-	-	-	-
East Tigray Zone.....	117,866	99.53	174	0.15	229	0.19	67	0.06	90	0.08	-	-
Gulumahada.....	15,433	99.49	17	0.11	-	-	20	0.13	42	0.27	-	-
Erob.....	3,565	99.55	11	0.31	5	0.14	-	-	-	-	-	-
Saesi Tsaedamba.....	23,666	99.86	32	0.14	-	-	-	-	-	-	-	-
Ganta Afeshum.....	20,055	99.28	-	-	51	0.25	47	0.23	48	0.24	-	-
Hawzen.....	20,494	99.78	-	-	45	0.22	-	-	-	-	-	-
Wukro.....	14,504	99.59	18	0.12	41	0.28	-	-	-	-	-	-
Atsbi Wenberta.....	20,149	99.10	96	0.47	87	0.43	-	-	-	-	-	-
South Tigray Zone.....	169,925	99.48	639	0.37	168	0.10	-	-	47	0.03	42	0.02
Seharte Samre.....	22,362	99.86	-	-	32	0.14	-	-	-	-	-	-
Enderta.....	21,224	99.40	94	0.44	35	0.16	-	-	-	-	-	-
Hintalo Wajirat.....	27,558	98.62	255	0.91	42	0.15	-	-	47	0.17	42	0.15
Ambalage.....	19,877	99.57	85	0.43	-	-	-	-	-	-	-	-
Endamehoni.....	16,744	99.61	66	0.39	-	-	-	-	-	-	-	-
Rayazebo.....	19,902	99.88	-	-	24	0.12	-	-	-	-	-	-
Alamata.....	14,492	99.69	45	0.31	-	-	-	-	-	-	-	-
Wofla.....	27,766	99.54	94	0.34	35	0.13	-	-	-	-	-	-

Table 8.21B:- Number of Crop Holders that Owned Wheelbarrow by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Wheelbarrow		One Wheelbarrow		Two Wheelbarrows		Three Wheelbarrows		Four Wheelbarrows		Five and above Wheelbarrows	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	670,938	99.88	761	0.11	20	0.00	-	-	18	0.00	-	-
West Tigray Zone.....	166,412	99.92	114	0.07	-	-	-	-	18	0.01	-	-
Kafta.....	9,994	99.38	62	0.62	-	-	-	-	-	-	-	-
Tahtay Adiyabo.....	15,775	100.00	-	-	-	-	-	-	-	-	-	-
Laelay Adiyabo.....	20,677	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Koraro.....	13,434	99.73	19	0.14	-	-	-	-	18	0.13	-	-
Medebay Zana.....	22,348	100.00	-	-	-	-	-	-	-	-	-	-
Asegede Tsimbela.....	20,570	100.00	-	-	-	-	-	-	-	-	-	-
Tselemti.....	27,215	99.88	33	0.12	-	-	-	-	-	-	-	-
Welkait.....	21,875	100.00	-	-	-	-	-	-	-	-	-	-
Tsegede.....	14,525	100.00	-	-	-	-	-	-	-	-	-	-
Central Tigray Zone.....	215,689	99.88	255	0.12	-	-	-	-	-	-	-	-
Mereb Lehe.....	18,067	100.00	-	-	-	-	-	-	-	-	-	-
Ahiferom.....	33,102	100.00	-	-	-	-	-	-	-	-	-	-
Werie Lehe.....	26,501	100.00	-	-	-	-	-	-	-	-	-	-
Adwa.....	22,871	99.02	226	0.98	-	-	-	-	-	-	-	-
Laelay Maychew.....	14,111	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew.....	17,434	100.00	-	-	-	-	-	-	-	-	-	-
Naeder Adet.....	21,093	100.00	-	-	-	-	-	-	-	-	-	-
Kola Temben.....	26,373	100.00	-	-	-	-	-	-	-	-	-	-
Degua Temben.....	21,645	99.87	29	0.13	-	-	-	-	-	-	-	-
Tanqu Abergele.....	14,492	100.00	-	-	-	-	-	-	-	-	-	-
East Tigray Zone.....	118,125	99.75	281	0.24	20	0.02	-	-	-	-	-	-
Gulumahada.....	15,478	99.78	19	0.12	15	0.10	-	-	-	-	-	-
Erob.....	3,465	96.76	111	3.10	5	0.14	-	-	-	-	-	-
Saesi Tsaedamba.....	23,635	99.73	63	0.27	-	-	-	-	-	-	-	-
Ganta Afeshum.....	20,138	99.69	63	0.31	-	-	-	-	-	-	-	-
Hawzen.....	20,539	100.00	-	-	-	-	-	-	-	-	-	-
Wukro.....	14,563	100.00	-	-	-	-	-	-	-	-	-	-
Atsbi Wenberta.....	20,307	99.88	25	0.12	-	-	-	-	-	-	-	-
South Tigray Zone.....	170,710	99.94	111	0.06	-	-	-	-	-	-	-	-
Seharte Samre.....	22,394	100.00	-	-	-	-	-	-	-	-	-	-
Enderta.....	21,290	99.70	63	0.30	-	-	-	-	-	-	-	-
Hintalo Wajirat.....	27,944	100.00	-	-	-	-	-	-	-	-	-	-
Ambalage.....	19,962	100.00	-	-	-	-	-	-	-	-	-	-
Endamehoni.....	16,810	100.00	-	-	-	-	-	-	-	-	-	-
Rayaazebo.....	19,926	100.00	-	-	-	-	-	-	-	-	-	-
Alamata.....	14,537	100.00	-	-	-	-	-	-	-	-	-	-
Wofla.....	27,846	99.82	49	0.18	-	-	-	-	-	-	-	-

Table 8.22B:- Number of Crop Holders that Owned Ass (Specifically for ploughing) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Ass		One Ass		Two Asses		Three Asses		Four Asses		Five and above Asses	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	668,653	99.54	2,573	0.38	401	0.06	74	0.01	36	0.01	-	-
West Tigray Zone.....	165,866	99.59	593	0.36	85	0.05	-	-	-	-	-	-
Kafta.....	9,648	95.94	376	3.74	32	0.32	-	-	-	-	-	-
Tahtay Adiyabo.....	15,661	99.28	114	0.72	-	-	-	-	-	-	-	-
Laelay Adiyabo.....	20,631	99.78	20	0.10	26	0.13	-	-	-	-	-	-
Tahtay Koraro.....	13,456	99.89	15	0.11	-	-	-	-	-	-	-	-
Medebay Zana.....	22,321	99.88	-	-	27	0.12	-	-	-	-	-	-
Asegede Tsimbela.....	20,570	100.00	-	-	-	-	-	-	-	-	-	-
Tselemti.....	27,211	99.86	37	0.14	-	-	-	-	-	-	-	-
Welkait.....	21,844	99.86	31	0.14	-	-	-	-	-	-	-	-
Tsegede.....	14,525	100.00	-	-	-	-	-	-	-	-	-	-
Central Tigray Zone.....	215,185	99.65	699	0.32	24	0.01	-	-	36	0.02	-	-
Mereb Lehe.....	18,067	100.00	-	-	-	-	-	-	-	-	-	-
Ahiferom.....	32,911	99.42	155	0.47	-	-	-	-	36	0.11	-	-
Werie Lehe.....	26,440	99.77	61	0.23	-	-	-	-	-	-	-	-
Adwa.....	23,097	100.00	-	-	-	-	-	-	-	-	-	-
Laelay Maychew.....	14,111	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew.....	17,413	99.88	21	0.12	-	-	-	-	-	-	-	-
Naeder Adet.....	21,013	99.62	56	0.27	24	0.11	-	-	-	-	-	-
Kola Temben.....	26,373	100.00	-	-	-	-	-	-	-	-	-	-
Degua Temben.....	21,649	99.88	25	0.12	-	-	-	-	-	-	-	-
Tanqu Abergele.....	14,110	97.36	382	2.64	-	-	-	-	-	-	-	-
East Tigray Zone.....	117,609	99.31	594	0.50	185	0.16	38	0.03	-	-	-	-
Gulumahada.....	15,453	99.62	59	0.38	-	-	-	-	-	-	-	-
Erob.....	3,444	96.17	51	1.42	76	2.12	10	0.28	-	-	-	-
Saesi Tsaedamba.....	23,620	99.67	78	0.33	-	-	-	-	-	-	-	-
Ganta Afeshum.....	20,201	100.00	-	-	-	-	-	-	-	-	-	-
Hawzen.....	20,539	100.00	-	-	-	-	-	-	-	-	-	-
Wukro.....	14,356	98.58	163	1.12	44	0.30	-	-	-	-	-	-
Atsbi Wenberta.....	19,996	98.35	243	1.20	65	0.32	28	0.14	-	-	-	-
South Tigray Zone.....	169,990	99.51	687	0.40	108	0.06	36	0.02	-	-	-	-
Seharte Samre.....	22,280	99.49	114	0.51	-	-	-	-	-	-	-	-
Enderata.....	21,100	98.82	168	0.79	85	0.40	-	-	-	-	-	-
Hintalo Wajirat.....	27,862	99.71	46	0.16	-	-	36	0.13	-	-	-	-
Ambalage.....	19,660	98.49	279	1.40	23	0.12	-	-	-	-	-	-
Endamehoni.....	16,730	99.52	80	0.48	-	-	-	-	-	-	-	-
Rayaazebo.....	19,926	100.00	-	-	-	-	-	-	-	-	-	-
Alamata.....	14,537	100.00	-	-	-	-	-	-	-	-	-	-
Wofla.....	27,895	100.00	-	-	-	-	-	-	-	-	-	-

Table 8.23B:- Number of Crop Holders that Owned Camel (Specifically for ploughing) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Camel		One Camel		Two Camels		Three Camels		Four Camels		Five and above Camels	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	671,223	99.92	489	0.07	25	0.00	-	-	-	-	-	-
West Tigray Zone.....	166,163	99.77	381	0.23	-	-	-	-	-	-	-	-
Kafta.....	10,013	99.57	43	0.43	-	-	-	-	-	-	-	-
Tahtay Adiyabo.....	15,735	99.75	40	0.25	-	-	-	-	-	-	-	-
Laelay Adiyabo.....	20,624	99.74	53	0.26	-	-	-	-	-	-	-	-
Tahtay Koraro.....	13,449	99.84	22	0.16	-	-	-	-	-	-	-	-
Medebay Zana.....	22,200	99.34	148	0.66	-	-	-	-	-	-	-	-
Asegede Tsimbela.....	20,495	99.64	75	0.36	-	-	-	-	-	-	-	-
Tselemti.....	27,248	100.00	-	-	-	-	-	-	-	-	-	-
Welkait.....	21,875	100.00	-	-	-	-	-	-	-	-	-	-
Tsegede.....	14,525	100.00	-	-	-	-	-	-	-	-	-	-
Central Tigray Zone.....	215,811	99.94	108	0.05	25	0.01	-	-	-	-	-	-
Mereb Lehe.....	17,934	99.26	108	0.60	25	0.14	-	-	-	-	-	-
Ahiferom.....	33,102	100.00	-	-	-	-	-	-	-	-	-	-
Werie Lehe.....	26,501	100.00	-	-	-	-	-	-	-	-	-	-
Adwa.....	23,097	100.00	-	-	-	-	-	-	-	-	-	-
Laelay Maychew.....	14,111	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew.....	17,434	100.00	-	-	-	-	-	-	-	-	-	-
Naeder Adet.....	21,093	100.00	-	-	-	-	-	-	-	-	-	-
Kola Temben.....	26,373	100.00	-	-	-	-	-	-	-	-	-	-
Degua Temben.....	21,674	100.00	-	-	-	-	-	-	-	-	-	-
Tanqu Abergele.....	14,492	100.00	-	-	-	-	-	-	-	-	-	-
East Tigray Zone.....	118,426	100.00	-	-	-	-	-	-	-	-	-	-
Gulumahada.....	15,512	100.00	-	-	-	-	-	-	-	-	-	-
Erob.....	3,581	100.00	-	-	-	-	-	-	-	-	-	-
Saesi Tsaedamba.....	23,698	100.00	-	-	-	-	-	-	-	-	-	-
Ganta Afeshum.....	20,201	100.00	-	-	-	-	-	-	-	-	-	-
Hawzen.....	20,539	100.00	-	-	-	-	-	-	-	-	-	-
Wukro.....	14,563	100.00	-	-	-	-	-	-	-	-	-	-
Atsbi Wenberta.....	20,332	100.00	-	-	-	-	-	-	-	-	-	-
South Tigray Zone.....	170,821	100.00	-	-	-	-	-	-	-	-	-	-
Seharte Samre.....	22,394	100.00	-	-	-	-	-	-	-	-	-	-
Enderta.....	21,353	100.00	-	-	-	-	-	-	-	-	-	-
Hintalo Wajirat.....	27,944	100.00	-	-	-	-	-	-	-	-	-	-
Ambalage.....	19,962	100.00	-	-	-	-	-	-	-	-	-	-
Endamehoni.....	16,810	100.00	-	-	-	-	-	-	-	-	-	-
Rayazebo.....	19,926	100.00	-	-	-	-	-	-	-	-	-	-
Alamata.....	14,537	100.00	-	-	-	-	-	-	-	-	-	-
Wofla.....	27,895	100.00	-	-	-	-	-	-	-	-	-	-

