

**TRANSITIONAL GOVERNMENT OF
ETHIOPIA
CENTRAL STATISTICAL AUTHORITY**

**AGRICULTURAL SAMPLE SURVEY
1990/91 (1983 E.C.)**

REPORT ON

**AGRICULTURAL PRACTICES
Private Holding
(Meher Season)**

**Addis Ababa
February, 1995**

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PREPARED AND PRINTED BY
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I. INTRODUCTION.

Ethiopia's economy is mainly based on agriculture. The majority of the population is predominantly engaged in agriculture and its contribution to Gross Domestic Product is substantially high. It is therefore, essential to have reliable and basic quantitative information on the current state of agriculture for use in the establishment of national priorities, in development planning and socio-economic policy formulation.

For this reason, the Integrated System of Food and Agricultural Statistics Program was initiated in 1980 as a major part of the Rural Integrated Household Survey Program which in turn is part of the National Integrated Household Survey Program. Since the implementation of the first round of the program in 1980/81 (1973 E.C.), an agricultural sample survey has been carried out every year. The program was targeted to fill information needed for agricultural planning and other socio-economic policy making.

This report presents the results of agricultural inputs (use of fertilizers, improved seed, pesticide, irrigation etc.) from the agricultural sample survey that was conducted in 1990/91 (1983 E.C.).

In the report, it is also attempted to describe the objective of the survey, the scope of the survey, concepts and definitions relevant to the survey, sample design, method of data collection and estimation procedures. The details are presented below.

II. OBJECTIVE OF THE SURVEY.

The objective of the Agricultural Sample Survey which has been conducted annually since 1980/81 (1973 E.C.) is to

collect basic quantitative information about the nation's agriculture needed in the establishment of national priorities, in development planning and socio-economic policy formulation. It aimed at obtaining reliable estimates on Area, Production, Crop Land Utilization, Agricultural Practices, Livestock and Poultry and other agricultural variables for the regions and the country as a whole.

As indicated in the introduction, this report presents the results of 1990/91 (1983 E.C.) survey and covers agricultural practices such as fertilizer, insecticide and improved seeds applications measured in quantity and in area extent used by the private peasant holdings for the main season at national and regional levels.

III. SCOPE OF THE SURVEY.

The 1990/91 (1983 E.C.) Agricultural Sample Survey was launched in 25 administrative regions and one autonomous region excluding Eritrea, Tigray, North Wolo, Asab and Ogaden Autonomous Regions. Information was collected on area under major crops, production of major crops, general agricultural practices, number of livestock and poultry and other related agricultural variables, from selected holders in sampled 709 Farmers' Associations.

The units of enumeration were private peasant holdings, cooperatives and state farms. In this year the number of cooperatives dramatically declined and thus, data were collected only from 120 cooperatives out of 4,000 in the country. The results of cooperatives and state farms however, are not included in the report.

IV. BASIC CONCEPTS AND DEFINITIONS.

HOLDER: A holder is a person who exercises management control over the operations of the agricultural holding and takes the major decision regarding the utilization of the available resources. He has technical and economic responsibility for the holding. He may operate the holding directly as an owner or as a manager. Under conditions of traditional agricultural holding the holder may be regarded as the person, who with or without the help of other, operates land or raises livestock in his own right, i.e. the person who decides on what, when where and how to grow crops or raise livestock and has the right to determine the utilization of the products.

HOLDING: a holding is all the land and livestock kept which is used wholly or partly for agricultural production and is operated as one technical unit by one person alone, or with others, without regard to title, legal form, size or location.

SIZE OF HOLDING: In this report size of holding is determined by total area under crop and which includes area under temporary crops, permanent crops and other land which includes fallow land, pastoral land woodland and forest and others.

HOUSEHOLD: A household may be either;

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

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

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

TEMPORARY CROPS: Temporary crops are those crops which are grown with a cycle of under one year, sometimes only a few months with a view to be sown anew or planted for further production after the harvest. Similarly, crops grown in rotation are also considered temporary crops as these are destroyed when land is ploughed.

PERMANENT CROPS: Crops which occupy land for a long period of time and are not planted for several years after each harvest are considered as permanent crops. All fruit trees (e.g. oranges, mandarins, apples etc.) and trees used for beverages (like coffee, tea etc.) are considered as permanent crops. Permanent meadows and pastures, however, are excluded.

FERTILIZER : refers to anything added to the soil intended to increase the amount of plant nutrients available for crop growth. Usually fertilizers are divided in to two parts, Natural and Commercial. Examples of Natural fertilizers are farmyard manure and wood ashes while commercial fertilizers are DAP (Di-Amonium phosphate) and UREA (Amonium Nitrate).

PESTICIDE: are chemicals useful for the mitigation, control or elimination of pests which are troublesome or harmful to crops. Insecticides and herbicides are included here.

AREA IRRIGATED: refers to the practice where an area of land is purposely and actually provided with water, other than by rain, for improving the production of crops. The uncontrolled flooding of land by the overflow of rivers or streams should not be considered irrigation.

IMPROVED SEED: is defined as crop variety which gives a significant higher yield, better quality and/or better benefit compared to traditional varieties of seeds, and usually prepared under Agricultural Inputs supply corporation (AISCO) in Ethiopia.

V. SAMPLE DESIGN.

For the year 1990/91 (1983 E.C.) Agricultural Sample Survey, 867 Farmers' Associations were selected without replacement from the 25 Administrative Regions and one Autonomous Region in the country with probability proportional to size (size being the total number of households in the FAs). From each selected farmers' associations, a systematic sample of 25 agricultural households from a fresh list of agricultural households were selected. But the coverage was only 709 Farmers Associations due to the war and various problems from the targeted 867 FAs.

All agricultural holders belonging to the selected agricultural households of the 709 FAs were enumerated and the required data were collected from these holders.

VI. METHOD OF DATA COLLECTION.

For the 1990/91 (1983 E.C.) Agricultural Sample Survey, both interview and objective method of data collection were adopted. With respect to the information on area, all cropped fields under temporary and permanent crops belonging to the sampled holders were physically measured. All fields under temporary crops of each selected holder were classified by type of crop and from each class a field under crop was randomly selected for crop cutting.

Physical area measurements were done with the help of compass, measuring tape and ranging poles. First of all, the north-western corner of the field was located. Starting from this corner point, the distance between the point and the next corner point was measured and the bearing of the second from the first was read on the compass. The process continued in a clockwise direction until it reaches back to the starting corner point.

The enumerators drew sketch maps of the measured fields on graph papers indicating the measurements in chosen scales. Calculation of area of the fields was done by the enumerators using the following formula.

$$\text{AREA OF MEASURED FIELD} = \frac{SC^2}{4}$$

Where S , stands for the total number of full and half or larger than half squares inside the sketch and C for the chosen scale.

