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CENTRAL STATISTICAL AGENCY

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2015/16 (2008 E.C) VOLUME V

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

PRIVATE PEASANT HOLDINGS

ADDIS ABABA

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Table of Contents

Table of Content……..I
List of Tables……..II
List of Figures…… III
List of Acronyms..…….... IV

CHAPTER I ***1***

1 INTRODUCTION AND OBJECTIVES OF THE SURVEY **1**
1.1 INTRODUCTION 1
1.2 OBJECTIVES OF THE SURVEY 2

CHAPTER II ***3***

2 SURVEY METHODOLOGY, DATA COLLECTION AND PROCESSING **3**
2.1 COVERAGE 3
2.2 SAMPLING FRAME 3
2.3 SAMPLE DESIGN AND SELECTION SCHEME 3
2.4 FIELD ORGANIZATION 4
2.5 TRAINING OF THE FIELD STAFF 5
2.6 METHODS OF DATA COLLECTION 5
2.7 DATA PROCESSING 6
2.8 BASIC CONCEPTS AND DEFINITIONS 7

CHAPTER III ***10***

3 SUMMARY OF MAJOR FINDINGS OF THE SURVEY **10**
3.1 AREA AND PRODUCTION 10
3.2 ESTIMATES OF THE 2014/15 (2007 E.C) TOTAL CROP LAND AREA AND PRODUCTION OF MAJOR CROPS, MEHER AND BELG SEASONS 12

CHAPTER IV ***30***

4 FARM MANAGEMENT PRACTISES OF THE 2014/15 (2007 E.C) BELG SEASON **30**
4.1 INTRODUCTION 30
4.2 SUMMARY OF THE FARM MANAGEMENT PRACTICES OF THE 2014/15 (2007 E.C) BELG SEASON AGRICULTURAL SAMPLE SURVEY 31
4.3 FERTLIZER APPLIED AREA AND FERTLIZER TYPE USED 33
4.4 THE USE OF NATURAL FERTLIZER 34
4.5. THE USE OF COMMERCIAL FERTLIZERS 35
4.6. THE USE OF IMPROVED SEEDS 36
4.7. NUMBER OF BELG CROP PRODUCING HOLDERS REPORTING THE USE OF IMPROVED FARM MANAGEMENT PRACTICES BY AGE 37
4.8 NUMBER OF BELG CROP PRODUCING HOLDERS REPORTING THE USE OF IMPROVED FARM MANAGEMENT PRACTICES BY EDUCATIONAL STATUS 38
4.9 NUMBER OF HOLDERS REPORTING CROP DAMAGE BY CAUSES OF DAMAGE 40

APPENDIX I ***101***

APPENDIX II ***105***

APPENDIX III ***117***

APPENDIX IV ***123***

List of Tables

Summary Table 1*: Cropland Area and Production of Major Belg Crops: Private Peasant Holdings, 2015/16 (2008 E.C.)*……11

Summary Table 2*: Summary of National Grain Cropland Area and Production of Meher season, Belg Season and Commercial Farms during 2015/16 (2008 E.C.)*…..11

Summary Table 3*. Cropland Area under Major Crops for Private Peasant Holdings for 2015/16 (2008 E.C.), Both seasons*……..……...12

Summary Table 4. *Total Production of Major Crops Harvested by Private Peasant Holdings, 2015/16 (2008 E.C.), Both Seasons*…….……....14

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 2015/16 (2008 E.C)*……..18

Table 6. *Total Cropland Area and Number of Holders Engaged in 2015/16 (2008 E.C.)Belg Season Crop Production* …….....31

Table 7. *Belg Season Cropland Areas under Different Farm Management Practices for the Production Year of 2015/16 (2008 E.C), National Level*……....32

Table 8*. Summary of Cropland Area under Improved Farm Management Practices for Private Peasant Holdings, 2015/16 (2008 E.C.) Belg season, National*…….33

Table 9. *Summary of Fertilizer Applied Cropland Area for Private Holdings of 2015/16 (2008 E.C.) Belg season, National*…….. 34

Table 10. *Number of Holders,Inputs Applied Area and Quantity of Inputs used*.....43

Table 21*: Holders Applying Inputs by Age Group*……....87

Table 22. *Holders Applying Inputs by Educational Status*……..……91

Table 23*. Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage*…….……..95

List of Figures

Figure 1 **Estimates of Total Area under Major Crops for Private peasant Holdings in Ethiopia for Both Seasons 2015/16 (2008 E.C)……13**

Figure 2 **Estimates of Total Production of Major Crops for Private Holdings in Ethiopia for Both Seasons of 2015/16 (2008 E.C) …….…… 14**

Figure 3*:* **Percentage of Area under Major Belg Season Crops in 2015/16 (2008 E.C), National ...…….....15**

Figure 4 **Percentage Distribution of Chemical Fertilizer Applied Cropland Area by Fertilizer Type for Private Holdings of Belg 2015/16 (2008 E.C)……..35**

Figure 5. **Percentage Distribution of Quantity of Chemical Fertilizers Applied by Fertilizer Type for Private Holding of 2015/16 (2008 E.C) Belg season, National ……..36**

Figure 6. **Graphical Representation of Number of Holders Using Inputs for Belg 015/16 (2008 E.C)…….……38**

Figure 7. **Number of Holders Using Different Inputs by Educational status, 2015/16 (2008 E.C), Belg Season…….....39**

Figure 8. **Damaged Cropland Area by Causes of Damage and Crop Category.40**

List of Acronyms

CSA	**Central Statistical Agency**
CV	**Coefficienct of Varietion**
DAP	**Di Amonium Phosphate**
SE	**Standard Errors**
EA	**Enumeration Area**
E.C	**Ethiopian Calencder**
Ha	**Hectare**
LSF	**Large Scale Farms (Commercial Farms)**
NPS	**Nitrogen, Phosphurs and Sulfure**
Qt	**Quintal**
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 the Gross Domestic Product, employment and foreign exchange earnings. Agriculture is still believed to remain a sector that plays an important 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 production and productivity. Several factors can influence agricultural production and productivity improvement. Among other factors, the increased use of modern farm inputs, modernization of farming activities by using improved farm implements as well as introduction of modern farming technologies to the sector are the major ones. In order identify, plan, implement and monitor agricultural projects and programs, availability of reliable, comprehensive and timely statistical data on the overall performance of the sector is essential.

Central Statistical Agency (CSA) of Ethiopia has been conducting 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 for the private peasant holdings annually. In the previous years, two reports were used 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. Since 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. The report contained the data on crop cultivated area and production as well as farm management practices of the private peasant holdings of the

major Belg crops. The findings of the 2015/16 (2008 E.C) Belg survey are summarized and presented using tables and graphs at national and regional levels.

1.2 OBJECTIVES OF THE SURVEY

There are two main objectives of the 2015/16 (2008 E.C.) Belg season agricultural sample survey. These are 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 fertilizer applied area by crop type, the type and quantity of fertilizers used, areas applied with improved seeds and indegineous seeds, areas applied with pesticide, areas under irrigation, and areas under extension package by crop type and category.

Given the objectives, the survey findings are presented in such a way that, first crop cultivated area and production is discussed and then followed by farm management practice findings, subsequently.

CHAPTER II

2 SURVEY METHODOLOGY, DATA COLLECTION AND PROCESSING

2.1 COVERAGE

The 2015/16 (2008 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 1,300 Enumeration Areas (EAs). However, in 286 EAs among the selected EAs, the survey was not successful due to various reasons. Therefore, the survey was successfully accomplished involving only 1,263 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, 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.

2.3 SAMPLE DESIGN AND SELECTION SCHEME

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 2015/16 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.

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.

2.4 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 2015/16 (2008 E.C.), 22 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, Jigjiga and Shire statistical branch offices did not take part on the 2015/16 (2008 E.C) Belg season agricultural sample survey as Belg season farming activities by smallholder private holdings are not practiced in the EAs of the branch offices.

2.5 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 Bahir Dar City 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 trainings for the enumerators and field supervisors for 20 days in the 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.

2.6 METHODS OF DATA COLLECTION

The agricultural data for 2015/16 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 April 15 to May 30/2008 E.C. (May 23 to June 7, 2016). Crop cultivated area data are collected objectively using compass/GPS and measuring tapes, while production data were collected subjective by interviewing the agricultural holders by questionnaire based personal interview. The percentage change of crop yield expected this year relative to the previous year's yield (condition factor) is collected from both agricultural holders and Development Agents (DAs) within each EA to estimate this year's crop yield subjectively. Data on production of Belg season crops are then, computed by the use of the crop cultivated area estimates and the yield data collected from the sampled holders and DAs.

2.7 DATA PROCESSING

a. Editing, Coding and Verification

To insure the quality of the collected data, data editing, coding and verification tasks were conducted at the head office. The number of editors participated in editing was relatively lesser relative to the previous years due to the shortage of data editors and work load of other surveys at the head office during the time of data editing. Therefore, most. In order to publish the result of this survey earlier than it was before and therebye meet the demand of data users some of the data editing, coding and and entry tasks are accomplished at the branch statistical offices.

b. Data Entry, Cleaning and Tabulation

Before starting data entry, computer edit specifications are 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. The data enrty task was accomplished at both the head office and the statistical branch offices (that have fully operational data entry system). 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.

2.8 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 2015/16 (2008 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 2015/16 (2008 E.C) Belg season agricultural sample survey estimate indicates a total cropland area estimates of about 2,111,667.03 hectare and production of 56,314,693.05 quintal, which includes grain crops, vegetables and root crops in the estimation. It is important to note that a crop named Mung bean/"Masho" was use to be reported as a cereal crop in the previous reports. In this report it is categorized as a pulse crop which is its proper category. With this background, the main findings of the 2015/16 (2008 E.C.) Belg season crop production sample survey are presented in this Chapter**.**

3.1.1 **Grain Crops:** 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 2015/16 (2008 E.C) Belg season agricultural sample survey result indicates that a total land area of about *1,770,993.40* hectare was cultivated by the major Belg crops (grains) from which a total grain production of about *19,085,226.54* quintals was estimated at national level. As compared to the production year of 2014/15 (2007 E.C) grain cultivated area and production have decreased by 50.83% and 113.61%, respectively. Out of the total Belg season grain cropland area and production, cereals accounted for the largest percentage interms of both crop cultivated area and production.

Cereals accounted for about 1,298,973.22 hectares (73.35%) of the national Belg grain cropland area) and about 14,823,546.49 quintals (77.67%) of the total Belg grain production). Following cereals is pulse crops which accounted for about 436,435.21 hectares (24.64% of the total grain area) and about 4,013,627.28 quintals production (which is 21.03% of the total grain production). Moreover, oilseeds are the other category

of grain crops produced which accounted for an area of 35,584.97 hectares (2.01% of the total grain area) and 248,052.77 quintals of production (1.30% 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, 2015/16 (2008 E.C.), Country Level

Crop Category	Total Cropland Area in		Total Production	
	Hectare	%	In Quintals	%
Cereal……	*1,298,973.22*	*73.35*	*14,823,546.49*	*77.67*
Pulses……	*436,435.21*	*24.64*	*4,013,627.28*	*21.03*
Oilseeds……...	*35,584.97*	*2.01*	*248,052.77*	*1.30*
Grain crops……	***1770993.40***	***100.00***	***19085226.54***	***100.00***

In order to illustrate the overall performance of the 2015/16 (2008 E.C) crop production year, the total estimated cropland area and production of grain crops for private peasant holders for seasons of Belg, Meher as well as for commercial farms are presented in the Summary Table 2. By the year 2015/16 (2008 E.C) the overall grain cultivated area estimate is about *14,885,697.92* hectare (Meher,Belg and Commercial farms).

Summary Table 2: Summary of National Grain Cropland Area and Production of Meher season, Belg Season and Commercial Farms during 2015/16 (2008 E.C.), **Country Level**

	Grain crops Area		Grain Production(Qt)	
	Hectare	%	In Quintals	%
Meher season private holdings	*12,486,270.87*	*83.88*	*266,828,807.04*	*89.39*
Belg season private holdings	*1,770,993.41*	*11.90*	*19,085,226.55*	*6.39*
Commercial Farms	*628,433.64*	*4.22*	*12,581,277.90*	*4.21*
Grand total	***14,885697.92***	***100.00***	***298,495,311.49***	***100.00***

Out of the total grain area estimated, Belg season grain area accounted for about 1,770,993.41 hectares (11.90% of total grain area) where as Meher season grain area accounted for about 12,486,270.87 hectare (83.88% of the total grain area cultivated).

Commercial farms grain cultivated area is about 628,433.64 hectares (4.22% of the total grain area cultivated).

The total grain crops produced during the year 2015/16 (2008 E.C.), amounts 298,495,311.49 quintals which is increased by 2.41% from the 2014/15 (2007 E.C) total production considering Meher, Belg and commercial farms. Meher season, Belg season and commercial farms account for about 266,828,807.04 quitals (89.39%), 19,085,226.55 quintals (6.39%) and 12,581,277.90 quintals (4.21%) of the total grain production, respectively for the year 2015/16 (2008 E.C.).

3.2 ESTIMATES OF THE 2015/16 (2008 E.C) TOTAL CROP LAND AREA AND PRODUCTION OF MAJOR CROPS, MEHER AND BELG SEASONS

For the year *2015/16 (2008 E.C.),* the total cropland area cultivated of major crops (grains) of the private peasant holdings during both seasons was estimated to be *14,257,264.26* hectares (commercial not included). Meher season accounts for 12,486,270.86 (87.58%) while Belg season accounts for 1,770,993.40 (12.42%) 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 2015/16 (2008 E.C.), Both Seasons:
Country Level

Crop Type	*Total Grain Cropland Area in Hectares during*					
	Meher Season		*Belg Season*		*Both seasons Total*	
	Area in Ha	*%*	*Area in Ha*	*%*	*Area in Ha*	*%*
Cereal	*9,974,316.28*	*79.88*	*1,298,973.22*	*73.35*	*11,273,289.50*	*79.07*
Pulses	*1,652,844.19*	*13.24*	*4,364,35.21*	*24.64*	*2,089,279.40*	*14.65*
Oilseeds	*859,110.39*	*6.88*	*355,84.97*	*2.01*	*894,695.36*	*6.28*
Total	***12,486,270.86***	***100.00***	***1,770,993.40***	***100.00***	***14,257,264.26***	***100.00***

As indicated in Summary Table 3, cereals accounted for about 9,974,316.28 hectares (79.88% of the total grain cultivated area) while Pulses and Oil crops accounted for about 1,652,844.19 hectare (13.24%) and 859,110.39 hectares (6.88%) 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 2015/16 (2008 E.C) is indicated using Figure 1 as follows.

Figure 1: Estimate of Total Area under Major Crops for Private Peasnt Holdings in Ethiopia for Both Seasons 2015/16 (2008 E.C.)

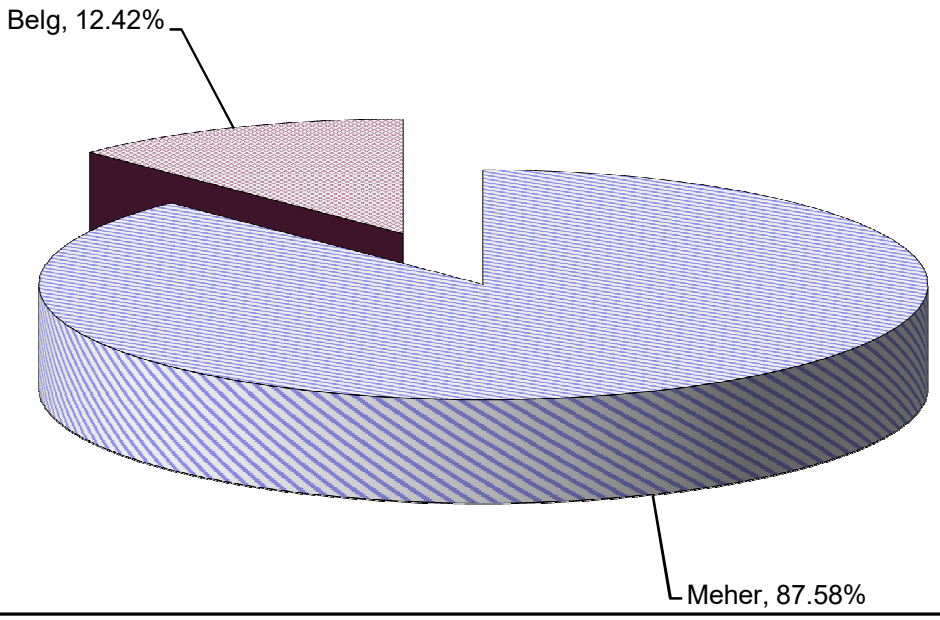


Figure 1 shows that out of the total major crops cultivated area by private peasant holdings during both seasons of *2015/16 (2008 E.C.),* Belg and Meher seasons account for 12.42% and 87.58%, respectively. Likewise, the overall performance of the major grain crops production estimates for both seasons is illustrated in Summary Table 4.

Summary Table 4. Total Production of Major Crops Harvested by Private Peasant Holdings, 2015/16 (2008 E.C.), Both Seasons: Country Level

Crop Type	*Total Production in Quintals, Harvested during*					
	Meher Season Production		**Belg Season Production**		**Both seasons Production**	
	in Quintals	**%**	in Quintals	**%**	in Quintals	**%**
Cereal	*231,287,970.83*	*86.68*	*14,823,546.49*	*77.67*	*246,111,517.32*	*86.08*
Pulses	*27,692,743.11*	*10.38*	*4,013,627.28*	*21.03*	*31,706,370.39*	*11.09*
Oil crops	*7,848,093.10*	*2.94*	*248,052.77*	*1.30*	*8,096,145.87*	*2.83*
Total	***266,828,807.04***	***100.00***	***19,085,226.54***	***100.00***	***285,914,033.58***	***100.00***

The Summary Table 4 indicate that cereals production accounted for about 246,111,517.32 quintals (86.08% of the total grain crops) produced in both seasons. Pulses and Oil crops account for about 31,706,370.39 quintals (11.09 %) and 8,096,145.87 (2.83%), 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 *2015/16 (2008 E.C.)* is indicated using Figure 2 bellow.

Figure 2: Estimates of Total Productionof Major Crops for Private Holdings in Ethiopia for Both Seasons of 2015/16 (2008 E.C.)

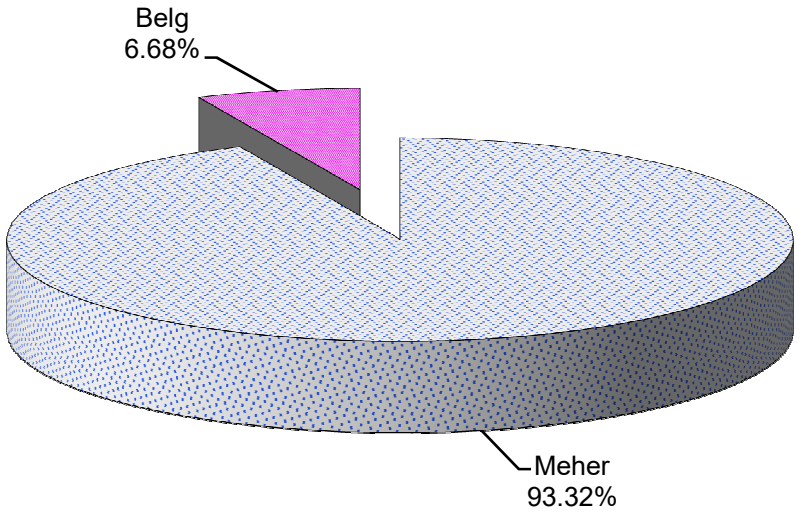
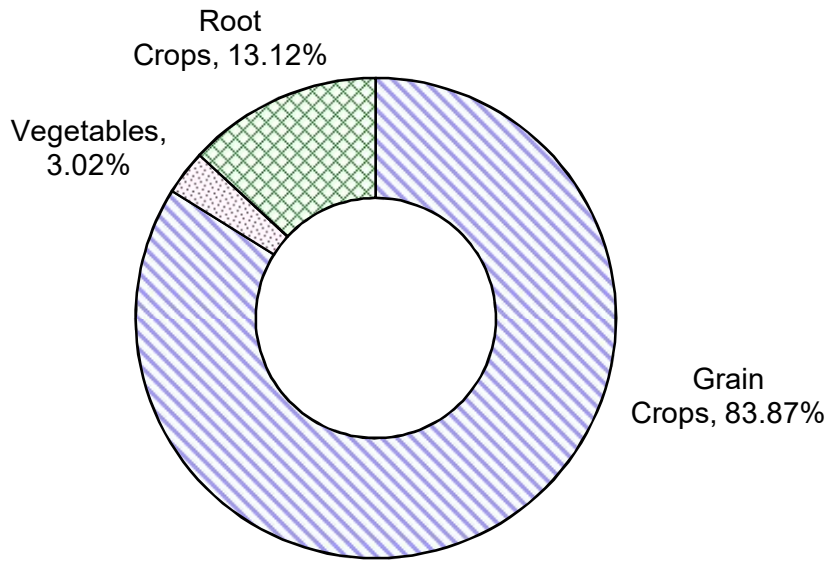


Figure 2 indicates that out of the total of major grain crops produced by private peasant holdings during both seasons of *2015/16 (2008 E.C.),* Belg accounts for 6.68% (which is about 19.085,226.54 quintals) whereas Meher accounts for 93.32% (about 266,828,807.04 quintals).

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 3.02% of the area under all crops at national level during the Belg season. Out of the total area under vegetables, 75.37% is accounted for Ethiopian Cabbage (See Statistical Table 6).

Figure 3: Percentage Distribution of Area under Major Belg Season Crops in 2015/16 (2008 EC), National Level



3.1.4. <u>Root Crops</u>: - 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 13.12% of the area under all Belg crops in the country (see Figure 3 above).

Potatoes, onion and sweet potatoes accounted for 81.74%, 6.83% and 5.21% of the total root crop area cultivated, respectively. Interms of production, potatoes, onion and sweet potatoes accounted for 83.66%, 3.41% and 8.17% 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, there might be no production data is available for some crops. Such cases are designated by Not Stated (NS). In all tables, if the data are not available, it is labeled as "-".

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

Summary Table5: Estimates of total Grain Cropland area and production for Meher (main), Belag (minor) Seasons of private Holdings and Commercial Farms (Large scale Farms (LSF))

Crop	Cropland area in Hectare			Total Area	Total Production in Quintal			Total Production
	Meher	Belg	LSF		Meher	Belg	LSF	
Grain Crops.....	**12,486,270.87**	**1,770,993.41**	**999,795.33**	**15,257,059.61**	**266,828,807.04**	**19,085,226.55**	**12,581,277.90**	**298,495,311.49**
Cereals.....	**9,974,316.28**	**1,298,973.22**	**628,433.64**	**11,901,723.14**	**231,287,970.83**	**14,823,546.49**	**9,076,916.81**	**255,188,434.13**
Teff.....	2,866,052.99	111,486.82	280,415.05	3,257,954.86	44,713,786.91	1,055,209.94	101,728.76	45,870,725.61
Barley.....	944,401.34	190,253.76	6,860.87	1,141,515.97	18,567,042.76	1,982,278.78	66,512.00	20,615,833.54
Wheat.....	1,664,564.62	77,410.91	2,295.41	1,744,270.94	42,192,572.23	736,381.43	2,566,760.18	45,495,713.84
Maize.....	2,111,518.23	847,172.75	79,947.72	3,038,638.70	71,508,354.11	10,623,350.51	3,659,031.06	85,790,735.68
Sorghum.....	1,854,710.93	61,573.60	88,853.89	2,005,138.42	43,232,997.52	313,399.11	2,600,471.81	46,146,868.44
Finger millet.....	465,508.27	915.26	98,912.09	565,335.62	9,402,463.39	*	8,825.00	
Oats/'Aja'.....	22,105.72	8,987.42	459.57	31,552.71	402,689.43	102,426.75	133.00	505,249.18
Rice.....	45,454.18	*	7.32		1,268,064.47	*	73,455.00	
Pulses.....	**1,652,844.19**	**436,435.21**	**3,078.17**	**2,092,357.57**	**27,692,743.11**	**4,013,627.28**	**1,167,107.62**	**32,873,478.01**
Horse beans.....	443,966.09	4,676.72	60,731.11	509,373.92	8,486,545.69	52,452.77	18,567.08	8,557,565.54
Field peas.....	221,415.67	25,147.69	809.43	247,372.79	3,233,901.34	214,914.61	3,006.00	3,451,821.95
Haricot beans white.	113,249.95	62,656.76	207.43	176,114.14	1,597,394.84	374,063.64	191,607.82	2,163,066.30
Haricot beans red...	244,049.94	243,678.15	10,005.38	497,733.47	3,804,994.53	2,392,507.76	90,600.46	6,288,102.75
Chick-peas.....	258,486.29	18,482.29	5,247.70	282,216.28	4,726,113.88	213,689.90	23,224.00	4,963,027.78
Lentils.....	100,692.74	23,036.58	1,185.84	124,915.16	1,339,336.41	235,862.38	125,655.69	1,700,854.48
Vetch.....	159,105.68	*	7,811.35	#VALUE!	2,876,743.76	*	715.00	
Soya beans.....	38,166.04	309.73	43.42	38,519.19	812,418.33	*	24,992.00	
Fenugreek.....	29,837.65	1,245.77	1,424.00	32,507.42	356,537.64	8,739.20	505,136.27	870,413.11
Mung bean/"Masho"...	27,085.92	49,414.24	25,863.54	102,363.70	271,589.80	476,655.74	7,726.10	755,971.64
Gibto.....	16,788.20	*	540.85		187,166.88	-	175,570.20	
Oilseeds.....	**859,110.39**	**35,584.97**	**7,574.91**	**902,270.27**	**7,848,093.10**	**248,052.77**	**307.00**	**8,096,452.87**
Neug.....	281,036.36	*	17.26		2,563,271.66	-	2,337,253.47	
Linseed.....	85,415.67	235.07	287,287.48	372,938.22	885,511.44	822.68	8,976.28	895,310.40
Groundnuts.....	67,062.40	7,219.71	973.62	75,255.73	1,039,395.34	93,557.03	18,848.00	1,151,800.37
Sunflower.....	7,361.30	10,679.84	819.02	18,860.16	67,310.46	126,522.68	22,370.89	216,204.03
Sesame.....	388,245.50	16,881.33	1,363.67	406,490.50	2,742,174.27	26,252.08	1,433.00	2,769,859.35
Rapeseed.....	29,989.17	557.91	82.01	30,629.09	550,429.93	*	2,211,313.84	
Vegetables.....	**201,332.14**	**63,673.53**	**279,731.71**	**544,737.38**	**7,444,468.39**	**5,062,654.13**	**74,311.46**	**12,581,433.98**
Lettuce.....	207.70	*	4,317.45		1,450.65	*	926,933.00	
Head Cabbage.....	7,197.70	2,636.28	7,686.40	17,520.38	463,177.16	194,771.78	58,535.72	716,484.66
Ethiopian Cabbag....	33,942.01	47,992.83	199.44	82,134.28	3,296,960.05	4,367,076.49	54,192.75	7,718,229.29
Tomatoes.....	9,524.42	*	243.36		591,563.36	320,101.06	1,349.00	913,013.42
Green peppers.....	7,449.59	2,820.01	14.94	10,284.54	458,536.96	148,461.68	563,604.40	1,170,603.04
Red peppers.....	142,795.16	2,806.56	1,614.48	147,216.20	2,627,908.26	30,640.89	37,504.13	2,696,053.28
Swiss chard.....	215.56	49.87	217.84	483.27	4,871.95	*	211,219.82	
Root Crops.....	**213,766.65**	**277,000.10**	**5,382.24**	**496,148.99**	**39,985,663.02**	**32,166,812.38**	**527.18**	**72,153,002.58**
Beetroot.....	3,364.72	1,206.60	14.10	4,585.42	301,898.70	82,215.18	362,186.17	746,300.05
Carrot.....	3,823.41	961.66	1,438.41	6,223.48	167,513.76	44,052.62	347.74	211,914.12
Onion.....	29,517.01	18,922.18	4.17	48,443.36	2,648,493.54	1,096,928.08	1,617.30	3,747,038.92
Potatoes.....	70,131.32	226,428.84	17.43	296,577.59	9,432,334.43	26,911,691.98	232,356.28	36,576,382.69
Yam/'Boye'.....	5,521.65	2,959.60	1,041.12	9,522.37	522,502.19	268,463.66	37,011.84	827,977.69
Garlic.....	11,845.53	6,789.11	173.30	18,807.94	1,077,434.57	578,172.67	9,680.00	1,665,287.24
Taro/'Godere'.....	48,523.71	5,306.41	39.92	53,870.04	12,112,217.60	557,110.78	-	
Sweet potatoes.....	41,039.31	14,425.69	-		13,723,268.22	2,628,177.42	81,173.01	16,432,618.65

TABLE I 5.1. ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
National

Crop	Holders	Cropland area in		Production in		Crop Yield (QTS/Ha)
		Hectare	%	Quintals	%	
Grain Crops.....	11,042,272.00	1,770,993.41	100.00	19,085,226.55	100.00	
Cereals.....	9,617,401.00	1,298,973.22	73.35	14,823,546.49	77.67	
Teff.....	472,254.00	111,486.82	6.30	1,055,209.94	5.53	9.46
Barley.....	988,795.00	190,253.76	10.74	1,982,278.78	10.39	10.42
Wheat.....	133,246.00	77,410.91	4.37	736,381.43	3.86	9.51
Maize.....	8,581,941.00	847,172.75	47.84	10,623,350.51	55.66	12.54
Sorghum.....	477,203.00	61,573.60	3.48	313,399.11	1.64	5.09
Finger millet.....	13,485.00	915.26	0.05	*	*	*
Oats/'Aja'.....	39,300.00	8,987.42	0.51	102,426.75	0.54	11.40
Rice.....	*	*	*	*	*	*
Pulses.....	6,601,410.00	436,435.21	24.64	4,013,627.28	21.03	
Horse beans.....	112,592.00	4,676.72	0.26	52,452.77	0.27	11.22
Field peas.....	137,376.00	25,147.69	1.42	214,914.61	1.13	8.55
Haricot beans white.	576,534.00	62,656.76	3.54	374,063.64	1.96	5.97
Haricot beans red...	5,605,978.00	243,678.15	13.76	2,392,507.76	12.54	9.82
Chick-peas.....	131,387.00	18,482.29	1.04	213,689.90	1.12	11.56
Lentils.....	167,209.00	23,036.58	1.30	235,862.38	1.24	10.24
Vetch.....	*	*	*	*	*	*
Soya beans.....	10,904.00	309.73	0.02	*	*	*
Fenugreek.....	18,633.00	1,245.77	0.07	8,739.20	0.05	7.02
Mung bean/"Masho"...	87,992.00	49,414.24	2.79	476,655.74	2.50	9.65
Gibto.....	*	*	*	-	-	-
Oilseeds.....	203,365.00	35,584.97	2.01	248,052.77	1.30	
Neug.....	*	*	*	-	-	-
Linseed.....	7,648.00	235.07	0.01	822.68	*	3.50
Groundnuts.....	39,127.00	7,219.71	0.41	93,557.03	0.49	12.96
Sunflower.....	100,155.00	10,679.84	0.60	126,522.68	0.66	11.85
Sesame.....	24,596.00	16,881.33	0.95	26,252.08	0.14	*
Rapeseed.....	34,458.00	557.91	0.03	*	*	*
Vegetables.....	3,703,827.00	63,673.53	100.00	5,062,654.13	100.00	79.51
Lettuce.....	5,389.00	*	*	*	*	*
Head Cabbage.....	110,261.00	2,636.28	4.14	194,771.78	3.85	73.88
Ethiopian Cabbag....	3,332,272.00	47,992.83	75.37	4,367,076.49	86.26	90.99
Tomatoes.....	164,546.00	*	*	320,101.06	6.32	*
Green peppers.....	237,695.00	2,820.01	4.43	148,461.68	2.93	52.65
Red peppers.....	68,875.00	2,806.56	4.41	30,640.89	0.61	10.92
Swiss chard.....	18,457.00	49.87	0.08	*	*	*
Root Crops.....	5,019,524.00	277,000.10	100.00	32,166,812.38	100.00	116.13
Beetroot.....	103,984.00	1,206.60	0.44	82,215.18	0.26	68.14
Carrot.....	109,053.00	961.66	0.35	44,052.62	0.14	45.81
Onion.....	349,615.00	18,922.18	6.83	1,096,928.08	3.41	57.97
Potatoes.....	3,705,879.00	226,428.84	81.74	26,911,691.98	83.66	118.85
Yam/'Boye'.....	224,374.00	2,959.60	1.07	268,463.66	0.83	90.71
Garlic.....	528,282.00	6,789.11	2.45	578,172.67	1.80	85.16
Taro/'Godere'.....	383,801.00	5,306.41	1.92	557,110.78	1.73	104.99
Sweet potatoes.....	510,049.00	14,425.69	5.21	2,628,177.42	8.17	182.19

