

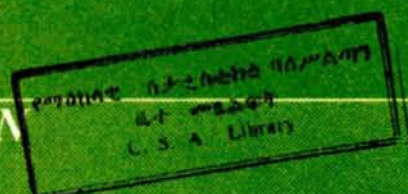
THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

CENTRAL STATISTICAL AUTHORITY

**AGRICULTURAL SAMPLE SURVEY
1999/2000 (1992 E.C.)**

(September 12 - October 11, 1998)

REPORT ON



**FORECAST OF AREA AND
PRODUCTION OF MAJOR CROPS**

(For Private Peasant Holdings)

*Addis Ababa
November, 1999*

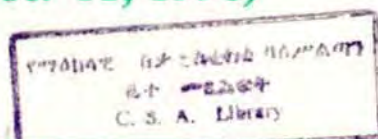
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PART I

INTRODUCTION AND OBJECTIVE OF THE SURVEY

1. INTRODUCTION

In Ethiopia, the agriculture sector is the backbone of the nation's economy. This sector continues to be extremely important, contributing about 55 percent to the national GDP, 60 percent to merchandise exports and 80 percent to the population's employment (World Bank, 1995). Besides its contribution as the main income generating sector for the majority of the rural population, it also serves as the main source for household consumption.

Food availability for the majority of Ethiopians continues to be determined by its domestic crop production. Therefore, timely crop production forecast estimates prior to harvest are of great importance and interest to government agencies and non-government donor organizations. Accurate and objective estimates for use by these organizations for planning purposes are essential. Timeliness of the estimates is of the utmost importance for these organizations to take all necessary and appropriate measures, i.e. administering exports or imports, management of stocks and distribution of food to deficit regions, regulation of price control both during periods of surplus and/or deficits, ... etc.

A forecast of crop production can be defined as a statement of the most probable production of the crop which can be obtained from the coming harvest given reasonable expectations for normal growing conditions through the harvest period.

The Central Statistical Authority (CSA) has been conducting crop production forecast surveys annually, since 1980/81 (1973 E.C.). The crop forecast estimates are based on data collected from producers (farmers) using scientifically accepted probability sampling methodology subject to the conditions and expectations for harvest at the time of data collection from 12 September through 11 October 1999 (i.e. from Meskerem 1 to 30, 1992 E.C.)

This report presents basic information of crop production forecasts for 1999/2000 (1992 E.C.), i.e. for Meher season harvest, and indicates the area coverage and expected production of major crops for the coming harvest at the national, regional as well as zonal/ special wereda levels.

2. OBJECTIVES OF THE SURVEY

The objectives of the crop production forecast survey is to collect basic quantitative information on area and expected production of major crops. Timely estimates made from this quantitative information that indicate the expected production of the 1999/2000 (1992 E.C.) Meher (Main) season crops prior to their harvest are considered to be essential for policy makers and administrators to prepare policies and for implementation of timely measures such as administering exports or imports of crops, management of stocks and distributing of food to different regions, regulation of crop prices at the time of surplus and/or deficits, etc.

PART II

SURVEY METHODOLOGY, DATA COLLECTION AND PROCESSING

1. SCOPE, COVERAGE AND CONTENT OF THE SURVEY

The 1999/2000 (1992 E.C.) annual crop production forecast survey was designed to cover the **sedentary rural** agricultural population in all regions of the country. This coverage encompasses a total of 11 regions, 56 zones and five special weredas which were designated in the sampling design as the area basis to be domains /reporting levels for the survey. The geographic coverage of the survey is given in Table A.

The original sample selected totaled 1450 enumeration areas (EAs). These EAs were selected at the zonal level to be enumerated for the survey to provide specific coverage within all regions. For this report, however, the number of "Useable" EAs which were completed and acceptable for tabulation, totaled 1438 EAs. The remaining 12 EAs were incomplete and unusable due to various reasons. In each EA a sample of 40 agricultural households were selected in which 25 households were interviewed for the forecast survey which resulted in a total of 35,950 sample households. The forecast estimates of area under crops are obtained from a sub-sample of the first 10 households out of the 40 selected from each EA.

TABLE A. AREAL COVERAGE OF THE 1999/2000 (1992 E.C.)
CROP PRODUCTION RECAST SURVEY

Region	Number of Zones		Number of Weredas Covered in the survey
	Total	Covered in the survey	
Tigray ¹	5	4	33
Afar ²	5	3	7
Amhara	10	10	92
Oromia	12	12	170
Somalie ³	9	3	9
Benshangul Gumez	3	3	18
S.N.N.P.R.	14	14	73
Gambela	4	3	5
Harari	1	1	1
Addis Ababa ⁴	6	2	5
Dire Dawa	1	1	1
Total	70	56	414

Notes:-

- 1 - In Tigray Region, four out of five zones have rural settled population.
- 2 - Afar Region has a total of five Zones, however only three Zones have significant rural sedentary population.
- 3 - Somalie Region has a total of nine Zones, however only three Zones have significant rural sedentary population.
- 4 - Addis Ababa has a total of six Zones, however, only two Zones have rural settled population. In the remaining four Zones the entire population is urban residents.

S.N.N.P.R. Southern Nations, Nationalities and peoples' Region.

2. SAMPLE DESIGN

The 1999/2000 (1992 E.C.) crop production forecast 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. Each zone /special wereda 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 strata /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 agricultural 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 systematic sampling; size being total number of agricultural households in the EAs as obtained from the 1994 Population and Housing Census each sample EA, 40 agricultural households were systematically selected for the annual livestock survey from a fresh list of households prepared at the beginning of the field work of the survey. For the crop forecast survey, data on crop condition factors were collected from the first 25 agricultural households and for the area measurement of the survey, the first ten sample households were selected to be covered.

A total of 1,450 EAs (2.9 % of total EAs in the rural areas of the country) were selected for the survey. However, 10 EAs were closed due to different factors that were beyond the control of the Authority and from 2 EAs forecast data were not collected for various reasons such as flooding of the area, temporary movements of the households from the EA,...etc. Hence the survey succeeded in covering 1438 (99.17%) EAs. With respect to ultimate sampling units, for the crop forecast survey, it was planned to cover 14,500 and 36,250 agricultural households for area measurement and crop condition factors, respectively. Estimation procedures of parameters of interest (total and ratio) and their sampling error is presented in Appendix I. Distribution of the number of sampling units sampled and covered by strata is given in Appendix III.

3. FIELD ORGANIZATION

The Heads of CSA Branch Statistical Offices as well as field supervisors and enumerators were fully involved in the administration of the Agricultural Sample Survey. At any given time during the survey there were 1600 (including 10% reserves) field enumerators stationed across the country for the data collection operation. One field enumerator is assigned to each of the selected EA. A supervisor is assigned to closely follow up the work of 4-5 enumerators. Moreover, experts from the CSA's headquarters and other support staff were involved in the survey operation.

For all field enumerators the necessary survey equipment such as compass, protractors, ruler, measuring tape, balance scale, iron pegs, rope, sample bag, ...etc. were issued at the conclusion of their training to facilitate the field work and crop cutting exercises later in the season at harvest time.

4. TRAINING OF FIELD STAFF

Preparation for the Agricultural Sample Survey required considerable planning and acquisition of all relevant materials. These included the training of personnel, procurement of equipment, designing and printing of questionnaires, as well as enumerator's and supervisor's instruction manuals.

The training program for the survey was carried out in two stages. In the first stage, 83 trainees who are experts in various disciplines in headquarter, Branch Statistical Office Heads, and a few experienced field supervisors were given training for a period of one week, at CSA headquarter. Those trained in the first stage conducted similar training for 350 field supervisors and 1595 field enumerators in the 22 CSA Branch Statistical Offices all over the country. The content of the training document focused on specific details pertaining to the crop production survey, including detailed class room instruction on the purpose of the survey, terminology, concepts and

definitions used for the survey, how to correctly complete each questionnaire, description of field area measurement methodology, detailed discussion on all aspects used for crop cutting measurement, and correct procedures for conducting an interview with holders ...etc. The training at the branch offices was conducted for a period of two weeks and included thorough field practices to reinforce the classroom lectures and to insure that each enumerator was thoroughly familiar with interviewing holders, field measurement and crop cutting procedures.

5. METHOD OF DATA COLLECTION AND CROP PRODUCTION FORECASTING

i. Method of Data Collection

The data collected from holders for the crop production forecast estimates consisted of both subjective questions that is meant to obtain information pertaining to the nature of production expectations through direct interviews and objective methodologies associated with field measurement. The cultivated crop field area measurement data are collected objectively by measuring all cropped fields under temporary and permanent crops using compasses and measuring tapes (see **Appendix III** for the total number of fields measured). For forecast survey purposes only area under major temporary crops are being published. These crop forecast production estimates are calculated from data collected directly from the sampled holder or producer based on the "condition" of the holder's crops surveyed, i.e., percentage change on the expected increase or decrease of yield for the coming harvest, as compared to last year's yield. The enumerator is trained to ask this question on percentage change using the local translation and meaning. The enumerator is also trained how to use comparative associations to represent the concept of percentage change in units to the holder in such a way that the enumerator can calculate the percentage change and enter it on the questionnaire.

This forecast estimation procedure has proven successful in past years and also avoids the serious problems in Ethiopia of using many different local units of measurements that the farmers could otherwise report an absolute yield. This subjective data on percentage yield change is recorded

on the questionnaire for each temporary crop by interviewing all holders within selected 25 households in each enumeration area.

ii. Method of Crop Production Forecasting

The crop production forecast for 1999/2000 (1992 E.C.) is based on what could be considered a three component production "models". The first component production "model" is the survey's direct expansion estimate of the actual cultivated area (obtained from the objectively measured fields during the September-October field data collection period). The second component production uses last year's Meher (Main) season crop yield estimate obtained from objectively collected crop cuttings. The third component production is the average "condition" factor which estimates the yield of this year's crop comparing with the previous year.

All specific condition factors (such as weather, pest damage, ...etc.) affecting the crop growth for the rest of the current season have been taken into account by the holders in these "condition" factors and represents the holder's own subjective estimate on the future production. Forecast estimates are published for all major temporary crops for which objective area field measurements were performed.

iii. Main Factors Which Influence The Expected Crop Production

In order for the holder to intuitively formulate the future production of his field crop production there are numerous factors subjectively assessed. Besides the meteorological factors, there are a number of other factors that influence production and yield of major crops. These are:

a. Reason for expected decrease

- too much rainfall and lodging of the crop,
- shortage of rainfall,
- insect (locust), disease and other pest (birds) damage,
- hail and frost damage,
- wild and domestic animal damage,
- shortage of seed,

- depletion of the soil fertility and
- others.

b. Reason for expected increase

- favorable weather conditions,
- improved seed and cultural practices,
- application of fertilizers,
- application of pesticides (absence of pests) and
- others.

6. DATA EDITING, CODING AND VERIFICATION

The Agricultural Sample Survey data editing and coding instruction manuals were prepared and printed prior to training. Before receipt of the completed questionnaires from the branch offices, the CSA regular editor/coder staff were given one full day of intensive training on proper questionnaire review techniques. Instructions and rules associated with correctly coding the questionnaire and correcting inconsistent records were thoroughly taught. In order to undertake this task at CSA headquarters a total of 55 editors/coders were involved.

During the coding process, several of the professional staff members from ASD were assigned to guide and supervise the editors/coders in correction of the difficult problems on the filled-in questionnaire. These technical experts were also involved in answering questions, clear doubts...etc. so as to facilitate the editing and coding activity. Each editor/coder was assigned to work on a single EA at a time to assure that all questionnaires were accounted for and completed. Next the edited and coded questionnaires were checked by about 15 supervisors/verifiers. All EAs were included in this final verification process.

7. DATA ENTRY, CLEANING AND PROCESSING

The data entry process deployed 40 data encoders and as many personal computers. The data was entered in the PCs using IMPS (Integrated Microcomputer Processing System) software which is a software package developed by the United States Bureau of the Census. Following data entry, the data was further reviewed for data inconsistencies, missing data, reasonableness ... etc. Five of the regular professional staff from Agricultural Statistics Department and six computer operators skilled in data cleaning from Data processing Department fully participated to make appropriate data cleaning according to the output of the edit program. The final stage of the data processing was to summarize the cleaned data using the PC based IMPS software. The summary tables required reformatting and merging with the report text file for publication purposes. Three programmers were responsible for all of the data processing activity.

8. BASIC CONCEPTS AND DEFINITIONS

The concepts and definitions used in the survey are described as follows:

Enumeration Area (EA):- Is the survey primary sampling unit classified as located in the rural area of the country which is less than or equal to a peasant's Association's 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 provision for his own food or other essentials for living without combining with any other person to form part of a multi-person household, or
- b) a multi-person household, that is, a group of two or more persons who live together and make common provision for food or other essentials for living. The persons in the group may pool their incomes and have a common budget more or less. They may be related or unrelated persons, or a combination of both.

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

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

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

Holding:- A holding is all the land and livestock kept which is used wholly or partially for agricultural production and is operated as one administratively managed unit by one person alone, or with others, without regard to title, legal form, size or location. A holding may consist of one or more parcels.

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

Field:- A field is defined as any plot of land within a parcel which can be whole or part of a parcel under the same cultural practice.

Forecast of crop production:- It is an estimation of the future realization of final crop production growing under conditions which introduce a random variable which can cause an uncertainty as to what the final production at harvest will be.

PART III

SUMMARY OF THE RESULTS OF THE 1999/2000 (1992 E.C.) CROP PRODUCTION FORECAST SURVEY

In this part of the report the estimate of area and crop production for the 1999/2000 (1992 E.C.) Crop Production Forecast Survey are presented at the national, regional, zonal and special wereda levels. Discussions of some of the major findings and important points of the survey result are given below.

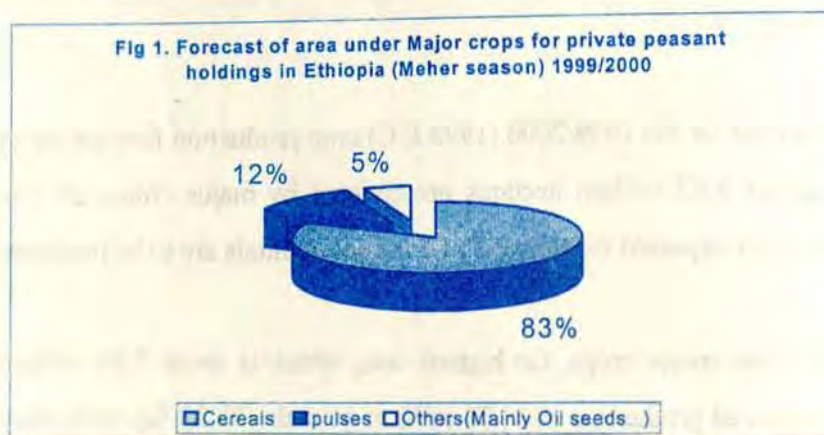
Based on the data collected for the 1999/2000 (1992 E.C.) crop production forecast survey results, it is estimated that about 8.82 million hectares are covered by major crops, of which in the coming harvest season it is expected that about 92.63 million quintals are to be produced.

