THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
CENTRAL STATISTICAL AUTHORITY

AGRICULTURAL SAMPLE SURVEY
1998/99 (1991 E.C.)

VOLUME I

REPORT ON

AREA AND PRODUCTION FOR MAJOR CROPS

(PRIVATE PEASANT HOLDINGS, MEHER SEASON)

ADDIS ABABA
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ABBREVIATIONS

CSA -	CENTRAL STATISTICAL AUTHORITY
CV -	COEFFICIENT OF VARIATION
E.C -	ETHIOPIAN CALENDAR
HA -	HECTARE
QT -	QUINTAL
SE -	STANDARD ERROR
SNNPR -	SOUTHERN NATIONS, NATIONALITIES AND PEOPLES REGION

PART I

INTRODUCTION AND OBJECTIVES OF THE SURVEY

I. Introduction

Agriculture is the major contributor to the Ethiopian economy. A great majority of the Ethiopian population are engaged in agriculture to earn their livelihood and most of the nation's exports are made up of agricultural produce. The collection of reliable, comprehensive and timely data on agriculture is thus essential for policy formulation, decision making and other uses. In this regard the Central Statistical Authority (CSA) has exerted effort to provide users and policy makers with reliable and timely agricultural data.

This report presents one of the series of the 1998/99 (1991 E.C) Agricultural Sample Survey (AgSS) results, i.e. area and production for the major crops produced within the private peasant holdings sector of the economy. The report consists of three parts where Part I includes the objectives of this annual survey, Part II includes coverage and content of the survey, sample design, field organization, training of field staff, method of data collection and Part III includes survey estimates of area, production and yield of major crops. Estimation procedures and formulations for estimates of totals, ratios, and variance are presented in Appendix I.

Estimates of the standard errors with the corresponding coefficient of variations for area and production of the major crops are presented in

appendix II, the number of agricultural households covered, parcels and fields measured, and number of crop cuttings completed are presented in Appendix III and the survey questionnaires in Appendix IV.

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 considered essential for development planning, socio-economic policy formulation, food assistance, etc. The AgSS is composed of four components: crop production forecast survey, Meher season survey, livestock survey, and survey of the Belg season crop area and production.

The specific objectives of the Meher season area and production survey are to estimate the total cultivated land area, production and yield per hectare of major crops (temporary). Companion reports are published separately with estimates of land use and quantity of agricultural inputs applied by type for the Meher and Belg seaons. All reports are based on the private peasant holdings in sedentary areas of the nation, further subdivided by regions and zones.

PART II

SURVEY METHODOLOGY, DATA COLLECTION AND PROCESSING

1. Scope, Coverage and Content of the Survey

The 1998/99 (1991 E.C) annual Agricultural Sample Survey used a sampling frame which was designed to cover the sedentary rural agricultural population in all regions of the country (urban and nomadic areas were not included in the survey). Illustrated in Table A is a break down of the sample distribution as expressed by regions, zones and weredas. A total of 56 zones and 417 weredas were actually covered by the survey.

The area sampling unit used for this survey is defined as an enumeration area (EA) as defined for the 1994 Population and Housing Census. For the 1998/99 AgSS a total of 1450 enumeration areas were selected from all regions of the country. Due to various reasons, 22 EAs were not covered in the survey which resulted in the survey actually covering 1428 enumeration areas (EAs). From each of the selected EAs a representative sample of forty agricultural households were selected to represent the agricultural population of the sampled EA.

Of these forty agricultural households, the first twenty-five were used for obtaining information on area under crops, Meher and Belg season production of crops, land use, agricultural practices, crop damage, and quantity of agricultural inputs used. It is important to note that of the total forty agricultural households sampled in each of the selected EAs, data oncrop

cutting were collected for only the fifteen households (11th-25th households selected).

TABLE A: AREA COVRAGE OF THE 1998/99 AGRICULTURAL SAMPLE SURVEY

REGION	NUMBER OF ZONES			NUMBER OF WEREDAS		
	TOTAL	COVERED	NOT COVERED	TOTAL[3]	COVERED	NOT COVERED
TIGRAY[1]	5	4	1	33	33	-
AFAR[2]	5	3	2	8	7	1
AMHARA[1]	11	10	1	93	93	-
OROMIYA	12	12	-	171	171	-
SOMALIE[2]	9	3	6	9	9	-
BENISHANGUL-GUMUZ	3	3	-	18	18	-
SNNP	14	14	-	73	73	-
GAMBELA	4	3	1	5	5	-
HARARI	1	1	-	1	1	-
ADDIS ABABA[1]	6	2	4	5	5	-
DIRE DAWA	1	1	-	1	1	-
TOTAL	71	56	15	417	416	1

Note

1= Zones that are not covered in these regions are urban.

2 = Zones that are not covered in these regions are the ones that are not inhabited by significant number of sedentary population.

3 = Numbers of total weredas signify those weredas in covered zones of the respective regions.

SNNP = Southern Nations, Nationalities and Peoples.

2. Concepts and Definitions

In order to collect standardized data of acceptable quality the same concepts and definitions must be used by all field enumerators during data collection. Below are defined some of the more important concepts and definitions used for the survey.

Enumeration Area (EA): an enumeration area in the rural parts of the country is a locality that is less than or 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 coommon budget to 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.

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

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

person, who with or without the help of others, operates land and/or raises livestock in his own right, i.e. the person who decides on what, which, where and how to grow crops or raise livestock and has the right to determine the utilization of the products.

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

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 land holding.

Meher (main) season crop: any crop harvested from Meskerem (September) to Yekatit (February) is considered as Meher season crop.

Belg Season Crop: any crop harvested during the months of Megabit (March) to Nehase (August).

Temporary crops : temporary crops are crops which are grown under a cycle of less than one year, sometimes only a few months with an objective to be sown or replanted again for additional production following the current harvest. Continuously grown crops planted in rotation are also considered 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 permanent crops. All fruit trees (i.e. oranges, mandarins, banana, etc) and trees for beverages (i.e. coffee, tea, etc.) are considered permanent crops, but meadows and pastures are excluded.

5. Sample Design

The 1998/99 (1991 E.C.) meher season agricultural survey covered the rural part of the country except two zones in Afar region and six zones in Somalie region that are predominantly nomadic. A two-stage stratified sample design was used to select the sample EAs and the agricultural households. Each zone/special wereda in the sampled population of Tigray, Afar, Amhara, Oromiya, Somalie, Benishangul-Gumuz, SNNP regions was adopted as stratum for which major findings of the survey are reported. But each of the four regions, namely; Gambela, Harari, Addis Ababa and Dire Dawa were considered as reporting levels. The primary sampling units (PSUs) were

enumeration areas (EAs) and agricultural households were the secondary sampling units.

The survey questionnaires were administered to all agricultural holders within the sample households. A fixed number of sample EAs was determined for each stratum/reporting level based on precision of major estimates and cost considerations. Within each stratum EAs were selected using probability proportional to size; size being total number of households in the EAs as obtained from the 1994 population and housing census. From each sample EA, 25 agricultural households were systematically selected for the meher season survey from a fresh list of households prepared at the beginning of the fieldwork of the survey.

A total of 1,450 EAs (2.9 % of total EAs in the rural areas of the country) were selected for the survey. However, 22 EAs were not covered by the survey due to various reasons that are beyond the control of the Authority. Thus, the survey succeeded in covering 1428 (98.48 %) EAs. With respect to ultimate sampling units, it was planned to cover a total of 36,250 agricultural households for area measurement and 21,750 agricultural households for crop cutting (see appendix III). The response rate was found to be 98.94 % for area measurement and 95.50 % for crop cutting. Distribution of the number of sampling units sampled and covered by strata is given in appendix I. Estimation procedures of parameters of interest (total and ratio) and their sampling error is presented in appendix II. In appendix III, distribution of EAs

sampled and covered, agricultural households sampled and actually covered, fields measured and crop cuttings is presented.

4. Field Organization

All the 22 Branch Statistical Offices of the CSA participated in the survey undertaking, especially in organizing the second stage training, in deploying the field staff to their respective sites of assignment, and retrieving completed questionnaires and submitting them to the head office for data processing. The Branch Statistical Offices were also responsible in administering the financial and logistics aspect of the survey within the areas of their assignment. In the data collection of the survey, a total of 1559 enumerators and 331 field supervisors were involved with an average supervisor-enumerator ratio of 1-to-5. To accomplish the data collection operation, all the enumerators were supplied with the necessary survey equipment (compass, protractor, ruler, measuring tape, balance scale, poles, ropes, sample bags, ... etc. at the completion of the AgSS training. To assist the data collection activities in deployment, supervision and retrieval of completed questionnaires, a total of 123 four-wheel vehicles were used. The following table shows distribution of the field staff and vehicles by Branch Statistical Office.

Table B. Distribution of Field Staff and Vehicles by Branch Statistical Office

Branch Office	Number of		
	Enumerators	Supervisors	Vehicles
Mekele	103	22	7
Asayita	66	15	5
Gondar	75	16	6
Debre Markos	94	20	8
Dessie	94	20	7
Debre Birhan	61	13	5
Nazreth	50	11	4
Ambo	66	15	5
Nekemte	66	15	6
Jimma	66	15	7
Goba	49	12	4
Asebe Teferi	50	11	4
Jijiga	66	15	4
Asosa	84	19	6
Awasa	112	22	8
Mizan Teferi	66	14	6
Arba Minch	122	22	8
Hosana	127	25	7
Gambela	33	7	5
Harar	49	10	4
Addis Ababa	28	6	4
Dire Dawa	33	6	3
Total	1559	331	123

5. Training of Field Staff

The field staff training program was carried out in two stages. The first stage consisted of training of staff from the head office, Branch Statistical Office heads and the senior field supervisors. This training was given for a period of one week at CSA's headquarters in Addis Ababa. Many of these Personnel trained in the first stage were assigned to conducted similar training for field supervisors and enumerators for fifteen days in all the twenty-two CSA brach offices which are distributed all over the country. During this second stage of training, the field staff were given detailed classroom instruction on the objectives and uses of the AgSS, concepts and definition of terms used, the method of area measurement, method of crop cutting, correct interviewing procedures, ... etc. The training of the enumerators and supervisors also included field practice to reinforce the understanding of the concepts, definitions and theories discussed in the classroom with regard to field measurement and crop cutting methods.

6. Method of Data Collection

In the 1998/99 AgSS data on area and production were recorded on questionnaires using both subjective and objective enumeration methods. Information on agricultural practices (application of fertilizer, pesticides, use of improved seeds and irrigation) were collected subjectively by interviewing the holders in each sampled household.

The objective measurement procedures for area measurement were carried out for the twenty-five selected households from each sampled EA. This required

that all separate fields by land area utilization be physically measured using compass and measuring tape. In addition, for all fields under temporary crops of each holder of the last fifteen sampled households, each was classified by type of crop and for selected major crops a field was randomly selected for each crop for crop cutting to be performed. Crop cutting procedures consist of demarcation of a sixteen square meter plot randomly located in the selected field for which the crop in the field is to be harvested.

Following the field enumerator's harvest of the crop cutting plot and threshing, the crop is stored in bags with identification information (i.e. name of the crop, holder's number, parcel and field number). The crop placed in the bag is weighed immediately (green weight) after threshing, and weighed again after two weeks of drying to simulate normal holder harvesting and drying practices. The green and dry weights are recorded on the respective forms.

7. Data Processing

7.1. Editing, Coding and Verification

In order to insure the quality of the collected survey data an editing, coding and verification instruction manual was prepared and printed. Then 50 editors-coders and 10 verifiers were trained for two days in the editing, coding and verfication operation 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. The editing, coding and verification exercise of all questionnares was completed in about 40 days.

7.2. Data Entry, Cleaning and Tabulation

Before starting data entry, professional staff of Agricultural Statistics Department prepared edit specifications for use on personal computers utilizing the Integrated Microcomputer Processing System (IMPS) software for data consistency checking purposes.

The data on the coded questionnaires were then entered into personal computers using IMPS software. The data were then checked and cleaned using the edit specifications prepared earlier for this purpose. The data entry operation involved about 50 data encoders and it took 35 days to complete the job. Finally, tabulation was done on personal computers to produce results as indicated in the tabulation plan.

PART III

SUMMARY OF THE SURVEY RESULTS

1. Area and Production

The results for area, production and yield of major crops (temporary or annual) are presented in this publication. The estimates for the twenty major crops exclude cash crops (coffee, chat, etc), fruits, vegetables, Enset, and other root crops. Consequently, the total area under major temporary crops is estimated to be a little more than 8 million hectares (see Table C) at country level for the Meher season of 1998/99 (1991 E.C).

Out of the total crop area, cereals accounted for about 6.7 million hectares (84%), while pulses and other crops (nueg, linseed, rapeseed, ground nuts, sunflower, sesame and fenugreek) accounted for about 0.9 million hectares (11%) and 0.4 million hectares (5%), respectively. Looking at specific crops, the largest area, or about 2.1 million hectares, is reported for teff followed by maize and sorghum. For details refer to Table 1.

Table C **Summary Estimates of Area, Production and Yield of Major Crops for the Year 1998/99 (1991 E.C)**

Crop type	Area in million hectares		Production in million quintals		Yield
	number	percent	number	percent	qt / hectare
Cereals	6.74	84	76.83	90	11.39
Pulses	0.88	11	7.32	8	8.36
Other crops	0.40	5	1.69	2	4.26
Total	8.02	100	85.84	100	10.71

Fig.1 Estimates of Area Under Major Crops for Private Peasant Holdings: National 1998/99 (1991 E.C)

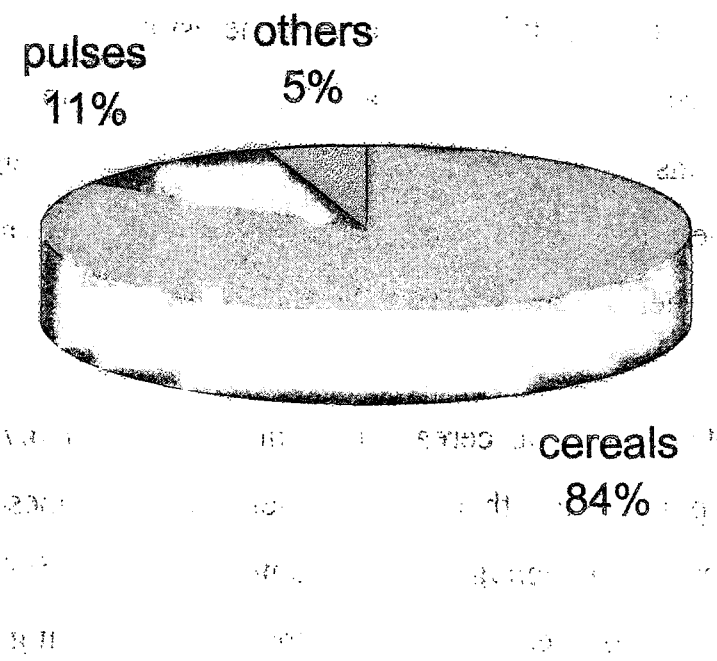


Fig.2 Estimates of Production for Major Crops for Private Peasant Holdings: National 1998/99 (1991 E.C)

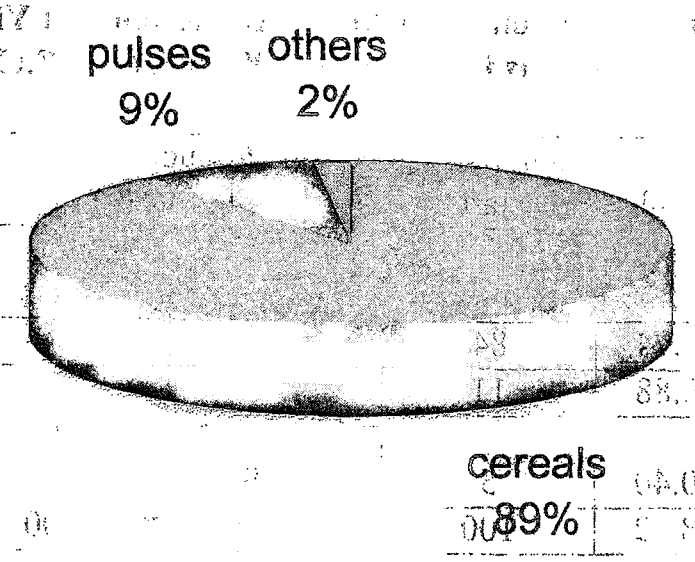


Table 1. Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

National

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	6,744.71	84.14	76,829.91	89.51	11.39
Teff	2,091.34	26.09	16,422.85	19.13	7.85
Barley	830.18	10.36	7,685.85	8.95	9.26
Wheat	987.07	12.31	11,137.83	12.98	11.28
Maize	1,303.10	16.26	24,166.24	28.15	18.55
Sorghum	1,042.39	13.00	13,208.41	15.39	12.67
Millet	446.68	5.57	3,814.86	4.44	8.54
Oats	43.97	.55	393.87	.46	8.96
Pulses	875.38	10.92	7,319.77	8.53	8.36
Horse Beans	293.41	3.66	2,851.60	3.32	9.72
Field Peas	141.95	1.77	984.86	1.15	6.94
Haricot Beans	129.47	1.62	1,024.89	1.19	7.92
Chick Peas	167.65	2.09	1,388.37	1.62	8.28
Lentils	47.85	.60	283.80	.33	5.93
Vetch	95.05	1.19	786.24	.92	8.27
Others	396.22	4.94	1,688.74	1.97	4.26
Neug	221.11	2.76	845.30	.98	3.82
Linseed	90.44	1.13	352.78	.41	3.90
Rapeseed	10.42	.13	84.17	.10	8.08
Ground Nuts	15.03	.19	83.52	.10	5.56
Sunflower	5.58	.07	24.86	.03	4.46
Sesame	32.20	.40	176.77	.21	5.49
Fenugreek	21.43	.27	121.34	.14	5.66
All Crops	8,016.31	100.00	85,838.42	100.00	10.71

The total production estimate at country level is about 85.84 million quintals, of which cereals accounted for 76.83 million quintals, pulses accounted for about 7.32 million quintals, and other crops (mentioned above) totalled to 1.69 million quintals (see Table C).

The survey results also indicate that the yield of cereals was 11.39 quintals per hectare, the yield of pulses was 8.36 quintals per hectare and the yield of other crops (mentioned above) was 4.26 quintals per hectare. In Table 1 it is also shown that the highest yield is reported for maize, which was 18.55 quintals per hectare, and the lowest is for nueg at 3.82 quintals per hectare.

As presented in Table 2, total area cultivated and total production have increased by 17.03%, and 16.59%, respectively and the average yield per hectare has decreased by 0.37% compared to last crop season, i.e. 1997/98.

The 1998/99 AgSS design increased the number of sampling units in some of the reporting levels in order to come up with relatively more reliable survey estimates at the regional and zonal levels. Comparing the AgSS estimates at the regional level the data in Table 3 illustrates the variation in yield of Ethiopian agriculture.