TABLE 5.2. ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
Tigray

Crop	Holders	Cropland area in		Production in		Crop Yield (QTS/Ha)
		Hectare	%	Quintals	%	
Grain Crops.....	25,139.00	8,539.28	100.00	89,656.14	100.00	
Cereals.....	21,232.00	7,536.22	88.25	81,837.05	91.28	
Teff.....	14,433.00	5,331.24	62.43	56,143.82	62.62	10.53
Barley.....	*	*	*	*	*	*
Wheat.....	*	*	*	*	*	*
Maize.....	6,058.00	*	*	*	*	*
Sorghum.....	*	*	*	*	*	*
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Pulses.....	*	*	*	*	*	
Horse beans.....	-	-	-	-	-	-
Field peas.....	*	*	*	*	*	*
Haricot beans white.	-	-	-	-	-	-
Haricot beans red...	-	-	-	-	-	-
Chick-peas.....	-	-	-	-	-	-
Lentils.....	*	*	*	*	*	*
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	*	*	*	*	*	*
Mung bean/"Masho"...	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oilseeds.....	**-**	**-**	**-**	**-**	**-**	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	-	-	-	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	*	*	*	*	*	*
Lettuce.....	-	-	*	-	*	-
Head Cabbage.....	-	-	*	-	*	-
Ethiopian Cabbag....	-	-	*	-	*	-
Tomatoes.....	-	-	*	-	*	-
Green peppers.....	*	*	*	*	*	*
Red peppers.....	*	*	*	*	*	*
Swiss chard.....	-	-	*	-	*	-
Root Crops.....	*	*	*	*	*	*
Beetroot.....	-	-	*	-	*	-
Carrot.....	-	-	*	-	*	-
Onion.....	*	*	*	*	*	*
Potatoes.....	*	*	*	-	*	-
Yam/'Boye'.....	-	-	*	-	*	-
Garlic.....	-	-	*	-	*	-
Taro/'Godere'.....	-	-	*	-	*	-
Sweet potatoes.....	-	-	*	-	*	-

TABLE 5.3. ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
Afar

Crop	Holders	Cropland area in		Production in		Crop Yield
		Hectare	%	Quintals	%	(QTS/Ha)
Grain Crops.....	**22,655.00**	**24,105.27**	**100.00**	**385,624.41**	**100.00**	
Cereals.....	**21,725.00**	**23,711.74**	**98.37**	**381,060.28**	**98.82**	
Teff.....	*	*	*	*	*	*
Barley.....	-	-	-	-	-	-
Wheat.....	*	*	*	*	*	*
Maize.....	21,419.00	23,607.33	97.93	379,642.71	98.45	16.08
Sorghum.....	*	*	*	*	*	*
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Pulses.....	**1,298.00**	**388.96**	**1.61**	*	*	
Horse beans.....	-	-	-	-	-	-
Field peas.....	-	-	-	-	-	-
Haricot beans white.	*	*	*	-	-	-
Haricot beans red...	-	-	-	-	-	-
Chick-peas.....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Mung bean/"Masho"...	*	*	*	*	*	*
Gibto.....	-	-	-	-	-	-
Oilseeds.....	*	*	*	-	-	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	*	*	*	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	**1,133.00**	*	*	-	-	-
Lettuce.....	-	-	*	-	-	-
Head Cabbage.....	-	-	*	-	-	-
Ethiopian Cabbag....	*	*	*	-	-	-
Tomatoes.....	*	*	*	-	-	-
Green peppers.....	*	*	*	-	-	-
Red peppers.....	708.00	*	*	-	-	-
Swiss chard.....	-	-	*	-	-	-
Root Crops.....	*	*	*	-	-	-
Beetroot.....	-	-	*	-	-	-
Carrot.....	-	-	*	-	-	-
Onion.....	*	*	*	-	-	-
Potatoes.....	-	-	*	-	-	-
Yam/'Boye'.....	-	-	*	-	-	-
Garlic.....	-	-	*	-	-	-
Taro/'Godere'.....	-	-	*	-	-	-
Sweet potatoes.....	*	*	*	-	-	-

TABLE 5.4 ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
Amhara

Crop	Holders	Cropland area in		Production in		Crop Yield (QTS/Ha)
		Hectare	%	Quintals	%	
Grain Crops.....	**984,446.00**	**267,181.82**	**100.00**	**2,682,882.76**	**100.00**	
Cereals.....	**739,378.00**	**152,485.67**	**57.07**	**1,532,282.34**	**57.11**	
Teff.....	170,760.00	25,718.19	9.63	275,019.85	10.25	10.69
Barley.....	402,826.00	88,341.79	33.06	806,186.17	30.05	9.13
Wheat.....	67,140.00	19,281.32	7.22	181,476.51	6.76	9.41
Maize.....	220,902.00	17,996.12	6.74	260,775.42	9.72	14.49
Sorghum.....	*	*	*	-	-	-
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	12,909.00	962.41	0.36	8,824.39	0.33	9.17
Rice.....	-	-	-	-	-	-
Pulses.....	**405,861.00**	**104,076.23**	**38.95**	**1,025,331.89**	**38.22**	
Horse beans.....	3,590.00	*	*	*	*	*
Field peas.....	55,237.00	5,355.11	2.00	44,499.73	1.66	8.31
Haricot beans white.	*	*	*	*	*	*
Haricot beans red...	*	*	*	*	*	*
Chick-peas.....	128,538.00	18,027.51	6.75	210,643.34	7.85	11.68
Lentils.....	145,121.00	18,561.34	6.95	202,179.90	7.54	10.89
Vetch.....	*	*	*	*	*	*
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	14,049.00	753.65	0.28	*	*	*
Mung bean/"Masho"...	72,022.00	47,035.44	17.60	464,311.57	17.31	9.87
Gibto.....	-	-	-	-	-	-
Oilseeds.....	**95,208.00**	**10,619.93**	**3.97**	**125,268.53**	**4.67**	
Neug.....	-	-	-	-	-	-
Linseed.....	*	*	*	*	*	*
Groundnuts.....	-	-	-	-	-	-
Sunflower.....	92,515.00	10,502.84	3.93	124,773.68	4.65	11.88
Sesame.....	-	-	-	-	-	-
Rapeseed.....	*	*	*	*	*	*
Vegetables.....	**145,423.00**	*	*	*	*	*
Lettuce.....	*	*	*	-	*	-
Head Cabbage.....	6,975.00	*	*	*	*	*
Ethiopian Cabbag....	68,918.00	300.85	*	25,701.97	*	85.43
Tomatoes.....	*	*	*	*	*	*
Green peppers.....	13,717.00	*	*	*	*	*
Red peppers.....	27,956.00	749.16	*	6,901.43	*	9.21
Swiss chard.....	*	*	*	*	*	*
Root Crops.....	**716,328.00**	**68,855.40**	**100.00**	**4,787,418.37**	**100.00**	**69.53**
Beetroot.....	*	*	*	*	*	*
Carrot.....	*	*	*	*	*	*
Onion.....	79,103.00	7,403.21	10.75	299,739.74	6.26	40.49
Potatoes.....	626,857.00	58,943.52	85.60	4,296,201.56	89.74	72.89
Yam/'Boye'.....	-	-	-	-	-	-
Garlic.....	51,360.00	*	*	*	*	*
Taro/'Godere'.....	-	-	-	-	-	-
Sweet potatoes.....	*	*	*	*	*	*

TABLE 5.5 ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
Oromia

Crop	Holders	Cropland area in		Production in		Crop Yield (QTS/Ha)
		Hectare	%	Quintals	%	
Grain Crops.....	**4,428,937.00**	**700,827.18**	**100.00**	**7,847,924.25**	**100.00**	
Cereals.....	**4,045,275.00**	**562,945.65**	**80.33**	**6,597,839.55**	**84.07**	
Teff.....	107,194.00	28,694.04	4.09	272,780.87	3.48	9.51
Barley.....	316,693.00	72,256.34	10.31	883,844.82	11.26	12.23
Wheat.....	56,132.00	57,103.46	8.15	542,125.50	6.91	9.49
Maize.....	3,719,856.00	368,453.46	52.57	4,776,597.08	60.86	12.96
Sorghum.....	303,669.00	28,239.12	4.03	28,862.87	0.37	*
Finger millet.....	*	*	*	-	-	-
Oats/'Aja'.....	*	7,989.14	1.14	93,602.36	1.19	11.72
Rice.....	*	*	*	*	*	*
Pulses.....	**2,549,031.00**	**131,750.37**	**18.80**	**1,240,097.88**	**15.80**	
Horse beans.....	47,596.00	1,937.43	0.28	23,058.58	0.29	11.90
Field peas.....	44,736.00	16,835.68	2.40	158,020.27	2.01	9.39
Haricot beans white.	502,275.00	39,499.45	5.64	320,999.99	4.09	8.13
Haricot beans red...	2,026,229.00	68,014.08	9.70	701,456.50	8.94	10.31
Chick-peas.....	*	*	*	27.04	*	*
Lentils.....	13,511.00	3,616.07	0.52	26,860.38	0.34	7.43
Vetch.....	*	*	*	-	-	-
Soya beans.....	*	*	*	*	*	*
Fenugreek.....	2,449.00	420.22	0.06	4,184.80	0.05	9.96
Mung bean/"Masho"...	2,243.00	960.90	0.14	5,060.36	0.06	5.27
Gibto.....	*	*	*	-	-	-
Oilseeds.....	**39,525.00**	**6,131.16**	**0.87**	**9,986.83**	**0.13**	
Neug.....	-	-	-	-	-	-
Linseed.....	*	40.68	0.01	210.59	*	5.18
Groundnuts.....	*	*	*	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	3,496.00	5,410.07	0.77	9,010.07	0.11	1.67
Rapeseed.....	30,867.00	524.92	0.07	*	*	*
Vegetables.....	**1,018,333.00**	**18,749.23**	**100.00**	**1,353,390.49**	**100.00**	**72.18**
Lettuce.....	*	*	*	*	*	*
Head Cabbage.....	57,158.00	*	*	*	*	*
Ethiopian Cabbag....	811,139.00	13,008.81	69.38	1,037,980.52	76.69	79.79
Tomatoes.....	100,144.00	2,088.29	11.14	125,724.66	9.29	60.20
Green peppers.....	136,512.00	1,522.32	8.12	93,081.79	6.88	61.14
Red peppers.....	25,632.00	*	*	*	*	*
Swiss chard.....	*	*	*	*	*	*
Root Crops.....	**1,583,464.00**	**80,538.30**	**100.00**	**6,836,622.89**	**100.00**	**84.89**
Beetroot.....	44,633.00	440.35	0.55	30,015.68	0.44	68.16
Carrot.....	17,145.00	*	*	*	*	*
Onion.....	113,318.00	8,032.08	9.97	504,343.67	7.38	62.79
Potatoes.....	1,243,912.00	64,869.86	80.55	5,749,298.74	84.10	88.63
Yam/'Boye'.....	*	*	*	-	-	-
Garlic.....	160,021.00	1,960.56	2.43	138,650.55	2.03	70.72
Taro/'Godere'.....	31,620.00	609.39	0.76	*	*	*
Sweet potatoes.....	144,022.00	4,330.37	5.38	395,125.82	5.78	91.25

TABLE 5.6. ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
Somale

Crop	Holders	Cropland area in		Production in		Crop Yield (QTS/Ha)
		Hectare	%	Quintals	%	
Grain Crops.....	**26,023.00**	**6,554.37**	**100.00**	**62,278.16**	**100.00**	
Cereals.....	**22,447.00**	**4,583.29**	**69.93**	**52,915.20**	**84.97**	
Teff.....	-	-	-	-	-	-
Barley.....	-	-	-	-	-	-
Wheat.....	-	-	-	-	-	-
Maize.....	22,121.00	4,515.51	68.89	52,248.70	83.90	11.57
Sorghum.....	*	*	*	*	*	*
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Pulses.....	**10,265.00**	*	*	**9,362.96**	**15.03**	
Horse beans.....	-	-	-	-	-	-
Field peas.....	-	-	-	-	-	-
Haricot beans white.	*	*	*	*	*	*
Haricot beans red...	9,676.00	*	*	8,689.36	13.95	*
Chick-peas.....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Mung bean/"Masho"...	*	*	*	-	-	-
Gibto.....	-	-	-	-	-	-
Oilseeds.....	**-**	**-**	**-**	**-**	**-**	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	-	-	-	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	*	*	*	*	*	*
Lettuce.....	-	-	*	-	*	-
Head Cabbage.....	*	*	*	-	*	-
Ethiopian Cabbag....	-	-	*	-	*	-
Tomatoes.....	*	*	*	*	*	*
Green peppers.....	*	*	*	*	*	*
Red peppers.....	-	-	*	-	*	-
Swiss chard.....	-	-	*	-	*	-
Root Crops.....	*	*	*	*	*	*
Beetroot.....	-	-	*	-	*	-
Carrot.....	-	-	*	-	*	-
Onion.....	*	*	*	*	*	*
Potatoes.....	-	-	*	-	*	-
Yam/'Boye'.....	-	-	*	-	*	-
Garlic.....	-	-	*	-	*	-
Taro/'Godere'.....	-	-	*	-	*	-
Sweet potatoes.....	*	*	*	-	*	-

TABLE 5.7. ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
Benshangule-Gumuz

Crop	Holders	Cropland area in		Production in		Crop Yield (QTS/Ha)
		Hectare	%	Quintals	%	
Grain Crops.....	**62,980.00**	**8,006.96**	**100.00**	**73,263.10**	**100.00**	
Cereals.....	**56,480.00**	**4,193.46**	**52.37**	**34,765.73**	**47.45**	
Teff.....	-	-	-	-	-	-
Barley.....	1,010.00	*	*	*	*	*
Wheat.....	*	*	*	-	-	-
Maize.....	56,181.00	4,012.69	50.12	34,155.53	46.62	8.51
Sorghum.....	1,425.00	*	*	-	-	-
Finger millet.....	*	*	*	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	*	*	*	-	-	-
Pulses.....	**60,131.00**	**3,813.49**	**47.63**	**38,497.37**	**52.55**	
Horse beans.....	*	*	*	*	*	*
Field peas.....	-	-	-	-	-	-
Haricot beans white.	*	*	*	478.82	0.65	*
Haricot beans red...	58,781.00	3,643.29	45.50	37,006.50	50.51	10.16
Chick-peas.....	-	-	-	-	-	-
Lentils.....	*	*	*	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	*	*	*	-	-	-
Fenugreek.....	*	*	*	-	-	-
Mung bean/"Masho"...	*	*	*	-	-	-
Gibto.....	*	*	*	-	-	-
Oilseeds.....	**-**	**-**	**-**	**-**	**-**	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	-	-	-	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	**28,516.00**	**435.50**	**100.00**	**18,679.13**	**100.00**	**42.89**
Lettuce.....	*	*	*	-	-	-
Head Cabbage.....	450.00	2.47	0.57	50.28	0.27	20.36
Ethiopian Cabbag....	24,786.00	358.56	82.33	15,135.34	81.03	42.21
Tomatoes.....	4,011.00	*	*	2,665.68	14.27	*
Green peppers.....	2,411.00	18.66	4.28	822.43	4.40	44.07
Red peppers.....	*	*	*	*	*	*
Swiss chard.....	-	-	-	-	-	-
Root Crops.....	**17,937.00**	**290.89**	**100.00**	**28,563.82**	**100.00**	**98.19**
Beetroot.....	*	*	*	*	*	*
Carrot.....	-	-	-	-	-	-
Onion.....	2,165.00	15.50	5.33	1,048.41	3.67	67.64
Potatoes.....	13,719.00	231.27	79.50	27,042.70	94.67	116.93
Yam/'Boye'.....	-	-	-	-	-	-
Garlic.....	3,518.00	*	*	*	*	*
Taro/'Godere'.....	*	*	*	-	-	-
Sweet potatoes.....	1,370.00	10.45	3.59	*	*	*

TABLE 5.8. ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
S.N.P.P.R

Crop	Holders	Cropland area in		Production in		Crop Yield (QTS/Ha)
		Hectare	%	Quintals	%	
Grain Crops.....	**5,454,400.00**	**747,242.27**	**100.00**	**7,839,919.07**	**100.00**	
Cereals.....	**4,673,860.00**	**536,466.30**	**71.79**	**6,041,880.84**	**77.07**	
Teff.....	179,512.00	51,707.02	6.92	450,798.84	5.75	8.72
Barley.....	263,809.00	29,078.12	3.89	289,737.42	3.70	9.96
Wheat.....	9,039.00	932.15	0.12	12,474.04	0.16	13.38
Maize.....	4,499,512.00	420,475.63	56.27	5,001,627.65	63.80	11.90
Sorghum.....	163,807.00	32,374.00	4.33	276,840.64	3.53	8.55
Finger millet.....	8,926.00	716.33	0.10	*	*	*
Oats/'Aja'.....	4,482.00	35.87	*	-	-	-
Rice.....	*	*	*	*	*	*
Pulses.....	**3,562,415.00**	**193,289.02**	**25.87**	**1,687,236.29**	**21.52**	
Horse beans.....	60,042.00	2,389.69	0.32	26,161.94	0.33	10.95
Field peas.....	34,908.00	2,732.72	0.37	11,496.24	0.15	4.21
Haricot beans white.	60,938.00	18,063.76	2.42	23,199.30	0.30	*
Haricot beans red...	3,476,453.00	168,283.51	22.52	1,620,251.04	20.67	9.63
Chick-peas.....	*	*	*	*	*	*
Lentils.....	*	*	*	*	*	*
Vetch.....	*	*	*	-	-	-
Soya beans.....	5,756.00	82.86	0.01	*	*	*
Fenugreek.....	*	*	*	*	*	*
Mung bean/"Masho"...	12,319.00	*	*	*	*	*
Gibto.....	*	*	*	-	-	-
Oilseeds.....	**67,037.00**	**17,486.95**	**2.34**	**110,801.94**	**1.41**	
Neug.....	*	*	*	-	-	-
Linseed.....	4,178.00	83.30	0.01	159.10	*	*
Groundnuts.....	35,221.00	7,037.34	0.94	93,460.25	1.19	13.28
Sunflower.....	7,639.00	177.00	0.02	1,749.00	0.02	9.88
Sesame.....	20,075.00	10,161.98	1.36	*	*	*
Rapeseed.....	*	*	*	*	*	*
Vegetables.....	**2,502,676.00**	**38,201.85**	**100.00**	**3,456,342.96**	**100.00**	**90.48**
Lettuce.....	*	*	*	-	-	-
Head Cabbage.....	45,486.00	*	*	*	*	*
Ethiopian Cabbag....	2,424,568.00	34,301.73	89.79	3,286,730.26	95.09	95.82
Tomatoes.....	21,716.00	*	*	*	*	*
Green peppers.....	81,647.00	764.68	2.00	39,504.59	1.14	51.66
Red peppers.....	13,111.00	*	*	*	*	*
Swiss chard.....	14,621.00	40.73	0.11	*	*	*
Root Crops.....	**2,692,364.00**	**126,805.74**	**100.00**	**20,500,516.47**	**100.00**	**161.67**
Beetroot.....	56,915.00	722.65	0.57	50,501.55	0.25	69.88
Carrot.....	83,989.00	437.47	0.35	20,483.70	0.10	46.82
Onion.....	149,059.00	3,079.82	2.43	279,749.73	1.36	90.83
Potatoes.....	1,818,589.00	102,283.79	80.66	16,837,512.66	82.13	164.62
Yam/'Boye'.....	221,242.00	2,927.09	2.31	268,460.67	1.31	91.72
Garlic.....	313,367.00	2,665.81	2.10	268,729.21	1.31	100.81
Taro/'Godere'.....	352,064.00	4,691.25	3.70	548,277.40	2.67	116.87
Sweet potatoes.....	361,500.00	9,997.85	7.88	2,226,801.56	10.86	222.73

TABLE 5.9. ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
Gambela

Crop	Holders	Cropland area in		Production in		Crop Yield (QTS/Ha)
		Hectare	%	Quintals	%	
Grain Crops.....	**33,687.00**	**8,219.64**	**100.00**	**101,592.39**	**100.00**	
Cereals.....	**33,061.00**	**6,804.35**	**82.78**	**99,000.32**	**97.45**	
Teff.....	*	*	*	*	*	*
Barley.....	*	*	*	-	-	-
Wheat.....	-	-	-	-	-	-
Maize.....	33,016.00	6,783.29	82.53	98,877.43	97.33	14.58
Sorghum.....	*	*	*	*	*	*
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	*	*	*	*	*	*
Pulses.....	**3,434.00**	**76.00**	**0.92**	**596.60**	**0.59**	
Horse beans.....	*	*	*	*	*	*
Field peas.....	-	-	-	-	-	-
Haricot beans white.	821.00	9.32	0.11	54.07	0.05	5.80
Haricot beans red...	2,613.00	66.07	0.80	534.88	0.53	8.10
Chick-peas.....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Mung bean/"Masho"...	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oilseeds.....	**1,406.00**	**1,339.28**	**16.29**	**1,995.47**	**1.96**	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	134.00	*	*	*	*	*
Sunflower.....	-	-	-	-	-	-
Sesame.....	1,026.00	1,309.28	15.93	1,876.01	1.85	1.43
Rapeseed.....	*	*	*	*	*	*
Vegetables.....	**2,419.00**	**17.44**	**100.00**	**1,721.70**	**100.00**	**98.72**
Lettuce.....	-	-	-	-	-	-
Head Cabbage.....	-	-	-	-	-	-
Ethiopian Cabbag....	2,407.00	15.06	86.35	1,528.40	88.77	101.49
Tomatoes.....	76.00	*	*	*	*	*
Green peppers.....	*	*	*	*	*	*
Red peppers.....	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-
Root Crops.....	**748.00**	*	*	*	*	*
Beetroot.....	-	-	*	-	*	-
Carrot.....	-	-	*	-	*	-
Onion.....	172.00	*	*	*	*	*
Potatoes.....	*	*	*	*	*	*
Yam/'Boye'.....	*	*	*	*	*	*
Garlic.....	*	*	*	*	*	*
Taro/'Godere'.....	-	-	*	-	*	-
Sweet potatoes.....	*	*	*	-	*	-

TABLE 5.10. ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
Harari

Crop	Holders	Cropland area in		Production in		Crop Yield (QTS/Ha)
		Hectare	%	Quintals	%	
Grain Crops.....	**3,643.00**	**292.30**	**100.00**	**1,718.56**	**100.00**	
Cereals.....	**3,580.00**	**222.22**	**76.02**	**1,597.47**	**92.95**	
Teff.....	-	-	-	-	-	-
Barley.....	-	-	-	-	-	-
Wheat.....	-	-	-	-	-	-
Maize.....	2,512.00	123.17	42.14	1,597.47	92.95	12.97
Sorghum.....	1,523.00	99.04	33.88	-	-	-
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Pulses.....	**2,202.00**	**67.00**	**22.92**	*	*	
Horse beans.....	-	-	-	-	-	-
Field peas.....	-	-	-	-	-	-
Haricot beans white.	*	*	*	*	*	*
Haricot beans red...	2,045.00	58.77	20.11	-	-	-
Chick-peas.....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Mung bean/"Masho"...	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oilseeds.....	*	*	*	**-**	**-**	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	*	*	*	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	**566.00**	**33.09**	**100.00**	**-**	**-**	**-**
Lettuce.....	-	-	-	-	-	-
Head Cabbage.....	*	*	*	-	-	-
Ethiopian Cabbag....	*	*	*	-	-	-
Tomatoes.....	-	-	-	-	-	-
Green peppers.....	*	*	*	-	-	-
Red peppers.....	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-
Root Crops.....	**1,282.00**	**45.93**	**100.00**	**-**	**-**	**-**
Beetroot.....	*	*	*	-	-	-
Carrot.....	-	-	-	-	-	-
Onion.....	-	-	-	-	-	-
Potatoes.....	1,002.00	40.14	87.39	-	-	-
Yam/'Boye'.....	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-
Taro/'Godere'.....	-	-	-	-	-	-
Sweet potatoes.....	*	*	*	-	-	-

TABLE 5.11. ESTIMATES OF HOLDERS, AREA, PRODUCTION AND YIELD OF TEMPORARY CROPS FOR PRIVATE PEASANT HOLDERS 2015/16 (2008 E.C)
Dire Dawa

Crop	Holders	Cropland area in		Production in		Crop Yield (QTS/Ha)
		Hectare	%	Quintals	%	
Grain Crops.....	**363.00**	**24.32**	**100.00**	**367.71**	**100.00**	
Cereals.....	**363.00**	**24.32**	**100.00**	**367.71**	**100.00**	
Teff.....	-	-	-	-	-	-
Barley.....	-	-	-	-	-	-
Wheat.....	-	-	-	-	-	-
Maize.....	363.00	24.32	100.00	367.71	100.00	15.12
Sorghum.....	-	-	-	-	-	-
Finger millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Pulses.....	**-**	**-**	**-**	**-**	**-**	
Horse beans.....	-	-	-	-	-	-
Field peas.....	-	-	-	-	-	-
Haricot beans white.	-	-	-	-	-	-
Haricot beans red...	-	-	-	-	-	-
Chick-peas.....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Vetch.....	-	-	-	-	-	-
Soya beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Mung bean/"Masho"...	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oilseeds.....	**-**	**-**	**-**	**-**	**-**	
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnuts.....	-	-	-	-	-	-
Sunflower.....	-	-	-	-	-	-
Sesame.....	-	-	-	-	-	-
Rapeseed.....	-	-	-	-	-	-
Vegetables.....	**302.00**	**14.88**	**100.00**	**783.56**	**100.00**	**52.66**
Lettuce.....	-	-	-	-	-	-
Head Cabbage.....	-	-	-	-	-	-
Ethiopian Cabbag....	*	*	*	-	-	-
Tomatoes.....	283.00	11.70	78.63	783.56	100.00	66.97
Green peppers.....	116.00	3.17	21.30	-	-	-
Red peppers.....	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-
Root Crops.....	**84.00**	*	*	**-**	**-**	**-**
Beetroot.....	-	-	*	-	-	-
Carrot.....	-	-	*	-	-	-
Onion.....	39.00	*	*	-	-	-
Potatoes.....	*	*	*	-	-	-
Yam/'Boye'.....	-	-	*	-	-	-
Garlic.....	-	-	*	-	-	-
Taro/'Godere'.....	-	-	*	-	-	-
Sweet potatoes.....	*	*	*	-	-	-

CHAPTER IV

4 FARM MANAGEMENT PRACTISES OF THE 2014/15 (2007 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 overview of the 2015/16 (2008 E.C) Belg season farm management practice of the country indicates that the total quantity of chemical fertlizers applied during the season has also decreasd by 2.20 % (from 562,423 quintals in 2007 E.C to 550,073 quintals in the 2008 E.C), at national level. The total improved seed applied area increased by morethan 100% (from 57,056 hectares in 2007 E.C to about 123,871 hectares in 2008 E.C). Interms of quantity, the total improved seeds applied has increased by about 95% which is a change from 18,994 quintals in 2007 E.C to 37,128 quintals in 2008 E.C).

Given this background, in Chapter four, the quantitative information about the use of modern agricultural inputs for Belg season crops of 2015/16 (2008 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 2016.

4.2 SUMMARY OF THE FARM MANAGEMENT PRACTICES OF THE 2014/15 (2007 E.C) BELG SEASON AGRICULTURAL SAMPLE SURVEY

According to the 2015/16 (2008 E.C.) Belg Season Crop Production Sample Survey, total cropland area estimated is about 2,111,667 hectares of land while the estimated number of holders engaged in crop production activity is about 13,497,903 at national level. For more illustration see summary Table 6 bellow.

Table 6.Total Cropland Area and Number of Holders Engaged in 20015/16 (2008 E.C.) Belg Season Crop Production

Total Belg Cropland Area in Hectare	2,111,667
Number of Belg Crop Producing Holders	13,497,903
Improved Farm Management practiced Area (in Hectare)	1,282,316
Quantity of Commercial Fertilizer Applied (Quintals)	550,073

As indicated Table 6, during 2015/16 (2008 E.C.), out of the total area under Belg season crops, 1,282,316 hectares (39.27%) of the total cropland area) was under the use of improved farm management practices that includes fertilizer, improved seed, pesticides, irrigation and extension services. Moreover, it was estimated that about 550,073 quintals of chemical fertilizer was utilized for crop production nationally. The total cropland areas categorized into different types of farm management practices for the season are summarized in Table 7 below.

Table 7. Belg Season Cropland Area under Different Farm Management Practices for Production Year of 2015/16 (2008 E.C), National Level

Farm Management Practice Category	Cropland Area Under Different Farm Management Practices (Hectare)	Percentage from Total Cropland Area
Fertilizer	952,769	45.12
Improved Seeds	123,871	5.87
Pesticides	171,286	8.11
Irrigation	158,248	7.49
Extension	360,428	17.07

As shown in Table 7 above, the total crop land area estimated is 952,769 Hectare for fertilizer, 123,871 Hectare for improved seed, 171,286 Hectare for pesticide, 158,248 Hectare for irrigation and 360,428 Hectare for extension. Out of the total Belg cropland area, the percentage distribution is 45.12% for fertilizer, 5.87% for improved seed, 8.11% for pesticides, 7.49% for irrigation and 17.07% for extension serveces. Furthermore, the survey findings indicate that cereals account for the largest share of the different farm management practices observed as summarized in Table 8.