Table 8.24B:- Number of Crop Holders that Owned Muel (Specifically for ploughing by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Muels		One Muels		Two Muels		Three Muels		Four Muels		Five and above Muels	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region	671,586	99.98	59	0.01	68	0.01	24	0.00	-	-	-	-
West Tigray Zone	166,544	100.00	-	-	-	-	-	-	-	-	-	-
Kafta	10,056	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Adiyabo	15,775	100.00	-	-	-	-	-	-	-	-	-	-
Laelay Adiyabo	20,677	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Koraro	13,471	100.00	-	-	-	-	-	-	-	-	-	-
Medebay Zana	22,348	100.00	-	-	-	-	-	-	-	-	-	-
Asegede Tsimbela	20,570	100.00	-	-	-	-	-	-	-	-	-	-
Tselemti	27,248	100.00	-	-	-	-	-	-	-	-	-	-
Welkait	21,875	100.00	-	-	-	-	-	-	-	-	-	-
Tsegede	14,525	100.00	-	-	-	-	-	-	-	-	-	-
Central Tigray Zone	215,944	100.00	-	-	-	-	-	-	-	-	-	-
Mereb Lehe	18,067	100.00	-	-	-	-	-	-	-	-	-	-
Ahiferom	33,102	100.00	-	-	-	-	-	-	-	-	-	-
Werie Lehe	26,501	100.00	-	-	-	-	-	-	-	-	-	-
Adwa	23,097	100.00	-	-	-	-	-	-	-	-	-	-
Laelay Maychew	14,111	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew	17,434	100.00	-	-	-	-	-	-	-	-	-	-
Naeder Adet	21,093	100.00	-	-	-	-	-	-	-	-	-	-
Kola Temben	26,373	100.00	-	-	-	-	-	-	-	-	-	-
Degua Temben	21,674	100.00	-	-	-	-	-	-	-	-	-	-
Tanqu Abergele	14,492	100.00	-	-	-	-	-	-	-	-	-	-
East Tigray Zone	118,334	99.92	-	-	68	0.06	24	0.02	-	-	-	-
Gulumahada	15,512	100.00	-	-	-	-	-	-	-	-	-	-
Erob	3,581	100.00	-	-	-	-	-	-	-	-	-	-
Saesi Tsaedamba	23,698	100.00	-	-	-	-	-	-	-	-	-	-
Ganta Afeshum	20,201	100.00	-	-	-	-	-	-	-	-	-	-
Hawzen	20,539	100.00	-	-	-	-	-	-	-	-	-	-
Wukro	14,563	100.00	-	-	-	-	-	-	-	-	-	-
Atsbi Wenberta	20,240	99.55	-	-	68	0.33	24	0.12	-	-	-	-
South Tigray Zone	170,762	99.97	59	0.03	-	-	-	-	-	-	-	-
Seharte Samre	22,394	100.00	-	-	-	-	-	-	-	-	-	-
Enderta	21,294	99.72	59	0.28	-	-	-	-	-	-	-	-
Hintalo Wajirat	27,944	100.00	-	-	-	-	-	-	-	-	-	-
Ambalage	19,962	100.00	-	-	-	-	-	-	-	-	-	-
Endamehoni	16,810	100.00	-	-	-	-	-	-	-	-	-	-
Rayaazebo	19,926	100.00	-	-	-	-	-	-	-	-	-	-
Alamata	14,537	100.00	-	-	-	-	-	-	-	-	-	-
Wofla	27,895	100.00	-	-	-	-	-	-	-	-	-	-

Table 8.25B:- Number of Crop Holders that Owned Ox (Specifically for ploughing) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Ox		One Ox		Two Oxen		Three Oxen		Four Oxen		Five and above Oxen	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region	196,416	29.24	212,166	31.58	221,998	33.05	24,296	3.62	13,506	2.01	3,355	0.50
West Tigray Zone	35,133	21.10	47,376	28.45	67,995	40.83	7,833	4.70	6,238	3.75	1,969	1.18
Kafta	6,188	61.54	1,420	14.12	1,873	18.63	248	2.47	198	1.97	129	1.28
Tahtay Adiyabo	3,758	23.82	4,177	26.48	6,342	40.20	688	4.36	572	3.63	238	1.51
Laclay Adiyabo	3,679	17.79	8,181	39.57	7,709	37.28	678	3.28	381	1.84	49	0.24
Tahtay Koraro	2,539	18.85	3,374	25.05	5,997	44.52	876	6.50	504	3.74	181	1.34
Medebay Zana	4,908	21.96	7,235	32.37	8,736	39.09	968	4.33	405	1.81	96	0.43
Asegede Tsimbela	2,609	12.68	3,718	18.07	11,019	53.57	1,461	7.10	1,536	7.47	227	1.10
Tselemti	4,335	15.91	8,721	32.01	12,496	45.86	942	3.46	724	2.66	30	0.11
Welkait	4,475	20.46	5,922	27.07	8,494	38.83	1,170	5.35	1,073	4.91	741	3.39
Tsegede	2,645	18.21	4,627	31.86	5,328	36.68	803	5.53	845	5.82	277	1.91
Central Tigray Zone	63,555	29.43	73,377	33.98	70,541	32.67	6,422	2.97	1,664	0.77	385	0.18
Mereb Lehe	4,917	27.22	5,138	28.44	7,493	41.47	416	2.30	103	0.57	-	-
Ahiferom	11,289	34.10	14,099	42.59	6,992	21.12	578	1.75	86	0.26	58	0.18
Werie Lehe	7,068	26.67	8,105	30.58	9,985	37.68	1,017	3.84	288	1.09	38	0.14
Adwa	5,982	25.90	7,245	31.37	8,685	37.60	916	3.97	218	0.94	51	0.22
Laclay Maychew	4,438	31.45	3,276	23.22	5,572	39.49	750	5.32	36	0.26	39	0.28
Tahtay Maychew	5,590	32.06	6,766	38.81	4,819	27.64	215	1.23	23	0.13	21	0.12
Naeder Adet	6,269	29.72	7,881	37.36	6,407	30.38	510	2.42	-	-	26	0.12
Kola Temben	8,119	30.79	8,961	33.98	8,446	32.03	643	2.44	204	0.77	-	-
Degua Temben	7,160	33.03	7,035	32.46	6,346	29.28	710	3.28	306	1.41	117	0.54
Tanqu Abergele	2,726	18.81	4,870	33.60	5,793	39.97	667	4.60	400	2.76	36	0.25
East Tigray Zone	45,138	38.11	44,409	37.50	26,563	22.43	1,601	1.35	590	0.50	125	0.11
Gulumahada	5,423	34.96	6,809	43.90	3,164	20.40	79	0.51	18	0.12	19	0.12
Erob	1,476	41.22	1,506	42.06	551	15.39	38	1.06	-	-	10	0.28
Saesi Tsaedamba	8,693	36.68	9,351	39.46	5,481	23.13	112	0.47	61	0.26	-	-
Ganta Afeshum	8,192	40.55	8,257	40.87	3,511	17.38	197	0.98	44	0.22	-	-
Hawzen	7,827	38.11	6,455	31.43	5,971	29.07	164	0.80	122	0.59	-	-
Wukro	4,313	29.62	4,899	33.64	4,446	30.53	579	3.98	230	1.58	96	0.66
Atsbi Wenberta	9,213	45.31	7,132	35.08	3,439	16.91	433	2.13	115	0.57	-	-
South Tigray Zone	52,588	30.79	47,005	27.52	56,900	33.31	8,439	4.94	5,013	2.93	876	0.51
Seharte Samre	5,897	26.33	7,738	34.55	7,001	31.26	1,499	6.69	132	0.59	127	0.57
Enderta	6,107	28.60	6,094	28.54	7,029	32.92	1,314	6.15	757	3.55	52	0.24
Hintalo Wajirat	8,138	29.12	8,109	29.02	9,336	33.41	1,493	5.34	768	2.75	100	0.36
Ambalage	7,928	39.72	5,931	29.71	5,425	27.18	556	2.79	89	0.45	33	0.17
Endamehoni	5,857	34.84	4,676	27.82	5,357	31.87	532	3.16	338	2.01	50	0.30
Rayaazebo	4,396	22.06	3,338	16.75	8,665	43.49	1,217	6.11	1,978	9.93	332	1.67
Alamata	4,139	28.47	2,998	20.62	5,993	41.23	652	4.49	655	4.51	100	0.69
Wofla	10,130	36.31	8,120	29.11	8,093	29.01	1,176	4.22	295	1.06	81	0.29

Table 8.26B:- Number of Crop Holders that Owned Ass (For threshing or transportation) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Ass		One Ass		Two Asses		Three Asses		Four Asses		Five and above Asses	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	447,646	66.64	174,425	25.97	41,573	6.19	6,594	0.98	820	0.12	679	0.10
West Tigray Zone.....	103,363	62.06	52,390	31.46	9,134	5.48	1,372	0.82	149	0.09	136	0.08
Kafta.....	5,328	52.98	4,143	41.20	486	4.83	72	0.72	18	0.18	9	0.09
Tahtay Adiyabo.....	7,355	46.62	7,313	46.36	948	6.01	129	0.82	13	0.08	17	0.11
Laelay Adiyabo.....	11,414	55.20	7,905	38.23	1,129	5.46	187	0.90	22	0.11	20	0.10
Tahtay Koraro.....	9,057	67.23	3,168	23.52	963	7.15	207	1.54	37	0.27	39	0.29
Medebay Zana.....	15,886	71.08	5,000	22.37	1,350	6.04	112	0.50	-	-	-	-
Asegede Tsimbela.....	13,356	64.93	6,071	29.51	876	4.26	186	0.90	30	0.15	51	0.25
Tselemti.....	21,016	77.13	4,967	18.23	1,089	4.00	146	0.54	30	0.11	-	-
Welkait.....	12,528	57.27	7,515	34.35	1,614	7.38	218	1.00	-	-	-	-
Tsegede.....	7,425	51.12	6,306	43.41	679	4.67	115	0.79	-	-	-	-
Central Tigray Zone.....	159,341	73.79	42,888	19.86	11,158	5.17	2,033	0.94	297	0.14	227	0.11
Mereb Lehe.....	11,590	64.15	5,511	30.50	754	4.17	174	0.96	19	0.11	19	0.11
Ahiferom.....	25,851	78.09	5,809	17.55	1,224	3.70	152	0.46	66	0.20	-	-
Werie Lehe.....	21,673	81.78	3,076	11.61	1,211	4.57	416	1.57	65	0.25	60	0.23
Adwa.....	17,541	75.94	3,753	16.25	1,496	6.48	257	1.11	24	0.10	26	0.11
Laelay Maychew.....	8,908	63.13	3,899	27.63	1,025	7.26	235	1.67	44	0.31	-	-
Tahtay Maychew.....	13,170	75.54	3,313	19.00	826	4.74	85	0.49	-	-	40	0.23
Naeder Adet.....	16,875	80.00	3,195	15.15	813	3.85	161	0.76	49	0.23	-	-
Kola Temben.....	20,742	78.65	3,923	14.88	1,635	6.20	73	0.28	-	-	-	-
Degua Temben.....	15,012	69.26	4,849	22.37	1,387	6.40	334	1.54	30	0.14	62	0.29
Tanqu Abergele.....	7,981	55.07	5,560	38.37	786	5.42	146	1.01	-	-	19	0.13
East Tigray Zone.....	84,383	71.25	27,653	23.35	5,478	4.63	719	0.61	123	0.10	70	0.06
Gulumahada.....	11,837	76.31	2,674	17.24	861	5.55	113	0.73	27	0.17	-	-
Erob.....	1,828	51.05	1,420	39.65	318	8.88	15	0.42	-	-	-	-
Saesi Tsaedamba.....	17,302	73.01	5,078	21.43	1,088	4.59	141	0.59	65	0.27	24	0.10
Ganta Afeshum.....	17,301	85.64	2,426	12.01	401	1.99	46	0.23	-	-	27	0.13
Hawzen.....	16,384	79.77	3,406	16.58	600	2.92	118	0.57	31	0.15	-	-
Wukro.....	7,846	53.88	5,663	38.89	912	6.26	123	0.84	-	-	19	0.13
Atsbi Wenberta.....	11,883	58.44	6,988	34.37	1,297	6.38	164	0.81	-	-	-	-
South Tigray Zone.....	100,557	58.87	51,494	30.15	15,803	9.25	2,470	1.45	252	0.15	245	0.14
Scharte Samre.....	12,622	56.36	7,891	35.24	1,777	7.94	104	0.46	-	-	-	-
Enderta.....	6,696	31.36	10,529	49.31	3,757	17.59	291	1.36	80	0.37	-	-
Hintalo Wajirat.....	14,348	51.35	10,401	37.22	2,749	9.84	410	1.47	36	0.13	-	-
Ambalage.....	13,909	69.68	3,883	19.45	1,725	8.64	412	2.06	-	-	33	0.17
Endamehoni.....	10,220	60.80	4,305	25.61	1,754	10.43	439	2.61	40	0.24	52	0.31
Rayaazebo.....	12,360	62.03	6,134	30.78	1,203	6.04	149	0.75	-	-	80	0.40
Alamata.....	10,803	74.31	2,716	18.68	731	5.03	149	1.02	96	0.66	42	0.29
Wofla.....	19,600	70.26	5,635	20.20	2,106	7.55	516	1.85	-	-	38	0.14

