THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

CENTRAL STATISTICAL AGENCY

AGRICULTURAL SAMPLE SURVEY

2018/19 (2011 E.C.)

VOLUME I

REPORT ON

AREA AND PRODUCTION OF MAJOR CROPS

(PRIVATE PEASANT HOLDINGS, MEHER SEASON)

ADDIS ABABA
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ABBREVIATIONS:

CV – Coefficent of variation

E.C. - Ethiopian calender

S.N.N.P.R. – South nations, Nationalities and Peoples Region

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PART I

INTRODUCTION AND OBJECTIVES OF THE SURVEY

1.1. INTRODUCTION

The sound performance of agriculture warrants the availability of food crops. This accomplishment in agriculture does not only signify the adequate acquisition of food crops to attain food security, but also heralds a positive aspect of the economy. In regard to this, collective efforts are being geared to securing agricultural outputs of the desired level so that self reliance in food supply can be achieved and disaster caused food shortages be contained in the shortest possible time in Ethiopia.

The prime role that agriculture plays in a country's political, economic and social stability makes measures of agricultural productions extremely sensitive. Statistics collected on agricultural productions are, therefore, fraught with questions of reliability by data users. To tackle these questions convincingly and dissipate the misgivings of users, information on agriculture has to be collected using standard procedures of data collection.

Upholding this principle, the Central Statistical Agency (CSA) has been furnishing statistical information on the country's agriculture since 1980/81 to alert policy interventionists on the changes taking place in the agricultural sector. As part of this task, the 2017/18 (2010 E.C.) Agricultural Sample Survey (AgSS) was conducted to provide data on croped area and production of crops within the private peasant holdings for Meher Season of the specified year. The survey results are presented in this bulletin and other electronic media for data users.

The report comprises three parts. Part I contains the objectives of this annual survey. Part II deals with coverage of the survey, sample design, field organization and method of data collection and Part III includes the survey results. Estimation procedures and formulation of estimates of totals, ratios and variance are presented in Appendix I. Estimates of the standard errors with the corresponding coefficients of variations for area and production of crops are presented in Appendix II. The numbers of agricultural households covered, number of parcels and fields measured are presented in appendix III and the survey questionnaires in Appendix IV.

1.2. OBJECTIVES OF THE SURVEY

The general objective of CSA's Agricultural Sample Survey (AgSS) is to collect basic quantitative information on the country's agriculture that is essential for planning, policy

formulation, monitoring and evaluation of mainly food security and other agricultural activities. The AgSS is composed of four components: Crop Production Forecast Survey, Meher Season Post Harvest Survey (Area and production, land use, farm management and crop utilization), Livestock Survey and Belg Season Survey.

The specific objectives of Meher Season Post Harvest Survey are to estimate the total crop area, volume of crop production and yield of crops for Meher Season agriculture in Ethiopia. The report is based on private peasant holdings in rural sedentary areas of the country and part of companion reports on the performance of agriculture in the country. The report is compiled at regional level.

PART II
SURVEY METHODOLOGY, DATA COLLECTION AND PROCESSING

2.1. SCOPE AND COVERAGE OF THE SURVEY

The range of data items that the 2018/19 (2011 E.C.) Annual Agricultural Sample Survey (Meher Season) dealt with includes all cereals, pulses and oilseeds and the most commonly grown vegetables, root crops and permanent (perennial) crops. Holders growing at least one or more of these and/ or other crops are enumerated and data on crop area and yield condition recorded, hence data on production of these crops acquired.

The 2018/19 (2011 E.C.) Annual Agricultural Sample Survey (Meher season) covered the entire rural parts of the country except the non-sedentary population of three zones of Afar & six zones of Somali regions.

To be covered by the survey, a total of **1,600** Enumeration Areas (EAs) were selected. However, due to various reasons that are beyond control, in 127 EAs the survey could not be successful and hence interrupted. Thus, all in all the survey succeeded to cover **1,473** EAs (92.06%) throughout the regions. The Annual Agricultural Sample survey (Meher season) was conducted on the basis of 20 agricultural households selected from each EA. Regarding the ultimate sampling units, it was intended to cover a total of 32,000 agricultural households, however, 29,045 (90.77%) were actually covered by the survey.

2.2 SAMPLING FRAME

The list containing EAs of all regions and their respective households obtained from the 4th round cartographic census frame was used as the sampling frame in order to select the primary sampling units (EAs). Consequently, all sample EAs were selected from this frame based on the design proposed for the survey. The second stage sampling units, households, were selected from a fresh list of households that were prepared for each EA at the beginning of the survey.

2.3. SAMPLE DESIGN

In order to select the sample, a stratified two-stage cluster sample design was implemented. Enumeration areas (EAs) were taken to be the primary sampling units (PSUs) and the secondary sampling units (SSUs) were agricultural households. The sample size for the 2018/19 (2011 E.C.) agricultural sample survey was determined by taking into account both the required level of precision for the most important estimates within each domain and the

amount of resources allocated to the survey. In order to reduce non-sampling errors, manageability of the survey in terms of quality and operational control was also considered.

All regions were taken to be the domain of estimation for which major findings of the survey are reported.

2.4. SELECTION SCHEME

Enumeration areas from each stratum were selected systematically using probability proportional to size sampling technique; size being number of agricultural households. The sizes for EAs were obtained from the 4th round Population and Housing census frame. From the fresh list of households prepared at the beginning of the survey, 20 agricultural households within each sample EA were selected systematically.

Estimation procedure of totals, ratios, sampling error and the measurement of precision of estimates (CV) are given in Appendix-I and II respectively. Distribution of sampling units (sampled and covered EAs and households) by stratum is also presented in Appendix-III.

2.5. ORGANIZATION OF FIELD WORK

The conduct of a survey cannot be executed without the arrangement of fieldwork. In recognition of this, the organization of fieldwork has been entrusted to the Desks that liaises between the Head Office and the 24 Branch Statistical Offices spread across the regions. All Branch Offices took part in the survey execution especially in recruiting the enumerators, organizing the 2nd stage training, assigning the field staff to their sites of enumeration, supervising the data collection and retrieving completed questionnaires and submitting them to the Head Office for data processing.

The Branch Offices were also responsible for administering the financial and logistic aspects of the survey within their areas of operation. A total of 1,680 enumerators, 534 field supervisors and 214 statisticians were involved in the data collection where on the average one supervisor was assigned to three enumeration areas for supervision of data collection. All the enumerators were supplied with the necessary survey equipment after the completion of the training to ensure the smooth operation of the survey. To facilitate the data collection activities, a total of 180 four-wheel drive vehicles were used.

2.6. TRAINING OF FIELD STAFF

The execution of a survey and quality of data acquired from the survey highly depend on the type of training given to the enumerators and supervisors and the consequent understanding of the tasks to be performed and the standard procedures to be followed by the enumerators

and supervisors in the survey undertaking. The quality and completeness of data are ensured when the training meets its objective of producing responsible and fervent enumerators and supervisors.

In light of this point, the training was given to the field staff in two stages. The first stage training, which took place at Head office, Addis Ababa, and lasted for 6 days targeted staff from the Head Office, statisticians and senior field supervisors from Branch Statistical Offices. The staff that took part in the first stage training was then assigned to conduct similar training for the enumerators and other supervisors for 15 days in all the twenty- four Branch Statistical Offices distributed across the country.

In the training the field staff was given detailed classroom instruction on how to collect data, method of area measurement, interviewing procedures, etc. The training also included field practice to reinforce the understanding of concepts, definitions and theories discussed in the classroom with regard to field measurement, crop cutting, GPS reading and interviewing methods.

2.7. METHOD OF DATA COLLECTION

The agricultural data for the year 2018/19 (2011 E.C.) was collected from sedentary rural peasant households by interviewing the selected agricultural holders and physically measuring their fields to obtain data on crop yields and other items of interest.

The data obtained were recorded in various forms designed for this purpose. Instruments like measuring tape; compass, kitchen balance, scientific calculators, GPS (Oromiya region only) and others were used during data collection for a timely and smooth acquisition of accurate data. The procedures for measuring area under crop and area of non - crop fields operated by the holders were performed for the 20 selected households from each sampled E.A. using measuring tapes, compasses as well as GPS.

2.8. DATA PROCESSING

a) Editing, Coding and Verification

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

Editing, coding and verification instruction manual was prepared and reproduced for this purpose. Then 34 editors-coders and verifiers were trained for two days in editing, coding and verification using the aforementioned manual as a reference and teaching aid. The completed questionnaires were edited, coded and later verified on a 100% basis before the questionnaires were passed over to the data entry unit. The editing, coding and verification exercise of all questionnaires took 20 days.

b) Data Entry, Cleaning and Tabulation

Before data entry, the Agriculture, Natural Resources and Environment Statistics Directorate of the CSA prepared edit specification for the survey for use on personal computers for data consistency checking purposes. The data on the edited and coded questionnaires were then entered into personal computers. The data were then checked and cleaned using the edit specifications prepared earlier for this purpose. The data entry operation involved about 65 data encoders, 5 data encoder supervisors, 14 data cleaning operators and 70 personal computers. The data entered into the computers using the entry module of the CSPRO (Census and Survey Processing System) software, which is a software package developed by the United States Bureau of the Census. Following the data entry operations, the data was further reviewed for data inconsistencies, missing data … etc. by the regular professional staff from Agriculture, Natural Resources and Environment Statistics Directorate. The final stage of the data processing was to summarizing the cleaned data and produce statistical tables that present the results of the survey using the tabulation component of the PC based CSPRO software produced by professional staff from Agriculture, Natural Resources and Environment Statistics Directorate.

2.9. CONCEPTS AND DEFINITIONS

Data items of agriculture have to be distinctly defined and identified, so that the information about the items becomes useful. The correct way of stating data items and related terms is a prerequisite for making standards and definitions for the collection and compilation of agricultural data. The purpose of using standard concepts and definitions is not only to provide quality data but also to ensure that the right items are enumerated and measured accurately to reflect the agricultural situation.

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

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

Household: a household may be either:

a) a one person household, that is a person who makes provisions for his own living without combining with any other person to form part of a multi- person household or

b) a multi-person household, that is, a group of two or more persons who live together and make common provisions for food and other essentials of living. The persons in the group may pool their incomes and have a common budget to a greater or lesser extent. They may be related or unrelated persons or a combination of both. These persons are taken as members of the household.

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

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

Holding: - a holding is all the land and /or livestock kept, which is used wholly or partly for agricultural production and is operated as one legal entity by one person alone, or with others with out regard to management, organization, size or location.

Holder: - a holder is a person who exercises management control over the operation of the agricultural holding and makes the major decision regarding the utilization of the available resources. He/she has primary technical and economic responsibility for the holding. He/she may operate the holding directly as an owner or a manager. Under conditions of traditional agricultural holding the holder may be regarded as the person, who with or with out the help of others, operates land and/or raises livestock in his/ her own right, i.e. the person who decides on which, where, when, and how to grow crops or raise livestock or both and has the right to determine the utilization of the products.

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

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

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

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

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

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

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

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

Note:-

1. If in some tables figures do not add up to total, it is due to rounding
2. Those area and production designated by "*" in all tables could not be reported because of high coefficient of variation (i.e. they are less reliable). However, they are consolidated in the total estimates.
3. In all tables "-" indicates not reported.
4. Due to incompleteness of the year 2018/19 (2011 E.C) main season field data collection in Afar and Somali regions, the 2017/18 (2010 E.C) post-harvest setimates for the respective regions are imputed for completeness purpose.

PART III

SUMMARY OF SURVEY RESULTS

3.1. INTRODUCTION

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

The food crops on which data is collected are the ones that are commonly grown by the majority of peasant holders. In the statistical tables these crops have been categorized into eight groups for simplicity of description and comparison purposes. The groups are cereals, pulses, oilseeds, vegetables, root crops, fruit crops, stimulant crops and sugar cane. Stimulant crops consist of Chat, coffee and hops.

Crop yield per area (amount of crop harvested per amount of land cultivated) is the most commonly used impact indicator for agricultural productivity activities. Crop yields are inevitably affected by many factors, these are weather, input price, changes in farming practices, amounts of fertilizer used, quality of seed varieties,and use of irrigation.

3.2 Major Findings of the Year 2018/19 (2011 E.C.) Post-Harvest Crop Production Survey, Meher Season

The results of the year 2018/19 (2011 E.C.), Meher Season Post-harvest Crop Production Survey has been summarized and quantitative information with regard to farm management practice, land use and Utilization of agricultural produce will be made available at national and regional reporting levels, consecutively, following this report. This report, however, presents quantitative information on cropped land area and production of both temporary and permanent crops at Country and Regional reporting levels.

In this section of the report, therefore, brief discussions on the major findings of the Survey are presented as follows.

3.2.1 Grain Crops

Grain crops - refers to the major crop category that included cereals**,** pulses and oilseeds, which not only constituted the major food crops for the majority of the country's population

but also served as a source of income at household level and a contributer for the country's foreign currency earnings, among others.

The results of the year 2018/19 (2011 E.C.), Meher Season Post-harvest Crop Production Survey indicate that a total land area of about 12,727,191.21 hectares are covered by grain crops i.e. cereals, pulses and oilseeds, from which a total volume of about 315,602,058.49 quintals of grains are obtained, from private peasant holdings (See Table 1 below).

Table 1. Total Area and Production of Grain Crops for Private peasant holdings, 2018/19 (2011 E.C.), Meher Season

Crop Category	***Total Area in Hectares***	***%***	***Total Production in Quintals***	***%***
Cereals.....	10,358,890.13	81.39	277,638,380.98	87.97
Pulses.....	1,620,497.30	12.73	30,113,480.57	9.54
Oil Seeds …….	747,803.78	5.88	7,850,196.94	2.49
Grain Crops ……	12,727,191.21	100.00	315,602,058.49	100.00

Within the category of Grain crops**,** Cereals are the major food crops both in terms of the area they are planted and volume of production obtained. They are produced in larger volume compared with other crops because they are the principal staple crops. Cereals are grown in all the regions with varying quantity as shown in the survey results. The data in Table 2 well underpin this finding of the survey.

Out of the total grain crop area, 81.39% (10,358,890.13 hectares) was under cereals. Teff, maize, sorghum and wheat took up 24.17% (about 3,076,595.02 hectares), 18.60% (about 2,367,797.39 hectares), 14.38% (1,829,662.39 hectares) and 13.73% (1,747,939.31 hectares) of the grain crop area, respectively. As to production, the tables paint similar picture as that of the area. Cereals contributed 87.97% (about 277,638,380.98 quintals) of the grain production. Maize, teff, wheat and sorghum made up 30.08% (94,927,708.34 quintals), 17.12% (54,034,790.51 quintals), 15.33% (48,380,740.91 quintals) and 15.92% (50,243,680.72 quintals) of the grain production, in the same order.

The survey results show that the private peasant holders grow various crops for own consumption and/ or economic benefits. Pulses are also among the various crops produced in all the regions of the country after cereals. Pulses are grown in different volumes across the country as indicated in Table 2.