Table 8. Summary of Cropland Area under Improved Farm Management Practices for Private Peasant Holdings, 2015/16 (2008 E.C.) Belg season, National

Crop Category	Cropland Area			
	Total Area		Area under Improved Farm Management Practice.	
	Hectare	%	Hectare	% (of Total)
Cereals	1,298,973.22	61.51	806,207.00	38.18
Pulses	436,435.21	20.67	177,139.00	8.39
Oil crops	35,584.97	1.69	4,124.00	0.20
Vegetables	63,673.53	3.02	36,764.00	1.74
Root Crops	277,000.10	13.12	258,676.00	12.25
Total	**2,111,667.03**	**100.00**	**1,282,316.00**	**60.73**

As indicated in summary Table 8 above, estimates of total cropland area under different farm management practices shows that cereals accounted 1,298,973 hectares (61.51 % of the total all cropland areal), followed by pulses with 436,435 hectares (20.67 % from the total all cropp land area). Root crops, vegetables and oil crops accounted for 277,000 hectare (13.12 %), 63,674 hectares (3.02 %) and 35,585 hectare (1.69 %), respectively. Out of the total cereal cultivated cropland area, 806,207 hectare (38.18% of the total cropland area) is cultivated with improved farm management practices (includes all fertilizer, improved seed, pesticides and irrigation). The respective numbers are 177,139 hectare (8.39%) for pulses, 4,124 hectare (0.20%) for oil crops. The corresponding figures for vegetables and root crops can be refered from are 36,764 hectare (1.74%) and 258,676 hectare (12.25%) respectively.

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 952,769 hectares, covering 45.12% 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 2015/16 (2008 E.C.) Belg season, National

Fertilizer Type	Fertilizer Applied Area		%ge from Total Belg Cropland Area
	Hectare	%ge of Fertilizer Applied Area	
Natural	452,771.00	47.52	21.44
Commercial			
DAP	267,678.00	28.09	12.68
Urea	47,111.00	4.94	2.23
UREA + DAP	154,288.00	16.19	7.31
NPS	29,363.00	3.08	1.39
NPS + UREA	*	*	*
Total	**952,769.00**	**100.00**	**45.12**

As indicated in Summary Table 9, nearly 452,771 hectares (47.52% of the total fertilizer applied cropland area) is applied with natural fertilizer. This accounts 21.44% of the total Belg cropland area. The coverage of chemical fertilizers is estimated to be 499,998 hectares (52.48% from the total fertilizer applied area and 23.68% from the total cropland area). The application of DAP, UREA, the mixture of DAP and Urea (Dap+Urea) and NPS called as commercial fertilizers, constitute 28.09%, 4.94%, 16.19% and 3.08% of the total fertilizer applied cropland area, respectively. The percentages of Dap, Urea, the mixture of Dap and Urea and NPS applied out of the total cropland area of the Belg season are: 12.68%, 2.23%, 7.31% and 1.39 respectively.

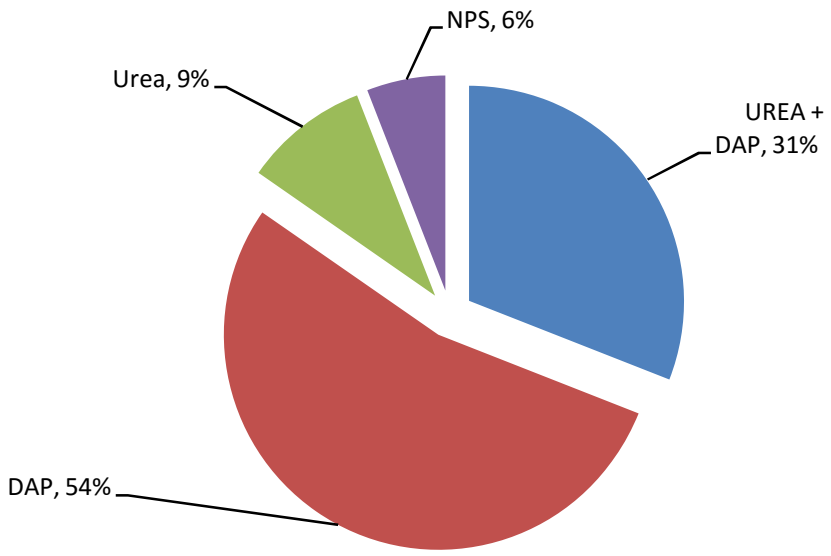
4.4 THE USE OF NATURAL FERTLIZER

In general, the application of natural fertilizers for Belg season crops in 2015/16 (2008 E.C.) vary from crop to crop. Of the total area under natural fertilizer, the highest proportion was reported for maize crop, which was estimated at 212,000 hectares (46.82%). The fertilized area (natural fertilizer) under potato stood second with 54,284 hectare (11.99%) while red haricot beans stands third accounting for 49,683 hectare (10.97%) 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 499,998 hectares (52.48% of total fertilizer applied cropland area), in 2015/16 (2008 E.C.) Belg season. Out of this, DAP is the most used fertilizer which accounted for about 267,678 hectare (53.54% of the commercial fertilizer applied area). The second most applied commercial fertilizer is the mixture of Dap and Urea (DAP+UREA) covering 154,288 hectare (accounting for 30.86%) while the use of Urea stands in the third position applied on 47,111 hectare (9.42%) of the total commercial fertilizer applied area. This is more indicated using Figure 4.

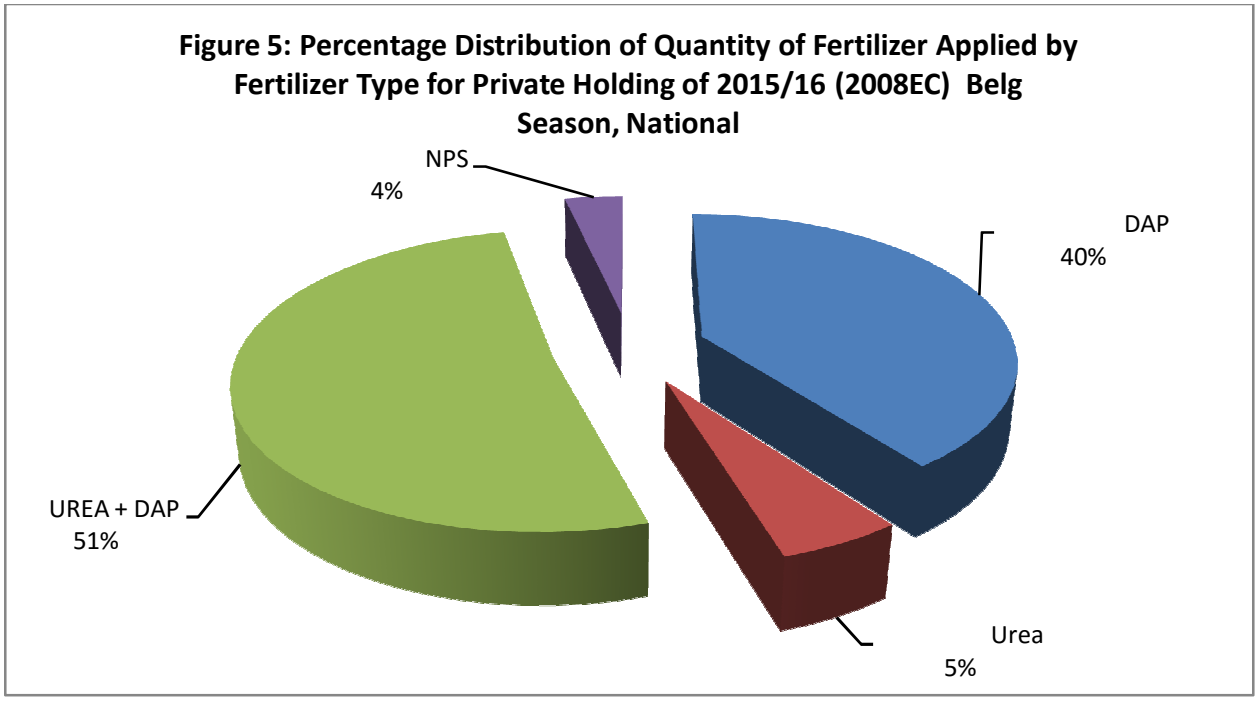
Figure 4: Percentage Distribution of Chemical Fertilizer Applied Cropland Area by Fertilizer Type for Holdings of Belg 2015/16 (2008EC)



The commercial fertilizers applied area vary between crops. The highest area is reported for maize accounting for 166,743 hectares (33.35%) followed by potatoes which is 105,389 hectares (21.08% of commercial fertilizer applied area), which is more illustrated in the statistical table.

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 S.N.N.P region accounting for nearly 445,850 hectare (46.80% of total fertilized area).

Oromia region accounted for 407,899 hectares (42.81%) of the total country level of both natural and commercial fertilizers applied cropland area) while Amhara region accounted nearly 92,303 hectare (9.69%). In terms of quantity, the total commercial fertilizer applied is 550,073 quintals. Out of this, the mixture of DAP and Urea (Dap + Urea) is the most applied commercial fertilizer accounting for 280,301 quintals (56.06%). The percentage distribution of the chemical fertilizer applied during the production season is more indicated by Figure 5.



As indicated in Figure 6, application of DAP is the second most applied fertilizer type which is about 217,987 quintals (43.60%)while NPS is the least type of chemical fertilizer applied accounting about 18,927 quintals (3.79%).

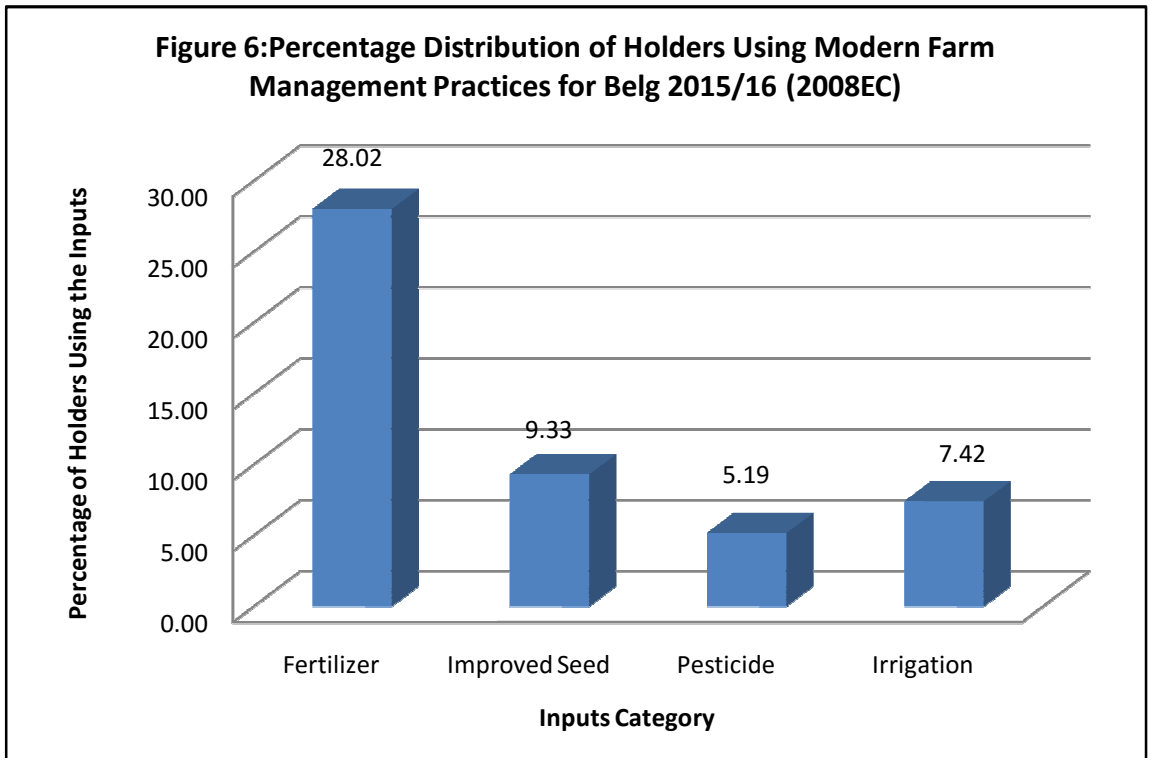
4.6. THE USE OF IMPROVED SEEDS

Better application of improved variety seeds helps to harvest higher yield compared to the use of traditional variety seeds. The survey findings indicate that the total crop area applied with improved seed is nearly 123,871 hectare while total quantity used is 37,128 quintals, at country level. The area applied with improved seed is about 5.87% of the total Belg 2008 E.C cropland area. The total quantity of improved seeds used is nearly 4.25% of the total seeds used during the season.

4.7. 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 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 holders groups. The survey result shows that a total of 13,497,903 holders were engaged in the overall Belg season agricultural activities in 2015/16 (2008 E.C.). Accordingly, the category with the largest number of holders is in the age group 30-39, with 3,737,759 holders (which is 27.69% of the total holders). The age group of 40 to 49 stands second with is 3,263,831 holders (24.18% 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, 3,782,501 holders (28.02% of total households) used fertilizer and 1,259,187 holders (9.37%) used improved seeds. Likewise, 700,453 holders (5.19%) applied pesticides and 1,001,415 holders (7.42%) used irrigation at national level for 2015/16 (2008 E.C) Belg season, in order to obtain higher crop yield (See Table 21). Generally, nearly 49.96% of the the total holders practiced the use of various farm management practices. The percentages of holder categorized by the use of various modern farm inputs are re-presented using Figure 6.



4.8 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 2015/16 (2008 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 7.

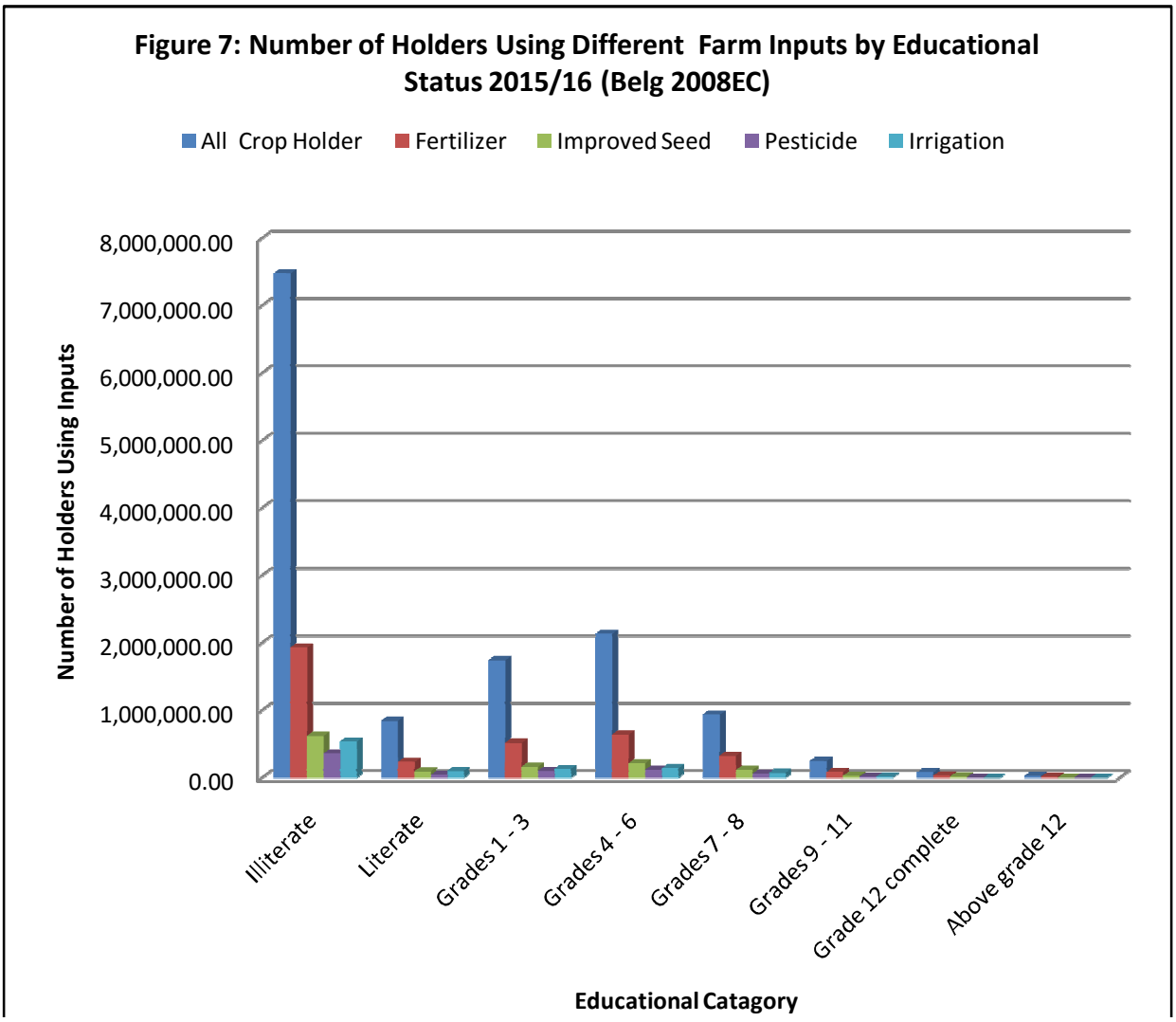
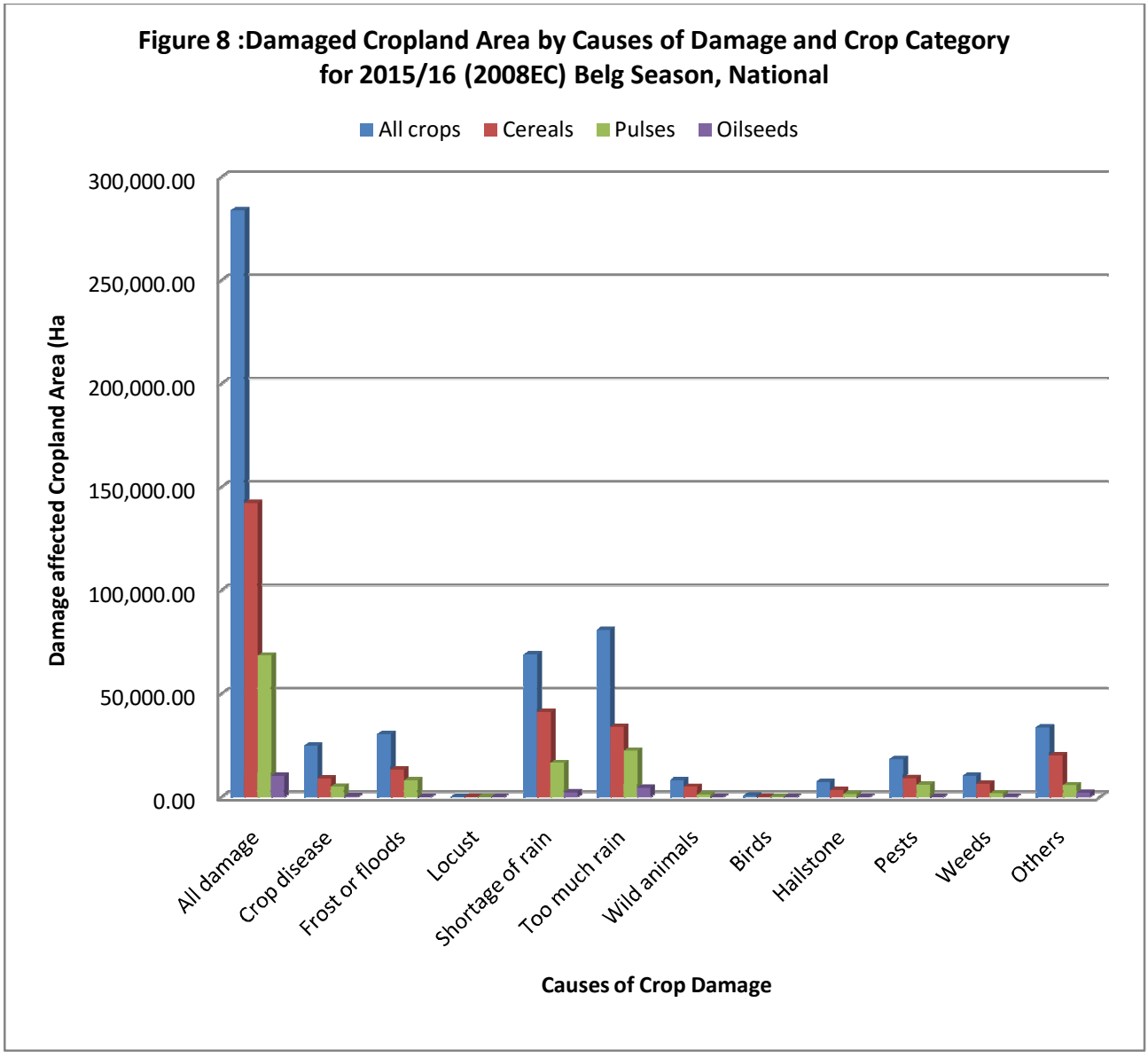


Figure 7: Number of Holders Using Different Farm Inputs by Educational Status 2015/16 (Belg 2008EC)

According to the results of the 2015/16 (2008 E.C) Belg season crop production sample survey, out of the total number of holders (13,497,903), the largest category of the holders number is under the illiterate category in which the number of all crop holders is 7,459,168 (which accounts for 55.41% of total holders) (See Figure 8). Under this category, 1,931,243 holder are reported for using fertilizer, 621,358 holders using improved seeds, 360,673 using pesticides and 535,384 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 2,134,196. The respective number of holders is 640,599 for fertilizer, 213,195 for improved seeds, 117,507 for pesticides and 140,428 for irrigation in the education category.

4.9 NUMBER OF HOLDERS REPORTING CROP DAMAGE 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 2015/16 (2008 E.C) Belg season are estimated to be about 5,673,200 and the damaged cropland area was estimated to be 283,903 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 8.



As indicated in Figure 8, the highest cropland area damaged was reported for cereals which is 142,181 hectares, followed by pulses with about 68,497 hectares and oil crops with 10,202 hectares**.** With regard to the causes of crop damage, it is reported that 80,894 hectares was damaged due to too much rain.

The second highest cause of crop damage is shortage of rain with estimated crop damaged area of 68,969 hectares while other causes of crop damage stands third position in damaging 33,702 hectare cropland area (For further details, see Figure 8).

National and Regional Statistical Tables of Farm Management Practices

Table 10: Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16 GC) National

Crop	All cropland Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	**2111667**	**952769**	**550073**	**6602722**	**452771**	**2287755**	**267678**	**217987**
Cereals	**1298973**	**551490**	**249859**	**4284567**	**277144**	**1369225**	**145267**	**103366**
Teff	111487	38551	24586	78695	8409	42369	11100	6675
Barley	190254	61924	29487	221161	20170	82383	20498	11248
Wheat	77411	45274	10637	44172	15568	16014	12033	4326
Maize	847173	378743	181599	3973700	212000	1247295	96449	78636
Sorghum	61574	24466	3343	217214	20154	*	*	2311
Finger millet	915	*	*	2278	*	*	*	*
Oats/ 'Aja'	8987	2299	139	*	700	*	1586	102
Rice	*	*	*	*	*	*	*	*
Pulse	**436435**	**161299**	**86845**	**2577253**	**68891**	**1210746**	**65814**	**54821**
Horse/Faba beans	4677	1004	520	32699	668	3336	*	*
Field peas	25148	*	*	20302	2264	8442	*	*
White Haricot beans	62657	22698	3399	310282	11563	44375	*	1970
Red Haricot beans	243678	125497	80550	2224246	49683	1157612	56397	51016
Chick peas	18482	276	*	4133	268	*	*	*
Lentiles	23037	2370	*	17864	1569	3325	*	*
Vetch/Grass peas	*	*	*	*	*	*	*	*
Soya beans	310	40	20	4083	*	-	-	-
Fenugreek	1246	*	*	*	*	*	*	*
Mung bean/"Masho"	49414	*	*	8532	*	*	*	*
Gibto	*	*	*	*	*	*	*	*
Oile seeds	**35585**	**2172**	*	**34353**	**1355**	**4602**	**545**	**151**
Nueg	*	*	-	*	*	-	-	-
Linseed	235	*	*	*	*	*	*	*
Ground nuts	7220	536	*	7583	201	*	*	*
Safflower	10680	*	*	878	*	*	*	*
Sesame	16881	1237	*	1211	804	*	410	32
Rapeseed	558	*	*	*	*	*	*	*
Vegetables.....	**63674**	**43385**	**16239**	**2390892**	**33918**	**185071**	**3262**	**3724**
Lettuce.....	*	*	*	2415	*	*	*	*
Head Cabbage....	2636	*	*	38303	233	5125	*	*
Ethiopian Cabbage	47993	35890	7220	2249465	31609	165098	2021	2519
Tomatoes.....	*	2350	*	42156	539	*	*	*
Green peppers...	2820	1690	584	123298	1218	*	189	*
Red peppers.....	2807	1761	*	19322	294	*	*	*
Swiss chard.....	50	25	*	13697	*	-	-	-
Root Crops.....	**277000**	**194423**	**196631**	**2142942**	**71463**	**835123**	**52790**	**55925**
Beetroot.....	1207	524	*	36770	297	*	*	*
Carrot.....	962	608	399	66311	164	10600	*	154
Onion.....	18922	15319	22419	111536	2279	31799	*	*
Potatoes.....	226429	159673	168436	1321451	54284	711851	46982	51065
Yam.....	2960	1563	*	136789	1453	*	*	*
Garlic.....	6789	4493	2654	270900	2261	38692	1486	1359
Taro/'Godere'...	5306	3625	1334	213526	2794	35074	576	711
Sweet potatoes..	14426	8617	650	310189	7931	21546	*	468

Table 10. (cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16 GC)

National

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**337286**	**47111**	**29349**	**1388520**	**154288**	**280301**	**13072136**	**1806194**	**836098**
Cereals	**198060**	**31244**	**17355**	**567898**	**70720**	**112156**	**6774618**	**1024222**	**627462**
Teff	38052	9170	4240	32884	9652	13454	458404	109794	46916
Barley	7774	2103	681	37043	7052	7918	985382	189784	275696
Wheat	5514	2697	804	*	2797	1218	132989	77381	42984
Maize	156119	16871	11479	514665	50823	88658	5647329	602197	250271
Sorghum	*	*	*	7395	385	875	140766	34299	7459
Finger millet	-	-	-	-	-	-	9989	681	183
Oats/ 'Aja'	-	-	-	*	*	*	35419	8913	2675
Rice	-	-	-	-	-	-	*	*	*
Pulse	**99753**	**5136**	**2981**	**347536**	**20663**	**28461**	**6462311**	**428003**	**203608**
Horse/Faba beans	*	*	*	*	*	*	111214	4665	3628
Field peas	*	*	*	*	*	*	135721	25091	16257
White Haricot beans	*	*	*	5326	*	*	558643	61703	8814
Red Haricot beans	93231	3818	2709	337821	15406	26510	5483979	236517	136772
Chick peas	-	-	-	-	-	-	131194	18466	7956
Lentiles	*	*	*	*	*	*	166306	23031	15305
Vetch/Grass peas	-	-	-	-	-	-	*	*	*
Soya beans	-	-	-	*	*	*	9808	295	147
Fenugreek	*	*	*	*	*	*	18459	1245	599
Mung bean/"Masho"	-	-	-	*	*	*	87956	49348	8650
Gibto	*	*	*	-	-	-	*	*	*
Oile seeds	*	*	*	*	*	*	**162728**	**34418**	**5028**
Nueg	-	-	-	-	-	-	*	*	*
Linseed	-	-	-	-	-	-	7244	202	*
Ground nuts	*	*	*	*	*	*	32424	7011	*
Safflower	*	*	*	-	-	-	99829	10680	1057
Sesame	-	-	-	*	*	*	21628	16436	632
Rapeseed	-	-	-	-	-	-	4221	*	*
Vegetables.....	**44939**	**1734**	**1617**	**94717**	**4429**	**10843**	**3605159**	**59560**	**-**
Lettuce.....	*	*	*	*	*	*	5389	*	-
Head Cabbage....	4707	*	*	16035	*	*	80018	975	-
Ethiopian Cabbage	24814	656	632	69494	*	4014	3273112	47215	-
Tomatoes.....	*	*	*	*	*	*	147426	*	-
Green peppers...	*	*	*	4667	*	*	223855	2761	-
Red peppers.....	5609	119	*	7390	*	*	57937	2079	-
Swiss chard.....	*	*	*	*	*	*	11658	45	-
Root Crops.....	**161351**	**8920**	**7330**	**837728**	**58440**	**128763**	**4600463**	**259991**	**-**
Beetroot.....	*	*	*	*	*	*	82285	906	-
Carrot.....	*	*	*	11820	*	*	69143	712	-
Onion.....	30962	3552	2638	43950	5378	15305	306510	13151	-
Potatoes.....	116916	5003	4439	764707	51853	110817	3562533	220587	-
Yam.....	*	*	*	*	*	*	187770	2705	-
Garlic.....	3027	54	47	32112	680	1229	509885	6639	-
Taro/'Godere'...	*	*	*	15056	223	594	122318	1625	-
Sweet potatoes..	*	*	*	6501	47	123	464948	13666	-