Out of the total land under major crops, the highest area, which is about 7.28 million hectares (82.53%), and with expected production of 81.73 million quintals (88.23 %), with mean yield of 11.23 qt/ha, is reported for cereals, followed by pulses, with 1.09 million hectares (12.35 %) and 9.03 million quintals (9.75 %) with mean yield of 8.31 qt/ha. and then by other crops (mainly oilseeds) with 0.46 million hectares (5.22 %) and 1.86 million quintals (2.01 %), with mean yield of 4.09 qt/ha. See Table B.

**Table B. Forecast of Area and Expected Production of Major crops for
private peasant Holdings in Ethiopia, 1999/2000 (1992 E.C)**

Crop Type	Area		Production		Yield Qt/ha
	In million (ha.)	%	In million (qt.)	%	
Cereal	7.28	82.53	81.73	88.23	11.23
Pulses	1.09	12.35	9.03	9.75	8.31
Others	0.46	5.22	1.86	2.01	4.09
All Crops	8.82	100.00	92.63	100.00	

Moreover, comparison with last year's main season estimates of total area, production and with this year's forecasted area under crop, expected production and yield of major crops were made in Table 1. As it can be seen from the table this year's expected area under crop and production showed an increase of 10.02 % and 7.91% compared with that of last year's main season estimates, respectively. On the other hand, as it can be seen from the same table that this year's expected yield shows a decrease of 25.34%, 21.76%, 11.41 % for Lentils, Sesame and Maize and a decrease of 3.88%, 3.78%, 1.85 % for Sorghum, Wheat and Fieldpeas, respectively.



The observed decreases in this year's expected yield for major crops are mainly contributed due to the farmers expectation of bad harvest during the time of data collection that was from October 1 to 11, 1999. At this time the planted crops in most parts of the country were affected by too much rain and this situation influenced the attitude of the farmers to expect lower yield in comparison to that of last year's yield.

Besides the excess rains that farmers thought will reduce crop production the following factors were reported by individual farmers for the overall decline of the expected yield in the coming harvest. These are:

- Insect (locust), disease and other pest (birds) damage,
- Hail and frost damage,
- Wild and domestic animal damage,
- Depletion of the soil fertility and...etc.

Fig.2 . Forecast of Production of major crops For private holdings in Ethiopia (Meher season) 1999/2000



Similarly, as it has been mentioned above, there is an increase in the area estimated under major crops by 10.02% when compared to last year's estimates. Based on some investigations regarding this increase it has been reported by the field staff in some of the 'Zones' that the observed increase in the area is possibly contributed by factors such as the newly claimed areas for crop cultivation from areas which have never been cultivated particularly in the low land areas; a shift of fields for Meher season crop production which were used only for Belg season crop production, shift of fields from other landuse practices; ...etc.

It is important for data users to note that the objective of a probability sample survey is to make inferences about the true population value based on a sample drawn from that population. Statistical estimation can be separated into two forms: point estimates and interval estimates.

For point estimates, where one value is computed on the real number scale derived from a sample of data elements, e.g. $x_1, x_2, \dots, x_n$, such that it is used to estimate the true population value of x . Thus point estimator is directly dependent on the individual values of the data which will vary with multiple samples. Thus the estimates in this report are point estimates of their respective true population values which would differ on the real number scale depending on the composition of the data elements for each subsequent survey sample.

To alleviate the problem of not knowing the true population value, statisticians use the second form of estimation, called interval estimation, where two points are used to define an interval on the real number scale, which could contain the true population value. Based on sample survey data this interval is constructed such that given a certain specified level of probability, the resulting confidence interval has a specific chance to contain the true population value. Again it is important to note that every sample will have its own unique confidence interval which also has a specific probability of containing the true population value.

The interval estimates for area and production estimates under cereals, pulses and other crops (mainly oil seeds) on the results obtained from the 1999/2000 (1992 E.C) Crop Production Forecast sample survey are presented in Table C. The confidence intervals are based on a probability such that, unless due to chance alone, the true population values would be expected to be contained within a 95% confidence interval.

Table C. Interval Estimates for Area and production of Major Crops for private peasant Holdings in Ethiopia, 1999/2000 (1992 E.C.)

Crop Type	Area		Production	
	CV	95 % Confidence interval for area	CV	95 % Confidence interval for Production
	%	Hectares	%	Quintals
Cereals	3.23	6816.81 – 7736.81	4.15	75088.09 – 88381.13
Pulses	8.59	904.01 – 1269.98	5.71	8017.18 – 10038.76
Others	6.03	401.56 – 509.51	7.85	1576.16 – 2149.18
All Crops	3.29	8250.23 – 9388.10	3.83	85674.73 – 99575.77

In Appendix II, Standard Error (SE) and the Coefficient of Variation (CV) for the area and crop production forecast estimates are presented. These estimates of the SE for production must be used with caution since they contain an unknown measure of forecast error.

Finally, users of this report should be aware that the information on what is called condition factors were collected in the months of September 1999 (Meskerem 1992 E.C). Therefore, the results should be used with caution in light of the favorable or adverse conditions of weather and other factors which may affect the crop after the crop production forecast survey data was collected. The effect of these subsequent changes in crop conditions are not reflected in this report.

- Note:-

1. If in some tables figures do not add up to total it is due to rounding.

2. Those forecasts designated by " * " in all tables could not be reported because of high coefficient of variation (i.e. they are less reliable). However they are consolidated in the total forecast.

3. In all tables " - " indicates not reported and "0.00" indicates the value is insignificant.

Table 1. Forecast of 1999/2000 and Estimate of 1998/99 Area, Production and Yield of major crops for peasant holdings in Ethiopia (Meher Season)

CROP TYPE	TOTAL AREA IN '000 HA			TOTAL PROD. IN '000 QTS			YIELD		
	Estimate's of 1998/99	Forecast of 1999/2000	% age Change	Estimate's of 1998/99	Forecast of 1999/2000	% age Change	Estimate's of 1998/99	Forecast of 1999/2000	% age Change
CEREALS	6,744.71	7,276.81	7.89	76,829.91	81,734.61	6.38	11.39	11.23	-1.40
Teff	2,091.34	2,191.61	4.79	16,422.85	18,394.34	12.00	7.85	8.39	6.88
Barley	830.18	867.73	4.52	7,685.85	8,254.80	7.40	9.26	9.51	2.75
Wheat	987.07	1,109.62	12.42	11,137.83	12,047.35	8.17	11.28	10.86	-3.78
Maize	1,303.10	1,645.91	26.31	24,166.24	27,041.78	11.90	18.55	16.43	-11.41
Sorghum	1,042.39	1,010.11	-3.10	13,208.41	12,302.41	-6.86	12.67	12.18	-3.88
Millet	446.68	406.10	-9.08	3,814.86	3,161.85	-17.12	8.54	7.79	-8.84
Oats	43.97	45.74	4.03	393.87	532.08	35.09	8.96	11.63	29.86
PULSES	875.38	1,087.00	24.17	7,319.77	9,027.97	23.34	8.36	8.31	-0.67
Horse Beans	293.41	398.91	35.96	2,851.60	3,718.05	30.38	9.72	9.32	-4.10
Field Peas	141.95	166.94	17.60	984.86	1,136.77	15.42	6.94	6.81	-1.85
Haricot Beans	129.47	179.84	38.90	1,024.89	1,243.26	21.31	7.92	6.91	-12.67
Chick Peas	167.65	153.63	-8.36	1,388.37	1,480.41	6.63	8.28	9.64	16.36
Lentils	47.85	90.54	89.22	283.80	400.94	41.28	5.93	4.43	-25.34
Vetch	95.05	97.15	2.21	786.24	1,048.55	33.36	8.27	10.79	30.48
OTHERS	396.22	455.36	14.93	1,688.74	1,862.67	10.30	4.26	4.09	-4.03
Neug	221.11	271.76	22.91	845.30	1,016.23	20.22	3.82	3.74	-2.19
Line seed	90.44	82.84	-8.40	352.78	293.13	-16.91	3.90	3.54	-9.29
Rapeseed	10.42	26.38	153.17	84.17	190.33	126.13	8.08	7.21	-10.68
Ground Nuts	15.03	13.38	-10.98	83.52	81.42	-2.51	5.56	6.09	9.51
Sunflower	5.58	5.46	-2.15	24.86	25.04	0.72	4.46	4.59	2.94
Sesame	32.20	37.60	16.77	176.77	161.50	-8.64	5.49	4.30	-21.76
Fenugreek	21.43	17.94	-16.29	121.34	95.02	-21.69	5.66	5.30	-6.46
ALLCROPS	8,016.31	8,819.16	10.02	85,838.42	92,625.25	7.91			

Fig 3 1998/99 estimates and 1999/2000 forecast Area of major crops for private holdings in Ethiopia, Region. (Meher Season)

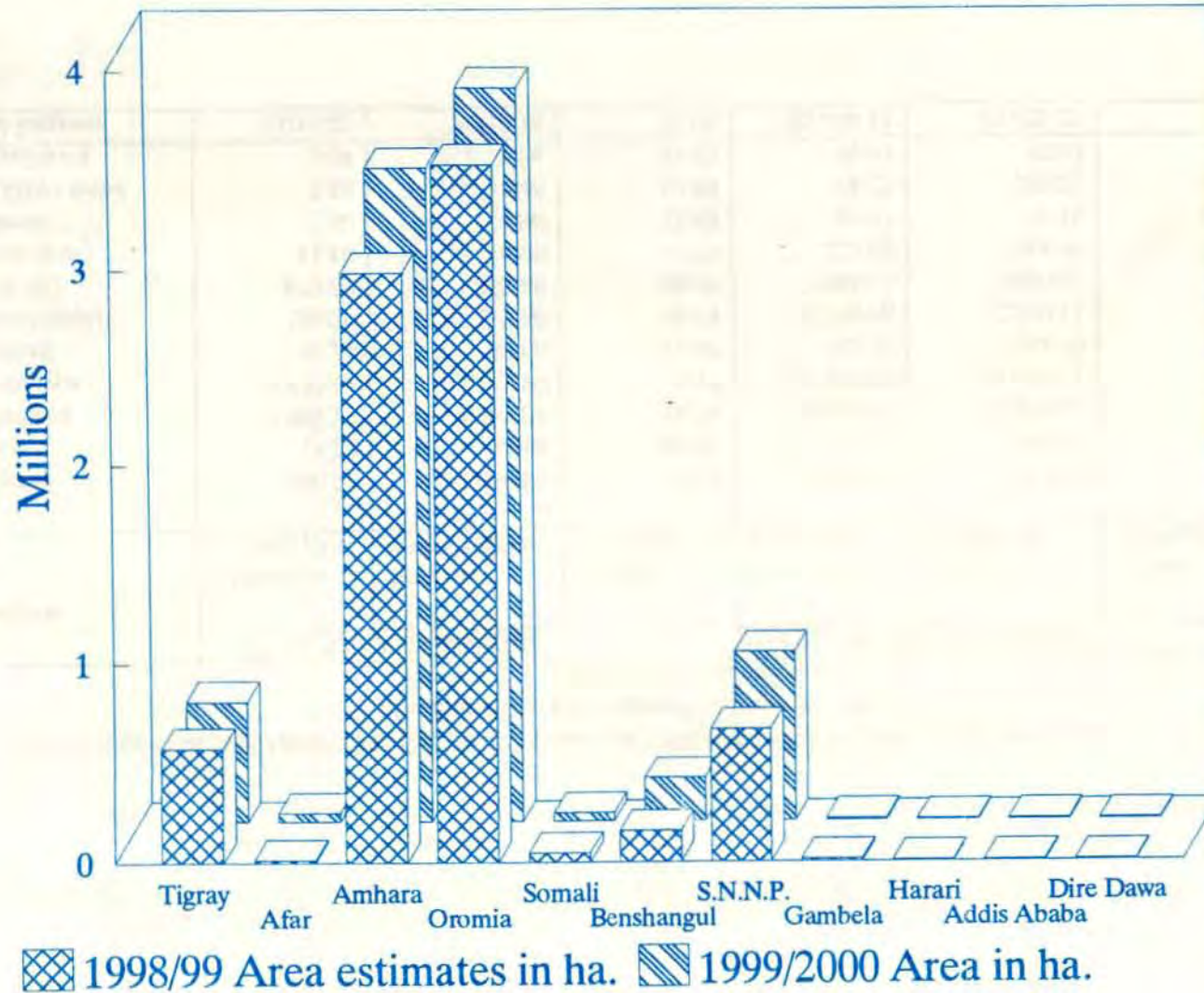


Table 2. Forecast of 1999/2000(1992 E.C.) and Estimate of 1998/99(1991 E.C.) Area and Production of major crops for peasant holdings in Ethiopia
By Region (Meher Season)

Region	TOTAL AREA IN '000 HA			TOTAL PROD. IN '000 QTS		
	Estimate's of 1998/99	Forecast of 1999/2000	% age Change	Estimate's of 1997/98	Forecast of 1998/99	% age Change
Tigray	580.21	609.82	5.10	6,530.89	6,102.84	-6.55
Afar	15.22	44.03	189.29	183.46	390.41	112.80
Amhara	2,985.73	3,307.58	10.78	28,532.46	30,533.69	7.01
Oromiya	3,529.48	3,711.79	5.17	41,109.08	44,042.51	7.14
Somali	46.24	40.66	-12.07	262.32	254.79	-2.87
Benshangul	156.99	219.38	39.74	1,776.76	2,369.11	33.34
S.N.N.P	673.09	852.68	26.68	7,044.14	8,480.93	20.40
Gambela	11.18	10.98	-1.79	222.82	214.20	-3.87
Harari	5.50	6.90	25.45	46.53	76.16	63.68
Addis Ababa	7.40	8.48	14.59	74.33	103.26	38.92
DireDawa	5.28	6.86	29.92	55.63	57.33	3.06
All Regions	8,016.32	8,819.16	10.02	85,838.42	92,625.23	7.91

Fig 4. Estimates of 1998/99 and Forecast of 1999/2000 Production of major crops for private holdings in Ethiopia, region. (Meher Season)

