

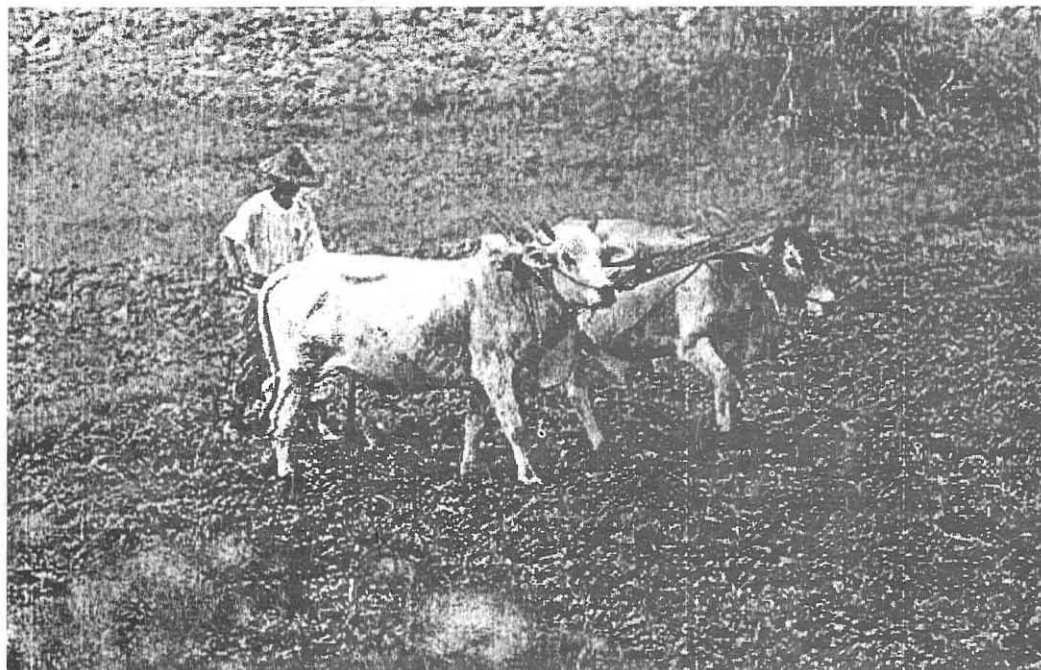
THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

CENTRAL STATISTICAL AGENCY

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# AGRICULTURAL SAMPLE SURVEY

2010/11 (2003 E.C), VOLUME VI



**REPORT ON**  
**FARM MANAGEMENT PRACTICES**  
**FOR BELG/ SECOND SEASON CROPS**  
**PRIVATE PEASANT HOLDINGS**

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## CHAPTER- I

### 1. INTRODUCTION AND OBJECTIVES OF THE SURVEY

#### 1.1 Introduction

Country's experience showed that farmers' attitude and tendency to adopt and accept new innovations, modern agricultural techniques and technologies, such as use of fertilizers, irrigation, improved seeds and pesticides that help to improve their living standards through attaining enhanced productivity, do have positive impact on the development of the agricultural sector as a whole. In this regard, the extent of adopting modern agricultural practices, such as utilization of fertilizer, irrigation, pesticides and improved seeds ...etc, by the peasant farmers often used as important indicators for estimating the rate and extent of modern technologies use in the country's agriculture, above all the magnitude and level modern/improved farm management practices in the agriculture sector used to be the sole indicator of the transformation rate of the country's existing agriculture to modern agriculture.

This report which is Volume VI of the nine series reports, presents quantitative information about the use of modern agricultural inputs for Belg season crops of 2010/11 (2003 E.C.) of the private peasant holdings for the country and regions as it was obtained from the results of the Belg Season Crop Production Sample Survey conducted in May, 2011 by the Central Statistical Agency (CSA).

#### 1.2 Objectives of the 2010/11 Belg Season Crop Production Sample Survey

The objectives of the 2010/11(2003 E.C.), Belg Season Crop Production Sample Survey is to produce basic quantitative information on cropland area, production and yield, of major Belg season crops, as well as to provide quantitative information on:-

- The extent and use of different farm management practices on Belg season crops such as fertilized crop land area and quantity of fertilizer used by crop and fertilizer type, irrigated cropland area under improved seed, pesticide treated cropland area ..... etc.
- The adequate and timely supply of this information to ultimate users is, therefore, important for use as a primary input in the process of policy formulation, designing developmental agricultural projects and programmes. This report, therefore, presents quantitative information on the above mentioned major variables at country and regional levels.

Except Harari, and Dire Dawa, where each region as a whole was taken to be the domain of estimation; each zone of a region / special wereda was adopted as a stratum for which major findings of the survey are reported.

### **2.3 SELECTION SCHEME**

Enumeration areas from each stratum were selected systematically using probability proportional to size sampling technique; size being number of agricultural households. The sizes for EAs were obtained from the 1999 E.C cartographic census frame. From the fresh list of households prepared at the beginning of the survey 30 agricultural households within each sample EA were selected systematically. Estimation procedure of totals, ratios, sampling error and the measurement of precision of estimates (CV) are given in Appendix-I and II respectively.

### **2.5 Field Organization**

The Central Statistical Agency (CSA) branch statistical office heads, field supervisors and enumerators, other supporting staff and drivers were all involved in the field operation activities of the 2010/11 (2003 E.C.) Belg season Crop Production Sample survey. To accomplish the data collection activities, all field enumerators were equipped with the necessary survey equipment (i.e. compass, programmable calculator, measuring tape, sample bags...etc). To assist with the fieldwork and data collection activities all available four-wheel drive vehicles were used for supervision and collection of completed questionnaires.

### **2.6 Training of Field Staff**

At the beginning of the survey year, the field staff-training program was carried out in two stages. The first stage consisted of trainees from the head office, branch statistical office heads, statisticians and some of the field supervisors for one week at Ambo University. Those trained in the first stage conducted similar training for field supervisors and enumerators for 15 days in the 24 branch statistical offices, which are distributed all over the country. During the second stage training, the field staff were given detailed classroom instruction 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 enumerators' and supervisors' training also included a field practice to reinforce the procedures discussed in the classroom with regard to field area measurement, use of the programmable calculator and crop-cutting techniques.

## CHAPTER II

### 2. SURVEY METHODOLOGY, FIELD ORGANIZATION, METHOD OF DATA COLLECTION AND PROCESSING

#### 2.1 COVERAGE

The 2010/11 (2003 E.C) Annual Agricultural Sample Survey (Belg season) covered the entire rural parts of the country except the non-sedentary population of three zones of Afar & six zones of Somali regions. Accordingly the survey took in to account of all parts of Harari, Dire Dawa, and actually 59 Zones / Special weredas (that are treated as zones) of other regions.

To be covered by the survey, a total of around 2110 Enumeration Areas (EAs) were selected. However, due to some EAs weren't growing Belg season crops, in 934 EAs the survey could not be successful and hence interrupted. Thus, all in all the survey succeeded to cover 1176 EAs throughout the regions. The Annual Agricultural Sample survey (Belg season) was conducted on the basis of 30 agricultural households selected from each EA.

#### 2.2 SAMPLING FRAME

The list containing EAs of all regions and their respective households obtained from the 1999 E.C cartographic census frame was used as the sampling frame in order to select the primary sampling units (EAs). Consequently, all sample EAs were selected from this frame based on the design proposed for the survey. The second stage sampling units, households, were selected from a fresh list of households that were prepared for each EA at the beginning of the survey.

#### 2.3 SAMPLE DESIGN

In order to select the sample a stratified two-stage cluster sample design was implemented. Enumeration areas (EAs) were taken to be the primary sampling units (PSUs) and the secondary sampling units (SSUs) were agricultural households.

The sample size for the 2010/11 agricultural sample survey was determined by taking into account of 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 non-sampling errors, manageability of the survey in terms of quality and operational control was also considered.

## 2.7 Methods of Data Collection.

Except cropland area of major Belg Season crop, the data of which collected objectively using compasses and measuring tape, the information on production of major Belg Season crops and agricultural practices (uses of fertilizer, pesticide, improved seed and irrigation) were subjectively collected by interviewing the holders of sampled households. Appendix II, illustrates the total number of EAs and households reporting for the 2010/11 (2003 E.C.), Belg crop production by region.

A major characteristic of Ethiopian agriculture is the existence of two well-known crop production seasons referred to as the Meher (or main) and Belg(short rain) Seasons. The generally accepted definition of the Meher season is that of the long rainy season, which normally occurs from June to September. The Belg Season most often refers to small but timely rainy season, which normally occurs from February to May but in limited areas of the country. Generally, the Meher Season rainy period provides ideal growing conditions for the longer maturing crops. Planting and harvest of Meher crops can extend to December or January in some areas. Most of the time holders rely on short maturing crops for planting during the Belg rainy period and harvest of the crops is in June or July.

A point of contention arises with respect to the pure definition of the Belg crop. Belg cropping practices are heterogeneous across different portions 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. It is important not to overlook or miss agricultural practices performed all year round due to use of irrigation or soil moisture from sufficiently dried areas that from time-to-time are swampy or marshy. To help clarify the two-crop season, the following definition has been in use since 1987/88:

Belg Season Crops were defined as any crops that are harvested during the months of March to August, while those crops that are harvested during September to February are considered Meher (or main) season crops.

This report consists of estimates of area, production and yield of major Belg Season crops for the year 2010/11 (2003 E.C.) The data collection period for obtaining the area, production and agricultural practices of the Belg season crops was from 'Sene' 1 -15, 2003 E.C. (i.e. From June 8 to June 22, 2011). Data on area under Belg season crop are collected objectively using

compass and measuring tapes, while data on production of belg season crops were using subjective method based on face-to-face interviewing of the holder by the enumerator. Data on production of belg season crops are calculated from the condition factor data that are collected directly from the sampled holders within household, peasant association chairpersons and development agents. The enumerators were trained to systematically present the questions to the respondents on percentage changes using the local translation and meaning. The enumerators were also trained on how to use comparative associations to represent the concept of percentage changes and fill in the questionnaire.

## **2.8 Data Processing**

### **a. Editing, Coding and Verification**

To insure the quality of the collected survey data an editing, coding, and verification instruction manual was written, and thirty four editors, data coders and verifiers were trained for one day to edit, code and verify the data using the aforementioned manual as a reference and teaching aid.

The enumerator completed edited and coded questionnaires sent to the head office were thoroughly verified by trained verifiers on a 100% basis before the questionnaires were sent to the data entry unit. The editing, coding, verification and data entry of all questionnaires was completed in two weeks time.

### **b. Data Entry, Cleaning and Tabulation**

Before starting data entry computer edit specifications were prepared for use on personal computers, utilizing the CSPRO Software for data consistency checking purposes. The data on the coded questionnaires were then entered into the CSPRO software on personal computers. The data was then checked and cleaned using the computer edit specifications prepared earlier for this purpose. Forty six data encoders and eight supervisors were involved in this total process and it took twenty five days to complete the job. Finally, tabulation was done on personal computers to produce results as indicated in the tabulation plan.

## **2.9 Basic concepts and definitions**

For better understanding and ultimate use of the data presented in this report, the definitions and concepts of technical terms and terminologies used for the collection of all types of data of the 2010/11 (2003 E.C.) Belg Seasons Crop Production Sample Survey is presented here below: -

**Enumeration Area (EA):** An Enumeration Area in rural parts of the Country is a locality that is less than or equal to a farmer's association area and usually it consists of 150-200 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 provision for food or other essentials for living. The persons in the group may pool their incomes and have a common budget to greater or lesser extent. They may be related unrelated persons, or a combination of both.

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

**Holder:-** A holder is a person who exercises management control over the operations of the agricultural holding and takes the major decision regarding the utilization of the available resources. He has technical and economic responsibility for the holding. He may operate the holding directly as an owner or as a manager.

Under conditions of traditional agricultural holding the holder may be regarded as the person, who with or without helps, of others, operates land or raises livestock in his own right, i.e. the person who decides on what, when where and how to grow crops or raise livestock and has right to determine the utilization of the products.

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

**Parcel:** - A parcel of holding is any piece of land entirely surrounded by land, Water, road, forest, etc. which is not part of the holding. It 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 crop.

**Belg Season Crops:** - are defined as any 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) are considered as main (Meher) season crops.

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

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

**Fertilizer:** - refers to anything added to the soil intended to increase the amount of plant nutrients available for crop growth. Usually fertilizers are divided into two parts, Natural and commercial. Examples of natural fertilizers are farmyard manure and wood ashes while commercial 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 troublesome or harmful to crop. Insecticides, herbicides and fungicides are all considered as pesticides.

## CHAPTER III

### III. SUMMARY OF THE RESULTS OF THE 2010/11 (2003 E.C.) FARM MANAGEMENT PRACTICES OF BELG SEASON SURVEY

In this part of the report, the results of the 2010/11 (2003 E.C.), Belg Season Crop Production Sample Survey on the extent and use of Belg season farm management practices are presented. The following are brief discussions on the major findings of the survey.

According to 2010/11 (2003 E.C.), Belg Season Crop Production Sample Survey results, it was estimated that Belg season major crops covered 1,173,048 hectares of land, where 4,470,153 holders were engaged in the production activity. Of this total area under Belg season crops 697,938 hectares (59.49%) was under the use of improved farm management practices in which 3,362,141 (75.21%) agricultural holders reported for utilizing different agricultural inputs. Moreover, in 2010/11 (2003 E.C.) it was estimated that a total of 164,843 quintals of commercial fertilizer was utilized for Belg season crop production.

**Summary Table A: Total Cropland Area and Number of holders engaged in 2010/11 (2003 E.C.) belg season crop production activities**

• Belg crop Area in Hectare	1,173,048
• Number of Belg Crop Producing Holders	4,470,153
• Improved Farm Management including practices in Hectare	697,938
• Number of holders reporting the use of farm management practices	3,362,141
• Quantity of commercial fertilizer applied in Quintals	164,843

#### 3.1 Belg Season Cropland Area under Different Farm Management Practices

According to the 2010/11 (2003 E.C.), Belg season Crop Production Sample Survey results, it was estimated that Belg season crops covered about 1,173,048 hectares of land. Of this total, about 588,192 hectares (50.14%) was under the use of improved farm management practices. Moreover, of the above mentioned total cropland area under improved farm inputs, about 383,772 hectares (65.25%) was under fertilizer (Both Natural and Commercial), 59,823 hectares (10.17%) was under irrigation, 100,056 hectares (17.01%) was treated with pesticides and 44,541 hectares (7.57%) was under improved seeds. The coverage of the above mentioned farm management practices accounted

for 32.72%, 5.09%, 8.53% and 3.78% of the country level total area under Belg season crops, respectively (See Summary Table B).

**Summary Table B. Cropland Area Under Improved Farm Management Practices;**

**For Private Holdings, 2010/11 (2003 E.C.), Belg season**

**Country Level**

Farm Mangement Practices	Cropland AREA		% From Country Total
	IN Hectare	%	
IRRIGATION	59823	10.17	5.09
IMPROVED SEEDS	44541	7.57	3.80
FERTILIZER	383772	65.25	32.72
PESTICIDES	100056	17.01	8.53
<b>TOTAL</b>	<b>587980</b>	<b>100.00</b>	<b>50.14</b>

In Summary Table C, below the 2010/11 (2003 E.C.), Belg Season estimates of total cropland area under different farm management practices is presented. As it is indicated in the summary Table, the highest proportion of cropland area under different farm management practices was reported to be covered by Cereals, which accounted for 490,826 hectares (52.50% from the total cereals covered area reported at country level ), followed by pulses with 91114 hectares under improved farm management practices, taking up 43.09% of the total country level pulses covered area.