In Tigray Region, 580.21 thousand hectares of land has been allotted to grow the twenty major crops by private peasant holders in 1998/99, an increase of 12.94% from the previous year. Production of the twenty major crops was up

Table 2. Estimates of 1997/98 and 1998/99 Area, Production and Yield of Major Crops for Private Peasant Holdings in Ethiopia (Meher Season)

CROP	TOTAL AREA (' 000 HA.)			TOTAL PRODUCTION (' 000 QT.)			YIELD (QT / HA.)		
	1997/98 (1990 E.C.)	1998/99 (1991 E.C)	% CHANGE	1997/98 (1990 E.C)	1998/99 (1991 E.C)	% CHANGE	1997/98 (1990 E.C)	1998/99 (1991 E.C)	% CHANGE
CEREALS	5,601.88	6,744.71	20.40	64,987.83	76,829.91	18.22	11.6	11.39	-1.81
TEFF	1,747.19	2,091.34	19.70	13,073.48	16,422.85	25.62	7.48	7.85	4.95
BARLEY	681.95	830.18	21.74	7,863.95	7,685.85	-2.26	11.53	9.26	-19.69
WHEAT	787.72	987.07	25.31	11,067.85	11,137.83	0.63	14.05	11.28	-19.72
MAIZE	1,100.61	1,303.10	18.40	19,288.51	24,166.24	25.29	17.53	18.55	5.82
SORGHUM	954.74	1,042.39	9.18	10,697.40	13,208.41	23.47	11.2	12.67	13.13
MILLET	289.74	446.68	54.17	2,587.05	3,814.86	47.46	8.93	8.54	-4.37
OATS	39.93	43.97	10.12	409.6	393.87	-3.84	10.26	8.96	-12.67
PULSES	837.61	875.38	4.51	6,801.92	7,319.77	7.61	8.12	8.36	2.96
HORSE BEANS	266.3	293.41	10.18	2,596.67	2,851.60	9.82	9.75	9.72	-0.31
FIELD PEAS	119.88	141.95	18.41	927.25	984.86	6.21	7.73	6.94	-10.22
HARICOT BEANS	92.19	129.47	40.44	548.46	1,024.89	86.87	5.95	7.92	33.11
CHICK PEAS	169.97	167.65	-1.36	1,371.33	1,388.37	1.24	8.07	8.28	2.60
LENTILS	47.09	47.85	1.61	310.79	283.8	-8.68	6.6	5.93	-10.15
VETCH	142.17	95.05	-33.14	1,047.44	786.24	-24.94	7.37	8.27	12.21
OTHERS	410.01	396.22	-3.36	1,836.96	1,688.74	-8.07	4.48	4.26	-4.91
NEUG	195.22	221.11	13.26	735.79	845.3	14.88	3.77	3.82	1.33
LINSEED	134.64	90.44	-32.83	633.46	352.78	-44.31	4.7	3.9	-17.02
RAPESEED	15.67	10.42	-33.50	86.94	84.17	-3.19	5.55	8.08	45.59
GROUNDNUTS	11.02	15.03	36.39	77.76	83.52	7.41	7.06	5.56	-21.25
SUNFLOWER	3.33	5.58	67.57	12.57	24.86	97.77	3.77	4.46	18.30
SESAME	23.62	32.2	36.33	98.25	176.77	79.92	4.16	5.49	31.97
FENUGREEK	29.71	21.43	-27.87	162.19	121.34	-25.19	5.46	5.66	3.66
ALL CROPS	6,849.50	8,016.31	17.03	73,626.71	85,838.42	16.59	10.75	10.71	-0.37

by 41.98% compared to 1997/98. The 1998/99 estimate of total major crop production of Tigray Region accounted for 7.61% of the total national crop production. The land area under the twenty major crops constitutes 7.24% of the total land area under similar crops at country level.

In Afar Region 15.22 thousand hectares of land was cultivated in order to grow the twenty major crops by private peasant holders in 1998/99.The area cultivated showed a decrease of 3.30% from the previous year. Production of the twenty major crops was up by 60.31% compared to 1997/98 and accounted for only 0.21% of the total crop production at country level.

Amhara Region is the second largest both in area planted and production in 1998/99 with 2.98 million hectares of land cultivated for growing the twenty major crops by private holders. This indicates an increase of 21.48% from the previous year. This area accounted for 37.24% of the national total area planted. Production of the twenty major crops was up by 30.95% from the 1997/98 and this production accounted for 33.24% of the crop production at country level.

Oromiya Region is the largest in both area planted and production in 1998/99 and 3.53 million hectares of land was cultivated to grow the twenty major crops by private holders. This shows an increase of 13.97% from the previous year. This area comprised 44.03% of the total crop area at country level and accounted for 47.89% of the total crop production, at country level. The

Fig. 3 Estimates of Area and Production of Major Crops by Region for Private Peasant Holdings, 1998/99 (1991 E.C.)

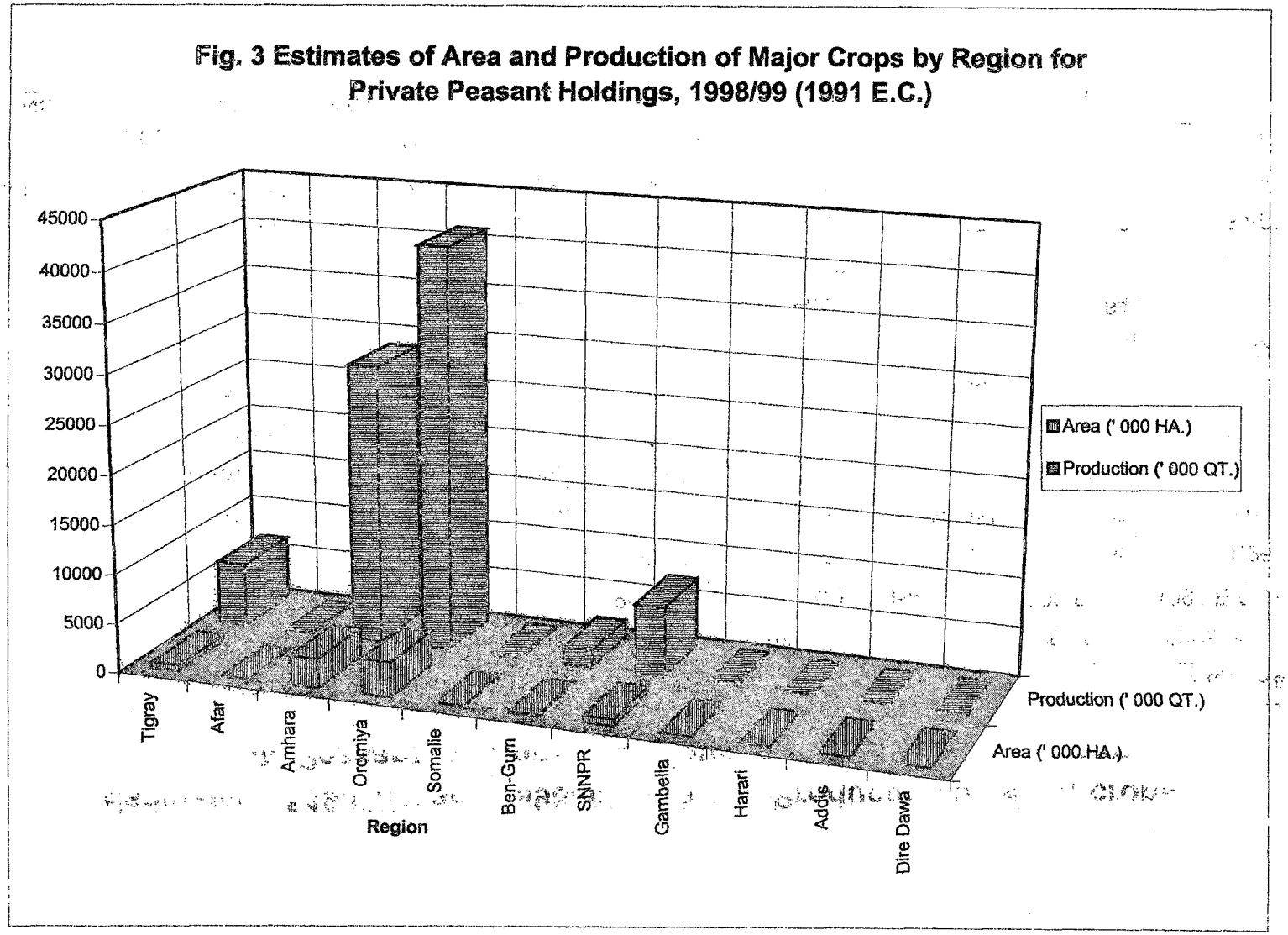


Table 3. Estimates of 1997/98 and 1998/99 Area and Production of Major crops for Private Peasant Holdings in Ethiopia by Region (Meher Season)

REGION	TOTAL AREA (' 000 HA.)			TOTAL PRODUCTION (' 000 QT.)			YIELD (QT./HA)		
	1997/98 (1990 E.C.)	1998/99 (1991E.C.)	% CHANGE	1997/98 (1990 E.C.)	1998/99 (1991 E.C.)	% CHANGE	1997/98 (1990 E.C.)	1998/99 (1991 E.C.)	% CHANGE
TIGRAY	513.72	580.21	12.94	4,599.81	6,530.89	41.98	8.95	11.26	25.81
AFAR	15.74	15.22	-3.30	114.44	183.46	60.31	7.27	12.05	65.75
AMHARA	2,457.83	2,985.73	21.48	21,788.61	28,532.46	30.95	8.86	9.56	7.90
OROMIYA	3,096.94	3,529.48	13.97	37,703.02	41,109.08	9.03	12.17	11.65	-4.27
SOMALI	51.49	46.24	-10.20	506.71	262.32	-48.23	9.84	5.67	-42.38
BENISHANGUL-GUM	133.39	156.99	17.69	1,520.80	1,776.76	16.83	11.4	11.32	-0.70
S.N.N.P.R	551.58	673.09	22.03	6,973.06	7,044.14	1.02	12.64	10.47	-17.17
GAMBELLA	12.81	11.18	-12.72	262.66	222.82	-15.17	20.5	19.93	-2.78
HARARI	4.44	5.5	23.87	32.96	46.53	41.17	7.42	8.46	14.02
ADDIS ABABA	7.01	7.4	5.56	90.93	74.33	-18.26	12.97	10.04	-22.59
DIRE DAWA	4.55	5.28	16.04	33.72	55.63	64.98	7.41	10.54	42.24
ALL REGIONS	6,849.50	8,016.31	17.03	73,626.72	85,838.42	16.59	10.75	10.71	-0.37

production in Oromiya of the twenty major crops was up by 9.03% compared to 1997/98.

Somalie and Gambella Regions both showed a decrease of 10.20% and 12.72% in planted area and a reduction in production by 48.23% and 15.17%, respectively while Benishangul-Gumuz Region showed an increase of 17.69% and 16.83% in planted area and production, respectively compared to the previous year.

SNNP Region cultivated 673.09 thousand hectares of land and is the third largest major crop growing region in the country, accounting for 8.40% of the total area planted at country level compared with 1997/98. This planted area increased by 22.03%.

The three remaining regions of Harari, Addis Ababa, and Dire Dawa experienced similar increase in planted area 23.87 %, 5.56%, and 16.04%, respectively compared with the 1997/98 Meher season crop. Yield was up by 14.02% in Harar and 42.24% in Dire Dawa and down by 22.59% in Addis Ababa compared with that of the previous year. Detailed estimates at regional as well as zonal levels are given in Tables 4 through 14.

Note

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

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

3. For those items in the tables where "-" appears, it implies that no data was obtained from the sample units from which an estimate could be made.

2. CROP DAMAGE ASSESSMENT

This section of the report deals with the summary of crop damage estimates and is the second of its type in the series of Area and Production Reports of the Annual Agricultural Sample Surveys.

Information on the type and extent of crop damage was collected subjectively by interviewing holders in the sampled agricultural households. The interview focused on each of the holders' fields sampled for crop cutting exercises on which 4m x 4m plot was demarcated and the crop in the plot was harvested. The yield obtained from these sampled plots is used to estimate production by type of crop at the desired reporting levels. Similarly, the type and extent of crop damage information was collected from sampled fields or crop cutting exercise plots and used to estimate the extent of crop damage by type at country level. As in the preceding issue of this report, CSA supplements this section on summary of crop damage to illustrate the reasons for this year's relatively lower yield of Meher season crops.

Hence, an attempt has been made to summarize crop damage estimates by type at country level for five selected cereal crops (namely, Teff, Wheat, Barley, Maize and Sorghum), all other crops combined and for the total of all crops. The objective of summarizing the crop damage estimates is mainly to illustrate the relatively low performance of this year's Meher season crop harvest by investigating yield estimates of damaged area by

type of damage and crops affected, and by comparing the effect of the damage on the estimated yield and/or production obtained from damaged area, with that of undamaged area of the same year as well as that of the last year's overall estimates.

The data in Table 3.1 show the impact of the crop damage on the 1998/99 (1991 E.C.) estimates of area, production and yield of all major crops. As indicated in the table, of the total area under all crops of this year Meher season harvest, it is reported that 26% of the total area under all crops was damaged due to "others" (flood, frost, animals, birds, hailstorm and other factors) while an additional 12% of the total area was damaged due to "too much rain". On the other hand, damage caused by "insects and pests infestation" has reduced all crop yield estimate from 11.46 qt/ha on undamaged crop area to 9.52 qt/ha (17%). Similarly, damage due to "too much rain", "shortage of rain" and "others" have reduced all crop yield estimate by 1.78 qt/ha (15%), 1.51 qt/ha (13%) and 1.35 qt/ha (12%), respectively. It should be noted that only 51% of the total area, which accounts for 54% of the total crop production of 1998/99 (1991 E.C.) was reported to be free from any type of crop damage. Hence, the overall crop damage on this year's production has slightly lowered all crop yield estimate by 0.37% when compared with that of 1997/98 (1990 E.C.) estimate.

This lower yield estimate of all crops was mainly attributed to crop damage caused by "too much rain ", "shortage of rain", " insects and pest infestation" and other factors that prevailed in different parts of the country.

Table 3.1 Estimates of Area, Production and Yield for **All Crops** by Categories of Crop Damage for Private Peasant Holdings 1998/99 (1991 E.C.)

CROP	REASON FOR CROP DAMAGE	AREA ('000 HA)	%	PRODUCTION ('000 QT)	%	YIELD (QT/ HA)	% CHANGE FROM NO DAMAGE
ALL CROPS	NO DAMAGE	4,061.76	51.25	46,533.62	54.21	11.46	-
	INSECTS & PESTS	344.47	4.35	3,277.79	3.82	9.52	-16.93
	SHORTAGE OF RAIN	525.35	6.63	5,228.53	6.09	9.95	-13.18
	TOO MUCH RAIN	922.89	11.65	8,937.03	10.41	9.68	-15.53
	OTHERS	2,161.84	26.12	21,861.76	25.47	10.11	-11.78
	TOTAL	8,016.31	100.00	85,838.73	100.00	10.71	-

Furthermore, among the five major cereal crops Teff was hit by the unfavorable weather conditions that prevailed during the 1998/99 (1991 E.C.) Meher season. For instance, out of the total Teff area, 11% of it was damaged due to "too much rain", while the damage by "others" (flood, frost, animals, hailstorm, ... etc.) was 23%. Only 60% of the total area under Teff crop, however, was reported undamaged.

Consequently, the Teff yield estimate obtained from the damaged area due to " shortage of rain" has been reduced by more than a quarter (28%), while 12% reduction of Teff yield was observed in area damaged due to "insects

and pest infestation" compared to the undamaged area of Teff yield estimate (for detail see Table 3.2).

Despite the above mentioned damages caused by unfavorable weather conditions of the 1998/99 (1991 E.C.) crop year, the overall Teff yield estimate was up by 5% and the yield estimate of Teff from undamaged area which is 8.24 qt/ha was also up by 10% from the last year's estimate.

TABLE 3.2 Estimates of Area, Production Aand Yield for **Teff** by Categories of Crop Damage for Private Peasant Holdings 1998/99 (1991 E.C.)

CROP	REASON FOR CROP DAMAGE	AREA ('000 HA)	%	PRODUCTION ('000 QT)	%	YIELD (QT/ HA)	% CHANGE FROM NO DAMAGE
TEFF	NO DAMAGE	1,246.81	59.89	10,273.01	62.55	8.24	-
	INSECTS & PESTS	53.6	2.57	389.58	2.37	7.27	-11.77
	SHORTAGE OF RAIN	64.13	3.08	382.08	2.33	5.96	-27.67
	TOO MUCH RAIN	232.09	11.15	1,763.18	10.14	7.60	-7.77
	OTHERS	494.71	23.31	3,615.00	22.01	7.31	-11.29
	TOTAL	2,091.34	100.00	16,422.85	100.00	7.85	-

Barley and Wheat were also affected by the unfavorable weather conditions that prevailed in 1998/99 (1991 E.C.) Meher season harvest. Data in Table 3.3 present the impact of crop damage on the area, production and yield of barley and wheat in 1998/99 (1991 E.C.). As shown in the table, out of the total area under barley and wheat, 21% and 18%, respectively are affected by "too much rain". As a result of this damage, the yield estimate is lowered

by 3% for barley and 13% for wheat when compared with that of yield estimates obtained from the undamaged area of these two cereal crops.

TABLE 3.3 Estimates of Area, Production and Yield for Barley and Wheat by Categories of Crop Damage for Private Peasant Holdings 1998/99 (1991 E.C.)

CROP	REASON FOR CROP DAMAGE	AREA ('000 HA)	%	PRODUCTION ('000 QT)	%	YIELD (QT/ HA)	% CHANGE FROM NO DAMAGE
BARLEY	NO DAMAGE	387.81	47.14	3,691.51	48.03	9.52	-
	INSECTS & PESTS	17.59	2.14	169.04	2.20	9.61	0.94
	SHORTAGE OF RAIN	52.03	6.32	411.84	5.36	7.92	-16.81
	TOO MUCH RAIN	170.60	20.74	1,576.19	20.51	9.24	-2.94
	OTHERS	202.15	23.66	1,837.27	23.90	9.09	-4.52
	TOTAL	830.18	100.00	7,685.85	100.00	9.26	-
WHEAT	NO DAMAGE	457.6	46.60	5,468.43	49.10	11.95	-
	INSECTS & PESTS	8.10	0.82	82.27	0.74	10.16	-14.98
	SHORTAGE OF RAIN	77.49	7.89	824.26	7.40	10.64	-10.96
	TOO MUCH RAIN	181.06	18.44	1,888.24	16.95	10.43	-12.72
	OTHERS	262.82	26.24	2,874.62	25.81	10.94	-8.45
	TOTAL	987.07	100.00	11,137.82	100.00	11.28	-

Maize and Sorghum are the other two crops affected by the unfavourable weather conditions of 1998/99 (1991 E.C). As indicated in Table 3.4, 47% of the total area under Maize and 53% of the total area under Sorghum remained undamaged. Moreover, as a result of crop damage caused by "shortage of rain" 11% of the area under Maize and 12% of the area under sorghum were affected. Likewise the yield estimates of both crops were reduced by 7.49 qt/ha and 3.9 qt/ha (i.e. 36% and 29% reduction of Maize and Sorghum yield, respectively) compared to the undamaged area yield

estimates. The damage caused by "too much rain" has also reduced the Maize yield estimate by 15% and the Sorghum yield estimate by 19% from the undamaged yield estimates of both crops. The damage caused by "insects and pests infestation" has also reduced the yield estimates of Maize and Sorghum by 26% and 8%, respectively from the undamaged yield estimates.

In spite of this decrease the overall Maize and Sorghum yield estimates of this year have shown an increase of 6% and 13%, respectively over that of the previous year (for detail see Table 3.4).

TABLE 3.4 Estimates of Area, Production and Yield for **Maize** and **Sorghum** by categories of Crop Damage for Private Peasant Holdings 1998/99 (1991 E.C.)

CROP	REASON FOR CROP DAMAGE	AREA ('000 HA)	%	PRODUCTION ('000 QT)	%	YIELD (QT/ HA)	% CHANGE FROM NO DAMAGE
MAIZE	NO DAMAGE	606.36	46.79	12,641.23	52.31	20.85	-
	INSECTS & PESTS	45.83	3.54	707.76	2.93	15.44	-25.95
	SHORTAGE OF RAIN	146.05	11.27	1,950.54	8.07	13.36	-35.92
	TOO MUCH RAIN	107.65	8.31	1,909.89	7.90	17.74	-14.92
	OTHERS	397.21	30.10	6,957.15	28.79	17.52	-15.92
	TOTAL	1,303.10	100.00	24,166.57	100.00	18.55	-
SORGHUM	NO DAMAGE	543.11	52.86	7,581.75	57.40	13.96	-
	INSECTS & PESTS	81.63	7.94	1,045.18	7.91	12.80	-8.31
	SHORTAGE OF RAIN	120.77	11.75	1,203.53	9.11	9.97	-28.58
	TOO MUCH RAIN	41.43	4.03	470.74	3.56	11.36	-18.62
	OTHERS	255.45	23.41	2,907.21	22.01	11.38	-18.48
	TOTAL	1,042.39	100.00	13,208.41	100.00	12.67	-

For other crops, the main damage is caused by "insects and pests infestation" and "others" which reduced the yield by 1.97 qt/ha and 1.71 qt/ha (i.e. 23% and 20%, respectively) from the undamaged yield estimate. The damage caused by " shortage of rain" and "too much rain" has also reduced the yield estimate by 1.36 qt/ha and 1.4 qt/ha (i.e. 16% and 17%, respectively) from the undamaged yield estimate of the same crops.

TABLE 3.5 Estimates of Area , Production and Yield for **Other Crops** by Categories of Crop Damage for Private Peasant Holdings 1998/99 (1991 E.C.)

