THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

CENTRAL STATISTICAL AGENCY

AGRICULTURAL SAMPLE SURVERY
2013/14 (2006 E.C) VOLUME V

REPORT ON AREA, PRODUCTION AND FARM MANAGEMENT PRACTICE OF BELG SEASON CROPS FOR

PRIVATE PEASANT HOLDINGS

ADDIS ABABA
OCTOBER 2014

532 STATISTICAL BULLETIN 532

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List of Acronyms

CSA	**Central Statistical Agency**
CV	**Coefficienct of Varietion**
SE	**Standard Errors**
EA	**Enumeration Area**
E.C	**Ethiopian Calencder**
Ha	**Hectare**
Qt	**Quintals**
SNNPR	**Southern Nation Nationalities and Peoples Region**

CHAPTER I

1 INTRODUCTION AND OBJECTIVES OF THE SURVEY

1.1 *INTRODUCTION*

Agriculture is a dominant sector of Ethiopian economy which makes a lion share contribution to Gross Domestic Product (GDP), employment and foreign exchange earnings of the country. Agriculture is still believed to remain a determinant sector that can play a dominant role in stimulating the overall economic development of the country in the years to come. This would be realized if and only if strenuous efforts are made by the government and other concerned stakeholders including farmers to increase agricultural productivity. Among the factors that contribute to the increment of agricultural productivity, some are increased use of modern farm inputs such as improved seed, fertilizers and through modernizing farming activities by using improved farm implements and farming system as well as through introducing modern farming technologies to the sector. In order identify, plan, implement and monitor agricultural projects and programs, among other things, availability of reliable, comprehensive and timely statistical data on the overall performance of the sector is essential. For that matter, Central Statistical Agency (CSA) of Ethiopia has been conducting four integrated annual agricultural sample surveys and has been providing the survey results to the ultimate data users for more than three decades.

Out of the annual agricultural sample surveys carried out by the CSA, Belg season agricultural sample survey is the one that generates data on crop cultivated area, production and farm management practice for the major Belg season crops of the private peasant holdings on annual basis. In the previous years, two reports were use to be generated from the Belg agricultural sample survey nearly simultaneously which are named as a report on area and production and report on farm management practices. As of the the year 2013/14 (2006 E.C.), the Belg season agricultural sample survey findings are compliled and produced in only one report with the basic idea of making the report user friendly and handy in this report . The report is contained with the data on crop cultivated area and production as well as farm management practices of the private peasant farming of the major Belg crops for the year 2013/14 (2006 E.C). The findings are summarized and presented using tables and graphs at national and regional levels.

1.2 *OBJECTIVES OF THE SURVEY*

Availability of adequate and timely agricultural data is important for policy formulation, designing of different projects and programs and to conduct various researches on agriculture. Given the importance of agricultural data, the two main objectives of the 2013/14 (2006 E.C.) Belg season agricultural sample survey is to generate basic quantitative information on:

- Crop cultivated area, production and yield of major Belg season crops and
- The use of different farm management practices that includes the type and quantity of fertilizers used, crop cultivated area with fertilizer, areas under irrigation, areas applied with improved seeds and indegineous seeds, areas applied with pesticide,… etc.

Given the two objectives of the survey, while presenting and discussing the survey findings, first summary of area and production is discussed and followed by the summary of the farm management practices findings, subsequently.

CHAPTER II

2 SURVEY METHODOLOGY, DATA COLLECTION AND PROCESSING

2.1 *COVERAGE*

The 2013/14 (2006 E.C) Annual Agricultural Sample Survey of the Belg season covered the entire rural parts of the country except the non-sedentary population of the three zones of Afar and six zones of Somali regions. Accordingly, all parts of Harari, Dire Dawa as well as 60 Zones (Special Weredas that are treated as Zones of other regions) are also considered in the survey. The survey was planned to cover a total of nearly 1 492 Enumeration Areas (EAs). However, in 226 EAs among the selected EAs, the survey was not successful due to various reasons. Therefore, the survey was successfully accomplished involving only 1 266 EAs.

2.2 *SAMPLING FRAME*

The list of Enumeration Areas (EAs) was obtained from the 2007 Population and Housing Census. From the list of the EAs obtained, a set of sampled EAs were selected based on the sample design proposed for the survey. Once the selection of the sampled EAs was accomplished, a fresh list of households within each selected EA was carried out. The list of agricultural households in each EA was used as a sampling frame from which the agricultural households are finally selected as sources of data for data collection.

2.3 *SAMPLE DESIGN*

In order to select the survey sample, a stratified two-stage cluster sample design was implemented. Enumeration areas are the primary sampling units (PSUs) whereas the agricultural households are the Secondary Sampling Units (SSUs). The sample size for the 2013/14 agricultural sample survey was determined by considering both the required level of precision for the most important estimates within each domain and the amount of resources allocated to the survey. In order to reduce the non-sampling errors, considerable effort was allocated to manage the survey in terms of quality and operational control. With the exception of Harari, and Dire Dawa, each region was taken to be the domain of estimation. Each

zone of the regions / special woredas was adopted as a stratum for which major findings of the survey are reported.

2.4 *SELECTION SCHEME*

Enumeration areas from each stratum were selected systematically using a probability proportional to size sampling technique; size being the number of agricultural households. From the fresh list of households prepared at the beginning of the survey, 30 agricultural households within each sampled EA are selected systematically. The estimation procedures of totals, ratios, sampling error and the measurements of precision of estimates (CV) of the survey are given in Appendix-I, II and III.

2.5 *FIELD ORGANIZATION*

The Central Statistical Agency (CSA) has 25 statistical branch offices located in different parts of the country. Each branch office has its respective branch head, field supervisors, enumerators, other supporting staffs and drivers. By the year 2013/14 (2006 E.C.), 24 Branch offices are involved in the field operation activities of agricultural sample survey of the Belg season. In order to accomplish the data collection activities, field enumerators are equipped with the necessary survey equipments such as GPS, compass, programmable calculator, measuring tape, questionnaire … etc. To facilitate the field work of data collection and for field supervision, the branch offices used the available four-wheel drive vehicles. The Addis Ababa statistical branch office did not take part on the 2013/14 (2006 E.C) Belg season agricultural sample survey as the farming activities by smallholder private holdings are not commonly practiced in the EAs of the branch office.

2.6 *TRAINING OF THE FIELD STAFF*

At the beginning of the survey year, the field staff-training program was carried out for the survey in two-stages. The first stage training was the training of the trainers which was carried out at Mekelle, the capital of Tigray National Regional State for six consecutive days. In the first stage training, the trainers were the staff from the head office while the trainees were branch statistical office heads, statisticians and some field supervisors. The manpower trained in the first stage inturn provided similar training for the enumerators and field supervisors for 20 days in the 24 Statistical Branch Offices at the second stage training. During the

second-stage training, the trainee were given detailed classroom training on the objectives and uses of the Agricultural Sample Survey (AgSS), concepts and definitions of terms used, the method of area measurement, interviewing procedures, … etc. The second stage training also included a field practice to reinforce the procedures discussed in the classroom, to identify the boundaries of the households included in the EAs and to practice interviewing, area measurement using GPS and compass rope techniques, etc.

2.7 *METHODS OF DATA COLLECTION*

The agricultural data for 2013/14 Belg season crops were collected from the selected rural agricultural households by interviewing the respondents (subjectively) supported by questionnaire and by measuring physically (objectively) the farm fields (areas) for the selected agricultural households using the equipments such as GPS, compass and measuring tape.

A major characteristic of Ethiopian agriculture is the existence of two well-known crop production seasons named as Meher (main) and Belg (short rain) seasons. Meher is a long rainy season which normally occurs from June to September. The Belg season most often refers to small rainy season which normally occurs from February to May mostly in limited areas of the country. Generally, the Meher season rain provides ideal crop growing moisture for the longer maturing crops.

A point of contention arises with respect to the pure definition of Belg crops. Belg cropping practices are heterogeneous across different parts of the country. The nature of the sowing period also overlaps with some of the Meher season crops. Consequently, the report on Belg Season crops in the past faced a problem of a clearly defined growing period. To help clarify the two-crop season, the following definitions have been used since 1987/88: Belg Season Crops are defined as crops that are harvested during the months of March to August, while crops that are harvested during September to February are considered as Meher season crops.

The time period for data collection on area, production and agricultural practices of the Belg season was from ‘Miyazia 15/2006 to Ginbot 30/2006 E.C. (May 23 to June 7, 2014). Belg season’s crop cultivated area data are collected objectively using compass/GPS and measuring tapes, while production data were collected subjective by interviewing the agricultural holders face to face. Data on production of Belg season crops are calculated from the condition factor data that are collected directly from the sampled holders within the households and development agents (DA). The enumerators are trained to systematically present the

questions to the respondents on percentage change bases using the local translation and meaning. The enumerators were also trained on how to use comparative associations to represent the concept of percentage changes and to fill in the questionnaire.

2.8 *DATA PROCESSING*

a. Editing, Coding and Verification

To insure the quality of the collected data, data editing, coding and verification tasks were conducted. For data editing, coding and verification purpose, instruction manual was prepared and four data editors were involved in the editing, coding and verification of the data in the head office. The number of editors participated in editing was relatively lesser relative to the last year due to the shortage of manpower during the time of editing. Although some of the branch offices accomplished the editing work in their respective offices, most of the editing work was accomplished in the head office. Generally, editing, coding and verification of all questionnaire were completed in 16 days. The edited data finally went through computer data entry operation.

b. Data Entry, Cleaning and Tabulation

Before starting data entry, computer edit specifications were prepared for use on personal computers and CSPro Software was used for the purpose of data consistency checking. The filled in questionnaire data were entered into personal computers by data encoders of CSA through the use of CSPro. About 73 data encoders and 6 supervisors were involved in this total process and it lasted 26 days to complete the data entry activity. After the data entry was accomplished, the data were checked for consistency and cleaned using the data cleaning specifications prepared for this purpose. Finally, tabulation was done on personal computers to produce results as indicated in the tabulation plan.

2.9 *BASIC CONCEPTS AND DEFINITIONS*

For a better understanding of the data presented in this report, the basic concepts and definitions of some technical terms and terminologies used in the collection of the agricultural sample survey data for 2013/14 (2006 E.C.) Belg season are indicated as follows.

Enumeration Area (EA): An Enumeration Area in the rural parts of the country is a locality that is in most cases less than and in some cases equal to a farmers' association in geographical area and usually it consists of 150 to 200 households.

Household: A household may be either:

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

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

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

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 technical unit by one person alone, or with others, regardless of the title, legal form, size or location.

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

Parcel: A parcel of a holding is any piece of land entirely surrounded by land, water, road, forest… etc., which are not part of the holding. A parcel may consist of one or more cadastral units, plots or field 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.

Belg Season Crops: are defined as any temporary crops that are harvested during the months of March (Megabit) to August (Nehase**).**

Meher Season Crops: are those crops that are harvested during September (Meskerem) to February (Yekatit).

Irrigated area: refers to the area of land that is purposefully and actually provided with water artificially, 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 crop 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 applied to the soil that is intended to increase the amount of plant nutrients available for crop growth. Fertilizers are usually categorized into two which include natural and chemical fertilizers. Examples of natural fertilizers are farmyard manure and wood ashes while that of the chemical fertilizers are DAP (Di-Ammonium Phosphate) and UREA (Ammonium Nitrate).

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

CHAPTER III

3 SUMMARY OF MAJOR FINDINGS OF THE SURVEY

3.1 *AREA AND PRODUCTION*

The general overview of the total cropland[1] area cultivated and total production of the country for Belg season of 2013/14 (2006 E.C) shows an increment compared to the performance of 2012/13 (2005 E.C) Belg season. The total cropland area cultivated increased by 8.15% (from 1 396 472.47 hectare in 2012/13 (2005 E.C) to 1 510 345.14 hectare in 2013/14). Similarly, total crop production is also increased by 16.52% (which is an increment from 21 881 719.6 quintals in 2012/13 (2005 E.C) to 25 495 860.11 quintals in 2013/14 (2006 E.C)). Increased utilization of improved farm management practices are among the factors that can positively contributed to increased production during the 2013/14 (2006 E.C) Belg season. It is also important to note that three crops named masho, white and red harricotbeans (which was formerly named haricotbeans) and yam are included in the crops surveyed in 2013/14 (2006 E.C Belg season) unlike the previous years which could bring change in the total cropland area cultivated and production on Belg season. Given this background, the main findings of the 2013/14 (2006 E.C.) Belg season crop production sample survey are presented in this Chapter**.**

3.1.1 <u>Grain Crops</u>: refer to a major crop category that includes cereals, pulses and oilseeds, which are not only the major food crops of country and but also are the main sources of household income and sources of the foreign currency earnings. The 2013/14 (2006 E.C) Belg season agricultural sample survey result indicates that a total land area of about 1 327 860.49 hectare was cultivated by the major Belg crops (grains) from which a total grain production of about 10 970 571.62 quintals was estimated to be harvested at national level. As compared to the production year of 2012/13 (2005 E.C) grain cultivated area and production has increased by 7.8% and 11.89%, respectively. Out of the total estimate of Belg season cropland area and production, cereals accounted for the largest percentage in both crop cultivated area and in production. Cereals accounted for about 1 037 966.49 hectares (78.17% of the national Belg grain cropland area) and about 9 576 746.66 quintals (87.29% of the total national grain production). Following cereals is, pulse crops which accounted for about 261 101.05 hectares (19.66% of the total grain area) and about 1 388 083.6 quintals

[1] Total cropland area and production refers total grain crops, vegitables and root crops total area and production for Belg season

production (which is 12.65% of the total grain production). Moreover, oilseeds are the other category of grain crops produced which accounted for an area of 28 792.96 hectares (2.17% of the total grain area) and 5 741.36 quintals of production (0.05% of total grain produced during the Belg season). (For more details, see Summary Table 1).

Summary Table 1: Cropland Area and Production of Major Belg Crops: Private Peasant Holdings, 2013/14 (2006 E.C.), Country Level

Crop Category	Total Cropland Area		Total Production	
	in Hectare	%	In Quintals	%
Cereal……	1 037 966.49	78.17	9 576 746.66	87.29
Pulses……	261 101.05	19.66	1 388 083.60	12.65
Oilseeds……..	28 792.96	2.17	5 741.36	0.05
Grain crops……	1 327 860.49	*100*	10 970 571.62	*100*

In order to illustrate the overall performance of the 2013/14 (2006 E.C) crop production year, the total estimated cropland area and production of grain crops for private peasant holders for seasons of Meher and Belg as well as for commercial farms are presented in the Summary Table 2. By the year 2013/14 (2006 E.C) the overall grain cultivated area estimated is about 14 337 647.65 hectare. As compared to 2012/13 (2005 E.C), there is a 1.8% increment in area cultivated of major grain crops nationally where the last year's area was 14 083 525.54 hectares (this value is obtained from the last years report, not given in Table 2).

***Summary Table 2: Summary of National Grain Cropland Area and Production of Meher season, Belg Season and Commercial Farms during 2013/14 (2006 E.C.),* Country Level**

	Grain crops Area (Ha)	%	Grain Production(Qt)	%
Meher season private holdings	12 407 473.46	***86.54***	251 536 623.90	***91.66***
Belg season private holdings	1 327 860.49	***9.26***	10 970 571.62	***4.00***
Commercial Farms	602 313.70	***4.20***	11 919 952.76	***4.34***
Grand total	14 337 647.65	***100***	274 427 148.28	***100***

Out of the total grain area estimated, Meher season grain area accounted for about 12 407 473.46 hectare (86.54% of the total grain area cultivated) while Belg and commercial farms accounted for about 1 327

860.499 hectares (9.26% of total grain area) and 602 313.70 hectares (4.2% of the total grain area cultivated) respectively.

The total grain crops produced during 2013/14 (2006 E.C) amounts 274 427 148.28 quintals which is increased by 9% from the 2012/13(2005 E.C) total production that was 251 050 015.88 quintals, considering Meher, Belg and commercial farms. Meher season, Belg season and commercial farms account for about 251 536 623.90 Quintals (91.66%), 10 970 571.62 Quintals (4%) and 11 919 952.76 Quintals (4.34%) of the total grain production, respectively for the year 2013/14 (2006 E.C).

3.2 *ESTIMATES OF THE 2013/14 (2006 E.C) TOTAL CROP LAND AREA AND PRODUCTION OF MAJOR CROPS, MEHER AND BELG SEASONS*

For the year 2013/14 (2006 E.C.), the total cropland area cultivated of major crops (grains) of the private peasant holdings during both seasons was estimated to be 13 735 333.95 hectares (commercial not included). Meher season accounts for 12 407 473.46 (90.67%) while Belg season accounts for 1 327 860.50 (9.33%) of grain crops area cultivated during both seasons. The estimated area of grain crops cultivated during both seasons is given in Summary Table 3.

Summary Table 3. Cropland Area under Major Crops for Private Peasant Holdings 2013/14 (2006 E.C.), Both Seasons: Country Level

	Total Grain Cropland Area in Hectares during					
	Meher Season		***Belg Season***		***Both seasons Total***	
Crop Type	***Area in Ha***	***%***	***Area in Ha***	***%***	***Area in Ha***	***%***
Cereal	9 848 745.96	79.38	1 037 966.49	78.17	10 886 712.45	79.26
Pulses	1 742 602.19	14.04	261 101.05	19.66	2 003 703.24	14.59
Oilseeds	816 125.31	6.58	28 792.96	2.17	844 918.27	6.15
Total	12 407 473.46	100.00	1 327 860.50	100.00	13 735 333.96	100.00

As indicated in Summary Table 3, cereals accounted for about 10 886 712.45 hectares (79.26% of the total grain cultivated area) while Pulses and Oil crops accounted for about 2 003 703.24 hectare (14.59%) and 844 918.27 hectares (6.15%) of the total grain cropland area, respectively, in both seasons. Graphical representation of the estimates of total area under major crops for private holdings in Ethiopia for both seasons during 2013/14 (2006E.C) is indicated using Figure 1 as follows.

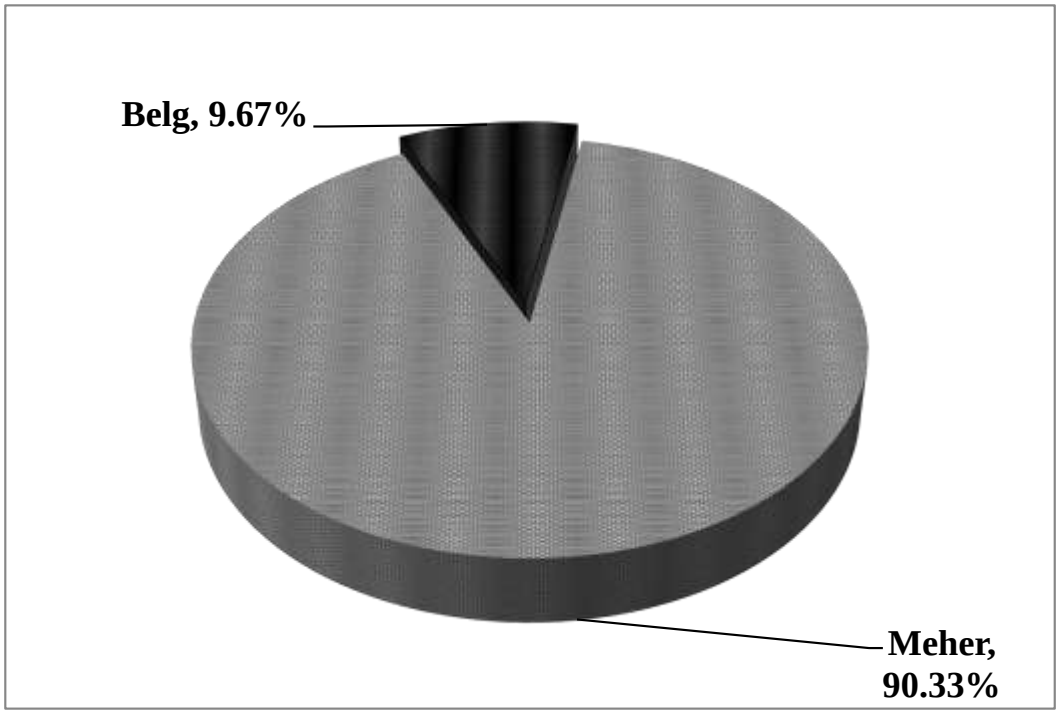


Figure 1 Estimates of Total Area under Major Crops for Private peasant Holdings in Ethiopia for Both Seasons 2013/14 (2006 E.C)

Figure 1 shows that out of the total major crops cultivated area by private peasant holdings during both seasons of 2013/14 (2006 E.C), Belg and Meher seasons account for 9.67% and 90.33%, respectively. Likewise, the overall performance of the major grain crops production estimates for both seasons is illustrated in Summary Table 4.

Summary Table 4. Total Production of Major Crops Harvested by Private Peasant Holdings, 2013/14 (2006 E.C.), Both Seasons: Country Level

Crop Type	*Total Production in Quintals, Harvested during*					
	Meher Season		**Belg Season**		**Both seasons**	
	Production in Quintals	**%**	Production in Quintals	**%**	Production in Quintals	**%**
Cereal	215 835 255.61	*85.81*	9 576 746.66	*87.30*	225 412 002.27	*85.87*
Pulses	28 588 805.90	*11.37*	1 388 083.6	*12.65*	29 976 889.50	*11.42*
Oil crops	7 112 592.38	*2.82*	5741.36	*0.05*	7 118 333.74	*2.71*
Total	251 536 623.90	*100*	10970571.62	*100.00*	262 507 195.52	*100.00*

The Summary Table 4 indicate that cereals production accounted for about 225 412 002.27 quintals (85.87% of the total grain crops) produced in both seasons. Pulses and Oil crops account for about 29 976 889.50 quintals (11.42%) and 7 118 333.74 (2.71%), respectively of the total sum of both seasons..

Moreover, the graphical representation of the estimates of the total production of major crops for private holdings in Ethiopia for both seasons during 2013/14 (2006 E.C) is indicated using Figure 2 bellow.

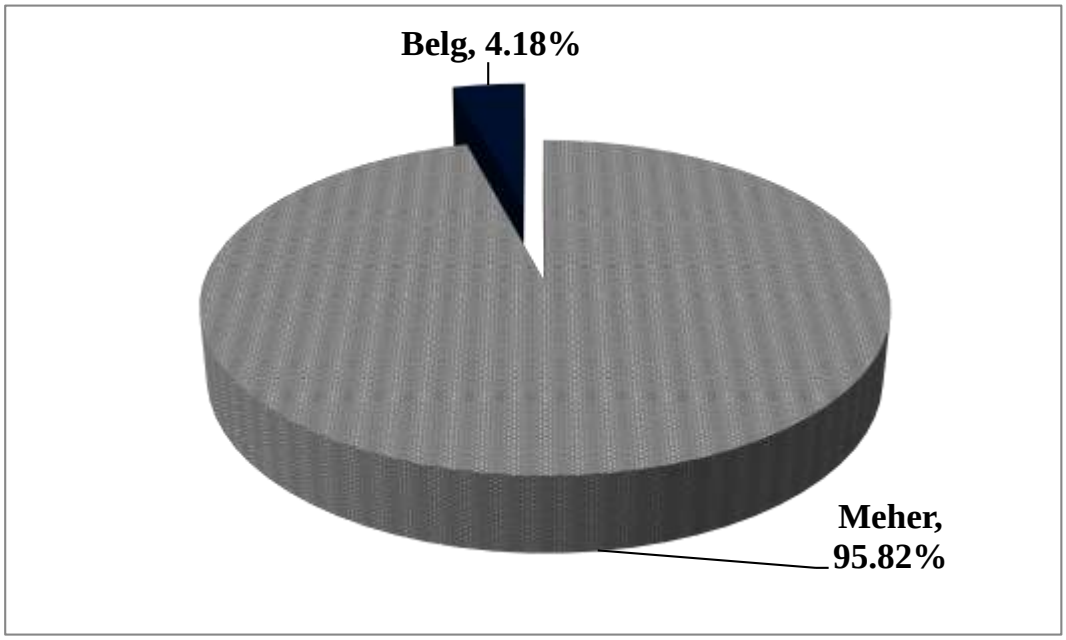


Figure 2 Estimates of Total Production of Major Crops for Private Holdings in Ethiopia for Both Seasons of 2013/14 (2006 E.C)

Figure 2 indicates that out of the total of major crops produced by private peasant holdings during both seasons of 2013/14 (2006 E.C), Belg accounts for 9.67% (which is about 10 970 571.62 quintals) whereas Meher accounts for 95.82% (about 251 536 623.90 quintals).

3.1.3 <u>Vegetables</u>: holders living near to urban centres largely practice vegetable farming. Vegetable farms are not commonly practiced by the rural private peasant holders which is evidenced by the small volume of production recorded as indicated by the survey result. This is better indicated in Figure 3. Vegetables account about 1.87% of the area under all crops at national level during the Belg season. Out of the total area under vegetables, 81.26% and 7.64% are accounted for Ethiopian Cabbage and Tomato, respectively (See Statistical Table 6).

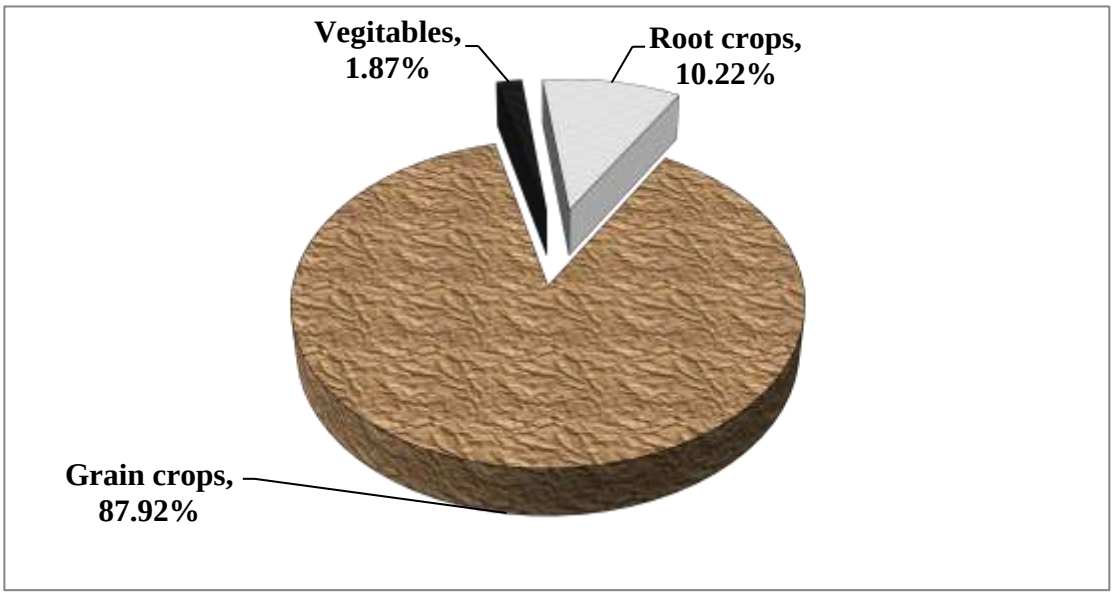


Figure 1*:* ***Percentage of Area under Major Belg Season Crops in 2013/14(2006E.C), National***

3.1.4. Root Crops: - Root crops such as onion and garlic are indispensable to improve the taste and scent of the food we eat. Other crops like potatoes, sweet potatoes and taro/ Godere are among the major root crops that are consumed in the country. The economic importances of these crops prompt the peasant farm holders to grow many of the root crops as shown in the survey results. For more details, see the statistical Table 5. Root crops covered nearly 10.22% of the area under all Belg crops in the country. Potatoes, onion and sweet potatoes accounted for 72.74%, 10.40% and 9.56% of the total root crop area cultivated, respectively. Interms of production, potatoes, onion and sweet potatoes accounted for 65.16%, 7.87% and 19.51% of the total root crop production, respectively.

NOTES:

1. Some estimates in all reporting levels are excluded due to high coefficient of variations. Nevertheless, they are incorporated in the total estimates. Hence the sum of the specific estimates may not be equal to the total estimates.

2. Users are also advised to use those estimates with 30-50% coefficient of variation (CV) cautiously

3. Even though area is reported for some crops in some reporting levels, no production data is available such cases are designated by Not Stated (NS). On the other hand, in all tables "-" labeled for data not available totally.