**Summary Table C. Cropland Area Under Improved Farm Management Practices;**  
**For Private Holdings, 2009/10 (2002 E.C.), Belg season**

**Country Level**

Crop Categorie	Cropland AREA			
	Total		Under IMP. Farm Mgmt Prac.	
	In Hectare	%	In Hectare	% From Total
CEREALS	934,946	79.70	490,826	41.84
PULSES	211,462	18.03	911,462	7.77
OIL CEOPS	26,640	2.27	2,672	0.23
GRAINS	1,173,048	100.00	584,612	49.84

### 3.2 Fertilizer Applied Cropland Area and Fertilizer Type used

The results of the survey indicate that belg season cropland area under both natural and commercial fertilizers were estimated to be 383,772 hectares, covering 32.72% of the total area

under Belg seasons crops of the private holdings. Of the total fertilized area **207,977** hectares (54.19% from the total fertilizer appliedbel cropland area and 17.73% from total country level Belg Cropland area) was reported to be under natural fertilizers. The coverage of commercial fertilizers was estimated to be **175,795** hectares (**45.81 %** from the total fertilizer applied aea and **14.99%** from the country total crop land areat), the share of DAP, UREA and the mixture of the two [i.e. DAP + UREA] called as commercial fertiltzers altogether constitute **38.20%**, **01.79%** and **5.82%** of the total fertijizer applied crop land area and **12.50%**, **0.59%** and **1.90%** of the total country level reported Belg season cropland area in that order (For details see Summary Table D.)

**Summary Table D:- Fertilizer Applied Cropland Area ;For Private Holdings,  
2010/11 (2003 E.C.), Belg season**

<b>Country Level</b>			
<b>FertilizerType</b>	<b>Fertilizer Applied AREA</b>		<b>% From Country Total B.Crop Area</b>
	<b>In Hectare</b>	<b>%</b>	
<b>Natural</b>	<b>207,977</b>	<b>54.19</b>	<b>17.73</b>
<b>Commercial</b>	<b>175,795</b>	<b>45.81</b>	<b>14.99</b>
DAP	146,584	38.20	12.50
UREA	6,876	1.79	0.59
DAP + UREA	22,335	5.82	1.90
<b>Total</b>	<b>383,772</b>	<b>100.00</b>	<b>32.72</b>

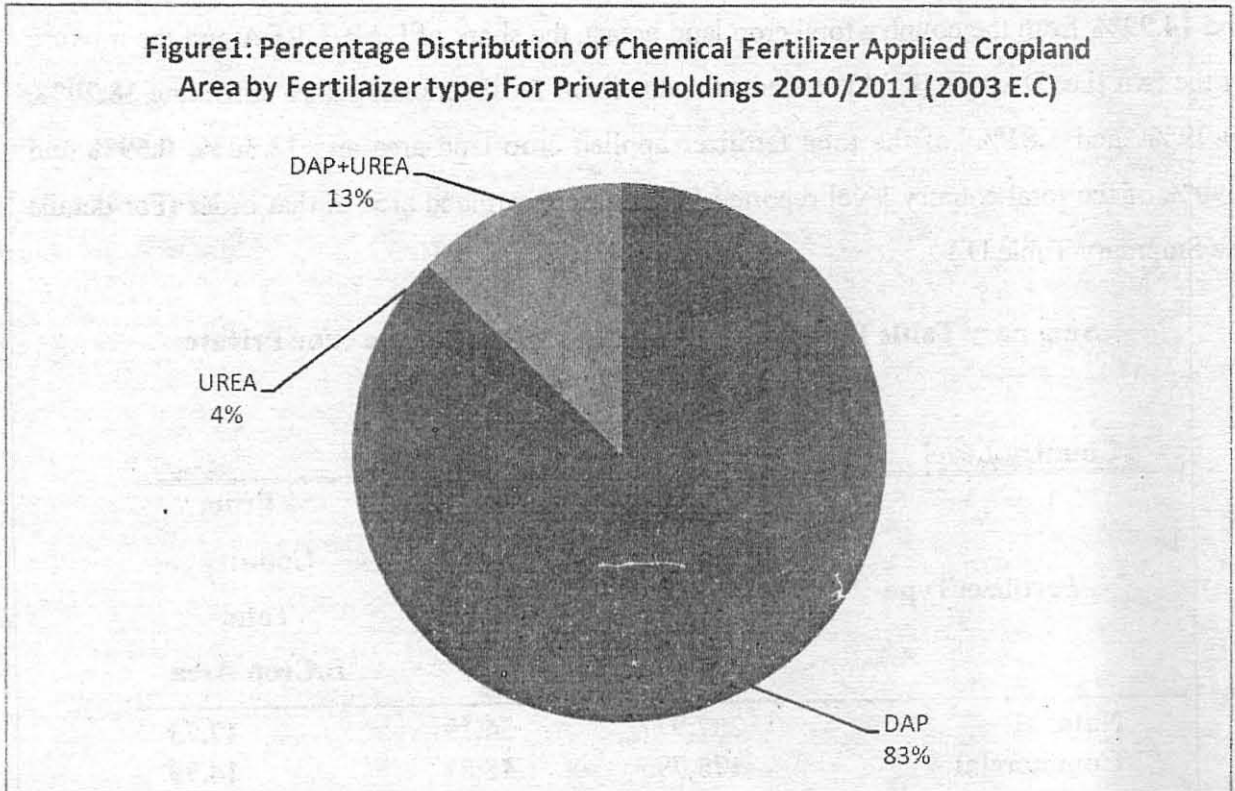
### 3.3.1 Use of Natural Fertilizers

In general, the application of natural fertilizers for Belg season crops in 2010/11 (2003 E.C.), varies from crop to crop. Of the total area under natural fertilizer, the highest proportion was reported for maize crop, which was estimated at **109,263** hectares (**52.54%**). The fertilized area (natural fertilizer) under haricot beans was the second with an estimated area of **37,388** hectares (**17.98%**), while area under barley stood third i.e. **23,783** hectares, accounting **11.45%** of the total country level natural fertilizer applied Belg season cropland area (see Table 2.1).

### 3.3.2 Use of Commercial Fertilizers

Out of the total cropland area under commercial fertilizers in 2010/11 (2003 E.C.), Belg season, i.e, **175,795** hectare (**14.99%**) of the total Belg season crop area), the area under DAP

was the highest which accounted for **146,584 hectare (83.38%)**, while the the second and third were the mix of the two fertilizers (DAP+UREA) and UREA covering **22,335 hectare (12.71%)** and **6,876 hectare (3.91 %)** of the total commercial fertilizer applied area, respectively (see Fig 1.)



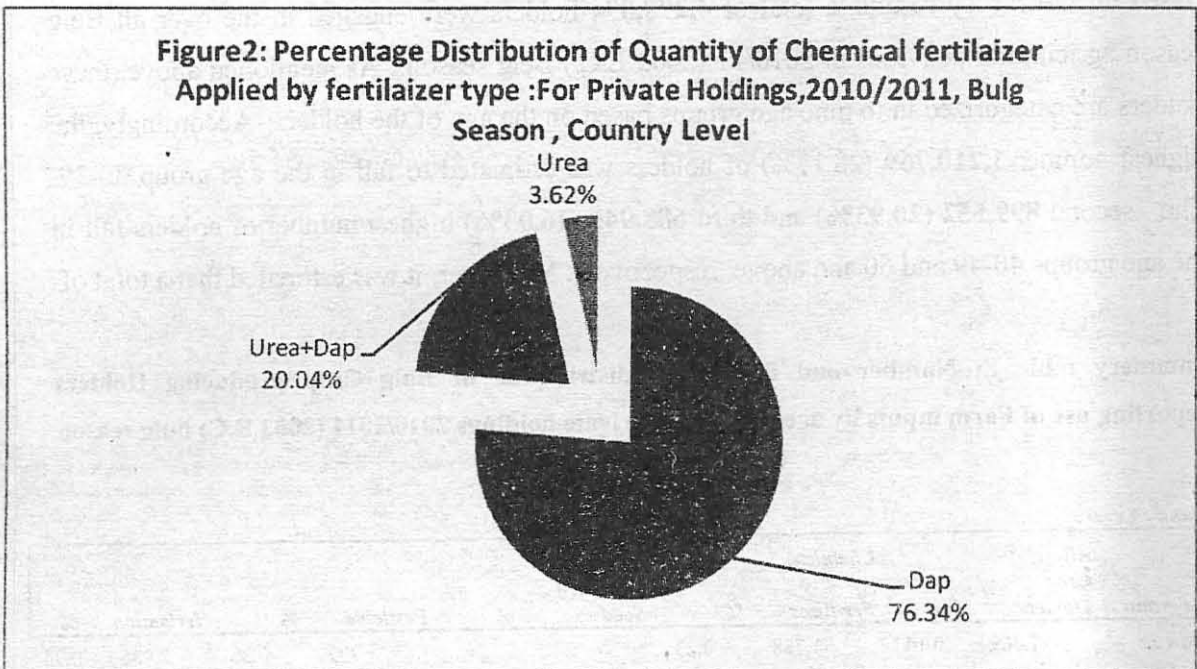
Similarly, the application of commercial fertilizers varied from crop to crop. Of the total area under commercial fertilizers, the highest area was reported for Maize at **61,192 hectares (37.12%)**. The second highest area reported under commercial fertilizers was for Haricotbean, i.e., **37,372 hectares (22.67%)**, followed by barley with **30,805 hectares**, i.e. about 18.69% of the total haricotbean covered area, was under commercial fertilizer, during the 2010/11 Belg season harvest.

The regional distribution of both natural and commercial fertilizers application varied from region to region. For instance, of the total area under both (Natural + Commercial) fertilizers, the highest was reported for Oromia Region, which accounted for **207,095 hectares (53.96%)** of the total country level both Natural + Commercial fertilizer applied cropland area), S.N.N.P and Amhara Regions were the second and third in contributing the highest both (Natural and

Commercial) fertilizers applied cropland area which were estimated to be 156,346 hectares (40.74%) and 34,949 hectares (9.10%), respectively.

### 3.4 Type and Quantity of Commercial Fertilizer Applied

In 2010/11 (2003 E.C.) the total quantity of commercial fertilizer used for Belg season crop production was estimated at 164,843 quintals. Of this total, the share of DAP was the highest accounting for 76.35% (125,853 quintals). The mixture of the two types of fertilizers (DAP+UREA) was the second highest accounting for 20.04% (33,028 quintals). The last was the share of the Urea, which accounted for 3.62% (5,962 quintals) (See Fig 2).



### 3.5 Number of Belg Crop producing Holders Reporting use of Improved Farm Management Practices by Age

To easily identify the age category of holders who used to earn the economic benefit generated from adopting/practicing the use of modern farm management practices on their holdings, Belg crop producing holders' ages have been categorized into nine groups. These are:

### The group categories by age

Group	1	-	Under 18 Years
Group	2	-	18-20 Years
Group	3	-	21-24 Years
Group	4	-	25-29 Years
Group	5	-	30-39 Years
Group	6	-	40-49 Years
Group	7	-	50-59 Years
Group	8	-	60 years& above
Group	9	-	not stated

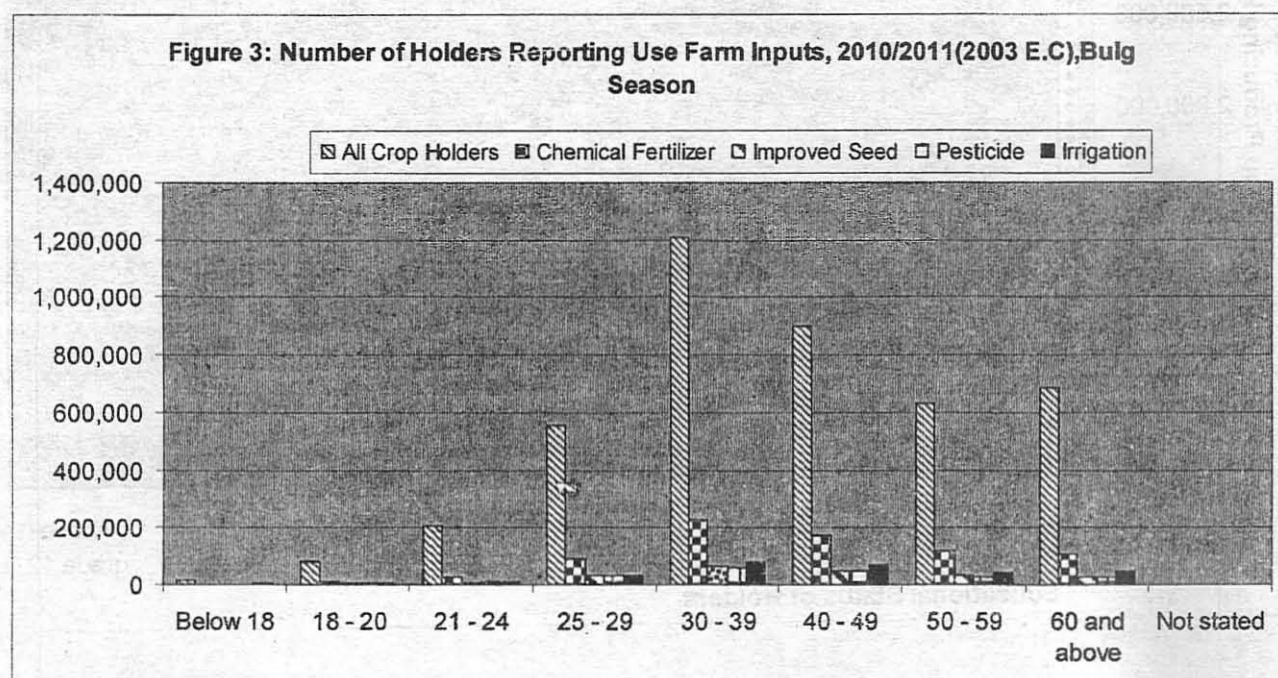
Based on the survey results, a total of **4,298,094** holders were engaged in the over all Belg season agricultural activities in 2010/11 (2003 E.C.) Belg season. As mentioned above, these holders are categorized in to nine age groups based on the age of the holder. Accordingly, the highest number **1,210,769** (28.17%) of holders was estimated to fall in the age group 30-39. The second **899,552** (20.93%) and third **688,945** (16.03%) highest number of holders fall in the age groups 40-49 and 60 and above, respectively. Moreover, it was estimated that a total of

**Summery table E: Number and Percentage distribution of Bulg Crop producing Holders reporting use of Farm inputs by age group; for private holdings 2010/2011 (2003 E.C) bulg season**

#### Country Level

Age group	All Crop Holders	%	Chemical		Improved Seed		Pesticide		Irrigation	
			Fertilizer	%		%		%		%
Below 18	17,809	0.14	1,788	0.23	*		799	0.38	2,886	0.96
18 - 20	81,861	1.90	10,353	1.33	3,144	1.46	4,212	2.02	4,533	1.50
21 - 24	207,920	4.84	29,720	3.82	7,832	3.65	12,366	5.94	12,974	4.29
25 - 29	558,273	12.99	95,320	12.27	30,498	14.20	30,403	14.59	33,053	10.94
30 - 39	1,210,769	28.17	229,889	29.58	67,491	31.42	58,008	27.84	82,095	27.17
40 - 49	899,552	20.93	174,900	22.50	47,931	22.32	48,124	23.10	70,220	23.24
50 - 59	630,410	14.67	122,450	15.76	31,477	14.66	26,069	12.51	45,346	15.01
60 and above	688,945	16.03	111,282	14.32	25,858	12.04	28,367	13.62	51,047	16.89
Not stated	*		*		-		-		-	
Total	4,298,094	100	777,166	100.00	214,779	100	208,349	100.00	302,153	100
%	100		18.08		5.00		4.85		7.03	

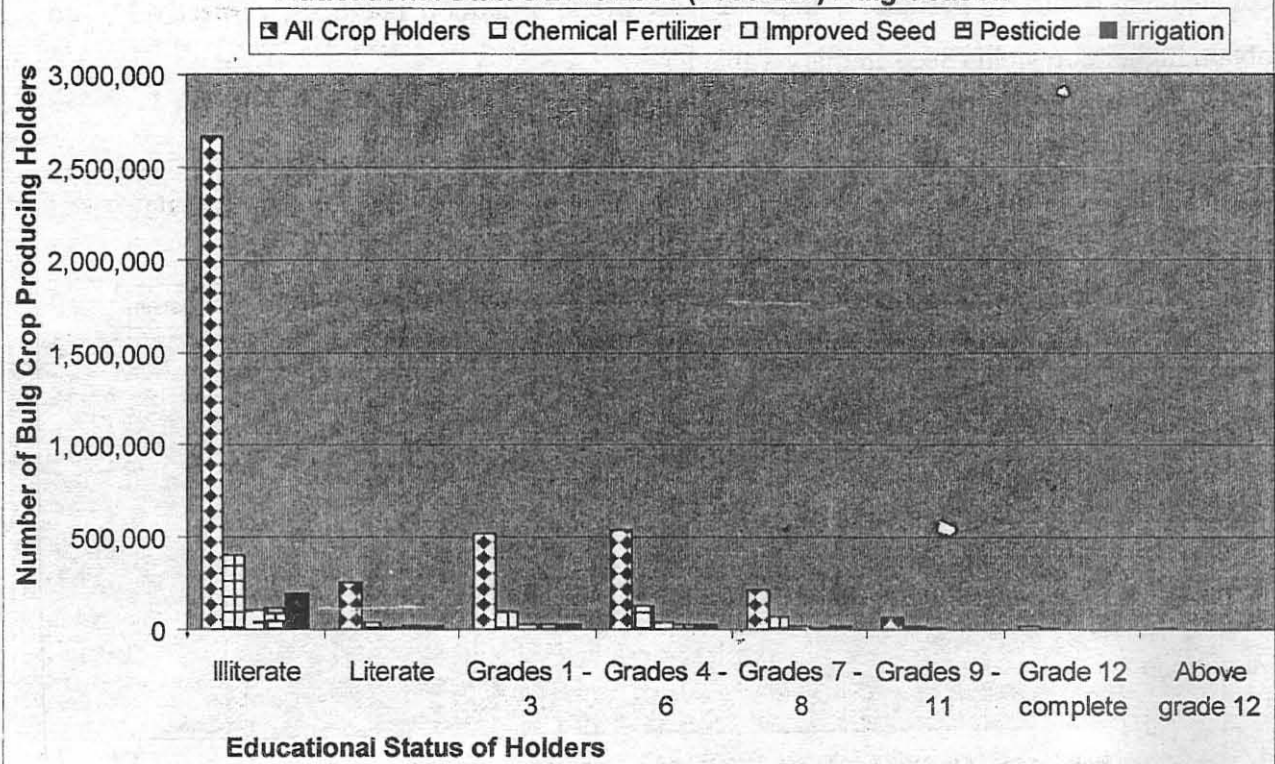
777,166 ; 214,779; 208,349 and 302,153 Belg crop-producing holders ( i.e. about 18.08%; 5%; 4.85% and 7.03% of the country total Belg crop producing holders) reported the use of commercial fertilizer, pesticides, improved seed, and irrigation practices, respectively, to obtain higher cop yield (See summary Table E).