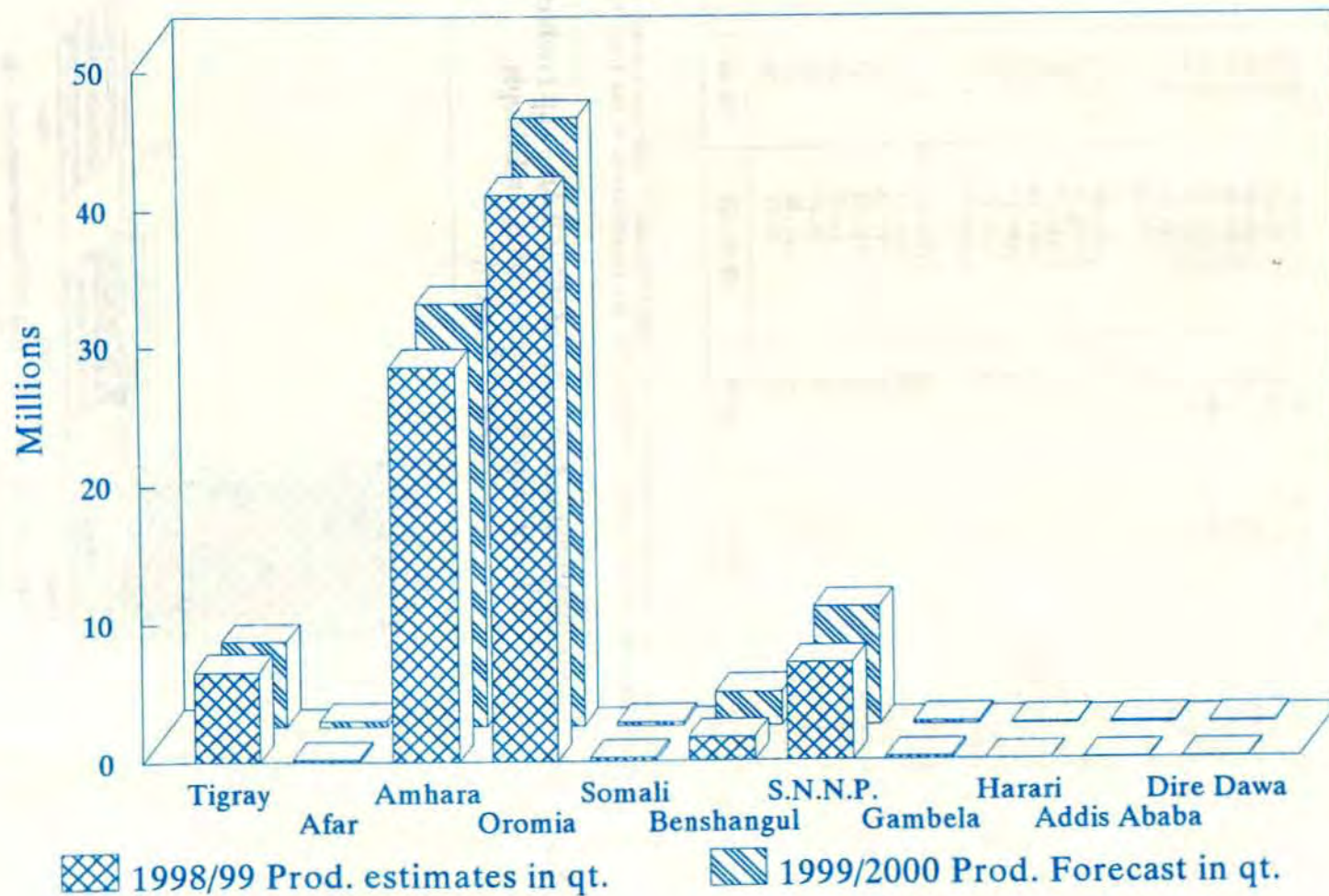


Table 3. Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

National					
CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	7,276.81	82.51	81,734.61	88.24	11.23
Teff	2,191.61	24.85	18,394.34	19.86	8.39
Barley	867.73	9.84	8,254.80	8.91	9.51
Wheat	1,109.62	12.58	12,047.35	13.01	10.86
Maize	1,645.91	18.66	27,041.78	29.19	16.43
Sorghum	1,010.11	11.45	12,302.41	13.28	12.18
Millet	406.10	4.60	3,161.85	3.41	7.79
Oats	45.74	.52	532.08	.57	11.63
Pulses	1,087.00	12.33	9,027.97	9.75	8.31
Horse Beans	398.91	4.52	3,718.05	4.01	9.32
Field Peas	166.94	1.89	1,136.77	1.23	6.81
Haricot Beans	179.84	2.04	1,243.26	1.34	6.91
Chick Peas	153.63	1.74	1,480.41	1.60	9.64
Lentils	90.54	1.03	400.94	.43	4.43
Vetch	97.15	1.10	1,048.55	1.13	10.79
Others	455.36	5.16	1,862.67	2.01	4.09
Neug	271.76	3.08	1,016.23	1.10	3.74
Linseed	82.84	.94	293.13	.32	3.54
Rapeseed	26.38	.30	190.33	.21	7.21
Ground Nuts	13.38	.15	81.42	.09	6.09
Sunflower	5.46	.06	25.04	.03	4.59
Sesame	37.60	.43	161.50	.17	4.30
Fenugreek	17.94	.20	95.02	.10	5.30
All Crops	8,819.16	100.00	92,625.25	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Fig 5. Forecast of 1999/2000 and estimates of 1998/99 Area and Production of major crops for private holdings in Ethiopia. (Meher Season)

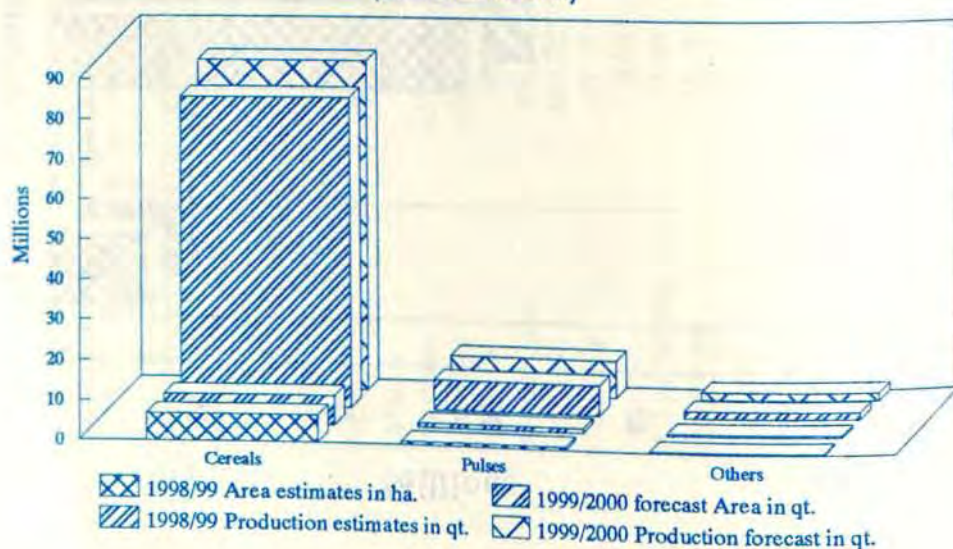


Fig 6. 1999/2000 (1992 E.C.) Forecast of Yield for Cereals, Pulses and Other crops for private holdings in Ethiopia, by Region. (Meher Season)

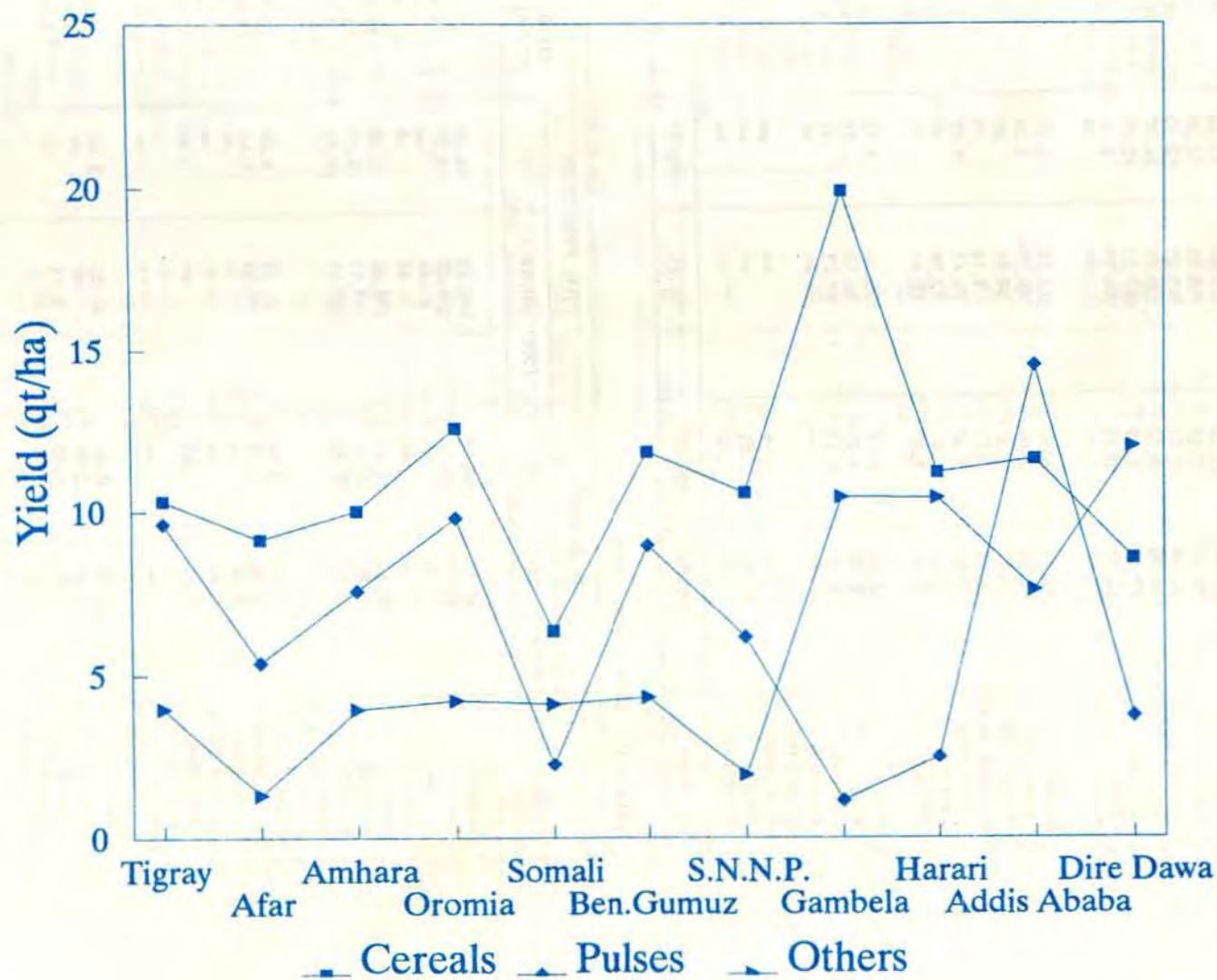


Table 4. Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Tigray

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	543.45	89.12	5,614.83	92.00	10.33
Teff	129.64	21.26	1,075.31	17.62	8.29
Barley	78.56	12.88	748.36	12.26	9.53
Wheat	71.99	11.81	741.23	12.15	10.30
Maize	111.70	18.32	1,520.79	24.92	13.61
Sorghum	87.14	14.29	967.52	15.85	11.10
Millet	64.31	10.55	559.29	9.16	8.70
Oats	**	**	**	**	**
Pulses	39.75	6.52	382.37	6.27	9.62
Horse Beans	12.45	2.04	185.35	3.04	14.89
Field Peas	6.11	1.00	57.86	.95	9.47
Haricot Beans	3.20	.52	9.16	.15	2.86
Chick Peas	8.39	1.38	74.45	1.22	8.87
Lentils	3.49	.57	12.88	.21	3.69
Vetch	6.11	1.00	42.67	.70	6.98
Others	26.62	4.37	105.64	1.73	3.97
Neug	8.22	1.35	35.40	.58	4.31
Linseed	6.92	1.13	27.73	.45	4.01
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	11.16	1.83	**	**	**
Fenugreek	.15	.02	**	**	**
All Crops	609.82	100.00	6,102.84	100.00	

Table 4.1 West Tigray Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	150.55	89.52	1,680.42	94.23	11.16
Teff	35.55	21.14	334.65	18.77	9.41
Barley	**	**	**	**	**
Wheat	**	**	**	**	**
Maize	24.68	14.67	371.86	20.85	15.07
Sorghum	45.89	27.29	599.51	33.62	13.06
Millet	43.47	25.85	365.91	20.52	8.42
Oats	-	-	-	-	-
Pulses	3.44	2.05	37.35	2.09	10.86
Horse Beans	1.90	1.13	25.98	1.46	13.67
Field Peas	**	**	**	**	**
Haricot Beans	**	**	**	**	**
Chick Peas	1.03	.61	**	**	**
Lentils	-	-	-	-	-
Vetch	**	**	**	**	**
Others	14.18	8.43	65.60	3.68	4.63
Neug	4.04	2.40	**	**	5.40
Linseed	1.74	1.03	6.11	.34	3.51
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	8.40	4.99	**	**	**
Fenugreek	-	-	-	-	-
All Crops	168.18	100.00	1,783.37	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 4.2 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Central Tigray Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	203.12	91.41	1,980.91	93.86	9.75
Teff	50.97	22.94	354.98	16.82	6.96
Barley	14.94	6.72	141.35	6.70	9.46
Wheat	14.31	6.44	153.66	7.28	10.74
Maize	**	**	**	**	**
Sorghum	28.25	12.71	201.58	9.55	7.14
Millet	20.54	9.24	191.43	9.07	9.32
Oats	-	-	-	-	-
Pulses	11.89	5.35	108.66	5.15	9.14
Horse Beans	5.47	2.46	76.43	3.62	13.97
Field Peas	.85	.38	3.54	.17	4.16
Haricot Beans	**	**	5.32	.25	**
Chick Peas	**	**	**	**	**
Lentils	**	**	**	**	**
Vetch	**	**	**	**	**
Others	7.21	3.24	20.90	.99	2.90
Neug	3.86	1.74	**	**	**
Linseed	2.06	.93	4.08	.19	1.98
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	**	**	**	**	**
Fenugreek	-	-	-	-	-
All Crops	222.21	100.00	2,110.47	100.00	

Table 4.3 East Tigray Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	62.64	80.73	617.99	80.57	9.87
Teff	5.26	6.78	35.04	4.57	6.66
Barley	31.07	40.04	309.87	40.40	9.97
Wheat	24.87	32.05	250.36	32.64	10.07
Maize	**	**	**	**	**
Sorghum	**	**	**	**	**
Millet	**	**	**	**	**
Oats	**	**	**	**	**
Pulses	12.95	16.69	134.28	17.51	10.37
Horse Beans	2.14	2.76	38.88	5.07	18.17
Field Peas	1.84	2.37	**	**	**
Haricot Beans	-	-	-	-	-
Chick Peas	4.20	5.41	40.77	5.32	9.71
Lentils	.88	1.13	4.27	.56	4.85
Vetch	3.88	5.00	28.00	3.65	7.22
Others	2.01	2.59	**	**	**
Neug	**	**	-	-	**
Linseed	1.90	2.45	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	77.59	100.00	767.05	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 4.4 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

South Tigray Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	127.14	89.64	1,335.50	92.62	10.50
Teff	37.87	26.70	350.64	24.32	9.26
Barley	32.02	22.57	292.24	20.27	9.13
Wheat	32.38	22.83	333.60	23.14	10.30
Maize	11.99	8.45	193.01	13.39	16.10
Sorghum	12.88	9.08	166.01	11.51	12.89
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	11.47	8.09	102.08	7.08	8.90
Horse Beans	2.94	2.07	44.06	3.06	14.99
Field Peas	3.05	2.15	**	**	**
Haricot Beans	**	**	**	**	**
Chick Peas	**	**	**	**	**
Lentils	**	**	**	**	**
Vetch	1.57	1.11	11.40	.79	7.26
Others	3.23	2.28	4.37	.30	1.35
Neug	**	**	-	-	**
Linseed	1.22	.86	**	**	**
Rapeseed	**	**	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	**	**	**	**	**
All Crops	141.84	100.00	1,441.95	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 5. Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Afar

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	41.38	93.98	378.21	96.88	9.14
Teff	**	**	**	**	**
Barley	**	**	**	**	**
Wheat	**	**	**	**	**
Maize	6.68	15.17	61.97	15.87	9.28
Sorghum	9.65	21.92	**	**	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	2.15	4.88	**	**	**
Horse Beans	-	-	-	-	-
Field Peas	**	**	**	**	**
Haricot Beans	**	**	.60	.15	**
Chick Peas	1.44	3.27	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	**	**	-	-	-
Linseed	**	**	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	**	**	-	-	**
Fenugreek	**	**	**	**	**
All Crops	44.03	100.00	390.41	100.00	