CROP	REASON FOR CROP DAMAGE	AREA ('000 HA)	%	PRODUCTION ('000 QT)	%	YIELD (QT/ HA)	% CHANGE FROM NO DAMAGE
OTHER CROPS	NO DAMAGE	820.07	47.82	6,877.69	52.04	8.39	-
	INSECTS & PESTS	137.72	8.03	883.96	6.69	6.42	-23.48
	SHORTAGE OF RAIN	64.88	3.78	456.28	3.45	7.03	-16.21
	TOO MUCH RAIN	190.06	11.08	1,328.79	10.05	6.99	-16.69
	OTHERS	549.50	29.28	3,670.51	27.77	6.68	-20.38
	TOTAL	1,762.23	100.00	13,217.23	100.00	7.50	-

Table 3.6 Estimates of Area, Production and Yield for Major Crops by Categories of Crop Damage For Private Peasant Holdings 1998/99 (1991 E.C)

CROP	REASON FOR CROP DAMAGE	AREA ('000 HA.)	PRODUCTION ('000 QT.)	YIELD (QT. / HA.)
TEFF	NO DAMAGE	1,246.81	10,273.01	8.24
	INSECTS & PESTS	53.60	389.58	7.27
	SHORTAGE OF RAIN	64.13	382.08	5.96
	TOO MUCH RAIN	232.09	1,763.18	7.60
	OTHERS	494.71	3,615.00	7.31
BARLEY	NO DAMAGE	387.81	3,691.51	9.52
	INSECTS & PESTS	17.59	169.04	9.61
	SHORTAGE OF RAIN	52.03	411.84	7.92
	TOO MUCH RAIN	170.60	1,576.19	9.24
	OTHERS	202.15	1,837.27	9.09
WHEAT	NO DAMAGE	457.60	5,468.43	11.95
	INSECTS & PESTS	8.10	82.27	10.16
	SHORTAGE OF RAIN	77.49	824.26	10.64
	TOO MUCH RAIN	181.06	1,888.24	10.43
	OTHERS	262.82	2,874.62	10.94
MAIZE	NO DAMAGE	606.36	12,641.23	20.85
	INSECTS & PESTS	45.83	707.76	15.44
	SHORTAGE OF RAIN	146.05	1,950.54	13.36
	TOO MUCH RAIN	107.65	1,909.89	17.74
	OTHERS	397.21	6,957.15	17.52
SORGHUM	NO DAMAGE	543.11	7,581.75	13.96
	INSECTS & PESTS	81.63	1,045.18	12.80
	SHORTAGE OF RAIN	120.77	1,203.53	9.97
	TOO MUCH RAIN	41.43	470.74	11.36
	OTHERS	255.45	2,907.21	11.38
OTHER CROPS	NO DAMAGE	820.07	6,877.69	8.39
	INSECTS & PESTS	137.72	883.96	6.42
	SHORTAGE OF RAIN	64.88	456.28	7.03
	TOO MUCH RAIN	190.06	1,328.79	6.99
	OTHERS	549.50	3,670.51	6.68
ALL CROPS	NO DAMAGE	4,061.76	46,533.62	11.46
	INSECTS & PESTS	344.47	3,277.79	9.52
	SHORTAGE OF RAIN	525.35	5,228.53	9.95
	TOO MUCH RAIN	922.89	8,937.03	9.68
	OTHERS	2,161.84	21,861.76	10.11
TOTAL		8,016.31	85,838.73	10.71

Table 4. Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Tigray

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	522.53	90.06	6,081.62	93.12	11.64
Teff	140.83	24.27	1,130.08	17.30	8.02
Barley	78.40	13.51	844.42	12.93	10.77
Wheat	54.94	9.47	577.52	8.84	10.51
Maize	69.87	12.04	1,317.98	20.18	18.86
Sorghum	108.69	18.73	1,456.27	22.30	13.40
Millet	**	**	751.58	11.51	**
Oats	.46	.08	**	**	**
Pulses	34.13	5.88	333.31	5.10	9.77
Horse Beans	9.85	1.70	146.74	2.25	14.90
Field Peas	3.44	.59	38.40	.59	11.16
Haricot Beans	**	**	9.79	.15	**
Chick Peas	10.35	1.78	90.39	1.38	8.73
Lentils	**	**	9.11	.14	**
Vetch	5.46	.94	38.88	.60	7.12
Others	23.55	4.06	115.96	1.78	4.92
Neug	**	**	26.17	.40	**
Linseed	6.03	1.04	24.88	.38	4.13
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	**	**	-	-	**
Sesame	**	**	**	**	**
Fenugreek	.33	.06	**	**	**
All Crops	580.21	100.00	6,530.89	100.00	11.26

Table 4.1 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

West Tigray Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	142.11	88.48	1,877.94	93.80	13.21
Teff	30.99	19.30	294.48	14.71	9.50
Barley	.98	.61	**	**	**
Wheat	.52	.32	**	**	**
Maize	24.81	15.45	489.95	24.47	19.75
Sorghum	43.70	27.21	642.44	32.09	14.70
Millet	41.11	25.60	438.84	21.92	10.67
Oats	-	-	-	-	-
Pulses	5.12	3.19	44.98	2.25	8.79
Horse Beans	.83	.52	13.15	.66	15.84
Field Peas	.37	.23	**	**	**
Haricot Beans	.02	.01	**	**	**
Chick Peas	3.77	2.35	28.71	1.43	7.62
Lentils	-	-	-	-	-
Vetch	.13	.08	**	**	**
Others	13.37	8.32	79.12	3.95	5.92
Neug	2.34	1.46	13.37	.67	5.71
Linseed	.67	.42	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	10.35	6.44	**	**	**
Fenugreek	-	-	-	-	-
All Crops	160.61	100.00	2,002.04	100.00	12.47

Table 4.2 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Central Tigray Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	176.73	93.45	1,919.39	95.79	10.86
Teff	65.51	34.64	461.62	23.04	7.05
Barley	13.65	7.22	146.82	7.33	10.76
Wheat	10.58	5.59	117.61	5.87	11.12
Maize	20.64	10.91	403.67	20.15	19.56
Sorghum	42.86	22.66	534.63	26.68	12.47
Millet	23.32	12.33	255.04	12.73	10.94
Oats	.17	.09	-	-	-
Pulses	7.85	4.15	69.23	3.45	8.82
Horse Beans	3.74	1.98	47.71	2.38	12.76
Field Peas	.15	.08	**	**	**
Haricot Beans	1.58	.84	5.94	.30	3.76
Chick Peas	1.39	.74	10.85	.54	7.81
Lentils	.24	.13	**	**	**
Vetch	.75	.40	**	**	**
Others	4.53	2.40	15.19	.76	3.35
Neug	2.41	1.27	11.54	.58	4.79
Linseed	1.56	.82	2.62	.13	1.68
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	.40	.21	**	**	**
Fenugreek	.16	.08	**	**	**
All Crops	189.11	100.00	2,003.82	100.00	10.60

Table 4.3 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

East Tigray Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	64.64	83.49	754.50	85.27	11.67
Teff	8.16	10.54	65.43	7.39	8.02
Barley	25.81	33.34	301.12	34.03	11.67
Wheat	15.81	20.42	176.70	19.97	11.18
Maize	4.56	5.89	86.76	9.80	19.03
Sorghum	5.84	7.54	68.01	7.69	11.65
Millet	4.30	5.55	53.01	5.99	12.33
Oats	.17	.22	**	**	**
Pulses	10.65	13.76	117.14	13.24	11.00
Horse Beans	2.27	2.93	39.85	4.50	17.56
Field Peas	1.45	1.87	**	**	**
Haricot Beans	-	-	-	-	-
Chick Peas	3.43	4.43	**	**	**
Lentils	.78	1.01	3.30	.37	4.23
Vetch	2.71	3.50	**	**	**
Others	2.13	2.75	**	**	**
Neug	-	-	-	-	-
Linseed	2.03	2.62	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	.10	.13	**	**	**
All Crops	77.42	100.00	884.88	100.00	11.43

Table 4.4 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

South Tigray Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	139.04	90.83	1,529.79	93.27	11.00
Teff	36.18	23.64	308.55	18.81	8.53
Barley	37.95	24.79	388.34	23.68	10.23
Wheat	28.02	18.31	279.13	17.02	9.96
Maize	19.86	12.97	337.60	20.58	17.00
Sorghum	16.28	10.64	**	**	**
Millet	.63	.41	**	**	**
Oats	.13	.08	**	**	**
Pulses	10.50	6.86	101.96	6.22	9.71
Horse Beans	3.00	1.96	46.03	2.81	15.34
Field Peas	1.47	.96	17.86	1.09	12.15
Haricot Beans	.73	.48	**	**	**
Chick Peas	1.77	1.16	**	**	**
Lentils	1.66	1.08	5.01	.31	3.02
Vetch	1.87	1.22	**	**	**
Others	3.53	2.31	8.41	.51	2.38
Neug	.16	.10	**	**	**
Linseed	1.76	1.15	5.06	.31	2.88
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	.01	.01	-	-	-
Sesame	1.51	.99	**	**	**
Fenugreek	.07	.05	**	**	**
All Crops	153.07	100.00	1,640.15	100.00	10.72

Table 5. Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Afar

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	**	**	175.80	95.82	**
Teff	**	**	50.80	27.69	**
Barley	**	**	**	**	**
Wheat	**	**	**	**	**
Maize	3.39	22.27	57.54	31.36	16.97
Sorghum	**	**	64.34	35.07	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	**	**	**	**	**
Horse Beans	-	-	-	-	-
Field Peas	**	**	-	-	**
Haricot Beans	**	**	**	**	**
Chick Peas	**	**	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	-	-	-	-	-
Linseed	**	**	-	-	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	-	-	-	-	-
All Crops	**	**	183.46	100.00	**

Table 5.1 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Zone 1

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	1.81	99.45	31.17	100.00	17.22
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	1.69	92.86	31.17	100.00	18.44
Sorghum	.12	6.59	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	-	-	-	-	-
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.01	.55	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	.01	.55	-	-	-
Fenugreek	-	-	-	-	-
All Crops	1.82	100.00	31.17	100.00	17.13

Table 5.2 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Zone 3

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	11.31	91.80	129.63	94.41	11.46
Teff	4.90	39.77	45.19	32.91	9.22
Barley	.17	1.38	**	**	**
Wheat	.18	1.46	**	**	**
Maize	1.37	11.12	19.34	14.09	14.12
Sorghum	4.68	37.99	61.98	45.14	13.24
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	.86	6.98	7.14	5.20	8.30
Horse Beans	-	-	-	-	-
Field Peas	.01	.08	-	-	-
Haricot Beans	.58	4.71	**	**	**
Chick Peas	.28	2.27	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.15	1.22	**	**	**
Neug	-	-	-	-	-
Linseed	.02	.16	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	.05	.41	**	**	**
Sesame	.07	.57	**	**	**
Fenugreek	-	-	-	-	-
All Crops	12.32	100.00	137.30	100.00	11.14

Table 6. Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Amhara

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	2,395.39	80.23	24,480.56	85.80	10.22
Teff	884.68	29.63	7,380.79	25.87	8.34
Barley	262.62	8.80	2,024.76	7.10	7.71
Wheat	244.90	8.20	2,465.88	8.64	10.07
Maize	305.41	10.23	5,284.71	18.52	17.30
Sorghum	414.08	13.87	5,061.89	17.74	12.22
Millet	273.81	9.17	2,180.18	7.64	7.96
Oats	**	**	82.35	.29	**
Pulses	401.96	13.46	3,270.08	11.46	8.14
Horse Beans	123.38	4.13	1,179.66	4.13	9.56
Field Peas	56.38	1.89	359.66	1.26	6.38
Haricot Beans	40.09	1.34	329.61	1.16	8.22
Chick Peas	96.93	3.25	802.26	2.81	8.28
Lentils	27.29	.91	180.54	.63	6.62
Vetch	57.89	1.94	418.36	1.47	7.23
Others	188.38	6.31	781.82	2.74	4.15
Neug	130.64	4.38	501.26	1.76	3.84
Linseed	23.93	.80	67.30	.24	2.81
Rapeseed	**	**	47.71	.17	**
Ground Nuts	**	**	**	**	**
Sunflower	4.86	.16	21.44	.08	4.41
Sesame	12.67	.42	73.07	.26	5.77
Fenugreek	10.81	.36	67.65	.24	6.26
All Crops	2,985.73	100.00	28,532.46	100.00	9.56

Table 6.1 Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

North Gonder Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	496.35	85.64	3,894.55	89.90	7.85
Teff	144.05	24.85	902.53	20.83	6.27
Barley	43.65	7.53	316.04	7.30	7.24
Wheat	20.11	3.47	164.47	3.80	8.18
Maize	31.78	5.48	316.47	7.31	9.96
Sorghum	142.43	24.57	1,366.53	31.54	9.59
Millet	113.95	19.66	824.50	19.03	7.24
Oats	.40	.07	**	**	**
Pulses	47.03	8.11	289.48	6.68	6.16
Horse Beans	16.39	2.83	121.51	2.80	7.41
Field Peas	6.48	1.12	38.67	.89	5.97
Haricot Beans	3.98	.69	**	**	**
Chick Peas	15.38	2.65	106.62	2.46	6.93
Lentils	.60	.10	**	**	**
Vetch	4.20	.72	**	**	**
Others	36.20	6.25	148.01	3.42	4.09
Neug	25.84	4.46	109.91	2.54	4.25
Linseed	2.24	.39	6.03	.14	2.69
Rapeseed	.19	.03	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	.24	.04	-	-	-
Sesame	5.77	1.00	**	**	**
Fenugreek	1.93	.33	**	**	**
All Crops	579.59	100.00	4,332.03	100.00	7.47

Table 6.2 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

South Gonder Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	301.28	77.08	2,386.17	80.09	7.92
Teff	112.24	28.72	814.19	27.33	7.25
Barley	47.63	12.19	328.56	11.03	6.90
Wheat	31.96	8.18	207.03	6.95	6.48
Maize	39.28	10.05	420.55	14.12	10.71
Sorghum	24.83	6.35	225.75	7.58	9.09
Millet	45.27	11.58	390.10	13.09	8.62
Oats	.07	.02	-	-	-
Pulses	59.02	15.10	437.59	14.69	7.41
Horse Beans	19.59	5.01	182.39	6.12	9.31
Field Peas	5.36	1.37	31.61	1.06	5.90
Haricot Beans	5.61	1.44	**	**	**
Chick Peas	20.98	5.37	145.29	4.88	6.93
Lentils	1.77	.45	8.73	.29	4.93
Vetch	5.70	1.46	33.01	1.11	5.79
Others	30.57	7.82	155.42	5.22	5.08
Neug	23.23	5.94	129.39	4.34	5.57
Linseed	4.49	1.15	14.02	.47	3.12
Rapeseed	.22	.06	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	.64	.16	**	**	**
Sesame	-	-	-	-	-
Fenugreek	1.98	.51	**	**	**
All Crops	390.86	100.00	2,979.18	100.00	7.62

Table 6.3 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

North Wolo Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	155.21	81.05	1,732.92	84.41	11.17
Teff	52.04	27.17	480.10	23.39	9.23
Barley	28.07	14.66	273.93	13.34	9.76
Wheat	31.55	16.48	311.19	15.16	9.86
Maize	15.58	8.14	**	**	**
Sorghum	25.47	13.30	329.76	16.06	12.95
Millet	.67	.35	6.67	.32	9.96
Oats	1.84	.96	11.17	.54	6.07
Pulses	30.79	16.08	294.22	14.33	9.56
Horse Beans	10.47	5.47	114.75	5.59	10.96
Field Peas	3.78	1.97	34.43	1.68	9.11
Haricot Beans	.81	.42	**	**	**
Chick Peas	6.74	3.52	67.30	3.28	9.99
Lentils	5.56	2.90	**	**	**
Vetch	3.43	1.79	**	**	**
Others	5.50	2.87	25.83	1.26	4.70
Neug	.22	.11	**	**	**
Linseed	3.46	1.81	9.47	.46	2.74
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	.54	.28	**	**	**
Sesame	.12	.06	**	**	**
Fenugreek	1.17	.61	11.30	.55	9.66
All Crops	191.50	100.00	2,052.97	100.00	10.72

Table 6.4 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

South Wolo Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	228.69	76.55	2,574.29	78.64	11.26
Teff	82.43	27.59	802.38	24.51	9.73
Barley	24.93	8.34	223.63	6.83	8.97
Wheat	43.73	14.64	530.82	16.22	12.14
Maize	15.19	5.08	191.12	5.84	12.58
Sorghum	52.55	17.59	733.54	22.41	13.96
Millet	3.77	1.26	**	**	**
Oats	6.10	2.04	59.51	1.82	9.76
Pulses	60.43	20.23	623.37	19.04	10.32
Horse Beans	24.74	8.28	300.81	9.19	12.16
Field Peas	9.71	3.25	70.45	2.15	7.26
Haricot Beans	4.41	1.48	32.66	1.00	7.41
Chick Peas	7.90	2.64	**	**	**
Lentils	5.22	1.75	**	**	**
Vetch	8.45	2.83	96.85	2.96	11.46
Others	9.64	3.23	75.92	2.32	7.88
Neug	2.66	.89	**	**	**
Linseed	1.48	.50	6.49	.20	4.39
Rapeseed	.03	.01	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	**	**	**
Sesame	1.41	.47	**	**	**
Fenugreek	4.06	1.36	**	**	**
All Crops	298.76	100.00	3,273.58	100.00	10.96

Table 6.5 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

North Shewa Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	254.05	82.34	2,702.72	87.68	10.64
Teff	101.78	32.99	869.08	28.19	8.54
Barley	22.22	7.20	141.09	4.58	6.35
Wheat	43.36	14.05	448.17	14.54	10.34
Maize	10.16	3.29	148.43	4.82	14.61
Sorghum	76.30	24.73	1,095.39	35.54	14.36
Millet	-	-	-	-	-
Oats	.23	.07	**	**	**
Pulses	49.08	15.91	362.47	11.76	7.39
Horse Beans	14.33	4.64	116.90	3.79	8.16
Field Peas	3.80	1.23	22.86	.74	6.02
Haricot Beans	4.16	1.35	34.16	1.11	8.21
Chick Peas	12.47	4.04	94.03	3.05	7.54
Lentils	10.55	3.42	56.44	1.83	5.35
Vetch	3.77	1.22	**	**	**
Others	5.40	1.75	17.25	.56	3.19
Neug	1.17	.38	**	**	**
Linseed	1.75	.57	2.85	.09	1.63
Rapeseed	.03	.01	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	.52	.17	**	**	**
Sesame	1.32	.43	**	**	**
Fenugreek	.61	.20	2.28	.07	3.74
All Crops	308.53	100.00	3,082.44	100.00	9.99

Table 6.6 Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

East Gojam Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	357.45	77.46	4,543.78	83.22	12.71
Teff	188.19	40.78	2,065.93	37.84	10.98
Barley	48.04	10.41	425.55	7.79	8.86
Wheat	55.90	12.11	679.98	12.45	12.16
Maize	46.15	10.00	981.00	17.97	21.26
Sorghum	18.83	4.08	**	**	**
Millet	.34	.07	**	**	**
Oats	-	-	-	-	-
Pulses	83.14	18.02	853.85	15.64	10.27
Horse Beans	17.16	3.72	185.96	3.41	10.84
Field Peas	10.47	2.27	69.72	1.28	6.66
Haricot Beans	11.55	2.50	**	**	**
Chick Peas	21.74	4.71	249.75	4.57	11.49
Lentils	1.48	.32	**	**	**
Vetch	20.74	4.49	197.93	3.63	9.54
Others	20.87	4.52	62.04	1.14	2.97
Neug	14.50	3.14	40.85	.75	2.82
Linseed	4.68	1.01	14.47	.27	3.09
Rapeseed	.51	.11	2.80	.05	5.49
Ground Nuts	-	-	-	-	-
Sunflower	.27	.06	**	**	**
Sesame	.04	.01	**	**	**
Fenugreek	.88	.19	**	**	**
All Crops	461.45	100.00	5,459.67	100.00	11.83

Table 6.7 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

West Gojam Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	331.01	76.96	3,796.95	88.77	11.47
Teff	123.14	28.63	909.78	21.27	7.39
Barley	18.61	4.33	93.11	2.18	5.00
Wheat	8.79	2.04	58.25	1.36	6.63
Maize	101.47	23.59	2,070.11	48.40	20.40
Sorghum	15.24	3.54	**	**	**
Millet	62.66	14.57	510.90	11.94	8.15
Oats	1.11	.26	**	**	**
Pulses	54.54	12.68	307.46	7.19	5.64
Horse Beans	14.05	3.27	109.90	2.57	7.82
Field Peas	12.08	2.81	68.21	1.59	5.65
Haricot Beans	6.41	1.49	**	**	**
Chick Peas	10.12	2.35	56.66	1.32	5.60
Lentils	.30	.07	**	**	**
Vetch	11.59	2.69	16.89	.39	1.46
Others	44.58	10.36	172.72	4.04	3.87
Neug	35.73	8.31	116.53	2.72	3.26
Linseed	3.42	.80	8.51	.20	2.49
Rapeseed	3.59	.83	39.95	.93	11.13
Ground Nuts	-	-	-	-	-
Sunflower	1.68	.39	**	**	**
Sesame	.02	-	**	**	**
Fenugreek	.15	.03	**	**	**
All Crops	430.13	100.00	4,277.14	100.00	9.94