Table 8.27B:- Number of Crop Holders that Owned Camel (For threshing or transportation) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Camel		One Camel		Two Camels		Three Camels		Four Camels		Five and above Camels	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	661,243	98.44	5,931	0.88	1,668	0.25	985	0.15	642	0.10	1,268	0.19
West Tigray Zone.....	163,152	97.96	2,837	1.70	439	0.26	116	0.07	-	-	-	-
Kafta.....	9,876	98.21	180	1.79	-	-	-	-	-	-	-	-
Tahtay Adiyabo.....	15,442	97.89	333	2.11	-	-	-	-	-	-	-	-
Lacalay Adiyabo.....	20,056	97.00	597	2.89	24	0.12	-	-	-	-	-	-
Tahtay Koraro.....	13,379	99.32	38	0.28	54	0.40	-	-	-	-	-	-
Medebay Zana.....	21,699	97.10	561	2.51	88	0.39	-	-	-	-	-	-
Asegede Tsimbela.....	20,038	97.41	532	2.59	-	-	-	-	-	-	-	-
Tselemti.....	27,248	100.00	-	-	-	-	-	-	-	-	-	-
Welkait.....	21,084	96.38	403	1.84	272	1.24	116	0.53	-	-	-	-
Tsegede.....	14,331	98.66	194	1.34	-	-	-	-	-	-	-	-
Central Tigray Zone.....	213,072	98.67	2,457	1.14	260	0.12	97	0.04	-	-	58	0.03
Mereb Lehe.....	17,322	95.88	745	4.12	-	-	-	-	-	-	-	-
Ahiferom.....	31,889	96.34	1,170	3.53	43	0.13	-	-	-	-	-	-
Werie Lehe.....	26,405	99.64	32	0.12	32	0.12	32	0.12	-	-	-	-
Adwa.....	23,015	99.64	56	0.24	-	-	-	-	-	-	26	0.11
Lacalay Maychew.....	14,093	99.87	18	0.13	-	-	-	-	-	-	-	-
Tahtay Maychew.....	17,144	98.34	290	1.66	-	-	-	-	-	-	-	-
Naeder Adet.....	21,093	100.00	-	-	-	-	-	-	-	-	-	-
Kola Temben.....	26,212	99.39	64	0.24	32	0.12	65	0.25	-	-	-	-
Degua Temben.....	21,498	99.19	27	0.12	117	0.54	-	-	-	-	32	0.15
Tanqu Abergele.....	14,401	99.37	55	0.38	36	0.25	-	-	-	-	-	-
East Tigray Zone.....	118,203	99.81	-	-	125	0.11	98	0.08	-	-	-	-
Gulumahada.....	15,512	100.00	-	-	-	-	-	-	-	-	-	-
Erob.....	3,581	100.00	-	-	-	-	-	-	-	-	-	-
Saesi Tsaedamba.....	23,698	100.00	-	-	-	-	-	-	-	-	-	-
Ganta Afeshum.....	20,176	99.88	-	-	25	0.12	-	-	-	-	-	-
Hawzen.....	20,407	99.36	-	-	73	0.36	59	0.29	-	-	-	-
Wukro.....	14,497	99.55	-	-	27	0.19	39	0.27	-	-	-	-
Atsbi Wenberta.....	20,332	100.00	-	-	-	-	-	-	-	-	-	-
South Tigray Zone.....	166,812	97.65	637	0.37	845	0.49	675	0.40	642	0.38	1,210	0.71
Seharte Samre.....	22,201	99.14	25	0.11	84	0.38	84	0.38	-	-	-	-
Enderata.....	21,194	99.26	61	0.29	28	0.13	24	0.11	-	-	46	0.22
Hintalo Wajirat.....	27,183	97.28	36	0.13	168	0.60	121	0.43	208	0.74	228	0.82
Ambalage.....	19,962	100.00	-	-	-	-	-	-	-	-	-	-
Endamehoni.....	16,810	100.00	-	-	-	-	-	-	-	-	-	-
Rayaazebo.....	17,129	85.96	456	2.29	525	2.63	446	2.24	434	2.18	936	4.70
Alamata.....	14,438	99.32	59	0.41	40	0.28	-	-	-	-	-	-
Wofla.....	27,895	100.00	-	-	-	-	-	-	-	-	-	-

Table 8.28B:- Number of Crop Holders that Owned Cattle (For threshing or transportation) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Cattle		One Cattle		Two Cattle		Three Cattle		Four Cattle		Five and above Cattle	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	184,594	27.48	159,136	23.69	181,882	27.08	69,510	10.35	41,845	6.23	34,770	5.18
West Tigray Zone.....	33,418	20.07	37,309	22.40	52,609	31.59	18,071	10.85	12,001	7.21	13,136	7.89
Kafta.....	6,046	60.12	1,107	11.01	1,487	14.79	456	4.53	362	3.60	598	5.95
Tahtay Adiyabo.....	3,572	22.64	3,721	23.59	4,780	30.30	1,039	6.59	992	6.29	1,671	10.59
Laelay Adiyabo.....	3,804	18.40	6,648	32.15	7,749	37.48	1,363	6.59	721	3.49	392	1.90
Tahtay Koraro.....	2,442	18.13	2,723	20.21	4,949	36.74	1,658	12.31	1,100	8.17	599	4.45
Medebay Zana.....	4,558	20.40	5,699	25.50	7,210	32.26	2,320	10.38	1,139	5.10	1,422	6.36
Asegede Tsimbela.....	2,279	11.08	2,218	10.78	5,722	27.82	4,233	20.58	2,881	14.01	3,237	15.74
Tselemti.....	3,917	14.38	5,931	21.77	9,760	35.82	3,591	13.18	2,495	9.16	1,554	5.70
Welkait.....	4,262	19.48	5,230	23.91	5,947	27.19	2,044	9.34	1,457	6.66	2,935	13.42
Tsegede.....	2,538	17.47	4,033	27.77	5,006	34.46	1,366	9.40	855	5.89	727	5.01
Central Tigray Zone.....	58,732	27.20	53,566	24.81	56,229	26.04	23,240	10.76	13,494	6.25	10,683	4.95
Mereb Lehe.....	4,699	26.01	4,412	24.42	6,312	34.94	1,220	6.75	786	4.35	638	3.53
Ahiferom.....	10,188	30.78	11,412	34.48	5,780	17.46	3,067	9.27	1,416	4.28	1,239	3.74
Werie Lehe.....	6,342	23.93	5,129	19.35	6,947	26.21	3,078	11.61	2,805	10.58	2,200	8.30
Adwa.....	5,565	24.09	4,520	19.57	5,896	25.53	3,636	15.74	1,900	8.23	1,580	6.84
Laelay Maychew.....	4,016	28.46	2,647	18.76	4,803	34.04	1,661	11.77	569	4.03	415	2.94
Tahtay Maychew.....	5,004	28.70	5,035	28.88	4,566	26.19	1,882	10.79	758	4.35	189	1.08
Naeder Adet.....	5,398	25.59	5,281	25.04	5,110	24.23	2,289	10.85	1,616	7.66	1,399	6.63
Kola Temben.....	8,561	32.46	5,764	21.86	6,889	26.12	2,823	10.70	1,572	5.96	1,764	2.90
Degua Temben.....	6,286	29.00	5,472	25.25	4,982	22.99	2,430	11.21	1,229	5.67	1,275	5.88
Tanqu Abergele.....	2,674	18.45	3,892	26.86	4,945	34.12	1,155	7.97	842	5.81	984	6.79
East Tigray Zone.....	44,211	37.33	31,715	26.78	23,741	20.05	10,572	8.93	5,102	4.31	3,085	2.61
Gulumahada.....	5,428	34.99	4,573	29.48	3,349	21.59	1,227	7.91	602	3.88	333	2.15
Erob.....	1,603	44.76	1,033	28.85	586	16.36	234	6.53	100	2.79	25	0.70
Saesi Tsaedamba.....	8,922	37.65	6,038	25.48	3,870	16.33	2,736	11.55	1,022	4.31	1,110	4.68
Ganta Afeshum.....	8,932	44.22	6,199	30.69	3,298	16.33	1,209	5.98	449	2.22	114	0.56
Hawzen.....	7,305	35.57	4,479	21.81	4,358	21.22	2,223	10.82	1,560	7.60	614	2.99
Wukro.....	4,287	29.44	3,899	26.77	4,204	28.87	1,136	7.80	691	4.74	346	2.38
Atsbi Wenberta.....	7,734	38.04	5,494	27.02	4,077	20.05	1,808	8.89	678	3.33	541	2.66
South Tigray Zone.....	48,232	28.24	36,546	21.39	49,302	28.86	17,627	10.32	11,248	6.58	7,866	4.60
Seharte Samre.....	4,900	21.88	5,401	24.12	6,350	28.36	2,832	12.65	1,325	5.92	1,586	7.08
Enderta.....	5,651	26.46	5,694	26.67	7,314	34.25	1,726	8.08	916	4.29	52	0.24
Hintalo Wajirat.....	7,964	28.50	6,569	23.51	7,645	27.36	2,862	10.24	1,487	5.32	1,417	5.07
Ambalage.....	7,315	36.64	4,055	20.31	4,467	22.38	2,648	13.27	725	3.63	752	3.77
Endamehoni.....	5,664	33.69	3,897	23.18	4,301	25.59	1,493	8.88	838	4.99	617	3.67
Rayazebo.....	4,309	21.63	3,214	16.13	8,158	40.94	1,411	7.08	2,216	11.12	618	3.10
Alamata.....	3,805	26.17	2,841	19.54	5,369	36.93	888	6.11	784	5.39	850	5.85
Wofla.....	8,625	30.92	4,875	17.48	5,698	20.43	3,766	13.50	2,957	10.60	1,974	7.08

Table 8.29B:- 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	%
Tigray Region.....	670,599	99.83	1,025	0.15	93	0.01	-	-	20	0.00	-	-
West Tigray Zone.....	166,240	99.82	270	0.16	34	0.02	-	-	-	-	-	-
Kafta.....	10,056	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Adiyabo.....	15,775	100.00	-	-	-	-	-	-	-	-	-	-
Lalay Adiyabo.....	20,677	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Koraro.....	13,455	99.88	-	-	16	0.12	-	-	-	-	-	-
Medebay Zana.....	22,348	100.00	-	-	-	-	-	-	-	-	-	-
Asegede Tsimbela.....	20,570	100.00	-	-	-	-	-	-	-	-	-	-
Tselemti.....	27,248	100.00	-	-	-	-	-	-	-	-	-	-
Welkait.....	21,875	100.00	-	-	-	-	-	-	-	-	-	-
Tsegede.....	14,237	98.02	270	1.86	18	0.12	-	-	-	-	-	-
Central Tigray Zone.....	215,878	99.97	66	0.03	-	-	-	-	-	-	-	-
Mereb Lehe.....	18,067	100.00	-	-	-	-	-	-	-	-	-	-
Ahiferom.....	33,036	99.80	66	0.20	-	-	-	-	-	-	-	-
Werie Lehe.....	26,501	100.00	-	-	-	-	-	-	-	-	-	-
Adwa.....	23,097	100.00	-	-	-	-	-	-	-	-	-	-
Lalay Maychew.....	14,111	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew.....	17,434	100.00	-	-	-	-	-	-	-	-	-	-
Naeder Adet.....	21,093	100.00	-	-	-	-	-	-	-	-	-	-
Kola Temben.....	26,373	100.00	-	-	-	-	-	-	-	-	-	-
Degua Temben.....	21,674	100.00	-	-	-	-	-	-	-	-	-	-
Tanqu Abergele.....	14,492	100.00	-	-	-	-	-	-	-	-	-	-
East Tigray Zone.....	118,240	99.84	168	0.14	18	-	-	-	-	-	-	-
Gulumahada.....	15,454	99.63	40	0.26	18	-	-	-	-	-	-	-
Erob.....	3,581	100.00	-	-	-	-	-	-	-	-	-	-
Saesi Tsaedamba.....	23,672	99.89	26	0.11	-	-	-	-	-	-	-	-
Ganta Afeshum.....	20,201	100.00	-	-	-	-	-	-	-	-	-	-
Hawzen.....	20,539	100.00	-	-	-	-	-	-	-	-	-	-
Wukro.....	14,563	100.00	-	-	-	-	-	-	-	-	-	-
Atsbi Wenberta.....	20,229	99.49	103	0.51	-	-	-	-	-	-	-	-
South Tigray Zone.....	170,240	99.66	521	0.30	40	0.02	-	-	20	0.01	-	-
Scharte Samre.....	22,394	100.00	-	-	-	-	-	-	-	-	-	-
Enderta.....	21,236	99.45	117	0.55	-	-	-	-	-	-	-	-
Hintalo Wajirat.....	27,944	100.00	-	-	-	-	-	-	-	-	-	-
Ambalage.....	19,825	99.31	137	0.69	-	-	-	-	-	-	-	-
Endamchoni.....	16,718	99.45	32	0.19	40	0.24	-	-	20	0.12	-	-
Rayazebo.....	19,861	99.67	65	0.33	-	-	-	-	-	-	-	-
Alamata.....	14,467	99.52	70	0.48	-	-	-	-	-	-	-	-
Wofla.....	27,796	99.65	99	0.35	-	-	-	-	-	-	-	-

Table 8.30B:- Number of Crop Holders that Owned Muel (For threshing or transportation) by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Muel		One Muel		Two Muels		Three Muels		Four Muels		Five and above Muels	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	666,706	99.25	4,331	0.64	506	0.08	126	0.02	36	0.01	32	0.00
West Tigray Zone.....	165,480	99.36	1,033	0.62	15	0.01	-	-	16	0.01	-	-
Kafta.....	10,056	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Adiyabo.....	15,758	99.89	17	0.11	-	-	-	-	-	-	-	-
Laelay Adiyabo.....	20,561	99.44	116	0.56	-	-	-	-	-	-	-	-
Tahtay Koraro.....	13,397	99.45	58	0.43	-	-	-	-	16	0.12	-	-
Medebay Zana.....	22,291	99.74	57	0.26	-	-	-	-	-	-	-	-
Asegede Tsimbela.....	20,262	98.50	308	1.50	-	-	-	-	-	-	-	-
Tselemti.....	27,218	99.89	30	0.11	-	-	-	-	-	-	-	-
Welkait.....	21,618	98.83	257	1.17	-	-	-	-	-	-	-	-
Tsegede.....	14,319	98.58	191	1.31	15	0.10	-	-	-	-	-	-
Central Tigray Zone.....	214,786	99.46	1,008	0.47	118	0.05	-	-	-	-	32	0.01
Mereb Lehe.....	17,982	99.53	85	0.47	-	-	-	-	-	-	-	-
Ahiferom.....	32,814	99.13	288	0.87	-	-	-	-	-	-	-	-
Werie Lehe.....	26,441	99.77	28	0.11	-	-	-	-	-	-	32	0.12
Adwa.....	23,051	99.80	46	0.20	-	-	-	-	-	-	-	-
Laelay Maychew.....	14,111	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew.....	17,336	99.44	98	0.56	-	-	-	-	-	-	-	-
Naeder Adet.....	21,093	100.00	-	-	-	-	-	-	-	-	-	-
Kola Temben.....	26,373	100.00	-	-	-	-	-	-	-	-	-	-
Degua Temben.....	21,223	97.92	333	1.54	118	0.54	-	-	-	-	-	-
Tanqu Abergele.....	14,362	99.10	130	0.90	-	-	-	-	-	-	-	-
East Tigray Zone.....	117,575	99.28	618	0.52	140	0.12	73	0.06	20	0.02	-	-
Gulumahada.....	15,493	99.88	19	0.12	-	-	-	-	-	-	-	-
Erob.....	3,569	99.66	12	0.34	-	-	-	-	-	-	-	-
Saesi Tsaedamba.....	23,526	99.27	172	0.73	-	-	-	-	-	-	-	-
Ganta Afeshum.....	20,171	99.85	30	0.15	-	-	-	-	-	-	-	-
Hawzen.....	20,509	99.85	30	0.15	-	-	-	-	-	-	-	-
Wukro.....	14,360	98.61	144	0.99	39	0.27	-	-	20	0.14	-	-
Atsbi Wenberta.....	19,948	98.11	211	1.04	100	0.49	73	0.36	-	-	-	-
South Tigray Zone.....	168,863	98.85	1,671	0.98	234	0.14	53	0.03	-	-	-	-
Seharte Samre.....	21,988	98.19	292	1.30	85	0.38	29	0.13	-	-	-	-
Enderta.....	20,907	97.91	370	1.73	76	0.36	-	-	-	-	-	-
Hintalo Wajirat.....	27,670	99.02	202	0.72	72	0.26	-	-	-	-	-	-
Ambalage.....	19,851	99.44	111	0.56	-	-	-	-	-	-	-	-
Endamehoni.....	16,757	99.68	53	0.32	-	-	-	-	-	-	-	-
Rayaazebo.....	19,722	98.98	181	0.91	-	-	23	0.12	-	-	-	-
Alamata.....	14,433	99.28	104	0.72	-	-	-	-	-	-	-	-
Wofla.....	27,536	98.71	359	1.29	-	-	-	-	-	-	-	-