Pulses grown in 2018/19 (2011 E.C.) covered 12.73% (1,620,497.30 hectares) of the grain crop area and 9.54% (about 30,113,480.57 quintals) of the grain production was drawn from the same crops. Faba beans, haricot beans (white), haricot beans (red), and chick peas (white)

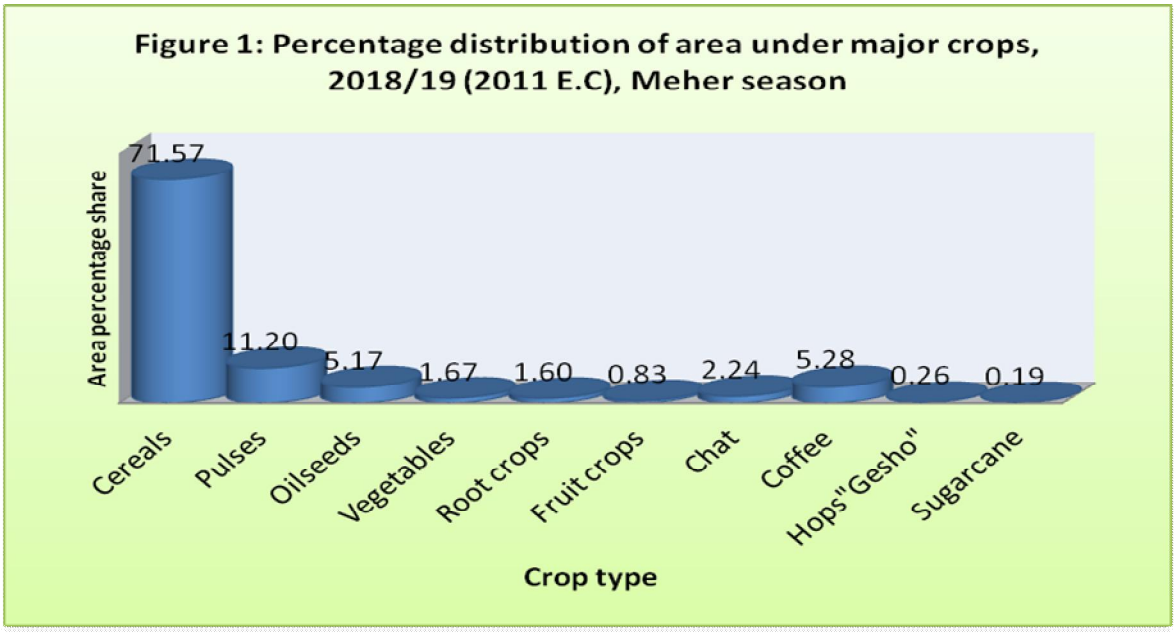
were planted to 3.87% (about 492,271.60 hectares), 0.69% (about 88,302.71 hectares), 1.57% (about 200,334.52 hectares) and 1.28% (about 163,067.24 hectares) of the grain crop area. The production obtained from faba beans, haricot beans(white) haricot beans (red) and chick peas (white) was 3.30% (about 10,419,535.14 quintals), 0.48**%** (about 1,508,230.37 quintals), 1.07**%** (3,374,971.33 quintals) and 1.05**%** (3,301,531.98 quintals) of the grain production, in that order.

Oilseeds refer to crops which are also classified within grain crops category**,** nonetheless**.** oilseeds are grown to flavour the food consumed at home and earn some cash for peasant holders in the country. Various oil crops are produced in all the regions with differing quantity as illustrated in the survey results. Table 2 underscores this point in detail.

Oil seeds added 5.88% (about 747,803.78 hectares) of the grain crop area and 2.49**%** (about 7,850,196.94 quintals) of the production to the national grain total. Neug, sesame and linseed covered 2.03% (about 257,950.40 hectares), 2.32% (about 294,819.49 hectares) and 0.66% (about 83,626.93 hectares) of the grain crop area and 0.94% (about 2,963,227.47 quintals), 0.64% (about 2,016,646.44 quintals) and 0.31% (about 966,855.92 quintals) of the grain production, respectively.

3.2.2 Vegetables

Vegetables - holders living near to urban centres largely practice vegetable farming. Most vegetables are not commonly practiced by the rural private peasant holders, hence the small volume of production recorded as well evidenced by the survey results. Figure 1 underlines this more in the report. Vegetables took up about 1.67% of the area under all crops at national level. However, of the total estimated area under vegetables, the lion share which is about 71.37% and 20.09% was under Red peppers and Ethiopian Cabbage, respectively (See Statistical Table 2). Production of vegetables contribute 2.23% of the total crops production, conversely,of the total production of vegetables, the above mentioned crops have the lions share, i.e. about 34.57% and 52.07%, in that order.



3.2.3 Root Crops

Root Crops - Some root crops like onion and garlic are indispensable to improve the taste and scent of the food we eat. Others like potatoes, sweet potatoes and taro/ Godere are among the list of major food crops that are consumed across the country. These and other economic importances prompt the peasant holders to grow many of the root crops as shown in the survey results. Table 2 substantiates this point in more details.

3.2.4 Fruit Crops

Fruit Crops – The survey results show that fruit crops grown by the private peasant holders cover only a small token area and production in the country. The number of holders practicing fruit farming is much less than that of grains or cereals as indicated in the tables.

About 119,908.57 hectares of land is under fruit crops in Ethiopia. Bananas contributed about 55.11% of the fruit crop area followed by avocadoes that contributed 16.48% of the area. More than 8,343,562.20 quintals of fruits was produced in the country. Bananas, Mangoes Avocados, Papayas, and Oranges took up 60.11%, 16.02%, 10.16% , 7.10% and 4.94% of the fruit production, respectively, as shown in Table 2.

Table 2: Area, Production and Yield of Crops For Private Peasant Holdings For Meher Season 2018/19 (2011 E.C)

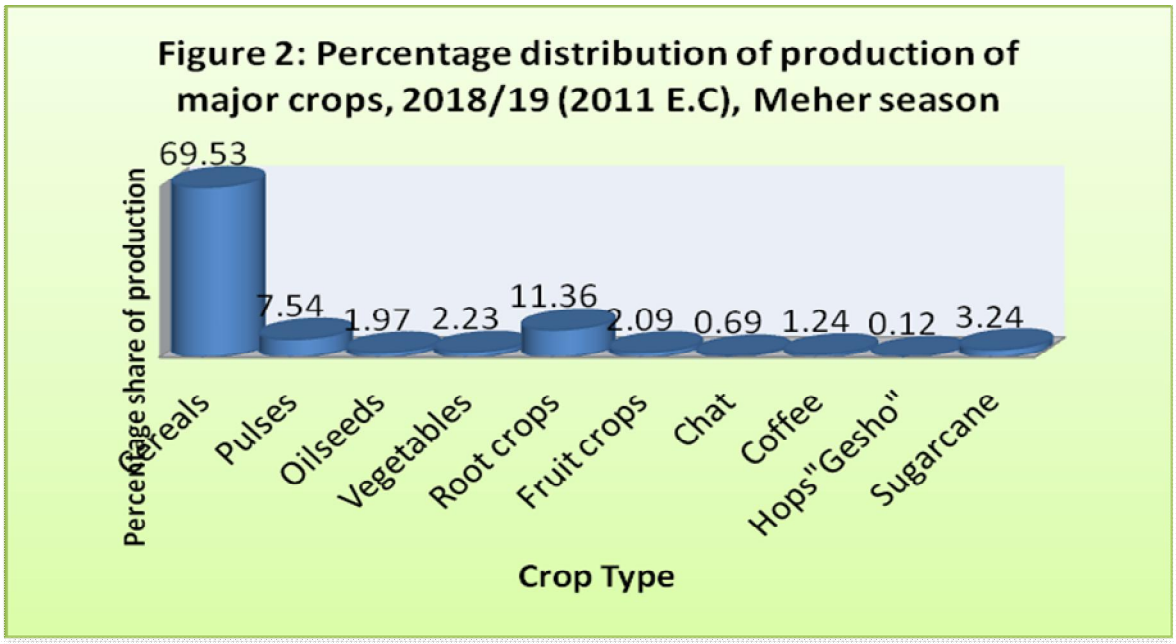
Ethiopia

Crop	Number of Holders	Area in Hectares	% Distribution	Production in Quintals	% Distribution	Yield (Qt/Ha)
Grain Crops. . ……..	15,997,013	12,727,191.21	100.00	315,602,058.49	100.00	
Cereals.....	15,150,420	10,358,890.13	81.31	277,638,380.98	87.92	
Teff.....	6,780,644	3,076,595.02	24.32	54,034,790.51	17.22	17.56
Barley.....…….	3,714,340	811,782.08	6.42	17,675,184.47	5.63	21.77
Wheat.....	4,761,643	1,747,939.31	13.78	48,380,740.91	15.39	27.64
Maize.....	9,863,145	2,367,797.39	18.50	94,927,708.34	30.03	39.92
Sorghum.....	4,739,613	1,829,662.39	14.13	50,243,680.72	15.70	27.36
Finger millet.....…….	1,669,551	446,909.00	3.53	10,356,295.66	3.30	23.17
Oats/'Aja'.....	162,918	14,843.08	0.12	301,439.40	0.10	20.31
Rice.....	184,915	63,361.86	0.50	1,718,540.95	0.55	27.12
Pulses.....	8,074,692	1,620,497.30	12.8	30,113,480.57	9.59	
Faba beans.....	3,987,723	492,271.60	3.89	10,419,535.14	3.32	21.17
Field peas.....	1,640,270	216,786.33	1.71	3,608,112.40	1.15	16.64
White Haricot beans…	788,190	88,302.71	0.70	1,508,230.37	0.48	17.08
Red Haricot beans…..	2,100,476	200,334.52	1.58	3,374,971.33	1.07	16.80
Chick-peas(Red).....	704,925	163,067.24	1.29	3,301,531.98	1.05	20.25
Chick-peas(White).....	216,627	76,718.89	0.61	1,290,199.89	0.41	16.82
Lentils.....	703,274	99,753.97	0.79	1,408,122.17	0.45	14.12
Grass peas.....	632,968	130,543.38	1.03	2,604,157.88	0.83	19.95
Soya beans.....	148,066	64,720.12	0.51	1,494,546.13	0.48	23.09
Fenugreek.....	521,309	22,344.12	0.18	288,299.94	0.09	12.90
Mung bean/"Masho"..	219,275	48,074.52	0.37	576,204.64	0.18	11.93
Gibto..... ….…..	92,441	17,579.90	0.14	239,568.71	0.08	13.63
Oilseeds.....	2,824,730	747,803.78	5.89	7,850,196.94	2.49	
Neug.....	778,999	257,950.40	2.04	2,963,227.47	0.94	11.49
Linseed.....	720,857	83,626.93	0.66	966,855.92	0.31	11.56
Groundnuts.....	376,977	84,237.01	0.65	1,440,912.59	0.44	17.23
Sunflower.....	152,106	6,489.00	0.05	80,394.80	0.03	12.37
Sesame..... ….…	474,747	294,819.49	2.33	2,016,646.44	0.64	6.83
Rapeseed.....	770,517	20,680.95	0.16	382,159.71	0.12	18.48
Vegetables.....…..	6,323,879	241,191.40	100.00	8,893,169.13	100.00	
Lettuce.....	41,963	244.92	0.10	2,163.35	0.02	8.83
Head Cabbage.....	439,049	5,170.52	2.15	314,837.53	3.54	60.89
Ethiopian Cabbage….	3,479,524	48,457.96	20.15	4,630,489.60	52.10	95.56
Tomatoes.....	195,984	4,322.31	1.65	235,837.51	2.61	51.21
Green peppers.....	1,206,321	10,473.07	4.22	622,475.59	6.99	57.66
Red peppers.....	2,055,964	172,142.19	71.58	3,074,571.09	34.59	17.86
Swiss chard.....	121,138	380.42	0.16	12,794.47	0.14	33.63
Root Crops.....	5,932,310	231,551.95	100.00	45,357,549.36	100.00	
Beetroot..... ..	408,052	3,831.61	1.67	315,778.41	10.37	82.41
Carrot..... …..	186,937	2,556.05	1.11	101,482.29	60.92	39.70
Onion.....	675,624	28,185.11	11.46	2,624,782.85	0.40	91.43
Potatoes..... …..	1,256,696	73,677.64	32.09	10,444,363.59	1.05	141.76
Yam/'Boye'.....	319,953	4,101.39	1.79	369,007.97	15.81	89.97
Garlic..... …..	1,953,748	21,754.49	9.47	1,957,400.45	4.16	89.94
Taro/'Godere'.....	1,931,839	56,065.32	24.42	14,633,644.48	7.15	261.01
Sweet potatoes.....	1,294,969	41,380.35	18.00	14,911,089.33	0.14	359.97
Fruit Crops.....	4,787,354	119,908.57	100.00	8,343,562.20	100.00	
Avocados.....	1,909,095	19,758.75	16.71	847,936.48	10.37	42.91
Bananas.....	3,050,798	66,081.22	55.55	5,015,286.29	60.92	75.97
Guavas.....	287,283	2,759.42	2.31	32,746.16	0.40	11.84
Lemons..... ..	208,025	1,848.72	1.24	94,477.06	1.05	46.31
Mangoes.....	1,589,983	19,497.92	16.21	1,337,049.26	69.68	69.68
Oranges..... ..	606,142	5,416.52	4.18	412,499.15	4.16	82.45
Papayas.....	706,180	4,009.62	3.34	592,051.08	7.15	147.20
Pineapples.....	36,114	536.41	0.45	11,516.72	0.14	21.47
Chat.....	3,219,970	323,643.90		2,747,770.98		8.37
Coffee.....	5,148,340	764,863.16		4,945,743.63		6.46
Hops.....	2,591,305	38,112.41		490,521.26		12.87
Sugar Cane.....	998,749	27,826.98		12,940,810.52		465.05

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	136,088,791.00	34,470,255.16	38,473,366.20	1,164,694.12	0.25	0.28	0.01

3.2.5 Stimulant crops

Stimulant crops – Farmers engaged in growing and producing stimulant crops such as coffee and Chat are greater in number than those growing fruits. The area and production of these crops are also larger than that of fruits since they earn a considerable amount of cash for the holders. Table 2 shows Chat and Coffee shared 2.24% and 5.28% of the area under all crops in the country and 2,747,770.98 and 4,945,743.63 quintals of produce was obtained from these crops in the same agricultural year respectively.



3.2.6 Sugar Cane

Sugar Cane - is grown in small areas in some parts of the country within the private peasant holdings. About 27,826.98 hectares of land was under sugar cane in the country, yielding an estimated total of 12,940,810.52 quintals of produce by the peasant holders. But the production is not usually used for industrial purposes. It is noticeably used up in household consumption.

3.2.7 Enset

Enset - is grown in south-western part of the country and covers considerable land area within the private holdings. The number of Enset trees to be harvested, in the current agricultural year, from all over the country is estimated to be 136,088,791.00 Thus, the total produce in the form of Amicho, Kocho, and Bula is 34,470,255.16 quinals, 38,473,366.20 quintals and 1,164,694.12 quintals respectively (see Table 4).