Table 5.1 Zone 1 Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	2.11	100.00	18.39	100.00	8.72
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	1.92	91.00	18.39	100.00	9.58
Sorghum	**	**	-	-	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	-	-	-	-	-
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	2.11	100.00	18.39	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 5.2 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Zone 3 Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	38.16	93.51	**	**	**
Teff	**	**	**	**	**
Barley	**	**	**	**	**
Wheat	**	**	**	**	**
Maize	4.39	10.76	36.36	10.30	8.28
Sorghum	9.43	23.11	**	**	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	2.15	5.27	**	**	**
Horse Beans	-	-	-	-	-
Field Peas	**	**	**	**	**
Haricot Beans	**	**	.60	.17	**
Chick Peas	1.44	3.53	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	**	**	-	-	**
Linseed	**	**	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	**	**	.61	.17	**
Sesame	**	**	-	-	**
Fenugreek	**	**	**	**	**
All Crops	40.81	100.00	353.05	100.00	

Table 5.3 Zone 5 Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	**	**	**	**	**
Teff	**	**	**	**	**
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	**	**	**	**	**
Sorghum	**	**	**	**	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	**	**	-	-	**
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	**	**	-	-	**
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	**	**	**	**	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 6. Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Amhara

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	2,565.62	77.57	25,697.48	84.16	10.02
Teff	891.11	26.94	8,114.73	26.58	9.11
Barley	258.65	7.82	1,770.32	5.80	6.84
Wheat	365.79	11.06	2,698.62	8.84	7.38
Maize	427.19	12.92	7,035.37	23.04	16.47
Sorghum	367.06	11.10	4,205.43	13.77	11.46
Millet	242.70	7.34	1,750.35	5.73	7.21
Oats	13.12	.40	122.66	.40	9.35
Pulses	528.37	15.97	3,990.73	13.07	7.55
Horse Beans	197.33	5.97	1,495.12	4.90	7.58
Field Peas	83.95	2.54	514.18	1.68	6.12
Haricot Beans	53.74	1.62	411.81	1.35	7.66
Chick Peas	80.76	2.44	785.57	2.57	9.73
Lentils	60.10	1.82	226.06	.74	3.76
Vetch	52.49	1.59	558.00	1.83	10.63
Others	213.59	6.46	845.48	2.77	3.96
Neug	146.21	4.42	544.38	1.78	3.72
Linseed	27.86	.84	84.66	.28	3.04
Rapeseed	10.61	.32	74.28	.24	7.00
Ground Nuts	**	**	**	**	**
Sunflower	3.92	.12	19.76	.06	5.04
Sesame	**	**	**	**	**
Fenugreek	8.01	.24	47.07	.15	5.88
All Crops	3,307.58	100.00	30,533.69	100.00	

Table 6.1 North Gonder Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	433.61	82.38	3,946.32	87.49	9.10
Teff	125.54	23.85	992.01	21.99	7.90
Barley	43.82	8.33	312.65	6.93	7.13
Wheat	24.48	4.65	195.92	4.34	8.00
Maize	36.69	6.97	305.33	6.77	8.32
Sorghum	156.66	29.76	1,714.46	38.01	10.94
Millet	45.51	8.65	417.83	9.26	9.18
Oats	**	**	**	**	**
Pulses	45.31	8.61	338.37	7.50	7.47
Horse Beans	22.45	4.27	204.91	4.54	9.13
Field Peas	9.01	1.71	45.88	1.02	5.09
Haricot Beans	**	**	**	**	**
Chick Peas	10.11	1.92	68.40	1.52	6.77
Lentils	**	**	**	**	**
Vetch	**	**	**	**	**
Others	47.41	9.01	225.94	5.01	4.77
Neug	32.17	6.11	160.68	3.56	4.99
Linseed	2.35	.45	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	**	**	**	**	**
All Crops	526.34	100.00	4,510.64	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 6.2 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

South Gonder Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	331.34	80.43	1,927.21	79.70	5.82
Teff	106.55	25.86	666.04	27.55	6.25
Barley	54.11	13.14	239.45	9.90	4.43
Wheat	37.71	9.15	210.65	8.71	5.59
Maize	36.07	8.76	289.19	11.96	8.02
Sorghum	13.52	3.28	**	**	**
Millet	**	**	**	**	**
Oats	**	**	**	**	**
Pulses	52.18	12.67	388.30	16.06	7.44
Horse Beans	16.54	4.02	160.99	6.66	9.73
Field Peas	7.40	1.80	28.51	1.18	3.85
Haricot Beans	**	**	**	**	**
Chick Peas	15.96	3.87	**	**	**
Lentils	2.24	.54	**	**	**
Vetch	**	**	**	**	**
Others	28.43	6.90	102.44	4.24	3.60
Neug	19.25	4.67	69.39	2.87	3.60
Linseed	7.90	1.92	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	411.95	100.00	2,417.95	100.00	

Table 6.3 North Wolo Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	163.48	80.48	1,843.79	82.36	11.28
Teff	62.10	30.57	630.94	28.18	10.16
Barley	30.09	14.81	243.08	10.86	8.08
Wheat	32.67	16.08	328.33	14.67	10.05
Maize	**	**	**	**	**
Sorghum	23.79	11.71	326.96	14.60	13.74
Millet	**	**	**	**	**
Oats	1.59	.78	**	**	**
Pulses	35.15	17.30	375.60	16.78	10.69
Horse Beans	12.69	6.25	148.87	6.65	11.73
Field Peas	5.40	2.66	66.63	2.98	12.34
Haricot Beans	**	**	**	**	**
Chick Peas	6.91	3.40	67.54	3.02	9.77
Lentils	5.67	2.79	45.59	2.04	8.04
Vetch	**	**	**	**	**
Others	4.50	2.22	19.38	.87	4.31
Neug	.35	.17	**	**	**
Linseed	2.66	1.31	7.50	.34	2.82
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	1.16	.57	**	**	**
All Crops	203.13	100.00	2,238.77	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 6.4 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

South Wolo Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	243.21	71.17	2,510.52	70.37	10.32
Teff	95.12	27.83	930.39	26.08	9.78
Barley	26.43	7.73	251.31	7.04	9.51
Wheat	58.51	17.12	696.91	19.54	11.91
Maize	12.99	3.80	116.78	3.27	8.99
Sorghum	40.81	11.94	418.82	11.74	10.26
Millet	**	**	**	**	**
Oats	9.20	2.69	95.37	2.67	10.37
Pulses	88.88	26.01	992.56	27.82	11.17
Horse Beans	35.16	10.29	481.12	13.49	13.68
Field Peas	14.83	4.34	111.41	3.12	7.51
Haricot Beans	9.61	2.81	87.07	2.44	9.06
Chick Peas	8.99	2.63	90.03	2.52	10.01
Lentils	7.74	2.26	**	**	**
Vetch	12.53	3.67	146.51	4.11	11.69
Others	9.64	2.82	64.35	1.80	6.68
Neug	**	**	**	**	**
Linseed	**	**	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	3.14	.92	27.49	.77	8.75
All Crops	341.73	100.00	3,567.43	100.00	

Table 6.5 North Shewa Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	329.53	67.97	2,084.44	82.94	6.33
Teff	111.26	22.95	936.90	37.28	8.42
Barley	24.74	5.10	101.56	4.04	4.11
Wheat	**	**	392.23	15.61	**
Maize	8.02	1.65	88.95	3.54	11.09
Sorghum	47.10	9.72	564.79	22.47	11.99
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	**	**	410.93	16.35	**
Horse Beans	**	**	132.52	5.27	**
Field Peas	7.82	1.61	**	**	**
Haricot Beans	3.64	.75	19.29	.77	5.30
Chick Peas	16.24	3.35	120.90	4.81	7.44
Lentils	**	**	79.09	3.15	**
Vetch	**	**	**	**	**
Others	8.42	1.74	17.74	.71	2.11
Neug	2.27	.47	**	**	**
Linseed	3.17	.65	3.84	.15	1.21
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	**	**	1.17	.05	**
All Crops	484.81	100.00	2,513.10	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 6.6 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

East Gojam Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	382.05	77.57	5,097.56	81.73	13.34
Teff	202.55	41.12	2,604.42	41.76	12.86
Barley	50.06	10.16	451.91	7.25	9.03
Wheat	57.18	11.61	751.07	12.04	13.14
Maize	48.41	9.83	785.70	12.60	16.23
Sorghum	**	**	**	**	**
Millet	**	**	**	**	**
Oats	-	-	-	-	-
Pulses	85.54	17.37	1,047.92	16.80	12.25
Horse Beans	15.73	3.19	194.16	3.11	12.34
Field Peas	11.05	2.24	71.08	1.14	6.43
Haricot Beans	15.64	3.18	**	**	**
Chick Peas	18.81	3.82	275.17	4.41	14.63
Lentils	**	**	**	**	**
Vetch	23.65	4.80	319.43	5.12	13.51
Others	24.96	5.07	91.58	1.47	3.67
Neug	15.25	3.10	45.32	.73	2.97
Linseed	4.12	.84	13.01	.21	3.16
Rapeseed	3.23	.66	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	2.04	.41	**	**	**
All Crops	492.55	100.00	6,237.06	100.00	

Table 6.7 West Gojam Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	412.44	82.31	5,780.64	92.97	14.02
Teff	108.89	21.73	805.26	12.95	7.40
Barley	9.43	1.88	38.31	.62	4.06
Wheat	6.90	1.38	56.74	.91	8.22
Maize	217.73	43.45	**	**	**
Sorghum	9.75	1.95	71.40	1.15	7.32
Millet	58.93	11.76	417.97	6.72	7.09
Oats	**	**	**	**	**
Pulses	39.88	7.96	239.30	3.85	6.00
Horse Beans	11.71	2.34	97.62	1.57	8.34
Field Peas	10.95	2.19	66.09	1.06	6.04
Haricot Beans	8.34	1.66	**	**	**
Chick Peas	**	**	**	**	**
Lentils	-	-	-	-	-
Vetch	**	**	**	**	**
Others	48.74	9.73	198.02	3.18	4.06
Neug	40.13	8.01	142.89	2.30	3.56
Linseed	4.63	.92	**	**	**
Rapeseed	3.84	.77	36.69	.59	9.55
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	501.06	100.00	6,217.95	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 6.8 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Waghamera Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	64.85	67.10	416.16	69.63	6.42
Teff	19.71	20.40	126.13	21.10	6.40
Barley	12.07	12.49	74.33	12.44	6.16
Wheat	8.06	8.34	55.98	9.37	6.95
Maize	1.63	1.69	13.00	2.18	7.98
Sorghum	23.31	24.12	146.51	24.51	6.29
Millet	**	**	**	**	**
Oats	-	-	-	-	-
Pulses	26.87	27.80	162.36	27.17	6.04
Horse Beans	6.67	6.90	62.23	10.41	9.33
Field Peas	**	**	**	**	**
Haricot Beans	3.51	3.63	9.88	1.65	2.81
Chick Peas	.58	.60	**	**	**
Lentils	1.86	1.92	8.30	1.39	4.46
Vetch	-	-	-	-	-
Others	4.93	5.10	19.15	3.20	3.88
Neug	.62	.64	**	**	**
Linseed	1.52	1.57	3.71	.62	2.44
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	1.48	1.53	8.00	1.34	5.41
Sesame	**	**	**	**	**
Fenugreek	**	**	**	**	**
All Crops	96.64	100.00	597.66	100.00	

Table 6.9 Agewawi Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	157.60	79.30	1,510.62	92.38	9.59
Teff	47.12	23.71	314.40	19.23	6.67
Barley	7.55	3.80	55.95	3.42	7.41
Wheat	1.40	.70	**	**	**
Maize	39.23	19.74	594.89	36.38	15.16
Sorghum	**	**	**	**	**
Millet	53.33	26.84	462.76	28.30	8.68
Oats	**	**	-	-	**
Pulses	5.31	2.67	21.90	1.34	4.12
Horse Beans	2.24	1.13	10.69	.65	4.77
Field Peas	2.84	1.43	**	**	**
Haricot Beans	**	**	-	-	**
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	**	**	-	-	**
Others	35.82	18.02	102.74	6.28	2.87
Neug	30.90	15.55	84.98	5.20	2.75
Linseed	**	**	**	**	**
Rapeseed	1.82	.92	**	**	**
Ground Nuts	**	**	**	**	**
Sunflower	-	-	-	-	-
Sesame	**	**	**	**	**
Fenugreek	**	**	.05	-	**
All Crops	198.73	100.00	1,635.26	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 6.10 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Oromia Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	47.49	93.78	580.22	97.05	12.22
Teff	12.28	24.25	108.24	18.10	8.81
Barley	.36	.71	**	**	**
Wheat	**	**	**	**	**
Maize	13.83	27.31	153.83	25.73	11.12
Sorghum	20.04	39.57	308.65	51.63	15.40
Millet	.12	.24	**	**	**
Oats	**	**	**	**	**
Pulses	2.40	4.74	13.49	2.26	5.62
Horse Beans	**	**	**	**	**
Field Peas	**	**	**	**	**
Haricot Beans	1.06	2.09	4.15	.69	3.92
Chick Peas	**	**	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	.74	1.46	**	**	**
Neug	**	**	-	-	-
Linseed	**	**	**	**	**
Rapeseed	-	-	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	.62	1.22	**	**	**
Fenugreek	.02	.04	**	**	**
All Crops	50.64	100.00	597.86	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 7. Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Oromia

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	3,136.41	84.50	39,419.53	89.50	12.57
Teff	939.03	25.30	7,821.97	17.76	8.33
Barley	384.53	10.36	3,988.49	9.06	10.37
Wheat	566.19	15.25	7,491.32	17.01	13.23
Maize	780.82	21.04	14,044.58	31.89	17.99
Sorghum	365.22	9.84	5,165.04	11.73	14.14
Millet	68.38	1.84	502.72	1.14	7.35
Oats	32.25	.87	405.41	.92	12.57
Pulses	393.09	10.59	3,853.42	8.75	9.80
Horse Beans	151.31	4.08	1,685.65	3.83	11.14
Field Peas	52.84	1.42	434.64	.99	8.23
Haricot Beans	69.51	1.87	572.56	1.30	8.24
Chick Peas	57.42	1.55	573.10	1.30	9.98
Lentils	25.17	.68	159.38	.36	6.33
Vetch	36.84	.99	428.09	.97	11.62
Others	182.29	4.91	769.57	1.75	4.22
Neug	97.36	2.62	357.51	.81	3.67
Linseed	46.84	1.26	178.63	.41	3.81
Rapeseed	15.43	.42	115.76	.26	7.50
Ground Nuts	**	**	**	**	**
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	9.14	.25	46.50	.11	5.09
All Crops	3,711.79	100.00	44,042.51	100.00	