Table 10. (cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16 GC)
National

Crop	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	**1259187**	**123871**	**37128**	**700453**	**171286**	**1001415**	**158248**	**2201072**	**360428**
Cereals	**895339**	**102282**	**31650**	**350999**	**123578**	**677922**	**102826**	**1342164**	**230290**
Teff	*	*	*	147421	38233	*	*	74877	24789
Barley	*	*	*	97844	39088	14968	3847	67264	28353
Wheat	*	*	*	20569	28971	6614	*	19728	23489
Maize	887877	100492	31083	102756	10154	607874	79602	1205825	143814
Sorghum	*	*	*	2840	*	11533	749	85346	6736
Finger millet	*	*	*	-	-	*	*	*	*
Oats/ 'Aja'	-	-	-	2111	5276	*	*	1094	2864
Rice	-	-	-	*	*	-	-	*	*
Pulse	**167368**	**6882**	**5440**	**87439**	**16658**	**134523**	**16584**	**832850**	**45402**
Horse/Faba beans	*	*	*	*	*	-	-	*	165
Field peas	*	*	*	*	*	*	*	2957	402
White Haricot beans	*	330	28	*	*	10118	*	51486	2771
Red Haricot beans	152814	6403	5321	51909	1988	85364	2929	764937	38186
Chick peas	-	-	-	*	*	*	*	*	*
Lentiles	-	-	-	*	*	12429	2020	*	*
Vetch/Grass peas	*	*	*	*	*	*	*	*	*
Soya beans	-	-	-	*	*	-	-	*	35
Fenugreek	-	-	-	*	*	*	*	*	*
Mung bean/"Masho"	37	9	1	12484	6376	*	*	5304	*
Gibto	*	*	*	-	-	*	*	*	*
Oile seeds	*	*	*	*	**286**	*	*	**14838**	**2699**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	*	*	*	*	*	*
Ground nuts	-	-	-	*	*	*	*	11447	*
Safflower	-	-	-	-	-	-	-	*	*
Sesame	*	*	*	67	198	-	-	*	788
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	**63339**	**3231**	**-**	**67666**	**4323**	**215455**	**12833**	**219758**	**6952**
Lettuce.....	-	-	-	-	-	*	*	*	*
Head Cabbage....	28918	*	-	12366	*	28077	*	26881	*
Ethiopian Cabbage	13960	*	-	43720	*	73557	2064	163579	3323
Tomatoes.....	15539	*	-	9130	*	80891	*	18497	*
Green peppers...	*	*	-	*	*	43397	1222	10890	131
Red peppers.....	*	*	-	*	*	37934	1544	10331	*
Swiss chard.....	*	*	-	-	-	*	*	*	*
Root Crops.....	**244045**	**11154**	**-**	**257294**	**26441**	**341165**	**25846**	**924658**	**75085**
Beetroot.....	22505	*	-	*	*	21954	360	20995	245
Carrot.....	42798	*	-	*	*	16162	344	41520	411
Onion.....	41025	5468	-	46157	7245	121287	12263	75717	9993
Potatoes.....	135309	5068	-	207250	18791	167272	9884	758234	61848
Yam.....	*	*	-	*	*	*	*	11495	56
Garlic.....	*	*	-	7149	265	48385	*	31268	*
Taro/'Godere'...	*	*	-	*	*	*	*	30336	579
Sweet potatoes..	*	*	-	*	*	*	*	33593	882

Table 10: (cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16 GC)

National

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**73380**	**29363**	**18927**	**14343**	*	*
Cereals	**59680**	**26810**	**16426**	*	*	*
Teff	*	199	*	*	*	*
Barley	33020	11995	9497	*	*	*
Wheat	7330	12178	*	-	-	-
Maize	21264	2420	2436	*	*	*
Sorghum	*	*	*	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	*	*	*	-	-	-
Rice	-	-	-	-	-	-
Pulse	**11603**	*	**435**	*	*	*
Horse/Faba beans	*	*	*	-	-	-
Field peas	*	*	*	-	-	-
White Haricotbeans	*	*	*	-	-	-
Red Haricot beans	7526	*	*	*	*	*
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	*	*	*	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	*	*	*
Gibto	-	-	-	-	-	-
Oile seeds	*	*	*	-	-	-
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	*	*	*	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	*	*	*	*	*	*
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	*	*	*
Ethiopian Cabbage	*	*	*	*	*	*
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	**18539**	**1637**	**1809**	**13385**	*	*
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	*	*	*	*	*	*
Potatoes	15246	1163	1177	*	*	*
Yam	-	-	-	-	-	-
Garlic	*	*	*	*	*	*
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 10.1 Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC) Tigray

Crop	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	**9074**	**1809**	**1209**	**2138**	**222**	*	*	*
Cereals	**7536**	*	**403**	**1197**	*	*	*	*
Teff	5331	*	*	*	*	*	*	*
Barley	*	*	*	-	-	-	-	-
Wheat	*	-	-	-	-	-	-	-
Maize	*	431	284	*	*	*	*	*
Sorghum	*	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulse	*	*	*	*	*	*	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	*	*	*	-	-	*	*	*
White Haricot beans	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	*	*	*	*	*	*	*	*
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	*	*	*	-	-	*	*	*
Mung bean/"Masho"	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-
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) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Tigray

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**2086**	**387**	*	*	*	*	**30400**	**8948**	**4633**
Cereals	*	*	*	*	*	*	**20999**	**7470**	**3533**
Teff	*	*	*	-	-	-	14433	5331	1692
Barley	*	*	*	*	*	*	*	*	*
Wheat	-	-	-	-	-	-	*	*	*
Maize	*	*	*	*	*	*	5825	1115	386
Sorghum	-	-	-	-	-	-	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	*	*	*	*	*	*	*	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	*	*	*
White Haricot beans	-	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	*	*	*	*	*	*	*	*	*
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	*	*	*	*	*	*	*	*	*
Mung bean/"Masho"	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
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) Number of Holders, Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16 GC)
Tigray

Crop	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	-	-	-	-	-	-	-	-	-
Pulse	*	*	*	-	-	*	*	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	*	*	*	-	-	*	*	-	-
White Haricot beans	-	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	*	*	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	*	*	*	*
Mung bean/"Masho"	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-	-
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) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Tigray

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	-	-	-	-	-	-
Cereals	-	-	-	-	-	-
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulse	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-
Field peas	-	-	-	-	-	-
White Haricotbeans	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	-	-	-	-	-	-
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Yam	-	-	-	-	-	-
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 10.2. Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)
Afar

Crop	All crop land Area	All Fertilizer		Natural		DAP		
	Hectare	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	24277	*	*	*	*	-	-	-
Cereals	23712	*	*	*	*	-	-	-
Teff	*	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	*	-	-	-	-	-	-	-
Maize	23607	*	*	*	*	-	-	-
Sorghum	*	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulse	389	-	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	*	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Mung bean/"Masho"	*	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	*	-	-	-	-	-	-	-
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) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Afar

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	*	*	*	-	-	-	**19447**	**21074**	**10148**
Cereals	*	*	*	-	-	-	**17912**	**20585**	**10049**
Teff	-	-	-	-	-	-	*	*	*
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	*	*	*
Maize	*	*	*	-	-	-	17607	20481	10001
Sorghum	-	-	-	-	-	-	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	-	-	-	-	-	-	**1298**	**389**	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	*	*	*
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	*	*	*
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	*	*	*
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	*	*	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	-	-	-	-	-	-	**751**	*	-
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) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16 GC)
Afar

Crop	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	**4799**	**3203**	**1448**	**412**	**94**	**22139**	**23915**	**1656**	**513**
Cereals	**4364**	**3126**	**1448**	*	*	**21358**	**23675**	*	**385**
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	*	*	-	-
Maize	4364	3126	1448	*	*	21318	23602	*	385
Sorghum	-	-	-	-	-	*	*	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	**-**	**-**	**-**	*	*	*	*	**-**	**-**
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	*	*	-	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	*	*	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	*	*	**-**	**-**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	*	*	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	**-**	*	*	**1133**	*	*	*
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	*	*	-	*	*	*	*	*	*
Tomatoes.....	*	*	-	*	*	*	*	*	*
Green peppers...	-	-	-	-	-	*	*	*	*
Red peppers.....	*	*	-	-	-	708	*	*	*
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	**-**	**-**	**-**	*	*	*	*
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	*	*	-	-	-	*	*	*	*
Potatoes.....	-	-	-	-	-	-	-	-	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	*	*	*	*

Table 10.2: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Afar

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	-	-	-	-	-	-
Cereals	-	-	-	-	-	-
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulse	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-
Field peas	-	-	-	-	-	-
White Haricotbeans	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	-	-	-	-	-	-
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Yam	-	-	-	-	-	-
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 10.3 Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)
Amhara

Crop	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	**341862**	**92303**	**43940**	**429359**	**52205**	**85688**	**14054**	**12800**
Cereals	**152486**	**52769**	**27692**	**219670**	**27879**	**46348**	**7318**	**7408**
Teff	25718	7775	*	42241	3271	*	230	*
Barley	88342	22227	11392	101665	10627	13634	3263	3128
Wheat	19281	*	*	28174	*	*	*	*
Maize	17996	12747	9332	87296	5318	*	*	*
Sorghum	*	*	-	*	*	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	962	*	-	*	*	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulse	**104076**	**5365**	*	**47222**	**5206**	*	*	*
Horse/Faba beans	*	*	-	*	*	-	-	-
Field peas	5355	*	-	9345	*	-	-	-
White Haricot beans	*	-	-	-	-	-	-	-
Red Haricot beans	*	*	*	*	*	*	*	*
Chick peas	18028	248	-	3092	248	-	-	-
Lentiles	18561	1267	-	14301	1267	-	-	-
Vetch/Grass peas	*	*	-	*	*	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	754	*	*	*	*	-	-	-
Mung bean/"Masho"	47035	*	*	*	*	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	**10620**	*	-	*	*	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	*	*	-	*	*	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	10503	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	*	*	-	*	*	-	-	-
Vegetables.....	*	**1359**	**1225**	**48470**	**258**	*	*	*
Lettuce.....	*	*	*	-	-	-	-	-
Head Cabbage....	*	*	*	*	*	*	*	*
Ethiopian Cabbage	301	237	*	39121	171	*	*	*
Tomatoes.....	*	*	*	*	*	-	-	-
Green peppers...	*	*	*	*	*	-	-	-
Red peppers.....	749	255	229	*	*	*	*	*
Swiss chard.....	*	*	*	*	*	-	-	-
Root Crops.....	**68855**	**32804**	**14648**	**224830**	**18855**	**58967**	**6611**	**5213**
Beetroot.....	*	*	*	-	-	-	-	-
Carrot.....	*	*	*	*	*	*	*	*
Onion.....	7403	6774	6602	9724	*	*	*	*
Potatoes.....	58944	24632	6798	212310	18304	42809	3444	3116
Yam.....	-	-	-	-	-	-	-	-
Garlic.....	*	*	*	14282	262	*	*	*
Taro/'Godere'...	-	-	-	-	-	-	-	-
Sweet potatoes..	*	*	-	*	*	-	-	-

Table 10.3 (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Amhara

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**78149**	**8210**	**5043**	**78527**	**13128**	**20304**	**1293563**	**332967**	**233192**
Cereals	**34506**	**4473**	**2311**	**51474**	**10308**	**15551**	**683966**	**147716**	**190024**
Teff	16456	2435	*	*	*	*	169909	25625	9978
Barley	*	*	*	20030	5527	5895	402826	88307	160904
Wheat	*	768	*	*	*	*	66960	19258	9440
Maize	17184	*	*	27867	2626	*	163210	13412	8195
Sorghum	-	-	-	-	-	-	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	12909	962	1281
Rice	-	-	-	-	-	-	-	-	-
Pulse	*	*	*	*	*	*	**405861**	**103950**	**41784**
Horse/Faba beans	-	-	-	-	-	-	3590	*	*
Field peas	-	-	-	-	-	-	55237	5355	5516
White Haricot beans	-	-	-	-	-	-	*	*	*
Red Haricot beans	-	-	-	-	-	-	*	*	*
Chick peas	-	-	-	-	-	-	128357	18011	7676
Lentiles	-	-	-	-	-	-	145121	18561	12824
Vetch/Grass peas	-	-	-	-	-	-	*	*	*
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	*	*	*	*	*	*	14049	754	449
Mung bean/"Masho"	-	-	-	-	-	-	72022	46978	7983
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**95208**	**10620**	**1384**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	*	*	*
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	92515	10503	1051
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	*	*	*
Vegetables.....	**18844**	*	*	**8673**	**148**	**268**	**129924**	*	**-**
Lettuce.....	*	*	*	*	*	*	*	*	-
Head Cabbage....	*	*	*	*	*	*	4746	*	-
Ethiopian Cabbage	*	*	*	*	*	*	54831	257	-
Tomatoes.....	*	*	*	-	-	-	*	*	-
Green peppers...	-	-	-	*	*	*	13536	*	-
Red peppers.....	5307	115	*	*	*	*	27956	749	-
Swiss chard.....	-	-	-	*	*	*	*	*	-
Root Crops.....	**37548**	**2880**	**1917**	**36101**	**2589**	**4205**	**684354**	**64973**	**-**
Beetroot.....	-	-	-	*	*	*	*	*	-
Carrot.....	*	*	*	*	*	*	*	*	-
Onion.....	21982	*	*	8669	498	1056	62402	4283	-
Potatoes.....	11701	418	293	22592	1824	2529	607131	58377	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	*	*	*	*	*	*	51112	*	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	*	*	-

Table 10.3 (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Amhara

Crop	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	**55739**	**6845**	*	**64170**	**20377**	**274487**	**56996**	**278689**	**51552**
Cereals	*	*	*	**17594**	*	**160332**	**28364**	**129636**	**23423**
Teff	*	*	*	4295	957	*	*	33995	4383
Barley	-	-	-	*	*	*	*	30042	8990
Wheat	*	*	*	*	*	5565	*	*	*
Maize	*	*	*	*	*	98474	9997	78913	7952
Sorghum	-	-	-	-	-	*	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	*	*	*	**27998**	**11472**	**32919**	*	**14066**	**3722**
Horse/Faba beans	-	-	-	*	*	-	-	*	*
Field peas	-	-	-	*	*	*	*	*	*
White Haricot beans	-	-	-	*	*	*	*	*	*
Red Haricot beans	*	*	*	-	-	-	-	*	*
Chick peas	-	-	-	*	*	*	*	-	-
Lentiles	-	-	-	*	*	*	1185	*	*
Vetch/Grass peas	*	*	*	*	*	*	*	*	*
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	*	*	*	*	*	*
Mung bean/"Masho"	-	-	-	12277	6312	*	*	5169	*
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	**-**	**3941**	*	**70140**	*	**23024**	**507**
Lettuce.....	-	-	-	-	-	*	*	*	*
Head Cabbage....	*	*	-	*	*	*	*	5968	*
Ethiopian Cabbage	-	-	-	*	*	5714	*	5841	62
Tomatoes.....	*	*	-	*	*	*	*	*	*
Green peppers...	-	-	-	*	*	*	*	*	*
Red peppers.....	-	-	-	*	*	24859	688	*	*
Swiss chard.....	*	*	-	-	-	*	*	*	*
Root Crops.....	**26142**	*	**-**	**20283**	*	**139830**	**13447**	**182508**	**23900**
Beetroot.....	*	*	-	-	-	*	*	*	*
Carrot.....	*	*	-	-	-	*	*	*	*
Onion.....	*	*	-	*	*	66465	7182	38213	5182
Potatoes.....	*	*	-	7057	509	62863	3979	147748	17727
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	32848	*	*	*
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	*	*	-	-

Table 10.3: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Amhara

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**15348**	**3637**	**3442**	*	*	*
Cereals	**9421**	*	**2234**	*	*	*
Teff	*	*	*	*	*	*
Barley	7560	*	2075	*	*	*
Wheat	*	*	*	-	-	-
Maize	1563	83	61	*	*	*
Sorghum	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulse	**-**	**-**	**-**	*	*	*
Horse/Faba beans	-	-	-	-	-	-
Field peas	-	-	-	-	-	-
White Haricotbeans	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	*	*	*
Gibto	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	*	*	*	*	*	*
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	*	*	*
Ethiopian Cabbage	*	*	*	-	-	-
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	**8799**	**979**	*	*	*	*
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	*	*	*	*	*	*
Potatoes	6714	535	*	*	*	*
Yam	-	-	-	-	-	-
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 10.4 Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)
Oromia

Crop	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	**800115**	**407899**	**143416**	**2407917**	**247008**	**465541**	**89808**	**61328**
Cereals	**562946**	**295449**	**82551**	**1933760**	**177631**	**359249**	**68185**	**39761**
Teff	28694	9011	2610	14517	*	23261	4974	2146
Barley	72256	35485	15821	79809	7855	37773	15511	6955
Wheat	57103	34770	9262	*	*	13025	11555	3964
Maize	368453	192384	52255	1805255	140825	298126	31397	24668
Sorghum	28239	21561	2492	177921	18169	*	*	1922
Finger millet	*	*	-	*	*	-	-	-
Oats/ 'Aja'	7989	2137	99	*	553	622	1581	94
Rice	15	14	*	*	*	30	*	*
Pulse	**131750**	**45750**	**11679**	**1329022**	**33284**	**151228**	**8864**	**7255**
Horse/Faba beans	1937	314	*	16154	238	*	*	*
Field peas	16836	*	*	5052	*	*	*	*
White Haricot beans	39499	13360	2209	291102	11247	32449	1365	1566
Red Haricot beans	68014	26424	7940	1042006	20251	114375	3585	4255
Chick peas	*	*	*	*	*	*	*	*
Lentiles	3616	*	*	*	*	*	*	*
Vetch/Grass peas	*	*	*	-	-	*	*	*
Soya beans	*	22	*	*	*	-	-	-
Fenugreek	420	*	-	*	*	-	-	-
Mung bean/"Masho"	961	33	9	*	*	67	27	9
Gibto	*	*	-	*	*	-	-	-
Oile seeds	**6131**	**1526**	*	*	**1053**	*	**473**	*
Nueg	-	-	-	-	-	-	-	-
Linseed	41	*	*	-	-	*	*	*
Ground nuts	*	*	*	*	*	*	*	*
Safflower	-	-	-	-	-	-	-	-
Sesame	5410	1000	10	*	610	153	390	10
Rapeseed	525	*	*	*	*	*	*	*
Vegetables.....	**18749**	**10740**	**2832**	**584278**	**8494**	**33146**	**1313**	**1329**
Lettuce.....	*	*	*	*	*	*	*	*
Head Cabbage....	*	304	*	21474	122	*	*	*
Ethiopian Cabbage	13009	7613	1125	490515	6811	20052	325	410
Tomatoes.....	2088	909	*	31910	484	*	*	*
Green peppers...	1522	1113	*	75150	948	*	*	*
Red peppers.....	*	*	*	9273	*	*	*	*
Swiss chard.....	*	*	-	*	*	-	-	-
Root Crops.....	**80538**	**54434**	**46237**	**774505**	**26546**	**164844**	**10974**	**12866**
Beetroot.....	440	278	*	20057	248	*	*	*
Carrot.....	*	*	*	9166	74	*	*	*
Onion.....	8032	6371	12481	52552	1734	4920	*	124
Potatoes.....	64870	42786	32879	560250	20540	143312	9936	12025
Yam.....	*	*	-	*	*	-	-	-
Garlic.....	1961	1391	520	96971	847	7114	*	*
Taro/'Godere'...	609	552	*	26653	547	*	*	*
Sweet potatoes..	4330	2852	*	83717	2541	*	*	*

Table 10.4: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Oromia

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**117567**	**21514**	**14434**	**184282**	**24886**	**53025**	**4843868**	**640051**	**281437**
Cereals	**85499**	**14966**	**8558**	**94432**	**11370**	**20773**	**2502088**	**409780**	**224938**
Teff	*	*	*	*	*	*	103823	28455	14915
Barley	*	*	*	*	*	*	316105	72054	84289
Wheat	*	*	*	*	2385	606	56132	57103	32599
Maize	79846	11005	*	86843	7655	18540	2127774	240804	90852
Sorghum	*	*	*	*	*	*	26285	3243	800
Finger millet	-	-	-	-	-	-	*	*	*
Oats/ 'Aja'	-	-	-	-	-	-	*	7940	1392
Rice	-	-	-	-	-	-	*	15	*
Pulse	*	*	*	**31320**	**958**	**2339**	**2523904**	**131001**	**56312**
Horse/Faba beans	-	-	-	-	-	-	46942	1934	1722
Field peas	*	*	*	-	-	-	44736	16836	9258
White Haricot beans	*	*	*	*	*	*	488626	39197	7606
Red Haricot beans	*	*	*	30154	852	1978	2013879	67594	35210
Chick peas	-	-	-	-	-	-	*	*	*
Lentiles	*	*	*	-	-	-	13511	3616	1812
Vetch/Grass peas	-	-	-	-	-	-	*	*	-
Soya beans	-	-	-	-	-	-	*	*	123
Fenugreek	-	-	-	-	-	-	2449	420	119
Mung bean/"Masho"	-	-	-	-	-	-	2207	952	242
Gibto	-	-	-	-	-	-	*	*	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**6455**	**5497**	**187**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	*	41	9
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	3343	5406	177
Rapeseed	-	-	-	-	-	-	*	*	1
Vegetables.....	**5350**	*	*	*	*	*	**991390**	**17551**	**-**
Lettuce.....	-	-	-	-	-	-	*	*	-
Head Cabbage....	*	*	*	*	*	*	42935	337	-
Ethiopian Cabbage	4245	*	*	*	*	*	801593	12657	-
Tomatoes.....	*	*	*	*	*	*	94449	2022	-
Green peppers...	*	*	*	*	*	*	128299	1500	-
Red peppers.....	-	-	-	*	*	*	22866	*	-
Swiss chard.....	-	-	-	-	-	-	*	*	-
Root Crops.....	**80239**	**4121**	**3790**	**107121**	**12156**	**28923**	**1510262**	**76222**	**-**
Beetroot.....	-	-	-	*	*	*	41045	348	-
Carrot.....	-	-	-	-	-	-	16644	*	-
Onion.....	*	*	*	15291	3741	11723	103381	6331	-
Potatoes.....	75107	3395	3148	89710	8297	17074	1213395	63074	-
Yam.....	-	-	-	-	-	-	*	*	-
Garlic.....	*	17	16	*	*	*	159055	1855	-
Taro/'Godere'...	-	-	-	-	-	-	3123	*	-
Sweet potatoes..	-	-	-	*	*	*	139356	4278	-

Table 10.4: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Oromia

Crop	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	**282767**	**28694**	**7380**	**283283**	**105326**	**525181**	**49485**	**653481**	**127048**
Cereals	**207841**	**24448**	**7269**	**166671**	**88310**	**382957**	**34821**	**515471**	**95283**
Teff	37	7	2	64276	18679	124	55	4607	1167
Barley	-	-	-	50769	30429	5257	1532	16853	17389
Wheat	-	-	-	17542	27862	*	*	8444	21359
Maize	207449	24368	7267	46506	5876	376838	30623	473287	47070
Sorghum	*	*	-	*	174	*	*	*	*
Finger millet	-	-	-	-	-	*	*	-	-
Oats/ 'Aja'	-	-	-	2111	5276	-	-	1094	2864
Rice	-	-	-	*	*	-	-	30	*
Pulse	**19407**	**360**	*	**19467**	*	**42125**	**720**	**283398**	**10442**
Horse/Faba beans	-	-	-	*	*	-	-	25	12
Field peas	-	-	-	*	*	-	-	*	170
White Haricot beans	*	*	*	*	*	*	*	48756	1863
Red Haricot beans	*	*	*	13096	510	32797	339	234875	8182
Chick peas	-	-	-	-	-	-	-	*	*
Lentiles	-	-	-	68	43	*	*	*	72
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	*	*	-	-	*	*
Fenugreek	-	-	-	*	*	-	-	-	-
Mung bean/"Masho"	37	9	1	-	-	86	29	123	109
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	*	**214**	**-**	**-**	*	**495**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	*	*	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	*	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	67	198	-	-	196	458
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	**-**	**6817**	*	**85663**	**3395**	**42968**	**1499**
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	*	*	-	*	*	*	*	*	*
Ethiopian Cabbage	*	*	-	*	*	22508	681	29978	709
Tomatoes.....	5399	*	-	4587	*	36969	1080	3909	*
Green peppers...	*	*	-	*	*	26423	*	*	*
Red peppers.....	-	-	-	-	-	*	*	*	*
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	**41765**	**3125**	**-**	**107486**	**12469**	**170290**	**10548**	**232458**	**19328**
Beetroot.....	*	*	-	*	*	18207	276	*	*
Carrot.....	*	*	-	*	*	*	*	*	*
Onion.....	*	*	-	16527	3142	34292	3688	18307	4001
Potatoes.....	30369	1610	-	86772	9046	98743	5618	209719	14807
Yam.....	-	-	-	-	-	*	*	-	-
Garlic.....	*	*	-	4244	188	14161	*	*	*
Taro/'Godere'...	-	-	-	*	*	-	-	*	*
Sweet potatoes..	-	-	-	-	-	*	*	*	*

Table 10.4: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Oromia

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**50553**	**24390**	**13952**	*	*	*
Cereals	**47203**	**23128**	**13089**	*	*	*
Teff	*	*	*	-	-	-
Barley	25313	9503	7418	-	-	-
Wheat	*	12127	*	-	-	-
Maize	16792	1332	1277	*	*	*
Sorghum	*	*	*	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	*	*	*	-	-	-
Rice	-	-	-	-	-	-
Pulse	**10303**	*	**371**	*	*	*
Horse/Faba beans	*	*	*	-	-	-
Field peas	*	*	*	-	-	-
White Haricotbeans	*	*	*	-	-	-
Red Haricot beans	*	*	*	*	*	*
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	*	*	*	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	*	*	*	**-**	**-**	**-**
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	-	-	-
Ethiopian Cabbage	*	*	*	-	-	-
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	**5131**	*	*	*	*	*
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	*	*	*	-	-	-
Potatoes	4297	*	*	*	*	*
Yam	-	-	-	-	-	-
Garlic	*	*	*	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 10.5: Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)
Somale

Crop	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	**6687**	*	-	*	*	-	-	-
Cereals	**4583**	*	-	*	*	-	-	-
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	4516	*	-	*	*	-	-	-
Sorghum	*	*	-	*	*	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulse	*	*	-	*	*	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	*	*	-	*	*	-	-	-
Red Haricot beans	*	*	-	*	*	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Mung bean/"Masho"	*	*	-	*	*	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-
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 10.5: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Somale

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**-**	**-**	**-**	**-**	**-**	**-**	**26815**	**6623**	**1946**
Cereals	**-**	**-**	**-**	**-**	**-**	**-**	**22323**	**4582**	**1282**
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	21996	4515	1236
Sorghum	-	-	-	-	-	-	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	**-**	**-**	**-**	**-**	**-**	**-**	**10140**	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	*	*	*
Red Haricot beans	-	-	-	-	-	-	9552	*	*
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	*	*	*
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
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 10.5: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Somale

Crop	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	-	-	-	-	-	-	-	-	-
Pulse	*	*	*	-	-	*	*	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	*	*	-	-
Red Haricot beans	*	*	*	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-	-
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 10.5: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Somale

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	-	-	-	-	-	-
Cereals	-	-	-	-	-	-
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulse	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-
Field peas	-	-	-	-	-	-
White Haricotbeans	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	-	-	-	-	-	-
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Yam	-	-	-	-	-	-
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 10.6: Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)
Benshangul-Gumuz

Crop	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	**8733**	**3277**	**345**	**32237**	**2803**	**2331**	**353**	**198**
Cereals	**4193**	**1654**	**80**	**27773**	**1566**	**807**	*	*
Teff	-	-	-	-	-	-	-	-
Barley	*	*	*	*	*	-	-	-
Wheat	*	*	-	*	*	-	-	-
Maize	4013	1615	74	27572	1540	736	*	*
Sorghum	*	*	*	*	*	*	*	*
Finger millet	*	*	-	*	*	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	*	-	-	-	-	-	-	-
Pulse	**3813**	**1271**	**177**	**26841**	**936**	**1985**	*	**151**
Horse/Faba beans	*	*	*	*	*	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	*	*	-	*	*	-	-	-
Red Haricot beans	3643	1250	175	26102	917	1985	*	151
Chick peas	-	-	-	-	-	-	-	-
Lentiles	*	*	-	*	*	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	*	*	-	*	*	-	-	-
Fenugreek	*	*	-	*	*	-	-	-
Mung bean/"Masho"	*	*	-	*	*	-	-	-
Gibto	*	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables.....	**436**	**196**	*	**13864**	**166**	*	*	*
Lettuce.....	*	*	-	*	*	-	-	-
Head Cabbage....	2	*	*	*	*	*	*	*
Ethiopian Cabbage	359	155	*	12967	154	-	-	-
Tomatoes.....	*	*	*	404	*	*	*	*
Green peppers...	19	9	*	1044	7	*	*	*
Red peppers.....	*	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-
Root Crops.....	**291**	**157**	*	**8878**	**136**	*	*	*
Beetroot.....	*	*	*	*	*	-	-	-
Carrot.....	-	-	-	-	-	-	-	-
Onion.....	16	*	*	*	*	*	*	*
Potatoes.....	231	125	*	6422	109	*	*	*
Yam.....	-	-	-	-	-	-	-	-
Garlic.....	*	*	*	*	*	*	*	*
Taro/'Godere'...	*	-	-	-	-	-	-	-
Sweet potatoes..	10	*	-	831	*	-	-	-

Table 10.6: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Benshangul-Gumuz

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**716**	**49**	*	*	*	*	**66228**	**5148**	**1709**
Cereals	*	*	*	*	*	*	**11789**	**705**	**213**
Teff	-	-	-	-	-	-	-	-	-
Barley	*	*	*	-	-	-	928	*	*
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	*	*	*	10956	635	174
Sorghum	-	-	-	-	-	-	*	*	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	*	*	-
Pulse	*	*	*	*	*	*	**59313**	**3785**	**1496**
Horse/Faba beans	*	*	*	-	-	-	*	*	*
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	*	*	*
Red Haricot beans	*	*	*	*	*	*	57962	3615	1363
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	*	*	*
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	*	*	*
Fenugreek	-	-	-	-	-	-	*	*	-
Mung bean/"Masho"	-	-	-	-	-	-	*	*	*
Gibto	-	-	-	-	-	-	*	*	*
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	*	*	*	*	**27712**	**402**	**-**
Lettuce.....	-	-	-	-	-	-	*	*	-
Head Cabbage....	-	-	-	*	*	*	450	2	-
Ethiopian Cabbage	-	-	-	*	*	*	24538	356	-
Tomatoes.....	*	*	*	*	*	*	2767	*	-
Green peppers...	-	-	-	*	*	*	2288	19	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	*	*	*	*	**16786**	**255**	**-**
Beetroot.....	-	-	-	*	*	*	*	*	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	-	-	-	*	*	*	2026	15	-
Potatoes.....	*	*	*	-	-	-	13421	212	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	*	*	*	3435	*	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	*	*	-

Table 10.6: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Benshangul-Gumuz

Crop	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	**1717**	**42**	*	*	*	**9635**	**445**	**3839**	**303**
Cereals	**-**	**-**	**-**	**-**	**-**	**5707**	**225**	*	*
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	*	*
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	5707	225	*	*
Sorghum	-	-	-	-	-	-	-	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	*	*	*	**-**	**-**	**4297**	**99**	**1749**	**149**
Horse/Faba beans	-	-	-	-	-	-	-	*	*
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	*	*	-	-
Red Haricot beans	*	*	*	-	-	3950	97	1667	145
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	*	*	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	**-**	*	*	**7018**	**97**	*	*
Lettuce.....	-	-	-	-	-	*	*	-	-
Head Cabbage....	-	-	-	-	-	*	*	-	-
Ethiopian Cabbage	-	-	-	*	*	3658	*	*	*
Tomatoes.....	*	*	-	*	*	3920	*	*	*
Green peppers...	*	*	-	-	-	1602	11	*	*
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	**-**	**-**	**-**	**2209**	**23**	*	*
Beetroot.....	-	-	-	-	-	*	*	*	*
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	*	*	-	-	-	*	*	*	*
Potatoes.....	*	*	-	-	-	*	*	*	*
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	*	*	*	*
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	*	*	*	*