Table 6.8 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Waghamera Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	68.89	81.97	598.42	86.56	8.69
Teff	18.83	22.41	119.50	17.29	6.35
Barley	13.28	15.80	99.24	14.35	7.47
Wheat	6.77	8.06	50.20	7.26	7.42
Maize	1.36	1.62	14.71	2.13	10.82
Sorghum	28.23	33.59	311.86	45.11	11.05
Millet	.41	.49	2.91	.42	7.10
Oats	-	-	-	-	-
Pulses	10.10	12.02	68.92	9.97	6.82
Horse Beans	3.73	4.44	33.26	4.81	8.92
Field Peas	1.67	1.99	10.42	1.51	6.24
Haricot Beans	2.70	3.21	15.27	2.21	5.66
Chick Peas	.48	.57	**	**	**
Lentils	1.52	1.81	6.68	.97	4.39
Vetch	-	-	-	-	-
Others	5.05	6.01	23.98	3.47	4.75
Neug	.41	.49	1.14	.16	2.78
Linseed	1.07	1.27	3.20	.46	2.99
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	.85	1.01	5.28	.76	6.21
Sesame	2.71	3.22	**	**	**
Fenugreek	.01	.01	-	-	-
All Crops	84.04	100.00	691.33	100.00	8.23

Table 6.9 Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Agewawia Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	158.79	81.59	1,600.43	93.12	10.08
Teff	52.16	26.80	340.01	19.78	6.52
Barley	15.99	8.22	122.25	7.11	7.65
Wheat	2.45	1.26	14.08	.82	5.75
Maize	34.14	17.54	634.93	36.94	18.60
Sorghum	7.76	3.99	**	**	**
Millet	46.26	23.77	403.12	23.46	8.71
Oats	.02	.01	**	**	**
Pulses	6.14	3.16	24.32	1.42	3.96
Horse Beans	2.66	1.37	12.21	.71	4.59
Field Peas	2.74	1.41	12.11	.70	4.42
Haricot Beans	-	-	-	-	-
Chick Peas	.74	.38	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	29.68	15.25	93.90	5.46	3.16
Neug	26.87	13.81	81.47	4.74	3.03
Linseed	1.29	.66	**	**	**
Rapeseed	.49	.25	**	**	**
Ground Nuts	.42	.22	**	**	**
Sunflower	-	-	-	-	-
Sesame	.58	.30	**	**	**
Fenugreek	.02	.01	.02	-	1.00
All Crops	194.61	100.00	1,718.65	100.00	8.83

Table 6.10 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Oromia Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	43.67	94.42	650.33	97.72	14.89
Teff	9.82	21.23	77.30	11.62	7.87
Barley	.20	.43	**	**	**
Wheat	.28	.61	**	**	**
Maize	10.30	22.27	187.30	28.15	18.18
Sorghum	22.45	48.54	377.76	56.77	16.83
Millet	.49	1.06	**	**	**
Oats	.13	.28	**	**	**
Pulses	1.69	3.65	8.39	1.26	4.96
Horse Beans	.27	.58	**	**	**
Field Peas	.30	.65	**	**	**
Haricot Beans	.45	.97	**	**	**
Chick Peas	.38	.82	**	**	**
Lentils	.29	.63	**	**	**
Vetch	-	-	-	-	-
Others	.89	1.92	6.76	1.02	7.60
Neug	.01	.02	-	-	-
Linseed	.06	.13	**	**	**
Rapeseed	-	-	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	.11	.24	**	**	**
Sesame	.70	1.51	6.62	.99	9.46
Fenugreek	.01	.02	**	**	**
All Crops	46.25	100.00	665.48	100.00	14.39

Table 7. Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Oromia

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	3,012.29	85.35	37,308.87	90.76	12.39
Teff	867.80	24.59	6,746.91	16.41	7.77
Barley	383.45	10.86	3,856.97	9.38	10.06
Wheat	599.14	16.98	7,112.78	17.30	11.87
Maize	702.82	19.91	13,777.52	33.51	19.60
Sorghum	351.26	9.95	4,932.69	12.00	14.04
Millet	**	**	575.29	1.40	**
Oats	**	**	306.70	.75	**
Pulses	355.81	10.08	3,107.34	7.56	8.73
Horse Beans	137.23	3.89	1,303.32	3.17	9.50
Field Peas	61.69	1.75	449.38	1.09	7.28
Haricot Beans	56.03	1.59	491.03	1.19	8.76
Chick Peas	52.85	1.50	453.14	1.10	8.57
Lentils	17.28	.49	92.66	.23	5.36
Vetch	30.73	.87	317.81	.77	10.34
Others	161.38	4.57	692.87	1.69	4.29
Neug	**	**	281.11	.68	**
Linseed	59.59	1.69	258.79	.63	4.34
Rapeseed	**	**	36.40	.09	**
Ground Nuts	**	**	**	**	**
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	9.34	.26	50.40	.12	5.40
All Crops	3,529.48	100.00	41,109.08	100.00	11.65

Table 7.1 Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

West Welega Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	264.83	90.78	3,243.17	95.81	12.25
Teff	50.91	17.45	237.62	7.02	4.67
Barley	2.82	.97	17.20	.51	6.10
Wheat	8.25	2.83	83.97	2.48	10.18
Maize	97.40	33.39	1,706.83	50.42	17.52
Sorghum	65.52	22.46	934.47	27.61	14.26
Millet	39.88	13.67	262.95	7.77	6.59
Oats	.05	.02	**	**	**
Pulses	19.31	6.62	121.55	3.59	6.29
Horse Beans	6.07	2.08	47.41	1.40	7.81
Field Peas	1.31	.45	5.69	.17	4.34
Haricot Beans	9.94	3.41	61.17	1.81	6.15
Chick Peas	1.52	.52	**	**	**
Lentils	-	-	-	-	-
Vetch	.47	.16	**	**	**
Others	7.59	2.60	20.38	.60	2.69
Neug	7.12	2.44	19.39	.57	2.72
Linseed	.20	.07	**	**	**
Rapeseed	.17	.06	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	.01	-	-	-	-
Fenugreek	.10	.03	**	**	**
All Crops	291.73	100.00	3,385.10	100.00	11.60

Table 7.2 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

East Welega Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	299.91	80.08	4,132.49	91.56	13.78
Teff	127.39	34.02	896.58	19.87	7.04
Barley	15.00	4.01	147.43	3.27	9.83
Wheat	22.00	5.87	350.35	7.76	15.93
Maize	90.47	24.16	2,097.12	46.47	23.18
Sorghum	22.71	6.06	443.76	9.83	19.54
Millet	22.26	5.94	196.86	4.36	8.84
Oats	.07	.02	**	**	**
Pulses	24.04	6.42	172.18	3.82	7.16
Horse Beans	14.46	3.86	127.54	2.83	8.82
Field Peas	8.78	2.34	40.92	.91	4.66
Haricot Beans	.36	.10	**	**	**
Chick Peas	.19	.05	**	**	**
Lentils	.25	.07	**	**	**
Vetch	-	-	-	-	-
Others	50.56	13.50	208.56	4.62	4.13
Neug	44.41	11.86	188.70	4.18	4.25
Linseed	4.04	1.08	**	**	**
Rapeseed	.62	.17	**	**	**
Ground Nuts	.01	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	1.33	.36	**	**	**
Fenugreek	.14	.04	**	**	**
All Crops	374.50	100.00	4,513.23	100.00	12.05

Table 7.3 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Illubabor Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	126.07	92.26	1,699.27	96.91	13.48
Teff	38.91	28.47	271.56	15.49	6.98
Barley	1.24	.91	8.30	.47	6.69
Wheat	.46	.34	**	**	**
Maize	60.86	44.54	1,134.56	64.71	18.64
Sorghum	19.21	14.06	245.09	13.98	12.76
Millet	5.38	3.94	37.86	2.16	7.04
Oats	.02	.01	**	**	**
Pulses	9.38	6.86	51.74	2.95	5.52
Horse Beans	2.46	1.80	15.53	.89	6.31
Field Peas	2.80	2.05	19.51	1.11	6.97
Haricot Beans	3.60	2.63	16.17	.92	4.49
Chick Peas	.17	.12	**	**	**
Lentils	-	-	-	-	-
Vetch	.35	.26	**	**	**
Others	1.20	.88	2.39	.14	1.99
Neug	1.07	.78	2.27	.13	2.12
Linseed	.09	.07	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	.01	.01	-	-	-
Sunflower	-	-	**	**	**
Sesame	-	-	-	-	-
Fenugreek	.03	.02	**	**	**
All Crops	136.65	100.00	1,753.40	100.00	12.83

Table 7.4 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Jimma Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	263.19	90.19	3,002.15	94.72	11.41
Teff	124.47	42.65	827.75	26.12	6.65
Barley	9.72	3.33	74.18	2.34	7.63
Wheat	12.81	4.39	107.28	3.38	8.37
Maize	80.67	27.64	1,579.61	49.84	19.58
Sorghum	29.22	10.01	346.37	10.93	11.85
Millet	5.03	1.72	**	**	**
Oats	1.27	.44	**	**	**
Pulses	21.85	7.49	150.54	4.75	6.89
Horse Beans	12.82	4.39	103.46	3.26	8.07
Field Peas	5.64	1.93	29.21	.92	5.18
Haricot Beans	1.89	.65	**	**	**
Chick Peas	1.15	.39	**	**	**
Lentils	.34	.12	**	**	**
Vetch	-	-	-	-	-
Others	6.79	2.33	**	**	**
Neug	6.08	2.08	**	**	**
Linseed	.71	.24	1.19	.04	1.68
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	291.83	100.00	3,169.50	100.00	10.86

Table 7.5 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

West Shewa Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	452.52	84.12	4,907.00	88.81	10.84
Teff	218.59	40.63	1,993.23	36.07	9.12
Barley	58.45	10.87	481.87	8.72	8.24
Wheat	110.54	20.55	1,098.76	19.89	9.94
Maize	42.18	7.84	980.08	17.74	23.24
Sorghum	22.24	4.13	350.56	6.34	15.76
Millet	-	-	-	-	-
Oats	.52	.10	**	**	**
Pulses	69.44	12.91	537.85	9.73	7.75
Horse Beans	26.06	4.84	194.32	3.52	7.46
Field Peas	6.41	1.19	**	**	**
Haricot Beans	.08	.01	**	**	**
Chick Peas	21.60	4.02	151.54	2.74	7.02
Lentils	3.37	.63	8.18	.15	2.43
Vetch	11.93	2.22	143.28	2.59	12.01
Others	15.99	2.97	80.65	1.46	5.04
Neug	5.52	1.03	**	**	**
Linseed	7.53	1.40	29.09	.53	3.86
Rapeseed	2.38	.44	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	.56	.10	**	**	**
All Crops	537.96	100.00	5,525.49	100.00	10.27

Table 7.6 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

North Shewa Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	269.09	79.02	2,405.37	80.86	8.94
Teff	91.79	26.96	689.95	23.20	7.52
Barley	69.75	20.48	606.33	20.38	8.69
Wheat	67.65	19.87	672.05	22.59	9.93
Maize	4.60	1.35	42.87	1.44	9.32
Sorghum	34.81	10.22	391.65	13.17	11.25
Millet	-	-	-	-	-
Oats	.49	.14	2.51	.08	5.12
Pulses	59.29	17.41	534.05	17.95	9.01
Horse Beans	20.94	6.15	194.33	6.53	9.28
Field Peas	7.10	2.08	50.86	1.71	7.16
Haricot Beans	.28	.08	**	**	**
Chick Peas	12.76	3.75	**	**	**
Lentils	8.40	2.47	**	**	**
Vetch	9.82	2.88	99.74	3.35	10.16
Others	12.15	3.57	35.14	1.18	2.89
Neug	5.40	1.59	14.14	.48	2.62
Linseed	5.96	1.75	17.16	.58	2.88
Rapeseed	.03	.01	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	.17	.05	**	**	**
Sesame	-	-	-	-	-
Fenugreek	.59	.17	**	**	**
All Crops	340.53	100.00	2,974.56	100.00	8.74

Table 7.7 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

East Shewa Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	264.07	83.51	3,952.21	88.45	14.97
Teff	96.38	30.48	785.73	17.58	8.15
Barley	9.07	2.87	119.28	2.67	13.15
Wheat	58.44	18.48	811.82	18.17	13.89
Maize	95.42	30.18	2,172.46	48.62	22.77
Sorghum	4.06	1.28	60.34	1.35	14.86
Millet	.65	.21	**	**	**
Oats	.04	.01	**	**	**
Pulses	50.58	16.00	511.42	11.45	10.11
Horse Beans	5.70	1.80	61.44	1.38	10.78
Field Peas	4.49	1.42	41.33	.92	9.20
Haricot Beans	20.39	6.45	202.63	4.53	9.94
Chick Peas	13.04	4.12	138.46	3.10	10.62
Lentils	2.47	.78	16.10	.36	6.52
Vetch	4.48	1.42	**	**	**
Others	1.56	.49	**	**	**
Neug	-	-	-	-	-
Linseed	.14	.04	**	**	**
Rapeseed	.12	.04	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	.05	.02	-	-	-
Sesame	.03	.01	**	**	**
Fenugreek	1.22	.39	**	**	**
All Crops	316.20	100.00	4,468.35	100.00	14.13

Table 7.8 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Arsi Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	547.12	85.12	6,642.23	89.02	12.14
Teff	75.81	11.79	640.15	8.58	8.44
Barley	154.04	23.96	1,636.35	21.93	10.62
Wheat	222.56	34.62	2,711.62	36.34	12.18
Maize	70.53	10.97	1,326.36	17.78	18.81
Sorghum	16.00	2.49	294.37	3.95	18.40
Millet	-	-	-	-	-
Oats	8.18	1.27	33.37	.45	4.08
Pulses	62.69	9.75	667.92	8.95	10.65
Horse Beans	34.96	5.44	402.83	5.40	11.52
Field Peas	15.87	2.47	**	**	**
Haricot Beans	9.84	1.53	**	**	**
Chick Peas	.46	.07	**	**	**
Lentils	.42	.07	**	**	**
Vetch	1.14	.18	**	**	**
Others	32.97	5.13	150.96	2.02	4.58
Neug	3.48	.54	**	**	**
Linseed	26.93	4.19	126.39	1.69	4.69
Rapeseed	1.83	.28	**	**	**
Ground Nuts	.01	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	.72	.11	**	**	**
All Crops	642.79	100.00	7,461.10	100.00	11.61

Table 7.9 Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

West Harerge Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	123.28	89.74	2,089.18	93.47	16.95
Teff	8.42	6.13	75.82	3.39	9.00
Barley	3.79	2.76	40.10	1.79	10.58
Wheat	.72	.52	**	**	**
Maize	57.57	41.91	1,102.98	49.35	19.16
Sorghum	51.17	37.25	845.84	37.84	16.53
Millet	1.20	.87	**	**	**
Oats	.41	.30	1.68	.08	4.10
Pulses	11.87	8.64	137.13	6.14	11.55
Horse Beans	4.95	3.60	70.36	3.15	14.21
Field Peas	1.02	.74	**	**	**
Haricot Beans	4.83	3.52	**	**	**
Chick Peas	.51	.37	**	**	**
Lentils	.55	.40	**	**	**
Vetch	.01	.01	**	**	**
Others	2.24	1.63	8.82	.39	3.94
Neug	-	-	-	-	-
Linseed	.65	.47	1.47	.07	2.26
Rapeseed	-	-	-	-	-
Ground Nuts	.29	.21	**	**	**
Sunflower	.04	.03	**	**	**
Sesame	.29	.21	**	**	**
Fenugreek	.97	.71	5.96	.27	6.14
All Crops	137.38	100.00	2,235.12	100.00	16.27

Table 7.10 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

East Harerge Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	148.65	86.81	1,909.54	92.03	12.85
Teff	4.76	2.78	**	**	**
Barley	4.26	2.49	41.63	2.01	9.77
Wheat	8.43	4.92	108.92	5.25	12.92
Maize	52.22	30.50	771.29	37.17	14.77
Sorghum	77.21	45.09	922.54	44.46	11.95
Millet	-	-	-	-	-
Oats	1.77	1.03	**	**	**
Pulses	10.19	5.95	106.55	5.14	10.46
Horse Beans	4.75	2.77	**	**	**
Field Peas	1.70	.99	**	**	**
Haricot Beans	3.22	1.88	39.77	1.92	12.35
Chick Peas	.11	.06	-	-	-
Lentils	.40	.23	1.80	.09	4.50
Vetch	.01	.01	**	**	**
Others	12.38	7.23	58.75	2.83	4.75
Neug	-	-	-	-	-
Linseed	.27	.16	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	11.30	6.60	54.55	2.63	4.83
Sunflower	-	-	-	-	-
Sesame	.21	.12	**	**	**
Fenugreek	.61	.36	3.00	.14	4.92
All Crops	171.23	100.00	2,074.83	100.00	12.12

Table 7.11 Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Bale Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	205.58	86.01	2,583.75	92.55	12.57
Teff	24.73	10.35	229.30	8.21	9.27
Barley	46.46	19.44	577.28	20.68	12.43
Wheat	85.38	35.72	1,136.13	40.70	13.31
Maize	20.93	8.76	309.18	11.08	14.77
Sorghum	7.49	3.13	**	**	**
Millet	-	-	-	-	-
Oats	20.59	8.61	241.89	8.66	11.75
Pulses	15.49	6.48	102.17	3.66	6.60
Horse Beans	3.63	1.52	29.93	1.07	8.25
Field Peas	5.90	2.47	31.20	1.12	5.29
Haricot Beans	1.09	.46	**	**	**
Chick Peas	1.26	.53	**	**	**
Lentils	1.08	.45	**	**	**
Vetch	2.53	1.06	**	**	**
Others	17.95	7.51	105.71	3.79	5.89
Neug	.26	.11	**	**	**
Linseed	13.07	5.47	75.70	2.71	5.79
Rapeseed	.10	.04	**	**	**
Ground Nuts	.12	.05	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	4.41	1.85	**	**	**
All Crops	239.02	100.00	2,791.63	100.00	11.68

Table 7.12 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Borena Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	47.98	96.64	742.53	98.12	15.48
Teff	5.63	11.34	**	**	**
Barley	8.84	17.80	**	**	**
Wheat	1.91	3.85	**	**	**
Maize	29.97	60.36	554.18	73.23	18.49
Sorghum	1.62	3.26	**	**	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	1.68	3.38	**	**	**
Horse Beans	.43	.87	**	**	**
Field Peas	.67	1.35	**	**	**
Haricot Beans	.51	1.03	3.32	.44	6.51
Chick Peas	.08	.16	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	49.65	100.00	756.76	100.00	15.24

Table 8. Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Somale

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	**	**	257.76	98.26	**
Teff	**	**	**	**	**
Barley	**	**	30.14	11.49	**
Wheat	**	**	11.95	4.56	**
Maize	**	**	142.37	54.27	**
Sorghum	**	**	72.34	27.58	**
Millet	-	-	-	-	-
Oats	**	**	**	**	**
Pulses	**	**	1.79	.68	**
Horse Beans	-	-	-	-	-
Field Peas	**	**	-	-	**
Haricot Beans	**	**	**	**	**
Chick Peas	**	**	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	-	-	-	-	-
Linseed	**	**	**	**	**
Rapeseed	**	**	-	-	**
Ground Nuts	**	**	**	**	**
Sunflower	-	-	-	-	-
Sesame	**	**	-	-	**
Fenugreek	**	**	**	**	**
All Crops	**	**	262.32	100.00	**

Table 8.1 Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Shinele Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	.30	96.77	3.02	100.00	10.07
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	.15	48.39	1.93	63.91	12.87
Sorghum	.15	48.39	1.10	36.42	7.33
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	-	-	-	-	-
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	.31	100.00	3.02	100.00	9.74

Table 8.2 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Jijiga Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	40.73	97.00	202.08	97.79	4.96
Teff	.06	.14	**	**	**
Barley	5.12	12.19	30.14	14.59	5.89
Wheat	1.77	4.22	11.95	5.78	6.75
Maize	18.13	43.18	88.04	42.61	4.86
Sorghum	15.57	37.08	70.99	34.35	4.56
Millet	-	-	-	-	-
Oats	.07	.17	**	**	**
Pulses	.62	1.48	1.79	.87	2.89
Horse Beans	-	-	-	-	-
Field Peas	.04	.10	-	-	-
Haricot Beans	.10	.24	**	**	**
Chick Peas	.48	1.14	1.55	.75	3.23
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.64	1.52	**	**	**
Neug	-	-	-	-	-
Linseed	.08	.19	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	.30	.71	**	**	**
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	.26	.62	**	**	**
All Crops	41.99	100.00	206.64	100.00	4.92

Table 8.3 Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Moyale Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	3.72	94.18	**	**	**
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	3.68	93.16	**	**	**
Sorghum	.03	.76	**	**	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	.22	5.57	-	-	-
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	.22	5.57	-	-	-
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	3.95	100.00	**	**	**

