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CENTRAL STATISTICAL AGENCY**

***AGRICULTURAL SAMPLE SURVEY
2009 / 2010 (2002 E.C.)***

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VOLUME III

REPORT ON

FARM MANAGEMENT PRACTICES

(PRIVATE PEASANT HOLDINGS, MEHER SEASON)

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PART I

INTRODUCTION AND OBJECTIVES OF THE SURVEY

1.1. INTRODUCTION

A boost in agricultural productivity is a prevailing motive for farmers and a driving force in Ethiopia's agricultural policy. Considerable resources are being utilized by the government to realize agricultural productivity and alter the state of agriculture in the country. Human and material resources are rallied towards this end. Development agents, extension packages, and agricultural inputs are some of the resources that are made available to farmers to change their style of farming and augment productivity.

One of the missions of the Central Statistical Agency (CSA) is to survey developments in agriculture and produce information about the changes taking place in it to data users to indicate whether the much desired increase in agricultural productivity has materialized. Thus, to shed a ray of statistical information on agricultural productivity, the agency has been providing statistics on the extent of inputs applied area and volume of fertilizers and improved seeds used. As part of the 2009/10 (2002 E.C) Agricultural Sample Survey, data on fertilizer, improved seed, irrigation and pesticide applied area and volume of fertilizers and improved seeds used within the private peasant holdings was collected, processed and summarized.

The survey results are presented in this bulletin and other electronic media for data users. The report comprises three parts. Part I contains the objectives of this annual survey, Part II deals with coverage of the survey, sample design, field organization and method of data collection and Part III includes summary of the results. Estimation procedures and formulation of estimates of totals and variance are presented in Appendix I. Estimates of the standard errors with the corresponding coefficients of variations for quantity of inputs used and inputs applied area are presented in Appendix II.

1.2. OBJECTIVES OF THE SURVEY.

The general objective of CSA's Agricultural Sample Survey (AgSS) is to collect basic quantitative information on the country's agriculture that is essential for planning, policy formulation, food security, etc. The AgSS is composed of four components: Crop Production Forecast Survey, Meher Season Survey of which Farm Management Practice is a part, Livestock Survey and Belg Season Survey.

The specific objectives of Meher Season Survey (Farm Management Practice) are to estimate the total volume of inputs used, inputs applied area and number of holders using inputs. Companion reports are published separately with estimates of area and production of crops and land use area. This report on Farm Management Practice is based on the private peasant holdings in sedentary rural areas of the country. The data is disaggregated at regional levels.

PART II

SURVEY METHODOLOGY, DATA COLLECTION AND PROCESSING

2.1. SCOPE AND COVERAGE OF THE SURVEY

The range of data items that the 2009/10 (2002 E.C) Agricultural Main Season Survey dealt with included fertilizers, improved seeds, application of pesticides, irrigation, prevention of erosion, extension package, and other miscellaneous agricultural practices. Holders applying any one of the above inputs are enumerated and data on quantity of inputs used and inputs applied area were recorded.

The 2009/10 (2002 E.C) Annual Agricultural Sample Survey (Meher season) covered the entire rural parts of the country except the non-sedentary population of three zones of Afar & six zones of Somali regions.

To be covered by the survey, a total of 1,660 enumeration areas (EAs) were selected. However, due to various reasons that are beyond control, in 25 EAs the survey could not be successful and hence interrupted. Thus, all in all the survey succeeded to cover 1,635 EAs (98.5 %) throughout the regions. The Annual Agricultural Sample survey (Meher season) was conducted on the basis of 20 agricultural households selected from each EA. Regarding the ultimate sampling units, it was intended to cover a total of 33,200 agricultural households, however 32,630 (98.3 %) were actually covered by the survey.

2.2 SAMPLING FRAME

The list containing EAs of all regions and their respective agricultural households obtained from the 2006/07 (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 2009/10 (2002 E.C) agricultural sample survey was determined by taking into account 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.

2.4 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 2006/07 (1999 E.C) cartographic census frame. From the fresh list of households prepared at the beginning of the survey 20 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) by stratum is also presented in Appendix III.

2.5. ORGANIZATION OF FIELD WORK

The conduct of a survey cannot be executed without the arrangement of fieldwork. In recognition of this, the organization of fieldwork has been entrusted to the Department of Regional Offices and Field Operations that liaises between the Head Office and the 25 Branch Statistical Offices spread across the regions. All Branch Offices took part in the survey execution especially in recruiting the enumerators, organizing the 2nd stage training, assigning the field staff to their sites of enumeration, supervising the data collection and retrieving completed questionnaires and submitting them to the Head Office for data processing.

The Branch Offices were also responsible for administering the financial and logistic aspects of the survey within their areas of operation. Enumerators, field supervisors, coordinators and statisticians were involved in the data collection where on the average one supervisor was assigned to five enumeration areas for supervision of data collection. All the enumerators were supplied with the necessary survey equipment after the completion of the training to warrant the smooth operation of the survey. To facilitate the data collection activities, four-wheel drive vehicles and horseback were used.

2.6. TRAINING OF FIELD STAFF

The execution of a survey and quality of data acquired from the survey highly depend on the type of training given to the enumerators and supervisors and the consequent understanding of the tasks to be performed and the standard procedures to be followed by the enumerators and supervisors in the survey undertaking. The quality and completeness of data are guaranteed when the training meets its objective of producing responsible and fervent enumerators and supervisors.

In light of this point, the training was given to the field staff in two stages. The first stage training, which took place at the Head Quarters of CSA and lasted 8 days targeted staff from the Head Office, statistician and senior field supervisors from Branch Statistical Offices. The staff that took part in the first stage training was then assigned to conduct similar training for the enumerators and other supervisors for fifteen days in all the twenty- five Branch Statistical Offices distributed across the country.

In the training, the field staffs were given detailed classroom instructions on how to collect data, method of area measurement, interviewing procedures, etc. The training also included field practice to reinforce the understanding of concepts, definitions and theories discussed in the classroom with regard to field measurement, and interviewing methods.

2.7 METHOD OF DATA COLLECTION

The agricultural data for the year 2009/10 (2002 E.C) was collected from sedentary rural peasant households by interviewing the selected agricultural holders and physically measuring their crop fields and weighing inputs applied to crop fields. The data obtained were recorded in various forms designed for this purpose.

Instruments like measuring tape; compass, kitchen balance, scientific calculators and others were used during data collection for a speedy and smooth acquisition of accurate data. The procedures for measuring areas of all crop fields and other fields used by the holders and weighing the inputs applied were performed for the thirty selected households from each sampled EA using measuring tapes, compasses and kitchen balances.

2.8. DATA PROCESSING

a) Editing, Coding and Verification

Statistical data editing plays an important role in ensuring the quality of the collected survey data. It minimizes the effects of errors introduced while collecting data in the field, hence the need for data editing, coding and verification. Although coding and editing are done by the enumerators and supervisors in the field, respectively, verification of this task is done at the Head Office.

An editing, coding and verification instruction manual was prepared and reproduced for this purpose. Then editors-coders and verifiers were trained for two days in editing, coding and verification using the aforementioned manual as a reference and teaching aid. The completed questionnaires were edited, coded and later verified on a 100 % basis before the questionnaires were passed over to the data entry unit.

b) Data Entry, Cleaning and Tabulation

Before data entry, the Agriculture, Natural Resources and Environment Statistics Directorate prepared edit specification for the survey for use on PC (Personal Computers) for data consistency checking purposes. The data on the edited and coded questionnaires were then entered into personal computers. The data were then checked and cleaned using the edit specification prepared earlier for this purpose. The data entered into the computers using the entry module of the CSRO (Census and Survey Processing System) software, which is a software package developed by the United States Bureau of the Census. Following the data entry operations, the data was further reviewed for data inconsistencies, missing data ... etc. by the regular professional staff from Agriculture, Natural Resources and Environment Statistics Directorate. The final stage of the data processing was to summarizing the cleaned data and produce statistical tables that present the results of the survey using the tabulation component of the PC based CSPRO software produced by professional staff from Data Processing Department. Finally, summarization of the data was done on personal computers to produce statistical tables as per the tabulation plan.

2.9 CONCEPTS AND DEFINITIONS

Data items of agriculture have to be distinctly defined and identified so that the information about the items becomes useful. The correct way of stating data items and related terms is a prerequisite

for making standards and definitions for the collection and compilation of agricultural data. The purpose of using standard concepts and definitions is not only to provide quality data but also to ensure that the right items are enumerated and measured accurately to reflect the agricultural situation.

Standard concepts and definitions used in the survey help to maintain consistent enumeration and measurement of variables of interest. To achieve this, CSA communicates concepts and definitions to the field staff through training and instruction manuals. The concepts and definitions used in the survey included the following.

Enumeration Area (E.A): - an enumeration area in the rural parts of the country is a locality that is in most of the cases less than and only in some cases equal to a farmers' association in geographical area and usually consists of 150-200 households

Household: - a household may be either:

- a) A one person household, that is a person who makes provisions for his own living without combining with any other person to form part of a multi- person household or
- b) A multi-person household, that is, a group of two or more persons who live together and make common provisions for food and other essentials of living. The persons in the group may pool their incomes and have a common budget to a greater or lesser extent. They may be related or unrelated persons or a combination of both. These persons are taken as members of the household.

Agriculture: - The growing of crops and/or **rearing** of animals for own consumption and /or sale.

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

Holding: - a holding is all the land and /or livestock kept, which is used wholly or partly for agricultural production and is operated as one legal entity by one person alone, or with others without regard to management, organization, size or location.

Holder: - a holder is a person who exercises management control over the operation of the agricultural holding and makes the major decision regarding the utilization of the available resources. He/she has primary technical and economic responsibility for the holding. He/she may operate the holding directly as an owner or a manager. Under conditions of traditional agricultural

holding the holder may be regarded as the person, who with or without the help of others, operates land and/or raises livestock in his/ her own right, i.e. the person who decides on which, where, when, and how to grow crops or raise livestock or both and has the right to determine the utilization of the products.

Parcel: - a parcel of holding is any piece of land entirely surrounded by land and/or water and/or road and/or forest etc. which is not part of the holding. It may consist of one or more cadastral units, plots or fields adjacent to each other.

Field: - a field is defined as any plot of land which is a parcel or part of a parcel under the same or mixed crops or any other form of private holding.

Crop: includes cereals, pulses, oilseeds, vegetables, root crops, fruits coffee, Enset, Chat, hops, sugarcane, cotton, tobacco, etc produced for food, making drinks, stimulation and making fabrics or clothing.

Crop production: - the process of growing and harvesting of the above crops for own consumption and/or sale.

Temporary/Annual Crops: - Annual/temporary crops are crops, which are grown in less than a year's time, sometimes only a few months with an objective to sow or replant again for additional production following the current harvest. Continuously grown crops planted in rotation are also considered as temporary crops since each is harvested and destroyed by ploughing in preparation for each successive crop.

Permanent Crops: - Crops, which are grown and occupy land for a long period of time, not requiring replanting for several years after each harvest, are considered as permanent crops. All fruit trees (i.e. oranges, mandarin, bananas, etc) and trees for beverages (i.e. coffee, tea, Gesho, etc) are considered permanent crops but meadows and pastures are excluded.

Meher (Main) Season Crop: -any temporary crop harvested between Meskerm (September) and Yekatit (February) is considered as Meher season crop.

Belg Season Crop: - any temporary crop harvested between Megabit (March) and Pagume (August) is considered to be Belg Season Crop.

Fertilizer: – refers to anything that is added to the soil and intended to increase the amount of plant nutrients available for crop growth. In this survey data is elicited on two types of fertilizers (Natural and Chemical). The Natural fertilizer consists of the farm yard manure and wood ashes while the chemical type consists of DAP (Di- Ammonium phosphate) and UREA (Ammonium Nitrate)

Improved seed- is crop variety, which gives a significantly higher yield, and better quality compared to locally produced variety of seeds.

Pesticides – are chemicals that are useful for the control, mitigation or elimination of pests, which are detrimental to crops. Pesticides include insecticides and herbicides.

Irrigation: - refers to the practice where an area of land is purposely and actually provided with water, other than by rain to improve/increase production of crops. The uncontrolled flooding of land by the overflow of rivers or streams is not considered to be irrigation.

PART III

SUMMARY OF SURVEY RESULTS

3. 1. Farm Management Practice

By and large, agriculture in Ethiopia is subsistence. This is particularly true to the major food crops grown in the country and covered in the survey. The major food crops are produced in almost all regions of the country in spite of the variation in volume of production across the regions. The variation may be attributed to the extent of area devoted to each crop type, weather change, use of inputs, farm practice and a shift in preference for the crops grown.

The items on which data is collected are the ones that are practiced by the peasant holders. The items shown in the statistical tables are fertilizers, improved seeds, pesticides and irrigation. The quantity of fertilizers and improved seeds used and the area they are applied to including pesticides and irrigation are also indicated in the statistical tables.

3.1.1 Fertilizer Applied Area:

Fertilizer is one of the major agricultural inputs that increase productivity. The application of fertilizer to crop fields in Ethiopia is gathering momentum. The volume of fertilizer used and the extent of area it is applied to are shown in Table 1. The total volume of fertilizer applied to area under crops is estimated to be about 4.23 million quintals and the extent of area to which fertilizer was applied is estimated to be more than 5.16 million hectares.

Of all the volume of fertilizers used, more than 2.78 million quintals was that of a mixture of UREA and DAP and about 1.23 million quintals was that of DAP. Most of the fertilizer used was applied to Teff (more than 1.12 million quintals), wheat (more than 954 thousand quintals) and maize (about 746 thousand quintals). The largest area to which fertilizer was applied was that of Teff (about 1.27 million hectares) followed by wheat (more than 912 thousand hectares) and maize (about 792 thousand hectares).

3.1. 2 Improved Seed Applied Area

Improved seeds are another input that contributes to an increase in agricultural productivity. Their application is also noticeable as more and more peasant holders aspire to have increased volume of crop production. Table 1 sheds some light on the use of improved seeds in the country.

The total volume of improved seeds used in 2009/10 (2002 E.C) was estimated to be about 153 thousand quintals. The crop area it was applied to was estimated to be more than 363 thousand hectares. The larger volumes of improved seeds used were that of maize and wheat which amounted to about 57.2 thousand and 46.9 thousand quintals, respectively. The largest area to which improved seeds were applied was under maize and wheat estimated to be about 210 thousand and 38 thousand hectares, respectively.

3.1.3 Pesticide Applied Area

At times when rampant pests and weeds damage crops the use of pesticides is indispensable. In areas where crop damage caused by pests and weeds was reported the application of pesticides is more evident in the survey results.

The total pesticide applied area was estimated to be about 1.49 million hectares as indicated in Table 1. The number of holders who applied it was more than 2.8 million. Most of the crop area to which pesticide was applied was under Teff (more than 432 thousand hectares) and wheat (more than 396 thousand hectares).

3.1.4 Irrigated Area

Irrigation enables to increase the frequency of crop production and alleviates water shortage caused by poor rains /dry seasons. The use of extensive irrigation is an idea fanned by many agricultural experts in the wake of the recurrent drought and famine. The survey results show that the practice of irrigation in the country has a long way to go to bring about the desired change as shown in Table 1.

The total irrigated crop area in the country within the private peasant holdings was estimated to be more than 154 thousand hectares. The farmers who practice irrigation are estimated to number more than one million. Most of the area irrigated was under maize, sorghum, Teff and wheat estimated to be about 32 thousand for maize, more than 26 thousand for sorghum, more than 19 thousand hectares for Teff , and about 10 thousand hectares for wheat.

3.2 Holders applied inputs by education status

The numbers of holders who applied different types of input (fertilizer, improved seed pesticide) were estimated and disaggregated by education status. More than eight million were illiterate while about 1.4 million were educated up to grade six. For details see Table 2.

3.3 Causes of crop damage

Data on crop damage were collected and the major causes of crop damage reported by farmers were hailstone, too much rain, weeds, birds and frost or flood. About 5.61 million holders reported that hailstone was the major cause of crop damage followed by too much rain, which was reported by about 1.96 million holders as a major cause of crop damage (see Table 3).

3.4 Extension package and other services

The number of holders participating in various crop extension packages was estimated to be more than 2.9 million. Most of the area under the extension program was reported to be under Teff, wheat and maize estimated to be more than 479 thousand, more than 310 thousand and about 288 thousand hectares, respectively, as shown in Table 1. The extension package embraced more than 1.18 million Teff growers, about 953 thousand wheat growers and more than 1.1 million maize growers,. Credit and advisory services users numbered more than 3.2 million and about 8.28 million holders, respectively, as shown in Table 4.

3.5 Source of water for irrigation

According to the survey result, the main source of irrigation in Ethiopia during the 2009/10 cropping season was river, which was reported by about 703 thousand holders. A total area of about 118 thousand hectare was irrigated using river water. Water harvest, ponds and lakes were also used by farmers a source of water for irrigation (see Tables 5-6).

3.6. Copping strategy for oxen shortage

Data on coping strategy of oxen shortage by holders were also gathered and pairing with someone's ox was reported to be the major coping strategy, which was estimated to be practiced by more than 2.8 million holders. More than 2.3 million holders were reported to borrow oxen from others and about 2.24 million holders have used hand digging as a coping strategy for oxen shortage (see Table 8).

Note:-

1. If in some tables figures do not add up to total it is due to rounding
2. Those farm management practice designated by “*” in all tables could not be reported because of high coefficient of variation (i.e. they are less reliable). However, they are consolidated in the total estimates.
3. In all tables “-” indicates not reported.

Fig 1. Inputs Applied Area (Ha), Ethiopia

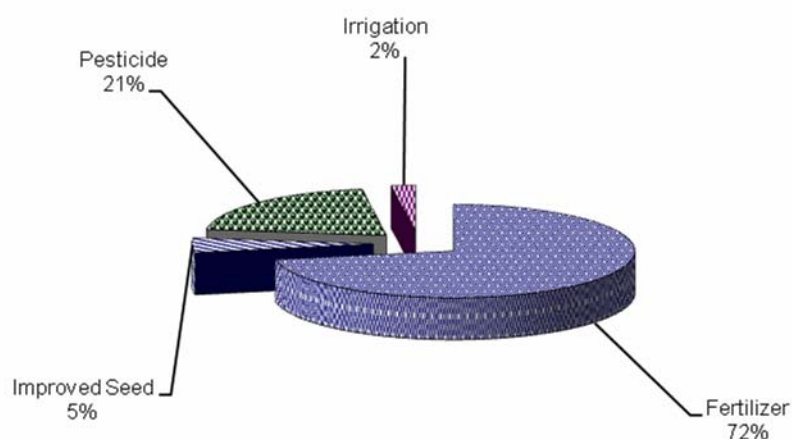
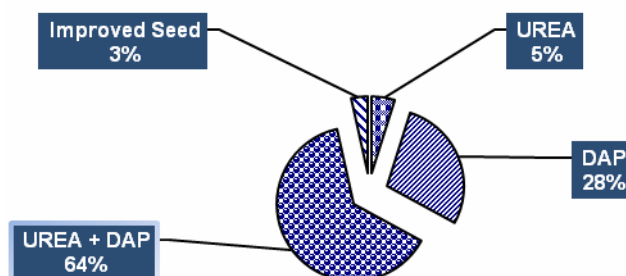


Fig 2. Quantity of Inputs Applied (QT), Ethiopia



STATISTICAL TABLES

Table1. Number of Holders, Inputs Applied Area and Quantity of Inputs used

Ethiopia								
Crop type	All	All Fertilizers		Natural		DAP		Quintal
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	
All	12,954,749	5,163,486	4,227,495	8,340,727	1,996,080	2,841,589	1,336,931	1,229,530
Cereals	9,233,025	3,962,605	3,345,830	5,406,447	1,239,116	2,425,525	1,118,952	949,731
Teff	2,588,661	1,265,026	1,121,472	808,037	200,084	932,621	360,216	255,850
Barley	1,129,112	486,262	303,346	1,504,886	216,411	689,727	182,341	173,234
Wheat	1,683,565	912,236	954,573	1,146,637	182,490	837,127	273,891	246,992
Maize	1,772,253	791,949	745,770	3,031,586	356,124	767,816	164,783	153,849
Sorghum	1,618,677	338,283	93,759	1,007,410	253,207	215,170	41,120	34,499
Finger millet	368,999	160,628	115,911	159,326	27,295	280,813	93,777	79,777
Oats / 'Aja'	24,018	6,008	8,683	55,321	2,443	29,260	2,640	5,371
Rice	47,739	2,213	2,316	12,334	*	*	*	*
Pulses	1,489,308	399,582	410,534	2,097,836	182,037	650,886	95,151	111,134
Horse / Faba beans	512,067	171,763	141,462	1,209,228	97,373	321,546	38,698	49,033
Field Peas	226,533	71,909	62,199	313,184	27,876	162,060	26,010	27,768
Haricot beans	244,013	60,447	48,176	624,023	30,110	198,118	22,806	23,139
Chick peas	213,187	43,768	65,693	98,643	10,939	15,203	3,007	3,650
Lentils	105,956	26,117	51,906	77,574	7,528	17,514	2,460	3,275
Vetch / Grass peas	135,658	21,005	35,084	47,534	5,615	9,837	1,453	2,227
Soya beans	5,679	571	307	11,390	471	840	54	67
Fenugreek	21,183	2,999	3,568	126,641	1,842	8,550	279	772
Gibto	25,033	1,004	2,139	6,652	284	7,296	385	*
Oilseeds	780,916	162,899	176,981	521,793	49,544	267,588	72,281	69,165
Neug	256,794	67,246	64,947	60,686	12,526	86,424	33,985	29,129
Linseed	140,801	54,877	33,766	119,094	12,476	99,611	31,870	21,871
Groundnuts	41,579	8,820	3,043	41,037	7,043	7,177	437	1,754
Safflower	4,653	1,643	1,696	28,091	1,060	*	*	*
Sesame	315,843	13,950	4,082	48,814	10,329	14,248	2,320	*
Rapeseed	21,247	16,363	69,447	240,968	6,109	63,096	3,457	13,129
Vegetables	138,393	75,925	79,657	2,890,824	39,600	172,871	11,580	24,238
Lettuce	*	*	*	26,966	75	-	-	-
Head cabbage	2,562	1,478	1,516	165,225	803	6,086	145	419
Ethiopian cabbage	32,782	22,133	12,527	1,839,775	20,822	65,244	907	6,979
Tomatoes	4,953	1,628	2,119	93,930	783	4,749	*	*
Green peppers	7,850	3,340	5,792	373,988	2,385	7,536	141	1,613
Red peppers	89,862	47,034	57,513	752,346	14,541	94,119	10,328	14,737
Swiss chard	227	196	*	79,974	192	-	-	-
Root crops	212,208	108,211	97,916	2,641,303	75,179	341,762	17,617	36,447
Beetroot	1,096	839	1,627	172,771	598	6,885	*	*
Carrot	2,713	1,303	2,059	86,862	567	9,763	*	942
Onion	17,588	8,643	18,411	279,982	3,663	18,205	*	2,453
Potatoes	69,784	46,406	45,519	694,993	24,762	236,204	13,286	24,301
Garlic	15,361	8,641	18,316	1,145,408	6,523	43,344	517	4,157
Taro 'Godere'	52,201	20,887	2,603	458,512	19,404	16,719	1,187	1,165
Sweet potatoes	53,465	21,492	9,380	566,503	19,662	25,072	691	2,856
Other Temporary	63,418	25,252	19,986	1,430,519	21,655	48,067	1,613	4,905
Fruit Crops	53,086	20,337		1,293,356	18,587			
Avocado	5,694	2,814		417,702	2,725			
Bananas	29,409	10,840		648,200	9,643			
Guava	1,944	815		115,606	605			
Lemons	753	265		60,207	262			
Mangoes	8,630	2,539		270,427	2,434			
Oranges	3,471	1,860		160,567	1,807			
Papayas	3,067	1,200		249,864	1,108			
Pineapples	*	*		*	*			
Stimulant Crops	557,813	134,712		2,472,229	107,085			
Chat	138,811	45,214		761,297	37,410			
Coffee	395,003	78,819		1,410,036	61,330			
Hops / 'Gesho'	23,998	10,679		748,121	8,345			
Enset	395,632	262,595		2,340,307	254,113			
Sugar cane	18,908	7,192		331,967	5,687			
Other permanent	12,040	4,177		427,312	3,477			

(Table 1cont'd.)

Ethiopia

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	802,039	237,396	213,026	2,867,057	1,593,079	2,784,939	12,539,138	10,979,645	7,692,845
Cereals	643,551	203,424	166,397	2,607,976	1,401,114	2,229,702	11,250,790	7,660,560	5,814,495
Teff	314,805	106,874	77,469	1,319,327	597,851	788,154	5,221,792	2,244,829	1,262,500
Barley	75,391	15,223	12,083	382,132	72,287	118,029	4,053,950	951,195	1,441,630
Wheat	171,684	35,444	31,715	1,148,935	420,411	675,866	4,272,681	1,417,579	1,988,935
Maize	182,660	28,402	35,457	932,416	242,639	556,465	6,121,503	1,250,162	505,333
Sorghum	42,311	10,712	6,487	143,018	33,245	52,773	3,721,003	1,382,453	341,893
Finger millet	32,067	6,197	2,342	135,559	33,359	33,792	1,288,032	350,430	148,545
Oats / 'Aja'	3,446	*	*	8,906	728	2,976	237,470	20,381	45,439
Rice	2,008	375	*	*	*	*	116,463	43,531	80,220
Pulses	75,064	10,200	13,311	496,422	112,194	286,090	6,266,950	1,358,379	1,610,354
Horse / Faba beans	34,970	4,926	6,181	221,426	30,767	86,248	3,414,643	459,195	670,148
Field Peas	8,766	1,153	1,027	78,134	16,870	33,404	1,421,108	209,767	263,626
Haricot beans	14,535	1,102	*	81,391	6,430	22,424	1,975,286	205,379	153,847
Chick peas	6,391	911	1,265	83,834	28,910	60,777	897,521	202,745	189,283
Lentils	4,167	*	*	68,741	15,592	48,399	701,265	100,086	137,551
Vetch / Grass peas	*	*	*	60,393	12,436	31,277	645,699	131,233	158,302
Soya beans	*	*	*	1,055	36	239	58,631	5,504	4,327
Fenugreek	2,325	*	*	14,731	841	2,511	377,351	19,525	21,397
Gibto	*	*	*	3,203	*	810	104,371	24,945	11,872
Oilseeds	37,666	4,814	5,351	206,871	36,261	102,465	2,537,871	706,361	267,996
Neug	9,970	1,917	907	55,271	18,818	34,912	808,588	218,748	94,409
Linseed	5,139	*	554	39,214	9,779	11,341	811,685	120,293	105,417
Groundnuts	5,296	*	760	*	*	*	184,334	32,393	19,967
Safflower	4,543	240	*	*	*	*	88,336	4,450	662
Sesame	4,303	616	340	2,862	*	*	568,471	311,383	37,094
Rapeseed	10,420	258	*	113,687	6,539	54,314	454,675	19,094	10,447
Vegetables	131,708	8,595	9,397	194,278	16,149	46,023	4,550,562	122,832	-
Lettuce	*	*	*	*	*	*	29,624	*	-
Head cabbage	6,093	*	*	*	*	867	239,082	1,760	-
Ethiopian cabbage	5,077	*	*	23,773	*	5,184	2,456,810	27,808	-
Tomatoes	*	*	*	7,750	*	*	180,287	4,312	-
Green peppers	10,643	*	797	20,384	484	3,382	703,663	6,645	-
Red peppers	110,616	7,880	7,845	138,488	14,285	34,932	1,652,897	81,998	-
Swiss chard	*	*	*	*	*	*	83,058	193	-
Root crops	100,210	3,419	8,110	215,338	11,996	53,359	4,581,220	183,254	-
Beetroot	*	*	*	*	*	1,044	226,463	937	-
Carrot	*	*	*	*	*	*	129,511	1,657	-
Onion	16,837	798	*	36,190	2,759	*	498,445	13,382	-
Potatoes	30,903	*	*	87,350	6,511	17,405	1,252,179	59,255	-
Garlic	46,143	408	1,488	65,953	*	12,671	1,852,146	13,507	-
Taro 'Godere'	1,918	*	34	6,876	210	1,405	886,494	49,164	-
Sweet potatoes	10,183	244	*	26,106	896	5,547	1,162,399	45,351	-
Other Temporary	24,678	879	*	30,439	1,106	12,026	2,420,822	56,431	-
Fruit Crops							2,455,885	48,927	
Avocado							737,613	5,185	
Bananas							1,417,830	27,414	
Guava							211,494	1,640	
Lemons							147,526	687	
Mangoes							615,749	7,811	
Oranges							315,378	3,332	
Papayas							515,256	2,741	
Pineapples							10,558	*	
Stimulant Crops							4,603,420	456,021	
Chat							1,521,562	110,096	
Coffee							2,745,145	324,548	
Hops / 'Gesho'							1,481,536	21,378	
Enset							3,131,647	359,242	
Sugar cane							713,163	16,291	
Other permanent							872,888	11,347	

(Table 1 Con' td.)