Table 10.6: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Benshangul-Gumuz

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	-	-	-	-	-	-
Cereals	-	-	-	-	-	-
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulse	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-
Field peas	-	-	-	-	-	-
White Haricotbeans	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	-	-	-	-	-	-
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Yam	-	-	-	-	-	-
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 10.7: Number of Holders, Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)
(S.N.N.P.R)

Crop	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	**912250**	**445850**	**361014**	**3720295**	**149109**	**1730953**	**162853**	**143321**
Cereals	**536466**	**199879**	**139047**	**2094766**	**69232**	**961556**	**69345**	**56003**
Teff	51707	21386	15978	21293	*	16598	5700	4338
Barley	29078	4121	2205	39605	1685	30976	1725	1165
Wheat	932	*	*	*	*	*	*	*
Maize	420476	170780	119621	2045977	63579	917436	61187	49776
Sorghum	32374	2817	795	37624	1939	10092	321	351
Finger millet	716	58	*	*	*	*	*	*
Oats/ 'Aja'	36	*	*	*	*	*	*	*
Rice	*	*	*	*	*	*	*	*
Pulse	**193289**	**108014**	**74380**	**1168631**	**28990**	**1055167**	**56444**	**47260**
Horse/Faba beans	2390	644	424	15321	*	2677	*	75
Field peas	2733	689	*	5905	400	2904	*	*
White Haricot beans	18064	*	*	18503	296	*	*	405
Red Haricot beans	168284	97073	72369	1136674	27807	1040110	52479	46553
Chick peas	*	*	*	*	*	*	*	*
Lentiles	*	*	*	*	*	*	*	*
Vetch/Grass peas	*	*	*	*	*	*	*	*
Soya beans	83	*	*	*	*	-	-	-
Fenugreek	*	*	*	*	*	-	-	-
Mung bean/"Masho"	*	*	*	*	*	*	*	*
Gibto	*	*	*	*	*	*	*	*
Oile seeds	**17487**	*	*	**7357**	**125**	*	*	*
Nueg	*	*	-	*	*	-	-	-
Linseed	83	-	-	-	-	-	-	-
Ground nuts	7037	*	*	4671	*	*	*	*
Safflower	177	*	*	878	*	*	*	*
Sesame	10162	*	*	*	*	*	*	*
Rapeseed	*	*	-	*	*	-	-	-
Vegetables.....	**38202**	**30858**	**12015**	**1741962**	**24882**	**147046**	**1828**	**2228**
Lettuce.....	*	*	-	*	*	-	-	-
Head Cabbage....	*	*	*	15853	85	*	*	*
Ethiopian Cabbage	34302	27885	6000	1706552	24472	142268	1648	2041
Tomatoes.....	*	*	*	*	10	*	*	*
Green peppers...	765	369	*	42207	162	*	*	*
Red peppers.....	*	*	*	5599	*	*	*	*
Swiss chard.....	41	*	*	11869	*	-	-	-
Root Crops.....	**126806**	**106630**	**135190**	**1133143**	**25880**	**610279**	**35163**	**37797**
Beetroot.....	723	*	*	16642	48	*	*	*
Carrot.....	437	*	187	56095	77	*	*	*
Onion.....	3080	1853	*	48175	280	11196	*	*
Potatoes.....	102284	92053	128691	541756	15305	525504	33591	35916
Yam.....	2927	1549	*	134800	1439	*	*	*
Garlic.....	2666	1837	1048	157677	1134	25322	*	*
Taro/'Godere'...	4691	3073	1328	186873	2247	34187	571	705
Sweet potatoes..	9998	5724	427	223844	5349	10924	259	253

Table 10.7: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

(S.N.N.P.R)

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**138344**	**16827**	**9617**	**1118475**	**115531**	**206061**	**6753450**	**783133**	**300885**
Cereals	**76266**	**11481**	**6386**	**419586**	**48794**	**75556**	**3481679**	**426645**	**195355**
Teff	*	6352	2973	16989	7632	8668	169884	50346	20318
Barley	*	*	*	10646	616	995	261066	28848	29236
Wheat	-	-	-	*	*	*	9039	932	788
Maize	57986	4670	3238	397633	40339	65508	3266144	314519	137372
Sorghum	*	*	*	3865	172	310	107796	30328	6276
Finger millet	-	-	-	-	-	-	8066	515	123
Oats/ 'Aja'	-	-	-	*	*	*	*	*	*
Rice	-	-	-	-	-	-	*	*	*
Pulse	**46133**	**3079**	**1280**	**314413**	**19458**	**25775**	**3449816**	**185795**	**102132**
Horse/Faba beans	*	*	*	*	*	*	59318	2382	1457
Field peas	*	*	*	*	*	*	33616	2708	1038
White Haricot beans	*	*	*	4160	*	*	56696	17412	552
Red Haricot beans	45043	2221	1242	307326	14523	24510	3368120	161613	98549
Chick peas	-	-	-	-	-	-	*	*	*
Lentiles	-	-	-	-	-	-	*	*	*
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	*	*	*	4660	*	*
Fenugreek	-	-	-	*	*	*	*	*	*
Mung bean/"Masho"	-	-	-	*	*	*	12319	*	*
Gibto	*	*	*	-	-	-	*	*	*
Oile seeds	*	*	*	*	*	*	**59574**	**17049**	*
Nueg	-	-	-	-	-	-	*	*	*
Linseed	-	-	-	-	-	-	3774	50	10
Ground nuts	*	*	*	*	*	*	32159	6987	*
Safflower	*	*	*	-	-	-	7314	177	*
Sesame	-	-	-	*	*	*	17306	9813	411
Rapeseed	-	-	-	-	-	-	*	*	*
Vegetables.....	**19430**	**329**	**319**	**78273**	**3819**	**9467**	**2448374**	**35546**	**-**
Lettuce.....	-	-	-	-	-	-	*	*	-
Head Cabbage....	*	*	*	13293	*	*	31745	459	-
Ethiopian Cabbage	18520	309	303	65206	*	*	2389495	33923	-
Tomatoes.....	*	*	*	*	*	*	12900	*	-
Green peppers...	-	-	-	*	*	*	76904	753	-
Red peppers.....	-	-	-	*	*	*	5126	*	-
Swiss chard.....	*	*	*	*	*	*	8512	37	-
Root Crops.....	**43121**	**1862**	**1565**	**690373**	**43423**	**95186**	**2380507**	**118098**	**-**
Beetroot.....	*	*	*	*	*	*	39543	527	-
Carrot.....	*	*	*	*	*	*	50236	*	-
Onion.....	*	*	*	16703	907	*	133567	2193	-
Potatoes.....	29966	1173	981	651630	41695	91172	1725784	98824	-
Yam.....	*	*	*	*	*	*	185448	2674	-
Garlic.....	*	*	*	24443	*	*	296266	2630	-
Taro/'Godere'...	*	*	*	15056	223	594	119195	1583	-
Sweet potatoes..	*	*	*	5585	44	115	322160	9300	-

Table 10.7: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

(S.N.N.P.R)

Crop	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	**911385**	**84718**	**27375**	**347899**	**44577**	**150151**	**23589**	**1258850**	**180112**
Cereals	**654141**	**71217**	**22089**	**165467**	**29413**	**98334**	**13461**	**691788**	**110306**
Teff	*	*	*	*	*	*	*	35579	18993
Barley	*	*	*	38300	*	-	-	20287	1965
Wheat	-	-	-	*	*	-	-	*	*
Maize	648102	69623	21555	52446	3724	97390	13061	649272	87787
Sorghum	*	*	*	*	*	1826	*	8409	1288
Finger millet	*	*	*	-	-	-	-	*	*
Oats/ 'Aja'	-	-	-	-	-	*	*	-	-
Rice	-	-	-	*	*	-	-	*	*
Pulse	**146804**	**6452**	**5248**	**39767**	**1482**	**49331**	*	**532820**	**31066**
Horse/Faba beans	*	*	*	-	-	-	-	*	134
Field peas	-	-	-	*	*	*	*	1812	*
White Haricot beans	*	*	*	*	*	*	*	2601	*
Red Haricot beans	145273	6283	5203	38812	1478	48401	2487	527122	29821
Chick peas	-	-	-	-	-	*	*	*	*
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	*	*	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	*	*
Fenugreek	-	-	-	-	-	-	-	*	*
Mung bean/"Masho"	-	-	-	-	-	-	-	*	*
Gibto	*	*	*	-	-	-	-	*	*
Oile seeds	*	*	*	*	*	*	*	**14169**	**2204**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	*	*	*	*
Ground nuts	-	-	-	*	*	*	*	*	*
Safflower	-	-	-	-	-	-	-	*	*
Sesame	*	*	*	-	-	-	-	*	*
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	**34713**	*	**-**	**55486**	*	**47017**	*	**150662**	**4751**
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	13274	*	-	*	*	*	*	17722	*
Ethiopian Cabbage	*	79	-	42561	*	*	*	127317	*
Tomatoes.....	*	*	-	*	*	*	*	*	*
Green peppers...	*	*	-	*	*	*	*	*	*
Red peppers.....	*	*	-	*	*	*	*	*	*
Swiss chard.....	*	*	-	-	-	*	*	*	*
Root Crops.....	**174605**	**4456**	**-**	**126511**	**10183**	**21630**	*	**506489**	**31785**
Beetroot.....	18848	*	-	-	-	*	*	11605	*
Carrot.....	37003	70	-	-	-	*	*	*	*
Onion.....	15492	*	-	*	*	*	*	17611	*
Potatoes.....	100467	3210	-	113422	9236	4068	*	400442	29299
Yam.....	*	*	-	*	*	*	*	11495	56
Garlic.....	*	*	-	*	*	*	*	19166	95
Taro/'Godere'...	*	*	-	*	*	*	*	29567	570
Sweet potatoes..	*	*	-	*	*	*	*	29221	673

Table 10.7: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

(S.N.N.P.R)

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**7479**	*	*	*	*	*
Cereals	*	*	*	-	-	-
Teff	-	-	-	-	-	-
Barley	*	*	*	-	-	-
Wheat	-	-	-	-	-	-
Maize	*	*	*	-	-	-
Sorghum	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulse	*	*	*	-	-	-
Horse/Faba beans	-	-	-	-	-	-
Field peas	-	-	-	-	-	-
White Haricotbeans	-	-	-	-	-	-
Red Haricot beans	*	*	*	-	-	-
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oile seeds	*	*	*	-	-	-
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	*	*	*	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	-	-	-	*	*	*
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	*	*	*
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	*	*	*	*	*	*
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	*	*	*	*	*	*
Potatoes	*	*	*	*	*	*
Yam	-	-	-	-	-	-
Garlic	-	-	-	*	*	*
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 10.8: Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)
Gambela

Crop	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	**8256**	**267**	**-**	**738**	**267**	**-**	**-**	**-**
Cereals	**6804**	**67**	**-**	**383**	**67**	**-**	**-**	**-**
Teff	*	*	-	*	*	-	-	-
Barley	*	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	6783	52	-	315	52	-	-	-
Sorghum	*	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	*	*	-	*	*	-	-	-
Pulse	76	26	-	243	26	-	-	-
Horse/Faba beans	*	*	-	*	*	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	9	*	-	*	*	-	-	-
Red Haricot beans	66	25	-	224	25	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	1339	171	-	291	171	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	*	*	-	134	*	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	1309	152	-	157	152	-	-	-
Rapeseed	*	-	-	-	-	-	-	-
Vegetables.....	17	*	-	*	*	-	-	-
Lettuce.....	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-
Ethiopian Cabbage	15	*	-	*	*	-	-	-
Tomatoes.....	*	-	-	-	-	-	-	-
Green peppers...	*	-	-	-	-	-	-	-
Red peppers.....	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-
Root Crops.....	*	*	-	*	*	-	-	-
Beetroot.....	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-
Onion.....	*	*	-	*	*	-	-	-
Potatoes.....	*	*	-	*	*	-	-	-
Yam.....	*	-	-	-	-	-	-	-
Garlic.....	*	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-
Sweet potatoes..	*	-	-	-	-	-	-	-

Table 10.8: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Gambela

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**-**	**-**	**-**	**-**	**-**	**-**	**33672**	**7992**	**2095**
Cereals	**-**	**-**	**-**	**-**	**-**	**-**	**32552**	**6633**	**2019**
Teff	-	-	-	-	-	-	*	*	*
Barley	-	-	-	-	-	-	*	*	*
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	32507	6612	2004
Sorghum	-	-	-	-	-	-	*	*	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	*	*	*
Pulse	**-**	**-**	**-**	**-**	**-**	**-**	**3434**	**76**	**20**
Horse/Faba beans	-	-	-	-	-	-	*	*	*
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	821	9	*
Red Haricot beans	-	-	-	-	-	-	2613	66	19
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**1359**	**1247**	**56**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	134	*	12
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	979	1217	44
Rapeseed	-	-	-	-	-	-	*	*	-
Vegetables.....	**-**	**-**	**-**	**-**	**-**	**-**	**2419**	**17**	**-**
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	2407	15	-
Tomatoes.....	-	-	-	-	-	-	*	*	-
Green peppers...	-	-	-	-	-	-	*	*	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	**-**	**-**	**-**	**-**	**-**	**-**	**708**	*	**-**
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	-	-	-	-	-	-	172	*	-
Potatoes.....	-	-	-	-	-	-	*	*	-
Yam.....	-	-	-	-	-	-	*	*	-
Garlic.....	-	-	-	-	-	-	*	*	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	-	-	-

Table 10.8: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Gambela

Crop	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	**555**	*	*	*	*	*	*	**223**	**13**
Cereals	**555**	*	*	*	*	**-**	**-**	**223**	**13**
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	555	*	*	*	*	-	-	223	13
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
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 10.8: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Gambela

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	**Quintal**
All	**-**	**-**	**-**	**-**	**-**	**-**
Cereals	**-**	**-**	**-**	**-**	**-**	**-**
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulse	**-**	**-**	**-**	**-**	**-**	**-**
Horse/Faba beans	-	-	-	-	-	-
Field peas	-	-	-	-	-	-
White Haricotbeans	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	**-**	**-**	**-**	**-**	**-**	**-**
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	**-**	**-**	**-**	**-**	**-**	**-**
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Yam	-	-	-	-	-	-
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 10.9: Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)
Harari

Crop	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	**371**	**238**	**131**	**2073**	**130**	**610**	**74**	**87**
Cereals	**222**	**130**	**73**	**1656**	**72**	**495**	**32**	**41**
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	123	79	*	1388	57	*	*	*
Sorghum	99	52	53	421	15	*	*	*
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulse	**67**	**48**	**45**	**1042**	**18**	**495**	**24**	**36**
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	*	*	-	*	*	-	-	-
Red Haricot beans	59	40	45	938	11	495	24	36
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	*	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	*	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables.....	**33**	*	*	*	*	*	*	*
Lettuce.....	-	-	-	-	-	-	-	-
Head Cabbage....	*	*	*	-	-	*	*	*
Ethiopian Cabbage	*	*	-	*	*	-	-	-
Tomatoes.....	-	-	-	-	-	-	-	-
Green peppers...	*	*	-	*	*	-	-	-
Red peppers.....	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-
Root Crops.....	**46**	**43**	*	**930**	*	*	*	*
Beetroot.....	*	*	*	-	-	*	*	*
Carrot.....	-	-	-	-	-	-	-	-
Onion.....	-	-	-	-	-	-	-	-
Potatoes.....	40	37	*	649	*	*	*	*
Yam.....	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-
Sweet potatoes..	*	*	-	*	*	-	-	-

Table 10.9: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Harari

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	*	*	*	*	*	*	**4145**	**219**	**47**
Cereals	*	*	*	*	*	*	**947**	**80**	*
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	-	-	-	947	80	*
Sorghum	*	*	*	*	*	*	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	*	*	*	*	*	*	**2136**	**67**	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	*	*	-
Red Haricot beans	*	*	*	*	*	*	1979	58	*
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	**-**	**-**	**-**	**-**	**-**	**-**	**515**	**30**	**-**
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	*	*	-
Tomatoes.....	-	-	-	-	-	-	-	-	-
Green peppers...	-	-	-	-	-	-	*	*	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	*	**-**	**-**	**-**	**1282**	**42**	**-**
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	-	-	-	-	-	-	-	-	-
Potatoes.....	*	*	*	-	-	-	1002	40	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	*	*	-

Table 10.9: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Harari

Crop	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	*	*	*	-	-	**596**	**53**	**719**	**48**
Cereals	*	*	*	-	-	*	*	**605**	**23**
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	-	-	*	*	*	*
Sorghum	-	-	-	-	-	*	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	-	-	-	-	-	*	*	**513**	**17**
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	*	*	-	-
Red Haricot beans	-	-	-	-	-	*	*	513	17
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-	-
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: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Harari

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	-	-	-	-	-	-
Cereals	-	-	-	-	-	-
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulse	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-
Field peas	-	-	-	-	-	-
White Haricotbeans	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	-	-	-	-	-	-
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Yam	-	-	-	-	-	-
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 10.10: Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)
Dire Dawa

Crop	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	**42**	**37**	**5**	**413**	**32**	*	*	*
Cereals	**24**	**21**	*	**279**	**21**	-	-	-
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	24	21	*	279	21	-	-	-
Sorghum	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulse	-	-	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables.....	**15**	**14**	**4**	**211**	**9**	*	*	*
Lettuce.....	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-
Ethiopian Cabbage	*	*	-	*	*	-	-	-
Tomatoes.....	12	11	4	192	7	-	-	-
Green peppers...	3	3	*	79	3	*	*	*
Red peppers.....	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-
Root Crops.....	*	*	*	**66**	*	*	*	*
Beetroot.....	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-
Onion.....	*	*	-	39	*	-	-	-
Potatoes.....	*	*	*	*	*	*	*	*
Yam.....	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-
Sweet potatoes..	*	*	-	*	*	-	-	-

Table 10.10: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Dire Dawa

Crop	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	**91**	**4**	**4**	*	*	*	**550**	**38**	**5**
Cereals	*	*	*	**-**	**-**	**-**	**363**	**24**	**5**
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	-	-	-	363	24	5
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	**73**	**4**	**4**	*	*	*	**266**	**12**	**-**
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-	*	*	-
Tomatoes.....	73	4	4	*	*	*	246	8	-
Green peppers...	-	-	-	-	-	-	116	3	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	*	*	*	**-**	**-**	**-**	**84**	*	**-**
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	-	-	-	-	-	-	39	*	-
Potatoes.....	*	*	*	-	-	-	*	*	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	-	*	*	-

Table 10.10: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Dire Dawa

Crop	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	*	*	-	**73**	**4**	**486**	**38**	-	-
Cereals	-	-	-	-	-	**299**	**22**	-	-
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	299	22	-	-
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	-	-	-	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
White Haricot beans	-	-	-	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables.....	*	*	-	**73**	**4**	**284**	**14**	-	-
Lettuce.....	-	-	-	-	-	-	-	-	-
Head Cabbage....	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	*	*	-	-
Tomatoes.....	*	*	-	73	4	265	11	-	-
Green peppers...	-	-	-	-	-	98	3	-	-
Red peppers.....	-	-	-	-	-	-	-	-	-
Swiss chard.....	-	-	-	-	-	-	-	-	-
Root Crops.....	-	-	-	-	-	**84**	*	-	-
Beetroot.....	-	-	-	-	-	-	-	-	-
Carrot.....	-	-	-	-	-	-	-	-	-
Onion.....	-	-	-	-	-	39	*	-	-
Potatoes.....	-	-	-	-	-	*	*	-	-
Yam.....	-	-	-	-	-	-	-	-	-
Garlic.....	-	-	-	-	-	-	-	-	-
Taro/'Godere'...	-	-	-	-	-	-	-	-	-
Sweet potatoes..	-	-	-	-	-	*	*	-	-

Table 10.10: (Cont'd) Number of Holders,Inputs Applied Area and Quantity of Inputs used in Belg 2008 EC (2015/16GC)

Dire Dawa

Crop	NPS			NPS+UREA		
	Holder	Hectare	Quintal	Holder	Hectare	**Quintal**
All	-	-	-	-	-	-
Cereals	-	-	-	-	-	-
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulse	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-
Field peas	-	-	-	-	-	-
White Haricotbeans	-	-	-	-	-	-
Red Haricot beans	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean/"Masho"	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-
Nueg	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-
Lettuce	-	-	-	-	-	-
Head Cabbage	-	-	-	-	-	-
Ethiopian Cabbage	-	-	-	-	-	-
Tomatoes	-	-	-	-	-	-
Green peppers	-	-	-	-	-	-
Red papers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	-	-	-	-	-	-
Beet root	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Yam	-	-	-	-	-	-
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-

Table 21. Holders Applying Inputs by Age group
National

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	24,367.00	3,479.00	*	*	*
18 - 20	122,653.00	16,877.00	7,192.00	7,530.00	10,053.00
21 - 24	399,175.00	60,085.00	32,699.00	17,071.00	26,069.00
25 - 29	1,334,699.00	344,170.00	122,447.00	76,011.00	93,022.00
30 - 39	3,737,759.00	1,037,748.00	381,489.00	206,753.00	312,844.00
40 - 49	3,263,831.00	1,006,823.00	316,509.00	166,306.00	224,216.00
50 - 59	2,133,780.00	644,522.00	203,819.00	120,164.00	168,158.00
60 and above	2,476,806.00	666,711.00	194,541.00	105,505.00	163,448.00
Not stated	4,833.00	*	*	-	-
Total	**13,497,903.00**	**3,782,501.00**	**1,259,187.00**	**700,453.00**	**1,001,415.00**

Table 21.1 Holders Applying Inputs by Age group Tigray

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	-	-	-	-	-
18 - 20	-	-	-	-	-
21 - 24	*	*	*	-	-
25 - 29	1,597.00	*	*	*	*
30 - 39	8,588.00	*	*	*	*
40 - 49	7,198.00	1,051.00	-	*	2,086.00
50 - 59	5,837.00	*	*	*	*
60 and above	7,002.00	*	-	*	*
Not stated	-	-	-	-	-
Total	**30,814.00**	*	*	*	*

Table 21.2 Holders Applying Inputs by Age group
Afar

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	-	-	-	-	-
18 - 20	*	-	*	-	*
21 - 24	764.00	-	*	-	764.00
25 - 29	2,967.00	-	1,176.00	-	2,762.00
30 - 39	6,907.00	-	1,288.00	*	6,548.00
40 - 49	6,645.00	-	944.00	*	6,382.00
50 - 59	3,598.00	-	897.00	*	3,444.00
60 and above	2,454.00	*	253.00	-	2,138.00
Not stated	-	-	-	-	-
Total	**23,436.00**	*	**4,799.00**	**412.00**	**22,139.00**

Table 21.3 Holders Applying Inputs by Age group
Amhara

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	*	*	*	*	*
18 - 20	1,911.00	-	-	*	*
21 - 24	30,771.00	3,410.00	-	2,655.00	*
25 - 29	115,473.00	16,423.00	2,514.00	4,593.00	17,396.00
30 - 39	282,249.00	58,299.00	13,859.00	17,744.00	75,078.00
40 - 49	330,856.00	54,716.00	15,071.00	12,557.00	66,404.00
50 - 59	253,231.00	55,011.00	11,903.00	14,625.00	59,286.00
60 and above	304,700.00	45,398.00	*	10,922.00	50,657.00
Not stated	-	-	-	-	-
Total	**1,320,523.00**	**233,406.00**	**55,739.00**	**64,170.00**	**274,487.00**

Table 21.4 Holders Applying Inputs by Age group
Oromia

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	10,329.00	*	*	*	*
18 - 20	65,219.00	7,264.00	*	3,392.00	8,181.00
21 - 24	198,547.00	17,286.00	14,834.00	7,723.00	18,674.00
25 - 29	540,996.00	93,853.00	32,051.00	30,918.00	55,185.00
30 - 39	1,431,086.00	232,780.00	89,876.00	79,492.00	174,273.00
40 - 49	1,106,671.00	192,692.00	63,501.00	74,970.00	113,685.00
50 - 59	759,203.00	125,708.00	39,013.00	50,611.00	72,762.00
60 and above	882,700.00	120,587.00	40,053.00	35,989.00	79,011.00
Not stated	*	*	-	-	-
Total	**4,998,598.00**	**793,610.00**	**282,767.00**	**283,283.00**	**525,181.00**

Table 21.5 Holders Applying Inputs by Age group
Somale

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	-	-	-	-	-
18 - 20	*	-	-	-	*
21 - 24	741.00	-	-	-	*
25 - 29	2,076.00	-	*	-	*
30 - 39	7,527.00	-	*	-	1,551.00
40 - 49	5,198.00	-	*	-	*
50 - 59	5,595.00	-	*	-	1,266.00
60 and above	6,219.00	-	*	-	*
Not stated	-	-	-	-	-
Total	**27,633.00**	**-**	*	**-**	*

Table 21.6 Holders Applying Inputs by Age group
Benshangul-Gumuz

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	*	-	-	-	-
18 - 20	1,584.00	-	-	-	*
21 - 24	2,838.00	-	-	-	*
25 - 29	6,104.00	505.00	347.00	*	887.00
30 - 39	19,865.00	735.00	*	*	2,326.00
40 - 49	14,801.00	1,031.00	*	*	2,062.00
50 - 59	10,322.00	919.00	*	*	1,502.00
60 and above	11,370.00	739.00	378.00	-	2,275.00
Not stated	-	-	-	-	-
Total	**67,248.00**	**3,928.00**	**1,717.00**	*	**9,635.00**

Table 21.7 Holders Applying Inputs by Age group
(S.N.N.P.R)

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	12,292.00	*	-	*	-
18 - 20	53,172.00	9,612.00	3,717.00	3,215.00	*
21 - 24	163,979.00	39,157.00	17,424.00	6,693.00	1,068.00
25 - 29	661,885.00	233,225.00	86,035.00	39,921.00	16,055.00
30 - 39	1,969,074.00	741,967.00	275,059.00	107,330.00	48,624.00
40 - 49	1,780,773.00	756,813.00	236,181.00	78,096.00	31,982.00
50 - 59	1,090,038.00	460,795.00	151,194.00	53,879.00	*
60 and above	1,258,582.00	497,610.00	141,516.00	57,991.00	*
Not stated	948.00	*	*	-	-
Total	**6,990,743.00**	**2,741,155.00**	**911,385.00**	**347,899.00**	**150,151.00**

Table 21.8 Holders Applying Inputs by Age group
Gambela

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	*	-	-	-	-
18 - 20	389.00	-	*	-	-
21 - 24	782.00	-	*	-	-
25 - 29	3,411.00	-	*	*	-
30 - 39	10,683.00	-	284.00	*	*
40 - 49	9,912.00	-	*	*	-
50 - 59	5,487.00	-	-	-	-
60 and above	3,375.00	-	-	-	-
Not stated	*	-	-	-	-
Total	**34,130.00**	**-**	**555.00**	*	*

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	*	-	-	-	-
25 - 29	*	-	-	-	-
30 - 39	1,641.00	369.00	-	-	*
40 - 49	1,543.00	466.00	*	-	*
50 - 59	393.00	*	-	-	-
60 and above	329.00	*	-	-	*
Not stated	-	-	-	-	-
Total	**4,211.00**	**978.00**	*	**-**	**596.00**

Table 21.10 Holders Applying Inputs by Age group
Dire Dawa

Age group	All Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	-	-	-	-	-
18 - 20	-	-	-	-	-
21 - 24	*	-	-	-	*
25 - 29	37.00	-	-	-	*
30 - 39	139.00	*	*	*	139.00
40 - 49	234.00	*	*	*	198.00
50 - 59	74.00	*	-	-	74.00
60 and above	74.00	-	-	-	38.00
Not stated	-	-	-	-	-
Total	**568.00**	**128.00**	*	**73.00**	**486.00**

Table 22. Holders Applying Inputs by Educational Status

National

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	7,479,168.00	1,931,243.00	621,358.00	360,673.00	535,384.00
Literate	843,496.00	235,187.00	92,178.00	41,362.00	99,375.00
Grades 1 - 3	1,743,271.00	518,297.00	164,021.00	101,437.00	130,862.00
Grades 4 - 6	2,134,196.00	640,599.00	213,195.00	117,507.00	140,428.00
Grades 7 - 8	936,389.00	323,736.00	117,546.00	59,773.00	72,262.00
Grades 9 - 11	248,678.00	85,036.00	28,924.00	14,226.00	14,689.00
Grade 12 complete	84,144.00	33,113.00	18,592.00	4,391.00	*
Above grade 12	28,561.00	15,289.00	*	*	*
Total	**13,497,903.00**	**3,782,501.00**	**1,259,187.00**	**700,453.00**	**1,001,415.00**

Table 22.1 Holders Applying Inputs by Educational Status

Tigray

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	21,550.00	*	*	*	*
Literate	*	*	-	-	*
Grades 1 - 3	*	*	-	*	*
Grades 4 - 6	*	*	-	-	*
Grades 7 - 8	*	-	-	*	-
Grades 9 - 11	*	*	*	-	-
Grade 12 complete	*	*	-	-	*
Above grade 12	-	-	-	-	-
Total	**30,814.00**	*	*	*	*

Table 22.2 Holders Applying Inputs by Educational Status

Afar

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	19,384.00	*	3,616.00	412.00	18,137.00
Literate	1,199.00	-	*	-	1,148.00
Grades 1 - 3	1,121.00	-	*	-	1,121.00
Grades 4 - 6	1,248.00	-	*	-	1,248.00
Grades 7 - 8	*	-	-	-	*
Grades 9 - 11	-	-	-	-	-
Grade 12 complete	*	-	-	-	*
Above grade 12	-	-	-	-	-
Total	**23,436.00**	*	**4,799.00**	**412.00**	**22,139.00**

Table 22.3 Holders Applying Inputs by Educational Status
Amhara

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	818,298.00	123,135.00	21,006.00	40,446.00	163,248.00
Literate	260,750.00	57,303.00	*	12,990.00	55,395.00
Grades 1 - 3	72,436.00	15,722.00	*	2,664.00	12,040.00
Grades 4 - 6	116,009.00	26,423.00	3,848.00	5,133.00	28,553.00
Grades 7 - 8	44,648.00	8,216.00	*	2,596.00	13,596.00
Grades 9 - 11	8,055.00	2,607.00	-	*	1,655.00
Grade 12 complete	*	-	-	-	-
Above grade 12	-	-	-	-	-
Total	**1,320,523.00**	**233,406.00**	**55,739.00**	**64,170.00**	**274,487.00**