Table 8.31B:- 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	%
Tigray Region	264,702	39.41	61,201	9.11	105,883	15.76	88,456	13.17	61,878	9.21	89,617	13.34
West Tigray Zone	67,545	40.56	22,317	13.40	37,310	22.40	21,118	12.68	10,899	6.54	7,355	4.42
Kafta	7,296	72.55	1,448	14.40	1,200	11.93	104	1.03	-	-	8	0.08
Tahtay Adiyabo	4,252	26.95	1,790	11.35	3,977	25.21	2,964	18.79	1,767	11.20	1,025	6.50
Laelay Adiyabo	8,816	42.64	2,042	9.88	4,629	22.39	2,617	12.66	1,236	5.98	1,337	6.47
Tahtay Koraro	2,852	21.17	1,580	11.73	3,728	27.67	2,780	20.64	1,692	12.56	839	6.23
Medebay Zana	7,318	32.75	1,893	8.47	4,222	18.89	3,639	16.28	2,702	12.09	2,574	11.52
Asegede Tsimbela	5,924	28.80	2,874	13.97	4,426	21.52	3,831	18.62	2,290	11.13	1,225	5.96
Tselemti	12,051	44.23	4,579	16.80	6,553	24.05	2,966	10.89	765	2.81	334	1.23
Welkait	13,803	63.10	2,281	10.43	4,560	20.85	967	4.42	264	1.21	-	-
Tsegede	5,233	36.03	3,829	26.36	4,015	27.64	1,251	8.61	184	1.27	13	0.09
Central Tigray Zone	29,620	13.72	11,305	5.24	30,791	14.26	39,352	18.22	35,266	16.33	69,610	32.24
Mereb Lehe	658	3.64	692	3.83	2,927	16.20	4,691	25.96	3,990	22.08	5,109	28.28
Ahiferom	7,639	23.08	1,944	5.87	4,580	13.84	6,151	18.58	4,760	14.38	8,028	24.25
Werie Lehe	923	3.48	520	1.96	1,998	7.54	3,903	14.73	4,417	16.67	14,740	55.62
Adwa	1,503	6.51	1,207	5.23	3,234	14.00	4,221	18.28	4,381	18.97	8,551	37.02
Laelay Maychew	734	5.20	575	4.07	1,739	12.32	1,990	14.10	2,255	15.98	6,818	48.32
Tahtay Maychew	3,052	17.51	761	4.37	3,480	19.96	4,060	23.29	2,668	15.30	3,413	19.58
Naeder Adet	1,601	7.59	1,189	5.64	2,933	13.91	4,515	21.41	4,125	19.56	6,730	31.91
Kola Temben	2,463	9.34	947	3.59	3,618	13.72	4,087	15.50	4,610	17.48	10,648	40.37
Degua Temben	9,415	43.44	2,628	12.13	4,071	18.78	2,394	11.05	1,860	8.58	1,306	6.03
Tanqu Abergele	1,632	11.26	842	5.81	2,212	15.26	3,341	23.05	2,199	15.17	4,266	29.44
East Tigray Zone	56,752	47.92	6,952	5.87	15,585	13.16	17,035	14.38	11,559	9.76	10,543	8.90
Gulumahada	4,775	30.78	946	6.10	2,393	15.43	3,498	22.55	2,378	15.33	1,522	9.81
Erob	2,043	57.05	122	3.41	321	8.96	464	12.96	287	8.01	344	9.61
Saesi Tsaedamba	15,717	66.32	764	3.22	2,763	11.66	2,584	10.90	1,220	5.15	650	2.74
Ganta Afeshum	3,989	19.75	1,175	5.82	3,195	15.82	4,668	23.11	3,223	15.95	3,951	19.56
Hawzen	12,117	59.00	693	3.37	2,183	10.63	2,040	9.93	1,920	9.35	1,586	7.72
Wukro	4,785	32.86	1,230	8.45	2,145	14.73	2,554	17.54	1,664	11.43	2,185	15.00
Atsbi Wenberta	13,327	65.55	2,021	9.94	2,585	12.71	1,227	6.03	867	4.26	305	1.50
South Tigray Zone	110,784	64.85	20,627	12.08	22,197	12.99	10,950	6.41	4,154	2.43	2,109	1.23
Scharte Samre	12,487	55.76	2,662	11.89	3,093	13.81	2,458	10.98	825	3.68	869	3.88
Enderata	17,496	81.94	1,751	8.20	1,572	7.36	417	1.95	87	0.41	30	0.14
Hintalo Wajirat	24,380	87.25	1,794	6.42	1,073	3.84	527	1.89	128	0.46	42	0.15
Ambalage	13,771	68.99	2,672	13.39	2,266	11.35	938	4.70	286	1.43	29	0.15
Endamechoni	11,033	65.63	1,865	11.09	2,376	14.13	843	5.01	477	2.84	216	1.28
Rayaazebo	11,244	56.43	3,586	18.00	3,206	16.09	1,278	6.41	535	2.68	77	0.39
Alamata	5,662	38.95	3,176	21.85	3,856	26.53	1,436	9.88	317	2.18	90	0.62
Wofla	14,714	52.75	3,120	11.18	4,755	17.05	3,052	10.94	1,499	5.37	755	2.71

Table 8.32B:- 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 'Gotteras'		Three 'Gotteras'		Four 'Gotteras'		Five and above 'Gotteras'	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	458,285	68.22	65,499	9.75	62,959	9.37	40,787	6.07	21,549	3.21	22,658	3.37
West Tigray Zone.....	52,836	31.72	23,789	14.28	41,009	24.62	25,478	15.30	13,250	7.96	10,182	6.11
Kafta.....	6,555	65.18	2,403	23.90	926	9.21	133	1.32	39	0.39	-	-
Tahtay Adiyabo.....	11,278	71.49	1,701	10.78	1,606	10.18	590	3.74	330	2.09	270	1.71
Lalay Adiyabo.....	6,301	30.47	1,356	6.56	4,793	23.18	4,771	23.07	2,307	11.16	1,149	5.56
Tahtay Koraro.....	4,413	32.76	964	7.16	2,190	16.26	2,694	20.00	1,560	11.58	1,650	12.25
Medebay Zana.....	6,548	29.30	1,516	6.78	2,967	13.28	4,042	18.09	3,306	14.79	3,969	17.76
Asegede Tsimbela.....	5,733	27.87	3,154	15.33	5,973	29.04	3,348	16.28	1,616	7.86	746	3.63
Tsclenti.....	5,898	21.65	4,010	14.72	8,536	31.33	4,851	17.80	2,413	8.86	1,540	5.65
Welkait.....	5,138	23.49	5,647	25.81	6,826	31.20	2,834	12.96	948	4.33	482	2.20
Tsegede.....	974	6.71	3,039	20.92	7,192	49.51	2,215	15.25	729	5.02	376	2.59
Central Tigray Zone.....	187,894	87.01	5,327	2.47	6,663	3.09	5,555	2.57	3,481	1.61	7,024	3.25
Mereb Lehe.....	17,582	97.32	160	0.89	160	0.89	66	0.37	42	0.23	57	0.32
Ahiferom.....	29,966	90.53	81	0.24	290	0.88	690	2.08	596	1.80	1,479	4.47
Werie Lehe.....	25,538	96.37	887	3.35	32	0.12	-	-	44	0.17	-	-
Adwa.....	21,465	92.93	-	-	330	1.43	314	1.36	261	1.13	727	3.15
Lalay Maychew.....	13,982	99.09	-	-	19	0.13	20	0.14	51	0.36	39	0.28
Tahtay Maychew.....	14,042	80.54	297	1.70	862	4.94	885	5.08	687	3.94	661	3.79
Naeder Adet.....	19,411	92.03	237	1.12	292	1.38	299	1.42	179	0.85	675	3.20
Kola Temben.....	19,101	72.43	887	3.36	1,422	5.39	1,513	5.74	711	2.70	2,739	10.39
Degua Temben.....	16,561	76.41	1,536	7.09	1,824	8.42	1,036	4.78	496	2.29	221	1.02
Tanqu Abergele.....	10,249	70.72	1,242	8.57	1,432	9.88	732	5.05	412	2.84	425	2.93
East Tigray Zone.....	99,226	83.79	3,137	2.65	4,477	3.78	4,865	4.11	2,900	2.45	3,821	3.23
Gulumahada.....	14,124	91.05	132	0.85	346	2.23	500	3.22	314	2.02	96	0.62
Erob.....	3,237	90.39	92	2.57	121	3.38	86	2.40	18	0.50	27	0.75
Saesi Tsaedamba.....	19,342	81.62	1,192	5.03	1,414	5.97	1,159	4.89	288	1.22	303	1.28
Ganta Afeshum.....	19,979	98.90	27	0.13	122	0.60	50	0.25	-	-	23	0.11
Hawzen.....	10,100	49.17	501	2.44	1,840	8.96	2,763	13.45	1,999	9.73	3,336	16.24
Wukro.....	13,992	96.08	127	0.87	120	0.82	86	0.59	229	1.57	9	0.06
Atsbi Wenberta.....	18,451	90.75	1,067	5.25	514	2.53	221	1.09	53	0.26	26	0.13
South Tigray Zone.....	118,326	69.27	33,246	19.46	10,810	6.33	4,889	2.86	1,918	1.12	1,632	0.96
Scharte Samre.....	14,193	63.38	2,101	9.38	2,020	9.02	2,309	10.31	951	4.25	820	3.66
Enderta.....	20,953	98.13	242	1.13	158	0.74	-	-	-	-	-	-
Hintalo Wajirat.....	18,521	66.28	5,200	18.61	2,302	8.24	840	3.01	562	2.01	519	1.86
Ambalage.....	14,837	74.33	2,866	14.36	1,559	7.81	489	2.45	107	0.54	104	0.52
Endamehoni.....	10,652	63.37	3,816	22.70	1,328	7.90	729	4.34	155	0.92	130	0.77
Rayaazebo.....	11,651	58.47	7,073	35.50	1,128	5.66	74	0.37	-	-	-	-
Alamata.....	8,370	57.58	5,294	36.42	758	5.21	76	0.52	19	0.13	20	0.14
Wofla.....	19,145	68.63	6,654	23.85	1,559	5.59	373	1.34	125	0.45	39	0.14

Table 8.33B:- Number of Crop Holders that Owned Local Storage 'Gudguad' by Geographic area.

Geographic area	Number of Crop holders that owned											
	No 'Gudguad'		One 'Gudguad'		Two 'Gudguads'		Three 'Gudguads'		Four 'Gudguads'		Five and above 'Gudguads'	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region	649,104	96.63	17,832	2.65	3,375	0.50	646	0.10	267	0.04	513	0.08
West Tigray Zone	166,219	99.80	90	0.05	47	0.03	55	0.03	52	0.03	81	0.05
Kafta	10,034	99.78	22	0.22	-	-	-	-	-	-	-	-
Tahtay Adiyabo	15,775	100.00	-	-	-	-	-	-	-	-	-	-
Laclay Adiyabo	20,677	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Koraro	13,455	99.88	-	-	16	0.12	-	-	-	-	-	-
Medebay Zana	22,238	99.51	-	-	-	-	55	0.25	-	-	55	0.25
Asegede Tsimbela	20,432	99.33	30	0.15	30	0.15	-	-	52	0.25	26	0.13
Tselemti	27,248	100.00	-	-	-	-	-	-	-	-	-	-
Welkait	21,875	100.00	-	-	-	-	-	-	-	-	-	-
Tsegede	14,487	99.74	38	0.26	-	-	-	-	-	-	-	-
Central Tigray Zone	215,000	99.56	344	0.16	219	0.10	95	0.04	-	-	286	0.13
Mereb Lehe	18,003	99.65	64	0.35	-	-	-	-	-	-	-	-
Ahiferom	33,055	99.86	47	0.14	-	-	-	-	-	-	-	-
Werie Lehe	26,501	100.00	-	-	-	-	-	-	-	-	-	-
Adwa	22,975	99.47	25	0.11	-	-	-	-	-	-	97	0.42
Laclay Maychew	14,093	99.87	-	-	18	0.13	-	-	-	-	-	-
Tahtay Maychew	17,366	99.61	-	-	-	-	68	0.39	-	-	-	-
Naeder Adet	20,692	98.10	154	0.73	127	0.60	-	-	-	-	120	0.57
Kola Temben	26,265	99.59	-	-	39	0.15	-	-	-	-	69	0.26
Degua Temben	21,647	99.88	-	-	-	-	27	0.12	-	-	-	-
Tanqu Abergele	14,402	99.38	54	0.37	36	0.25	-	-	-	-	-	-
East Tigray Zone	117,595	99.30	298	0.25	270	0.23	115	0.10	85	0.07	63	0.05
Gulumahada	15,476	99.77	-	-	-	-	18	0.12	18	0.12	-	-
Erob	3,581	100.00	-	-	-	-	-	-	-	-	-	-
Saesi Tsaedamba	23,480	99.08	31	0.13	62	0.26	31	0.13	31	0.13	63	0.27
Ganta Afeshum	20,056	99.28	80	0.40	30	0.15	-	-	35	0.17	-	-
Hawzen	20,539	100.00	-	-	-	-	-	-	-	-	-	-
Wukro	14,563	100.00	-	-	-	-	-	-	-	-	-	-
Atsbi Wenberta	19,901	97.88	187	0.92	178	0.88	66	0.32	-	-	-	-
South Tigray Zone	150,286	87.98	17,100	10.01	2,840	1.66	381	0.22	131	0.08	83	0.05
Seharte Samre	22,108	98.72	82	0.37	89	0.40	54	0.24	-	-	61	0.27
Enderata	21,162	99.11	163	0.76	-	-	28	0.13	-	-	-	-
Hintalo Wajirat	27,408	98.08	407	1.46	42	0.15	35	0.13	52	0.19	-	-
Ambalage	19,940	99.89	22	0.11	-	-	-	-	-	-	-	-
Endamehoni	16,810	100.00	-	-	-	-	-	-	-	-	-	-
Rayaazebo	6,197	31.10	11,639	58.41	1,951	9.79	109	0.55	30	0.15	-	-
Alamata	8,939	61.49	4,700	32.33	757	5.21	70	0.48	49	0.34	22	0.15
Wofla	27,722	99.38	87	0.31	-	-	86	0.31	-	-	-	-

Table 8.34B:- Number of Crop Holders that Owned Modern Storage by Geographic area.