Ethiopia

Crop type	IMPROVED SEED			PESTICIDE		IRRIGATION		EXTENSION PACKAGE	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	1,565,327	364,154	237,751	3,164,053	1,493,067	1,076,103	154,424	3,087,304	1,563,334
Cereals	1,344,986	322,819	219,987	2,961,550	1,241,060	474,711	96,109	2,903,566	1,381,028
Teff	132,582	44,755	19,304	1,691,970	432,078	95,885	19,117	1,234,343	479,078
Barley	51,591	8,698	17,143	816,970	140,519	48,952	6,514	578,985	126,440
Wheat	192,484	37,888	73,271	1,571,593	396,016	65,216	9,934	1,055,031	310,146
Maize	1,124,946	209,850	102,112	438,910	84,282	237,105	32,195	1,438,825	287,664
Sorghum	72,375	16,390	3,862	368,925	128,798	133,820	26,188	238,903	80,480
Finger millet	17,197	3,500	1,194	205,915	51,771	5,302	1,613	294,947	94,700
Oats / 'Aja'	-	-	-	60,276	3,881	*	*	19,894	1,365
Rice	*	*	*	*	*	*	*	*	*
Pulses	82,349	12,912	14,231	598,527	143,451	83,705	7,891	536,670	91,783
Horse / Faba beans	32,865	4,413	3,809	280,666	48,836	25,015	2,016	297,247	39,083
Field Peas	7,269	2,022	843	100,001	22,836	5,214	*	97,920	17,017
Haricot beans	27,954	3,524	6,612	83,590	14,837	26,480	*	117,336	12,111
Chick peas	7,474	2,043	1,390	93,935	27,267	12,219	1,961	42,907	*
Lentils	3,998	*	*	72,234	8,449	2,454	313	40,243	6,247
Vetch / Grass peas	*	*	*	72,300	20,237	3,035	*	16,243	2,788
Soya beans	1,502	115	52	4,323	*	*	*	*	*
Fenugreek	2,300	*	*	10,478	586	11,587	*	20,252	462
Gibto	-	-	-	*	*	*	*	7,353	*
Oilseeds	32,074	9,139	3,533	234,285	67,726	16,901	971	288,595	42,203
Neug	18,706	7,411	1,724	83,094	28,444	2,375	164	50,824	14,417
Linseed	8,392	*	*	121,622	32,487	5,696	*	48,683	8,843
Groundnuts	*	*	*	*	*	2,245	165	*	*
Safflower	-	-	-	*	*	*	*	13,814	521
Sesame	*	*	*	16,939	5,483	2,815	*	33,051	8,777
Rapeseed	2,974	148	*	16,612	*	3,425	*	154,427	7,784
Vegetables	76,465	2,788	-	126,953	5,701	254,612	5,090	273,567	17,726
Lettuce	4,640	*	-	*	*	*	*	6,884	*
Head cabbage	21,363	*	-	5,906	*	29,649	*	25,226	*
Ethiopian cabbage	9,186	76	-	45,794	664	38,074	333	47,163	499
Tomatoes	6,590	*	-	5,903	*	36,344	637	14,696	352
Green peppers	9,687	116	-	14,754	120	88,689	1,490	30,374	*
Red peppers	18,733	*	-	55,681	4,460	99,414	1,966	168,608	15,693
Swiss chard	12,566	21	-	*	*	12,001	*	8,013	10
Root crops	121,910	3,721	-	188,791	8,370	326,580	11,408	335,877	11,565
Beetroot	21,023	*	-	3,907	*	9,283	*	18,645	42
Carrot	23,184	*	-	*	*	20,558	*	22,087	*
Onion	34,590	*	-	26,663	1,636	84,033	3,116	62,717	2,684
Potatoes	21,923	1,726	-	89,865	4,722	87,344	3,929	129,883	5,900
Garlic	10,518	97	-	46,789	404	106,166	779	131,641	1,558
Taro 'Godere'	9,139	241	-	14,558	998	2,516	*	8,348	451
Sweet potatoes	23,165	462	-	10,712	217	83,094	3,089	26,039	767
Other Temporary	14,750	*	-	41,496	1,431	59,984	1,042	79,088	2,063
Fruit Crops				33,512	778	274,913	6,726	73,207	1,133
Avocado				3,552	8	24,513	*	12,644	44
Bananas				15,914	*	134,520	3,489	21,375	236
Guava				2,296	*	51,278	376	12,776	82
Lemons				*	*	38,656	262	7,230	29
Mangoes				6,064	19	55,298	781	19,745	141
Oranges				*	*	43,341	697	6,228	*
Papayas				3,788	*	72,327	877	20,067	*
Pineapples				-	-	*	*	-	-
Stimulant Crops	147,520	9,852	-	168,830	20,101	335,005	14,843	160,814	11,764
Chat				94,957	5,950	197,351	8,266	59,396	3,374
Coffee	133,062	7,952	-	78,140	14,151	211,479	6,577	108,796	8,391
Hops / 'Gesho'				29,971	937	205,324	3,085	88,246	1,722
Enset				55,541	2,968	31,109	3,438		
Sugar cane				9,290	418	125,259	3,079	23,492	733
Other permanent				7,582	*	73,983	743	21,869	240

Table1.1 Number of Holders, Inputs Applied Area and Quantity of Inputs used

Tigray

Crop type	All	All Fertilizers		Natural		DAP		
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	871,147	446,993	211,180	648,847	202,699	127,747	63,853	49,460
Cereals	693,967	415,190	205,931	566,531	175,857	124,564	61,194	47,694
Teff	187,859	115,081	65,571	84,772	22,445	56,758	19,774	9,577
Barley	106,788	67,577	39,415	202,717	30,936	34,431	7,144	7,787
Wheat	113,596	76,723	59,122	144,706	21,001	34,343	8,192	8,081
Maize	64,649	53,802	11,120	343,207	39,006	18,427	3,306	1,686
Sorghum	155,421	65,188	5,822	142,808	52,254	22,712	8,385	3,810
Finger millet	64,612	36,058	23,652	56,329	10,183	45,086	14,144	*
Oats / 'Aja'	*	*	*	-	-	*	*	*
Rice	*	*	*	*	*	*	*	*
Pulses	63,798	15,954	1,762	156,054	14,023	7,999	955	*
Horse / Faba beans	19,727	6,941	813	99,110	6,097	*	*	*
Field Peas	8,331	3,825	*	35,104	3,172	4,601	*	*
Haricot beans	4,076	711	-	8,649	711	-	-	-
Chick peas	13,549	1,233	*	11,575	1,018	*	*	*
Lentils	7,910	*	*	20,136	*	*	*	*
Vetch / Grass peas	9,459	705	-	6,369	705	-	-	-
Soya beans	*	-	-	-	-	-	-	-
Fenugreek	691	194	*	8,296	*	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oilseeds	98,566	10,737	895	44,197	8,732	7,569	1,593	*
Neug	6,744	422	-	5,133	422	-	-	-
Linseed	13,148	2,266	*	18,188	1,766	*	*	*
Groundnuts	*	*	-	*	*	-	-	-
Safflower	*	*	-	*	*	-	-	-
Sesame	78,053	7,909	*	19,506	6,405	*	*	*
Rapeseed	*	*	-	*	*	-	-	-
Vegetables	3,682	2,205	1,174	145,079	1,805	3,244	36	66
Lettuce	3	3	-	2,136	3	-	-	-
Head cabbage	*	*	*	*	*	-	-	-
Ethiopian cabbage	*	*	-	*	*	-	-	-
Tomatoes	448	237	184	9,440	116	*	*	*
Green peppers	633	295	*	35,620	241	*	-	-
Red peppers	2,560	1,638	*	102,506	1,427	*	*	*
Swiss chard	17	15	*	4,432	15	-	-	-
Root crops	1,823	1,000	563	51,037	738	*	*	*
Beetroot	*	*	-	*	*	-	-	-
Carrot	*	*	*	-	-	-	-	-
Onion	341	145	117	9,081	86	-	-	-
Potatoes	907	535	108	20,161	416	*	*	*
Garlic	552	296	*	30,154	231	*	*	*
Taro 'Godere'	-	-	-	-	-	-	-	-
Sweet potatoes	*	*	-	*	*	-	-	-
Other Temporary	426	161	*	11,890	159	-	-	-
Fruit Crops	1,002	460	*	14,861	352	*	*	*
Avocado	*	*	*	*	*	-	-	-
Bananas	*	*	*	1,852	*	-	-	-
Guava	108	67	*	8,050	59	-	-	-
Lemons	*	*	*	3,326	*	-	-	-
Mangoes	29	*	*	1,560	*	-	-	-
Oranges	*	*	*	1,645	*	-	-	-
Papayas	398	*	*	6,319	*	-	-	-
Pineapples	*	-	-	-	-	-	-	-
Stimulant Crops	2,704	654	*	42,580	477	*	*	*
Chat	*	*	*	4,853	*	-	-	-
Coffee	*	*	*	2,767	*	-	-	-
Hops / 'Gesho'	1,133	415	*	37,727	249	-	-	-
Enset	-	-	-	-	-	-	-	-
Sugar cane	*	*	*	*	*	-	-	-
Other permanent	5,146	598	-	-	537	-	-	-

(Table 1.1 cont'd.)

Tigray

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	72,779	17,652	12,072	332,043	162,789	149,648	949,317	854,592	627,763
Cereals	67,518	17,326	11,632	329,846	160,813	146,605	933,071	678,462	543,206
Teff	35,131	7,271	4,106	212,453	65,590	51,888	526,512	184,121	99,445
Barley	13,678	2,113	1,877	126,223	27,385	29,752	446,923	106,692	166,717
Wheat	28,137	4,770	4,023	164,091	42,759	47,018	380,966	105,706	166,461
Maize	11,559	1,268	821	84,619	10,222	8,613	523,276	63,767	32,457
Sorghum	*	*	*	12,897	*	1,885	324,338	153,569	48,693
Finger millet	7,984	1,621	571	46,324	10,111	6,734	252,618	64,227	28,831
Oats / 'Aja'	-	-	-	*	*	*	*	*	*
Rice	*	*	*	*	*	*	*	*	*
Pulses	1,807	*	*	11,526	820	769	430,104	63,617	67,492
Horse / Faba beans	*	*	*	8,891	496	424	248,785	19,648	26,756
Field Peas	-	-	-	*	*	*	80,323	8,320	11,824
Haricot beans	-	-	-	-	-	-	30,364	4,076	1,554
Chick peas	*	*	*	*	*	*	72,929	13,549	9,288
Lentils	-	-	-	*	*	*	75,407	7,854	8,012
Vetch / Grass peas	-	-	-	-	-	-	47,044	9,459	9,658
Soya beans	-	-	-	-	-	-	*	*	*
Fenugreek	-	-	-	*	*	*	21,358	691	398
Gibto	-	-	-	-	-	-	-	-	-
Oilseeds	*	*	*	1,516	*	*	250,095	98,383	17,066
Neug	-	-	-	-	-	-	50,360	6,744	2,262
Linseed	*	*	*	*	*	*	100,192	13,148	5,569
Groundnuts	-	-	-	-	-	-	*	*	*
Safflower	-	-	-	-	-	-	*	*	*
Sesame	*	*	*	*	*	*	125,725	77,872	8,983
Rapeseed	-	-	-	-	-	-	*	*	*
Vegetables	4,480	44	*	16,419	321	*	217,777	3,601	-
Lettuce	-	-	-	-	-	-	2,453	3	-
Head cabbage	*	*	*	-	-	-	1,947	*	-
Ethiopian cabbage	-	-	-	-	-	-	*	*	-
Tomatoes	*	*	*	*	*	*	24,247	382	-
Green peppers	-	-	-	4,871	54	*	62,108	630	-
Red peppers	*	*	*	*	*	*	143,058	2,555	-
Swiss chard	-	-	-	*	*	*	5,290	9	-
Root crops	*	*	*	10,401	200	*	104,327	1,580	-
Beetroot	-	-	-	-	-	-	*	*	-
Carrot	-	-	-	*	*	*	-	-	-
Onion	*	*	*	3,912	*	110	18,413	169	-
Potatoes	-	-	-	*	*	*	35,933	902	-
Garlic	*	*	*	6,384	58	*	71,750	503	-
Taro 'Godere'	-	-	-	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-	*	*	-
Other Temporary	*	*	*	-	-	-	32,808	345	-
Fruit Crops							41,656	800	
Avocado							-	-	
Bananas							3,400	*	
Guava							13,543	73	
Lemons							15,486	100	
Mangoes							1,608	*	
Oranges							5,377	*	
Papayas							18,075	321	
Pineapples							*	*	
Stimulant Crops							128,678	2,643	
Chat							16,030	*	
Coffee							9,720	*	
Hops / 'Gesho'							115,287	1,106	
Enset							-	-	
Sugar cane							*	*	
Other permanent							103,624	5,127	

Table1.2 Number of Holders, Inputs Applied Area and Quantity of Inputs used

Afar

Crop type	All	All Fertilizers		Natural		DAP		
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	6,324	*	*	724	*	*	*	*
Cereals	5,697	*	*	*	*	*	*	*
Teff	*	*	*	*	*	*	*	*
Barley	*	*	-	*	*	-	-	-
Wheat	-	-	-	-	-	-	-	-
Maize	3,499	*	-	*	*	-	-	-
Sorghum	578	*	*	*	*	*	*	*
Finger millet	-	-	-	-	-	-	-	-
Oats / 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulses	*	*	*	*	*	*	*	*
Horse / Faba beans	-	-	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-	-	-
Haricot beans	*	*	-	*	*	-	-	-
Chick peas	*	*	*	-	-	*	*	*
Lentils	*	-	-	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oilseeds	*	*	-	*	*	-	-	-
Neug	*	-	-	-	-	-	-	-
Linseed	*	-	-	-	-	-	-	-
Groundnuts	*	-	-	-	-	-	-	-
Safflower	*	*	-	*	*	-	-	-
Sesame	*	*	-	*	*	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables	*	-	-	-	-	-	-	-
Lettuce	-	-	-	-	-	-	-	-
Head cabbage	-	-	-	-	-	-	-	-
Ethiopian cabbage	*	-	-	-	-	-	-	-
Tomatoes	*	-	-	-	-	-	-	-
Green peppers	*	-	-	-	-	-	-	-
Red peppers	*	-	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-	-	-
Root crops	*	*	*	-	-	-	-	-
Beetroot	-	-	-	-	-	-	-	-
Carrot	-	-	-	-	-	-	-	-
Onion	*	*	*	-	-	-	-	-
Potatoes	-	-	-	-	-	-	-	-
Garlic	-	-	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-	-	-
Sweet potatoes	*	-	-	-	-	-	-	-
Other Temporary	*	-	-	-	-	-	-	-
Fruit Crops	*	-	-	-	-	-	-	-
Avocado	*	-	-	-	-	-	-	-
Bananas	*	-	-	-	-	-	-	-
Guava	*	-	-	-	-	-	-	-
Lemons	*	-	-	-	-	-	-	-
Mangoes	*	-	-	-	-	-	-	-
Oranges	*	-	-	-	-	-	-	-
Papayas	*	-	-	-	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-
Stimulant Crops	-	-	-	-	-	-	-	-
Chat	-	-	-	-	-	-	-	-
Coffee	-	-	-	-	-	-	-	-
Hops / 'Gesho'	-	-	-	-	-	-	-	-
Enset	-	-	-	-	-	-	-	-
Sugar cane	*	*	-	*	*	-	-	-
Other permanent	83	*	-	-	*	-	-	-

(Table 1.2 cont'd.)

Afar

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	*	*	*	*	*	*	8,777	5,258	2,061
Cereals	*	*	*	-	-	-	5,645	4,639	2,007
Teff	*	*	*	-	-	-	2,316	*	*
Barley	-	-	-	-	-	-	*	*	*
Wheat	-	-	-	-	-	-	-	-	-
Maize	-	-	-	-	-	-	4,994	2,544	1,367
Sorghum	-	-	-	-	-	-	*	*	70
Finger millet	-	-	-	-	-	-	-	-	-
Oats / 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	-	870	*	*
Horse / Faba beans	-	-	-	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	*	*	*
Chick peas	-	-	-	-	-	-	*	*	*
Lentils	-	-	-	-	-	-	*	*	*
Vetch / Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oilseeds	-	-	-	-	-	-	*	*	*
Neug	-	-	-	-	-	-	*	*	*
Linseed	-	-	-	-	-	-	*	*	*
Groundnuts	-	-	-	-	-	-	*	*	*
Safflower	-	-	-	-	-	-	*	*	*
Sesame	-	-	-	-	-	-	*	*	*
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-	606	*	-
Lettuce	-	-	-	-	-	-	-	-	-
Head cabbage	-	-	-	-	-	-	-	-	-
Ethiopian cabbage	-	-	-	-	-	-	*	*	-
Tomatoes	-	-	-	-	-	-	*	*	-
Green peppers	-	-	-	-	-	-	*	*	-
Red peppers	-	-	-	-	-	-	450	*	-
Swiss chard	-	-	-	-	-	-	-	-	-
Root crops	-	-	-	*	*	*	264	*	-
Beetroot	-	-	-	-	-	-	-	-	-
Carrot	-	-	-	-	-	-	-	-	-
Onion	-	-	-	*	*	*	207	*	-
Potatoes	-	-	-	-	-	-	-	-	-
Garlic	-	-	-	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-	*	*	-
Other Temporary	-	-	-	-	-	-	*	*	-
Fruit Crops	-	-	-	-	-	-	*	*	-
Avocado	-	-	-	-	-	-	-	-	-
Bananas	-	-	-	-	-	-	*	*	-
Guava	-	-	-	-	-	-	*	*	-
Lemons	-	-	-	-	-	-	*	*	-
Mangoes	-	-	-	-	-	-	*	*	-
Oranges	-	-	-	-	-	-	*	*	-
Papayas	-	-	-	-	-	-	218	*	-
Pineapples	-	-	-	-	-	-	-	-	-
Stimulant Crops	-	-	-	-	-	-	-	-	-
Chat	-	-	-	-	-	-	-	-	-
Coffee	-	-	-	-	-	-	-	-	-
Hops / 'Geshe'	-	-	-	-	-	-	-	-	-
Enset	-	-	-	-	-	-	-	-	-
Sugar cane	-	-	-	-	-	-	*	*	-
Other permanent	-	-	-	-	-	-	3,386	77	-

Table1.3 Number of Holders, Inputs Applied Area and Quantity of Inputs used

Amhara

Crop type	All	All Fertilizers		Natural		DAP		
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	4,109,138	1,730,018	1,785,663	2,423,311	487,509	609,110	352,765	329,639
Cereals	2,986,622	1,531,835	1,601,325	1,891,094	361,364	561,364	321,301	282,774
Teff	1,001,028	594,730	580,868	282,665	54,601	320,952	141,327	101,815
Barley	387,862	151,146	65,345	631,431	88,273	113,080	35,012	31,742
Wheat	548,315	334,529	439,348	486,783	65,500	152,212	41,912	52,052
Maize	355,508	295,056	435,691	1,098,423	95,971	160,350	32,609	40,717
Sorghum	486,468	55,673	4,515	186,159	49,078	*	*	*
Finger millet	164,321	97,933	74,981	37,452	5,792	173,012	68,019	54,551
Oats / 'Aja'	8,743	1,664	*	31,945	1,243	*	*	*
Rice	34,376	*	*	*	*	*	*	*
Pulses	694,672	103,392	48,723	649,112	73,171	113,533	20,476	22,223
Horse / Faba beans	232,535	63,544	29,771	492,679	48,709	74,761	10,795	12,257
Field Peas	108,469	22,032	10,544	130,913	11,588	43,977	8,254	7,776
Haricot beans	51,247	3,003	*	62,445	2,588	*	*	*
Chick peas	113,337	4,276	*	30,460	3,441	*	*	*
Lentils	62,827	6,237	*	31,882	3,835	*	*	*
Vetch / Grass peas	85,262	2,142	*	14,204	1,959	-	-	-
Soya beans	*	*	-	*	*	-	-	-
Fenugreek	14,236	1,132	226	42,828	744	*	*	*
Gibto	24,891	984	2,139	*	264	7,296	385	*
Oilseeds	316,456	23,162	68,997	288,196	11,535	64,053	4,173	12,842
Neug	75,304	2,667	1,320	15,563	1,379	5,710	762	417
Linseed	31,961	2,543	945	38,440	1,728	2,850	355	*
Groundnuts	*	*	-	*	*	-	-	-
Safflower	4,014	1,540	1,668	23,539	967	*	*	*
Sesame	185,782	1,977	321	16,857	1,855	-	-	-
Rapeseed	16,415	14,211	64,743	201,955	5,384	52,257	2,847	11,573
Vegetables	37,117	26,057	26,824	710,731	8,081	34,138	1,843	1,937
Lettuce	*	*	-	5,141	*	-	-	-
Head cabbage	346	272	72	50,852	258	-	-	-
Ethiopian cabbage	1,599	1,182	*	184,813	956	-	-	-
Tomatoes	392	134	*	24,599	114	*	*	*
Green peppers	2,141	954	*	80,047	485	*	*	*
Red peppers	32,562	23,448	25,058	420,821	6,201	32,936	1,826	1,898
Swiss chard	*	*	-	21,022	*	-	-	-
Root crops	36,341	26,402	24,957	884,912	16,390	94,040	4,889	9,424
Beetroot	*	*	*	20,112	*	-	-	-
Carrot	136	104	*	18,806	101	*	*	-
Onion	3,649	2,489	*	74,542	642	3,094	*	*
Potatoes	24,130	18,440	13,803	290,787	11,773	81,191	4,671	8,756
Garlic	8,073	5,178	6,662	670,171	3,719	12,367	91	*
Taro 'Godere'	*	-	-	-	-	-	-	-
Sweet potatoes	196	74	*	8,691	*	-	-	-
Other Temporary	6,233	2,801	7,186	306,854	1,822	3,807	*	*
Fruit Crops	2,847	1,381	1,381	112,938	1,366	1,366	*	*
Avocado	*	*	*	15,718	*	*	*	*
Bananas	627	158	*	22,024	148	*	*	*
Guava	191	112	*	29,258	108	*	*	*
Lemons	245	115	*	23,646	115	*	*	*
Mangoes	213	130	*	26,010	128	*	*	*
Oranges	980	693	*	36,114	693	*	*	*
Papayas	*	70	*	22,668	70	*	*	*
Pineapples	-	-	-	-	-	-	-	-
Stimulant Crops	27,049	14,210	14,210	563,914	13,180	13,180	*	*
Chat	6,437	4,390	*	115,087	4,252	*	*	*
Coffee	5,424	3,073	*	111,737	3,024	*	*	*
Hops / 'Gesho'	15,189	6,747	*	455,916	5,904	*	*	*
Enset	6	*	*	*	*	*	*	*
Sugar cane	1,066	*	*	23,313	*	*	*	*
Other permanent	728	486	486	-	317	-	-	-

(Table 1.3 cont'd.)

Amhara

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	452,748	147,328	128,205	1,159,161	742,416	1,327,818	3,583,844	3,955,205	3,175,098
Cereals	383,778	136,681	111,379	1,141,321	712,488	1,207,171	3,472,529	2,839,536	2,322,472
Teff	238,609	85,732	61,752	622,381	313,070	417,301	2,158,869	992,385	482,825
Barley	37,849	9,304	6,411	99,733	18,557	27,192	1,530,666	385,846	595,524
Wheat	94,284	20,351	20,107	525,004	206,766	367,189	1,645,538	539,139	884,623
Maize	90,485	14,804	20,494	484,726	151,673	374,480	1,825,688	229,961	95,490
Sorghum	9,480	*	1,060	8,138	1,848	1,644	901,808	485,993	106,753
Finger millet	21,108	3,754	1,517	68,056	20,369	18,913	491,620	164,162	75,816
Oats / 'Aja'	*	*	*	*	*	*	104,043	8,743	10,848
Rice	*	*	*	*	*	*	63,463	33,307	70,592
Pulses	23,243	1,543	2,380	78,862	8,202	24,120	2,242,900	692,319	804,051
Horse / Faba beans	12,794	550	*	48,254	3,490	15,881	1,429,124	231,922	349,722
Field Peas	*	*	*	13,194	1,886	2,529	680,768	107,803	131,140
Haricot beans	2,158	*	*	6,360	*	*	293,725	51,110	42,205
Chick peas	*	*	*	*	*	*	496,065	112,572	107,495
Lentils	*	*	*	7,144	*	*	408,348	62,712	62,583
Vetch / Grass peas	*	*	*	*	*	*	397,492	85,262	88,279
Soya beans	-	-	-	-	-	-	*	*	*
Fenugreek	*	*	*	5,477	*	210	188,227	14,236	9,076
Gibto	*	*	*	3,203	*	810	101,647	24,836	11,830
Oilseeds	21,998	947	3,715	112,945	6,506	52,440	1,194,843	315,216	48,575
Neug	*	*	*	2,604	*	*	355,388	74,996	18,051
Linseed	*	*	*	3,222	*	380	313,870	31,892	7,930
Groundnuts	-	-	-	-	-	-	19,522	*	*
Safflower	4,514	238	*	*	*	*	72,388	4,014	365
Sesame	3,031	*	245	*	*	*	265,974	185,643	17,707
Rapeseed	9,781	252	*	105,938	5,728	51,173	372,982	15,690	2,093
Vegetables	100,383	6,592	5,724	88,870	9,541	19,163	1,287,027	35,755	-
Lettuce	-	-	-	-	-	-	5,508	*	-
Head cabbage	3,194	7	34	*	*	*	75,344	332	-
Ethiopian cabbage	*	*	*	*	*	*	254,630	1,595	-
Tomatoes	*	*	*	*	*	*	50,566	353	-
Green peppers	*	*	*	*	*	*	164,302	2,125	-
Red peppers	91,901	6,214	5,281	81,815	9,208	17,879	854,394	31,274	-
Swiss chard	-	-	-	-	-	-	25,835	*	-
Root crops	58,774	961	2,442	71,805	4,163	13,092	1,441,217	35,906	-
Beetroot	*	*	*	*	*	*	35,095	*	-
Carrot	*	*	*	*	*	*	27,961	133	-
Onion	11,970	278	300	19,151	*	*	160,604	3,531	-
Potatoes	*	*	*	29,280	1,708	4,204	495,970	23,977	-
Garlic	40,890	382	1,283	30,503	*	4,903	1,097,467	7,945	-
Taro 'Godere'	-	-	-	-	-	-	*	*	-
Sweet potatoes	*	*	*	*	*	*	20,382	183	-
Other Temporary	17,153	*	*	10,202	*	4,958	520,793	6,191	-
Fruit Crops							205,200	2,681	
Avocado							14,783	*	
Bananas							57,886	625	
Guava							35,686	156	
Lemons							46,148	219	
Mangoes							32,037	142	
Oranges							57,361	969	
Papayas							46,024	*	
Pineapples							-	-	
Stimulant Crops							1,015,607	25,889	
Chat							174,343	6,241	
Coffee							213,049	5,079	
Hops / 'Gesho'							862,611	14,569	
Enset							*	5	
Sugar cane							61,037	1,041	
Other permanent							146,768	667	

(Table 1.3 Con' td.)