Moreover, area calculation was also done by computer and the area estimate results presented in this report are based on this computer calculations.

With regard to use of agricultural inputs, data were collected from the sampled holders through interview method only.

VII. FIELD OPERATION AND REFERENCE PERIOD.

The field work of the survey was carried out from September 1990 to February 1991 and the reference period of area-under crop is related to the agricultural year 1990/91.

VIII. ESTIMATION PROCEDURES.

Estimation procedure is guided by the method with which the sample has been selected. Having followed certain set of rules for sample selection, the following formulas were applied for estimating a particular characteristic of the agricultural sample survey data collected during 1990/91 (1983 E.C.).

(i) Estimation of a reported characteristic of private households.

Let X_{hij} be a total of a characteristic reported by the j^{th} selected agricultural household in the i^{th} selected Farmers' Association (FA) in the h^{th} wereda.

A_{hijk} be measured area for a specific crop in the k^{th} field for the j^{th} household in i^{th} FA in the h^{th} wereda.

- Q_{hijk} be quantity of fertilizer applied for a specific crop in the k^{th} field for the j^{th} household in the i^{th} FA in the h^{th} wereda.
- l_{hij} number of measured fields under a specific crop for j^{th} hh in the i^{th} selected FA in the h^{th} wereda.
- m_{hi} be number of households sampled in i^{th} selected FA in the h^{th} wereda .
- M_{hi} be total number of agricultural households in the i^{th} selected FA in the h^{th} wereda listed by the enumerator.
- P_{hi} be probability of selection of the i^{th} selected FA in the h^{th} wereda.
- n_h be number of FAs selected in the h^{th} wereda.

The estimate of a characteristic per household in the i^{th} selected FA in the h^{th} wereda will be obtained by the following formula:-

$$\bar{X}_{hi} = \sum_{j=1}^{m_{hi}} \frac{X_{hij}}{m_{hi}}$$

and the estimate of total for a reported characteristic for the i_i^{th} wereda in the region will be:-

$$\hat{X}_h = \frac{1}{n_h} \sum_{i1}^{n_h} \frac{M_{hi} \bar{X}_{hi}}{P_{hi}}$$

The regional estimate is obtained by summing up all wereda estimates of that particular region. Moreover, national estimates are obtained by aggregating regional estimates.

(ii) Area estimation on the basis of objective measurement under a specific crop for private households.

The average area per household for a specific crop in the i^{th} selected FA in the h^{th} wereda is given by :-

$$\bar{A}_{hi} = \frac{\sum_{j1}^{m_{hi}} \sum_{k1}^{l_{hi}} \bar{A}_{hijk}}{m_{hi}}$$

and the estimate of total area under a specific crop in the h^{th} wereda is given by :-

$$\hat{A}_h = \frac{1}{n_h} \sum_{i1}^{n_h} \frac{M_{hi} \bar{A}_{hi}}{P_{hi}}$$

As mentioned above, the regional and national estimates

of area for all crops can be obtained by summing up all wereda and regional estimates respectively.

(iii) Estimation of total quantity of fertilizers applied to a particular crop.

The estimate of total quantity of fertilizers applied to a particular crop is obtained in the same manner mentioned in (ii).

(iv) Estimation of sampling error.

Sampling variance of total estimate for h^{th} wereda is estimated by assuming the FAs within each wereda were selected with replacement. Although the variance is slightly over estimated, this assumption greatly simplifies the estimation procedure. Estimated variance for a total of a characteristic x is obtained by the following formula:-

$$\text{Var}(\hat{X}_h) = \frac{n_h}{n_h - 1} \left(\sum \hat{X}_{hi} - \frac{\hat{X}_h^2}{n_h} \right)$$

where
$$\hat{X}_{hi} = \frac{M_{hi} \bar{X}_{hi}}{n_h P_{hi}}$$

Estimation of sampling variance for regional total estimate is obtained by aggregating variance estimates of the respective wereda totals. Furthermore, variance for the national total estimate is obtained by summing up variance estimates of all regions.

Some of the survey estimates, for example rate of application of fertilizer take the form of a ratio of two estimates. This ratio estimate is given by :-

$$\hat{R} = \frac{\sum \hat{Q}_h}{\sum \hat{A}_h} = \frac{\hat{Q}}{\hat{A}} \quad (\text{Rate of application of fertilizer per hectare})$$

The sampling variance of the ratio estimate is approximated by :-

$$\text{Var}(\hat{R}) = \frac{1}{\hat{A}^2} [\text{Var}(\hat{X}) + \hat{R}^2 \text{Var}(\hat{A}) - 2\hat{R}\text{Cov}(\hat{X}, \hat{A})]$$

Coefficient of Variation for a total of characteristic x in percent is estimated by :

$$CV(\hat{X}) = \frac{\sqrt{\text{VAR}(\hat{X})}}{\hat{X}} \times 100$$

PART I.

Area for Farm Management Practices:

This part deals with the total crop area on that the private peasant holders used farm management practices. These farm management practices are refer to practices that increase crop production and are mainly uses of improved seed, irrigation, pesticide and fertilizer. The results are summarized and presented below.

1. Total Improved Seed Applied Area.

As indicated in Table 1, the total cultivated area of all crops is about 5410 thousand hectares. From the total cultivated land, improved seed was applied in 48.61 thousand hectares only. This indicates that the peasant holders used to apply largely the traditional seed variety rather than the improved ones, and this may have been actually due to less availability and high costs of the improved seed.

From the improved seed applied area, 40.87 thousand hectares was under temporary crop and 7.72 thousand hectares was held under permanent crop. On the other hand, it is also shown on the table that Maize from temporary crops and coffee from permanent crops had largest improved seed applied area with 30.41% and 12.98% respectively.

Furthermore, when we see and compare the regional results, Welega administrative region has reported the largest improved seed applied area, that is 17.62 thousand hectares followed by Arsi administrative region with 7.61 thousand hectares. According to the 1990/91 Area and Crop Production of major crops report, the highest average yield, about 15.3 quintal per hectare, was reported in these administrative regions.

One of the reasons to achieve the highest average yield may be because the regions used the largest proportion of improved seed compared to other regions.

2. Total Irrigated Area.

The total irrigated area at national level is about 53.62 thousand hectares or 0.99% of the total area. This shows that the private peasant holders did not practice irrigation at large. In this regard, it is very essential to orient peasants how to use and the advantage of irrigation through extension programs or any other means to increase the volume of production of the private holders and the country at the same time.

Out of the total irrigated area, 62.68% was under temporary crops and 37.39% was held under permanent crops. Moreover, sorghum from temporary crops and chat from permanent crops had the largest proportion with 14.14% and 12.44% respectively.

