

**THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
CENTRAL STATISTICAL AGENCY**

**AGRICULTURAL SAMPLE SURVEY
2008/09(2001 E.C)
VOLUME
VI**



**REPORT ON FARM MANAGMENT
PRACTICES FOR BELG/SECOND SEASON CROPS**

PRIVATE PEASANT HOLDINGS

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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.

The extent of adopting modern agricultural practices, such as utilization of fertilizer, irrigation, pesticides and improved seeds, by the peasant farmers can be considered as important indicators for estimating the rate of adoption of modern technologies.

This report which is Volume VI of the seven series reports, presents quantitative information about the use of modern agricultural inputs for Belg season crops of 2008/09 (2001 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, 2009 by the Central Statistical Agency (CSA).

1.2 Objectives of the 2008/09 Belg Season Crop Production Sample Survey

The objectives of the 2008/09 (2001 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.

CHAPTER II

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

2.1 COVERAGE

The 2008/9 (2001 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 1,400 Enumeration Areas (EAs) were selected. However, due to various reasons that are beyond control, in EAs the survey could not be successful and hence interrupted. Thus, all in all the survey succeeded to cover 1314 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 2008/09 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.

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.

2.4 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. Distribution of sampling units (sampled and covered EAs and households) by stratum is also presented in Appendix-III.

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 2008/09 (2001 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 CSA's headquarters in Addis Ababa. Those trained in the first stage conducted similar training for field supervisors and enumerators for 20 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.

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 2008/09 (2001 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 2008/09 (2001 E.C.) The data collection period for obtaining the area, production and agricultural

practices of the Belg season crops was from 'Ginbot' 15-30, 2001 E.C. (i.e. From May 23 to June 7, 2009). 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 **2008/09 (2001 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 2008/09 (2001 E.C.) FARM MANAGEMENT PRACTICES OF BELG SEASON SURVEY

In this part of the report, the results of the 2008/09 (2001 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 2008/09 (2001 E.C) Belg Season Crop Production Sample Survey results, it was estimated that Belg season major crops covered 1,209,570.51 thousand hectares of land, where 4.75 million holders were engaged in the production activity. Of this total area under Belg season crops 544.59 thousand hectares (45%) was under the use of improved farm management practices in which 3,397.74 (41.31%) thousand agricultural holders reported for utilizing different agricultural inputs. Moreover, in 2008/09 (2001 E.C) it was estimated that a total of 126,950 quintals of commercial fertilizer was utilized for Belg season crop production.

Summary Table A: Total Cropland Area and Number of holders engaged in 2008/09 (2001 E.C.) belg season crop production activities

• <i>Belg crop Area (`000 ha)</i>	<i>1209.57</i>
• <i>Number of Belg Crop Producing Holders (in million)</i>	<i>4.75</i>
• <i>Improved Farm Management practices (`000 ha)</i>	<i>544.59</i>
• <i>Number of holders reporting the use of farm management practices (in million)</i>	<i>3.40</i>
• <i>Quantity of commercial fertilizer applied (`000 qt.)</i>	<i>126.95</i>

3.1 Total Area under Different Farm Management Practices

According to the 2008/09 (2001 E.C) Belg season Crop Production Sample Survey results, it was estimated that Belg season crops covered about 1209.57 thousands hectares of land. Of this total, about 544.59 hectares (45%) was under the use of improved farm management practices. Moreover, of the above mentioned total cropland area under improved farm inputs, about 375.15 thousand hectares (68.87%) was under fertilizer (Both Natural and Commercial), 71.37 thousand hectares (13.11%) was under irrigation, 81.23 thousand hectares (14.91%) was treated with pesticides and 16.85 thousand hectares (3.09%) was under improved seeds. The coverage of the above mentioned

farm management practices accounted for 31.01%, 5.91%, 6.75% and 1.39% of the total area under Belg season crops, respectively. (See Summary Table B).

Summary Table B. Total Area Under Improved Farm Management Practices For Belg Season Crops of Private Holdings in Ethiopia 2008/09 (2001 E.C.)

<i>TYPE OF FARM MANAGEMENT PRACTICES</i>	<i>TOTAL AREA IN ‘000HA.</i>	<i>%</i>	<i>% FROM TOTAL BELG CROP AREA</i>
<i>IRRIGATION</i>	71.37	13.11	5.91
<i>IMPROVED SEEDS</i>	16.85	3.10	1.39
<i>FERTILIZER</i>	375.15	68.88	31.01
<i>PESTICIDES</i>	81.23	14.91	6.71
<i>TOTAL</i>	544.6	100.00	45.02

The estimate of total cropland area under different farm management practices for Belg season crops of 2008/09 (2001 E.C) is presented in Summary Table C. As it is indicated in this summary Table, the highest proportion of cropland area under different farm management practices was reported to be covered by Cereals, which accounted for 996,245 thousand hectares (82.36%). Furthermore, 205,597 thousand hectares about (17%) was accounted for Belg Pulses and the remaining about 7,729 thousands hectares (0.64%) was reported as Belg Oilseed crops.

Summary Table C. Total Area Under Improved Farm Management Practices for Belg Season Crops of Private Holdings in Ethiopia, 2008/09 (2001 E.C.)

<i>CROP TYPE</i>	<i>TOTAL BELG CROP AREA</i>		<i>CROPLAND AREA UNDER IMP. FARM MANAGEMENT PRAC.</i>	
	<i>‘000 HA.</i>	<i>%</i>	<i>‘000 HA.</i>	<i>%</i>
<i>CEREALS</i>	996.24	82.36	471.48	86.571
<i>PULSES</i>	205.6	17	67.08	12.31
<i>OILSEEDS</i>	7.73	0.64	*	*
<i>GRAINS</i>	1209.57	100.00	544.59	100.00

3.2 Total Cropland Area under Fertilizer by Type

The results of the survey indicate that belg season cropland area under both natural and commercial fertilizers were estimated to be 375,146 thousand hectares, covering 31.01% of the total area under Belg seasons crops of the private holdings. Of the total fertilized area 236,918 thousand hectares (63.15) was reported to be under natural fertilizers. The coverage of commercial fertilizers was estimated to be 138,228 thousand hectares (36.85 %), constituting of 88.98% DAP, 3.39% UREA and 7.63% mixture of the two fertilizers (DAP+UREA). (For details see Summary Table D.)

Summary Table D: Total Cropland Area under Fertilizer by Type of Fertilizer for Private Holdings in Ethiopia, 2008/09 (2001 E.C)

<i>TYPE OF FERTILIZER</i>	<i>FERTILIZER</i>		<i>PERCENTAGE FROM TOTAL BELG CROP AREA</i>
	<i>APPLIED AREA IN</i> 000' HA	<i>%</i>	
NATURAL	236.92	63.15	19.57
COMMERCIAL	138.23	36.85	11.43
<i>DAP</i>	122.99	88.98	10.17
<i>UREA</i>	4.68	3.39	0.39
<i>DAP+UREA</i>	10.55	7.63	0.87
TOTAL	375.15	100.00	31

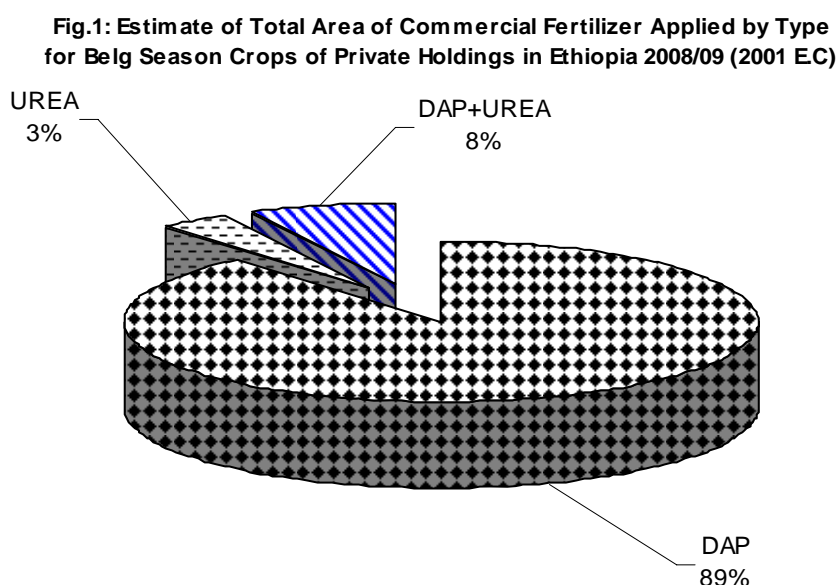
3.3.1 Use of Natural Fertilizers

In general, the application of natural fertilizers for Belg season crops in 2008/09 (2001 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 119.38 thousand hectares (50.39%). The fertilized area (natural fertilizer) under haricot beans was the second and estimated to be 35.64 thousand hectares (15.04%), while area under barley stood third i.e. 35.35 thousand hectares, 14.92% (see Table 2.1).

3.3.2 Use of Commercial Fertilizers

Out of the total land area under commercial fertilizers in 2008/09 (2001 E.C) Belg season, i.e, 138.23 thousand hectare (11.43%) of the total Belg season crop area, the area under DAP was the highest which accounted for 122.99 thousand hectare (88.98%), while the mix of the two fertilizers

(DAP+UREA) and UREA were covering 10.55 thousand hectare (7.63 %) and 4.68 thousand hectare (3.39 %) of the total commercial fertilizer applied area, respectively (see Fig 1.)



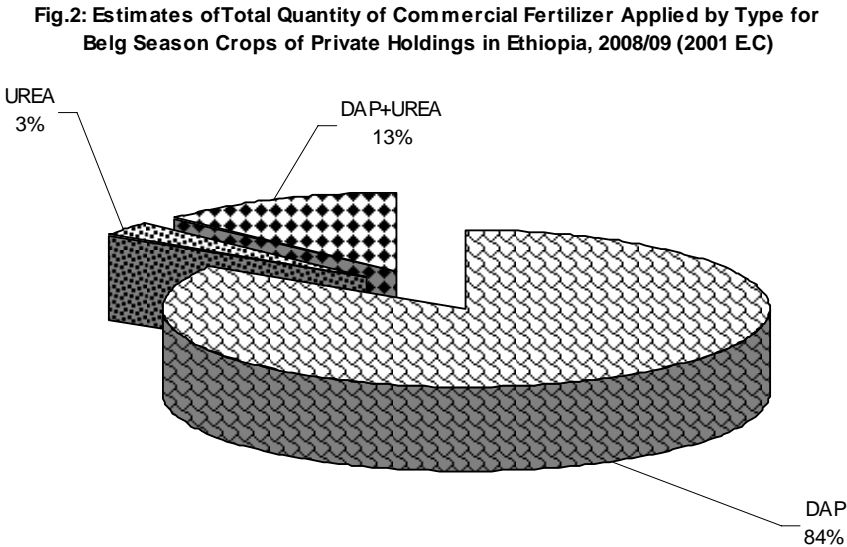
Similarly, the application of commercial fertilizers varied from crop to crop. Of the total area under commercial fertilizers the highest area was reported for barley at 58.14 thousand hectares (42.06%). The second highest area reported under commercial fertilizers was for maize, i.e., 29.03 thousand hectares (21%).

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 220,494 hectares (58.78% of the total), S.N.N.P and Amhara Regions were the second and third to report the highest area under both (Natural and Commercial) fertilizers which were estimated to be 107,408 hectares (28.63%) and 38,352 hectares (10.22%), respectively.