Statistical Tables Presenting Area and Production Results at National and Regional Levels

Summary Table 5. Estimates of Total Cropland Area and Production for the Meher (main) and Belg (seasons) and Commercial Farms for the Crop Production Year of 2013/14 (2006 E.C), National

Crop Name	Total Cropland Area (Hectare)			All Cropland Area in Hectare	Total Production (Quintal)			All Crop Production in Quintal
	Meher		Belg		Meher		Belg	
	Private H.	Commercial	Private H.		Private H.	Commercial	Private H.	
Grain Crops.....	**12407473.46**	**602313.70**	**1327860.49**	**14,337,647.65**	**251,536,623.90**	**11919952.8**	**10970571.62**	**274,427,148.28**
Cereals.....	**9848745.96**	**273826.08**	**1037966.49**	**11,160,538.53**	**215,835,225.61**	**8788400.99**	**9576746.66**	**234,200,373.26**
Teff.....	3016521.90	6032.22	93958.15	3116512.27	44,186,421.95	87904.03	634713.04	44,909,039.02
Barley.....	1019477.93	714.99	185943.24	1206136.16	19,082,624.11	19947.51	1428203.45	20,530,775.07
Wheat.....	1605653.90	80744.08	63196.03	1749594.01	39,251,741.35	2578690.95	705838.8	42,536,271.10
Maize.....	1994813.80	84570.03	599614.49	2678998.32	64,915,402.92	3451381.63	6142555.49	74,509,340.04
Sorghum.....	1677486.33	97572.31	43648.93	1818707.57	38,288,701.03	2559994.2	289881.14	41,138,576.37
Finger millet.....	454662.33	353.79	401.07	455417.19	8,489,564.26	5844.83	33.03	8,495,442.12
Oats/'Aja'.....	35617.76	397.48	7795.90	43811.14	616,502.59	740.38	99526.67	716,769.64
Rice.....	33819.65	3441.18	*	*	923,627.30	83897.46	*	
Masho.....	10692.38	-	43313.15	-	80,640.10	-	*	
Pulses.....	**1742602.19**	**45728.69**	**261101.05**	**2,049,431.93**	**28,588,805.90**	**838828.63**	**1388083.6**	**30,815,718.13**
Horse beans.....	538458.21	435.20	3679.83	542573.24	9,917,002.83	8291.33	13212.75	9,938,506.91
Field peas.....	275386.33	239.06	23501.98	299127.37	3,798,130.84	5198.19	148018.47	3,951,347.50
Haricot beans white.	133372.84	-	38259.11	-	1,987,777.65	-	243468.85	
Haricot beans red...	193093.04	-	155396.26	-	2,586,338.48	-	864842.45	
Chick-peas.....	229720.74	8,282.14	10167.92	248170.80	4,238,148.39	130320.58	110192.29	4,478,661.26
Lentils.....	125830.74	43.40	16597.31	142471.45	1,591,212.26	681.6	346.6	1,592,240.46
Vetch.....	169441.21	22.56	*	*	3,173,220.59	602.24	*	
Soya beans.....	30517.38	25,446.03	64.72	56028.13	610,249.16	492865.38	-	
Fenugreek.....	24426.24	586.00	522.29	25534.53	456,266.15	7385.82	2530.4	466,182.37
Gibto.....	22355.46	-	*	*	230,459.55	-	-	
Oil crops.....	**816125.31**	**282,758.93**	**28792.96**	**1,127,677.20**	**7,112,592.38**	**2292723.14**	**5741.36**	**9,411,056.88**
Neug.....	285303.47	1,044.76	*	*	2,202,111.90	9569.55	-	
Linseed.....	95582.79	478.65	272.93	96334.37	879,459.08	7422.91	*	
Groundnuts.....	79947.03	1,419.10	3393.34	84759.47	1,120,887.24	23616.76	*	
Sunflower.....	11526.27	27.19	1287.79	12841.25	83,470.97	426.66	-	
Sesame.....	299724.41	276,701.42	23321.11	599746.94	2,202,160.53	2197326.33	5714.01	4,405,200.87
Rapeseed.....	44041.34	3,087.82	284.95	47414.11	624,502.66	54360.94	-	
Vegetables.....	**161487.93**	**6,468.85**	**28174.39**	**196,131.17**	**7,228,936.61**	**830826.07**	**1888449.36**	**9,948,212.04**
Lettuce.....	239.88	212.02	23.66	475.56	*	63711.78	*	
Head Cabbage.....	3961.84	206.93	1227.10	5395.87	270,188.32	49540.73	60763.78	380,492.83
Ethiopian Cabbag....	34503.80	25.96	22893.63	57423.39	3,603,271.60	3801.22	1661907.97	5,268,980.79
Tomatoes.....	7257.45	1,471.96	2153.42	10882.83	393,730.22	479219.66	105078.29	978,028.17
Green peppers.....	6167.47	149.48	1041.64	7358.59	412,503.57	29810.78	50821.7	493,136.05
Red peppers.....	109050.25	4,368.45	789.71	114208.41	2,541,883.97	203664.21	7988.82	2,753,537.00
Swiss chard.....	307.23	34.05	*	*	*	1077.71	*	
Root Crops.....	209879.65	1,219.26	**154310.26**	**365,409.17**	41,608,725.14	295101.68	**12636839.13**	**54,540,665.95**
Beetroot.....	1643.15	2.67	503.03	2148.85	140,749.38	283.82	19163.01	160,196.21
Carrot.....	1602.46	45.13	986.36	2633.95	67,120.34	2725.37	40696.67	110,542.38
Onion.....	24375.70	856.88	16054.30	41286.88	2,197,352.67	189604.59	993908.32	3,380,865.58
Potatoes.....	66745.61	172.54	112241.12	179159.27	7,849,934.00	36552.48	8233576	16,120,062.48
Yam/'Boye'.....	3075.62	-	1449.99	-	-	-	242730	
Garlic.....	16411.19	35.34	3026.01	19472.54	1,590,935.75	5328.46	259032.96	1,855,297.17
Taro/'Godere'.....	42656.73	0.38	5290.54	47947.65	11,935,383.02	15	381819.17	12,317,217.19
Sweet potatoes.....	53,369	106	14,759	68,234	17,827,250	60,592	2,465,913	20,353,755

Table 5.1. Cropland Area, Production and Yield of Major Belg Crops for Private Peasant Holdings for Belg Season 2013/14 (2006 E.C.)

National

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**5950886**	**1327860.49**	**100**	**10970571.62**	**100**	**8.26**
Cereals.....	**5528239**	**1037966.49**	**78.17**	**9576746.66**	**87.29**	
Teff.....	357542	93958.15	7.08	634713.04	5.79	6.76
Barley.....	938490	185943.24	14	1428203.45	13.02	7.68
Wheat.....	229857	63196.03	4.76	705838.8	6.43	11.17
Maize.....	4545186	599614.49	45.16	6142555.49	55.99	10.24
Sorghum.....	264399	43648.93	3.29	289881.14	2.64	6.64
Finger millet.....	8016	401.07	0.03	33.03	*	0.08
Oats/'Aja'.....	59116	7795.9	0.59	99526.67	0.91	12.77
Rice.....	2223	*	*	*	*	*
Masho.....	90437	43313.15	3.26	*	*	*
Pulses.....	**3473553**	**261101.05**	**19.66**	**1388083.6**	**12.65**	
Horse beans.....	98286	3679.83	0.28	13212.75	0.12	3.59
Field peas.....	163783	23501.98	1.77	148018.47	1.35	6.3
Haricot beans white.	740183	38259.11	2.88	243468.85	2.22	6.36
Haricot beans red...	2460286	155396.26	11.7	864842.45	7.88	5.57
Chick-peas.....	74021	10167.92	0.77	110192.29	1	10.84
Lentils.....	118340	16597.31	1.25	346.6	*	0.02
Vetch.....	41448	*	*	*	*	*
Soya beans.....	2926	64.72	*	-	-	-
Fenugreek.....	19136	522.29	0.04	2530.4	0.02	4.84
Gibto.....	1395	*	*	-	-	-
Oil crops.....	**126942**	**28792.96**	**2.17**	**5741.36**	**0.05**	
Neug.....	*	*	*	-	-	-
Linseed.....	8927	272.93	0.02	*	*	*
Groundnuts.....	31390	3393.34	0.26	*	*	*
Sunflower.....	14391	1287.79	0.1	-	-	-
Sesame.....	56840	23321.11	1.76	5714.01	0.05	0.25
Rapeseed.....	15639	284.95	0.02	-	-	-
Vegetables.....	**1888769**	**28174.39**	**100**	**1888449.36**	**100**	**67.03**
Lettuce.....	5055	23.66	0.08	*	*	*
Head Cabbage.....	60993	1227.1	4.36	60763.78	3.22	49.52
Ethiopian Cabbage....	1726280	22893.63	81.26	1661907.97	88	72.59
Tomatoes.....	74992	2153.42	7.64	105078.29	5.56	48.8
Green peppers.....	126424	1041.64	3.7	50821.7	2.69	48.79
Red peppers.....	32378	789.71	2.8	7988.82	0.42	10.12
Swiss chard.....	6307	*	*	*	*	*
Root Crops.....	**2747700**	**154310.26**	**100**	**12636839.13**	**100**	**81.89**
Beetroot.....	52230	503.03	0.33	19163.01	0.15	38.1
Carrot.....	36901	986.36	0.64	40696.67	0.32	41.26
Onion.....	283398	16054.3	10.4	993908.32	7.87	61.91
Potatoes.....	1798119	112241.12	72.74	8233576	65.16	73.36
Yam/'Boye'.....	91767	1449.99	0.94	242730	1.92	167.4
Garlic.....	378017	3026.01	1.96	259032.96	2.05	85.6
Taro/'Godere'.....	309606	5290.54	3.43	381819.17	3.02	72.17
Sweet potatoes.....	449906	14758.91	9.56	2465913	19.51	167.08

Table 5.2. Cropland Area, Production and Yield of Major Belg Crops for Private Peasant Holdings for Belg Season 2013/14 (2006 E.C.)
Tigray

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**24526**	**6078.73**	**100**	*	*	*
Cereals.....	**24526**	**5910.93**	**97.24**	*	*	
Teff.....	13562	3933.14	64.7	-	-	-
Barley.....	*	*	*	*	*	*
Wheat.....	*	*	*	-	-	-
Maize.....	*	*	*	*	*	*
Sorghum.....	-	-	-	-	-	-
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Masho.....	-	-	-	-	-	-
Pulses.....	*	*	*	-	-	
Horse beans.....	-	-	-	-	-	-
Field peas.....	*	*	*	-	-	-
Haricot beans white.	-	-	-	-	-	-
Haricot beans red...	-	-	-	-	-	-
Chick-peas.....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oil crops.....	-	-	-	-	-	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	-	-	-	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	*	*	*	-	-	-
Lettuce.....	-	-	*	-	-	-
Head Cabbage.....	-	-	*	-	-	-
Ethiopian Cabbage....	-	-	*	-	-	-
Tomatoes.....	*	*	*	-	-	-
Green peppers.....	*	*	*	-	-	-
Red peppers.....	-	-	*	-	-	-
Swiss chard.....	-	-	*	-	-	-
Root Crops.....	*	*	*	*	*	*
Beetroot.....	-	-	*	-	*	-
Carrot.....	-	-	*	-	*	-
Onion.....	*	*	*	*	*	*
Potatoes.....	*	*	*	-	*	-
Yam/'Boye'.....	-	-	*	-	*	-
Garlic.....	-	-	*	-	*	-
Taro/'Godere'.....	-	-	*	-	*	-
Sweet potatoes.....	-	-	*	-	*	-

Table 5.3. Cropland Area, Production and Yield of Major Belg Crops
For Private Peasant Holders of Belg Season 2013/14 (2006 E.C)
Afar

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**32106**	**26140.38**	**100**	**631456.02**	**100**	**24.16**
Cereals.....	**31942**	**26031.58**	**99.58**	**631456.02**	**100**	
Teff.....	*	-	-	-	-	-
Barley.....	*	*	*	-	-	-
Wheat.....	*	*	*	-	-	-
Maize.....	28030	24727.71	94.6	631456.02	100	25.54
Sorghum.....	806	290.9	1.11	-	-	-
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	*	*	*	-	-	-
Masho.....	3295	890.68	3.41	-	-	-
Pulses.....	**546**	*	*	-	-	
Horse beans.....	-	-	-	-	-	-
Field peas.....	-	-	-	-	-	-
Haricot beans white.	509	*	*	-	-	-
Haricot beans red...	-	-	-	-	-	-
Chick-peas.....	*	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oil crops.....	*	*	*	-	-	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	-	-	-	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	*	*	*	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	**1354**	*	*	*	*	*
Lettuce.....	-	-	*	-	*	-
Head Cabbage.....	-	-	*	-	*	-
Ethiopian Cabbage....	*	*	*	-	*	-
Tomatoes.....	709	*	*	*	*	*
Green peppers.....	*	*	*	*	*	*
Red peppers.....	665	*	*	*	*	*
Swiss chard.....	-	-	*	-	*	-
Root Crops.....	*	*	*	*	*	*
Beetroot.....	-	-	*	-	*	-
Carrot.....	-	-	*	-	*	-
Onion.....	*	*	*	*	*	*
Potatoes.....	*	*	*	-	*	-
Yam/'Boye'.....	*	*	*	-	*	-
Garlic.....	-	-	*	-	*	-
Taro/'Godere'.....	-	-	*	-	*	-
Sweet potatoes.....	*	*	*	-	*	-

Table 5.4. Cropland Area, Production and Yield of Major Belg Crops
For Private Peasant Holders of Belg Season 2013/14 (2006 E.C)
Amhara

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**693891**	**209609.08**	**100**	**1067783.23**	**100**	**5.09**
Cereals.....	**646130**	**164231.65**	**78.35**	**932082.9**	**87.29**	
Teff.....	102953	18124.29	8.65	78424.03	7.34	4.33
Barley.....	362710	83139.39	39.66	450557.61	42.2	5.42
Wheat.....	77707	9827.27	4.69	50209.11	4.7	5.11
Maize.....	161193	9907.69	4.73	77877.62	7.29	7.86
Sorghum.....	*	*	*	-	-	-
Finger millet.....	*	*	*	-	-	-
Oats/'Aja'.....	9538	570.95	0.27	598.21	0.06	1.05
Rice.....	-	-	-	-	-	-
Masho.....	85657	42359.92	20.21	*	*	*
Pulses.....	**218041**	**43747.65**	**20.87**	**135700.33**	**12.71**	
Horse beans.....	*	*	*	-	-	-
Field peas.....	48492	5348.05	2.55	*	*	*
Haricot beans white.	*	*	*	*	*	*
Haricot beans red...	19564	1018.49	0.49	4853.08	0.45	4.76
Chick-peas.....	66662	9407.39	4.49	110192.29	10.32	11.71
Lentils.....	97099	13553.95	6.47	232.99	0.02	0.02
Vetch.....	39788	*	*	*	*	*
Soya beans.....	*	*	*	-	-	-
Fenugreek.....	14270	422.45	0.2	2530.4	0.24	5.99
Gibto.....	-	-	-	-	-	-
Oil crops.....	**19682**	**1629.78**	**0.78**	**-**	**-**	
Neug.....	*	*	*	-	-	-
Linseed.....	4474	*	*	-	-	-
Groundnuts.....	-	-	-	-	-	-
Sunflower.....	8407	1188.41	0.57	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	6387	78.42	0.04	-	-	-
Vegetables.....	**82770**	**1577.15**	**100**	**114897.11**	**100**	**72.85**
Lettuce.....	*	*	*	*	*	*
Head Cabbage.....	4229	*	*	*	*	*
Ethiopian Cabbage....	51701	411.05	26.06	37431.98	32.58	91.06
Tomatoes.....	14071	526.22	33.37	*	*	*
Green peppers.....	8264	*	*	*	*	*
Red peppers.....	19239	397.51	25.2	6970.39	6.07	17.54
Swiss chard.....	*	*	*	-	-	-
Root Crops.....	**436568**	**39033.08**	**100**	**1575682.04**	**100**	**40.37**
Beetroot.....	*	*	*	*	*	*
Carrot.....	*	*	*	*	*	*
Onion.....	74211	6214.74	15.92	*	*	*
Potatoes.....	363724	32080.67	82.19	993004.01	63.02	30.95
Yam/'Boye'.....	-	-	-	-	-	-
Garlic.....	25111	409.25	1.05	36477.25	2.32	89.13
Taro/'Godere'.....	-	-	-	-	-	-
Sweet potatoes.....	*	*	*	*	*	*

Table 5.5. Cropland Area, Production and Yield of Major Belg Crops
For Private Peasant Holders of Belg Season 2013/14 (2006 E.C)
Oromia

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**2388204**	**594239.79**	**100**	**5622228.32**	**100**	**9.46**
Cereals.....	**2207652**	**482526.58**	**81.2**	**4997208.85**	**88.88**	
Teff.....	161168	48512.76	8.16	399705.19	7.11	8.24
Barley.....	415734	85984.03	14.47	860147.62	15.3	10
Wheat.....	136523	50995.48	8.58	649661.99	11.56	12.74
Maize.....	1825341	267460.66	45.01	2842717.33	50.56	10.63
Sorghum.....	99230	22380.31	3.77	*	*	*
Finger millet.....	*	*	*	-	-	-
Oats/'Aja'.....	46829	7131.84	1.2	98928.46	1.76	13.87
Rice.....	*	*	*	-	-	-
Masho.....	*	*	*	-	-	-
Pulses.....	**1207649**	**92552.18**	**15.57**	**624992.66**	**11.12**	
Horse beans.....	37370	2221.9	0.37	9431.13	0.17	4.24
Field peas.....	81615	16791.91	2.83	133521.93	2.37	7.95
Haricot beans white.	460292	24299.65	4.09	172726.77	3.07	7.11
Haricot beans red...	668819	45480.1	7.65	309199.22	5.5	6.8
Chick-peas.....	*	*	*	-	-	-
Lentils.....	*	*	*	*	*	*
Vetch.....	*	*	*	-	-	-
Soya beans.....	*	*	*	-	-	-
Fenugreek.....	1790	*	*	-	-	-
Gibto.....	*	*	*	-	-	-
Oilseeds.....	**49601**	**19161.03**	**3.22**	*****	*****	
Neug.....	-	-	-	-	-	-
Linseed.....	1992	*	*	*	*	*
Groundnuts.....	12990	*	*	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	30230	17436.6	2.93	-	-	-
Rapeseed.....	4388	42.4	0.01	-	-	-
Vegetables.....	**610279**	**11305.75**	**100**	**726957.7**	**100**	**64.3**
Lettuce.....	2332	*	*	*	*	*
Head Cabbage.....	26044	517.67	4.58	*	*	*
Ethiopian Cabbag....	529170	8998.22	79.59	642672.6	88.41	71.42
Tomatoes.....	34345	880.58	7.79	28589.68	3.93	32.47
Green peppers.....	60067	498.46	4.41	29638.95	4.08	59.46
Red peppers.....	*	*	*	*	*	*
Swiss chard.....	1518	*	*	*	*	*
Root Crops.....	**888203**	**56632.6**	**100**	**1063882.67**	**100**	**18.79**
Beetroot.....	26832	322.04	0.57	16942.26	1.59	52.61
Carrot.....	*	*	*	*	*	*
Onion.....	111127	7959.16	14.05	308624.78	29.01	38.78
Potatoes.....	589724	40816.98	72.07	454352.24	42.71	11.13
Yam/'Boye'.....	*	*	*	-	-	-
Garlic.....	155467	1844.56	3.26	143571.42	13.5	77.84
Taro/'Godere'.....	22303	264.16	0.47	-	-	-
Sweet potatoes.....	132843	4905.23	8.66	128698.97	12.1	26.24

Table 5.6. Cropland Area, Production and Yield of Major Belg Crops
For Private Peasant Holders of Belg Season 2013/14 (2006 E.C)
Somale

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**25237**	**6481.64**	**100**	**57094.32**	**100**	**8.81**
Cereals.....	**22362**	**4987.4**	**76.95**	**56696.35**	**99.3**	
Teff.....	-	-	-	-	-	-
Barley.....	-	-	-	-	-	-
Wheat.....	-	-	-	-	-	-
Maize.....	22362	4986.71	76.94	56696.35	99.3	11.37
Sorghum.....	*	*	*	-	-	-
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Masho.....	-	-	-	-	-	-
Pulses.....	**8436**	**1494.24**	**23.05**	**397.97**	**0.7**	
Horse beans.....	-	-	-	-	-	-
Field peas.....	-	-	-	-	-	-
Haricot beans white.	*	*	*	*	*	*
Haricot beans red...	8280	1465.35	22.61	356.84	0.63	0.24
Chick-peas.....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oilseeds.....	**-**	**-**	**-**	**-**	**-**	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	-	-	-	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	**2814**	**121.47**	**100**	*****	*****	*****
Lettuce.....	-	-	-	-	*	-
Head Cabbage.....	-	-	-	-	*	-
Ethiopian Cabbag....	-	-	-	-	*	-
Tomatoes.....	2507	112.64	92.73	*	*	*
Green peppers.....	*	*	*	-	*	-
Red peppers.....	-	-	-	-	*	-
Swiss chard.....	-	-	-	-	*	-
Root Crops.....	**2007**	*****	*****	*****	*****	*****
Beetroot.....	*	*	*	-	*	-
Carrot.....	-	-	*	-	*	-
Onion.....	2007	*	*	*	*	*
Potatoes.....	-	-	*	-	*	-
Yam/'Boye'.....	-	-	*	-	*	-
Garlic.....	-	-	*	-	*	-
Taro/'Godere'.....	-	-	*	-	*	-
Sweet potatoes.....	-	-	*	-	*	-

Table 5.7. Cropland Area, Production and Yield of Major Belg Crops
For Private Peasant Holders of Belg Season 2013/14 (2006 E.C)
Benishangul Gumuz

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**31559**	**3673.59**	**100**	**22142.18**	**100**	**6.03**
Cereals.....	**28555**	**1905.06**	**51.86**	**9262.54**	**41.83**	
Teff.....	*	*	*	-	-	-
Barley.....	726	59.02	1.61	-	-	-
Wheat.....	*	*	*	-	-	-
Maize.....	28299	1758.22	47.86	9262.54	41.83	5.27
Sorghum.....	1038	85.59	2.33	-	-	-
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Masho.....	-	-	-	-	-	-
Pulses.....	**28669**	**1768.53**	**48.14**	**12879.64**	**58.17**	
Horse beans.....	*	*	*	-	-	-
Field peas.....	-	-	-	-	-	-
Haricot beans white.	3172	*	*	*	*	*
Haricot beans red...	26667	1611.49	43.87	11823.84	53.4	7.34
Chick-peas.....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	*	*	*	-	-	-
Fenugreek.....	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oilseeds.....	**-**	**-**	**-**	**-**	**-**	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	-	-	-	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	**11793**	**178.63**	**100**	**11369.32**	**100**	**63.65**
Lettuce.....	*	*	*	-	-	-
Head Cabbage.....	*	*	*	*	*	*
Ethiopian Cabbag....	8759	149.27	83.56	*	*	*
Tomatoes.....	*	*	*	*	*	*
Green peppers.....	1164	7.27	4.07	*	*	*
Red peppers.....	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-
Root Crops.....	**9206**	**170**	**100**	*****	*****	*****
Beetroot.....	*	*	*	*	*	*
Carrot.....	*	*	*	-	*	-
Onion.....	*	*	*	367.55	*	*
Potatoes.....	6563	139.67	82.16	-	*	-
Yam/'Boye'.....	-	-	-	-	*	-
Garlic.....	1902	7.36	4.33	-	*	-
Taro/'Godere'.....	*	*	*	-	*	-
Sweet potatoes.....	*	*	*	-	*	-

Table 5.8. Cropland Area, Production and Yield of Major Belg Crops
For Private Peasant Holders of Belg Season 2013/14 (2006 E.C)
S.N.N.P.R

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**2702973**	**470743.3**	**100**	**3439599.49**	**100**	**7.31**
Cereals.....	**2516661**	**342665.61**	**72.79**	**2829329.84**	**82.26**	
Teff.....	79474	23362.66	4.96	156583.83	4.55	6.7
Barley.....	154154	15921.85	3.38	109921.23	3.2	6.9
Wheat.....	13890	2216.55	0.47	5967.7	0.17	2.69
Maize.....	2425469	280439.2	59.57	2411412.48	70.11	8.6
Sorghum.....	153852	20171.96	4.29	143832.86	4.18	7.13
Finger millet.....	6856	387.97	0.08	33.03	*	0.09
Oats/'Aja'.....	*	*	*	-	-	-
Rice.....	1883	*	*	*	*	*
Masho.....	972	*	*	-	-	-
Pulses.....	**1994696**	**120724.93**	**25.65**	**610269.11**	**17.74**	
Horse beans.....	53927	1149.82	0.24	3781.62	0.11	3.29
Field peas.....	32754	1194.21	0.25	4471.71	0.13	3.74
Haricot beans white.	259349	12737.96	2.71	66325.02	1.93	5.21
Haricot beans red...	1725569	105372.06	22.38	535690.76	15.57	5.08
Chick-peas.....	1011	154.66	0.03	-	-	-
Lentils.....	1284	*	*	-	-	-
Vetch.....	*	*	*	-	-	-
Soya beans.....	1902	33.84	0.01	-	-	-
Fenugreek.....	3076	26.92	0.01	-	-	-
Gibto.....	1042	*	*	-	-	-
Oil crops.....	**55451**	**7352.76**	**1.56**	*	*	
Neug.....	*	*	*	-	-	-
Linseed.....	2461	33.74	0.01	-	-	-
Groundnuts.....	17986	*	*	*	*	*
Sunflower.....	5984	99.38	0.02	-	-	-
Sesame.....	24775	5257.98	1.12	-	-	-
Rapeseed.....	*	*	*	-	-	-
Vegetables.....	**1168211**	**14600.86**	**100**	**1019361.65**	**100**	**69.82**
Lettuce.....	*	*	*	-	-	-
Head Cabbage.....	29984	587.77	4.03	*	*	*
Ethiopian Cabbag....	1129309	13257.89	90.8	969273.6	95.09	73.11
Tomatoes.....	17018	*	*	*	*	*
Green peppers.....	55016	378.84	2.59	9216.85	0.9	24.33
Red peppers.....	2922	12.56	0.09	58.54	-	4.66
Swiss chard.....	*	*	*	*	*	*
Root Crops.....	**1393339**	**57488.4**	**100**	**9921199.34**	**100**	**172.58**
Beetroot.....	24229	171.51	0.3	1719.04	0.02	10.02
Carrot.....	16946	*	*	*	*	*
Onion.....	87046	1319.24	2.29	109764.04	1.11	83.2
Potatoes.....	833292	39016.96	67.87	6786219.75	68.4	173.93
Yam/'Boye'.....	91335	1446.76	2.52	242730	2.45	167.77
Garlic.....	195438	763.78	1.33	78912.61	0.8	103.32
Taro/'Godere'.....	287117	5024.62	8.74	381811	3.85	75.99
Sweet potatoes.....	307930	9597.43	16.69	2311792.72	23.3	240.88

Table 5.9. Cropland Area, Production and Yield of Major Belg Crops
For Private Peasant Holders of Belg Season 2013/14 (2006 E.C)
Gambela

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**37358**	**9403.69**	**100**	**114880.07**	**100**	**12.22**
Cereals.....	**36084**	**8491.45**	**90.3**	**108203.77**	**94.19**	
Teff.....	*	*	*	-	-	-
Barley.....	*	*	*	-	-	-
Wheat.....	-	-	-	-	-	-
Maize.....	35914	8411.12	89.44	108203.77	94.19	12.86
Sorghum.....	-	-	-	-	-	-
Finger millet.....	*	*	*	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	*	*	*	-	-	-
Masho.....	-	-	-	-	-	-
Pulses.....	**7149**	**302.24**	**3.21**	**962.29**	**0.84**	
Horse beans.....	-	-	-	-	-	-
Field peas.....	-	-	-	-	-	-
Haricot beans white.	1301	8.17	0.09	29.77	0.03	3.64
Haricot beans red...	6023	293.9	3.13	932.51	0.81	3.17
Chick-peas.....	-	-	-	-	-	-
Lentils.....	*	*	*	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	*	*	*	-	-	-
Fenugreek.....	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oil crops.....	**1692**	**610**	**6.49**	**5714.01**	**4.97**	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	*	*	*	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	1573	591.69	6.29	5714.01	4.97	9.66
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	**6112**	**65.02**	**100**	**6576.69**	**100**	**101.15**
Lettuce.....	-	-	-	-	-	-
Head Cabbage.....	*	*	*	-	-	-
Ethiopian Cabbag....	5926	48.25	74.21	4734.84	71.99	98.13
Tomatoes.....	*	*	*	*	*	*
Green peppers.....	170	*	*	*	*	*
Red peppers.....	*	*	*	-	-	-
Swiss chard.....	-	-	-	-	-	-
Root Crops.....	**1247**	**28.04**	**100**	**295.4**	**100**	**10.53**
Beetroot.....	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-
Onion.....	422	*	*	-	-	-
Potatoes.....	*	*	*	-	-	-
Yam/'Boye'.....	*	*	*	-	-	-
Garlic.....	*	*	*	*	*	*
Taro/'Godere'.....	*	*	*	*	*	*
Sweet potatoes.....	302	5.28	18.83	*	*	*

Table 5.10. Cropland Area, Production and Yield of Major Belg Crops
For Private Peasant Holders of Belg Season 2013/14 (2006 E.C)
Harari

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**10944**	**1232.88**	**100**	**6914.46**	**100**	**5.61**
Cereals.....	**10290**	**964.79**	**78.25**	**4032.86**	**58.33**	
Teff.....	-	-	-	-	-	-
Barley.....	-	-	-	-	-	-
Wheat.....	-	-	-	-	-	-
Maize.....	6930	561.24	45.52	4032.86	58.33	7.19
Sorghum.....	4563	403.55	32.73	-	-	-
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Masho.....	-	-	-	-	-	-
Pulses.....	**7229**	**267.92**	**21.73**	**2881.6**	**41.67**	
Horse beans.....	-	-	-	-	-	-
Field peas.....	-	-	-	-	-	-
Haricot beans white.	*	*	*	*	*	*
Haricot beans red...	5214	153.58	12.46	1986.19	28.73	12.93
Chick-peas.....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oil crops.....	*	*	*	-	-	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	*	*	*	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	**2148**	**57.07**	**100**	**-**	**-**	**-**
Lettuce.....	*	*	*	-	-	-
Head Cabbage.....	*	*	*	-	-	-
Ethiopian Cabbag....	*	*	*	-	-	-
Tomatoes.....	*	*	*	-	-	-
Green peppers.....	*	*	*	-	-	-
Red peppers.....	-	-	-	-	-	-
Swiss chard.....	*	*	*	-	-	-
Root Crops.....	**7145**	**299.04**	**100**	**25180.37**	**100**	**84.2**
Beetroot.....	*	*	*	-	-	-
Carrot.....	*	*	*	-	-	-
Onion.....	-	-	-	-	-	-
Potatoes.....	3237	109.65	36.67	-	-	-
Yam/'Boye'.....	-	-	-	-	-	-
Garlic.....	*	*	*	-	-	-
Taro/'Godere'.....	-	-	-	-	-	-
Sweet potatoes.....	4562	187.17	62.59	25180.37	100	134.53

Table 5.11. Cropland Area, Production and Yield of Major Belg Crops
For Private Peasant Holders of Belg Season 2013/14 (2006 E.C)
Dire Dawa

Crop Name	Number of Holders	Cropland Area in Hectares	%	Production in Quintals	%	Yield QT/HA
Grain Crops.....	**4087**	*	*	-	-	-
Cereals.....	**4038**	*	*	-	-	
Teff.....	-	-	-	-	-	-
Barley.....	-	-	-	-	-	-
Wheat.....	-	-	-	-	-	-
Maize.....	3374	*	*	-	-	-
Sorghum.....	*	*	*	-	-	-
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Masho.....	-	-	-	-	-	-
Pulses.....	*	*	*	-	-	
Horse beans.....	-	-	-	-	-	-
Field peas.....	-	-	-	-	-	-
Haricot beans white.	*	*	*	-	-	-
Haricot beans red...	*	*	*	-	-	-
Chick-peas.....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oilseeds.....	*	*	*	-	-	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	*	*	*	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	**2288**	**66.56**	**100**	-	-	-
Lettuce.....	-	-	-	-	-	-
Head Cabbage.....	-	-	-	-	-	-
Ethiopian Cabbag....	*	*	*	-	-	-
Tomatoes.....	2239	64.07	96.26	-	-	-
Green peppers.....	*	*	*	-	-	-
Red peppers.....	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-
Root Crops.....	**2705**	**76.83**	**100**	-	-	-
Beetroot.....	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-
Onion.....	*	*	*	-	-	-
Potatoes.....	*	*	*	-	-	-
Yam/'Boye'.....	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-
Taro/'Godere'.....	-	-	-	-	-	-
Sweet potatoes.....	2171	49.37	64.26	-	-	-

CHAPTER IV

4 FARM MANAGEMENT PRACTISES OF THE 2013/14 (2006 E.C) BELG SEASON

4.1 *INTRODUCTION*

The observed experiences indicate that farmers' attitude and tendency towards adoption and acceptance of new innovations, modern agricultural techniques and technologies such as the use of fertilizers, irrigation and improved seeds have positive impact on the development of agricultural sector as a whole. In this regard, the extent of adoption of modern agricultural practices such as utilization of fertilizer, irrigation, pesticides and improved seeds by the private peasant farm holders is often used as important indicators for estimating the rate and extent of modern technologies used in the country's agriculture. The magnitude and level modern/improved farm management practices in the agricultural sector are used to be the sole indicators of the transformation rate of the country's traditional agriculture to modern agriculture.