It is also shown in Table 2 that Irrigation was practiced largely in East Harerge with 15.35 thousand hectares followed by West Gojam with 10.26 thousand hectares.

3. Total Pesticide Applied Area.

It was mentioned above that the total cultivated land during the year 1990/91 was about 5410 thousand hectares. Pesticide was applied in only 3.94% of the total cultivated land. This really shows the private peasant holders have not used pesticide in considerable amount. As noted in 1, the reasons may have been the less availability of the pesticide and substantially high price.

The pesticide applied area under temporary crop was 205.28 thousand hectares or 96.21% and under permanent crop 8.11 thousand hectares or 3.80% of the total pesticide

applied area. In addition to this, from the pesticide applied area, the largest proportion was reported on teff which is 42.95% while the smallest proportion(0.01%) was on potatoes.

Regional comparison has shown that in Arsi and South Shewa Administrative regions the largest proportion of pesticide applied area were reported. For details see Table 2.

4. Total Fertilizer Applied Area.

It is known that fertilizer is one of the very important agricultural inputs used to facilitate the growth of crops and to increase productivity. But, due to reasons mentioned in (1) and (2), 1844.96 thousand hectares, which is 34.10% of the total cultivated land, was only fertilized.

Out of the total fertilized area, 1656.99 thousand hectares was reported under temporary crops and the other 187.80 thousand hectares was under permanent crops. Further more, teff took the largest share while vetch shared the least with 33.72.% and 0.04% respectively.

In addition, it is revealed that Arsi stood first in reporting fertilized area followed by West Gojam. The fertilized area in Arsi was 288.14 thousand hectares and in West Gojam it was 227.88 thousand hectares.

NOTE: If in some tables figures do not add up to total it is because of rounding..

TABLE 1. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON OF PRIVATE HOLDINGS IN *ETHIOPIA, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED APPLIED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	3852.17	71.20	36.23	74.53	25.16	46.92	192.81	90.36	1506.03	81.63
Teff	1241.29	22.94	1.93	3.97	3.45	6.43	91.64	42.95	622.13	33.72
Barley	540.11	9.98	2.13	4.38	4.75	8.86	18.91	8.86	227.38	12.32
Wheat	485.98	8.98	7.16	14.73	3.41	6.36	59.51	27.89	243.38	13.19
Maize	907.62	16.78	14.78	30.41	5.89	10.98	9.42	4.41	247.47	13.41
Sorghum	478.13	8.84	10.07	20.72	7.58	14.14	8.23	3.86	83.51	4.53
Millet	163.41	3.02	0.09	0.19	-	-	3.54	1.66	73.18	3.97
Oats	35.63	0.66	0.07	0.14	0.08	0.15	1.56	0.73	8.98	0.49
PULSES	660.23	12.20	2.77	5.70	2.25	4.20	10.59	4.96	79.69	4.32
Horse Beans	236.43	4.37	0.28	0.58	1.15	2.14	3.52	1.65	33.67	1.82
Chick Peas	113.09	2.09	0.27	0.56	0.15	0.28	0.30	0.14	4.70	0.25
Haricot Bean	91.60	1.69	2.03	4.18	0.23	0.43	0.42	0.20	10.03	0.54
Field Peas	114.78	2.12	0.10	0.21	-	-	5.54	2.60	24.46	1.33
Lentils	39.66	0.73	-	-	-	-	0.75	0.35	6.04	0.33
Vetch	64.67	1.20	0.09	0.19	0.72	1.34	0.06	0.03	0.79	0.04
OILSEEDS	242.60	4.48	0.23	0.47	0.28	0.52	0.52	0.24	11.07	0.60
Neug	158.77	2.93	-	-	-	-	0.27	0.13	2.09	0.11
Linseed	62.19	1.15	0.18	0.37	0.11	0.21	0.14	0.07	1.16	0.06
Fenugreek	9.96	0.18	0.05	0.10	-	-	0.11	0.05	1.16	0.06
Rapeseed	11.68	0.22	-	-	0.17	0.32	-	-	6.66	0.36
Other Temporary	34.03	0.63	0.23	0.47	0.14	0.26	0.03	0.01	-	-
Spices	45.20	0.84	0.29	0.60	1.28	2.39	0.30	0.14	11.34	0.61
Potatoes	21.55	0.40	0.14	0.29	1.79	3.34	0.02	0.01	11.19	0.61
Other Vegetables	89.87	1.66	0.98	2.02	2.71	5.05	1.01	0.47	37.67	2.04
TOTAL TEMPORARY	4945.65	91.41	40.87	84.08	33.61	62.68	205.28	96.21	1656.99	89.81
Chat	85.06	1.57	0.27	0.56	6.67	12.44	4.16	1.95	33.23	1.80
Coffee	149.89	2.77	6.31	12.98	6.10	11.38	3.39	1.59	20.82	1.13
Enset	188.63	3.49	1.00	2.06	1.63	3.04	0.47	0.22	122.98	6.67
Fruits	6.51	0.12	0.03	0.06	0.54	1.01	-	-	1.78	0.10
Other Permanent	34.51	0.64	0.11	0.23	5.06	9.44	0.09	0.04	8.99	0.49
TOTAL PERMANENT	464.60	8.59	7.72	15.88	20.00	37.30	8.11	3.80	187.80	10.18
ALL CROPS	5410.30	100.00	48.61	100.00	53.62	100.00	213.37	100.00	1844.96	100.00

* EXCLUDING ERITREA, TIGRAY, NORTH WOLO, ASAB AND OGADEN AUTONOMOUS REGIONS.

FIG 1. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA FOR MAJOR CROPS OF PRIVATE HOLDINGS CROPS IN ETHIOPIA, 1990/91(1983 E.C.)