### 3.6 Number of Belg Crop producing Holders reporting use of Improved Farm Management Practices, by Holders' Educational Status

Holders Educational Status plays 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 2010/11 Belg Season Crop Production activities based on their educational status. According to the results of the 2010/11 Belg Season Crop Production Sample Survey, out of the total number i.e. **4,298,094** holders, out of which the highest number of holders who used chemical fertilizers, improved seed, pesticides and irrigation i.e. about **126,801; 38,951** and **25,249** holders wre fount to have Grade 4 – 6 educational status, however,with regardcto irrigation practice, the highes number i.e. **33,197** holders' were found to Grade 1 – 3 educational status. In general, it was also estimated that number of illiterate holders were recorded more in all application of agricultural inputs as compared to number of literate holders.

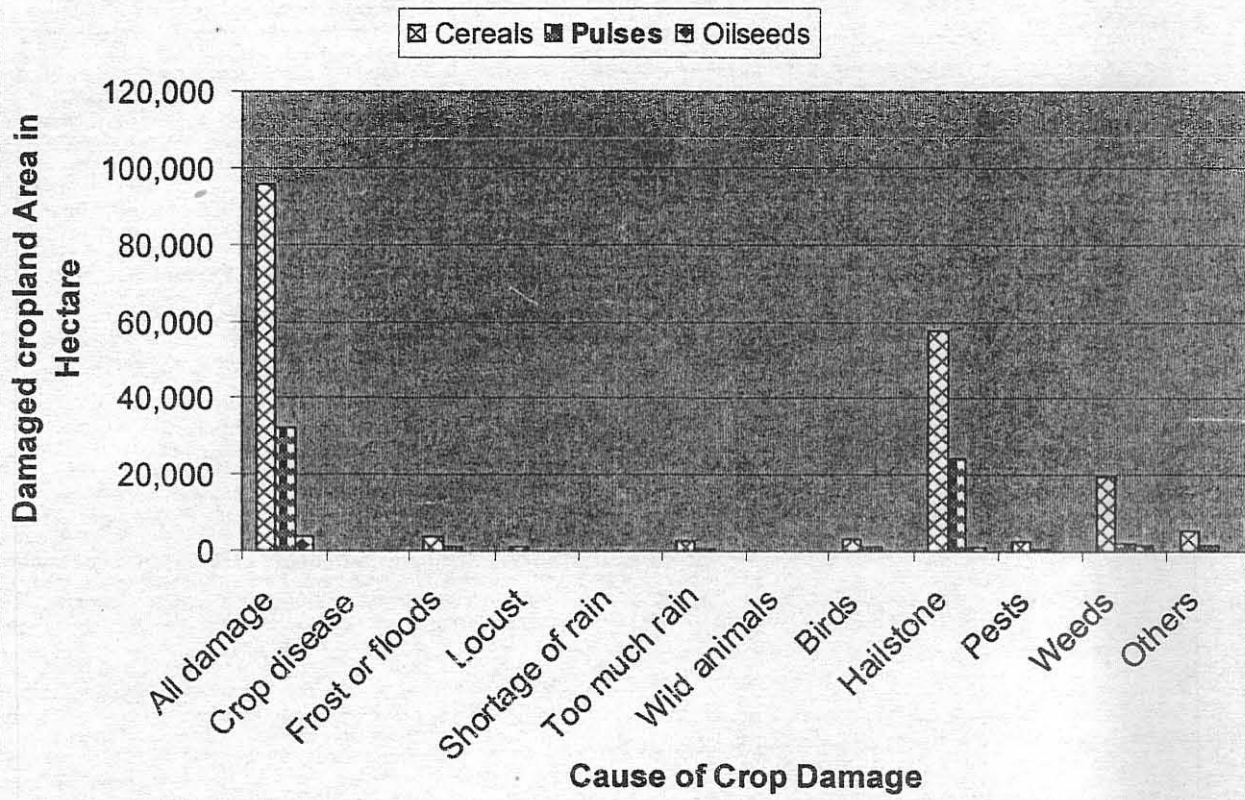
**Figure 4: Number of Holders Reporting Use of Farm Inputs by Educational Status 2010/2011 (2003 E.C) Bulg Season**



### 3.7 Number of Holders Reporting Damaged Cropland Area by Causes of Damage

The total number of belg crop producing private peasant holders who reported crop damage and the cause of damage during the year 2010/11 Belg Season Crop Production harvest were estimated to be about **1,480,209** and the damaged cropland area was estimated to be **145,848** hectares. As indicated in Table 4, the highest cropland area was reported for cereals, that is **95,608** hectares, followed by pulses, which is **32,240** hectares and then Oil crops with **3,722** hectares of damaged cropland area. With regard to the causes of crop damage, it is reported that **90,406** hectares was damaged due to Halistone the second highest crop damage which is estimated at **26,182** hecares was damaged by Weeds. For details, see Table 4 and Fig 5.

**Figure 5: damaged Cropland Area by causes of damage and crop Category; 2010/2011(2003 E.C) Bulg Season**



## **National and Regional Statistical Tables**

Table 1: Number of Holders, Inputs Applied Area and Quantity of Inputs used

Country Level

Crop type	All crop	All Fertilizer		Natural		DAP		
	land Area	Hectare	Quintas	Holder	Hectare	Holder	Hectare	Quintal
Grain Crops	1,173,048	383,773	164,844	1,839,552	207,977	652,639	146,584	125,853
Cereals	934,946	299,909	116,712	1,694,965	166,302	520,973	111,462	87,896
Teff	77,786	19,203	4,444	56,711	10,424	27,477	6,678	3,469
Barley	162,274	54,828	20,524	174,843	23,783	111,230	29,177	18,321
Wheat	71,787	31,848	22,249	45,381	5,641	47,287	24,680	20,435
Maize	550,759	173,187	67,267	1,484,872	109,263	379,627	47,577	43,893
Sorghum	57,413	17,077	869	83,763	15,975	7,874	829	574
Finger millet	1,380	362 *	-	7,286	362 -	-	-	-
Oats/ 'Aja'	12,978	3,392	1,205	10,018	841	11,661	2,520	1,204
Rice	-	-	-	-	-	-	-	-
Pulse	211,462	80,997	47,305	953,807	40,328	381,539	33,799	37,336
Horse/Faba beans	3,993	663	187	22,357	490	6,187	171	168
Field peas	7,144	1,353 *	-	15,022	1,045	3,237	308 *	-
Haricot beans	182,453	77,365	46,778	914,013	37,388	372,536	33,139	36,866
Chick peas	6,235	696 *	-	6,402	647 *	*	*	*
Lentiles	7,031	766 *	-	9,219	610 *	*	*	*
Vetch/Grass peas	3,412 *	-	*	*	*	-	-	-
Soya beans	*	*	*	*	*	*	*	*
Fenugreek	1,126	49 *	-	3,626	47 -	-	-	-
Gibto	*	-	-	-	-	-	-	-
Oile crops	26,640	2,866	827	11,878	1,348	4,918	1,324	622
Nueg	*	*	*	*	*	-	-	-
Linseed	366 *	*	*	*	*	*	*	*
Ground nuts	*	*	*	*	*	*	*	*
Safflower	*	*	*	*	*	-	-	-
Sesame	23,139	2,288 *	-	2,949	915 *	-	1,216 *	*
Rapeseed	635 *	*	*	*	*	-	-	*

Table 1(Cont'd)

Country Level

Crop type	UREA			UREA + DAP			Indigenous seed	
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare
Grain Crops	30,422	6,876	5,962	114,247	22,335	33,028	4,255,374	1,128,196
Cereals	23,472	4,084	3,581	93,430	18,062	25,235	3,830,999	892,435
Teff	2,959	740 *	-	4,819	1,360	663	307,927	77,474
Barley	2,346 *	*	-	7,339	1,628	1,950	710,375	161,884
Wheat	*	*	*	*	*	*	202,621	70,920
Maize	17,523	2,732	2,692	80,810	13,615	20,681	3,117,503	510,218
Sorghum	880 *	*	-	1,199	137 *	-	235,996	57,011
Finger millet	-	-	*	-	-	*	19,107	1,380
Oats/ 'Aja'	*	*	-	-	-	-	68,421	12,978
Rice	-	-	-	-	-	-	*	*
Pulse	12,525 *	*	-	53,195	4,262	7,731	2,299,136	209,682
Horse/Faba beans	233	1	2	249 *	-	17	69,016	3,993
Field peas	-	-	-	-	-	-	66,126	7,144
Haricot beans	12,148 *	*	-	52,573	4,233	7,677	2,133,214	180,674
Chick peas	-	-	-	*	*	*	42,885	6,235
Lentiles	-	-	-	-	-	-	61,436	7,031
Vetch/Grass peas	-	-	-	-	-	-	19,579	3,412
Soya beans	-	-	-	-	-	-	1,360 *	-
Fenugreek	*	*	-	-	-	-	19,382	1,126
Gibto	-	-	-	-	-	-	*	*
Oile crops	*	*	*	*	*	*	100,988	26,080
Nueg	-	-	-	*	*	*	*	*
Linseed	-	-	-	-	-	-	6,659	366
Ground nuts	-	-	-	-	-	-	17,090 *	-
Safflower	-	-	-	*	*	*	*	*
Sesame	*	*	*	*	*	*	58,359	22,579
Rapeseed	*	*	*	*	*	*	14,606	635

Table 1(Cont'd)

## Country Level

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
<b>Grain Crops</b>	214,779	44,541	14,794	208,349	100,056	302,153	59,823	356,523	109,746
<b>Cereals</b>	201,541	42,211	13,708	190,869	95,551	285,824	53,154	320,939	95,947
Teff	1,277	312 *		58,041	18,476	30,079	5,689	16,683	5,505
Barley	1,347 *	*		78,730	20,572	17,619	3,030	61,308	20,517
Wheat	2,555 *	*		67,845	33,106 *	*	*	30,328	18,893
Maize	196,098	40,540	12,005	52,877	14,021	243,590	43,779	246,062	50,072
Sorghum	*	*	*	14,106 *		2,298 *		10,187	959
Finger millet	-	-	*	*	*	*	-	-	-
Oats/ 'Aja'	-	-	*	16,246	2,719 *	*	-	-	-
Rice	-	-	*	*	*	-	-	-	-
<b>Pulse</b>	14,945	1,770	1,055	27,006	4,324	73,311	6,630	136,711	12,252
Horse/Faba bean	-	-	*	*	*	*	-	-	-
Field peas	-	-	*	*	*	*	*	*	*
Haricot beans	14,945	1,770	1,055	21,162	3,111	57,883 *		132,262	11,614
Chick peas	-	-	*	1,062 *		6,925	1,306 *	*	*
Lentiles	-	-	*	*		2,178	164 *	*	*
Vetch/Grass pea	-	-	*	*		*	*	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	*	*		6,819 *	-	-	-
Gibto	-	-	*	*		-	-	-	-
<b>Oile crops</b>	*	*	*	*		1,948 *		6,885	1,547
Nueg	-	-	-	-		-	*	*	*
Linseed	-	-	-	-		*	*	*	*
Ground nuts	-	-	-	-		*	*	*	*
Safflower	-	-	-	-		-	-	-	-
Sesame	*	*	*	*		*	*	*	*
Rapeseed	-	-	*	*		*	*	*	*

Table 1.1: Number of Holders, Inputs Applied Area and Quantity of Inputs used

## Tigray Region

Crop type	All crop	All Fertilizer		Natural		DAP		
	land Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
<b>Grain Crops</b>	5,481	2,318	829	8,467	1,651 *	*	*	*
<b>Cereals</b>	4,805	2,152	792	7,399	1,514 *	*	*	*
Teff	2,763 *	-	*	*	*	-	-	-
Barley	*	*	*	*	*	*	*	*
Wheat	*	*	*	*	*	-	-	-
Maize	*	*	*	*	176 *	*	*	*
Sorghum	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
<b>Pulse</b>	*	*	*	1,683 *	*	-	-	-
Horse/Faba bean	-	-	-	-	-	-	-	-
Field peas	*	*	*	*	*	-	-	-
Haricot beans	-	-	-	-	-	-	-	-
Chick peas	*	*	*	*	*	-	-	-
Lentiles	*	*	*	*	*	-	-	-
Vetch/Grass pea	*	*	*	*	*	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	*	*	*	*	*	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 1.1 (Cont'd)

## Tigray Region

Crop type	UREA			UREA + DAP			Indigenous seed	
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare
<b>Grain Crops</b>	*	*	*	*	*	723	24,002	5,481
<b>Cereals</b>	*	*	*	*	*	686	21,133	4,805
Teff	-	-	-	-	-	-	9,656	2,763
Barley	*	*	*	*	*	**	*	*
Wheat	-	-	-	*	*	**	*	*
Maize	-	-	-	*	*	**	*	*
Sorghum	-	-	-	-	-	--	-	-
Finger millet	-	-	-	-	-	--	-	-
Oats/ 'Aja'	-	-	-	-	-	--	-	-
Rice	-	-	-	-	-	--	-	-
<b>Pulse</b>	-	-	-	*	*	**	*	*
Horse/Faba bean	-	-	-	-	-	--	-	-
Field peas	-	-	-	-	-	*	*	*
Haricot beans	-	-	-	-	-	--	-	-
Chick peas	-	-	-	*	*	**	*	*
Lentiles	-	-	-	-	-	*	*	*
Vetch/Grass pea.	-	-	-	-	-	*	*	*
Soya beans	-	-	-	-	-	--	-	-
Fenugreek	-	-	-	-	-	-	874	*
Gibto	-	-	-	-	-	--	-	-
<b>Oil crops</b>	-	-	-	-	-	--	-	-
Nueg	-	-	-	-	-	--	-	-
Linseed	-	-	-	-	-	--	-	-
Ground nuts	-	-	-	-	-	--	-	-
Safflower	-	-	-	-	-	--	-	-
Sesame	-	-	-	-	-	--	-	-
Rapeseed	-	-	-	-	-	--	-	-

Table 1.1 (Cont'd)