Geographic area	Number of Crop holders that owned											
	No Modern Storage		One Modern Storage		Two Modern Storages		Three Modern Storages		Four Modern Storages		Five and above Modern Storages	
	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%	Holders	%
Tigray Region.....	670,595	99.83	384	0.06	324	0.05	184	0.03	156	0.02	94	0.01
West Tigray Zone .....	166,020	99.69	187	0.11	204	0.12	84	0.05	49	0.03	-	-
Kafta.....	10,056	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Adiyabo.....	15,754	99.87	21	0.13	-	-	-	-	-	-	-	-
Laelay Adiyabo.....	20,560	99.43	-	-	68	0.33	-	-	49	0.24	-	-
Tahtay Koraro.....	13,453	99.87	-	-	-	-	18	0.13	-	-	-	-
Medebay Zana.....	22,348	100.00	-	-	-	-	-	-	-	-	-	-
Asegede Tsimbela.....	20,534	99.82	-	-	-	-	36	0.18	-	-	-	-
Tselemti.....	27,114	99.51	37	0.14	97	0.36	-	-	-	-	-	-
Welkait.....	21,686	99.14	129	0.59	29	0.13	31	0.14	-	-	-	-
Tsegede.....	14,516	99.94	-	-	9	0.06	-	-	-	-	-	-
Central Tigray Zone.....	215,731	99.90	29	0.01	36	0.02	38	0.02	45	0.02	65	0.03
Mereb Lehe.....	18,067	100.00	-	-	-	-	-	-	-	-	-	-
Ahiferom.....	32,992	99.67	-	-	36	0.11	38	0.11	-	-	36	0.11
Werie Lehe.....	26,501	100.00	-	-	-	-	-	-	-	-	-	-
Adwa.....	23,068	99.87	29	0.13	-	-	-	-	-	-	-	-
Laelay Maychew.....	14,111	100.00	-	-	-	-	-	-	-	-	-	-
Tahtay Maychew.....	17,434	100.00	-	-	-	-	-	-	-	-	-	-
Naeder Adet.....	21,065	99.87	-	-	-	-	-	-	-	-	28	0.13
Kola Temben.....	26,373	100.00	-	-	-	-	-	-	-	-	-	-
Degua Temben.....	21,649	99.88	-	-	-	-	-	-	25	0.12	-	-
Tanqu Abergele.....	14,473	99.87	-	-	-	-	-	-	19	0.13	-	-
East Tigray Zone .....	118,242	99.84	42	0.04	49	0.04	31	0.03	62	0.05	-	-
Gulumahada.....	15,495	99.89	-	-	17	0.11	-	-	-	-	-	-
Erob.....	3,570	99.69	11	0.31	-	-	-	-	-	-	-	-
Saesi Tsaedamba.....	23,634	99.73	32	0.14	32	0.14	-	-	-	-	-	-
Ganta Afeshum.....	20,201	100.00	-	-	-	-	-	-	-	-	-	-
Hawzen.....	20,446	99.55	-	-	-	-	31	0.15	62	0.30	-	-
Wukro.....	14,563	100.00	-	-	-	-	-	-	-	-	-	-
Atsbi Wenberta.....	20,332	100.00	-	-	-	-	-	-	-	-	-	-
South Tigray Zone.....	170,601	99.87	126	0.07	35	0.02	30	0.02	-	-	29	0.02
Seharte Samre.....	22,365	99.87	-	-	-	-	-	-	-	-	29	0.13
Enderta.....	21,353	100.00	-	-	-	-	-	-	-	-	-	-
Hintalo Wajirat.....	27,837	99.62	42	0.15	35	0.13	30	0.11	-	-	-	-
Ambalage.....	19,962	100.00	-	-	-	-	-	-	-	-	-	-
Endamehoni.....	16,747	99.63	63	0.37	-	-	-	-	-	-	-	-
Rayazebo.....	19,926	100.00	-	-	-	-	-	-	-	-	-	-
Alamata.....	14,517	99.86	20	0.14	-	-	-	-	-	-	-	-
Wofla.....	27,895	100.00	-	-	-	-	-	-	-	-	-	-

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

**Annex Tables 8.1-8.5**

ANNEX TABLE 8.1:- Standad Errors and Coefficient of Variation For the Number of Holders Reporting , Quantity Reported and Total Value, for Private Holdings, Regional.

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								
Axe.....	481,318	5,290.70	1.10	715,388	14,146.04	1.98	8,779,927	18,062,610.30	2.06
Gejera.....	283,849	5,914.85	2.08	317,408	7,099.01	2.24	3,949,718	11,090,024.46	2.81
Shovel.....	290,835	4,481.88	1.54	310,158	4,976.38	1.60	3,767,765	7,500,265.65	1.99
Used for Cultivation									
Hoe.....	57,671	3,474.92	6.03	72,753	4,917.44	6.76	810,516	5,087,559.29	6.28
Mekeskesha.....	88,223	4,839.03	5.48	148,712	9,579.09	6.44	890,892	5,389,244.50	6.05
Pick Axe.....	343,376	5,993.55	1.75	458,163	11,728.64	2.56	4,329,010	9,905,805.53	2.29
Tractor.....	-	-	-	-	-	-	-	-	-
Parts for traditional Plough									
Deger.....	531,360	4,920.64	0.93	1,350,149	22,370.47	1.66	4,272,091	7,950,082.63	1.86
Erfe (Handle).....	529,977	4,953.08	0.93	1,034,078	14,806.27	1.43	4,608,222	8,243,138.10	1.79
Plough-Beam.....	536,480	4,885.58	0.91	876,036	10,088.04	1.15	15,058,688	26,360,958.95	1.75
Plough -Tip (Metal).....	535,927	4,868.04	0.91	682,770	7,052.94	1.03	18,685,929	25,844,108.21	1.38
Wegel -Tip.....	530,386	4,927.65	0.93	719,884	9,137.46	1.27	4,210,038	6,232,643.45	1.48
Yoke.....	531,578	4,892.24	0.92	734,456	8,180.98	1.11	9,112,985	15,388,853.26	1.69
Used for Harvesting									
Sickle.....	589,958	5,074.41	0.86	1,396,916	17,108.42	1.22	11,109,346	18,474,886.57	1.66
Used for Threshing									
Hay-Fork (Metal).....	6,621	473.52	7.15	9,845	762.09	7.74	100,422	901,212.06	8.97
Hay-Fork (Wood).....	464,284	5,258.78	1.13	883,446	12,339.30	1.40	5,284,671	9,625,580.70	1.82
Threshing Stick.....	60,233	4,614.95	7.66	113,046	9,871.10	8.73	324,870	3,575,162.78	11.00
Winnower (Metal).....	3,703	694.36	18.75	4,027	770.77	19.14	48,784	927,146.35	19.01
Winnower (Wood).....	112,031	3,574.07	3.19	130,588	4,888.15	3.74	1,461,764	5,767,460.66	3.95
Other Farm Equipment									
Carts (Hauling).....	1,097	228.66	20.85	1,207	244.78	20.28	2,025,109	53,289,437.79	26.31
Sprayer (Hand Operated)	3,096	338.30	10.93	5,468	714.68	13.07	60,010	805,449.93	13.42
Sprayer (Power Operated)	•	•	•	•	•	•	•	•	•
Tying Tool.....	-	-	-	-	-	-	-	-	-
Wheelbarrow.....	799	154.82	19.38	872	170.60	19.57	112,450	2,851,698.66	25.36
Animals Used for Ploughing									
Asses.....	3,085	472.48	15.32	3,743	565.09	15.10	1,817,973	28,967,960.20	15.93
Camels.....	514	176.61	34.35	539	180.92	33.55	907,200	31,275,207.37	34.47
Horses.....	•	•	•	•	•	•	•	•	•
Mules.....	151	70.39	46.75	•	•	•	•	•	•
Oxen.....	475,321	4,648.11	0.98	844,845	21,256.05	2.52	643,505,551	870,053,179.00	1.35
Animals Used for Threshing or Transportation									
Asses.....	224,091	3,769.66	1.68	293,767	7,506.80	2.56	80,452,942	161,544,659.01	2.01
Camels.....	10,494	1,037.11	9.88	23,639	3,434.42	14.53	31,380,177	433,099,158.30	13.80
Cattle.....	487,143	4,798.65	0.99	1,162,895	24,488.10	2.11	823,638,127	1,359,263,554.51	1.65
Horses.....	1,138	223.85	19.68	1,290	269.85	20.91	595,014	12,196,807.86	20.50
Mules.....	5,030	485.16	9.64	6,024	614.71	10.20	5,822,048	60,348,599.02	10.37
Storage Structure									
Dibignit.....	407,035	7,179.77	1.76	1,388,697	34,937.87	2.52	13,327,857	42,316,319.17	3.18
Gottera.....	213,453	6,590.86	3.09	549,341	23,850.67	4.34	10,209,638	51,782,207.10	5.07
Gudguad.....	22,633	1,397.98	6.18	31,182	2,252.83	7.22	912,175	9,893,653.29	10.85
odern Storage.....	1,141	216.64	18.98	2,785	620.96	22.30	42,732	983,885.91	23.02

ANNEX TABLE 8.2:- Standad Errors and Coefficient of Variation For the Number of Holders Reporting , Quantity Reported and Total Value, for Private Holdings, West Tigray

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								
Axe .....	140,348	3,265.73	2.33	211,374	6,943.94	3.29	3,594,307	12,209,503.30	3.40
Gejera .....	82,956	3,290.79	3.97	95,240	4,110.47	4.32	1,492,943	7,669,703.30	5.14
Shovel.....	74,908	2,288.33	3.05	80,865	2,621.67	3.24	1,141,187	4,367,839.43	3.83
Used for Cultivation									
Hoe .....	23,469	2,228.94	9.50	29,275	2,993.49	10.23	330,053	2,956,209.14	8.96
Mekesksha .....	27,363	2,818.80	10.30	48,834	5,370.96	11.00	333,824	3,334,934.24	9.99
Pick Axe .....	89,843	3,756.54	4.18	124,907	7,371.81	5.90	1,267,860	6,226,071.35	4.91
Tractor .....	-	-	-	-	-	-	-	-	-
Parts for traditional Plough									
Deger.....	140,724	3,121.37	2.22	329,589	9,187.31	2.79	1,034,492	3,492,845.28	3.38
Erfe (Handle) .....	138,873	3,117.24	2.24	253,585	6,901.01	2.72	751,127	3,159,460.94	4.21
Plough-Beam .....	141,294	3,138.96	2.22	217,574	5,284.79	2.43	2,209,800	7,066,580.04	3.20
Plough -Tip (Metal) .....	140,238	3,110.23	2.22	175,650	4,094.57	2.33	6,279,145	17,144,387.22	2.73
Wegel -Tip.....	139,449	3,126.42	2.24	183,547	4,560.03	2.48	1,411,592	3,685,452.02	2.61
Yoke .....	140,843	3,140.84	2.23	200,252	4,749.43	2.37	1,668,631	5,748,784.76	3.45
Used for Harvesting									
Sickle.....	153,278	3,169.87	2.07	318,906	8,461.19	2.65	4,116,652	13,730,753.29	3.34
Used for Threshing									
Hay-Fork (Metal) .....	1,383	211.98	15.32	2,194	352.75	16.08	13,621	262,940.65	19.30
Hay-Fork (Wood) .....	114,688	3,237.29	2.82	204,606	6,855.44	3.35	941,846	3,705,779.73	3.93
Threshing Stick.....	22,660	3,197.86	14.11	43,848	6,641.58	15.15	97,802	1,411,136.68	14.43
Winnower (Metal) .....	916	369.85	40.36	969	389.53	40.21	10,751	423,924.19	39.43
Winnower (Wood) .....	33,662	2,426.58	7.21	39,401	2,935.75	7.45	235,254	1,870,419.31	7.95
Other Farm Equipment									
Carts (Hauling) .....	831	210.09	25.28	914	222.79	24.37	1,902,366	52,734,360.63	27.72
Sprayer (Hand Operated)	707	144.47	20.44	1,215	263.76	21.70	18,393	419,382.97	22.80
Sprayer (Power Operated)	*	*	*	*	*	*	*	*	*
Tying Tool.....	-	-	-	-	-	-	-	-	-
Wheelbarrow .....	131	56.95	43.37	184	88.00	47.75	*	*	*
Animals Used for Ploughing									
Asses .....	677	230.08	33.98	762	253.34	33.26	435,701	15,041,638.70	34.52
Camels.....	381	149.08	39.15	381	149.08	39.15	665,841	26,342,924.88	39.56
Horses.....	-	-	-	-	-	-	-	-	-
Mules.....	-	-	-	-	-	-	-	-	-
Oxen .....	131,411	3,034.34	2.31	256,809	10,685.98	4.16	205,336,967	622,898,968.64	3.03
AnimalsUsed for Threshing or Transportation									
Asses .....	63,181	2,133.04	3.38	81,025	5,126.71	6.33	25,731,451	104,509,170.18	4.06
Camels.....	3,392	631.19	18.61	4,062	982.23	24.18	7,073,511	186,092,143.27	26.31
Cattle .....	133,126	3,011.95	2.26	345,372	15,674.20	4.54	262,311,508	998,790,674.79	3.81
Horses.....	304	136.54	44.90	338	147.45	43.57	198,949	8,348,774.34	41.96
Mules.....	1,064	193.56	18.18	1,128	204.16	18.10	1,146,202	21,687,296.27	18.92
Storage Structure									
Dibignit.....	98,999	4,090.02	4.13	270,340	24,902.32	9.21	2,391,484	21,002,852.96	8.78
Gottera.....	113,707	4,038.99	3.55	305,231	14,231.80	4.66	5,595,052	28,234,134.80	5.05
Gudguad .....	324	136.29	42.08	*	*	*	*	*	*
Modern Storage .....	524	140.55	26.81	1,044	286.32	27.43	17,731	547,619.83	30.89

ANNEX TABLE 8.3:- Standad Errors and Coefficient of Variation For the Number of Holders Reporting , Quantity Reported and Total Value, for Private Holdings, Central Tigray.