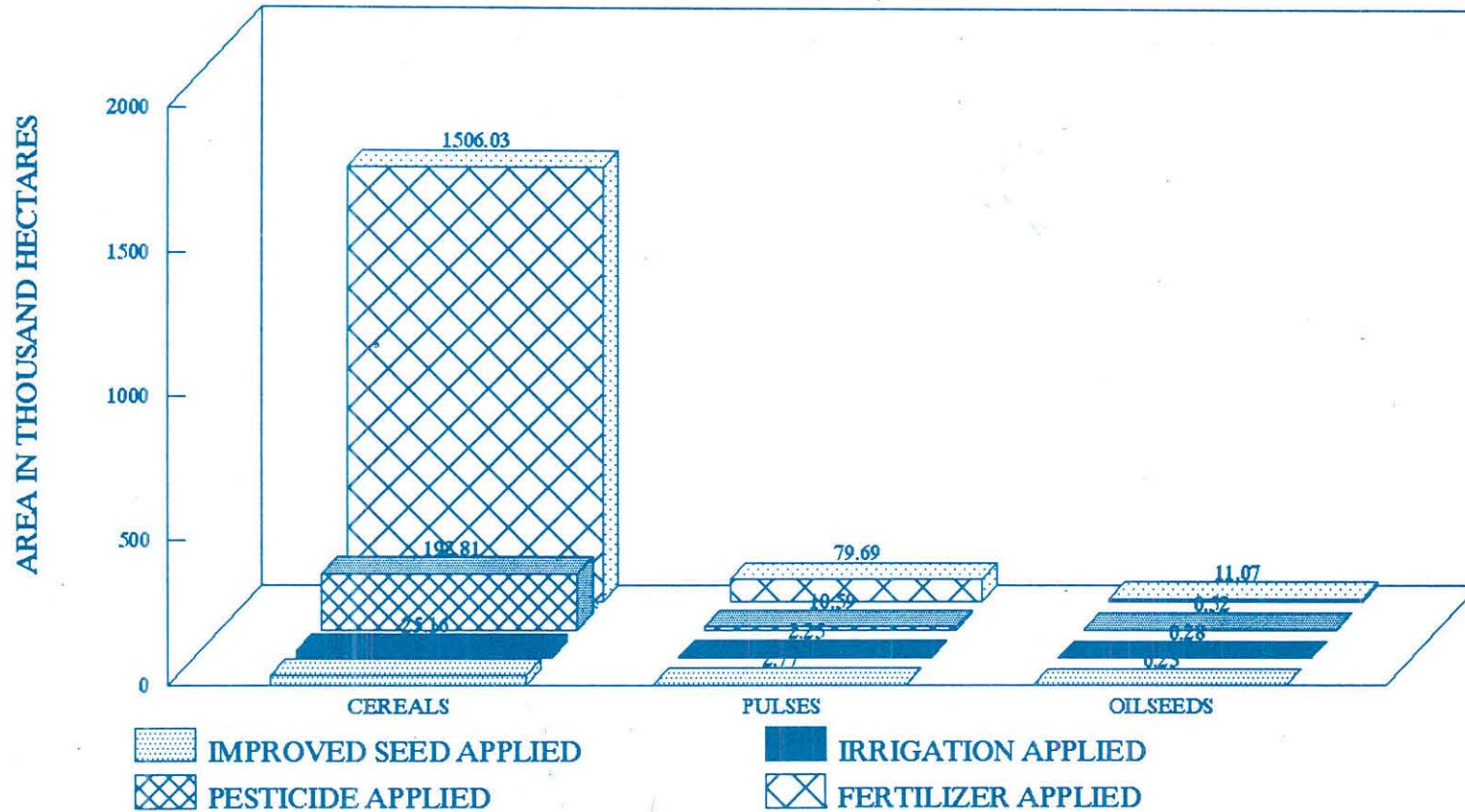


TABLE 2. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY REGION FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN *ETHIOPIA, 1990/91(1983 E.C.)

REGION	(000' HA)									
	TOTAL		IMPROVED SEED APPLIED		IRRIGATION		PESTICIDE		FERTILIZER	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
ARSI	449.74	8.31	7.61	15.66	0.20	0.37	56.62	26.54	288.14	15.62
BALE	117.84	2.18	0.25	0.51	0.43	0.80	1.28	0.60	24.78	1.34
NORTH OMO	188.28	3.48	1.94	3.99	2.32	4.33	0.80	0.37	78.84	4.27
SOUTH OMO	16.28	0.30	0.16	0.33	-	-	0.03	0.01	0.01	0.00*
EAST GOJAM	443.20	8.19	1.65	3.39	1.33	2.48	2.90	1.36	109.81	5.95
WEST GOJAM	516.51	9.55	1.32	2.72	10.26	19.13	0.56	0.26	227.88	12.35
METEKEL	62.92	1.16	0.39	0.80	0.06	0.11	1.10	0.52	14.20	0.77
NORTH GONDER	196.34	3.63	0.09	0.19	1.33	2.48	0.61	0.29	21.26	1.15
SOUTH GONDER	125.77	2.32	0.31	0.64	0.73	1.36	0.09	0.04	19.35	1.05
DIRE DAWA	6.27	0.12	0.47	0.97	1.26	2.35	0.21	0.10	1.45	0.08
EAST HARERGE	236.42	4.37	2.02	4.16	15.35	28.63	8.29	3.89	95.85	5.20
WEST HARERGE	156.48	2.89	1.21	2.49	5.08	9.47	3.22	1.51	15.40	0.83
GAMBELA	13.00	0.24	1.39	2.86	-	-	0.79	0.37	0.51	0.03
ILUBABOR	431.13	7.97	3.68	7.57	0.38	0.71	8.96	4.20	90.03	4.88
KEFA	106.01	1.96	0.92	1.89	0.01	0.02	3.33	1.56	0.63	0.03
ADDIS ABABA	112.36	2.08	0.93	1.91	0.04	0.07	10.50	4.92	43.58	2.36
EAST SHEWA	209.90	3.88	0.63	1.30	0.05	0.09	19.78	9.27	112.40	6.09
NORTH SHEWA	229.85	4.25	0.01	0.02	2.54	4.74	3.37	1.58	23.02	1.25
SOUTH SHEWA	500.06	9.24	1.68	3.46	1.15	2.14	55.12	25.83	224.75	12.18
WEST SHEWA	448.74	8.29	0.71	1.46	4.29	8.00	26.18	12.27	169.27	9.17
BORENA	45.29	0.84	0.25	0.51	-	-	-	-	2.42	0.13
SIDAMO	253.96	4.69	1.87	3.85	2.70	5.04	1.87	0.88	141.14	7.65
ASOSA	22.55	0.42	0.02	0.04	-	-	0.04	0.02	3.84	0.21
WELEGA	365.24	6.75	17.62	36.25	0.72	1.34	6.53	3.06	115.61	6.27
SOUTH WOLO	156.19	2.89	1.48	3.04	3.39	6.32	1.19	0.56	20.79	1.13
TOTAL	5410.33	100.00	48.61	100.00	53.62	100.00	213.37	100.00	1844.96	100.00