Table 7.1 West Welega Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	262.52	91.26	3,693.81	96.48	14.07
Teff	39.12	13.60	208.08	5.43	5.32
Barley	2.86	.99	17.36	.45	6.07
Wheat	7.42	2.58	**	**	**
Maize	109.85	38.19	2,143.43	55.98	19.51
Sorghum	66.02	22.95	1,006.34	26.28	15.24
Millet	37.25	12.95	238.70	6.23	6.41
Oats	-	-	-	-	-
Pulses	15.50	5.39	108.21	2.83	6.98
Horse Beans	6.55	2.28	51.78	1.35	7.91
Field Peas	1.22	.42	4.89	.13	4.01
Haricot Beans	7.71	2.68	51.51	1.35	6.68
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	**	**	**	**	**
Others	9.63	3.35	26.63	.70	2.77
Neug	9.21	3.20	25.44	.66	2.76
Linseed	**	**	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	**	**	**	**	**
All Crops	287.65	100.00	3,828.64	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 7.2 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

East Welega Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	341.54	79.55	5,189.57	90.76	15.19
Teff	145.85	33.97	1,257.59	21.99	8.62
Barley	14.44	3.36	179.48	3.14	12.43
Wheat	21.13	4.92	401.90	7.03	19.02
Maize	108.93	25.37	2,661.84	46.55	24.44
Sorghum	28.52	6.64	494.66	8.65	17.34
Millet	22.47	5.23	192.75	3.37	8.58
Oats	**	**	**	**	**
Pulses	22.93	5.34	236.37	4.13	10.31
Horse Beans	15.16	3.53	184.29	3.22	12.16
Field Peas	7.24	1.69	51.26	.90	7.08
Haricot Beans	.36	.08	**	**	**
Chick Peas	**	**	-	-	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	64.88	15.11	292.17	5.11	4.50
Neug	57.42	13.37	252.81	4.42	4.40
Linseed	3.15	.73	6.68	.12	2.12
Rapeseed	2.59	.60	23.77	.42	9.18
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	**	**	**	**	**
Fenugreek	.17	.04	**	**	**
All Crops	429.35	100.00	5,718.11	100.00	

Table 7.3 Illibabor Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	144.72	91.68	1,818.40	95.56	12.56
Teff	41.11	26.04	337.19	17.72	8.20
Barley	1.63	1.03	4.68	.25	2.87
Wheat	1.69	1.07	6.80	.36	4.02
Maize	71.31	45.17	1,157.71	60.84	16.23
Sorghum	23.74	15.04	277.88	14.60	11.71
Millet	5.03	3.19	33.29	1.75	6.62
Oats	**	**	**	**	**
Pulses	11.22	7.11	81.15	4.26	7.23
Horse Beans	2.98	1.89	14.96	.79	5.02
Field Peas	3.25	2.06	39.27	2.06	12.08
Haricot Beans	4.99	3.16	**	**	**
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	1.92	1.22	**	**	**
Neug	1.49	.94	**	**	**
Linseed	**	**	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	157.86	100.00	1,902.80	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 7.4 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Jimma Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	292.82	86.12	3,172.52	90.77	10.83
Teff	125.64	36.95	807.02	23.09	6.42
Barley	12.21	3.59	95.12	2.72	7.79
Wheat	17.18	5.05	154.80	4.43	9.01
Maize	93.20	27.41	1,598.06	45.72	17.15
Sorghum	41.51	12.21	485.32	13.89	11.69
Millet	**	**	**	**	**
Oats	1.01	.30	**	**	**
Pulses	**	**	**	**	**
Horse Beans	**	**	**	**	**
Field Peas	5.12	1.51	22.49	.64	4.39
Haricot Beans	3.09	.91	**	**	**
Chick Peas	**	**	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	10.45	3.07	**	**	**
Neug	**	**	**	**	**
Linseed	**	**	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	340.00	100.00	3,494.96	100.00	

Table 7.5 West Shewa Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	453.24	83.60	4,957.09	87.74	10.94
Teff	228.91	42.22	2,184.54	38.67	9.54
Barley	60.93	11.24	567.64	10.05	9.32
Wheat	96.71	17.84	1,038.73	18.39	10.74
Maize	48.46	8.94	989.08	17.51	20.41
Sorghum	**	**	**	**	**
Millet	-	-	-	-	-
Oats	1.50	.28	9.94	.18	6.63
Pulses	68.49	12.63	613.93	10.87	8.96
Horse Beans	17.72	3.27	162.51	2.88	9.17
Field Peas	4.93	.91	**	**	**
Haricot Beans	.20	.04	**	**	**
Chick Peas	25.99	4.79	196.55	3.48	7.56
Lentils	3.18	.59	6.55	.12	2.06
Vetch	16.48	3.04	205.70	3.64	12.48
Others	20.42	3.77	78.70	1.39	3.85
Neug	8.35	1.54	**	**	**
Linseed	8.20	1.51	24.71	.44	3.01
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	542.16	100.00	5,649.72	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 7.6 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

North Shewa Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	249.53	76.60	2,077.07	76.07	8.32
Teff	97.41	29.90	810.04	29.67	8.32
Barley	64.74	19.87	470.16	17.22	7.26
Wheat	65.22	20.02	648.19	23.74	9.94
Maize	3.80	1.17	23.86	.87	6.28
Sorghum	17.12	5.26	118.43	4.34	6.92
Millet	-	-	-	-	-
Oats	1.24	.38	6.40	.23	5.16
Pulses	60.96	18.71	622.29	22.79	10.21
Horse Beans	26.99	8.29	278.02	10.18	10.30
Field Peas	7.43	2.28	56.09	2.05	7.55
Haricot Beans	**	**	**	**	**
Chick Peas	7.07	2.17	**	**	**
Lentils	10.26	3.15	79.24	2.90	7.72
Vetch	9.08	2.79	111.17	4.07	12.24
Others	15.27	4.69	31.12	1.14	2.04
Neug	9.53	2.93	21.31	.78	2.24
Linseed	4.87	1.49	6.36	.23	1.31
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	325.76	100.00	2,730.49	100.00	

Table 7.7 East Shewa Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	283.82	80.25	3,423.12	82.36	12.06
Teff	108.41	30.65	942.38	22.67	8.69
Barley	10.26	2.90	92.99	2.24	9.06
Wheat	66.35	18.76	898.69	21.62	13.54
Maize	93.23	26.36	1,439.67	34.64	15.44
Sorghum	4.69	1.33	43.82	1.05	9.34
Millet	**	**	**	**	**
Oats	**	**	**	**	**
Pulses	67.75	19.16	728.42	17.53	10.75
Horse Beans	6.52	1.84	76.61	1.84	11.75
Field Peas	5.76	1.63	OS **	**	**
Haricot Beans	23.27	6.58	203.09	4.89	8.73
Chick Peas	21.02	5.94	255.69	6.15	12.16
Lentils	5.55	1.57	41.25	.99	7.43
Vetch	5.62	1.59	72.25	1.74	12.86
Others	2.11	.60	34.81	.12	2.28
Neug	-	-	-	-	-
Linseed	**	**	**	**	**
Rapeseed	.27	.08	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	**	**	**	**	**
All Crops	353.68	100.00	4,156.35	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 7.8 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Arsi Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	522.62	84.95	6,475.87	88.59	12.39
Teff	107.04	17.40	889.72	12.17	8.31
Barley	126.37	20.54	1,342.57	18.37	10.62
Wheat	182.38	29.65	2,712.65	37.11	14.87
Maize	80.24	13.04	1,139.54	15.59	14.20
Sorghum	21.94	3.57	363.84	4.98	16.58
Millet	**	**	**	**	**
Oats	**	**	**	**	**
Pulses	59.09	9.61	662.22	9.06	11.21
Horse Beans	30.84	5.01	475.85	6.51	15.43
Field Peas	10.48	1.70	84.95	1.16	8.11
Haricot Beans	14.90	2.42	82.11	1.12	5.51
Chick Peas	-	-	-	-	-
Lentils	**	**	**	**	**
Vetch	**	**	**	**	**
Others	33.48	5.44	171.48	2.35	5.12
Neug	**	**	**	**	**
Linseed	20.57	3.34	97.17	1.33	4.72
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	615.20	100.00	7,309.56	100.00	

Table 7.9 West Harerge Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	148.17	89.31	2,750.06	93.04	18.56
Teff	7.92	4.77	79.12	2.68	9.99
Barley	3.97	2.39	44.51	1.51	11.21
Wheat	1.56	.94	**	**	**
Maize	73.20	44.12	1,422.44	48.13	19.43
Sorghum	60.27	36.33	1,183.82	40.05	19.64
Millet	.77	.46	**	**	**
Oats	.48	.29	**	**	**
Pulses	15.52	9.36	196.33	6.64	12.65
Horse Beans	**	**	**	**	**
Field Peas	1.48	.89	**	**	**
Haricot Beans	6.19	3.73	78.69	2.66	12.71
Chick Peas	1.02	.61	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	2.21	1.33	9.27	.31	4.19
Neug	-	-	-	-	-
Linseed	**	**	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	**	**	**	**	**
Sunflower	**	**	**	**	**
Sesame	**	**	**	**	**
Fenugreek	.73	.44	**	**	**
All Crops	165.90	100.00	2,955.65	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 7.10 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

East Harerge Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	153.62	86.65	2,064.32	90.57	13.44
Teff	5.65	3.19	**	**	**
Barley	3.52	1.99	31.23	1.37	8.87
Wheat	**	**	**	**	**
Maize	52.54	29.64	807.23	35.42	15.36
Sorghum	78.72	44.40	972.59	42.67	12.36
Millet	-	-	-	-	-
Oats	1.50	.85	**	**	**
Pulses	12.50	7.05	151.65	6.65	12.13
Horse Beans	5.12	2.89	**	**	**
Field Peas	**	**	7.55	.33	8.68
Haricot Beans	6.12	3.45	83.95	3.68	13.72
Chick Peas	**	**	**	**	**
Lentils	.37	-	**	**	**
Vetch	-	-	-	-	-
Others	**	**	63.22	2.77	**
Neug	-	-	-	-	-
Linseed	**	**	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	10.41	5.87	**	**	**
Sunflower	-	-	-	-	-
Sesame	**	**	**	**	**
Fenugreek	.52	.29	3.22	.14	6.19
All Crops	177.28	100.00	2,279.18	100.00	

Table 7.11 Bale Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	226.69	88.73	3,144.95	94.28	13.87
Teff	24.52	9.60	200.59	6.01	8.18
Barley	65.58	25.67	935.61	28.05	14.27
Wheat	90.62	35.47	1,315.13	39.43	14.51
Maize	18.73	7.33	310.91	9.32	16.60
Sorghum	5.87	2.30	**	**	**
Millet	-	-	-	-	-
Oats	21.37	8.36	331.78	9.95	15.53
Pulses	18.46	7.23	129.33	3.88	7.01
Horse Beans	4.10	1.60	38.86	1.17	9.48
Field Peas	4.65	1.82	**	**	**
Haricot Beans	.45	.18	**	**	**
Chick Peas	1.88	.74	**	**	**
Lentils	2.07	.81	10.23	.31	4.94
Vetch	**	**	**	**	**
Others	10.33	4.04	61.33	1.84	5.94
Neug	**	**	**	**	**
Linseed	7.04	2.76	39.00	1.17	5.54
Rapeseed	**	**	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	3.22	1.26	**	**	**
All Crops	255.48	100.00	3,335.61	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 7.12 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Borena Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	57.11	92.89	652.76	95.79	11.43
Teff	**	**	**	**	**
Barley	18.04	29.34	207.14	30.40	11.48
Wheat	**	**	**	**	**
Maize	27.32	44.44	350.81	51.48	12.84
Sorghum	**	**	**	**	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	3.94	6.41	28.67	4.21	7.28
Horse Beans	1.32	2.15	**	**	**
Field Peas	**	**	**	**	**
Haricot Beans	**	**	**	**	**
Chick Peas	**	**	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	**	**	-	-	**
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	**	**	-	-	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	61.48	100.00	681.43	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 8. Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Somale					
CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	39.76	97.79	252.27	99.01	6.34
Teff	**	**	**	**	**
Barley	2.91	7.16	22.20	8.71	7.63
Wheat	1.60	3.94	12.37	4.85	7.73
Maize	20.56	50.57	146.08	57.33	7.11
Sorghum	14.46	35.56	70.57	27.70	4.88
Millet	-	-	-	-	-
Oats	**	**	**	**	**
Pulses	.62	1.52	**	**	**
Horse Beans	-	-	-	-	-
Field Peas	**	**	**	**	**
Haricot Beans	.39	.96	**	**	**
Chick Peas	**	**	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.27	.66	**	**	**
Neug	-	-	-	-	-
Linseed	**	**	**	**	**
Rapeseed	-	-	-	-	-
Ground Nuts	**	**	**	**	**
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	40.66	100.00	254.79	100.00	

Table 8.1 Shinele Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	.52	100.00	6.52	100.00	12.54
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	.16	30.77	3.23	49.54	20.19
Sorghum	.36	69.23	3.29	50.46	9.14
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	-	-	-	-	-
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	.52	100.00	6.52	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 8.2 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Jijiga Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	38.19	98.10	231.13	98.92	6.05
Teff	**	**	.20	.09	**
Barley	2.91	7.47	22.20	9.50	7.63
Wheat	1.60	4.11	12.37	5.29	7.73
Maize	19.35	49.70	128.23	54.88	6.63
Sorghum	14.10	36.22	67.27	28.79	4.77
Millet	-	-	-	-	-
Oats	**	**	.85	.36	**
Pulses	.47	1.21	1.41	.60	3.00
Horse Beans	-	-	-	-	-
Field Peas	**	**	.04	.02	**
Haricot Beans	.24	.62	.53	.23	2.21
Chick Peas	**	**	.84	.36	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.27	.69	1.11	.48	4.11
Neug	-	-	-	-	-
Linseed	**	**	.24	.10	**
Rapeseed	-	-	-	-	-
Ground Nuts	**	**	.86	.37	**
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	**	**	-	-	**
All Crops	38.93	100.00	233.65	100.00	

Table 8.3 Moyale Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	**	**	14.62	100.00	**
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	**	**	14.62	100.00	**
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	**	**	-	-	**
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	**	**	-	-	**
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	1.20	100.00	14.62	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 9 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Benshangul-Gumuz

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	184.92	84.29	2,187.86	92.35	11.83
Teff	27.32	12.45	142.47	6.01	5.21
Barley	**	**	**	**	**
Wheat	**	**	**	**	**
Maize	33.91	15.46	596.39	25.17	17.59
Sorghum	55.68	25.38	772.26	32.60	13.87
Millet	25.83	11.77	325.05	13.72	12.58
Oats	.05	.02	**	**	**
Pulses	6.96	3.17	62.38	2.63	8.96
Horse Beans	**	**	**	**	**
Field Peas	**	**	**	**	**
Haricot Beans	4.20	1.91	39.33	1.66	9.36
Chick Peas	**	**	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	27.50	12.54	118.87	5.02	4.32
Neug	19.11	8.71	77.41	3.27	4.05
Linseed	.26	.12	**	**	**
Rapeseed	.06	.03	.20	.01	3.33
Ground Nuts	1.00	.46	7.97	.34	7.97
Sunflower	**	**	-	-	**
Sesame	7.02	3.20	31.80	1.34	4.53
Fenugreek	.05	.02	**	**	**
All Crops	219.38	100.00	2,369.11	100.00	

Table 9.1 Metekel Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	106.39	86.52	1,228.64	92.44	11.55
Teff	11.79	9.59	80.84	6.08	6.86
Barley	**	**	**	**	12.86
Wheat	**	**	**	**	**
Maize	8.71	7.08	169.70	12.77	19.48
Sorghum	25.47	20.71	376.55	28.33	14.78
Millet	18.43	14.99	249.89	18.80	13.56
Oats	**	**	-	-	**
Pulses	4.39	3.57	34.90	2.63	7.95
Horse Beans	.75	.61	6.42	.48	8.56
Field Peas	**	**	**	**	**
Haricot Beans	2.57	2.09	21.26	1.60	8.27
Chick Peas	**	**	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	12.19	9.91	65.53	4.93	5.38
Neug	8.18	6.65	44.12	3.32	5.39
Linseed	**	**	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	**	**	**	**	**
Sunflower	**	**	-	-	**
Sesame	3.55	2.89	17.64	1.33	4.97
Fenugreek	**	**	.04	-	**
All Crops	122.97	100.00	1,329.08	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e They are less reliable). However they are consolidated in the total estimate.