## Tigray Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
<b>Grain Crops</b>	-	-	-	-	-	9,836	*	**	**
<b>Cereals</b>	-	-	-	-	-	7,406	934	*	737
Teff	-	-	-	-	-	*	*	**	**
Barley	-	-	-	-	-	*	*	**	**
Wheat	-	-	-	-	-	*	*	**	**
Maize	-	-	-	-	-	*	*	**	**
Sorghum	-	-	-	-	-	-	-	--	--
Finger millet	-	-	-	-	-	-	-	--	--
Oats/ 'Aja'	-	-	-	-	-	-	-	--	--
Rice	-	-	-	-	-	-	-	--	--
<b>Pulse</b>	-	-	-	-	-	*	*	**	**
Horse/Faba bean	-	-	-	-	-	-	-	--	--
Field peas	-	-	-	-	-	*	*	--	--
Haricot beans	-	-	-	-	-	-	-	--	--
Chick peas	-	-	-	-	-	*	*	**	**
Lentiles	-	-	-	-	-	-	-	--	--
Vetch/Grass pea.	-	-	-	-	-	*	*	--	--
Soya beans	-	-	-	-	-	-	-	--	--
Fenugreek	-	-	-	-	-	874	*	--	--
Gibto	-	-	-	-	-	-	-	--	--
<b>Oil crops</b>	-	-	-	-	-	-	-	--	--
Nueg	-	-	-	-	-	-	-	--	--
Linseed	-	-	-	-	-	-	-	--	--
Ground nuts	-	-	-	-	-	-	-	--	--
Safflower	-	-	-	-	-	-	-	--	--
Sesame	-	-	-	-	-	-	-	--	--
Rapeseed	-	-	-	-	-	-	-	--	--

**Table 1.2: Number of Holders, Inputs Applied Area and Quantity of Inputs used**

Crop type	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
<b>Grain Crops</b>	*	*	-	*	*	-	-	-
<b>Cereals</b>	*	*	-	*	*	-	-	-
Teff	*	*	-	*	*	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	*	-	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
<b>Pulse</b>	*	-	-	-	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	*	-	-	-	-	-	-	-
Chick peas	*	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

**Table 1.2 (Cont'd)**

Crop type	UREA			UREA + DAP			Indigenous seed	
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare
<b>Grain Crops</b>	-	-	-	-	-	-	12,107	*
<b>Cereals</b>	-	-	-	-	-	-	10,847	*
Teff	-	-	-	-	-	-	*	*
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	9,719	*
Sorghum	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
<b>Pulse</b>	-	-	-	-	-	-	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	*	*
Chick peas	-	-	-	-	-	-	*	*
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 1.2 (Cont'd)

Afar Region

Crop type	Improved seed			Pesticide		Irrigation		Extension pa	Hectare
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	
<b>Grain Crops</b>	*	*	*	*	*	*	10,672	*	*
<b>Cereals</b>	*	*	*	*	*	*	10,599	*	*
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	*	*	*	10,599	*	*
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
<b>Pulse</b>	-	-	-	*	*	*	*	*	*
Horse/Faba bean	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	*	*	*	*	*	*
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass pea	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-

Table 1.3: Number of Holders, Inputs Applied Area and Quantity of Inputs used

Amhara Region

Crop type	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
<b>Grain Crops</b>	136,016	34,949	7,501	162,128	25,265	34,049	8,084	5,685
<b>Cereals</b>	102,158	33,300	7,323	156,175	23,674	34,049	8,031	5,523
Teff	16,082	3,777 *		28,010	3,577 *	*	*	*
Barley	68,465	21,711	4,470	76,559	14,606	25,618	6,189	3,533
Wheat	6,543	2,379 -		26,103	2,379 -			
Maize	8,667	4,972 *		44,552	2,652 *	*	*	*
Sorghum	*	*		*	*			
Finger millet	*	*		*	*			
Oats/ 'Aja'	1,754 *	-		5,056 *	-			
Rice	-	-		-	-			
<b>Pulse</b>	33,390	1,644 *		23,251	1,586 *	*	*	*
Horse/Faba bean *	*	*		*	*			
Field peas	1,086	183 -		4,117	183 -			
Haricot beans	17,887	545 *		8,629	506 *	*	*	*
Chick peas	5,098	514 -		5,061	495 *	*		
Lentiles	5,426	320 -		5,837	320 -			
Vetch/Grass pea *	*	*		*	*			
Soya beans	-	-		-	-			
Fenugreek	*	*		*	*			
Gibto	-	-		-	-			
<b>Oile crops</b>	*	*		*	*			
Nueg	-	-		-	-			
Linseed	202 *	*		*	*			
Ground nuts	-	-		-	-			
Safflower	*	*		*	*			
Sesame	*	*		*	*			
Rapeseed	*	*		*	*			

Table 1.3 (Cont'd)

## Amhara Region

Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	
<b>Grain Crops</b>		2,799	364	328	6,786	1,236	1,489	443,518	134,813
<b>Cereals</b>		2,799	359	311	6,786	1,236	1,489	395,813	100,955
Teff	*	*	*	*	*	*	*	90,440	16,082
Barley	*	*	*		2,823	739	744	242,526	68,137
Wheat	-	-	-	-	-	-	-	60,042	6,487
Maize	*	*	*	*	*	*		80,906	7,848
Sorghum	-	-	-	-	-	-	*		*
Finger millet	-	-	-	-	-	-	*		*
Oats/ 'Aja'	-	-	-	-	-	-		16,270	1,754
Rice	-	-	-	-	-	-	-		
<b>Pulse</b>	*	*	*					135,745	33,390
Horse/Faba bean	-	-	-	-	-	-		1,773	*
Field peas	-	-	-	-	-	-		16,396	1,086
Haricot beans	*	*	*					52,013	17,887
Chick peas	-	-	-	-	-	-		34,887	5,098
Lentiles	-	-	-	-	-	-		44,060	5,426
Vetch/Grass pea	-	-	-	-	-	-		16,977	*
Soya beans	-	-	-	-	-	-			
Fenugreek	-	-	-	-	-	-		10,570	*
Gibto	-	-	-	-	-	-			
<b>Oile crops</b>	-	-	-	-	-	-		7,138	*
Nueg	-	-	-	-	-	-			
Linseed	-	-	-	-	-	-		3,613	202
Ground nuts	-	-	-	-	-	-			
Safflower	-	-	-	-	-	-	*		*
Sesame	-	-	-	-	-	-	*		*
Rapeseed	-	-	-	-	-	-	*		*

Table 1.3 (Cont'd)

## Amhara Region

Crop type	Improved seed			Pesticide		Irrigation		Extension pd	Hectare
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	
<b>Grain Crops</b>	*	*	*	10,451	3,018	88,112	17,522	31,652	7,540
<b>Cereals</b>	*	*	*	*	*	79,088	12,786	30,441	7,177
Teff	-	-	-	*	*	26,177	5,013	*	*
Barley	*	*	*	*	*	7,599	1,163	22,780	6,472
Wheat	*	*	*	*	*	*	*	*	*
Maize	*	*	*	*	*	49,418	6,383	8,358	*
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	*	*	-	-
Oats/ 'Aja'	-	-	-	-	-	*	*	-	-
Rice	-	-	-	-	-	-	-	-	-
<b>Pulse</b>	-	-	-	*	*	20,050	*	*	*
Horse/Faba bean	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	*	*
Haricot beans	-	-	-	*	*	*	*	*	*
Chick peas	-	-	-	*	*	*	*	*	*
Lentiles	-	-	-	*	*	2,105	163	-	-
Vetch/Grass pea	-	-	-	*	*	*	*	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	*	*	5,690	*	-	-
Gibto	-	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	*	*	*	*
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	*	*	*	*
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	*	*	-	-

Table 1.4: Number of Holders, Inputs Applied Area and Quantity of Inputs used

## Oromia Region

Crop type	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
<b>Grain Crops</b>	601,133	187,610	66,822	687,642	687,642	178,327	68,592	56,443
<b>Cereals</b>	503,827	160,975	55,361	619,656	619,656	164,890	63,779	47,881
Teff	43,770	9,889	2,110	19,690	19,690	15,353	3,859	1,840
Barley	78,656	28,795	14,548	53,725	53,725	69,301	21,563	13,675
Wheat	63,953	28,643	21,796	14,917	14,917	43,912	24,345	20,180
Maize	272,441	80,243	15,624	565,679	565,679	70,549	11,354	10,910
Sorghum	33,606	10,237 *		36,782	36,782 *			
Finger millet	*			*				
Oats/ 'Aja'	11,210	3,032	1,205	4,738	4,738	11,661	2,520	1,204
Rice	*			*				
<b>Pulse</b>	80,730	25,465	11,391	363,634	363,634	56,461	4,658 *	
Horse/Faba beans	2,598	286 *		10,266	10,266 *			
Field peas	5,533	987 *		7,637	7,637	2,874 *		
Haricot beans	69,898	23,634	11,050	350,703	350,703	51,199	4,171 *	
Chick peas	*			*				
Lentiles	1,542	442 *		*				
Vetch/Grass peas	*			*				
Soya beans	*			*				
Fenugreek	447 *			*				
Gibto	-			-				
<b>Oile crops</b>	16,576	1,170 *		5,810	5,810	1,080 *		
Nueg	-			-				
Linseed	*			*				
Ground nuts	*			*				
Safflower	*			-				
Sesame	15,954	1,074 *		1,577	1,577 *			
Rapeseed	*			*				

Table 1.4 (Cont'd)

## Oromia Region

Crop type	UREA			UREA + DAP			Indigenous seed	
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare
<b>Grain Crops</b>	30,422	6,876	5,962	114,247	22,335	33,028	1,916,346	596,031
<b>Cereals</b>	23,472	4,084	3,581	93,430	18,062	25,235	1,720,088	499,035
Teff	2,959	740 *		4,819	1,360	663	144,908	43,517
Barley	2,346 *			7,339	1,628	1,950	323,786	78,597
Wheat	*			*			129,209	63,174
Maize	17,523	2,732	2,692	80,810	13,615	20,681	1,418,099	269,077
Sorghum	880 *			1,199	137 *		107,159	33,269
Finger millet	-			*			*	*
Oats/ 'Aja'	*			-			51,554	11,210
Rice	-			-			*	*
<b>Pulse</b>	12,525 *			53,195	4,262	7,731	919,488	80,420
Horse/Faba beans	233	1	2	249 *		17	33,822	2,598
Field peas	-			-			39,634	5,533
Haricot beans	12,148 *			52,573	4,233	7,677	864,626	69,586
Chick peas	-			*		*	*	*
Lentiles	-			-			15,838	1,542
Vetch/Grass peas	-			-			1,721 *	*
Soya beans	-			-			*	*
Fenugreek	*			-			6,509	447
Gibto	-			-			-	-
<b>Oile crops</b>	*			*			50,107	16,576
Nueg	-			*		*	-	-
Linseed	-			-			*	*
Ground nuts	-			-			*	*
Safflower	-			*		*	*	*
Sesame	*			*		*	34,909	15,954
Rapeseed	*			*		*	11,733 *	

Table 1.4 (Cont'd)

## Oromia Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
<b>Grain Crops</b>	23,743	23,743	3,119	208,349	100,056	302,153	59,823	356,523	51,896
<b>Cereals</b>	20,895	20,895	2,802	190,869	95,551	285,824	53,154	320,939	46,759
Teff	*	*	*	58,041	18,476	30,079	5,689	16,683	*
Barley	*	*	*	78,730	20,572	17,619	3,030	61,308	12,664
Wheat	*	*	*	67,845	33,106	*	*	30,328	18,495
Maize	17,054	17,054	1,128	52,877	14,021	243,590	43,779	246,062	11,847
Sorghum	*	*	*	14,106	*	2,298	*	10,187	*
Finger millet	-	-	-	*	*	*	*	-	-
Oats/ 'Aja'	-	-	-	16,246	2,719	*	*	-	-
Rice	-	-	-	*	*	-	-	-	-
<b>Pulse</b>	*	*	*	27,006	4,324	73,311	6,630	136,711	*
Horse/Faba bean	-	-	-	*	*	*	*	-	-
Field peas	-	-	-	*	*	*	*	-	-
Haricot beans	*	*	*	21,162	3,111	57,883	*	132,262	*
Chick peas	-	-	-	1,062	*	6,925	1,306	*	*
Lentiles	-	-	-	*	*	2,178	164	*	*
Vetch/Grass pea	-	-	-	*	*	*	*	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	*	*	6,819	*	-	-
Gibto	-	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	*	*	1,948	*	6,885	*
Nueg	-	-	-	-	-	-	-	*	-
Linseed	-	-	-	-	-	*	*	*	-
Ground nuts	-	-	-	-	-	*	*	*	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	*	*	*	*	*	*
Rapeseed	-	-	-	*	*	*	*	*	-

Table 1.5: Number of Holders, Inputs Applied Area and Quantity of Inputs used

## Somale Region

Crop type	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
<b>Grain Crops</b>	14,823	23	-	252	23	-	-	-
<b>Cereals</b>	14,591	23	-	252	23	-	-	-
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	13,902	22	-	252	22	-	-	-
Sorghum	*	*	-	*	*	-	-	-
Finger millet	*	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	*	-	-	-	-	-	-	-
<b>Pulse</b>	*	-	-	-	-	-	-	-
Horse/Faba bean	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	*	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass pea	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	*	*	-	*	*	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	*	*	-	*	*	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 1.5 (Cont'd)

## Somale Region

Crop type	UREA			UREA + DAP			Indigenous seed	
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare
<b>Grain Crops</b>	-	-	-	-	-	-	28,399	14,090
<b>Cereals</b>	-	-	-	-	-	-	28,399	13,858
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	*	-
Maize	-	-	-	-	-	-	28,157	13,169
Sorghum	-	-	-	-	-	-	*	*
Finger millet	-	-	-	-	-	-	*	*
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	*	*
<b>Pulse</b>	-	-	-	-	-	-	1,902	*
Horse/Faba bean	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	1,902	*
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass pea	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	-	*	*
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	*	*
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 1.5 (Cont'd)

## Somale Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
<b>Grain Crops</b>	*	*	*	*	*	5,335	960	-	-
<b>Cereals</b>	*	*	*	*	*	5,335	945	-	-
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	*	*	5,306	937	-	-
Sorghum	-	-	-	-	-	*	7	-	-
Finger millet	-	-	-	-	-	*	*	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
<b>Pulse</b>	-	-	-	-	-	*	*	-	-
Horse/Faba bean	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	*	*	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass pea	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	*	*	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	*	*	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-

Table 1.6: Number of Holders, Inputs Applied Area and Quantity of Inputs used

Benshangul-Gumuz Region

Crop type	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
<b>Grain Crops</b>	4,706	1,802	*	19,390	1,746	475	56	*
<b>Cereals</b>	1,847	831	*	17,812	815	*	*	*
Teff	*	-	-	-	-	-	-	-
Barley	61	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	1,671	809	*	17,766	793	*	*	*
Sorghum	113	*	-	*	*	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
<b>Pulse</b>	2,859	971	*	16,918	931	452	*	*
Horse/Faba beans	*	-	-	-	-	-	-	-
Field peas	*	-	-	-	-	-	-	-
Haricot beans	2,841	971	*	16,918	931	452	*	*
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	*	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	*	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	*	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 1.6 (Cont'd)

Benshangul-Gumuz Region

Crop type	UREA			UREA + DAP			Indigenous seed	
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare
<b>Grain Crops</b>	-	-	-	-	-	-	35,616	4,706
<b>Cereals</b>	-	-	-	-	-	-	28,525	1,847
Teff	-	-	-	-	-	-	*	*
Barley	-	-	-	-	-	-	562	61
Wheat	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	28,191	1,671
Sorghum	-	-	-	-	-	-	1,122	113
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
<b>Pulse</b>	-	-	-	-	-	-	32,926	2,859
Horse/Faba beans	-	-	-	-	-	-	*	*
Field peas	-	-	-	-	-	-	*	*
Haricot beans	-	-	-	-	-	-	32,857	2,841
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	*	*
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	-	*	*
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	*	*
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 1.6 (Cont'd)

## Benshangul-Gumuz Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
<b>Grain Crops</b>	-	-	-	*	*	9,933	539	*	*
<b>Cereals</b>	-	-	-	*	*	9,696	340	*	*
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	*	*	9,696	340	*	*
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
<b>Pulse</b>	-	-	-	*	*	6,343	199	*	*
Horse/Faba bean	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	*	*	6,343	199	*	*
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass pea	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-