Table 22.4 Holders Applying Inputs by Educational Status
Oromia

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	2,787,939.00	426,686.00	178,811.00	151,595.00	283,082.00
Literate	252,256.00	50,551.00	12,256.00	13,089.00	19,294.00
Grades 1 - 3	735,764.00	101,641.00	30,535.00	35,469.00	80,121.00
Grades 4 - 6	769,934.00	130,770.00	34,468.00	47,575.00	85,920.00
Grades 7 - 8	323,690.00	56,683.00	19,265.00	28,185.00	36,353.00
Grades 9 - 11	91,065.00	14,597.00	*	3,594.00	12,221.00
Grade 12 complete	26,087.00	*	*	2,692.00	*
Above grade 12	11,862.00	*	*	*	*
Total	**4,998,598.00**	**793,610.00**	**282,767.00**	**283,283.00**	**525,181.00**

Table 22.5 Holders Applying Inputs by Educational Status
Somale

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	15,894.00	-	*	-	3,001.00
Literate	5,756.00	-	*	-	*
Grades 1 - 3	2,012.00	-	*	-	*
Grades 4 - 6	1,646.00	-	*	-	*
Grades 7 - 8	2,210.00	-	-	-	*
Grades 9 - 11	*	-	-	-	-
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	**27,633.00**	**-**	*	**-**	*

Table 22.6 Holders Applying Inputs by Educational Status
Benshangul-Gumuz

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	40,958.00	1,880.00	*	*	5,882.00
Literate	7,555.00	*	*	-	1,108.00
Grades 1 - 3	9,103.00	365.00	*	-	829.00
Grades 4 - 6	6,505.00	*	*	*	1,209.00
Grades 7 - 8	2,782.00	*	*	-	*
Grades 9 - 11	*	-	-	-	*
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	**67,248.00**	**3,928.00**	**1,717.00**	*	**9,635.00**

Table 22.7 Holders Applying Inputs by Educational Status
(S.N.N.P.R)

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	3,747,690.00	1,372,227.00	415,345.00	164,503.00	51,752.00
Literate	311,594.00	124,990.00	52,314.00	15,156.00	*
Grades 1 - 3	918,387.00	400,149.00	130,485.00	63,028.00	*
Grades 4 - 6	1,231,571.00	482,287.00	173,872.00	64,482.00	22,330.00
Grades 7 - 8	559,929.00	258,345.00	96,208.00	28,743.00	21,040.00
Grades 9 - 11	147,520.00	67,601.00	24,926.00	10,289.00	*
Grade 12 complete	57,416.00	26,571.00	15,473.00	*	-
Above grade 12	16,636.00	8,985.00	*	-	-
Total	**6,990,743.00**	**2,741,155.00**	**911,385.00**	**347,899.00**	**150,151.00**

Table 22.8 Holders Applying Inputs by Educational Status
Gambela

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	24,107.00	-	346.00	*	-
Literate	810.00	-	-	*	-
Grades 1 - 3	2,656.00	-	*	*	-
Grades 4 - 6	3,372.00	-	*	*	*
Grades 7 - 8	1,864.00	-	*	-	-
Grades 9 - 11	1,168.00	-	*	-	-
Grade 12 complete	89.00	-	-	-	-
Above grade 12	*	-	-	-	-
Total	**34,130.00**	**-**	**555.00**	*	*

Table 22.9 Holders Applying Inputs by Educational Status

Harari

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	2,956.00	616.00	*	-	*
Literate	*	-	-	-	-
Grades 1 - 3	*	*	-	-	*
Grades 4 - 6	743.00	*	-	-	-
Grades 7 - 8	*	*	*	-	*
Grades 9 - 11	*	-	-	-	-
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	**4,211.00**	**978.00**	*	**-**	**596.00**

Table 22.10 Holders Applying Inputs by Educational Status

Dire Dawa

Educational Status of Holders	All Crop Holder	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	392.00	*	-	*	319.00
Literate	*	-	-	-	*
Grades 1 - 3	46.00	-	-	-	46.00
Grades 4 - 6	84.00	*	*	*	84.00
Grades 7 - 8	*	*	*	*	*
Grades 9 - 11	-	-	-	-	-
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	**568.00**	**128.00**	*	**73.00**	**486.00**

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

Cause of damage	Crop category				
	All holders	**All crops**	**Cereals**	**Pulses**	**Oilseeds**
All damage	5,673,200.00	283,903.00	142,181.00	68,497.00	10,202.00
Crop disease	745,730.00	24,794.00	9,098.00	5,126.00	434.00
Frost or floods	630,837.00	30,526.00	13,415.00	8,068.00	*
Locust	*	76.00	33.00	*	22.00
Shortage of rain	1,121,334.00	68,969.00	41,191.00	16,498.00	2,294.00
Too much rain	2,047,421.00	80,894.00	33,901.00	22,404.00	4,563.00
Wild animals	293,418.00	8,187.00	5,006.00	1,140.00	*
Birds	21,490.00	698.00	*	115.00	-
Hailstone	152,657.00	7,420.00	3,346.00	1,538.00	*
Pests	400,383.00	18,354.00	9,168.00	6,055.00	61.00
Weeds	354,044.00	10,284.00	6,504.00	1,794.00	148.00
Others	768,449.00	33,702.00	20,079.00	5,753.00	2,133.00

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

Cause of damage	Crop category				
	All holders	**All crops**	**Cereals**	**Pulses**	**Oilseeds**
All damage	19,696.00	2,765.00	1,788.00	*	-
Crop disease	*	*	*	-	-
Frost or floods	*	*	*	-	-
Locust	-	-	-	-	-
Shortage of rain	16,075.00	2,561.00	1,712.00	*	-
Too much rain	*	*	*	-	-
Wild animals	-	-	-	-	-
Birds	-	-	-	-	-
Hailstone	-	-	-	-	-
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	Crop category				
	All holders	**All crops**	**Cereals**	**Pulses**	**Oilseeds**
All damage	18,445.00	11,841.00	11,406.00	-	-
Crop disease	*	*	*	-	-
Frost or floods	*	*	*	-	-
Locust	-	-	-	-	-
Shortage of rain	*	*	*	-	-
Too much rain	*	*	*	-	-
Wild animals	*	*	*	-	-
Birds	-	-	-	-	-
Hailstone	-	-	-	-	-
Pests	1,720.00	*	*	-	-
Weeds	476.00	*	*	-	-
Others	14,058.00	9,457.00	9,126.00	-	-

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

Amhara

Cause of damage	Crop category				
	All holders	**All crops**	**Cereals**	**Pulses**	**Oilseeds**
All damage	653,634.00	70,979.00	36,043.00	13,692.00	5,586.00
Crop disease	139,989.00	10,570.00	4,972.00	*	392.00
Frost or floods	*	*	4,878.00	*	-
Locust	-	-	-	-	-
Shortage of rain	157,253.00	15,590.00	12,315.00	1,446.00	-
Too much rain	214,502.00	15,588.00	5,023.00	3,698.00	3,883.00
Wild animals	6,249.00	151.00	75.00	*	-
Birds	*	*	*	*	-
Hailstone	43,411.00	5,784.00	*	565.00	*
Pests	58,792.00	7,927.00	3,836.00	*	-
Weeds	12,987.00	635.00	377.00	*	*
Others	63,741.00	5,422.00	*	*	1,309.00

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

Cause of damage	Crop category				
	All holders	**All crops**	**Cereals**	**Pulses**	**Oilseeds**
All damage	1,635,769.00	71,565.00	39,281.00	16,751.00	949.00
Crop disease	356,892.00	8,903.00	3,187.00	1,246.00	40.00
Frost or floods	157,243.00	6,987.00	3,338.00	1,528.00	-
Locust	65.00	14.00	14.00	-	-
Shortage of rain	260,296.00	14,595.00	8,351.00	4,722.00	361.00
Too much rain	299,928.00	22,110.00	13,869.00	5,017.00	17.00
Wild animals	125,027.00	2,430.00	1,202.00	482.00	-
Birds	11,666.00	*	*	*	-
Hailstone	31,694.00	422.00	*	*	-
Pests	198,600.00	4,567.00	2,126.00	1,992.00	13.00
Weeds	62,447.00	1,520.00	865.00	285.00	32.00
Others	305,915.00	9,594.00	5,825.00	1,271.00	*

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

Cause of damage	Crop category				
	All holders	**All crops**	**Cereals**	**Pulses**	**Oilseeds**
All damage	16,706.00	1,462.00	1,177.00	247.00	-
Crop disease	*	*	*	-	-
Frost or floods	-	-	-	-	-
Locust	-	-	-	-	-
Shortage of rain	12,667.00	1,344.00	1,092.00	243.00	-
Too much rain	-	-	-	-	-
Wild animals	*	*	*	-	-
Birds	-	-	-	-	-
Hailstone	-	-	-	-	-
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	Crop category				
	All holders	**All crops**	**Cereals**	**Pulses**	**Oilseeds**
All damage	14,182.00	211.00	145.00	48.00	-
Crop disease	2,349.00	12.00	3.00	*	-
Frost or floods	*	*	*	*	-
Locust	-	-	-	-	-
Shortage of rain	*	*	*	-	-
Too much rain	-	-	-	-	-
Wild animals	*	*	*	*	-
Birds	-	-	-	-	-
Hailstone	*	*	-	-	-
Pests	*	*	*	*	-
Weeds	*	*	*	*	-
Others	2,399.00	37.00	*	20.00	-

Table 23.7 Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage
(S.N.N.P.R)

Cause of damage	Crop category				
	All holders	**All crops**	**Cereals**	**Pulses**	**Oilseeds**
All damage	3,310,260.00	124,900.00	52,265.00	37,157.00	3,666.00
Crop disease	242,438.00	5,086.00	802.00	1,252.00	*
Frost or floods	396,811.00	14,360.00	5,156.00	6,366.00	*
Locust	*	62.00	19.00	*	22.00
Shortage of rain	673,805.00	34,464.00	17,452.00	9,510.00	*
Too much rain	1,531,604.00	43,127.00	14,994.00	13,686.00	662.00
Wild animals	159,249.00	4,698.00	2,826.00	602.00	*
Birds	5,691.00	80.00	*	*	-
Hailstone	77,484.00	1,214.00	*	799.00	*
Pests	131,032.00	4,778.00	2,170.00	1,278.00	48.00
Weeds	272,885.00	7,904.00	5,065.00	1,312.00	116.00
Others	381,349.00	9,127.00	3,534.00	2,326.00	*

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

Cause of damage	Crop category				
	All holders	All crops	Cereals	Pulses	Oilseeds
All damage	4,069.00	170.00	70.00	32.00	*
Crop disease	*	*	-	*	-
Frost or floods	282.00	12.00	*	*	-
Locust	-	-	-	-	-
Shortage of rain	*	*	*	*	-
Too much rain	835.00	26.00	12.00	2.00	-
Wild animals	67.00	*	-	*	-
Birds	*	*	*	-	-
Hailstone	-	-	-	-	-
Pests	*	*	*	-	*
Weeds	1,531.00	40.00	17.00	14.00	-
Others	519.00	15.00	5.00	*	-

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

Cause of damage	Crop category				
	All holders	All crops	Cereals	Pulses	Oilseeds
All damage	*	*	*	-	-
Crop disease	-	-	-	-	-
Frost or floods	-	-	-	-	-
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	-	-	-	-	-
Wild animals	-	-	-	-	-
Birds	-	-	-	-	-
Hailstone	-	-	-	-	-
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	Crop category				
	All holders	All crops	Cereals	Pulses	Oilseeds
All damage	321.00	9.00	3.00	-	-
Crop disease	170.00	3.00	*	-	-
Frost or floods	*	*	*	-	-
Locust	-	-	-	-	-
Shortage of rain	*	*	*	-	-
Too much rain	*	*	*	-	-
Wild animals	*	*	-	-	-
Birds	-	-	-	-	-
Hailstone	-	-	-	-	-
Pests	128.00	3.00	*	-	-
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 h[th] stratum.

M_h is the measure of size of the h[th] stratum as obtained from the sampling frame.

m_{hi} is the measure of size of the i[th] sample EA in the h[th] stratum obtained from the sampling frame.

H_{hi} is the total number of agricultural households of the i[th] sample EA in the h[th] stratum.

h_{hi} is the number of sample agricultural households successfully covered in the i[th] sample EA in the h[th] stratum.

a_{hij} is the value of area for agricultural household j, in the i[th] EA in the h[th] 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, $H_{hi} = a_{hi} * \overline{Y}_{hi}$

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.

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

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

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*.

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

$\hat{A}_{hij},\hat{\mathrm{P}}_{hij}$ 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.

$$Var(\hat{A})=\sum_{h}^{L}Var(\hat{A}_h),Var(\hat{\mathrm{P}})=\sum_{h}^{L}Var(\hat{P}_h)$$

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:

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

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 Production

TABLE24. Estimates, Standard Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

National

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	11,042,272.00	201,639.71	1.83	1,770,993.41	56,337.20	3.18	19,085,226.55	694,801.31	3.64
Cereals..... .	9,617,401.00	206,622.15	2.15	1,298,973.22	46,569.37	3.59	14,823,546.49	597,957.88	4.03
Teff..... .	472,254.00	67,057.67	14.20	111,486.82	16,063.55	14.41	1,055,209.94	153,329.94	14.53
Barley..... .	988,795.00	79,237.44	8.01	190,253.76	16,827.91	8.84	1,982,278.78	198,044.01	9.99
Wheat..... .	133,246.00	22,836.35	17.14	77,410.91	13,699.22	17.70	736,381.43	110,032.86	14.94
Maize..... .	8,581,941.00	207,499.57	2.42	847,172.75	35,184.00	4.15	10,623,350.51	501,995.39	4.73
Sorghum..... .	477,203.00	67,446.38	14.13	61,573.60	9,729.50	15.80	313,399.11	95,927.74	30.61
Finger millet..... .	13,485.00	4,182.05	31.01	915.26	323.67	35.36	2,615.66	1,344.09	51.39
Oats/'Aja'..... .	39,300.00	14,253.21	36.27	8,987.42	656.78	7.31	102,426.75	8,495.62	8.29
Rice..... .	5,986.00	3,388.02	56.59	1,172.69	1,033.01	88.09	7,884.31	7,004.59	88.84
Pulses..... .	6,601,410.00	186,260.21	2.82	436,435.21	25,568.62	5.86	4,013,627.28	262,286.23	6.53
Horse beans..... .	112,592.00	16,493.97	14.65	4,676.72	757.91	16.21	52,452.77	9,633.92	18.37
Field peas..... .	137,376.00	19,876.98	14.47	25,147.69	4,875.81	19.39	214,914.61	49,271.92	22.93
Haricot beans white...	576,534.00	66,435.29	11.52	62,656.76	11,408.16	18.21	374,063.64	65,651.28	17.55
Haricot beans red..... .	5,605,978.00	182,846.29	3.26	243,678.15	13,463.75	5.53	2,392,507.76	157,590.31	6.59
Chick-peas..... .	131,387.00	15,279.98	11.63	18,482.29	1,573.73	8.51	213,689.90	9,155.20	4.28
Lentils..... .	167,209.00	18,630.22	11.14	23,036.58	3,278.80	14.23	235,862.38	37,522.23	15.91
Vetch..... .	40,793.00	20,946.46	51.35	7,492.41	4,975.76	66.41	44,294.44	38,661.79	87.28
Soya beans..... .	10,904.00	3,677.23	33.72	309.73	137.33	44.34	446.83	422.41	94.53
Fenugreek..... .	18,633.00	5,445.20	29.22	1,245.77	384.59	30.87	8,739.20	2,380.52	27.24
Mung bean/"Masho"..... .	87,992.00	16,371.05	18.61	49,414.24	15,830.04	32.04	476,655.74	186,283.36	39.08
Gibto..... .	9,326.00	5,298.81	56.82	294.88	178.00	60.36	-	-	-
Oilseeds..... .	203,365.00	19,693.42	9.68	35,584.97	5,847.16	16.43	248,052.77	42,106.26	16.97
Neug..... .	228.00	161.08	70.70	11.10	10.47	94.27	-	-	-
Linseed..... .	7,648.00	2,012.63	26.32	235.07	102.62	43.65	822.68	320.06	38.91
Groundnuts..... .	39,127.00	10,871.92	27.79	7,219.71	3,274.88	45.36	93,557.03	39,659.05	42.39
Sunflower..... .	100,155.00	1,974.39	1.97	10,679.84	61.58	0.58	126,522.68	626.83	0.50
Sesame..... .	24,596.00	5,838.31	23.74	16,881.33	4,685.48	27.76	26,252.08	12,159.50	46.32
Rapeseed..... .	34,458.00	15,191.89	44.09	557.91	230.43	41.30	898.31	627.08	69.81
Vegetables..... .	3,703,827.00	170,063.35	4.59	63,673.53	8,370.21	13.15	5,062,654.13	660,369.99	13.04
Lettuce..... .	5,389.00	2,521.34	46.79	41.15	28.54	69.37	1,124.52	1,118.99	99.51
Head Cabbage..... .	110,261.00	21,868.79	19.83	2,636.28	985.54	37.38	194,771.78	83,178.91	42.71
Ethiopian Cabbage..... .	3,332,272.00	165,263.22	4.96	47,992.83	7,045.21	14.68	4,367,076.49	634,703.99	14.53
Tomatoes..... .	164,546.00	32,373.39	19.67	7,326.83	3,969.49	54.18	320,101.06	157,596.22	49.23
Green peppers..... .	237,695.00	32,886.63	13.84	2,820.01	586.47	20.80	148,461.68	33,116.65	22.31
Red peppers..... .	68,875.00	15,088.41	21.91	2,806.56	865.13	30.83	30,640.89	12,125.38	39.57
Swiss chard..... .	18,457.00	6,835.79	37.04	49.87	18.10	36.29	477.72	271.90	56.92
Root Crops..... .	5,019,524.00	204,768.58	4.08	277,000.10	19,536.72	7.05	32,166,812.38	3,691,038.73	11.47
Beetroot..... .	103,984.00	17,142.07	16.49	1,206.60	278.10	23.05	82,215.18	20,947.00	25.48
Carrot..... .	109,053.00	31,422.02	28.81	961.66	289.38	30.09	44,052.62	11,726.37	26.62
Onion..... .	349,615.00	34,020.49	9.73	18,922.18	3,538.65	18.70	1,096,928.08	178,065.14	16.23
Potatoes..... .	3,705,879.00	201,992.93	5.45	226,428.84	19,138.84	8.45	26,911,691.98	3,680,687.43	13.68
Yam/'Boye'..... .	224,374.00	34,720.39	15.47	2,959.60	728.19	24.60	268,463.66	115,879.06	43.16
Garlic..... .	528,282.00	49,972.97	9.46	6,789.11	1,375.85	20.27	578,172.67	125,157.80	21.65
Taro/'Godere'..... .	383,801.00	34,675.01	9.03	5,306.41	620.40	11.69	557,110.78	94,707.27	17.00
Sweet potatoes..... .	510,049.00	51,462.55	10.09	14,425.69	1,780.94	12.35	2,628,177.42	302,771.89	11.52

TABLE 24.1. Estimates, Standar Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

Tigray

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	25,139.00	6,241.37	24.83	8,539.28	2,445.71	28.64	89,656.14	26,282.36	29.31
Cereals..... .	21,232.00	4,598.85	21.66	7,536.22	2,445.63	32.45	81,837.05	26,486.73	32.37
Teff..... .	14,433.00	4,735.85	32.81	5,331.24	2,049.04	38.43	56,143.82	18,937.59	33.73
Barley..... .	4,438.00	3,094.20	69.72	501.89	376.62	75.04	1,900.17	1,704.30	89.69
Wheat..... .	727.00	716.76	98.53	71.40	70.38	98.57	274.46	270.54	98.57
Maize..... .	6,058.00	2,530.45	41.77	1,181.23	603.01	51.05	17,460.80	10,677.77	61.15
Sorghum..... .	1,176.00	884.28	75.22	450.46	308.62	68.51	6,057.80	4,156.13	68.61
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	6,774.00	5,422.31	80.05	1,003.07	874.72	87.20	7,819.09	7,680.56	98.23
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	2,495.00	1,648.44	66.06	224.18	148.25	66.13	898.38	885.29	98.54
Haricot beans white...		-	-	-	-	-	-	-	-
Haricot beans red..... .	-	-	-	-	-	-	-	-	-
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	4,584.00	4,502.56	98.23	712.76	700.24	98.24	6,491.81	6,377.79	98.24
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	917.00	904.07	98.61	66.13	65.56	99.14	428.90	425.20	99.14
Mung bean/"Masho"..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oilseeds..... .	-	-	-	-	-	-	-	-	-
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	-	-	-	-	-	-	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	3,015.00	1,613.73	53.52	174.47	112.60	64.54	5,894.77	5,719.23	97.02
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage..... .	-	-	-	-	-	-	-	-	-
Tomatoes..... .	-	-	-	-	-	-	-	-	-
Green peppers..... .	1,647.00	1,452.27	88.18	111.46	109.62	98.35	5,815.69	5,726.72	98.47
Red peppers..... .	1,368.00	964.11	70.46	63.01	44.89	71.24	79.08	53.74	67.96
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	5,603.00	3,798.57	67.79	359.91	286.27	79.54	10,885.23	9,503.12	87.30
Beetroot..... .	-	-	-	-	-	-	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	4,340.00	3,830.86	88.26	315.91	289.26	91.56	10,885.23	9,503.12	87.30
Potatoes..... .	1,263.00	900.13	71.28	44.00	30.91	70.26	-	-	-
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	-	-	-	-	-	-	-	-	-
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	-	-	-	-	-	-	-	-	-

TABLE24.2 Estimates, Standar Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

Afar

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	22,655.00	3,687.18	16.28	24,105.27	6,363.60	26.40	385,624.41	92,003.43	23.86
Cereals..... .	21,725.00	3,727.87	17.16	23,711.74	6,365.74	26.85	381,060.28	92,005.65	24.14
Teff..... .	266.00	234.95	88.48	31.17	27.73	88.94	415.91	369.91	88.94
Barley..... .	-	-	-	-	-	-	-	-	-
Wheat..... .	131.00	132.06	101.02	15.86	16.02	101.02	30.93	31.24	101.02
Maize..... .	21,419.00	3,763.37	17.57	23,607.33	6,372.76	26.99	379,642.71	92,050.94	24.25
Sorghum..... .	270.00	197.29	73.04	57.38	46.10	80.34	970.74	771.25	79.45
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	1,298.00	580.44	44.72	388.96	187.97	48.33	4,564.12	2,700.49	59.17
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...		261.00	252.71	96.65	63.84	62.15	97.36	-	-
Haricot beans red..... .	-	-	-	-	-	-	-	-	-
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"..... .	1,037.00	522.54	50.41	325.12	177.39	54.56	4,564.12	2,700.49	59.17
Gibto..... .	-	-	-	-	-	-	-	-	-
Oilseeds..... .	131.00	132.06	101.02	4.56	4.61	101.02	-	-	-
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	131.00	132.06	101.02	4.56	4.61	101.02	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	1,133.00	402.25	35.51	144.75	107.68	74.39	-	-	-
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage..... .	205.00	200.45	97.77	0.84	0.82	97.77	-	-	-
Tomatoes..... .	682.00	353.61	51.83	75.42	53.73	71.24	-	-	-
Green peppers..... .	258.00	262.80	101.83	11.08	11.28	101.83	-	-	-
Red peppers..... .	708.00	323.23	45.62	57.40	45.10	78.57	-	-	-
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	594.00	349.53	58.86	27.44	18.89	68.83	-	-	-
Beetroot..... .	-	-	-	-	-	-	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	389.00	286.34	73.65	25.36	18.78	74.04	-	-	-
Potatoes..... .	-	-	-	-	-	-	-	-	-
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	-	-	-	-	-	-	-	-	-
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	205.00	200.45	97.77	2.08	2.03	97.77	-	-	-

TABLE24.3 Estimates, Standar Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

Amhara

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	984,446.00	47,764.32	4.85	267,181.82	23,521.31	8.80	2,682,882.76	261,879.09	9.76
Cereals..... .	739,378.00	48,701.23	6.59	152,485.67	14,450.21	9.48	1,532,282.34	177,152.28	11.56
Teff..... .	170,760.00	45,417.46	26.60	25,718.19	7,645.85	29.73	275,019.85	74,745.60	27.18
Barley..... .	402,826.00	50,425.75	12.52	88,341.79	14,683.64	16.62	806,186.17	159,808.67	19.82
Wheat..... .	67,140.00	18,180.23	27.08	19,281.32	6,138.86	31.84	181,476.51	58,314.42	32.13
Maize..... .	220,902.00	39,328.00	17.80	17,996.12	3,842.71	21.35	260,775.42	74,681.72	28.64
Sorghum..... .	4,172.00	2,492.53	59.75	185.84	134.19	72.21	-	-	-
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	12,909.00	3,972.71	30.77	962.41	309.01	32.11	8,824.39	3,323.63	37.66
Rice..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	405,861.00	36,155.84	8.91	104,076.23	18,211.00	17.50	1,025,331.89	194,126.48	18.93
Horse beans..... .	3,590.00	1,767.94	49.25	234.21	162.86	69.54	2,212.55	1,518.43	68.63
Field peas..... .	55,237.00	13,769.23	24.93	5,355.11	1,968.90	36.77	44,499.73	12,616.44	28.35
Haricot beans white...	9,758.00	6,303.68	64.60	4,874.14	3,787.97	77.72	28,536.78	20,256.87	70.99
Haricot beans red..... .	30,181.00	18,167.46	60.19	1,775.35	915.97	51.59	24,569.48	12,815.52	52.16
Chick-peas..... .	128,538.00	15,231.60	11.85	18,027.51	1,552.54	8.61	210,643.34	8,903.75	4.23
Lentils..... .	145,121.00	16,729.75	11.53	18,561.34	2,665.65	14.36	202,179.90	34,993.50	17.31
Vetch..... .	39,486.00	20,935.51	53.02	7,459.48	4,975.69	66.70	44,294.44	38,661.79	87.28
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	14,049.00	5,281.18	37.59	753.65	363.78	48.27	4,084.12	2,071.08	50.71
Mung bean/"Masho"..... .	72,022.00	15,553.81	21.60	47,035.44	15,816.62	33.63	464,311.57	186,252.04	40.11
Gibto..... .	-	-	-	-	-	-	-	-	-
Oilseeds..... .	95,208.00	1,207.62	1.27	10,619.93	93.40	0.88	125,268.53	305.12	0.24
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	1,889.00	1,059.20	56.06	111.09	93.25	83.94	452.99	302.25	66.72
Groundnuts..... .	-	-	-	-	-	-	-	-	-
Sunflower..... .	92,515.00	-	-	10,502.84	-	-	124,773.68	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	803.00	580.04	72.23	6.00	5.38	89.72	41.86	41.73	99.69
Vegetables..... .	145,423.00	30,994.02	21.31	5,824.92	4,020.74	69.03	225,287.82	153,166.75	67.99
Lettuce..... .	2,067.00	2,056.37	99.51	26.36	26.23	99.52	-	-	-
Head Cabbage..... .	6,975.00	3,081.54	44.18	223.24	112.65	50.46	12,940.42	7,434.28	57.45
Ethiopian Cabbage..... .	68,918.00	19,391.24	28.14	300.85	78.74	26.17	25,701.97	7,418.33	28.86
Tomatoes..... .	36,839.00	26,461.70	71.83	4,195.05	3,880.40	92.50	170,618.57	152,997.51	89.67
Green peppers..... .	13,717.00	6,540.88	47.68	327.52	174.83	53.38	9,017.49	7,341.50	81.41
Red peppers..... .	27,956.00	8,739.41	31.26	749.16	289.47	38.64	6,901.43	2,631.48	38.13
Swiss chard..... .	2,905.00	1,759.89	60.59	2.74	1.66	60.79	107.93	66.09	61.23
Root Crops..... .	716,328.00	39,109.40	5.46	68,855.40	5,797.06	8.42	4,787,418.37	350,797.53	7.33
Beetroot..... .	2,244.00	1,189.72	53.02	37.47	27.82	74.24	1,498.44	1,240.00	82.75
Carrot..... .	7,919.00	4,155.26	52.47	260.02	146.44	56.32	13,213.86	7,834.03	59.29
Onion..... .	79,103.00	18,430.72	23.30	7,403.21	2,826.44	38.18	299,739.74	111,579.46	37.23
Potatoes..... .	626,857.00	36,462.67	5.82	58,943.52	4,844.95	8.22	4,296,201.56	306,529.44	7.13
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	51,360.00	14,966.83	29.14	2,137.09	1,186.60	55.52	170,724.57	107,039.71	62.70
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	2,523.00	1,489.28	59.03	74.08	49.08	66.25	6,040.21	4,016.96	66.50

TABLE24.4 Estimates, Standar Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