3.3 Comparison of the current year 2018/19 (2011 E.C.) Post - Harvest Crop yield with 2017/18 (2010 E.C), estimates.

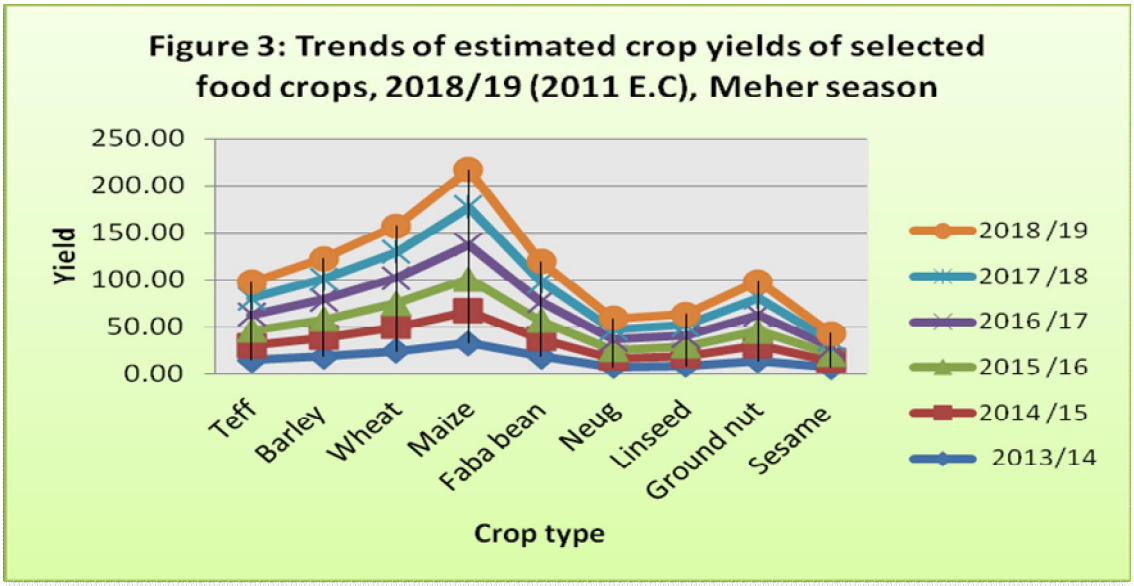
In this section of the report an attempt has been made to compare the post-harvest crop productivity estimates of selected important food crops obtained from the 2018/19 (2011 E.C.) Agricultural Sample Survey with last year i.e. 2017/18 (2010 E.C) crop yield estimates of the same crops.

The presentation of such comparisons are believed to give a bird's eye view whether or not the current year estimated increase in the volume of production over the last year estimate, is effected from increased cropped area or due to the attainment of enhanced crop yield or the contribution of both have brought the increment of the current year production, contributed but enhanced crop yield taken up the lion share, so as one can generally indicate the direction, the rate of change and the level of steps the agriculture sector taking up on the ladder of transformation to commercialized agriculture from its intial subsistence and back ward starting point. Of course, it should be noted that, except for the progress made during the the last two and half decades, the agricultural sector in Ethiopia had remained stagnant for centuries with limited progress in few specific areas.

Consequently, the outcome of such comparisons are believed to serve as problem area indicators for concerned stakeholders to develop and implement corrective measures, that could help to accelerate the speed of transforming the existing agriculture into commercial agriculture. Thus, to meet the objectives mentioned so far, the following brief discussions on the results of crop productivity comparisons was made for selected important food crops at country level as follows:

Since the rain fall was normal and adequate in the current crop-growing season, the 2018/19 (2011 E.C.) main season crop production has shown significant increament both in the estimated cropped land area and volume of grain crops production. As indicated in Table 3, the 2018/19 (2011 E.C.) estimated cropped area and volume of production have increased by about 0.39 % and 3.10% over last year 2017/18 (2010 E.C) post harvest estimate.

Conversely, with regard to estimated crop yield, crops such as maze, teff, and wheat within the category of cereals have shown an increment, that ranges from 1.65 Qt/Ha to 23.21 Qt/Ha for Maize; from 0.48 Qt/Ha to 19.89 Qt/Ha for Teff; and from 1.16 to 13.21 Qt/Ha for Wheat over the last five years (2013/14 - 2017/18) Post-harvest estimates. Similarly crops such as faba beans and linseed have shown an increment that ranges from 0.36 to 14.91 Qt/Ha for faba beans and from 3.60 to 25.67 Qt/Ha for linseed over 2013/14 and 2017/18 estimates. (See Figure 3).



Following the same Pattern, the results of the 2018/19 (2011 E.C.), Post-harvest agricultural Sample Survey, indicates that both the largest grain cropped land area and the highest volume of production obtained in the current Meher season is reported for Oromia, Amhara, SNNP, Tigray and Benshangul-Gumuz Regions.

Table 3 - Estimate of Area and Production of Grain Crops for 2017/18 and 2018/19, Meher Season

Region	*Area in Hectares*			*Production in Quintals*		
	2017/18	*2018/19*	*% Change*	*2017/18*	*2018/19*	*% Change*
TIGRAY	*941,091.28*	*941,109.61*	*0.00*	*18,589,665.02*	*19,432,966.43*	*4.54*
AFAR	*9,062.46*	*9,062.46*	*0.00*	*207,924.28*	*207,924.28*	*0.00*
AMHARA	*4,479,345.02*	*4,493,847.15*	*0.32*	*100,520,273.48*	*103,102,649.81*	*2.57*
OROMIA	*5,757,293.43*	*5,764,272.99*	*0.12*	*151,080,010.79*	*155,393,448.31*	*2.86*
SOMALI	*73,933.86*	*73,933.86*	*0.00*	*1,665,620.52*	*1,665,620.52*	*0.00*
BENISHANGUL-GUM.	*253,409.72*	*253,681.56*	*0.11*	*5,818,801.22*	*6,272,383.51*	*7.80*
S.N.N.P.R	*1,133,354.78*	*1,159,993.92*	*2.35*	*27,640,228.02*	*28,980,614.95*	*4.85*
GAMBELA	*6,795.66*	*7,886.55*	*16.05*	*168,776.68*	*182,193.41*	*7.95*
HARARI	*11,570.41*	*11,454.92*	*-1.00*	*206,235.11*	*181,866.10*	*-11.82*
DIRE DAWA	*12,025.66*	*11,948.19*	*-0.64*	*228,847.96*	*182,391.17*	*-20.30*
ALL REGIONS	*12,677,882.27*	*12,727,191.21*	*0.39*	*306,126,383.06*	*315,602,058.49*	*3.10*

Accordingly, the total grain cropped area reported for Oromia, Amhara, S.N.N.P.R, Tigray and Benshangul-Gumuz Regions have increased by about 0.12%, 0.32%, 2.35%, 0.00% and 0.11% over last year 2017/18 (2010 E.C) post harvest estimate respectivey. Following the same pattern the current year harvested volume of production reported for the above mentioned regions have increased by about 2.86%, 2.57%, 4.85%, 4.54% and 7.80% over last year's 2017/18 (2010 E.C) post harvest estimate of the regions, in that order (For details see Table .3)

National and Regional Statistical tables

Table 4 - Estimate of Area, 2018/19 (2011 E.C), Meher Season
Ethiopia Production and Yield of Crops for 2017/18 (2010 E.C) and

Crop	Area in Hectares			Production in Quintals			Yield(Quintals/Hectare)		
	2017/18	2018/19	% Change	2017/18	2018/19	% Change	2017/18	2018/19	% Change
Grain Crops. . …..	12,677,882.27	12,727,191.21	0.39	306,126,383.06	315,602,058.49	3.10			
Cereals.....	10,232,582.23	10,358,890.13	1.23	267,789,764.02	277,638,380.98	3.68			
Teff.....	3,023,283.50	3,076,595.02	1.76	52,834,011.56	54,034,790.51	2.27	17.48	17.56	0.48
Barley.....	951,993.15	811,782.08	-14.73	20,529,963.72	17,675,184.47	-13.91	21.57	21.77	0.94
Wheat.....	1,696,907.05	1,747,939.31	3.01	46,429,657.12	48,380,740.91	4.20	27.36	27.68	1.16
Maize.....	2,128,948.91	2,367,797.39	11.22	83,958,872.44	94,927,708.34	13.06	39.44	40.09	1.65
Sorghum.....	1,896,389.29	1,829,662.39	-3.52	51,692,525.40	50,243,680.72	-2.80	27.26	27.46	0.74
Finger millet.....	456,057.31	446,909.00	-2.01	10,308,231.53	10,356,295.66	0.47	22.60	23.17	2.54
Oats/'Aja'.....	25,896.22	14,843.08	-42.68	526,318.93	301,439.40	-42.73	20.32	20.31	-0.06
Rice.....	53,106.79	63,361.86	19.31	1,510,183.30	1,718,540.95	13.80	28.44	27.12	-4.63
Pulses.....	1,598,806.51	1,620,497.30	1.36	29,785,880.89	30,113,480.57	1.10			
Faba beans.....	437,106.04	492,271.60	12.62	9,217,615.35	10,419,535.14	13.04	21.09	21.17	0.36
Field peas.....	220,508.39	216,786.33	-1.69	3,685,190.65	3,608,112.40	-2.09	16.71	16.64	-0.40
White Haricot beans	89,382.68	88,302.71	-1.21	1,482,128.42	1,508,230.37	1.76	16.58	17.08	3.02
Red Haricot beans.	216,803.91	200,334.52	-7.60	3,727,664.85	3,374,971.33	-9.46	17.19	16.85	-2.00
Chick-peas(Red).....	242,703.73	163,067.24	-32.81	4,994,255.50	3,301,531.98	-33.89	20.58	20.25	-1.62
Chick-peas(White)...	-	76,718.89	-	-	1,290,199.89	-	-	16.82	-
Lentils.....	119,046.04	99,753.97	-16.21	1,751,435.58	1,408,122.17	-19.60	14.71	14.12	-4.04
Grass peas.....	143,085.60	130,543.38	-8.77	2,866,016.31	2,604,157.88	-9.14	20.03	19.95	-0.41
Soya beans.....	38,072.70	64,720.12	69.99	864,678.69	1,494,546.13	72.84	22.71	23.09	1.68
Fenugreek.....	32,587.00	22,344.12	-31.43	436,373.92	288,299.94	-33.93	13.39	12.90	-3.64
Mung bean/"Masho"	41,633.20	48,074.52	15.47	514,227.41	576,204.64	12.05	12.35	11.99	-2.95
Gibto.....	17,877.23	17,579.90	-1.66	246,294.20	239,568.71	-2.73	13.78	13.63	-1.11
Oilseeds.....	846,493.53	747,803.78	-11.66	8,550,738.16	7,850,196.94	-8.19			
Neug.....	290,494.94	257,950.40	-11.20	3,233,448.82	2,963,227.47	-8.36	11.13	11.49	3.21
Linseed.....	79,044.51	83,626.93	5.80	882,096.51	966,855.92	9.61	11.16	11.56	3.60
Groundnuts.....	80,841.57	84,237.01	4.20	1,451,728.20	1,440,912.59	-0.75	17.96	17.11	-4.76
Sunflower.....	7,966.73	6,489.00	-18.55	95,768.76	80,394.80	-16.05	12.02	12.39	3.07
Sesame.....	370,141.06	294,819.49	-20.35	2,559,034.30	2,016,646.44	-21.20	6.91	6.84	-1.01
Rapeseed.....	18,004.73	20,680.95	14.86	328,661.57	382,159.71	16.28	18.25	18.48	1.25
Vegetables.....	208,985.91	241,191.40	15.41	7,391,544.84	8,893,169.13	20.32			
Lettuce.....	145.19	244.92	68.69	1,529.96	2,163.35	41.40	10.54	8.83	-16.20
Head Cabbage.....	6,006.97	5,170.52	-13.92	365,129.00	314,837.53	-13.77	60.78	60.89	0.18
Ethiopian Cabbage	34,127.53	48,457.96	41.99	3,449,918.26	4,630,489.60	34.22	101.09	95.56	-5.47
Tomatoes.....	5,235.19	4,322.31	-17.44	277,745.38	235,837.51	-15.09	53.05	54.56	2.85
Green peppers.....	10,207.26	10,473.07	2.60	632,404.53	622,475.59	-1.57	61.96	59.44	-4.07
Red peppers.....	152,752.94	172,142.19	12.69	2,647,225.30	3,074,571.09	16.14	17.33	17.86	3.06
Swiss chard.....	510.83	380.42	-25.53	17,592.41	12,794.47	-27.27	34.44	33.63	-2.34
Root Crops.....	233,290.13	231,551.95	-0.75	45,609,822.12	45,357,549.36	-0.55			
Beetroot.....	2,890.07	3,831.61	32.58	256,385.13	315,778.41	23.17	88.71	82.41	-7.10
Carrot.....	4,902.90	2,556.05	-47.87	173,334.27	101,482.29	-41.45	35.35	39.70	12.31
Onion.....	31,673.21	28,185.11	-11.01	2,938,875.85	2,624,782.85	-10.69	92.79	93.13	0.36
Potatoes.....	69,610.81	73,677.64	5.84	9,689,696.44	10,444,363.59	7.79	139.20	141.76	1.84
Yam/'Boye'.....	5,356.14	4,101.39	-23.43	487,404.77	369,007.97	-24.29	91.00	89.97	-1.13
Garlic.....	19,412.49	21,754.49	12.06	1,782,218.93	1,957,400.45	9.83	91.81	89.98	-2.00
Taro/'Godere'.....	45,995.28	56,065.32	21.89	11,797,769.33	14,633,644.48	24.04	256.50	261.01	1.76
Sweet potatoes.....	53,449.23	41,380.35	-22.58	18,484,137.40	14,911,089.33	-19.33	345.83	360.34	4.20
Fruit Crops.....	104,421.80	119,908.57	14.83	7,774,306.92	8,343,562.20	7.32			
Avocados.....	18,021.13	19,758.75	9.64	814,317.63	847,936.48	4.13	45.19	42.91	-5.04
Bananas.....	59,298.19	66,081.22	11.44	4,936,022.34	5,015,286.29	1.61	83.24	75.90	-8.82
Guavas.....	2,469.91	2,759.42	11.72	31,998.44	32,746.16	2.34	12.96	11.87	-8.43
Lemons.....	1,459.78	1,848.72	26.64	79,250.22	94,477.06	19.21	54.29	51.10	-5.87
Mangoes.....	15,373.04	19,497.92	26.83	1,049,807.79	1,337,049.26	27.36	68.29	68.57	0.42
Oranges.....	3,705.50	5,416.52	46.18	305,614.80	412,499.15	34.97	82.48	76.16	-7.67
Papayas.....	3,484.46	4,009.62	15.07	543,550.24	592,051.08	8.92	155.99	147.66	-5.34
Pineapples.....	609.80	536.41	-12.04	13,745.47	11,516.72	-16.21	22.54	21.47	-4.75
Chat.....	262,071.88	323,643.90	23.49	2,354,538.01	2,747,770.98	16.70	8.98	8.49	-5.46
Coffee.....	725,961.24	764,863.16	5.36	4,492,298.08	4,945,743.63	10.09	6.19	6.47	4.46
Hops.....	31,196.08	38,112.41	22.17	396,479.32	490,521.26	23.72	12.71	12.87	1.26
Sugar Cane.....	29,536.49	27,826.98	-5.79	13,470,350.06	12,940,810.52	-3.93	456.06	465.05	1.97

Table 4 - Area, Production and Yield of Crops for Private Peasant Holdings for 2018/19 (2011 E.C) Meher Season