3.4 Total Quantity of Commercial Fertilizer Applied by Type

In 2008/09 (2001 E.C.) the total quantity of commercial fertilizer used for Belg season crop production was estimated at 126,950 quintals. Of this total, the share of DAP was the highest accounting for 83.76% (106,328 quintals). The mixture of the two types of fertilizers

(DAP+UREA) was the second highest accounting for 13.04% (16,553 quintals). The last was the share of the Urea, which accounted for 3.21% (4,069 quintals) (See Fig 2).



3.5 Total 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 practice modern farm management on their holdings, Belg crop producing holders’ ages have been categorized into nine groups. These are:

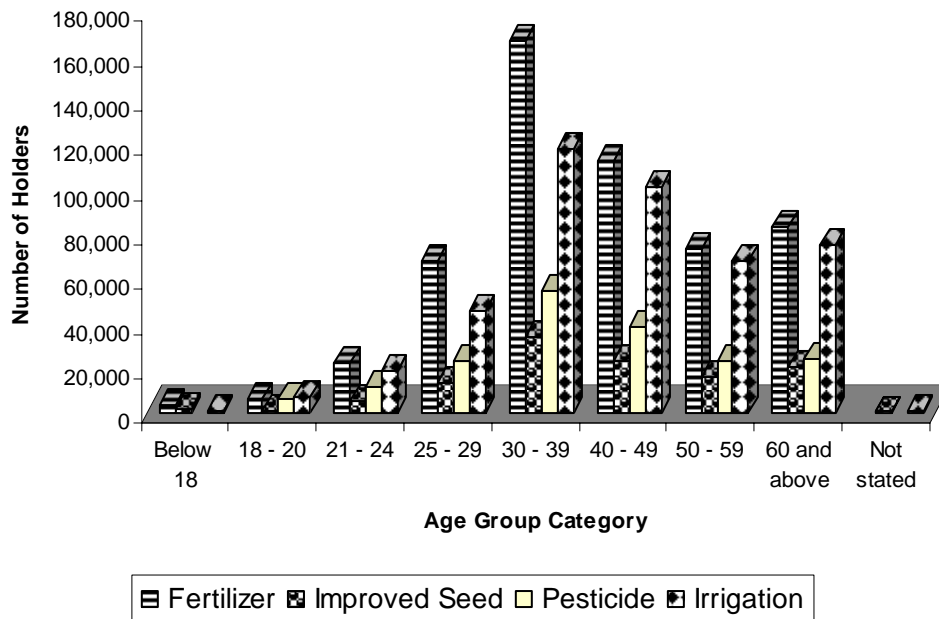
The group categories by age				
Group	1	-	Under 18 Years	
Group	2	-	18-20	Years
Group	3	-	21-24	Years
Group	4	-	25-29	Years
Group	5	-	30-39	Years
Group	6	-	40-49	Years
Group	7	-	50-59	Years
Group	8	-	60 years& above	
Group	9	-	not stated	

Based on the survey results, a total of 4.71 million holders were engaged in the over all Belg season agricultural activities in 2008/09 (2001 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 1,339,545 (28.23%) of holders was estimated to fall in the age group 30-39. The second 1,001,864 (21.11%) and third 748,259 (15.77%) highest number of holders fall in the age groups 40-49 and 60 and above, respectively. Moreover, it was estimated that a total of 1,255,914 Belg crop-producing holders (about 26.47% of the total) reported the use of improved farm management practices (See summary Table E)

Summary Table E: Total number of Belg crop producing holders reporting use of Farm Management Practices by age for private holdings in Ethiopia, 2008/09 (2001 E.C.)

<i>Age Group Category</i>	<i>Total Number of Holders</i>		<i>Number of holders Reporting use of Farm Management Practices</i>	
	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>
<i>Under 18</i>	24719	0.52	5247	0.42
<i>18-20</i>	106537	2.25	18868	1.50
<i>21-24</i>	239514	5.05	56464	4.50
<i>25-29</i>	622536	13.12	148579	11.83
<i>30-39</i>	1339545	28.23	372451	29.66
<i>40-49</i>	1001864	21.11	274582	21.86
<i>50-59</i>	658872	13.89	178642	14.22
<i>60 & ABOVE</i>	748258	15.77	200936	16.00
<i>NOT STATED</i>	3220	0.07	145	0.01
<i>TOTAL</i>	<i>4745063</i>	<i>100.00</i>	<i>1255914</i>	<i>100.00</i>

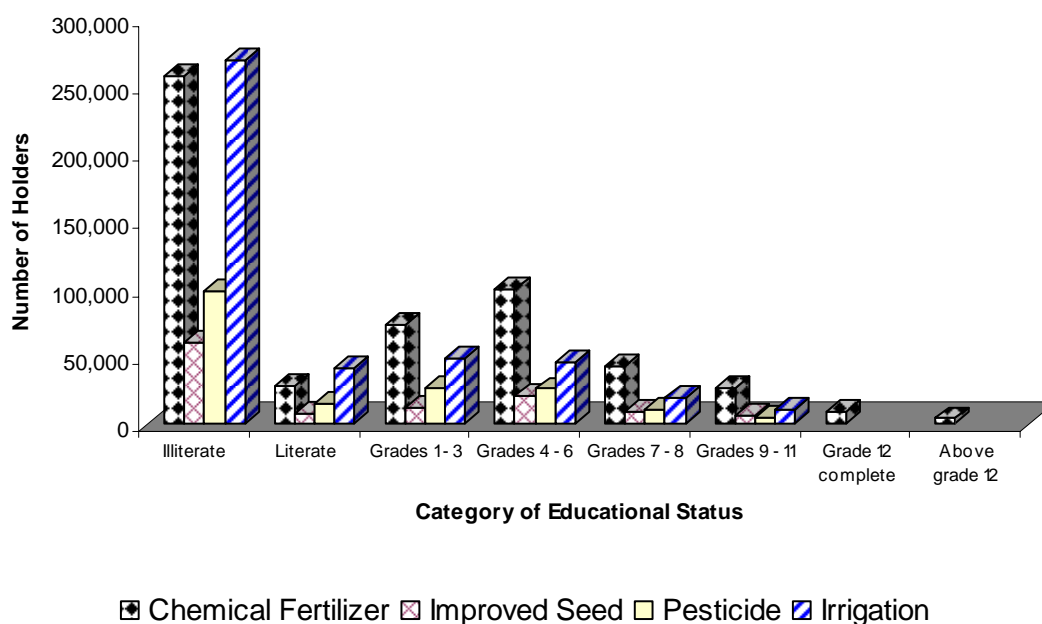
Fig.3: Number of Holders Applying Agricultural Inputs by Age Group, 2008/09 Belg Season



3.6 Total 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 new and improved farming technologies, therefore, in this report an attempt is made to categorize holders reporting use of modern farming practice during the 2008/09 Belg Season Crop Production activities depending up on their educational status. According to the results of the 2008/09 Belg Season Crop Production Sample Survey, out of the total number i.e. 4.75 million holders, the highest number of holders (about 533.17 thousand holders) used chemical fertilizers, followed by use of irrigation scheme (431.67 thousand holders). It was also estimated that number of illiterate holders were recorded more in all application of agricultural inputs as compared to number of litrate holders.

Fig. 4: Number of Holders Applying Inputs by Educational Status, 2008/09 Belg Season

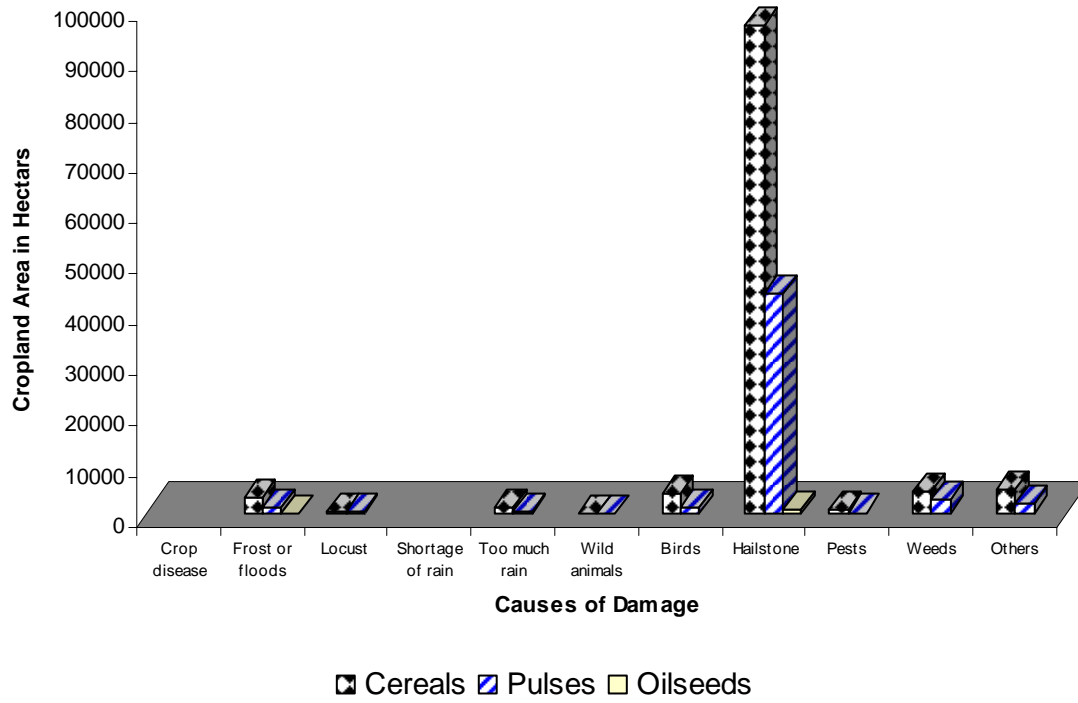


3.7 Number of Holders Reporting Damaged Cropland Area by Causes of Damage

The total number of belg crop producing private peasant holders who reported their crops were damaged by different causes of damage during the year 2008/09 Belg Season Crop Production harvest were estimated to be about 2.14 million and the damaged cropland area was estimated to be 192.16 thousand hectares. As indicated in Table 4, the highest cropland area was reported for cereals, that is 115.58 thousand hectares, followed by pulses, which is 52.11 thousand hectares.

With regard to the causes of crop damage, it is reported that 158.55 thousand hectares was damaged due to hailstone, the second highest crop damage which is estimated at 8.60 thousand hectares was damaged by Weeds. For details, see Table 4.