Amhara

Crop type	IMPROVED SEED			PESTICIDE		IRRIGATION		EXTENSION PACKAGE	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	496,890	148,371	50,647	469,715	246,429	405,746	30,777	1,472,037	991,908
Cereals	458,502	144,683	49,945	405,301	224,205	92,911	14,605	1,412,107	893,876
Teff	19,077	7,891	3,325	196,112	78,363	22,211	4,414	760,272	337,778
Barley	7,348	1,388	*	43,684	9,547	25,252	4,320	259,313	55,079
Wheat	48,392	9,004	12,738	162,826	63,393	6,099	729	587,328	195,998
Maize	395,604	125,108	30,601	37,824	4,168	38,179	2,621	638,404	190,392
Sorghum	*	*	-	74,372	42,309	8,364	1,263	83,065	38,741
Finger millet	*	*	*	60,484	25,615	3,065	*	209,639	75,210
Oats / 'Aja'	-	-	-	*	*	*	*	*	*
Rice	*	*	*	*	*	*	*	*	*
Pulses	11,692	1,363	703	54,682	19,608	17,620	2,436	292,919	50,807
Horse / Faba beans	3,470	284	*	5,434	*	6,576	716	198,413	27,490
Field Peas	*	*	*	3,166	309	*	*	65,710	9,855
Haricot beans	*	*	*	*	*	*	*	25,853	1,362
Chick peas	*	*	*	*	*	3,283	*	22,710	3,639
Lentils	*	*	*	*	*	*	*	19,676	3,778
Vetch / Grass peas	-	-	-	*	*	*	*	10,950	2,082
Soya beans	-	-	-	-	-	-	-	*	*
Fenugreek	-	-	-	*	*	2,688	14	13,893	321
Gibto	-	-	-	*	*	*	*	7,353	*
Oilseeds	*	*	-	12,061	1,263	4,307	*	208,593	20,588
Neug	*	*	-	*	*	*	*	20,995	*
Linseed	*	*	-	*	*	*	*	16,056	1,124
Groundnuts	-	-	-	*	*	-	-	*	*
Safflower	-	-	-	*	*	*	*	13,669	516
Sesame	*	*	-	6,063	*	-	-	20,124	*
Rapeseed	*	*	-	*	*	*	*	150,497	7,659
Vegetables	14,714	*	-	6,941	*	110,384	2,110	178,948	14,797
Lettuce	*	*	-	-	-	*	*	*	*
Head cabbage	5,285	12	-	*	*	12,988	37	7,333	39
Ethiopian cabbage	-	-	-	*	*	11,539	61	20,124	*
Tomatoes	*	*	-	*	*	9,992	*	*	*
Green peppers	*	*	-	*	*	24,251	*	*	*
Red peppers	*	*	-	4,118	*	66,854	1,327	142,515	13,952
Swiss chard	*	*	-	-	-	6,379	*	*	*
Root crops	11,306	127	-	8,975	87	107,222	3,373	202,557	7,473
Beetroot	*	9	-	-	-	*	*	6,353	13
Carrot	*	*	-	-	-	5,046	*	*	*
Onion	3,546	41	-	3,744	*	35,242	887	38,842	*
Potatoes	*	*	-	*	*	34,812	2,040	92,033	4,439
Garlic	*	*	-	2,203	*	55,140	402	101,530	*
Taro 'Godere'	-	-	-	-	-	-	-	-	-
Sweet potatoes	*	*	-	*	*	*	*	*	*
Other Temporary	-	-	-	3,913	*	24,098	*	44,754	1,158
Fruit Crops				*	*	81,413	1,438	31,953	*
Avocado	-	-	-	-	-	8,055	*	8,588	*
Bananas	-	-	-	-	-	29,643	427	3,742	*
Guava	*	*	-	*	*	12,213	76	6,740	38
Lemons	*	*	-	*	*	15,955	*	*	*
Mangoes	*	*	-	*	*	15,032	66	13,807	93
Oranges	*	*	-	*	*	21,360	360	3,542	*
Papayas	*	*	-	*	*	11,479	*	8,126	*
Pineapples	-	-	-	-	-	-	-	-	-
Stimulant Crops	21,918	*	-	*	*	187,889	5,621	89,689	2,327
Chat				*	*	54,768	1,555	9,539	*
Coffee	13,148	*	-	4,313	*	73,429	1,686	25,218	697
Hops / 'Gesho'				*	*	129,718	2,380	67,885	1,346
Enset				-	-	*	*		
Sugar cane				-	-	35,889	501	8,684	*
Other permanent				-	-	-	-	-	-

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

Oromia								
Crop type	All	All Fertilizers		Natural		DAP		Quintal
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	
All	6,028,684	2,044,253	1,681,573	2,853,223	792,559	1,162,553	651,830	575,773
Cereals	4,466,528	1,532,896	1,095,975	1,940,327	583,990	908,000	508,289	399,427
Teff	1,182,811	441,046	392,250	393,599	113,160	285,293	124,689	87,722
Barley	542,476	213,434	156,017	425,845	78,083	292,929	111,027	100,067
Wheat	857,603	378,480	311,207	383,246	80,872	341,660	168,118	120,920
Maize	1,000,056	290,287	149,388	903,953	168,941	254,596	71,742	59,052
Sorghum	754,878	185,386	63,142	460,667	132,573	116,557	22,541	19,726
Finger millet	105,611	20,017	15,037	48,397	9,148	34,443	8,089	7,142
Oats / 'Aja'	14,147	3,855	7,906	20,599	1,127	20,440	2,079	4,785
Rice	8,945	391	*	3,518	*	*	*	*
Pulses	559,780	219,621	321,826	620,895	63,945	235,737	50,266	63,591
Horse / Faba beans	205,520	81,326	100,203	319,497	31,893	128,134	20,137	28,454
Field Peas	77,397	38,178	45,815	64,100	10,001	57,172	13,212	15,200
Haricot beans	114,707	26,334	23,419	180,941	11,431	42,389	11,248	10,653
Chick peas	79,405	36,649	64,508	33,677	5,204	7,535	2,134	3,297
Lentils	34,248	17,135	49,918	19,523	1,381	13,457	1,844	2,996
Vetch / Grass peas	40,673	18,059	34,384	25,574	2,861	9,481	1,444	2,224
Soya beans	1,739	396	284	6,892	*	743	43	52
Fenugreek	6,054	1,545	3,295	60,558	839	6,068	204	715
Gibto	*	-	-	-	-	-	-	-
Oilseeds	322,285	124,723	106,063	161,244	26,644	186,388	65,771	55,319
Neug	163,785	63,351	63,566	38,628	10,237	80,409	32,905	28,651
Linseed	92,675	49,444	32,423	54,792	8,848	86,514	30,721	21,337
Groundnuts	26,655	*	2,450	24,962	*	6,144	340	1,661
Safflower	*	*	*	*	*	-	-	-
Sesame	34,154	3,503	*	10,710	1,917	*	1,197	*
Rapeseed	4,535	2,014	4,663	32,280	595	10,685	608	1,538
Vegetables	50,843	12,889	29,377	709,192	7,978	62,992	2,304	10,311
Lettuce	*	*	*	9,676	*	-	-	-
Head cabbage	1,658	*	1,013	47,770	241	2,116	*	*
Ethiopian cabbage	11,467	4,112	10,247	423,379	3,412	41,975	597	6,243
Tomatoes	*	*	*	13,391	187	*	*	*
Green peppers	3,446	1,202	4,821	159,704	861	5,471	*	1,578
Red peppers	32,590	5,784	11,396	143,373	3,163	14,588	1,509	1,999
Swiss chard	101	*	*	16,473	*	-	-	-
Root crops	91,021	38,109	57,994	817,792	22,599	115,020	8,335	19,124
Beetroot	669	507	1,569	64,564	284	4,621	*	*
Carrot	2,373	1,009	1,922	29,489	*	6,973	*	*
Onion	9,968	4,551	*	108,392	2,052	11,848	*	*
Potatoes	32,032	16,766	19,722	175,177	7,646	44,000	5,089	8,917
Garlic	6,078	2,652	11,357	332,368	2,079	27,122	413	3,629
Taro 'Godere'	8,452	2,673	2,225	63,481	1,681	10,276	808	823
Sweet potatoes	31,448	9,952	8,567	227,293	8,507	17,860	486	2,453
Other Temporary	23,485	7,349	9,417	315,374	5,480	26,818	1,131	3,691
Fruit Crops	16,471	5,437	380,062	4,717				
Avocado	1,350	398		36,174	381			
Bananas	8,976	3,135		169,637	2,697			
Guava	1,213	399		49,410	202			
Lemons	57	12		9,538	12			
Mangoes	3,393	1,086		111,045	1,031			
Oranges	803	171		30,852	169			
Papayas	673	234		85,222	222			
Pineapples	6	*		*	*			
Stimulant Crops	380,641	66,529		676,059	47,132			
Chat	96,660	25,393		298,607	21,426			
Coffee	278,161	38,285		295,181	24,143			
Hops / 'Gesho'	5,820	2,851		158,095	1,563			
Enset	105,368	31,744		417,776	26,478			
Sugar cane	10,739	3,988		84,537	2,847			
Other permanent	1,522	968		-	*			

(Table 1.4 cont'd.)

Oromia

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	192,722	53,965	51,395	935,138	545,900	1,054,405	4,727,358	4,296,807	3,040,382
Cereals	133,267	37,659	29,177	725,800	402,958	667,371	4,246,808	3,124,174	2,238,616
Teff	28,902	11,227	9,718	369,318	191,970	294,809	1,751,285	854,363	574,856
Barley	16,341	3,431	3,387	105,919	20,894	52,563	1,300,621	367,696	549,349
Wheat	31,773	7,537	5,120	283,407	121,952	185,166	1,511,690	615,228	657,702
Maize	58,722	9,220	7,412	160,443	40,385	82,924	2,257,300	659,080	259,039
Sorghum	22,887	5,877	2,813	98,705	24,395	40,602	1,538,996	522,754	130,823
Finger millet	*	*	*	17,015	2,642	7,855	414,989	88,057	30,056
Oats / 'Aja'	*	*	*	7,153	571	2,818	110,583	10,521	33,317
Rice	*	*	*	*	*	*	35,792	6,477	3,474
Pulses	38,628	7,841	10,216	330,985	97,569	248,019	1,926,152	431,872	614,051
Horse / Faba beans	19,997	4,128	4,419	139,901	25,168	67,331	1,002,837	153,471	238,714
Field Peas	4,179	778	705	52,850	14,186	29,911	319,867	61,321	97,749
Haricot beans	4,705	607	*	25,276	3,048	10,689	655,099	76,453	68,517
Chick peas	4,724	818	1,161	80,009	28,494	60,049	259,462	69,742	68,924
Lentils	*	*	*	59,954	13,894	46,831	190,768	28,549	66,417
Vetch / Grass peas	*	*	*	58,610	12,290	30,678	198,374	36,248	60,199
Soya beans	-	-	-	821	19	232	28,384	1,679	1,676
Fenugreek	*	*	*	8,851	*	2,299	144,056	4,406	11,856
Gibto	-	-	-	-	-	-	*	*	-
Oilseeds	12,366	3,117	1,229	88,285	29,191	49,516	881,885	249,219	187,715
Neug	5,764	1,700	569	52,667	18,509	34,346	369,320	126,049	72,315
Linseed	*	*	*	32,281	9,261	10,885	328,498	72,235	90,954
Groundnuts	*	*	*	*	*	*	100,183	17,515	7,640
Safflower	-	-	-	*	*	*	9,282	*	*
Sesame	*	*	*	*	*	*	110,696	30,033	8,208
Rapeseed	*	*	*	7,087	*	3,119	64,939	3,108	8,331
Vegetables	12,563	504	1,399	49,859	2,103	17,667	1,336,627	37,017	-
Lettuce	*	*	*	*	*	*	12,635	*	-
Head cabbage	*	*	*	*	*	822	83,761	941	-
Ethiopian cabbage	*	*	*	15,443	61	3,768	705,480	6,625	-
Tomatoes	-	-	-	*	*	*	25,236	*	-
Green peppers	5,261	*	533	10,833	171	2,709	284,961	2,260	-
Red peppers	2,962	*	*	14,450	878	8,879	425,167	26,022	-
Swiss chard	*	*	*	-	-	-	18,968	*	-
Root crops	31,755	*	*	98,009	4,976	33,539	1,563,918	63,206	-
Beetroot	-	-	-	*	*	*	95,359	598	-
Carrot	*	*	*	*	*	*	55,575	1,439	-
Onion	*	*	*	10,497	*	*	183,358	6,150	-
Potatoes	*	*	*	28,466	2,599	8,085	336,915	21,670	-
Garlic	*	*	*	28,430	141	7,540	527,850	4,407	-
Taro 'Godere'	743	21	13	6,616	162	1,389	169,836	5,544	-
Sweet potatoes	7,731	*	*	22,599	772	5,183	563,333	23,397	-
Other Temporary	5,416	*	*	13,564	*	4,993	628,857	17,083	-
Fruit Crops							799,233	12,896	
Avocado							98,275	923	
Bananas							445,201	7,079	
Guava							99,105	985	
Lemons							19,503	48	
Mangoes							246,630	2,672	
Oranges							85,103	687	
Papayas							169,049	497	
Pineapples							2,090	5	
Stimulant Crops							1,621,625	282,424	
Chat							711,396	68,396	
Coffee							962,490	210,169	
Hops / 'Gesho'							277,886	3,859	
Enset							773,874	69,516	
Sugar cane							200,159	8,163	
Other permanent							167,575	1,237	

(Table 1.4 Con' td.)

Oromia

Crop type	IMPROVED SEED			PESTICIDE		IRRIGATION		EXTENSION PACKAGE	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	472,861	131,505	55,356	1,651,087	952,705	336,955	75,215	628,616	277,378
Cereals	305,477	98,057	42,850	1,308,191	737,629	211,526	48,525	443,434	212,385
Teff	82,638	30,606	10,911	558,409	256,000	49,429	11,085	121,211	55,504
Barley	27,214	6,628	8,943	380,838	117,046	7,630	853	103,989	43,861
Wheat	54,607	14,618	11,815	514,665	234,171	27,006	5,910	119,825	59,518
Maize	108,843	29,619	6,731	290,400	71,444	89,705	11,575	134,188	35,728
Sorghum	65,365	14,094	3,595	170,742	47,351	80,003	19,013	74,577	14,105
Finger millet	14,777	2,491	855	30,629	7,595	-	-	17,996	2,842
Oats / 'Aja'	-	-	-	36,221	3,747	*	*	9,625	819
Rice	-	-	-	*	*	-	-	*	*
Pulses	53,378	11,016	9,265	505,906	121,679	22,608	3,845	103,588	31,700
Horse / Faba beans	25,506	3,943	2,891	258,268	47,619	8,212	969	51,611	9,156
Field Peas	5,788	1,835	713	86,315	21,961	*	*	17,102	6,150
Haricot beans	15,237	3,206	3,530	68,399	13,936	*	*	17,716	*
Chick peas	2,377	*	*	65,141	20,093	4,325	*	*	*
Lentils	2,464	*	*	55,551	6,469	*	*	12,287	*
Vetch / Grass peas	*	*	*	50,205	10,770	2,605	*	*	*
Soya beans	-	-	-	*	*	*	*	*	*
Fenugreek	1,982	*	*	9,988	574	*	*	2,359	*
Gibto	-	-	-	-	-	-	-	-	-
Oilseeds	26,952	8,797	3,242	203,220	63,687	4,648	*	55,884	18,212
Neug	17,776	7,286	1,724	81,761	28,336	*	*	28,022	10,090
Linseed	7,361	*	*	108,198	32,374	*	*	22,572	7,128
Groundnuts	-	-	-	*	*	*	*	*	*
Safflower	-	-	-	*	*	-	-	-	-
Sesame	*	*	*	6,986	2,008	*	*	*	*
Rapeseed	2,355	127	*	11,474	*	*	*	*	123
Vegetables	32,853	1,257	-	75,611	2,886	45,920	1,483	37,457	1,841
Lettuce	*	*	-	*	*	*	*	*	*
Head cabbage	*	*	-	*	*	*	*	*	*
Ethiopian cabbage	8,814	*	-	33,625	609	*	*	9,660	84
Tomatoes	*	*	-	*	*	*	*	*	*
Green peppers	6,237	109	-	10,166	64	*	*	5,984	121
Red peppers	11,205	691	-	26,111	1,843	3,388	*	13,828	1,183
Swiss chard	*	*	-	*	*	*	*	*	*
Root crops	56,341	3,026	-	107,625	6,237	100,620	6,251	65,984	2,863
Beetroot	*	*	-	3,479	*	3,105	*	2,968	*
Carrot	*	*	-	*	*	*	*	6,206	*
Onion	*	*	-	13,398	*	17,205	*	5,789	*
Potatoes	17,858	1,677	-	33,099	3,152	*	*	16,119	908
Garlic	6,253	*	-	36,884	398	9,974	171	14,488	*
Taro 'Godere'	7,371	181	-	12,992	979	-	-	3,897	146
Sweet potatoes	15,880	450	-	7,511	201	47,481	2,389	18,478	608
Other Temporary	9,124	*	-	26,630	1,011	11,243	*	13,704	*
Fruit Crops				16,403	*	94,250	1,576	19,489	111
Avocado				1,170	1	*	*	*	*
Bananas				10,039	*	51,058	934	7,586	40
Guava				*	*	23,561	194	*	*
Lemons				-	-	4,452	*	*	*
Mangoes				3,095	14	16,303	*	3,123	21
Oranges				*	*	8,060	50	*	*
Papayas				*	*	27,649	128	*	*
Pineapples				-	-	-	-	-	-
Stimulant Crops	49,717	7,844	-	110,589	16,156	112,819	8,504	69,849	8,395
Chat				23,610	1,348	55,374	4,753	18,190	1,340
Coffee	33,595	5,883	-	64,797	13,958	67,679	3,577	44,247	6,848
Hops / 'Gesho'				24,069	850	8,884	174	8,320	207
Enset				42,885	2,359	12,379	*		
Sugar cane				7,577	410	41,016	*	5,371	*
Other permanent				-	-	-	-	-	-

Table1.5 Number of Holders, Inputs Applied Area and Quantity of Inputs used

Somalie									
Crop type	All	All Fertilizers		Natural		DAP			
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal	
All	76,668	8,060	*	13,819	7,244	*	*	*	*
Cereals	67,095	6,599	*	12,257	5,782	*	*	*	*
Teff	-	-	-	-	-	-	-	-	-
Barley	3,016	*	-	*	*	-	-	-	-
Wheat	4,364	*	-	*	*	-	-	-	-
Maize	26,999	*	*	7,900	*	-	-	-	-
Sorghum	32,705	3,394	*	7,984	2,841	*	*	*	*
Finger millet	-	-	-	-	-	-	-	-	-
Oats / 'Aja'	*	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulses	576	*	-	979	*	-	-	-	-
Horse / Faba beans	-	-	-	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-	-	-	-
Haricot beans	432	*	-	*	*	-	-	-	-
Chick peas	*	*	-	*	*	-	-	-	-
Lentils	*	-	-	-	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	*	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oilseeds	*	*	-	*	*	-	-	-	-
Neug	-	-	-	-	-	-	-	-	-
Linseed	*	-	-	-	-	-	-	-	-
Groundnuts	*	*	-	*	*	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	*	*	-	*	*	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables	*	*	-	*	*	-	-	-	-
Lettuce	-	-	-	-	-	-	-	-	-
Head cabbage	-	-	-	-	-	-	-	-	-
Ethiopian cabbage	-	-	-	-	-	-	-	-	-
Tomatoes	*	*	-	*	*	-	-	-	-
Green peppers	*	*	-	*	*	-	-	-	-
Red peppers	*	-	-	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-	-	-	-
Root crops	*	*	-	*	*	-	-	-	-
Beetroot	-	-	-	-	-	-	-	-	-
Carrot	-	-	-	-	-	-	-	-	-
Onion	*	-	-	-	-	-	-	-	-
Potatoes	*	*	-	*	*	-	-	-	-
Garlic	*	-	-	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-	-	-	-
Sweet potatoes	*	*	-	*	*	-	-	-	-
Other Temporary	*	*	-	*	*	-	-	-	-
Fruit Crops	584	*	-	1,817	*	-	-	-	-
Avocado	-	-	-	-	-	-	-	-	-
Bananas	*	*	-	*	*	-	-	-	-
Guava	*	*	-	*	*	-	-	-	-
Lemons	47	*	-	409	*	-	-	-	-
Mangoes	*	*	-	354	*	-	-	-	-
Oranges	*	*	-	*	*	-	-	-	-
Papayas	*	*	-	*	*	-	-	-	-
Pineapples	-	-	-	-	-	-	-	-	-
Stimulant Crops	4,286	*	-	*	*	-	-	-	-
Chat	4,279	*	-	*	*	-	-	-	-
Coffee	*	*	-	*	*	-	-	-	-
Hops / 'Gesho'	-	-	-	-	-	-	-	-	-
Enset	*	-	-	-	-	-	-	-	-
Sugar cane	*	-	-	-	-	-	-	-	-
Other permanent	20	*	-	-	*	-	-	-	-

(Table 1.5 cont'd.)

Somale

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	*	*	*	*	*	*	88,834	75,143	31,301
Cereals	*	*	*	*	*	*	86,982	65,733	29,356
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	7,158	3,016	1,728
Wheat	-	-	-	-	-	-	11,051	4,364	2,988
Maize	*	*	*	*	*	*	67,654	26,506	12,469
Sorghum	*	*	*	*	*	*	60,067	31,835	12,162
Finger millet	-	-	-	-	-	-	-	-	-
Oats / 'Aja'	-	-	-	-	-	-	*	*	*
Rice	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	-	6,150	572	198
Horse / Faba beans	-	-	-	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	4,594	428	146
Chick peas	-	-	-	-	-	-	*	*	*
Lentils	-	-	-	-	-	-	*	*	*
Vetch / Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	*	*	*
Gibto	-	-	-	-	-	-	-	-	-
Oilseeds	-	-	-	-	-	-	*	*	*
Neug	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	*	*	*
Groundnuts	-	-	-	-	-	-	*	*	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	*	*	*
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-	5,984	*	-
Lettuce	-	-	-	-	-	-	-	-	-
Head cabbage	-	-	-	-	-	-	-	-	-
Ethiopian cabbage	-	-	-	-	-	-	-	-	-
Tomatoes	-	-	-	-	-	-	*	*	-
Green peppers	-	-	-	-	-	-	*	*	-
Red peppers	-	-	-	-	-	-	*	*	-
Swiss chard	-	-	-	-	-	-	-	-	-
Root crops	-	-	-	-	-	-	3,943	*	-
Beetroot	-	-	-	-	-	-	-	-	-
Carrot	-	-	-	-	-	-	-	-	-
Onion	-	-	-	-	-	-	*	*	-
Potatoes	-	-	-	-	-	-	*	*	-
Garlic	-	-	-	-	-	-	*	*	-
Taro 'Godere'	-	-	-	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-	*	*	-
Other Temporary	-	-	-	-	-	-	*	*	-
Fruit Crops	-	-	-	-	-	-	4,083	584	-
Avocado	-	-	-	-	-	-	-	-	-
Bananas	-	-	-	-	-	-	*	*	-
Guava	-	-	-	-	-	-	*	*	-
Lemons	-	-	-	-	-	-	1,377	47	-
Mangoes	-	-	-	-	-	-	1,253	*	-
Oranges	-	-	-	-	-	-	1,158	*	-
Papayas	-	-	-	-	-	-	*	*	-
Pineapples	-	-	-	-	-	-	-	-	-
Stimulant Crops	-	-	-	-	-	-	16,174	4,141	-
Chat	-	-	-	-	-	-	16,088	4,133	-
Coffee	-	-	-	-	-	-	*	*	-
Hops / 'Gesho'	-	-	-	-	-	-	-	-	-
Enset	-	-	-	-	-	-	*	*	-
Sugar cane	-	-	-	-	-	-	*	*	-
Other permanent	-	-	-	-	-	-	909	20	-

Table1.6 Number of Holders, Inputs Applied Area and Quantity of Inputs used

Benishangul-Gumuz								
Crop type	All	All Fertilizers		Natural		DAP		
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	195,343	36,220	17,661	63,459	17,577	13,271	14,167	10,607
Cereals	148,213	31,262	16,724	53,405	13,921	12,715	13,428	10,066
Teff	18,632	9,342	6,010	3,005	*	10,194	7,632	5,897
Barley	874	*	*	1,722	198	*	*	*
Wheat	*	*	*	*	*	*	*	*
Maize	35,953	12,019	6,623	50,891	8,856	2,011	410	413
Sorghum	59,963	1,790	*	5,257	1,348	*	*	*
Finger millet	28,392	4,055	*	3,872	*	*	*	*
Oats / 'Aja'	88	*	*	*	*	*	*	*
Rice	585	58	*	1,059	34	-	-	-
Pulses	7,288	1,369	*	12,025	1,204	*	*	*
Horse / Faba beans	625	378	*	3,513	320	*	*	*
Field Peas	660	*	*	2,313	*	*	*	*
Haricot beans	4,303	444	*	5,738	420	-	-	-
Chick peas	237	*	-	*	*	-	-	-
Lentils	47	*	-	728	*	-	-	-
Vetch / Grass peas	-	-	-	-	-	-	-	-
Soya beans	1,321	104	*	1,087	83	*	*	*
Fenugreek	7	5	-	730	5	-	-	-
Gibto	*	*	-	*	*	-	-	-
Oilseeds	32,891	1,579	188	3,529	765	*	*	*
Neug	10,724	806	*	1,362	488	*	*	*
Linseed	*	*	*	891	25	*	*	*
Groundnuts	6,753	*	*	506	*	*	*	*
Safflower	47	*	*	*	*	-	-	-
Sesame	14,741	538	*	756	*	-	-	-
Rapeseed	*	*	-	*	*	-	-	-
Vegetables	1,709	741	86	26,146	606	*	*	*
Lettuce	-	-	-	-	-	-	-	-
Head cabbage	11	*	-	1,261	*	-	-	-
Ethiopian cabbage	62	*	*	2,210	*	-	-	-
Tomatoes	27	*	*	*	*	-	-	-
Green peppers	80	*	-	5,324	*	-	-	-
Red peppers	1,529	641	62	19,171	507	*	*	*
Swiss chard	1	*	-	*	*	-	-	-
Root crops	879	426	*	18,058	246	*	*	*
Beetroot	4	2	-	1,676	2	-	-	-
Carrot	*	*	-	476	*	-	-	-
Onion	67	17	*	4,026	17	-	-	-
Potatoes	*	*	*	2,017	*	*	*	*
Garlic	51	33	-	6,622	33	-	-	-
Taro 'Godere'	46	*	-	1,433	*	-	-	-
Sweet potatoes	387	104	*	7,985	96	-	-	-
Other Temporary	1,652	275	*	15,465	270	-	-	-
Fruit Crops	1,444	237		14,565	235			
Avocado	6	*		*	*			
Bananas	417	117		7,048	116			
Guava	26	*		*	*			
Lemons	28	3		529	*			
Mangoes	850	93		7,222	93			
Oranges	67	13		2,149	12			
Papayas	50	10		3,154	10			
Pineapples	*	-		-	-			
Stimulant Crops	1,150	275		12,290	275			
Chat	317	27		3,298	27			
Coffee	754	*		8,119	*			
Hops / 'Gesho'	78	36		6,237	36			
Enset	8	*		*	*			
Sugar cane	77	31		1,974	31			
Other permanent	*	*		-	*			

(Table 1.6 cont'd.)