Table 9. Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Benshangul-Gumuz

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	132.49	84.39	1,641.31	92.38	12.39
Teff	21.64	13.78	105.05	5.91	4.85
Barley	**	**	**	**	**
Wheat	**	**	**	**	**
Maize	29.01	18.48	552.72	31.11	19.05
Sorghum	52.14	33.21	666.51	37.51	12.78
Millet	**	**	291.18	16.39	**
Oats	**	**	-	-	**
Pulses	6.38	4.06	57.82	3.25	9.06
Horse Beans	**	**	10.88	.61	**
Field Peas	**	**	**	**	**
Haricot Beans	4.03	2.57	38.89	2.19	9.65
Chick Peas	.38	.24	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	18.12	11.54	77.62	4.37	4.28
Neug	11.47	7.31	36.10	2.03	3.15
Linseed	**	**	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	1.57	1.00	14.50	.82	9.24
Sunflower	**	**	-	-	**
Sesame	4.88	3.11	26.57	1.50	5.44
Fenugreek	**	**	**	**	**
All Crops	156.99	100.00	1,776.76	100.00	11.32

Table 9.1 Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Metekel Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	66.47	85.34	757.10	91.65	11.39
Teff	11.51	14.78	69.79	8.45	6.06
Barley	1.49	1.91	**	**	**
Wheat	1.34	1.72	**	**	**
Maize	6.57	8.43	117.66	14.24	17.91
Sorghum	25.40	32.61	327.81	39.68	12.91
Millet	20.10	25.81	218.56	26.46	10.87
Oats	.06	.08	-	-	-
Pulses	4.01	5.15	31.06	3.76	7.75
Horse Beans	.82	1.05	6.58	.80	8.02
Field Peas	.53	.68	**	**	**
Haricot Beans	2.37	3.04	18.69	2.26	7.89
Chick Peas	.22	.28	**	**	**
Lentils	.06	.08	**	**	**
Vetch	-	-	-	-	-
Others	7.42	9.53	37.89	4.59	5.11
Neug	4.05	5.20	**	**	**
Linseed	.04	.05	**	**	**
Rapeseed	.02	.03	**	**	**
Ground Nuts	.73	.94	**	**	**
Sunflower	.01	.01	-	-	-
Sesame	2.57	3.30	14.44	1.75	5.62
Fenugreek	-	-	**	**	**
All Crops	77.89	100.00	826.05	100.00	10.61

Table 9.2 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Asosa Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	41.11	79.83	518.57	91.26	12.61
Teff	5.76	11.18	17.15	3.02	2.98
Barley	.10	.19	**	**	**
Wheat	.25	.49	**	**	**
Maize	13.17	25.57	250.07	44.01	18.99
Sorghum	20.94	40.66	242.22	42.63	11.57
Millet	.89	1.73	6.54	1.15	7.35
Oats	-	-	-	-	-
Pulses	1.29	2.50	**	**	**
Horse Beans	.09	.17	**	**	**
Field Peas	-	-	-	-	-
Haricot Beans	1.12	2.17	**	**	**
Chick Peas	.07	.14	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	9.10	17.67	33.45	5.89	3.68
Neug	6.56	12.74	17.75	3.12	2.71
Linseed	.12	.23	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	.80	1.55	6.18	1.09	7.73
Sunflower	-	-	-	-	-
Sesame	1.62	3.15	9.29	1.63	5.73
Fenugreek	-	-	-	-	-
All Crops	51.50	100.00	568.24	100.00	11.03

Table 9.3 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Kemeshi Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	24.92	90.29	**	**	**
Teff	4.37	15.83	**	**	**
Barley	.02	.07	-	-	-
Wheat	-	-	-	-	-
Maize	9.27	33.59	**	**	**
Sorghum	5.80	21.01	96.47	25.22	16.63
Millet	5.45	19.75	**	**	**
Oats	-	-	-	-	-
Pulses	1.09	3.95	**	**	**
Horse Beans	.27	.98	**	**	**
Field Peas	.19	.69	**	**	**
Haricot Beans	.54	1.96	**	**	**
Chick Peas	.09	.33	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	1.60	5.80	6.28	1.64	3.93
Neug	.85	3.08	**	**	**
Linseed	-	-	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	.04	.14	.21	.05	5.25
Sunflower	-	-	-	-	-
Sesame	.70	2.54	2.84	.74	4.06
Fenugreek	.01	.04	**	**	**
All Crops	27.60	100.00	**	**	**

Table 10. Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

(S.N.N.P.R)

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	596.65	88.64	6,514.92	92.49	10.92
Teff	167.40	24.87	977.31	13.87	5.84
Barley	**	14.66	910.94	12.93	9.23
Wheat	82.34	12.23	934.16	13.26	11.35
Maize	162.67	24.17	2,883.30	40.93	17.72
Sorghum	82.91	12.32	792.45	11.25	9.56
Millet	**	**	16.45	.23	**
Oats	**	**	**	**	**
Pulses	73.81	10.97	523.85	7.44	7.10
Horse Beans	21.68	3.22	210.62	2.99	9.71
Field Peas	19.66	2.92	130.20	1.85	6.62
Haricot Beans	25.87	3.84	149.34	2.12	5.77
Chick Peas	**	**	30.88	.44	**
Lentils	**	**	.62	.01	**
Vetch	**	**	**	**	**
Others	2.62	.39	5.37	.08	2.05
Neug	**	**	**	**	**
Linseed	.61	.09	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	**	**	-	-	**
Sunflower	**	**	2.80	.04	**
Sesame	**	**	**	**	**
Fenugreek	**	**	**	**	**
All Crops	673.09	100.00	7,044.14	100.00	10.47

Table 10.1 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Gurage Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	130.22	89.53	1,818.00	94.15	13.96
Teff	37.56	25.82	221.96	11.49	5.91
Barley	16.72	11.50	240.81	12.47	14.40
Wheat	19.59	13.47	190.18	9.85	9.71
Maize	40.80	28.05	1,028.35	53.26	25.20
Sorghum	15.55	10.69	136.71	7.08	8.79
Millet	.01	.01	-	-	-
Oats	-	-	-	-	-
Pulses	14.24	9.79	112.22	5.81	7.88
Horse Beans	5.35	3.68	**	**	**
Field Peas	4.02	2.76	**	**	**
Haricot Beans	2.18	1.50	1.58	.08	.72
Chick Peas	2.09	1.44	**	**	**
Lentils	.24	.17	**	**	**
Vetch	.36	.25	**	**	**
Others	.99	.68	**	**	**
Neug	.72	.50	**	**	**
Linseed	.15	.10	**	**	**
Rapeseed	.04	.03	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	.02	.01	-	-	-
Sesame	-	-	-	-	-
Fenugreek	.05	.03	-	-	-
All Crops	145.45	100.00	1,930.98	100.00	13.28

Table 10.2 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Hadiya Zone

CROP TYPE	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	('000 hectare)	%	('000 quintal)	%	
Cereals	84.25	90.34	957.55	92.17	11.37
Teff	20.44	21.92	149.01	14.34	7.29
Barley	4.57	4.90	45.91	4.42	10.05
Wheat	35.04	37.57	449.04	43.22	12.82
Maize	16.61	17.81	242.22	23.31	14.58
Sorghum	7.16	7.68	69.30	6.67	9.68
Millet	.42	.45	**	**	**
Oats	.02	.02	-	-	-
Pulses	8.81	9.45	81.26	7.82	9.22
Horse Beans	4.69	5.03	53.39	5.14	11.38
Field Peas	3.46	3.71	23.21	2.23	6.71
Haricot Beans	.56	.60	**	**	**
Chick Peas	.05	.05	**	**	**
Lentils	.04	.04	**	**	**
Vetch	-	-	-	-	-
Others	.21	.23	**	**	**
Neug	-	-	-	-	-
Linseed	.14	.15	**	**	**
Rapeseed	.04	.04	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	.03	.03	-	-	-
All Crops	93.26	100.00	1,038.94	100.00	11.14

Table 10.3 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Kembata Alaba Tembaro Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	60.88	95.23	804.48	96.83	13.21
Teff	15.88	24.84	83.70	10.07	5.27
Barley	1.19	1.86	8.15	.98	6.85
Wheat	14.52	22.71	181.28	21.82	12.48
Maize	25.83	40.40	496.51	59.76	19.22
Sorghum	1.98	3.10	24.64	2.97	12.44
Millet	1.48	2.32	10.19	1.23	6.89
Oats	-	-	-	-	
Pulses	2.48	3.88	25.14	3.03	10.14
Horse Beans	1.38	2.16	**	**	**
Field Peas	.62	.97	**	**	**
Haricot Beans	.45	.70	2.09	.25	4.64
Chick Peas	-	-	-	-	-
Lentils	.03	.05	-	-	-
Vetch	-	-	-	-	-
Others	.58	.91	**	**	**
Neug	.01	.02	-	-	-
Linseed	.06	.09	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	.51	.80	**	**	**
All Crops	63.93	100.00	830.85	100.00	13.00

Table 10.4 : Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Sidama Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	24.86	80.58	377.77	93.33	15.20
Teff	1.29	4.18	**	**	**
Barley	2.86	9.27	**	**	**
Wheat	.77	2.50	**	**	**
Maize	19.86	64.38	337.97	83.49	17.02
Sorghum	.08	.26	**	**	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	5.98	19.38	26.98	6.67	4.51
Horse Beans	.43	1.39	**	**	**
Field Peas	.29	.94	**	**	**
Haricot Beans	5.25	17.02	**	**	**
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.02	.06	**	**	**
Neug	-	-	-	-	-
Linseed	.01	.03	**	**	**
Rapeseed	.01	.03	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	30.85	100.00	404.78	100.00	13.12

Table 10.5 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Gedio Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	6.68	85.75	95.21	92.25	14.25
Teff	.08	1.03	-	-	-
Barley	1.55	19.90	**	**	**
Wheat	.31	3.98	**	**	**
Maize	4.74	60.85	76.29	73.92	16.09
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	1.09	13.99	7.96	7.71	7.30
Horse Beans	.68	8.73	5.74	5.56	8.44
Field Peas	.22	2.82	**	**	**
Haricot Beans	.19	2.44	**	**	**
Chick Peas	-	-	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.02	.26	**	**	**
Neug	-	-	-	-	-
Linseed	.02	.26	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	7.79	100.00	103.21	100.00	13.25

Table 10.6 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

North Omo Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	178.08	88.69	1,392.21	90.57	7.82
Teff	65.64	32.69	328.63	21.38	5.01
Barley	61.66	30.71	**	**	**
Wheat	5.03	2.51	51.08	3.32	10.16
Maize	26.80	13.35	332.01	21.60	12.39
Sorghum	18.49	9.21	176.83	11.50	9.56
Millet	.43	.21	**	**	**
Oats	.04	.02	**	**	**
Pulses	22.35	11.13	144.88	9.42	6.48
Horse Beans	2.76	1.37	22.93	1.49	8.31
Field Peas	4.15	2.07	**	**	**
Haricot Beans	12.54	6.25	92.29	6.00	7.36
Chick Peas	2.90	1.44	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.34	.17	**	**	**
Neug	-	-	-	-	-
Linseed	.18	.09	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	.16	.08	-	-	-
Fenugreek	-	-	-	-	-
All Crops	200.78	100.00	1,537.22	100.00	7.66

Table 10.7 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

South Omo Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	27.49	92.68	298.32	95.87	10.85
Teff	2.31	7.79	17.72	5.69	7.67
Barley	2.67	9.00	19.30	6.20	7.23
Wheat	1.05	3.54	**	**	**
Maize	9.42	31.76	117.53	37.77	12.48
Sorghum	11.90	40.12	132.79	42.68	11.16
Millet	.13	.44	**	**	**
Oats	-	-	-	-	-
Pulses	1.81	6.10	9.94	3.19	5.49
Horse Beans	.50	1.69	**	**	**
Field Peas	.45	1.52	**	**	**
Haricot Beans	.84	2.83	4.08	1.31	4.86
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	.02	.07	-	-	-
Others	.36	1.21	2.91	.94	8.08
Neug	-	-	-	-	-
Linseed	.01	.03	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	.32	1.08	2.71	.87	8.47
Sesame	.02	.07	**	**	**
Fenugreek	-	-	-	-	-
All Crops	29.66	100.00	311.16	100.00	10.49

Table 10.8 Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Kefiche-Shekicho Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	32.67	73.51	331.56	80.11	10.15
Teff	14.46	32.54	102.05	24.66	7.06
Barley	3.98	8.96	29.93	7.23	7.52
Wheat	2.81	6.32	20.88	5.04	7.43
Maize	4.15	9.34	84.85	20.50	20.45
Sorghum	7.19	16.18	92.95	22.46	12.93
Millet	.09	.20	**	**	**
Oats	-	-	-	-	-
Pulses	11.76	26.46	82.33	19.89	7.00
Horse Beans	4.50	10.13	37.36	9.03	8.30
Field Peas	5.46	12.29	34.79	8.41	6.37
Haricot Beans	1.80	4.05	10.19	2.46	5.66
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.01	.02	**	**	**
Neug	-	-	-	-	-
Linseed	.01	.02	-	-	-
Rapeseed	-	-	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	44.44	100.00	413.89	100.00	9.31

Table 10.9 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Bench-Maji Zone

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	10.61	93.65	167.47	97.34	15.78
Teff	1.70	15.00	10.17	5.91	5.98
Barley	1.05	9.27	9.02	5.24	8.59
Wheat	.22	1.94	**	**	**
Maize	3.42	30.19	70.92	41.22	20.74
Sorghum	4.19	36.98	76.14	44.26	18.17
Millet	.03	.26	-	-	-
Oats	-	-	-	-	-
Pulses	.72	6.35	4.57	2.66	6.35
Horse Beans	.26	2.29	1.97	1.15	7.58
Field Peas	.23	2.03	1.17	.68	5.09
Haricot Beans	.22	1.94	**	**	**
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	11.33	100.00	172.04	100.00	15.18

Table 10.10 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Yem Special Wereda

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	9.07	84.22	73.25	87.74	8.08
Teff	3.68	34.17	26.37	31.58	7.17
Barley	1.08	10.03	6.79	8.13	6.29
Wheat	2.19	20.33	16.80	20.12	7.67
Maize	1.54	14.30	18.00	21.56	11.69
Sorghum	.57	5.29	5.22	6.25	9.16
Millet	.01	.09	**	**	**
Oats	.01	.09	**	**	**
Pulses	1.67	15.51	10.20	12.22	6.11
Horse Beans	1.01	9.38	7.34	8.79	7.27
Field Peas	.60	5.57	2.67	3.20	4.45
Haricot Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Lentils	.06	.56	.19	.23	3.17
Vetch	-	-	-	-	-
Others	.03	.28	.04	.05	1.33
Neug	-	-	-	-	-
Linseed	.03	.28	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	**	**	**
All Crops	10.77	100.00	83.49	100.00	7.75

Table 10.11 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Amaro Special Wereda

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	3.40	80.95	32.92	79.61	9.68
Teff	1.66	39.52	**	**	**
Barley	.62	14.76	5.34	12.91	8.61
Wheat	.36	8.57	2.94	7.11	8.17
Maize	.63	15.00	**	**	**
Sorghum	.11	2.62	**	**	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	.79	18.81	**	**	**
Horse Beans	.08	1.90	.57	1.38	7.13
Field Peas	.12	2.86	**	**	**
Haricot Beans	.19	4.52	**	**	**
Chick Peas	.37	8.81	**	**	**
Lentils	.01	.24	**	**	**
Vetch	.01	.24	-	-	-
Others	.02	.48	**	**	**
Neug	.01	.24	**	**	**
Linseed	-	-	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	.01	.24	**	**	**
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	4.20	100.00	**	**	**

Table 10.12 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Burji Special Wereda

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	2.00	80.00	18.88	90.73	9.44
Teff	.44	17.60	2.18	10.48	4.95
Barley	.21	8.40	.68	3.27	3.24
Wheat	.33	13.20	2.20	10.57	6.67
Maize	.44	17.60	9.64	46.32	21.91
Sorghum	.58	23.20	4.18	20.09	7.21
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	.50	20.00	1.93	9.27	3.86
Horse Beans	-	-	**	**	**
Field Peas	.02	.80	**	**	**
Haricot Beans	.42	16.80	1.36	6.54	3.24
Chick Peas	.06	2.40	.52	2.50	8.67
Lentils	-	-	**	**	**
Vetch	-	-	-	-	-
Others	.01	.40	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	.01	.40	-	-	-
All Crops	2.50	100.00	20.81	100.00	8.32

Table 10.13 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Konso Special Wereda

CROP TYPE	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	('000 hectare)	%	('000 quintal)	%	
Cereals	16.98	94.91	69.63	94.09	4.10
Teff	1.54	8.61	4.67	6.31	3.03
Barley	.09	.50	**	**	**
Wheat	-	-	-	-	-
Maize	3.35	18.73	19.04	25.73	5.68
Sorghum	11.98	66.96	45.66	61.70	3.81
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	.89	4.97	4.33	5.85	4.87
Horse Beans	.01	.06	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	.84	4.70	4.27	5.77	5.08
Chick Peas	.05	.28	**	**	**
Lentils	.01	.06	**	**	**
Vetch	-	-	-	-	-
Others	.02	.11	**	**	**
Neug	-	-	-	-	-
Linseed	-	-	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	.01	.06	**	**	**
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	17.89	100.00	74.00	100.00	4.14

Table 10.14 Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Derashe Special Wereda

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	9.48	92.76	77.68	95.41	8.19
Teff	.71	6.95	4.67	5.74	6.58
Barley	.42	4.11	3.16	3.88	7.52
Wheat	.12	1.17	.71	.87	5.92
Maize	5.10	49.90	42.27	51.92	8.29
Sorghum	3.13	30.63	26.87	33.00	8.58
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	.72	7.05	3.74	4.59	5.19
Horse Beans	.01	.10	**	**	**
Field Peas	.02	.20	**	**	**
Haricot Beans	.39	3.82	2.26	2.78	5.79
Chick Peas	.29	2.84	1.32	1.62	4.55
Lentils	.01	.10	**	**	**
Vetch	-	-	-	-	-
Others	.02	.20	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	.02	.20	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	10.22	100.00	81.42	100.00	7.97

Table 11. Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Gambella

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	10.86	97.14	219.18	98.37	20.18
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	**	**	136.07	61.07	**
Sorghum	**	**	82.94	37.22	**
Millet	**	**	**	**	**
Oats	-	-	-	-	-
Pulses	**	**	**	**	**
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	**	**	**	**	**
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	**	**	**	**	**
Sunflower	-	-	-	-	-
Sesame	**	**	**	**	**
Fenugreek	-	-	-	-	-
All Crops	11.18	100.00	222.82	100.00	19.93

Table 12. Estimates of Area, Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Harari

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	4.52	82.18	38.80	83.39	8.58
Teff	-	-	**	**	**
Barley	.02	.36	**	**	**
Wheat	.08	1.45	.54	1.16	6.75
Maize	1.14	20.73	12.65	27.19	11.10
Sorghum	3.26	59.27	25.45	54.70	7.81
Millet	-	-	-	-	-
Oats	.01	.18	**	**	**
Pulses	.03	.55	.15	.32	5.00
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	.02	.36	.15	.32	7.50
Chick Peas	.01	.18	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.95	17.27	7.59	16.31	7.99
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	.95	17.27	7.58	16.29	7.98
Sunflower	-	-	-	-	-
Sesame	-	-	**	**	**
Fenugreek	-	-	-	-	-
All Crops	5.50	100.00	46.53	100.00	8.46