Fig. 5: Total Damaged Cropland Area by Cuases of Damage and Crop Category



National and Regional Statistical Tables

On Extent of Crop Damage and Causes of Damage

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

Ethiopia								
Crop type	All crop	All Fertilizer		Natural		DAP		
	land Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	1,209,571	375,146	126,949	2,129,910	236,918	439,853	122,994	106,328
Cereals	996,245	313,120	100,720	2,013,005	192,441	376,494	108,508	86,647
Teff	91,430	13,596	2,369	50,812	8,667	19,235	3,914	1,764
Barley	205,938	93,495	40,229	286,995	35,353	142,357	57,153	39,572
Wheat	81,422	36,134	22,414	101,708	11,616	51,647	23,334	20,631
Maize	537,693	148,410	33,610	1,732,480	119,383	212,390	20,279	23,034
Sorghum	64,230	15,584	*	117,016	15,186	2,634	163	152
Finger millet	1,042	497	*	3,767	*	*	*	*
Oats/ 'Aja'	12,951	5,403	1,362	20,415	1,847	14,134	3,556	1,362
Rice	*	-	-	-	-	-	-	-
Pulse	205,597	60,461	26,021	1,038,461	42,984	204,987	14,486	19,681
Horse/Faba beans	5,803	444	*	18,344	399	*	*	*
Field peas	21,833	5,181	188	33,776	4,435	3,602	740	104
Haricot beans	154,694	51,799	25,570	976,457	35,643	200,601	13,683	19,549
Chick peas	8,918	1,484	*	9,411	1,019	-	-	-
Lentiles	8,371	1,145	*	11,620	1,121	*	*	*
Vetch/Grass peas	*	*	*	3,325	*	-	-	-
Soya beans	43	*	*	*	*	-	-	-
Fenugreek	*	44	-	4,940	44	-	-	-
Gibto	*	*	-	*	*	-	-	-
Oile seeds	7,729	*	*	25,725	*	-	-	-
Nueg	*	*	-	*	*	-	-	-
Linseed	775	*	-	1,838	*	-	-	-
Ground nuts	3,021	*	*	*	*	-	-	-
Safflower	104	*	-	*	*	-	-	-
Sesame	2,592	*	-	*	*	-	-	-
Rapeseed	441	82	*	6,972	80	-	-	-

Table 1(Cont'd)

Ethiopia									
Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	32,359	4,683	4,069	72,878	10,551	16,553	4,727,204	1,192,716	933,781
Cereals	30,672	4,056	2,915	64,224	8,115	11,157	4,416,963	980,037	812,137
Teff	2,095	*	*	2,597	426	*	342,814	90,913	39,273
Barley	2,546	*	*	5,148	434	313	972,313	205,585	373,710
Wheat	*	*	*	3,536	1,009	1,598	335,407	80,271	150,714
Maize	24,125	2,529	1,743	55,982	6,218	8,833	3,555,986	523,732	214,223
Sorghum	*	*	*	*	*	*	319,288	64,017	12,311
Finger millet	-	-	-	-	-	-	12,314	1,042	443
Oats/ 'Aja'	-	-	-	-	-	-	81,265	12,937	19,697
Rice	-	-	-	-	-	-	*	*	*
Pulse	10,540	557	949	35,745	2,434	5,391	2,448,976	204,972	119,625
Horse/Faba beans	-	-	-	-	-	-	88,980	5,803	5,090
Field peas	*	*	*	-	-	-	139,374	21,832	22,256
Haricot beans	9,952	540	859	33,816	1,933	5,163	2,218,167	154,098	70,988
Chick peas	-	-	-	*	*	*	57,306	8,889	5,651
Lentiles	-	*	*	-	-	-	49,431	8,371	*
Vetch/Grass peas	-	-	-	*	*	*	22,239	*	3,374
Soya beans	*	*	*	-	-	-	1,382	43	17
Fenugreek	-	-	-	-	-	-	17,006	*	446
Gibto	-	-	-	-	-	-	*	*	*
Oile seeds	*	*	Oile seeds	*	*	*	84,244	7,708	2,018
Nueg	-	-	-	-	-	-	*	*	*
Linseed	-	-	-	-	-	-	10,566	775	*
Ground nuts	*	*	*	-	-	-	34,550	3,021	575
Safflower	-	-	-	-	-	-	3,705	104	23
Sesame	-	-	-	-	-	-	12,757	2,571	390
Rapeseed	-	-	-	*	*	*	19,825	441	90

Table 1(Cont'd)

Ethiopia										
Crop type	Improved seed			Pesticide		Irrigation		Extension package		
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare	
All		112,248	16,854	7,420	178,819	81,219	431,674	71,369	222,314	63,308
Cereals		101,920	16,208	7,141	161,841	76,264	416,875	65,884	217,413	60,191
Teff		1,238	*	97	58,897	18,270	11,818	2,645	17,859	5,823
Barley		4,569	353	*	77,852	25,598	28,516	3,206	51,900	17,097
Wheat		4,540	1,151	2,073	48,009	24,895	11,639	1,251	30,059	*
Maize		89,981	13,960	4,496	16,304	2,810	380,467	56,994	144,090	19,026
Sorghum		*	*	*	*	*	10,270	1,781	5,556	882
Finger millet		-	-	-	*	*	-	-	-	-
Oats/ 'Aja'		*	*	*	17,889	3,974	*	*	-	-
Rice		-	-	-	*	*	*	*	-	-
Pulse		14,762	626	277	20,470	*	87,396	5,419	58,522	3,104
Horse/Faba beans		-	-	-	-	-	*	*	-	-
Field peas		*	*	*	*	*	*	*	*	*
Haricot beans		13,986	596	273	7,311	572	66,489	2,966	55,228	2,686
Chick peas		*	*	*	*	*	11,607	1,289	*	*
Lentiles		-	-	-	*	*	2,339	*	*	*
Vetch/Grass peas		-	-	-	*	*	*	*	-	-
Soya beans		-	-	-	-	-	*	21	-	-
Fenugreek		-	-	-	-	-	3,491	*	-	-
Gibto		-	-	-	-	-	-	-	-	-
Oile seeds		*	*	*	*	*	2,370	66	*	*
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 land Area	All Fertilizer		Natural		DAP			
		Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal	
All	14,309	6,173	1,461	30,957	4,081	*	*	*	
Cereals	13,127	5,369	1,230	29,465	3,782	*	*	*	
Teff	8,560	*	91	*	*	*	*	*	
Barley	1,018	692	*	5,662	487	*	*	*	
Wheat	*	*	*	*	*	-	-	-	
Maize	3,166	2,495	967	18,191	1,315	*	*	*	
Sorghum	*	*	-	*	*	-	-	-	
Finger millet	-	-	-	-	-	-	-	-	
Oats/ 'Aja'	-	-	-	-	-	-	-	-	
Rice	-	-	-	-	-	-	-	-	
Pulse	*	*	*	*	*	-	-	-	
Horse/Faba beans	-	-	-	-	-	-	-	-	
Field peas	-	-	-	-	-	-	-	-	
Haricot beans	-	-	-	-	-	-	-	-	
Chick peas	*	*	*	*	*	-	-	-	
Lentiles	*	-	-	-	-	-	-	-	
Vetch/Grass peas	*	*	*	*	*	-	-	-	
Soya beans	*	*	*	-	-	-	-	-	
Fenugreek	*	*	-	*	*	-	-	-	
Gibto	-	-	-	-	-	-	-	-	
Oile seeds	*	*	-	*	*	-	-	-	
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	Quintal
All		*	*	14,036	1,706	1,212	70,649	14,177	7,698
Cereals		*	*	12,497	1,205	983	66,330	12,996	6,761
Teff		*	*	955	151	66	18,719	8,457	3,037
Barley	-	-	-	610	59	55	9,940	1,018	1,512
Wheat	-	-	-	*	*	*	*	*	*
Maize	*	*	*	11,531	979	854	39,789	3,137	1,782
Sorghum	-	-	-	-	-	-	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	*	*	*	*	*	*	8,881	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	*	*	*	7,193	*	*
Lentiles	-	-	-	-	-	-	*	*	*
Vetch/Grass peas	-	-	-	*	*	*	*	*	*
Soya beans	*	*	*	-	-	-	*	*	-
Fenugreek	-	-	-	-	-	-	*	*	*
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	*	*	*
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
All		*	*	*	*	50,374	5,530	27,808	4,819
Cereals		*	*	*	*	46,055	4,384	26,448	4,481
Teff		*	*	*	*	3,185	*	*	*
Barley	-	-	-	-	-	*	673	*	*
Wheat	-	-	-	-	-	*	*	*	*
Maize	*	*	*	*	*	37,274	2,892	18,427	1,817
Sorghum	-	-	-	-	-	*	*	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	-	-	-	-	-	8,685	*	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	-	-	-
Chick peas	-	-	-	-	-	6,998	*	*	*
Lentiles	-	-	-	-	-	*	*	-	-
Vetch/Grass peas	-	-	-	-	-	*	*	-	-
Soya beans	-	-	-	-	-	*	*	-	-
Fenugreek	-	-	-	-	-	*	*	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	*	*	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	*	*	-	-

Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-

Table 1.2 (Cont'd)

Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	922	238	90	74	5	5,413	3,793	582	142
Cereals	894	219	89	74	5	5,376	3,760	582	142
Teff	-	-	-	-	-	*	*	-	-
Barley	-	-	-	-	-	*	*	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	894	219	89	74	5	5,329	3,668	582	142
Sorghum	-	-	-	-	-	*	*	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	-	-	-	-	-	65	14	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	*	*	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	37	13	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	*	*	*	-	-	*	*	-	-
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
All	137,090	38,352	2,053	229,082	35,879	15,806	1,342	1,270
Cereals	102,505	34,070	2,053	221,198	31,597	15,806	1,342	1,270
Teff	10,409	1,823	*	21,065	1,775	-	-	-
Barley	61,289	16,949	*	119,085	16,436	*	*	*
Wheat	10,883	4,330	*	48,757	4,083	-	-	-
Maize	17,544	9,555	1,279	78,696	7,889	13,297	829	*
Sorghum	*	*	-	*	*	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	2,167	1,404	-	14,165	1,404	-	-	-
Rice	*	-	-	-	-	-	-	-
Pulse	34,496	4,268	-	33,753	4,268	-	-	-
Horse/Faba beans	*	*	-	*	*	-	-	-
Field peas	3,034	*	-	*	*	-	-	-
Haricot beans	*	*	-	6,702	*	-	-	-
Chick peas	6,709	700	-	5,843	700	-	-	-
Lentiles	*	1,016	-	9,884	1,016	-	-	-
Vetch/Grass peas	*	*	-	*	*	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	221	*	-	*	*	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	90	*	-	*	*	-	-	-

Table 1.3 (Cont'd)Table 1.3 (Cont'd)[illegible]

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	
All	659,024	220,494	80,008	799,952	120,745	194,496	94,735	72,270	
Cereals	566,906	198,020	73,910	749,129	101,440	190,139	92,191	68,259	
Teff	55,677	8,199	1,708	18,974	4,323	13,543	3,237	1,289	
Barley	124,798	71,960	39,111	114,370	15,392	128,945	55,970	38,744	
Wheat	68,767	31,379	22,019	46,873	7,142	51,520	23,318	20,618	
Maize	269,231	73,285	9,191	658,071	65,342	39,780	5,902	6,070	
Sorghum	37,312	8,887	*	58,851	8,598	1,125	*	*	
Finger millet	*	*	*	*	*	*	*	*	
Oats/ 'Aja'	10,740	3,996	1,362	5,913	*	14,134	3,556	1,362	
Rice	*	-	-	-	-	-	-	-	
Pulse	88,143	21,132	5,894	429,401	18,032	30,284	2,544	4,011	
Horse/Faba beans	4,577	364	*	13,606	319	*	*	*	
Field peas	17,904	4,048	*	19,518	3,316	2,847	725	95	
Haricot beans	62,365	16,551	5,683	403,644	14,251	26,465	1,756	3,888	
Chick peas	891	*	-	*	*	-	-	-	
Lentiles	998	*	*	1,621	*	*	*	*	
Vetch/Grass peas	-	-	-	-	-	-	-	-	
Soya beans	*	*	-	*	*	-	-	-	
Fenugreek	*	*	-	*	*	-	-	-	
Gibto	*	*	-	*	*	-	-	-	
Oile seeds	3,974	*	*	*	*	-	-	-	
Nueg	*	*	-	*	*	-	-	-	
Linseed	647	*	-	*	*	-	-	-	
Ground nuts	*	*	*	*	*	-	-	-	
Safflower	-	-	-	-	-	-	-	-	
Sesame	*	*	-	*	*	-	-	-	
Rapeseed	*	*	-	*	*	-	-	-	