Tigray Region

Crop	Number of Holders	Area In Hectares	Production In Quintals	Yield (Qt/Ha)
Grain Crops. . . . . .. ….	1,059,215.00	941,109.61	19,432,966.43	
Cereals.....	1,052,968.00	785,099.80	17,957,074.07	
Teff.....	510,358.00	176,545.98	2,838,337.41	16.08
Barley.....	401,455.00	91,579.93	1,686,853.84	18.42
Wheat.....	409,174.00	119,580.03	2,514,112.95	21.02
Maize.....	659,079.00	67,675.62	1,735,972.03	25.65
Sorghum.....	438,129.00	242,716.17	7,092,509.41	29.22
Finger millet.....	298,449.00	85,575.12	2,054,235.61	24.01
Oats/'Aja'.....	2,127.00	203.83	4,087.43	20.05
Rice.....	*	1,223.13	30,965.39	25.32
Pulses.....	365,411.00	48,103.43	741,840.09	
Faba beans.....	198,464.00	12,342.62	208,790.10	16.92
Field peas.....	63,335.00	6,058.24	92,245.57	15.23
Haricot beans white..... .	22,711.00	2,923.93	43,575.99	14.9
Haricot beans red.....	16,609.00	*	*	*
Chick-peas(Red).....	36,653.00	5,672.42	93,671.38	16.51
Chick-peas(White)).....	-	-	-	-
Lentils.....	74,078.00	9,609.46	123,962.85	12.9
Grass peas.....	32,223.00	7,352.54	128,500.56	17.48
Soya beans.....	*	*	*	*
Fenugreek.....	17,706.00	272.89	2,241.76	8.21
Mung bean /"Masho"…..	*	*	*	*
Gibto.....	-	-	-	-
Oilseeds.....	196,217.00	107,906.37	734,052.26	
Neug.....	32,625.00	6,419.50	93,090.40	14.5
Linseed.....	50,235.00	5,360.52	56,862.78	10.61
Groundnuts.....	*	*	*	*
Safflower.....	3,041.00	*	*	*
Sesame.....	123,513.00	95,943.72	582,333.48	6.07
Rape seed.....	3,234.00	*	*	*
Vegetables.....	211,440.00	3,046.16	73,988.51	
Lettuce.....	5,359.00	20.69	219.36	10.6
Head Cabbage.....	4,429.00	77.01	*	*
Ethiopian Cabbage.....	*	*	*	*
Tomatoes.....	30,728.00	366.10	18,342.99	50.1
Green peppers.....	48,973.00	220.43	12,608.99	57.2
Red peppers.....	144,259.00	2,294.62	36,870.23	16.07
Swiss chard.....	6,326.00	16.29	*	*
Root Crops.....	99,135.00	3,006.37	203,188.73	
Beetroot.....	*	*	*	*
Carrot.....	2,025.00	*	*	*
Onion.....	28,682.00	1,299.06	82,233.86	63.3
Potatoes.....	12,156.00	604.48	47,420.26	78.45
Yam/'Boye'.....	-	-	-	-
Garlic.....	67,868.00	1,002.67	73,041.67	72.85
Taro/'Godere'.....	-	-	-	-
Sweet potatoes.....	1,267.00	*	*	*
Fruit Crops.....	59,283.00	1,626.50	44,178.36	
Avocados.....	*	*	*	*
Bananas.....	3,337.00	*	*	*
Guavas.....	15,940.00	106.72	1,888.46	17.7
Lemons.....	15,750.00	*	*	*
Mangoes.....	13,695.00	358.66	6,301.49	17.57
Oranges.....	15,992.00	*	*	*
Papayas.....	12,633.00	114.02	4,068.74	35.68
Pineapples.....	-	-	-	-
Chat.....	*	*	*	*
Coffee.....	10,969.00	203.86	*	*
Hops.....	158,385.00	2,066.22	90,071.24	43.59
Sugar Cane.....	*	*	*	*

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	-	-	-	-	-	-	-

Table 5 - Area, Production and Yield of Crops for Private Peasant Holdings for 2018/19 (2011 E.C) Meher Season

Afar Region

Crop	Number of Holders	Area In Hectares	Production In Quintals	Yield (Qt/Ha)
Grain Crops. . . . . .. ….	8,350.00	9,062.46	207,924.28	
Cereals.....	8,350.00	6,961.79	188,989.33	
Teff.....	*	*	*	*
Barley.....	*	*	*	*
Wheat.....	-	-	-	-
Maize.....	6,057.00	4,308.23	138,009.12	32.03
Sorghum.....	*	*	*	*
Finger millet.....	-	-	-	-
Oats/'Aja'.....	-	-	-	-
Rice.....	-	-	-	-
Pulses.....	*	*	*	
Faba beans.....	-	-	-	-
Field peas.....	-	-	-	-
Haricot beans white..... .	*	*	*	*
Haricot beans red.....	*	*	*	*
Chick-peas(Red).....	-	-	-	-
Chick-peas(White)).....	-	-	-	-
Lentils.....	-	-	-	-
Grass peas.....	-	-	-	-
Soya beans.....	-	-	-	-
Fenugreek.....	-	-	-	-
Mung bean /"Masho"…...	*	*	*	*
Gibto.....	-	-	-	-
Oilseeds.....	*	*	*	
Neug.....	-	-	-	-
Linseed.....	-	-	-	-
Groundnuts.....	-	-	-	-
Safflower.....	*	*	*	*
Sesame.....	*	*	*	*
Rape seed.....	-	-	-	-
Vegetables.....	1,483.00	*	*	
Lettuce.....	-	-	-	-
Head Cabbage.....	-	-	-	-
Ethiopian Cabbage.....	-	-	-	-
Tomatoes.....	877.00	*	*	*
Green peppers.....	*	*	*	*
Red peppers.....	*	*	*	*
Swiss chard.....	-	-	-	-
Root Crops.....	818.00	*	*	
Beetroot.....	-	-	-	-
Carrot.....	-	-	-	-
Onion.....	*	*	*	*
Potatoes.....	-	-	-	-
Yam/'Boye'.....	-	-	-	-
Garlic.....	-	-	-	-
Taro/'Godere'.....	-	-	-	-
Sweet potatoes.....	*	*	*	*
Fruit Crops.....	721.00	7.83	*	
Avocados.....	-	-	-	-
Bananas.....	*	*	*	*
Guavas.....	*	*	*	*
Lemons.....	*	*	*	*
Mangoes.....	*	*	*	*
Oranges.....	-	-	-	-
Papayas.....	*	*	*	*
Pineapples.....	-	-	-	-
Chat.....	-	-	-	-
Coffee.....	-	-	-	-
Hops.....	-	-	-	-
Sugar Cane.....	-	-	-	-

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	-	-	-	-	-	-	-

Table 6 - Area, Production and Yield of Crops for Private Peasant Holdings for 2018/19 (2011 E.C) Meher Season

Amhara Region

Crop	Number of Holders	Area In Hectares	Production In Quintals	Yield (Qt/Ha)
Grain Crops. . . . . .. ….	4,811,089	4,493,847.15	103,102,649.81	
Cereals.....	4,730,980	3,506,080.35	88,087,369.58	
Teff.....	2,698,646	1,200,986.74	21,614,861.85	18.00
Barley.....	1,219,719	238,164.36	4,817,694.34	20.23
Wheat.....	1,861,758	570,742.91	14,820,433.79	25.97
Maize.....	2,990,535	559,981.55	22,844,483.11	40.80
Sorghum.....	1,292,371	643,170.00	17,040,820.52	26.50
Finger millet.....	777,058	248,292.40	5,710,949.96	23.00
Oats/'Aja'.....	52,081	3,055.08	45,182.12	14.79
Rice.....	113,937	41,687.30	1,192,943.90	28.62
Pulses.....	2,641,774	723,615.60	12,737,910.32	
Faba beans.....	1,421,375	191,788.53	3,662,169.11	19.09
Field peas.....	651,013	85,322.34	1,304,990.23	15.29
Haricot beans white..... .	241,300	48,058.97	836,900.35	17.41
Haricot beans red.....	177,250	25,795.10	443,733.07	17.20
Chick-peas(Red).....	417,574	93,218.97	1,736,463.73	18.63
Chick-peas(White)).....	77,309	28,566.87	551,850.86	19.32
Lentils.....	433,098	68,265.62	935,842.28	13.71
Grass peas.....	396,238	86,427.13	1,637,827.22	18.95
Soya beans.....	50,410	*	*	*
Fenugreek.....	199,629	10,755.96	148,054.37	13.76
Mung bean /"Masho"….	176,345	36,585.53	457,570.54	12.51
Gibto.....	87,442	17,019.86	239,504.61	14.07
Oilseeds.....	1,227,115	264,151.20	2,277,369.90	
Neug.....	312,093	56,814.97	505,996.02	8.91
Linseed.....	316,446	21,443.45	152,102.35	7.09
Groundnuts.....	53,488	*	*	*
Safflower.....	101,696	4,942.99	61,528.61	12.45
Sesame.....	247,059	159,509.94	1,169,882.36	7.33
Rape seed.....	387,836	11,008.25	204,329.70	18.56
Vegetables.....	1,551,994	93,291.96	1,898,989.15	
Lettuce.....	12,157	*	*	*
Head Cabbage.....	113,099	1,422.29	105,532.77	74.20
Ethiopian Cabbage.....	246,866	848.77	69,305.11	81.65
Tomatoes.....	67,413	894.26	74,225.09	83.00
Green peppers.....	230,920	*	*	*
Red peppers.....	1,026,762	87,350.44	1,499,934.42	17.17
Swiss chard.....	43,895	*	*	*
Root Crops.....	1,521,618	36,149.86	4,710,174.89	
Beetroot.....	57,222	325.96	20,958.21	64.30
Carrot.....	48,548	663.34	36,614.88	55.20
Onion.....	231,231	10,465.76	1,368,900.24	130.80
Potatoes.....	470,030	17,175.42	2,588,262.25	150.70
Yam/'Boye'.....	-	-	-	-
Garlic.....	1,013,748	6,970.38	591,219.54	84.82
Taro/'Godere'.....	-	-	-	-
Sweet potatoes.....	27,997	*	*	*
Fruit Crops.....	489,401	6,168.95	304,609.50	
Avocados.....	49,490	404.60	*	*
Bananas.....	177,324	1,732.81	42,771.13	24.68
Guavas.....	67,118	478.42	8,706.48	18.20
Lemons.....	44,337	490.59	42,912.07	87.47
Mangoes.....	195,900	1,506.46	82,399.68	54.70
Oranges.....	136,866	1,018.42	72,359.17	71.05
Papayas.....	69,600	536.60	55,460.97	103.36
Pineapples.....	*	*	*	*
Chat.....	269,996	10,629.28	67,689.91	6.37
Coffee.....	465,620	10,569.55	36,858.07	3.49
Hops.....	1,648,415	27,614.71	253,294.06	9.17
Sugar Cane.....	45,868	4,490.99	*	*

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	-	-	-	-	-	-	-

Table 7 - Area, Production and Yield of Crops for Private Peasant Holdings for 2018/19 (2011 E.C) Meher Season

Oromia Region

Crop	Number of Holders	Area In Hectares	Production In Quintals	Yield (Qt/Ha)
Grain Crops. . . . . .. ….	6,469,309	5,764,272.99	155,393,448.31	
Cereals.....	6,254,482	4,858,959.99	139,168,163.36	
Teff.....	2,573,006	1,431,869.73	25,628,688.88	17.90
Barley.....	1,293,225	386,569.22	9,325,076.44	24.12
Wheat.....	1,715,170	897,118.00	26,852,876.15	29.93
Maize.....	4,495,507	1,324,274.98	54,383,119.44	41.07
Sorghum.....	2,030,275	718,966.58	20,531,636.06	28.56
Finger millet.....	459,407	82,044.16	2,010,743.20	24.51
Oats/'Aja'.....	92,725	11,212.68	246,785.17	22.01
Rice.....	29,778	*	*	*
Pulses.....	2,926,275	584,896.19	12,064,333.56	
Faba beans.....	1,481,697	212,540.97	5,035,982.59	23.69
Field peas.....	487,577	83,372.40	1,534,473.67	18.41
Haricot beans white..... .	431,249	30,502.27	509,614.93	16.71
Haricot beans red.....	751,343	69,939.44	1,304,278.93	18.65
Chick-peas(Red).....	214,947	58,143.64	1,354,089.30	23.29
Chick-peas(White)).....	104,780	43,386.75	678,580.63	15.64
Lentils.....	180,098	21,431.65	344,202.40	16.06
Grass peas.....	198,293	36,443.97	833,459.52	22.87
Soya beans.....	33,543	*	*	*
Fenugreek.....	252,807	9,905.06	123,864.49	12.51
Mung bean /"Masho"….	*	*	*	*
Gibto.....	*	*	*	*
Oilseeds.....	1,143,786	320,416.81	4,160,951.39	
Neug.....	391,135	182,196.91	2,257,909.58	12.39
Linseed.....	287,142	55,049.13	745,987.50	13.55
Groundnuts.....	230,897	50,121.08	815,968.88	16.28
Safflower.....	33,998	1,019.15	12,719.42	12.48
Sesame.....	58,959	23,065.90	158,598.34	6.88
Rape seed.....	343,891	8,964.65	169,767.69	18.94
Vegetables.....	2,301,057	79,251.95	2,784,793.65	
Lettuce.....	19,526	*	1,943.99	*
Head Cabbage.....	244,736	2,474.91	134,103.42	54.19
Ethiopian Cabbage.....	1,202,898	12,820.26	1,221,179.42	95.25
Tomatoes.....	52,539	1,909.82	125,257.80	65.59
Green peppers.....	696,991	5,068.43	302,111.52	59.61
Red peppers.....	637,366	56,698.99	991,055.51	17.48
Swiss chard.....	51,874	186.06	9,141.99	49.13
Root Crops.....	2,108,158	86,786.92	17,502,308.55	
Beetroot.....	277,052	1,793.09	161,687.20	90.17
Carrot.....	98,032	1,519.99	52,881.29	34.79
Onion.....	289,100	12,733.71	873,052.48	68.56
Potatoes.....	349,898	36,414.07	4,464,577.76	122.61
Yam/'Boye'.....	21,300	*	*	*
Garlic.....	728,806	11,333.28	1,049,321.03	92.59
Taro/'Godere'.....	520,466	7,706.11	1,622,800.63	210.59
Sweet potatoes.....	514,282	15,090.19	9,277,988.17	614.84
Fruit Crops.....	1,810,650	38,341.10	2,273,217.58	
Avocados.....	621,896	6,742.50	293,627.53	43.55
Bananas.....	1,209,664	20,946.64	1,314,315.46	62.75
Guavas.....	130,101	1,589.75	18,865.26	11.87
Lemons.....	49,044	182.70	8,281.81	45.33
Mangoes.....	597,545	5,840.11	363,155.15	62.18
Oranges.....	232,078	2,043.12	132,402.08	64.80
Papayas.....	212,053	968.46	142,459.50	147.10
Pineapples.....	*	*	*	*
Chat.....	2,013,268	228,063.37	1,792,775.48	7.86
Coffee.....	2,047,360	531,702.73	3,435,447.12	6.46
Hops.....	524,501	6,218.65	142,292.70	22.88
Sugar Cane.....	312,039	7,587.42	3,491,820.69	460.21

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	*54,388,513.00*	*12,282,031.47*	*13,841,292.91*	*793,823.92*	*0.23*	*0.25*	*0.01*

Table 8 - Area, Production and Yield of Crops for Private Peasant Holdings for 2018/19 (2011 E.C) Meher Season