Table 9.2 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Asosa Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	42.99	77.99	453.88	90.45	10.56
Teff	7.33	13.30	21.95	4.37	2.99
Barley	**	**	-	-	**
Wheat	**	**	**	**	**
Maize	11.21	20.34	153.00	30.49	13.65
Sorghum	22.96	41.65	268.26	53.46	11.68
Millet	1.31	2.38	10.66	2.12	8.14
Oats	-	-	-	-	-
Pulses	**	**	**	**	**
Horse Beans	**	**	-	-	**
Field Peas	**	**	-	-	**
Haricot Beans	**	**	**	**	**
Chick Peas	**	**	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	11.37	20.63	37.35	7.44	3.28
Neug	8.68	15.75	23.89	4.76	2.75
Linseed	.12	.22	.08	.02	.67
Rapeseed	-	-	-	-	-
Ground Nuts	.72	1.31	5.40	1.08	7.50
Sunflower	**	**	-	-	**
Sesame	1.84	3.34	7.98	1.59	4.34
Fenugreek	-	-	-	-	-
All Crops	55.12	100.00	501.80	100.00	

Table 9.3 Kemeshi Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	**	**	**	**	**
Teff	**	**	**	**	**
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	**	**	273.69	50.85	**
Sorghum	7.24	17.53	127.45	23.68	17.60
Millet	**	**	**	**	**
Oats	**	**	**	**	**
Pulses	**	**	**	**	**
Horse Beans	**	**	**	**	**
Field Peas	-	-	-	-	-
Haricot Beans	1.12	2.71	8.02	1.49	7.16
Chick Peas	**	**	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	2.25	5.45	9.41	1.75	4.18
Linseed	-	-	-	-	-
Rapeseed	**	**	**	**	**
Ground Nuts	.02	.05	.15	.03	7.50
Sunflower	-	-	-	-	-
Sesame	1.63	3.95	6.18	1.15	3.79
Fenugreek	**	**	**	**	**
All Crops	**	**	**	**	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 10. Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

(S.N.N.P.R)

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	735.66	86.28	7,775.71	91.68	10.57
Teff	176.58	20.71	989.44	11.67	5.60
Barley	**	**	**	**	**
Wheat	75.20	8.82	930.35	10.97	12.37
Maize	256.56	30.09	3,468.47	40.90	13.52
Sorghum	96.74	11.35	859.15	10.13	8.88
Millet	4.83	.57	24.01	.28	4.97
Oats	**	**	**	**	**
Pulses	113.91	13.36	699.23	8.24	6.14
Horse Beans	36.25	4.25	336.20	3.96	9.27
Field Peas	23.54	2.76	124.18	1.46	5.28
Haricot Beans	47.82	5.61	208.08	2.45	4.35
Chick Peas	4.20	.49	**	**	**
Lentils	1.30	.15	1.33	.02	1.02
Vetch	**	**	**	**	**
Others	3.10	.36	6.00	.07	1.94
Neug	**	**	**	**	**
Linseed	.86	.10	**	**	**
Rapeseed	.20	.02	**	**	**
Ground Nuts	**	**	-	-	-
Sunflower	.53	.06	3.37	.04	6.36
Sesame	**	**	-	-	**
Fenugreek	.43	.05	**	**	**
All Crops	852.68	100.00	8,480.93	100.00	

Table 10.1 Gurage Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	185.11	91.67	2,499.20	95.69	13.50
Teff	36.40	18.03	216.95	8.31	5.96
Barley	**	**	**	**	**
Wheat	16.29	8.07	159.01	6.09	9.76
Maize	44.91	22.24	1,009.01	38.63	22.47
Sorghum	7.89	3.91	51.84	1.98	6.57
Millet	**	**	-	-	**
Oats	-	-	-	-	-
Pulses	15.69	7.77	110.48	4.23	7.04
Horse Beans	6.20	3.07	59.35	2.27	9.57
Field Peas	**	**	**	**	**
Haricot Beans	**	**	**	**	**
Chick Peas	**	**	**	**	**
Lentils	**	**	**	**	**
Vetch	**	**	**	**	**
Others	**	**	**	**	**
Neug	**	**	**	**	**
Linseed	**	**	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	201.94	100.00	2,611.69	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 10.2 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Hadiya Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	100.19	91.20	1,033.44	91.77	10.31
Teff	32.43	29.52	219.95	19.53	6.78
Barley	3.05	2.78	27.95	2.48	9.16
Wheat	30.95	28.17	438.08	38.90	14.15
Maize	25.36	23.08	276.65	24.57	10.91
Sorghum	7.49	6.82	65.86	5.85	8.79
Millet	**	**	**	**	**
Oats	-	-	-	-	-
Pulses	9.39	8.55	92.66	8.23	9.87
Horse Beans	6.88	6.26	**	**	**
Field Peas	1.04	.95	8.88	.79	8.54
Haricot Beans	1.05	.96	**	**	**
Chick Peas	**	**	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	-	-	-	-	-
Linseed	**	**	**	**	**
Rapeseed	**	**	-	-	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	**	**	-	-	**
All Crops	109.86	100.00	1,126.15	100.00	

Table 10.3 Kembata Alaba Tembaro Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	61.35	90.78	722.74	92.52	11.78
Teff	14.14	20.92	67.58	8.65	4.78
Barley	.57	.84	**	**	**
Wheat	9.78	14.47	146.52	18.76	14.98
Maize	30.37	44.94	447.19	57.25	14.72
Sorghum	3.78	5.59	41.33	5.29	10.93
Millet	2.69	3.98	14.94	1.91	5.55
Oats	**	**	**	**	**
Pulses	5.67	8.39	**	**	**
Horse Beans	3.25	4.81	**	**	**
Field Peas	.52	.77	**	**	**
Haricot Beans	1.81	2.68	7.16	.92	3.96
Chick Peas	**	**	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	.57	.84	.56	.07	.98
Neug	-	-	-	-	-
Linseed	.11	.16	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	**	**	-	-	**
Sunflower	**	**	**	**	**
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	67.58	100.00	781.18	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 10.4 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Sidama Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	27.26	74.38	280.76	91.37	10.30
Teff	**	**	**	**	**
Barley	2.47	6.74	**	**	**
Wheat	**	**	**	**	**
Maize	22.78	62.16	246.68	80.28	10.83
Sorghum	.05	.14	**	**	**
Millet	.01	.03	-	-	-
Oats	-	-	-	-	-
Pulses	9.39	25.62	26.52	8.63	2.82
Horse Beans	.95	2.59	**	**	**
Field Peas	**	**	**	**	**
Haricot Beans	7.90	21.56	**	**	**
Chick Peas	**	**	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	36.65	100.00	307.28	100.00	

Table 10.3 Gedio Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	8.82	80.77	114.19	86.16	12.95
Teff	**	**	-	-	**
Barley	2.18	19.96	**	**	**
Wheat	**	**	**	**	**
Maize	5.71	52.29	82.63	62.34	14.47
Sorghum	**	**	-	-	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	2.08	19.05	18.35	.14	8.82
Horse Beans	1.08	9.89	**	**	**
Field Peas	**	**	**	**	**
Haricot Beans	**	**	**	**	**
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	**	**	-	-	**
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	**	**	-	-	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	10.92	100.00	132.54	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 10.6 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

North Omo Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	194.22	83.85	1,616.57	88.49	8.32
Teff	58.03	25.05	277.46	15.19	4.78
Barley	20.97	9.05	**	**	**
Wheat	6.83	2.95	80.93	4.43	11.85
Maize	81.26	35.08	830.93	45.49	10.23
Sorghum	26.25	11.33	196.06	10.73	7.47
Millet	**	**	**	**	**
Oats	**	**	**	**	**
Pulses	37.10	16.02	210.18	11.51	5.67
Horse Beans	**	**	41.94	2.30	**
Field Peas	**	**	**	**	**
Haricot Beans	20.87	9.01	122.97	6.73	5.89
Chick Peas	**	**	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	**	**	-	-	**
Neug	-	-	-	-	-
Linseed	**	**	-	-	**
Rapeseed	-	-	-	-	-
Ground Nuts	**	**	-	-	**
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	231.63	100.00	1,826.75	100.00	

Table 10.7 South Omo Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	32.63	85.69	295.60	92.69	9.06
Teff	2.45	6.43	14.96	4.69	6.11
Barley	2.70	7.09	**	**	**
Wheat	**	**	**	**	**
Maize	10.59	27.81	100.96	31.66	9.53
Sorghum	15.89	41.73	141.51	44.37	8.91
Millet	**	**	**	**	**
Oats	-	-	-	-	-
Pulses	4.82	12.66	19.98	6.26	4.15
Horse Beans	**	**	**	**	**
Field Peas	**	**	**	**	**
Haricot Beans	2.98	7.83	10.20	3.20	3.42
Chick Peas	**	**	-	-	**
Lentils	**	**	**	**	**
Vetch	**	**	-	-	**
Others	.63	1.65	3.34	1.05	5.30
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	**	**	-	-	**
Sunflower	.53	1.39	3.34	1.05	6.30
Sesame	**	**	-	-	**
Fenugreek	**	**	-	-	**
All Crops	38.08	100.00	318.92	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 10.8 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Keficho-Shekicho Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	61.84	77.17	621.85	83.81	10.06
Teff	18.27	22.80	105.27	14.19	5.76
Barley	7.30	9.11	62.01	8.36	8.49
Wheat	**	**	**	**	**
Maize	16.67	20.80	211.97	28.57	12.72
Sorghum	14.78	18.45	197.81	26.66	13.38
Millet	**	**	**	**	**
Oats	**	**	**	**	**
Pulses	18.23	22.75	120.16	16.19	6.59
Horse Beans	8.08	10.08	65.13	8.78	8.06
Field Peas	6.28	7.84	32.18	4.34	5.12
Haricot Beans	3.86	4.82	22.85	3.08	5.92
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.06	.07	-	-	-
Neug	-	-	-	-	-
Linseed	**	**	-	-	**
Rapeseed	**	**	-	-	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	80.13	100.00	742.00	100.00	

Table 10.9 Bench-Maji Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	20.26	89.02	336.74	96.78	16.62
Teff	**	**	16.87	4.85	**
Barley	1.97	8.66	14.34	4.12	7.28
Wheat	.15	.66	**	**	**
Maize	9.12	40.07	203.64	58.52	22.33
Sorghum	6.37	27.99	100.93	29.01	15.84
Millet	**	**	**	**	**
Oats	-	-	**	**	**
Pulses	2.46	10.81	11.22	3.22	4.56
Horse Beans	1.18	5.18	7.96	2.29	6.75
Field Peas	.14	.62	**	**	**
Haricot Beans	1.13	4.96	**	**	**
Chick Peas	**	**	**	**	**
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	.04	.18	-	-	-
Neug	-	-	-	-	-
Linseed	**	**	-	-	**
Rapeseed	**	**	-	-	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	22.76	100.00	347.96	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 10.10 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Yem Special Wereda Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	11.02	85.83	94.92	88.21	8.61
Teff	5.43	42.29	41.00	38.10	7.55
Barley	1.25	9.74	9.73	9.04	7.78
Wheat	2.52	19.63	24.25	22.54	9.62
Maize	1.40	10.90	16.11	14.97	11.51
Sorghum	.39	3.04	3.76	3.49	9.64
Millet	**	**	**	**	**
Oats	**	**	**	**	**
Pulses	1.79	13.94	12.67	11.77	7.08
Horse Beans	1.15	8.96	9.79	9.10	8.51
Field Peas	.55	4.28	2.64	2.45	4.80
Haricot Beans	**	**	**	**	**
Chick Peas	**	**	**	**	**
Lentils	.07	.55	.19	.18	2.71
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	**	**	-	-	**
Linseed	**	**	**	**	**
Rapeseed	**	**	-	-	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	12.84	100.00	107.61	100.00	

Table 10.11 Amaro Special Wereda Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	4.06	86.75	31.86	89.37	7.85
Teff	1.95	41.67	**	**	**
Barley	.96	20.51	9.20	25.81	9.58
Wheat	.22	4.70	1.25	3.51	5.68
Maize	.48	10.26	**	**	**
Sorghum	**	**	**	**	**
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	.61	13.03	3.79	10.63	6.21
Horse Beans	.09	1.92	.59	1.65	6.56
Field Peas	.27	5.77	1.86	5.22	6.89
Haricot Beans	.23	4.91	1.16	3.25	5.04
Chick Peas	**	**	**	**	**
Lentils	.01	.21	**	**	**
Vetch	-	-	-	-	-
Others	**	**	-	-	**
Neug	-	-	-	-	-
Linseed	-	-	-	-	**
Rapeseed	**	**	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	4.68	100.00	35.65	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 10.12 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Burji Special Wereda Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	2.24	80.87	19.52	91.21	8.71
Teff	.85	30.69	4.55	21.26	5.35
Barley	.25	9.03	1.04	4.86	4.16
Wheat	.35	12.64	**	**	**
Maize	.31	11.19	7.58	35.42	24.45
Sorghum	.48	17.33	2.96	13.83	6.17
Millet	**	**	**	**	**
Oats	-	-	-	-	-
Pulses	.53	19.13	1.88	8.79	3.55
Horse Beans	**	**	**	**	**
Field Peas	**	**	**	**	**
Haricot Beans	.47	16.97	1.63	7.62	3.47
Chick Peas	**	**	**	**	**
Lentils	**	**	-	-	**
Vetch	**	**	-	-	**
Others	**	**	-	-	**
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	**	**	-	-	**
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	2.77	100.00	21.40	100.00	

Table 10.13 Konso Special Wereda Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	14.31	76.04	36.88	85.33	2.58
Teff	2.56	13.60	4.79	11.08	1.87
Barley	.16	.85	**	**	**
Wheat	**	**	**	**	**
Maize	4.74	25.19	15.33	35.47	3.23
Sorghum	6.83	36.29	16.40	37.95	2.40
Millet	**	**	-	-	**
Oats	-	-	-	-	-
Pulses	**	**	6.34	14.67	**
Horse Beans	**	**	-	-	**
Field Peas	**	**	-	-	**
Haricot Beans	**	**	6.32	14.62	**
Chick Peas	**	**	-	-	**
Lentils	.03	.16	**	**	**
Vetch	-	-	-	-	-
Others	.01	.05	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	18.82	100.00	43.22	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 10.14 Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Derashe Special Wereda Zone