Oromia

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	4,428,937.00	120,667.11	2.72	700,827.18	31,986.64	4.56	7,847,924.25	413,331.83	5.27
Cereals..... .	4,045,275.00	118,503.64	2.93	562,945.65	27,507.66	4.89	6,597,839.55	368,737.55	5.59
Teff..... .	107,194.00	22,836.31	21.30	28,694.04	5,708.84	19.90	272,780.87	57,935.95	21.24
Barley..... .	316,693.00	51,159.20	16.15	72,256.34	6,489.76	8.98	883,844.82	105,521.07	11.94
Wheat..... .	56,132.00	13,519.49	24.09	57,103.46	12,241.87	21.44	542,125.50	93,205.45	17.19
Maize..... .	3,719,856.00	122,011.93	3.28	368,453.46	22,698.75	6.16	4,776,597.08	330,564.16	6.92
Sorghum..... .	303,669.00	64,596.97	21.27	28,239.12	7,328.93	25.95	28,862.87	5,647.10	19.57
Finger millet..... .	4,435.00	2,341.00	52.79	195.49	116.53	59.61	-	-	-
Oats/'Aja'..... .	21,909.00	13,515.51	61.69	7,989.14	579.31	7.25	93,602.36	7,818.51	8.35
Rice..... .	357.00	293.39	82.22	14.60	6.52	44.68	26.06	12.39	47.54
Pulses..... .	2,549,031.00	127,910.77	5.02	131,750.37	10,923.33	8.29	1,240,097.88	112,688.27	9.09
Horse beans..... .	47,596.00	10,503.96	22.07	1,937.43	380.52	19.64	23,058.58	4,564.77	19.80
Field peas..... .	44,736.00	10,821.57	24.19	16,835.68	4,356.07	25.87	158,020.27	47,430.27	30.02
Haricot beans white...	502,275.00	64,780.55	12.90	39,499.45	7,536.98	19.08	320,999.99	62,133.61	19.36
Haricot beans red..... .	2,026,229.00	126,469.09	6.24	68,014.08	6,602.87	9.71	701,456.50	80,647.35	11.50
Chick-peas..... .	853.00	639.83	75.05	216.35	205.82	95.13	27.04	10.50	38.84
Lentils..... .	13,511.00	6,559.20	48.55	3,616.07	1,774.26	49.07	26,860.38	11,943.79	44.47
Vetch..... .	444.00	441.93	99.58	2.13	2.12	99.58	-	-	-
Soya beans..... .	4,977.00	2,970.26	59.68	224.78	131.24	58.39	429.96	422.08	98.17
Fenugreek..... .	2,449.00	704.49	28.77	420.22	106.12	25.25	4,184.80	1,093.51	26.13
Mung bean/"Masho"..... .	2,243.00	375.62	16.74	960.90	99.85	10.39	5,060.36	542.89	10.73
Gibto..... .	2,117.00	1,958.45	92.53	23.29	16.97	72.89	-	-	-
Oilseeds..... .	39,525.00	15,252.70	38.59	6,131.16	546.06	8.91	9,986.83	1,503.36	15.05
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	1,580.00	1,058.66	66.99	40.68	18.02	44.30	210.59	82.57	39.21
Groundnuts..... .	3,582.00	1,898.20	53.00	155.49	93.38	60.06	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	3,496.00	671.63	19.21	5,410.07	486.76	9.00	9,010.07	1,378.91	15.30
Rapeseed..... .	30,867.00	15,096.84	48.91	524.92	229.94	43.80	766.17	621.77	81.15
Vegetables..... .	1,018,333.00	73,281.84	7.20	18,749.23	2,125.13	11.33	1,353,390.49	135,196.16	9.99
Lettuce..... .	1,849.00	1,307.14	70.68	11.19	11.01	98.43	1,124.52	1,118.99	99.51
Head Cabbage..... .	57,158.00	19,064.26	33.35	936.02	491.89	52.55	89,168.13	53,736.56	60.26
Ethiopian Cabbage..... .	811,139.00	64,916.22	8.00	13,008.81	1,569.10	12.06	1,037,980.52	109,531.55	10.55
Tomatoes..... .	100,144.00	17,521.79	17.50	2,088.29	536.15	25.67	125,724.66	33,413.82	26.58
Green peppers..... .	136,512.00	28,945.43	21.20	1,522.32	494.40	32.48	93,081.79	28,786.26	30.93
Red peppers..... .	25,632.00	11,328.93	44.20	1,176.19	641.36	54.53	5,941.08	4,280.13	72.04
Swiss chard..... .	931.00	719.08	77.25	6.40	4.55	71.05	369.79	263.74	71.32
Root Crops..... .	1,583,464.00	122,681.53	7.75	80,538.30	8,120.38	10.08	6,836,622.89	946,062.45	13.84
Beetroot..... .	44,633.00	10,832.97	24.27	440.35	144.12	32.73	30,015.68	10,673.37	35.56
Carrot..... .	17,145.00	5,563.42	32.45	264.16	133.42	50.51	10,355.06	5,196.80	50.19
Onion..... .	113,318.00	17,418.65	15.37	8,032.08	1,916.80	23.86	504,343.67	107,586.97	21.33
Potatoes..... .	1,243,912.00	119,856.96	9.64	64,869.86	7,784.31	12.00	5,749,298.74	935,436.95	16.27
Yam/'Boye'..... .	3,092.00	1,629.35	52.70	31.52	19.24	61.04	-	-	-
Garlic..... .	160,021.00	29,797.73	18.62	1,960.56	451.93	23.05	138,650.55	27,989.08	20.19
Taro/'Godere'..... .	31,620.00	7,920.54	25.05	609.39	191.76	31.47	8,833.38	6,833.08	77.36
Sweet potatoes..... .	144,022.00	40,210.58	27.92	4,330.37	1,253.80	28.95	395,125.82	108,998.02	27.59

TABLE24.5 Estimates, Standar Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

Somale

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	26,023.00	5,018.02	19.28	6,554.37	1,906.09	29.08	62,278.16	16,682.54	26.79
Cereals..... .	22,447.00	4,355.12	19.40	4,583.29	1,263.38	27.56	52,915.20	15,615.23	29.51
Teff..... .	-	-	-	-	-	-	-	-	-
Barley..... .	-	-	-	-	-	-	-	-	-
Wheat..... .	-	-	-	-	-	-	-	-	-
Maize..... .	22,121.00	4,368.84	19.75	4,515.51	1,272.16	28.17	52,248.70	15,690.86	30.03
Sorghum..... .	1,152.00	969.39	84.17	67.79	64.72	95.47	666.50	592.85	88.95
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	10,265.00	3,187.94	31.06	1,971.08	1,061.85	53.87	9,362.96	3,867.84	41.31
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...	388.00	201.29	51.83	90.71	59.71	65.82	673.60	439.23	65.21
Haricot beans red..... .	9,676.00	3,099.67	32.03	1,837.08	1,059.80	57.69	8,689.36	3,919.10	45.10
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"..... .	200.00	200.15	99.99	43.29	43.28	99.99	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oilseeds..... .	-	-	-	-	-	-	-	-	-
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	-	-	-	-	-	-	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	1,443.00	1,251.73	86.72	77.42	65.94	85.17	553.71	531.07	95.91
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	141.00	142.22	100.53	9.37	9.42	100.53	-	-	-
Ethiopian Cabbage..... .	-	-	-	-	-	-	-	-	-
Tomatoes..... .	796.00	762.11	95.79	29.93	28.78	96.17	342.43	329.30	96.17
Green peppers..... .	1,085.00	1,037.26	95.60	38.12	36.66	96.18	211.28	203.21	96.18
Red peppers..... .	-	-	-	-	-	-	-	-	-
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	1,120.00	732.10	65.35	55.34	33.75	60.98	1,052.53	809.17	76.88
Beetroot..... .	-	-	-	-	-	-	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	1,031.00	729.03	70.70	46.99	33.05	70.33	1,052.53	809.17	76.88
Potatoes..... .	-	-	-	-	-	-	-	-	-
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	-	-	-	-	-	-	-	-	-
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	89.00	88.94	99.81	8.35	8.33	99.81	-	-	-

TABLE24. 6 Estimates, Standar Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

Benshangul-Gumuz

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	62,980.00	3,445.94	5.47	8,006.96	741.41	9.26	73,263.10	8,160.75	11.14
Cereals..... .	56,480.00	3,912.50	6.93	4,193.46	466.50	11.12	34,765.73	5,165.38	14.86
Teff..... .	-	-	-	-	-	-	-	-	-
Barley..... .	1,010.00	395.35	39.13	69.32	41.60	60.01	610.19	355.26	58.22
Wheat..... .	77.00	77.69	100.30	6.72	6.74	100.30	-	-	-
Maize..... .	56,181.00	3,932.64	7.00	4,012.69	425.02	10.59	34,155.53	5,105.93	14.95
Sorghum..... .	1,425.00	705.98	49.53	99.91	71.41	71.48	-	-	-
Finger millet..... .	124.00	123.92	100.34	3.44	3.45	100.34	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	83.00	82.30	99.54	1.38	1.37	99.54	-	-	-
Pulses..... .	60,131.00	3,392.16	5.64	3,813.49	450.83	11.82	38,497.37	7,142.54	18.55
Horse beans..... .	1,341.00	759.45	56.61	114.77	79.75	69.48	1,012.04	797.84	78.84
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...	1,935.00	1,199.85	62.01	47.31	24.35	51.47	478.82	239.10	49.94
Haricot beans red..... .	58,781.00	3,101.52	5.28	3,643.29	459.62	12.62	37,006.50	6,998.54	18.91
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	68.00	68.56	100.34	0.67	0.67	100.34	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	171.00	170.87	99.75	2.09	2.09	99.75	-	-	-
Fenugreek..... .	68.00	68.56	100.34	0.31	0.31	100.34	-	-	-
Mung bean/"Masho"..... .	171.00	170.87	99.75	1.86	1.85	99.75	-	-	-
Gibto..... .	149.00	106.01	71.12	3.18	2.52	79.19	-	-	-
Oilseeds..... .	-	-	-	-	-	-	-	-	-
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	-	-	-	-	-	-	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	28,516.00	4,123.93	14.46	435.50	83.72	19.22	18,679.13	3,635.45	19.46
Lettuce..... .	307.00	215.37	70.14	0.16	0.12	71.05	-	-	-
Head Cabbage..... .	450.00	211.62	47.08	2.47	1.20	48.75	50.28	23.34	46.41
Ethiopian Cabbage..... .	24,786.00	4,118.01	16.61	358.56	81.55	22.74	15,135.34	3,588.72	23.71
Tomatoes..... .	4,011.00	1,567.57	39.08	55.38	29.30	52.91	2,665.68	1,311.69	49.21
Green peppers..... .	2,411.00	727.60	30.18	18.66	6.73	36.06	822.43	313.65	38.14
Red peppers..... .	99.00	99.37	99.93	0.26	0.26	99.93	5.41	5.40	99.93
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	17,937.00	3,162.35	17.63	290.89	79.42	27.30	28,563.82	7,749.69	27.13
Beetroot..... .	142.00	139.58	98.45	2.33	2.30	98.81	199.52	197.14	98.81
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	2,165.00	878.60	40.58	15.50	6.41	41.33	1,048.41	441.25	42.09
Potatoes..... .	13,719.00	3,080.42	22.45	231.27	66.93	28.94	27,042.70	7,737.61	28.61
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	3,518.00	1,339.22	38.07	25.57	18.21	71.19	63.36	44.86	70.80
Taro/'Godere'..... .	117.00	115.60	98.72	5.76	5.69	98.72	-	-	-
Sweet potatoes..... .	1,370.00	479.23	34.97	10.45	4.55	43.50	209.84	134.46	64.08

TABLE24.7 Estimates, Standar Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

(S.N.N.P.R)

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	5,454,400.00	154,019.60	2.82	747,242.27	39,322.01	5.26	7,839,919.07	483,410.11	6.17
Cereals..... .	4,673,860.00	161,874.99	3.46	536,466.30	33,975.68	6.33	6,041,880.84	425,002.00	7.03
Teff..... .	179,512.00	43,474.16	24.22	51,707.02	12,758.85	24.68	450,798.84	119,196.57	26.44
Barley..... .	263,809.00	33,298.96	12.62	29,078.12	5,030.77	17.30	289,737.42	50,446.91	17.41
Wheat..... .	9,039.00	2,768.48	30.63	932.15	338.33	36.30	12,474.04	4,396.33	35.24
Maize..... .	4,499,512.00	162,979.49	3.62	420,475.63	25,779.39	6.13	5,001,627.65	357,980.68	7.16
Sorghum..... .	163,807.00	19,174.13	11.71	32,374.00	6,389.35	19.74	276,840.64	95,666.20	34.56
Finger millet..... .	8,926.00	3,463.22	38.80	716.33	301.94	42.15	2,615.66	1,344.09	51.39
Oats/'Aja'..... .	4,482.00	2,168.54	48.38	35.87	16.21	45.19	-	-	-
Rice..... .	5,502.00	3,374.14	61.32	1,147.18	1,032.97	90.04	7,786.59	7,004.37	89.95
Pulses..... .	3,562,415.00	130,279.31	3.66	193,289.02	14,165.56	7.33	1,687,236.29	135,196.31	8.01
Horse beans..... .	60,042.00	12,570.40	20.94	2,389.69	629.89	26.36	26,161.94	8,308.61	31.76
Field peas..... .	34,908.00	9,256.28	26.52	2,732.72	948.47	34.71	11,496.24	4,258.40	37.04
Haricot beans white...	60,938.00	13,257.74	21.76	18,063.76	7,680.06	42.52	23,199.30	6,237.20	26.89
Haricot beans red..... .	3,476,453.00	130,723.43	3.76	168,283.51	11,640.48	6.92	1,620,251.04	134,544.11	8.30
Chick-peas..... .	1,996.00	1,032.83	51.74	238.43	154.54	64.82	3,019.52	2,130.94	70.57
Lentils..... .	3,925.00	1,974.77	50.31	145.74	80.70	55.37	330.29	205.95	62.36
Vetch..... .	863.00	513.07	59.45	30.81	27.72	89.98	-	-	-
Soya beans..... .	5,756.00	2,161.10	37.55	82.86	40.38	48.74	16.87	16.72	99.12
Fenugreek..... .	1,150.00	664.09	57.74	5.46	3.17	58.06	41.39	30.65	74.06
Mung bean/"Masho"..... .	12,319.00	5,060.32	41.08	1,047.63	617.69	58.96	2,719.70	2,020.00	74.27
Gibto..... .	7,060.00	4,922.46	69.72	268.41	177.17	66.01	-	-	-
Oilseeds..... .	67,037.00	12,395.64	18.49	17,486.95	5,817.57	33.27	110,801.94	42,077.30	37.98
Neug..... .	228.00	161.08	70.70	11.10	10.47	94.27	-	-	-
Linseed..... .	4,178.00	1,344.62	32.18	83.30	38.86	46.65	159.10	65.32	41.06
Groundnuts..... .	35,221.00	10,703.80	30.39	7,037.34	3,273.53	46.52	93,460.25	39,659.02	42.43
Sunflower..... .	7,639.00	1,974.39	25.85	177.00	61.58	34.79	1,749.00	626.83	35.84
Sesame..... .	20,075.00	5,798.27	28.88	10,161.98	4,656.05	45.82	15,366.00	12,077.69	78.60
Rapeseed..... .	2,542.00	1,583.19	62.28	16.23	11.29	69.54	67.59	67.58	99.99
Vegetables..... .	2,502,676.00	150,230.40	6.00	38,201.85	7,024.39	18.39	3,456,342.96	627,936.37	18.17
Lettuce..... .	1,165.00	611.15	52.44	3.43	2.29	66.74	-	-	-
Head Cabbage..... .	45,486.00	10,258.39	22.55	1,461.80	846.50	57.91	92,612.95	63,054.30	68.08
Ethiopian Cabbage..... .	2,424,568.00	150,680.61	6.21	34,301.73	6,867.32	20.02	3,286,730.26	625,127.18	19.02
Tomatoes..... .	21,716.00	6,134.80	28.25	868.94	638.20	73.45	19,781.27	17,604.90	89.00
Green peppers..... .	81,647.00	14,039.29	17.20	764.68	235.05	30.74	39,504.59	13,462.19	34.08
Red peppers..... .	13,111.00	4,679.14	35.69	760.53	499.25	65.64	17,713.89	11,035.29	62.30
Swiss chard..... .	14,621.00	6,566.10	44.91	40.73	17.44	42.81	-	-	-
Root Crops..... .	2,692,364.00	159,136.88	5.91	126,805.74	16,794.24	13.24	20,500,516.47	3,550,425.54	17.32
Beetroot..... .	56,915.00	13,231.01	23.25	722.65	236.17	32.68	50,501.55	17,979.97	35.60
Carrot..... .	83,989.00	30,645.15	36.49	437.47	210.94	48.22	20,483.70	7,009.21	34.22
Onion..... .	149,059.00	22,320.98	14.97	3,079.82	879.77	28.57	279,749.73	87,126.91	31.14
Potatoes..... .	1,818,589.00	158,415.26	8.71	102,283.79	16,799.41	16.42	16,837,512.66	3,546,603.47	21.06
Yam/'Boye'..... .	221,242.00	34,682.12	15.68	2,927.09	727.93	24.87	268,460.67	115,879.06	43.16
Garlic..... .	313,367.00	37,196.69	11.87	2,665.81	529.49	19.86	268,729.21	58,511.41	21.77
Taro/'Godere'..... .	352,064.00	33,758.09	9.59	4,691.25	590.00	12.58	548,277.40	94,460.45	17.23
Sweet potatoes..... .	361,500.00	32,077.63	8.87	9,997.85	1,263.82	12.64	2,226,801.56	282,443.08	12.68

TABLE24.8 Estimates, Standar Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

Gambela

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	33,687.00	2,197.33	6.52	8,219.64	774.17	9.42	101,592.39	11,793.99	11.61
Cereals..... .	33,061.00	2,201.92	6.66	6,804.35	748.66	11.00	99,000.32	11,801.78	11.92
Teff..... .	90.00	46.42	51.83	5.16	2.69	52.08	50.65	26.38	52.08
Barley..... .	19.00	17.68	94.02	6.30	5.92	94.02	-	-	-
Wheat..... .	-	-	-	-	-	-	-	-	-
Maize..... .	33,016.00	2,201.70	6.67	6,783.29	748.76	11.04	98,877.43	11,801.50	11.94
Sorghum..... .	10.00	9.33	98.09	0.06	0.06	98.09	0.57	0.56	98.09
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	45.00	31.59	70.53	9.54	7.22	75.70	71.67	54.25	75.70
Pulses..... .	3,434.00	464.28	13.52	76.00	16.56	21.79	596.60	132.29	22.17
Horse beans..... .	22.00	21.88	97.74	0.62	0.61	97.74	7.65	7.48	97.74
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...	821.00	254.48	30.98	9.32	3.43	36.84	54.07	20.15	37.27
Haricot beans red..... .	2,613.00	526.98	20.17	66.07	16.80	25.42	534.88	133.44	24.95
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oilseeds..... .	1,406.00	234.42	16.67	1,339.28	195.52	14.60	1,995.47	291.36	14.60
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	134.00	58.91	43.85	19.24	9.98	51.86	96.78	50.19	51.86
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	1,026.00	121.89	11.89	1,309.28	194.95	14.89	1,876.01	285.35	15.21
Rapeseed..... .	246.00	189.45	76.92	10.76	8.44	78.45	22.69	17.80	78.45
Vegetables..... .	2,419.00	365.23	15.10	17.44	3.29	18.88	1,721.70	346.69	20.14
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage..... .	2,407.00	365.16	15.17	15.06	2.74	18.22	1,528.40	310.48	20.31
Tomatoes..... .	76.00	32.74	43.33	2.12	1.65	78.06	184.89	147.10	79.56
Green peppers..... .	24.00	22.95	93.84	0.26	0.24	93.84	8.41	7.89	93.84
Red peppers..... .	-	-	-	-	-	-	-	-	-
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	748.00	309.29	41.34	18.68	10.21	54.65	1,753.06	1,151.35	65.68
Beetroot..... .	-	-	-	-	-	-	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	172.00	73.81	42.98	2.80	1.89	67.47	108.76	74.40	68.40
Potatoes..... .	501.00	304.75	60.81	14.63	10.04	68.60	1,636.32	1,150.36	70.30
Yam/'Boye'..... .	40.00	26.19	65.20	0.99	0.69	69.92	2.99	2.80	93.85
Garlic..... .	17.00	15.43	89.80	0.06	0.05	89.80	4.99	4.48	89.80
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	40.00	23.18	57.31	0.20	0.16	77.62	-	-	-

TABLE24.9 Estimates, Standar Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

Harari

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	3,643.00	348.93	9.58	292.30	54.22	18.55	1,718.56	511.60	29.77
Cereals..... .	3,580.00	330.42	9.23	222.22	42.92	19.32	1,597.47	477.77	29.91
Teff..... .	-	-	-	-	-	-	-	-	-
Barley..... .	-	-	-	-	-	-	-	-	-
Wheat..... .	-	-	-	-	-	-	-	-	-
Maize..... .	2,512.00	433.54	17.26	123.17	35.69	28.98	1,597.47	477.77	29.91
Sorghum..... .	1,523.00	354.72	23.29	99.04	38.45	38.83	-	-	-
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	2,202.00	367.32	16.68	67.00	16.01	23.90	121.09	101.64	83.94
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...	157.00	122.73	78.10	8.23	6.91	83.94	121.09	101.64	83.94
Haricot beans red..... .	2,045.00	399.44	19.53	58.77	16.39	27.88	-	-	-
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oilseeds..... .	60.00	58.08	97.53	3.09	3.01	97.53	-	-	-
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	60.00	58.08	97.53	3.09	3.01	97.53	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	566.00	197.64	34.89	33.09	13.95	42.18	-	-	-
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	51.00	51.03	99.42	3.37	3.36	99.42	-	-	-
Ethiopian Cabbage..... .	239.00	132.69	55.55	6.96	5.47	78.53	-	-	-
Tomatoes..... .	-	-	-	-	-	-	-	-	-
Green peppers..... .	276.00	150.32	54.42	22.75	12.79	56.24	-	-	-
Red peppers..... .	-	-	-	-	-	-	-	-	-
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	1,282.00	367.19	28.63	45.93	20.19	43.95	-	-	-
Beetroot..... .	51.00	51.03	99.42	3.80	3.78	99.42	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	-	-	-	-	-	-	-	-	-
Potatoes..... .	1,002.00	369.96	36.91	40.14	18.88	47.05	-	-	-
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	-	-	-	-	-	-	-	-	-
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	280.00	180.70	64.48	1.99	1.26	63.14	-	-	-

TABLE24.10 Estimates, Standar Errors and Coefficients of Variation for the Estimates of Holdres, Area and Production of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Surveye

Dire Dawa

Crop	Holders			Area in Hectares			Production in Quintals		
	Estimate	S.E.	C.V.	Estimate	S.E.	C.V.	Estimate	S.E	C.V.
GRAIN CROPS	363.00	44.39	12.24	24.32	4.98	20.48	367.71	83.36	22.67
Cereals..... .	363.00	44.39	12.24	24.32	4.98	20.48	367.71	83.36	22.67
Teff..... .	-	-	-	-	-	-	-	-	-
Barley..... .	-	-	-	-	-	-	-	-	-
Wheat..... .	-	-	-	-	-	-	-	-	-
Maize..... .	363.00	44.39	12.24	24.32	4.98	20.48	367.71	83.36	22.67
Sorghum..... .	-	-	-	-	-	-	-	-	-
Finger millet..... .	-	-	-	-	-	-	-	-	-
Oats/'Aja'..... .	-	-	-	-	-	-	-	-	-
Rice..... .	-	-	-	-	-	-	-	-	-
Pulses..... .	-	-	-	-	-	-	-	-	-
Horse beans..... .	-	-	-	-	-	-	-	-	-
Field peas..... .	-	-	-	-	-	-	-	-	-
Haricot beans white...		-	-	-	-	-	-	-	-
Haricot beans red..... .	-	-	-	-	-	-	-	-	-
Chick-peas..... .	-	-	-	-	-	-	-	-	-
Lentils..... .	-	-	-	-	-	-	-	-	-
Vetch..... .	-	-	-	-	-	-	-	-	-
Soya beans..... .	-	-	-	-	-	-	-	-	-
Fenugreek..... .	-	-	-	-	-	-	-	-	-
Mung bean/"Masho"..... .	-	-	-	-	-	-	-	-	-
Gibto..... .	-	-	-	-	-	-	-	-	-
Oilseeds..... .	-	-	-	-	-	-	-	-	-
Neug..... .	-	-	-	-	-	-	-	-	-
Linseed..... .	-	-	-	-	-	-	-	-	-
Groundnuts..... .	-	-	-	-	-	-	-	-	-
Sunflower..... .	-	-	-	-	-	-	-	-	-
Sesame..... .	-	-	-	-	-	-	-	-	-
Rapeseed..... .	-	-	-	-	-	-	-	-	-
Vegetables..... .	302.00	44.73	14.79	14.88	3.08	20.67	783.56	254.37	32.46
Lettuce..... .	-	-	-	-	-	-	-	-	-
Head Cabbage..... .	-	-	-	-	-	-	-	-	-
Ethiopian Cabbage..... .	10.00	9.46	96.38	0.01	0.01	96.38	-	-	-
Tomatoes..... .	283.00	44.58	15.76	11.70	2.81	24.05	783.56	254.37	32.46
Green peppers..... .	116.00	33.52	28.79	3.17	1.21	38.25	-	-	-
Red peppers..... .	-	-	-	-	-	-	-	-	-
Swiss chard..... .	-	-	-	-	-	-	-	-	-
Root Crops..... .	84.00	30.33	36.03	2.46	1.40	56.83	-	-	-
Beetroot..... .	-	-	-	-	-	-	-	-	-
Carrot..... .	-	-	-	-	-	-	-	-	-
Onion..... .	39.00	18.10	46.96	0.50	0.29	57.18	-	-	-
Potatoes..... .	37.00	25.02	68.50	1.64	1.38	84.30	-	-	-
Yam/'Boye'..... .	-	-	-	-	-	-	-	-	-
Garlic..... .	-	-	-	-	-	-	-	-	-
Taro/'Godere'..... .	-	-	-	-	-	-	-	-	-
Sweet potatoes..... .	18.00	12.23	67.27	0.32	0.22	67.27	-	-	-

APPENDIX III

STANDARDERRORS AND COEFFICIENT OF VARIETION FOR THE FARM MANAGEMENT PRACTICE

Table 25. Estimates OF Number of Holders, Inputs Applied Area, Quantity of Inputs used and their Standar Errors and Coefficients of Variation of Privat Peasant Holders for 2015/16 (2008E.C.) Belg Season Agricultural Sample Survey

National

Crop type	All crop Area			All Fertilizer						Natural					
	Area (Ha)			Area (Ha)			Quantity (Q)			Holder			Area (Ha)		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	2,111,667.00	60,268.00	2.85	952,769.00	38,298.00	4.02	550,073.00	34,758.00	6.32	6,602,722.00	199,193.00	3.02	452,771.00	26,524.00	5.86
Cereals	1,298,973.00	46,569.00	3.59	551,490.00	27,569.00	5.00	249,859.00	19,210.00	7.69	4,284,567.00	175,597.00	4.10	277,144.00	20,350.00	7.34
Teff	111,487.00	16,064.00	14.41	38,551.00	7,296.00	18.93	24,586.00	6,066.00	24.67	78,695.00	20,306.00	25.80	8,409.00	2,433.00	28.94
Barley	190,254.00	16,828.00	8.84	61,924.00	6,318.00	10.20	29,487.00	4,658.00	15.80	221,161.00	38,032.00	17.20	20,170.00	3,773.00	18.71
Wheat	77,411.00	13,699.00	17.70	45,274.00	9,496.00	20.98	10,637.00	2,615.00	24.58	44,172.00	14,653.00	33.17	15,568.00	7,292.00	46.84
Maize	847,173.00	35,184.00	4.15	378,743.00	22,236.00	5.87	181,599.00	15,713.00	8.65	3,973,700.00	171,558.00	4.32	212,000.00	17,011.00	8.02
Sorghum	61,574.00	9,730.00	15.80	24,466.00	7,137.00	29.17	3,343.00	1,090.00	32.60	217,214.00	49,997.00	23.02	20,154.00	7,004.00	34.75
Finger millet	915.00	324.00	35.36	148.00	91.00	61.34	16.00	14.00	83.66	2,278.00	942.00	41.36	124.00	89.00	71.62
Oats/ 'Aja'	8,987.00	657.00	7.31	2,299.00	366.00	15.92	139.00	36.00	26.00	21,198.00	13,543.00	63.89	700.00	290.00	41.37
Rice	1,173.00	1,033.00	88.09	86.00	56.00	65.44	51.00	39.00	76.55	1,603.00	1,299.00	81.01	18.00	10.00	57.41
Pulse	436,435.00	25,569.00	5.86	161,299.00	10,734.00	6.65	86,845.00	7,009.00	8.07	2,577,253.00	134,364.00	5.21	68,891.00	5,704.00	8.28
Horse/Faba beans	4,677.00	758.00	16.21	1,004.00	286.00	28.45	520.00	220.00	42.28	32,699.00	7,648.00	23.39	668.00	213.00	31.81
Field peas	25,148.00	4,876.00	19.39	6,169.00	3,964.00	64.25	1,510.00	1,047.00	69.34	20,302.00	5,013.00	24.69	2,264.00	991.00	43.75
White Haricot beans	62,657.00	11,408.00	18.21	22,698.00	5,431.00	23.93	3,399.00	1,056.00	31.08	310,282.00	55,940.00	18.03	11,563.00	2,495.00	21.57
Red Haricot beans	243,678.00	13,464.00	5.53	125,497.00	8,037.00	6.40	80,550.00	6,707.00	8.33	2,224,246.00	127,688.00	5.74	49,683.00	4,472.00	9.00
Chick peas	18,482.00	1,574.00	8.51	276.00	113.00	40.85	3.00	2.00	74.06	4,133.00	1,625.00	39.32	268.00	112.00	41.90
Lentiles	23,037.00	3,279.00	14.23	2,370.00	867.00	36.59	363.00	201.00	55.37	17,864.00	5,734.00	32.10	1,569.00	647.00	41.24
Vetch/Grass peas	7,492.00	4,976.00	66.41	179.00	136.00	76.01	7.00	5.00	70.88	2,218.00	1,276.00	57.52	174.00	136.00	78.06
Soya beans	310.00	137.00	44.34	40.00	14.00	35.50	20.00	9.00	46.26	4,083.00	1,942.00	47.58	19.00	10.00	51.85
Fenugreek	1,246.00	385.00	30.87	238.00	131.00	55.11	330.00	299.00	90.71	2,858.00	1,446.00	50.58	72.00	55.00	76.35
Mung bean/"Masho"	49,414.00	15,830.00	32.04	2,704.00	1,665.00	61.60	112.00	71.00	63.70	8,532.00	3,931.00	46.08	2,601.00	1,664.00	63.99
Gibto	295.00	178.00	60.36	125.00	93.00	74.54	31.00	22.00	71.51	2,856.00	2,150.00	75.26	10.00	9.00	93.32
Oile seeds	35,585.00	5,847.00	16.43	2,172.00	384.00	17.68	499.00	285.00	57.17	34,353.00	13,292.00	38.69	1,355.00	249.00	18.36
Nueg	11.00	10.00	94.27	1.00	1.00	####	-	-	-	116.00	117.00	####	1.00	1.00	100.77
Linseed	235.00	103.00	43.65	16.00	16.00	96.35	6.00	6.00	98.99	152.00	151.00	98.96	-	-	98.96
Ground nuts	7,220.00	3,275.00	45.36	536.00	259.00	48.35	334.00	274.00	82.11	7,583.00	2,829.00	37.31	201.00	82.00	40.76
Safflower	10,680.00	62.00	0.58	8.00	5.00	63.32	6.00	5.00	90.39	878.00	428.00	48.69	4.00	2.00	60.80
Sesame	16,881.00	4,685.00	27.76	1,237.00	192.00	15.51	108.00	62.00	57.80	1,211.00	506.00	41.78	804.00	146.00	18.15
Rapeseed	558.00	230.00	41.30	376.00	206.00	54.86	45.00	45.00	99.72	24,426.00	12,975.00	53.12	346.00	184.00	53.13
Vegetables	63,674.00	8,370.00	13.15	43,385.00	7,125.00	16.42	16,239.00	4,586.00	28.24	2,390,892.00	156,167.00	6.53	33,918.00	6,897.00	20.33
Lettuce	41.00	29.00	69.37	35.00	27.00	77.17	44.00	38.00	85.76	2,415.00	1,171.00	48.50	3.00	2.00	61.82
Head Cabbage	2,636.00	986.00	37.38	1,634.00	851.00	52.08	2,542.00	1,589.00	62.51	38,303.00	9,342.00	24.39	233.00	55.00	23.47
Ethiopian Cabbage	47,993.00	7,045.00	14.68	35,890.00	6,871.00	19.14	7,220.00	1,998.00	27.67	2,249,465.00	154,968.00	6.89	31,609.00	6,850.00	21.67
Tomatoes	7,327.00	3,969.00	54.18	2,350.00	889.00	37.84	3,596.00	2,239.00	62.27	42,156.00	8,750.00	20.76	539.00	174.00	32.23
Green peppers	2,820.00	586.00	20.80	1,690.00	506.00	29.95	584.00	264.00	45.25	123,298.00	23,014.00	18.66	1,218.00	409.00	33.54
Red peppers	2,807.00	865.00	30.83	1,761.00	741.00	42.11	2,242.00	1,210.00	53.96	19,322.00	5,261.00	27.23	294.00	143.00	48.62
Swiss chard	50.00	18.00	36.29	25.00	11.00	44.94	10.00	7.00	69.72	13,697.00	5,621.00	41.04	21.00	11.00	51.79
Root Crops	277,000.00	19,537.00	7.05	194,423.00	18,410.00	9.47	196,631.00	26,123.00	13.29	2,142,942.00	114,632.00	5.35	71,463.00	7,287.00	10.20
Beetroot	1,207.00	278.00	23.05	524.00	180.00	34.33	566.00	434.00	76.76	36,770.00	8,889.00	24.18	297.00	107.00	36.10
Carrot	962.00	289.00	30.09	608.00	208.00	34.28	399.00	143.00	35.85	66,311.00	26,639.00	40.17	164.00	42.00	25.46
Onion	18,922.00	3,539.00	18.70	15,319.00	3,380.00	22.06	22,419.00	4,942.00	22.05	111,536.00	14,975.00	13.43	2,279.00	579.00	25.40
Potatoes	226,429.00	19,139.00	8.45	159,673.00	18,079.00	11.32	168,436.00	25,723.00	15.27	1,321,451.00	99,018.00	7.49	54,284.00	7,063.00	13.01
Yam	2,960.00	728.00	24.60	1,563.00	485.00	31.05	173.00	104.00	60.19	136,789.00	27,141.00	19.84	1,453.00	481.00	33.12
Garlic	6,789.00	1,376.00	20.27	4,493.00	908.00	20.20	2,654.00	847.00	31.93	270,900.00	32,218.00	11.89	2,261.00	416.00	18.41
Taro/'Godere'	5,306.00	620.00	11.69	3,625.00	538.00	14.86	1,334.00	345.00	25.87	213,526.00	25,990.00	12.17	2,794.00	430.00	15.37
Sweet potatoes	14,426.00	1,781.00	12.35	8,617.00	1,331.00	15.45	650.00	226.00	34.81	310,189.00	37,252.00	12.01	7,931.00	1,221.00	15.39