Somali Region

Crop	Number of Holders	Area In Hectares	Production In Quintals	Yield (Qt/Ha)
Grain Crops. . . . . .. ….	111,424.00	73,933.86	1,665,620.52	
Cereals.....	110,375.00	71,019.56	1,616,664.88	
Teff.....	*	*	*	*
Barley.....	*	*	*	*
Wheat.....	*	*	*	*
Maize.....	65,032.00	23,792.38	574,831.11	24.16
Sorghum.....	79,036.00	41,271.04	950,832.54	23.04
Finger millet.....	-	-	-	-
Oats/'Aja'.....	-	-	-	-
Rice.....	-	-	-	-
Pulses.....	*	*	*	
Faba beans.....	-	-	-	-
Field peas.....	-	-	-	-
Haricot beans white..... .	-	-	-	-
Haricot beans red.....	*	*	*	*
Chick-peas(Red).....	-	-	-	-
Chick-peas(White)).....	-	-	-	-
Lentils.....	-	-	-	-
Grass peas.....	-	-	-	-
Soya beans.....	-	-	-	-
Fenugreek.....	-	-	-	-
Mung bean /"Masho"…..	-	-	-	-
Gibto.....	-	-	-	-
Oilseeds.....	*	*	*	
Neug.....	-	-	-	-
Linseed.....	-	-	-	-
Groundnuts.....	*	*	*	*
Safflower.....	-	-	-	-
Sesame.....	*	*	*	*
Rape seed.....	-	-	-	-
Vegetables.....	10,632.00	*	4,867.30	
Lettuce.....	-	-	-	-
Head Cabbage.....	-	-	-	-
Ethiopian Cabbage.....	-	-	-	-
Tomatoes.....	6,753.00	324.69	*	*
Green peppers.....	*	*	*	*
Red peppers.....	-	-	-	-
Swiss chard.....	-	-	-	-
Root Crops.....	15,764.00	*	*	
Beetroot.....	-	-	-	-
Carrot.....	-	-	-	-
Onion.....	13,295.00	*	*	*
Potatoes.....	-	-	-	-
Yam/'Boye'.....	-	-	-	-
Garlic.....	*	*	*	*
Taro/'Godere'.....	-	-	-	-
Sweet potatoes.....	*	*	*	*
Fruit Crops.....	35,634.00	1,644.69	167,579.99	
Avocados.....	-	-	-	-
Bananas.....	7,816.00	*	*	*
Guavas.....	*	*	*	*
Lemons.....	17,306.00	*	*	*
Mangoes.....	*	*	*	*
Oranges.....	29,012.00	467.64	72,648.28	155.35
Papayas.....	*	*	*	*
Pineapples.....	-	-	-	-
Chat.....	40,324.00	10,438.54	47,333.50	4.53
Coffee.....	*	*	*	*
Hops.....	-	-	-	-
Sugar Cane.....	-	-	-	-

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	-	-	-	-	-	-	-

Table 9 - Area, Production and Yield of Crops for Private Peasant Holdings for 2018/19 (2011 E.C) Meher Season

Binishangul-Gumuz Region

Crop	Number of Holders	Area In Hectares	Production In Quintals	Yield (Qt/Ha)
Grain Crops. . . . . .. ….	261,917	253,681.56	6,272,383.51	
Cereals.....	256,880	179,253.07	5,127,313.42	
Teff.....	51,301	29,726.64	432,135.13	14.54
Barley.....	7,766	1,687.07	26,372.26	15.63
Wheat.....	11,710	3,033.60	73,227.87	24.14
Maize.....	217,107	62,287.85	2,539,863.66	40.78
Sorghum.....	147,627	56,675.14	1,519,956.31	26.82
Finger millet.....	38,415	21,311.26	426,554.87	20.02
Oats/'Aja'.....	*	*	*	*
Rice.....	7,443	*	*	*
Pulses.....	100,354	30,505.61	596,098.82	
Faba beans.....	8,657	998.71	19,984.78	20.01
Field peas.....	*	*	*	*
Haricot beans white..... .	13,952	*	*	*
Haricot beans red.....	43,805	5,598.61	97,097.14	17.34
Chick-peas(Red).....	2,856	*	*	*
Chick-peas(White)).....	*	*	*	*
Lentils.....	*	*	*	*
Grass peas.....	*	*	*	*
Soya beans.....	38,845	19,671.99	416,300.27	21.16
Fenugreek.....	*	*	*	*
Mung bean /"Masho"…..	3,690	*	*	*
Gibto.....	*	*	*	*
Oilseeds.....	122,092	43,922.88	548,971.27	
Neug.....	37,487	11,650.53	98,041.78	8.42
Linseed.....	20,691	973.23	5,732.56	5.89
Groundnuts.....	60,745	17,174.96	348,628.02	20.3
Safflower.....	*	*	*	*
Sesame.....	38,139	14,026.78	94,920.27	6.77
Rape seed.....	*	*	*	*
Vegetables.....	48,837	2,834.74	34,487.95	
Lettuce.....	*	*	*	*
Head Cabbage.....	2,334	*	*	*
Ethiopian Cabbage.....	17,072	274.48	5,765.35	21
Tomatoes.....	3,204	*	*	*
Green peppers.....	8,119	*	*	*
Red peppers.....	25,911	*	21,185.79	*
Swiss chard.....	-	-	-	-
Root Crops.....	69,381	2,609.48	438,150.57	
Beetroot.....	709	*	*	*
Carrot.....	1,284	*	*	*
Onion.....	4,436	62.26	3,956.18	63.54
Potatoes.....	9,733	*	*	*
Yam/'Boye'.....	*	*	*	*
Garlic.....	8,140	*	*	*
Taro/'Godere'.....	9,474	*	*	*
Sweet potatoes.....	46,074	890.41	129,569.77	145.52
Fruit Crops.....	140,260	3,948.61	237,704.63	
Avocados.....	8,004	*	*	*
Bananas.....	62,535	1,102.59	88,316.22	80.1
Guavas.....	17,426	57.95	*	*
Lemons.....	14,186	75.73	2,672.38	35.29
Mangoes.....	96,399	2,151.96	117,223.71	54.47
Oranges.....	26,218	*	6,331.00	*
Papayas.....	35,338	280.52	23,161.33	82.57
Pineapples.....	*	*	*	*
Chat.....	31,715	3,309.70	65,473.23	19.78
Coffee.....	35,380	*	*	*
Hops.....	8,718	79.53	*	*
Sugar Cane.....	1,791	*	*	*

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	*	*	*	*	*	*	*

Table 10 - Area, Production and Yield of Crops for Private Peasant Holdings for 2018/19 (2011 E.C) Meher Season

S.N.N.P Region

Crop	Number of Holders	Area In Hectares	Production In Quintals	Yield (Qt/Ha)
Grain Crops. . . . . .. ….	3,301,060	1,159,993.92	28,980,614.95	
Cereals.....	2,761,644	923,391.79	24,971,332.26	
Teff.....	947,333	236,532.28	3,508,286.48	14.83
Barley.....	791,777	93,643.58	1,818,938.69	19.42
Wheat.....	762,567	151,583.20	4,028,574.55	26.58
Maize.....	1,452,359	320,078.03	12,575,816.30	39.29
Sorghum.....	762,622	102,872.44	2,684,329.22	26.09
Finger millet.....	96,159	9,670.25	153,812.02	15.91
Oats/'Aja'.....	15,762	368.68	5,382.95	14.60
Rice.....	26,351	*	*	*
Pulses.....	2,029,142	230,386.63	3,947,174.28	
Faba beans.....	877,447	74,598.17	1,492,606.04	20.01
Field peas.....	433,224	41,555.64	669,220.60	16.10
Haricot beans white..... .	72,086	4,551.17	78,330.80	17.21
Haricot beans red.....	1,106,194	94,580.26	1,479,383.96	15.64
Chick-peas(Red).....	32,894	5,893.82	*	*
Chick-peas(White)).....	34,141	4,678.09	*	*
Lentils.....	14,992	399.46	4,114.64	10.30
Grass peas.....	5,675	247.03	4,370.58	17.69
Soya beans.....	24,267	1,476.28	19,929.86	13.50
Fenugreek.....	50,651	*	*	*
Mung bean /"Masho"…..	*	*	*	*
Gibto.....	2,781	*	*	*
Oilseeds.....	116,395	6,215.50	62,108.41	
Neug.....	5,600	*	*	*
Linseed.....	46,316	800.53	6,170.74	7.71
Groundnuts.....	14,375	*	*	*
Safflower.....	12,444	*	*	*
Sesame.....	*	*	*	*
Rape seed.....	32,164	611.42	6,660.41	10.89
Vegetables.....	2,201,815	61,851.78	4,089,749.84	
Lettuce.....	*	*	*	*
Head Cabbage.....	74,153	1,175.40	68,268.83	58.08
Ethiopian Cabbage.....	2,001,909	34,428.36	3,334,239.72	96.85
Tomatoes.....	39,520	598.13	6,161.19	10.30
Green peppers.....	219,881	2,043.98	*	*
Red peppers.....	221,043	23,574.65	525,525.14	22.29
Swiss chard.....	19,043	22.77	*	*
Root Crops.....	2,120,835	100,692.36	22,364,492.39	
Beetroot.....	71,562	*	133,070.09	*
Carrot.....	36,972	*	*	*
Onion.....	120,911	1,718.67	173,240.76	100.80
Potatoes.....	414,072	17,927.72	3,067,437.91	171.10
Yam/'Boye'.....	296,708	3,893.61	369,007.97	94.77
Garlic.....	135,092	*	243,557.29	*
Taro/'Godere'.....	1,397,298	48,228.21	12,983,367.56	269.21
Sweet potatoes.....	698,129	24,588.81	5,383,476.72	218.94
Fruit Crops.....	2,243,727	66,360.25	5,311,656.07	
Avocados.....	1,221,177	12,376.89	554,308.95	44.79
Bananas.....	1,584,324	41,543.14	3,529,707.37	84.96
Guavas.....	48,762	283.10	2,993.60	10.57
Lemons.....	81,523	276.08	17,764.36	64.34
Mangoes.....	664,009	8,338.64	723,104.79	86.72
Oranges.....	192,897	1,145.18	116,045.91	101.33
Papayas.....	361,598	1,896.56	356,325.16	187.88
Pineapples.....	30,601	500.66	11,405.94	22.78
Chat.....	850,371	63,343.48	644,789.40	10.18
Coffee.....	2,570,935	210,740.15	1,463,962.71	6.95
Hops.....	249,381	2,112.31	4,863.26	2.30
Sugar Cane.....	631,990	15,323.93	7,868,377.84	513.47

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	*81,608,352.00*	*22,188,223.70*	*24,632,073.29*	*370,870.20*	*0.27*	*0.30*	*

Table 11 - Area, Production and Yield of Crops for Private Peasant Holdings for 2018/19 (2011 E.C) Meher Season

Gamballa Region

Crop	Number of Holders	Area In Hectares	Production In Quintals	Yield (Qt/Ha)
Grain Crops. . . . . .. ….	27,936	7,886.55	182,193.41	
Cereals.....	27,195	7,781.06	181,251.79	
Teff.....	-	-	-	-
Barley.....	*	*	*	*
Wheat.....	-	-	-	-
Maize.....	21,348	4,040.25	107,859.38	26.70
Sorghum.....	7,129	3,359.38	73,224.14	21.80
Finger millet.....	-	-	-	-
Oats/'Aja'.....	-	-	-	-
Rice.....	*	371.76	*	*
Pulses.....	1,639	*	*	
Faba beans.....	*	*	*	*
Field peas.....	-	-	-	-
Haricot beans white..... .	*	*	*	*
Haricot beans red.....	1,075	2.50	*	*
Chick-peas(Red).....	-	-	-	-
Chick-peas(White)).....	-	-	-	-
Lentils.....	-	-	-	-
Grass peas.....	-	-	-	-
Soya beans.....	*	*	*	*
Fenugreek.....	*	*	*	*
Mung bean /"Masho"….	*	*	*	*
Gibto.....	*	*	*	*
Oilseeds.....	650	*	*	
Neug.....	*	*	*	*
Linseed.....	*	*	*	*
Groundnuts.....	*	*	*	*
Safflower.....	*	*	*	*
Sesame.....	*	*	*	*
Rape seed.....	215	*	*	*
Vegetables.....	5,872	108.80	*	
Lettuce.....	-	-	-	-
Head Cabbage.....	*	*	*	*
Ethiopian Cabbage.....	4,512	33.83	*	*
Tomatoes.....	482	*	*	*
Green peppers.....	1,105	8.44	*	*
Red peppers.....	490	13.22	*	*
Swiss chard.....	-	-	-	-
Root Crops.....	6,775	144.30	*	
Beetroot.....	-	-	-	-
Carrot.....	-	-	-	-
Onion.....	*	*	*	*
Potatoes.....	*	*	*	*
Yam/'Boye'.....	741	6.01	*	*
Garlic.....	*	*	*	*
Taro/'Godere'.....	4,601	63.21	*	*
Sweet potatoes.....	2,504	73.92	*	-
Fruit Crops.....	18,053	542.65	*	
Avocados.....	6,621	129.53	*	*
Bananas.....	8,534	189.79	*	*
Guavas.....	524	1.72	*	*
Lemons.....	485	1.44	*	*
Mangoes.....	8,225	158.49	*	*
Oranges.....	1,634	9.36	*	*
Papayas.....	7,608	48.18	*	*
Pineapples.....	469	*	*	*
Chat.....	1,363	87.08	*	*
Coffee.....	9,482	8,382.93	*	*
Hops.....	1,830	20.82	*	*
Sugar Cane.....	5,132	89.28	*	*

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	*	*	*	*	*	*	*

Table 12 - Area, Production and Yield of Crops for Private Peasant Holdings for 2018/19 (2011 E.C) Meher Season

Harari

Crop	Number of Holders	Area In Hectares	Production In Quintals	Yield (Qt/Ha)
Grain Crops. . . . . .. ….	37,958	11,454.92	181,866.10	
Cereals.....	37,743	9,202.89	166,175.25	
Teff.....	-	-	-	-
Barley.....	*	*	*	*
Wheat.....	1,054	38.07	514.37	13.51
Maize.....	19,861	1,154.09	25,000.33	21.66
Sorghum.....	33,433	7,991.36	140,590.21	17.59
Finger millet.....	-	-	-	-
Oats/'Aja'.....	*	*	*	*
Rice.....	*	*	*	*
Pulses.....	747	*	*	
Faba beans.....	*	*	*	*
Field peas.....	*	*	*	*
Haricot beans white..... .	-	-	-	-
Haricot beans red.....	435	*	*	*
Chick-peas(Red).....	-	-	-	-
Chick-peas(White)).....	-	-	-	-
Lentils.....	*	*	*	*
Grass peas.....	*	*	*	*
Soya beans.....	-	-	-	-
Fenugreek.....	*	*	*	*
Mung bean /"Masho"…..	-	-	-	-
Gibto.....	-	-	-	-
Oilseeds.....	14,394	2,224.52	15,573.31	
Neug.....	-	-	-	-
Linseed.....	-	-	-	-
Groundnuts.....	14,275	2,222.13	15,558.68	7.00
Safflower.....	-	-	-	-
Sesame.....	*	*	*	*
Rape seed.....	*	*	*	*
Vegetables.....	543	*	*	
Lettuce.....	-	-	-	-
Head Cabbage.....	*	*	*	*
Ethiopian Cabbage.....	-	-	-	-
Tomatoes.....	*	*	*	*
Green peppers.....	*	*	*	*
Red peppers.....	*	*	*	*
Swiss chard.....	-	-	-	-
Root Crops.....	2,561	116.18	15,834.90	
Beetroot.....	-	-	-	-
Carrot.....	*	*	*	*
Onion.....	-	-	-	-
Potatoes.....	*	*	*	*
Yam/'Boye'.....	-	-	-	-
Garlic.....	-	-	-	-
Taro/'Godere'.....	-	-	-	-
Sweet potatoes.....	2,287	87.69	15,834.90	180.58
Fruit Crops.....	17,896	*	4,616.07	
Avocados.....	610	*	*	*
Bananas.....	4,286	*	*	*
Guavas.....	4,528	*	*	*
Lemons.....	2,103	29.48	*	*
Mangoes.....	12,419	*	*	*
Oranges.....	*	*	*	*
Papayas.....	2,857	34.18	3,207.55	93.84
Pineapples.....	-	-	-	-
Chat.....	34,219	6,207.76	128,161.44	20.65
Coffee.....	2,681	93.62	*	*
Hops.....	*	*	*	*
Sugar Cane.....	*	*	*	*