Table 1.7: Number of Holders, Inputs Applied Area and Quantity of Inputs used

## (S.N.N.P.R) Region

Crop type	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
<b>Grain Crops</b>	389,567	156,345	89,126	956,332	69,444	438,154	69,700	63,457
<b>Cereals</b>	289,236	102,093	52,920	888,708	48,948	320,133	39,492	34,296
Teff	14,875	4,577	2,260	5,233	736	11,920	2,804	1,618
Barley	13,853	3,731	1,210	42,179	2,213	15,872	1,366	1,071
Wheat	1,110	748	394	3,902	312 *	*	*	*
Maize	235,565	86,245	48,309	850,462	39,745	296,678	34,312	30,888
Sorghum	22,315	6,617	592	44,806	5,767	7,020 *	*	464
Finger millet	1,042	173 *	*	4,243	173	-	-	-
Oats/ 'Aja'	*	*	-	*	*	-	-	-
Rice	*	*	-	*	*	-	-	-
<b>Pulse</b>	91,688	52,587	35,449	545,896	20,054	323,326	29,039	28,562
Horse/Faba bean	1,319	345	129	11,194	248	3,528	95	110
Field peas	465	156 *	*	2,638 *	*	*	*	*
Haricot beans	89,726	52,051	35,300	535,338	19,675	319,747	28,886	28,433
Chick peas	129 *	*	*	*	*	*	*	*
Lentiles	13 *	-	*	*	-	-	-	-
Vetch/Grass pea *	*	-	*	*	-	-	-	-
Soya beans	*	*	*	*	*	*	*	*
Fenugreek	12 *	*	*	*	-	-	-	-
Gibto	*	-	-	-	-	-	-	-
<b>Oile crops</b>	8,644	1,665	756	5,193 *	*	3,838 *	*	599
Nueg	*	*	*	*	*	-	-	-
Linseed	*	*	*	*	*	*	*	*
Ground nuts	*	*	*	*	*	*	*	*
Safflower	83 *	*	*	*	-	-	-	-
Sesame	6,280 *	*	*	*	*	*	*	*
Rapeseed	*	*	*	-	-	-	-	-

Table 1.7 (Cont'd)

(S.N.N.P.R) Region

Crop type	UREA			UREA + DAP			Indigenous seed	
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare
<b>Grain Crops</b>	12,980	1,585	1,515	86,021	15,617	24,153	1,758,245	1,758,245
<b>Cereals</b>	10,870	1,315	957	67,737	12,338	17,668	1,589,895	1,589,895
Teff	687	191	56	3,369	847	587	61,579	61,579
Barley	*	*	*	2,241	144	132	136,842	136,842
Wheat	*	*	*	*	*	*	11,576	11,576
Maize	9,785	1,021	863	62,760	11,167	16,559	1,512,078	1,512,078
Sorghum	*	*	*	718	*	*	117,823	117,823
Finger millet	-	-	-	-	-	*	14,220	14,220
Oats/ 'Aja'	-	-	-	-	-	-	*	*
Rice	-	-	-	-	-	-	*	*
<b>Pulse</b>	5,442	226	464	45,826	3,269	6,423	1,190,538	1,190,538
Horse/Faba bean	233	1	2	249	*	17	33,031	33,031
Field peas	-	-	-	-	-	-	8,983	8,983
Haricot beans	5,065	222	460	45,593	3,268	6,407	1,168,594	1,168,594
Chick peas	-	-	-	-	-	-	1,027	1,027
Lentiles	-	-	-	-	-	-	909	909
Vetch/Grass pea	-	-	-	-	-	-	*	*
Soya beans	-	-	-	-	-	-	*	*
Fenugreek	*	*	*	-	-	-	1,428	1,428
Gibto	-	-	-	-	-	-	*	*
<b>Oile crops</b>	*	*	*	*	*	*	41,520	41,520
Nueg	-	-	-	*	*	*	*	*
Linseed	-	-	-	-	-	-	1,558	1,558
Ground nuts	-	-	-	-	-	-	14,631	14,631
Safflower	-	-	-	*	*	*	2,695	2,695
Sesame	*	*	*	*	*	*	21,473	21,473
Rapeseed	*	*	*	*	*	*	2,511	2,511

Table 1.7 (Cont'd)

(S.N.N.P.R) Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
<b>Grain Crops</b>	181,199	37,392	11,124	35,027	5,216	24,673	5,179	196,239	48,381
<b>Cereals</b>	170,809	35,363	10,355	27,324	4,507	23,532	4,689	173,713	40,541
Teff	*	*	*	3,676	1,054	*	*	6,822	1,942
Barley	*	*	*	10,445	1,769	548	*	10,558	1,238
Wheat	*	*	*	*	*	*	*	*	*
Maize	170,391	35,204	10,333	13,291	1,592	21,694	3,940	160,758	36,406
Sorghum	*	*	*	-	-	*	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	*	*	-	-	-	-
<b>Pulse</b>	11,373	1,469	738	11,021	*	11,611	462	93,372	6,518
Horse/Faba bean	-	-	-	-	-	*	*	-	-
Field peas	-	-	-	*	*	*	*	*	*
Haricot beans	11,373	1,469	738	10,827	*	11,611	457	93,331	6,516
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	*	*	-	-
Vetch/Grass pea	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
<b>Oile crops</b>	*	*	*	-	-	*	*	4,700	*
Nueg	-	-	-	-	-	-	-	*	*
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	819	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	*	*	*	-	-	*	*	*	*
Rapeseed	-	-	-	-	-	*	*	*	*

Table 1.8: Number of Holders, Inputs Applied Area and Quantity of Inputs used

Gambella Region

Crop type	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
<b>Grain Crops</b>	8,117	*	*	*	*	*	*	*
<b>Cereals</b>	6,805	54	*	*	*	*	*	*
Teff	*	-	-	-	-	-	-	-
Barley	*	-	*	*	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	6,658	*	*	*	*	*	*	*
Sorghum	*	-	-	-	-	-	-	-
Finger millet	*	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	*	-	-	-	-	-	-	-
<b>Pulse</b>	364	*	*	*	-	-	-	-
Horse/Faba beans	*	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	361	*	*	*	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	948	*	*	*	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	*	*	*	*	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	899	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 1.8 (Cont'd)

Gambella Region

Crop type	UREA			UREA + DAP			Indigenous seed	
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare
<b>Grain Crops</b>	-	-	-	-	-	-	28,799	8,108
<b>Cereals</b>	-	-	-	-	-	-	28,099	6,797
Teff	-	-	-	-	-	-	*	*
Barley	-	-	-	-	-	-	*	*
Wheat	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	27,932	6,651
Sorghum	-	-	-	-	-	-	*	*
Finger millet	-	-	-	-	-	-	147	*
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	179	*
<b>Pulse</b>	-	-	-	-	-	-	6,176	363
Horse/Faba beans	-	-	-	-	-	-	*	*
Field peas	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	6,176	360
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	-	2,000	948
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	*	*
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	1,817	899
Rapeseed	-	-	-	-	-	-	-	-

Table 1.8 (Cont'd)

## Gambella Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
<b>Grain Crops</b>	*		*	*	*	*			
<b>Cereals</b>	*		*	*	*	*			
Teff	-		-	-	*	*			
Barley	-		-	-	*	*			
Wheat	-		-	-	-	-			
Maize	*		*	*	*	*			
Sorghum	-		-	-	-	-			
Finger millet	-		-	-	*	*			
Oats/ 'Aja'	-		-	-	-	-			
Rice	-		-	-	-	-			
<b>Pulse</b>	-		-	-	-	-			
Horse/Faba bean	-		-	-	-	-			
Field peas	-		-	-	-	-			
Haricot beans	-		-	-	-	-			
Chick peas	-		-	-	-	-			
Lentiles	-		-	-	-	-			
Vetch/Grass pea	-		-	-	-	-			
Soya beans	-		-	-	-	-			
Fenugreek	-		-	-	-	-			
Gibto	-		-	-	-	-			
<b>Oile crops</b>	-		-	-	-	-			
Nueg	-		-	-	-	-			
Linseed	-		-	-	-	-			
Ground nuts	-		-	-	-	-			
Safflower	-		-	-	-	-			
Sesame	-		-	-	-	-			
Rapeseed	-		-	-	-	-			

Table 1.9: Number of Holders, Inputs Applied Area and Quantity of Inputs used

## Harari Region

Crop type	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
<b>Grain Crops</b>	605	401	517	2,945	241	356	38	*
<b>Cereals</b>	449	294	292	2,904	181	356	29	*
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	*	*	*	-	-	-	-	-
Maize	198	130	90	2,213	87	302	14	*
Sorghum	248	161	199	1,219	94	*	*	*
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
<b>Pulse</b>	153	106	225	2,074	59	356	9	*
Horse/Faba bean	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	153	106	225	2,074	59	356	9	*
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass pea	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	*	*	-	*	*	-	-	-
Nueg	*	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	*	*	-	*	*	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 1.9 (Cont'd)

## Harari Region

Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	
<b>Grain Crops</b>		878	66	*	*	*	*	5,957	593
<b>Cereals</b>		878	48	*	*	*	*	5,916	438
Teff		-	-	-	-	-	--	-	-
Barley		-	-	-	-	-	--	-	-
Wheat		-	-	-	*	*	**	*	-
Maize		463	*	*	*	*	*	3,882	187
Sorghum		*	*	*	*	*	*	3,032	248
Finger millet		-	-	-	-	-	--	-	-
Oats/ 'Aja'		-	-	-	-	-	--	-	-
Rice		-	-	-	-	-	--	-	-
<b>Pulse</b>		*	*	*	*	*	*	4,514	153
Horse/Faba bean		-	-	-	-	-	--	-	-
Field peas		-	-	-	-	-	--	-	-
Haricot beans		*	*	*	*	*	*	4,514	153
Chick peas		-	-	-	-	-	--	-	-
Lentiles		-	-	-	-	-	--	-	-
Vetch/Grass pea		-	-	-	-	-	--	-	-
Soya beans		-	-	-	-	-	--	-	-
Fenugreek		-	-	-	-	-	--	-	-
Gibio		-	-	-	-	-	--	-	-
<b>Oile crops</b>		-	-	-	-	-	-*	*	-
Nueg		-	-	-	-	-	-*	*	-
Linseed		-	-	-	-	-	--	-	-
Ground nuts		-	-	-	-	-	-*	*	-
Safflower		-	-	-	-	-	--	-	-
Sesame		-	-	-	-	-	--	-	-
Rapeseed		-	-	-	-	-	--	-	-

Table 1.9 (Cont'd)

## Harari Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder
<b>Grain Crops</b>	*	*	*	-	-	1,075	*	*
<b>Cereals</b>	*	*	*	-	-	1,035	*	*
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	*	*	*	-	-	1,007	*	*
Sorghum	-	-	-	-	-	*	*	*
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
<b>Pulse</b>	-	-	-	-	-	*	*	*
Horse/Faba bean	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	*	*	*
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass pea	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibio	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 1.10: Number of Holders, Inputs Applied Area and Quantity of Inputs used

Dire Dawa Region

Crop type	All crop land Area	All Fertilizer		Natural		DAP		
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
<b>Grain Crops</b>	*	*	*	*	1,687	*	*	*
<b>Cereals</b>	*	*	*	*	1,626	*	*	*
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	*	*	*	*	*	*	*	*
Sorghum	-	-	-	-	254	*	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
<b>Pulse</b>	-	-	-	-	*	*	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	*	*	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	*	*	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	*	*	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	*	*	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 1.10 (Cont'd)

Dire Dawa Region

Crop type	UREA			UREA + DAP			Indigenous seed	
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare
<b>Grain Crops</b>	*	*	*	-	-	-	-	593 *
<b>Cereals</b>	*	*	*	-	-	-	-	438 *
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	*	*	*	-	-	-	-	187 *
Sorghum	-	-	-	-	-	-	-	248
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
<b>Pulse</b>	-	-	-	-	-	-	-	153 *
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	-	153 *
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
<b>Oile crops</b>	-	-	-	-	-	-	-	*
Nueg	-	-	-	-	-	-	-	*
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	*
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	*
Rapeseed	-	-	-	-	-	-	-	-

Table 1.10 (Cont'd)

## Dire Dawa Region

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
<b>Grain Crops</b>	-	-	-	-	-	-	1,930	*	--
<b>Cereals</b>	-	-	-	-	-	-	1,891	*	--
Teff	-	-	-	-	-	-	-	-	--
Barley	-	-	-	-	-	-	-	-	--
Wheat	-	-	-	-	-	-	-	-	--
Maize	-	-	-	-	-	-	1,812	*	--
Sorghum	-	-	-	-	-	-	*	*	--
Finger millet	-	-	-	-	-	-	-	-	--
Oats/ 'Aja'	-	-	-	-	-	-	-	-	--
Rice	-	-	-	-	-	-	-	-	--
<b>Pulse</b>	-	-	-	-	-	-	*	*	--
Horse/Faba bean	-	-	-	-	-	-	-	-	--
Field peas	-	-	-	-	-	-	-	-	--
Haricot beans	-	-	-	-	-	-	*	*	--
Chick peas	-	-	-	-	-	-	-	-	--
Lentiles	-	-	-	-	-	-	-	-	--
Vetch/Grass pea.	-	-	-	-	-	-	-	-	--
Soya beans	-	-	-	-	-	-	-	-	--
Fenugreek	-	-	-	-	-	-	-	-	--
Gibto	-	-	-	-	-	-	-	-	--
<b>Oil crops</b>	-	-	-	-	-	-	*	*	--
Nueg	-	-	-	-	-	-	-	-	--
Linseed	-	-	-	-	-	-	-	-	--
Ground nuts	-	-	-	-	-	-	*	*	--
Safflower	-	-	-	-	-	-	-	-	--
Sesame	-	-	-	-	-	-	*	*	--
Rapeseed	-	-	-	-	-	-	-	-	--

*Table 2: Holders Applying Inputs by Age group*

*Country Level*

<i>Age group</i>	<i>All Crop Holders</i>	<i>Chemical Fertilizer</i>	<i>Improved Seed Pesticide</i>	<i>Irrigation</i>
<i>Below 18</i>	17,809	1,788 *	799	2,886
<i>18 - 20</i>	81,861	10,353	3,144	4,533
<i>21 - 24</i>	207,920	29,720	7,832	12,974
<i>25 - 29</i>	558,273	95,320	30,498	33,053
<i>30 - 39</i>	1,210,769	229,889	67,491	82,095
<i>40 - 49</i>	899,552	174,900	47,931	70,220
<i>50 - 59</i>	630,410	122,450	31,477	45,346
<i>60 and above</i>	688,945	111,282	25,858	51,047
<i>Not stated</i>	*	*	-	-
<i>Total</i>	4,298,094	777,166	214,779	302,153

*Table 2.1: Holders Applying Inputs by Age group*

*Tigray Region*

<i>Age group</i>	<i>All Crop Holders</i>	<i>Chemical Fertilizer</i>	<i>Improved Seed Pesticide</i>	<i>Irrigation</i>
<i>Below 18</i>	-	-	-	-
<i>18 - 20</i>	-	-	-	-
<i>21 - 24</i>	*	*	-	*
<i>25 - 29</i>	*	*	-	*
<i>30 - 39</i>	8,395 *	-	-	3,465
<i>40 - 49</i>	4,771 *	-	-	*
<i>50 - 59</i>	2,475 *	-	-	*
<i>60 and above</i>	5,629 *	-	-	2,539
<i>Not stated</i>	-	-	-	-
<i>Total</i>	24,002 *	-	-	9,836

*Table 2.2: Holders Applying Inputs by Age group*

*Afar Region*

<i>Age group</i>	<i>All Crop Holders</i>	<i>Chemical Fertilizer</i>	<i>Improved Seed Pesticide</i>	<i>Irrigation</i>
<i>Below 18</i>	-	-	-	-
<i>18 - 20</i>	*	-	-	*
<i>21 - 24</i>	-	-	-	-
<i>25 - 29</i>	1,199 -	*	*	*
<i>30 - 39</i>	5,672 -	*	*	4,857
<i>40 - 49</i>	3,895 -	*	*	3,538
<i>50 - 59</i>	*	-	-	*
<i>60 and above</i>	*	-	*	*
<i>Not stated</i>	-	-	-	-
<i>Total</i>	12,987 -	*	*	10,672