Table 1.4 (Cont'd)

Oromia Region									
Crop type	UREA			UREA + DAP			Indigenous seed		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	17,248	3,124	2,850	12,996	1,890	4,888	2,167,929	655,463	611,364
Cereals	16,416	2,663	1,934	11,444	1,725	3,717	2,039,245	563,466	558,013
Teff	*	*	*	*	*	*	179,728	55,354	25,038
Barley	1,799	*	*	*	*	*	520,522	124,601	258,818
Wheat	*	*	*	1,540	771	1,348	220,759	67,875	135,766
Maize	12,246	1,320	982	*	721	*	1,615,781	267,396	115,405
Sorghum	*	*	*	-	-	-	153,293	37,116	5,709
Finger millet	-	-	-	-	-	-	2,756	*	*
Oats/ 'Aja'	-	-	-	-	-	-	58,979	10,740	17,018
Rice	-	-	-	-	-	-	*	*	*
Pulse	6,683	391	712	*	*	*	1,042,114	88,023	52,735
Horse/Faba beans	-	-	-	-	-	-	59,454	4,577	4,379
Field peas	*	*	*	-	-	-	83,537	17,904	18,474
Haricot beans	6,327	378	624	*	*	*	944,921	62,254	28,940
Chick peas	-	-	-	-	-	-	6,336	882	221

Lentiles	*	*	*	-	-	-	10,320	998	471
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	*	*	*
Fenugreek	-	-	-	-	-	-	6,835	*	*
Gibto	-	-	-	-	-	-	*	*	*
Oile seeds	*	*	*	-	-	-	39,767	3,974	616
Nueg	-	-	-	-	-	-	*	*	*
Linseed	-	-	-	-	-	-	5,627	647	284
Ground nuts	*	*	*	-	-	-	*	*	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	6,966	*	*
Rapeseed	-	-	-	-	-	-	*	*	68

Table 1.4 (Cont'd)

Oromia Region									
Crop type	Improved seed			Pesticide		Irrigation		Extension package	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	23,756	3,561	2,962	135,919	68,223	239,883	32,355	116,761	45,849
Cereals	20,891	3,440	2,924	131,244	67,300	236,135	31,069	114,894	44,100
Teff	*	*	*	45,631	13,488	*	*	*	*
Barley	1,706	*	*	66,719	23,062	8,722	*	42,457	15,783
Wheat	2,469	892	1,847	47,339	24,772	*	*	26,642	*
Maize	14,518	1,834	696	8,562	1,614	230,811	29,335	57,218	7,121
Sorghum	*	*	-	*	*	*	*	4,309	*
Finger millet	-	-	-	*	*	-	-	-	-
Oats/ 'Aja'	-	-	-	17,889	3,974	*	*	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	3,406	*	*	7,086	876	47,371	1,278	34,648	1,736
Horse/Faba beans	-	-	-	-	-	*	*	-	-
Field peas	-	-	-	*	*	-	-	*	*
Haricot beans	3,147	*	*	4,529	404	45,981	1,088	33,119	1,658
Chick peas	*	*	*	*	*	-	-	-	-
Lentiles	-	-	-	*	*	*	*	*	*
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	*	*	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	*	*	*	*	*	*
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
All	2,559	432	2	1,812	421	50	11	2
Cereals	2,530	428	2	1,717	417	50	11	2
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	2,530	428	2	1,717	417	50	11	2
Sorghum	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulse	24	4	-	285	4	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	24	4	-	285	4	-	-	-

Table 1.5 (Cont'd)Table 1.5 (Cont'd)

Somale Region											
Crop type	Improved seed				Pesticide			Irrigation		Extension package	
	Holder	Hectare	Quintal		Holder	Hectare		Holder	Hectare	Holder	Hectare
All		149	34	3	47	13		2,161	468	47	13
Cereals		149	34	3	47	13		2,161	463	47	13
Teff		-	-	-	-	-		-	-	-	-
Barley		-	-	-	-	-		-	-	-	-
Wheat		-	-	-	-	-		-	-	-	-
Maize		149	34	3	47	13		2,161	463	47	13
Sorghum		-	-	-	-	-		-	-	-	-
Finger millet		-	-	-	-	-		-	-	-	-
Oats/ 'Aja'		-	-	-	-	-		-	-	-	-
Rice		-	-	-	-	-		-	-	-	-
Pulse		-	-	-	-	-		-	-	-	-
Horse/Faba beans		-	-	-	-	-		-	-	-	-
Field peas		-	-	-	-	-		-	-	-	-
Haricot beans		-	-	-	-	-		-	-	-	-

Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	117	5	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	117	5	-	-
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
All	3,287	1,293	26	13,613	1,268	*	*	*
Cereals	1,548	758	26	12,936	732	*	*	*
Teff	-	-	-	-	-	-	-	-
Barley	99	*	-	56	*	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	1,331	701	26	12,836	675	*	*	*
Sorghum	117	*	-	*	*	-	-	-
Finger millet	*	*	-	*	*	-	-	-
Oats/ 'Aja'	*	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulse	1,739	536	-	11,629	536	-	-	-
Horse/Faba beans	17	*	-	*	*	-	-	-
Field peas	*	-	-	-	-	-	-	-
Haricot beans	1,714	536	-	11,616	536	-	-	-
Chick peas	*	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-
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	Quintal
All	*	*	2	202	*	23	22,142	3,261	903
Cereals	*	*	2	202	*	23	19,108	1,530	188
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	755	99	111
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	2	202	*	23	18,914	1,313	76

Sorghum	-	-	-	-	-	-	1,134	117	*
Finger millet	-	-	-	-	-	-	*	*	-
Oats/ 'Aja'	-	-	-	-	-	-	*	*	*
Rice	-	-	-	-	-	-	-	-	-
Pulse	-	-	-	-	-	-	19,813	1,732	715
Horse/Faba beans	-	-	-	-	-	-	378	17	16
Field peas	-	-	-	-	-	-	*	*	*
Haricot beans	-	-	-	-	-	-	19,726	1,707	691
Chick peas	-	-	-	-	-	-	*	*	*
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-	-
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
All		191	26	*	*	*	5,221	239	507
Cereals		*	*	*	*	*	5,135	195	507
Teff		-	-	-	-	-	-	-	-
Barley		*	*	-	*	*	*	*	*
Wheat		-	-	-	-	-	-	-	-
Maize		*	*	*	*	*	5,112	195	497
Sorghum		-	-	-	-	-	-	-	-
Finger millet		-	-	-	-	-	-	-	-
Oats/ 'Aja'		-	-	-	-	-	-	-	-
Rice		-	-	-	-	-	-	-	-
Pulse		*	*	*	*	*	2,042	44	*
Horse/Faba beans		-	-	-	-	-	-	-	-
Field peas		-	-	-	-	-	-	-	-
Haricot beans		*	*	*	*	*	2,042	44	*
Chick peas		-	-	-	-	-	-	-	-
Lentiles		-	-	-	-	-	-	-	-
Vetch/Grass peas		-	-	-	-	-	-	-	-
Soya beans		-	-	-	-	-	-	-	-
Fenugreek		-	-	-	-	-	-	-	-
Gibto		-	-	-	-	-	-	-	-
Oile seeds		-	-	-	-	-	-	-	-
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
All	384,872	107,408	42,756	1,048,306	73,776	227,422	26,639	32,411
Cereals	301,621	73,653	23,154	992,482	53,833	168,421	14,712	16,841
Teff	16,756	1,554	562	5,463	734	5,474	656	453
Barley	18,717	3,878	564	47,812	3,029	9,403	524	329
Wheat	1,556	*	*	*	*	*	*	*

Maize	236,358	61,375	21,997	957,912	43,267	158,272	13,489	16,027
Sorghum	25,997	6,354	*	54,108	6,327	1,150	*	*
Finger millet	700	*	-	*	*	-	-	-
Oats/ 'Aja'	43	*	-	*	*	-	-	-
Rice	*	-	-	-	-	-	-	-
Pulse	79,723	33,561	19,598	557,228	19,751	174,246	11,927	15,570
Horse/Faba beans	1,187	76	-	4,526	76	-	-	-
Field peas	894	*	*	*	*	*	*	*
Haricot beans	77,316	33,409	19,589	551,428	19,614	173,679	11,912	15,560
Chick peas	222	*	-	*	*	-	-	-
Lentiles	48	*	-	*	*	-	-	-
Vetch/Grass peas	*	*	-	*	*	-	-	-
Soya beans	*	*	-	*	*	-	-	-
Fenugreek	37	13	-	3,004	13	-	-	-
Gibto	*	-	-	-	-	-	-	-
Oile seeds	3,528	194	*	9,851	192	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	55	*	-	*	*	-	-	-
Ground nuts	1,816	*	-	3,443	*	-	-	-
Safflower	93	*	-	*	*	-	-	-
Sesame	*	*	-	*	*	-	-	-
Rapeseed	199	58	*	5,414	56	-	-	-

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	Quintal
All	7,245	891	721	41,580	6,103	9,625	1,914,624	373,287	161,396
Cereals	6,620	747	555	36,016	4,361	5,758	1,789,453	290,515	121,742
Teff	*	*	*	*	*	*	68,634	16,747	7,877
Barley	*	37	18	3,815	287	216	172,695	18,628	17,322
Wheat	-	-	-	*	*	-	17,346	1,553	1,137
Maize	5,848	677	517	32,255	3,941	5,453	1,711,010	225,371	87,134
Sorghum	-	-	-	-	-	-	155,764	25,980	6,320
Finger millet	-	-	-	-	-	-	9,522	700	197
Oats/ 'Aja'	-	-	-	-	-	-	1,792	43	*
Rice	-	-	-	-	-	-	*	*	*
Pulse	3,199	143	165	28,724	1,739	3,863	1,222,178	79,245	38,300
Horse/Faba beans	-	-	-	-	-	-	28,644	1,187	649
Field peas	-	-	-	-	-	-	23,780	893	387
Haricot beans	3,199	143	165	28,724	1,739	3,863	1,206,864	76,838	37,153
Chick peas	-	-	-	-	-	-	2,107	222	79
Lentiles	-	-	-	-	-	-	2,412	48	18
Vetch/Grass peas	-	-	-	-	-	-	*	*	*
Soya beans	-	-	-	-	-	-	437	*	*
Fenugreek	-	-	-	-	-	-	5,302	37	8
Gibto	-	-	-	-	-	-	*	*	*
Oile seeds	-	-	-	*	*	*	40,081	3,527	1,354
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	2,299	55	*
Ground nuts	-	-	-	-	-	-	20,337	1,816	571
Safflower	-	-	-	-	-	-	3,313	93	19
Sesame	-	-	-	-	-	-	5,554	*	*
Rapeseed	-	-	-	*	*	*	9,592	199	*

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
All	76,812	11,585	3,653	24,715	7,038	39,107	16,564	52,198	9,889
Cereals	69,862	11,106	3,418	22,765	6,898	38,144	15,047	50,524	8,877
Teff	*	*	*	12,085	4,566	4,449	995	*	*