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	-	-	-	-	-	-	-

Table 13 - Area, Production and Yield of Crops for Private Peasant Holdings for 2018/19 (2011 E.C) Meher Season

Dire Dawa

Crop	Number of Holders	Area In Hectares	Production In Quintals	Yield (Qt/Ha)
Grain Crops. . . . . .. ….	28,528	11,948.19	182,391.17	
Cereals.....	28,528	11,139.83	174,047.02	
Teff.....	-	-	-	-
Barley.....	*	*	*	*
Wheat.....	*	*	*	*
Maize.....	7,349	204.40	2,753.87	13.47
Sorghum.....	28,026	10,914.71	171,282.87	15.69
Finger millet.....	*	*	*	*
Oats/'Aja'.....	-	-	-	-
Rice.....	-	-	-	-
Pulses.....	9,351	466.65	5,214.94	
Faba beans.....	-	-	-	-
Field peas.....	-	-	-	-
Haricot beans white..... .	6,523	286.63	2,944.56	10.27
Haricot beans red.....	3,766	179.95	2,270.37	12.62
Chick-peas(Red).....	-	-	-	-
Chick-peas(White)).....	-	-	-	-
Lentils.....	-	-	-	-
Grass peas.....	-	-	-	-
Soya beans.....	-	-	-	-
Fenugreek.....	*	*	*	*
Mung bean /"Masho"…..	-	-	-	-
Gibto.....	-	-	-	-
Oilseeds.....	4,080	341.71	*	
Neug.....	-	-	-	-
Linseed.....	-	-	-	-
Groundnuts.....	2,731	*	*	*
Safflower.....	-	-	-	-
Sesame.....	*	47.30	160.76	3.40
Rape seed.....	-	-	-	-
Vegetables.....	2,321	67.75	6,292.73	
Lettuce.....	-	-	-	-
Head Cabbage.....	-	-	-	-
Ethiopian Cabbage.....	*	*	*	*
Tomatoes.....	1,898	63.15	6,292.73	99.65
Green peppers.....	269	*	*	*
Red peppers.....	*	*	*	*
Swiss chard.....	-	-	-	-
Root Crops.....	3,847	121.61	*	
Beetroot.....	*	*	*	*
Carrot.....	-	-	-	-
Onion.....	1,211	*	*	*
Potatoes.....	*	*	*	*
Yam/'Boye'.....	-	-	-	-
Garlic.....	*	*	*	*
Taro/'Godere'.....	-	-	-	-
Sweet potatoes.....	2,429	55.52	-	-
Fruit Crops.....	8,084	148.75	*	
Avocados.....	-	-	-	-
Bananas.....	*	*	*	*
Guavas.....	2,883	14.96	*	*
Lemons.....	*	*	*	*
Mangoes.....	1,790	21.80	*	*
Oranges.....	*	*	*	*
Papayas.....	4,494	68.61	*	*
Pineapples.....	-	-	-	-
Chat.....	10,349	774.08	1,548.02	2.00
Coffee.....	5,913	222.49	243.72	1.10
Hops.....	-	-	-	-
Sugar Cane.....	-	-	-	-

Crop	Number of Trees Harvested	Production In Quintals			Yield (Quintals/Tree)		
		Amicho	Kocho	Bula	Amicho	Kocho	Bula
Enset	-	-	-	-	-	-	-

APPENDIX I - ESTIMATION PROCEDURES OF TOTAL, RATIO AND SAMPLING ERRORS

APPENDIX I

Estimation Procedures of Totals, Ratios and Sampling Errors

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

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

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

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

Where:

h represents the stratum

n_h is the total number of sample EAs successfully covered in the h[th] stratum.

M_h is the measure of size of the h[th] stratum as obtained from the sampling frame.

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

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

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

a_{hij} is the value of area for agricultural household j, in the i[th] EA in the h[th] strtatum under a specific crop.

a_{hi} is the sample total area under specific crop for EA i in stratum h

$\hat{A}_h$ estimate of total area under specific crop in stratum h

2. For estimating Total Production under Specific Crop:

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

in which, $\mathrm{P}_{hi} = a_{hi} * \overline{Y}_{hi}$

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

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

Y_{hi} is sample total quantity of production of a specific crop from defined area of land for crop cutting

of a crop in the ith EA in the hth stratum.

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

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

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

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

4. Sampling Variance of Estimates:

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

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

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

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

Where,

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

f_h = average first stage probability of selection of EAs within stratum *h*.

$f_{hi} = \frac{h_{hi}}{H_{hi}}$ = average second stage probability of selection within the *i*th sample EA in stratum *h*.

$\hat{A}_{hi}, \hat{P}_{hi}$ are weighted total area and production, respectively, of a specific crop in the ith EA and hth

stratum.

$\hat{A}_{hij}, \hat{P}_{hij}$ are weighted values of area and production, respectively, from jth agricultural household in the

i^{th} EA and h^{th} stratum under a specific crop.

Since all strata are independent, the total variance at regional and country level is computed by aggregating the result obtained at Zone/Special Wereda level, i.e.

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

Where, *L* is the number of strata (Zone/Special Wereda).

In estimating the sampling variance by the above formula, selection of EAs within a stratum is assumed to be with replacement. By so doing the variance estimate may be slightly over estimated but it greatly simplifies the estimation procedure.

5. Coefficient of Variation (CV) of Estimates:

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

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

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

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

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

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

APPENDIX II

STANDARD ERRORS AND COEFFICIENTS OF VARIATION OF ESTIMATES

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

Ethiopia

Crop	*Area*	*Standard Error*	*CV (%)*	*Production*	*Standard Error*	*CV (%)*
Total Grains**.....**	12,727,191.21	261,324.98	2.07	315,602,058.49	8,520,276.09	2.72
Cereals**.....**	10,358,890.13	216,389.41	2.10	277,638,380.98	7,891,412.87	2.86
Teff.....…..…..…..…..…	3,076,595.02	113,564.73	3.69	54,034,790.51	2,328,077.49	4.31
Barley.....…..…..…..…	811,782.08	56,595.39	6.97	17,675,184.47	1,557,935.55	8.81
Wheat.....…..…..…..…	1,747,939.31	112,179.04	6.44	48,380,740.91	4,190,573.96	8.68
Maize.....	2,367,797.39	89,729.67	3.84	94,927,708.34	4,835,185.79	5.13
Sorghum.....	1,829,662.39	97,240.32	5.44	50,243,680.72	3,031,089.66	6.15
Finger Millet.....	446,909.00	31,007.88	6.94	10,356,295.66	811,423.65	7.84
Oats/'Aja'.....	14,843.08	2,952.41	19.89	301,439.40	59,697.79	19.80
Rice.....…..…..…..…..…	63,361.86	16,500.90	26.04	1,718,540.95	503,133.50	29.28
Pulses**.....…….**	1,620,497.30	63,594.21	3.93	30,113,480.57	1,369,583.51	4.55
Faba Beans.…..…..….	492,271.60	27,539.70	5.59	10,419,535.14	739,035.24	7.09
Field Pease.…..…..…..….	216,786.33	16,896.49	7.79	3,608,112.40	330,676.81	9.16
Whight Haricot beans.	88,302.71	14,554.00	16.48	1,508,230.37	257,975.90	17.10
Red Haricot beans.…..…	200,334.52	19,816.04	9.93	3,374,971.33	405,671.02	12.03
Chick-Peas (Red).....	163,067.24	17,920.24	10.99	3,301,531.98	391,188.85	11.85
Chick-Peas (White).....	76,718.89	16,738.96	21.82	1,290,199.89	332,134.65	25.74
Lentils.....	99,753.97	10,604.50	10.63	1,408,122.17	174,396.00	12.39
Grass Peas.....	130,543.38	14,681.75	11.25	2,604,157.88	310,782.74	11.93
Soya Beans.....	64,720.12	21,886.02	33.82	1,494,546.13	520,988.71	34.86
Fenugreek.....	22,344.12	3,532.44	15.81	288,299.94	59,138.50	20.51
Mung bean "Masho"…	48,074.52	8,921.05	19.23	576,204.64	121,712.49	21.78
Gibto.....	17,579.90	7,346.13	41.79	239,568.71	85,391.68	35.64
Oilseeds**.....**	747,803.78	61,391.03	8.24	7,850,196.94	829,313.11	10.63
Neug.....…..…....	257,950.40	33,507.81	12.99	2,963,227.47	592,911.29	20.01
Linseed.....	83,626.93	12,765.87	15.27	966,855.92	233,188.02	24.12
Groundnut.....	84,237.01	17,490.22	21.29	1,440,912.59	396,000.38	28.40
Sufflower.....	6,489.00	1,359.81	20.99	80,394.80	18,357.17	22.83
Sesame.....	294,819.49	43,318.75	14.72	2,016,646.44	350,440.15	17.39
Rapeseed.....	20,680.95	2,352.37	11.37	382,159.71	62,573.47	16.37

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

Tigray

Crop	*Area*	*Standard Error*	*CV (%)*	*Production*	*Standard Error*	*CV (%)*
Total Grains.....	941,109.61	46,133.85	4.90	19,432,966.43	1,245,854.78	6.41
Cereals.....	785,099.80	36,727.44	4.68	17,957,074.07	1,168,675.82	6.51
Teff.....	176,545.98	14,060.79	7.96	2,838,337.41	261,908.30	9.23
Barley.....	91,579.93	9,143.36	9.98	1,686,853.84	246,824.18	14.63
Wheat.....	119,580.03	9,788.69	8.19	2,514,112.95	280,531.47	11.16
Maize.....	67,675.62	6,405.95	9.47	1,735,972.03	191,792.72	11.05
Sorghum.....	242,716.17	22,867.40	9.42	7,092,509.41	814,003.28	11.48
Finger Millet.....	85,575.12	9,026.16	10.55	2,054,235.61	262,152.42	12.76
Oats/'Aja'.....	203.83	97.43	47.80	4,087.43	1,953.75	47.8
Rice.....	1,223.13	529.03	43.25	30,965.39	13,145.51	42.45
Pulses.....	48,103.43	4,933.37	10.26	741,840.09	82,727.64	11.15
Faba Beans.....	12,342.62	1,569.79	12.72	208,790.10	27,227.07	13.04
Field Pease.....	6,058.24	1,596.66	26.36	92,245.57	29,472.48	31.95
Whight Haricot beans....	2,923.93	1,271.23	43.48	43,575.99	18,289.75	41.97
Red Haricot beans.....	3,501.74	2,512.71	71.76	45,578.61	31,794.74	69.76
Chick-Peas (Red).....	5,672.42	1,037.50	18.29	93,671.38	18,320.20	19.56
Chick-Peas (White).....	-	-	-	-	-	-
Lentils.....	9,609.46	2,155.95	22.44	123,962.85	32,312.13	26.07
Grass Peas.....	7,352.54	2,035.45	27.68	128,500.56	40,248.45	31.32
Soya Beans.....	41.76	27.23	65.21	391.84	255.53	65.21
Fenugreek.....	272.89	93.02	34.09	2,241.76	841.22	37.53
Mung bean "Masho"...	327.84	264.42	80.66	2,881.43	2,183.87	75.79
Gibto.....	-	-	-	-	-	-
Oilseeds.....	107,906.37	17,763.68	16.46	734,052.26	130,926.31	17.84
Neug.....	6,419.50	2,834.30	44.15	93,090.40	34,422.17	36.98
Linseed.....	5,360.52	1,026.50	19.15	56,862.78	11,623.37	20.44
Groundnut.....	65.46	65.10	99.45	757.37	753.18	99.45
Sufflower.....	93.25	68.36	73.31	795.28	598.89	75.31
Sesame.....	95,943.72	17,991.34	18.75	582,333.48	132,798.34	22.8
Rapeseed.....	23.93	12.48	52.16	212.96	111.07	52.15

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

Afar

Crop	*Area*	*Standard Error*	*CV* (%)	*Production*	*Standard Error*	*CV* (%)
Total Grains	9,062.46	3,467.15	38.26	207,924.28	58,002.23	31.45
Cereals	6,961.79	2,316.37	33.27	188,989.33	57,928.40	30.65
Teff	919.72	751.21	81.68	12,480.76	10,194.12	81.68
Barley	8.26	8.08	97.89	-	-	-
Wheat	-	-	-	-	-	-
Maize	4,308.23	1,489.20	34.57	138,009.12	48,837.57	35.39
Sorghum	1,725.58	1,121.29	64.98	38,499.44	25,017.15	64.98
Finger Millet	-	-	-	-	-	-
Oats/'Aja'	-	-	-	-	-	-
Rice	-	-	-	-	-	-
Pulses	1,683.12	1,092.45	64.91	17,393.28	11,338.70	65.19
Faba Beans	-	-	-	-	-	-
Field Pease	-	-	-	-	-	-
Whight Haricot beans	0.14	0.14	99.54	-	-	-
Red Haricot beans	7.35	7.50	102.01	-	-	-
Chick-Peas (Red)	-	-	-	-	-	-
Chick-Peas (White)						
Lentils	-	-	-	-	-	-
Grass Peas	-	-	-	-	-	-
Soya Beans	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Mung bean "Masho"	1,675.63	1,092.34	65.19	17,393.28	11,338.70	65.19
Gibto	-	-	-	-	-	-
Oilseeds	417.56	269.06	64.44	1,541.67	1,000.46	64.89
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Groundnut	-	-	-	-	-	-
Sufflower	11.81	11.76	99.54	-	-	-
Sesame	405.74	263.31	64.89	1,541.67	1,000.46	64.89
Rapeseed	-	-	-	-	-	-

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

Amhara

Crop	*Area*	*Standard Error*	*CV (%)*	*Production*	*Standard Error*	*CV (%)*
Total Grains	4,493,847.15	148,015.16	3.29	103,102,649.81	3,957,149.44	3.84
Cereals	3,506,080.35	108,864.46	3.11	88,087,369.58	3,556,847.49	4.04
Teff	1,200,986.74	64,045.41	5.33	21,614,861.85	1,287,209.80	5.96
Barley	238,164.36	24,393.76	10.24	4,817,694.34	583,459.14	12.11
Wheat	570,742.91	49,944.61	8.75	14,820,433.79	1,738,381.76	11.73
Maize	559,981.55	34,267.11	6.12	22,844,483.11	1,857,232.71	8.13
Sorghum	643,170.00	58,226.32	9.05	17,040,820.52	1,820,180.75	10.68
Finger Millet	248,292.40	26,596.18	10.71	5,710,949.96	656,985.81	11.5
Oats/'Aja'	3,055.08	806.22	26.39	45,182.12	13,281.77	29.4
Rice	41,687.30	14,772.76	35.44	1,192,943.90	470,216.94	39.42
Pulses	723,615.60	44,402.37	6.14	12,737,910.32	870,799.74	6.84
Faba Beans	191,788.53	16,508.92	8.61	3,662,169.11	336,865.39	9.2
Field Pease	85,322.34	9,746.35	11.42	1,304,990.23	189,121.09	14.49
Whight Haricot beans	48,058.97	11,922.37	24.81	836,900.35	210,825.29	25.19
Red Haricot beans	25,795.10	7,110.23	27.56	443,733.07	149,019.18	33.58
Chick-Peas (Red)	93,218.97	13,500.10	14.48	1,736,463.73	244,414.93	14.08
Chick-Peas (White)	28,566.87	11,074.93	38.77	551,850.86	261,761.75	47.43
Lentils	68,265.62	9,487.31	13.9	935,842.28	154,733.90	16.53
Grass Peas	86,427.13	12,854.20	14.87	1,637,827.22	263,311.50	16.08
Soya Beans	31,810.74	19,278.90	60.6	783,003.95	457,127.35	58.38
Fenugreek	10,755.96	2,774.07	25.79	148,054.37	46,740.38	31.57
Mung bean "Masho"	36,585.53	7,704.83	21.06	457,570.54	113,271.03	24.75
Gibto	17,019.86	7,338.18	43.12	239,504.61	85,391.65	35.65
Oilseeds	264,151.20	40,134.95	15.19	2,277,369.90	366,663.41	16.1
Neug	56,814.97	11,333.60	19.95	505,996.02	117,603.33	23.24
Linseed	21,443.45	3,769.38	17.58	152,102.35	31,717.37	20.85
Groundnut	10,431.61	7,479.60	71.7	183,530.87	139,780.31	76.16
Sufflower	4,942.99	1,249.61	25.28	61,528.61	17,223.72	27.99
Sesame	159,509.94	37,722.19	23.65	1,169,882.36	314,320.77	26.87
Rapeseed	11,008.25	1,931.75	17.55	204,329.70	44,896.59	21.97