Table 13. Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

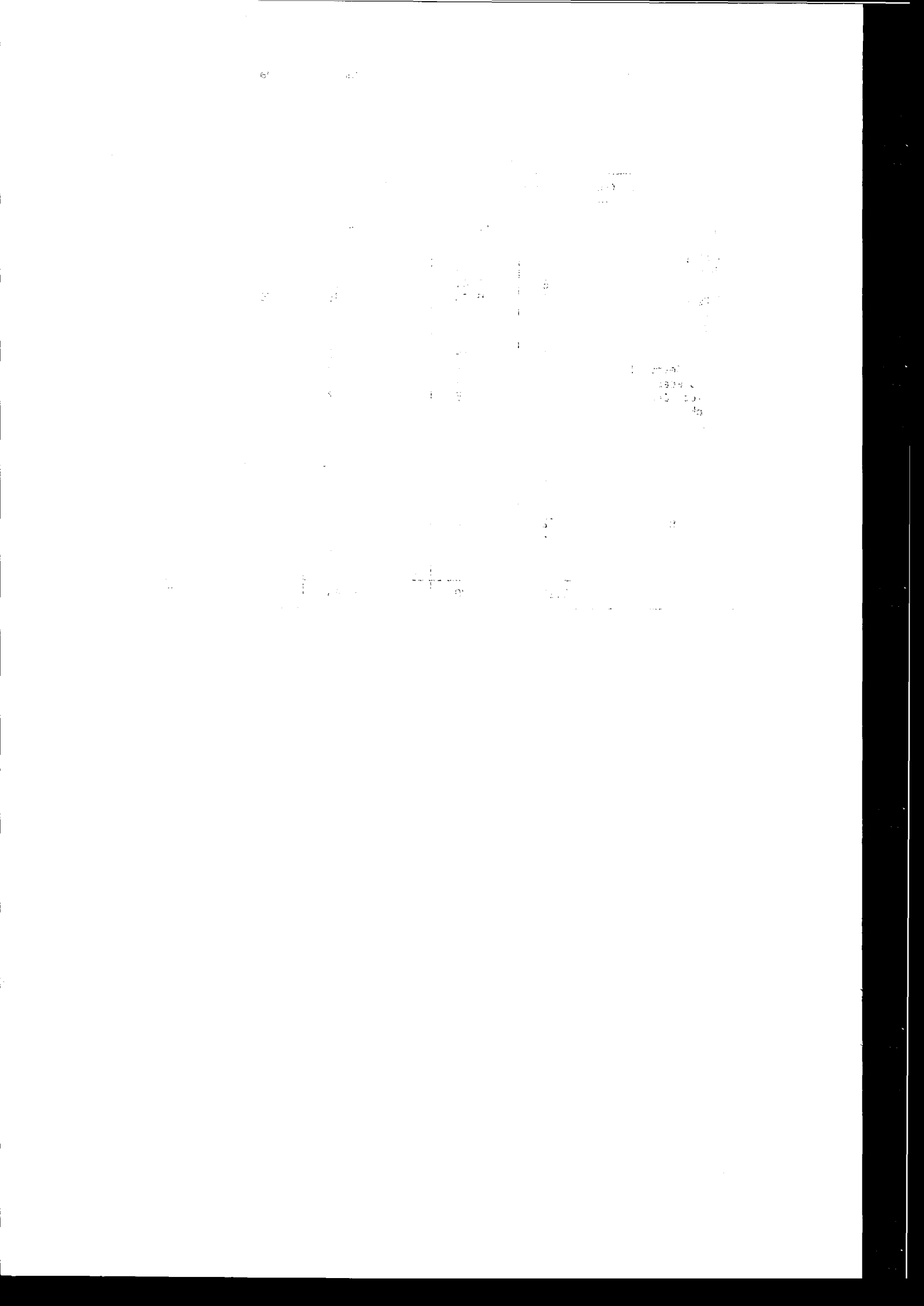
Addis Ababa

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	5.95	80.41	56.42	75.90	9.48
Teff	3.65	49.32	31.61	42.53	8.66
Barley	**	**	**	1.44	**
Wheat	2.12	28.65	23.44	31.54	11.06
Maize	.02	.27	**	**	**
Sorghum	**	**	**	**	**
Millet	-	-	-	-	-
Oats	**	**	**	**	**
Pulses	1.37	18.51	17.51	23.56	12.78
Horse Beans	.07	.95	**	**	**
Field Peas	.01	.14	**	**	**
Haricot Beans	**	**	**	**	**
Chick Peas	.57	7.70	7.38	9.93	12.95
Lentils	.13	1.76	.66	.89	5.08
Vetch	.59	7.97	9.01	12.12	15.27
Others	.08	1.08	.41	.55	5.13
Neug	**	**	**	**	**
Linseed	**	**	**	**	**
Rapeseed	-	-	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	-	-	-	-	-
Fenugreek	**	**	.36	.48	5.14
All Crops	7.40	100.00	74.33	100.00	10.04

Table 14. Estimates of Area,Production and Yield of Major Crops for Private Peasant Holdings 1998/99 (1991 E.C.)

Dire Dawa

CROP TYPE	TOTAL AREA ('000 hectare)	%	TOTAL PRODUCTION ('000 quintal)	%	YIELD (QT/HA)
Cereals	5.12	96.97	54.67	98.27	10.68
Teff	-	-	-	-	-
Barley	-	-	**	**	**
Wheat	-	-	-	-	-
Maize	.18	3.41	1.31	2.35	7.28
Sorghum	4.94	93.56	53.36	95.92	10.80
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	.14	2.65	.77	1.38	5.50
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	.14	2.65	.77	1.38	5.50
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.02	.38	**	**	**
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	.02	.38	**	**	**
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	5.28	100.00	55.63	100.00	10.54



APPENDIX I

ESTIMATION PROCEDURES OF TOTAL, RATIO AND SAMPLING ERRORS

APPENDIX I

ESTIMATION PROCEDURES OF TOTAL RATIO AND SAMPLING ERRORS

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

1. *For estimating total area of land under specific crop:*

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

in which

$$W_{hi} = \frac{N_h M_{hi}}{n_h N_{hi} m_{hi}}$$

is the weight.

Where:

h represents the stratum.

n_h is the total number of EAs selected in the h^{th} stratum.

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

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

M_{hi} is the total number of agricultural households of the i^{th} sample EA in the h^{th} stratum obtained from household listing of the survey.

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

a_{hi} is the sample total of values of area in the ith EA in the hth stratum under a specific crop.

$\hat{A}_h$ is estimate of total area under specific crop in the hth stratum.

2. *For estimating level of production:*

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

in which

$$P_{hi} = \bar{a}_{hi} x \bar{Y}_{hi}$$

where:

$$\bar{a}_{hi} = \frac{a_{hi}}{m_{hi}}$$

$$\bar{Y}_{hi} = \frac{Y_{hi}}{16C_{hi}}$$

Note: W_{hi} is as defined above.

Where: Y_{hi} is sampled total of yield of a specific crop from 16 mt^2 area of land for crop-cutting of crop in the ith EA in the hth stratum.

C_{hi} is number of crop-cutting of a specific crop in the ith EA in the hth stratum.

$\bar{a}_{hi}$ is sampled average area per agricultural household under specific crop in the ith EA in the hth stratum.

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

$\hat{P}_{hi}$ is estimate of production quantity per household of a specific crop in the i^{th} EA in the h^{th} stratum.

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

3. *Estimate of yield of a specific crop is given by:*

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

4. *Sampling variance of Estimates:*

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

$$Var(\hat{A}_h) = \frac{n_h}{n_h - 1}\left[\sum_{i=1}^{n_h} \hat{A}_{hi}^{\,2} - \frac{\hat{A}_h^{\,2}}{n_h}\right]$$

$$Var(\hat{P}_h) = \frac{n_h}{n_h - 1}\left[\sum_{i=1}^{n_h} \hat{P}_{hi}^{\,2} - \frac{\hat{P}_h^{\,2}}{n_h}\right]$$

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

Where

$$Cov(\hat{P}_h, \hat{A}_h) = \frac{n_h}{n_h - 1}[\sum_{i=1}^{n_h}(\hat{A}_{hi} - \frac{\hat{A}_h}{n_h})(\hat{P}_{hi} - \frac{\hat{P}_h}{n_h})]$$

In estimating the sampling variance by the above formula, selection of EAs within a stratum is assumed to be with replacement. By so doing the variance estimate may be slightly over estimated but it greatly simplify the estimation procedure. Furthermore the finite population correction (fpc) is ignored in the formula. This is due to the fact that its effect is negligible.

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 respectively by:

$$CV(\hat{A}_h) = \sqrt{\frac{Var(\hat{A}_h)}{\hat{A}_h}} X100$$

$$CV(\hat{P}_h) = \sqrt{\frac{Var(\hat{P}_h)}{\hat{P}_h}} X100$$

$$CV(\hat{Y}_h) = \sqrt{\frac{Var(\hat{Y}_h)}{\hat{Y}_h}} X100$$

APPENDIX II

STANDARD ERRORS AND COEFFICIENTS OF VARIATION FOR ESTIMATES

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

TIGRAY

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	522.53	94.39	18.06	6,081.62	447.67	7.36
TEFF	140.83	47.17	33.49	1,130.08	123.21	10.9
BARLEY	78.4	31.78	40.53	844.42	107.47	12.73
WHEAT	54.94	22.89	41.67	577.52	75.68	13.1
MAIZE	69.87	17.75	25.41	1,317.98	187.02	14.19
SORGHUM	108.69	38.18	35.13	1,456.27	254.29	17.46
MILLET	**	**	**	751.58	137.9	18.35
OATS	0.46	0.16	34.41	**	**	**
PULSES	34.13	5.22	15.29	333.31	41.41	12.42
HORSEBEANS	9.85	2.48	25.22	146.74	25.9	17.65
FIELDPEAS	3.44	1.4	40.55	38.4	14.11	36.74
HARICOTBEANS	**	**	**	9.79	4.39	44.82
CHICKPEAS	10.35	2.37	22.87	90.39	23.35	25.83
LENTILS	**	**	**	9.11	2.6	28.54
VETCH	5.46	2.3	42.22	38.88	14.24	36.61
OTHERS	24.3	10.9	44.85	115.96	40.05	34.54
NEUG	**	**	**	26.17	8.62	32.92
LINSEED	6.03	1.18	19.52	24.88	7.68	30.87
RAPESEED	0	0	-	0	0	-
GROUNDNUTS	0	0	-	0	0	-
SUNFLOWER	**	**	**	0	0	-
SESAME	**	**	**	**	**	**
FENUGREEK	0.33	0.13	39.46	**	**	**
ALL CROPS	580.21	95.37	16.44	6,530.89	448.86	6.87

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

AFAR

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	**	**	**	175.8	38.68	22
TEFF	**	**	**	50.8	16.27	32.04
BARLEY	**	**	**	**	**	**
WHEAT	**	**	**	**	**	**
MAIZE	3.39	1.24	36.4	57.54	14.17	24.62
SORGHUM	**	**	**	64.34	18.38	28.56
MILLET	0	0	-	0	0	-
OATS	0	0	-	0	0	-
PULSES	**	**	**	**	**	**
HORSEBEANS	0	0	-	0	0	-
FIELDPEAS	**	**	**	0	0	-
HARICOTBEANS	**	**	**	**	**	**
CHICKPEAS	**	**	**	**	**	**
LENTILS	0	0	-	0	0	-
VETCH	0	0	-	0	0	-
OTHERS	**	**	**	**	**	**
NEUG	0	0	-	0	0	-
LINSEED	**	**	**	0	0	-
RAPESEED	0	0	-	0	0	-
GROUNDNUTS	0	0	-	0	0	-
SUNFLOWER	**	**	**	**	**	**
SESAME	**	**	**	**	**	**
FENUGREEK	0	0	-	0	0	-
ALL CROPS	**	**	**	183.46	41.55	22.65

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

AMHARA

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	2395.39	439.04	18.33	24,480.56	1,326.28	5.42
TEFF	884.68	178.56	20.18	7,380.79	592.38	8.03
BARLEY	262.62	50.18	19.11	2,024.76	188.64	9.32
WHEAT	244.9	62.1	25.36	2,465.88	323.84	13.13
MAIZE	305.41	91.3	29.89	5,284.71	547.2	10.35
SORGHUM	414.08	128.82	31.11	5,061.89	600.38	11.86
MILLET	273.81	123.01	44.92	2,180.18	443.66	20.35
OATS	**	**	**	82.35	23.82	28.93
PULSES	401.96	85.48	21.27	3,270..08	269.08	8.23
HORSEBEANS	123.38	25.16	20.39	1,179.66	115.64	9.8
FIELDPEAS	56.38	12.55	22.26	359.66	43.86	12.2
HARICOTBEANS	40.09	10.86	27.09	329.61	89.78	27.24
CHICKPEAS	96.93	25.31	26.11	802.26	122.59	15.28
LENTILS	27.29	10.71	39.23	180.54	42.15	23.35
VETCH	57.89	20.46	35.35	418.36	88.84	21.23
OTHERS	188.38	49.2	26.12	781.82	94.12	12.04
NEUG	130.64	43.69	33.45	501.26	84.54	16.87
LINSEED	23.93	4.88	20.41	67.3	10.26	15.25
RAPESEED	**	**	**	47.71	20.78	43.35
GROUNDNUTS	**	**	**	**	**	**
SUNFLOWER	4.86	1.6	32.88	21.44	7.23	33.72
SESAME	12.67	5.69	44.94	73.07	26.92	36.85
FENUGREEK	10.81	4.08	37.73	67.65	20.85	30.82
ALL CROPS	2985.73	540.97	18.12	28,532.46	1,454.29	5.1

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

OROMIYA

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	3016.18	486.74	16.14	37,308.87	1,665.12	4.46
TEFF	868.93	221.8	25.53	6,746.91	551.06	8.17
BARLEY	384.46	156.7	40.76	3,856.97	552.12	14.31
WHEAT	599.98	228.69	38.12	7,112.78	944.84	13.28
MAIZE	703.25	104.35	14.84	13,777.52	1,057.84	7.68
SORGHUM	351.75	83.34	23.69	4,932.69	472.24	9.57
MILLET	**	**	**	575.29	105.61	18.36
OATS	**	**	**	306.7	69.52	22.67
PULSES	356.45	82.96	23.27	3,107.34	306.13	9.85
HORSEBEANS	137.35	37.4	27.23	1,303.32	150.07	11.51
FIELDPEAS	61.85	14.95	24.17	449.38	103.74	23.08
HARICOTBEANS	56.14	21	37.41	491.03	105.04	21.39
CHICKPEAS	52.85	24.99	47.29	453.14	119.89	26.46
LENTILS	17.42	8.54	49.05	92.66	31.39	33.88
VETCH	30.83	14.33	46.47	317.81	83.72	26.34
OTHERS	161.43	51.85	32.12	692.87	88.42	12.76
NEUG	**	**	**	281.11	62.05	22.07
LINSEED	59.64	27.83	46.66	258.79	54.33	21
RAPESEED	**	**	**	36.4	13.3	36.55
GROUNDNUTS	**	**	**	**	**	**
SUNFLOWER	**	**	**	**	**	**
SESAME	**	**	**	**	**	**
FENUGREEK	9.34	4.2	44.95	50.4	16.04	31.83
ALL CROPS	3534.06	588.54	16.65	41,109.08	1,813.32	

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

SOMALIE

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	**	**	**	258.53	50.74	19.63
TEFF	**	**	**	**	**	**
BARLEY	**	**	**	30.14	8.9	29.54
WHEAT	**	**	**	12.02	5.59	46.51
MAIZE	**	**	**	142.56	33.1	23.22
SORGHUM	**	**	**	72.85	24.85	34.11
MILLET	0	0	-	0	0	-
OATS	**	**	**	**	**	**
PULSES	**	**	**	1.79	0.84	46.91
HORSEBEANS	0	0	-	0	0	-
FIELDPEAS	**	**	**	0	0	-
HARICOTBEANS	**	**	**	**	**	**
CHICKPEAS	**	**	**	**	**	**
LENTILS	0	0	-	0	0	-
VETCH	0	0	-	0	0	-
OTHERS	**	**	**	**	**	**
NEUG	0	0	-	0	0	-
LINSEED	**	**	**	**	**	**
RAPESEED	**	**	**	0	0	-
GROUNDNUTS	**	**	**	**	**	**
SUNFLOWER	0	0	-	0	0	-
SESAME	**	**	**	0	0	-
FENUGREEK	**	**	**	**	**	**
ALL CROPS	**	**	**	263.09	51.38	19.53

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

BENISHANGUL-GUMUZ

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	132.49	36.27	27.38	1,641.31	241.14	14.69
TEFF	21.64	6.56	30.29	105.05	26.64	25.36
BARLEY	**	**	**	**	**	**
WHEAT	**	**	**	**	**	**
MAIZE	29.01	5.75	19.82	552.72	130.81	23.67
SORGHUM	52.14	17.79	34.12	666.51	89.49	13.43
MILLET	**	**	**	291.18	90.67	31.14
OATS	**	**	**	0	0	-
PULSES	6.38	2.83	44.3	57.82	15.4	26.63
HORSEBEANS	**	**	**	10.88	4.57	41.96
FIELDPEAS	**	**	**	**	**	**
HARICOTBEANS	4.03	1.63	40.29	38.89	13.13	33.76
CHICKPEAS	0.38	0.15	37.86	**	**	**
LENTILS	**	**	**	**	**	**
VETCH	0	0	-	0	0	-
OTHERS	18.12	6.82	37.64	77.62	16.15	20.81
NEUG	11.47	4.96	43.22	36.1	9.86	27.32
LINSEED	**	**	**	**	**	**
RAPESEED	**	**	**	**	**	**
GROUNDNUTS	1.57	0.73	46.55	14.5	5.81	40.06
SUNFLOWER	**	**	**	0	0	-
SESAME	4..8	1.62	33.24	26.57	7.9	29.73
FENUGREEK	**	**	**	**	**	**
ALL CROPS	156.99	43.57	S	1,776.76	257.6	14.5

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

SNNPR

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	596.65	199.94	33.51	6,514.92	670.23	10.29
TEFF	167.4	70.58	42.16	977.31	132.87	13.6
BARLEY	**	**	**	910.94	354.49	38.91
WHEAT	82.34	38.52	46.78	934.16	137.46	14.71
MAIZE	162.67	46.53	28.6	2,883.30	409.47	14.2
SORGHUM	82.91	23.5	28.34	792.45	99.4	12.54
MILLET	**	**	**	16.45	5.48	33.29
OATS	**	**	**	**	**	**
PULSES	73.82	25.02	33.89	523.96	64.35	12.28
HORSEBEANS	21.69	7.26	33.47	210.74	33.07	15.69
FIELDPEAS	19.66	7.24	36.83	130.2	27.91	21.44
HARICOTBEANS	25.87	12.6	48.71	149.34	33.26	22.27
CHICKPEAS	**	**	**	30.88	12.33	39.91
LENTILS	**	**	**	0.62	0.24	38.64
VETCH	**	**	**	**	**	**
OTHERS	2.62	1.1	41.75	5.37	1.3	24.16
NEUG	**	**	**	**	**	**
LINSEED	0.61	0.24	39.87	**	**	**
RAPESEED	**	**	**	**	**	**
GROUNDNUTS	**	**	**	0	0	-
SUNFLOWER	**	**	**	2.8	1	35.63
SESAME	**	**	**	**	**	**
FENUGREEK	**	**	**	**	**	**
ALL CROPS	673.1	223.67	33.23	7,044.25	690.53	9.8

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

GAMBELLA

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	10.86	4.09	37.66	219.18	54.55	24.89
TEFF	0	0	-	0	0	-
BARLEY	0	0	-	0	0	-
WHEAT	0	0	-	0	0	-
MAIZE	**	**	**	136.07	41.84	30.75
SORGHUM	**	**	**	82.94	26.58	32.05
MILLET	**	**	**	**	**	**
OATS	0	0	-	0	0	-
PULSES	**	**	**	**	**	**
HORSEBEANS	0	0	-	0	0	-
FIELDPEAS	0	0	-	0	0	-
HARICOTBEANS	**	**	**	**	**	**
CHICKPEAS	0	0	-	0	0	-
LENTILS	0	0	-	0	0	-
VETCH	0	0	-	0	0	-
OTHERS	**	**	**	**	**	**
NEUG	0	0	-	0	0	-
LINSEED	0	0	-	0	0	-
RAPESEED	0	0	-	0	0	-
GROUNDNUTS	**	**	**	**	**	**
SUNFLOWER	0	0	-	0	0	-
SESAME	**	**	**	**	**	**
FENUGREEK	0	0	-	0	0	-
ALL CROPS	11.18	4.28	38.3	222.82	54.68	24.54

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

HARARI

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	4.52	0	0	38.8	3.86	9.95
TEFF	0	0	0	**	**	**
BARLEY	0.02	0	0	**	**	**
WHEAT	0.08	0	0	0.54	0.24	44.07
MAIZE	1.14	0	0	12.65	2.01	15.91
SORGHUM	3.26	0	0	25.45	2.71	10.66
MILLET	0	0	-	0	0	-
OATS	0.01	0	0	**	**	**
PULSES	0.03	0	0	0.15	0.06	41
HORSEBEANS	0	0	-	0	0	-
FIELDPEAS	0	0	0	0	0	-
HARICOTBEANS	0.02	0	0	0.15	0.06	41.08
CHICKPEAS	0.01	0	0	**	**	**
LENTILS	0	0	0	0	0	-
VETCH	0	0	-	0	0	-
OTHERS	0.95	0	0	7.59	1.91	25.17
NEUG	0	0	-	0	0	-
LINSEED	0	0	-	0	0	-
RAPESEED	0	0	-	0	0	-
GROUNDNUTS	0.95	0	0	7.58	1.91	25.17
SUNFLOWER	0	0	-	0	0	-
SESAME	0	0	0	**	**	**
FENUGREEK	0	0	-	0	0	-
ALL CROPS	5.5	0	0	46.53	4.28	9.19