Barley	1,412	*	*	7,127	1,238	782	*	1,258	*
Wheat	*	*	*	*	*	*	*	345	43
Maize	68,295	10,987	3,357	5,120	645	36,227	12,599	49,374	8,541
Sorghum	*	*	*	*	*	6,058	*	1,096	*
Finger millet	-	-	-	*	*	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	*	*	-	-	-	-
Pulse	10,760	478	234	2,567	*	13,942	*	21,798	1,012
Horse/Faba beans	-	-	-	-	-	*	*	-	-
Field peas	*	*	*	-	-	-	-	*	*
Haricot beans	10,745	478	233	2,567	*	13,942	*	21,785	1,010
Chick peas	-	-	-	-	-	*	*	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	*	*	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	*	*	*	-	-	*	*	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
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	
All	3,200	*	-	*	*	-	-	-	-
Cereals	3,027	*	-	*	*	-	-	-	-
Teff	*	-	-	-	-	-	-	-	-
Barley	10	*	-	*	*	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	3,012	*	-	*	*	-	-	-	-
Sorghum	*	-	-	-	-	-	-	-	-
Finger millet	*	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	*	*	-	*	*	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
Haricot beans	*	*	-	*	*	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	*	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	*	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	*	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-

Table 1.8 (Cont'd)

Gambella Region			
UREA		UREA + DAP	Indigenous seed

Crop type	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	-	-	-	-	-	-	13,579	3,187	1,440
Cereals	-	-	-	-	-	-	13,508	3,014	1,356
Teff	-	-	-	-	-	-	*	*	*
Barley	-	-	-	-	-	-	80	10	*
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	13,458	3,000	1,349
Sorghum	-	-	-	-	-	-	*	*	*
Finger millet	-	-	-	-	-	-	*	*	*
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	-	-	-	-	-	-	*	*	*
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	*	*	*
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	*	*	*
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	*	*	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	*	*	*
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
All	88	*	*	*	*	*	*	*	*
Cereals	*	*	*	*	*	*	*	*	*
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	*	*	*	*	*	*	*	*	*
Sorghum	-	-	-	-	-	-	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	*	*	*	*	*	-	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
Haricot beans	*	*	*	*	*	-	-	-	-
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-

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

Harari Region			
All crop	All Fertilizer	Natural	DAP

Crop type	land Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	786	570	642	2,934	359	493	63	221
Cereals	571	401	343	2,822	251	493	48	121
Teff	*	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	289	193	145	2,141	126	277	10	32
Sorghum	281	208	198	1,333	126	359	38	89
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulse	205	160	299	2,646	98	456	15	100
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	204	160	299	2,646	98	456	15	100
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	*	*	-	*	*	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	10	10	-	*	9	-	-	-
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	Quintal
All	505	64	148	483	86	273	5,715	777	189
Cereals	505	44	78	483	58	144	5,629	562	*
Teff	-	-	-	-	-	-	*	*	-
Barley	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-
Maize	293	27	40	343	31	73	4,200	280	*
Sorghum	212	18	38	*	*	*	2,648	281	-
Finger millet	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulse	426	19	70	449	28	129	4,606	205	162
Horse/Faba beans	-	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-	-
Haricot beans	426	19	70	449	28	129	4,606	204	162
Chick peas	-	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	*	*	*
Gibto	-	-	-	-	-	-	-	-	-
Oile seeds	*	*	-	-	-	-	265	10	*
Nueg	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Ground nuts	*	*	-	-	-	-	*	*	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	*	*	*

Table 1.9 (Cont'd)

Harari Region

Haran Region										
Crop type	Improved seed			Pesticide		Irrigation		Extension package		
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare	
All		*	*	*	-	-	879	91	284	47
Cereals		*	*	*	-	-	879	82	284	34
Teff		-	-	-	-	-	-	-	-	-
Barley		-	-	-	-	-	-	-	-	-
Wheat		-	-	-	-	-	-	-	-	-
Maize		*	*	*	-	-	*	*	*	*
Sorghum		-	-	-	-	-	*	*	*	*
Finger millet		-	-	-	-	-	-	-	-	-
Oats/ 'Aja'		-	-	-	-	-	-	-	-	-
Rice		-	-	-	-	-	-	-	-	-
Pulse		-	-	-	-	-	*	*	*	*
Horse/Faba beans		-	-	-	-	-	-	-	-	-
Field peas		-	-	-	-	-	-	-	-	-
Haricot beans		-	-	-	-	-	*	*	*	*
Chick peas		-	-	-	-	-	-	-	-	-
Lentiles		-	-	-	-	-	-	-	-	-
Vetch/Grass peas		-	-	-	-	-	-	-	-	-
Soya beans		-	-	-	-	-	-	-	-	-
Fenugreek		-	-	-	-	-	-	-	-	-
Gibto		-	-	-	-	-	-	-	-	-
Oile seeds		-	-	-	-	-	-	-	-	-
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
All	295	194	*	2,516	192	-	-	-
Cereals	294	192	*	2,516	191	-	-	-
Teff	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	207	157	*	2,186	156	-	-	-
Sorghum	86	35	-	674	35	-	-	-
Finger millet	-	-	-	-	-	-	-	-
Oats/ 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulse	2	1	-	*	1	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-
Field peas	-	-	-	-	-	-	-	-
Haricot beans	2	1	-	*	1	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentiles	-	-	-	-	-	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oile seeds	-	-	-	-	-	-	-	-
Nueg	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-

Table 2. Holders Applying Inputs by Educational Status

Ethiopia

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	2,887,240	257,427	59,817	97,543	269,012
Literate	276,768	26,840	6,372	14,296	40,722
Grades 1 - 3	590,605	71,844	11,572	26,362	47,344
Grades 4 - 6	623,314	99,157	20,095	24,918	44,719
Grades 7 - 8	226,642	41,646	7,875	9,887	18,157
Grades 9 - 11	103,647	25,024	4,944	4,274	10,193
Grade 12 complete	28,317	8,226	*	*	*
Above grade 12	8,529	3,010	*	*	*
Total	4,745,063	533,173	112,248	178,819	431,674

Table 2.1: Holders Applying Inputs by Educational Status

Tigray Region

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Seed	Pesticide	Irrigation
Illiterate	51,969	11,907	*	*	35,482
Literate	8,602	3,247	*	*	6,630
Grades 1 - 3	5,064	*	-	-	3,385
Grades 4 - 6	3,753	*	*	-	3,144
Grades 7 - 8	*	*	-	-	*
Grades 9 - 11	*	*	-	-	*
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	71,318	17,853	*	*	50,374

Table 2.2: Holders Applying Inputs by Educational Status

Afar Region					
Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation	
Illiterate	5,233	*	710	37	4,875
Literate	231	-	147	37	231
Grades 1 - 3	177	-	65	-	177
Grades 4 - 6	*	-	-	-	*
Grades 7 - 8	*	-	-	-	*
Grades 9 - 11	-	-	-	-	-
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	5,771	*	922	74	5,413

Table 2.3: Holders Applying Inputs by Educational Status

Amhara Region					
Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation	
Illiterate	344,287	16,167	4,417	*	56,065
Literate	86,142	4,430	*	*	14,979
Grades 1 - 3	27,953	903	*	*	6,250
Grades 4 - 6	42,272	*	*	-	5,558
Grades 7 - 8	10,481	*	-	*	2,312
Grades 9 - 11	5,498	*	*	-	*
Grade 12 complete	*	-	-	-	-
Above grade 12	-	-	-	-	-
Total	516,995	23,177	9,150	*	86,356

Table 2.4: Holders Applying Inputs by Educational Status

Oromia Region					
Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation	
Illiterate	1,327,731	109,896	14,994	70,299	140,714
Literate	132,802	13,667	1,281	9,033	16,821
Grades 1 - 3	295,267	36,343	2,783	21,744	32,420
Grades 4 - 6	263,040	36,728	2,715	22,285	28,921
Grades 7 - 8	102,678	14,624	*	7,673	12,534
Grades 9 - 11	39,818	8,540	*	3,779	7,135
Grade 12 complete	8,311	*	-	*	*
Above grade 12	3,288	*	-	-	*
Total	2,172,933	222,055	23,756	135,919	239,883

Table 2.5: Holders Applying Inputs by Educational Status

Somale Region					
Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation	
Illiterate	4,761	-	50	-	1,577
Literate	1,805	-	-	47	294
Grades 1 - 3	404	-	-	-	142
Grades 4 - 6	384	50	100	-	147
Grades 7 - 8	47	-	-	-	-
Grades 9 - 11	-	-	-	-	-
Grade 12 complete	-	-	-	-	-
Above grade 12	47	-	-	-	-

Total	7,449	50	149	47	2,161
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Table 2.6: Holders Applying Inputs by Educational Status
Benshangul-Gumuz Region

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Σ Pesticide	Irrigation
Illiterate	15,809	174	*	*
Literate	1,623	*	*	-
Grades 1 - 3	2,304	*	*	-
Grades 4 - 6	1,396	*	*	*
Grades 7 - 8	672	-	-	-
Grades 9 - 11	*	-	*	-
Grade 12 complete	-	-	-	-
Above grade 12	*	-	-	-
Total	22,248	345	191	*

Table 2.7: Holders Applying Inputs by Educational Status
(S.N.N.P.R) Region

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Σ Pesticide	Irrigation
Illiterate	1,122,298	118,480	38,833	14,259
Literate	44,987	5,295	1,950	1,080
Grades 1 - 3	257,638	33,378	8,517	3,834
Grades 4 - 6	308,877	59,823	16,043	2,601
Grades 7 - 8	110,429	26,313	6,433	2,015
Grades 9 - 11	55,921	15,822	3,464	*
Grade 12 complete	19,344	7,252	*	*
Above grade 12	5,062	1,728	*	*
Total	1,924,556	268,091	76,812	24,715

Table 2.8: Holders Applying Inputs by Educational Status
Gambella Region

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Σ Pesticide	Irrigation
Illiterate	8,274	-	*	*
Literate	91	-	-	-
Grades 1 - 3	972	-	-	-
Grades 4 - 6	2,107	-	-	*
Grades 7 - 8	987	-	*	-
Grades 9 - 11	856	-	*	-
Grade 12 complete	300	-	-	-
Above grade 12	*	-	-	-
Total	13,646	-	88	*

Table 2.9: Holders Applying Inputs by Educational Status
Harari Region

Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved Σ Pesticide	Irrigation
Illiterate	3,359	701	*	-
Literate	319	*	-	-
Grades 1 - 3	654	177	-	-
Grades 4 - 6	1,122	363	-	-
Grades 7 - 8	296	*	*	-
Grades 9 - 11	*	*	-	-
Grade 12 complete	-	-	-	-

Above grade 12	-	-	-	-	-
Total	5,811	1,481	*	-	879

Table 2.10: Holders Applying Inputs by Educational Status

Dire Dawa Region					
Educational Status of Holders	All Crop Holders	Chemical Fertilizer	Improved \leq Pesticide	Irrigation	
Illiterate	3,521	*	192	*	1,849
Literate	167	-	-	-	*
Grades 1 - 3	173	-	-	-	*
Grades 4 - 6	289	*	-	-	162
Grades 7 - 8	132	-	-	-	*
Grades 9 - 11	*	-	*	-	*
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	4,336	*	207	*	2,271