Table 2.3: Holders Applying Inputs by Age group

## Amhara Region

Age group	All	Chemical			
	Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	2,509 *	-	*	*	
18 - 20	3,253 *	-	-	-	*
21 - 24	15,093 *	*	*		3,250
25 - 29	42,933	3,262 *		2,377	5,368
30 - 39	102,820	13,142 *		2,878	20,675
40 - 49	98,070	8,232 *		2,661	21,265
50 - 59	80,583	8,517 *		1,436	15,566
60 and above	101,935	7,573 *	*		19,799
Not stated	-	-	-	-	-
Total	447,196	42,815 *		10,451	88,112

Table 2.4: Holders Applying Inputs by Age group

## Oromia Region

Age group	All	Chemical			
	Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	5,980 *	-	*	*	
18 - 20	43,175	4,152 *		3,777	3,371
21 - 24	110,766	10,192 *		10,731	8,151
25 - 29	272,383	32,905	4,512	24,437	22,473
30 - 39	538,274	56,039	7,003	42,831	40,887
40 - 49	372,835	40,134	3,697	38,077	33,022
50 - 59	280,689	30,493	4,126	19,148	21,406
60 and above	302,006	29,653	3,546	21,760	20,773
Not stated	*	*	-	-	-
Total	1,928,419	205,218	23,743	161,170	150,588

Table 2.5: Holders Applying Inputs by Age group

## Somale Region

Age group	All	Chemical			
	Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Below 18	-	-	-	-	-
18 - 20	*	-	-	-	-
21 - 24	822	-	*	-	*
25 - 29	4,183	-	*	-	809
30 - 39	8,756	-	*	-	1,646
40 - 49	7,429	-	*	-	938
50 - 59	4,503	-	*	*	837
60 and above	4,187	-	*	-	926
Not stated	-	-	-	-	-
Total	30,094	-	*	*	5,335

Table 2.6: Holders Applying Inputs by Age group

## Benshangul-Gumuz Region

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed Pesticide	Irrigation
Below 18	*	*	-	*
18 - 20	949	-	-	*
21 - 24	1,305	-	-	*
25 - 29	2,850	-	-	719
30 - 39	8,512	*	-	2,644
40 - 49	8,182	*	-	2,370
50 - 59	6,556	*	-	1,293
60 and above	6,982	*	-	2,086
Not stated	-	-	-	-
Total	35,616	475	-	9,933

Table 2.7: Holders Applying Inputs by Age group

## (S.N.N.P.R) Region

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed Pesticide	Irrigation
Below 18	8,959	1,217	*	*
18 - 20	33,693	6,026	2,794	*
21 - 24	77,769	17,634	6,646	1,440
25 - 29	227,091	58,437	24,665	3,121
30 - 39	526,091	158,304	57,620	11,460
40 - 49	395,708	124,912	42,048	7,148
50 - 59	249,966	82,230	25,827	5,421
60 and above	263,056	73,324	21,050	5,862
Not stated	*	-	-	-
Total	1,782,576	522,083	181,199	35,027

Table 2.8: Holders Applying Inputs by Age group

## Gambella Region

Age group	All Crop Holders	Fertilizer	Improved Seed Pesticide	Irrigation
Below 18	82	-	-	-
18 - 20	354	-	-	-
21 - 24	1,310	-	*	-
25 - 29	4,432	-	*	-
30 - 39	9,378	*	*	-
40 - 49	6,785	-	*	-
50 - 59	3,555	-	*	-
60 and above	2,902	-	*	-
Not stated	-	-	-	-
Total	28,799	*	*	-

Table 2.9: Holders Applying Inputs by Age group

Harari Region

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed Pesticide	Irrigation
Below 18	-	-	-	-
18 - 20	*	*	-	-
21 - 24	281 *	-	-	*
25 - 29	652 *	-	-	*
30 - 39	2,115	469 *	-	302
40 - 49	1,250	394 *	-	*
50 - 59	778	259 -	-	*
60 and above	891	318 -	-	132
Not stated	-	-	-	-
Total	6,020	1,654 *	-	1,075

Table 2.10: Holders Applying Inputs by Age group

Dire Dawa Region

Age group	All Crop Holders	Chemical Fertilizer	Improved Seed Pesticide	Irrigation
Below 18	-	-	-	-
18 - 20	*	-	-	*
21 - 24	*	-	-	*
25 - 29	298 *	-	-	298
30 - 39	754 *	-	-	582
40 - 49	627 -	-	-	527
50 - 59	421 -	-	-	*
60 and above	*	-	-	*
Not stated	-	-	-	-
Total	2,385	157 -	-	1,930

**Table 3. Holders Applying Inputs by Educational Status**

<i>Country Level</i>					
<i>Educational Status of Holders</i>	<i>All Crop Holders</i>	<i>Chemical</i>			
		<i>Fertilizer</i>	<i>Improved Seed</i>	<i>Pesticide</i>	<i>Irrigation</i>
<i>Illiterate</i>	2,665,422	403,108	112,157	120,957	192,942
<i>Literate</i>	258,935	39,811	7,033	16,702	22,864
<i>Grades 1 - 3</i>	521,835	103,186	31,408	29,599	33,197
<i>Grades 4 - 6</i>	537,622	126,801	38,951		31,296
<i>Grades 7 - 8</i>	215,525	73,227	18,017	9,985	16,413
<i>Grades 9 - 11</i>	69,717	22,780	5,041	4,281	3,795
<i>Grade 12 complete</i>	22,129	6,212 *		1,577	1,412
<i>Above grade 12</i>	6,909	2,042 *			*
<i>Total</i>	4,298,094	777,166	214,779	208,349	302,153

*Table 3.1: Holders Applying Inputs by Educational Status*

<i>Tigray Region</i>					
<i>Educational Status of Holders</i>	<i>All Crop Holders</i>	<i>Chemical</i>			
		<i>Fertilizer</i>	<i>Improved Seed</i>	<i>Pesticide</i>	<i>Irrigation</i>
<i>Illiterate</i>	14,667	2,776	-	-	4,734
<i>Literate</i>	4,631 *	-	-	-	*
<i>Grades 1 - 3</i>	1,664	-	-	-	*
<i>Grades 4 - 6</i>	2,146 *	-	-	-	*
<i>Grades 7 - 8</i>	*	*	-	-	*
<i>Grades 9 - 11</i>	*	-	-	-	-
<i>Grade 12 complete</i>	-	-	-	-	-
<i>Above grade 12</i>	-	-	-	-	-
<i>Total</i>	24,002 *	-	-	-	9,836

*Table 3.2: Holders Applying Inputs by Educational Status*

<i>Afar Region</i>					
<i>Educational Status of Holders</i>	<i>All Crop Holders</i>	<i>Chemical</i>			
		<i>Fertilizer</i>	<i>Improved Seed</i>	<i>Pesticide</i>	<i>Irrigation</i>
<i>Illiterate</i>	10,662	-	*	*	8,893
<i>Literate</i>	1,452	-	*	*	*
<i>Grades 1 - 3</i>	*	-	-	*	*
<i>Grades 4 - 6</i>	*	-	-	-	*
<i>Grades 7 - 8</i>	-	-	-	-	-
<i>Grades 9 - 11</i>	-	-	-	-	-
<i>Grade 12 complete</i>	-	-	-	-	-
<i>Above grade 12</i>	-	-	-	-	-
<i>Total</i>	12,987	-	*	*	10,672

Table 3.3: Holders Applying Inputs by Educational Status

<i>Amhara Region</i>						
<i>Educational Status of Holders</i>	<i>All Crop Holders</i>	<i>Chemical Fertilizer</i>	<i>Improved Seed</i>	<i>Pesticide</i>	<i>Irrigation</i>	
<i>Illiterate</i>	298,672	28,021 *			6,716	62,943
<i>Literate</i>	69,236	5,597 *		*		8,283
<i>Grades 1 - 3</i>	28,437	2,923 *		*		5,583
<i>Grades 4 - 6</i>	36,429	3,826 *		*		7,938
<i>Grades 7 - 8</i>	11,699 *		*	-		*
<i>Grades 9 - 11</i>	2,362 -		-	*		*
<i>Grade 12 complete</i>	*	*	-	-		-
<i>Above grade 12</i>	-	-	-	-		-
<i>Total</i>	447,196	42,815 *			10,451	88,112

Table 3.4: Holders Applying Inputs by Educational Status

<i>Oromia Region</i>						
<i>Educational Status of Holders</i>	<i>All Crop Holders</i>	<i>Chemical Fertilizer</i>	<i>Improved Seed</i>	<i>Pesticide</i>	<i>Irrigation</i>	
<i>Illiterate</i>	298,672	28,021 *			6,716	62,943
<i>Literate</i>	69,236	5,597 *		*		8,283
<i>Grades 1 - 3</i>	28,437	2,923 *		*		5,583
<i>Grades 4 - 6</i>	36,429	3,826 *		*		7,938
<i>Grades 7 - 8</i>	11,699 *		*	-		*
<i>Grades 9 - 11</i>	2,362 -		-	*		*
<i>Grade 12 complete</i>	*	*	-	-		-
<i>Above grade 12</i>	-	-	-	-		-
<i>Total</i>	447,196	42,815 *			10,451	88,112

Table 3.5: Holders Applying Inputs by Educational Status

<i>Somale Region</i>						
<i>Educational Status of Holders</i>	<i>All Crop Holders</i>	<i>Chemical Fertilizer</i>	<i>Improved Seed</i>	<i>Pesticide</i>	<i>Irrigation</i>	
<i>Illiterate</i>	23,581 -		*	*		3,841
<i>Literate</i>	3,296 -		-	-		*
<i>Grades 1 - 3</i>	1,641 -		-	-		*
<i>Grades 4 - 6</i>	1,149 -		*	-		*
<i>Grades 7 - 8</i>	*		*	-		*
<i>Grades 9 - 11</i>	*		-	-		-
<i>Grade 12 complete</i>	-		-	-		-
<i>Above grade 12</i>	-		-	-		-
<i>Total</i>	30,094 -		*	*		5,335

Table 3.6: Holders Applying Inputs by Educational Status

*Benshangul-Gumuz Region*

Educational Status of Holders	All	Chemical			
	Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	22,130 *	-	-	*	5,374
Literate	4,664 *	-	-	-	1,075
Grades 1 - 3	4,080 *	-	-	-	*
Grades 4 - 6	3,025 *	-	-	-	1,194
Grades 7 - 8	854 -	-	-	-	*
Grades 9 - 11	840 *	-	-	*	*
Grade 12 complete	*	-	-	-	-
Above grade 12	-	-	-	-	-
<b>Total</b>	<b>35,616</b>	<b>475 -</b>	<b>-</b>	<b>*</b>	<b>9,933</b>

Table 3.7: Holders Applying Inputs by Educational Status

*(S.N.N.P.R) Region*

Educational Status of Holders	All	Chemical			
	Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	1,065,325	261,396	91,921	18,909	14,422
Literate	45,304	15,507	5,267	1,884	1,079
Grades 1 - 3	221,391	72,857	28,837	4,677	2,200
Grades 4 - 6	276,404	95,307	33,415	5,185	3,029
Grades 7 - 8	115,836	53,186	15,926	2,685	1,795
Grades 9 - 11	40,640	17,104	3,844 *	-	1,416
Grade 12 complete	12,866	5,240 *	-	*	*
Above grade 12	4,809	1,485 *	-	-	*
<b>Total</b>	<b>1,782,576</b>	<b>522,083</b>	<b>181,199</b>	<b>35,027</b>	<b>24,673</b>

Table 3.8: Holders Applying Inputs by Educational Status

*Gambella Region*

Educational Status of Holders	All	Chemical			
	Crop Holders	Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	18,182 -	-	-	*	-
Literate	1,138 -	-	-	*	-
Grades 1 - 3	2,593 -	-	-	*	-
Grades 4 - 6	3,973 -	-	-	-	-
Grades 7 - 8	1,969 *	-	*	*	-
Grades 9 - 11	845 -	-	-	-	-
Grade 12 complete	*	-	-	-	-
Above grade 12	*	-	-	-	-
<b>Total</b>	<b>28,799 *</b>	<b>-</b>	<b>*</b>	<b>*</b>	<b>-</b>

Table 3.9: Holders Applying Inputs by Educational Status

<i>Harari Region</i>						
<i>Educational Status of Holders</i>	<i>All</i>	<i>Chemical</i>				
	<i>Crop Holders</i>	<i>Fertilizer</i>	<i>Improved Seed</i>	<i>Pesticide</i>	<i>Irrigation</i>	
<i>Illiterate</i>		4,287	953 *	-		947
<i>Literate</i>	*	*	-	-	-	-
<i>Grades 1 - 3</i>		612	234 -	-	-	*
<i>Grades 4 - 6</i>		685	192 -	-	-	*
<i>Grades 7 - 8</i>	*	-	-	-	-	-
<i>Grades 9 - 11</i>	*	*	-	-	-	-
<i>Grade 12 complete</i>	*	*	-	-	-	-
<i>Above grade 12</i>	-	-	-	-	-	-
<i>Total</i>		6,020	1,654 *	-		1,075

Table 3.10: Holders Applying Inputs by Educational Status

<i>Dire Dawa Region</i>						
<i>Educational Status of Holders</i>	<i>All</i>	<i>Chemical</i>				
	<i>Crop Holders</i>	<i>Fertilizer</i>	<i>Improved Seed</i>	<i>Pesticide</i>	<i>Irrigation</i>	
<i>Illiterate</i>		4,287	953 *	-		947
<i>Literate</i>	*	*	-	-	-	-
<i>Grades 1 - 3</i>		612	234 -	-	-	*
<i>Grades 4 - 6</i>		685	192 -	-	-	*
<i>Grades 7 - 8</i>	*	-	-	-	-	-
<i>Grades 9 - 11</i>	*	*	-	-	-	-
<i>Grade 12 complete</i>	*	*	-	-	-	-
<i>Above grade 12</i>	-	-	-	-	-	-
<i>Total</i>		6,020	1,654 *	-		1,075

Table 4: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Country Level

Cause of damage	All holders	All crops	Crop category		
			Cereals	Pulses	Oilseeds
All damage	1,480,209	145,848	95,608	32,240	3,722
Crop disease	*	*	*	-	*
Frost or floods	118,529	6,008	3,573	1,258	*
Locust	44,323	1,905	1,064	*	*
Shortage of rain	4,175	174	59	*	*
Too much rain	52,036	3,566	2,524	569	*
Wild animals	24,072	431	182	126	*
Birds	72,463	4,990	3,335	888	162
Hailstone	911,871	90,406	57,604	24,385	1,113
Pests	53,676	4,184	2,674	647	*
Weeds	182,246	26,182	19,430	2,119	1,620
Others	161,065	7,979	5,148	1,515	*

Table 4.1: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Tigray Region

Cause of damage	All holders	All crops	Crop category		
			Cereals	Pulses	Oilseeds
All damage	19,978	3,644	3,218	*	-
Crop disease	-	-	-	-	-
Frost or floods	-	-	-	-	-
Locust	*	*	*	-	-
Shortage of rain	-	-	-	-	-
Too much rain	*	*	*	*	-
Wild animals	-	-	-	-	-
Birds	-	-	-	-	-
Hailstone	16,152	3,331	3,039	*	-
Pests	-	-	-	-	-
Weeds	*	*	*	*	-
Others	*	*	*	*	-

Table 4.2: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Afar Region

Cause of damage	All holders	All crops	Crop category		
			Cereals	Pulses	Oilseeds
All damage	4,792	1,080	*	*	-
Crop disease	-	-	-	-	-
Frost or floods	*	*	*	*	-
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	-	-	-	-	-
Wild animals	*	*	-	*	-
Birds	*	*	-	*	-
Hailstone	*	*	*	*	-
Pests	*	*	*	-	-
Weeds	511	*	*	*	-
Others	*	*	*	-	-

Table 4.3: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Amhara Region

Cause of damage	All holders	All crops	Crop category		
			Cereals	Pulses	Oilseeds
All damage	205,165	35,691	18,842	14,320	*
Crop disease	-	-	-	-	-
Frost or floods	14,499	1,115	690	*	*
Locust	*	*	*	*	-
Shortage of rain	*	*	*	-	-
Too much rain	25,814	2,346	1,697	406	*
Wild animals	6,332	141	*	*	-
Birds	3,243	*	*	*	-
Hailstone	141,979	28,180	13,547	*	*
Pests	4,432	358	298	-	-
Weeds	23,599	2,045	*	*	*
Others	14,839	1,014	801	119	*