The general overview of the 2013/14 (2006 E.C) Belg season farm management practice of the country indicates that cropland areas applied with chemical fertilizers increased by 16% (which was estimated to be about 312 869 hectare in 2012/13 (2005 E.C) has increased to about 363 607 hectares in 2013/14 (2006 E.C). Likewice, the total quantity of chemical fertlizers applied during the season has also increasd by 47.32% (from 396 706 quintals in 2012/13 (2005 E.C) to 584 431 quintals in the 2013/14 (2006 E.C) Belg season, at national level. In addition, improved seed applied area also increased by about 90% (from 39 914 hectares in 2012/13 (2005 E.C) to about 76 213 hectares in 2013/14 (2006 E.C). Interms of quantity, the use of mproved seed applied has increased by about 56% which is an increrement from 15 232 quintal in 2012/13 to 23 744 quintals in 2013/14 (2006 E.C). It is also important to note that the inclusion of the three crops (masho, haricotbeans and yam) could increase the on the change in the total areas applied with various types of inputs and the total quantity of inputs used.

Given this background, in Chapter four, the quantitative information about the use of modern agricultural inputs for Belg season crops of 2013/14 (2006 E.C.) of the private peasant holdings are presented both at country and regional levels. Furthermore, the general composition of the farm holders surveyed applying

inputs interms of age group, holders applying inputs by educational status and the number of holders and the damaged crop land area in hectare are summarized and and presented in this Chapter. The data are generated from the findings of Belg season agricultural sample survey conducted by the Central Statistical Agency of Ethiopia in May 2014.

4.2 *SUMMARY OF THE FARM MANAGEMENT PRACTICES OF THE 2013/14 (2006 E.C) BELG SEASON AGRICULTURAL SAMPLE SURVEY*

According to the 2013/14 (2006 E.C.) Belg Season Crop Production Sample Survey results, total cropland area estimated is about 1 510 345 hectares of land while the estimated number of holders engaged in crop production activity is about 6 897 408 at national level. For more illustration see summary Table 6 bellow.

Table 6. **Total Cropland Area and Number of Holders Engaged in 2013/14 (2006 E.C.) Belg Season Crop Production**

Total Belg Cropland Area in Hectare	1 510 345
Number of Belg Crop Producing Holders	6 897 408
Improved Farm Management practiced Area (Hectare)	1 100 978
Quantity of Commercial Fertilizer Applied (Quintals)	584 431

As indicated Table 6, during 2013/14 (2006 E.C.), out of the total area under Belg season crops, 1 100 978 hectares (72.90% of the total cropland area) was under the use of improved farm management practices. Moreover, it was estimated that about 584 431 quintals of chemical fertilizer was utilized for crop production nationally. The total cropland areas categorized into different types of farm management practices for the Belg season are summarized and presented in Table 7.

Table 7. Belg Season Cropland Areas under Different Farm Management Practices_for the Production Year of 2013/14 (2006 E.C), National Level

Farm Management Practices	Cropland Area		
	Hectare	Percentage from Farm Management Practiced Area	Percentage from Total Cropland Area
Fertilizer	630 441	64.26	41.74
Improved Seeds	76 213	7.77	5.05
Pesticides	154 439	15.74	10.23
Irrigation	119 942	12.23	7.94
Totals	981 035	100	64.95

As shown in Table 7 above, the total crop land area estimated that is applied with fertilizer, improved seed, pesticide and irrigation is about 981 035 hectares. Out of this, the percentage distribution is 64.26% for fertilizer, 7.77% for improved seed, 15.74% for pesticides and 12.23% for irrigation. Out of the cropland area under improved farm inputs, about 630 41 hectares is accounted by fertilizer (Both Natural and Chemical) which is nearly 41.74% of the total Belg cropland area cultivated. Accordingly, improved seed accounted for 76 213 hectares (5.05%) while pesticides and irrigation accounted for 154 439 hectares (10.23%) and 119 942 hectares (7.94%), respectively. Furthermore, the survey findings of the 2013/14 (2006 E.C) Belg season indicates that cereals account for the largest share of the different farm management practices observed as summarized in Table 18.

Table 8. Summary of Cropland Area under Improved Farm Management Practices for Private Peasant Holdings, 2013/14 (2006 E.C.) Belg season, National

Crop Category	Cropland Area			
	Total Area		Area under Improved Farm MGT Practice.	
	Hectare	%	Hectare	% (of total)
Cereals	1 037 966	68.72	666 865	65.52
Pulses	261 101	17.29	129 045	9.68
Oil crops	28 793	1.91	5 561	0.55
Vegetables	28 174	1.87	22 046	2.17
Root Crops	154 310	10.22	194 323	19.08
Total	1 510 345	100	1 017 840	100

As indicated in summary Table 8 above, estimates of total cropland area under different farm management practices shows that cereals accounted for the highest proportion which is 1 037 966 hectares (68.72% of the total all cropland areal), followed by pulses with 261 101 hectares (17.29% from the total all cropped land area). Root crops, vegetables and oil crops accounted for 154 310 hectare (10.22%), 28 174 hectares (1.87%) and 28,793 hectare (1.91%), respectively**.** Out of the total cereal cultivated cropland area, 666 865 hectare (65.52%) is cultivated with improved farm management practices. The respective numbers are 129 045 hectare (9.68%) for pulses, 5 561 hectare (0.55%) for oil crops, 22 046 hectares (2.17%) for vegetables and 194 323 hectare (19.08%) for root crops.

4.3 *FERTLIZER APPLIED AREA AND FERTLIZER TYPE USED*

The results of the survey indicate that Belg season cropland area under both natural and chemical fertilizers were estimated to be 630 441 hectares, covering 41.74% of the total area under Belg seasons crops of the private holdings. The percentage of different fertilizers applied is given using summary Table 9 as follows.

Table 9. Summary of Fertilizer Applied Cropland Area for Private Holdings of 2013/14 (2006 E.C.) Belg season, National

Fertilizer Type	Fertilizer Applied Area		%ge from Total Belg Cropland Area
	Hectare	%	
Natural	266 834	42.32	17.67
Commercial			
Dap	258 665	41.03	17.13
Urea	21 862	3.47	1.45
Dap+Urea	83 081	13.18	5.50
Total	630 442	100	41.75

As indicated in Summary Table 9, out of the total fertilizer applied area, 266 834 hectares (42.32% from the total fertilizer applied cropland area) and 17.68% of the total Belg cropland area was reported to be under natural fertilizers. The coverage of chemical fertilizers is estimated to be 363 607 hectares (57.68% from the total fertilizer applied area and 24.08% from the total cropland area), the share of DAP, UREA and the mixture of and DAP and Urea (Dap+Urea), called as commercial fertilizers, constitute 41.03%, 3.47% and 13.18% of the total fertilizer applied cropland area, respectively. The percentages of Dap, Urea and the mixture of Dap and Urea applied out of the total cropland area of the Belg season are: 17.13%, 1.45% and 5.50%, respectively.

4.4 *THE USE OF NATURAL FERTLIZER*

In general, the application of natural fertilizers for Belg season crops in 2013/14 (2006 E.C.), varies from crop to crop. Of the total area under natural fertilizer, the highest proportion was reported for maize crop, which was estimated at 113 438 hectares (42.51%). The fertilized area (natural fertilizer) under potato stood second with 36 178 hectare (13.56%) while red haricot beans stands third accounting for 27 800 hectare (10.42%) of the total country level natural fertilizer applied of Belg season cropland area.

4.5. *THE USE OF COMMERCIAL FERTLIZERS*

The total cropland area under commercial fertilizers is about 363 607 hectare (57.68% of total fertilizer applied cropland area), in 2013/14 (2006 E.C.) Belg season. Out of this, DAP is the most used fertilizer which accounted for about 258 665 hectare (71.54% of the commercial fertilizer applied area). The second most applied commercial fertilizer is the mixture Dap and Urea (DAP+UREA) covering 83 081 hectare (accounting for 22.85%) while the use of Urea stands in the third position applied on 21 862 hectare (6.01%) of the total commercial fertilizer applied area. This is more indicated using Figure 5.

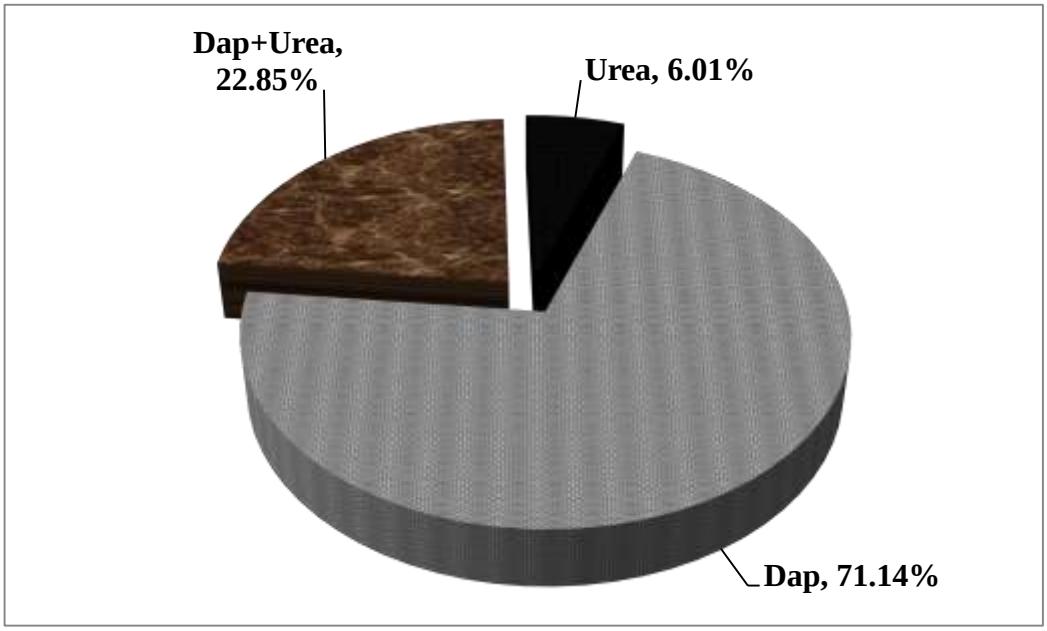


Figure 5 Percentage Distribution of Chemical Fertilizer Applied Cropland Area by Fertilizer Type for Private Holdings of Belg 2013/14 (2006 E.C)

The application of commercial fertilizers also varied between crop types. Of the total area under commercial fertilizers, the highest area was reported for Maize at 121 642 hectares (33%). The second highest area reported under commercial fertilizers was for potatoes accounting for 56 584 hectares (15.56%), followed by barley with 53 972 hectares (14.84%) of the total commercial fertilizer, during the 2013/14 (2006 E.C) Belg season.

Region-wise, the distribution of both natural and commercial fertilizers applied varies from region to region. For instance, of the total area under both (Natural + Commercial) fertilizers, the highest was

reported for Oromia Region, which accounted for 288,440 hectares (45.75%) of the total country level both natural and commercial fertilizers applied cropland area), S.N.N.P and Amhara Regions were in the second and third position in contributing the highest fertilizer (both natural and commercial) applied cropland area which were estimated to be 254 180 hectares (40.32%) and 82 778 hectares (13.13%), respectively. In terms of quantity, the total commercial fertilizer applied is 584431 quintals. Out of this, Dap is the most applied commercial fertilizer accounting for 325 598 quintals (55.72%). The percentage distribution of the chemical fertilizer applied during the production season is more indicated by Figure 6.

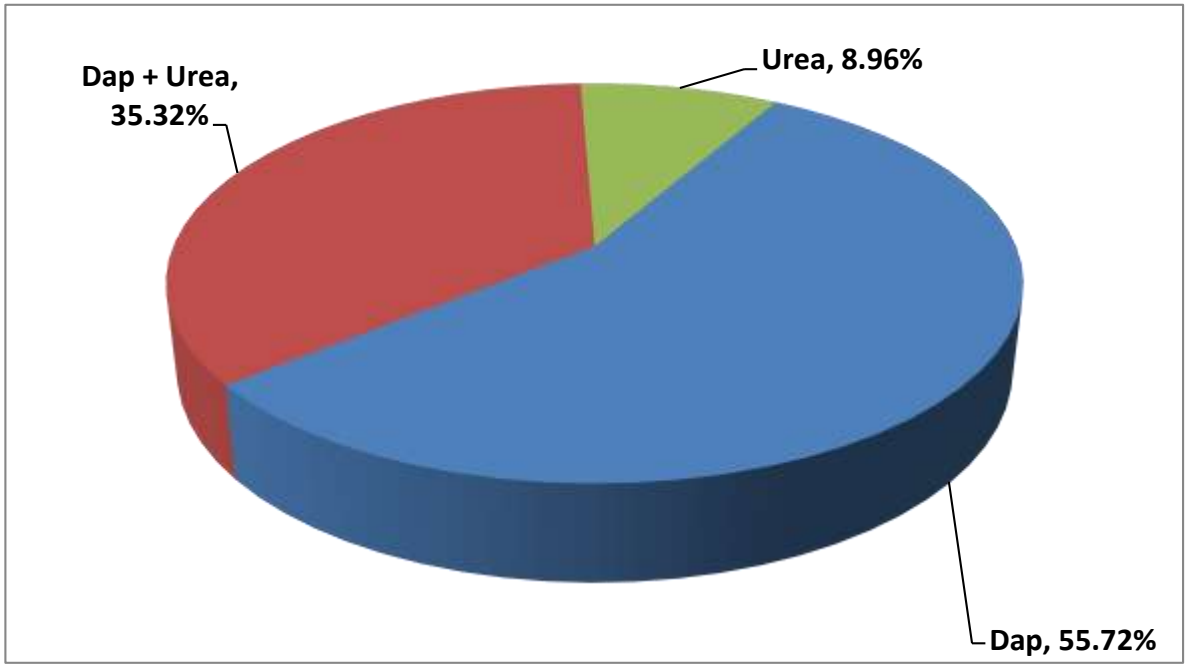


Figure 6. Percentage Distribution of Quantity of Chemical Fertilizers Applied by Fertilizer Type for Private Holding of 2013/14 (2006 E.C) Belg Season, National

As indicated in Figure 6, application of the mixture of Dap and Urea (Dap + Urea) is the second most applied fertilizer type which is about 20 6475 quintals (35.32%) while Urea is the last type of chemical fertilizer applied which is about 52 358 quintals (8.96%).

4.6. *NUMBER OF BELG CROP PRODUCING HOLDERS REPORTING THE USE OF IMPROVED FARM MANAGEMENT PRACTICES BY AGE*

To easily identify the age category of the holders who used to earn the economic benefits generated from adopting/practicing the use of modern farm management practices on their holdings, Belg crop producing holders' have been categorized into nine groups. These are age groups below 18 years, 18 to 20 years, 21 to 24 years, 25 to 29 years, 30 to 39 years, 40 to 49 years, 50 to 59 years, 60 years and above as well as not stated. The survey result shows that a total of 6 897 408 holders were engaged in the overall Belg season agricultural activities in 2013/14 (2006 E.C.). Accordingly, the category with the largest number of holders is in the age group 30-39, with 1 942 861 holders (which is 28.17% of the total holders). The age group of 40 to 60 stands second with is 1 472 765 holders (21.35% of total holders) . The number and percentage distribution of Belg crop producing holders reporting the use of farm inputs by age group for private holding is given in Table 21.

Moreover, 2 179 384 holders (30.60% of total households) used chemical fertilizer while 545 757 holders (7.91%) used improved seeds. Likewise; 434 058 holders (6.29%) applied pesticides and 576 574 holders (8.36%) used irrigation at national level for 2013/14 (2006 E.C) Belg season, in order to obtain higher crop yield (See Table 21). The number of holders categorized by age and the use of various modern farm inputs are re-presented using Figure 7.

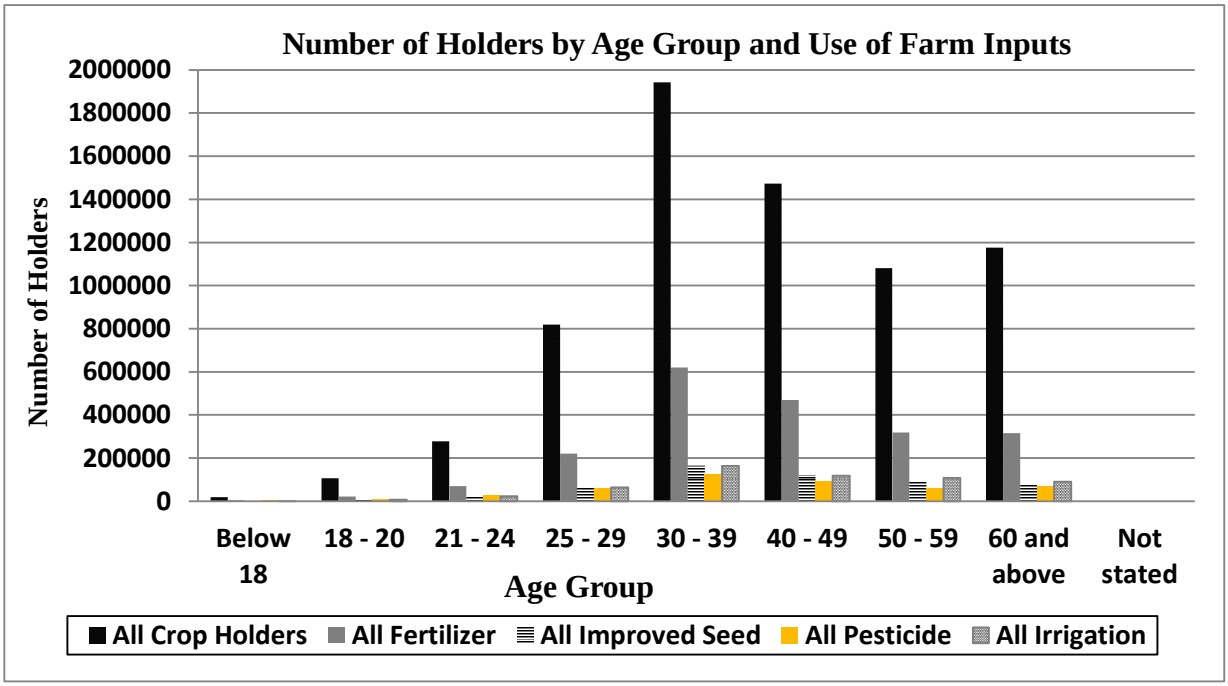
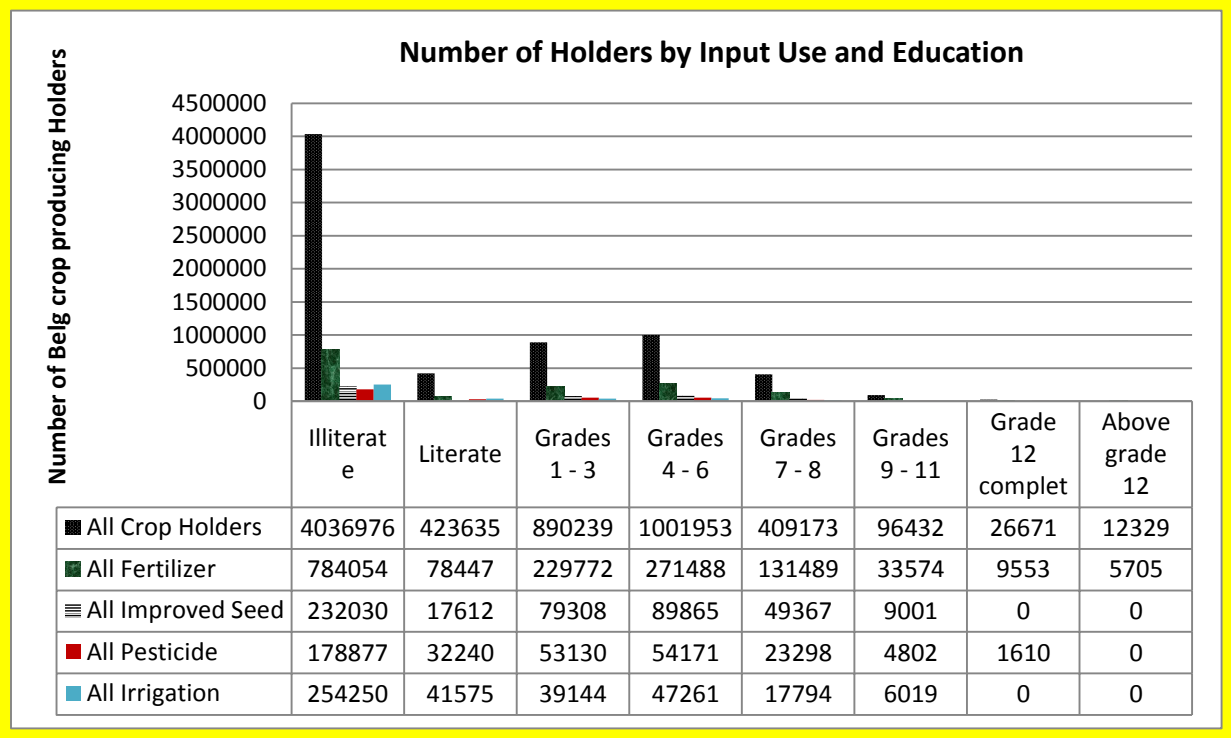


Figure 7. Graphical Representation of Number of Holders Using Inputs by Age for 2013/14(2006 E.C)

4.7 *NUMBER OF BELG CROP PRODUCING HOLDERS REPORTING THE USE OF IMPROVED* FARM MANAGEMENT PRACTICES BY EDUCATIONAL STATUS

Holders educational status play important role in the adoption of new and improved farming technologies. Therefore, in this report, an attempt is made to categorize holders reporting the use of modern farming practices during the 2013/14 (2006 E.C) Belg season crop production based on their educational status. Based on their education level, holders are categorized in to eight groups consisting of illiterate, literate, grade 1 to 3, grade 4 to 6, grade 7 to 8, grade 9 to 11, grade 12 complete and above grade. The number of Belg crop producing holders using different farm inputs based on education is graphically presented in Figure 8.



	Illiterate	Literate	Grades 1 - 3	Grades 4 - 6	Grades 7 - 8	Grades 9 - 11	Grade 12 complet	Above grade 12
All Crop Holders	4036976	423635	890239	1001953	409173	96432	26671	12329
All Fertilizer	784054	78447	229772	271488	131489	33574	9553	5705
All Improved Seed	232030	17612	79308	89865	49367	9001	0	0
All Pesticide	178877	32240	53130	54171	23298	4802	1610	0
All Irrigation	254250	41575	39144	47261	17794	6019	0	0

Figure 8. Number of Holders Using Different Inputs by Educational status, 2013/14 (2006 E.C), Belg Season

According to the results of the 2013/14 (2006 E.C) Belg season crop production sample survey, out of the total number of holders (6 897 408), the largest category of the holders number is under the illiterate category in which the number of all crop holders is 4 036 976 (which accounts for 58.53% of total holders) (See Figure 8). Under this category, 784 054 holder are reported for using fertilizer, 232 030 holders using improved seeds, 178 877 using pesticides and 254 250 using irrigation. The second largest category of the number of holders lies on education level of grade four to six. Within this category, the number of holders reported for using all cropland is 1 001 953. The respective number of holders is 271 488 for fertilizer, 89 865 for improved seeds, 54 171 for pesticides and 47 261 for irrigation in the education category.

4.8 *NUMBER OF HOLDERS REPORTING DAMAGED CROPLAND AREA BY CAUSES OF DAMAGE*

The total number of Belg crop producing private peasant holders who reported crop damage and the cause of damage during the year 2013/14 (2006 E.C) Belg season are estimated to be about 1 731 009 and the damaged cropland area was estimated to be 141 767 hectares. For illustration purpose, the total cropland area affected by crop damage of different crop types in hectare and the various causes of crop damage are presented graphically in Figure 9.

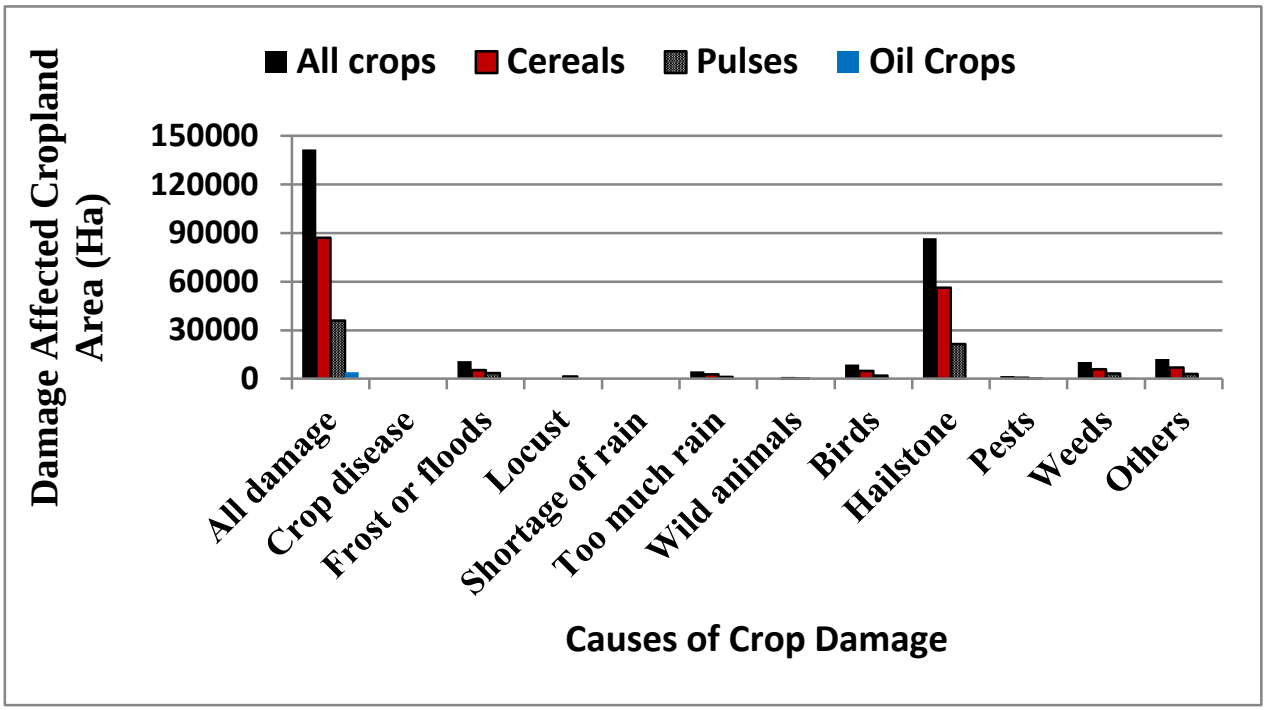


Figure 9 Damaged Cropland Area by Causes of Damage and Crop Category

As indicated in Figure 9, the highest cropland area damaged was reported for cereals which is 87 087 hectares, followed by pulses with about 35 923 hectares and oil crops with 4 207 hectares of damaged cropland area**.** With regard to the causes of crop damage, it is reported that 86 816 hectares was damaged due to hailstone. The second highest cause of crop damage is frost or floods with estimated crop damaged area of 11 015 hectares while weeds stands third position in damaging 10 403 hectare cropland area (For further details, see Figure 9).