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

ADDIS ABABA

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	5.95	1.11	18.73	56.42	5.87	10.4
TEFF	3.65	0.69	18.79	31.61	4.16	13.17
BARLEY	**	**	**	**	**	**
WHEAT	2.12	0.3	14.36	23.44	2.96	12.64
MAIZE	0.02	0	2.89	**	**	**
SORGHUM	**	**	**	**	**	**
MILLET	0	0	-	0	0	-
OATS	**	**	**	**	**	**
PULSES	1.37	0.18	12.91	17.51	4.17	23.84
HORSEBEANS	0.07	0.03	46.49	**	**	**
FIELDPEAS	0.01	0.01	42.61	**	**	**
HARICOTBEANS	**	**	**	**	**	**
CHICKPEAS	0.57	0.1	18.16	7.38	1.55	21.02
LENTILS	0.13	0.02	18.98	0.66	0.12	17.65
VETCH	0.59	0.22	36.59	9.01	3.11	34.53
OTHERS	0.08	0.03	32.74	0.41	0.08	20.33
NEUG	**	**	**	**	**	**
LINSEED	**	**	**	**	**	**
RAPESEED	0	0	9.51	**	**	**
GROUNDNUTS	0	0	-	0	0	-
SUNFLOWER	**	**	**	**	**	**
SESAME	0	0	-	0	0	-
FENUGREEK	**	**	**	0.36	0.08	23.2
ALL CROPS	7.4	1.26	17.09	74.33	9.85	12.85

Table 1 Estimates of Area and Production, their Standard Errors and Coefficients of Variation for Major Crops in 1998/99 (1991 E.C),

DIRE DAWA

TYPE OF CROP	AREA ('000 HA.)	S.E. ('000)	C.V. %	PRODUCTION ('000 QT)	S.E. ('000)	C.V %
CEREALS	5.12	0	0	54.67	5.39	9.86
TEFF	0	0	0	0	0	-
BARLEY	0	0	0	**	**	**
WHEAT	0	0	0	0	0	-
MAIZE	0.18	0	0	1.31	0.41	31.27
SORGHUM	4.94	0	0	53.36	5.2	9.75
MILLET	0	0	-	0	0	-
OATS	0	0	-	0	0	-
PULSES	0.14	0	0	0.77	0.27	34.66
HORSEBEANS	0	0	-	0	0	-
FIELDPEAS	0	0	-	0	0	-
HARICOTBEANS	0.14	0	0	0.77	0.27	34.66
CHICKPEAS	0	0	-	0	0	-
LENTILS	0	0	-	0	0	-
VETCH	0	0	-	0	0	-
OTHERS	0.02	0	0	**	**	**
NEUG	0	0	-	0	0	-
LINSEED	0	0	0	0	0	-
RAPESEED	0	0	-	0	0	-
GROUNDNUTS	0.02	0	0	**	**	**
SUNFLOWER	0	0	-	0	0	-
SESAME	0	0	0	0	0	-
FENUGREEK	0	0	-	0	0	-
ALL CROPS	5.28	0	0	55.63	5.39	9.7

APPENDIX III

-NUMBER OF Eas SAMPLED AND COVERED

-NUMBER OF HOUSEHOLDS EXPECTED TO BE COVERED AND ACTUALLY COVERED

-NUMBER OF PARCELS AND FIELDS MEASURED

-NUMBER OF CROP CUTTINGS CONDUCTED

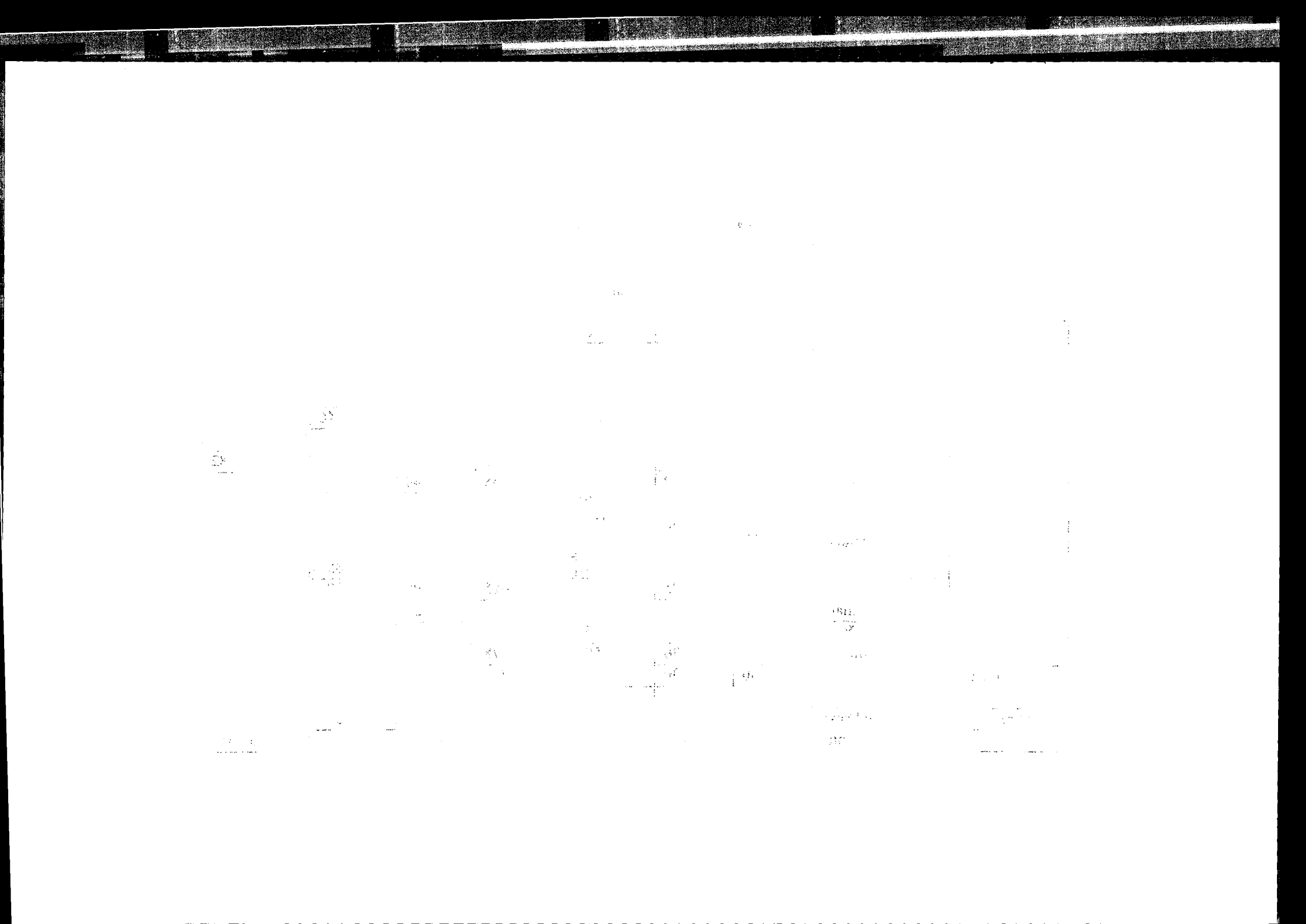
APPENDIX III **THE 1998/99 (1991 E.C.) AGRICULTURAL SAMPLE SURVEY**
NUMBER OF EAs AND AGRICULTURAL HOUSEHOLDS

SAMPLED, ACTUALLY COVERED, FIELDS MEASURED AND CROP CUTTINGS

Region	Stratum/Reporting Level Zone/Sp.Wereda	EAs		Households		Number of parcels	Number of Fields measured	Number of crop cuttings
		Sampled	Covered	Sampeld	Responded			
Tigray	Mirabawi	25	24	625	598	1,774	3,438	1,123
	Mekakelegnaw	25	25	625	623	2,752	5,358	1,617
	Debubawi	25	25	625	624	2,831	3,879	1,165
	Misrakawi	25	25	625	625	3,067	6,502	1,554
Afar	Zone 1	20	19	500	456	897	1,251	70
	Zone 3	20	19	500	454	924	1,625	389
	Zone 5	20	2	500	45	101	178	53
Amhara	North Gondar	30	30	750	750	3,036	5,567	1,594
	South Gondar	30	29	750	725	3,531	5,947	1,845
	West Gojam	30	30	750	750	3,444	6,243	1,607
	Agew Awi	25	25	625	625	2,428	4,948	1,246
	East Gojam	30	30	750	750	3,409	5,946	1,656
	North Wollo	30	30	750	746	3,064	5,611	1,491
	South Wollo	30	30	750	750	3,576	6,333	1,699
	Wag Himra	25	25	625	625	2,530	4,569	1,596
	Oromiya	25	25	625	625	1,798	3,442	774
	North Shoa	30	30	750	740	3,567	6,379	1,735

Region	Stratum/Reporting Level Zone/Sp.Wereda	EAs		Households		Number of parcels	Number of Fields measured	Number of crop cuttings
		Sampled	Covered	Sampeld	Responded			
Oromiya	West Wellega	30	30	750	750	3,307	7,540	1,748
	East Wellega	30	30	750	750	2,845	6,596	1,729
	Illubabor	30	30	750	748	2,180	5,204	1,207
	Jimma	30	30	750	750	2,561	6,538	1,290
	North Shoa	30	30	750	747	4,394	6,873	1,690
	West Shoa	30	30	750	748	2,972	6,569	1,632
	East Shoa	30	30	740	739	2,527	5,272	1,195
	Arsi	30	30	750	750	3,253	6,877	1,541
	Bale	30	30	750	716	2,382	6,037	1,302
	Borena	30	30	750	748	1,269	2,831	321
	West Hararge	30	30	750	748	2,279	5,155	1,050
	East Hararge	30	30	750	750	2,474	4,567	1,062
Somalie	Jijiga	20	20	500	499	1,297	2,643	493
	Shinile	20	18	500	448	765	1,154	105
	Liben	20	20	500	495	927	1,389	107
Benshangul Gumuz	Asosa	25	25	625	625	3,181	5,353	1,361
	Kemashi	25	25	625	625	1,629	3,281	1047
	Metekel	25	25	625	615	2,045	3,715	1,137

Region	Stratum/Reporting Level Zone/Sp.Wereda	EAs		Households		Number of parcels	Number of Fields measured	Number of crop cuttings
		Sampled	Covered	Sampeld	Responded			
SNNPR	Sidama	30	30	750	748	1,139	4,496	264
	Hadiya	30	30	750	729	1,404	7,089	1,139
	Kembata Alaba Timbaro	30	30	750	750	1,385	6,402	900
	Gurage	30	30	750	736	1,764	6,146	911
	Gedeo	30	30	750	748	1,522	3,086	180
	North Omo	30	30	750	750	1,366	5,868	682
	South Omo	30	30	750	748	1,740	3,744	744
	Bench Maji	30	30	750	750	1,490	3,895	412
	Kefa Sheka	30	30	750	750	1,560	4,886	789
	Konso	25	25	625	623	1,755	3,079	697
	Derashe	25	25	625	625	1,586	2,857	787
	Burji	25	25	625	615	1,499	3,881	921
	Amaro	25	25	625	625	1,228	3,025	473
	Yem	25	25	625	604	2,122	5,842	1,381
Gambela	Gambela	30	30	750	678	1,417	2,525	496
Harari	Harari	30	30	750	750	2,546	4,309	944
Addis Ababa	Addis Ababa	25	25	625	624	2,337	4,386	1,086
Dire Dawa	Dire Dawa	30	30	750	749	2,060	3,091	516
	Total	1450	1428	36250	35364	114,916	243,417	54,553



APPENDIX IV

QUESTIONNAIRES

CENTRAL STATISTICAL AUTHORITY
NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM
HOUSEHOLD LISTING FORM - 1991 E.C.

JOB	1	2	3
ID	1	3	1

PART 1 - IDENTIFICATION PARTICULARS

1 REGION	2 ZONE	3 WEREDA	4 FARMERS' ASSOCIATION	5 ENUMERATION AREA
4 5	6 7	8 9	10 11 12	13 14

PART 2 - LIST OF HOUSEHOLDS AND HOLDERS

1 SERIAL NUMBER OF HOUSEHOLD	2 NAME OF HEAD OF HOUSEHOLD	3 MEMBER OF HOUSEHOLD	4 IS THERE A HOLDER IN THE HH.? YES = 1 NO = 2	5 SERIAL NUMBER OF HOUSEHOLDS WITHOUT HOLDERS *(IF CODE IS 2 IN COLUMN 4)*	6 SERIAL NUMBER OF HOLDERS WITH IN HOUSEHOLD *(IF CODE IS 1 IN COLUMN 4)*	7 NAME OF THE HOLDER	8 SERIAL NUMBER OF HOUSEHOLDS WITH HOLDERS *(IF CODE IS 1 IN COLUMN 4)*	9 ORDER OF SELECTION AGRICUL. SURVEY	10 ORDER OF SELECTION OTHER SURVEY
15 16 17		18 19	20	21 22 23	24		25 26 27	28 29	30 31

RANDOM START COLUMN ________ RANDOM INTERVAL ________

RANDOM START ________

	NAME	SIGNATURE	DATE
ENUMERATOR			/ /
SUPERVISOR			/ /
REGIONAL STAT. HEAD			/ /

1. TOTAL NUMBER OF HOUSEHOLDS WITH HOLDERS LISTED IN THE EA ________
2. TOTAL NUMBER OF HOUSEHOLDS WITHOUT HOLDERS LISTED IN THE EA ________

FORM ASS - 91/1

CENTRAL STATISTICAL AUTHORITY
NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM
AGRICULTURAL SAMPLE SURVEY - 1991 E.C.

JOB	1	2	3
ID	1	3	2

PART 1 - IDENTIFICATION PARTICULARS

1		2		3		4			5	
REGION		ZONE		WEREDA		FARMERS' ASSOCIATION			ENUMERATION AREA	
4	5	6	7	8	9	10	11	12	13	14

PART 2 - LIST OF SAMPLED HOUSEHOLDS AND HOLDERS

1			2	3	4	5	6			7
SERIAL NUMBER OF HOUSEHOLDS *(ASS 91/0 COL. 1)*			NAME OF HEAD OF HOUSEHOLD *(ASS 91/0 COL. 2)*	SERIAL NUMBER OF HOLDER *(WITH IN HOUSEHOLD)*	NAME OF HOLDER	TYPE OF AGRICULTURE CROP = 1 LIVESTOCK = 2 BOTH = 3	ORDER OF SELECTION *(ASS 91/0 COL. 9)*			REMARKS
15	16	17		18		19		20	21	

	NAME	SIGNATURE	DATE
ENUMERATOR			/ /
SUPERVISOR			/ /
REGIONAL STAT. HEAD			/ /

FORM ASS 91/2

PRIVATE HOLDINGS

CENTRAL STATISTICAL AUTHORITY
NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM
CROP PRODUCTION FORECAST SURVEY 1991 E.C.

JOB ID	1	2	3
	1	4	0

PART 1 - IDENTIFICATION PARTICULARS

FOR SINGLE STAND CROP ONLY

1	2	3	4	5	6
REGION	ZONE	WEREDA	FARMERS' ASSOCIATION	ENUMERATION AREA	CROP NAME
4 5	6 7	8 9	10 11 12	13 14	15 16

PART 2- CROP CONDITION

1		2	3			4		5			6		7			8			9	10		11			12
SR. NO.		NAME OF HOLDER	HOUSEHOLD ID NUMBER			HOLDER ID NUMBER		NUMBER OF FIELDS			CROP PRODUCTIVITY COMPARED TO LAST YEAR														
											INCREASE =1 SAME / NO CHANGE= DECREASE =3		IF INCREASE QUANTITY IN PERCENT			IF DECREASE						CHANGE IN PERCENT			REMARKS
																QUANTITY IN PERCENT			ONE MAJOR REASON FOR DECREASE	CODE					
17	18		19	20	21	22	23	24	25	26		27		28	29	30	31	32	33		34	35	36	37	38	
0	1																								
0	2																								
0	3																								
0	4																								
0	5																								
0	6																								
0	7																								
0	8																								
0	9																								
1	0																								

NOTE: THIS FORM SHOULD BE FILLED OUT FOR MIXED CROPS ACCORDING TO THEIR TYPE IN PURE STANDS.

CENTRAL STATISTICAL AUTHORITY
NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM
AGRICULTURAL SAMPLE SURVEY - 1991 E.C.

FORM ASS - 91/3A

PRIVATE HOLDINGS

JOB 1 2 3
ID 1 5 1

PART 1 - IDENTIFICATION PARTICULARS

1 REGION	2 ZONE	3 WEREDA	4 FARMERS' ASSOCIATION	5 ENUMERATION AREA	6 HOUSEHOLD ID NUMBER	7 HOLDER ID NUMBER	8 HOLDER'S NAME	9 SEX MALE = 1 FEMALE = 2	10 AGE	11 EDUCATIONAL STATUS (GRADE COMPLETED)	12 NUMBERS OF MEMBERS OF HOLDER'S HOUSEHOLD	13 TYPE OF AGRICULTURE CROP = 1 LIVESTOCK = 2 BOTH = 3
4 5	6 7	8 9	10 11 12	13 14	15 16 17	18 19		20	21 22	23	24 25	26

NOTES ON PART 1 COLUMN 12

ILLITERATE = 1	GRADES 7-8 COMPLETED = 4
INFORMAL EDUCATION OR GRADES 1-3 COMPLETED = 2	GRADES 9-11 COMPLETED = 5
	GRADE 12 COMPLETED = 6
GRADES 4-6 COMPLETED = 3	ABOVE 12 GRADE = 7

PART 2 - LIST OF FIELDS AND AGRICULTURAL PRACTICES (MEHER SEASON)

(ONLY PURE STAND TEMPORARY AND PERMANENT CROPS)

1 LINE NUMBER	2 SERIAL NUMBER PARCEL	3 SERIAL NUMBER FIELD	4 CROP NAME TEMPORARY	5 CODE	6 TYPE OF SEED USED IMPROVED = 1 LOCAL = 2	7 USE OF IRRIG. YES = 1 NO = 2	8 USE OF FERTILIZER: USED ? YES = 1 NO = 2	9 IF YES NATURAL = 1 COMMERCIAL = 2 BOTH = 3	10 IF COMMERCIAL FERTILIZER (IF IT IS CODE 2 OR 3 IN COLUMN 9): TYPE UREA = 1 DAP = 2 BOTH = 3	11 QUANTITY USED: KG.			GRAMS			12 USE OF PESTICIDES YES = 1 NO = 2	13 WAS CROP DAMAGED ? YES = 1 NO = 2	14 IF YES REASON OF DAMAGE	15 CODE	16 PERCENT DAMAGED		17 REMARKS
27 28	29 30	31 32		33 34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	
0 1																						
0 2																						
0 3																						
0 4																						
0 5																						
			PERMANENT																			
0 1																						
0 2																						
0 3																						
0 4																						

JOB 1 2 3
ID 1 5 2

PART 3- LIST OF FIELDS AND AGRICULTURAL PRACTICES FOR MIXED CROPS (*MEHER SEASON*)

1 LINE NUMBER	2 SERIAL NUMBER PARCEL	3 SERIAL NUMBER FIELD	4 CROP NAME MIXED STAND	5 USE OF IRRIGATION YES = 1 NO = 2	6 USE OF FERTILIZER: USED ? YES = 1 NO = 2	7 IF YES NATURAL = 1 COMMERCIAL = BOTH = 3	8 IF COMMERCIAL FERTILIZER (IF IT IS CODE 2 OR 3 IN COLUMN 7): TYPE UREA = 1 DAP = 2 BOTH = 3	9 QUANTITY USED: KG.			GRAMS			10 SR. NO.	11 LIST OF CROPS IN MIXED STAND	12 CODE	13 TYPE OF SEED IMP. = 1 LOCA. = 2	14 USE OF PESTICIDE YES = 1 NO = 2	15 WAS CROP DAMAGED ? YES = 1 NO = 2	16 IF YES REASON OF DAMAGE	17 CODE	18 PERCENT DAMAGE		19 REMARKS
27 28	29 30	31 32		33	34	35	36	37	38	39	40	41	42	43		44 45	46	47	48		49 50	51	52	
0 1														1										
														2										
														3										
0 2														1										
														2										
														3										
0 3														1										
														2										
														3										

PART 4- OTHER LAND USE

JOB ID	1 2 3 1 9 3								
1	2		3			4	5		6
LINE NUMBER	SERIAL NUMBER PARCEL		FIELD			TYPE OF LAND USE	CODE		REMARKS
27	28	29	30	31	32		33	34	
0	1								
0	2								
0	3								
0	4								
0	5								
0	6								

PART 5- QUANTITY OF IMPROVED AND LOCAL SEEDS BY TYPE OF CROP

JOB ID	1 2 3 1 9 0																	
1	2		3	4						5								
SERIAL NUMBER	CROP NAME		CODE	IMPROVED SEED QUANTITY KG			GRAM			LOCAL SEED QUANTITY KG			GRAM					
27	28		29	30	31	32	33	34	35	36	37	38	39	40	41	42		

PART 6 - TYPE AND QUANTITY OF CROP PROTECTION CHEMICALS

JOB ID	1 2 3 1 9 1																	
1	2		3	4		5	6	7										
SERIAL NUMBER	NAME OF CHEMICAL		CODE	TYPE AND QUANTITY OF CROP PROTECTION CHEMICAL USED INSECTICIDE = 1 FUNGICIDE = 2 HERBICIDE = 3		NAME OF MEASURMENT UNITY	CODE	QUANTITY										
27	28		29	30	31		32	33	34	35	36	37	38	39				

	NAME	SIGNATURE	DATE
ENUMERATOR			/ /
SUPERVISOR			/ /
REGIONAL STAT. HEAD			/ /

CENTRAL STATISTICAL AUTHORITY
NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM
AGRICULTURAL SAMPLE SURVEY - 1991 E.C.