Benishangul-Gumuz

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	4,648	1,692	722	6,586	2,783	6,332	147,242	193,233	68,911
Cereals	2,414	1,206	610	5,992	2,707	6,048	145,952	146,338	54,522
Teff	537	*	*	667	120	*	34,662	18,489	12,068
Barley	-	-	-	-	-	-	5,312	874	1,862
Wheat	*	*	*	*	*	*	6,266	*	*
Maize	622	244	263	5,214	2,509	5,947	130,368	34,640	9,704
Sorghum	*	*	*	-	-	-	102,846	59,902	11,381
Finger millet	1,075	640	171	*	*	*	52,103	28,090	11,738
Oats / 'Aja'	-	-	-	-	-	-	*	80	*
Rice	*	*	*	-	-	-	3,544	584	577
Pulses	*	*	*	*	*	*	52,750	7,184	4,819
Horse / Faba beans	-	-	-	-	-	-	6,415	625	703
Field Peas	-	-	-	-	-	-	4,320	660	716
Haricot beans	-	-	-	*	*	*	34,965	4,278	2,437
Chick peas	-	-	-	-	-	-	3,315	237	105
Lentils	-	-	-	-	-	-	975	47	20
Vetch / Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	*	*	*	-	-	-	9,079	1,242	813
Fenugreek	-	-	-	-	-	-	774	7	3
Gibto	-	-	-	-	-	-	*	*	*
Oilseeds	*	*	*	-	-	-	89,703	32,862	9,569
Neug	-	-	-	-	-	-	31,588	10,724	1,743
Linseed	-	-	-	-	-	-	7,557	*	*
Groundnuts	-	-	-	-	-	-	29,420	6,724	5,800
Safflower	*	*	*	-	-	-	1,535	47	4
Sesame	*	*	*	-	-	-	53,232	14,741	1,896
Rapeseed	-	-	-	-	-	-	*	*	*
Vegetables	1,715	58	*	701	*	*	51,371	1,706	-
Lettuce	-	-	-	-	-	-	-	-	-
Head cabbage	-	-	-	-	-	-	2,537	11	-
Ethiopian cabbage	-	-	-	*	*	*	3,982	62	-
Tomatoes	-	-	-	*	*	*	6,280	27	-
Green peppers	-	-	-	-	-	-	8,512	80	-
Red peppers	1,715	58	*	655	*	*	38,840	1,526	-
Swiss chard	-	-	-	-	-	-	593	*	-
Root crops	*	*	*	*	*	*	42,104	878	-
Beetroot	-	-	-	-	-	-	2,498	3	-
Carrot	-	-	-	-	-	-	683	*	-
Onion	-	-	-	*	*	*	7,221	66	-
Potatoes	-	-	-	-	-	-	5,698	*	-
Garlic	-	-	-	-	-	-	9,651	51	-
Taro 'Godere'	-	-	-	-	-	-	3,698	46	-
Sweet potatoes	*	*	*	-	-	-	27,428	387	-
Other Temporary	-	-	-	*	*	*	53,816	1,634	-
Fruit Crops							59,245	1,438	
Avocado							1,614	5	
Bananas							22,395	415	
Guava							5,681	25	
Lemons							6,083	28	
Mangoes							43,035	848	
Oranges							9,017	67	
Papayas							15,292	50	
Pineapples							*	*	
Stimulant Crops							29,679	1,076	
Chat							12,101	316	
Coffee							18,159	682	
Hops / 'Gesho'							12,861	78	
Enset							520	8	
Sugar cane							3,201	77	
Other permanent							4,520	*	

Table1.7 Number of Holders, Inputs Applied Area and Quantity of Inputs used

S.N.N.P Region

Crop type	All	All Fertilizers		Natural		DAP		
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	1,625,039	881,613	512,549	2,312,828	479,189	926,793	253,554	262,841
Cereals	837,850	435,210	415,412	922,092	92,553	816,914	214,327	209,164
Teff	196,702	104,605	76,621	43,826	8,441	259,310	66,746	50,757
Barley	88,038	53,039	41,941	242,754	18,533	247,778	28,710	33,104
Wheat	155,661	118,772	141,355	130,237	14,737	304,606	52,609	63,206
Maize	278,928	136,507	139,388	619,121	40,222	331,701	56,653	51,802
Sorghum	108,744	19,385	14,292	186,660	10,307	65,836	7,366	8,822
Finger millet	6,020	2,563	1,578	13,277	268	26,856	2,044	1,252
Oats / 'Aja'	769	246	119	2,292	*	6,369	107	105
Rice	*	*	*	*	*	*	*	*
Pulses	162,695	59,035	37,929	656,252	29,505	292,560	23,308	24,279
Horse / Faba beans	53,628	19,574	10,640	294,429	10,353	114,864	7,485	7,958
Field Peas	31,672	7,538	5,217	80,755	2,841	55,902	3,870	4,189
Haricot beans	68,837	29,790	21,748	362,925	14,802	153,379	11,459	11,915
Chick peas	6,488	1,502	193	21,420	1,182	5,318	283	116
Lentils	912	364	*	5,306	141	1,988	*	*
Vetch / Grass peas	*	*	*	*	*	*	*	*
Soya beans	*	*	*	2,950	12	-	-	-
Fenugreek	186	122	*	14,228	68	*	*	*
Gibto	*	*	-	*	*	-	-	-
Oilseeds	6,181	796	279	17,666	328	8,635	297	189
Neug	*	-	-	-	-	-	-	-
Linseed	2,385	560	236	6,734	104	7,808	292	169
Groundnuts	607	101	*	2,992	99	*	*	*
Safflower	*	*	-	1,801	*	-	-	-
Sesame	*	*	-	*	*	-	-	-
Rapeseed	182	56	*	5,456	48	*	*	*
Vegetables	43,510	33,952	22,173	1,296,871	21,068	71,818	7,367	11,914
Lettuce	26	16	-	10,013	16	-	-	-
Head cabbage	525	388	*	64,520	296	3,970	75	*
Ethiopian cabbage	19,622	16,793	1,086	1,228,475	16,409	23,269	310	735
Tomatoes	1,271	351	*	43,322	313	*	*	*
Green peppers	1,493	835	*	92,544	744	*	*	*
Red peppers	20,521	15,519	20,398	66,439	3,240	43,843	6,942	10,795
Swiss chard	52	51	-	37,546	51	-	-	-
Root crops	80,678	41,960	13,630	863,461	35,038	128,849	4,164	7,454
Beetroot	261	207	*	86,221	192	*	*	*
Carrot	*	*	*	38,056	115	*	*	*
Onion	2,868	1,366	*	83,485	*	3,263	*	*
Potatoes	12,364	10,395	11,463	206,346	4,839	108,328	3,312	6,221
Garlic	578	480	*	105,939	*	2,806	*	*
Taro 'Godere'	43,496	18,186	378	393,300	17,695	6,443	379	342
Sweet potatoes	20,925	11,153	461	316,796	10,883	7,094	*	*
Other Temporary	30,819	14,465	3,156	779,413	13,725	17,442	447	1,090
Fruit Crops	29,631	12,336		761,070	11,475			
Avocado	4,193	2,311		365,204	2,238			
Bananas	18,810	7,223		445,817	6,475			
Guava	374	228		26,244	226			
Lemons	196	51		21,182	51			
Mangoes	3,467	1,021		120,449	1,007			
Oranges	1,285	849		88,775	847			
Papayas	1,294	651		129,496	629			
Pineapples	13	*		*	*			
Stimulant Crops	134,098	49,103		1,161,123	44,290			
Chat	25,050	11,366		324,670	9,842			
Coffee	107,288	37,109		989,267	33,856			
Hops / 'Gesho'	1,760	629		90,115	592			
Enset	289,496	230,803		1,918,656	227,590			
Sugar cane	6,658	2,756		220,703	2,426			
Other permanent	3,423	1,197		219,140	1,190			

(Table 1.7 cont'd.)

S.N.N.P. Region

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	71,275	13,156	14,481	428,129	135,715	235,226	2,959,927	1,557,964	736,129
Cereals	49,081	8,150	9,985	399,767	120,181	196,262	2,290,889	775,054	615,118
Teff	11,398	2,316	1,744	114,508	27,102	24,120	748,034	193,842	92,729
Barley	7,379	371	388	49,994	5,424	8,449	762,132	87,033	126,407
Wheat	16,538	2,698	2,222	174,692	48,728	75,927	713,717	149,193	269,708
Maize	16,463	2,296	*	193,545	37,335	82,338	1,272,528	227,068	92,056
Sorghum	2,354	336	*	18,674	1,377	5,139	738,503	108,311	26,045
Finger millet	*	*	*	4,093	*	*	76,526	5,852	2,085
Oats / 'Aja'	*	*	*	*	*	*	20,489	767	702
Rice	-	-	-	-	-	-	*	*	*
Pulses	11,184	650	630	74,831	5,572	13,020	1,597,659	162,321	119,591
Horse / Faba beans	*	*	*	24,379	1,613	2,612	726,995	53,496	54,233
Field Peas	*	*	*	11,426	757	946	335,744	31,660	22,193
Haricot beans	7,671	391	419	49,581	3,138	9,415	946,082	68,631	38,885
Chick peas	*	*	*	*	*	*	64,531	6,473	3,416
Lentils	*	*	*	*	*	*	25,183	912	508
Vetch / Grass peas	-	-	-	-	-	-	*	*	*
Soya beans	-	-	-	*	*	*	14,159	*	*
Fenugreek	-	-	-	-	-	-	22,584	178	60
Gibto	-	-	-	-	-	-	*	*	*
Oilseeds	-	-	-	3,753	171	90	101,168	6,159	1,420
Neug	-	-	-	-	-	-	*	*	*
Linseed	-	-	-	3,091	*	67	61,040	2,385	841
Groundnuts	-	-	-	-	-	-	14,923	607	*
Safflower	-	-	-	-	-	-	3,882	*	*
Sesame	-	-	-	-	-	-	8,839	*	*
Rapeseed	-	-	-	*	*	*	12,231	182	15
Vegetables	12,360	1,390	2,012	38,234	4,126	8,248	1,640,270	43,234	-
Lettuce	-	-	-	-	-	-	8,995	16	-
Head cabbage	*	*	*	*	*	*	74,996	454	-
Ethiopian cabbage	*	*	*	5,615	49	305	1,486,654	19,493	-
Tomatoes	-	-	-	*	*	*	66,021	1,216	-
Green peppers	-	-	-	*	*	*	179,806	1,493	-
Red peppers	11,156	1,349	1,952	32,413	3,988	7,652	188,553	20,521	-
Swiss chard	-	-	-	-	-	-	32,373	40	-
Root crops	6,695	215	276	33,837	2,543	5,899	1,404,321	80,230	-
Beetroot	-	-	-	-	-	-	92,794	194	-
Carrot	-	-	-	*	*	*	45,119	83	-
Onion	-	-	-	*	*	*	124,532	2,779	-
Potatoes	3,877	123	244	28,155	*	4,999	376,090	12,356	-
Garlic	*	*	*	*	*	*	144,654	573	-
Taro 'Godere'	*	*	*	*	*	*	705,113	43,367	-
Sweet potatoes	*	*	*	*	*	*	536,487	20,879	-
Other Temporary	*	*	*	6,322	*	*	1,169,720	30,571	-
Fruit Crops							1,310,943	29,437	
Avocado							617,151	4,137	
Bananas							874,905	18,739	
Guava							50,442	368	
Lemons							55,319	196	
Mangoes							271,637	3,460	
Oranges							154,010	1,284	
Papayas							252,971	1,240	
Pineapples							6,611	13	
Stimulant Crops							1,752,497	132,004	
Chat							561,067	24,990	
Coffee							1,526,634	105,266	
Hops / 'Gesho'							210,243	1,748	
Enset							2,343,998	288,958	
Sugar cane							436,851	6,642	
Other permanent							431,135	3,353	

(Table 1.7 Con' td.)

S.N.N.P. Region

Crop type	IMPROVED SEED			PESTICIDE		IRRIGATION		EXTENSION PACKAGE	
	Holder	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Holder	Hectare
All	362,195	64,516	30,714	562,077	203,103	75,037	*	407,150	93,148
Cereals	288,352	61,618	30,504	491,161	193,332	48,669	*	357,380	83,193
Teff	6,453	2,816	1,072	256,662	74,299	*	*	63,775	17,026
Barley	4,092	*	*	81,380	8,642	*	*	27,366	3,018
Wheat	25,313	6,467	10,061	307,880	90,336	*	*	69,699	13,043
Maize	260,655	51,555	18,572	19,570	3,586	41,072	*	228,371	46,860
Sorghum	*	*	*	27,865	11,637	*	*	20,611	2,998
Finger millet	*	*	*	17,147	2,208	-	-	*	*
Oats / 'Aja'	-	-	-	2,235	45	-	-	*	*
Rice	-	-	-	*	*	-	-	*	*
Pulses	4,751	316	205	15,519	1,327	15,451	*	77,370	5,879
Horse / Faba beans	1,274	*	*	4,679	449	*	*	10,854	1,068
Field Peas	-	-	-	4,457	*	-	-	4,127	370
Haricot beans	3,158	*	*	7,489	347	14,550	*	63,813	4,413
Chick peas	-	-	-	*	*	*	*	-	-
Lentils	-	-	-	-	-	-	-	*	*
Vetch / Grass peas	-	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	*	*
Fenugreek	*	*	*	*	*	-	-	*	*
Gibto	-	-	-	-	-	-	-	-	-
Oilseeds	*	*	*	1,856	24	*	*	1,474	*
Neug	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	1,613	18	-	-	*	*
Groundnuts	-	-	-	-	-	-	-	-	-
Safflower	-	-	-	-	-	-	-	-	-
Sesame	*	*	*	*	*	*	*	*	*
Rapeseed	-	-	-	-	-	-	-	*	*
Vegetables	18,635	133	-	20,327	2,580	12,091	*	27,642	620
Lettuce	*	*	-	-	-	-	-	*	*
Head cabbage	7,619	68	-	1,516	*	*	*	*	*
Ethiopian cabbage	*	*	-	5,984	55	8,868	69	12,725	136
Tomatoes	*	*	-	*	*	2,207	*	*	*
Green peppers	*	*	-	*	*	*	*	*	*
Red peppers	-	-	-	*	2,445	*	*	4,505	429
Swiss chard	8,594	11	-	-	-	*	*	*	*
Root crops	25,243	*	-	28,270	1,945	*	*	38,363	839
Beetroot	10,508	*	-	*	*	*	*	6,187	19
Carrot	10,550	*	-	-	-	*	*	6,891	*
Onion	6,501	*	-	*	*	1,739	*	8,180	*
Potatoes	*	*	-	24,062	1,526	-	-	13,075	314
Garlic	*	*	-	*	*	-	-	*	*
Taro 'Godere'	*	*	-	*	*	*	*	4,451	*
Sweet potatoes	*	*	-	*	*	*	*	4,593	109
Other Temporary	1,886	*	-	4,185	*	11,332	*	11,988	270
Fruit Crops				8,272	43	25,965	*	10,229	128
Avocado				*	*	5,141	*	2,134	*
Bananas				4,343	*	20,198	*	7,283	89
Guava				*	*	*	*	*	*
Lemons				*	*	*	*	-	-
Mangoes				*	*	*	*	*	*
Oranges				*	*	*	*	-	-
Papayas				*	*	*	17	*	*
Pineapples				-	-	-	-	-	-
Stimulant Crops	35,553	1,706	-	52,256	*	17,916	*	38,123	1,546
Chat				46,088	*	*	*	19,639	712
Coffee	31,847	1,658	-	6,220	113	17,484	*	20,000	831
Hops / 'Geshe'				*	*	-	-	*	*
Enset				8,373	609	14,102	*	-	-
Sugar cane				*	*	*	*	4,560	*
Other permanent				-	-	-	-	-	-

Table1.8 Number of Holders, Inputs Applied Area and Quantity of Inputs used

Gambela

Crop type	All	All Fertilizers		Natural		DAP		Quintal
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	
All	15,359	163	-	1,139	163	-	-	-
Cereals	9,601	*	-	328	*	-	-	-
Teff	*	-	-	-	-	-	-	-
Barley	*	-	-	-	-	-	-	-
Wheat	*	-	-	-	-	-	-	-
Maize	4,793	*	-	*	*	-	-	-
Sorghum	4,682	*	-	*	*	-	-	-
Finger millet	*	-	-	-	-	-	-	-
Oats / 'Aja'	*	-	-	-	-	-	-	-
Rice	*	-	-	-	-	-	-	-
Pulses	89	*	-	*	*	-	-	-
Horse / Faba beans	*	-	-	-	-	-	-	-
Field Peas	*	-	-	-	-	-	-	-
Haricot beans	50	*	-	*	*	-	-	-
Chick peas	-	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-
Vetch / Grass peas	*	-	-	-	-	-	-	-
Soya beans	*	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oilseeds	25	-	-	-	-	-	-	-
Neug	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Groundnuts	18	-	-	-	-	-	-	-
Safflower	*	-	-	-	-	-	-	-
Sesame	*	-	-	-	-	-	-	-
Rapeseed	*	-	-	-	-	-	-	-
Vegetables	133	*	-	*	*	-	-	-
Lettuce	-	-	-	-	-	-	-	-
Head cabbage	*	*	-	*	*	-	-	-
Ethiopian cabbage	27	*	-	*	*	-	-	-
Tomatoes	*	-	-	-	-	-	-	-
Green peppers	32	-	-	-	-	-	-	-
Red peppers	*	-	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-	-	-
Root crops	398	*	-	*	*	-	-	-
Beetroot	*	-	-	-	-	-	-	-
Carrot	*	*	-	*	*	-	-	-
Onion	7	*	-	*	*	-	-	-
Potatoes	2	-	-	-	-	-	-	-
Garlic	1	*	-	*	*	-	-	-
Taro 'Godere'	196	*	-	*	*	-	-	-
Sweet potatoes	191	*	-	*	*	-	-	-
Other Temporary	521	*	-	*	*	-	-	-
Fruit Crops	525	2	-	216	2	-	-	-
Avocado	26	*	-	*	*	-	-	-
Bananas	144	*	-	*	*	-	-	-
Guava	2	-	-	-	-	-	-	-
Lemons	2	-	-	-	-	-	-	-
Mangoes	237	*	-	*	*	-	-	-
Oranges	21	-	-	-	-	-	-	-
Papayas	86	*	-	*	*	-	-	-
Pineapples	8	-	-	-	-	-	-	-
Stimulant Crops	3,212	*	-	137	*	-	-	-
Chat	103	*	-	*	*	-	-	-
Coffee	3,092	*	-	*	*	-	-	-
Hops / 'Gesho'	17	*	-	*	*	-	-	-
Enset	733	*	-	*	*	-	-	-
Sugar cane	119	*	-	*	*	-	-	-
Other permanent	2	*	-	-	*	-	-	-

(Table 1.8 cont'd.)

Gambela

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	-	-	-	-	-	-	35,125	15,303	3,565
Cereals	-	-	-	-	-	-	30,888	9,551	3,522
Teff	-	-	-	-	-	-	*	*	*
Barley	-	-	-	-	-	-	*	*	*
Wheat	-	-	-	-	-	-	*	*	*
Maize	-	-	-	-	-	-	22,806	4,791	1,835
Sorghum	-	-	-	-	-	-	16,021	4,641	1,604
Finger millet	-	-	-	-	-	-	*	*	*
Oats / 'Aja'	-	-	-	-	-	-	*	*	-
Rice	-	-	-	-	-	-	*	*	*
Pulses	-	-	-	-	-	-	5,497	89	33
Horse / Faba beans	-	-	-	-	-	-	*	*	*
Field Peas	-	-	-	-	-	-	*	*	*
Haricot beans	-	-	-	-	-	-	5,082	50	14
Chick peas	-	-	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-	-	*	*	*
Soya beans	-	-	-	-	-	-	161	*	*
Fenugreek	-	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-	-
Oilseeds	-	-	-	-	-	-	1,898	25	9
Neug	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Groundnuts	-	-	-	-	-	-	1,089	18	8
Safflower	-	-	-	-	-	-	359	*	*
Sesame	-	-	-	-	-	-	*	*	2
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-	8,223	133	-
Lettuce	-	-	-	-	-	-	*	-	-
Head cabbage	-	-	-	-	-	-	453	*	-
Ethiopian cabbage	-	-	-	-	-	-	4,981	27	-
Tomatoes	-	-	-	-	-	-	1,304	*	-
Green peppers	-	-	-	-	-	-	2,146	32	-
Red peppers	-	-	-	-	-	-	1,330	*	-
Swiss chard	-	-	-	-	-	-	-	-	-
Root crops	-	-	-	-	-	-	11,260	398	-
Beetroot	-	-	-	-	-	-	181	*	-
Carrot	-	-	-	-	-	-	*	*	-
Onion	-	-	-	-	-	-	777	7	-
Potatoes	-	-	-	-	-	-	323	2	-
Garlic	-	-	-	-	-	-	543	1	-
Taro 'Godere'	-	-	-	-	-	-	7,472	196	-
Sweet potatoes	-	-	-	-	-	-	4,367	190	-
Other Temporary	-	-	-	-	-	-	12,288	517	-
Fruit Crops	-	-	-	-	-	-	18,373	525	-
Avocado	-	-	-	-	-	-	5,702	26	-
Bananas	-	-	-	-	-	-	9,348	144	-
Guava	-	-	-	-	-	-	480	2	-
Lemons	-	-	-	-	-	-	855	2	-
Mangoes	-	-	-	-	-	-	10,656	237	-
Oranges	-	-	-	-	-	-	2,565	21	-
Papayas	-	-	-	-	-	-	8,422	86	-
Pineapples	-	-	-	-	-	-	1,406	8	-
Stimulant Crops	-	-	-	-	-	-	10,968	3,212	-
Chat	-	-	-	-	-	-	2,719	103	-
Coffee	-	-	-	-	-	-	10,319	3,092	-
Hops / 'Gesho'	-	-	-	-	-	-	2,607	17	-
Enset	-	-	-	-	-	-	9,156	732	-
Sugar cane	-	-	-	-	-	-	7,633	119	-
Other permanent	-	-	-	-	-	-	2,874	2	-

Table1.9 Number of Holders, Inputs Applied Area and Quantity of Inputs used

Harari Region								
Crop type	All	All Fertilizers		Natural		DAP		
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	14,097	10,485	17,773	11,519	4,095	1,455	402	781
Cereals	7,835	5,991	9,784	9,075	2,271	1,400	269	424
Teff	-	-	-	-	-	-	-	-
Barley	*	*	*	166	*	*	*	*
Wheat	247	230	699	334	*	*	*	*
Maize	1,425	1,299	3,376	4,959	418	686	60	171
Sorghum	6,123	4,425	5,612	7,172	1,840	981	187	206
Finger millet	*	*	*	-	-	-	-	-
Oats / 'Aja'	*	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulses	*	*	*	-	-	-	-	-
Horse / Faba beans	-	-	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-	-	-
Chick peas	*	*	*	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-
Gibto	-	-	-	-	-	-	-	-
Oilseeds	2,018	1,224	557	3,430	864	*	*	*
Neug	-	-	-	-	-	-	-	-
Linseed	*	*	-	*	*	-	-	-
Groundnuts	2,011	1,218	557	3,380	858	*	*	*
Safflower	-	-	-	-	-	-	-	-
Sesame	*	*	-	*	*	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables	*	*	*	230	*	-	-	-
Lettuce	-	-	-	-	-	-	-	-
Head cabbage	*	*	*	-	-	-	-	-
Ethiopian cabbage	-	-	-	-	-	-	-	-
Tomatoes	*	*	*	149	*	-	-	-
Green peppers	*	*	*	*	*	-	-	-
Red peppers	*	*	-	*	*	-	-	-
Swiss chard	-	-	-	-	-	-	-	-
Root crops	160	114	368	1,305	43	163	*	*
Beetroot	-	-	-	-	-	-	-	-
Carrot	-	-	-	-	-	-	-	-
Onion	*	*	*	*	*	-	-	-
Potatoes	12	10	46	*	*	*	*	*
Garlic	*	-	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-	-	-
Sweet potatoes	140	96	319	1,232	34	*	*	*
Other Temporary	11	10	*	714	7	-	-	-
Fruit Crops	444	231	-	4,700	191	-	-	-
Avocado	-	-	-	-	-	-	-	-
Bananas	11	4	-	1,030	4	-	-	-
Guava	14	1	-	344	1	-	-	-
Lemons	42	28	-	1,289	26	-	-	-
Mangoes	329	162	-	2,735	128	-	-	-
Oranges	*	*	-	*	*	-	-	-
Papayas	49	*	-	1,309	*	-	-	-
Pineapples	-	-	-	-	-	-	-	-
Stimulant Crops	3,368	2,806	-	6,372	629	-	-	-
Chat	3,299	2,751	-	5,998	602	-	-	-
Coffee	*	*	-	*	*	-	-	-
Hops / 'Gesho'	*	-	-	-	-	-	-	-
Enset	*	*	-	-	-	-	-	-
Sugar cane	197	*	-	*	*	-	-	-
Other permanent	30	4	-	-	3	-	-	-

(Table 1.9 cont'd.)

Harari Region

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	6,412	2,859	5,784	4,894	3,129	11,208	18,559	13,897	2,039
Cereals	6,253	1,684	3,287	4,828	1,766	6,073	18,262	7,683	1,915
Teff	-	-	-	-	-	-	-	-	-
Barley	*	*	*	*	*	*	566	16	*
Wheat	747	43	*	1,551	156	504	2,660	216	*
Maize	4,217	387	1,120	3,714	433	2,086	12,182	1,364	130
Sorghum	5,298	1,250	1,998	4,337	1,148	3,409	17,274	6,085	1,744
Finger millet	-	-	-	*	*	*	-	-	-
Oats / 'Aja'	-	-	-	-	-	-	*	*	-
Rice	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	*	*	*	*	*	67
Horse / Faba beans	-	-	-	-	-	-	*	-	-
Field Peas	-	-	-	-	-	-	*	-	-
Haricot beans	-	-	-	-	-	-	-	-	65
Chick peas	-	-	-	*	*	*	*	*	-
Lentils	-	-	-	-	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-	-	-	-	*
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	*
Gibto	-	-	-	-	-	-	-	-	-
Oilseeds	1,832	273	309	372	*	*	8,249	2,004	*
Neug	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	*	*	-
Groundnuts	1,832	273	309	372	*	*	8,199	1,996	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	*	*	1
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables	*	*	*	*	*	*	486	*	-
Lettuce	-	-	-	-	-	-	-	-	-
Head cabbage	-	-	-	*	*	*	*	*	-
Ethiopian cabbage	-	-	-	-	-	-	-	-	-
Tomatoes	-	-	-	*	*	*	*	*	-
Green peppers	*	*	*	-	-	-	*	*	-
Red peppers	-	-	-	-	-	-	*	*	-
Swiss chard	-	-	-	-	-	-	-	-	-
Root crops	533	17	35	1,049	51	313	3,934	159	-
Beetroot	-	-	-	-	-	-	-	-	-
Carrot	-	-	-	-	-	-	-	-	-
Onion	*	*	*	*	*	*	*	*	-
Potatoes	*	*	*	232	*	37	551	12	-
Garlic	-	-	-	-	-	-	*	*	-
Taro 'Godere'	-	-	-	-	-	-	-	-	-
Sweet potatoes	410	14	28	860	46	274	3,390	138	-
Other Temporary	*	*	*	*	*	*	1,373	11	-
Fruit Crops	-	-	-	-	-	-	10,295	443	-
Avocado	-	-	-	-	-	-	-	-	-
Bananas	-	-	-	-	-	-	1,879	11	-
Guava	-	-	-	-	-	-	3,258	14	-
Lemons	-	-	-	-	-	-	1,918	41	-
Mangoes	-	-	-	-	-	-	6,980	329	-
Oranges	-	-	-	-	-	-	324	*	-
Papayas	-	-	-	-	-	-	2,346	48	-
Pineapples	-	-	-	-	-	-	-	-	-
Stimulant Crops	-	-	-	-	-	-	15,716	3,347	-
Chat	-	-	-	-	-	-	15,653	3,279	-
Coffee	-	-	-	-	-	-	1,505	*	-
Hops / 'Gesho'	-	-	-	-	-	-	*	*	-
Enset	-	-	-	-	-	-	*	*	-
Sugar cane	-	-	-	-	-	-	1,956	197	-
Other permanent	-	-	-	-	-	-	4,196	19	-

Table1.10 Number of Holders, Inputs Applied Area and Quantity of Inputs used

Dire Dawa								
Crop type	All	All Fertilizers		Natural		DAP		
	Crop Area	Hectare	Quintal	Holder	Hectare	Holder	Hectare	Quintal
All	11,838	4,355	329	11,856	4,199	375	*	175
Cereals	9,619	3,277	123	10,922	3,196	281	*	66
Teff	-	-	-	-	-	-	-	-
Barley	*	*	-	*	*	-	-	-
Wheat	*	*	-	*	*	-	-	-
Maize	444	233	*	2,568	228	*	*	*
Sorghum	9,115	3,019	108	10,515	2,942	281	*	57
Finger millet	-	-	-	-	-	-	-	-
Oats / 'Aja'	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-
Pulses	243	120	*	2,445	112	*	*	*
Horse / Faba beans	-	-	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-	-	-
Haricot beans	238	119	*	2,445	112	*	*	*
Chick peas	-	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-
Vetch / Grass peas	*	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-
Fenugreek	*	*	*	-	-	*	*	*
Gibto	-	-	-	-	-	-	-	-
Oilseeds	*	*	*	*	*	-	-	-
Neug	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-
Groundnuts	*	*	*	*	*	-	-	-
Safflower	-	-	-	-	-	-	-	-
Sesame	17	*	-	188	*	-	-	-
Rapeseed	-	-	-	-	-	-	-	-
Vegetables	70	*	*	1,843	*	-	-	-
Lettuce	-	-	-	-	-	-	-	-
Head cabbage	-	-	-	-	-	-	-	-
Ethiopian cabbage	*	*	-	*	*	-	-	-
Tomatoes	*	*	*	1,356	*	-	-	-
Green peppers	7	4	-	494	4	-	-	-
Red peppers	-	-	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-	-	-
Root crops	194	92	*	3,346	79	*	*	*
Beetroot	-	-	-	-	-	-	-	-
Carrot	-	-	-	-	-	-	-	-
Onion	11	5	*	310	4	-	-	-
Potatoes	7	6	*	297	*	*	*	*
Garlic	*	*	-	*	*	-	-	-
Taro 'Godere'	*	-	-	-	-	-	-	-
Sweet potatoes	144	79	*	3,110	68	*	*	*
Other Temporary	*	*	-	*	*	-	-	-
Fruit Crops	94	53	-	3,128	51	-	-	-
Avocado	*	*	-	*	*	-	-	-
Bananas	2	1	-	318	1	-	-	-
Guava	10	4	-	877	4	-	-	-
Lemons	*	*	-	289	*	-	-	-
Mangoes	22	11	-	1,011	11	-	-	-
Oranges	*	*	-	*	*	-	-	-
Papayas	35	14	-	1,453	12	-	-	-
Pineapples	*	-	-	-	-	-	-	-
Stimulant Crops	1,304	537	-	6,256	504	-	-	-
Chat	1,200	478	-	5,338	451	-	-	-
Coffee	105	60	-	2,078	52	-	-	-
Hops / 'Gesho'	-	-	-	-	-	-	-	-
Enset	-	-	-	-	-	-	-	-
Sugar cane	*	-	-	-	-	-	-	-
Other permanent	*	*	-	-	*	-	-	-

(Table 1.10 cont'd.)