TABLE 3. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ARSI, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	358.53	79.72	7.58	99.61	-	-	54.79	96.78	268.44	93.15
Teff	25.74	5.72	-	-	-	-	8.18	14.46	15.38	5.34
Barley	144.97	32.23	1.74	22.86	-	-	12.12	21.41	126.76	43.99
Wheat	135.61	30.15	5.74	75.43	-	-	33.57	59.29	114.35	39.68
Maize	35.16	7.82	0.07	0.92	-	-	0.23	0.40	5.71	1.98
Sorghum	8.76	1.95	0.03	0.39	-	-	-	-	0.48	0.17
Millet	-	-	-	-	-	-	-	-	-	-
Oats	8.28	1.84	-	-	-	-	0.69	1.23	5.76	2.00
PULSES	56.67	12.60	-	-	-	-	1.80	3.18	16.49	5.72
Horse Beans	23.78	5.29	-	-	-	-	0.59	1.05	6.52	2.26
Chick Peas	0.26	0.06	-	-	-	-	-	-	0.08	0.03
Haricot Bean	12.35	2.75	-	-	-	-	0.02	0.04	1.32	0.46
Field Peas	14.85	3.30	-	-	-	-	0.64	1.14	5.92	2.05
Lentils	4.39	0.98	-	-	-	-	0.54	0.95	2.50	0.87
Vetch	1.05	0.23	-	-	-	-	-	-	0.14	0.05
OILSEEDS	28.96	6.44	-	-	0.11	57.89	0.01	0.02	2.02	0.70
Neug	0.44	0.10	-	-	-	-	-	-	-	-
Linseed	25.59	5.69	-	-	0.11	57.89	0.01	0.02	0.62	0.21
Fenugreek	0.27	0.06	-	-	-	-	-	-	0.06	0.02
Rapeseed	2.67	0.59	-	-	-	-	-	-	1.34	0.47
Other Temporary	0.03	0.01	-	-	-	-	-	-	-	-
Spices	0.15	0.03	-	-	0.01	6.92	-	-	0.09	0.03
Potatoes	0.06	0.01	-	-	-	-	-	-	0.02	0.01
Other Vegetables	2.19	0.49	0.03	0.39	0.06	30.40	0.02	0.03	0.84	0.29
TOTAL TEMPORARY	446.60	99.30	7.61	100.00	0.18	95.21	56.61	100.02	287.89	99.91
Chat	0.29	0.06	-	-	-	-	-	-	-	-
Coffee	0.21	0.05	-	-	-	-	-	-	-	-
Enset	0.09	0.02	-	-	-	-	-	-	0.01	-
Fruits	-	-	-	-	-	-	-	-	-	-
Other Permanent	2.55	0.57	-	-	0.01	4.79	-	-	0.25	0.09
TOTAL PERMANENT	3.14	0.70	-	-	0.01	4.79	-	-	0.26	0.09
ALL CROPS	449.74	100.00	7.61	100.00	0.20	100.00	56.62	100.00	288.15	100.00

TABLE 4. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN BALE, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	90.39	76.71	0.02	8.00	0.27	63.50	1.26	98.43	24.02	96.96
Teff	9.52	8.08	-	-	0.27	63.50	-	-	0.11	0.43
Barley	33.56	28.48	-	-	-	-	0.28	21.52	11.50	46.42
Wheat	32.79	27.82	-	-	-	-	0.95	74.67	11.31	45.65
Maize	5.19	4.40	0.02	8.00	-	-	-	-	-	-
Sorghum	0.72	0.61	-	-	-	-	-	-	-	-
Millet	-	-	-	-	-	-	-	-	-	-
Oats	8.63	7.32	-	-	-	-	0.03	2.24	1.11	4.46
PULSES	12.39	10.51	-	-	-	-	0.02	1.57	0.09	0.36
Horse Beans	3.46	2.94	-	-	-	-	0.02	1.57	0.01	0.05
Chick Peas	1.89	1.60	-	-	-	-	-	-	-	-
Haricot Bean	0.27	0.23	-	-	-	-	-	-	-	-
Field Peas	4.81	4.08	-	-	-	-	-	-	0.04	0.15
Lentils	1.10	0.94	-	-	-	-	-	-	0.04	0.16
Vetch	0.86	0.73	-	-	-	-	-	-	-	-
OILSEEDS	7.44	6.31	0.18	72.00	-	-	-	-	0.59	2.37
Neug	0.27	0.23	-	-	-	-	-	-	-	-
Linseed	5.96	5.06	0.18	72.00	-	-	-	-	0.02	0.08
Fenugreek	1.20	1.02	-	-	-	-	-	-	0.57	2.29
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	0.06	0.05	-	-	-	-	-	-	-	-
Spices	0.59	0.50	-	-	-	-	-	-	-	-
Potatoes	0.33	0.28	-	-	-	-	-	-	-	-
Other Vegetables	0.24	0.20	0.03	12.00	0.01	1.37	-	-	0.01	0.05
TOTAL TEMPORARY	111.45	94.57	0.23	92.00	0.28	64.87	1.28	100.00	24.72	99.74
Chat	0.41	0.35	-	-	-	-	-	-	-	-
Coffee	4.05	3.44	-	-	0.12	27.40	-	-	-	-
Enset	1.28	1.09	0.02	8.00	0.03	7.66	-	-	0.06	0.25
Fruits	0.25	0.21	-	-	-	-	-	-	-	-
Other Permanent	0.40	0.34	-	-	-	0.08	-	-	-	-
TOTAL PERMANENT	6.40	5.43	0.02	8.00	0.15	35.13	-	-	0.06	0.25
ALL CROPS	117.84	100.00	0.25	100.00	0.43	100.00	1.28	100.00	24.78	100.00

TABLE 5. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN NORTH OMO, 1990/91(1983 E.C.)

CROPNAME	(000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	102.58	54.48	1.76	90.96	0.93	40.09	0.20	24.43	33.33	42.28
Teff	39.59	21.03	0.25	12.69	-	-	-	-	16.87	21.39
Barley	21.01	11.16	0.04	2.22	-	-	-	-	10.36	13.14
Wheat	4.04	2.14	-	-	0.05	2.16	-	-	1.46	1.86
Maize	13.47	7.15	1.21	62.29	0.88	37.93	0.20	24.43	1.33	1.68
Sorghum	23.95	12.72	0.27	13.76	-	-	-	-	3.32	4.21
Millet	0.50	0.26	-	-	-	-	-	-	-	-
Oats	0.03	0.02	-	-	-	-	-	-	-	-
PULSES	21.08	11.19	-	-	-	-	0.16	19.53	5.67	7.19
Horse Beans	4.76	2.53	-	-	-	-	-	-	0.67	0.85
Chick Peas	2.88	1.53	-	-	-	-	-	-	0.77	0.98
Haricot Bean	8.33	4.42	-	-	-	-	0.16	19.53	3.27	4.15
Field Peas	5.06	2.69	-	-	-	-	-	-	0.95	1.21
Lentils	0.05	0.03	-	-	-	-	-	-	-	-
Vetch	-	-	-	-	-	-	-	-	-	-
OILSEEDS	0.11	0.06	-	-	-	-	-	-	0.02	0.02
Neug	0.07	0.03	-	-	-	-	-	-	-	-
Linseed	0.03	0.02	-	-	-	-	-	-	0.01	0.01
Fenugreek	0.01	0.01	-	-	-	-	-	-	0.01	0.01
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-	-	-	-	-
Spices	1.60	0.85	-	-	-	-	-	-	0.47	0.59
Potatoes	7.13	3.79	0.05	2.47	0.01	0.43	0.02	2.57	4.54	5.76
Other Vegetables	21.91	11.63	0.03	1.45	0.06	2.59	0.43	53.46	11.35	14.40
TOTAL TEMPORARY	154.42	82.01	1.85	94.88	1.00	43.10	0.81	99.99	55.38	70.24
Chat	-	-	-	-	-	-	-	-	-	-
Coffee	6.09	3.23	0.04	1.85	-	-	-	-	3.39	4.31
Enset	20.82	11.06	0.06	3.27	0.02	0.86	-	-	18.32	23.24
Fruits	0.30	0.16	-	-	-	-	-	-	0.19	0.24
Other Permanent	6.67	3.54	-	-	1.30	56.03	-	-	1.55	1.97
TOTAL PERMANENT	33.89	18.00	0.10	5.12	1.33	57.33	-	-	23.46	29.76
ALL CROPS	188.28	100.00	1.94	100.00	2.32	100.00	0.80	100.00	78.84	100.00