Table 3: Holders Applying Inputs by Age group

Ethiopia					
Age group	All Crop Holders	Chemical Fertilizer	Improved \leq Pesticide	Irrigation	
Below 18	24,719	3,384	997	-	866
18 - 20	106,537	5,886	839	5,502	6,641
21 - 24	239,514	21,851	5,158	11,348	18,107
25 - 29	622,536	67,621	12,656	23,112	45,190
30 - 39	1,339,545	166,317	33,792	54,395	117,947
40 - 49	1,001,864	112,431	23,276	38,291	100,584
50 - 59	658,872	72,765	15,316	22,755	67,806
60 and above	748,258	82,917	20,178	23,416	74,425
Not stated	3,220	-	37	-	*
Total	4,745,063	533,173	112,248	178,819	431,674

Table 3.1: Holders Applying Inputs by Age group

Tigray Region					
Age group	All Crop Holders	Chemical Fertilizer	Improved \leq Pesticide	Irrigation	
Below 18	-	-	-	-	-
18 - 20	-	-	-	-	-
21 - 24	*	-	-	-	*
25 - 29	4,045	*	-	-	2,671
30 - 39	18,237	3,964	-	*	13,539
40 - 49	21,409	5,719	*	*	16,073
50 - 59	12,837	3,142	-	-	7,758
60 and above	14,380	3,968	*	*	9,924
Not stated	-	-	-	-	-
Total	71,318	17,853	*	*	50,374

Table 3.2: Holders Applying Inputs by Age group

Afar Region					
Age group	All Crop Holders	Chemical Fertilizer	Improved \leq Pesticide	Irrigation	
Below 18	-	-	-	-	-
18 - 20	*	-	-	-	*
21 - 24	*	-	*	-	*
25 - 29	808	*	*	-	808
30 - 39	2,300	-	498	74	2,180
40 - 49	1,326	*	221	-	1,159

50 - 59	556	-	-	-	484
60 and above	412	-	*	-	412
Not stated	37	-	37	-	37
Total	5,771	*	922	74	5,413

Table 3.3: Holders Applying Inputs by Age group

Amhara Region					
Age group	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation	
Below 18	*	-	-	-	-
18 - 20	5,395	*	*	*	*
21 - 24	13,969	*	*	*	1,662
25 - 29	44,254	*	*	*	7,346
30 - 39	123,164	4,786	*	*	23,182
40 - 49	120,386	6,104	*	*	20,241
50 - 59	88,615	5,104	*	2,558	15,608
60 and above	120,147	3,845	2,122	*	17,816
Not stated	-	-	-	-	-
Total	516,995	23,177	9,150	*	86,356

Table 3.4: Holders Applying Inputs by Age group

Oromia Region					
Age group	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation	
Below 18	10,545	1,402	*	-	*
18 - 20	59,610	3,081	*	4,989	5,315
21 - 24	129,412	10,833	1,614	9,061	13,344
25 - 29	295,760	31,152	3,554	17,342	26,431
30 - 39	611,687	67,956	4,878	38,437	63,580
40 - 49	448,025	44,390	5,161	30,515	52,048
50 - 59	291,639	28,708	3,888	16,954	37,377
60 and above	323,968	34,533	4,102	18,622	41,038
Not stated	*	-	-	-	-
Total	2,172,933	222,055	23,756	135,919	239,883

Table 3.5: Holders Applying Inputs by Age group

Somale Region					
Age group	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation	
Below 18	-	-	-	-	-
18 - 20	145	-	-	-	50
21 - 24	460	-	-	-	165
25 - 29	1,017	-	-	-	289
30 - 39	1,670	-	-	-	599
40 - 49	1,449	50	100	-	342
50 - 59	1,122	-	50	47	432
60 and above	1,587	-	-	-	284
Not stated	-	-	-	-	-
Total	7,449	50	149	47	2,161

Table 3.6: Holders Applying Inputs by Age group

Benshangul-Gumuz Region					
Age group	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation	
Below 18	*	-	-	-	-
18 - 20	220	-	-	-	*
21 - 24	1,127	*	*	-	84
25 - 29	2,480	*	*	*	391
30 - 39	4,710	106	*	*	1,344
40 - 49	5,473	*	*	-	1,317

50 - 59	4,002	*	*	*	1,063
60 and above	4,099	*	*	-	913
Not stated	*	-	-	-	*
Total	22,248	345	191	*	5,221

Table 3.7: Holders Applying Inputs by Age group

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

Age group	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation
Below 18	12,751	1,982	*	*
18 - 20	40,574	2,499	709	513
21 - 24	92,788	10,735	2,863	1,503
25 - 29	270,751	32,257	7,903	3,291
30 - 39	570,336	89,006	27,090	8,991
40 - 49	398,101	55,560	14,516	5,115
50 - 59	257,614	35,598	9,549	3,100
60 and above	280,895	40,454	13,614	2,202
Not stated	*	-	-	-
Total	1,924,556	268,091	76,812	24,715

Table 3.8: Holders Applying Inputs by Age group

Gambella Region

Age group	All Crop Holders	Fertilizer	Improved S Pesticide	Irrigation
Below 18	303	-	-	-
18 - 20	350	-	-	-
21 - 24	473	-	*	-
25 - 29	2,061	-	-	-
30 - 39	3,996	-	-	*
40 - 49	3,204	-	*	*
50 - 59	1,440	-	-	*
60 and above	1,775	-	*	-
Not stated	*	-	-	-
Total	13,646	-	88	*

Table 3.9: Holders Applying Inputs by Age group

Harari Region

Age group	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation
Below 18	-	-	-	-
18 - 20	*	-	-	-
21 - 24	460	*	*	*
25 - 29	795	279	*	-
30 - 39	2,072	454	*	-
40 - 49	1,349	436	*	-
50 - 59	593	155	-	-
60 and above	488	*	-	-
Not stated	-	-	-	-
Total	5,811	1,481	*	-

Table 3.10: Holders Applying Inputs by Age group

Dire Dawa Region

Age group	All Crop Holders	Chemical Fertilizer	Improved S Pesticide	Irrigation
Below 18	*	-	-	-
18 - 20	*	-	-	-
21 - 24	222	-	*	-
25 - 29	564	-	*	-
30 - 39	1,372	*	*	*

40 - 49	1,142	-	*	*	780
50 - 59	455	*	*	-	257
60 and above	508	-	*	-	256
Not stated	-	-	-	-	-
Total	4,336	*	207	*	2,271

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

Ethiopia						
Cause of damage	All holders	All crops	Crop category			
			Cereals	Pulses	Oilseeds	
All damage	2,135,041	192,161	115,575	52,114	1,012	
Crop disease	2,743	*	*	*	-	
Frost or floods	134,469	5,462	3,234	1,314	30	
Locust	24,650	1,171	468	391	-	
Shortage of rain	3,559	118	*	*	-	
Too much rain	51,101	2,085	1,178	561	*	
Wild animals	12,227	469	166	98	*	
Birds	98,449	5,965	4,070	1,148	*	
Hailstone	1,631,567	158,554	96,352	43,593	744	
Pests	18,713	1,075	737	213	-	
Weeds	115,389	8,603	4,297	2,771	*	
Others	160,713	8,326	4,756	1,933	*	

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	53,423	9,856	9,003	127	-	
Crop disease	-	-	-	-	-	
Frost or floods	*	*	*	-	-	
Locust	-	-	-	-	-	
Shortage of rain	*	*	*	*	-	
Too much rain	-	-	-	-	-	
Wild animals	-	-	-	-	-	
Birds	-	-	-	-	-	
Hailstone	50,452	9,663	8,847	112	-	
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	520	*	-	-	-	
Crop disease	-	-	-	-	-	
Frost or floods	*	*	-	-	-	
Locust	-	-	-	-	-	
Shortage of rain	-	-	-	-	-	
Too much rain	-	-	-	-	-	
Wild animals	-	-	-	-	-	
Birds	*	*	-	-	-	
Hailstone	*	*	-	-	-	
Pests	*	*	-	-	-	
Weeds	*	*	-	-	-	
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	369,828	61,490	33,778	23,319	*
Crop disease	-	-	-	-	-
Frost or floods	5,059	222	*	*	*
Locust	*	*	*	*	-
Shortage of rain	*	*	-	*	-
Too much rain	8,320	482	*	*	-
Wild animals	*	*	*	*	-
Birds	*	*	-	*	-
Hailstone	337,120	56,961	32,519	20,570	*
Pests	2,342	*	*	*	-
Weeds	16,988	*	*	*	-
Others	5,232	521	216	*	-

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	853,822	81,891	53,584	15,596	459
Crop disease	2,493	*	*	*	-
Frost or floods	87,669	3,118	1,986	762	-
Locust	3,007	86	*	*	-
Shortage of rain	*	*	*	*	-
Too much rain	31,367	1,176	695	234	*
Wild animals	7,048	283	61	*	-
Birds	47,999	3,557	2,774	458	*
Hailstone	561,669	63,159	41,211	12,497	*
Pests	7,562	443	304	*	-
Weeds	75,666	5,045	3,271	647	*
Others	88,821	4,654	2,945	794	*

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	2,635	299	269	30	-
Crop disease	-	-	-	-	-
Frost or floods	47	1	-	1	-
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	-	-	-	-	-
Wild animals	-	-	-	-	-
Birds	95	1	1	-	-
Hailstone	2,106	263	234	29	-
Pests	95	13	13	-	-
Weeds	294	22	22	*	-
Others	95	*	-	*	-

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

Benshangul-Gumuz Region

			Crop category		
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Cause of damage	All holders	All crops	Cereals	Pulses	Oilseeds
All damage	6,237	145	114	*	-
Crop disease	-	-	-	-	-
Frost or floods	375	*	*	*	-
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	*	6	*	*	-
Wild animals	*	*	*	-	-
Birds	*	*	*	-	-
Hailstone	3,705	98	84	*	-
Pests	-	-	-	-	-
Weeds	959	16	11	*	-
Others	484	9	5	*	-

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		
			Cereals	Pulses	Oilseeds
All damage	843,022	38,035	18,734	12,940	360
Crop disease	*	*	*	*	-
Frost or floods	40,816	1,996	1,001	545	*
Locust	13,920	609	144	*	-
Shortage of rain	*	*	*	*	-
Too much rain	10,652	409	330	35	*
Wild animals	2,548	75	*	*	*
Birds	48,652	2,277	1,285	606	*
Hailstone	673,658	28,269	13,394	10,333	315
Pests	8,665	445	273	108	-
Weeds	19,298	921	706	138	*
Others	64,543	2,980	1,542	928	*

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

Cause of damage	All holders	All crops	Crop category		
			Cereals	Pulses	Oilseeds
All damage	2,865	168	21	79	-
Crop disease	-	-	-	-	-
Frost or floods	*	*	*	*	-
Locust	-	-	-	-	-
Shortage of rain	-	-	-	-	-
Too much rain	*	*	-	*	-
Wild animals	*	*	*	*	-
Birds	889	66	*	*	-
Hailstone	669	44	*	37	-
Pests	*	*	*	-	-
Weeds	749	25	*	*	-
Others	*	*	-	*	-

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		905	*	*	-
Crop disease		-	-	-	-
Frost or floods		-	-	-	-
Locust		-	-	-	-
Shortage of rain		-	-	-	-
Too much rain		-	-	-	-
Wild animals		-	-	-	-
Birds		-	-	-	-
Hailstone		*	*	*	-
Pests		-	-	-	-
Weeds		477	*	*	-
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		1,785	72	60	*
Crop disease		-	-	-	-
Frost or floods		-	-	-	-
Locust		-	-	-	-
Shortage of rain		-	-	-	-
Too much rain		*	*	-	-
Wild animals		-	-	-	-
Birds		-	-	-	-
Hailstone		1,617	64	52	*
Pests		-	-	-	-
Weeds		*	*	*	-
Others		*	*	*	-