Dire Dawa

Crop type	UREA			UREA + DAP			INDIGENOUS SEED		
	Holder	Hectare	Quintal	Holder	Hectare	Quintal	Holder	Hectare	Quintal
All	506	52	79	257	*	*	20,156	11,558	2,039
Cereals	290	*	*	*	*	*	19,765	9,391	1,915
Teff	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	*	*	*
Wheat	-	-	-	-	-	-	*	*	*
Maize	*	*	*	-	-	-	4,707	442	130
Sorghum	249	*	*	*	*	*	19,550	8,888	1,744
Finger millet	-	-	-	-	-	-	-	-	-
Oats / 'Aja'	-	-	-	-	-	-	-	-	-
Rice	-	-	-	-	-	-	-	-	-
Pulses	*	*	-	*	*	*	4,775	235	67
Horse / Faba beans	-	-	-	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-	-	-	-
Haricot beans	-	-	-	*	*	*	4,671	230	65
Chick peas	-	-	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-	-	*	*	*
Soya beans	-	-	-	-	-	-	-	-	-
Fenugreek	*	*	-	-	-	-	*	*	*
Gibto	-	-	-	-	-	-	-	-	-
Oilseeds	*	*	*	-	-	-	2,184	*	*
Neug	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-
Groundnuts	*	*	*	-	-	-	*	*	*
Safflower	-	-	-	-	-	-	-	-	-
Sesame	-	-	-	-	-	-	677	17	1
Rapeseed	-	-	-	-	-	-	-	-	-
Vegetables	*	*	*	*	*	*	2,190	62	-
Lettuce	-	-	-	-	-	-	-	-	-
Head cabbage	-	-	-	-	-	-	-	-	-
Ethiopian cabbage	-	-	-	-	-	-	*	*	-
Tomatoes	*	*	*	*	*	*	1,765	55	-
Green peppers	-	-	-	-	-	-	669	7	-
Red peppers	-	-	-	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-	-	-	-
Root crops	*	*	*	*	*	*	5,933	192	-
Beetroot	-	-	-	-	-	-	-	-	-
Carrot	-	-	-	-	-	-	-	-	-
Onion	*	*	*	-	-	-	590	9	-
Potatoes	-	-	-	*	*	*	526	7	-
Garlic	-	-	-	-	-	-	*	*	-
Taro 'Godere'	-	-	-	-	-	-	*	*	-
Sweet potatoes	*	*	*	-	-	-	5,327	143	-
Other Temporary	-	-	-	-	-	-	*	*	-
Fruit Crops							5,709	79	
Avocado							*	*	
Bananas							504	2	
Guava							1,882	10	
Lemons							705	*	
Mangoes							1,751	21	
Oranges							413	*	
Papayas							2,559	21	
Pineapples							*	*	
Stimulant Crops							12,477	1,285	
Chat							12,164	1,199	
Coffee							2,992	86	
Hops / 'Geshe'							-	-	
Enset							-	-	
Sugar cane							*	*	
Other permanent							2,831	*	

Table 2. Number of Holders Applying Inputs by Educational Status

Ethiopia

Educational Status of Holders	Holdes	Fertilizer	Improved seed	Pesticide	Irrigation
Illiterate	8,239,615	3,360,125	846,079	1,829,068	670,685
Literate (informal)	1,016,284	487,173	132,592	234,940	124,862
Grades 1 – 3	1,352,255	635,515	213,948	397,454	104,533
Grades 4 – 6	1,404,313	702,904	204,086	405,291	112,018
Grades 7 – 8	526,940	298,353	91,454	162,595	32,229
Grades 9 – 11	279,742	155,180	50,291	96,943	25,528
Grade 12 complete	62,038	44,087	18,429	22,410	5,016
Above grade 12	34,934	19,715	8,448	15,352	*
Total	12,916,120	5,703,053	1,565,327	3,164,053	1,076,103

Fig 3. Number of Holders Applied Inputs by Educational Status

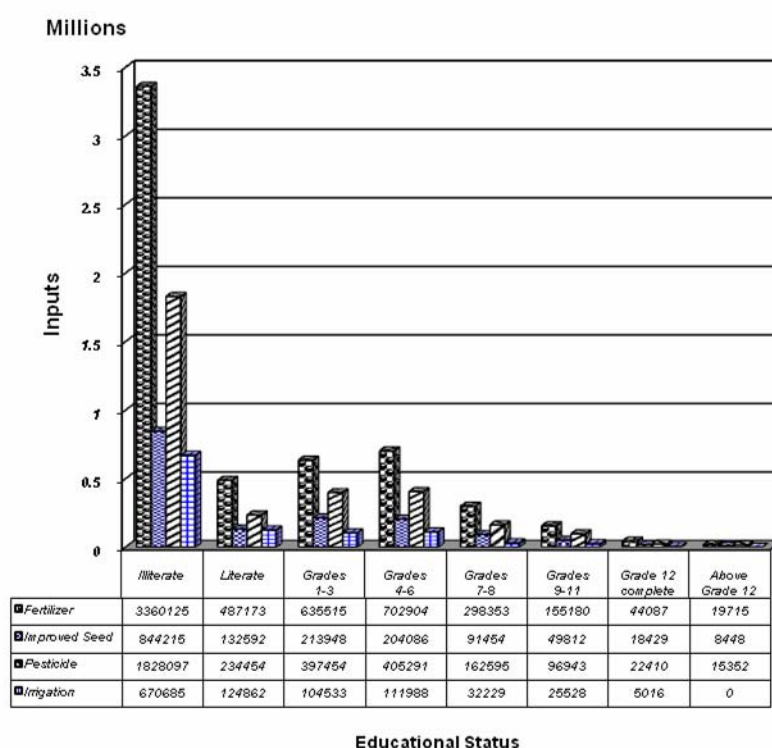


Table 2.1 Number of Holders Applying Inputs by Educational Status

Tigray

Educational Status of Holders	Holdes	Fertilizer	Improved seed	Pesticide	Irrigation
Illiterate	603,514	288,145	38,321	73,821	88,909
Literate (informal)	129,836	70,230	12,280	21,150	26,742
Grades 1 – 3	101,742	60,181	8,998	20,136	16,320
Grades 4 – 6	82,461	49,481	9,684	14,445	17,313
Grades 7 – 8	18,906	12,413	2,401	3,811	2,354
Grades 9 – 11	12,383	8,915	1,401	2,486	2,416
Grade 12 complete	*	*	-	-	-
Above grade 12	*	-	-	*	*
Total	950,434	489,644	73,085	136,219	154,232

Table 2.2 Number of Holders Applying Inputs by Educational Status

Afar					
Educational Status of Holders	Holders	Fertilizer	Improved seed	Pesticide	Irrigation
Illiterate	8,865	*	*	327	7,336
Literate (informal)	*	-	*	-	*
Grades 1 – 3	356	-	-	-	356
Grades 4 – 6	484	-	-	-	389
Grades 7 – 8	*	-	-	-	*
Grades 9 – 11	*	-	-	-	*
Grade 12 complete	-	-	-	-	-
Above grade 12	-	-	-	-	-
Total	10,106	*	*	327	8,313

Table 2.3 Number of Holders Applying Inputs by Educational Status

Amhara					
Educational Status of Holders	Holders	Fertilizer	Improved seed	Pesticide	Irrigation
Illiterate	2,573,227	1,091,971	312,691	320,383	272,151
Literate (informal)	509,972	263,115	87,525	79,949	65,941
Grades 1 – 3	187,787	92,044	32,949	27,579	28,146
Grades 4 – 6	210,602	117,919	37,607	27,671	28,341
Grades 7 – 8	65,464	41,903	15,097	8,493	8,037
Grades 9 – 11	34,965	19,302	7,265	3,952	*
Grade 12 complete	5,414	4,305	3,433	*	*
Above grade 12	*	-	*	-	-
Total	3,588,211	1,630,559	496,890	469,715	405,746

Table 2.4 Number of Holders Applying Inputs by Educational Status

Oromia					
Educational Status of Holders	Holders	Fertilizer	Improved seed	Pesticide	Irrigation
Illiterate	3,014,514	1,290,082	306,600	1,105,609	232,561
Literate (informal)	289,156	126,220	24,563	119,581	29,250
Grades 1 – 3	674,234	327,360	112,406	275,042	48,849
Grades 4 – 6	635,455	338,024	87,454	269,510	53,701
Grades 7 – 8	254,202	152,153	43,284	115,290	16,643
Grades 9 – 11	141,777	85,405	25,995	72,473	19,068
Grade 12 complete	27,156	21,155	8,149	13,230	1,831
Above grade 12	17,970	13,345	5,140	10,871	*
Total	5,054,463	2,353,744	613,591	1,981,606	402,911

Table 2.5 Number of Holders Applying Inputs by Educational Status

Somale					
Educational Status of Holders	Holders	Fertilizer	Improved seed	Pesticide	Irrigation
Illiterate	72,277	*	*	*	6,500
Literate (informal)	10,349	-	-	-	*
Grades 1 – 3	2,231	-	-	-	611
Grades 4 – 6	2,827	-	*	-	741
Grades 7 – 8	766	-	*	-	*
Grades 9 – 11	*	-	-	-	*
Grade 12 complete	*	-	-	-	-
Above grade 12	*	-	-	-	-
Total	88,991	*	*	*	8,849

Table 2.6 Number of Holders Applying Inputs by Educational Status

Benishangul-Gumuz						
Educational Status of Holders	Holders	Fertilizer	Improved seed	Pesticide	Irrigation	
Illiterate	87,053	11,629	4,251	5,180	3,645	
Literate (informal)	10,550	1,955	1,310	1,068	795	
Grades 1 – 3	19,937	3,232	1,492	1,136	1,073	
Grades 4 – 6	19,562	3,609	1,696	980	1,083	
Grades 7 – 8	5,763	726	379	*	*	
Grades 9 – 11	3,795	754	*	*	*	
Grade 12 complete	*	*	-	-	-	
Above grade 12	*	*	*	-	-	
Total	147,242	22,156	9,453	8,594	6,928	

Table 2.7 Number of Holders Applying Inputs by Educational Status

S.N.N.P. Region						
Educational Status of Holders	Holders	Fertilizer	Improved seed	Pesticide	Irrigation	
Illiterate	1,811,138	669,441	176,659	319,530	49,309	
Literate (informal)	59,537	24,931	6,632	13,094	*	
Grades 1 – 3	354,478	151,103	57,551	73,114	8,215	
Grades 4 – 6	435,130	191,873	66,707	92,037	8,832	
Grades 7 – 8	176,315	90,894	30,146	34,796	4,796	
Grades 9 – 11	82,919	40,586	14,829	17,902	*	
Grade 12 complete	27,764	18,214	6,812	7,492	*	
Above grade 12	14,886	6,212	2,860	4,112	-	
Total	2,962,165	1,193,254	362,195	562,077	75,037	

Table 2.8 Number of Holders Applying Inputs by Educational Status

Gambela						
Educational Status of Holders	Holders	Fertilizer	Improved seed	Pesticide	Irrigation	
Illiterate	19,426	-	*	204	*	
Literate (informal)	1,298	-	-	-	-	
Grades 1 – 3	3,808	-	*	*	-	
Grades 4 – 6	5,277	-	*	*	*	
Grades 7 – 8	3,147	-	*	*	*	
Grades 9 – 11	1,758	-	*	-	-	
Grade 12 complete	213	-	-	-	-	
Above grade 12	231	-	-	-	-	
Total	35,156	-	326	*	107	

Table 2.9 Number of Holders Applying Inputs by Educational Status

Harari Region						
Educational Status of Holders	Holders	Fertilizer	Improved seed	Pesticide	Irrigation	
Illiterate	12,939	6,460	692	1,527	2,267	
Literate (informal)	942	722	*	*	481	
Grades 1 – 3	1,936	1,596	275	375	285	
Grades 4 – 6	2,101	1,711	*	438	573	
Grades 7 – 8	306	264	*	-	*	
Grades 9 – 11	261	*	*	*	*	
Grade 12 complete	*	*	*	-	*	
Above grade 12	-	-	-	-	-	
Total	18,559	11,012	1,364	2,475	3,802	

Table 2.10 Number of Holders Applying Inputs by Educational Status

Dire Dawa						
Educational Status of Holders	Holdes	Fertilizer	Improved seed	Pesticide	Irrigation	
Illiterate	16,044	804	959	*	7,944	
Literate (informal)	409	-	*	-	*	
Grades 1 – 3	1,103	-	*	-	678	
Grades 4 – 6	2,435	288	369	*	979	
Grades 7 – 8	*	-	-	-	*	
Grades 9 – 11	*	-	*	-	*	
Grade 12 complete	-	-	-	-	-	
Above grade 12	*	-	-	-	*	
Total	20,318	1,092	1,747	201	10,148	

Table 3 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Ethiopia								
Cause of damage	Damaged crop area by crop category (HA)							
	Holdes	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	9,050,800	2,191,144	901,375	262,291	120,877	54,356	52,898	127,059
Crop disease	10,367	903	498	*	*	-	*	*
Frost or floods	912,508	69,817	24,913	6,712	4,364	1,782	1,747	6,468
Locust	475,769	76,873	26,381	16,276	5,228	2,067	2,542	2,265
Shortage of rain	212,705	13,885	6,474	1,433	367	103	*	433
Too much rain	1,963,764	116,862	34,738	11,584	7,303	2,576	3,515	20,506
Wild animals	121,984	6,267	2,874	489	*	*	159	154
Birds	914,325	92,425	36,533	10,832	7,989	3,999	1,359	5,207
Hailstone	5,609,208	1,492,522	654,040	173,561	75,123	35,112	34,149	66,464
Pests	355,485	36,948	14,708	4,407	2,475	1,135	991	2,663
Weeds	1,309,419	95,724	30,766	14,655	6,204	2,821	3,117	6,462
Others	2,083,224	188,918	69,450	22,242	11,393	4,580	4,880	16,163

Fig 4. Number of Holders Reporting Damaged Crop Area

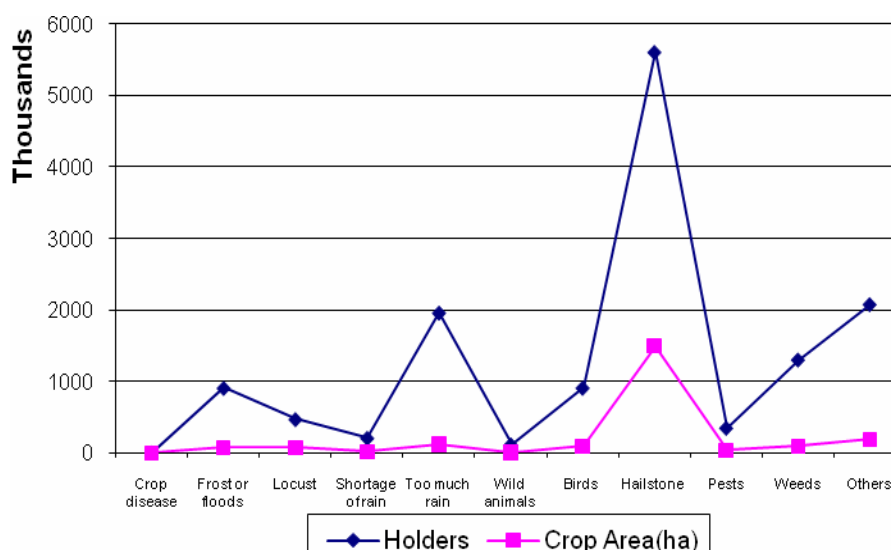


Table 3.1 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Tigray

Cause of damage	Damaged crop area by crop category (HA)							
	Holders	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	828,701	300,285	159,117	24,936	19,513	5,550	2,859	8,124
Crop disease	-	-	-	-	-	-	-	-
Frost or floods	17,186	1,285	575	*	*	*	*	*
Locust	42,717	5,381	2,940	*	*	*	*	*
Shortage of rain	5,690	*	41	*	*	-	-	-
Too much rain	34,854	2,946	1,119	862	*	*	*	*
Wild animals	*	*	*	*	*	-	-	-
Birds	56,476	5,956	2,287	*	804	181	*	*
Hailstone	771,866	276,019	148,060	22,644	17,788	4,887	2,549	6,954
Pests	21,784	2,064	1,177	*	*	*	*	*
Weeds	39,853	2,421	1,054	162	84	160	*	*
Others	50,677	3,909	1,833	177	84	*	*	*

Table 3.2 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Afar

Cause of damage	Damaged crop area by crop category (HA)							
	Holders	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	3,984	2,265	*	*	*	-	-	*
Crop disease	-	-	-	-	-	-	-	-
Frost or floods	*	*	*	-	-	-	-	-
Locust	-	-	-	-	-	-	-	-
Shortage of rain	*	*	-	-	-	-	-	-
Too much rain	-	-	-	-	-	-	-	-
Wild animals	-	-	-	-	-	-	-	-
Birds	*	*	-	-	-	-	-	-
Hailstone	2,522	*	*	*	*	-	-	*
Pests	-	-	-	-	-	-	-	-
Weeds	692	116	*	-	*	-	-	*
Others	643	*	*	-	-	-	-	*

Table 3.3 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Amhara

Cause of damage	Damaged crop area by crop category (HA)							
	Holders	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	2,646,682	750,580	321,228	129,425	64,576	24,171	16,609	21,701
Crop disease	*	*	*	*	-	-	-	-
Frost or floods	250,711	21,770	9,123	2,491	2,075	277	545	*
Locust	271,531	57,043	19,224	13,631	3,870	1,157	2,316	567
Shortage of rain	110,019	6,958	3,095	1,119	*	-	*	*
Too much rain	381,931	26,003	8,295	4,768	2,434	508	613	922
Wild animals	45,133	1,921	1,083	284	*	-	*	*
Birds	271,696	36,888	14,939	4,651	5,438	2,413	389	*
Hailstone	1,743,824	458,885	211,446	77,438	41,368	16,077	8,816	12,079
Pests	149,215	15,354	6,256	2,920	*	*	*	*
Weeds	593,501	52,042	18,577	10,938	2,692	1,602	1,421	2,411
Others	716,892	73,553	29,117	11,107	5,080	1,433	1,862	2,555

Table 3.4 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Cause of damage	Damaged crop area by crop category (HA)							
	Holders	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	3,445,189	895,862	330,693	92,436	33,309	16,060	24,605	66,291
Crop disease	6,938	609	*	*	*	-	*	*
Frost or floods	393,302	31,386	10,385	2,293	1,910	942	*	3,482
Locust	105,932	10,454	2,989	2,000	*	539	*	881
Shortage of rain	51,557	5,246	2,555	*	*	83	*	95
Too much rain	825,270	66,264	20,701	4,647	4,438	1,359	2,042	12,694
Wild animals	41,921	2,183	896	*	*	*	*	*
Birds	372,765	37,106	15,450	4,910	945	589	485	2,775
Hailstone	1,982,767	606,742	233,587	64,944	15,004	9,582	17,453	32,090
Pests	119,332	14,940	5,302	987	1,012	264	*	847
Weeds	463,127	35,047	9,462	3,087	3,262	*	*	2,422
Others	848,760	85,884	29,058	9,260	5,660	1,925	1,845	10,708

Table 3.5 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Cause of damage	Damaged crop area by crop category (HA)							
	Holders	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	73,541	25,925	11,114	*	*	*	*	1,302
Crop disease	-	-	-	-	-	-	-	-
Frost or floods	*	*	*	-	-	-	-	-
Locust	-	-	-	-	-	-	-	-
Shortage of rain	*	*	*	-	-	-	-	-
Too much rain	1,485	*	*	-	-	-	*	*
Wild animals	*	*	*	-	-	-	-	*
Birds	*	*	*	*	-	-	-	*
Hailstone	65,406	22,725	9,424	*	*	*	*	1,191
Pests	*	*	-	-	-	-	-	-
Weeds	6,178	*	*	-	-	*	*	*
Others	3,575	*	*	-	-	-	-	*

Table 3.6 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Cause of damage	Damaged crop area by crop category (HA)							
	Holders	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	87,572	14,737	4,070	574	2,335	1,198	519	2,068
Crop disease	-	-	-	-	-	-	-	-
Frost or floods	13,723	1,509	324	*	256	*	*	318
Locust	10,566	1,146	*	*	191	86	*	157
Shortage of rain	4,165	*	*	*	*	-	*	24
Too much rain	14,876	548	114	*	123	*	*	148
Wild animals	1,066	45	*	*	-	*	*	*
Birds	32,946	4,369	1,267	122	802	583	171	434
Hailstone	22,017	2,472	484	44	317	102	23	285
Pests	4,854	512	99	*	*	*	*	*
Weeds	18,090	1,178	412	*	159	71	*	133
Others	34,194	2,837	837	293	457	162	*	371

Table 3.7 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage
S.N.N.P. Region

Cause of damage	Damaged crop area by crop category (HA)							
	Holders	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	1,908,281	186,289	71,665	14,569	732	5,361	7,311	24,289
Crop disease	*	*	*	*	-	-	*	*
Frost or floods	232,054	13,653	4,419	1,741	*	427	628	1,633
Locust	44,974	2,849	779	*	*	*	*	*
Shortage of rain	38,597	692	119	81	*	*	*	*
Too much rain	694,902	20,263	4,415	1,299	118	605	712	6,338
Wild animals	29,361	900	266	*	*	*	*	96
Birds	177,363	8,009	2,561	914	-	233	276	1,169
Hailstone	974,546	110,232	47,984	8,154	237	2,731	4,414	11,036
Pests	59,599	4,014	1,848	332	*	*	*	146
Weeds	179,981	3,951	1,009	437	*	*	*	1,241
Others	425,371	21,594	8,147	1,404	*	894	998	1,979

Table 3.8 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage
Gambela

Cause of damage	Damaged crop area by crop category (HA)							
	Holders	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	18,739	2,492	846	*	*	*	*	407
Crop disease	*	*	-	-	-	-	*	*
Frost or floods	4,718	179	*	*	-	*	*	50
Locust	-	-	-	-	-	-	-	-
Shortage of rain	*	*	-	-	-	*	-	*
Too much rain	5,284	336	50	*	-	*	*	208
Wild animals	316	*	*	*	-	*	-	*
Birds	1,688	68	*	-	-	*	*	17
Hailstone	8,541	1,636	574	*	*	*	*	67
Pests	*	*	*	-	-	-	-	*
Weeds	3,237	163	86	*	*	*	*	*
Others	2,198	72	2	-	-	*	*	*

Table 3.9 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage
Harari Region

Cause of damage	Damaged crop area by crop category (HA)							
	Holders	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	17,905	5,887	783	-	132	*	133	1,988
Crop disease	-	-	-	-	-	-	-	-
Frost or floods	*	*	-	-	-	-	-	*
Locust	-	-	-	-	-	-	-	-
Shortage of rain	*	*	-	-	-	-	*	*
Too much rain	719	*	*	-	-	-	*	*
Wild animals	*	*	-	-	-	-	-	*
Birds	*	*	-	-	-	-	*	*
Hailstone	17,685	5,457	724	-	132	*	128	1,909
Pests	*	*	-	-	-	-	-	*
Weeds	2,641	*	*	-	-	-	*	40
Others	*	*	*	-	-	-	-	*

Table 3.10 Number of Holders reporting Damaged Crop Area in Hectare by Category of Crops and Cause of Damage

Cause of damage	Damaged crop area by crop category (HA)							
	Holders	All crops	Cereals	Pulses	Oilseeds	Vegetables	Root crops	Permanent
All damage	20,206	6,822	1,134	*	*	*	223	486
Crop disease	-	-	-	-	-	-	-	-
Frost or floods	194	*	-	-	-	-	*	-
Locust	*	*	-	-	-	-	*	-
Shortage of rain	*	*	-	-	-	-	-	-
Too much rain	4,444	295	*	-	-	-	*	32
Wild animals	-	-	-	-	-	-	-	-
Birds	-	-	-	-	-	-	-	-
Hailstone	20,033	6,428	1,098	*	*	*	205	452
Pests	*	*	-	-	-	-	-	-
Weeds	2,119	64	*	-	-	*	*	*
Others	331	*	-	-	-	-	-	-

Table 4. Number of Holders by Type of Farm practice

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	10,724,109
Reasons for not participating in extension package	
Ignorance	1,288,262
Shortage of money	3,622,889
Suspicion on efficiency	939,262
Programs unavailable	1,418,983
Insufficient arable land	1,408,008
Others	2,104,749
Use of services	
Credit	3,222,945
Advisory	8,275,198
Reasons for not using credit service	
Service unavailable	1,267,626
Failure to pay the loan	3,888,675
Inadequate service	2,978,121
Ignorance	509,100
No return	373,477
Others	1,040,939
Reasons for not using advisory service	
Service unavailable	867,421
Inadequate service	2,591,201
Ignorance	1,036,387
No return	233,417
Others	349,435
Supplier of fertilizers	
Government	2,666,494
Private organizations	376,605
Traders	1,252,799
Others	1,233,776

Table 4.1 Number of Holders by Type of Farm practice

Tigray

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	914,863
Reasons for not participating in extension package	
Ignorance	71,163
Shortage of money	238,844
Suspicion on efficiency	79,789
Programs unavailable	69,800
Insufficient arable land	55,653
Others	22,766
Use of services	
Credit	522,129
Advisory	847,265
Reasons for not using credit service	
Service unavailable	18,171
Failure to pay the loan	284,010
Inadequate service	30,294
Ignorance	30,168
No return	17,852
Others	79,713
Reasons for not using advisory service	
Service unavailable	36,866
Inadequate service	28,704
Ignorance	46,504
No return	9,832
Others	18,021
Supplier of fertilizers	
Government	370,369
Private organizations	86,156
Traders	9,920
Others	*

Table 4.2 Number of Holders by Type of Farm practice

Afar

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	3,430
Reasons for not participating in extension package	
Ignorance	*
Shortage of money	392
Suspicion on efficiency	*
Programs unavailable	7,380
Insufficient arable land	*
Others	*
Use of services	
Credit	1,069
Advisory	5,447
Reasons for not using credit service	
Service unavailable	47,207
Failure to pay the loan	*
Inadequate service	*
Ignorance	*
No return	-
Others	*
Reasons for not using advisory service	
Service unavailable	41,221
Inadequate service	2,721
Ignorance	*
No return	*
Others	*
Supplier of fertilizers	
Government	*
Private organizations	-
Traders	-
Others	-

Table 4.3 Number of Holders by Type of Farm practice

Amhara

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	3,379,209
Reasons for not participating in extension package	
Ignorance	404,335
Shortage of money	764,099
Suspicion on efficiency	307,413
Programs unavailable	257,267
Insufficient arable land	228,586
Others	177,309
Use of services	
Credit	1,176,768
Advisory	2,894,948
Reasons for not using credit service	
Service unavailable	79,260
Failure to pay the loan	1,369,190
Inadequate service	227,958
Ignorance	146,792
No return	153,314
Others	483,823
Reasons for not using advisory service	
Service unavailable	93,772
Inadequate service	203,694
Ignorance	323,885
No return	59,568
Others	103,607
Supplier of fertilizers	
Government	752,982
Private organizations	90,450
Traders	200,365
Others	551,945