TABLE 6. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH OMO, 1990/91(1983 E.C.)

CROP NAME	(000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	8.55	52.62	0.16	100.00	-	-	-	-	-	-
Teff	2.08	12.80	-	-	-	-	-	-	-	-
Barley	0.95	5.82	-	-	-	-	-	-	-	-
Wheat	0.19	1.19	-	-	-	-	-	-	-	-
Maize	2.51	15.42	0.08	48.17	-	-	-	-	-	-
Sorghum	2.82	17.38	0.08	51.83	-	-	-	-	-	-
Millet	-	-	-	-	-	-	-	-	-	-
Oats	-	-	-	-	-	-	-	-	-	-
PULSES	1.80	11.10	-	-	-	-	-	-	-	-
Horse Beans	0.51	3.13	-	-	-	-	-	-	-	-
Chick Peas	-	-	-	-	-	-	-	-	-	-
Haricot Bean	0.37	2.28	-	-	-	-	-	-	-	-
Field Peas	0.91	5.60	-	-	-	-	-	-	-	-
Lentils	0.02	0.10	-	-	-	-	-	-	-	-
Vetch	-	-	-	-	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-	-	-	-	-
Neug	-	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	0.16	0.95	-	-	-	-	-	-	-	-
Spices	0.75	4.61	-	-	-	-	-	-	-	-
Potatoes	0.17	1.07	-	-	-	-	-	-	-	-
Other Vegetables	0.86	5.29	-	-	-	-	-	-	-	-
TOTAL TEMPORARY	12.30	75.64	0.16	100.00	-	-	-	-	-	-
Chat	-	-	-	-	-	-	-	-	-	-
Coffee	2.67	16.45	-	-	-	-	0.03	100.00	0.01	100.00
Enset	1.25	7.67	-	-	-	-	-	-	-	-
Fruits	-	-	-	-	-	-	-	-	-	-
Other Permanent	0.04	0.24	-	-	-	-	-	-	-	-
TOTAL PERMANENT	3.96	24.36	-	-	-	-	0.03	100.00	0.01	100.00
ALL CROPS	16.25	100.00	0.16	100.00	-	-	0.03	100.00	0.01	100.00

TABLE 7. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN EAST GOJAM, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	330.79	74.64	1.42	85.70	1.11	83.46	2.09	72.23	106.44	96.93
Teff	177.33	40.01	0.34	20.58	0.06	4.51	1.84	63.44	81.82	74.51
Barley	52.37	11.82	0.05	2.94	0.61	45.86	0.07	2.29	8.79	8.01
Wheat	58.19	13.13	0.75	45.64	—	—	0.19	6.50	10.44	9.51
Maize	26.04	5.88	0.27	16.54	0.35	26.32	—	—	5.32	4.85
Sorghum	16.41	3.70	—	—	0.09	6.77	—	—	—	—
Millet	0.45	0.10	—	—	—	—	—	—	0.06	0.06
Oats	—	—	—	—	—	—	—	—	—	—
PULSES	69.30	15.64	0.23	13.96	0.04	3.01	0.77	26.45	2.04	1.86
Horse Beans	20.41	4.61	0.13	7.75	—	—	0.77	26.45	1.08	0.98
Chick Peas	16.66	3.76	—	—	0.04	3.01	—	—	0.22	0.20
Haricot Bean	1.33	0.30	—	—	—	—	—	—	—	—
Field Peas	8.29	1.87	0.10	6.22	—	—	—	—	0.74	0.67
Lentils	5.47	1.23	—	—	—	—	—	—	—	—
Vetch	17.13	3.87	—	—	—	—	—	—	—	—
OILSEEDS	34.42	7.77	—	—	—	—	—	—	0.82	0.74
Neug	21.58	4.87	—	—	—	—	—	—	0.79	0.72
Linseed	9.84	2.22	—	—	—	—	—	—	—	—
Fenugreek	2.34	0.53	—	—	—	—	—	—	0.03	0.03
Rapeseed	0.66	0.15	—	—	—	—	—	—	—	—
Other Temporary	3.03	0.68	—	—	—	—	—	—	—	—
Spices	3.02	0.68	—	—	0.03	2.26	—	—	0.08	0.07
Potatoes	0.16	0.03	—	—	—	—	—	—	0.01	0.01
Other Vegetables	0.27	0.06	—	—	0.01	0.75	—	—	0.02	0.02
TOTAL TEMPORARY	440.98	99.50	1.64	99.67	1.19	89.47	2.87	98.68	109.40	99.64
Chat	—	—	—	—	—	—	—	—	—	—
Coffee	0.01	0.00	—	—	—	—	—	—	0.01	0.01
Enset	—	—	—	—	—	—	—	—	—	—
Fruits	—	—	—	—	—	—	—	—	—	—
Other Permanent	2.19	0.49	0.01	0.34	0.14	10.53	0.04	1.32	0.40	0.37
TOTAL PERMANENT	2.21	0.50	0.01	0.34	0.14	10.53	0.04	1.32	0.41	0.37
ALL CROPS	443.20	100.00	1.65	100.00	1.33	100.00	2.90	100.00	109.81	100.00

TABLE 8. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WEST GOJAM, 1990/91(1983 E.C.)