Table 25 (Con't)

National

Crop type	DAP									UREA								
	Holder			Hectare			Quintal			Holder			Hectare			Quintal		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	2,287,755.00	148,362.00	6.49	267,678.00	19,758.00	7.38	217,987.00	16,526.00	7.58	337,286.00	50,965.00	15.11	47,111.00	9,276.00	19.69	29,349.00	6,610.00	22.52
Cereals	1,369,225.00	118,766.00	8.67	145,267.00	13,527.00	9.31	103,366.00	9,685.00	9.37	198,060.00	39,204.00	19.79	31,244.00	7,480.00	23.94	17,355.00	4,430.00	25.53
Teff	42,369.00	12,578.00	29.69	11,100.00	3,077.00	27.72	6,675.00	1,735.00	25.99	38,052.00	15,143.00	39.80	9,170.00	3,357.00	36.61	4,240.00	1,477.00	34.84
Barley	82,383.00	12,864.00	15.61	20,498.00	2,124.00	10.36	11,248.00	2,124.00	18.88	7,774.00	3,044.00	39.16	2,103.00	1,044.00	49.67	681.00	294.00	43.20
Wheat	16,014.00	4,670.00	29.16	12,033.00	2,359.00	19.60	4,326.00	1,320.00	30.50	5,514.00	2,724.00	49.40	2,697.00	1,234.00	45.74	804.00	372.00	46.28
Maize	1,247,295.00	117,637.00	9.43	96,449.00	11,288.00	11.70	78,636.00	8,367.00	10.64	156,119.00	36,115.00	23.13	16,871.00	5,581.00	33.08	11,479.00	3,988.00	34.75
Sorghum	63,029.00	34,740.00	55.12	3,509.00	1,975.00	56.28	2,311.00	953.00	41.24	3,190.00	1,686.00	52.84	402.00	220.00	54.63	151.00	84.00	55.78
Finger millet	664.00	496.00	74.68	24.00	20.00	81.34	16.00	14.00	83.66	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	1,754.00	1,134.00	64.64	1,586.00	224.00	14.11	102.00	15.00	15.02	-	-	-	-	-	-	-	-	-
Rice	186.00	156.00	83.76	68.00	55.00	81.59	51.00	39.00	76.55	-	-	-	-	-	-	-	-	-
Pulse	1,210,746.00	95,350.00	7.88	65,814.00	6,326.00	9.61	54,821.00	4,700.00	8.57	99,753.00	31,793.00	31.87	5,136.00	1,415.00	27.56	2,981.00	1,073.00	35.99
Horse/Faba beans	3,336.00	1,257.00	37.67	157.00	82.00	52.42	166.00	96.00	57.64	389.00	318.00	81.79	7.00	5.00	73.49	7.00	5.00	73.49
Field peas	8,442.00	3,860.00	45.72	3,696.00	3,038.00	82.19	1,315.00	1,043.00	79.30	531.00	380.00	71.63	57.00	52.00	91.04	14.00	10.00	72.88
White Haricot beans	44,375.00	15,279.00	34.43	4,924.00	2,509.00	50.96	1,970.00	708.00	35.91	3,714.00	2,188.00	58.91	956.00	758.00	79.32	140.00	76.00	53.93
Red Haricot beans	1,157,612.00	92,620.00	8.00	56,397.00	4,975.00	8.82	51,016.00	4,506.00	8.83	93,231.00	31,767.00	34.07	3,818.00	1,187.00	31.08	2,709.00	1,069.00	39.47
Chick peas	220.00	214.00	97.13	7.00	6.00	80.37	3.00	2.00	74.06	-	-	-	-	-	-	-	-	-
Lentiles	3,325.00	1,619.00	48.71	538.00	276.00	51.35	265.00	138.00	52.00	1,004.00	718.00	71.56	185.00	130.00	70.37	76.00	54.00	70.80
Vetch/Grass peas	676.00	499.00	73.79	5.00	3.00	70.88	7.00	5.00	70.88	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenugreek	306.00	304.00	99.58	5.00	5.00	99.58	4.00	4.00	99.58	1,157.00	902.00	77.97	25.00	19.00	77.53	22.00	19.00	84.24
Mung bean/"Masho"	2,655.00	1,819.00	68.51	59.00	32.00	53.48	56.00	45.00	80.48	-	-	-	-	-	-	-	-	-
Gibto	903.00	902.00	99.86	26.00	26.00	99.86	18.00	18.00	99.86	648.00	647.00	99.89	88.00	88.00	99.89	13.00	13.00	99.89
Oile seeds	4,602.00	1,915.00	41.61	545.00	124.00	22.73	151.00	75.00	49.57	803.00	629.00	78.33	77.00	76.00	98.74	66.00	65.00	98.60
Nueg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linseed	988.00	978.00	98.95	16.00	16.00	98.97	6.00	6.00	98.99	-	-	-	-	-	-	-	-	-
Ground nuts	984.00	599.00	60.86	85.00	60.00	70.40	63.00	56.00	89.11	598.00	594.00	99.44	77.00	76.00	99.47	66.00	65.00	99.45
Safflower	158.00	159.00	####	3.00	3.00	100.19	5.00	5.00	100.19	205.00	205.00	100.14	1.00	1.00	100.14	1.00	1.00	100.14
Sesame	1,594.00	1,173.00	73.58	410.00	97.00	23.67	32.00	15.00	48.60	-	-	-	-	-	-	-	-	-
Rapeseed	878.00	876.00	99.72	30.00	30.00	99.72	45.00	45.00	99.72	-	-	-	-	-	-	-	-	-
Vegetables	185,071.00	32,796.00	17.72	3,262.00	693.00	21.24	3,724.00	663.00	17.79	44,939.00	10,365.00	23.06	1,734.00	624.00	36.00	1,617.00	619.00	38.30
Lettuce	338.00	338.00	99.99	6.00	6.00	99.99	7.00	7.00	99.99	1,378.00	1,372.00	99.57	20.00	20.00	99.57	17.00	17.00	99.57
Head Cabbage	5,125.00	2,431.00	47.44	97.00	52.00	53.76	134.00	77.00	57.87	4,707.00	2,145.00	45.57	247.00	146.00	58.81	241.00	145.00	60.16
Ethiopian Cabbage	165,098.00	31,034.00	18.80	2,021.00	355.00	17.55	2,519.00	420.00	16.68	24,814.00	6,551.00	26.40	656.00	254.00	38.69	632.00	254.00	40.08
Tomatoes	4,520.00	2,423.00	53.59	197.00	125.00	63.39	163.00	94.00	57.84	11,500.00	7,192.00	62.54	616.00	527.00	85.49	607.00	526.00	86.73
Green peppers	9,878.00	5,247.00	53.12	189.00	93.00	48.88	180.00	96.00	53.61	1,347.00	816.00	60.59	75.00	62.00	83.57	35.00	27.00	79.10
Red peppers	3,467.00	1,757.00	50.69	752.00	555.00	73.74	723.00	472.00	65.27	5,609.00	2,548.00	45.43	119.00	58.00	48.35	84.00	42.00	50.45
Swiss chard	-	-	-	-	-	-	-	-	-	232.00	231.00	99.60	-	-	99.60	-	-	99.60
Root Crops	835,123.00	97,681.00	11.70	52,790.00	10,458.00	19.81	55,925.00	10,598.00	18.95	161,351.00	38,419.00	23.81	8,920.00	2,180.00	24.44	7,330.00	1,836.00	25.05
Beetroot	3,133.00	1,802.00	57.52	30.00	16.00	53.04	36.00	20.00	55.36	314.00	313.00	99.66	13.00	13.00	99.66	6.00	6.00	99.66
Carrot	10,600.00	5,061.00	47.74	192.00	97.00	50.41	154.00	74.00	48.31	4,224.00	2,441.00	57.79	184.00	155.00	84.37	99.00	73.00	73.75
Onion	31,799.00	11,271.00	35.45	2,865.00	2,018.00	70.45	1,995.00	1,263.00	63.29	30,962.00	11,820.00	38.18	3,552.00	1,535.00	43.22	2,638.00	1,089.00	41.27
Potatoes	711,851.00	94,417.00	13.26	46,982.00	10,115.00	21.53	51,065.00	10,454.00	20.47	116,916.00	36,337.00	31.08	5,003.00	1,547.00	30.92	4,439.00	1,482.00	33.37
Yam	16,717.00	9,697.00	58.01	91.00	68.00	74.37	137.00	102.00	74.38	614.00	611.00	99.61	11.00	11.00	99.68	11.00	11.00	99.68
Garlic	38,692.00	10,180.00	26.31	1,486.00	685.00	46.11	1,359.00	597.00	43.95	3,027.00	1,133.00	37.44	54.00	20.00	37.61	47.00	17.00	36.78
Taro/'Godere'	35,074.00	10,415.00	29.69	576.00	199.00	34.48	711.00	259.00	36.38	2,962.00	1,757.00	59.31	31.00	17.00	53.69	30.00	16.00	55.82
Sweet potatoes	21,546.00	9,009.00	41.82	568.00	286.00	50.28	468.00	200.00	42.71	3,814.00	2,545.00	66.72	71.00	48.00	67.67	60.00	39.00	64.75

Table 25 (Con't)

National

Crop type	UREA + DAP									Indigenous seed								
	Holder			Hectare			Quintal			Holder			Hectare			Quintal		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	1,388,520.00	127,871.00	9.21	154,288.00	13,639.00	8.84	280,301.00	27,290.00	9.74	13,072,136.00	176,495.00	1.35	1,806,194.00	55,802.00	3.09	836,098.00	37,337.00	4.47
Cereals	567,898.00	67,752.00	11.93	70,720.00	8,266.00	11.69	112,156.00	14,640.00	13.05	6,774,618.00	209,205.00	3.09	1,024,222.00	41,949.00	4.10	627,462.00	34,898.00	5.56
Teff	32,884.00	12,878.00	39.16	9,652.00	2,984.00	30.91	13,454.00	5,240.00	38.95	458,404.00	65,137.00	14.21	109,794.00	15,400.00	14.03	46,916.00	7,087.00	15.11
Barley	37,043.00	10,717.00	28.93	7,052.00	2,669.00	37.85	7,918.00	2,768.00	34.96	985,382.00	79,227.00	8.04	189,784.00	16,823.00	8.86	275,696.00	31,177.00	11.31
Wheat	6,930.00	3,777.00	54.50	2,797.00	1,127.00	40.29	1,218.00	464.00	38.07	132,989.00	22,829.00	17.17	77,381.00	13,699.00	17.70	42,984.00	8,833.00	20.55
Maize	514,665.00	66,233.00	12.87	50,823.00	6,746.00	13.27	88,658.00	12,024.00	13.56	5,647,329.00	210,152.00	3.72	602,197.00	30,870.00	5.13	250,271.00	14,758.00	5.90
Sorghum	7,395.00	3,378.00	45.68	385.00	166.00	42.97	875.00	415.00	47.49	140,766.00	18,489.00	13.13	34,299.00	6,491.00	18.93	7,459.00	1,329.00	17.81
Finger millet	-	-	-	-	-	-	-	-	-	9,989.00	3,605.00	36.09	681.00	268.00	39.34	183.00	64.00	35.14
Oats/ 'Aja'	1,572.00	1,571.00	99.97	10.00	10.00	99.97	33.00	33.00	99.97	35,419.00	14,094.00	39.79	8,913.00	656.00	7.36	2,675.00	461.00	17.22
Rice	-	-	-	-	-	-	-	-	-	5,986.00	3,388.00	56.59	1,173.00	1,033.00	88.09	1,278.00	1,140.00	89.16
Pulse	347,536.00	50,588.00	14.56	20,663.00	4,568.00	22.11	28,461.00	5,076.00	17.83	6,462,311.00	185,868.00	2.88	428,003.00	25,480.00	5.95	203,608.00	11,716.00	5.75
Horse/Faba beans	4,431.00	2,292.00	51.73	170.00	94.00	55.18	345.00	175.00	50.84	111,214.00	16,470.00	14.81	4,665.00	756.00	16.21	3,628.00	568.00	15.65
Field peas	2,466.00	1,652.00	67.01	60.00	34.00	57.26	146.00	90.00	61.87	135,721.00	19,838.00	14.62	25,091.00	4,875.00	19.43	16,257.00	3,372.00	20.74
White Haricot beans	5,326.00	2,217.00	41.62	4,810.00	3,120.00	64.87	1,131.00	678.00	59.97	558,643.00	66,167.00	11.84	61,703.00	11,265.00	18.26	8,814.00	2,085.00	23.66
Red Haricot beans	337,821.00	50,386.00	14.92	15,406.00	3,037.00	19.71	26,510.00	4,855.00	18.31	5,483,979.00	181,690.00	3.31	236,517.00	13,399.00	5.67	136,772.00	9,248.00	6.76
Chick peas	-	-	-	-	-	-	-	-	-	131,194.00	15,279.00	11.65	18,466.00	1,574.00	8.52	7,956.00	1,057.00	13.28
Lentiles	306.00	304.00	99.58	78.00	78.00	99.58	22.00	22.00	99.58	166,306.00	18,610.00	11.19	23,031.00	3,279.00	14.24	15,305.00	3,270.00	21.36
Vetch/Grass peas	-	-	-	-	-	-	-	-	-	39,930.00	20,940.00	52.44	7,451.00	4,975.00	66.78	5,376.00	3,093.00	57.53
Soya beans	317.00	317.00	99.85	2.00	2.00	99.85	4.00	4.00	99.85	9,808.00	3,523.00	35.92	295.00	137.00	46.37	147.00	61.00	41.41
Fenugreek	1,163.00	902.00	77.55	137.00	98.00	71.92	304.00	280.00	92.33	18,459.00	5,443.00	29.48	1,245.00	385.00	30.88	599.00	207.00	34.47
Mung bean/"Masho"	12.00	12.00	100.61	-	-	100.61	-	-	100.61	87,956.00	16,371.00	18.61	49,348.00	15,822.00	32.06	8,650.00	2,443.00	28.25
Gibto	-	-	-	-	-	-	-	-	-	8,515.00	5,257.00	61.74	192.00	154.00	80.08	104.00	103.00	99.64
Oile seeds	3,308.00	2,288.00	69.16	37.00	23.00	61.98	78.00	61.00	78.25	162,728.00	12,361.00	7.60	34,418.00	5,834.00	16.95	5,028.00	1,737.00	34.54
Nueg	-	-	-	-	-	-	-	-	-	228.00	161.00	70.70	11.00	10.00	94.27	7.00	7.00	99.11
Linseed	-	-	-	-	-	-	-	-	-	7,244.00	1,980.00	27.34	202.00	97.00	48.11	351.00	326.00	92.90
Ground nuts	28.00	28.00	98.58	14.00	14.00	98.58	1.00	1.00	98.58	32,424.00	10,597.00	32.68	7,011.00	3,269.00	46.62	2,964.00	1,699.00	57.32
Safflower	-	-	-	-	-	-	-	-	-	99,829.00	1,949.00	1.95	10,680.00	62.00	0.58	1,057.00	5.00	0.45
Sesame	3,280.00	2,288.00	69.76	22.00	18.00	79.68	76.00	61.00	79.69	21,628.00	5,533.00	25.58	16,436.00	4,677.00	28.46	632.00	178.00	28.15
Rapeseed	-	-	-	-	-	-	-	-	-	4,221.00	1,852.00	43.87	78.00	50.00	64.24	18.00	14.00	76.19
Vegetables	94,717.00	20,598.00	21.75	4,429.00	1,761.00	39.75	10,843.00	4,339.00	40.01	3,605,159.00	168,758.00	4.68	59,560.00	8,228.00	13.82	-	-	-
Lettuce	689.00	687.00	99.75	6.00	6.00	99.75	20.00	20.00	99.75	5,389.00	2,521.00	46.79	41.00	29.00	69.37	-	-	-
Head Cabbage	16,035.00	6,567.00	40.95	1,056.00	828.00	78.42	2,167.00	1,570.00	72.47	80,018.00	16,350.00	20.43	975.00	215.00	22.08	-	-	-
Ethiopian Cabbage	69,494.00	19,172.00	27.59	1,562.00	787.00	50.37	4,014.00	1,860.00	46.33	3,273,112.00	163,901.00	5.01	47,215.00	7,040.00	14.91	-	-	-
Tomatoes	7,364.00	3,747.00	50.88	998.00	675.00	67.66	2,826.00	2,174.00	76.94	147,426.00	31,855.00	21.61	6,445.00	3,919.00	60.81	-	-	-
Green peppers	4,667.00	2,157.00	46.21	208.00	143.00	68.91	370.00	244.00	65.79	223,855.00	32,243.00	14.40	2,761.00	585.00	21.19	-	-	-
Red peppers	7,390.00	2,873.00	38.88	596.00	397.00	66.66	1,436.00	1,021.00	71.10	57,937.00	14,419.00	24.89	2,079.00	712.00	34.24	-	-	-
Swiss chard	949.00	735.00	77.44	4.00	3.00	73.27	10.00	7.00	71.34	11,658.00	4,379.00	37.56	45.00	18.00	39.52	-	-	-
Root Crops	837,728.00	115,248.00	13.76	58,440.00	8,669.00	14.83	128,763.00	20,171.00	15.67	4,600,463.00	204,745.00	4.45	259,991.00	19,392.00	7.46	-	-	-
Beetroot	4,760.00	3,201.00	67.26	184.00	138.00	75.04	523.00	433.00	82.77	82,285.00	15,902.00	19.33	906.00	233.00	25.73	-	-	-
Carrot	11,820.00	5,782.00	48.91	68.00	43.00	63.28	146.00	82.00	56.39	69,143.00	24,909.00	36.03	712.00	256.00	36.02	-	-	-
Onion	43,950.00	10,778.00	24.52	5,378.00	1,258.00	23.39	15,305.00	3,753.00	24.52	306,510.00	30,331.00	9.90	13,151.00	2,260.00	17.18	-	-	-
Potatoes	764,707.00	115,401.00	15.09	51,853.00	8,583.00	16.55	110,817.00	19,858.00	17.92	3,562,533.00	199,059.00	5.59	220,587.00	19,117.00	8.67	-	-	-
Yam	2,240.00	1,624.00	72.48	7.00	5.00	62.18	25.00	16.00	62.19	187,770.00	32,413.00	17.26	2,705.00	726.00	26.85	-	-	-
Garlic	32,112.00	12,483.00	38.87	680.00	273.00	40.13	1,229.00	542.00	44.07	509,885.00	48,392.00	9.49	6,639.00	1,371.00	20.65	-	-	-
Taro/'Godere'	15,056.00	4,690.00	31.15	223.00	81.00	36.46	594.00	213.00	35.83	122,318.00	21,473.00	17.56	1,625.00	379.00	23.32	-	-	-
Sweet potatoes	6,501.00	2,532.00	38.95	47.00	19.00	41.31	123.00	50.00	40.38	464,948.00	50,582.00	10.88	13,666.00	1,767.00	12.93	-	-	-

Table 25 (Con't)

National

Crop type	Improved seed									Pesticide					
	Holder			Hectare			Quintal			Holder			Hectare		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	1259187	117979	9.37	123871	14397	11.62	37128	3976	10.71	700453	72569	10.36	171286	16403	9.58
Cereals	895339	107050	11.96	102282	12970	12.68	31650	3561	11.25	350999	53175	15.15	123578	13240	10.71
Teff	7336	6212	84.68	1398	1296	92.74	449	430	95.93	147421	43337	29.4	38233	10665	27.9
Barley	1966	1452	73.86	115	109	95.13	21	21	99.99	97844	22536	23.03	39088	5276	13.5
Wheat	180	181	100.36	24	24	100.36	23	23	100.36	20569	4752	23.1	28971	3427	11.83
Maize	887877	106736	12.02	100492	12560	12.5	31083	3435	11.05	102756	21089	20.52	10154	2469	24.31
Sorghum	1003	531	52.92	86	48	56.02	55	55	99.66	2840	1288	45.36	777	431	55.51
Finger millet	335	335	99.92	168	168	99.92	21	21	99.92	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-	2111	180	8.54	5276	441	8.36
Rice	-	-	-	-	-	-	-	-	-	2326	2230	95.87	1078	1033	95.86
Pulse	167368	31486	18.81	6882	1316	19.13	5440	1674	30.77	87439	16723	19.13	16658	5355	32.15
Horse/Faba beans	388	385	99.1	5	5	99.11	5	5	99.12	501	288	57.38	47	30	63.7
Field peas	364	360	98.93	33	33	99.07	46	45	99.21	5247	2718	51.81	3006	2244	74.65
White Haricot beans	12684	6660	52.51	330	144	43.52	28	14	49.13	2011	1052	52.32	58	35	59.6
Red Haricot beans	152814	30672	20.07	6403	1281	20.01	5321	1656	31.12	51909	12018	23.15	1988	447	22.47
Chick peas	-	-	-	-	-	-	-	-	-	566	551	97.28	73	71	97.63
Lentiles	-	-	-	-	-	-	-	-	-	5657	3216	56.85	820	460	56.06
Vetch/Grass peas	667	491	73.66	14	11	82.62	6	6	99.7	11949	9783	81.88	4256	3925	92.22
Soya beans	-	-	-	-	-	-	-	-	-	32	17	52.19	19	10	52.19
Fenugreek	-	-	-	-	-	-	-	-	-	341	222	65.08	16	14	87.39
Mung bean/"Masho"	37	18	48.37	9	4	48.37	1	1	48.37	12484	4665	37.36	6376	2746	43.06
Gibto	648	647	99.89	88	88	99.89	32	32	99.89	-	-	-	-	-	-
Oile seeds	2601	1870	71.89	322	312	96.96	38	27	71.06	1383	1030	74.43	286	102	35.71
Nueg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-	988	978	98.95	16	16	98.97
Ground nuts	-	-	-	-	-	-	-	-	-	329	323	98.07	72	71	99.11
Safflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sesame	2601	1870	71.89	322	312	96.96	38	27	71.06	67	23	34.6	198	72	36.1
Rapeseed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetables	63339	15345	24.23	3231	1586	49.09	-	-	-	67666	22254	32.89	4323	1926	44.55
Lettuce	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Head Cabbage	28918	12474	43.13	1517	944	62.27	-	-	-	12366	6169	49.88	1217	845	69.4
Ethiopian Cabbage	13960	6584	47.16	301	201	66.7	-	-	-	43720	19729	45.13	1302	853	65.5
Tomatoes	15539	4890	31.47	867	630	72.65	-	-	-	9130	3692	40.44	1167	681	58.31
Green peppers	4249	3032	71.36	26	17	64.09	-	-	-	3978	3141	78.98	143	100	70.17
Red peppers	2797	1934	69.16	516	405	78.61	-	-	-	2839	1845	64.97	494	461	93.44
Swiss chard	6798	4838	71.16	5	3	60.09	-	-	-	-	-	-	-	-	-
Root Crops	244045	44292	18.15	11154	2946	26.41	-	-	-	257294	46605	18.11	26441	4854	18.36
Beetroot	22505	6661	29.6	299	154	51.4	-	-	-	374	370	98.95	12	12	99.19
Carrot	42798	17851	41.71	224	115	51.37	-	-	-	1135	1118	98.46	80	79	98.56
Onion	41025	13378	32.61	5468	2562	46.86	-	-	-	46157	14323	31.03	7245	2367	32.67
Potatoes	135309	38542	28.48	5068	1425	28.11	-	-	-	207250	44221	21.34	18791	4179	22.24
Yam	525	384	73.2	1	1	71.98	-	-	-	116	117	100.77	-	-	100.77
Garlic	14800	8334	56.31	27	17	62.94	-	-	-	7149	2612	36.53	265	102	38.53
Taro/'Godere'	1856	1302	70.15	45	33	71.94	-	-	-	374	218	58.22	3	2	62.98
Sweet potatoes	776	548	70.55	21	18	87.19	-	-	-	608	429	70.66	46	39	84.42

Table 25 (Con't)

National

Crop type	Irrigation						Extension package					
	Holder			Hectare			Holder			Hectare		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	1001415	122679	12.25	158248	19958	12.61	2201072	159745	7.26	360428	25063	6.95
Cereals	677922	102401	15.11	102826	13666	13.29	1342164	108802	8.11	230290	19092	8.29
Teff	68926	37385	54.24	13904	7216	51.9	74877	17795	23.77	24789	6605	26.65
Barley	14968	5467	36.52	3847	1728	44.92	67264	11468	17.05	28353	3719	13.12
Wheat	6614	2856	43.18	4712	2623	55.66	19728	5957	30.2	23489	2428	10.33
Maize	607874	94765	15.59	79602	10747	13.5	1205825	107355	8.9	143814	15108	10.51
Sorghum	11533	4577	39.68	749	279	37.25	85346	40236	47.14	6736	3022	44.86
Finger millet	130	129	99.61	5	5	99.61	561	404	71.97	177	168	95.2
Oats/ 'Aja'	131	131	100.11	8	8	100.11	1094	96	8.79	2864	287	10.01
Rice	-	-	-	-	-	-	422	277	65.66	69	55	80.49
Pulse	134523	30392	22.59	16584	5943	35.84	832850	71054	8.53	45402	4551	10.02
Horse/Faba beans	-	-	-	-	-	-	3947	2046	51.83	165	62	37.49
Field peas	1880	1289	68.6	141	116	81.83	2957	998	33.75	402	139	34.49
White Haricot beans	10118	4638	45.84	2726	2406	88.24	51486	17833	34.64	2771	1005	36.25
Red Haricot beans	85364	26183	30.67	2929	1074	36.66	764937	68933	9.01	38186	4134	10.83
Chick peas	3738	2617	70.02	319	256	80.46	220	214	97.13	7	6	80.37
Lentiles	12429	5771	46.43	2020	903	44.69	5810	3281	56.47	745	420	56.35
Vetch/Grass peas	1455	1284	88.25	110	102	92.62	2340	2255	96.38	306	296	96.54
Soya beans	-	-	-	-	-	-	1322	872	65.95	35	17	49.02
Fenugreek	5519	3025	54.81	406	225	55.37	2683	1771	66	127	101	80.09
Mung bean/"Masho"	18124	11952	65.95	7932	5210	65.68	5304	2492	46.99	2569	1458	56.77
Gibto	68	69	100.34	1	1	100.34	648	647	99.89	88	88	99.89
Oile seeds	833	513	61.61	158	124	78.55	14838	5809	39.15	2699	1084	40.15
Nueg	-	-	-	-	-	-	-	-	-	-	-	-
Linseed	404	404	100.01	33	33	100.01	404	404	100.01	33	33	100.01
Ground nuts	430	326	75.97	125	121	96.29	11447	5590	48.83	1838	1032	56.15
Safflower	-	-	-	-	-	-	1453	1088	74.85	40	36	88.88
Sesame	-	-	-	-	-	-	1534	1060	69.07	788	328	41.68
Rapeseed	-	-	-	-	-	-	-	-	-	-	-	-
Vegetables	215455	42126	19.55	12833	4536	35.35	219758	51804	23.57	6952	2193	31.54
Lettuce	2374	2068	87.11	27	26	98.91	689	687	99.75	12	12	99.75
Head Cabbage	28077	12379	44.09	1850	963	52.04	26881	8044	29.92	1263	838	66.36
Ethiopian Cabbage	73557	24122	32.79	2064	937	45.41	163579	50525	30.89	3323	1473	44.32
Tomatoes	80891	29376	36.32	6123	3959	64.66	18497	6699	36.22	992	640	64.55
Green peppers	43397	12835	29.58	1222	478	39.16	10890	4255	39.07	131	59	44.92
Red peppers	37934	10611	27.97	1544	583	37.78	10331	4140	40.08	1215	725	59.66
Swiss chard	949	735	77.44	4	3	73.27	8414	5038	59.87	16	10	66.17
Root Crops	341165	46338	13.58	25846	4721	18.27	924658	127498	13.79	75085	12566	16.74
Beetroot	21954	7820	35.62	360	136	37.85	20995	7268	34.62	245	104	42.45
Carrot	16162	6035	37.34	344	154	44.78	41520	19172	46.17	411	201	48.93
Onion	121287	22474	18.53	12263	3089	25.19	75717	15540	20.52	9993	3137	31.39
Potatoes	167272	33041	19.75	9884	2451	24.8	758234	125336	16.53	61848	12013	19.42
Yam	579	404	69.71	8	7	85.14	11495	5252	45.69	56	25	44.74
Garlic	48385	14503	29.97	2341	1201	51.3	31268	10168	32.52	1069	678	63.41
Taro/'Godere'	435	312	71.72	16	13	79.69	30336	6944	22.89	579	154	26.52
Sweet potatoes	31083	17239	55.46	630	318	50.5	33593	12191	36.29	882	362	41.01

APPENDIX IV

QUESTIONNAIRE

Form AgSS 2008/8
CENTRAL STATISTICAL AUTHORITY
ETHIOPIAN AGRICULTURAL SAMPLE SURVEY 2015/16 (2008 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			