Table 4.4 Number of Holders by Type of Farm practice

Oromia

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	4,227,999
Reasons for not participating in extension package	
Ignorance	497,980
Shortage of money	1,542,235
Suspicion on efficiency	341,809
Programs unavailable	805,737
Insufficient arable land	507,401
Others	1,583,621
Use of services	
Credit	972,172
Advisory	2,848,060
Reasons for not using credit service	
Service unavailable	668,499
Failure to pay the loan	1,293,130
Inadequate service	1,654,195
Ignorance	201,746
No return	138,183
Others	350,858
Reasons for not using advisory service	
Service unavailable	421,554
Inadequate service	1,277,431
Ignorance	420,988
No return	123,901
Others	186,849
Supplier of fertilizers	
Government	881,131
Private organizations	174,202
Traders	542,386
Others	657,632

Table 4.5 Number of Holders by Type of Farm practice

Somalie

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	41,266
Reasons for not participating in extension package	
Ignorance	6,294
Shortage of money	*
Suspicion on efficiency	*
Programs unavailable	81,042
Insufficient arable land	*
Others	*
Use of services	
Credit	*
Advisory	4,158
Reasons for not using credit service	
Service unavailable	126,738
Failure to pay the loan	*
Inadequate service	7,205
Ignorance	*
No return	-
Others	*
Reasons for not using advisory service	
Service unavailable	120,028
Inadequate service	15,046
Ignorance	1,038
No return	*
Others	*
Supplier of fertilizers	
Government	*
Private organizations	*
Traders	*
Others	-

Table 4.6 Number of Holders by Type of Farm practice

Benishangul-Gumuz

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	123,418
Reasons for not participating in extension package	
Ignorance	20,155
Shortage of money	72,646
Suspicion on efficiency	4,464
Programs unavailable	29,385
Insufficient arable land	6,449
Others	8,735
Use of services	
Credit	20,343
Advisory	92,469
Reasons for not using credit service	
Service unavailable	12,582
Failure to pay the loan	63,837
Inadequate service	28,761
Ignorance	6,161
No return	5,799
Others	9,989
Reasons for not using advisory service	
Service unavailable	13,539
Inadequate service	28,158
Ignorance	10,007
No return	1,272
Others	2,564
Supplier of fertilizers	
Government	10,391
Private organizations	2,265
Traders	8,352
Others	-

Table 4.7 Number of Holders by Type of Farm practice

S.N.N.P. Region

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	2,015,606
Reasons for not participating in extension package	
Ignorance	280,962
Shortage of money	992,554
Suspicion on efficiency	201,529
Programs unavailable	137,612
Insufficient arable land	603,398
Others	290,955
Use of services	
Credit	521,283
Advisory	1,573,053
Reasons for not using credit service	
Service unavailable	287,986
Failure to pay the loan	872,951
Inadequate service	996,345
Ignorance	116,986
No return	57,786
Others	113,324
Reasons for not using advisory service	
Service unavailable	112,848
Inadequate service	1,000,375
Ignorance	229,925
No return	37,650
Others	37,176
Supplier of fertilizers	
Government	649,244
Private organizations	22,999
Traders	481,636
Others	*

Table 4.8 Number of Holders by Type of Farm practice

Gambela

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	12,779
Reasons for not participating in extension package	
Ignorance	2,783
Shortage of money	796
Suspicion on efficiency	811
Programs unavailable	22,467
Insufficient arable land	3,028
Others	6,080
Use of services	
Credit	1,056
Advisory	2,530
Reasons for not using credit service	
Service unavailable	24,848
Failure to pay the loan	852
Inadequate service	6,008
Ignorance	*
No return	137
Others	*
Reasons for not using advisory service	
Service unavailable	22,829
Inadequate service	9,288
Ignorance	1,232
No return	476
Others	278
Supplier of fertilizers	
Government	-
Private organizations	-
Traders	-
Others	-

Table 4.9 Number of Holders by Type of Farm practice

Harari Region

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	3,549
Reasons for not participating in extension package	
Ignorance	1,789
Shortage of money	3,539
Suspicion on efficiency	1,746
Programs unavailable	1,776
Insufficient arable land	2,056
Others	3,232
Use of services	
Credit	849
Advisory	3,907
Reasons for not using credit service	
Service unavailable	*
Failure to pay the loan	1,145
Inadequate service	12,997
Ignorance	*
No return	*
Others	1,123
Reasons for not using advisory service	
Service unavailable	*
Inadequate service	11,962
Ignorance	921
No return	367
Others	353
Supplier of fertilizers	
Government	1,359
Private organizations	*
Traders	9,121
Others	-

Table 4.10 Number of Holders by Type of Farm practice

Dire Dawa

<i>Farm Practice</i>	Number of Holders Reporting
Crop rotation	1,990
Reasons for not participating in extension package	
Ignorance	1,890
Shortage of money	2,345
Suspicion on efficiency	1,119
Programs unavailable	6,518
Insufficient arable land	1,073
Others	7,143
Use of services	
Credit	4,195
Advisory	3,362
Reasons for not using credit service	
Service unavailable	*
Failure to pay the loan	2,548
Inadequate service	13,548
Ignorance	494
No return	*
Others	847
Reasons for not using advisory service	
Service unavailable	3,826
Inadequate service	13,824
Ignorance	1,580
No return	*
Others	*
Supplier of fertilizers	
Government	294
Private organizations	*
Traders	692
Others	-

Table 5 Number of Holders and Area of Irrigated land by Source of Water

Geographic area		Source of Water				
		River	Lake	Pond	Water Harvest	Others
Ethiopia	Holdings	703,436	41,892	83,644	69,214	153,860
	Hectare	118,041	5,892	9,750	3,451	17,276
Tigray Region	Holdings	72,940	9,625	28,200	38,999	13,560
	Hectare	8,399	*	3,077	1,145	*
Afar Region	Holdings	8,221	*	-	-	-
	Hectare	3,804	*	-	-	-
Amhara Region	Holdings	302,831	11,147	15,180	15,167	73,202
	Hectare	25,420	1,066	*	*	2,923
Oromia Region	Holdings	9,361	*	-	*	*
	Hectare	*	*	-	*	*
Somali Region	Holdings	6,716	*	*	*	1,042
	Hectare	1,987	*	*	*	*
Benishangul	Holdings	4,938	*	*	604	733
	Hectare	492	*	*	*	*
S.N.N.P Region	Holdings	60,067	6,344	*	*	*
	Hectare	*	*	*	*	30
Gambela	Holdings	*	-	*	-	-
	Hectare	*	-	*	-	-
Harari Region	Holdings	2,259	-	*	*	271
	Hectare	742	-	*	*	54
Dire Dawa	Holdings	3,431	-	1,852	186	5,417
	Hectare	931	-	188	*	2,406

Table 6 Area of Irrigated land by Crop and Source of Water

Crop type	Source of Water					Total
	River	Lake	Pond	Water harvest	Others	
All	118,053	5,892	9,750	3,451	17,276	154,424
Cereals	73,381	3,040	6,351	2,055	11,282	96,109
Teff	14,470	1,116	829	*	*	19,117
Barley	5,237	*	*	*	*	6,514
Wheat	7,228	*	*	*	*	9,934
Maize	26,825	939	1,138	402	2,891	32,195
Sorghum	18,297	*	*	*	4,101	26,188
Finger millet	1,255	*	*	-	-	1,613
Oats / 'Aja'	*	-	-	-	*	*
Rice	-	-	-	*	*	*
Pulses	6,486	*	*	*	377	7,891
Horse / Faba beans	1,709	*	*	*	*	2,016
Field Peas	*	-	-	-	-	*
Haricot beans	*	-	*	*	55	*
Chick peas	1,263	*	*	-	*	1,961
Lentils	*	-	-	*	-	313
Vetch / Grass peas	*	-	-	-	*	*
Soya beans	*	-	-	-	-	*
Fenugreek	*	*	*	*	*	*
Gibto	*	-	-	-	-	*
Oilseeds	672	*	*	*	*	971
Neug	69	*	-	*	-	164
Linseed	*	-	-	*	*	*
Groundnuts	124	*	*	*	*	165
Safflower	*	-	-	-	-	*
Sesame	*	-	-	*	*	*
Rapeseed	*	-	-	*	-	*
Vegetables	3,040	51	319	200	1,479	5,090
Lettuce	-	-	*	*	*	*
Head cabbage	89	-	*	*	*	*
Ethiopian cabbage	105	*	*	*	*	333
Tomatoes	397	*	*	*	*	637
Green peppers	*	29	*	54	*	1,490
Red peppers	1,625	*	*	61	125	1,966
Swiss chard	*	-	11	*	*	*
Root crops	8,917	*	*	358	*	11,408
Beetroot	*	-	-	*	*	*
Carrot	*	*	-	*	*	*
Onion	2,777	*	23	*	*	3,116
Potatoes	2,926	-	*	*	*	3,929
Garlic	403	*	*	109	154	779
Taro 'Godere'	*	-	-	-	*	*
Sweet potatoes	2,676	-	112	*	*	3,089
Other Temporary	660	*	*	*	*	1,055
Fruit Crops	5,540	77	681	80	348	6,726
Avocado	*	-	-	*	*	*
Bananas	3,041	*	*	6	51	3,489
Guava	250	*	*	*	*	376
Lemons	195	*	*	*	*	262
Mangoes	713	*	*	*	43	781
Oranges	511	-	*	*	*	697
Papayas	*	*	49	*	*	877
Pineapples	*	-	-	-	-	*
Stimulant Crops	14,459	234	1,209	233	1,793	17,928
Chat	6,595	*	500	115	1,015	8,266
Coffee	5,504	*	*	*	301	6,577
Hops / 'Gesho'	2,361	*	127	71	476	3,085
Enset	*	*	-	*	*	3,438
Sugar cane	2,735	*	*	*	135	3,079
Other permanent	508	*	*	*	32	730

Table 6.1 Area of Irrigated land by Crop and Source of Water

Crop type	Source of Water					Total
	River	Lake	Pond	Water harvest	Others	
All	8,399	*	3,077	1,145	*	14,279
Cereals	4,742	*	*	603	*	8,656
Teff	1,029	*	*	-	-	1,663
Barley	721	*	*	*	*	1,284
Wheat	2,025	*	*	*	*	3,011
Maize	464	*	*	*	*	968
Sorghum	*	-	*	*	-	961
Finger millet	*	-	*	-	-	*
Oats / 'Aja'	-	-	-	-	-	-
Rice	-	-	-	*	-	*
Pulses	*	-	*	*	*	1,064
Horse / Faba beans	*	-	*	*	*	*
Field Peas	*	-	-	-	-	*
Haricot beans	-	-	-	-	-	-
Chick peas	*	-	*	-	-	*
Lentils	*	-	-	-	-	*
Vetch / Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	*	-	-	*	*	118
Gibto	-	-	-	-	-	-
Oilseeds	*	-	*	*	-	*
Neug	*	-	-	-	-	*
Linseed	-	-	-	-	-	-
Groundnuts	-	-	*	*	-	*
Safflower	-	-	-	-	-	-
Sesame	*	-	-	*	-	*
Rapeseed	-	-	-	-	-	-
Vegetables	340	*	*	107	*	878
Lettuce	-	-	*	*	-	*
Head cabbage	*	-	*	*	-	*
Ethiopian cabbage	-	-	-	-	-	-
Tomatoes	*	*	*	*	*	321
Green peppers	*	*	*	48	*	259
Red peppers	*	-	*	*	*	266
Swiss chard	*	-	*	*	*	15
Root crops	370	*	*	*	*	812
Beetroot	-	-	-	*	-	*
Carrot	-	-	-	*	-	*
Onion	*	*	*	*	*	*
Potatoes	*	-	*	*	*	*
Garlic	103	*	12	71	*	206
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	-	-	-	-	-	-
Other Temporary	*	*	*	*	*	24
Fruit Crops	456	*	133	*	*	829
Avocado	-	-	-	-	-	-
Bananas	*	*	*	*	*	*
Guava	60	*	*	*	*	97
Lemons	*	*	*	*	*	79
Mangoes	*	-	*	-	*	*
Oranges	*	-	*	*	*	*
Papayas	*	*	37	*	*	339
Pineapples	*	-	-	-	-	*
Stimulant Crops	*	*	84	61	*	*
Chat	*	-	*	*	-	*
Coffee	*	-	*	*	*	*
Hops / 'Gesho'	340	*	75	58	*	530
Enset	-	-	-	-	-	-
Sugar cane	*	-	-	-	-	*
Other permanent	*	-	*	*	-	*

Table 6.2 Area of Irrigated land by Crop and Source of Water

Crop type	Source of Water				Total
	River	Lake	Pond	Water harvest Others	
All	3,804	*	-	-	3,856
Cereals	3,552	*	-	-	3,602
Teff	*	-	-	-	*
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	3,225	*	-	-	3,275
Sorghum	*	-	-	-	*
Finger millet	-	-	-	-	-
Oats / 'Aja'	-	-	-	-	-
Rice	-	-	-	-	-
Pulses	*	-	-	-	*
Horse / Faba beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot beans	*	-	-	-	*
Chick peas	-	-	-	-	-
Lentils	*	-	-	-	*
Vetch / Grass peas	-	-	-	-	-
Soya beans	-	-	-	-	-
Fenugreek	-	-	-	-	-
Gibto	-	-	-	-	-
Oilseeds	*	-	-	-	*
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Groundnuts	*	-	-	-	*
Safflower	-	-	-	-	-
Sesame	*	-	-	-	*
Rapeseed	-	-	-	-	-
Vegetables	*	*	-	-	*
Lettuce	-	-	-	-	-
Head cabbage	-	-	-	-	-
Ethiopian cabbage	-	-	-	-	-
Tomatoes	*	-	-	-	*
Green peppers	*	-	-	-	*
Red peppers	*	*	-	-	*
Swiss chard	-	-	-	-	-
Root crops	*	-	-	-	*
Beetroot	-	-	-	-	-
Carrot	-	-	-	-	-
Onion	*	-	-	-	*
Potatoes	-	-	-	-	-
Garlic	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-
Sweet potatoes	-	-	-	-	-
Other Temporary	*	-	-	-	*
Fruit Crops	*	-	-	-	*
Avocado	-	-	-	-	-
Bananas	*	-	-	-	*
Guava	*	-	-	-	*
Lemons	*	-	-	-	*
Mangoes	*	-	-	-	*
Oranges	*	-	-	-	*
Papayas	*	-	-	-	*
Pineapples	-	-	-	-	-
Stimulant Crops	-	-	-	-	-
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Hops / 'Gesho'	-	-	-	-	-
Enset	-	-	-	-	-
Sugar cane	*	-	-	-	*
Other permanent	82	*	-	-	82

Table 6.3 Area of Irrigated land by Crop and Source of Water

Crop type	Source of Water					Total
	River	Lake	Pond	Water harvest	Others	
All	25,420	1,066	*	*	2,923	30,777
Cereals	12,162	*	*	*	*	14,605
Teff	3,350	*	*	*	*	4,414
Barley	3,854	*	-	-	*	4,320
Wheat	*	*	*	-	-	729
Maize	2,105	*	-	*	*	2,621
Sorghum	1,200	*	*	-	*	1,263
Finger millet	*	-	-	-	-	*
Oats / 'Aja'	*	-	-	-	-	*
Rice	-	-	-	-	*	*
Pulses	2,052	*	-	*	*	2,436
Horse / Faba beans	546	*	-	-	-	716
Field Peas	*	-	-	-	-	*
Haricot beans	*	-	-	-	-	*
Chick peas	*	-	-	-	*	*
Lentils	*	-	-	*	-	*
Vetch / Grass peas	*	-	-	-	-	*
Soya beans	-	-	-	-	-	-
Fenugreek	*	-	-	*	*	14
Gibto	*	-	-	-	-	*
Oilseeds	*	-	-	-	-	*
Neug	*	-	-	-	-	*
Linseed	*	-	-	-	-	*
Groundnuts	-	-	-	-	-	-
Safflower	*	-	-	-	-	*
Sesame	-	-	-	-	-	-
Rapeseed	*	-	-	-	-	*
Vegetables	1,553	*	32	34	*	2,110
Lettuce	-	-	-	-	*	*
Head cabbage	24	-	*	*	*	37
Ethiopian cabbage	*	-	*	*	*	61
Tomatoes	*	*	*	-	*	*
Green peppers	*	*	*	*	*	*
Red peppers	1,198	*	*	*	*	1,327
Swiss chard	*	-	*	*	*	*
Root crops	3,011	*	*	38	229	3,373
Beetroot	*	-	-	-	*	*
Carrot	*	*	-	*	*	*
Onion	771	*	*	*	103	887
Potatoes	1,973	-	*	*	*	2,040
Garlic	233	*	14	34	*	402
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	*	-	-	-	-	*
Other Temporary	*	-	*	*	*	*
Fruit Crops	1,249	*	*	*	134	1,438
Avocado	*	-	-	-	*	*
Bananas	*	*	-	*	*	427
Guava	66	-	-	-	*	76
Lemons	*	*	*	-	*	*
Mangoes	43	-	-	-	*	66
Oranges	*	-	*	*	*	360
Papayas	*	-	-	*	*	*
Pineapples	-	-	-	-	-	-
Stimulant Crops	4,457	*	*	55	1,017	5,621
Chat	1,186	-	*	*	*	1,555
Coffee	1,377	*	*	*	*	1,686
Hops / 'Geshe'	1,894	*	*	*	430	2,380
Enset	*	-	-	-	-	*
Sugar cane	397	-	*	-	94	501
Other permanent	*	*	*	*	9	*

Table 6.4 Area of Irrigated land by Crop and Source of Water

Crop type	Source of Water				Total
	River	Lake	Pond	Water harvest	
All	55,001	3,228	*	893	75,215
Cereals	35,831	991	*	*	48,525
Teff	8,353	*	*	*	11,085
Barley	605	*	-	*	853
Wheat	4,286	-	*	-	5,910
Maize	7,654	*	872	*	11,575
Sorghum	14,898	*	*	*	19,013
Finger millet	-	-	-	-	-
Oats / 'Aja'	*	-	-	-	*
Rice	-	-	-	-	-
Pulses	3,253	*	*	*	3,845
Horse / Faba beans	881	*	-	*	969
Field Peas	*	-	-	-	*
Haricot beans	*	-	-	*	*
Chick peas	*	*	*	-	*
Lentils	*	-	-	-	*
Vetch / Grass peas	*	-	-	-	*
Soya beans	*	-	-	-	*
Fenugreek	*	*	-	-	*
Gibto	-	-	-	-	-
Oilseeds	*	*	-	*	*
Neug	-	*	-	-	*
Linseed	*	-	-	*	*
Groundnuts	*	-	-	-	*
Safflower	-	-	-	-	-
Sesame	*	-	-	-	*
Rapeseed	*	-	-	*	*
Vegetables	*	12	*	*	1,483
Lettuce	-	-	-	*	*
Head cabbage	39	-	*	-	*
Ethiopian cabbage	*	-	-	-	*
Tomatoes	*	-	-	-	*
Green peppers	*	12	-	*	*
Red peppers	*	-	-	-	*
Swiss chard	-	-	-	-	*
Root crops	4,662	-	*	*	6,251
Beetroot	*	-	-	-	*
Carrot	*	-	-	-	*
Onion	*	-	-	*	*
Potatoes	*	-	*	-	*
Garlic	*	-	*	*	171
Taro 'Godere'	-	-	-	-	-
Sweet potatoes	2,055	-	*	-	2,389
Other Temporary	*	-	*	-	*
Fruit Crops	1,131	*	*	-	1,576
Avocado	*	-	-	-	*
Bananas	588	-	*	-	934
Guava	118	-	*	-	194
Lemons	*	-	*	-	*
Mangoes	*	-	*	-	*
Oranges	48	-	*	-	50
Papayas	119	*	*	-	128
Pineapples	-	-	-	-	-
Stimulant Crops	6,982	*	*	*	8,504
Chat	3,913	-	358	-	4,753
Coffee	2,942	*	*	*	3,577
Hops / 'Geshe'	126	-	*	-	174
Enset	*	*	-	*	*
Sugar cane	*	*	-	-	*
Other permanent	33	-	*	*	76

Table 6.5 Area of Irrigated land by Crop and Source of Water

Somalie	Crop type	Source of Water					Total
		River	Lake	Pond	Water harvest	Others	
All		1,987	*	*	*	*	2,930
Cereals		1,187	*	*	-	*	2,012
	Teff	-	-	-	-	-	-
	Barley	-	-	-	-	-	-
	Wheat	-	-	-	-	-	-
	Maize	784	*	-	-	*	862
	Sorghum	403	-	*	-	*	1,150
	Finger millet	-	-	-	-	-	-
	Oats / 'Aja'	-	-	-	-	-	-
	Rice	-	-	-	-	-	-
Pulses		*	-	*	-	-	*
	Horse / Faba beans	-	-	-	-	-	-
	Field Peas	-	-	-	-	-	-
	Haricot beans	*	-	*	-	-	*
	Chick peas	-	-	-	-	-	-
	Lentils	-	-	-	-	-	-
	Vetch / Grass peas	-	-	-	-	-	-
	Soya beans	-	-	-	-	-	-
	Fenugreek	-	-	-	-	-	-
	Gibto	-	-	-	-	-	-
Oilseeds		*	-	-	-	-	*
	Neug	-	-	-	-	-	-
	Linseed	-	-	-	-	-	-
	Groundnuts	-	-	-	-	-	-
	Safflower	-	-	-	-	-	-
	Sesame	*	-	-	-	-	*
	Rapeseed	-	-	-	-	-	-
Vegetables		*	-	*	*	-	*
	Lettuce	-	-	-	-	-	-
	Head cabbage	-	-	-	-	-	-
	Ethiopian cabbage	-	-	-	-	-	-
	Tomatoes	*	-	-	*	-	*
	Green peppers	*	-	*	-	-	*
	Red peppers	*	-	-	-	-	*
	Swiss chard	-	-	-	-	-	-
Root crops		*	-	*	-	-	*
	Beetroot	-	-	-	-	-	-
	Carrot	-	-	-	-	-	-
	Onion	*	-	-	-	-	*
	Potatoes	-	-	-	-	-	-
	Garlic	-	-	-	-	-	-
	Taro 'Godere'	-	-	-	-	-	-
	Sweet potatoes	*	-	*	-	-	*
Other Temporary		*	-	-	-	-	*
Fruit Crops		*	-	*	-	-	*
	Avocado	-	-	-	-	-	-
	Bananas	*	-	-	-	-	*
	Guava	*	-	*	-	-	*
	Lemons	*	-	*	-	-	*
	Mangoes	*	-	*	-	-	*
	Oranges	*	-	*	-	-	*
	Papayas	-	-	-	-	-	-
	Pineapples	-	-	-	-	-	-
Stimulant Crops		*	-	*	-	-	120
	Chat	*	-	*	-	-	112
	Coffee	*	-	-	-	-	*
	Hops / 'Gesho'	-	-	-	-	-	-
Enset		-	-	-	-	-	-
Sugar cane		*	-	-	-	-	*
Other permanent		*	-	*	-	-	*

Table 6.6 Area of Irrigated land by Crop and Source of Water

Crop type	Source of Water				Total	
	River	Lake	Pond	Water harvest		Others
All	492	*	*	*	*	698
Cereals	*	*	*	-	-	*
Teff	-	*	-	-	-	*
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	*	-	*	-	-	*
Sorghum	*	-	-	-	-	*
Finger millet	*	*	-	-	-	*
Oats / 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulses	*	-	-	-	-	*
Horse / Faba beans	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Haricot beans	*	-	-	-	-	*
Chick peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-	-
Soya beans	*	-	-	-	-	*
Fenugreek	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oilseeds	*	*	-	*	-	*
Neug	*	-	-	*	-	*
Linseed	-	-	-	-	-	-
Groundnuts	*	*	-	-	-	*
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	*	-	-	-	-	*
Vegetables	*	*	*	-	*	*
Lettuce	-	-	-	-	-	-
Head cabbage	-	-	-	-	-	-
Ethiopian cabbage	-	-	-	-	-	-
Tomatoes	-	-	-	-	*	*
Green peppers	-	*	-	-	-	*
Red peppers	*	-	*	-	*	*
Swiss chard	-	-	-	-	-	-
Root crops	*	-	-	-	-	*
Beetroot	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	*	-	-	-	-	*
Other Temporary	*	-	-	-	-	*
Fruit Crops	47	*	*	*	*	86
Avocado	*	-	-	-	-	*
Bananas	45	*	*	*	*	79
Guava	*	*	-	-	-	*
Lemons	-	*	-	-	-	*
Mangoes	*	*	*	-	*	3
Oranges	*	-	-	-	*	*
Papayas	*	-	-	-	*	*
Pineapples	-	-	-	-	-	-
Stimulant Crops	*	*	-	*	-	*
Chat	*	*	-	*	-	*
Coffee	*	*	-	*	-	*
Hops / 'Geshe'	*	-	-	-	-	*
Enset	*	-	-	-	-	*
Sugar cane	27	-	*	*	*	37
Other permanent	-	*	-	-	-	*

Table 6.7 Area of Irrigated land by Crop and Source of Water

Crop type	Source of Water					Total
	River	Lake	Pond	Water harvest	Others	
All	*	*	*	*	30	*
Cereals	*	*	*	-	-	*
Teff	*	*	-	-	-	*
Barley	*	-	*	-	-	*
Wheat	*	-	-	-	-	*
Maize	*	*	-	-	-	*
Sorghum	*	*	*	-	-	*
Finger millet	-	-	-	-	-	-
Oats / 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulses	*	-	*	*	-	*
Horse / Faba beans	*	-	-	*	-	*
Field Peas	-	-	-	-	-	-
Haricot beans	*	-	*	-	-	*
Chick peas	*	-	-	-	-	*
Lentils	-	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oilseeds	*	-	-	-	-	*
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Groundnuts	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Sesame	*	-	-	-	-	*
Rapeseed	-	-	-	-	-	-
Vegetables	*	*	*	*	*	*
Lettuce	-	-	-	-	-	-
Head cabbage	*	-	-	-	*	*
Ethiopian cabbage	*	*	*	*	*	69
Tomatoes	*	-	-	-	*	*
Green peppers	*	-	-	-	*	*
Red peppers	*	-	-	-	-	*
Swiss chard	-	-	-	-	*	*
Root crops	*	-	*	*	*	*
Beetroot	*	-	-	*	-	*
Carrot	-	-	-	*	-	*
Onion	*	-	-	*	*	*
Potatoes	-	-	-	-	-	-
Garlic	-	-	-	-	-	-
Taro 'Godere'	*	-	-	-	*	*
Sweet potatoes	*	-	*	-	-	*
Other Temporary	*	*	-	-	*	*
Fruit Crops	*	*	*	*	*	*
Avocado	*	-	-	*	*	*
Bananas	*	*	*	-	-	*
Guava	*	-	-	-	-	*
Lemons	*	-	-	-	-	*
Mangoes	*	-	-	*	-	*
Oranges	*	-	-	*	-	*
Papayas	*	-	-	*	-	17
Pineapples	-	-	-	-	-	-
Stimulant Crops	*	*	-	*	*	*
Chat	*	*	-	-	*	*
Coffee	*	*	-	*	*	*
Hops / 'Gesho'	-	-	-	-	-	-
Enset	*	*	-	*	*	*
Sugar cane	*	*	*	-	*	*
Other permanent	*	*	-	*	*	*

Table 6.8 Area of Irrigated land by Crop and Source of Water

Crop type	Source of Water				Total
	River	Lake	Pond	Water harvest Others	
All	*	-	*	-	*
Cereals	*	-	-	-	*
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	-	-	-	-	-
Sorghum	*	-	-	-	*
Finger millet	-	-	-	-	-
Oats / 'Aja'	-	-	-	-	-
Rice	-	-	-	-	-
Pulses	-	-	-	-	-
Horse / Faba beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot beans	-	-	-	-	-
Chick peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-
Soya beans	-	-	-	-	-
Fenugreek	-	-	-	-	-
Gibto	-	-	-	-	-
Oilseeds	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Groundnuts	-	-	-	-	-
Safflower	-	-	-	-	-
Sesame	-	-	-	-	-
Rapeseed	-	-	-	-	-
Vegetables	*	-	-	-	*
Lettuce	-	-	-	-	-
Head cabbage	-	-	-	-	-
Ethiopian cabbage	*	-	-	-	*
Tomatoes	*	-	-	-	*
Green peppers	-	-	-	-	-
Red peppers	-	-	-	-	-
Swiss chard	-	-	-	-	-
Root crops	-	-	*	-	*
Beetroot	-	-	-	-	-
Carrot	-	-	-	-	-
Onion	-	-	-	-	-
Potatoes	-	-	-	-	-
Garlic	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-
Sweet potatoes	-	-	*	-	*
Other Temporary	-	-	-	-	-
Fruit Crops	*	-	-	-	*
Avocado	-	-	-	-	-
Bananas	*	-	-	-	*
Guava	-	-	-	-	-
Lemons	-	-	-	-	-
Mangoes	-	-	-	-	-
Oranges	-	-	-	-	-
Papayas	-	-	-	-	-
Pineapples	-	-	-	-	-
Stimulant Crops	-	-	-	-	-
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Hops / 'Gesho'	-	-	-	-	-
Enset	-	-	-	-	-
Sugar cane	*	-	-	-	*
Other permanent	-	-	-	-	-