('000' HA)

CROP NAME	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	400.25	77.49	0.91	68.94	5.53	53.95	0.56	100.00	215.40	94.53
Teff	186.30	36.07	0.26	19.70	0.40	3.88	0.54	96.43	103.39	45.37
Barley	65.35	12.65	—	—	3.74	36.50	—	—	14.87	6.53
Wheat	9.78	1.89	—	—	1.32	12.85	—	—	4.76	2.09
Maize	64.51	12.49	0.58	43.94	0.07	0.71	0.02	3.57	39.05	17.13
Sorghum	0.76	0.15	—	—	—	—	—	—	—	—
Millet	73.17	14.17	—	—	—	—	—	—	53.34	23.41
Oats	0.39	0.08	0.07	5.30	—	—	—	—	—	—
PULSES	38.43	7.44	—	—	—	—	—	—	2.62	1.15
Horse Beans	12.14	2.35	—	—	—	—	—	—	0.76	0.33
Chick Peas	11.56	2.24	—	—	—	—	—	—	0.14	0.06
Haricot Bean	0.56	0.11	—	—	—	—	—	—	0.12	0.05
Field Peas	6.39	1.24	—	—	—	—	—	—	1.60	0.70
Lentils	0.33	0.06	—	—	—	—	—	—	—	—
Vetch	7.45	1.44	—	—	—	—	—	—	—	—
OILSEEDS	50.89	9.85	—	—	0.17	1.71	—	—	5.15	2.26
Neug	39.70	7.69	—	—	—	—	—	—	0.55	0.24
Linseed	5.04	0.98	—	—	—	—	—	—	0.19	0.09
Fenugreek	0.12	0.02	—	—	—	—	—	—	—	—
Rapeseed	6.03	1.17	—	—	0.17	1.71	—	—	4.40	1.93
Other Temporary	8.89	1.72	—	—	—	—	—	—	—	—
Spices	3.15	0.61	0.01	0.76	0.92	9.01	—	—	1.54	0.68
Potatoes	3.23	0.63	—	—	1.50	14.63	—	—	1.66	0.73
Other Vegetables	0.97	0.19	0.04	3.03	0.16	1.52	—	—	0.52	0.23
TOTAL TEMPORARY	505.82	97.95	0.96	72.73	8.28	80.81	0.56	100.00	226.89	99.57
Chat	—	—	—	—	—	—	—	—	—	—
Coffee	8.84	1.71	0.35	26.52	1.29	12.54	—	—	0.24	0.10
Enset	—	—	—	—	—	—	—	—	—	—
Fruits	0.01	0.00*	—	—	—	—	—	—	—	—
Other Permanent	1.86	0.36	—	—	0.68	6.64	—	—	0.75	0.33
TOTAL PERMANENT	10.71	2.07	0.36	27.27	1.97	19.18	—	—	0.99	0.43
ALL CROPS	516.51	100.00	1.32	100.00	10.26	100.00	0.56	100.00	227.88	100.00

TABLE 9. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN METEKEL, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	52.90	84.08	0.39	100.00	0.03	56.47	0.80	73.22	12.77	89.92
Teff	16.26	25.85	0.17	43.59	-	-	-	-	2.18	15.37
Barley	0.04	0.07	-	-	0.02	41.43	-	-	0.02	0.16
Wheat	0.32	0.50	0.05	12.82	-	-	-	-	-	-
Maize	9.80	15.58	0.08	20.51	-	-	0.37	34.14	4.59	32.28
Sorghum	8.20	13.04	-	-	0.01	15.04	0.43	39.08	0.26	1.85
Millet	13.38	21.26	0.09	23.08	-	-	-	-	5.32	37.47
Oats	4.90	7.78	-	-	-	-	-	-	0.40	2.79
PULSES	1.19	1.89	-	-	-	-	-	-	0.13	0.90
Horse Beans	0.15	0.24	-	-	-	-	-	-	0.01	0.08
Chick Peas	1.01	1.60	-	-	-	-	-	-	0.11	0.75
Haricot Bean	0.03	0.05	-	-	-	-	-	-	0.01	0.06
Field Peas	-	-	-	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-	-	-
Vetch	-	-	-	-	-	-	-	-	-	-
OILSEEDS	7.11	11.30	-	-	-	-	0.27	24.46	0.78	5.50
Neug	6.00	9.53	-	-	-	-	0.27	24.46	0.08	0.53
Linseed	0.05	0.07	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-	-
Rapeseed	1.07	1.70	-	-	-	-	-	-	0.71	4.97
Other Temporary	0.15	0.24	-	-	-	-	-	-	-	-
Spices	0.84	1.34	-	-	-	-	0.03	2.32	0.48	3.35
Potatoes	0.02	0.03	-	-	-	-	-	-	-	0.03
Other Vegetables	0.19	0.31	-	-	-	-	-	-	0.03	0.24
TOTAL TEMPORARY	62.41	99.19	0.39	100.00	0.03	56.47	1.10	100.00	14.20	99.93
Chat	0.02	0.02	-	-	-	-	-	-	-	-
Coffee	0.01	0.01	-	-	0.01	10.28	-	-	-	-
Enset	-	-	-	-	-	-	-	-	-	-
Fruits	0.03	0.04	-	-	0.02	33.24	-	-	-	-
Other Permanent	0.46	0.73	-	-	-	-	-	-	-	-
TOTAL PERMANENT	0.51	0.81	-	-	0.02	43.53	-	-	-	-
ALL CROPS	62.92	100.00	0.39	100.00	0.06	100.00	1.10	100.00	14.20	100.00