National and Regional Statistical Tables of Farm Management Practices

Table 10: Number of Holders,Inputs Applied Area and Quantity of Inputs used

National

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**1,510,345**	**630,441**	**584,431**	**3,322,905**	**266,834**	**1,477,061**	**258,665**	**325,598**
Cereals	**1,037,966**	**385,370**	**292,988**	**2,387,684**	**157,707**	**978,171**	**162,640**	**175,090**
Teff	93,958	23,343	13,778	38,163	5,646	44,127	10,492	6,388
Barley	185,943	76,107	49,318	193,852	22,135	173,151	46,729	39,827
Wheat	63,196	34,697	31,354	49,089	6,656	63,157	24,885	26,456
Maize	599,614	235,080	193,440	2,154,303	113,438	758,528	75,461	98,748
Sorghum	43,649	9,873	2,767	76,907	6,879	21,674	2,615	1,820
Finger millet	401	*	*	*	*	*	*	*
Oats/ 'Aja'	7,796	3,439	2,198	11,398	467	13,383	2,423	1,821
Rice	*	*	*	*	*	*	*	*
Masho	43,313	*	*	*	*	*	*	*
Pulses	**261,101**	**106,208**	**123,983**	**1,347,459**	**46,089**	**737,168**	**49,926**	**82,514**
Horse/Faba beans	3,680	726	*	23,696	400	7,872	182	*
Field peas	23,502	1,911	*	18,289	1,441	4,020	*	*
White Haricot beans	38,259	16,833	17,954	328,834	10,418	94,160	5,245	9,802
Red Haricot beans	155,396	80,351	100,691	975,465	27,800	632,859	43,850	68,418
Chick peas	10,168	*	*	6,353	*	*	*	*
Lentiles	16,597	2,897	*	21,362	2,786	*	*	*
Vetch/Grass peas	*	*	-	*	*	-	-	-
Soya beans	65	*	*	*	*	*	*	*
Fenugreek	522	133	*	6,211	*	*	*	*
Gibto	*	*	*	-	-	*	*	*
Oil crops	**28,793**	**4,637**	**2,126**	**16,615**	*****	**13,191**	**3,297**	**1,412**
Nueg	*	*	-	*	*	-	-	-
Linseed	273	*	*	*	*	*	*	*
Ground nuts	3,393	*	*	5,740	*	*	*	*
Safflower	1,288	25	*	879	13	*	*	*
Sesame	23,321	*	840	2,299	*	4,976	*	792
Rapeseed	285	106	*	6,175	64	*	*	*
Vegetables.....	**28,174**	**16,720**	**28,482**	**1,106,120**	**12,126**	**142,175**	**2,728**	**11,595**
Lettuce.....	24	21	*	2,705	6	-	-	-
Head Cabbage....	1,227	730	*	25,210	325	3,358	*	*
Ethiopian Cabbage	22,894	13,810	17,690	1,033,353	10,995	127,756	2,084	10,418
Tomatoes.....	2,153	991	2,335	26,834	288	7,311	*	324
Green peppers...	1,042	746	*	67,496	381	8,180	137	368
Red peppers.....	790	413	509	10,380	125	*	*	*
Swiss chard.....	*	*	*	3,816	*	*	*	*
Root Crops.....	**154,310**	**117,507**	**136,853**	**1,357,213**	**49,712**	**564,159**	**40,074**	**54,987**
Beetroot.....	503	275	309	18,047	101	3,861	*	*
Carrot.....	986	*	*	12,674	*	4,054	*	*
Onion.....	16,054	10,883	34,363	99,903	2,334	18,097	587	*
Potatoes.....	112,241	92,762	94,215	850,313	36,178	497,245	37,922	49,342
Yam.....	1,450	662	*	46,889	556	*	*	*
Garlic.....	3,026	1,690	*	231,235	1,266	12,443	236	250
Taro/'Godere'...	5,291	3,164	*	172,393	2,721	12,013	210	*
Sweet potatoes..	14,759	7,523	2,160	223,401	6,336	31,259	710	1,279

Table 10 (Cont'd)
National

Crop type	*UREA*			*UREA + DAP*			*Indigenous seed*		
	Holder	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Quintal*
All	**177,179**	**21,862**	**52,358**	**525,144**	**83,081**	**206,475**	**6,797,877**	**1,347,040**	**859,747**
Cereals	**106,112**	**13,026**	**20,891**	**323,049**	**51,996**	**97,007**	**4,476,067**	**890,454**	**717,827**
Teff	7,367	1,899	1,259	17,662	5,306	6,131	354,414	93,576	41,037
Barley	9,702	1,981	1,056	26,831	5,263	8,435	929,608	184,558	340,703
Wheat	3,134	*	*	6,865	*	*	225,774	62,372	132,926
Maize	85,265	7,714	17,879	280,398	38,467	76,812	3,412,047	464,133	175,733
Sorghum	1,192	*	*	2,647	180	719	114,539	34,399	7,673
Finger millet	*	*	*	-	-	-	7,096	389	45
Oats/ 'Aja'	*	*	*	1,615	*	*	57,888	7,742	12,182
Rice	-	-	-	-	-	-	2,043	*	*
Mahso	*	*	*	-	-	-	89,473	43,194	7,454
Pulses	**40,018**	**1,550**	*****	**182,645**	**8,642**	**36,968**	**3,436,806**	**257,252**	**134,556**
Horse/Faba beans	*	*	*	4,653	*	*	97,494	3,668	3,413
Field peas	*	*	*	*	*	*	163,706	23,493	28,033
White Haricot beans	*	169	*	30,680	1,001	7,649	734,030	37,888	10,508
Red Haricot beans	31,809	1,293	*	147,530	7,408	28,323	2,429,097	152,258	58,262
Chick peas	*	*	*	*	*	*	72,857	9,972	6,708
Lentiles	*	*	*	*	*	*	117,396	16,516	14,817
Vetch/Grass peas	-	-	-	-	-	-	41,424	*	*
Soya beans	-	-	-	*	-	*	2,141	53	*
Fenugreek	*	*	*	-	-	-	18,449	493	246
Gibto	-	-	-	-	-	-	1,227	*	*
Oil crops	*****	*****	*****	**3,371**	**85**	*****	**105,010**	**26,620**	**4,732**
Nueg	-	-	-	-	-	-	*	*	*
Linseed	-	-	-	*	*	*	8,927	273	*
Ground nuts	*	*	*	*	*	*	19,745	*	*
Safflower	-	-	-	*	*	*	13,767	1,232	21
Sesame	*	*	*	*	*	*	53,288	22,813	3,668
Rapeseed	*	*	*	*	*	*	9,397	*	*
Vegetables.....	**22,279**	**341**	*****	**52,186**	**1,525**	**10,275**	**1,815,203**	**26,773**	**42**
Lettuce.....	-	-	-	*	*	*	4,477	22	-
Head Cabbage....	1,871	*	*	4,009	159	*	51,188	1,065	*
Ethiopian Cabbage	14,040	113	*	39,519	619	5,176	1,663,213	22,204	40
Tomatoes.....	2,413	48	*	4,805	*	*	64,641	1,716	*
Green peppers...	*	*	*	*	*	*	116,350	1,008	-
Red peppers.....	*	*	*	*	*	*	30,501	713	*
Swiss chard.....	-	-	-	*	*	*	6,103	*	-
Root Crops.....	**83,607**	**6,888**	**20,297**	**227,308**	**20,832**	**61,569**	**2,502,817**	**145,942**	**2,590**
Beetroot.....	*	*	*	1,380	*	*	45,555	475	-
Carrot.....	*	*	*	*	*	*	25,271	567	*
Onion.....	26,418	*	12,555	26,702	4,636	20,021	261,946	14,953	*
Potatoes.....	51,312	*	*	188,480	15,438	39,727	1,765,033	110,328	1,865
Yam.....	*	*	*	-	-	-	66,693	1,189	*
Garlic.....	2,975	*	*	*	*	*	373,517	3,014	*
Taro/'Godere'...	1,257	*	*	5,556	187	723	66,922	1,301	*
Sweet potatoes..	5,147	185	214	7,931	*	668	405,036	14,113	*

Table 10 (Cont'd)
National

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	**545757**	**76213**	**23744**	**434058**	**154439**	**576574**	**119942**	**1282208**	**279370**
Cereals	**466474**	**69182**	**22206**	**328006**	**124386**	**394249**	**87927**	**913496**	**180273**
Teff	*	*	*	126247	35716	36465	7132	64489	16451
Barley	*	*	*	136733	34493	29435	4761	120313	32400
Wheat	*	*	*	78998	33583	*	*	48369	19711
Maize	459275	67932	20324	51702	10531	315689	63753	720431	100904
Sorghum	*	*	*	3725	*	5669	*	19970	*
Finger millet	*	*	*	-	-	*	*	*	*
Oats/ 'Aja'	*	*	*	23156	4225	*	*	10274	*
Rice	*	*	*	*	*	*	*	-	-
Masho	*	*	*	*	*	*	*	*	*
Pulses	*****	*****	**1452**	**44527**	*****	**81436**	**5948**	**547420**	**46849**
Horse/Faba beans	*	*	*	*	*	*	*	9684	245
Field peas	*	*	*	1368	*	*	*	*	*
White Haricot beans	3935	171	*	*	*	24509	1437	63849	4508
Red Haricot beans	*	*	*	8734	628	42397	1382	452381	35179
Chick peas	1659	196	223	*	*	9061	1676	10005	1323
Lentiles	-	-	-	*	*	4408	576	*	*
Vetch/Grass peas	-	-	-	*	*	*	*	*	*
Soya beans	-	-	-	-	-	*	*	*	*
Fenugreek	-	-	-	*	*	*	*	*	*
Gibto	-	-	-	-	-	*	*	*	*
Oil crops	**4216**	**494**	**83**	**1823**	*****	**4279**	**183**	**15108**	**2300**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	*	*	*	*	*	*
Ground nuts	-	-	-	*	*	*	*	*	*
Safflower	-	-	-	*	*	992	65	*	*
Sesame	4216	494	83	*	*	777	91	5762	2001
Rapeseed	-	-	-	-	-	*	*	*	*
Vegetables.....	**18580**	**638**	*****	**15250**	**1070**	**115743**	**3618**	**92218**	**2064**
Lettuce.....	*	*	-	-	-	1604	*	-	-
Head Cabbage....	9557	161	*	2660	*	8820	323	7509	*
Ethiopian Cabbage	*	*	-	7820	176	42848	578	68529	1191
Tomatoes.....	10328	434	*	4654	*	46840	1632	9523	328
Green peppers...	*	*	-	*	*	22981	421	7171	*
Red peppers.....	*	*	-	-	-	22650	618	5341	173
Swiss chard.....	*	*	-	-	-	*	*	*	*
Root Crops.....	**70565**	**2850**	*****	**90696**	**14897**	**265817**	**22266**	**513975**	**47884**
Beetroot.....	6773	28	-	*	*	8473	*	6717	*
Carrot.....	12393	*	-	-	-	12810	*	7319	*
Onion.....	21467	1046	*	41833	7242	116669	11173	54329	6041
Potatoes.....	32559	1348	*	44378	7395	121558	8873	421775	39781
Yam.....	-	-	-	*	*	*	*	*	*
Garlic.....	*	*	-	5129	121	32769	874	9357	162
Taro/'Godere'...	*	*	-	*	*	*	*	22238	516
Sweet potatoes..	*	*	-	*	*	26186	885	25672	960

Table 10.1: Number of Holders,Inputs Applied Area and Quantity of Inputs used

Tigray Region

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**6,485**	**1,804**	**3,974**	**2,021**	*	*	*	*
Cereals	**5,911**	**1,402**	**2,840**	*	*	*	*	*
Teff	3,933	*	*	*	*	-	-	-
Barley	*	*	*	-	-	-	-	-
Wheat	*	*	*	-	-	-	-	-
Maize	*	*	*	*	*	*	*	*
Sorghum	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-
Pulses	*	-	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	*	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables.....	*	*	*	*	*	-	-	-
Lettuce.....	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	-	-
Tomatoes.....	*	*	*	-	-	-	-	-
Green peppers...	*	*	-	*	*	-	-	-
Red peppers.....	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-
Root Crops.....	*	*	*	*	*	-	-	-
Beetroot.....	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-
Onion.....	*	*	*	*	*	-	-	-
Potatoes.....	*	*	*	*	*	-	-	-
Yam.....	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	-	-

Table 10.1 (Cont'd)

Tigray Region

Crop type	*UREA*			*UREA + DAP*			*Indigenous seed*		
	Holder	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Quintal*
All	*	*	*	**5,893**	**1,143**	**3,186**	**24,700**	**5,925**	*
Cereals	*	*	*	**5,707**	**985**	**2,699**	**24,144**	**5,546**	*
Teff	-	-	-	*	*	*	13,365	3,814	1,461
Barley	-	-	-	*	*	*	*	*	*
Wheat	-	-	-	*	*	*	*	*	*
Maize	*	*	*	*	*	*	*	*	*
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Mahso	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	-	*	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	*	*	*
White Haricot beans	-	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	-	-	-	*	*	*	*	*	-
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	-	-	-
Tomatoes.....	-	-	-	*	*	*	*	*	-
Green peppers...	-	-	-	-	-	-	*	*	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	*	*	*	*	*	*	-
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	*	*	*	*	*	*	*	*	-
Potatoes.....	-	-	-	*	*	*	*	*	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	-	-	-

Table 10.1 (Cont'd)

Tigray Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	*	*	*	*	*	13571	1853	*	*
Cereals	*	*	*	*	*	*	1476	*	*
Teff	-	-	-	-	-	*	*	*	*
Barley	-	-	-	-	-	*	*	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	*	*	*	*	*	*
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	-	-	-	*	*	*	*	-	-
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	-	-	-
Tomatoes.....	-	-	-	*	*	*	*	-	-
Green peppers...	-	-	-	-	-	*	*	-	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	-	*	*	*	*	*	*
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	*	*	-	*	*	*	*	*	*
Potatoes.....	*	*	-	-	-	*	*	-	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	-	-	-

Table10.2: Number of Holders,Inputs Applied Area and Quantity of Inputs used

Afar Region

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**26,383**	*	-	*	*	-	-	-
Cereals	**26,032**	*	-	*	*	-	-	-
Teff	-	-	-	*	-	-	-	-
Barley	*	-	-	-	-	-	-	-
Wheat	*	-	-	-	-	-	-	-
Maize	24,728	-	-	-	-	-	-	-
Sorghum	291	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	*	-	-	-	-	-	-	-
Masho	891	*	-	*	*	-	-	-
Pulses	*	-	-	*	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	*	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-
Chick peas	-	-	-	*	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oil crops	*	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	*	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables.....	*	-	-	-	-	-	-	-
Lettuce.....	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-
Ethiopian Cabbage	*	-	-	-	-	-	-	-
Tomatoes.....	*	-	-	-	-	-	-	-
Green peppers...	*	-	-	-	-	-	-	-
Red peppers.....	*	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-
Root Crops.....	*	-	-	-	-	-	-	-
Beetroot.....	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-
Onion.....	*	-	-	-	-	-	-	-
Potatoes.....	*	-	-	-	-	-	-	-
Yam.....	*	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-
Sweet potatoes..	*	-	-	-	-	-	-	-

Table 10.2 (Cont'd)

Afar Region

Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**-**	**-**	**-**	**-**	**-**	**-**	**29,481**	**22,900**	**9,071**
Cereals	**-**	**-**	**-**	**-**	**-**	**-**	**28,871**	**22,645**	**9,030**
Teff	-	-	-	-	-	-	*	-	*
Barley	-	-	-	-	-	-	*	*	*
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	25,344	21,431	8,755
Sorghum	-	-	-	-	-	-	806	291	80
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Mahso	-	-	-	-	-	-	2,951	803	127
Pulses	**-**	**-**	**-**	**-**	**-**	**-**	**546**	*****	*****
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	509	*	*
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	*	-	*
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	**-**	**-**	**-**	**-**	**-**	**-**	*****	*****	*****
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	*	*	*
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	**-**	**-**	**-**	**-**	**-**	**-**	**644**	*****	**-**
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	*	*	-
Tomatoes.....	-	-	-	-	-	-	209	*	-
Green peppers...	-	-	-	-	-	-	*	*	-
Red peppers.....	-	-	-	-	-	-	*	*	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	**-**	**-**	**-**	**-**	**-**	**-**	*****	*****	**-**
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	-	-	-	-	-	-	*	*	-
Potatoes.....	-	-	-	-	-	-	*	*	-
Yam.....	-	-	-	-	-	-	*	*	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	*	*	-

Table 10.2 (Cont'd)

Afar Region

Crop type	*Improved seed*			*Pesticide*		*Irrigation*		*Extension package*	
	Holder	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Holder*	*Hectare*
All	**4167**	**3405**	**1320**	**683**	**243**	**27213**	**25095**	*	*
Cereals	**3510**	**3309**	**1320**	*	*	**27027**	**24750**	*	*
Teff	-	-	-	*	-	-	-	*	-
Barley	-	-	-	-	-	*	*	-	-
Wheat	*	*	*	-	-	*	*	-	-
Maize	3371	3297	1316	*	*	26750	24349	*	*
Sorghum	-	-	-	-	-	686	279	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	*	*	*	-	-	*	*	-	-
Masho	*	*	*	*	*	-	-	*	*
Pulses	**-**	**-**	**-**	*	**-**	**468**	*	**-**	**-**
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	468	*	-	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	*	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	**-**	**-**	**-**	**-**	**-**	*	*	**-**	**-**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	*	*	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	**770**	*	**-**	*	*	**1271**	*	**-**	**-**
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	-	-	-
Tomatoes.....	561	*	-	*	*	709	*	-	-
Green peppers...	*	*	-	-	-	*	*	-	-
Red peppers.....	*	*	-	-	-	665	*	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	**-**	**-**	**-**	*	*	**-**	**-**
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	*	*	-	-	-	*	*	-	-
Potatoes.....	-	-	-	-	-	-	-	-	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	-	-	-

Table 10.3: Number of Holders,Inputs Applied Area and Quantity of Inputs used

Amhara Region

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**250,219**	**82,778**	**83,762**	**339,622**	**49,160**	**99,363**	**18,551**	**25,148**
Cereals	**164,232**	**44,331**	**31,774**	**201,136**	**26,245**	**53,132**	**10,800**	**13,582**
Teff	18,124	3,476	663	21,421	2,860	*	*	*
Barley	83,139	26,711	16,778	93,152	12,852	35,862	9,480	10,033
Wheat	9,827	5,334	*	32,914	*	*	*	*
Maize	9,908	5,939	12,414	74,965	3,539	18,519	921	*
Sorghum	*	*	*	-	-	*	*	*
Finger millet	*	*	-	*	*	-	-	-
Oats/ 'Aja'	571	245	*	3,791	229	-	-	-
Rice	-	-	-	-	-	-	-	-
Masho	42,360	*	*	*	*	-	-	-
Pulses	**43,748**	**6,633**	*****	**35,211**	*****	*****	*****	*****
Horse/Faba beans	*	*	*	*	*	-	-	-
Field peas	5,348	445	-	6,539	445	-	-	-
White Haricot beans	*	*	*	*	*	*	*	*
Red Haricot beans	1,018	*	*	*	*	*	*	*
Chick peas	9,407	*	*	5,716	*	-	-	-
Lentiles	13,554	*	*	19,042	*	-	-	-
Vetch/Grass peas	*	*	-	*	*	-	-	-
Soya beans	*	-	-	-	-	-	-	-
Fenugreek	422	*	*	4,343	*	*	*	*
Gibto	-	-	-	-	-	-	-	-
Oil crops	**1,630**	**98**	*****	*****	*****	*****	*****	*****
Nueg	*	-	-	-	-	-	-	-
Linseed	*	*	-	*	*	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	1,188	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	78	74	*	*	*	*	*	*
Vegetables.....	**1,577**	**676**	*****	**37,882**	**339**	*****	*****	*****
Lettuce.....	*	*	*	*	*	-	-	-
Head Cabbage....	*	*	*	*	*	*	*	*
Ethiopian Cabbage	411	355	*	30,393	227	*	*	*
Tomatoes.....	526	81	*	2,715	*	*	*	*
Green peppers...	*	*	*	*	*	*	*	*
Red peppers.....	398	146	*	5,403	36	*	*	*
Swiss chard.....	*	-	-	-	-	-	-	-
Root Crops.....	**39,033**	**31,039**	**40,298**	**207,697**	**16,167**	**64,429**	**7,530**	**8,963**
Beetroot.....	*	*	*	-	-	-	-	-
Carrot.....	*	*	*	*	*	*	*	*
Onion.....	6,215	*	*	21,539	*	*	*	*
Potatoes.....	32,081	25,657	20,570	192,172	14,831	61,723	7,366	8,776
Yam.....	-	-	-	-	-	-	-	-
Garlic.....	409	251	*	8,535	*	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-
Sweet potatoes..	*	*	*	*	*	-	-	-

Table 10.3 (Cont'd)

Amhara Region

Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**50,329**	**7,065**	**29,255**	**53,074**	**8,002**	**29,359**	**847,582**	**244,523**	**219,961**
Cereals	**20,031**	**2,076**	*	**30,815**	**5,209**	**11,260**	**590,972**	**159,636**	**177,690**
Teff	1,659	*	*	*	*	*	102,761	18,113	6,799
Barley	6,487	1,157	613	15,186	3,221	6,132	358,602	82,498	144,908
Wheat	*	*	*	*	*	*	74,663	9,038	13,760
Maize	9,527	327	*	12,599	1,152	3,271	94,280	7,019	3,943
Sorghum	-	-	-	-	-	-	*	*	-
Finger millet	-	-	-	-	-	-	*	*	*
Oats/ 'Aja'	-	-	-	*	*	*	9,070	535	1,031
Rice	-	-	-	-	-	-	-	-	-
Mahso	*	*	*	-	-	-	85,282	42,346	7,247
Pulses	*	*	*	*	*	*	**215,816**	**43,502**	**41,548**
Horse/Faba beans	*	*	*	*	*	*	*	*	*
Field peas	-	-	-	-	-	-	48,492	5,343	*
White Haricot beans	-	-	-	-	-	-	*	*	494
Red Haricot beans	*	*	*	-	-	-	18,800	1,004	427
Chick peas	-	-	-	*	*	*	65,523	9,213	6,521
Lentiles	*	*	*	-	-	-	97,099	13,554	13,384
Vetch/Grass peas	-	-	-	-	-	-	39,788	*	*
Soya beans	-	-	-	-	-	-	*	*	*
Fenugreek	*	*	*	-	-	-	13,864	398	162
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	-	-	-	*	*	*	**15,900**	**1,533**	*
Nueg	-	-	-	-	-	-	*	*	*
Linseed	-	-	-	-	-	-	4,474	*	*
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	7,911	1,135	21
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	*	*	*	*	*	-
Vegetables.....	*	**131**	*	**1,822**	*	*	**82,191**	**1,565**	*
Lettuce.....	-	-	-	*	*	*	*	*	-
Head Cabbage....	*	*	*	*	*	*	3,685	*	-
Ethiopian Cabbage	*	*	*	-	-	-	51,391	410	*
Tomatoes.....	*	*	*	*	*	*	14,071	525	-
Green peppers...	*	*	*	-	-	-	*	*	-
Red peppers.....	*	*	*	1,471	*	*	19,163	396	-
Swiss chard.....	-	-	-	-	-	-	*	*	-
Root Crops.....	**36,776**	**4,773**	**16,082**	**31,019**	**2,569**	*	**424,698**	**38,288**	*
Beetroot.....	-	-	-	*	*	*	*	*	-
Carrot.....	*	*	*	*	*	*	*	*	-
Onion.....	16,819	*	*	12,832	*	*	72,737	6,095	-
Potatoes.....	*	*	*	18,128	1,242	*	353,014	31,487	*
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	*	*	*	*	*	*	25,111	409	*
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	*	*	*	-	-	-	*	*	-

Table 10.3 (Cont'd)

Amhara Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	**31872**	**2317**	*****	**87303**	**28446**	**229363**	**41099**	**275700**	**55118**
Cereals	**18075**	**1684**	*****	**45893**	**11414**	**140616**	**25178**	**163338**	**26045**
Teff	*	*	*	*	*	33416	6636	18759	2848
Barley	*	*	*	*	*	17656	1945	58200	11247
Wheat	*	*	*	9455	1276	*	*	18262	2320
Maize	12931	696	*	*	*	76075	5995	77230	4496
Sorghum	-	-	-	-	-	-	-	*	*
Finger millet	-	-	-	-	-	*	*	-	-
Oats/ 'Aja'	*	*	-	-	-	*	*	*	*
Rice	-	-	-	-	-	-	-	-	-
Masho	-	-	-	*	*	*	*	*	*
Pulses	**1635**	**195**	**222**	**32729**	*****	**19420**	**3258**	**30175**	*****
Horse/Faba beans	-	-	-	*	*	-	-	*	*
Field peas	-	-	-	*	*	*	*	*	*
White Haricot beans	-	-	-	-	-	*	*	*	*
Red Haricot beans	-	-	-	-	-	*	*	*	*
Chick peas	1635	195	222	*	*	9061	1676	10005	1323
Lentiles	-	-	-	*	*	4408	576	*	*
Vetch/Grass peas	-	-	-	*	*	*	*	*	*
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	*	*	*	*	*	*
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	**-**	**-**	**-**	*****	*****	**1332**	**66**	*****	*****
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	*	*	-	-	*	*
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	*	*	992	65	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	*	*	*	*
Vegetables.....	*****	*****	**-**	**2542**	*****	**46556**	**1216**	**24761**	**436**
Lettuce.....	-	-	-	-	-	*	*	-	-
Head Cabbage....	*	*	-	*	*	3595	*	*	*
Ethiopian Cabbage	-	-	-	*	*	19096	107	16538	230
Tomatoes.....	*	*	-	*	*	*	*	*	*
Green peppers...	-	-	-	*	*	7881	*	*	*
Red peppers.....	*	*	-	-	-	16715	377	*	*
Swiss chard.....	-	-	-	-	-	*	*	-	-
Root Crops.....	**12694**	**428**	**-**	**30148**	*****	**140945**	**11381**	**178130**	**21547**
Beetroot.....	*	*	-	-	-	*	*	*	*
Carrot.....	*	*	-	-	-	*	*	*	*
Onion.....	*	*	-	25979	*	61393	6043	34937	*
Potatoes.....	10599	323	-	*	*	78791	4671	146201	17273
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	3419	*	17542	369	4904	*
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	*	*	*	*

Table 10.4: Number of Holders,Inputs Applied Area and Quantity of Inputs used

Oromia Region

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**662,178**	**288,440**	**211,512**	**1,176,229**	**120,174**	**469,822**	**133,208**	**141,221**
Cereals	**482,527**	**206,090**	**122,998**	**882,791**	**80,527**	**352,326**	**103,601**	**91,867**
Teff	48,513	9,658	3,251	13,738	2,502	26,227	5,337	2,390
Barley	85,984	45,278	30,498	62,265	6,618	124,867	36,254	28,554
Wheat	50,995	27,975	28,470	15,789	2,068	57,695	23,609	25,437
Maize	267,461	112,872	56,896	817,406	64,375	193,434	33,776	32,350
Sorghum	22,380	7,064	1,690	32,022	4,705	14,224	2,174	1,297
Finger millet	*	*	*	*	*	-	-	-
Oats/ 'Aja'	7,132	3,182	2,163	6,447	233	13,170	2,418	1,815
Rice	*	*	-	*	*	-	-	-
Masho	*	*	*	*	*	*	*	*
Pulses	**92,552**	**30,690**	**32,939**	**506,605**	**17,914**	**129,269**	**9,785**	**22,221**
Horse/Faba beans	2,222	142	*	6,896	90	*	*	*
Field peas	16,792	*	*	6,103	796	*	*	*
White Haricot beans	24,300	10,222	8,444	247,349	7,750	35,966	2,109	6,047
Red Haricot beans	45,480	18,646	22,261	255,522	8,965	86,522	7,056	13,942
Chick peas	*	*	-	*	*	-	-	-
Lentiles	*	*	*	*	*	*	*	*
Vetch/Grass peas	*	-	-	-	-	-	-	-
Soya beans	*	*	-	*	*	-	-	-
Fenugreek	*	*	*	*	*	*	*	*
Gibto	*	*	*	-	-	*	*	*
Oil crops	**19,161**	*****	*****	**8,096**	*****	*****	*****	*****
Nueg	-	-	-	-	-	-	-	-
Linseed	*	*	*	*	*	-	-	-
Ground nuts	*	*	*	*	*	*	*	*
Safflower	-	-	-	-	-	-	-	-
Sesame	17,437	*	*	*	*	*	*	*
Rapeseed	42	28	*	2,303	18	*	*	*
Vegetables.....	**11,306**	**6,637**	**5,497**	**348,140**	**5,089**	**20,566**	**616**	**1,894**
Lettuce.....	*	*	*	*	*	-	-	-
Head Cabbage....	518	397	*	11,055	141	*	*	*
Ethiopian Cabbage	8,998	5,081	2,688	310,936	4,645	14,303	280	1,341
Tomatoes.....	881	564	*	11,747	64	*	*	*
Green peppers...	498	312	*	29,734	149	2,069	*	*
Red peppers.....	*	*	*	*	*	*	*	*
Swiss chard.....	*	*	-	*	*	-	-	-
Root Crops.....	**56,633**	**40,805**	**48,831**	**419,479**	**15,587**	**166,458**	**16,095**	**24,085**
Beetroot.....	322	176	*	8,258	*	3,831	*	*
Carrot.....	*	*	*	*	*	*	*	*
Onion.....	7,959	4,927	15,280	35,943	921	11,522	*	*
Potatoes.....	40,817	31,792	32,022	270,415	11,761	142,611	15,084	22,107
Yam.....	*	-	-	-	-	-	-	-
Garlic.....	1,845	869	220	82,298	631	3,545	164	124
Taro/'Godere'...	264	145	*	13,404	125	*	*	*
Sweet potatoes..	4,905	2,513	844	70,870	1,916	8,019	231	380

Table 10.4 (cont'd

Oromia Region

Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**51,258**	**9,631**	**12,621**	**113,091**	**25,428**	**57,670**	**2,651,437**	**605,041**	**472,690**
Cereals	**35,165**	**7,180**	**8,672**	**71,473**	**14,783**	**22,459**	**1,765,197**	**429,039**	**418,284**
Teff	*	*	*	*	*	*	160,680	48,395	22,466
Barley	*	*	*	6,395	1,600	1,514	412,788	85,380	178,304
Wheat	*	*	*	*	*	*	136,215	50,994	116,691
Maize	29,302	4,895	7,661	59,423	9,826	16,885	1,323,926	220,305	85,970
Sorghum	*	*	*	*	*	*	39,484	16,800	3,635
Finger millet	*	*	*	-	-	-	*	*	-
Oats/ 'Aja'	*	*	*	*	*	*	46,829	7,132	11,137
Rice	-	-	-	-	-	-	*	*	-
Mahso	-	-	-	-	-	-	*	*	*
Pulses	**11,990**	*****	**1,224**	**31,493**	**2,018**	**9,494**	**1,199,972**	**91,943**	**49,860**
Horse/Faba beans	-	-	-	-	-	-	37,052	2,219	*
Field peas	-	-	-	-	-	-	81,615	16,792	19,643
White Haricot beans	*	*	*	5,171	244	2,079	456,865	24,092	7,699
Red Haricot beans	10,037	*	907	25,779	*	7,412	663,743	45,159	18,317
Chick peas	-	-	-	-	-	-	*	*	*
Lentiles	-	-	-	*	*	*	*	*	*
Vetch/Grass peas	-	-	-	-	-	-	*	*	*
Soya beans	-	-	-	-	-	-	*	*	-
Fenugreek	-	-	-	-	-	-	1,790	*	*
Gibto	-	-	-	-	-	-	*	*	-
Oil crops	*****	*****	*****	*****	*****	*****	**37,565**	**17,674**	*****
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	*	*	*	1,992	*	*
Ground nuts	*	*	*	-	-	-	*	*	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	30,230	17,437	*
Rapeseed	*	*	*	*	*	*	*	*	*
Vegetables.....	**3,891**	**130**	*****	**12,006**	**801**	**3,292**	**592,212**	**11,070**	**13**
Lettuce.....	-	-	-	*	*	*	1,958	*	-
Head Cabbage....	*	*	*	*	*	*	25,361	516	-
Ethiopian Cabbage	*	*	*	3,850	125	1,260	516,469	8,847	13
Tomatoes.....	*	*	*	3,503	*	*	33,507	871	-
Green peppers...	*	*	*	*	*	*	52,533	490	-
Red peppers.....	*	*	*	*	*	*	*	*	-
Swiss chard.....	-	-	-	-	-	-	1,518	*	-
Root Crops.....	**17,930**	**1,304**	**2,359**	**47,477**	**7,819**	**22,386**	**856,215**	**55,315**	*****
Beetroot.....	*	*	*	*	*	*	25,959	320	-
Carrot.....	-	-	-	-	-	-	5,687	*	-
Onion.....	4,972	*	*	10,701	3,081	13,130	109,257	7,572	*
Potatoes.....	12,010	543	1,149	31,841	4,404	8,766	586,213	40,625	*
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	*	*	*	*	*	*	154,924	1,844	-
Taro/'Godere'...	-	-	-	-	-	-	*	*	-
Sweet potatoes..	2,455	*	87	*	*	*	125,967	4,809	-

Table 10.4 (Cont'd)