Table 6.9 Area of Irrigated land by Crop and Source of Water

Crop type	Source of Water					Total
	River	Lake	Pond	Water harvest	Others	
All	742	-	*	*	54	1,161
Cereals	*	-	*	*	27	430
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	*	*
Maize	*	-	*	*	*	99
Sorghum	*	-	*	*	*	325
Finger millet	-	-	-	-	-	-
Oats / 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulses	-	-	-	-	-	-
Horse / Faba beans	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Haricot beans	-	-	-	-	-	-
Chick peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oilseeds	*	-	*	-	-	88
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Groundnuts	*	-	*	-	-	88
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Vegetables	*	-	-	*	-	*
Lettuce	-	-	-	-	-	-
Head cabbage	-	-	-	*	-	*
Ethiopian cabbage	-	-	-	-	-	-
Tomatoes	*	-	-	*	-	*
Green peppers	*	-	-	*	-	*
Red peppers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	*	-	*	*	*	38
Beetroot	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	-	-	-	*	-	*
Potatoes	*	-	-	*	*	*
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	-	-
Sweet potatoes	*	-	*	*	-	36
Other Temporary	*	-	-	-	-	*
Fruit Crops	*	-	*	*	*	*
Avocado	-	-	-	-	-	-
Bananas	*	-	*	*	-	*
Guava	*	-	-	-	*	*
Lemons	*	-	-	-	-	*
Mangoes	*	-	-	*	-	*
Oranges	-	-	-	-	-	-
Papayas	*	-	*	*	-	39
Pineapples	-	-	-	-	-	-
Stimulant Crops	122	-	*	*	*	314
Chat	122	-	*	*	*	288
Coffee	-	-	*	-	-	*
Hops / 'Gesho'	-	-	-	-	*	*
Enset	-	-	-	-	-	-
Sugar cane	*	-	*	-	-	*
Other permanent	-	-	*	*	-	*

Table 6.10 Area of Irrigated land by Crop and Source of Water

Crop type	Source of Water				Total	
	River	Lake	Pond	Water harvest Others		
All	931	-	188	*	2,406	3,634
Cereals	*	-	100	*	2,082	2,808
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	33	-	*	*	*	*
Sorghum	*	-	93	*	2,024	2,645
Finger millet	-	-	-	-	-	-
Oats / 'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulses	-	-	*	-	55	58
Horse / Faba beans	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Haricot beans	-	-	*	-	55	58
Chick peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch / Grass peas	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-
Fenugreek	-	-	*	-	-	*
Gibto	-	-	-	-	-	-
Oilseeds	-	-	-	-	*	*
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Groundnuts	-	-	-	-	*	*
Safflower	-	-	-	-	-	-
Sesame	-	-	-	-	*	*
Rapeseed	-	-	-	-	-	-
Vegetables	*	-	*	*	*	21
Lettuce	-	-	-	-	-	-
Head cabbage	-	-	-	-	-	-
Ethiopian cabbage	-	-	-	*	-	*
Tomatoes	*	-	*	*	-	19
Green peppers	*	-	*	-	*	*
Red peppers	-	-	-	-	-	-
Swiss chard	-	-	-	-	-	-
Root crops	23	-	*	-	42	78
Beetroot	-	-	-	-	-	-
Carrot	-	-	-	-	-	-
Onion	*	-	*	-	*	*
Potatoes	*	-	*	-	-	*
Garlic	-	-	-	-	-	-
Taro 'Godere'	-	-	-	-	*	*
Sweet potatoes	*	-	*	-	*	66
Other Temporary	-	-	-	-	*	*
Fruit Crops	43	-	6	-	*	71
Avocado	-	-	-	-	-	-
Bananas	*	-	*	-	-	2
Guava	*	-	*	-	*	4
Lemons	*	-	-	-	*	*
Mangoes	*	-	-	-	*	14
Oranges	*	-	*	-	-	*
Papayas	13	-	*	-	*	*
Pineapples	-	-	-	-	-	-
Stimulant Crops	211	-	51	*	189	470
Chat	154	-	35	*	186	392
Coffee	58	-	17	-	*	78
Hops / 'Geshe'	-	-	-	-	-	-
Enset	-	-	-	-	-	-
Sugar cane	*	-	-	-	-	*
Other permanent	*	-	*	-	*	*

Table 7. Farm Area Protected against Erosion as Reported by Farmers

Geographic area		Method of Protection					Total
		Terracing	Water catchments	Planting trees	Ploughing along the contour	Others	
Ethiopia	Holder	4,393,995	2,350,439	327,016	6,322,694	4,048,867	12,875,645
	Hectare	2,807,326	1,270,602	82,625	5,231,318	3,561,755	12,953,625
Tigray Region	Holder	459,304	604,331	22,248	271,241	8,219	950,434
	Hectare	274,260	401,814	*	184,874	*	871,147
Afar Region	Holder	2,802	4,411	*	3,678	*	10,106
	Hectare	2,078	2,374	*	1,590	*	6,324
Amhara Region	Holder	2,101,217	740,171	100,879	1,572,944	1,070,050	3,588,211
	Hectare	1,522,152	349,756	12,910	1,405,226	819,094	4,109,138
Oromia Region	Holder	1,041,279	662,606	143,052	2,601,748	2,276,013	5,054,463
	Hectare	679,218	374,465	42,212	2,528,202	2,404,577	6,028,674
Somalie Region	Holder	6,212	43,218	-	37,735	3,661	88,991
	Hectare	2,540	35,566	-	37,082	*	76,668
Benishangul – Gumuz Region	Holder	17,796	40,316	2,278	82,260	40,947	147,242
	Hectare	15,098	28,390	1,112	102,529	48,215	195,343
S.N.N.P Region	Holder	732,716	240,177	57,366	1,733,202	635,595	2,962,165
	Hectare	290,586	72,265	21,023	964,148	277,016	1,625,039
Gambela	Holder	438	6,677	*	16,559	12,129	35,156
	Hectare	*	3,294	*	6,052	5,773	15,359
Harari Region	Holder	13,121	5,630	*	3,184	1,528	18,559
	Hectare	10,404	1,680	*	1,567	*	14,097
Dire Dawa	Holder	19,111	2,903	-	*	*	20,318
	Hectare	10,762	*	-	*	*	11,838

Table 8 Number of Holders Reporting Oxen Shortage by Coping Strategy

Geographic area	Coping strategy						
	Renting oxen	Pairing with Someone's ox	Pairing with horse/cow	Using horse / cow	Digging by hand	Borrowing oxen	Others
Ethiopia	852,687	2,821,080	198,333	130,339	2,238,659	2,330,981	446,561
Tigray Region	105,164	289,414	16,970	6,141	16,803	140,285	27,168
Afar Region	3,588	1,485	*	*	1,144	2,894	*
Amhara Region	181,938	962,157	98,932	105,549	113,992	631,398	138,033
Oromia Region	434,076	936,547	64,756	9,654	672,223	1,101,923	207,860
Somalie Region	2,249	12,554	1,305	1,722	32,376	21,376	13,074
Benishangul – Gumuz Region	9,504	13,300	2,596	3,184	65,247	14,759	1,936
S.N.N.P Region	115,419	596,064	13,232	3,560	1,296,916	410,917	48,424
Gambela region	392	1,549	*	*	21,168	986	8,810
Harari Region	*	3,070	262	*	10,057	2,073	516
Dire Dawa	-	4,941	-	-	8,733	4,370	*

Table 9 Number of Holders reporting Oxen

Geographic Area	No ox	One ox	Two oxen	Three oxen	Four oxen	Five oxen
Ethiopia	5,235,402	3,338,756	3,407,621	331,593	289,709	80,288
Tigray Region	229,009	334,464	312,201	22,972	13,898	3,047
Afar Region	6,009	2,515	3,125	*	*	*
Amhara Region	858,298	1,147,138	1,161,240	113,589	69,223	16,149
Oromia Region	2,251,631	1,175,408	1,459,537	160,922	179,488	51,797
Somali Region	65,599	18,051	20,628	1,716	*	765
Benishangul – Gumuz Region	84,318	17,045	27,013	3,350	3,985	2,540
S.N.N.P Region	1,687,854	633,334	417,918	28,395	22,005	5,557
Gambela region	29,692	1,878	2,086	229	294	274
Harari Region	10,317	3,392	1,872	*	*	-
Dire Dawa	12,674	5,532	2,001	*	*	*

Table 10 Total Area and Crop Harvesting frequency by crop type
Ethiopia

Crop type	Area	Once	Twice
All	12,953,636	12,794,042	159,594
Cereals	9,233,025	9,136,726	96,299
Teff	2,588,661	2,565,445	23,216
Barley	1,129,112	1,094,402	34,711
Wheat	1,683,565	1,676,624	6,942
Maize	1,772,253	1,757,943	14,310
Sorghum	1,618,677	1,609,587	9,091
Finger millet	368,999	368,299	700
Oats / 'Aja'	24,018	23,712	*
Rice	47,739	40,715	*
Pulses	1,489,308	1,441,303	48,005
Horse / Faba beans	512,067	510,211	1,857
Field Peas	226,533	225,730	802
Haricot beans	244,013	237,171	6,842
Chick peas	213,187	197,471	15,716
Lentils	105,956	101,178	*
Vetch / Grass peas	135,658	118,121	17,536
Soya beans	5,679	5,676	*
Fenugreek	21,183	20,880	*
Gibto	25,033	24,866	*
Oilseeds	780,916	778,972	1,944
Neug	256,794	255,718	1,076
Linseed	140,801	140,324	*
Groundnuts	41,579	41,566	*
Safflower	4,653	4,653	-
Sesame	315,843	315,732	*
Rapeseed	21,247	20,980	*
Vegetables	138,393	136,840	1,553
Lettuce	*	114	*
Head cabbage	2,562	2,114	*
Ethiopian cabbage	32,782	32,706	77
Tomatoes	4,953	4,924	29
Green peppers	7,850	7,696	153
Red peppers	89,862	89,066	796
Swiss chard	227	220	*
Root crops	212,208	207,153	5,056
Beetroot	1,096	1,092	*
Carrot	2,713	2,500	*
Onion	17,588	15,763	1,826
Potatoes	69,784	67,211	2,572
Garlic	15,361	15,196	166
Taro 'Godere'	52,201	52,190	*
Sweet potatoes	53,465	53,200	265
Other Temporary	63,228	62,771	*
Fruit Crops	53,086	52,915	172
Avocado	5,694	5,673	*
Bananas	29,409	29,326	83
Guava	1,944	1,943	*
Lemons	753	750	*
Mangoes	8,630	8,607	*
Oranges	3,471	3,449	*
Papayas	3,067	3,049	*
Pineapples	*	*	-
Stimulant Crops	557,813	554,775	3,038
Chat	138,811	138,069	742
Coffee	395,003	392,857	2,147
Hops / 'Gesho'	23,998	23,849	149
Enset	395,632	393,035	*
Sugar cane	18,908	18,640	*
Other permanent	11,117	10,911	*

Table 10.1 Total Area and Crop Harvesting frequency by crop type
Tigray

Crop type	Area	Once	Twice
All	871,146.70	862,986.81	8,159.89
Cereals	693,967.25	686,692.24	7,275.01
Teff	187,858.61	184,858.37	*
Barley	106,787.74	105,784.89	1,002.85
Wheat	113,595.76	112,476.67	*
Maize	64,649.07	64,406.69	*
Sorghum	155,420.96	153,690.78	*
Finger millet	64,612.04	64,431.76	*
Oats / 'Aja'	*	*	-
Rice	*	*	-
Pulses	63,797.70	63,641.59	*
Horse / Faba beans	19,726.93	19,674.93	*
Field Peas	8,330.71	8,320.30	*
Haricot beans	4,076.43	4,076.43	-
Chick peas	13,548.86	13,505.36	*
Lentils	7,909.51	7,888.55	*
Vetch / Grass peas	9,459.05	9,459.05	-
Soya beans	*	*	-
Fenugreek	691	661.75	*
Gibto	-	-	-
Oilseeds	98,565.54	98,494.53	*
Neug	6,744.15	6,744.15	-
Linseed	13,147.93	13,147.93	-
Groundnuts	*	*	*
Safflower	*	*	-
Sesame	78,052.64	77,984.25	*
Rapeseed	*	*	-
Vegetables	3,681.81	3,638.65	43.16
Lettuce	3.35	3.35	-
Head cabbage	*	*	*
Ethiopian cabbage	*	*	-
Tomatoes	448.33	443.31	*
Green peppers	632.72	609.69	*
Red peppers	2,559.53	2,559.53	-
Swiss chard	16.62	10.85	*
Root crops	1,822.83	1,672.33	150.5
Beetroot	*	*	-
Carrot	*	-	*
Onion	340.6	300.56	*
Potatoes	907.05	851.45	*
Garlic	552.23	514.15	38.08
Taro 'Godere'	-	-	-
Sweet potatoes	*	*	-
Other Temporary	425.72	418.89	*
Fruit Crops	1,002.13	954.05	*
Avocado	*	*	*
Bananas	*	*	-
Guava	108.1	107.78	*
Lemons	*	*	*
Mangoes	29.37	*	*
Oranges	*	*	*
Papayas	397.89	381.79	*
Pineapples	*	*	-
Stimulant Crops	2,703.78	2,490.12	*
Chat	*	*	*
Coffee	*	*	*
Hops / 'Gesho'	1,132.84	1,041.40	91.44
Enset	-	-	-
Sugar cane	*	*	-
Other permanent	5,145.64	4,950.10	*

Table 10.2 Total Area and Crop Harvesting frequency by crop type
Afar

Crop type	Area	Once	Twice
All	6,323.93	6,229.41	*
Cereals	5,697.12	5,665.14	*
Teff	*	*	*
Barley	*	*	-
Wheat	-	-	-
Maize	3,498.58	3,467.99	*
Sorghum	578.4	578.4	-
Finger millet	-	-	-
Oats / 'Aja'	-	-	-
Rice	-	-	-
Pulses	*	*	-
Horse / Faba beans	-	-	-
Field Peas	-	-	-
Haricot beans	*	*	-
Chick peas	*	*	-
Lentils	*	*	-
Vetch / Grass peas	-	-	-
Soya beans	-	-	-
Fenugreek	-	-	-
Gibto	-	-	-
Oilseeds	*	*	-
Neug	*	*	-
Linseed	*	*	-
Groundnuts	*	*	-
Safflower	*	*	-
Sesame	*	*	-
Rapeseed	-	-	-
Vegetables	*	*	-
Lettuce	-	-	-
Head cabbage	-	-	-
Ethiopian cabbage	*	*	-
Tomatoes	*	*	-
Green peppers	*	*	-
Red peppers	*	*	-
Swiss chard	-	-	-
Root crops	*	*	*
Beetroot	-	-	-
Carrot	-	-	-
Onion	*	*	*
Potatoes	-	-	-
Garlic	-	-	-
Taro 'Godere'	-	-	-
Sweet potatoes	*	*	-
Other Temporary	*	*	-
Fruit Crops	*	*	-
Avocado	*	*	-
Bananas	*	*	-
Guava	*	*	-
Lemons	*	*	-
Mangoes	*	*	-
Oranges	*	*	-
Papayas	*	*	-
Pineapples	-	-	-
Stimulant Crops	-	-	-
Chat	-	-	-
Coffee	-	-	-
Hops / 'Gesho'	-	-	-
Enset	-	-	-
Sugar cane	*	*	-
Other permanent	83.13	83.13	-

Table 10.3 Total Area and Crop Harvesting frequency by crop type
Amhara

Crop type	Area	Once	Twice
All	4,109,137.84	4,012,601.45	96,536.39
Cereals	2,986,621.87	2,937,667.83	48,954.03
Teff	1,001,028.47	993,227.12	7,801.35
Barley	387,862.40	361,530.04	26,332.36
Wheat	548,315.25	546,947.95	1,367.30
Maize	355,508.17	349,800.67	5,707.50
Sorghum	486,467.74	486,116.60	*
Finger millet	164,321.16	164,123.98	*
Oats / 'Aja'	8,742.51	8,569.31	*
Rice	34,376.16	27,352.17	*
Pulses	694,671.70	651,027.91	43,643.80
Horse / Faba beans	232,535.13	231,349.75	1,185.38
Field Peas	108,469.23	107,781.67	687.56
Haricot beans	51,247.46	46,160.22	5,087.24
Chick peas	113,337.02	99,212.25	14,124.77
Lentils	62,827.37	58,164.77	*
Vetch / Grass peas	85,262.04	67,778.57	17,483.47
Soya beans	*	*	-
Fenugreek	14,236.43	13,991.16	*
Gibto	24,890.64	24,723.12	*
Oilseeds	316,456.33	315,461.05	*
Neug	75,303.79	74,822.28	*
Linseed	31,960.61	31,713.79	*
Groundnuts	*	*	-
Safflower	4,013.81	4,013.81	-
Sesame	185,782.18	185,782.18	-
Rapeseed	16,415.27	16,148.33	*
Vegetables	37,117.42	36,810.11	*
Lettuce	*	*	*
Head cabbage	345.86	321.46	*
Ethiopian cabbage	1,599.11	1,599.11	-
Tomatoes	392.18	390.9	*
Green peppers	2,141.22	2,083.88	*
Red peppers	32,561.99	32,341.71	*
Swiss chard	*	*	*
Root crops	36,340.79	33,810.31	2,530.48
Beetroot	*	*	*
Carrot	136.07	83.14	*
Onion	3,648.79	3,359.81	*
Potatoes	24,129.65	22,000.42	*
Garlic	8,072.72	8,015.83	*
Taro 'Godere'	*	*	-
Sweet potatoes	196.41	196.41	-
Other Temporary	6,233.42	6,213.06	*
Fruit Crops	2,846.78	2,845.13	*
Avocado	*	*	-
Bananas	626.77	626.77	-
Guava	190.6	190.22	*
Lemons	244.69	244.69	-
Mangoes	213.31	212.29	*
Oranges	979.51	979.26	*
Papayas	*	*	-
Pineapples	-	-	-
Stimulant Crops	27,049.33	26,973.92	75.4
Chat	6,436.63	6,409.37	*
Coffee	5,423.67	5,423.67	-
Hops / 'Gesho'	15,189.03	15,140.89	48.15
Enset	5.79	5.79	-
Sugar cane	1,066.20	1,064.44	*
Other permanent	728.22	721.89	*

Table 10.4 Total Area and Crop Harvesting frequency by crop type
Oromia

Crop type	Area	Once	Twice
All	6,028,683.75	5,976,847.82	51,835.93
Cereals	4,466,527.59	4,427,931.36	38,596.23
Teff	1,182,810.77	1,170,483.20	12,327.57
Barley	542,476.08	535,221.63	*
Wheat	857,603.04	853,255.17	4,347.87
Maize	1,000,055.87	992,707.29	7,348.57
Sorghum	754,878.14	748,015.53	6,862.61
Finger millet	105,610.88	105,288.17	*
Oats / 'Aja'	14,147.33	14,014.89	*
Rice	8,945.47	8,945.47	-
Pulses	559,779.91	556,105.51	3,674.40
Horse / Faba beans	205,519.57	204,900.38	619.19
Field Peas	77,397.47	77,293.46	104.01
Haricot beans	114,706.95	113,369.65	1,337.29
Chick peas	79,404.89	77,970.14	1,434.75
Lentils	34,248.11	34,153.29	*
Vetch / Grass peas	40,673.13	40,620.15	*
Soya beans	1,738.72	1,735.89	*
Fenugreek	6,054.22	6,025.70	*
Gibto	*	*	-
Oilseeds	322,285.35	321,512.29	773.06
Neug	163,785.42	163,294.90	490.52
Linseed	92,674.57	92,444.84	*
Groundnuts	26,654.89	26,644.91	*
Safflower	*	*	-
Sesame	34,154.17	34,111.34	*
Rapeseed	4,535.35	4,535.35	-
Vegetables	50,842.92	49,938.75	*
Lettuce	*	*	*
Head cabbage	1,658.36	1,245.55	*
Ethiopian cabbage	11,467.28	11,399.43	67.85
Tomatoes	*	*	-
Green peppers	3,445.58	3,372.63	*
Red peppers	32,590.37	32,279.72	310.65
Swiss chard	101.12	101.12	-
Root crops	91,021.45	88,993.15	2,028.30
Beetroot	668.51	666.58	*
Carrot	2,373.25	*	*
Onion	9,968.38	8,780.52	*
Potatoes	32,032.32	31,659.41	*
Garlic	6,078.33	6,007.60	*
Taro 'Godere'	8,452.26	8,442.13	*
Sweet potatoes	31,448.40	31,206.23	242.17
Other Temporary	23,485.01	23,056.91	*
Fruit Crops	16,470.70	16,351.58	119.12
Avocado	1,349.86	1,336.66	*
Bananas	8,976.12	8,892.88	83.23
Guava	1,213.04	1,212.82	*
Lemons	56.93	56.93	-
Mangoes	3,392.72	3,376.26	*
Oranges	803.11	798.81	*
Papayas	672.75	671.05	*
Pineapples	6.16	6.16	-
Stimulant Crops	380,641.15	377,915.03	2,726.12
Chat	96,659.86	96,037.89	*
Coffee	278,161.11	276,063.30	2,097.80
Hops / 'Gesho'	5,820.18	5,813.84	6.34
Enset	105,367.79	103,051.52	*
Sugar cane	10,739.43	10,472.88	*
Other permanent	1,522.45	1,518.85	*

Table 10.5 Total Area and Crop Harvesting frequency by crop type
Somalie

Crop type	Area	Once	Twice
All	76,668.35	76,636.70	*
Cereals	67,095.02	67,066.23	*
Teff	-	-	-
Barley	3,015.79	3,015.79	-
Wheat	4,364.13	4,364.13	-
Maize	26,998.54	26,997.09	*
Sorghum	32,704.78	32,677.45	*
Finger millet	-	-	-
Oats / 'Aja'	*	*	-
Rice	-	-	-
Pulses	575.71	575.71	-
Horse / Faba beans	-	-	-
Field Peas	-	-	-
Haricot beans	431.61	431.61	-
Chick peas	*	*	-
Lentils	*	*	-
Vetch / Grass peas	-	-	-
Soya beans	-	-	-
Fenugreek	*	*	-
Gibto	-	-	-
Oilseeds	*	*	-
Neug	-	-	-
Linseed	*	*	-
Groundnuts	*	*	-
Safflower	-	-	-
Sesame	*	*	-
Rapeseed	-	-	-
Vegetables	*	*	-
Lettuce	-	-	-
Head cabbage	-	-	-
Ethiopian cabbage	-	-	-
Tomatoes	*	*	-
Green peppers	*	*	-
Red peppers	*	*	-
Swiss chard	-	-	-
Root crops	*	*	*
Beetroot	-	-	-
Carrot	-	-	-
Onion	*	*	-
Potatoes	*	*	-
Garlic	*	*	-
Taro 'Godere'	-	-	-
Sweet potatoes	*	*	*
Other Temporary	*	*	-
Fruit Crops	584.05	584.05	-
Avocado	-	-	-
Bananas	*	*	-
Guava	*	*	-
Lemons	47.02	47.02	-
Mangoes	*	*	-
Oranges	*	*	-
Papayas	*	*	-
Pineapples	-	-	-
Stimulant Crops	4,286.32	4,284.87	*
Chat	4,278.80	4,277.35	*
Coffee	*	*	-
Hops / 'Geshe'	-	-	-
Enset	*	*	-
Sugar cane	*	*	-
Other permanent	19.57	19.57	-

Table 10.6 Total Area and Crop Harvesting frequency by crop type
Benshangul-Gumuz

Crop type	Area	Once	Twice
All	195,342.71	195,111.96	*
Cereals	148,212.53	148,126.95	*
Teff	18,632.31	18,604.13	*
Barley	874.3	869.16	*
Wheat	*	*	-
Maize	35,953.40	35,901.15	*
Sorghum	59,963.23	59,963.23	-
Finger millet	28,391.84	28,391.84	-
Oats / 'Aja'	87.6	87.6	-
Rice	584.81	584.81	-
Pulses	7,288.09	7,252.13	*
Horse / Faba beans	624.69	624.69	-
Field Peas	659.93	659.93	-
Haricot beans	4,302.58	4,290.58	*
Chick peas	236.94	212.98	*
Lentils	46.61	46.61	-
Vetch / Grass peas	-	-	-
Soya beans	1,321.43	1,321.43	-
Fenugreek	7.05	7.05	-
Gibto	*	*	-
Oilseeds	32,891.18	32,787.04	*
Neug	10,724.02	10,619.88	*
Linseed	*	*	-
Groundnuts	6,752.98	6,752.98	-
Safflower	47.13	47.13	-
Sesame	14,741.26	14,741.26	-
Rapeseed	*	*	-
Vegetables	1,709.31	1,705.85	*
Lettuce	-	-	-
Head cabbage	11.09	11.09	-
Ethiopian cabbage	62.43	61.89	*
Tomatoes	26.74	26.74	-
Green peppers	79.71	79.71	-
Red peppers	1,528.73	1,525.82	*
Swiss chard	0.62	0.62	-
Root crops	879.18	878.94	*
Beetroot	3.94	3.94	-
Carrot	*	*	-
Onion	66.81	66.81	-
Potatoes	*	*	-
Garlic	51.13	51.13	-
Taro 'Godere'	45.72	45.72	-
Sweet potatoes	386.72	386.48	*
Other Temporary	1,651.53	1,651.53	-
Fruit Crops	1,443.50	1,443.28	*
Avocado	5.65	5.65	-
Bananas	416.9	416.9	-
Guava	25.72	25.72	-
Lemons	28.12	28.12	-
Mangoes	849.7	849.47	*
Oranges	66.92	66.92	-
Papayas	50.42	50.42	-
Pineapples	*	*	-
Stimulant Crops	1,149.88	1,148.74	*
Chat	317.47	316.97	*
Coffee	754.23	754.23	-
Hops / 'Geshe'	78.17	77.54	*
Enset	7.7	7.7	-
Sugar cane	77.27	77.27	-
Other permanent	*	*	-

Table 10.7 Total Area and Crop Harvesting frequency by crop type
S.N.N.P.R

Crop type	Area	Once	Twice
All	1,625,038.53	1,622,429.11	2,609.42
Cereals	837,849.64	836,573.37	*
Teff	196,701.83	196,644.57	*
Barley	88,038.46	87,922.51	*
Wheat	155,660.71	155,561.00	*
Maize	278,927.61	278,033.51	*
Sorghum	108,743.79	108,634.54	*
Finger millet	6,020.19	6,020.19	-
Oats / 'Aja'	769.24	769.24	-
Rice	*	*	-
Pulses	162,694.55	162,199.77	*
Horse / Faba beans	53,627.90	53,627.90	-
Field Peas	31,671.95	31,671.48	*
Haricot beans	68,837.36	68,432.06	*
Chick peas	6,488.32	6,399.32	*
Lentils	912.14	912.14	-
Vetch / Grass peas	*	*	-
Soya beans	*	*	-
Fenugreek	186.45	186.45	-
Gibto	*	*	-
Oilseeds	6,180.61	6,180.61	-
Neug	*	*	-
Linseed	2,385.05	2,385.05	-
Groundnuts	607.18	607.18	-
Safflower	*	*	-
Sesame	*	*	-
Rapeseed	181.65	181.65	-
Vegetables	43,509.79	43,229.49	*
Lettuce	26.44	26.44	-
Head cabbage	524.66	523.11	*
Ethiopian cabbage	19,621.73	19,613.45	*
Tomatoes	1,270.75	1,262.81	*
Green peppers	1,493.20	1,493.20	-
Red peppers	20,521.11	20,258.58	*
Swiss chard	51.91	51.91	-
Root crops	80,677.61	80,407.55	*
Beetroot	261.49	261.49	-
Carrot	*	*	-
Onion	2,867.79	2,621.67	*
Potatoes	12,364.37	12,350.83	*
Garlic	578.25	578.25	-
Taro 'Godere'	43,495.77	43,495.32	*
Sweet potatoes	20,925.15	20,915.18	*
Other Temporary	30,818.69	30,817.06	*
Fruit Crops	29,631.38	29,631.09	*
Avocado	4,192.86	4,192.86	-
Bananas	18,809.76	18,809.76	-
Guava	373.77	373.77	-
Lemons	196.25	196.25	-
Mangoes	3,467.36	3,467.36	-
Oranges	1,284.50	1,284.22	*
Papayas	1,293.56	1,293.56	-
Pineapples	13.32	13.32	-
Stimulant Crops	134,098.37	134,093.76	*
Chat	25,050.28	25,048.70	*
Coffee	107,287.79	107,286.77	*
Hops / 'Gesho'	1,760.30	1,758.30	*
Enset	289,496.44	289,214.97	*
Sugar cane	6,658.07	6,658.07	-
Other permanent	3,423.37	3,423.37	-