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								
Axe.....	156,480	2,699.02	1.72	243,492	8,213.85	3.37	2,599,341	8,006,443.86	3.08
Gejera.....	110,501	3,684.27	3.33	124,383	4,477.83	3.60	1,244,150	5,258,949.55	4.23
Shovel.....	102,752	2,717.89	2.65	109,112	2,967.43	2.72	1,121,969	3,437,474.62	3.06
Used for Cultivation									
Hoe.....	18,263	2,202.89	12.06	24,840	3,348.92	13.48	223,625	2,884,817.38	12.90
Mekeskesha.....	25,816	2,922.42	11.32	45,484	6,452.91	14.19	235,827	2,876,087.78	12.20
Pick Axe.....	108,031	3,236.59	3.00	157,142	7,426.78	4.73	1,169,637	4,409,516.49	3.77
Tractor.....	-	-	-	-	-	-	-	-	-
Parts for traditional Plough									
Deger.....	169,430	2,551.93	1.51	525,796	16,520.53	3.14	1,647,228	5,448,167.56	3.31
Erfe (Handle).....	170,480	2,606.33	1.53	377,840	10,234.96	2.71	1,476,323	4,564,925.13	3.09
Plough-Beam.....	174,326	2,477.40	1.42	327,548	6,634.07	2.03	4,468,422	14,358,178.25	3.21
Plough -Tip (Metal).....	174,272	2,406.59	1.38	226,536	3,707.24	1.64	5,647,314	13,263,978.53	2.35
Wegel -Tip.....	172,277	2,477.37	1.44	244,202	4,886.18	2.00	1,252,213	2,998,504.96	2.39
Yoke.....	173,228	2,507.75	1.45	255,849	4,797.34	1.88	2,559,085	7,203,032.95	2.81
Used for Harvesting									
Sickle.....	195,135	2,549.22	1.31	538,178	9,200.23	1.71	3,228,786	8,682,782.65	2.69
Used for Threshing									
Hay-Fork (Metal).....	1,842	275.06	14.94	2,559	409.37	16.00	26,197	444,176.74	16.96
Hay-Fork (Wood).....	155,545	2,930.07	1.88	307,911	7,030.75	2.28	1,708,131	5,647,817.54	3.31
Threshing Stick.....	16,721	2,472.08	14.78	32,085	5,598.76	17.45	69,677	1,209,796.20	17.36
Winnower (Metal).....	•	•	•	•	•	•	•	•	•
Winnower (Wood).....	9,595	1,401.24	14.60	13,886	2,351.79	16.94	96,378	1,553,329.92	16.12
Other Farm Equipment									
Carts (Hauling).....	•	•	•	•	•	•	•	•	•
Sprayer (Hand Operated)	932	163.20	17.50	1,601	364.10	22.75	11,739	235,127.28	20.03
Sprayer (Power Operated)	-	-	-	-	-	-	-	-	-
Tying Tool.....	-	-	-	-	-	-	-	-	-
Wheelbarrow.....	255	97.46	38.21	255	97.46	38.21	30,471	1,229,923.18	40.36
Animals Used for Ploughing									
Asses.....	760	229.59	30.22	893	280.64	31.44	384,293	14,331,584.23	37.29
Camels.....	•	•	•	•	•	•	•	•	•
Horses.....	-	-	-	-	-	-	-	-	-
Mules.....	-	-	-	-	-	-	-	-	-
Oxen.....	152,389	2,250.46	1.48	253,307	8,219.58	3.24	196,007,297	389,058,987.67	1.98
Animals Used for Threshing or Transportation									
Asses.....	56,602	1,983.36	3.50	73,719	2,696.29	3.66	20,860,142	78,855,865.59	3.78
Camels.....	2,872	531.81	18.52	3,637	687.50	18.90	5,314,082	102,257,490.00	19.24
Cattle.....	157,212	2,380.71	1.51	379,036	15,188.75	4.01	260,823,538	662,629,975.92	2.54
Horses.....	•	•	•	•	•	•	•	•	•
Mules.....	1,158	301.19	26.00	1,405	382.51	27.23	1,262,797	34,788,389.07	27.55
Storage Structure									
Dibignit.....	186,325	3,815.08	2.05	793,572	20,353.81	2.56	7,734,881	30,078,096.36	3.89
Gottera.....	28,050	3,566.61	12.72	95,710	16,077.34	16.80	1,626,550	38,158,665.87	23.46
Gudguad.....	944	238.15	25.23	2,683	806.45	30.06	47,623	1,281,224.51	26.90
Modern Storage.....	213	92.15	43.33	827	406.93	49.23	•	•	•

ANNEX TABLE 8.4:- Standad Errors and Coefficient of Variation For the Number of Holders Reporting , Quantity Reported and Total Value, for Private Holdings, East Tigray.

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									
Axe .....	68,481	1,935.54	2.83	87,559	3,080.90	3.52	1,173,225	4,945,594.59	4.22
Gejera .....	14,688	1,155.51	7.87	15,778	1,291.81	8.19	178,022	1,651,371.66	9.28
Shovel.....	58,638	1,882.16	3.21	62,828	2,117.23	3.37	887,859	4,295,582.38	4.84
Used for Cultivation									
Hoe .....	5,038	961.89	19.09	6,335	1,369.09	21.61	113,018	2,245,154.98	19.87
Mekeskesha .....	22,011	2,054.47	9.33	34,839	3,476.29	9.98	206,215	2,612,757.98	12.67
Pick Axe.....	57,065	2,084.60	3.65	63,291	2,661.49	4.21	897,598	4,551,772.08	5.07
Tractor.....	-	-	-	-	-	-	-	-	-
Parts for traditional Plough									
Deger .....	88,829	1,655.42	1.86	212,513	7,915.79	3.72	850,331	3,403,548.98	4.00
Erfe (Handle) .....	87,885	1,668.38	1.90	148,930	4,664.06	3.13	1,146,189	4,181,197.81	3.65
Plough-Beam.....	88,234	1,697.54	1.92	118,764	2,804.07	2.36	4,094,540	13,837,938.68	3.38
Plough -Tip (Metal) .....	90,130	1,661.05	1.84	117,703	2,846.52	2.42	3,167,553	9,153,405.44	2.89
Wegel -Tip.....	87,204	1,728.55	1.98	118,707	3,781.29	3.19	663,462	2,321,792.03	3.50
Yoke.....	87,543	1,672.65	1.91	105,082	2,906.87	2.77	2,430,145	8,635,013.13	3.55
Used for Harvesting									
Sickle.....	96,309	1,852.66	1.92	221,054	6,144.58	2.78	1,674,209	6,079,377.82	3.63
Used for Threshing									
Hay-Fork (Metal) .....	1,642	226.78	13.81	2,423	347.44	14.34	34,689	569,097.51	16.41
Hay-Fork (Wood) .....	79,995	1,955.14	2.44	155,999	5,239.05	3.36	1,419,326	5,387,826.88	3.80
Threshing Stick.....	13,832	1,897.35	13.72	25,638	4,156.06	16.21	82,619	1,420,434.23	17.19
Winnower (Metal) .....	1,001	349.08	34.87	1,172	428.90	36.60	15,699	602,684.48	38.39
Winnower (Wood) .....	4,535	831.16	18.33	6,341	1,863.94	29.40	94,014	1,781,589.93	18.95
Other Farm Equipment									
Carts (Hauling) .....	*	*	*	*	*	*	*	*	*
Sprayer (Hand Operated)	560	120.85	21.57	1,193	265.24	22.24	11,469	271,331.96	23.66
Sprayer (Power Operated)	-	-	-	-	-	-	-	-	-
Tying Tool.....	-	-	-	-	-	-	-	-	-
Wheelbarrow .....	301	84.91	28.17	321	88.57	27.56	60,844	2,319,487.70	38.12
Animals Used for Ploughing									
Asses .....	816	263.49	32.27	1,077	327.67	30.43	596,032	12,272,581.09	20.59
Camels.....	-	-	-	-	-	-	-	-	-
Horses.....	-	-	-	-	-	-	-	-	-
Mules.....	*	*	*	*	*	*	*	*	*
Oxen .....	73,288	1,551.59	2.12	105,464	2,740.22	2.60	82,624,976	219,016,187.24	2.65
Animals Used for Threshing or Transportation									
Asses .....	34,043	1,276.91	3.75	42,393	1,810.35	4.27	11,547,435	50,213,699.33	4.35
Camels.....	222	94.27	42.40	542	231.60	42.71	740,515	34,549,128.21	46.66
Cattle .....	74,215	1,818.79	2.45	152,893	6,753.95	4.42	107,262,447	345,242,637.48	3.22
Horses.....	186	85.05	45.61	205	89.06	43.49	92,816	4,260,184.04	45.90
Mules.....	851	175.51	20.64	1,195	261.27	21.86	1,172,604	26,004,588.83	22.18
Storage Structure									
Dibignit.....	61,673	3,018.70	4.89	198,731	10,908.32	5.49	1,995,417	15,066,316.30	7.55
Gottera.....	19,199	2,193.26	11.42	61,989	7,928.00	12.79	829,925	14,240,317.48	17.16
Gudguad .....	830	276.59	33.34	1,928	803.43	41.66	25,137	1,041,279.35	41.42
Modern Storage .....	*	*	*	*	*	*	*	*	*

ANNEX TABLE 8.5:- Standad Errors and Coefficient of Variation For the Number of Holders Reporting , Quantity Reported and Total Value, for Private Holdings, South Tigray.

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								
Axe.....	116,008	2,509.08	2.16	172,963	8,656.38	5.00	1,413,054	9,414,025.23	6.66
Gejera.....	75,704	3,040.91	4.02	82,007	3,432.24	4.19	1,034,603	5,812,117.96	5.62
Shovel.....	54,537	1,980.25	3.63	57,353	2,145.44	3.74	616,750	2,628,251.10	4.26
Used for Cultivation									
Hoe.....	10,901	1,152.79	10.57	12,304	1,459.64	11.86	143,821	1,944,529.47	13.52
Mekeskesha.....	13,033	1,645.97	12.63	19,555	3,031.04	15.50	115,025	1,680,412.08	14.61
Pick Axe.....	88,438	2,643.85	2.99	112,823	4,580.04	4.06	993,915	4,381,615.46	4.41
Tractor.....	-	-	-	-	-	-	-	-	-
Parts for traditional Plough									
Deger.....	132,377	2,284.09	1.73	282,251	8,969.04	3.18	740,040	3,120,443.91	4.22
Erfe (Handle).....	132,738	2,288.97	1.72	253,723	6,715.21	2.65	1,234,582	4,432,400.68	3.59
Plough-Beam.....	132,626	2,235.32	1.69	212,150	4,686.77	2.21	4,285,926	15,726,340.12	3.67
Plough -Tip (Metal).....	131,287	2,339.55	1.78	162,881	3,336.50	2.05	3,591,916	10,689,712.73	2.98
Wegel -Tip.....	131,456	2,319.91	1.76	173,428	4,952.41	2.86	882,771	3,298,717.56	3.74
Yoke.....	129,965	2,232.18	1.72	173,273	3,592.62	2.07	2,455,125	8,793,244.17	3.58
Used for Harvesting									
Sickle.....	145,236	2,402.21	1.65	318,779	9,935.09	3.12	2,089,698	6,359,111.46	3.04
Used for Threshing									
Hay-Fork (Metal).....	1,754	228.47	13.03	2,670	409.93	15.36	25,916	471,041.85	18.18
Hay-Fork (Wood).....	114,057	2,183.31	1.91	214,930	5,327.49	2.48	1,215,368	4,241,754.22	3.49
Threshing Stick.....	7,020	1,166.34	16.62	11,474	2,170.03	18.91	74,773	2,703,560.97	36.16
Winnower (Metal).....	952	198.05	20.81	1,015	223.80	22.04	16,953	482,967.36	28.49
Winnower (Wood).....	64,239	2,057.03	3.20	70,960	2,504.03	3.53	1,036,118	4,917,137.13	4.75
Other Farm Equipment									
Carts (Hauling).....	178	79.48	44.69	178	79.48	44.69	•	•	•
Sprayer (Hand Operated).....	897	228.77	25.52	1,459	488.13	33.45	18,409	586,482.44	31.86
Sprayer (Power Operated).....	-	-	-	-	-	-	-	-	-
Tying Tool.....	-	-	-	-	-	-	-	-	-
Wheelbarrow.....	•	•	•	•	•	•	•	•	•
Animals Used for Ploughing									
Asses.....	831	219.46	26.40	1,012	262.72	25.97	401,947	16,027,516.04	39.87
Camels.....	-	-	-	-	-	-	-	-	-
Horses.....	•	•	•	•	•	•	•	•	•
Mules.....	•	•	•	•	•	•	•	•	•
Oxen.....	118,233	2,219.39	1.88	229,265	16,203.68	7.07	159,536,311	411,891,275.70	2.58
Animals Used for Threshing or Transportation									
Asses.....	70,264	2,023.93	2.88	96,630	4,418.32	4.57	22,313,914	80,217,498.50	3.59
Camels.....	4,008	620.88	15.49	15,398	3,210.01	20.85	18,252,070	375,891,418.65	20.59
Cattle.....	122,590	2,231.48	1.82	285,595	8,813.22	3.09	193,240,634	540,132,978.86	2.80
Horses.....	581	141.99	24.42	681	197.67	29.01	293,392	7,745,634.26	26.40
Mules.....	1,957	276.40	14.12	2,296	348.72	15.19	2,240,446	35,848,904.16	16.00
Storage Structure									
Dibignit.....	60,037	3,339.69	5.56	126,054	8,201.23	6.51	1,206,076	14,760,259.77	12.24
Gottera.....	52,496	3,097.57	5.90	86,410	6,706.43	7.76	2,158,110	15,012,001.26	6.96
Gudguad.....	20,535	1,342.59	6.54	25,159	1,773.47	7.05	769,200	7,256,293.37	9.43
Modern Storage.....	220	88.73	40.42	431	195.37	45.29	9,357	441,275.99	47.16

# APPENDIXES

**APPENDIX I** - Estimation Procedures of Totals , Ratios and  
Sampling Errors

**APPENDIX II** - Number of EAs and Agricultural Households  
Sampled and Covered by Wereda

**APPENDIX III** - 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 (Wereda).

#### 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  $h^{\text{th}}$  stratum.

$M_h$  is the measure of size of the  $h^{\text{th}}$  stratum as obtained from the sampling frame.