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

Oromia

Crop	*Area*	*Standard Error*	*CV (%)*	*Production*	*Standard Error*	*CV (%)*
Total Grains.....	5,764,272.99	199,108.12	3.45	155,393,448.31	7,151,671.20	4.60
Cereals.....	4,858,959.99	173,323.60	3.57	139,168,163.36	6,666,725.64	4.79
Teff.....	1,431,869.73	89,051.58	6.22	25,628,688.88	1,879,771.82	7.33
Barley.....	386,569.22	48,727.07	12.61	9,325,076.44	1,392,755.98	14.94
Wheat.....	897,118.00	97,381.00	10.85	26,852,876.15	3,750,332.55	13.97
Maize.....	1,324,274.98	76,615.10	5.79	54,383,119.44	4,205,156.13	7.73
Sorghum.....	718,966.58	73,100.09	10.17	20,531,636.06	2,252,052.11	10.97
Finger Millet.....	82,044.16	11,963.46	14.58	2,010,743.20	382,010.16	19.00
Oats/'Aja'.....	11,212.68	2,835.40	25.29	246,785.17	58,133.57	23.56
Rice.....	6,904.63	3,900.95	56.50	189,238.03	99,073.62	52.35
Pulses.....	584,896.19	40,551.38	6.93	12,064,333.56	986,652.12	8.18
Faba Beans.....	212,540.97	20,067.73	9.44	5,035,982.59	631,933.94	12.55
Field Pease.....	83,372.40	11,931.05	14.31	1,534,473.67	236,360.67	15.40
Whight Haricot beans.....	30,502.27	8,009.22	26.26	509,614.93	141,717.27	27.81
Red Haricot beans.....	69,939.44	13,059.24	18.67	1,304,278.93	298,099.87	22.86
Chick-Peas (Red).....	58,143.64	11,442.82	19.68	1,354,089.30	297,364.71	21.96
Chick-Peas (White).....	43,386.75	12,385.72	28.55	678,580.63	199,586.46	29.41
Lentils.....	21,431.65	4,215.80	19.67	344,202.40	73,646.06	21.40
Grass Peas.....	36,443.97	6,794.51	18.64	833,459.52	160,091.45	19.21
Soya Beans.....	11,719.31	9,406.54	80.27	274,920.21	233,262.17	84.85
Fenugreek.....	9,905.06	1,923.14	19.42	123,864.49	34,769.29	28.07
Mung bean "Masho"…	7,198.15	4,333.53	60.20	70,866.89	42,185.50	59.53
Gibto.....	312.57	307.30	98.31	-	-	-
Oilseeds.....	320,416.81	42,611.59	13.30	4,160,951.39	727,266.68	17.48
Neug.....	182,196.91	31,312.25	17.19	2,257,909.58	579,593.07	25.67
Linseed.....	55,049.13	12,149.19	22.07	745,987.50	230,718.86	30.93
Groundnut.....	50,121.08	15,300.49	30.53	815,968.88	361,522.91	44.31
Sufflower.....	1,019.15	448.44	44.00	12,719.42	5,403.61	42.48
Sesame.....	23,065.90	11,097.39	48.11	158,598.34	77,471.46	48.85
Rapeseed.....	8,964.65	1,326.13	14.79	169,767.69	43,477.30	25.61

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

Somali

Crop	*Area*	*Standard Error*	*CV (%)*	*Production*	*Standard Error*	*CV (%)*
Total Grains**.....**	73,933.86	10,382.85	14.04	1,665,620.52	229,290.64	13.77
Cereals**.....**	71,019.56	10,386.29	14.62	1,616,664.88	229,315.81	14.18
Teff.....…..…..…..….	13.92	13.92	99.99	-	-	-
Barley.....…..…..…...	100.21	80.85	80.68	-	-	-
Wheat.....…..…..…...	5,842.01	5,663.16	96.94	91,001.22	88,453.09	97.20
Maize.....	23,792.38	4,035.52	16.96	574,831.11	97,016.79	16.88
Sorghum.....	41,271.04	7,613.96	18.45	950,832.54	177,398.12	18.66
Finger Millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....…..…..…..…...	-	-	-	-	-	-
Pulses**.....……**	719.34	470.39	65.39	2,517.70	1,646.37	65.39
Faba Beans.…..…..…..….	-	-	-	-	-	-
Field Pease.…..…..…..….	-	-	-	-	-	-
Whight Haricot beans.….	-	-	-	-	-	-
Red Haricot beans.…..…	719.34	470.39	65.39	2,517.70	1,646.37	65.39
Chick-Peas (Red).....	-	-	-	-	-	-
Chick-Peas (White).....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Grass Peas.....	-	-	-	-	-	-
Soya Beans.....	-	-	-	-	-	-
Fenugreek.....	-	-	-	-	-	-
Mung bean "Masho"…	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oilseeds**.....**	2,194.95	1,959.57	89.28	46,437.94	43,661.39	94.02
Neug.....…..…....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnut.....	2,082.53	1,958.01	94.02	46,437.94	43,661.39	94.02
Sufflower.....	-	-	-	-	-	-
Sesame.....	112.43	68.10	60.57	-	-	-
Rapeseed.....	-	-	-	-	-	-

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

Benishangul-Gumuz

Crop	*Area*	*Standard Error*	*CV (%)*	*Production*	*Standard Error*	*CV (%)*
Total Grains.....	253,681.56	15,943.52	6.28	6,272,383.51	459,686.85	7.33
Cereals.....	179,253.07	13,349.17	7.45	5,127,313.42	408,506.54	7.97
Teff.....	29,726.64	7,513.22	25.27	432,135.13	110,417.47	25.55
Barley.....	1,687.07	797.73	47.28	26,372.26	12,458.59	47.24
Wheat.....	3,033.60	1,416.89	46.71	73,227.87	34,110.53	46.58
Maize.....	62,287.85	7,367.78	11.83	2,539,863.66	309,473.49	12.18
Sorghum.....	56,675.14	5,823.93	10.28	1,519,956.31	166,557.09	10.96
Finger Millet.....	21,311.26	5,072.76	23.8	426,554.87	101,549.71	23.81
Oats/'Aja'.....	0.41	0.41	99.48	1.74	1.73	99.48
Rice.....	4,531.10	3,037.72	67.04	109,201.59	73,210.30	67.04
Pulses.....	30,505.61	4,853.52	15.91	596,098.82	96,903.84	16.26
Faba Beans.....	998.71	388.11	38.86	19,984.78	7,732.32	38.69
Field Pease.....	466.16	256.20	54.96	7,178.85	3,945.49	54.96
Whight Haricot beans.....	1,972.89	1,021.29	51.77	36,808.04	20,475.78	55.63
Red Haricot beans.....	5,598.61	1,683.30	30.07	97,097.14	30,100.28	31
Chick-Peas (Red).....	138.40	84.56	61.1	1,322.64	858.90	64.94
Chick-Peas (White).....	87.18	64.29	73.75	-	-	-
Lentils.....	44.20	31.89	72.14	-	-	-
Grass Peas.....	71.78	70.21	97.82	-	-	-
Soya Beans.....	19,671.99	4,293.55	21.83	416,300.27	89,324.76	21.46
Fenugreek.....	4.63	4.19	90.62	-	-	-
Mung bean "Masho"…	1,446.13	927.50	64.14	17,342.99	11,142.72	64.25
Gibto.....	4.93	4.87	98.8	64.11	63.34	98.8
Oilseeds.....	43,922.88	4,805.31	10.94	548,971.27	83,295.48	15.17
Neug.....	11,650.53	2,271.55	19.5	98,041.78	23,201.32	23.66
Linseed.....	973.23	241.49	24.81	5,732.56	1,367.04	23.85
Groundnut.....	17,174.96	3,758.98	21.89	348,628.02	79,819.35	22.9
Sufflower.....	26.50	25.58	96.53	461.07	445.08	96.53
Sesame.....	14,026.78	2,338.81	16.67	94,920.27	18,223.48	19.2
Rapeseed.....	70.88	45.25	63.83	1,187.57	739.52	62.27

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

S.N.N.P.R

Crop	*Area*	*Standard Error*	*CV (%)*	*Production*	*Standard Error*	*CV (%)*
Total Grains.....	1,159,993.92	65,940.51	5.68	28,980,614.95	2,005,862.09	6.92
Cereals.....	923,391.79	58,297.13	6.31	24,971,332.26	1,908,601.52	7.64
Teff.....	236,532.28	24,714.27	10.45	3,508,286.48	385,623.72	10.99
Barley.....	93,643.58	12,223.66	13.05	1,818,938.69	293,073.35	16.11
Wheat.....	151,583.20	22,556.31	14.88	4,028,574.55	627,760.50	15.58
Maize.....	320,078.03	30,194.84	9.43	12,575,816.30	1,453,824.62	11.56
Sorghum.....	102,872.44	12,611.84	12.26	2,684,329.22	331,499.21	12.35
Finger Millet.....	9,670.25	1,950.09	20.17	153,812.02	42,543.86	27.66
Oats/'Aja'.....	368.68	133.08	36.10	5,382.95	2,022.66	37.58
Rice.....	8,643.33	5,412.05	62.62	196,192.04	129,194.45	65.85
Pulses.....	230,386.63	19,501.97	8.46	3,947,174.28	357,417.88	9.06
Faba Beans.....	74,598.17	8,975.62	12.03	1,492,606.04	180,425.02	12.09
Field Pease.....	41,555.64	6,747.96	16.24	669,220.60	129,729.76	19.39
Whight Haricot beans....	4,551.17	1,691.56	37.17	78,330.80	35,574.88	45.42
Red Haricot beans.....	94,580.26	12,744.62	13.47	1,479,383.96	227,115.03	15.35
Chick-Peas (Red).....	5,893.82	2,619.26	44.44	115,984.92	67,289.83	58.02
Chick-Peas (White).....	4,678.09	2,031.87	43.43	59,768.39	44,265.78	74.06
Lentils.....	399.46	155.77	39.00	4,114.64	1,889.83	45.93
Grass Peas.....	247.03	99.47	40.27	4,370.58	1,937.20	44.32
Soya Beans.....	1,476.28	635.51	43.05	19,929.86	8,579.47	43.05
Fenugreek.....	1,404.64	1,037.08	73.83	14,139.32	10,153.21	71.81
Mung bean "Masho"...	759.61	712.84	93.84	9,325.16	8,646.78	92.73
Gibto.....	242.45	149.15	61.52	-	-	-
Oilseeds.....	6,215.50	1,813.94	29.18	62,108.41	17,277.37	27.82
Neug.....	865.18	820.03	94.78	8,189.69	7,870.50	96.1
Linseed.....	800.53	210.74	26.32	6,170.74	1,579.96	25.6
Groundnut.....	1,837.59	1,164.91	63.39	27,000.81	13,572.96	50.27
Sufflower.....	395.16	284.86	72.09	4,890.42	3,251.68	66.49
Sesame.....	1,705.60	1,113.27	65.27	9,196.33	6,436.05	69.98
Rapeseed.....	611.42	202.80	33.17	6,660.41	2,983.35	44.79

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

Gambella

Crop	*Area*	*Standard Error*	*CV (%)*	*Production*	*Standard Error*	*CV (%)*
Total Grains.....	7,886.55	1,466.23	18.59	182,193.41	30,107.31	16.52
Cereals.....	7,781.06	1,472.89	18.93	181,251.79	30,176.49	16.65
Teff.....	-	-	-	-	-	-
Barley.....	9.67	7.96	82.28	168.27	138.46	82.28
Wheat.....	-	-	-	-	-	-
Maize.....	4,040.25	441.92	10.94	107,859.38	13,217.33	12.25
Sorghum.....	3,359.38	1,408.08	41.91	73,224.14	30,471.53	41.61
Finger Millet.....	-	-	-	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	371.76	173.28	46.61	-	-	-
Pulses.....	93.22	54.18	58.12	880.05	542.72	61.67
Faba Beans.....	2.24	2.18	97.44	-	-	-
Field Pease.....	-	-	-	-	-	-
Whight Haricot beans....	6.71	5.88	87.55	55.70	48.77	87.55
Red Haricot beans.....	2.50	0.69	27.55	-	-	-
Chick-Peas (Red).....	-	-	-	-	-	-
Chick-Peas (White).....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Grass Peas.....	-	-	-	-	-	-
Soya Beans.....	0.04	0.03	73.82	-	-	-
Fenugreek.....	0.02	0.02	100.45	-	-	-
Mung bean "Masho"...	81.62	53.52	65.57	824.35	540.55	65.57
Gibto.....	0.09	0.09	96.98	-	-	-
Oilseeds.....	12.27	6.23	50.78	61.57	46.28	75.16
Neug.....	3.32	3.01	90.63	-	-	-
Linseed.....	0.07	0.06	97.44	-	-	-
Groundnut.....	7.24	5.44	75.16	61.57	46.28	75.16
Sufflower.....	0.15	0.12	78.58	-	-	-
Sesame.....	0.07	0.05	74.53	-	-	-
Rapeseed.....	1.43	0.77	53.72	-	-	-

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

Harari

Crop	*Area*	*Standard Error*	*CV (%)*	*Production*	*Standard Error*	*CV (%)*
Total Grains	11,454.92	1,493.27	13.04	181,866.10	28,168.68	15.49
Cereals	9,202.89	1,027.14	11.16	166,175.25	25,713.39	15.47
Teff	-	-	-	-	-	-
Barley	16.36	11.54	70.57	70.35	49.64	70.57
Wheat	38.07	17.50	45.98	514.37	240.72	46.8
Maize	1,154.09	242.08	20.98	25,000.33	5,539.50	22.16
Sorghum	7,991.36	974.66	12.2	140,590.21	23,616.09	16.8
Finger Millet	-	-	-	-	-	-
Oats/'Aja'	2.40	2.42	100.78	-	-	-
Rice	0.61	0.52	85.89	-	-	-
Pulses	27.51	14.53	52.82	117.54	87.10	74.1
Faba Beans	0.36	0.36	100.78	2.52	2.54	100.78
Field Pease	11.55	11.64	100.78	3.47	3.49	100.78
Whight Haricot beans	-	-	-	-	-	-
Red Haricot beans	10.23	7.99	78.12	111.55	87.14	78.12
Chick-Peas (Red)	-	-	-	-	-	-
Chick-Peas (White)	-	-	-	-	-	-
Lentils	3.58	3.57	99.71	-	-	-
Grass Peas	0.94	0.78	83.61	-	-	-
Soya Beans	-	-	-	-	-	-
Fenugreek	0.85	0.85	99.31	-	-	-
Mung bean "Masho"	-	-	-	-	-	-
Gibto	-	-	-	-	-	-
Oilseeds	2,224.52	582.34	26.18	15,573.31	4,485.12	28.8
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Groundnut	2,222.13	582.29	26.2	15,558.68	4,485.23	28.83
Sufflower	-	-	-	-	-	-
Sesame	2.00	1.39	69.57	13.23	9.21	69.57
Rapeseed	0.39	0.39	101.28	1.40	1.41	101.28