Table 10.8 Total Area and Crop Harvesting frequency by crop type
Gambela

Crop type	Area	Once	Twice
All	15,358.56	15,344.87	*
Cereals	9,600.73	9,587.21	*
Teff	*	*	-
Barley	*	*	-
Wheat	*	*	-
Maize	4,792.95	4,779.42	*
Sorghum	4,682.30	4,682.30	-
Finger millet	*	*	-
Oats / 'Aja'	*	*	-
Rice	*	*	-
Pulses	88.76	88.76	-
Horse / Faba beans	*	*	-
Field Peas	*	*	-
Haricot beans	49.57	49.57	-
Chick peas	-	-	-
Lentils	-	-	-
Vetch / Grass peas	*	*	-
Soya beans	*	*	-
Fenugreek	-	-	-
Gibto	-	-	-
Oilseeds	25.21	25.21	-
Neug	-	-	-
Linseed	-	-	-
Groundnuts	18.34	18.34	-
Safflower	*	*	-
Sesame	*	*	-
Rapeseed	*	*	-
Vegetables	133.14	133.03	*
Lettuce	-	-	-
Head cabbage	*	*	-
Ethiopian cabbage	26.85	26.85	-
Tomatoes	*	*	*
Green peppers	32.07	32.05	*
Red peppers	*	*	-
Swiss chard	-	-	-
Root crops	398.35	398.3	*
Beetroot	*	*	-
Carrot	*	*	-
Onion	7.45	7.45	-
Potatoes	2.2	2.2	-
Garlic	0.76	0.76	-
Taro 'Godere'	196.44	196.44	-
Sweet potatoes	190.62	190.56	*
Other Temporary	521.13	521.13	-
Fruit Crops	525.37	525.37	-
Avocado	26.13	26.13	-
Bananas	143.73	143.73	-
Guava	1.89	1.89	-
Lemons	1.78	1.78	-
Mangoes	236.88	236.88	-
Oranges	21.14	21.14	-
Papayas	85.65	85.65	-
Pineapples	8.17	8.17	-
Stimulant Crops	3,212.01	3,212.01	-
Chat	102.78	102.78	-
Coffee	3,091.98	3,091.98	-
Hops / 'Gesho'	17.25	17.25	-
Enset	732.73	732.73	-
Sugar cane	119.14	119.14	-
Other permanent	1.98	1.98	-

Table 10.9 Total Area and Crop Harvesting frequency by crop type
Harari

Crop type	Area	Once	Twice
All	14,096.85	14,028.52	*
Cereals	7,834.52	7,800.93	*
Teff	-	-	-
Barley	*	*	-
Wheat	246.78	239.16	*
Maize	1,425.18	1,406.34	*
Sorghum	6,122.81	6,115.68	*
Finger millet	*	*	-
Oats / 'Aja'	*	*	-
Rice	-	-	-
Pulses	*	*	-
Horse / Faba beans	-	-	-
Field Peas	-	-	-
Haricot beans	-	-	-
Chick peas	*	*	-
Lentils	-	-	-
Vetch / Grass peas	-	-	-
Soya beans	-	-	-
Fenugreek	-	-	-
Gibto	-	-	-
Oilseeds	2,018.33	2,018.33	-
Neug	-	-	-
Linseed	*	*	-
Groundnuts	2,010.84	2,010.84	-
Safflower	-	-	-
Sesame	*	*	-
Rapeseed	-	-	-
Vegetables	*	9.56	*
Lettuce	-	-	-
Head cabbage	*	*	-
Ethiopian cabbage	-	-	-
Tomatoes	*	*	*
Green peppers	*	*	-
Red peppers	*	*	-
Swiss chard	-	-	-
Root crops	160.49	149.25	*
Beetroot	-	-	-
Carrot	-	-	-
Onion	*	*	-
Potatoes	12.36	11.3	*
Garlic	*	*	-
Taro 'Godere'	-	-	-
Sweet potatoes	139.86	129.67	*
Other Temporary	10.69	10.66	*
Fruit Crops	444.29	441.91	*
Avocado	-	-	-
Bananas	10.59	10.59	-
Guava	13.53	12.77	*
Lemons	41.69	41.69	-
Mangoes	329.49	327.94	*
Oranges	0.32	0.28	*
Papayas	48.67	48.64	*
Pineapples	-	-	-
Stimulant Crops	3,367.53	3,353.52	*
Chat	3,298.98	3,284.97	*
Coffee	*	*	-
Hops / 'Gescho'	*	*	-
Enset	*	*	-
Sugar cane	197.48	197.48	-
Other permanent	29.97	29.44	*

Table 10.10 Total Area and Crop Harvesting frequency by crop type
Dire Dawa

Crop type	Area	Once	Twice
All	11,838.35	11,824.97	*
Cereals	9,618.86	9,615.06	*
Teff	-	-	-
Barley	*	*	-
Wheat	*	*	-
Maize	443.76	442.84	*
Sorghum	9,115.09	9,112.21	*
Finger millet	-	-	-
Oats / 'Aja'	-	-	-
Rice	-	-	-
Pulses	243.12	243.12	-
Horse / Faba beans	-	-	-
Field Peas	-	-	-
Haricot beans	238.45	238.45	-
Chick peas	-	-	-
Lentils	-	-	-
Vetch / Grass peas	*	*	-
Soya beans	-	-	-
Fenugreek	*	*	-
Gibto	-	-	-
Oilseeds	*	*	-
Neug	-	-	-
Linseed	-	-	-
Groundnuts	*	*	-
Safflower	-	-	-
Sesame	16.64	16.64	-
Rapeseed	-	-	-
Vegetables	69.67	62.05	*
Lettuce	-	-	-
Head cabbage	-	-	-
Ethiopian cabbage	*	*	-
Tomatoes	*	54.6	*
Green peppers	6.69	6.69	-
Red peppers	-	-	-
Swiss chard	-	-	-
Root crops	194.42	193.64	*
Beetroot	-	-	-
Carrot	-	-	-
Onion	10.75	10.75	-
Potatoes	6.62	6.62	-
Garlic	*	*	-
Taro 'Godere'	*	*	-
Sweet potatoes	143.79	143.01	*
Other Temporary	*	*	-
Fruit Crops	93.97	93.97	-
Avocado	*	*	-
Bananas	1.65	1.65	-
Guava	10.32	10.32	-
Lemons	*	*	-
Mangoes	21.75	21.75	-
Oranges	*	*	-
Papayas	34.7	34.7	-
Pineapples	*	*	-
Stimulant Crops	1,304.49	1,303.30	*
Chat	1,199.53	1,199.14	*
Coffee	104.96	104.16	*
Hops / 'Gescho'	-	-	-
Enset	-	-	-
Sugar cane	*	*	-
Other permanent	*	*	-

APPENDIX I

ESTIMATION PROCEDURES OF TOTALS, RATIOS AND SAMPLING ERRORS

APPENDIX I Estimation Procedures of Totals, Ratios and Sampling Errors

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

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

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

in which, $W_{hi} = \frac{M_h H_{hi}}{n_h m_{hi} h_{hi}}$ is the basic weight.

Where:

h represents the stratum

n_h is the total number of sample EAs successfully covered in the h^{th} stratum.

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

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

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

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

a_{hij} is the value of area for agricultural household j , in the i^{th} EA in the h^{th} 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 Production under Specific Crop:

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

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

Where, $\bar{Y}_{hi} = \frac{Y_{hi}}{4C_{hi}}$ is average yield per square meter of a specific crop in the i^{th} EA in the h^{th} stratum.

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

Y_{hi} is sample total quantity of production of a specific crop from defined area of land for crop cutting of a crop in the i^{th} EA in the h^{th} stratum.

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

C_{hi} is the number of crop cutting of a specific crop in the i^{th} EA in the h^{th} stratum.

3. For estimating yield of a specific crop in stratum h :

$$\hat{Y}_h = \frac{\hat{P}_h}{\hat{A}_h}$$

4. Sampling Variance of Estimates:

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

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

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

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

Where,

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

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^{th} sample EA in stratum h .

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

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

Since all strata are independent, the total variance is computed by aggregating the result obtained for each stratum, i.e.

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

Where, L is the number of strata.

5. Coefficient of Variation (CV) of Estimates:

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

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

6. Ninety-five percent confidence interval (CI) of stratum total of area:

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

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

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

APPENDIX II

ESTIMATIONS OF STANDARD ERRORS AND COEFFICIENT OF VARIATIONS

APPENDIX II. Estimate of Inputs Applied Area, quantity of inputs used and their Standard Errors and Coefficient of Variations

Crop	All fertilizer						DAP		
	Area (ha)			Quantity (qt)			Area (ha)		
	Estimate	S.E	C.V	Estimate	S.E	C.V	Estimate	S.E	C.V
All	5,163,486	111,436	2.16	4,227,495	160,423	3.79	1,336,931	67,897	5.08
Cereals	3,962,605	97,655	2.46	3,345,830	130,835	3.91	1,118,952	60,733	5.43
Teff	1,265,026	53,547	4.23	1,121,472	68,315	6.09	360,216	28,836	8.01
Barley	486,262	31,344	6.45	303,346	22,802	7.52	182,341	21,833	11.97
Wheat	912,236	45,242	4.96	954,573	64,599	6.77	273,891	26,961	9.84
Maize	791,949	33,665	4.25	745,770	53,573	7.18	164,783	12,290	7.46
Sorghum	338,283	29,039	8.58	93,759	8,607	9.18	41,120	5,642	13.72
Finger millet	160,628	16,321	10.16	115,911	16,579	14.3	93,777	13,341	14.23
Oats / 'Aja'	6,008	1,004	16.71	8,683	1,962	22.6	2,640	840	31.82
Rice	2,213	911	41.16	2,316	1,018	43.96	182	112	61.23
Pulses	399,582	18,734	4.69	410,534	37,730	9.19	95,151	8,363	8.79
Horse/Faba beans	171,763	8,862	5.16	141,462	11,674	8.25	38,698	4,129	10.67
Field Peas	71,909	6,380	8.87	62,199	6,659	10.71	26,010	3,808	14.64
Haricot beans	60,447	6,949	11.5	48,176	7,202	14.95	22,806	4,797	21.03
Chick peas	43,768	8,016	18.31	65,693	16,389	24.95	3,007	807	26.82
Lentils	26,117	5,154	19.73	51,906	14,011	26.99	2,460	656	26.65
Vetch / Grass peas	21,005	3,159	15.04	35,084	6,790	19.35	1,453	552	37.99
Soya beans	571	204	35.83	307	16	5.21	54	11	20.4
Fenugreek	2,999	504	16.81	3,568	835	23.4	279	101	36.29
Gibto	1,004	313	31.12	2,139	801	37.43	385	157	40.86
Oilseeds	162,899	12,266	7.53	176,981	15,295	8.64	72,281	8,360	11.57
Neug	67,246	7,554	11.23	64,947	7,097	10.93	33,985	5,445	16.02
Linseed	54,877	7,366	13.42	33,766	4,587	13.58	31,870	5,616	17.62
Groundnuts	8,820	3,518	39.88	3,043	517	16.98	437	174	39.85
Safflower	1,643	508	30.91	1,696	578	34.1	211	119	56.56
Sesame	13,950	3,210	23.01	4,082	1,841	45.09	2,320	841	36.25
Rapeseed	16,363	2,207	13.49	69,447	11,950	17.21	3,457	878	25.41
Vegetables	75,925	7,216	9.5	79,657	11,082	13.91	11,580	2,242	19.36
Lettuce	116	65	56.11	168	150	89.77	-	-	-
Head cabbage	1,478	499	33.77	1,516	456	30.11	145	71	49.19
Ethiopian cabbage	22,133	1,666	7.53	12,527	1,988	15.87	907	237	26.09
Tomatoes	1,628	550	33.81	2,119	1,035	48.83	59	34	56.75
Green peppers	3,340	619	18.54	5,792	1,331	22.98	141	68	48.16
Red peppers	47,034	6,913	14.7	57,513	10,771	18.73	10,328	2,212	21.42
Swiss chard	196	57	28.95	22	20	87.77	-	-	-
Root crops	108,211	6,800	6.28	97,916	11,279	11.52	17,617	2,312	13.13
Beetroot	839	209	24.9	1,627	629	38.69	131	79	60.69
Carrot	1,303	503	38.6	2,059	929	45.1	382	239	62.46
Onion	8,643	1,848	21.38	18,411	7,347	39.91	1,423	1,033	72.6
Potatoes	46,406	5,129	11.05	45,519	6,393	14.04	13,286	2,055	15.47
Garlic	8,641	1,155	13.36	18,316	3,515	19.19	517	145	27.98
Taro 'Godere'	20,887	2,281	10.92	2,603	151	5.81	1,187	165	13.88
Sweet potatoes	21,492	2,131	9.92	9,380	1,657	17.66	691	175	25.33
Other Temporary	25,252	2,475	9.8	19,986	3,657	18.3	1,613	476	29.53
Fruit Crops	20,337	1,826	8.98	11,296	1,930	17.08	876	342	38.98
Avocado	2,814	286	10.17	1,342	533	39.73	62	30	48.94
Bananas	10,840	1,491	13.75	5,285	939	17.77	754	336	44.52
Guava	815	185	22.73	984	523	53.13	12	8	65.04
Lemons	265	53	20.09	14	7	54.92	1	1	100.08
Mangoes	2,539	290	11.42	1,985	423	21.33	35	15	43.51
Oranges	1,860	400	21.53	148	103	69.19	1	1	99.86
Papayas	1,200	157	13.07	1,538	998	64.85	10	6	60.11
Pineapples	4	3	61.43	-	-	-	-	-	-
Stimulant Crops	134,712	8,640	6.41	64,253	5,358	8.34	13,372	2,606	19.49
Chat	45,214	4,511	9.98	15,604	2,066	13.24	1,567	450	28.71
Coffee	78,819	6,347	8.05	34,232	3,618	10.57	11,271	2,334	20.71
Hops / 'Geshe'	10,679	1,078	10.09	14,417	3,032	21.03	534	251	46.96
Enset	262,595	11,617	4.42	15,450	2,808	18.17	4,580	1,504	32.83
Sugar cane	7,192	1,684	23.41	3,374	831	24.63	670	258	38.43
Other permanent	4,177	800	19.14	2,218	788	35.54	240	123	51.12

APPENDIX II (cont'd)

Crop	DAP			UREA					
	Quantity (qt)			Area (ha)			Quantity (qt)		
	Estimate	S.E	C.V	Estimate	S.E	C.V	Estimate	S.E	C.V
All	1,229,530	58,577	4.76	237,396	21,018	8.85	213,026	24,512	11.51
Cereals	949,731	48,575	5.11	203,424	19,458	9.57	166,397	21,648	13.01
Teff	255,850	19,022	7.43	106,874	13,761	12.88	77,469	15,481	19.98
Barley	173,234	17,880	10.32	15,223	2,968	19.5	12,083	2,203	18.23
Wheat	246,992	20,341	8.24	35,444	6,215	17.54	31,715	6,142	19.37
Maize	153,849	12,170	7.91	28,402	4,699	16.54	35,457	7,526	21.23
Sorghum	34,499	3,937	11.41	10,712	2,614	24.4	6,487	1,383	21.32
Finger millet	79,777	14,811	18.57	6,197	1,626	26.24	2,342	624	26.63
Oats / 'Aja'	5,371	1,607	29.92	196	108	55.03	336	220	65.39
Rice	161	89	55.58	375	179	47.89	508	323	63.45
Pulses	111,134	9,589	8.63	10,200	2,325	22.79	13,311	2,942	22.1
Horse/Faba beans	49,033	5,290	10.79	4,926	1,600	32.49	6,181	1,601	25.91
Field Peas	27,768	4,162	14.99	1,153	386	33.46	1,027	378	36.79
Haricot beans	23,139	4,052	17.51	1,102	313	28.44	2,613	1,432	54.8
Chick peas	3,650	1,492	40.86	911	316	34.65	1,265	545	43.11
Lentils	3,275	947	28.9	537	405	75.43	232	134	57.49
Vetch / Grass peas	2,227	886	39.79	1,501	1,009	67.19	1,580	877	55.5
Soya beans	67	14	21.65	10	7	74.17	2	2	99.83
Fenugreek	772	300	38.85	38	26	68.31	285	234	81.95
Gibto	1,203	664	55.22	24	24	99.79	126	126	99.79
Oilseeds	69,165	7,471	10.8	4,814	1,088	22.6	5,351	1,653	30.9
Neug	29,129	4,574	15.7	1,917	766	39.95	907	375	41.39
Linseed	21,871	3,805	17.4	752	396	52.66	554	271	48.96
Groundnuts	1,754	221	12.58	1,032	603	58.4	760	278	36.62
Safflower	637	321	50.33	240	106	44.11	787	460	58.46
Sesame	2,645	1,681	63.56	616	237	38.5	340	131	38.41
Rapeseed	13,129	3,067	23.36	258	104	40.49	2,004	1,470	73.39
Vegetables	24,238	4,276	17.64	8,595	2,255	26.23	9,397	1,903	20.25
Lettuce	-	-	-	8	8	100.1	44	44	100.1
Head cabbage	419	199	47.5	203	168	82.54	230	141	61.39
Ethiopian cabbage	6,979	1,505	21.57	142	81	57.47	364	244	67.03
Tomatoes	491	362	73.74	28	15	53.16	98	58	59.91
Green peppers	1,613	751	46.55	330	263	79.67	797	275	34.46
Red peppers	14,737	3,870	26.26	7,880	2,232	28.33	7,845	1,839	23.44
Swiss chard	-	-	-	4	4	100.04	19	19	100.04
Root crops	36,447	4,075	11.18	3,419	1,317	38.51	8,110	2,900	35.76
Beetroot	574	366	63.73	3	2	62.57	9	6	64.48
Carrot	942	465	49.4	35	25	71.73	303	247	81.32
Onion	2,453	1,072	43.71	798	356	44.57	1,486	897	60.36
Potatoes	24,301	3,772	15.52	1,847	1,157	62.66	3,813	2,459	64.49
Garlic	4,157	899	21.62	408	166	40.61	1,488	458	30.76
Taro 'Godere'	1,165	149	12.79	85	43	50.69	34	13	37.85
Sweet potatoes	2,856	476	16.66	244	112	45.9	977	546	55.9
Other Temporary	4,905	1,007	20.52	879	422	47.98	3,054	1,563	51.16
Fruit Crops	3,639	863	23.72						
Avocado	752	407	54.17						
Bananas	1,798	488	27.15						
Guava	670	509	75.9						
Lemons	4	4	100.08						
Mangoes	138	86	62.47						
Oranges	5	5	99.86						
Papayas	272	157	57.62						
Pineapples	-	-	-						
Stimulant Crops	19,688	2,162	10.98						
Chat	3,013	633	21						
Coffee	14,743	1,913	12.98						
Hops / 'Gesho'	1,931	438	22.67						
Enset	8,591	2,223	25.87						
Sugar cane									
	1,085	361	33.24						
Other permanent	906	516	56.96						

APPENDIX II (cont'd)

Crop	UREA+DAP						INDIGENOUS SEED		
	Area (ha)			Quantity (qt)			Area (ha)		
	Estimate	S.E	C.V	Estimate	S.E	C.V	Estimate	S.E	C.V
All	1,593,079	72,877	4.57	2,784,939	146,675	5.27	10,978,960	172,288	1.57
Cereals	1,401,114	65,081	4.64	2,229,702	119,064	5.34	7,660,560	122,752	1.6
Teff	597,851	39,955	6.68	788,154	63,964	8.12	2,244,829	73,610	3.28
Barley	72,287	7,694	10.64	118,029	11,795	9.99	951,195	46,618	4.9
Wheat	420,411	31,185	7.42	675,866	60,191	8.91	1,417,579	59,863	4.22
Maize	242,639	21,013	8.66	556,465	49,707	8.93	1,250,162	39,242	3.14
Sorghum	33,245	4,728	14.22	52,773	6,332	12	1,382,453	68,773	4.97
Finger millet	33,359	6,891	20.66	33,792	6,085	18.01	350,430	21,965	6.27
Oats / 'Aja'	728	254	34.86	2,976	1,003	33.69	20,381	2,562	12.57
Rice	595	377	63.33	1,647	865	52.52	43,531	16,666	38.28
Pulses	112,194	13,195	11.76	286,090	37,319	13.04	1,358,379	42,899	3.16
Horse/Faba beans	30,767	3,426	11.14	86,248	10,040	11.64	459,195	19,778	4.31
Field Peas	16,870	3,352	19.87	33,404	5,104	15.28	209,767	12,964	6.18
Haricot beans	6,430	1,517	23.59	22,424	4,991	22.26	205,379	17,127	8.34
Chick peas	28,910	7,427	25.69	60,777	16,033	26.38	202,745	16,736	8.25
Lentils	15,592	4,524	29.02	48,399	13,887	28.69	100,086	10,263	10.25
Vetch / Grass peas	12,436	2,546	20.47	31,277	6,635	21.21	131,233	13,296	10.13
Soya beans	36	17	47.7	239	7	2.9	5,504	1,780	32.35
Fenugreek	841	364	43.3	2,511	745	29.66	19,525	3,799	19.46
Gibto	312	184	59.06	810	388	47.87	24,945	5,609	22.49
Oilseeds	36,261	3,879	10.7	102,465	12,310	12.01	706,361	69,870	9.89
Neug	18,818	2,333	12.4	34,912	4,723	13.53	218,748	15,069	6.89
Linseed	9,779	2,370	24.24	11,341	2,404	21.19	120,293	10,770	8.95
Groundnuts	307	261	84.96	529	359	67.96	32,393	6,403	19.77
Safflower	133	89	67.01	272	150	55.07	4,450	996	22.39
Sesame	684	397	58.1	1,097	741	67.51	311,383	67,903	21.81
Rapeseed	6,539	1,306	19.98	54,314	10,857	19.99	19,094	2,319	12.14
Vegetables	16,149	3,784	23.43	46,023	8,298	18.03	122,832	8,144	6.63
Lettuce	33	30	92.45	124	107	86.69	116	63	54.48
Head cabbage	327	307	93.86	867	344	39.65	1,760	394	22.35
Ethiopian cabbage	263	140	53.4	5,184	1,087	20.96	27,808	1,810	6.51
Tomatoes	758	523	69.03	1,531	967	63.14	4,312	1,335	30.96
Green peppers	484	202	41.74	3,382	1,006	29.76	6,645	1,094	16.47
Red peppers	14,285	3,729	26.11	34,932	8,148	23.33	81,998	7,671	9.35
Swiss chard	1	1	100.46	3	3	100.46	193	57	29.3
Root crops	11,996	2,520	21.01	53,359	9,681	18.14	183,254	9,365	5.11
Beetroot	108	97	90.45	1,044	512	49.07	937	211	22.54
Carrot	319	249	78.23	814	573	70.41	1,657	604	36.42
Onion	2,759	1,057	38.3	14,472	7,243	50.05	13,382	2,433	18.18
Potatoes	6,511	1,637	25.14	17,405	3,616	20.78	59,255	6,882	11.61
Garlic	1,194	742	62.11	12,671	3,323	26.22	13,507	1,506	11.15
Taro 'Godere'	210	48	22.97	1,405	19	1.34	49,164	4,291	8.73
Sweet potatoes	896	236	26.32	5,547	1,469	26.48	45,351	3,288	7.25
Other Temporary	1,106	432	39.07	12,026	3,101	25.78	56,428	5,487	9.72
Fruit crops							48,927	3,988	8.15
Avocado							5,185	394	7.6
Bananas							27,414	2,981	10.87
Guava							1,640	362	22.1
Lemons							687	92	13.43
Mangoes							7,811	972	12.45
Oranges							3,332	546	16.39
Papayas							2,741	368	13.44
Pineapples							118	91	76.88
Stimulant Crops							456,021	24,486	5.37
Chat							110,096	14,527	13.19
Coffee							324,548	17,983	5.54
Hops / 'Gesho'							21,378	2,037	9.53
Enset							359,242	14,984	4.17
Sugar cane							16,291	3,062	18.79
Other permanent							10,665	1,242	11.65

APPENDIX III

**NUMBER OF EAs SAMPLED AND COVERED
NUMBER OF HOUSEHOLDS SAMPLED AND COVERED**

Appendix III. Number of Planned and Actually Covered Sampling Units (EAs & Households) of the 2009/10 (2002 E.C) Annual Agricultural Sample Survey (Meher Season).

Region	Enumeration Areas		Households	
	Planned	Covered	Planned	Covered
Tigray	152	152	3040	3040
Affar	49	48	980	937
Amhara	336	336	6720	6720
Oromiya	452	452	9040	9040
Somalie	72	70	1440	1353
Benishangul Gumuz	90	90	1800	1800
SNNP	380	380	7600	7600
Gambela	81	59	1620	1180
Hareri	24	24	480	480
Diredawa	24	24	480	480
Country Total	1660	1635	33200	32630

APPENDIX IV

QUESTIONNAIRE

PART III – RESULTS OF AREA MEASUREMENTS

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)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Length	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Side	9 -	10 -	11 -	12 -	13 -	14 -	15 -	16 -
Bearing(0)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Length	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Side	17 -	18 -	19 -	20 -	21 -	22 -	23 -	24 -
Bearing (0)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Length	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Side	25 -	26 -	27 -	28 -	29 -	30 -	31 -	32 -
Bearing (0)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Length	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Field Measurement	date	month	Closure error		Area in square meters			
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
For fields selected		Selected corner number		Shortest side length		Random number		
For crop cutting		Shortest side Bearing		Longest side length		Random number		

CENTRAL STATISTICAL AUTHORITY
ETHIOPIAN AGRICULTURAL SAMPLE SURVEY 2009/10 (2002 E.C)

PART I – IDENTIFICATION PARTICULARS

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

PART II – MISCELLANEOUS QUESTIONS FOR THE HOLDER

15	16	17
SER.NO.	QUESTIONS	CODE
1	Do you exercise crop rotation on your land holding? Yes = 1 No = 2	
2	Reason for not using chemical fertilizers on any one of your crop fields Ignorance = 1 High price = 2 Lack of Money = 3 Non – availability of supply = 4 lack of credit service = 5 Skeptical of the outcome = 6 Others (specify) = 7	
3	Reason for not participating in Extension Program Ignorance = 1 Lack of Money = 2 Skeptical of the outcome = 3 Non – availability of the program = 4 Lack of adequate crop fields = 5 Others (specify) = 6	
4	Do you get credit services? Yes = 1 No = 2	
5	If no in # 4 Why? Non availability of the service = 1 Unable to pay the loan = 2 Inadequate services provided = 3 Ignorance = 4 Does not yield any results = 5 Others = 6	
6	Do you get advisory services? Yes = 1 No = 2	
7	If no in # 6 Why? Non availability of the service = 1 Inadequate services provided = 2 Inadequate services provided = 2 Ignorance = 3 Does not yield any results = 4 Others = 5	
8	Your major supplier of fertilizer is Government organizations = 1 Private organizations = 2 Merchants = 3 Others (Specify) = 4 Never used fertilizer = 5	
9	How many oxen do you have in this Meher season?	
10	If you have one or no ox how do you plough? By renting ox = 1 By pairing mine with someone's ox = 2 By pairing mine with cow/ horse = 3 Using horses or cows = 4 Hand digging = 5 Using borrowed oxen = 6 others = 7	
11	Total number of fields recorded for the holder	
12	Total number of crop fields recorded for the holder	
13	Has the holder ploughed additional fields over that of the previous year? Yes = 1 No = 2	
14	If yes in question # 13, what was the previous state of the additional fields? Holder's virgin land = 1 Public/ Community virgin land = 2 Borrowed fallow land = 3 Other = 4	