$m_{hi}$  is the measure of size of the  $i^{\text{th}}$  sample EA in the  $h^{\text{th}}$  stratum obtained from the sampling frame.

$H_{hi}$  is the total number of agricultural households of the  $i^{\text{th}}$  sample EA in the  $h^{\text{th}}$  stratum.

$h_{hi}$  is number of sample agricultural households successfully covered in the  $i^{\text{th}}$  sample EA in the  $h^{\text{th}}$  stratum.

$a_{hi}$  is the sample total of values of area in the  $i^{\text{th}}$  EA in the  $h^{\text{th}}$  stratum under a specific crop.

$\hat{A}_h$  is estimate of total area under specific crop in the  $h^{\text{th}}$  stratum.

#### 2. Estimation of Total Production:

$$\hat{P}_h = \sum_{i=1}^{n_h} W_{hi} P_{hi}$$

in which,  $P_{hi} = a_{hi} * \bar{Y}_{hi}$

Where,  $\bar{Y}_{hi}$  is average yield per square meter of a specific crop in the  $i^{\text{th}}$  EA in the  $h^{\text{th}}$  stratum as defined in the table below for different crops.

Crop	Formula for $\bar{Y}_h$
Cereals, pulses, oilseeds, chat and coffee	$\bar{Y}_h = \frac{Y_h}{16C_h}$
Pineapple	$\bar{Y}_h = \frac{Y_h}{4C_h}$
Root-crops and vegetables (broadcast type), and sugar cane	$\bar{Y}_h = \frac{Y_h}{C_h}$
Root-crops and vegetables (row type)	$\bar{Y}_h = \frac{Y_h}{d_h \cdot C_h}$
Other permanent crops	$\bar{Y}_h = \frac{Y_h}{b_h \cdot C_h}$

Where,  $d_h$  is average sample area of root crop or vegetable (row type) used for crop-cutting in the

$i^{\text{th}}$  EA in the  $h^{\text{th}}$  stratum, or  $d_h = \frac{r}{n-1}$

$r$  is distance measured from Row 1 to Row  $n$  in meter.

$n$  is number of rows ( $2 \leq n \leq 5$ ).

$b_h$  is average area of a fruit bearing tree in the  $i^{\text{th}}$  EA in the  $h^{\text{th}}$  stratum.

$Y_h$  is sampled total of production of a specific crop from defined area of land for crop cutting of crop in the  $i^{\text{th}}$  EA in the  $h^{\text{th}}$  stratum.

$C_h$  is number of crop cutting of a specific crop in the  $i^{\text{th}}$  EA in the  $h^{\text{th}}$  stratum.

$\bar{Y}_h$  is average yield per square meter of a specific crop in the  $i^{\text{th}}$  EA in the  $h^{\text{th}}$  stratum.

$P_h$  is estimate of total production of a specific crop in the  $i^{\text{th}}$  EA in the  $h^{\text{th}}$  stratum.

$\hat{P}_h$  is estimate of total production quantity of a specific crop in the  $h^{\text{th}}$  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.

$$Var(\hat{A}_h) = (1 - f_h) \frac{n_h}{n_h - 1} \sum_{i=1}^m \left( \hat{A}_{hi} - \frac{\hat{A}_h}{n_h} \right)^2 + f_h \sum_{i=1}^m (1 - f_{hi}) \left( \frac{h_{hi}}{h_{hi} - 1} \right) \sum_{j=1}^{h_{hi}} \left( \hat{A}_{hij} - \frac{\hat{A}_{hi}}{h_{hi}} \right)^2$$

$$Var(\hat{P}_h) = (1 - f_h) \frac{n_h}{n_h - 1} \sum_{i=1}^m \left( \hat{P}_{hi} - \frac{\hat{P}_h}{n_h} \right)^2 + f_h \sum_{i=1}^m (1 - f_{hi}) \left( \frac{h_{hi}}{h_{hi} - 1} \right) \sum_{j=1}^{h_{hi}} \left( \hat{P}_{hij} - \frac{\hat{P}_{hi}}{h_{hi}} \right)^2$$

$$Var(\hat{Y}_h) = \frac{1}{\hat{A}_h^2} [Var(\hat{P}_h) + \hat{Y}_h^2 Var(\hat{A}_h) - 2\hat{Y}_h Cov(\hat{P}_h, \hat{A}_h)]$$

Where,  $Cov(\hat{P}_h, \hat{A}_h) = (1 - f_h) \frac{n_h}{n_h - 1} \sum_{i=1}^m \left( \hat{A}_{hi} - \frac{\hat{A}_h}{n_h} \right) \left( \hat{P}_{hi} - \frac{\hat{P}_h}{n_h} \right)$

$$+ f_h \sum_{i=1}^m (1 - f_{hi}) \left( \frac{h_{hi}}{h_{hi} - 1} \right) \sum_{j=1}^{h_{hi}} \left( \hat{A}_{hij} - \frac{\hat{A}_{hi}}{h_{hi}} \right) \left( \hat{P}_{hij} - \frac{\hat{P}_{hi}}{h_{hi}} \right)$$

$$Var(\hat{y}_h) = (1 - f_h) \frac{n_h}{n_h - 1} \sum_{i=1}^m \left( \hat{y}_{hi} - \frac{\hat{y}_h}{n_h} \right)^2 + f_h \sum_{i=1}^m (1 - f_{hi}) \left( \frac{h_{hi}}{h_{hi} - 1} \right) \sum_{j=1}^{h_{hi}} \left( \hat{y}_{hij} - \frac{\hat{y}_{hi}}{h_{hi}} \right)^2$$

$f_h$  = 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 zonal and regional is computed by aggregating the result obtained at wereda 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 (Weredas).

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:

$$CV(\hat{A}_h) = \frac{\sqrt{\text{Var}(\hat{A}_h)}}{\hat{A}_h} * 100$$

$$CV(\hat{P}_h) = \frac{\sqrt{\text{Var}(\hat{P}_h)}}{\hat{P}_h} * 100$$

$$CV(\hat{Y}_h) = \frac{\sqrt{\text{Var}(\hat{Y}_h)}}{\hat{Y}_h} * 100$$

### 7. Ninety-five percent confidence interval (CI) of stratum total is:

$$\hat{Y}_h \pm 1.96 * S.E(\hat{Y}_h)$$

Where,  $S.E(\hat{Y}_h) = \sqrt{\text{Var}(\hat{Y}_h)}$

**APPENDIX II**

**Number of EAs and Agricultural Households Sampled and Covered by Wereda (Rural)**

ZONE	WEREDA	EAs		HOUSEHOLDS	
		SAMPLED	COVERED	SAMPLED	COVERED
WESTERN	KAFTA	25	25	750	750
TIGRAY	TAHTAY ADIYABO	25	25	750	749
	LAELAY ADIYABO	25	24	750	720
	TAHTAY KORARO	25	25	750	750
	MEDEBAY ZANA	25	25	750	750
	ASEGEDE TSIMBILA	25	25	750	749
	TSELEMTI	25	25	750	750
	WELKAYIT	25	25	750	749
	TSEGEDE	25	25	750	750
	<b>ZONE TOTAL</b>		<b>225</b>	<b>224</b>	<b>6750</b>
CENTRAL TIGRAY	MEREB LEHE	25	25	750	750
	AHIFEROM	25	25	750	750
	WERE LEHE	25	25	750	750
	ADWA	25	25	750	750
	LAELAY MAYCHEW	25	25	750	750
	TAHTAY MAYCHEW	25	25	750	750
	NAEDER ADET	25	25	750	750
	KOLA TEMBEN	25	25	750	748
	DEGUA TEMBEN	25	25	750	750
	TANQUA ABERGELE	25	25	750	750
<b>ZONE TOTAL</b>		<b>250</b>	<b>250</b>	<b>7500</b>	<b>7498</b>
EASTERN TIGRAY	GULO MEHADA	25	25	750	750
	EROB	25	25	750	749
	SAWSI TSADA AMBA	25	25	750	750
	GANTA AFESHUM	25	25	750	750
	HAWZEN	25	25	750	750

ZONE	WEREDA	EAs		HOUSEHOLDS	
		SAMPLED	COVERED	SAMPLED	COVERED
	WUKRO	25	25	750	750
	ATSBI WENBERTA	25	25	750	748
	<b>ZONE TOTAL</b>	<b>175</b>	<b>175</b>	<b>5250</b>	<b>5247</b>
SOUTHERN TIGRAY	SEHARTI SAMIRE	25	25	750	750
	ENDERTA	25	25	750	750
	HINTALO WAJIRAT	25	25	750	750
	AMBALAGHE	25	25	750	750
	ENDAMEHONI	25	25	750	750
	RAYA AZEBO	25	25	750	750
	ALAMATA	25	25	750	749
	WOFLA	25	25	750	749
<b>ZONE TOTAL</b>	<b>200</b>	<b>200</b>	<b>6000</b>	<b>5998</b>	
<b>REGION TOTAL</b>		<b>850</b>	<b>849</b>	<b>25500</b>	<b>25460</b>

**Number of EAs and Agricultural Households Sampled and Covered by  
Wereda (Urban)**

ZONE	WEREDA	EAs		HOUSEHOLDS	
		SAMPLED	COVERED	SAMPLED	COVERED
WESTERN	KAFTA	22	22	623	623
TIGRAY	TAHTAY ADIYABO	20	20	598	598
	LAELAY ADIYABO	9	9	255	255
	TAHTAY KORARO	20	20	380	380
	MEDEBAY ZANA	11	11	298	298
	ASEGEDE TSIMBILA	12	12	317	317
	TSELEMTI	9	9	257	257
	WELKAYIT	8	8	240	240
	TSEGEDE	1	1	30	30
	<b>ZONE TOTAL</b>	<b>112</b>	<b>112</b>	<b>2998</b>	<b>2998</b>
CENTRAL	MEREB LEHE	9	9	270	270
TIGRAY	AHIFEROM	10	10	257	257
	WERE LEHE	5	5	150	150
	ADWA	15	15	400	400
	LAELAY MAYCHEW	25	25	680	680
	TAHTAY MAYCHEW	6	6	179	179
	NAEDER ADET	3	3	90	90
	KOLA TEMBEN	13	13	351	351
	DEGUA TEMBEN	6	6	180	180
	TANQUA ABERGELE	3	3	90	90
		<b>ZONE TOTAL</b>	<b>95</b>	<b>95</b>	<b>2647</b>
EASTERN	GULO MEHADA	5	5	61	61
TIGRAY	EROB	1	1	30	30
	SAWSI TSADA AMBA	13	13	283	282
	GANTA AFESHUM	21	21	380	380
	HAWZEN	6	6	162	161

ZONE	WEREDA	EAs		HOUSEHOLDS	
		SAMPLED	COVERED	SAMPLED	COVERED
	WUKRO	17	17	373	373
	ATSBI WENBERTA	8	8	206	205
	<b>ZONE TOTAL</b>	<b>71</b>	<b>71</b>	<b>1495</b>	<b>1492</b>
SOUTHERN TIGRAY	SEHARTI SAMIRE	5	5	150	150
	ENDERTA	12	12	272	272
	HINTALO WAJIRAT	9	9	245	245
	AMBALAGHE	10	10	239	238
	ENDAMEHONI	21	21	448	442
	RAYA AZEBO	13	13	337	337
	ALAMATA	25	25	674	664
	WOFLA	20	20	471	471
	<b>ZONE TOTAL</b>	<b>115</b>	<b>115</b>	<b>2836</b>	<b>2819</b>
	<b>MEKELE ZONE</b>	<b>25</b>	<b>25</b>	<b>446</b>	<b>431</b>
	<b>REGION TOTAL</b>	<b>418</b>	<b>418</b>	<b>10422</b>	<b>10387</b>

# APPENDIX III



# 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	ENUMERATION 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		
SR. NO.	FULL NAME	IS MEMBER 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 COMPLETED 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	10 YEARS AND ABOVE		IF IN COLUMN 13, CODE 1 OR 2, EMPLOYMENT STATUS EMPLOYER =1 OWN-ACCOUNT WORKER = 2 EMPLOYEE = 3 UNPAID FAMILY WORKER = 4 OTHERS =5		
											IF NOT ENGAGED (IN COL. 11 CODE) ECONOMIC 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	
		code		code	Code	Code	Code	Code	Code	No =2	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 13 = 15





## Ethiopian Agricultural Sample Enumeration List of Fields Under Mixed Crops and their Agricultural Practices (Belg Season) - 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 Areas	Household Number	Holder Number	Name		Age	Sex	Type of Holding	
											male → 1 Female → 2	Crop → 1 Livestock → 2 Both → 3	