Table 4.4: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

*Oromia Region*

Cause of damage	All holders	All crops	Crop category		
			Cereals	Pulses	Oilseeds
All damage	662,526	70,267	49,729	10,513	2,324
Crop disease	*	*	*	-	*
Frost or floods	61,701	2,321	1,343	482	*
Locust	21,167	591	*	*	-
Shortage of rain	*	*	*	-	-
Too much rain	13,339	778	543	86	*
Wild animals	*	76	*	*	*
Birds	23,312	2,125	1,369	*	*
Hailstone	345,125	33,678	23,889	6,525	*
Pests	31,957	3,029	1,845	546	*
Weeds	136,814	23,030	17,296	1,430	1,580
Others	80,529	4,548	3,013	889	*

Table 4.5: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

*Somale Region*

Cause of damage	All holders	All crops	Crop category		
			Cereals	Pulses	Oilseeds
All damage	18,825	4,822	4,311	279	-
Crop disease	-	-	-	-	-
Frost or floods	*	*	*	-	-
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	*	*	*	-	-
Wild animals	*	*	*	-	-
Birds	*	*	*	*	-
Hailstone	13,670	4,013	3,638	*	-
Pests	-	-	-	-	-
Weeds	*	*	*	*	-
Others	*	*	*	-	-

Table 4.6: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

*Benshangul-Gumuz Region*

Cause of damage	All holders	All crops	Crop category		
			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 4.7: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

*(S.N.N.P.R) Region*

Cause of damage	All holders	All crops	Crop category			Oilseeds
			Cereals	Pulses	Oilseeds	
All damage	563,958	29,915	18,923	6,104	1,184	
Crop disease	-	-	-	-	-	
Frost or floods	39,114	2,064	1,138	396	*	
Locust	19,090	*	388	*	*	
Shortage of rain	1,229	*	*	*	*	
Too much rain	11,638	350	213	62	*	
Wild animals	*	174	75	*	*	
Birds	42,518	2,447	1,696	346	74	
Hailstone	390,732	20,279	13,193	4,026	728	
Pests	17,198	778	512	101	*	
Weeds	17,479	702	581	62	*	
Others	60,718	2,067	1,115	440	2	

Table 4.8: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Gambella Region

Cause of damage	All holders	All crops	Crop category			
			Cereals	Pulses	Oilseeds	
All damage	3,813	387	148	22		*
Crop disease	*	*	*	-	-	-
Frost or floods	615	*	30	*		*
Locust	*	*	*	-	-	-
Shortage of rain	-	-	-	-	-	-
Too much rain	168	*	*	*		-
Wild animals	*	*	*	*		-
Birds	722	30	*	*		-
Hailstone	669	*	*	*		*
Pests	-	-	-	-		-
Weeds	*	43	6	*		*
Others	988	78	*	6		-

Table 4.9: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Harari Region

Cause of damage	All holders	All crops	Crop category			
			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 4.10: Number of Holders and Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Dire Dawa Region

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

**Appendix I**  
**Estimation Procedures of Totals, Ratios and**  
**Sampling Error**

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

The following formulas were used to estimate total area of land under specific crop, total holders, quantity of fertilizer applied and seed sowed, and ratios 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  $h^{\text{th}}$  stratum.

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

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

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

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

$a_{hij}$  is the value of area for agricultural households  $j$ , in the  $i^{\text{th}}$  EA in the  $h^{\text{th}}$  stratum 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:

$$\hat{Y}_h = \sum_{i=1}^{n_h} W_{hi} y_{hi}$$

Where:

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

$\hat{Y}_h$  is estimate of total number of holders for the  $h^{\text{th}}$  stratum.

$W_{hi}$  is as defined above.

### 3. For Estimating Quantity of Fertilizer and seed in Stratum $h$ :

$$\hat{Q}_h = \sum_{i=1}^{n_h} W_{hi} q_{hi}$$

where,

$\hat{Q}_h$  is estimate of total quantity of a specific fertilizer applied or seed sowed for a specific crop land in the  $h^{\text{th}}$  stratum.

$q_{hi}$  is the sample total of a specific fertilizer applied or seed sowed for a specific crop land in the  $i^{\text{th}}$  EA in the  $h^{\text{th}}$  stratum.

$W_{hi}$  is as defined above.

#### 4. For Estimating Ratios in Stratum $h$ :

$$\hat{R}_h = \frac{\hat{Z}_h}{\hat{X}_h},$$

Where, the numerator and denominator are estimates of domain totals for characteristic  $z$  and  $x$ , respectively.

#### 5. Sampling Variance of Estimates:

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

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

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

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

$$Var(\hat{R}_h) = \frac{1}{\hat{X}_h^2} \left[ Var(\hat{Z}_h) + \hat{R}_h^2 Var(\hat{X}_h) - 2\hat{R}_h Cov(\hat{Z}_h, \hat{X}_h) \right]$$

Where,

$$Cov(\hat{Z}_h, \hat{X}_h) = (1 - f_h) \frac{n_h}{n_h - 1} \sum_{i=1}^{n_h} \left( \hat{Z}_{hi} - \frac{\hat{Z}_h}{n_h} \right) \left( \hat{X}_{hi} - \frac{\hat{X}_h}{n_h} \right) + f_h \sum_{i=1}^{n_h} (1 - f_{hi}) \left( \frac{h_{hi}}{h_{hi} - 1} \right) \sum_{j=1}^{h_{hi}} \left( \hat{Z}_{hij} - \frac{\hat{Z}_{hi}}{h_{hi}} \right) \left( \hat{X}_{hij} - \frac{\hat{X}_{hi}}{h_{hi}} \right)$$

$f_h$  = 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  $i^{\text{th}}$  sample EA in stratum  $h$ .

$\hat{A}_{hi}, \hat{Y}_{hi}, \hat{Q}_{hi}, \hat{Z}_{hi}, \hat{X}_{hi}$  are weighted total area, holder, quantity of fertilizer or seed, characteristics  $z$  and  $x$ , respectively, in the  $i^{\text{th}}$  EA and  $h^{\text{th}}$  stratum.

$\hat{A}_{hij}, \hat{Y}_{hij}, \hat{Q}_{hij}, \hat{Z}_{hij}, \hat{X}_{hij}$  are weighted value of area, holder, quantity of fertilizer or seed, characteristics  $z$  and  $x$ , respectively, from  $j^{\text{th}}$  agricultural household in the  $i^{\text{th}}$  EA and  $h^{\text{th}}$  stratum.

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.

$$Var(\hat{A}) = \sum_h^L Var(\hat{A}_h), Var(\hat{Y}) = \sum_h^L Var(\hat{Y}_h), Var(\hat{R}) = \sum_{i=1}^L Var(\hat{R}_h)$$

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.

**6. Coefficient of Variation (CV) of Estimates:**

Coefficient of Variations (CV's) in percentage for estimates of stratum total area, number of holders, applied fertilizer and sowed seed for a specific crop are given by:

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

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

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

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

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

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

## Appendix II

### Standard Error and Coefficient of Variation

## Annex II

**Table 1 Estimate of Number of Holders, input applied Area and Quantity of Inputs used and their standard Errors  
& Coefficients of Variation of major Crops (For Ethiopia), 2010/2011 (2003 E.C) Agricultural sampl Survey, Bulg Season**

Crops	Hectare															
	Crop Land Area			All Fertilizer						Natural						
	Area (Ha)			Area in (Ha)			Quantity			Holder			Area (Ha)			
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	
All	1,173,048	42,870	3.65	383,773	23,500	6.12	164,844	16,234	9.85	1,839,552	63,618	3.46	207,977	14,576	7.01	
Cereals	934,946	38,323	4.1	299,909	21,047	7.02	116,712	13,000	11.14	1,694,965	62,886	3.71	166,302	12,543	7.54	
Teff	77,786	9,247	11.89	19,203	3,057	15.92	4,444	917	20.64	56,711	10,900	19.22	10,424	2,381	22.85	
Barley	162,274	14,400	8.87	54,828	7,438	13.57	20,524	3,806	18.54	174,843	17,491	10	23,783	3,381	14.22	
Wheat	71,787	18,034	25.12	31,848	9,768	30.67	22,249	7,863	35.34	45,381	8,789	19.37	5,641	1,360	24.11	
Maize	550,759	26,903	4.88	173,187	11,668	6.74	67,267	6,763	10.05	1,484,872	61,380	4.13	109,263	8,643	7.91	
Sorghum	57,413	9,888	17.22	17,077	4,449	26.05	869	257	29.59	83,763	11,402	13.61	15,975	4,429	27.72	
Finger millet	1,380	331	23.98	362	150	41.58	154	155	100.51	7,286	2,549	34.99	362	150	41.58	
Oats/ 'Aja'	12,978	2,922	22.52	3,392	1,302	38.38	1,205	555	46.05	10,018	2,727	27.22	841	284	33.76	
Rice	570	329	57.8	13	13	95.2	-	-	-	682	516	75.7	13	13	95.2	
Pulse	211,462	12,527	5.92	80,997	5,932	7.32	47,305	5,746	12.15	953,807	50,053	5.25	40,328	3,295	8.17	
Horse/Faba beans	3,993	1,181	29.59	663	95	14.28	187	46	24.57	22,357	3,317	14.84	490	74	15.02	
Field peas	7,144	1,551	21.7	1,353	382	28.26	211	110	52.38	15,022	3,501	23.31	1,045	282	26.96	
Haricot beans	182,453	11,759	6.44	77,365	5,844	7.55	46,778	5,741	12.27	914,013	49,677	5.44	37,388	3,191	8.53	
Chick peas	6,235	1,567	25.14	696	234	33.62	40	37	92.99	6,402	1,947	30.41	647	227	35.13	
Lentiles	7,031	1,620	23.05	766	256	33.46	82	74	90.66	9,219	3,338	36.21	610	208	34.14	
Vetch/Grass peas	3,412	1,627	47.69	95	70	73.03	-	-	-	1,192	632	52.97	95	70	73.03	
Soya beans	51	31	60.16	10	7	66.28	7	7	99.23	427	291	68.2	6	6	87.87	
Fenugreek	1,126	405	35.98	49	18	36.84	1	1	98.83	3,626	1,212	33.43	47	18	38.5	
Gibto	17	14	86.95	-	-	-	-	-	-	-	-	-	-	-	-	
Oile seeds	26,640	6,375	23.93	2,866	824	28.76	827	323	39.05	11,878	3,349	28.2	1,348	483	35.87	
Nueg	112	105	93.84	6	6	94.57	23	23	99.91	81	83	102.71	-	-	102.71	
Linseed	366	119	32.37	12	9	77.4	-	-	99.13	1,058	683	64.59	11	9	79.48	
Ground nuts	2,047	1,055	51.57	456	293	64.2	78	55	70.7	4,814	2,502	51.97	361	286	79.3	
Safflower	342	258	75.42	6	4	66.38	37	31	82.53	141	90	63.61	2	2	82.2	
Sesame	23,139	6,270	27.1	2,288	774	33.82	597	307	51.39	2,949	1,080	36.63	915	387	42.28	
Rapeseed	635	313	49.26	98	51	52.14	91	84	92.15	3,226	1,700	52.69	58	40	69.33	

Cont'd

Crops	DAP									UREA								
	Holder			Area (Ha)			Quantity (Qt)			Holder			Area (Ha)			Quantity (Qt)		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	652,639	39,359	6.03	146,584	16,771	11.44	125,853	15,189	12.07	30,422	6,651	21.86	6,876	2,473	35.96	5,962	1,794	30.09
Cereals	520,973	36,918	7.09	111,462	16,001	14.36	87,896	12,044	13.7	23,472	4,348	18.53	4,084	862	21.11	3,581	794	22.18
Teff	27,477	6,016	21.89	6,678	1,517	22.72	3,469	844	24.34	2,959	1,005	33.95	740	309	41.78	313	163	52.22
Barley	111,230	15,610	14.03	29,177	5,360	21.8	18,321	3,646	19.9	2,346	977	41.62	240	132	55.06	253	149	58.65
Wheat	47,287	12,063	25.51	24,680	8,982	36.39	20,435	7,180	35.14	665	482	72.57	204	178	87.06	176	151	85.64
Maize	379,627	31,777	8.37	47,577	5,752	12.09	43,893	5,860	13.35	17,523	4,058	23.16	2,732	741	27.11	2,692	740	27.48
Sorghum	7,874	2,912	36.98	829	378	45.58	574	227	39.5	880	367	41.73	136	72	52.97	145	91	62.78
Finger millet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	11,661	4,178	35.83	2,520	1,215	48.2	1,204	555	46.11	94	94	99.85	32	32	99.85	2	2	99.85
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pulse	381,539	31,454	8.24	33,799	2,984	8.83	37,336	5,256	14.08	12,525	5,205	41.56	2,609	2,271	87.05	2,239	1,471	65.73
Horse/Faba beans	6,187	1,544	24.95	171	49	28.71	168	46	27.29	233	-	-	1	-	-	2	-	-
Field peas	3,237	1,004	31.02	308	140	45.41	211	110	52.38	-	-	-	-	-	-	-	-	-
Haricot beans	372,536	31,389	8.43	33,139	2,969	8.96	36,866	5,250	14.24	12,148	5,204	42.84	2,605	2,271	87.19	2,235	1,471	65.82
Chick peas	176	163	92.32	20	19	95.67	3	2	93.88	-	-	-	-	-	-	-	-	-
Lentiles	665	471	70.74	156	132	84.86	82	74	90.66	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soya beans	164	163	99.23	4	4	99.23	7	7	99.23	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-	144	142	98.83	3	3	98.83	1	1	98.83
Gibto	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oile seeds	4,918	1,878	38.18	1,324	605	45.71	622	300	48.24	765	499	65.18	184	144	77.99	143	97	68.06
Nueg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linseed	185	183	99.13	-	-	99.13	-	-	99.13	-	-	-	-	-	-	-	-	-
Ground nuts	618	348	56.25	95	63	66.54	78	55	70.7	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sesame	3,514	1,800	51.22	1,216	603	49.99	537	295	55.05	346	271	78.3	156	141	90.11	59	49	83.6
Rapeseed	600	414	68.89	12	12	96.73	7	6	86.59	420	419	99.88	28	28	99.88	84	84	99.88