FORM ASS - 91/4A

PRIVATE HOLDINGS

JOB ID	1	2	3
	1	5	3

PART 1 - IDENTIFICATION PARTICULARS

1	2	3	4	5
REGION	ZONE	WEREDA	FARMERS' ASSOCIATION	ENUMERATION AREA
4 5	6 7	8 9	10 11 12	13 14

6	7	8	9	10	11	12	13	14	15
HOUSEHOLD ID NUMBER	HOLDER ID NUMBER	HOLDER'S NAME	PARCEL	FIELD	TYPE OF CROP STAND IN THE FIELD OR LAND USE PURE = 1 MIXED CROP = 2 OTHER LAND USE = 3	SR. NO.	CROP NAME (NAME OF LAND USE)	CODE	PERCENTAGE SHARE OF AREA *(IF CODE IS 2 IN COLUMN 11)*
15 16 17	18 19		20 21 22 23		24	25		26 27	28 29
						1			
						2			
						3			

PART 2 - RESULTS OF AREA MEASUREMENTS

1	2	3	4	5	6	7	8
DATE OF MEASUREMENT		AREA IN SQUARE METERS	AREA IN LOCAL UNITS			IF AREA IS NOT MEASURED REASON	CODE
DAY	MONTH		NAME	CODE	AREA		
30 31	32 33	34 35 36 37 38 39 40		41 42 43	44 45 46 47 48		49 50

	NAME	SIGNATURE	DATE
ENUMERATOR			/ /
SUPERVISOR			/ /
REGIONAL STAT. HEAD			/ /

PART 3 - FIELD AREA MEASUREMENT

SIDE	A-B					B-C					C-					D -					E -					F -					G -				
BEARING (0)			51	52	53			54	55	56			57	58	59			60	61	62			63	64	65			66	67	68			69	70	71
DISTANCE (M)	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106
SIDE	H -					I -					J -					K -					L -					M -					N -				
BEARING (0)			107	108	109			110	111	112			113	114	115			116	117	118			119	120	121			122	123	124			125	126	127
DISTANCE (M)	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162
SIDE	O -					P -					Q -					R -					S-					T -					U -				
BEARING (0)			163	164	165			166	167	168			169	170	171			172	173	174			175	176	177			178	179	180			181	182	183
DISTANCE (M)	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218

SCALE 1 CM = _____ METERS

NUMBER OF FULL SQUARES = _____ HALF AND GREATER SQUARES = _____

CENTRAL STATISTICAL AUTHORITY
NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM
AGRICULTURAL SAMPLE SURVEY - 1991 E.C.

FORM ASS - 91/4B

PRIVATE HOLDINGS

JOB ID	1	2	3
	1	8	3

PART 1 - IDENTIFICATION PARTICULARS

1	2	3	4	5
REGION	ZONE	WEREDA	FARMERS' ASSOCIATION	ENUMERATION AREA
4 5	6 7	8 9	10 11 12	13 14

6	7	8	9	10	11	12	13	14	15
HOUSEHOLD ID NUMBER	HOLDER ID NUMBER	HOLDER'S NAME	PARCEL	FIELD	TYPE OF CROP STAND IF THE FIELD OR LAND USE PURE = 1 MIXED CROP = 2 OTHER LAND USE = 3	SR. NO.	CROP NAME (NAME OF LAND USE)	CODE	PERCENTAGE SHARE OF AREA (IF CODE IS 2 IN COLUMN 11)
15 16 17	18 19		20 21	22 23	24	25		26 27	28 29
						1			
						2			
						3			

PART 2 - RESULTS OF AREA MEASUREMENTS

1	2	3	4	5	6	7	8
DATE OF MEASURMENT		AREA IN SQUARE METERS	AREA IN LOCAL UNITS			IF AREA IS NOT MEASURED REASON	CODE
DAY	MONTH		NAME	CODE	AREA		
30 31	32 33	34 35 36 37 38 39 40		41 42 43	44 45 46 47 48		49 50

PART 3 - FIELD AREA MEASUREMENT

SIDE	A-B			B-C			C-			D-			E-			F-			G-		
BEARING (0)		51	52 53		54	55 56		57	58 59		60	61 62		63	64 65		66	67 68		69	70 71
DISTANCE (M)	72	73	74 75 76	77	78	79 80 81	82	83	84 85 86	87	88	89 90 91	92	93	94 95 96	97	98	99 100 101	102	103	104 105 106
SIDE	H-			I-			J-			K-			L-			M-			N-		
BEARING (0)		107	108 109		110	111 112		113	114 115		116	117 118		119	120 121		122	123 124		125	126 127
DISTANCE (M)	128	129	130 131 132	133	134	135 136 137	138	139	140 141 142	143	144	145 146 147	148	149	150 151 152	153	154	155 156 157	158	159	160 161 162
SIDE	O-			P-			Q-			R-			S-			T-			U-		
BEARING (0)		163	164 165		166	167 168		169	170 171		172	173 174		175	176 177		178	179 180		181	182 183
DISTANCE (M)	184	185	186 187 188	189	190	191 192 193	194	195	196 197 198	199	200	201 202 203	204	205	206 207 208	209	210	211 212 213	214	215	216 217 218

	NAME	SIGNATURE	DATE
ENUMERATOR			/ /
SUPERVISOR			/ /
REGIONAL STAT. HEAD			/ /

FORM ASS - 91/5

CENTRAL STATISTICAL AUTHORITY
NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM
AGRICULTURAL SAMPLE SURVEY - 1991 E.C.

PRIVATE HOLDINGS

PART 1 - IDENTIFICATION PARTICULARS

JOB ID	1	2	3
	1	9	4

1	2	3	4	5	6	7	8
REGION	ZONE	WEREDA	FARMERS' ASSOCIATION	ENUMERATION AREA	HOUSEHOLD ID NUMBER	HOLDER ID NUMBER	HOLDER NAME
4 5	6 7	8 9	10 11 12	13 14	15 16 17	18 19	

PART 2 - LIST OF FIELDS AND SELECTION OF FIELDS FOR CROP CUTTING

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SERIAL NUMBER OF		CROP NAME (TEMPORARY, TEMPORARY MIXED, TEMPORARY & PERMANENT MIXED)		PRODUCTION IN LOCAL UNITS			CROP NAME												
PARCEL	FIELD		CODE	NAME	CODE	QUANTITY	FIELD NUMBER	SELECTED FIELD NO.	FIELD NUMBER	SELECTED FIELD NO.	FIELD NUMBER	SELECTED FIELD NO.	FIELD NUMBER	SELECTED FIELD NO.	FIELD NUMBER	SELECTED FIELD NO.	FIELD NUMBER	SELECTED FIELD NO.	REMARKS
20 21	22 23		24 25		26 27 28	29 30 31 32 33													

NOTE:- IN PART 2 COLUMN 3
. ALL TEMPORARY CROPS
. ONE OR MORE TEMPORARY CROPS WITH MIXED STAND
. ONE OR MORE TEMPORARY AND PERMANENT CROPS WITH MIXED STAND
WILL BE TRANSFERRED

PART 3 - DETAILS OF CROP CUTTING

JOB ID	1	2	3
	1	5	4

1	2			3	4	5				6					7				8				9	10	11	12		13	14
SERIAL NUMBER OF				CROP NAME	CODE	DATE OF HARVEST				FRESH WEIGHT					DATE OF RECORDED DRY WEIGHT				DRY WEIGHT				WAS CROP DAMAGED ?					TYPE OF CROP STAND	
PARCEL		FIELD				DATE		MONTH		KG		GRAM			DATE		MONTH		KG		GRAM		YES = 1 NO = 2	IF YES REASON FOR DAMAGE	CODE	PERCENT DAMAGED		PURE = 1 MIXED = 2	REMARKS
20	21	22	23		24 25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44		45 46	47	48	49	

	NAME	SIGNATURE	DATE
ENUMERATOR			/ /
SUPERVISOR			/ /
REGIONAL STAT. HEAD			/ /

CENTRAL STATISTICAL AUTHORITY
NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM
LIVESTOCK, POULTRY, BEEHIVES AND HONEY PRODUCTION - 1991 E.C

FORM ASS-91/6

PRIVATE HOLDINGS

PART 1 - IDENTIFICATION PARTICULARS

JOB ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	1	5	9																							
	REGION			ZONE			WEREDA			FARMERS' ASSOCIATION			ENUMERATION AREA			HOUSEHOLD ID NUMBER			HOLDER ID NUMBER		HOLDER'S NAME		SEX MALE = 1 FEM. = 2	AGE	EDUCATIONAL STATUS(grade compl.	NUMBER OF MEMBERS OF HOLDER		TYPE OF HOLDING CROP = 1 LIVESTOCK = 2 BOTH = 3

NOTES ON PART 1 COLUMN 11

- ILLITERATE = 1
- INFORMAL EDUCATION OR GRADES 1 - 3 COMPLETED = 2
- GRADES 4 - 6 COMPLETED = 3
- GRADES 7 - 8 COMPLETED = 4
- GRADES 9 - 11 COMPLETED = 5
- GRADE 12 COMPLETED = 6
- ABOVE 12 GRADE = 7

PART 2 - CATTLE BY SEX, AGE AND PURPOSE

1	2			3			4			5			6			7			8		9		10		11		12			13
													3 YEARS AND ABOVE AND LESS THAN 10 YEARS																	
CATTLE	GRAND TOTAL			LESS THAN 6 MONTHS			6 MONTHS & <1 YEAR			1 YEAR & <3 YEARS			TOTAL= COL 7 + COL 8 + COL 10 COL 11			BEEF CATTLE			DAIRY COWS		COWS GAV MILK IN THE LAST 12 MONTHS		CATTLE MAINLY FOR AGRICULTURAL PURPOSES		FOR OTHER PURPOSES		10 YEARS AND OVER			REMARKS
	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	
TOTAL																																
	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72		73	74						75	76		77	78		79	80	
MALE																																
	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95		96	97	98	99	100	101		102	103		104	105		106	107	
FEMALE																																

PART 3 - SHEEP AND GOATS BY SEX, AGE AND PURPOSE

1		2		3			4			5			6			7			8			9			10			11			12			13
																2 YEARS AND ABOVE																		
SR. NO.		TYPE		GRAND TOTAL			LESS THAN 6 MONTHS			6 MONTHS & <1 YEAR			1 YEAR & LESS THAN 2 YEARS			TOTAL= COL 8 + COL 9 + COL 10 + COL 11 + COL 1			FOR MEAT			FOR WOOL			FOR MILK			FOR BREED			FOR OTHER PURPOSES			REMARKS
108	109			110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	
			TOTAL																															
				140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160				161	162	163	164	165	166	
0	1	SHEEP	MALE																															
				167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	
			FEMALE																															
				197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214				215	216	217	218	219	220	221	222	223	
			TOTAL																															
				224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241							242	243	244	245	246	247	
0	2	GOATS	MALE																															
				248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265				266	267	268	269	270	271	272	273	274	
			FEMALE																															

NOTES

1. CATTLE INCLUDES CAVES, HEIFERS, YEARLINGS, BULLS, COWS & OXEN
2. MILKING COWS REFER TO THE 12 MONTHS PERIOD YEKATIT 2/1990 - YEKATIT 1/1991 (FEBRUARY 10/1998 - FEBRUARY 9/1999)
3. DATE OF REFERENCE IS YEKATIT 1/1991 (FEBRUARY 9/1999)
4. MENTION OTHER PURPOSES IN THE REMARK

PART 4 - HORSES, ASSES, MULES AND CAMELS BY AGE AND PURPOSE

JOB ID	1	2	3
	1	6	0

1	2		3	4	5	6	7	8	9
SR. NO.	TYPE		GRAND TOTAL	LESS THAN 3 YEARS	3 YEARS & ABOVE	LESS THAN 4 YEARS	4 YEARS & ABOVE	MAINLY FOR AGRICULTURAL PURPOSE	REMARKS
27	28		29 30 31	32 33 34	35 36 37			38 39 40	
0	1	HORSES TOTAL							
		HORSES MALE	41 42 43	44 45 46	47 48 49			50 51 52	
		HORSES FEMALE	53 54 55	56 57 58	59 60 61			62 63 64	
0	2	ASSES TOTAL	65 66 67	68 69 70	71 72 73			74 75 76	
		ASSES MALE	77 78 79	80 81 82	83 84 85			86 87 88	
		ASSES FEMALE	89 90 91	92 93 94	95 96 97			98 99 100	
0	3	MULES TOTAL	101 102 103					104 105 106	
		MULES MALE	107 108 109					110 111 112	
		MULES FEMALE	113 114 115					116 117 118	
0	4	CAMELS TOTAL	119 120 121			122 123 124	125 126 127	128 129 130	
		CAMELS MALE	131 132 133			134 135 136	137 138 139	140 141 142	
		CAMELS FEMALE	143 144 145			146 147 148	149 150 151	152 153 154	

PART 6 - BEEHIVES AND HONEY PRODUCTION

1	2								3	4
BEEHIVES (WITH BEES)	TOTAL HONEY PRODUCED PER YEAR								FREQUENCY OF HONEY PRODUCTION PER BEEHIVES PER YEAR	REMARKS
	KG						GRAM			
49	50	51	52	53	54	55	56	57	58	
TRADITION										
59	60	61	62	63	64	65	66	67	68	
MODERN										

NOTE :- BEEHIVES (WITH BEES) REFER TO THE PERIOD YEKATIT 2/1990 - YEKATIT 1/1991 (FEBRUARY 10/1998 - FEBRUARY 9/1999) FROM WHICH HONEY WAS PRODUCED ATLEAST ONCE IN THE PERIOD.

- IF HONEY WAS PRODUCED FROM THE BEEHIVE WITH IN THE REFERENCE PERIOD, IT WILL BE COUNTED EVEN IF IT IS WITHOUT BEES.

PART 5 - NUMBER OF POULTRY

JOB ID	1	2	3
	1	6	1

1	2			3	4		5			6			7			8
GRAND TOTAL	PULLETS			LAYING HENS	NON LAYING HENS		COCKERELS			COCKS			CHICKS			REMARKS
27 28	29	30	31	32 33	34	35	36	37	38	39	40	41	42	43	44	45	46 47	48	

. DATE OF REFERENCE IS YEKATIT 1/1991 (FEBRUARY 9/1999)

	NAM	SIGNATURE	DATE
ENUMERATOR			
SUPERVISOR			
REGIONAL STAT. HEAD			

CENTRAL STATISTICAL AUTHORITY
NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM
AGRICULTURAL SAMPLE SURVEY - 1991 E.C.

FORM ASS - 91/7

PRIVATE HOLDINGS

PART 1 IDENTIFICATION PARTICULARS

JOB ID: 1 2 3 / 1 8 5

1	2	3	4	5	6	7	8	9	10	11	12	13
KILLIL	ZONE	WEREDA	FARMER'S ASSOCIATION	ENUMERATION AREA	HOUSEHOLD ID NUMBER (ASS 91/1 PART 2 COL. 1)	HOLDER ID NUMBER (ASS 91/1 PART 2 COL. 9)	HOLDER'S NAME	HOLDER'S SEX M = 1 F = 2	HOLDER'S AGE	HOLDER'S EDUCATIONAL STATUS (GRADE COMPLETED)	NUMBER OF MEMBERS OF HOLDER'S HOUSEHOLD	TYPE OF AGRICUL. CROP = 1 LVSTK = 2 BOTH = 3
4 5	6 7	8 9	10 11 12	13 14	15 16 17	18 19		20 21 22		23	24 25	26

PART 2 LIST OF FIELDS AND AGRICULTURAL PRACTICES (1991 E.C. BELG SEASON)

1	2.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
LINE NO.	SERIAL NUMBER OF PARCE	SERIAL NUMBER OF FIELD	CROP NAME (TEMPORARY)	CODE	TYPE OF SEED USED IMPROVED = 1 INDIGN. = 2	USE OF IRRIGATION YES = 1 NO = 2	USE OF FERTILIZERS: USE YES = 1 NO = 2	USE OF FERTILIZERS: IF YES NATURAL = COMM. = 2 BOTH = 3	USE OF FERTILIZERS: IF COMMERCIAL (IF IT IS CODE 2 OR 3 IN COLUMN 9) UREA = 1 DAP = 2 BOTH = 3	USE OF FERTILIZERS: IF COMMERCIAL QUANTITY USED KG.	USE OF FERTILIZERS: IF COMMERCIAL QUANTITY USED GRAM	USE OF PESTICIDES YES = 1 NO = 2	WAS CROP DAMAGED ? YES = 1 NO = 2	IF YES REASON FOR DAMAGE	CODE	PERCENT OF DAMAGED	REMARK
27 28	29 30	31 32		33 34	35	36	37	38	39	40 41 42 43	44 45 46	47	48		49 50	51 52	
01																	
02																	
03																	
04																	
05																	
06																	
07																	
08																	
09																	
10																	

NOTE: - IN PART 1 COLUMN 11:

ILLITERATE	= 1	GRADES 7-8 COMPLETED	= 4
GRADES 1-3 COMPLETED	= 2	GRADES 9-11 COMPLETED	= 5
GRADES 4-6 COMPLETED	= 3	GRADES 12 COMPLETED	= 6
		ABOVE GRADE 12 COMPLETED	= 7

NOTE: - THIS FORM SHOULD BE FILLED OUT ONLY FOR TEMPORARY PURE STAND CROPS AND TEMPORARY WITH OTHER MIXED STAND CROPS.

- IN PART 3 THE INFORMATION ABOUT AREA AND PRODUCTION SHOULD BE FILLED OUT IF AND ONLY IF THE TEMPORARY CROPS HARVESTED BEFORE SEPTEMBER 1, 1992 E.C.

PART 3 - AREA AND PRODUCTION (1991 E.C. BELG SEASON)

JOB ID	1 2 3 / 1 6 4

1	2		3	4	5	6	7		8	9	10	11		12		13
SERIAL NO. OF			CROP NAME		AREA IN LOCAL UNITS				HECTARES	PRODUCTION IN LOCAL UNITS				QUINTALS		REMARKS
PARCE	FIELD			CODE	NAME	CODE	AREA			NAME	CODE	PRODUCTION				
27 28	29	30		31 32		33 34	35 36 37 38	39 40	41 42 43 44 45 46		47 48	49 50 51 52 53 54		55 56 57 58 59 60		

PART 4 - QUANTITY OF IMPROVED AND LOCAL SEED BY TYPE OF CROP

JOB ID	1 2 3 / 1 9 4

1	2		3	4					5				
SR. NO.	CROP NAME		CODE	IMPROVED SEED QUANTITY					LOCAL SEED QUANTITY				
				K.G			GRAM		K.G			GRAM	
27 28			29 30	31 32 33			34 35 36		37 38 39			40 41 42	

PART 5 - QUANTITY OF CROP PROTECTION CHEMICALS

JOB ID	1 2 3 / 1 9 5

1	2		3	4	5		6	7		
SR. NO.	CHEMICAL NAME		CODE	CROP PROTECTION CHEMICAL USED 1= INSECTICIDE 2= FUNGICIDE 3= HERBICIDE	UNIT NAME		CODE	QUANTITY		
27 28			29 30	31			32 33	34 35 36	37 38 39	

	NAME	SIGNATURE	DATE
ENUMERATOR			/ /
SUPERVISOR			/ /
HEAD OF BRANCH OFFICE			/ /

CORRIGENDUM

1. **Table of Contents**

   Estimates of Area Under Temporary Crops

   should be read as Estimates of Area under All Crops

2. **List of Tables**

   The group of Tables in AMHARA , i.e. South Wolo, Oromia and Shewa Zone

   should be read as South Wolo, Oromia and North Shewa Zone

3. **List of Tables**

   Table 5.12 under Table 5 (for Addis Ababa) is in Page 94;

   it should be in Page 95