**Part II - Area Under Mixed Crops and Agricultural Practice**

1	2	3						4							
	Questions	Parcel No.		Field No.				Parcel No.		Field No.					
		Crop Name		Corp Name		Crop Name		Corp Name		Corp Name		Corp Name			
		code		code		code		code		code		code			
0	1	Type of Holding Private → 1 Others → 3 Rented/contract → 2													
0	2	Have the field been included in the extension package program Yes → 1 No → 2													
0	3	Total Mixed Crop Area in Local Unit		Name of Local Unit		Area		Name of Local Unit		Area					
0	4	Production in Local Unit		Production Unit		Quantity		Production Unit		Quantity		Production Unit		Quantity	
		Local Unit	Code	Local Unit	Code	Local Unit	Code	Local Unit	Code	Local Unit	Code	Local Unit	Code	Local Unit	Code
0	5	Percentage share of Area		Quantity		Quantity		Quantity		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 Indiginous seed was used what was (for Cereals, Pulses & Oilseeds) the quantity		Kg.	Gram	Kg.	Gram	Kg.	Gram	Kg.	Gram	Kg.	Gram		
0	9	If Improved seed was used, (for Cereals, Pulses & Oilseeds) what was the quantity		Kg.	Gram	Kg.	Gram	Kg.	Gram	Kg.	Gram	Kg.	Gram		
1	0	If Improved seed was used (for Cereals, Pulses & Oilseeds) what was the cost/price		Birr	Cent	Birr	Cent	Birr	Cent	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	Reason	Code	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 Non-chemical → 2 Both → 3													
1	6	If chemical in 16, Insecticide → 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 Chemical → 2 Both → 3													
1	9	One main Reason for not using Chemical fertilizer		Reason		Code		Reason		Code					
2	0	If chemical fertilizer used 20.1 Type Urea → 1 Dap → 2 Both → 3 20.2 Quantity in Kilo gram		Kg.		Gram		Kg.		Gram					
2	1	If natural fertilizer used mainly what type? Manure → 1 Compost → 2 Others → 4 Both → 3													
		/ If others specify/													



## 2.2 Work Animals (including those used for transport)

Line No.	2		3	4		5		6	7		8	
	Name of animal			Number owned	Replacement Value (Cost Per Animal)		Total Value		Average age of animal? (Years)	Do you rent work Animals?		If yes rate per day
		Code		Birr	Ct.	Birr	Ct.		Yes=1 No=2		Birr	Ct.
2	6	Oxen ( all including cows)	42									
2	7	Donkeys										
2	8	Horses										
2	9	Mules										
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)

Line No.	2		3	4		5		6	7		8	
	Storage facilities			Number owned	Replacement Value (cost per building)		Total Value		Average storage capacity of buildings? (in Quintals)	Do you rent storage facilities?		if yes, enter rate per month
		Code		Birr	Ct.	Birr	Ct.		Yes =1 No =2		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

# Ethiopian Agricultural Sample Enumeration

## Use of Crop, Livestock and Products - 2000/01 (1994 E.C.)

### (Peasant Holding)

**Part I - Identification Particulars**

Job ID	1	2	3							
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)**

**Part III - Livestock Product Usage Proportions (Percentages)**

1	2		3	4	5	6	7	8	9
	Name of Crop								
Sr. No.			Proportions of Total Product For						
	Code		Household Consumption	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									

1	2		3	4	5	6	7
	Name of Livestock & Livestock Products						
SR. No.			Proportions in Percentage				
	Code		Household Consumption	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.

# 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 your 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)	
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 using 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	

## CHICKENS

## 9. CHICKENS Total on February 8, 2002

- a. Laying hens (over 20 weeks old)  
 b. Non-laying hens ( over 20 weeks old)  
 c. Cocks - males ( over 20 weeks old)  
 d. Cockerels (8 weeks to 20 weeks old)  
 e. Pullets (8 weeks to 20 weeks old)  
 f. Chicks ( below 8 weeks old)

None


216	
217	
218	
219	
220	
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

- a. Traditinal beehives  
 b. Intermediate beehives  
 c. Modern beehives

None


223	
224	
225	
226	

## MILK, EGG AND HONEY PRODUCTION FOR THE LAST 12 MONTHS (Feb. 9, 2001-Feb. 8, 2002)

## 11. Dairy cows &amp; camels

- a. Dairy cows gave milk  
 b. Lactation period of cows (in months)  
 c. Average milking month in a caw (traditional)  
 d. Milk production - per day per dairy cow in litres  
 e. Dairy camels gave milk  
 f. Lactation period of camels (in months)  
 g. Average milking month in a camel (traditional)  
 h. Milk production - per day per camel in litres

None


227	
228	
229	
230	
231	
232	
233	
234	

None


235	
236	

## 12. Egg production - per hen per clutch

'In nearest hole number of eggs

## 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 Sr. No.	2 Type of Livestock	3 Total Vaccinated	4 Total Affected	5 Total Treated	6 Total Died	7 Major cause of death		8 Remark
						Code		
						271	272	
1	Cattle							
2	Sheep							
3	Goats							
4	Equines							
5	Camels							
6	Pigs							
7	Chickens							

**16. Source of Livestock feed**

1 Sr. No.	2 TYPE OF FEED	Code	3 USE YES = 1 NO = 2		4 IF YES, PERCENT
			Code		
1	Natural grazing	1			
2	Crop Residue	2			
3	Improved pasture	3			
4	Hay	4			
6	Oil seed(noug cake)	5			
7	Other	6			

**Number of Sheep in Age & Purpose on February 8, 2002**

Form EASE-94/8 cont.

2. SHEEP of all ages on February 8, 2002

- a. Sheep < 6 months \_\_\_\_\_
- b. Sheep 6 months & < 1 years old \_\_\_\_\_
- c. Sheep 1 year to < 2 years old \_\_\_\_\_
- d. Sheep 2 years and older \_\_\_\_\_
  - (1) Sheep for meat (slaughter purpose) \_\_\_\_\_
  - (2) Sheep for wool only \_\_\_\_\_
  - (3) Sheep for breeding purpose only \_\_\_\_\_
  - (4) Sheep for other purposes \_\_\_\_\_
- e. Grand Total \_\_\_\_\_
  - 1. Total Local breed \_\_\_\_\_
  - 2. Total Exotic \_\_\_\_\_
  - 3. Total Hybrid \_\_\_\_\_

None	Total	Male	Female
	47	48	49
	50	51	52
	53	54	55
	56	57	58
	59	60	61
	62	63	64
	65	66	67
	68	69	70
	71	72	73
	74	75	76
	77	78	79
	80	81	82
	83	84	85

**Number of Goats in Age & Purpose on February 8, 2002**

3. GOATS of all ages on February 8, 2002

- a. Goats < 6 months \_\_\_\_\_
- b. Goats 6 months & < 1 year old \_\_\_\_\_
- c. Goats 1 year to < 2 years old \_\_\_\_\_
- d. Goats 2 years and older \_\_\_\_\_
  - (1) Goats for meat (slaughter purpose) \_\_\_\_\_
  - (2) Dairy Goats \_\_\_\_\_
  - (3) Goats for breeding purpose only \_\_\_\_\_
  - (4) Goats for other purposes \_\_\_\_\_
- e. Grand Total \_\_\_\_\_
  - 1. Total Local breed \_\_\_\_\_
  - 2. Total Exotic \_\_\_\_\_
  - 3. Total Hybrid \_\_\_\_\_

None	Total	Male	Female
	86	87	88
	89	90	91
	92	93	94
	95	96	97
	98	99	100
	101	102	103
	104		105
	106	107	108
	109	110	111
	112	113	114
	115	116	117
	118	119	120
	121	122	123

**Number of Pigs by age & purpose on February 8, 2002**

- 4. Total Pigs \_\_\_\_\_
  - a. below 6 months \_\_\_\_\_
  - b. 6 months & above \_\_\_\_\_
    - b.1. For meat Purpose \_\_\_\_\_
    - b.2. Pigs for other purpose \_\_\_\_\_

None	Total	Male	Female
	124	125	126
	127	128	129
	130	131	132
	133	134	135
	136	137	138

**Number of Horses, Asses, Mules & Camels in Age and Purpose (Feb. 9, 2001-Feb. 8, 2002)**

5. HORSES of all ages	_____	None	<input type="checkbox"/>
a. Horses <3 years old	_____		<input type="checkbox"/>
b. Horses 3 Years and older	_____		<input type="checkbox"/>
b1) Horses used primarily for draft purpose	_____		<input type="checkbox"/>
b2) Horses for Transportation	_____		<input type="checkbox"/>
b3) Horses for other purpose	_____		<input type="checkbox"/>
6. MULES of all ages	_____		<input type="checkbox"/>
a. Mules <3 years old	_____		<input type="checkbox"/>
b. Mules 3 years older	_____		<input type="checkbox"/>
b1) Mules used primarily for draft purpose	_____		<input type="checkbox"/>
b2) Mules for Transportation purposes	_____		<input type="checkbox"/>
b3) Mules for Other Purpose	_____		<input type="checkbox"/>
7. ASSES of all ages	_____		<input type="checkbox"/>
a. Asses <3 years old	_____		<input type="checkbox"/>
b. Asses 3 years and older	_____		<input type="checkbox"/>
b1) Asses used for draft purpose	_____		<input type="checkbox"/>
b2) Asses for Transportation purposes.	_____		<input type="checkbox"/>
b3) Asses for Other Purpose	_____		<input type="checkbox"/>
8. CAMELS of all ages	_____		<input type="checkbox"/>
a. Camels <4 years old	_____		<input type="checkbox"/>
b. Camels 4 years and older	_____		<input type="checkbox"/>
b1) Camels for slaughter	_____		<input type="checkbox"/>
b2) Camels used for draft purpose	_____		<input type="checkbox"/>
b3) Camels for milk purpose	_____		<input type="checkbox"/>
b4) Camels for Transportation purposes	_____		<input type="checkbox"/>
b5) Camels for other purposes	_____		<input type="checkbox"/>

Total	Male	Female
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208		209
210	211	212
213	214	215



Ethiopian Agricultural Sample Enumeration  
Livestock and Honey Production-2001/2002 (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	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**

**1. Cattle of all ages on February 8,2002**

- a. Cattle < 6 months
- b. Cattle 6 months & <1 years old
- c. Cattle 1 year to <3 years old
- d. Cattle 3 years to < 10 years
  - (1) Beef Cattle (for meat production purpose)
  - (2) For breeding purpose
  - (3) Dairy cows
  - (4) Cows gave milk for the last 12 months
  - (5) Draft Cattle (for work purpose)
  - (6) Cattle for other purposes
- e. Cattle 10 years and older
- f. Grand Total
  - 1. Total Local breed
  - 2. Total Exotic
  - 3. Total Hybrid

None	Total	Male	Femal
	1	2	3
	4	5	6
	7	8	9
	10	11	12
	13	14	15
	16	17	18
	19	20	21
	22		23
	24		25
	26	27	28
	29	30	31
	32	33	34
	35	36	37
	38	39	40
	41	42	43
	44	45	46





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.	<b>The Field or other land used</b>	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			Area in Percentage share for each Crop (If in Col. 11 Code 3)
		Field Under Temp/Veg/Root Crops → 1			Identification particulars			
		Permanent → 2						
Mixed → 3	Name Code Quantity							
Other land use → 4								
		cod		code				
			1					
			2					
			3					

**Part II. Area Measurement Result**

1	2	3	4	5
The field or other land use	Area in Sq.m.	Area in Local Units		Reason if area Measurement not conducted
Date of measurement		Name of Local Area Unit	Area	
Date	Month	code	Code	

**Part III. Bearing and Distances of the Measured Area**

Side ID	A-B	B-C	C-	D-	E-	F-	G-
Bearing							
Distance 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							









## Ethiopian Agricultural Sample Enumeration

### List of Fields Under Mixed Crops and their Agricultural Practices (Mehere 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	Enumeration Areas	Household Number	Holder Number	Holders'		Type of Holding	
							Name	Age	Sex	Crop → 1
									male → 1 Female → 2	Livestock → 2 Both → 3

**Part II - Area Under Mixed Crops and Agricultural Practice**

1	2	3			4		
		Parcel No.	Field No.		Parcel No.	Field No.	
	Questions	Crop Name	Corp Name	Crop Name	Corp Name	Corp Name	Corp Name
		code	code	code	code	code	code
0	1 Type of Holding Private → 1 Others → 3 Rented/contract → 2						
0	2 Total mixed crop area in local unit	Name of Local Unit	code	Area	Name of Local Unit	code	Area
0	3 Was the field been included in the extension package program Yes → 1 No → 2						
0	4 Area in percentag share for Each crop						
0	5 Number of trees for permanent crop (Excluding Coffee, Chat, Pinapple, Sugar-cane)	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
0	6 Number of trees of fruit of permanent crop (Excluding Coffee, Chat, Pinapple, Sugar-cane)	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
0	7 was the field Irrigated yes → 1 No → 2						
0	8 Variety of seeds used Improved → 1 Indiginous → 2						
0	9 If Indiginous seed was used what was the quantity (for Cereals, Pulses & Oilseeds only)	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram
1	0 If Improved seed was used, what was the quantity (for Cereals, Pulses & Oilseeds only)	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram	Kg. Gram
1	1 If Improved seed was used what was the cost/price (for Cereals, Pulses & Oilseeds only)	Birr sent	Birr sent	Birr sent	Birr sent	Birr sent	Birr sent
1	2 was the crop Damaged Yes → 1 No → 2						
1	3 If, yes, what was the major cause of Damage	Reason Code	Reason Code	Reason Code	Reason Code	Reason Code	Reason Code
1	4 percentage of Damage						
1	5 Any control/ preventive measure Taken for crop damage → 1 → 2						
1	6 If yes, what type of measure Chemical → 1 Both → 3 Non-chemical → 2						
1	7 If chemical insecticide Insecticide → 1 1&3 → 5 Herbicide → 2 2&3 → 6 Fungicide → 3 All → 7 1&2 → 4						
1	8 Was the field fertilized yes → 1 No → 2						
1	9 If fertilized what type? Natural → 1 Both → 3 Chemical → 2						
2	0 One main Reason for not using Chemical fertilizer	Reason	Code	Reason	Code	Reason	Code
2	1 If chemical fertilizer used 21.1 Type Urea → 1 Both → 3 Dap → 2						
	21.2 Quantity in kg.	Kg.	Gram	Kg.	Gram	Kg.	Gram
2	2 If natural fertilizer used mainly what type Manure → 1 Both → 3 Compost → 2 Others → 4 / If others specify/						

# Ethiopian Agricultural Sample Enmeration- Socio Economic characteristics of Population in Agricultural Households - 2001 /2002 (1994 E.C.)

## PART I- IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7
Region	Zone	Wereda		Farmers' Association	Enumeration Area	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
SR. NO.	FULL NAME	IS MEMBER OF THE HOUSEHOLD A HOLDER Yes =1 No =2	If Column 3, Code 1		SEX MALE =1 FEMALE =2	RELATION TO THE HEAD OF HOUSEHOLD	AGE (IN COMPLETED 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 CODE) 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
			HOLDER ID	TYPE OF HOLDING CROP =1 LIVESTOCK =2 BOTH =3									
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