Estimate of Holders, Area, Production, Standard Errors and Coefficient of Variations
For Crops **2018/19 (2011 E.C.)**

Dire Dawa

Crop	*Area*	*Standard Error*	*CV (%)*	*Production*	*Standard Error*	*CV (%)*
Total Grains.....	11,948.19	1,776.10	14.87	182,391.17	31,986.99	17.54
Cereals.....	11,139.83	1,717.57	15.42	174,047.02	31,461.73	18.08
Teff.....	-	-	-	-	-	-
Barley.....	3.43	3.00	87.63	10.28	9.01	87.63
Wheat.....	1.48	1.08	73.16	-	-	-
Maize.....	204.40	51.03	24.97	2,753.87	695.58	25.26
Sorghum.....	10,914.71	1,710.35	15.67	171,282.87	31,420.91	18.34
Finger Millet.....	15.80	15.33	97	-	-	-
Oats/'Aja'.....	-	-	-	-	-	-
Rice.....	-	-	-	-	-	-
Pulses.....	466.65	116.09	24.88	5,214.94	1,530.43	29.35
Faba Beans.....	-	-	-	-	-	-
Field Pease.....	-	-	-	-	-	-
Whight Haricot beans....	286.63	88.80	30.98	2,944.56	1,064.71	36.16
Red Haricot beans.....	179.95	60.63	33.69	2,270.37	741.21	32.65
Chick-Peas (Red).....	-	-	-	-	-	-
Chick-Peas (White).....	-	-	-	-	-	-
Lentils.....	-	-	-	-	-	-
Grass Peas.....	-	-	-	-	-	-
Soya Beans.....	-	-	-	-	-	-
Fenugreek.....	0.08	0.07	98.24	-	-	-
Mung bean "Masho"...	-	-	-	-	-	-
Gibto.....	-	-	-	-	-	-
Oilseeds.....	341.71	167.24	48.94	3,129.21	1,698.26	54.27
Neug.....	-	-	-	-	-	-
Linseed.....	-	-	-	-	-	-
Groundnut.....	294.41	168.05	57.08	2,968.45	1,704.89	57.43
Sufflower.....	-	-	-	-	-	-
Sesame.....	47.30	23.13	48.91	160.76	76.91	47.84
Rapeseed.....	-	-	-	-	-	-

APPENDIX III - Number of EAs and Households Planned and Actually Covered

Region	Enumeration Areas		Households	
	Planned	Covered	Planned	Covered
Tigray	188	187	3,760	3,735
Afar	51	51	1,020	1,020
Amhara	335	328	6,700	6,512
Oromia	391	379	7,820	7,451
Somali	80	18	1,600	328
Benishangul-Gumuz	103	75	2,060	1,384
S.N.N.P	316	307	6,320	6,080
Gambella	76	68	1,520	1,359
Harari	30	30	600	576
Dire Dawa	30	30	600	600
COUNTRY TOTAL	**1,600**	**1,473**	**32,000**	**29,045**

APPENDIX IV - QUESTIONNAIRE

Ag.S.S. Form **2011**/0

Central Statistical Agency
National Integrated Household Survey
Agricultural Sample Survey, **2018/19 (2011 E.C.)**

Part I - Identification Particulars

1	2	3	4	5
Region	Zone	Wereda	Farmers' Association	Enumeration Area

Part II – List of Households, Agricultural and non – agricultural Holders and order of selection

1	2	3		4		5	6	7
Household ID	Name of Household Head	Is there Agricultural Holder in The Household? Yes = 1 No = 2	code	Agricultural Holder ID (Within the Household)		Holder's Name	Agricultural Household ID	Selection Order

	Name	Signature	Date
Enumerator's			
Supervisor's			
Branch Office Head			

1.Total Number of Agricultural Households_____
2. Random Interval _____
3. Random Start _____

____ page(s) of _____ pages

Ag.S.S, Form 2011/1

Central Statistical Agency
National Integrated Household Survey
Agricultural Sample Survey, **2018/19 (2011 E.C.)**

Part I - Identification Particulars

1	2	3	4	5
Region	Zone	Wereda	Farmers' Association	Enumeration Area

Part II – List of Selected Agricultural Households and Holders

1	2	3	4	5	6	7
Household ID	Name of Household Head	Holder ID	Name of Holder	Farm Type Crop = 1 Livestock = 2 Both = 3 Crop & non-agri = 4 Livestock & non-agri = 5 All = 6 Non-agri = 7 code	Selection Order	Remarks

	Name	Signature	Date
Enumerator's			
Supervisor's			
Branch Office Head			

------- page(s) of --- pages

CENTRAL STATISTICAL AGENCY
ETHIOPIAN AGRICULTURAL SAMPLE SURVEY, **2018/19 (2011 E.C.)**

SECTION 2:- Field /Other land use details

15	16	17					
S. No.	**Questions for the holder**	**Parcel No.**			**Plot/field No.**		
		The field is covered by: Single crop = 1 Mixed crops = 2 Other land use = 3					
		Crop/other land use name		**Crop name**		**Crop name**	
		Code		**Code**		**Code**	
1	**Type of holding: Own** = 1 Rented in = 2 Sharecrop in = 3 Other (specify) = *4*						
2	**Is the field under extension program/ Service?** Yes = 1 No = 2						
3	**Was this field /plot Irrigated?** Yes = 1 No = 2 → ***Q4***						
3.1	**If it was irrigated, source of water:** River = 1 Lake = 2 Pond = 3 Harvested water = 4 Well/ground water = 5 Dam = 6 other (specify) = 7						
3.2	**Type of irrigation:** Full/conventional irrigation = 1 Supplemental irrigation = 2						
4	**How many times was the field tilled in this production season?** Zero tillage (direct drill/seedling) = 1 Tilled once = 2 Tilled two times = 3 Tilled three or more times = 4 Not at all(not cultivated) = 5						
4.1	**Slope of the field/plot:** Plain = 1 *partially slopy = 2 slopy = 3*						
5	Did you use prevention methods against soil erosion on this field? Yes = 1 No = 2 → ***Q6***						
5.1	**If the answer to Q5 is Yes, main soil erosion preventive method used:** Terracing = 1 Bund = 2 Planting trees = 3 Plough across the contour = 4 Rotational grazing = 5 avoiding grazing = 6 Creating grassed waterways = 7 Other (specify) = 8						
6	**Do you apply any method to maintain /improve soil organic matters on this field/plot?** Yes = 1 No = 2 → ***Q7***						
6.1	**(If the response to Q6 is YES, what method do you mainly used?** Growing annual crops in rows between perennial crops = 1 maintaining continuous soil cover (residues) = 2 Maximizing the use of organic matter sources =3 Using appropriate placement of nitrogen fertilizers = 4 Avoiding grazing = 5 Increasing the complexity of the crop rotations = 6 intercropping the complexity crop rotations with leguminous crops = 7 other = 8						
7	**How were seeds planted/ sowed?** (For only Temporary crops) *Broadcasting = 1 Row planting = 2*						
8	If more than one crop grown or if crops were intercropped, give the percentage of land devoted to each crop (the total percentage should equal 100).						
9	Number of Plants or trees on the field (for permanent crops only). (exclude chat, pineapple and sugarcane)						
10	Number of matured plants or trees (in full production) on the field (exclude chat, pineapple and sugarcane)						
11	Of the total area of this field, what percent of it is devoted to trees in full production (for each crop type)?						
12	**(For "enset" trees only)** Number of trees harvested/to be harvested in the production season:						
13	**Type of seed/seedling sowed/planted:** Improved seed *= 1 local seed = 2* → ***Q16***						
13.1	**If code 1 for Q13, the seed used was: (For only Temporary crops)** New improved seed for this production season = 1 Improved seed left over from last year production season = 2 Improved seed saved from previous harvest = *3* (if Code 2 or 3 for Q13.1, → *Q16)*						
13.2	**If code 1 for Q13.1,** From whom/or institution did you obtain/purchase the seed? Code (a)□ (codes are available in enumerators manual).						
14	***(For Cereals, Pulses and Oil seeds only:)*** *If improved seeds are used, (If code 1 for Q13, quantity of seed used (in Kg)*	**Kg**	**Gm**	**Kg**	**Gm**	**Kg**	**Gm**
15	***(For Cereals, Pulses and Oil seeds only):*** *If improved seeds are used, (If code 1 in Q13),* Total cost of seed(Birr**)**	**Birr**	**Cents**	**Birr**	**Cents**	**Birr**	**Cents**
16	***(For Cereals, Pulses and Oil seeds only:)*** *If local seeds are used, (If code 2 in Q13), quantity (in Kg)*	**Kg**	**Gm**	**Kg**	**Gm**	**Kg**	**Gm**
17	**Was there any crop damage on this field? Yes** = 1 No = 2 (if the answer is no to Q17, → *Q20***)**						
18	**If there was crop damage, (if code 1 for Q17)□** **Main cause of damage□** →						
	Code for main cause□ →						
19	**Percent damaged (if code 1 for Q17)□**						
20	**Have you applied any preventive methods against crop damage?** **Yes** = 1 No = 2 (if the answer to Q20 is no, → Q23)						
21	**Type of preventive methods (if code 1 to Q20):**						

	Chemical = *1 Natural/traditional/ = 2 Both = 3*							

Form Ag.S.S. 2011/2A .. cont'd

SECTION 2:- Field /Other land use details …… Cont'd

15		16	17							
2	2	**If chemical was used, type of chemical:** *Pesticide = 1 Herbicide = 2 fungicides = 3 1 &2= 4 1 & 3 = 5 2 &3 = 6 All = 7*								
2	3	**Have you applied/used natural/chemical fertilizers on this field? Yes** = 1 No = 2 (if the answer to Q23 is no →Q27)								
2	4	**If fertilizer was applied, type of fertilizer:** *Natural = 1 Chemical = 2 Both = 3*								
2	5	**If chemical fertilizer was applied, (if code 2 or 3 to Q24):**								
		25.1 Type of chemical fertilizer: UREA = 1 DAP =2 UREA & DAP = 3 NPS = 4 NPS & UREA = 5 Blended = 6 UREA & Blended = 7								
		25.2. Quantity of chemical fertilizer applied to the field (by fertilizer type):	**DAP**		**UREA**		**NPS**		**Blended**	
			Kg	Gm	Kg	Gm	Kg	Gm	Kg	Gm
2	6	**If natural fertilizer was used, (if code 1 or 3 to Q24), type of natural fertilizer:** Animal waste/manure = *1 compost = 2 Orga = 3 1 & 2 = 4 1 & 3 = 5 2 & 3 = 6 all = 7 other(specify) = 8*								
2	7	Number of times you harvest from this field/plot in this season?								
2	8	If you harvest twice or more from this plot in this production season, name of crop harvested: (more than one crop possible).	Crop name	Code	Crop name	Code	Crop name	Code		
2	9	**What was the field before this production season?** Left fallow = 1 own cropped/caltivated land = 2 gvernment forest/ tef/swamp = 3 comunal grazing/forest/tef land = 4 grazing/forest/tef land under other holder = 5 Cropped/caltivated land under other owner = 6 other (specify) = 7								

18. Field measured by? (GPS =1 Compass-rope = 2 → Section 3B Not measured = 3 → Q28) ►

SECTION 3A: Amount of area of field/plot measured using GPS:

19	20	21			22	23	24
GPS Accuracy in measuring the field	**Area of field**				**Field protection :** Not protected/bare □□□□ = 1 Covered with trees/perennial crops = 2 In compound □□□/□□ = 3 Partially covered = 4 Other (specify) = 5	Code	Note
	Area in M^2 (Clockwise)	**Area in M^2** (Anti Clockwise)					
Date of measurement			**Day**		**Month**		

SECTION 3B: Amount of area of field measured using Compass-Rope:

19	20	21	22	23	24	25	26	27
SIDE IDENTIFICATION	1 - 2	2 - 3	3 -	4 -	5 -	6 -	7 -	8 -
Bering (0)								
Length (Meter)								
SIDE IDENTIFICATION	9 -	10 -	11 -	12 -	13 -	14 -	15 -	16 -
Bering (0)								
Length (Meter)								
SIDE IDENTIFICATION	17 -	18 -	19 -	20 -	21 -	22 -	23 -	24 -
Bering (0)								
Length (Meter)								
SIDE IDENTIFICATION	25 -	26 -	27 -	28 -	29 -	30 -	31 -	32 -
Bering (0)								
Length (Meter)								
Date of measurement	**Day**	**Month**		**Closure error**		**Area in M^2**		

Only for fields selected for crop cut		**Selected angle No.**		**Length of shorter side**		**Obtained from random table**			
		Bering of shorter side		**Length of longer side**		**Obtained from random table**			

28. If field not measured, reason for not measured *(codes from enumerators' manual*) ⟶ ☐

29	**Area of plot (Farmers' estimate)**	**In Hectares**	**In local unit**		
			Unit	**Code**	**Area**

	Name	**Signature**	**Date**
Enumerator's			
Supervisor's			

Form AgSS. 2011/4

CENTRAL STATISTICAL AGENCY
ETHIOPIAN AGRICULTURAL SAMPLE SURVEY **2018/19 (2011 E.C.)**

Part I – Identification Particular

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Region	Zone	Wereda	Farmers' Association	E.A	Household ID	Household Head Sex M = 1 F = 2	Holder ID	Holder's Name	Age	Sex M = 1 F = 2	Educational Level Highest grade Completed	Household Size	Holding type Crop = 1 Livestock = 2 Both = 3

Part II – List of temporary crop fields to select sample fields for crop cutting

15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
				Crop name																			
Parcel No.	Field No.	Crop name	code	Field No.	Selected Field No.	Field No.	Selected Field No.	Field No.	Selected Field No.	Field No.	Selected Field No.	Field No.	Selected Field No.	Field No.	Selected Field No.	Field No.	Selected Field No.	Field No.	Selected Field No.	Field No.	Selected Field No.	Field No.	Selected Field No.

Form AgSS. 2011/5

CENTRAL STATISTICAL AGENCY
ETHIOPIAN AGRICULTURAL SAMPLE SURVEY **2018/19 (2011 E.C.)**

Part I – Identification Particular

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Region	Zone	Wereda	Farmers' Association	E.A	Household ID	Household Head Sex M = 1 F = 2	Holder ID	Holder's Name	Age	Sex M = 1 F = 2	Educational Level Highest grade Completed	Household Size	Holding type Crop = 1 Livestock = 2 Both = 3

Part II – Temporary Crop Cutting Results

15	16	17	18	19		20		21		22		23	24	25	26	27	28
Parcel No.	Field No.	Crop name		Crop cutting		Fresh Weight Of the harvest		Dry Weighing		Dry Weight		Was the Crop used before harvest Yes = 1 No = 2	Was there any crop damage? Yes = 1 No = 2	If yes Cause of damage		Percent of crop damaged	Crop Stand Pure stand = 1 Mixed = 2
			code	day	month	Kilo	Gram	Day	Month	Kilo	Gram	code	Code		Code		code