Oromia Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	**63953**	**9757**	**2507**	**280213**	**113539**	**225381**	**34553**	**387688**	**118213**
Cereals	**53099**	**8782**	**2430**	**245395**	**102765**	**162213**	**22798**	**293017**	**86981**
Teff	-	-	-	90604	26598	-	-	26622	6572
Barley	*	*	*	121348	32345	10377	*	54418	20677
Wheat	-	-	-	68630	32127	*	*	28217	17155
Maize	52531	8703	2380	31659	6910	150498	19293	209178	37507
Sorghum	-	-	-	*	*	*	*	7474	*
Finger millet	-	-	-	-	-	*	-	-	-
Oats/ 'Aja'	-	-	-	23156	4225	*	*	9631	*
Rice	-	-	-	-	-	-	-	-	-
Masho	-	-	-	*	*	-	-	-	-
Pulses	**3538**	**192**	*****	**7307**	**687**	**39506**	**1271**	**140023**	**12235**
Horse/Faba beans	*	*	*	*	*	-	-	*	*
Field peas	-	-	-	*	*	-	-	*	*
White Haricot beans	1979	*	*	*	*	13519	513	27714	1924
Red Haricot beans	1559	*	*	4560	314	25887	715	108565	10133
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	*	*
Vetch/Grass peas	-	-	-	-	-	*	*	*	*
Soya beans	-	-	-	-	-	*	*	-	-
Fenugreek	-	-	-	-	-	*	*	*	*
Gibto	-	-	-	-	-	-	-	*	*
Oil crops	**-**	**-**	**-**	*****	*****	*****	*****	**4972**	*****
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	*	*
Ground nuts	-	-	-	-	-	*	*	*	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	*	*	-	-	3125	*
Rapeseed	-	-	-	-	-	*	*	*	*
Vegetables.....	**1414**	*****	*****	**5629**	*****	**42053**	**1517**	**12469**	**408**
Lettuce.....	*	*	-	-	-	*	*	-	-
Head Cabbage....	*	*	-	*	*	4320	*	2032	*
Ethiopian Cabbage	*	*	-	2242	*	14171	344	8160	*
Tomatoes.....	*	*	*	*	*	19477	537	1521	*
Green peppers...	-	-	-	*	*	9656	169	*	*
Red peppers.....	-	-	-	-	-	*	*	*	*
Swiss chard.....	-	-	-	-	-	*	*	*	*
Root Crops.....	*****	*****	**-**	**37661**	**9221**	**92436**	**8940**	**140363**	**16913**
Beetroot.....	*	*	-	*	*	6781	*	*	*
Carrot.....	*	*	-	-	-	953	*	*	*
Onion.....	*	*	-	10382	3117	39025	4266	9136	*
Potatoes.....	*	*	-	26682	5945	34827	3424	123616	15064
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	*	*	-	*	*	13841	498	*	*
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	20071	617	*	*

Table 10.5: Number of Holders,Inputs Applied Area and Quantity of Inputs used

Somale Region

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**6,738**	*	*	**3,093**	*	-	-	-
Cereals	**4,987**	*	-	*	*	-	-	-
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	4,987	*	-	*	*	-	-	-
Sorghum	*	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-
Pulses	**1,494**	*	-	*	*	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	*	-	-	-	-	-	-	-
Red Haricot beans	1,465	*	-	*	*	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables.....	**121**	**38**	*	**919**	**33**	-	-	-
Lettuce.....	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	-	-
Tomatoes.....	113	33	*	733	28	-	-	-
Green peppers...	*	*	*	*	*	-	-	-
Red peppers.....	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-
Root Crops.....	*	**23**	*	**867**	**21**	-	-	-
Beetroot.....	*	*	-	*	*	-	-	-
Carrot.....	-	-	-	-	-	-	-	-
Onion.....	*	21	*	867	20	-	-	-
Potatoes.....	-	-	-	-	-	-	-	-
Yam.....	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	-	-

Table 10.5 (Cont'd)

Somale Region

Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	*	*	*	*	*	*	**25,495**	**6,387**	**1,939**
Cereals	-	-	-	-	-	-	**21,116**	**4,700**	**1,389**
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	21,032	4,699	1,389
Sorghum	-	-	-	-	-	-	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Mahso	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	-	**8,436**	**1,489**	**550**
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	*	*	*
Red Haricot beans	-	-	-	-	-	-	8,280	*	543
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	*	*	*	*	**2,029**	*	-
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	-	-	-
Tomatoes.....	*	*	*	*	*	*	1,768	*	-
Green peppers...	-	-	-	*	*	*	*	*	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	-	-	-	*	*	*	*	*	-
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	-	-	-	*	*	*	*	*	-
Potatoes.....	-	-	-	-	-	-	-	-	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	-	-	-

Table 10.5 (Cont'd)

Somale Region

Crop type	*Improved seed*			*Pesticide*		*Irrigation*		*Extension package*	
	Holder	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Holder*	*Hectare*
All	**2435**	*	*	*	*	**5818**	*	*	*
Cereals	*	*	*	-	-	*	*	*	*
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	-	-	*	*	*	*
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	*	*	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	*	*	*	*
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	**40**	-	*	*	**2814**	**121**	*	*
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	-	-	-
Tomatoes.....	739	38	-	*	*	2507	113	*	*
Green peppers...	*	*	-	*	*	*	*	*	*
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	**553**	**17**	-	*	*	**2007**	*	*	*
Beetroot.....	*	*	-	-	-	*	*	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	553	15	-	*	*	2007	*	*	*
Potatoes.....	-	-	-	-	-	-	-	-	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	-	-	-

Table 10.6 Number of Holders,Inputs Applied Area and Quantity of Inputs used

Benshangul-Gumuz Region

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**4,022**	**1,277**	*	**17,841**	**1,168**	**1,477**	*	*
Cereals	**1,905**	**577**	*	**13,722**	**549**	*	*	*
Teff	*	*	-	*	*	-	-	-
Barley	59	*	-	*	*	-	-	-
Wheat	*	-	-	-	-	-	-	-
Maize	1,758	574	*	13,701	546	*	*	*
Sorghum	86	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-
Pulses	**1,769**	**560**	*	**13,167**	**514**	*	*	*
Horse/Faba beans	*	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	*	*	*	*	*	*	*	*
Red Haricot beans	1,611	546	*	12,699	502	*	*	*
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	*	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oil crops	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables.....	**179**	**72**	*	**5,970**	**68**	*	*	*
Lettuce.....	*	*	-	*	*	-	-	-
Head Cabbage....	*	*	-	*	*	-	-	-
Ethiopian Cabbage	149	*	*	3,445	*	*	*	*
Tomatoes.....	*	*	*	*	*	*	*	*
Green peppers...	7	*	-	*	*	-	-	-
Red peppers.....	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-
Root Crops.....	**170**	**68**	*	**4,062**	**36**	**639**	*	*
Beetroot.....	*	*	-	*	*	-	-	-
Carrot.....	*	-	-	-	-	-	-	-
Onion.....	*	*	*	*	*	*	*	*
Potatoes.....	140	49	*	1,938	17	*	*	*
Yam.....	-	-	-	-	-	-	-	-
Garlic.....	7	4	-	1,022	4	-	-	-
Taro/'Godere'...	*	-	-	-	-	-	-	-
Sweet potatoes..	*	*	-	*	*	-	-	-

Table 10.6(Cont'd)

Benshangul-Gumuz Region

Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**-**	**-**	**-**	**-**	**-**	**-**	**35,136**	**2,450**	**1,271**
Cereals	**-**	**-**	**-**	**-**	**-**	**-**	**10,567**	**381**	**164**
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	726	59	77
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	10,125	322	86
Sorghum	-	-	-	-	-	-	*	*	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Mahso	-	-	-	-	-	-	-	-	-
Pulses	**-**	**-**	**-**	**-**	**-**	**-**	**28,625**	**1,755**	**1,107**
Horse/Faba beans	-	-	-	-	-	-	*	*	*
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	3,141	*	*
Red Haricot beans	-	-	-	-	-	-	26,623	1,602	1,017
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	*	*	*
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	**-**	**-**	**-**	**-**	**-**	**-**	**11,549**	**174**	*****
Lettuce.....	-	-	-	-	-	-	*	*	-
Head Cabbage....	-	-	-	-	-	-	*	*	-
Ethiopian Cabbage	-	-	-	-	-	-	8,583	147	*
Tomatoes.....	-	-	-	-	-	-	*	*	*
Green peppers...	-	-	-	-	-	-	1,142	*	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	**-**	**-**	**-**	**-**	**-**	**-**	**8,802**	**140**	**-**
Beetroot.....	-	-	-	-	-	-	*	*	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	-	-	-	-	-	-	*	*	-
Potatoes.....	-	-	-	-	-	-	6,245	117	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	1,861	7	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	*	*	-

Table 10.6 (Cont'd)

Benshangul-Gumuz Region

Crop type	*Improved seed*			*Pesticide*		*Irrigation*		*Extension package*	
	Holder	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Holder*	*Hectare*
All	**862**	**44**	**4**	*	*	**11908**	**372**	*	*
Cereals	*	**11**	**3**	-	-	**8344**	**214**	*	*
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	11	3	-	-	8344	214	*	*
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-	-
Pulses	**136**	*	*	*	*	*	*	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	*	*	*	-	-	441	*	-	-
Red Haricot beans	*	*	*	*	*	*	*	*	*
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	*	*	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	-	-	-	**4746**	**48**	*	*
Lettuce.....	-	-	-	-	-	*	*	-	-
Head Cabbage....	-	-	-	-	-	*	*	-	-
Ethiopian Cabbage	-	-	-	-	-	1848	*	-	-
Tomatoes.....	*	*	-	-	-	*	*	*	*
Green peppers...	*	*	-	-	-	*	*	*	*
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	-	-	-	**2646**	**26**	*	*
Beetroot.....	*	*	-	-	-	*	*	-	-
Carrot.....	*	*	-	-	-	*	*	*	*
Onion.....	*	*	-	-	-	*	*	*	*
Potatoes.....	*	*	-	-	-	*	*	*	*
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	*	*	-	-	-	*	*	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	*	*	-	-

Table 10.7: Number of Holders,Inputs Applied Area and Quantity of Inputs used

S.N.N.P.R

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**542,833**	**254,180**	**282,029**	**1,771,772**	**94,918**	**903,522**	**106,566**	**157,985**
Cereals	**342,666**	**131,805**	**134,553**	**1,277,978**	**49,485**	**570,125**	**48,113**	**69,451**
Teff	23,363	10,098	9,769	1,954	*	15,980	4,983	3,911
Barley	15,922	3,953	1,516	38,393	2,663	12,423	994	1,240
Wheat	2,217	*	929	*	*	4,381	*	*
Maize	280,439	114,006	121,579	1,240,380	44,493	544,801	40,692	63,077
Sorghum	20,172	2,359	741	41,571	1,983	6,168	299	*
Finger millet	388	*	*	*	*	*	*	*
Oats/ 'Aja'	*	*	*	*	*	*	*	*
Rice	*	*	*	*	*	*	*	*
Masho	*	*	-	*	*	-	-	-
Pulses	**120,725**	**68,022**	**87,918**	**787,406**	**21,140**	**604,214**	**39,997**	**58,251**
Horse/Faba beans	1,150	470	481	15,310	276	4,183	*	191
Field peas	1,194	*	*	5,647	*	1,672	*	*
White Haricot beans	12,738	6,427	9,403	78,422	2,553	57,074	3,072	3,672
Red Haricot beans	105,372	60,817	77,859	699,007	18,101	544,129	36,721	54,309
Chick peas	155	*	*	-	-	*	*	*
Lentiles	*	*	-	*	*	-	-	-
Vetch/Grass peas	*	*	-	*	*	-	-	-
Soya beans	34	*	*	-	-	*	*	*
Fenugreek	27	*	-	*	*	-	-	-
Gibto	*	*	*	-	-	*	*	*
Oil crops	**7,353**	**315**	**512**	**4,307**	**71**	*****	**178**	*****
Nueg	*	*	-	*	*	-	-	-
Linseed	34	*	*	*	*	*	*	*
Ground nuts	*	79	*	1,798	*	*	*	*
Safflower	99	25	*	879	13	*	*	*
Sesame	5,258	204	*	468	19	*	*	*
Rapeseed	*	*	*	*	*	*	*	*
Vegetables.....	**14,601**	**9,151**	**13,541**	**709,399**	**6,496**	**113,882**	**1,939**	**8,932**
Lettuce.....	*	*	-	*	*	-	-	-
Head Cabbage....	588	*	*	13,306	*	*	*	*
Ethiopian Cabbage	13,258	8,299	12,404	687,510	6,058	108,064	1,698	8,384
Tomatoes.....	*	*	*	7,119	*	*	*	*
Green peppers...	379	*	*	33,699	*	*	*	*
Red peppers.....	13	*	-	*	*	-	-	-
Swiss chard.....	*	*	*	*	*	*	*	*
Root Crops.....	**57,488**	**44,886**	**45,506**	**719,003**	**17,727**	**331,451**	**16,340**	**21,106**
Beetroot.....	172	*	*	9,298	*	*	*	*
Carrot.....	*	*	*	7,274	11	*	*	*
Onion.....	1,319	528	*	39,662	183	3,963	*	74
Potatoes.....	39,017	35,090	41,094	384,000	9,529	291,402	15,376	18,188
Yam.....	1,447	662	*	46,889	556	*	*	*
Garlic.....	764	565	139	139,380	485	8,861	72	124
Taro/'Godere'...	5,025	3,019	*	158,989	2,596	11,615	191	*
Sweet potatoes..	9,597	4,825	1,011	147,757	4,310	22,841	468	852

Table 20.7 (Cont'd)

S.N.N.P.R Region

Crop type	*UREA*			*UREA + DAP*			*Indigenous seed*		
	Holder	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Quintal*
All	**66,206**	**4,315**	**9,153**	**351,810**	**48,381**	**114,892**	**3,127,433**	**448,964**	**147,461**
Cereals	**46,184**	**3,238**	**4,896**	**214,253**	**30,970**	**60,205**	**1,992,802**	**259,382**	**104,300**
Teff	3,727	1,136	822	9,844	3,751	5,036	77,247	23,229	10,289
Barley	*	*	*	4,179	279	264	152,326	15,782	15,390
Wheat	*	*	*	*	*	*	13,282	2,188	2,023
Maize	42,174	2,066	*	202,659	26,755	54,473	1,887,082	200,433	72,524
Sorghum	*	*	*	*	*	*	73,610	17,218	3,957
Finger millet	-	-	-	-	-	-	6,825	387	45
Oats/ 'Aja'	-	-	-	*	*	*	*	*	*
Rice	-	-	-	-	-	-	1,763	*	*
Mahso	-	-	-	-	-	-	972	*	*
Pulses	**24,776**	**436**	*****	**148,628**	**6,449**	**26,655**	**1,968,243**	**117,761**	**41,185**
Horse/Faba beans	-	-	-	*	*	*	53,452	1,141	506
Field peas	*	*	*	*	*	*	32,677	1,190	481
White Haricot beans	*	*	*	25,472	754	5,547	257,110	12,590	2,214
Red Haricot beans	19,859	375	*	121,286	5,620	20,728	1,700,567	102,593	37,919
Chick peas	*	*	*	*	*	*	987	153	*
Lentiles	-	-	-	-	-	-	940	*	*
Vetch/Grass peas	-	-	-	-	-	-	*	*	-
Soya beans	-	-	-	*	-	*	1,311	*	*
Fenugreek	-	-	-	-	-	-	2,795	21	*
Gibto	-	-	-	-	-	-	*	*	*
Oil crops	*****	*****	*****	**1,034**	**56**	*****	**49,661**	**6,772**	**1,352**
Nueg	-	-	-	-	-	-	*	*	*
Linseed	-	-	-	-	-	-	2,461	34	*
Ground nuts	-	-	-	*	*	*	16,418	*	*
Safflower	-	-	-	*	*	*	5,856	97	*
Sesame	*	*	*	*	*	*	21,235	4,754	635
Rapeseed	-	-	-	-	-	-	*	*	*
Vegetables.....	**9,178**	**67**	**113**	**37,507**	**649**	**4,496**	**1,115,264**	**13,604**	**10**
Lettuce.....	-	-	-	-	-	-	*	*	-
Head Cabbage....	*	*	*	*	*	*	21,549	*	*
Ethiopian Cabbage	8,793	49	105	35,669	494	3,916	1,079,465	12,722	7
Tomatoes.....	-	-	-	*	*	*	8,914	*	*
Green peppers...	*	*	*	*	*	*	53,476	366	-
Red peppers.....	-	-	-	-	-	-	2,817	13	*
Swiss chard.....	-	-	-	-	-	-	*	*	-
Root Crops.....	**23,441**	**563**	**1,130**	**145,831**	**10,257**	**23,270**	**1,197,560**	**51,445**	*****
Beetroot.....	-	-	-	*	*	*	19,005	151	-
Carrot.....	*	*	*	*	*	*	11,974	*	*
Onion.....	*	*	*	*	*	*	73,740	932	*
Potatoes.....	18,736	455	948	137,541	9,731	21,958	814,789	37,933	*
Yam.....	*	*	*	-	-	-	66,441	1,186	*
Garlic.....	*	*	*	*	*	*	191,523	753	*
Taro/'Godere'...	1,257	*	*	5,556	187	723	65,472	1,298	*
Sweet potatoes..	*	*	*	*	*	*	270,327	9,059	*

Table 20.7 (Cont'd)

S.N.N.P.R Region

Crop type	*Improved seed*			*Pesticide*		*Irrigation*		*Extension package*	
	Holder	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Holder*	*Hectare*
All	**436783**	**59871**	**17439**	**59537**	**11333**	**57386**	**15640**	**608433**	**103113**
Cereals	**388932**	**54845**	**16200**	**35363**	**9479**	**38657**	**12583**	**448736**	**64538**
Teff	*	*	*	14209	*	*	*	15188	5180
Barley	*	*	*	8876	*	*	*	7696	476
Wheat	*	*	*	*	*	-	-	*	*
Maize	387584	54674	16099	12577	*	37795	*	430298	58106
Sorghum	*	*	*	*	*	*	*	10409	512
Finger millet	*	*	*	-	-	-	-	*	*
Oats/ 'Aja'	*	*	*	-	-	-	-	*	*
Rice	*	*	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-	-
Pulses	*****	*****	*****	**4143**	**359**	**15842**	*****	**375330**	**27541**
Horse/Faba beans	*	*	*	*	*	*	*	4987	*
Field peas	*	*	*	-	-	*	*	*	9
White Haricot beans	*	*	*	*	*	*	*	34711	*
Red Haricot beans	*	*	*	3863	305	8187	*	338725	24896
Chick peas	*	*	*	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	*	*
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	*	*	*	*
Oil crops	**4216**	**494**	**83**	*****	*****	*****	*****	**7408**	**562**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	*	*	*	*
Ground nuts	-	-	-	*	*	-	-	*	*
Safflower	-	-	-	-	-	-	-	*	*
Sesame	4216	494	83	-	-	*	*	2637	388
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	**14479**	**458**	*****	**6132**	*****	**16133**	**483**	**53435**	**1161**
Lettuce.....	*	*	-	-	-	-	-	-	-
Head Cabbage....	8187	*	*	*	*	*	*	4972	*
Ethiopian Cabbage	*	*	-	4470	*	7733	*	43831	760
Tomatoes.....	*	*	-	-	-	6856	*	*	*
Green peppers...	*	*	-	*	*	*	*	*	*
Red peppers.....	*	*	-	-	-	-	-	*	*
Swiss chard.....	*	*	-	-	-	51	*	*	*
Root Crops.....	**44852**	**1414**	*****	**17853**	**1265**	**18349**	**1292**	**193415**	**9311**
Beetroot.....	5322	20	-	-	-	*	*	3697	*
Carrot.....	*	*	-	-	-	*	*	*	*
Onion.....	14218	386	*	*	*	6225	*	8983	*
Potatoes.....	21157	*	*	15235	1200	*	*	151355	7407
Yam.....	-	-	-	*	*	*	*	*	*
Garlic.....	*	*	-	*	*	*	*	3939	24
Taro/'Godere'...	*	*	-	*	*	*	*	22238	516
Sweet potatoes..	*	*	-	*	*	*	*	16672	*

Table 20.8: Number of Holders,Inputs Applied Area and Quantity of Inputs used

Gambella Region

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**9,497**	*	*	**114**	*	*	*	*
Cereals	**8,491**	*	*	*	*	*	*	*
Teff	*	-	-	-	-	-	-	-
Barley	*	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	8,411	*	*	*	*	*	*	*
Sorghum	-	-	-	-	-	-	-	-
Finger millet	*	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	*	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-
Pulses	**302**	*	-	*	*	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	8	-	-	-	-	-	-	-
Red Haricot beans	294	*	-	*	*	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	*	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	*	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oil crops	**610**	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	*	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	592	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables.....	**65**	*	-	*	*	-	-	-
Lettuce.....	-	-	-	-	-	-	-	-
Head Cabbage....	*	-	-	-	-	-	-	-
Ethiopian Cabbage	48	*	-	*	*	-	-	-
Tomatoes.....	*	-	-	-	-	-	-	-
Green peppers...	*	-	-	-	-	-	-	-
Red peppers.....	*	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-
Root Crops.....	**28**	-	-	-	-	-	-	-
Beetroot.....	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-
Onion.....	*	-	-	-	-	-	-	-
Potatoes.....	*	-	-	-	-	-	-	-
Yam.....	*	-	-	-	-	-	-	-
Garlic.....	*	-	-	-	-	-	-	-
Taro/'Godere'...	*	-	-	-	-	-	-	-
Sweet potatoes..	5	-	-	-	-	-	-	-

Table 20.8 (Cont'd)

Gambella Region

Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**-**	**-**	**-**	**-**	**-**	**-**	**37,705**	**9,451**	**2,455**
Cereals	**-**	**-**	**-**	**-**	**-**	**-**	**35,909**	**8,458**	**2,328**
Teff	-	-	-	-	-	-	*	*	*
Barley	-	-	-	-	-	-	*	*	*
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	35,719	8,377	2,294
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	*	*	*
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	*	*	*
Mahso	-	-	-	-	-	-	-	-	-
Pulses	**-**	**-**	**-**	**-**	**-**	**-**	**6,995**	**295**	*****
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	1,301	8	*
Red Haricot beans	-	-	-	-	-	-	5,869	287	*
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	*	*	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	**-**	**-**	**-**	**-**	**-**	**-**	**1,622**	**606**	**75**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	*	*	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	1,561	588	59
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	**-**	**-**	**-**	**-**	**-**	**-**	**6,078**	**64**	*****
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	*	*	-
Ethiopian Cabbage	-	-	-	-	-	-	5,891	48	*
Tomatoes.....	-	-	-	-	-	-	*	*	*
Green peppers...	-	-	-	-	-	-	*	*	-
Red peppers.....	-	-	-	-	-	-	*	*	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	**-**	**-**	**-**	**-**	**-**	**-**	**1,213**	**28**	*****
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	-	-	-	-	-	-	388	*	*
Potatoes.....	-	-	-	-	-	-	*	*	-
Yam.....	-	-	-	-	-	-	*	*	-
Garlic.....	-	-	-	-	-	-	*	*	-
Taro/'Godere'...	-	-	-	-	-	-	*	*	-
Sweet potatoes..	-	-	-	-	-	-	302	5	*

Table 10.8 (Cont'd)

Gambella Region

Crop type	*Improved seed*			*Pesticide*		*Irrigation*		*Extension package*	
	Holder	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Holder*	*Hectare*
All	*	*	*	*	*	*	*	*	*
Cereals	*	*	*	*	*	-	-	*	*
Teff	-	-	-	*	*	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	*	*	-	-	*	*
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	*	*	-	-	-	-
Masho	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	*	*	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	*	*	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	-	-	-	-	-	*	*	-	-
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	-	-	-
Tomatoes.....	-	-	-	-	-	*	*	-	-
Green peppers...	-	-	-	-	-	*	*	-	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	-	-	-	*	*	-	-
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	*	*	-	-	-	*	*	-	-
Potatoes.....	-	-	-	-	-	-	-	-	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	*	*	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	-	-	-

Table 10.9: Number of Holders,Inputs Applied Area and Quantity of Inputs used

Harari Region

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**1,589**	**1,192**	**2,489**	**6,167**	**480**	**2,146**	**205**	**565**
Cereals	**965**	**647**	**791**	**3,966**	**225**	**1,418**	**75**	**125**
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	561	296	476	1,979	46	604	21	22
Sorghum	404	351	315	2,536	179	859	54	103
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-
Pulses	**268**	**247**	**563**	**3,348**	**123**	**1,293**	**49**	**160**
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	*	*	*	*	*	*	*	*
Red Haricot beans	154	140	470	1,982	48	*	*	*
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oil crops	*****	*****	**-**	*****	*****	**-**	**-**	**-**
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	*	*	-	*	*	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables.....	**57**	**43**	*****	**1,423**	**31**	*****	*****	*****
Lettuce.....	*	*	-	*	*	-	-	-
Head Cabbage....	*	*	*	-	-	-	-	-
Ethiopian Cabbage	*	*	*	*	*	*	*	*
Tomatoes.....	*	*	-	*	*	-	-	-
Green peppers...	*	*	*	*	*	-	-	-
Red peppers.....	-	-	-	-	-	-	-	-
Swiss chard.....	*	*	*	-	-	-	-	-
Root Crops.....	**299**	**254**	**670**	**3,567**	**101**	**1,182**	*****	*****
Beetroot.....	*	*	*	-	-	-	-	-
Carrot.....	*	*	-	*	*	-	-	-
Onion.....	-	-	-	-	-	-	-	-
Potatoes.....	110	110	*	1,553	32	*	*	*
Yam.....	-	-	-	-	-	-	-	-
Garlic.....	*	*	*	-	-	*	*	*
Taro/'Godere'...	-	-	-	-	-	-	-	-
Sweet potatoes..	187	142	*	2,250	68	*	12	*

Table 10.9 (Cont'd)

Harari Region

Crop type	*UREA*			*UREA + DAP*			*Indigenous seed*		
	Holder	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Quintal*
All	**2,547**	**385**	**561**	**1,229**	**123**	*	**13,137**	**1,024**	*
Cereals	**2,085**	**299**	**283**	**800**	**49**	*	**3,296**	*	*
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	1,616	*	171	701	*	*	3,256	*	*
Sorghum	*	*	*	*	*	*	*	*	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Mahso	-	-	-	-	-	-	-	-	-
Pulses	**1,613**	*	*	**502**	*	*	**7,185**	**265**	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	*	*	*	*	*	*	*	*	*
Red Haricot beans	1,568	*	*	*	*	*	5,214	154	*
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	*	*	*	*	**1,948**	**38**	-
Lettuce.....	-	-	-	-	-	-	*	*	-
Head Cabbage....	*	*	*	*	*	*	*	*	-
Ethiopian Cabbage	*	*	*	-	-	-	*	*	-
Tomatoes.....	-	-	-	-	-	-	*	*	-
Green peppers...	-	-	-	*	*	*	*	*	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	*	*	*	-	-	-
Root Crops.....	**800**	**24**	**69**	**968**	*	*	**6,914**	**289**	-
Beetroot.....	-	-	-	*	*	*	-	-	-
Carrot.....	-	-	-	-	-	-	*	*	-
Onion.....	-	-	-	-	-	-	-	-	-
Potatoes.....	*	*	*	414	*	*	3,192	109	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	*	*	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	*	*	*	*	*	*	4,376	178	-

Table 10.9 (Cont'd)

Harari Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	*	*	*	*	*	**2421**	*	**2307**	**150**
Cereals	*	*	*	-	-	*	*	**2017**	**89**
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	-	-	*	*	1330	46
Sorghum	-	-	-	-	-	-	-	*	43
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	*	*	*	*	**1692**	**35**
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	*	*	-	-
Red Haricot beans	-	-	-	*	*	*	*	1692	35
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	-	-	-	*	*	*	*
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	*	*	-	-	-	*	*	*	*
Ethiopian Cabbage	-	-	-	-	-	-	-	-	-
Tomatoes.....	*	*	-	-	-	*	*	-	-
Green peppers...	-	-	-	-	-	*	*	*	*
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	*	*	-	-	-	*	*	*	*
Root Crops.....	*	*	-	-	-	**1321**	**40**	**561**	*
Beetroot.....	*	*	-	-	-	*	*	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	-	-	-	-	-	-	-	-	-
Potatoes.....	-	-	-	-	-	*	*	*	*
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	1042	36	*	*

Table 10.10: Number of Holders,Inputs Applied Area and Quantity of Inputs used

Dire Dawa Region

Crop type	*All cropland Area*	*All Fertilizer*		*Natural*		*DAP*		
	Hectare	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Quintal*
All	**401**	**379**	*	**5,129**	**365**	*	*	*
Cereals	*	*	-	**3,792**	*	-	-	-
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	*	*	-	3,262	*	-	-	-
Sorghum	*	*	-	*	*	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-
Pulses	*	*	-	*	*	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	*	*	-	*	*	-	-	-
Red Haricot beans	*	*	-	*	*	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oil crops	*	*	-	*	*	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	*	*	-	*	*	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables.....	**67**	**67**	*	**2,123**	**59**	*	*	*
Lettuce.....	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-
Ethiopian Cabbage	*	*	-	*	*	-	-	-
Tomatoes.....	64	64	*	2,024	57	*	*	*
Green peppers...	*	*	-	*	*	-	-	-
Red peppers.....	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-
Root Crops.....	**77**	**65**	*	**2,145**	**57**	-	-	-
Beetroot.....	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-
Onion.....	*	*	*	*	*	-	-	-
Potatoes.....	*	*	*	*	*	-	-	-
Yam.....	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-
Sweet potatoes..	49	38	-	1,830	38	-	-	-

Table 10.10 (cont'd)

Dire Dawa Region

Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**385**	**12**	*	-	-	-	**5,771**	**375**	**82**
Cereals	-	-	-	-	-	-	**3,192**	*	**82**
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	3,192	*	82
Sorghum	-	-	-	-	-	-	*	*	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Mahso	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	-	*	*	-
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	*	*	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	*	-	-	-	**2,288**	**67**	-
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	*	*	-
Tomatoes.....	*	*	*	-	-	-	2,239	64	-
Green peppers...	-	-	-	-	-	-	*	*	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	*	-	-	-	**2,593**	**71**	-
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	*	*	*	-	-	-	*	*	-
Potatoes.....	*	*	*	-	-	-	*	*	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	2,102	49	-

Table 10.10 (Cont'd)

Dire Dawa Region

Crop type	*Improved seed*			*Pesticide*		*Irrigation*		*Extension package*	
	Holder	*Hectare*	*Quintal*	*Holder*	*Hectare*	*Holder*	*Hectare*	*Holder*	*Hectare*
All	*	*	*	*	*	**3452**	*	-	-
Cereals	*	*	*	-	-	**2811**	*	-	-
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	-	-	2811	*	-	-
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Masho	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oil crops	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	-	-	-	*	*	**1062**	**27**	-	-
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	-	-	-
Tomatoes.....	-	-	-	*	*	1012	25	-	-
Green peppers...	-	-	-	-	-	*	*	-	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	-	-	-	*	*	-	-
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	*	*	-	-	-	*	*	-	-
Potatoes.....	-	-	-	-	-	*	*	-	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	*	*	-	-

Table 21: Holders Applying Inputs by Age Group

Country Level

Age group	All Crop Holders	ChemicalFertilizer	Improved Seed	Pesticide	Irrigation
Below 18	18395	3379	895	2417	2027
18 - 20	107208	21026	6450	9109	6465
21 - 24	278432	69297	22321	24951	23938
25 - 29	819046	220208	63828	57129	63562
30 - 39	1942861	620527	165600	123478	163249
40 - 49	1472765	469078	121658	91679	117964
50 - 59	1080771	319135	89227	58015	107947
60 and above	1176660	315720	75779	67281	90807
Not Stated	*	*	-	-	*
Total	6897408	2039191	545757	434058	576574
%	**100**	**29.56**	**7.91**	**6.29**	**8.36**