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	12.35	88.15	71.45	90.94	5.79
Teff	.93	6.64	3.71	4.72	3.99
Barley	**	**	10.90	13.87	**
Wheat	.30	2.14	**	**	**
Maize	2.85	20.34	16.50	21.00	5.79
Sorghum	6.08	43.40	37.73	48.02	6.21
Millet	-	-	-	-	-
Oats	**	**	**	**	**
Pulses	1.66	11.85	7.11	9.05	4.28
Horse Beans	**	**	**	**	**
Field Peas	.04	.29	**	**	**
Haricot Beans	1.42	10.14	6.45	8.21	4.54
Chick Peas	.15	1.07	**	**	**
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	-	-	-	-	-
Linseed	**	**	-	-	**
Rapeseed	-	-	-	-	-
Ground Nuts	-	-	-	-	-
Sunflower	**	**	**	**	**
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	14.01	100.00	78.57	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 11. Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	10.58	96.36	210.57	98.31	19.90
Teff	**	**	**	**	**
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	6.57	59.84	143.93	67.19	21.91
Sorghum	3.96	36.07	66.18	30.90	16.71
Millet	**	**	**	**	**
Oats	-	-	-	-	-
Pulses	**	**	**	**	**
Horse Beans	**	**	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	**	**	**	**	**
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	**	**	**	**	**
Sunflower	-	-	-	-	-
Sesame	**	**	**	**	**
Fenugreek	-	-	-	-	-
All Crops	10.98	100.00	214.20	100.00	

Table 12. Harari

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	5.80	84.06	64.91	85.23	11.19
Teff	-	-	-	-	-
Barley	.04	.58	.17	.22	4.25
Wheat	.24	3.48	1.46	1.92	6.08
Maize	1.57	22.75	22.03	28.93	14.03
Sorghum	3.95	57.25	41.18	54.07	10.43
Millet	-	-	-	-	-
Oats	**	**	**	**	**
Pulses	.04	.58	**	**	**
Horse Beans	**	**	**	**	**
Field Peas	-	-	-	-	-
Haricot Beans	.03	.43	**	**	**
Chick Peas	-	-	-	-	-
Lentils	**	**	**	**	**
Vetch	-	-	-	-	-
Others	1.07	15.51	11.15	14.64	10.42
Neug	-	-	-	-	-
Linseed	**	**	-	-	**
Rapeseed	-	-	-	-	-
Ground Nuts	1.06	15.36	11.15	14.64	10.52
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	**	**	**	**	**
All Crops	6.90	100.00	76.16	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

Table 13. Forecast of Area, Production and Yield of Major Crops for Private Peasant Holdings 1999/2000 (1992 E.C.)

Addis Ababa

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	6.64	78.30	77.03	74.60	11.60
Teff	3.64	42.92	41.95	40.63	11.52
Barley	**	**	**	**	**
Wheat	2.83	33.37	33.88	32.81	11.97
Maize	.02	.24	.24	.23	12.00
Sorghum	**	**	-	-	**
Millet	-	-	-	-	-
Oats	**	**	**	**	**
Pulses	1.77	20.87	25.71	24.90	14.53
Horse Beans	.07	.83	**	**	**
Field Peas	**	**	**	**	**
Haricot Beans	**	**	**	**	**
Chick Peas	.63	7.43	9.53	9.23	15.13
Lentils	**	**	.39	.38	**
Vetch	.90	10.61	15.27	14.79	16.97
Others	.07	.83	.53	.51	7.57
Neug	-	-	-	-	-
Linseed	**	**	**	**	**
Rapeseed	**	**	**	**	**
Ground Nuts	-	-	-	-	-
Sunflower	**	**	-	-	**
Sesame	-	-	-	-	-
Fenugreek	.07	.83	.52	.50	7.43
All Crops	8.48	100.00	103.26	100.00	

Table 14. Dire Dawa

CROP	TOTAL AREA		TOTAL PRODUCTION		YIELD (QT/HA)
	(000' hectare)	%	(000' quintal)	%	
Cereals	6.58	95.92	56.20	98.03	8.54
Teff	-	-	-	-	-
Barley	**	**	**	**	**
Wheat	**	**	**	**	**
Maize	.33	4.81	1.93	3.37	5.85
Sorghum	6.25	91.11	54.22	94.58	8.68
Millet	-	-	-	-	-
Oats	-	-	-	-	-
Pulses	.27	3.94	**	**	**
Horse Beans	-	-	-	-	-
Field Peas	-	-	-	-	-
Haricot Beans	.27	3.94	**	**	**
Chick Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
Others	**	**	**	**	**
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Rapeseed	-	-	-	-	-
Ground Nuts	**	**	**	**	**
Sunflower	-	-	-	-	-
Sesame	-	-	-	-	-
Fenugreek	-	-	-	-	-
All Crops	6.86	100.00	57.33	100.00	

** These estimates could not be reported in this table because of high coefficient of variation (i.e. They are less reliable). However they are consolidated in the total estimate.

$$s = \sum_{i=1}^n \left[\left(\frac{M_i}{M} \right) \left(\frac{U_i}{\sum_{i=1}^n U_i} \right) \right]^2 \quad (1)$$

APPENDIX I

and number of units to sample

ESTIMATION PROCEDURES OF TOTAL, RATIO AND SAMPLING ERRORS

and number of units to sample

and number of units to sample

$$\sum_{i=1}^n \left(\frac{U_i}{\sum_{i=1}^n U_i} \right)^2$$

and number of units to sample

and number of units to sample

and number of units to sample

APPENDIX II

ESTIMATION PROCEDURES OF TOTAL, RATIO AND SAMPLING ERRORS

Estimator of Total

The estimate of stratum total $\hat{Y}_h$ is given by:

$$\hat{Y}_h = \sum_i^{n_h} I \left[\frac{M_h}{n_h M_{hi}} \frac{H_{hi}}{h_{hi}} \sum_j^{h_{hi}} I y_{hij} \right] \quad (1)$$

Where:

N_h = total number of EAs in stratum h

n_h = number of sample EAs in stratum h

M_{hi} = total number of households of EA i in stratum h
obtained from the 1994 census map work

M_h = $\sum_i^{N_h} M_{hi}$, total number of households of stratum h

H_{hi} = total number of agricultural households listed during the survey
for EA i in stratum h

h_{hi} = number of agricultural households and successfully covered

y_{hij} = the observed value of the variable y for agricultural households j, of EA
i in stratum h

Estimator of Variance for Total

The variance of stratum total estimate $\hat{Y}_h$ is:

$$v(\hat{Y}_h) = \frac{n_h}{n_h - 1} \left[\sum (\hat{Y}_{hi} - \frac{\hat{Y}_h}{n_h})^2 \right] \quad (2)$$

Where:

$\hat{Y}_{hi}$ = estimated total for EA i in stratum h

$\hat{Y}_h$ = estimated total for stratum h

Coefficient of variation of total

The coefficient of variation of total is defined as:

$$CV = \frac{\sqrt{v(\hat{Y}_h)}}{\hat{Y}_h} \times 100$$

Estimator of Ratio

The estimator of a given ratio $\hat{R}_h$ in stratum h is the following:

$$\hat{R}_h = \frac{\hat{Y}_h}{\hat{X}_h}$$

Where:

$\hat{R}_h$ = estimate for the ratio of $\hat{Y}_h$ to X_h in stratum h

$\hat{Y}_h$ = estimated total for variable Y in stratum h, given by formula (1)

$\hat{X}_h$ = estimated total for variable X in stratum h, given by formula (2)

Estimator of variance for ratio

The variance of a ratio is given by

$$v(\hat{R}_h) = \frac{1}{\hat{X}_h^2} [v(\hat{Y}_h) + \hat{R}_h^2 v(\hat{X}_h) - 2 \hat{R}_h \text{cov}(\hat{X}_h, \hat{Y}_h)] \quad (3)$$

APPENDIX II

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR AREA AND PRODUCTION FORECAST

Coefficient of variation of ratio

The coefficient of variation of ratio is defined as:

$$cv = \frac{\sqrt{v(\hat{R}_h)}}{\hat{R}_h} \times 100$$

Confidence Interval for Total

The confidence interval (CI) for a total is:

$$CI_{(1-\alpha)} = \hat{Y} \pm t_{(1-\alpha)} \hat{SE}$$

Where:

$\hat{Y}$ = estimate of a population total.

$t_{(1-\alpha)}$ = level of probability under the normal distribution, with α the acceptable level of error.

$\hat{SE} = \sqrt{v(\hat{Y})}$ = standard error of a total.

APPENDIX II

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR AREA AND PRODUCTION FORECAST

APPENDIX II STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, ETHIOPIA
1999/2000 (1992 E.C.)

NATIONAL

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	7276.81	234.69	3.23	81734.81	3391.08	4.15
TEFF	2191.61	84.48	3.85	18394.34	895.58	4.87
BARELY	867.73	81.92	9.44	8254.80	1032.96	12.51
WHEAT	1109.62	115.62	10.42	12047.35	1060.15	8.80
MAIZE	1645.91	132.01	8.02	27041.78	2703.71	10.00
SORGHUM	1010.11	51.79	5.13	12302.41	800.73	6.51
MILLET	406.10	61.14	15.05	3161.85	365.49	11.56
OATS	45.74	6.16	13.47	532.08	96.87	18.21
PULSES	1087.00	93.36	8.59	9027.97	515.71	5.71
HORSEBEANS	398.91	58.64	14.70	3718.05	313.35	8.43
FIELDPEAS	166.94	18.12	10.85	1136.77	134.33	11.82
HARICOTBEANS	179.84	16.27	9.05	1243.26	145.53	11.71
CHICKPEAS	153.63	18.40	11.98	1480.41	213.45	14.42
LENTILS	90.54	28.32	31.28	400.94	77.17	19.25
VECTH	97.15	13.78	14.19	1048.55	167.39	15.96
OTHERS	455.36	27.45	6.03	1862.67	146.18	7.85
NEUG	271.76	22.36	8.23	1016.23	109.59	10.78
LINSEED	82.84	9.37	11.31	293.13	47.71	16.28
RAPESEED	26.38	6.66	25.26	190.33	53.05	27.87
GROUNDNUTS	13.38	5.58	41.70	81.42	34.65	42.55
SUNFLOWER	5.46	1.01	18.49	25.04	5.84	23.33
SEASAME	37.60	11.34	30.16	161.50	58.96	36.51
FENUGREEK	17.94	2.69	14.96	95.02	19.77	20.80
ALL CROPS	8819.16	290.27	3.29	92625.25	3546.19	3.83

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

TIGRAY

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	543.45	63.93	11.76	5614.83	774.24	13.79
TEFF	129.64	12.75	9.83	1075.31	129.02	12.00
BARELY	78.56	7.27	9.25	748.36	94.90	12.68
WHEAT	71.99	7.09	9.85	741.23	87.31	11.78
MAIZE	111.70	55.36	49.56	1520.79	686.74	45.16
SORGHUM	87.14	12.22	14.02	967.52	164.19	16.97
MILLET	64.31	10.52	16.36	559.29	109.00	19.49
OATS	**	**	**	**	**	**
PULSES	39.75	3.98	10.01	382.37	49.35	12.91
HORSEBEANS	12.45	2.22	17.83	185.35	35.74	19.28
FIELDPEAS	6.11	1.56	25.54	57.86	22.05	38.11
HARICOTBEANS	3.20	1.40	43.88	9.16	3.61	39.40
CHICKPEAS	8.39	2.02	24.02	74.45	23.51	31.57
LENTILS	3.49	1.34	38.41	12.88	4.75	36.85
VECTH	6.11	1.27	20.76	42.67	11.78	27.62
OTHERS	26.62	5.03	18.91	105.64	28.41	26.89
NEUG	8.22	2.28	27.76	35.40	14.08	39.78
LINSEED	6.92	1.23	17.82	27.73	10.27	37.04
RAPESEED	**	**	**	**	**	**
GROUNDNUTS	-	-	-	-	-	-
SUNFLOWER	**	**	**	**	**	**
SEASAME	11.16	4.29	38.48	**	**	**
FENUGREEK	0.15	0.08	49.47	**	**	**
ALL CROPS	609.82	65.27	10.70	6102.84	784.41	12.85

Abbreviations

S.E. = Standard Error

C.V. = Coefficient of Variation

- = Insignificant or not available

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1997/98 (1991 E.C.)
1999/2000 (1992 E.C.)

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	41.38	18.59	44.92	378.21	171.18	45.26
TEFF	**	**	**	**	**	**
BARELY	**	**	**	**	**	**
WHEAT	**	**	**	**	**	**
MAIZE	6.68	1.25	18.64	61.97	13.88	22.40
SORGHUM	9.65	4.47	46.32	**	**	**
MILLET	-	-	-	-	-	-
OATS	-	-	-	-	-	-
PULSES	2.15	0.78	36.46	**	**	**
HORSEBEANS	-	-	-	-	-	-
FIELDPEAS	**	**	**	**	**	**
HARICOTBEANS	**	**	**	0.60	0.28	47.11
CHICKPEAS	1.44	0.64	44.13	**	**	**
LENTILS	**	**	**	**	**	**
VECTH	-	-	-	-	-	-
OTHERS	**	**	**	**	**	**
NEUG	**	**	**	-	-	-
LINSEED	**	**	**	**	**	**
RAPESEED	-	-	-	-	-	-
GROUNDNUTS	-	-	-	-	-	-
SUNFLOWER	**	**	**	**	**	**
SEASAME	**	**	**	-	-	-
FENUGREEK	**	**	**	**	**	**
ALL CROPS	44.03	18.57	42.19	390.41	170.95	43.79

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	2565.64	178.68	6.96	25697.79	2617.16	10.18
TEFF	891.11	51.27	5.75	8114.73	648.47	7.99
BARELY	258.68	22.20	8.58	1770.63	199.60	11.27
WHEAT	365.79	96.10	26.27	2698.62	330.69	12.25
MAIZE	427.19	109.20	25.56	7035.37	2343.95	33.32
SORGHUM	367.06	38.93	10.60	4205.43	595.96	14.17
MILLET	242.70	58.33	24.04	1750.35	318.87	18.22
OATS	13.12	2.88	21.96	122.66	32.36	26.38
PULSES	528.37	86.11	16.30	3990.73	331.13	8.30
HORSEBEANS	197.33	53.65	27.19	1495.12	159.07	10.64
FIELDPEAS	83.94	15.41	18.35	514.18	98.67	19.19
HARICOTBEANS	53.74	10.81	20.12	411.81	110.32	26.79
CHICKPEAS	80.76	11.12	13.76	785.57	143.60	18.28
LENTILS	60.10	27.84	46.32	226.06	62.34	27.58
VECTH	52.49	10.75	20.48	558.00	128.16	22.97
OTHERS	213.59	20.18	9.45	845.48	100.12	11.84
NEUG	149.21	17.64	12.06	544.38	78.31	14.39
LINSEED	27.86	3.87	13.90	84.66	21.68	25.60
RAPESEED	10.61	1.87	17.64	74.28	24.91	33.54
GROUNDNUTS	**	**	**	**	**	**
SUNFLOWER	3.92	0.91	23.14	19.76	5.57	28.18
SEASAME	**	**	**	**	**	**
FENUGREEK	8.01	1.83	23.33	7.07	14.77	31.38
ALL CROPS	3307.60	237.15	7.17	30534.00	2693.57	8.82

Abbreviations

S.E. = Standard Error
C.V. = Coefficient of Variation
- = Insignificant or not available