Appendix I

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

Appendix II

Standard Error and Coefficient of Variation

Annex II

Table 1 Estimate of Number of Holders, Inputs applied Area and Quality of Inputs used and their Standard Errors & Coefficients of Variations of Major Crops (For Ethiopia), 2008/09 (2001 E.C) Agricultural Sample Survey, Belg Season

Crop	All crop land area						All fertilizer						Natural					
	Area (Ha)			Area (Ha)			Quantity (Qt)			Holder			Area (Ha)			Area (Ha)		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	1,209,571	37,938	3.14	375,146	22,796	6.08	126,949	17,884	14.09	2,129,910	62,200	2.92	236,918	13,999	5.91			
Cereals	996,245	33,252	3.34	313,120	21,254	6.79	100,720	15,085	14.98	2,013,005	61,781	3.07	192,441	11,849	6.16			
Teff	91,430	9,829	10.75	13,596	2,508	18.45	2,369	576	24.31	50,812	10,468	20.6	8,667	1,941	22.39			
Barley	205,938	18,199	8.84	93,495	13,034	13.94	40,229	8,845	21.99	286,995	27,990	9.75	35,353	4,780	13.52			
Wheat	81,422	12,858	15.79	36,134	10,248	28.36	22,414	8,816	39.33	101,708	17,964	17.66	11,616	2,163	18.62			
Maize	537,693	21,632	4.02	148,410	8,730	5.88	33,610	5,966	17.75	1,732,480	57,346	3.31	119,383	7,524	6.3			
Sorghum	64,230	8,325	12.96	15,584	2,781	17.84	604	344	56.92	117,016	13,835	11.82	15,186	2,715	17.88			
Finger millet	1,042	289	27.76	497	236	47.43	131	131	99.85	3,767	1,626	43.16	387	209	53.9			
Oats/ 'Aja'	12,951	2,716	20.97	5,403	1,707	31.6	1,362	523	38.37	20,415	6,264	30.69	1,847	717	38.83			
Rice	1,540	1,185	76.96	-	-	-	-	-	-	-	-	-	-	-	-	-		
Pulse	205,597	11,612	5.65	60,461	3,925	6.49	26,021	5,534	21.27	1,038,461	44,336	4.27	42,984	3,117	7.25			
Horse/Faba beans	5,803	1,390	23.96	444	100	22.51	21	15	70.87	18,344	3,548	19.34	399	92	23.12			
Field peas	21,833	4,137	18.95	5,181	1,836	35.44	188	93	49.3	33,776	10,340	30.61	4,435	1,827	41.18			
Haricot beans	154,694	9,517	6.15	51,799	3,341	6.45	25,570	5,530	21.63	976,457	42,722	4.38	35,643	2,398	6.73			
Chick peas	8,918	1,875	21.02	1,484	592	39.89	217	184	84.86	9,411	2,570	27.31	1,019	335	32.88			
Lentils	8,371	3,679	43.95	1,145	469	40.99	11	6	53.55	11,620	3,867	33.28	1,121	469	41.86			
Vetch/Grass peas	4,268	2,257	52.88	353	196	55.49	12	12	100.13	3,325	1,375	41.37	317	193	60.7			
Soya beans	43	12	27.55	8	5	54.64	2	2	99.35	399	221	55.44	5	3	57.37			
Fenugreek	1,662	1,117	67.23	44	16	36.77	-	-	-	4,940	1,211	24.51	44	16	36.77			
Gibto	5	3	62.22	2	2	99.84	-	-	-	387	386	99.84	2	2	99.84			
Oilseeds	7,729	1,718	22.23	1,566	853	54.48	209	204	97.47	25,725	8,201	31.88	1,494	834	55.81			
Nueg	797	495	62.13	32	32	100.21	-	-	-	235	235	100.21	32	32	100.21			
Linseed	775	273	35.31	48	25	50.74	-	-	-	1,838	775	42.18	48	25	50.74			
Ground nuts	3,021	1,175	38.87	1,255	847	67.5	204	203	99.58	14,967	7,699	51.44	1,185	828	69.85			
Safflower	104	40	38.82	36	30	81.82	-	-	-	745	405	54.3	36	30	81.82			
Sesame	2,592	1,097	42.34	111	65	58.55	-	-	-	1,203	617	51.34	111	65	58.55			
Rapeseed	441	172	38.92	82	24	29.65	4	4	99.72	6,972	2,538	36.4	80	24	29.5			

Crop	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	439,853	33,176	7.54	122,994	17,846	14.51	106,328	17,324	16.29	32,359	4,904	15.16	4,683	934	19.95	4,069	1,058	25.99
Cereals	376,494	31,501	8.37	108,508	17,551	16.18	86,647	14,768	17.04	30,672	4,856	15.83	4,056	829	20.43	2,915	643	22.07
Teff	19,235	4,639	24.12	3,914	1,482	37.85	1,764	510	28.93	2,095	917	43.79	588	349	59.28	261	180	68.95
Barley	142,357	22,217	15.61	57,153	11,894	20.81	39,572	8,761	22.14	2,546	955	37.52	555	278	50.09	344	194	56.25
Wheat	51,647	12,189	23.6	23,334	9,627	41.26	20,631	8,785	42.58	1,379	881	63.88	175	110	62.56	185	137	74.2
Maize	212,390	21,222	9.99	20,279	2,926	14.43	23,034	5,498	23.87	24,125	4,185	17.35	2,529	598	23.65	1,743	359	20.6
Sorghum	2,634	767	29.11	163	73	44.63	152	50	32.55	2,288	1,862	81.37	208	184	88.4	382	333	87.33
Finger millet	292	291	99.85	110	110	99.85	131	131	99.85	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	14,134	5,461	38.63	3,556	1,543	43.38	1,362	523	38.37	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pulse	204,987	20,230	9.87	14,486	1,857	12.82	19,681	5,265	26.75	10,540	2,483	23.55	557	151	27.14	949	328	34.53
Horse/Faba beans	601	425	70.64	45	39	86.78	21	15	70.87	-	-	-	-	-	-	-	-	-
Field peas	3,602	1,194	33.15	740	284	38.42	104	40	38.13	168	168	99.6	7	7	99.6	84	84	99.6
Haricot beans	200,601	20,209	10.07	13,683	1,837	13.42	19,549	5,265	26.93	9,952	2,459	24.71	540	151	27.93	859	317	36.89
Chick peas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lentils	658	371	56.43	18	11	59.25	7	4	62.58	188	187	99.57	7	6	99.57	4	4	99.57
Vetch/Grass peas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-	230	229	99.35	4	4	99.35	2	2	99.35
Fenugreek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oilseeds	-	-	-	-	-	-	-	-	-	1,138	1,110	97.5	70	70	99.16	204	203	99.58
Nueg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-	1,138	1,110	97.5	70	70	99.16	204	203	99.58
Safflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Crop	UREA + DAP												Indigenous seed											
	Holder			Area (Ha)			Quantity			Holder			Area (Ha)			Quantity (Qt)								
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV						
All	72,878	10,618	14.57	10,551	1,566	14.84	16,553	3,488	21.07	4,727,204	63,029	1.33	1,192,716	37,567	3.15	933,781	56,439	6.04						
Cereals	64,224	9,477	14.76	8,115	1,252	15.43	11,157	2,171	19.45	4,416,963	65,293	1.48	980,037	32,859	3.35	812,137	52,780	6.5						
Teff	2,597	1,179	45.38	426	170	39.98	343	198	57.64	342,814	30,030	8.76	90,913	9,759	10.73	39,273	4,854	12.36						
Barley	5,148	1,453	28.23	434	124	28.65	313	88	28.05	972,313	50,696	5.21	205,585	18,187	8.85	373,710	39,218	10.49						
Wheat	3,536	1,194	33.77	1,009	407	40.29	1,598	632	39.52	335,407	29,721	8.86	80,271	12,820	15.97	150,714	29,382	19.5						
Maize	55,982	9,035	16.14	6,218	1,122	18.04	8,833	2,045	23.15	3,555,986	65,765	1.85	523,732	21,099	4.03	214,223	16,585	7.74						
Sorghum	234	132	56.37	27	15	56.96	71	46	65.73	319,288	23,080	7.23	64,017	8,318	12.99	12,311	1,588	12.9						
Finger millet	-	-	-	-	-	-	-	-	-	12,314	2,559	20.78	1,042	289	27.76	443	200	45.08						
Oats/ 'Aja'	-	-	-	-	-	-	-	-	-	81,265	13,259	16.32	12,937	2,716	21	19,697	4,357	22.12						
Rice	-	-	-	-	-	-	-	-	-	4,500	2,559	57.65	1,540	1,185	76.86	1,767	1,608	91.04						
Pulse	35,745	6,793	19	2,434	587	24.13	5,391	1,459	27.07	2,448,976	60,115	2.45	204,972	11,601	5.66	119,625	9,513	7.95						
Horse/Faba beans	-	-	-	-	-	-	-	-	-	88,990	11,449	12.87	5,803	1,390	23.96	5,090	1,548	30.41						
Field peas	-	-	-	-	-	-	-	-	-	139,317	19,260	13.82	21,832	4,137	18.95	22,256	4,172	18.74						
Haricot beans	33,816	6,654	19.68	1,933	467	24.17	5,163	1,447	28.04	2,218,167	55,969	2.52	154,098	9,503	6.17	70,988	4,347	6.12						
Chick peas	1,734	1,271	73.28	466	337	72.45	217	184	84.86	57,306	9,159	15.98	8,889	1,873	21.07	5,651	1,707	30.2						
Lentiles	-	-	-	-	-	-	-	-	-	49,431	12,219	24.72	8,371	3,679	43.95	11,800	6,303	53.42						
Vetch/Grass peas	196	196	100.13	36	36	100.13	12	12	100.13	22,239	8,781	39.49	4,268	2,257	52.88	3,374	1,621	48.04						
Soya beans	-	-	-	-	-	-	-	-	-	1,382	497	35.94	43	12	27.55	17	3	15.55						
Fenugreek	-	-	-	-	-	-	-	-	-	17,006	3,739	21.98	1,662	1,117	67.23	446	213	47.74						
Gibbo	-	-	-	-	-	-	-	-	-	876	529	60.45	5	3	62.22	3	2	70.79						
Oil seeds	99	99	99.72	2	2	99.72	4	4	99.72	84,244	12,412	14.73	7,708	1,718	22.28	2,018	619	30.69						
Nug	-	-	-	-	-	-	-	-	-	4,489	2,612	58.18	797	495	62.13	100	54	54.32						
Linseed	-	-	-	-	-	-	-	-	-	4,505	1,962	18.57	775	273	35.31	841	539	64.09						
Ground nuts	-	-	-	-	-	-	-	-	-	34,580	9,726	28.15	3,021	1,175	38.87	575	251	43.55						
Safflower	-	-	-	-	-	-	-	-	-	3,705	852	23	104	40	38.82	23	8	34.59						
Sesame	-	-	-	-	-	-	-	-	-	12,757	4,012	31.45	2,571	1,097	42.67	390	170	43.54						
Rapeseed	99	99	99.72	2	2	99.72	4	4	99.72	12,825	5,689	28.7	441	172	38.93	90	36	40.04						