Cont'd

Crops	JREA + DAP									Indigenous seed											
	Holder			AREA (Ha)			Quantity (Qt)			Holder			Area (Ha)			Quantity (Qt)					
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV			
All	114,247	11,039	9.66	22,335	2,571	11.51	33,028	4,307	13.04	4,255,374	78,082	1.83	1,128,196	42,018	3.72	736,938	53,421	7.25			
Cereals	93,430	9,585	10.26	18,062	2,299	12.73	25,235	3,632	14.39	3,830,999	78,846	2.06	892,435	37,502	4.2	642,407	51,193	7.97			
Teff	4,819	1,512	31.38	1,360	465	34.21	663	260	39.26	307,927	29,118	9.46	77,474	9,226	11.91	33,018	4,748	14.38			
Barley	7,339	1,715	23.37	1,628	636	39.04	1,950	713	36.58	710,375	39,926	5.62	161,884	14,356	8.87	270,433	25,443	9.41			
Wheat	1,350	695	51.52	1,322	1,033	78.12	1,638	1,280	78.17	202,621	24,283	11.98	70,920	17,880	25.21	127,093	32,254	25.38			
Maize	80,810	9,316	11.53	13,615	1,887	13.86	20,681	3,243	15.68	3,117,503	79,213	2.54	510,218	25,742	5.05	183,832	11,244	6.12			
Sorghum	1,199	431	35.92	137	67	48.72	150	82	54.53	235,996	20,773	8.8	57,011	9,890	17.35	10,626	1,941	18.26			
Finger millet	154	155	100.51	-	-	-	154	155	100.51	19,107	4,008	20.98	1,380	331	23.98	455	185	40.68			
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-	68,421	11,123	16.26	12,978	2,922	22.52	16,629	3,750	22.55			
Rice	-	-	-	-	-	-	-	-	-	3,965	2,023	51.02	570	329	57.8	321	203	63.07			
Pulse	53,195	7,354	13.82	4,262	911	21.38	7,731	1,246	16.11	2,299,136	74,470	3.24	209,682	12,523	5.97	89,867	7,075	7.87			
Horse/Faba beans	249	14	5.46	-	-	-	11.67	17	2	13.19	69,016	7,936	11.5	3,993	1,181	29.59	3,786	1,693	44.73		
Field peas	-	-	-	-	-	-	-	-	-	66,126	9,693	14.66	7,144	1,551	21.7	8,505	2,067	24.3			
Haricot beans	52,573	7,344	13.97	4,233	911	21.52	7,677	1,245	16.22	2,133,214	73,155	3.43	180,674	11,755	6.51	63,189	4,537	7.18			
Chick peas	389	386	99.18	28	28	99.38	37	37	99.26	42,885	9,282	21.64	6,235	1,567	25.14	4,342	1,334	30.72			
Lentiles	-	-	-	-	-	-	-	-	-	61,436	12,192	19.85	7,031	1,620	23.05	5,080	1,232	24.25			
Vetch/Grass peas	-	-	-	-	-	-	-	-	-	19,579	6,870	35.09	3,412	1,627	47.69	4,221	2,441	57.82			
Soya beans	-	-	-	-	-	-	-	-	-	1,360	591	43.47	51	31	60.16	5	4	64.72			
Fenugreek	-	-	-	-	-	-	-	-	-	19,382	3,730	19.25	1,126	405	35.98	737	296	40.16			
Gibto	-	-	-	-	-	-	-	-	-	255	181	70.8	17	14	86.95	3	3	99.57			
Olle seeds	586	413	70.54	11	7	64.15	62	38	61.52	100,988	14,854	14.71	26,080	6,271	24.05	4,664	1,370	29.37			
Nueg	380	379	99.91	6	6	99.91	23	23	99.91	872	544	62.47	112	105	93.84	6	6	99.96			
Linseed	-	-	-	-	-	-	-	-	-	6,659	1,483	22.26	366	119	32.37	185	94	50.86			
Ground nuts	-	-	-	-	-	-	-	-	-	17,090	4,849	28.37	2,047	1,055	51.57	1,563	1,151	73.64			
Safflower	177	162	91.75	4	4	90.72	37	31	82.53	6,025	3,124	51.85	342	258	75.42	8	3	32.41			
Sesame	15	13	88.59	1	1	88.59	2	2	88.59	58,359	12,723	21.8	22,579	6,170	27.33	2,833	743	26.24			
Rapeseed	15	13	88.59	-	-	88.59	-	-	88.59	14,606	5,035	34.47	635	313	49.26	69	30	44.34			

Cont'd

Crops	Improved seed									Pesticide								
	Holder			Holder (Ha)			Quintal			Holder			Area (Ha)					
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV			
All	214,779	18,545	8.63	44,541	4,656	10.45	14,794	2,512	16.98	208,349	22,306	10.71	100,056	17,753	17.74			
Cereals	201,541	18,329	9.09	42,211	4,616	10.94	13,708	2,471	18.02	190,869	21,513	11.27	95,551	17,487	18.3			
Teff	1,277	609	47.73	312	152	48.71	142	91	64	58,041	11,827	20.38	18,476	4,799	25.97			
Barley	1,347	567	42.07	90	46	50.8	13	9	67.44	78,730	15,310	19.45	20,572	4,792	23.29			
Wheat	2,555	1,175	45.98	867	475	54.73	1,493	909	60.92	67,845	14,123	20.82	33,106	10,938	33.04			
Maize	196,098	18,223	9.29	40,540	4,541	11.2	12,005	2,281	19	52,877	9,974	18.86	14,021	3,470	24.75			
Sorghum	1,757	1,341	76.31	401	337	84.04	56	48	86.72	14,106	6,468	45.85	6,589	3,434	52.11			
Finger millet	-	-	-	-	-	-	-	-	-	23	22	97.8	6	6	97.8			
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-	16,246	5,271	32.44	2,719	1,071	39.38			
Rice	-	-	-	-	-	-	-	-	-	152	151	99.16	61	61	99.16			
Pulse	14,945	2,690	18	1,770	387	21.85	1,055	351	33.25	27,006	6,190	22.92	4,324	1,703	39.39			
Horse/Faba beans	-	-	-	-	-	-	-	-	-	972	640	65.82	86	75	86.8			
Field peas	-	-	-	-	-	-	-	-	-	836	497	59.44	86	68	79.83			
Haricot beans	14,945	2,690	18	1,770	387	21.85	1,055	351	33.25	21,162	5,299	25.04	3,111	1,388	44.64			
Chick peas	-	-	-	-	-	-	-	-	-	1,062	527	49.65	53	29	53.9			
Lentiles	-	-	-	-	-	-	-	-	-	694	505	72.77	49	41	83.84			
Vetch/Grass peas	-	-	-	-	-	-	-	-	-	2,825	2,768	97.97	927	908	98.02			
Soya beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Fenugreek	-	-	-	-	-	-	-	-	-	346	247	71.53	12	9	71.22			
Gibto	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Oile seeds	1,834	1,706	93.01	560	547	97.69	31	30	95.37	688	499	72.54	181	177	97.6			
Nueg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Linseed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Ground nuts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Safflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Sesame	1,834	1,706	93.01	560	547	97.69	31	30	95.37	433	430	99.21	178	177	99.24			
Rapeseed	-	-	-	-	-	-	-	-	-	255	254	99.57	3	3	99.57			

Cont'd

Crops	Irrigation						Extension Package					
	Holder			Area (Ha)			Holder			Area (Ha)		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	302,153	27,662	9.16	59,823	9,799	16.38	356,523	29,698	8.33	109,746	14,489	13.2
Cereals	285,824	26,532	9.28	53,154	8,995	16.92	320,939	27,372	8.53	95,947	13,703	14.28
Teff	30,079	9,246	30.74	5,689	2,190	38.49	16,683	4,868	29.18	5,505	1,840	33.42
Barley	17,619	5,893	33.45	3,030	1,396	46.09	61,308	12,402	20.23	20,517	5,468	26.65
Wheat	3,173	1,606	50.62	289	165	57.06	30,328	9,722	32.06	18,893	7,718	40.85
Maize	243,590	24,622	10.11	43,779	8,606	19.66	246,062	23,688	9.63	50,072	5,701	11.39
Sorghum	2,298	796	34.62	309	222	71.69	10,187	4,293	42.15	959	425	44.34
Finger millet	1,850	1,802	97.37	45	42	94.11	-	-	-	-	-	-
Oats/ 'Aja'	458	328	71.7	14	14	99.44	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-	-	-	-
Pulse	73,311	11,691	15.95	6,630	2,549	38.45	136,711	19,143	14	12,252	3,586	29.26
Horse/Faba beans	664	590	88.97	9	6	70.52	-	-	-	-	-	-
Field peas	247	212	86.06	5	5	97.96	1,003	592	59.04	66	43	64.85
Haricot beans	57,883	10,347	17.88	3,724	2,134	57.32	132,262	18,953	14.33	11,614	3,560	30.65
Chick peas	6,925	3,381	48.83	1,306	643	49.2	3,076	2,512	81.67	441	404	91.65
Lentiles	2,178	998	45.82	164	79	47.84	371	367	99.15	131	130	99.16
Vetch/Grass peas	4,983	3,094	62.08	864	528	61.07	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-	-	-	-
Fenugreek	6,819	2,806	41.14	558	361	64.7	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-	-	-	-
Oile seeds	1,948	839	43.09	39	28	73.14	6,885	2,529	36.74	1,547	720	46.51
Nueg	-	-	-	-	-	-	380	379	99.91	6	6	99.91
Linseed	520	373	71.65	4	3	77.77	217	217	99.77	1	1	99.77
Ground nuts	76	40	52.07	1	-	68.5	2,243	1,472	65.62	112	63	56.37
Safflower	-	-	-	-	-	-	-	-	-	-	-	-
Sesame	61	38	61.97	-	-	94.12	4,031	2,030	50.35	1,428	719	50.32
Rapeseed	1,290	749	58.06	34	28	83.44	15	13	88.59	-	-	88.59

Table 2. Holders Applying Inputs by Educational Status

National Level

Educational Status of Holders	Crop Holders			Fertilizer			Improved Seed			Pesticide			Irrigation		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
Illiterate	2,665,422	59,816	2.24	403,108	24,832	6.16	112,157	9,956	8.88	120,957	14,476	11.97	192,942	19,944	10.34
Literate	258,935	15,726	6.07	39,811	7,058	17.73	7,033	1,981	28.16	16,702	4,278	25.61	22,864	3,564	15.59
Grades 1 - 3	521,835	17,011	3.26	103,186	7,740	7.5	31,408	4,260	13.56	29,599	3,791	12.81	33,197	4,170	12.56
Grades 4 - 6	537,622	16,099	2.99	126,801	8,525	6.72	38,951	4,836	12.41	25,249	3,901	15.45	31,296	3,574	11.42
Grades 7 - 8	215,525	9,300	4.32	73,227	6,194	8.46	18,017	3,181	17.65	9,985	1,948	19.51	16,413	2,751	16.76
Grades 9 - 11	69,717	5,176	7.42	22,780	2,875	12.62	5,041	1,274	25.28	4,281	1,140	26.63	3,795	997	26.26
Grade 12 complete	22,129	2,776	12.55	6,212	1,578	25.4	1,973	1,110	56.26	1,577	611	38.75	1,412	524	37.12
Above grade 12	6,909	1,378	19.94	2,042	665	32.55	198	166	83.98	-	-	-	233	201	86.38
Total	4,298,094	77,914	1.81	777,166	40,735	5.24	214,779	18,545	8.63	208,349	22,306	10.71	302,153	27,662	9.16

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Table 2. Holders Applying Inputs by Age group

National Level

Age group	Crop Holders			Fertilizer			Improved Seed			Pesticide			Irrigation		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
Below 18	17,809	2,331	13.09	1,788	565	31.62	548	290	52.95	799	389	48.63	2,886	1,032	35.76
18 - 20	81,861	6,290	7.68	10,353	1,796	17.35	3,144	782	24.88	4,212	1,434	34.04	4,533	1,406	31.02
21 - 24	207,920	9,786	4.71	29,720	3,277	11.03	7,832	1,440	18.39	12,366	2,445	19.77	12,974	2,430	18.73
25 - 29	558,273	18,352	3.29	95,320	7,344	7.7	30,498	3,294	10.8	30,403	4,235	13.93	33,053	4,179	12.64
30 - 39	1,210,769	27,942	2.31	229,889	13,177	5.73	67,491	7,225	10.7	58,008	6,968	12.01	82,095	9,171	11.17
40 - 49	899,552	22,336	2.48	174,900	12,591	7.2	47,931	5,337	11.14	48,124	7,848	16.31	70,220	7,482	10.65
50 - 59	630,410	15,944	2.53	122,450	7,579	6.19	31,477	3,287	10.44	26,069	3,782	14.51	45,346	4,763	10.5
60 and above	688,945	17,274	2.51	111,282	8,264	7.43	25,858	3,800	14.69	28,367	4,157	14.65	51,047	5,932	11.62
Not stated	2,553	1,530	59.92	1,464	1,461	99.83	-	-	-	-	-	-	-	-	-
Total	4,298,094	77,914	1.81	777,166	40,735	5.24	214,779	18,545	8.63	208,349	22,306	10.71	302,153	27,662	9.16

## **Appendix III \_ Questionnaires**

CENTRAL STATISTICAL AUTHORITY  
ETHIOPIAN AGRICULTURAL SAMPLE SURVEY 2010/2011 (2003 E.C)

## PART I – IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Region	Zone	Wereda	PA /	EA	HH	HH	HOLDER	HOLDER'S			HIGHEST GRADE COMPLET ED	HOLDER'S HH SIZE	FARMING TYPE
			REST.A R	LOC AL	ID	HEAD SEX 1=M 2=F		NAME	AGE	SEX M=1 F=2			

## PART II – CROP FIELD / OTHER LAND USE

15	16						17											
SER. NO.	QUESTIONS FOR THE HOLDER	PARCEL NO.		FIELD NO.														
		IS THE FIELD		PURE STAND =1		MIXED CROP =2		OTHER LAND USE=3										
		CROP/OTHER NAME		CROP NAME		CROP NAME												
		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	Seed / Seedling Type	Improved Seed = 1		indigenous seed = 2													
0	7	<i>For Cereals, Pulses &amp; Oilseeds only</i> Quantity of improved seeds used	Kilo	Gram	Kilo	Gram	Kilo	Gram										
0	8	<i>For Cereals, Pulses &amp; Oilseeds only</i> Price of improved seeds used	Birr	Cents	Birr	Cents	Birr	Cents										
0	9	<i>For Cereals, Pulses &amp; Oilseeds only</i> Quantity of indigenous seeds used	Kilo	Gram	Kilo	Gram	Kilo	Gram										
1	0	Was crop damaged ?	Yes = 1		No =2													
1	1	If yes in question number 10, Cause of damage	Code															
1	2	Percent of damaged crop																
1	3	Prevention/precaution measure taken?	Yes =1		No =2													
1	4	Type of measure if any?	Chemical = 1		Non - chemical = 2		Both = 3											
1	5	Chemical type used if any.	Pesticide =1		herbicide =2		Fungicide =3		1&2 = 4		1 & 3 = 5		2 & 3 = 6		All = 7			
1	6	Is Fertilizer Used?	Yes =1		No = 2													
1	7	Type of fertilizer used if any?	Natural = 1		Chemical = 2		Both = 3											
1	8	If chemical fertilizer used	18.1 Type UREA = 1		DAP = 2		Both = 3											
		18.2 Quantity of chemical fertilizer used	Kilo			Gram												
1	9	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	0	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	Is the field measured?		yes = 1	No = 2	→			
Accuracy during field measurement	Area of measured field		Is the field Flat = 1 Partially 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)						
<i>Field measurement</i>			<i>Date</i>		<i>Month</i>			

**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
<b>Data collector</b>			
<b>Field Supervisor</b>			

CENTRAL STATISTICAL AUTHORITY  
ETHIOPIAN AGRICULTURAL SAMPLE SURVEY 2010/2011 (2003 E.C)

## PART I – IDENTIFICATION PARTICULARS

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Region	Zone	Wereda	PA /	EA	HH	HH	HOLDER	HOLDER'S			HIGHEST GRADE COMPLETED	HOLDER'S HH SIZE	FARMING TYPE CROP=1 LIVEST=2 BOTH=3
			REST.A	LOC	ID	HEAD		SEX	NAME	AGE			
			R	AL	ID	SEX	ID						
						1=M 2=F							

## PART II – CROP FIELD / OTHER LAND USE

15		16				17							
SER. NO.		QUESTIONS FOR THE HOLDER				PARCEL NO.		FIELD NO.					
						IS THE FIELD PURE STAND =1 MIXED CROP =2 OTHER LAND USE=3		CROP/OTHER NAME		CROP NAME		CROP NAME	
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	Seed / Seedling Type	Improved Seed = 1	indigenous seed = 2									
0	7	<i>For Cereals, Pulses &amp; Oilseeds only</i> Quantity of improved seeds used				Kilo	Gram	Kilo	Gram	Kilo	Gram		
0	8	<i>For Cereals, Pulses &amp; Oilseeds only</i> Price of improved seeds used				Birr	Cents	Birr	Cents	Birr	Cents		
0	9	<i>For Cereals, Pulses &amp; Oilseeds only</i> Quantity of indigenous seeds used				Kilo	Gram	Kilo	Gram	Kilo	Gram		
1	0	Was crop damaged ?	Yes = 1	No =2									
1	1	If yes in question number 10, Cause of damage											
1	2	Percent of damaged crop											
1	3	Prevention/precaution measure taken?	Yes =1	No =2									
1	4	Type of measure if any? Chemical = 1 Non - chemical = 2 Both = 3											
1	5	Chemical type used if any. Pesticide =1 herbicide =2 Fungicide =3 1&2 =4 1 & 3 =5 2 & 3 =6 All =7											
1	6	Is Fertilizer Used?	Yes =1	No = 2									
1	7	Type of fertilizer used if any? Natural = 1 Chemical = 2 Both = 3											
1	8	If chemical fertilizer used 18.1 Type UREA = 1 DAP = 2 Both = 3											
		18.2 Quantity of chemical fertilizer used				Kilo		Gram					
1	9	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	0	Quantity of crop produced in standard/local measurement	Name	Code	Quantity	Name	code	Quantity	Name	Code	Quantity		