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

OROMIYA

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	3136.41	103.76	3.31	39419.53	1695.35	4.30
TEFF	939.03	60.11	6.40	7821.97	573.82	7.34
BARELY	384.53	38.38	9.98	3988.49	499.24	12.52
WHEAT	566.19	58.44	10.32	7491.32	988.91	13.20
MAIZE	780.82	41.70	5.34	14044.58	1038.20	7.39
SORGHUM	365.22	28.78	7.88	4568.52	435.78	9.54
MILLET	68.38	12.72	18.60	5165.04	480.09	9.30
OATS	32.25	5.44	16.88	502.72	89.53	17.82
PULSES	393.09	33.93	8.63	3853.42	382.48	9.93
HORSEBEANS	151.31	22.89	15.13	1685.65	259.88	15.42
FIELDPEAS	52.84	6.61	12.52	434.64	81.22	18.69
HARICOTBEANS	69.51	10.12	14.55	572.56	87.12	15.22
CHICKPEAS	57.42	14.38	25.04	573.10	155.42	27.12
LENTILS	25.17	4.98	19.78	159.38	45.23	28.38
VECTH	36.84	8.50	23.08	428.09	106.77	24.94
OTHERS	182.29	17.33	9.51	769.57	99.09	12.88
NEUG	97.36	12.79	13.13	357.51	70.70	19.78
LINSEED	46.84	8.43	18.01	178.63	41.23	23.08
RAPESEED	15.43	6.39	41.45	115.76	46.84	40.46
GROUNDNUTS	**	**	**	**	**	**
SUNFLOWER	**	**	**	**	**	**
SEASAME	**	**	**	**	**	**
FENUGREEK	9.14	1.91	20.92	46.50	13.13	28.25
ALL CROPS	3711.79	121.76	3.28	44042.51	1867.15	4.24

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

SOMALE

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	39.78	5.53	13.89	252.23	32.67	12.95
TEFF	**	**	**	**	**	**
BARELY	2.91	0.93	32.10	22.20	6.01	27.07
WHEAT	1.60	0.43	26.96	12.37	4.93	39.87
MAIZE	20.56	3.91	19.00	146.08	30.35	20.77
SORGHUM	14.47	3.54	24.48	70.57	19.18	27.18
MILLET	-	-	-	-	-	-
OATS	**	**	**	**	**	**
PULSES	0.62	0.17	26.58	**	**	**
HORSEBEANS	-	-	-	-	-	-
FIELDPEAS	**	**	**	**	**	**
HARICOTBEANS	0.39	0.13	34.15	**	**	**
CHICKPEAS	**	**	**	**	**	**
LENTILS	-	-	-	-	-	-
VECTH	-	-	-	-	-	-
OTHERS	0.27	0.12	44.97	**	**	**
NEUG	-	-	-	-	-	-
LINSEED	**	**	**	**	**	**
RAPESEED	-	-	-	-	-	-
GROUNDNUTS	**	**	**	**	**	**
SUNFLOWER	-	-	-	-	-	-
SEASAME	-	-	-	-	-	-
FENUGREEK	**	**	**	**	**	**
ALL CROPS	40.67	5.49	13.51	254.79	32.59	12.79

Abbreviations

S.E. = Standard Error

C.V. = Coefficient of Variation

- = Insignificant or not available

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

BENSHANGUL GUMUZ

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	184.92	48.67	26.32	2187.86	489.91	22.39
TEFF	27.32	9.24	33.83	142.47	51.27	35.99
BARELY	**	**	**	**	**	**
WHEAT	**	**	**	**	**	**
MAIZE	33.91	10.96	32.33	596.39	225.11	37.75
SORGHUM	55.68	6.81	12.23	772.26	113.82	14.74
MILLET	25.83	7.76	30.02	325.05	109.29	33.62
OATS	0.05	0.04	72.47	**	**	**
PULSES	6.96	1.61	23.18	62.38	17.59	28.19
HORSEBEANS	**	**	**	**	**	**
FIELDPEAS	**	**	**	**	**	**
HARICOTBEANS	4.20	1.17	27.88	39.33	14.00	35.60
CHICKPEAS	**	**	**	**	**	**
LENTILS	**	**	**	**	**	**
VECTH	-	-	-	-	-	-
OTHERS	27.50	4.45	16.17	118.87	26.23	22.07
NEUG	19.11	4.43	23.19	77.41	26.03	33.62
LINSEED	0.26	0.10	38.93	**	**	**
RAPESEED	0.06	0.03	49.40	0.20	0.09	44.28
GROUNDNUTS	1.00	0.30	30.30	7.97	2.47	31.02
SUNFLOWER	**	**	**	-	-	-
SEASAME	7.02	1.52	1.59	31.80	8.66	27.22
FENUGREEK	0.05	0.02	48.24	**	**	**
ALL CROPS	219.38	50.95	23.22	2369.11	510.18	21.53

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

S.N.N.P.R

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	735.66	74.49	10.13	7775.71	949.63	12.21
TEFF	176.58	21.16	11.98	989.44	136.01	13.75
BARELY	**	**	**	**	**	**
WHEAT	75.20	8.56	11.39	930.35	112.42	12.08
MAIZE	256.56	23.63	9.21	3468.47	460.75	13.28
SORGHUM	96.74	10.41	10.76	859.15	108.00	12.57
MILLET	4.83	1.51	31.29	24.01	7.60	31.66
OATS	**	**	**	**	**	**
PULSES	113.91	11.43	10.04	699.23	84.61	12.10
HORSEBEANS	36.25	5.59	15.43	336.20	63.12	18.78
FIELDPEAS	23.54	6.69	28.41	124.18	34.75	27.99
HARICOTBEANS	47.82	6.48	13.55	208.08	34.79	16.72
CHICKPEAS	4.20	1.89	45.04	**	**	**
LENTILS	1.30	0.64	49.17	1.33	0.63	47.47
VECTH	**	**	**	**	**	**
OTHERS	3.10	0.83	26.87	6.00	2.28	38.05
NEUG	**	**	**	*	*	**
LINSEED	0.86	0.29	33.81	*	*	**
RAPESEED	0.20	0.06	27.69	*	*	**
GROUNDNUTS	**	**	**	-	-	-
SUNFLOWER	0.53	0.18	34.01	3.37	1.55	45.89
SEASAME	**	**	**	-	-	-
FENUGREEK	**	**	**	*	*	**
ALL CROPS	852.68	77.13	9.05	8480.93	961.03	11.33

Abbreviations

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STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

GAMBELA

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	10.58	2.38	22.53	210.53	60.23	28.60
TEFF	**	**	**	**	**	**
BARELY	-	-	-	-	-	-
WHEAT	-	-	-	-	-	-
MAIZE	6.57	1.92	29.16	143.93	48.56	33.74
SORGHUM	3.96	1.15	28.91	66.18	27.99	42.29
MILLET	**	**	**	**	**	**
OATS	-	-	-	-	-	-
PULSES	**	**	**	**	**	**
HORSEBEANS	**	**	**	-	-	-
FIELDPEAS	-	-	-	-	-	-
HARICOTBEANS	**	**	**	**	**	**
CHICKPEAS	-	-	-	-	-	-
LENTILS	-	-	-	-	-	-
VECTH	-	-	-	-	-	-
OTHERS	**	**	**	**	**	**
NEUG	-	-	-	-	-	-
LINSEED	-	-	-	-	-	-
RAPESEED	-	-	-	-	-	-
GROUNDNUTS	**	**	**	**	**	**
SUNFLOWER	-	-	-	-	-	-
SEASAME	**	**	**	**	**	**
FENUGREEK	-	-	-	-	-	-
ALL CROPS	10.98	2.41	21.97	214.20	60.33	28.17

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

HARARI

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	5.80	0.48	8.24	64.91	11.35	17.48
TEFF	-	-	-	-	-	-
BARELY	0.04	0.02	39.47	0.17	0.08	46.65
WHEAT	0.24	0.09	38.37	1.46	0.55	37.57
MAIZE	1.57	0.13	8.30	22.03	4.22	19.18
SORGHUM	3.95	0.42	10.60	41.18	8.55	20.75
MILLET	-	-	-	-	-	-
OATS	**	**	**	**	**	**
PULSES	0.04	0.01	35.69	**	**	**
HORSEBEANS	**	**	**	-	-	-
FIELDPEAS	-	-	-	-	-	-
HARICOTBEANS	0.03	0.01	35.69	**	**	**
CHICKPEAS	-	-	-	-	-	-
LENTILS	**	**	**	**	**	**
VECTH	-	-	-	-	-	-
OTHERS	1.07	0.33	30.68	11.15	4.15	37.25
NEUG	-	-	-	-	-	-
LINSEED	**	**	**	-	-	-
RAPESEED	-	-	-	-	-	-
GROUNDNUTS	1.06	0.33	30.71	11.15	4.15	37.26
SUNFLOWER	-	-	-	-	-	-
SEASAME	-	-	-	-	-	-
FENUGREEK	**	**	**	**	**	**
ALL CROPS	6.90	0.66	9.55	76.16	14.09	18.50

Abbreviations

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STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

ADDIS ABABA

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	6.64	1.46	21.95	77.03	13.68	17.77
TEFF	3.64	0.84	23.13	41.95	8.41	20.06
BARELY	**	**	**	**	**	**
WHEAT	2.83	0.67	23.59	33.88	7.36	21.74
MAIZE	0.02	0.01	30.16	0.24	0.09	35.91
SORGHUM	**	**	**	-	-	-
MILLET	-	-	-	-	-	-
OATS	**	**	**	**	**	**
PULSES	1.77	0.46	26.08	25.71	8.33	32.41
HORSEBEANS	0.07	0.03	46.09	**	**	**
FIELDPEAS	**	**	**	**	**	**
HARICOTBEANS	**	**	**	**	**	**
CHICKPEAS	0.63	0.18	27.93	9.53	2.66	27.91
LENTILS	**	**	**	0.39	0.11	27.13
VECTH	0.90	0.28	31.11	15.27	6.15	40.29
OTHERS	0.07	0.02	28.04	0.53	0.23	43.97
NEUG	-	-	-	-	-	-
LINSEED	**	**	**	**	**	**
RAPESEED	**	**	**	**	**	**
GROUNDNUTS	-	-	-	-	-	-
SUNFLOWER	**	**	**	-	-	-
SEASAME	-	-	-	-	-	-
FENUGREEK	0.07	0.02	30.38	0.52	0.23	45.29
ALL CROPS	8.48	1.90	22.45	103.26	21.60	20.92

STANDARD ERROR AND COEFFICIENT OF VARIATION FOR FORECAST OF
AREA AND PRODUCTION, OF MAJOR CROPS, 1999/2000 (1992 E.C.)

DIRE DAWA

TYPE OF CROP	AREA (000' HA)	S.E. (000' HA)	C.V. (%)	PRODUCTION (000' QT)	S.E. (000' QT)	C.V. (%)
CEREALS	6.58	0.65	9.93	56.20	5.28	6.39
TEFF	-	-	-	-	-	-
BARELY	**	**	**	**	**	**
WHEAT	**	**	**	**	**	**
MAIZE	0.33	0.07	21.88	1.93	0.62	31.84
SORGHUM	6.25	0.64	10.28	54.22	5.18	9.56
MILLET	-	-	-	-	-	-
OATS	-	-	-	-	-	-
PULSES	0.27	0.08	29.56	**	**	**
HORSEBEANS	-	-	-	-	-	-
FIELDPEAS	-	-	-	-	-	-
HARICOTBEANS	0.27	0.08	29.56	**	**	**
CHICKPEAS	-	-	-	-	-	-
LENTILS	-	-	-	-	-	-
VECTH	-	-	-	-	-	-
OTHERS	**	**	**	**	**	**
NEUG	-	-	-	-	-	-
LINSEED	-	-	-	-	-	-
RAPESEED	-	-	-	-	-	-
GROUNDNUTS	**	**	**	**	**	**
SUNFLOWER	-	-	-	-	-	-
SEASAME	-	-	-	-	-	-
FENUGREEK	-	-	-	-	-	-
ALL CROPS	6.86	0.67	9.83	57.33	5.35	9.34

Abbreviations

S.E. = Standard Error

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APPENDIX III

NUMBER OF FIELDS MEASURED UNDER MAJOR CROPS

APPENDIX III. THE 1992 E.C. (1999/2000) CROP PRODUCTION FORECAST SURVEY
NUMBER OF Eas AGRICULTURAL ACTUALLY COVERED AND TOTAL
NUMBER OF FIELDS MEASURED

Region	Stratum Zone/Sp. Wereda	EAs		Households (area measurement)		Total No. of field measured	
		Sampled	Covered	Sampled	Responded	parcels	Fields
Tigray			99		990	4040	8704
	West Tigray		24		240	798	1737
	Central Tigray		25		250	1105	2729
	East Tigray		25		250	1091	2641
	South Tigray		25		250	1046	1597
Afar			46		437	970	1780
	Zone 1		20		193	376	606
	Zone 3		15		150	453	971
	Zone 5		11		94	141	203
Amhara			284		2832	12105	23536
	North Gondar		30		300	1161	2331
	South Gondar		29		290	1311	2379
	North Wollo		30		300	1169	2426
	South Wollo		30		300	1538	2883
	North Shoa		30		300	1422	2671
	East Gojam		30		300	1400	2601
	West Gojam		30		300	1418	2687
	Wag-Hamra		25		250	977	1821
	Agewawi		25		250	981	2171
	Oromia Zone		25		242	728	1566
Oromial			360		3596	12993	31495
	West Wellega		30		299	1358	3068
	East Wellga		30		300	1196	3001
	Illubabor		30		300	925	2332
	Jimma		30		301	1005	3078
	West Shewa		30		300	1147	3049
	North Shewa		30		300	1679	3221
	East Shewa		30		298	999	2525
	Arsi		30		300	1236	2957
	West Hararghe		30		300	906	2221
	East Hararghe		30		300	975	2019
	Bale		30		298	985	2611
	Borena		30		579	582	1413
Somalie			58		179	1163	2326
	Shinele		18		200	308	526
	Jijiga		20		200	487	1135
	Moyale		20		750	368	665

Region	Stratum Zone/Sp. Wereda	EAs		Households (area measurement)		Total No. of field measured	
		Sampled	Covered	Sampled	Responded	parcels	Fields
Benshangul- Gumuz			75		250	2988	5659
	Metekel		25		250	871	1692
	Assosa		25		250	1399	2446
	Kemeshi		25		250	718	1521
S.N.N.P.R			395		3943	8602	30679
	Gurage		30		300	661	2676
	Hadiya		30		300	538	3487
	Kemabata AT		30		300	542	3317
	Sidama		30		296	464	2072
	Gedio		30		300	621	1523
	North Omo		30		299	544	2773
	South Omo		30		300	685	1585
	Keficho-shekicho		30		298	693	2517
	Bench-Maji		30		300	711	2007
	Yem Sp. Wereda		25		250	788	2976
	Amaro Sp. Wereda		25		250	502	1562
	Burji Sp. Wereda		25		250	569	1741
	Konso Sp. Wereda		25		250	704	1223
	Derashe Sp.		25		250	580	1220
Gambella	Gambella		30		300	642	1271
Harari	Harari		30		300	1002	1944
Addis Abeba	Addis Abeba		25		250	928	1953
Dire Dawa	Dire Dawa		30		300	849	1388
	Total		1432		14277	46282	1388