Table 21.1: Holders Applying Inputs by Age Group

Tigray

Age group	All Crop Holders	ChemicalFertilizer	Improved Seed	Pesticide	Irrigation
Below 18	-	-	-	-	-
18 - 20	-	-	-	-	-
21 - 24	*	*	*	*	*
25 - 29	1317	*	*	*	*
30 - 39	6157	*	*	*	*
40 - 49	7592	2984	*	*	3482
50 - 59	7182	2486	*	*	2679
60 and above	5089	*	*	*	*
Not Stated	*	*	-	-	*
Total	28658	12300	*	*	13571

Table 21.2: Holders Applying Inputs by Age Group

Afar

Age group	All Crop Holders	ChemicalFertilizer	Improved Seed	Pesticide	Irrigation
Below 18	-	-	-	-	-
18 - 20	*	-	-	-	*
21 - 24	970	-	*	-	970
25 - 29	4519	-	737	-	3768
30 - 39	9564	-	703	*	7799
40 - 49	8164	-	1193	173	7237
50 - 59	4036	-	376	*	3696
60 and above	4659	-	1111	*	3685
Not stated	-	-	-	-	-
Total	32165	-	4167	683	27213

Table 21.3. Holders Applying Inputs by Age group

Amhara

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	2535	*	*	*	*
18 - 20	5928	*	-	*	*
21 - 24	25722	3682	*	3747	8086
25 - 29	75241	12860	*	10473	24661
30 - 39	208593	50281	9017	27012	62899
40 - 49	187015	45945	7463	14595	47807
50 - 59	171123	40051	6912	13450	47134
60 and above	179095	32283	5510	16495	35858
Not stated	*	-	-	-	-
Total	855485	187397	31872	87303	229363

Table 21.4. Holders Applying Inputs by Age Group

Oromia

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	8513	1576	-	1621	1117
18 - 20	49858	8850	*	7148	2340
21 - 24	138452	30495	3426	18221	12207
25 - 29	350423	75727	8764	38726	26259
30 - 39	763167	188438	20243	75233	64074
40 - 49	548456	129041	11873	62171	43572
50 - 59	388558	87094	13065	35338	38670
60 and above	439376	86545	6116	41756	37143
Not stated	*	-	-	-	-
Total	2686955	607765	63953	280213	225381

Table 21.5. Holders Applying Inputs by Age Group

Somale

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	*	-	*	-	-
18 - 20	*	-	-	-	-
21 - 24	1530	-	*	-	*
25 - 29	2073	-	*	-	1162
30 - 39	6126	-	*	*	*
40 - 49	4883	-	*	-	1216
50 - 59	5120	*	669	*	1011
60 and above	6347	-	*	-	*
Not stated	-	-	-	-	-
Total	27131	*	2435	*	5818

Table 21.6. Holders Applying Inputs by Age Group

Benshangul-Gumuz

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	317	-	-	-	-
18 - 20	565	-	-	-	*
21 - 24	1811	-	*	-	*
25 - 29	3505	*	91	-	*
30 - 39	10484	*	*	*	2998
40 - 49	7281	*	*	*	2157
50 - 59	6484	390	*	-	3195
60 and above	5057	*	*	-	2203
Not stated	-	-	-	-	-
Total	35504	1477	862	*	11908

Table 21.7 Holders Applying Inputs by Age Group

S.N.N.P.R

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	6769	1004	453	*	*
18 - 20	48729	10604	5984	*	*
21 - 24	106419	34279	17539	2803	*
25 - 29	374938	130641	52241	7452	6231
30 - 39	921049	375984	132801	17922	19043
40 - 49	695762	289529	99358	13021	11155
50 - 59	490180	187958	66800	8478	10451
60 and above	530513	193748	61607	8635	7279
Not stated	*	*	-	-	-
Total	3174633	1223955	436783	59537	57386

Table 21.8 Holders Applying Inputs by Age Group

Gambela

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	*	-	-	-	-
18 - 20	669	-	-	-	-
21 - 24	1248	-	-	-	-
25 - 29	4922	*	*	*	-
30 - 39	11930	-	*	*	*
40 - 49	9974	*	*	*	*
50 - 59	5116	-	-	129	*
60 and above	3856	-	-	-	-
Not stated	-	-	-	-	-
Total	37891	*	*	*	*

Table 21.9 Holders Applying Inputs by Age Group

Harari

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	-	-	-	-	-
18 - 20	*	*	-	-	-
21 - 24	1437	*	-	-	-
25 - 29	1383	640	-	-	*
30 - 39	4110	1599	-	-	1010
40 - 49	2257	1068	*	*	412
50 - 59	1916	1013	*	-	*
60 and above	1919	642	-	-	*
Not stated	-	-	-	-	-
Total	13217	5701	*	*	2421

Table 21.10 Holders Applying Inputs by Age Group

Dire Dawa

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	-	-	-	-	-
18 - 20	*	-	-	-	*
21 - 24	*	-	-	-	*
25 - 29	725	*	-	*	228
30 - 39	1683	*	*	-	804
40 - 49	1380	*	*	-	917
50 - 59	1055	*	*	-	740
60 and above	749	*	-	-	633
Not stated	-	-	-	-	-
Total	5771	435	*	*	3452

Table 22. Holders Applying Inputs by Educational Status

National

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	4036976	784054	232030	178877	254250
Literate	423635	78447	17612	32240	41575
Grades 1 - 3	890239	229772	79308	53130	39144
Grades 4 - 6	1001953	271488	89865	54171	47261
Grades 7 - 8	409173	131489	49367	23298	17794
Grades 9 - 11	96432	33574	9001	4802	6019
Grade 12 complete	26671	9553	*	1610	*
Above grade 12	12329	5705	*	*	*
Total	6897408	1544082	482175	349067	407020

Table 22.1 Holders Applying Inputs by Educational Statu

Tigray

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	17943	*	*	*	*
Literate	4471	*	-	-	*
Grades 1 - 3	3160	*	-	-	*
Grades 4 - 6	2659	*	-	-	*
Grades 7 - 8	*	*	-	-	*
Grades 9 - 11	*	-	-	-	-
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	28658	*	*	*	*

Table 22.2 Holders Applying Inputs by Educational Statu

Afar

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	26764	-	2335	*	22621
Literate	1864	-	*	*	1781
Grades 1 - 3	1682	-	*	-	1352
Grades 4 - 6	1302	-	*	*	972
Grades 7 - 8	302	-	-	-	*
Grades 9 - 11	*	-	-	-	-
Grade 12 complete	*	-	*	-	*
Above grade 12	-	-	-	-	-
Total	32165	-	3510	*	27155

Table 22.3 Holders Applying Inputs by Educational Status

Amhara

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	554510	63241	12426	31070	94679
Literate	158331	20960	4669	14539	26309
Grades 1 - 3	51302	6289	1369	7315	9658
Grades 4 - 6	65213	6780	*	7686	14247
Grades 7 - 8	20042	1845	-	*	3158
Grades 9 - 11	4598	*	-	-	*
Grade 12 complete	*	-	-	-	-
Above grade 12	-	-	-	-	-
Total	855485	99433	19277	61601	149584

Table 22.4 Holders Applying Inputs by Educational Status

Oromia

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	1532727	254902	33332	124929	99957
Literate	185667	36356	3328	16069	9297
Grades 1 - 3	385444	68760	6174	40221	18462
Grades 4 - 6	372298	63529	7361	39616	23002
Grades 7 - 8	160369	35479	5073	20645	10327
Grades 9 - 11	39033	9407	*	4475	3375
Grade 12 complete	8725	1662	-	1347	*
Above grade 12	2692	*	-	*	*
Total	2686955	470616	55997	248241	164931

Table 22.5 Holders Applying Inputs by Educational Status

Somale

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	17050	-	*	-	*
Literate	3732	-	-	-	*
Grades 1 - 3	*	-	-	-	*
Grades 4 - 6	1910	-	*	-	-
Grades 7 - 8	523	-	-	-	-
Grades 9 - 11	*	-	-	-	-
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	27131	-	*	-	*

Table 22.6 Holders Applying Inputs by Educational Statu

Benshangul-Gumuz

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	20729	*	*	*	3893
Literate	4710	*	*	-	1206
Grades 1 - 3	4465	-	*	-	*
Grades 4 - 6	4027	*	*	-	*
Grades 7 - 8	1279	-	*	-	*
Grades 9 - 11	295	-	-	-	-
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	35504	*	354	*	8463

Table 22.7 Holders Applying Inputs by Educational Statu

S.N.N.P.R

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	1831091	457540	181323	21657	21713
Literate	62673	20338	9279	*	*
Grades 1 - 3	433833	152537	71386	5445	6392
Grades 4 - 6	547385	199388	81186	6766	6346
Grades 7 - 8	223309	93728	44193	1663	3184
Grades 9 - 11	50771	23848	8272	*	*
Grade 12 complete	16017	7891	*	*	*
Above grade 12	9554	5184	*	-	*
Total	3174633	960454	400420	37544	39408

Table 22.8 Holders Applying Inputs by Educational Statu

Gambela

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	22115	*	*	464	-
Literate	1547	-	-	-	-
Grades 1 - 3	4516	*	-	*	-
Grades 4 - 6	5416	-	*	*	-
Grades 7 - 8	2707	-	-	-	-
Grades 9 - 11	1277	-	-	-	-
Grade 12 complete	230	-	-	-	-
Above grade 12	*	-	-	-	-
Total	37891	*	*	*	-

Table 22.9 Holders Applying Inputs by Educational Statu

Harari

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	9331	2926	-	*	*
Literate	504	*	-	-	-
Grades 1 - 3	1648	*	-	-	-
Grades 4 - 6	1310	444	-	-	*
Grades 7 - 8	315	*	*	-	*
Grades 9 - 11	*	-	-	-	*
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	13217	4435	*	*	*

Table 22.10 Holders Applying Inputs by Educational Sta

Dire Dawa

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	4717	-	*	-	2519
Literate	*	-	-	-	*
Grades 1 - 3	351	-	-	-	*
Grades 4 - 6	*	-	-	-	*
Grades 7 - 8	*	-	-	-	-
Grades 9 - 11	-	-	-	-	-
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	5771	-	*	-	2811

Table 23. Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Country Level

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	1731009	141767	87087	35923	4207
Crop disease	*	*	*	*	-
Frost or floods	244321	11015	5436	3461	*
Locust	98982	*	*	1282	*
Shortage of rain	3264	87	*	*	*
Too much rain	84973	4510	2739	1225	182
Wild animals	24663	491	200	188	*
Birds	193417	8816	4967	1869	475
Hailstone	711208	86816	56138	21273	*
Pests	50742	1711	685	696	*
Weeds	192567	10403	5878	3086	534
Others	309779	12151	6980	2822	202

Table 23.1 Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Tigray

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	15534	1700	1658	*	-
Crop disease	-	-	-	-	-
Frost or floods	-	-	-	-	-
Locust	*	*	*	-	-
Shortage of rain	-	-	-	-	-
Too much rain	*	*	*	-	-
Wild animals	-	-	-	-	-
Birds	-	-	-	-	-
Hailstone	12493	1416	1379	*	-
Pests	*	*	*	-	-
Weeds	*	*	*	-	-
Others	*	*	*	-	-

Table 23.2. Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Afar

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	16939	4361	3369	677	*
Crop disease	-	-	-	-	-
Frost or floods	2725	587	500	*	*
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	2077	*	*	*	*
Wild animals	*	*	*	-	-
Birds	*	*	*	*	*
Hailstone	*	*	*	-	-
Pests	*	*	-	*	-
Weeds	7637	2031	*	*	-
Others	*	174	*	*	-

Table 23.3. Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Amhara

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	248440	34063	25765	5149	410
Crop disease	*	*	-	-	-
Frost or floods	32995	2263	1676	*	*
Locust	*	*	*	*	-
Shortage of rain	*	*	*	-	-
Too much rain	24043	1478	663	573	50
Wild animals	8641	187	93	52	*
Birds	18178	825	*	78	40
Hailstone	128455	20551	17016	1929	*
Pests	3479	165	*	*	*
Weeds	28634	2398	898	1247	-
Others	34175	2258	1419	345	87

Table 23.4 Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Oromia

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	685688	62489	36654	17926	*
Crop disease	-	-	-	-	-
Frost or floods	114227	5497	2323	*	-
Locust	24278	805	389	223	-
Shortage of rain	*	*	*	-	-
Too much rain	31527	994	497	422	*
Wild animals	12884	184	*	120	-
Birds	68507	3567	2209	552	*
Hailstone	263507	40250	24415	12352	*
Pests	12005	423	195	*	*
Weeds	92274	4863	2730	1216	532
Others	116545	5875	3823	956	*

Table 23.5 Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Somale

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	17481	3346	1197	*	-
Crop disease	-	-	-	-	-
Frost or floods	-	-	-	-	-
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	-	-	-	-	-
Wild animals	-	-	-	-	-
Birds	-	-	-	-	-
Hailstone	16855	3333	1194	*	-
Pests	-	-	-	-	-
Weeds	*	*	-	-	-
Others	*	*	*	*	-

Table 23.6. Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Benshangul-Gumuz

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	5763	102	69	*	-
Crop disease	-	-	-	-	-
Frost or floods	*	*	*	*	-
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	*	*	*	*	-
Wild animals	-	-	-	-	-
Birds	807	8	7	*	-
Hailstone	*	*	*	-	-
Pests	*	*	*	-	-
Weeds	2152	*	*	*	-
Others	672	*	*	*	-

Table 23.7 Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

S.N.N.P

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	729869	35186	18103	9938	1128
Crop disease	*	*	*	*	-
Frost or floods	91823	2597	920	1071	*
Locust	64658	990	218	517	*
Shortage of rain	1802	16	*	*	*
Too much rain	25374	1031	*	125	*
Wild animals	2997	106	50	*	*
Birds	99398	3684	1675	1218	*
Hailstone	286306	21013	11931	4825	*
Pests	33598	985	381	477	*
Weeds	59633	1020	601	269	*
Others	154040	3718	1568	1402	*

Table 23.8. Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Gambela

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	9132	474	254	53	*
Crop disease	*	*	-	*	-
Frost or floods	1685	42	*	21	-
Locust	*	*	*	-	-
Shortage of rain	-	-	-	-	-
Too much rain	595	17	*	*	*
Wild animals	*	*	-	*	-
Birds	3939	252	*	20	*
Hailstone	1290	110	94	*	*
Pests	*	*	-	-	-
Weeds	168	*	-	*	-
Others	1826	35	20	5	-

Table 23.9 Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Harari

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	1843	44	*	21	-
Crop disease	-	-	-	-	-
Frost or floods	-	-	-	-	-
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	-	-	-	-	-
Wild animals	-	-	-	-	-
Birds	-	-	-	-	-
Hailstone	1802	44	*	21	-
Pests	-	-	-	-	-
Weeds	-	-	-	-	-
Others	*	*	*	-	-

Table 23.10 Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Dire Dawa

Cause of Damage	*All holders*	*All crops*	*Crop category*		
			Cereals	*Pulses*	*Oilseeds*
All damage	321	3	*	-	-
Crop disease	*	*	*	-	-
Frost or floods	-	-	-	-	-
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	-	-	-	-	-
Wild animals	-	-	-	-	-
Birds	*	*	-	-	-
Hailstone	*	*	*	-	-
Pests	-	-	-	-	-
Weeds	*	*	-	-	-
Others	-	-	-	-	-

APPENDIX I

Estimation Procedures of Totals,

Ratios and Sampling Errors

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

The following formulas were used to estimate total area of land under specific crop and production of specific crop in a stratum.

1. For Estimating Total Area of Land under Specific Crop:

$$\hat{A}_h = \sum_{i=1}^{n_h} W_{hi} \sum_{j=1}^{h_{hi}} a_{hij} = \sum_{i=1}^{n_h} W_{hi} a_{hi}$$

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 hth stratum.

M_h is the measure of size of the hth stratum as obtained from the sampling frame.

m_{hi} is the measure of size of the ith sample EA in the hth stratum obtained from the sampling frame.

H_{hi} is the total number of agricultural households of the ith sample EA in the hth stratum.

h_{hi} is the number of sample agricultural households successfully covered in the ith sample EA in the hth stratum.

a_{hij} is the value of area for agricultural household j, in the ith EA in the hth strtatum under a specific crop.

a_{hi} is the sample total area under specific crop for EA i in stratum h

$\hat{A}_h$ estimate of total area under specific crop in stratum h

2. For Estimating Total Number of Holders :

$$Y_h = \sum_{i=1}^{n_h} W_{hi} H_{hi}$$

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

Where,

$\bar{Y}_{hi}$ is average yield per square meter of a specific crop in the i[th] EA in the h[th] stratum.

H_h is estimate of total quantity of production of a specific crop in the h[th] stratum.

H_{hi} is estimate of total quantity of production under specific crop for EA i in stratum h.

3. Sampling Variance of Estimates:

Sampling variance for the estimate of stratum total of area, production and yield for a specific crop are estimated by the following formulas.

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

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

Where,

f_h = average first stage probability of selection of EAs within stratum *h*.

$f_{hi} = \frac{h_{hi}}{H_{hi}}$ = average second stage probability of selection within the *i*[th] sample EA in stratum *h*.

$\hat{A}_{hi}, \hat{P}_{hi}$ are weighted total area and production, respectively, of a specific crop in the i[th] EA and h[th] Stratum.

$\hat{A}_{hij}, \hat{P}_{hij}$ are weighted values of area and production, respectively, from j[th] agricultural household in the i[th] EA and h[th] stratum under a specific crop.

Since all strata are independent, the total variance at regional and country level is computed by aggregating the result obtained at Zone/Special Wereda level, i.e.

$$Var(\hat{A}) = \sum_h^L Var(\hat{A}_h), Var(\hat{P}) = \sum_h^L Var(\hat{P}_h)$$

Where, *L* is the number of strata (Zone/Special Wereda).

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.

4. Coefficient of Variation (CV) of Estimates:

Coefficient of Variation (CV) in percentage of estimate of stratum total of area and production for a specific crop are given by:

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

5. Ninety-five Percent Confidence Interval (CI) of Stratum Total of Area:

$$\hat{A}_h \pm 1.96 * SE(\hat{A}_h) \quad ,$$

Where $SE(\hat{A}_h) = \sqrt{Var(\hat{A}_h)}$ is standard error of the estimate of the stratum total of area.

Estimates of standard error and confidence interval for the other estimates can also be calculated by adopting the above formulas.

APPENDIX II

Standard Errors and Coefficient of Variation for

Area and Expected Production

Table 24. Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey

National

Crop Type	Holders			Area (Ha)			Production (Qt)		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	**5950886**	**100982.41**	**1.7**	**1327860.49**	**45483.92**	**3.43**	**10970571.6**	**561491.51**	**5.12**
Cereals..... .	**5528239**	**100361.13**	**1.82**	**1037966.49**	**39367.4**	**3.79**	**9576746.66**	**533706.17**	**5.57**
Teff..... .	357542	36041.4	10.08	93958.15	10740.73	11.43	634713.04	84496.54	13.31
Barley..... .	938490	52935.69	5.64	185943.24	15573	8.38	1428203.45	182368.93	12.77
Wheat..... .	229857	27762.25	12.08	63196.03	13279.28	21.01	705838.8	291158.72	41.25
Maize..... .	4545186	98533.99	2.17	599614.49	28539.72	4.76	6142555.49	346983.9	5.65
Sorghum..... .	264399	21846.63	8.26	43648.93	7698.8	17.64	289881.14	98185.22	33.87
Finger millet..... .	8016	2680.91	33.45	401.07	153.19	38.2	33.03	13.53	40.97
Oats/'Aja'..... .	59116	9758.94	16.51	7795.9	1758.56	22.56	99526.67	31563	31.71
Rice..... .	2223	652.83	29.37	95.53	54.48	57.03	1578.71	1418.33	89.84
Masho..... .	90437	27697.88	30.63	43313.15	17715.97	40.9	274416.32	158358.88	57.71
Pulses..... .	**3473553**	**99849.01**	**2.87**	**261101.05**	**14052.18**	**5.38**	**1388083.6**	**85574.84**	**6.16**
Horse beans..... .	98286	12325.06	12.54	3679.83	1100.35	29.9	13212.75	3648.1	27.61
Field peas..... .	163783	23413.76	14.3	23501.98	4429.51	18.85	148018.47	44354.61	29.97
Haricot beans white...		740183	55355.03	7.48	38259.11	4335.08	11.33	243468.85	33477.13
Haricot beans red..... .	2460286	100950.07	4.1	155396.26	7642.3	4.92	864842.45	54453.75	6.3
Chick-peas..... .	74021	12957.67	17.51	10167.92	1929.01	18.97	110192.29	34867.93	31.64
Lentils..... .	118340	21652.45	18.3	16597.31	3978.23	23.97	346.6	87.66	25.29
Vetch..... .	41448	15580.07	37.59	12856.21	6691.1	52.05	5471.79	2993.05	54.7
Soya beans..... .	2926	848.24	28.99	64.72	21.73	33.57	-	-	-
Fenugreek..... .	19136	4184.8	21.87	522.29	109.63	20.99	2530.4	607.48	24.01
Gibto..... .	1395	599.76	42.98	55.42	33.49	60.43	-	-	-
Oil Crops..... .	**126942**	**17109.27**	**13.48**	**28792.96**	**7410.89**	**25.74**	**5741.36**	**1869.37**	**32.56**
Neug..... .	1542	933.21	60.51	232.83	182.18	78.25	-	-	-
Linseed..... .	8927	2358.28	26.42	272.93	121.22	44.42	26.81	14.15	52.8
Groundnuts..... .	31390	8706.62	27.74	3393.34	1470.68	43.34	0.54	0.54	99.71
Sunflower..... .	14391	1641.81	11.41	1287.79	40.65	3.16	-	-	-
Sesame..... .	56840	13505.11	23.76	23321.11	7253.2	31.1	5714.01	1869.32	32.71
Rapeseed..... .	15639	4979.47	31.84	284.95	117.76	41.33	-	-	-
Vegetables..... .	**1888769**	**67193.5**	**3.56**	**28174.39**	**1732.38**	**6.15**	**1888449.36**	**141335.23**	**7.48**
Lettuce..... .	5055	1381.59	27.33	23.66	10.54	44.55	422.68	249.49	59.02
Head Cabbage..... .	60993	6851.97	11.23	1227.1	306.83	25	60763.78	21259.67	34.99
Ethiopian Cabbage..... .	1726280	64851.04	3.76	22893.63	1374.41	6	1661907.97	126460.85	7.61
Tomatoes..... .	74992	11248.43	15	2153.42	491.93	22.84	105078.29	33504.42	31.89
Green peppers..... .	126424	21687.04	17.15	1041.64	221.68	21.28	50821.7	10669	20.99
Red peppers..... .	32378	8457.86	26.12	789.71	267.17	33.83	7988.82	3144.6	39.36
Swiss chard..... .	6307	2208.87	35.02	45.23	31.93	70.6	1466.12	1362.23	92.91
Root Crops..... .	**2747700**	**92051.28**	**3.35**	**154310.26**	**9087.48**	**5.89**	**12636839.1**	**1011373.44**	**8**
Beetroot..... .	52230	6006.58	11.5	503.03	126.05	25.06	19163.01	5478.78	28.59
Carrot..... .	36901	9017.24	24.44	986.36	450.26	45.65	40696.67	16344.66	40.16
Onion..... .	283398	26829.64	9.47	16054.3	3373.92	21.02	993908.32	399109.34	40.16
Potatoes..... .	1798119	83564.77	4.65	112241.12	8342.3	7.43	8233576	866927.51	10.53
Yam/'Boye'..... .	91767	17620.65	19.2	1449.99	507.38	34.99	242730	102503.85	42.23
Garlic..... .	378017	31241.64	8.26	3026.01	429.41	14.19	259032.96	47171.02	18.21
Taro/'Godere'..... .	309606	23162.58	7.48	5290.54	638.44	12.07	381819.17	88999.05	23.31
Sweet potatoes..... .	449906	37982.13	8.44	14758.91	1526.66	10.34	2465913	335263.17	13.6

Table 24.1 Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey

Tigray

	Holders			Area (Ha)			Production (Qt)		
Crop Type	**Estimate**	**S.E.**	**C.V.**	**Estimate**	**S.E.**	**C.V.**	**Estimate**	**S.E**	**C.V.**
GRAIN CROPS	**24526**	**6339.07**	**25.85**	**6078.73**	**1845.14**	**30.35**	**8473.52**	**7177.83**	**84.71**
Cereals..... .	**24526**	**6339.07**	**25.85**	**5910.93**	**1791.43**	**30.31**	**8473.52**	**7177.83**	**84.71**
Teff..... .	13562	4278.77	31.55	3933.14	1786.93	45.43	-	-	-
Barley..... .	4990	4511.6	90.41	700.53	662.98	94.64	7577	7250.21	95.69
Wheat..... .	1614	1591.72	98.62	152.57	150.58	98.69	-	-	-
Maize..... .	8275	5364.74	64.83	1124.68	589.46	52.41	896.52	509.35	56.81
Sorghum..... .	-	-	-	-	-	-	-	-	-
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	-	-	-	-	-	-	-	-	-
Masho..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	**922**	**910.9**	**98.77**	**167.8**	**165.91**	**98.87**	**-**	**-**	**-**
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	922	910.9	98.77	167.8	165.91	98.87	-	-	-
Haricot beans white...		-	-	-	-	-	-	-	-
Haricot beans red..... .	-	-	-	-	-	-	-	-	-
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oil Crops..... .	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	-	-	-	-	-	-	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	**1000**	**694.39**	**69.43**	**39.77**	**27.99**	**70.39**	**-**	**-**	**-**
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage..... .	-	-	-	-	-	-	-	-	-
Tomatoes..... .	613	617.9	100.76	25.29	25.48	100.76	-	-	-
Green peppers..... .	387	382.59	98.9	14.48	14.33	98.96	-	-	-
Red peppers..... .	-	-	-	-	-	-	-	-	-
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	**6734**	**3913.16**	**58.11**	**366.84**	**200.17**	**54.57**	**34457.09**	**21944.93**	**63.69**
Beetroot..... .	-	-	-	-	-	-	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	5994	3917.47	65.36	307.04	199.99	65.14	34457.09	21944.93	63.69
Potatoes..... .	740	731.3	98.77	59.81	59.11	98.83	-	-	-
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	-	-	-	-	-	-	-	-	-
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	-	-	-	-	-	-	-	-	-

Table 24.2 Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey

Afar

	Holders			Area (Ha)			Production (Qt)		
Crop Type	**Estimate**	**S.E.**	**C.V.**	**Estimate**	**S.E.**	**C.V.**	**Estimate**	**S.E**	**C.V.**
GRAIN CROPS	**32106**	**4216.81**	**13.13**	**26140.38**	**3544.71**	**13.56**	**631456.02**	**91755.34**	**14.53**
Cereals..... .	**31942**	**4229.71**	**13.24**	**26031.58**	**3534.94**	**13.58**	**631456.02**	**91755.34**	**14.53**
Teff..... .	220	199.53	90.56	-	-	-	-	-	-
Barley..... .	60	58.9	97.67	119.93	117.13	97.67	-	-	-
Wheat..... .	102	70.13	68.65	2.18	1.75	80.08	-	-	-
Maize..... .	28030	4373.23	15.6	24727.71	3517.76	14.23	631456.02	91755.34	14.53
Sorghum..... .	806	320.26	39.74	290.9	136.3	46.86	-	-	-
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	60	58.9	97.67	0.18	0.17	97.67	-	-	-
Masho..... .	3295	1408.79	42.76	890.68	368.93	41.42	-	-	-
Pulses..... .	**546**	**200.82**	**36.77**	**73.95**	**39.99**	**54.07**	**-**	**-**	**-**
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...		509	199.21	39.1	73.95	39.99	54.07	-	-
Haricot beans red..... .	-	-	-	-	-	-	-	-	-
Chick-peas..... .	37	35.39	96.39	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oil Crops..... .	**262**	**164.9**	**62.94**	**34.85**	**24.18**	**69.38**	**-**	**-**	**-**
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	-	-	-	-	-	-	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	262	164.9	62.94	34.85	24.18	69.38	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	**1354**	**385.61**	**28.48**	**162.1**	**92.77**	**57.23**	**6489.96**	**3580.38**	**55.17**
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage..... .	83	76.51	92.67	0.19	0.18	93.6	-	-	-
Tomatoes..... .	709	290.32	40.95	140.66	92.93	66.07	5880.75	3585.67	60.97
Green peppers..... .	194	113.52	58.44	3.56	2.69	75.5	23.27	18.71	80.39
Red peppers..... .	665	316.3	47.57	17.69	10.26	57.99	585.94	430.61	73.49
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	**544**	**290.93**	**53.47**	**80.67**	**72.8**	**90.24**	**13135.62**	**12710.69**	**96.77**
Beetroot..... .	-	-	-	-	-	-	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	255	128.35	50.31	74.37	72.57	97.59	13135.62	12710.69	96.77
Potatoes..... .	124	113.43	91.6	3.08	2.86	93	-	-	-
Yam/'Boye'..... .	124	113.43	91.6	2.6	2.42	92.96	-	-	-
Garlic..... .	-	-	-	-	-	-	-	-	-
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	124	113.43	91.6	0.63	0.58	91.85	-	-	-