Crop	Improved seed									Pesticide								
	Holder			Area (Ha)			Quintal			Holder			Area (Ha)					
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	112,248	-	-	16,854	2,175	12.9	7,420	1,195	16.11	178,819	23,382	13.08	81,219	15,775	19.42	-	-	-
Cereals	101,920	10,409	10.21	16,208	2,128	13.13	7,141	1,179	16.51	161,841	21,940	13.56	76,264	15,476	20.29	-	-	-
Teff	1,238	481	38.85	516	308	59.71	97	45	45.89	58,897	13,001	22.07	18,270	4,082	22.34	-	-	-
Barley	4,569	1,193	26.11	353	133	37.72	451	236	52.28	77,852	15,633	20.08	25,598	7,267	28.39	-	-	-
Wheat	4,540	1,448	31.89	1,151	433	37.65	2,073	884	42.84	48,009	11,880	24.74	24,895	9,987	40.12	-	-	-
Maize	89,981	10,097	11.22	13,960	2,042	14.63	4,496	756	16.82	16,304	3,088	18.94	2,810	598	21.28	-	-	-
Sorghum	2,098	1,185	56.49	213	161	75.83	2	2	96.86	779	650	83.49	292	278	95.17	-	-	-
Finger millet	-	-	-	-	-	-	-	-	-	346	296	85.59	113	110	97.1	-	-	-
Oats/ 'Aja'	418	417	99.73	14	14	99.73	22	22	99.73	17,889	7,379	41.25	3,974	1,735	43.65	-	-	-
Rice	-	-	-	-	-	-	-	-	-	599	586	97.77	312	305	97.95	-	-	-
Pulse	14,762	3,585	24.29	626	184	29.35	277	88	31.8	20,470	8,095	39.55	4,898	2,689	54.9	-	-	-
Horse/Faba beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field peas	15	13	91.56	-	-	91.56	-	-	91.56	1,878	1,023	54.48	306	174	56.91	-	-	-
Haricot beans	13,986	3,553	25.4	596	183	30.68	273	88	32.25	7,311	1,482	20.27	572	174	30.47	-	-	-
Chick peas	762	483	63.4	29	17	57.8	4	3	78.44	2,947	2,349	79.7	965	857	88.77	-	-	-
Lentiles	-	-	-	-	-	-	-	-	-	1,261	852	67.61	255	152	59.5	-	-	-
Vetch/Grass peas	-	-	-	-	-	-	-	-	-	9,817	7,386	75.24	2,799	2,136	76.31	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oilseeds	235	195	82.71	20	19	91.86	2	1	63.27	608	447	73.42	57	48	83.86	-	-	-
Nueg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-	217	217	99.94	47	47	99.94	-	-	-
Ground nuts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-	392	391	99.77	10	10	99.77	-	-	-
Sesame	42	30	70.37	20	19	92.58	1	1	81.83	-	-	-	-	-	-	-	-	-
Rapeseed	193	192	99.72	-	-	99.72	1	1	99.72	-	-	-	-	-	-	-	-	-

Crop	Irrigation						Extension package					
	Holder			Area (Ha)			Holder			Area (Ha)		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
All	431,674	33,769	7.82	71,369	7,856	11.01	222,314	25,044	11.27	63,308	12,185	19.25
Cereals	416,875	33,061	7.93	65,884	7,343	11.15	217,413	24,871	11.44	60,191	12,064	20.04
Teff	11,818	2,725	23.05	2,645	826	31.24	17,859	7,342	41.11	5,823	2,695	46.28
Barley	28,516	6,734	23.61	3,206	811	25.29	51,900	12,456	24	17,097	5,045	29.51
Wheat	11,639	3,332	28.63	1,251	487	38.88	30,059	8,721	29.01	17,364	8,856	51
Maize	380,467	32,461	8.53	56,994	6,818	11.96	144,090	19,929	13.83	19,026	2,857	15.02
Sorghum	10,270	2,740	26.68	1,781	886	49.76	5,556	2,220	39.96	882	427	48.45
Finger millet	-	-	-	-	-	-	-	-	-	-	-	-
Oats/ 'Aja'	274	274	99.84	4	4	99.84	-	-	-	-	-	-
Rice	299	299	99.87	4	4	99.87	-	-	-	-	-	-
Pulse	87,396	12,562	14.37	5,419	1,250	23.06	58,522	11,884	20.31	3,104	686	22.11
Horse/Faba beans	1,064	616	57.92	85	64	75.79	-	-	-	-	-	-
Field peas	259	259	99.96	7	7	99.96	1,116	670	60.05	66	40	60.33
Haricot beans	66,489	11,011	16.56	2,966	868	29.26	55,228	11,816	21.39	2,686	648	24.11
Chick peas	11,607	4,109	35.4	1,289	636	49.39	1,751	1,069	61.04	338	224	66.16
Lentiles	2,339	946	40.44	296	165	55.81	441	308	69.99	14	10	70.76
Vetch/Grass peas	4,725	2,859	60.52	587	450	76.6	-	-	-	-	-	-
Soya beans	327	236	72.35	21	5	25.71	-	-	-	-	-	-
Fenugreek	3,491	1,275	36.52	168	84	50.2	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-	-	-	-
Oilseeds	2,370	752	31.74	66	29	44.28	518	361	69.75	13	12	91.77
Nueg	-	-	-	-	-	-	-	-	-	-	-	-
Linseed	259	259	99.96	3	3	99.96	-	-	-	-	-	-
Ground nuts	257	256	99.82	1	1	99.82	518	361	69.75	13	12	91.77
Safflower	75	74	99.27	1	1	99.27	-	-	-	-	-	-
Sesame	719	359	50.02	50	28	56.11	-	-	-	-	-	-
Rapeseed	1,061	550	51.87	10	6	63.05	-	-	-	-	-	-

Table 2. Holders Applying Inputs by Educational Status

Ethiopia												
Educational Status of Holders	Crop Holders			Fertilizer			Improved Seed			Pesticide		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
Illiterate	2,887,240	50,149	1.74	257,427	20,706	8.04	59,817	6,492	10.85	97,543	13,492	13.83
Literate	276,768	15,366	5.55	26,840	4,186	15.6	6,372	2,051	32.19	14,296	3,294	23.04
Grades 1 - 3	590,605	17,214	2.91	71,844	7,190	10.01	11,572	1,928	16.66	26,362	4,128	15.66
Grades 4 - 6	623,314	17,720	2.84	99,157	8,844	8.92	20,095	2,889	14.38	24,918	4,333	17.39
Grades 7 - 8	226,642	9,627	4.25	41,646	4,579	11	7,875	1,562	19.84	9,887	2,380	24.07
Grades 9 - 11	103,647	6,379	6.15	25,024	3,189	12.74	4,944	1,338	27.06	4,274	1,247	29.18
Grade 12 complete	28,317	3,754	13.26	8,226	1,941	23.59	1,006	524	52.13	1,526	776	50.85
Above grade 12	8,529	1,649	19.34	3,010	1,036	34.43	567	348	61.43	13	13	102.07
Total	4,745,063	62,855	1.32	533,173	35,476	6.65	112,248	10,749	9.58	178,819	23,382	13.08

Ethiopia												
Age group	Crop Holders			Fertilizer			Improved Seed			Pesticide		
	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV	Estimate	SE	CV
Below 18	24,719	2,978	12.05	3,384	1,025	30.29	997	479	48.03	-	-	-
18 - 20	106,537	5,881	5.52	5,886	1,446	24.56	839	327	38.97	5,502	1,730	31.45
21 - 24	239,514	9,306	3.89	21,851	2,879	13.18	5,158	1,115	21.61	11,348	2,204	19.42
25 - 29	622,536	15,979	2.57	67,621	6,730	9.95	12,656	2,115	16.71	23,112	3,757	16.26
30 - 39	1,339,545	24,483	1.83	166,317	12,854	7.73	33,792	3,840	11.36	54,395	8,027	14.76
40 - 49	1,001,864	20,278	2.02	112,431	8,948	7.96	23,276	3,125	13.42	38,291	5,497	14.36
50 - 59	658,872	16,234	2.46	72,765	6,345	8.72	15,316	2,411	15.74	22,755	3,571	15.69
60 and above	748,258	18,090	2.42	82,917	7,309	8.81	20,178	2,880	14.27	23,416	4,305	18.39
Not stated	3,220	1,436	44.61	-	-	-	37	-	-	-	-	-
Total	4,745,063	62,855	1.32	533,173	35,476	6.65	112,248	10,749	9.58	178,819	23,382	13.08

Appendix IV - Questionnaires

Crop Production Sample Survey
List of Fields Under Mixed Crops (Including Vegetables and Root Crops) and Agricultural Practices
(Belg Season) – 2008/09 (2001 E.C)

Part I – Identification Particulars

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Region	Zone	Wereda	Farmers' Association	Enumeration Area	House hold ID Number	Holder ID Number	Sex of head of House hold M = 1 F = 2	Holders		Age	Sex M = 1 F = 2	Educational Status	House hold Size	Type of Holding Crop = 1 Livestock = 2 Both = 3
								Name						

Part II. Area Under Temporary Crops and Agricultural Practices**and Area Measurement Result**

1	2	3	4	5
Sr. No.	Questions	Parcel No.	Field No.	
		Crop Name		Crop Name
		code	cod	cod
0	1	Type of Holding Private = 1 Rented/Contract= 2 Others		
0	2	Have the field been included in the extension package program Yes = 1 No= 2		
0	3	Was the field irrigated ? Yes = 1 No = 2		
0	4	Area in percentage share for each crop		
0	5	Variety of seeds used Improved = 1 Indigenous = 2		
0	6	(For Cereals, Pulses and oil seeds only) If indigenous seed was used, What was the total Quantity	Kg gram	Kg gram
0	7	(For Cereals, Pulses and oil seeds only) If improved seed was used What was the total quantity	Kg gram	Kg gram
0	8	(For Cereals, Pulses and oil seeds only) If improved seed was used What was the cost/price	Birr cent.	Birr cent.
0	9	Was the crop damage Yes = 1 No = 2		
1	0	If you, what was the major censes of damage Percentage of damage	Reas on	co de
1	1	Percentage of damage		
1	2	Any control/prevention measure taken for crop damage? Yes = 1 No = 2		
1	3	If Yes, What type of measure ? Chemical = 1 Both = 3 Non Chemical = 2		
1	4	If Chemical Insecticide = 1 1&3 = 5 Herbicides = 2 2&3 = 6 fungicide = 3 All = 7 1&2 = 4		
1	5	What was field fertilized ? Yes = 1 No = 2		
1	6	If fertilized What type ? Natural = 1 Both = 3 Chemical = 2		
1	7	If chemical fertilizer used 17.1 Type Urea = 1 Both = 3		
		17.2 Quantity in Kg.	Kg	gram
1	8	If Natural fertilizer used mainly what type ? Manure = 1 1 & 3 = 5 Compost = 2 2 & 3 = 6 Orga = 3 All = 7 1 & 2 = 4 Other		
1	9	Production in local unit	Local unit	Code
			quantity	

4	5
Date of Measurement	Area in Sq. m.
Date	Month
	Closure Error
Side ID	1 - 2
Bearing	
Distances of	
Side ID	4 -
Bearing	
Distances of	
Side ID	7 -
Bearing	
Distances of	
Side ID	10 -
Bearing	
Distances of	
Side ID	13 -
Bearing	
Distances of	
Side ID	16 -
Bearing	
Distances of	
Side ID	19 -
Bearing	
Distances of	
Side ID	22 -
Bearing	
Distances of	
Reason if Area measurement not conducted →	