Table 24.3 Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey

Amhara

Crop Type	Holders			Area (Ha)			Production (Qt)		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	**693891**	**38602.44**	**5.56**	**209609.08**	**23527.97**	**11.22**	**1067783.23**	**178492.83**	**16.72**
Cereals..... .	**646130**	**38989.43**	**6.03**	**164231.65**	**20652.63**	**12.58**	**932082.9**	**174053.5**	**18.67**
Teff..... .	102953	24488.05	23.79	18124.29	5437.83	30	78424.03	28660.2	36.55
Barley..... .	362710	35119.82	9.68	83139.39	11802.85	14.2	450557.61	84592.83	18.78
Wheat..... .	77707	17589.5	22.64	9827.27	2992.47	30.45	50209.11	22637.08	45.09
Maize..... .	161193	24064.02	14.93	9907.69	1698.39	17.14	77877.62	17654.96	22.67
Sorghum..... .	3914	2128.11	54.38	301.73	155.86	51.66	-	-	-
Finger millet..... .	163	161.88	99.06	0.41	0.41	99.06	-	-	-
Oats/'Aja'..... .	9538	3019.35	31.66	570.95	177.97	31.17	598.21	179.28	29.97
Rice..... .	-	-	-	-	-	-	-	-	-
Masho..... .	85657	27655.5	32.29	42359.92	17712.09	41.81	274416.32	158358.88	57.71
Pulses..... .	**218041**	**27321.45**	**12.53**	**43747.65**	**10014.68**	**22.89**	**135700.33**	**37960.72**	**27.97**
Horse beans..... .	6430	3722.64	57.9	284.66	189.58	66.6	-	-	-
Field peas..... .	48492	14622.23	30.15	5348.05	2447.5	45.76	10024.83	7308.67	72.91
Haricot beans white...		13323	7071.29	53.08	870.06	435.44	50.05	2394.95	1425.98
Haricot beans red..... .	19564	5635.21	28.8	1018.49	340.81	33.46	4853.08	2063.65	42.52
Chick-peas..... .	66662	12416.88	18.63	9407.39	1872.32	19.9	110192.29	34867.93	31.64
Lentils..... .	97099	18984.5	19.55	13553.95	3490.83	25.76	232.99	62.57	26.86
Vetch..... .	39788	15547.09	39.08	12834.11	6691.08	52.14	5471.79	2993.05	54.7
Soya beans..... .	355	353.59	99.56	8.51	8.47	99.56	-	-	-
Fenugreek..... .	14270	3968.05	27.81	422.45	102.28	24.21	2530.4	607.48	24.01
Gibto..... .	-	-	-	-	-	-	-	-	-
Oil Crops..... .	**19682**	**3423.01**	**17.39**	**1629.78**	**216.17**	**13.26**	**-**	**-**	**-**
Neug..... .	415	413.4	99.66	177.87	177.26	99.66	-	-	-
Linseed..... .	4474	1891.37	42.28	185.09	115.07	62.17	-	-	-
Groundnuts..... .	-	-	-	-	-	-	-	-	-
Sunflower..... .	8407	472.39	5.62	1188.41	28.96	2.44	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	6387	2817.44	44.11	78.42	36.93	47.1	-	-	-
Vegetables..... .	**82770**	**14918.51**	**18.02**	**1577.15**	**421.97**	**26.75**	**114897.11**	**35606.61**	**30.99**
Lettuce..... .	1405	737.33	52.47	4.57	2.79	61.01	19.21	13.45	69.98
Head Cabbage..... .	4229	1284.84	30.38	113.83	74.8	65.72	8772.6	5964.4	67.99
Ethiopian Cabbage..... .	51701	12083.85	23.37	411.05	123.31	30	37431.98	11248.43	30.05
Tomatoes..... .	14071	6667.38	47.39	526.22	256.16	48.68	50255.7	29394.45	58.49
Green peppers..... .	8264	4045.08	48.95	118.93	60.93	51.24	11447.23	6425.96	56.14
Red peppers..... .	19239	6660.77	34.62	397.51	150.1	37.76	6970.39	3099.75	44.47
Swiss chard..... .	937	641.91	68.52	5.04	4.71	93.42	-	-	-
Root Crops..... .	**436568**	**32982.41**	**7.55**	**39033.08**	**5438.4**	**13.93**	**1575682.04**	**420774.15**	**26.7**
Beetroot..... .	576	426.53	74.09	3.85	3.46	89.96	169	145.78	86.27
Carrot..... .	8952	5055.2	56.47	316.65	205.74	64.97	20753.49	13947	67.2
Onion..... .	74211	17258.31	23.26	6214.74	2836.01	45.63	525252.88	378747.77	72.11
Potatoes..... .	363724	32030.19	8.81	32080.67	4843.56	15.1	993004.01	186700.99	18.8
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	25111	4643.61	18.49	409.25	127.25	31.09	36477.25	11813.62	32.39
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	1267	819.28	64.65	7.93	6.44	81.24	25.41	25.08	98.69

Table 24.4 Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey

Oromia

Crop Type	Holders			Area (Ha)			Production (Qt)		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	**2388204**	**51312.11**	**2.15**	**594239.79**	**26995.01**	**4.54**	**5622228.32**	**463311.39**	**8.24**
Cereals..... .	**2207652**	**51231.87**	**2.32**	**482526.58**	**22831.9**	**4.73**	**4997208.85**	**444375.22**	**8.89**
Teff..... .	161168	23510.42	14.59	48512.76	7900.99	16.29	399705.19	73428.82	18.37
Barley..... .	415734	34682.95	8.34	85984.03	9821.35	11.42	860147.62	160318.01	18.64
Wheat..... .	136523	21176.68	15.51	50995.48	12908.72	25.31	649661.99	290267.5	44.68
Maize..... .	1825341	55160.65	3.02	267460.66	16471.78	6.16	2842717.33	258878.51	9.11
Sorghum..... .	99230	13523.9	13.63	22380.31	6696.31	29.92	146048.28	94608.45	64.78
Finger millet..... .	983	536.92	54.64	11.03	8.37	75.86	-	-	-
Oats/'Aja'..... .	46829	9171.89	19.59	7131.84	1748.65	24.52	98928.46	31562.49	31.9
Rice..... .	108	107.44	99.55	0.16	0.16	99.55	-	-	-
Masho..... .	513	362.04	70.52	50.3	36.97	73.51	-	-	-
Pulses..... .	**1207649**	**52677.37**	**4.36**	**92552.18**	**7730.03**	**8.35**	**624992.66**	**62388.15**	**9.98**
Horse beans..... .	37370	6976.3	18.67	2221.9	1062.85	47.84	9431.13	3565.93	37.81
Field peas..... .	81615	16427.83	20.13	16791.91	3675.33	21.89	133521.93	43732.22	32.75
Haricot beans white...		460292	34584.44	7.51	24299.65	3028.09	12.46	172726.77	28260.53
Haricot beans red..... .	668819	49399.9	7.39	45480.1	5038.24	11.08	309199.22	33803.62	10.93
Chick-peas..... .	6311	3687.71	58.43	605.88	457.95	75.58	-	-	-
Lentils..... .	19921	10399.26	52.2	3031.96	1907.96	62.93	113.61	61.39	54.03
Vetch..... .	290	289.54	99.81	3.39	3.39	99.81	-	-	-
Soya beans..... .	516	370.13	71.77	14.53	11.07	76.17	-	-	-
Fenugreek..... .	1790	708.37	39.58	72.92	38.16	52.32	-	-	-
Gibto..... .	354	353.23	99.88	29.93	29.89	99.88	-	-	-
Oil Crops..... .	**49601**	**12920.54**	**26.05**	**19161.03**	**7016.79**	**36.62**	**26.81**	**14.15**	**52.8**
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	1992	935.1	46.94	54.09	35.33	65.32	26.81	14.15	52.8
Groundnuts..... .	12990	5631.29	43.35	1627.94	908.12	55.78	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	30230	11517.33	38.1	17436.6	6959.87	39.92	-	-	-
Rapeseed..... .	4388	1815.82	41.38	42.4	15.95	37.63	-	-	-
Vegetables..... .	**610279**	**36176.21**	**5.93**	**11305.75**	**994.7**	**8.8**	**726957.7**	**63292.17**	**8.71**
Lettuce..... .	2332	1027.32	44.05	16.59	9.98	60.19	403.47	249.12	61.74
Head Cabbage..... .	26044	4343.57	16.68	517.67	172.66	33.35	23874.38	12916.72	54.1
Ethiopian Cabbage..... .	529170	34543.26	6.53	8998.22	809.22	8.99	642672.6	55992.94	8.71
Tomatoes..... .	34345	7288.17	21.22	880.58	355.87	40.41	28589.68	13552.22	47.4
Green peppers..... .	60067	9227.47	15.36	498.46	128.88	25.86	29638.95	7933.73	26.77
Red peppers..... .	9532	5072.11	53.21	361.45	220.71	61.06	373.95	306.4	81.94
Swiss chard..... .	1518	731.3	48.18	32.77	31.34	95.65	1404.67	1361.51	96.93
Root Crops..... .	**888203**	**56280.89**	**6.34**	**56632.6**	**5808.54**	**10.26**	**1063882.67**	**144204.59**	**13.55**
Beetroot..... .	26832	4664.31	17.38	322.04	102.78	31.92	16942.26	5448.84	32.16
Carrot..... .	10942	5726.27	52.33	520.12	386.7	74.35	11693	6720.83	57.48
Onion..... .	111127	17014.06	15.31	7959.16	1781.47	22.38	308624.78	119548.37	38.74
Potatoes..... .	589724	50019.03	8.48	40816.98	5357.64	13.13	454352.24	57541.66	12.66
Yam/'Boye'..... .	180	133.27	74.02	0.36	0.3	83.62	-	-	-
Garlic..... .	155467	22859.18	14.7	1844.56	398.33	21.59	143571.42	44266.82	30.83
Taro/'Godere'..... .	22303	4676.8	20.97	264.16	94.9	35.93	-	-	-
Sweet potatoes..... .	132843	20405.62	15.36	4905.23	899.6	18.34	128698.97	26071.47	20.26

Table 24.5 Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey

Somale

	Holders			Area (Ha)			Production (Qt)		
Crop Type	**Estimate**	**S.E.**	**C.V.**	**Estimate**	**S.E.**	**C.V.**	**Estimate**	**S.E**	**C.V.**
GRAIN CROPS	**25237**	**3917.68**	**15.52**	**6481.64**	**1871.99**	**28.88**	**57094.32**	**17539.15**	**30.72**
Cereals..... .	**22362**	**3744.02**	**16.74**	**4987.4**	**1365.15**	**27.37**	**56696.35**	**17484.62**	**30.84**
Teff..... .	-	-	-	-	-	-	-	-	-
Barley..... .	-	-	-	-	-	-	-	-	-
Wheat..... .	-	-	-	-	-	-	-	-	-
Maize..... .	22362	3744.02	16.74	4986.71	1365.2	27.38	56696.35	17484.62	30.84
Sorghum..... .	84	83.66	99.68	0.69	0.69	99.68	-	-	-
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	-	-	-	-	-	-	-	-	-
Masho..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	**8436**	**2152.66**	**25.52**	**1494.24**	**729.53**	**48.82**	**397.97**	**171.66**	**43.13**
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...		155	153.62	99.06	28.89	28.64	99.16	41.13	40.78
Haricot beans red..... .	8280	2176.03	26.28	1465.35	731.79	49.94	356.84	170.97	47.91
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oil Crops..... .	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	-	-	-	-	-	-	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	**2814**	**889.14**	**31.59**	**121.47**	**44.76**	**36.85**	**2796.92**	**1987.96**	**71.08**
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage..... .	-	-	-	-	-	-	-	-	-
Tomatoes..... .	2507	767.77	30.63	112.64	41.44	36.79	2796.92	1987.96	71.08
Green peppers..... .	801	527.34	65.86	8.83	5.93	67.16	-	-	-
Red peppers..... .	-	-	-	-	-	-	-	-	-
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	**2007**	**787.04**	**39.21**	**134.74**	**77.14**	**57.25**	**2306.35**	**1580.13**	**68.51**
Beetroot..... .	181	180	99.72	1.59	1.59	99.72	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	2007	787.04	39.21	133.15	77.16	57.95	2306.35	1580.13	68.51
Potatoes..... .	-	-	-	-	-	-	-	-	-
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	-	-	-	-	-	-	-	-	-
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	-	-	-	-	-	-	-	-	-

Table 24.6 Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey

Benshangul-Gumuz

	Holders			Area (Ha)			Production (Qt)		
Crop Type	**Estimate**	**S.E.**	**C.V.**	**Estimate**	**S.E.**	**C.V.**	**Estimate**	**S.E**	**C.V.**
GRAIN CROPS	31559	4700.06	14.89	3673.59	608.44	16.56	22142.18	5372.65	24.26
Cereals..... .	28555	4622.54	16.19	1905.06	323.03	16.96	9262.54	2401.98	25.93
Teff..... .	23	22.31	96.57	0.25	0.24	96.57	-	-	-
Barley..... .	726	236.93	32.66	59.02	19.1	32.37	-	-	-
Wheat..... .	21	20.45	95.21	1.98	1.89	95.21	-	-	-
Maize..... .	28299	4641.42	16.4	1758.22	318.02	18.09	9262.54	2401.98	25.93
Sorghum..... .	1038	331.54	31.94	85.59	33.28	38.88	-	-	-
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	-	-	-	-	-	-	-	-	-
Masho..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	28669	4863.42	16.96	1768.53	326.04	18.44	12879.64	3780.37	29.35
Horse beans..... .	559	325.11	58.15	23.45	15.75	67.16	-	-	-
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...		3172	1331.31	41.97	125.77	68.75	54.66	1055.79	892.81
Haricot beans red..... .	26667	5067.14	19	1611.49	331.12	20.55	11823.84	3899.74	32.98
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	130	91.03	70.06	7.82	6.38	81.58	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oilseeds..... .	-	-	-	-	-	-	-	-	-
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	-	-	-	-	-	-	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	11793	2727.27	23.13	178.63	55.59	31.12	11369.32	4993.09	43.92
Lettuce..... .	206	138.34	67.1	0.22	0.15	67.21	-	-	-
Head Cabbage..... .	400	224.07	56.02	1.1	0.81	73.58	83.65	60.87	72.76
Ethiopian Cabbage..... .	8759	2358.62	26.93	149.27	56.07	37.56	7794.94	4918.43	63.1
Tomatoes..... .	2846	1452.56	51.03	20.78	11.98	57.67	3060.72	1878.79	61.38
Green peppers..... .	1164	548.18	47.1	7.27	3.63	49.99	430	223.18	51.9
Red peppers..... .	-	-	-	-	-	-	-	-	-
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	9206	1573.85	17.1	170	42.58	25.05	700.26	367.63	52.5
Beetroot..... .	310	306.38	98.69	3.75	3.73	99.38	332.71	330.66	99.38
Carrot..... .	22	22.63	101.31	0.06	0.06	101.31	-	-	-
Onion..... .	1564	1002.01	64.07	12.5	6.85	54.82	367.55	177.34	48.25
Potatoes..... .	6563	1342.37	20.45	139.67	41.95	30.04	-	-	-
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	1902	626.02	32.91	7.36	2.48	33.73	-	-	-
Taro/'Godere'..... .	86	47.82	55.8	0.79	0.57	72.61	-	-	-
Sweet potatoes..... .	707	450.74	63.73	5.87	3.32	56.58	-	-	-

Table 24.7 Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey
S.N.N.P.R

	Holders			Area (Ha)			Production (Qt)		
Crop Type	**Estimate**	**S.E.**	**C.V.**	**Estimate**	**S.E.**	**C.V.**	**Estimate**	**S.E**	**C.V.**
GRAIN CROPS	**2702973**	**77301.91**	**2.86**	**470743.3**	**27664.38**	**5.88**	**3439599.49**	**243821.65**	**7.09**
Cereals..... .	**2516661**	**76356.96**	**3.03**	**342665.61**	**24144.45**	**7.05**	**2829329.84**	**218624.68**	**7.73**
Teff..... .	79474	11323.45	14.25	23362.66	4491.56	19.23	156583.83	30437.92	19.44
Barley..... .	154154	18586.58	12.06	15921.85	2509.66	15.76	109921.23	18656.05	16.97
Wheat..... .	13890	3218.98	23.18	2216.55	852.37	38.46	5967.7	2396.21	40.15
Maize..... .	2425469	77453.9	3.19	280439.2	22898.4	8.17	2411412.48	209374.64	8.68
Sorghum..... .	153852	16978.15	11.04	20171.96	3789.88	18.79	143832.86	26259.82	18.26
Finger millet..... .	6856	2621.58	38.24	387.97	152.95	39.42	33.03	13.53	40.97
Oats/'Aja'..... .	2749	1413.12	51.41	93.11	55.45	59.56	-	-	-
Rice..... .	1883	622.5	33.05	60.06	44.39	73.9	1578.71	1418.33	89.84
Masho..... .	972	479.31	49.31	12.24	6.75	55.13	-	-	-
Pulses..... .	**1994696**	**80105.16**	**4.02**	**120724.93**	**6061.34**	**5.02**	**610269.11**	**44441.36**	**7.28**
Horse beans..... .	53927	9448.52	17.52	1149.82	211.95	18.43	3781.62	769.94	20.36
Field peas..... .	32754	7980.68	24.37	1194.21	307.77	25.77	4471.71	1186.47	26.53
Haricot beans white...		259349	42600.8	16.43	12737.96	3069.69	24.1	66325.02	17860.25
Haricot beans red..... .	1725569	87666.35	5.08	105372.06	5679.06	5.39	535690.76	42457.21	7.93
Chick-peas..... .	1011	348.87	34.52	154.66	76.02	49.16	-	-	-
Lentils..... .	1284	521.18	40.59	11.27	6.1	54.08	-	-	-
Vetch..... .	1371	970.86	70.83	18.7	13.77	73.61	-	-	-
Soya beans..... .	1902	669.85	35.22	33.84	15.4	45.51	-	-	-
Fenugreek..... .	3076	1124.85	36.57	26.92	10.14	37.67	-	-	-
Gibto..... .	1042	484.7	46.53	25.49	15.11	59.26	-	-	-
Oils Crops..... .	**55451**	**10671.76**	**19.25**	**7352.76**	**2369.65**	**32.23**	**0.54**	**0.54**	**99.71**
Neug..... .	1127	836.65	74.21	54.97	42.06	76.53	-	-	-
Linseed..... .	2461	1053.47	42.82	33.74	14.33	42.47	-	-	-
Groundnuts..... .	17986	6638.08	36.91	1742.56	1156.72	66.38	0.54	0.54	99.71
Sunflower..... .	5984	1572.38	26.28	99.38	28.53	28.71	-	-	-
Sesame..... .	24775	7041.7	28.42	5257.98	2036.04	38.72	-	-	-
Rapeseed..... .	4865	3682.38	75.7	164.13	110.68	67.43	-	-	-
Vegetables..... .	**1168211**	**54527.16**	**4.67**	**14600.86**	**1348.16**	**9.23**	**1019361.65**	**121067.18**	**11.88**
Lettuce..... .	728	380.34	52.27	0.38	0.2	52.7	-	-	-
Head Cabbage..... .	29984	5133.81	17.12	587.77	242.33	41.23	28033.16	15797.28	56.35
Ethiopian Cabbage..... .	1129309	53477.86	4.74	13257.89	1102.49	8.32	969273.6	112718.71	11.63
Tomatoes..... .	17018	5013.64	29.46	356.57	193.7	54.32	12718.06	7259.22	57.08
Green peppers..... .	55016	19184.24	34.87	378.84	168.81	44.56	9216.85	3088.3	33.51
Red peppers..... .	2922	1158.8	39.65	12.56	5.63	44.8	58.54	28.13	48.06
Swiss chard..... .	3750	1980.39	52.81	6.85	3.88	56.65	61.45	44.16	71.86
Root Crops..... .	**1393339**	**64784.53**	**4.65**	**57488.4**	**4382.76**	**7.62**	**9921199.34**	**907922.03**	**9.15**
Beetroot..... .	24229	3742.28	15.45	171.51	72.77	42.43	1719.04	443.32	25.79
Carrot..... .	16946	4792.03	28.28	148.1	104.24	70.38	8250.18	5240.21	63.52
Onion..... .	87046	10738.87	12.34	1319.24	339.56	25.74	109764.04	30015.05	27.35
Potatoes..... .	833292	58755.07	7.05	39016.96	4173.9	10.7	6786219.75	844627.14	12.45
Yam/'Boye'..... .	91335	17619.4	19.29	1446.76	507.37	35.07	242730	102503.85	42.23
Garlic..... .	195438	20773.53	10.63	763.78	97.64	12.78	78912.61	11224.46	14.22
Taro/'Godere'..... .	287117	22685.41	7.9	5024.62	631.35	12.57	381811	88999.05	23.31
Sweet potatoes..... .	307930	31987.16	10.39	9597.43	1232.08	12.84	2311792.72	334154.86	14.45

Table 24.8 Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey

Gambela

Crop Type	Holders			Area (Ha)			Production (Qt)		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	**37358**	**1534.43**	**4.11**	**9403.69**	**1114.28**	**11.85**	**114880.07**	**22288.57**	**19.4**
Cereals..... .	**36084**	**1554.03**	**4.31**	**8491.45**	**1119.86**	**13.19**	**108203.77**	**22267.99**	**20.58**
Teff..... .	141	97.5	68.99	25.04	17.82	71.14	-	-	-
Barley..... .	116	62.3	53.56	18.49	11.51	62.28	-	-	-
Wheat..... .	-	-	-	-	-	-	-	-	-
Maize..... .	35914	1550.96	4.32	8411.12	1096.76	13.04	108203.77	22267.99	20.58
Sorghum..... .	-	-	-	-	-	-	-	-	-
Finger millet..... .	14	12.02	87.47	1.66	1.45	87.47	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	171	153.87	89.75	35.13	31.6	89.94	-	-	-
Masho..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	**7149**	**925.08**	**12.94**	**302.24**	**70.56**	**23.35**	**962.29**	**226.31**	**23.52**
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...		1301	537.22	41.3	8.17	3.68	45	29.77	13.75
Haricot beans red..... .	6023	1022.23	16.97	293.9	71.79	24.43	932.51	230.74	24.74
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	36	35.84	98.32	0.13	0.13	98.32	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	24	22.49	94.36	0.04	0.03	94.36	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oil crops..... .	**1692**	**366.68**	**21.67**	**610**	**152.85**	**25.06**	**5714.01**	**1869.32**	**32.71**
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	160	90.17	56.48	18.31	14.48	79.08	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	1573	355.48	22.6	591.69	152.24	25.73	5714.01	1869.32	32.71
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	**6112**	**733.29**	**12**	**65.02**	**15.64**	**24.06**	**6576.69**	**1718.2**	**26.13**
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	24	22.49	94.36	2.01	1.89	94.36	-	-	-
Ethiopian Cabbage..... .	5926	693.84	11.71	48.25	10.08	20.9	4734.84	954.71	20.16
Tomatoes..... .	259	157	60.73	13.46	8.32	61.79	1776.46	1347.01	75.83
Green peppers..... .	170	83.26	48.89	0.8	0.55	68.79	65.4	52.44	80.19
Red peppers..... .	20	19.68	97.49	0.5	0.49	97.49	-	-	-
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	**1247**	**458.44**	**36.76**	**28.04**	**10.36**	**36.96**	**295.4**	**129.01**	**43.67**
Beetroot..... .	-	-	-	-	-	-	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	422	180.29	42.73	12.62	6.53	51.76	-	-	-
Potatoes..... .	401	304.37	75.89	8.34	7.34	87.96	-	-	-
Yam/'Boye'..... .	129	116.07	90.27	0.28	0.25	90.43	-	-	-
Garlic..... .	61	46.18	76.25	0.55	0.47	85.39	71.69	61.22	85.39
Taro/'Godere'..... .	101	51.47	51.15	0.97	0.68	69.61	8.17	6.59	80.67
Sweet potatoes..... .	302	107.51	35.62	5.28	2.15	40.69	215.53	116.08	53.86

Table 24.9 Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey

Harari

Crop Type	Holders			Area (Ha)			Production (Qt)		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	**10944**	**883.2**	**8.07**	**1232.88**	**261.13**	**21.18**	**6914.46**	**1656.42**	**23.96**
Cereals..... .	**10290**	**971.67**	**9.44**	**964.79**	**252.75**	**26.2**	**4032.86**	**1913.35**	**47.44**
Teff..... .	-	-	-	-	-	-	-	-	-
Barley..... .	-	-	-	-	-	-	-	-	-
Wheat..... .	-	-	-	-	-	-	-	-	-
Maize..... .	6930	1209.93	17.46	561.24	253.27	45.13	4032.86	1913.35	47.44
Sorghum..... .	4563	1049.5	23	403.55	153.85	38.12	-	-	-
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	-	-	-	-	-	-	-	-	-
Masho..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	**7229**	**1260.26**	**17.43**	**267.92**	**64.05**	**23.91**	**2881.6**	**590.71**	**20.5**
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...		2015	1065.66	52.89	114.34	62.3	54.48	895.41	489.54
Haricot beans red..... .	5214	1394.95	26.75	153.58	52.12	33.94	1986.19	601.71	30.29
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oil Crops..... .	**39**	**38.18**	**97.57**	**0.17**	**0.16**	**97.57**	**-**	**-**	**-**
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	39	38.18	97.57	0.17	0.16	97.57	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	**2148**	**714.82**	**33.28**	**57.07**	**20.89**	**36.6**	**-**	**-**	**-**
Lettuce..... .	384	382.05	99.55	1.9	1.89	99.55	-	-	-
Head Cabbage..... .	312	159.3	51.09	4.72	2.74	58.08	-	-	-
Ethiopian Cabbage..... .	1183	669.78	56.63	28.11	15.37	54.7	-	-	-
Tomatoes..... .	386	222.47	57.71	13.15	8.21	62.41	-	-	-
Green peppers..... .	262	173.2	66.16	8.62	7.84	90.95	-	-	-
Red peppers..... .	-	-	-	-	-	-	-	-	-
Swiss chard..... .	102	101.59	99.3	0.57	0.57	99.3	-	-	-
Root Crops..... .	**7145**	**1248.42**	**17.47**	**299.04**	**68.16**	**22.79**	**25180.37**	**7885.66**	**31.32**
Beetroot..... .	102	101.59	99.3	0.28	0.28	99.3	-	-	-
Carrot..... .	39	38.18	97.57	1.43	1.39	97.57	-	-	-
Onion..... .	-	-	-	-	-	-	-	-	-
Potatoes..... .	3237	758.47	23.43	109.65	52.58	47.95	-	-	-
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	37	35.97	96.09	0.51	0.49	96.09	-	-	-
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	4562	1249.09	27.38	187.17	55.79	29.81	25180.37	7885.66	31.32

Table 24.10 Standard Errors, Coefficients of Varietion for the Estimates of Number of Holders, Area and Production of 2013/14 (2006 E.C) Belg Season Agricultural Sample Survey

Dire Dawa

Crop Type	Holders			Area (Ha)			Production (Qt)		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	**4087**	**492.24**	**12.04**	**257.4**	**139.21**	**54.08**	**-**	**-**	**-**
Cereals..... .	**4038**	**522.66**	**12.94**	**251.44**	**140.96**	**56.06**	**-**	**-**	**-**
Teff..... .	-	-	-	-	-	-	-	-	-
Barley..... .	-	-	-	-	-	-	-	-	-
Wheat..... .	-	-	-	-	-	-	-	-	-
Maize..... .	3374	854.96	25.34	237.25	145.38	61.28	-	-	-
Sorghum..... .	912	521.38	57.18	14.18	9.02	63.57	-	-	-
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	-	-	-	-	-	-	-	-	-
Masho..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	**216**	**142.03**	**65.9**	**1.6**	**1.21**	**75.56**	**-**	**-**	**-**
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...		66	65.95	99.48	0.31	0.3	99.48	-	-
Haricot beans red..... .	149	141.63	94.91	1.29	1.24	95.91	-	-	-
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oil Crops..... .	**216**	**142.03**	**65.9**	**4.37**	**2.87**	**65.65**	**-**	**-**	**-**
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	216	142.03	65.9	4.37	2.87	65.65	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	**2288**	**752.13**	**32.87**	**66.56**	**31.16**	**46.81**	**-**	**-**	**-**
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage..... .	149	141.63	94.91	0.65	0.63	95.63	-	-	-
Tomatoes..... .	2239	761.26	34	64.07	30.59	47.76	-	-	-
Green peppers..... .	99	94.51	95.78	1.84	1.8	97.84	-	-	-
Red peppers..... .	-	-	-	-	-	-	-	-	-
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	**2705**	**873.35**	**32.28**	**76.83**	**22**	**28.63**	**-**	**-**	**-**
Beetroot..... .	-	-	-	-	-	-	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	771	399.62	51.86	21.49	11.58	53.91	-	-	-
Potatoes..... .	315	242.8	77.19	5.98	4.41	73.8	-	-	-
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	-	-	-	-	-	-	-	-	-
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	2171	784.53	36.14	49.37	15.35	31.1	-	-	-

APPENDIX III

STANDARDERRORS AND COEFFICIENT

OF VARIETION FOR THE FARM MANAGEMENT PRACTICE

Table 25. Estimate of Number of Holders, Inputs Applied Area and Quantity of Inputs Used, their Standard Errors and Coefficient of Variation of Belg Crops, Agricultural Sample Survey of 2013/14(2006 E.C)
National

Crop type	All Cropland Area			All Fertilizer						Natural					
	Area in Ha			Area (Ha)			Quantity in Qt			Holder			Area (Ha)		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	**1510345**	**46148**	**3.06**	**630441**	**24672**	**3.91**	**584431**	**39335**	**6.73**	**3322905**	**87945**	**2.65**	**266834**	**13430**	**5.03**
Cereals	**1037966**	**39367**	**3.79**	**385370**	**19930**	**5.17**	**292988**	**23016**	**7.86**	**2387684**	**74447**	**3.12**	**157707**	**9380**	**5.95**
Teff	93958	10741	11.43	23343	4055	17.37	13778	3398	24.66	38163	7978	20.9	5646	1541	27.3
Barley	185943	15573	8.38	76107	9662	12.69	49318	7540	15.29	193852	24099	12.43	22135	4189	18.9
Wheat	63196	13279	21.01	34697	9281	26.75	31354	10010	31.92	49089	12333	25.12	6656	2398	36
Maize	599614	28540	4.76	235080	13292	5.65	193440	17748	9.18	2154303	71258	3.31	113438	7196	6.34
Sorghum	43649	7699	17.64	9873	1975	20	2767	626	22.62	76907	10271	13.35	6879	1681	24.4
Finger millet	401	153	38.2	59	38	63.54	7	6	88.82	2057	1055	51.29	55	37	67.5
Oats/ 'Aja'	7796	1759	22.56	3439	1112	32.35	2198	745	33.9	11398	3569	31.32	467	141	30.2
Rice	96	54	57.03	8	5	62.59	5	5	99.77	569	320	56.18	6	4	78.5
Masho	43313	17716	40.9	2764	2055	74.37	121	74	61.43	9014	5617	62.32	2425	1809	74.6
Pulse	**261101**	**14052**	**5.38**	**106208**	**6604**	**6.22**	**123983**	**13397**	**10.81**	**1347459**	**58977**	**4.38**	**46089**	**4407**	**9.56**
Horse/Faba beans	3680	1100	29.9	726	189	25.98	3001	1909	63.6	23696	4886	20.62	400	119	29.7
Field peas	23502	4430	18.85	1911	659	34.49	227	122	54.04	18289	4234	23.15	1441	459	31.9
White Haricot beans	38259	4335	11.33	16833	2366	14.05	17954	3723	20.73	328834	32635	9.92	10418	1689	16.2
Red Haricot beans	155396	7642	4.92	80351	5381	6.7	100691	12888	12.8	975465	55180	5.66	27800	2412	8.68
Chick peas	10168	1929	18.97	1282	875	68.25	69	51	74.81	6353	2305	36.29	1138	868	76.2
Lentiles	16597	3978	23.97	2897	1316	45.44	132	125	94.83	21362	8533	39.95	2786	1287	46.2
Vetch/Grass peas	12856	6691	52.05	2026	1968	97.17	-	-	-	4784	4233	88.5	2026	1968	97.2
Soya beans	65	22	33.57	7	5	70.28	72	68	95.78	195	193	99.26	4	4	99.3
Fenugreek	522	110	20.99	133	55	40.91	1811	1781	98.34	6211	2265	36.47	76	39	50.9
Gibto	55	33	60.43	43	32	76.13	27	20	74.32	-	-	-	-	-	-
Oil Crops	**28793**	**7411**	**25.74**	**4637**	**2139**	**46.13**	**2126**	**765**	**36.01**	**16615**	**3462**	**20.84**	**1198**	**615**	**51.3**
Nueg	233	182	78.25	3	3	99.93	-	-	-	801	800	99.93	3	3	99.9
Linseed	273	121	44.42	29	24	82.47	2	2	89.38	780	439	56.24	27	24	89.5
Ground nuts	3393	1471	43.34	1027	689	67.02	737	553	75.09	5740	2111	36.77	287	148	51.5
Safflower	1288	41	3.16	25	9	35.17	135	90	66.17	879	283	32.2	13	6	46.9
Sesame	23321	7253	31.1	3447	2025	58.74	840	372	44.3	2299	1135	49.35	805	596	74
Rapeseed	285	118	41.33	106	37	34.94	412	354	85.98	6175	2309	37.4	64	27	42.1
Vegetables	**28174**	**1732**	**6.15**	**16720**	**1444**	**8.64**	**28482**	**5954**	**20.9**	**1106120**	**60274**	**5.45**	**12126**	**1051**	**8.67**
Lettuce	24	11	44.55	21	10	49.86	77	66	86.32	2705	1039	38.42	6	3	47
Head Cabbage	1227	307	25	730	237	32.47	3255	1873	57.54	25210	4077	16.17	325	119	36.5
Ethiopian Cabbage	22894	1374	6	13810	1121	8.12	17690	3973	22.46	1033353	58329	5.64	10995	906	8.24
Tomatoes	2153	492	22.84	991	309	31.16	2335	923	39.53	26834	4107	15.31	288	70	24.2
Green peppers	1042	222	21.28	746	205	27.52	4609	2623	56.91	67496	16717	24.77	381	130	34
Red peppers	790	267	33.83	413	184	44.44	509	241	47.33	10380	3489	33.62	125	59	46.9
Swiss chard	45	32	70.6	7	4	54.42	7	5	79.66	3816	1828	47.9	6	4	59.6
Root Crops	**154310**	**9087**	**5.89**	**117507**	**8465**	**7.2**	**136853**	**16865**	**12.32**	**1357213**	**62981**	**4.64**	**49712**	**4210**	**8.47**
Beetroot	503	126	25.06	275	107	38.93	309	153	49.6	18047	3095	17.15	101	36	35.7
Carrot	986	450	45.65	548	278	50.86	348	192	55.19	12674	3335	26.31	221	123	55.8
Onion	16054	3374	21.02	10883	2934	26.96	34363	11936	34.73	99903	14402	14.42	2334	735	31.5
Potatoes	112241	8342	7.43	92762	7883	8.5	94215	11626	12.34	850313	56464	6.64	36178	4000	11.1
Yam	1450	507	34.99	662	268	40.46	216	163	75.19	46889	12054	25.71	556	241	43.4
Garlic	3026	429	14.19	1690	236	13.97	2717	2213	81.46	231235	22370	9.67	1266	180	14.2
Taro/'Godere'	5291	638	12.07	3164	399	12.61	2526	1410	55.81	172393	15174	8.8	2721	359	13.2
Sweet potatoes	14759	1527	10.34	7523	887	11.79	2160	542	25.11	223401	21456	9.6	6336	777	12.3

Table 25 (cont'd)

Crop type	Dap									UREA								
	Holder			Area (Ha)			Quantity in Qt			Holder			Area (Ha)			Quantity (Qt)		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	**1477061**	**68778**	**4.66**	**258665**	**17455**	**6.75**	**325598**	**30263**	**9.29**	**177179**	**20680**	**11.67**	**21862**	**3376**	**15.44**	**52358**	**11834**	**22.6**
Cereals	**978171**	**59494**	**6.08**	**162640**	**14773**	**9.08**	**175090**	**18722**	**10.69**	**106112**	**13306**	**12.54**	**13026**	**2217**	**17.02**	**20891**	**5180**	**24.8**
Teff	44127	8649	19.6	10492	2374	22.63	6388	1784	27.92	7367	1842	25.01	1899	569	29.97	1259	454	36.1
Barley	173151	22425	12.95	46729	7677	16.43	39827	6290	15.79	9702	3361	34.64	1981	801	40.45	1056	354	33.5
Wheat	63157	13558	21.47	24885	8466	34.02	26456	9211	34.81	3134	1185	37.81	534	369	69.03	240	160	66.9
Maize	758528	54975	7.25	75461	7350	9.74	98748	13463	13.63	85265	12451	14.6	7714	1677	21.73	17879	5122	28.7
Sorghum	21674	4383	20.22	2615	788	30.15	1820	438	24.08	1192	557	46.74	200	122	61.03	228	128	56
Finger millet	31	30	97.35	1	1	97.35	1	1	97.35	288	288	99.97	3	3	99.97	6	6	100
Oats/ 'Aja'	13383	3727	27.85	2423	922	38.06	1821	666	36.54	2223	1961	88.2	390	383	98.32	127	118	93
Rice	109	109	99.77	2	2	99.77	5	5	99.77	-	-	-	-	-	-	-	-	-
Masho	267	267	99.81	33	32	99.81	24	24	99.81	1296	1109	85.56	306	255	83.27	97	70	72.6
Pulse	**737168**	**50216**	**6.81**	**49926**	**4006**	**8.02**	**82514**	**11598**	**14.06**	**40018**	**6771**	**16.92**	**1550**	**633**	**40.83**	**4501**	**2260**	**50.2**
Horse/Faba bean	7872	2999	38.1	182	82	44.84	2116	1806	85.34	318	318	99.9	34	33	99.9	32	32	99.9
Field peas	4020	1616	40.2	465	300	64.36	209	122	58.26	27	25	91.12	1	1	91.12	2	2	91.1
White Haricot be	94160	16695	17.73	5245	942	17.97	9802	1883	19.21	6835	3979	58.21	169	71	42.02	503	256	50.9
Red Haricot bean	632859	50397	7.96	43850	3953	9.01	68418	11269	16.47	31809	5705	17.93	1293	628	48.54	3949	2247	56.9
Chick peas	86	62	71.79	13	9	75.23	10	7	72.51	105	107	101.32	13	13	101.32	3	3	101
Lentiles	584	580	99.39	82	82	99.65	126	125	99.81	309	308	99.61	27	26	99.61	5	5	99.6
Vetch/Grass peas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soya beans	168	139	82.63	3	3	94.17	3	3	85.73	-	-	-	-	-	-	-	-	-
Fenugreek	1169	599	51.23	43	25	57.22	1804	1780	98.69	667	460	68.97	14	11	80.26	7	6	85.5
Gibto	478	374	78.3	43	32	76.13	27	20	74.32	-	-	-	-	-	-	-	-	-
Oil crops	**13191**	**5224**	**39.6**	**3297**	**1616**	**49.02**	**1412**	**623**	**44.16**	**628**	**420**	**66.99**	**57**	**45**	**79.47**	**57**	**50**	**87.2**
Nueg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linseed	24	24	99.46	-	-	99.46	-	-	99.46	-	-	-	-	-	-	-	-	-
Ground nuts	7356	4632	62.96	685	634	92.54	601	501	83.39	329	328	99.75	43	43	99.75	49	49	99.8
Safflower	30	28	92.05	-	-	92.05	2	1	92.05	-	-	-	-	-	-	-	-	-
Sesame	4976	2364	47.51	2599	1487	57.2	792	370	46.74	38	41	107.63	11	12	107.63	2	2	108
Rapeseed	805	510	63.34	12	9	72.06	17	14	85.21	261	260	99.6	2	2	99.6	5	5	99.6
Vegetables	**142175**	**19889**	**13.99**	**2728**	**496**	**18.2**	**11595**	**3303**	**28.49**	**22279**	**6010**	**26.98**	**341**	**84**	**24.74**	**6612**	**3964**	**60**
Lettuce	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Head Cabbage	3358	1354	40.32	161	99	61.57	300	208	69.38	1871	800	42.74	85	44	51.46	123	74	59.8
Ethiopian Cabbag	127756	18700	14.64	2084	400	19.21	10418	3253	31.23	14040	5296	37.72	113	40	35.46	2096	1884	89.9
Tomatoes	7311	3612	49.41	250	126	50.19	324	146	45.15	2413	886	36.72	48	19	40.11	674	547	81.2
Green peppers	8180	3503	42.83	137	52	37.78	368	161	43.8	3093	1572	50.81	36	19	53.32	3577	2565	71.7
Red peppers	1800	981	54.51	95	64	67.81	183	142	77.56	3192	1977	61.93	59	35	59.18	142	97	68.4
Swiss chard	221	221	99.7	-	-	99.7	2	2	99.7	-	-	-	-	-	-	-	-	-
Root Crops	**564159**	**47274**	**8.38**	**40074**	**5630**	**14.05**	**54987**	**7300**	**13.28**	**83607**	**15895**	**19.01**	**6888**	**2374**	**34.47**	**20297**	**6979**	**34.4**
Beetroot	3861	1521	39.39	92	57	62.35	169	113	67.02	481	480	99.84	3	3	99.84	10	10	99.8
Carrot	4054	1928	47.57	217	162	74.66	238	172	72.36	612	368	60.13	34	25	74.27	26	17	67.7
Onion	18097	5874	32.46	587	224	38.24	1787	956	53.49	26418	8104	30.68	3327	1671	50.22	12555	6042	48.1
Potatoes	497245	45081	9.07	37922	5604	14.78	49342	7107	14.4	51312	13563	26.43	3224	1683	52.21	5145	2623	51
Yam	4304	2758	64.08	101	81	80.45	215	163	75.5	357	356	99.7	6	6	99.7	1	1	99.7
Garlic	12443	2938	23.61	236	74	31.22	250	59	23.79	2975	1485	49.93	65	35	54.81	2252	2207	98
Taro/'Godere'	12013	3247	27.03	210	56	26.54	1708	1232	72.17	1257	608	48.34	46	30	65.4	95	71	74.3
Sweet potatoes	31259	9878	31.6	710	228	32.08	1279	422	33.04	5147	1544	29.99	185	81	43.78	214	68	31.6

Table 25 (Cont'd)

Crop Type	UREA + DAP									Indigenous seed								
	Holder			Area (Ha)			Quantity (Qt)			Holder			Area (Ha)			Quintal		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	525144	38707	7.37	83081	7541	9.08	206475	19920	9.65	6797877	93813	1.38	1347040	42679	3.17	859747	54110	6.29
Cereals	323049	31547	9.77	51996	5989	11.52	97007	10532	10.86	4476067	*****S	2.38	890454	36541	4.1	717827	50303	7.01
Teff	17662	3799	21.51	5306	1392	26.23	6131	1841	30.02	354414	35861	10.12	93576	10723	11.46	41037	5510	13.43
Barley	26831	6764	25.21	5263	1572	29.88	8435	3074	36.45	929608	52945	5.7	184558	15527	8.41	340703	32116	9.43
Wheat	6865	2516	36.64	2622	1505	57.42	4658	2471	53.04	225774	27120	12.01	62372	13190	21.15	132926	31161	23.44
Maize	280398	30497	10.88	38467	5322	13.83	76812	9389	12.22	3412047	*****S	3.03	464133	24552	5.29	175733	8353	4.75
Sorghum	2647	974	36.78	180	78	43.17	719	264	36.67	114539	14247	12.44	34399	7504	21.81	7673	1411	18.39
Finger millet	-	-	-	-	-	-	-	-	-	7096	2628	37.04	389	153	39.27	45	21	45.71
Oats/ 'Aja'	1615	747	46.23	159	100	62.84	250	177	70.64	57888	9716	16.78	7742	1758	22.71	12182	2681	22.01
Rice	-	-	-	-	-	-	-	-	-	2043	639	31.29	91	54	59.69	72	54	75.14
Masho	-	-	-	-	-	-	-	-	-	89473	27694	30.95	43194	17717	41.02	7454	2783	37.34
Pulse	182645	24609	13.47	8642	1356	15.69	36968	5586	15.11	3436806	99503	2.9	257252	13912	5.41	134556	13275	9.87
Horse/Faba beans	4653	2318	49.82	110	60	54.46	854	581	68.06	97494	12242	12.56	3668	1100	29.98	3413	1570	45.99
Field peas	67	49	72.91	3	3	87.64	16	14	86.13	163706	23414	14.3	23493	4429	18.85	28033	6311	22.51
White Haricot beans	30680	11149	36.34	1001	312	31.17	7649	2778	36.32	734030	55277	7.53	37888	4288	11.32	10508	1526	14.52
Red Haricot beans	147530	22546	15.28	7408	1310	17.69	28323	4900	17.3	2429097	*****S	4.12	152258	7379	4.85	58262	4594	7.89
Chick peas	468	431	91.94	118	109	92.6	56	50	90.13	72857	12949	17.77	9972	1931	19.37	6708	1154	17.2
Lentiles	543	538	99.08	2	2	99.08	2	2	99.08	117396	21599	18.4	16516	3973	24.05	14817	3916	26.43
Vetch/Grass peas	-	-	-	-	-	-	-	-	-	41424	15580	37.61	12856	6691	52.05	12540	6891	54.95
Soya beans	137	137	100.2	-	-	-	68	68	100.2	2141	723	33.75	53	21	39.34	15	10	62.72
Fenugreek	-	-	-	-	-	-	-	-	-	18449	4073	22.08	493	105	21.35	246	60	24.5
Gibto	-	-	-	-	-	-	-	-	-	1227	575	46.91	55	33	60.57	14	12	81.81
Oile seeds	3371	1547	45.9	85	34	39.8	657	382	58.18	105010	16045	15.28	26620	7348	27.6	4732	1710	36.14
Nueg	-	-	-	-	-	-	-	-	-	1542	933	60.51	233	182	78.25	224	207	92.52
Linseed	543	538	99.08	2	2	99.08	2	2	99.08	8927	2358	26.42	273	121	44.42	114	67	58.81
Ground nuts	422	331	78.36	12	9	74.79	87	65	74.7	19745	6878	34.83	1918	1162	60.59	700	423	60.36
Safflower	414	257	62.18	12	7	56.61	134	89	66.78	13767	1649	11.98	1232	41	3.31	21	9	44.88
Sesame	198	147	74.15	32	21	66.22	45	36	78.64	53288	13377	25.1	22813	7244	31.75	3668	1642	44.77
Rapeseed	1795	1367	76.16	28	24	86.1	390	353	90.58	9397	4487	47.75	152	96	63.12	5	4	70.47
Vegetables	52186	11306	21.67	1525	384	25.22	10275	2622	25.52	1815203	66568	3.67	26773	1626	6.07	42	19	45.08
Lettuce	908	542	59.64	15	10	64.76	77	66	86.32	4477	1219	27.23	22	10	46.85	-	-	-
Head Cabbage	4009	1507	37.59	159	78	48.83	2832	1836	64.83	51188	6278	12.26	1065	296	27.81	2	2	99.77
Ethiopian Cabbage	39519	10630	26.9	619	160	25.89	5176	1404	27.13	1663213	64331	3.87	22204	1372	6.18	40	19	47.73
Tomatoes	4805	1759	36.61	405	221	54.68	1337	713	53.34	64641	10077	15.59	1716	447	26.03	1	-	51.62
Green peppers	3444	1832	53.2	191	114	59.68	663	401	60.38	116350	21035	18.08	1008	218	21.59	-	-	-
Red peppers	3037	1708	56.23	135	100	73.96	185	117	63.24	30501	8419	27.6	713	261	36.55	-	-	100.74
Swiss chard	102	102	99.3	1	1	99.3	5	5	99.3	6103	2204	36.12	44	32	72.83	-	-	-
Root Crops	227308	23411	10.3	20832	2756	13.23	61569	10943	17.77	2502817	90919	3.63	145942	9027	6.19	2590	1152	44.48
Beetroot	1380	595	43.1	80	47	59.18	130	81	62.67	45555	5692	12.5	475	126	26.41	-	-	-
Carrot	1290	711	55.12	76	69	91.02	85	72	84.28	25271	6203	24.54	567	247	43.45	-	-	99.65
Onion	26702	7740	28.99	4636	1535	33.11	20021	7472	37.32	261946	26350	10.06	14953	3335	22.3	704	687	97.55
Potatoes	188480	21896	11.62	15438	2300	14.9	39727	7981	20.09	1765033	82238	4.66	110328	8288	7.51	1865	891	47.79
Yam	-	-	-	-	-	-	-	-	-	66693	16406	24.6	1189	499	41.96	3	3	84.67
Garlic	2325	1182	50.83	123	79	63.69	215	145	67.7	373517	31161	8.34	3014	429	14.24	6	5	71.91
Taro/'Godere'	5556	1620	29.15	187	67	36.15	723	252	34.87	66922	13966	20.87	1301	369	28.34	1	1	99.05
Sweet potatoes	7931	3069	38.69	292	175	59.78	668	246	36.9	405036	36357	8.98	14113	1509	10.69	11	9	85.39

Table 25 (cont'd)

Crop type	Improved seed									Pesticide					
	Holder			Area (Ha)			Quantity (Qt)			Holder			Area (Ha)		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	545757	50915	9.33	76213	10107	13.26	23744	3243	13.66	434058	39742	9.16	154439	21268	13.8
Cereals	466474	50479	10.8	69182	9488	13.71	22206	3011	13.56	328006	34623	10.56	124386	18124	14.6
Teff	445	298	66.9	56	42	75.16	26	23	87.72	126247	23738	18.8	35716	7372	20.6
Barley	2808	1411	50.3	364	214	58.96	196	105	53.6	136733	21312	15.59	34493	6064	17.6
Wheat	3550	2505	70.5	715	555	77.69	1642	1403	85.45	78998	16679	21.11	33583	10644	31.7
Maize	459275	50399	11	67932	9466	13.93	20324	2660	13.09	51702	8760	16.94	10531	2500	23.7
Sorghum	556	341	61.3	64	52	80.88	16	14	89.21	3725	1464	39.3	1296	744	57.4
Finger millet	31	30	97.4	1	1	97.35	1	1	97.35	-	-	-	-	-	-
Oats/ 'Aja'	680	512	75.3	37	36	96.26	1	1	100.5	23156	5756	24.86	4225	1234	29.2
Rice	180	133	73.9	5	4	95.81	-	-	97.67	86	78	91.29	20	19	91.5
Mahso	37	35	96.4	9	9	96.39	1	1	96.39	14958	8198	54.81	4522	2521	55.7
Pulse	50199	26073	51.9	3050	1556	51	1452	607	41.8	44527	15745	35.36	13839	8079	58.4
Horse/Faba beans	342	318	92.9	3	3	91.4	1	1	84.38	763	456	59.8	78	45	58.1
Field peas	23	22	92.4	1	1	92.37	-	-	92.37	1368	675	49.35	156	99	63.5
White Haricot beans	3935	1336	33.9	171	70	41.02	54	28	52.19	1996	1008	50.49	228	115	50.7
Red Haricot beans	44580	26071	58.5	2679	1553	57.99	1173	607	51.73	8734	2069	23.69	628	206	32.8
Chick peas	1659	483	29.1	196	64	32.37	223	9	3.91	9515	4778	50.21	1613	955	59.2
Lentiles	-	-	-	-	-	-	-	-	-	14977	8954	59.79	3209	1946	60.6
Vetch/Grass peas	-	-	-	-	-	-	-	-	-	19114	13052	68.29	7896	5824	73.8
Soya beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-	1618	1259	77.79	31	27	86.7
Gibto	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oile seeds	4216	1820	43.2	494	211	42.83	83	34	40.91	1823	911	49.99	247	201	81.3
Nueg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-	736	514	69.81	18	13	71.2
Ground nuts	-	-	-	-	-	-	-	-	-	24	23	97.85	-	-	97.9
Safflower	-	-	-	-	-	-	-	-	-	473	472	99.95	29	29	100
Sesame	4216	1820	43.2	494	211	42.83	83	34	40.91	590	585	99.15	200	198	99.2
Rapeseed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetables	18580	4928	26.5	638	231	36.18	1	-	71.4	15250	3693	24.22	1070	427	39.9
Lettuce	476	386	81.2	1	-	78.01	-	-	-	-	-	-	-	-	-
Head Cabbage	9557	2743	28.7	161	77	47.87	-	-	99.12	2660	1325	49.82	228	135	59
Ethiopian Cabbage	599	368	61.4	14	14	99.21	-	-	-	7820	2392	30.59	176	72	41.2
Tomatoes	10328	4606	44.6	434	186	42.82	-	-	99.92	4654	1938	41.64	587	301	51.2
Green peppers	895	449	50.2	15	12	80.3	-	-	-	1615	975	60.37	79	52	65.5
Red peppers	391	239	61.3	12	10	82.8	-	-	-	-	-	-	-	-	-
Swiss chard	303	174	57.5	1	1	64.65	-	-	-	-	-	-	-	-	-
Root Crops	70565	13510	19.2	2850	777	27.27	3	1	57.77	90696	16958	18.7	14897	4028	27
Beetroot	6773	1584	23.4	28	9	32.18	-	-	-	1771	1137	64.19	99	68	68.9
Carrot	12393	5703	46	419	363	86.6	-	-	-	-	-	-	-	-	-
Onion	21467	4870	22.7	1046	437	41.84	2	1	70.15	41833	13296	31.78	7242	2893	39.9
Potatoes	32559	11083	34	1348	521	38.64	1	1	98.51	44378	10148	22.87	7395	2679	36.2
Yam	-	-	-	-	-	-	-	-	-	348	348	100.2	-	-	100
Garlic	3484	1981	56.9	9	7	81.79	-	-	-	5129	1807	35.24	121	50	41.6
Taro/'Godere'	49	43	86.6	-	-	86.81	-	-	-	811	569	70.17	15	10	66.2
Sweet potatoes	23	22	92.4	1	1	92.37	-	-	-	596	397	66.6	24	18	73.4

Table 25 (cont'd)

Crop type	Irrigation						Extension package					
	Holder			Area (Ha)			Holder			Area (Ha)		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	576574	48565	8.42	119942	14878	12.4	1282208	68647	5.35	279370	20254	7.3
Cereals	394249	42416	10.76	87927	12049	13.7	913496	57320	6.27	180273	16340	9.1
Teff	36465	12142	33.3	7132	2888	40.5	64489	15077	23.4	16451	4269	26
Barley	29435	7544	25.63	4761	1711	35.94	120313	18457	15.3	32400	6970	22
Wheat	17939	9526	53.1	3527	2267	64.27	48369	12039	24.9	19711	7914	40
Maize	315689	33928	10.75	63753	8011	12.57	720431	52503	7.29	100904	10705	11
Sorghum	5669	2803	49.44	1508	789	52.33	19970	3876	19.4	3910	2629	67
Finger millet	570	439	76.97	-	-	99.06	319	289	90.8	28	27	97
Oats/ 'Aja'	3013	1676	55.62	119	61	51.05	10274	4146	40.4	1886	943	50
Rice	60	59	97.67	-	-	97.67	-	-	-	-	-	-
Mahso	20323	19619	96.53	7127	6909	96.95	16137	8274	51.3	4982	2566	52
Pulse	81436	15182	18.64	5948	1480	24.88	547420	47324	8.64	46849	6304	13
Horse/Faba beans	572	429	74.93	56	53	95.35	9684	3731	38.5	245	109	45
Field peas	394	278	70.41	13	9	71.21	3294	1649	50.1	283	188	66
White Haricot beans	24509	7752	31.63	1437	627	43.64	63849	16712	26.2	4508	1589	35
Red Haricot beans	42397	11827	27.9	1382	403	29.15	452381	43083	9.52	35179	4169	12
Chick peas	9061	4072	44.94	1676	800	47.77	10005	4890	48.9	1323	622	47
Lentiles	4408	1533	34.78	576	219	38.07	13670	9420	68.9	2768	1951	70
Vetch/Grass peas	2795	1751	62.64	740	537	72.61	9423	9066	96.2	2408	2386	99
Soya beans	342	321	93.92	11	10	93.51	168	140	83.6	-	-	97
Fenugreek	1031	528	51.22	55	33	60.69	3679	2218	60.3	98	57	58
Gibto	179	178	99.52	4	4	99.52	652	463	70.9	37	31	83
Oile seeds	4279	1681	39.28	183	45	24.63	15108	3919	25.9	2300	874	38
Nueg	-	-	-	-	-	-	-	-	-	-	-	-
Linseed	52	54	102.8	-	-	102.8	1064	595	56	68	42	61
Ground nuts	343	343	99.82	9	9	99.82	5325	2937	55.2	186	131	70
Safflower	992	-	-	65	-	-	473	262	55.4	12	7	56
Sesame	777	374	48.12	91	42	46.69	5762	2012	34.9	2001	862	43
Rapeseed	2114	1602	75.75	18	12	67.06	2513	1458	58	33	24	73
Vegetables	115743	16601	14.34	3618	668	18.46	92218	12110	13.1	2064	354	17
Lettuce	1604	747	46.57	10	7	64.21	-	-	-	-	-	-
Head Cabbage	8820	2015	22.85	323	140	43.36	7509	2649	35.3	298	184	62
Ethiopian Cabbage	42848	9586	22.37	578	134	23.15	68529	10827	15.8	1191	262	22
Tomatoes	46840	9842	21.01	1632	378	23.17	9523	3024	31.8	328	113	34
Green peppers	22981	5639	24.54	421	129	30.67	7171	2564	35.8	71	37	53
Red peppers	22650	7963	35.15	618	250	40.48	5341	2564	48	173	86	49
Swiss chard	1572	808	51.37	37	32	85.14	1112	766	68.9	2	2	79
Root Crops	265817	28442	10.7	22266	3777	16.96	513975	49300	9.59	47884	7056	15
Beetroot	8473	2535	29.92	114	62	54.69	6717	2001	29.8	157	90	57
Carrot	12810	5092	39.75	336	193	57.33	7319	3061	41.8	152	106	70
Onion	116669	20167	17.29	11173	3137	28.08	54329	13205	24.3	6041	2829	47
Potatoes	121558	18503	15.22	8873	1837	20.7	421775	46362	11	39781	6391	16
Yam	357	356	99.7	9	9	99.7	5732	3543	61.8	116	85	74
Garlic	32769	6535	19.94	874	221	25.32	9357	2665	28.5	162	73	45
Taro/'Godere'	333	269	80.71	3	2	85.84	22238	5453	24.5	516	153	30
Sweet potatoes	26186	8676	33.13	885	336	38	25672	7726	30.1	960	469	49

APPENDIX IV

QUESTIONNAIRE

Form AgSS 2006/8

CENTRAL STATISTICAL AUTHORITY
ETHIOPIAN AGRICULTURAL SAMPLE SURVEY 2013/2014 (2006 E.C)

PART I – IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7	8	9	10	11	12	13	14
REGION	ZONE	WEREDA	PA / REST. AR	EA LOCAL	HH ID	HH HEAD SEX 1=M 2=F	HOLDER ID	HOLDER'S NAME	HOLDER'S AGE	HOLDER'S SEX M=1 F=2	HIGHEST GRADE COMPLETED	HOLDER'S HH SIZE	**FARMING TYPE** CROP=1 LIVEST=2 BOTH=3

PART II – CROP FIELD / OTHER LAND USE

15		16	17					
			PARCEL NO.		FIELD NO.			
			IS THE FIELD PURE STAND =1 MIXED CROP =2 OTHER LAND USE=3					
			CROP/OTHER NAME		CROP NAME		CROP NAME	
SER. NO.		QUESTIONS FOR THE HOLDER	CODE		CODE		CODE	
0	1	Ownership Own = 1 Rented in =2 Other =3						
0	2	Is field under Extension Program? Yes =1 No = 2						
0	3	Is Field Irrigated? Yes =1 No =2						
0	4	If Field Irrigated source of water. River =1 Lake =2 Pond =3 Harvested water =4 other =5						
0	5	Percent share of mixed crops						
0	6	Crop growing methods 1=by line 2=by broadcasting						
0	7	Seed / Seedling Type Improved Seed = 1 indigenous seed = 2						
0	8	*For Cereals, Pulses & Oilseeds only* Quantity of improved seeds used	Kilo / Gram		Kilo / Gram		Kilo / Gram	
0	9	*For Cereals, Pulses & Oilseeds only* Price of improved seeds used	Birr / Cents		Birr / Cents		Birr / Cents	
1	0	*For Cereals, Pulses & Oilseeds only* Quantity of indigenous seeds used	Kilo / Gram		Kilo / Gram		Kilo / Gram	
1	1	Was crop damaged? Yes = 1 No =2						
1	2	If yes in question number 10, Cause of damage → Code →						

1	3	Percent of damaged crop									
1	4	Prevention/precaution measure taken? Yes =1 No =2									
1	5	Type of measure if any? Chemical = 1 Non – chemical = 2 Both = 3									
1	6	Chemical type used if any. Pesticide =1 herbicide =2 Fungicide =3 1&2 = 4 1 & 3 = 5 2 & 3 = 6 All = 7									
1	7	Is Fertilizer Used? Yes =1 No = 2									
1	8	Type of fertilizer used if any? Natural = 1 Chemical = 2 Both = 3									
1	9	If chemical fertilizer used 19.1 Type UREA = 1 DAP = 2 Both = 3									
		19.2 Quantity of chemical fertilizer used				Kilo				Gram	
2	0	If natural fertilizer used, type Manure = 1 Compost = 2 Organic = 3 1 &2 = 4 1&3 = 5 2 & 3 = 6 All = 7 others = 8									
2	1	Quantity of crop produced in standard/local measurement	Name	Code	Quantity	Name	code	Quantity	Name	Code	Quantity

PART 3A: RESULTS OF AREA MEASUREMENTS using GPS

18	19	20	21	22	23	24	25
GPS Accuracy during field measurement	Is the field measured? yes =1 No =2 →						
	Area of measured field		**Is the field** **Flat =1** **Partialy Sloppy = 2** **Sloppy = 3**	**Code**	**If the field covered?** **None , 1** **With plant / permanent crop = 2** **With house = 3** **Partially covered , 4** **Others , 5**	**Code**	**Comments**
	Area in square meters **(Clockwise)**	Area in square meters **(Anti-Clockwise)**					
Field measurement			***Date***		***Month***		

PART 3B : RESULTS OF AREA MEASUREMENTS USING COMPASS-ROPE

18	19	20	21	22	23	24	25	26
Is the field measured?		Yes =1		No = 2	Code		→	
Side	1 - 2	2 - 3	3 -	4 -	5 -	6 -	7 -	8 -
Bearing (0)								
Length								
Side	9 -	10 -	11 -	12 -	13 -	14 -	15 -	16 -
Bearing(0)								
Length								
Side	17 -	18 -	19 -	20 -	21 -	22 -	23 -	24 -
Bearing (0)								
Length								
Side	25 -	26 -	27 -	28 -	29 -	30 -	31 -	32 -
Bearing (0)								
Length								
Field Measurement	date	month	**Closure error**		Area in square meters			

	Name	**Signature**	**Date**
Data collector			
Field Supervisor			