TABLE 10. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN NORTH GONDER, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	134.31	68.41	0.08	82.57	0.54	40.52	0.61	100.00	19.95	93.76
Teff	42.58	21.69	0.08	82.57	0.25	18.67	0.42	68.09	14.50	68.14
Barley	18.09	9.22	-	-	-	-	0.13	21.04	1.71	8.04
Wheat	7.71	3.93	-	-	-	-	-	-	0.22	1.02
Maize	7.91	4.03	-	-	0.29	21.86	0.07	10.86	1.37	6.42
Sorghum	47.09	23.98	-	-	-	-	-	-	1.18	5.55
Millet	9.45	4.81	-	-	-	-	-	-	0.97	4.58
Oats	1.48	0.75	-	-	-	-	-	-	-	-
PULSES	42.68	21.74	-	-	0.19	14.10	-	-	0.16	0.73
Horse Beans	10.78	5.49	-	-	0.07	5.32	-	-	0.01	0.04
Chick Peas	22.79	11.61	-	-	0.11	7.93	-	-	0.14	0.66
Haricot Bean	0.14	0.07	-	-	-	-	-	-	0.01	0.03
Field Peas	5.59	2.85	-	-	-	-	-	-	-	-
Lentils	1.14	0.58	-	-	-	-	-	-	-	-
Vetch	2.24	1.14	-	-	0.01	0.85	-	-	-	-
OILSEEDS	8.75	4.46	-	-	-	-	-	-	0.05	0.22
Neug	5.67	2.89	-	-	-	-	-	-	0.02	0.11
Linseed	1.02	0.52	-	-	-	-	-	-	-	-
Fenugreek	1.95	0.99	-	-	-	-	-	-	0.02	0.11
Rapeseed	0.11	0.06	-	-	-	-	-	-	-	-
Other Temporary	1.32	0.67	-	-	-	-	-	-	-	-
Spices	6.01	3.06	-	-	0.01	0.82	-	-	0.26	1.24
Potatoes	0.54	0.28	-	-	-	-	-	-	0.07	0.33
Other Vegetables	0.71	0.36	0.02	17.43	0.14	10.22	-	-	0.12	0.55
TOTAL TEMPORARY	194.32	98.98	0.10	100.00	0.88	65.67	0.62	99.99	20.60	96.82
Chat	-	-	-	-	-	-	-	-	-	-
Coffee	0.25	0.13	-	-	0.21	15.64	-	-	0.13	0.63
Enset	-	-	-	-	-	-	-	-	-	-
Fruits	0.03	0.01	-	-	0.02	1.45	-	-	-	-
Other Permanent	1.72	0.88	-	-	0.23	17.24	-	-	0.53	2.49
TOTAL PERMANENT	2.00	1.02	-	-	0.46	34.34	-	-	0.66	3.12
ALL CROPS	196.34	100.00	0.09	100.00	1.33	100.00	0.61	100.00	21.26	100.00

TABLE 11. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH GONDER, 1990/91(1983 E.C.)

CROP NAME	(000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	84.04	66.83	0.16	51.88	--	--	0.09	100.00	19.09	98.65
Teff	42.34	33.67	0.07	23.01	--	--	--	--	10.87	56.19
Barley	9.46	7.52	--	--	--	--	0.09	100.00	0.89	4.60
Wheat	1.13	0.90	--	--	--	--	--	--	--	--
Maize	12.75	10.13	0.09	28.87	--	--	--	--	3.71	19.18
Sorghum	3.51	2.79	--	--	--	--	--	--	--	--
Millet	14.85	11.81	--	--	--	--	--	--	3.61	18.68
Oats	--	--	--	--	--	--	--	--	--	--
PULSES	16.93	13.46	--	--	0.71	97.79	--	--	--	--
Horse Beans	2.72	2.16	--	--	--	--	--	--	--	--
Chick Peas	4.38	3.48	--	--	--	--	--	--	--	--
Haricot Bean	--	--	--	--	--	--	--	--	--	--
Field Peas	0.11	0.09	--	--	--	--	--	--	--	--
Lentils	0.81	0.64	--	--	--	--	--	--	--	--
Vetch	8.91	7.08	--	--	0.71	97.79	--	--	--	--
OILSEEDS	16.39	13.03	--	--	--	--	--	--	--	--
Neug	14.45	11.49	--	--	--	--	--	--	--	--
Linseed	1.69	1.35	--	--	--	--	--	--	--	--
Fenugreek	0.11	0.09	--	--	--	--	--	--	--	--
Rapeseed	0.13	0.10	--	--	--	--	--	--	--	--
Other Temporary	5.85	4.65	0.15	48.12	--	--	--	--	--	--
Spices	2.05	1.63	--	--	--	--	--	--	0.10	0.50
Potatoes	0.14	0.11	--	--	--	--	--	--	0.10	0.53
Other Vegetables	0.20	0.16	--	--	0.02	2.21	--	--	0.05	0.24
TOTAL TEMPORARY	125.59	99.85	0.31	100.00	0.73	100.00	0.09	100.00	19.33	99.92
Chat	--	--	--	--	--	--	--	--	--	--
Coffee	--	--	--	--	--	--	--	--	--	--
Enset	--	--	--	--	--	--	--	--	--	--
Fruits	0.03	0.03	--	--	--	--	--	--	--	--
Other Permanent	0.13	0.10	--	--	--	--	--	--	0.02	0.09
TOTAL PERMANENT	0.16	0.13	--	--	--	--	--	--	0.02	0.09
ALL CROPS	125.77	100.00	0.31	100.00	0.73	100.00	0.09	100.00	19.35	100.00

TABLE 12. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN DIRE DAWA, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	5.11	81.43	0.43	92.07	0.76	60.32	0.17	80.95	1.16	80.56
Teff	-	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-	-
Wheat	-	-	-	-	-	-	-	-	-	-
Maize	0.31	4.86	0.05	9.81	0.16	12.70	-	-	0.06	4.17
Sorghum	4.80	76.55	0.38	82.26	0.60	47.62	0.17	80.95	1.10	76.39
Millet	-	-	-	-	-	-	-	-	-	-
Oats	-	-	-	-	-	-	-	-	-	-
PULSES	0.02	0.28	-	-	-	-	-	-	-	-
Horse Beans	-	-	-	-	-	-	-	-	-	-
Chick Peas	-	-	-	-	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-	-	-
Vetch	-	-	-	-	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-	-	-	-	-
Neug	-	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	0.12	1.91	-	-	-	-	0.03	14.29	0.08	5.56
Spices	0.01	0.23	-	-	-	-	-	-	0.01	0.69
Potatoes	0.01	0.12	-	-	-	-	-	-	-	-
Other Vegetables	0.11	1.78	-	-	0.03	2.38	-	-	0.01	0.69
TOTAL TEMPORARY	5.36	85.45	0.43	92.07	0.79	62.70	0.20	95.24	1.26	87.50
Chat	0.63	9.98	0.03	6.40	0.26	20.63	0.01	4.76	0.12	8.33
Coffee	0.07	1.08	-	-	0.05	3.97	-	-	-	-
Enset	-	-	-	-	-	-	-	-	-	-
Fruits	0.20	3.13	0.01	1.53	0.16	12.70	-	-	0.06	4.17
Other Permanent	-	-	-	-	-	-	-	-	-	-
TOTAL PERMANENT	0.89	14.24	0.04	7.93	0.47	37.30	0.01	4.76	0.18	12.50
ALL CROPS	6.27	100.00	0.47	100.00	1.26	100.00	0.21	100.00	1.44	100.00

TABLE 13. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN EAST HARERGE, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	149.71	63.33	1.64	80.82	6.48	42.23	5.19	62.56	66.59	68.65
Teff	1.75	0.74	-	-	-	-	-	-	0.56	0.58
Barley	3.45	1.46	-	-	0.08	0.54	-	-	0.96	0.99
Wheat	12.14	5.14	0.11	5.22	-	-	0.16	1.95	5.62	5.79
Maize	32.46	13.73	0.78	38.54	1.59	10.38	1.09	13.11	10.30	10.61
Sorghum	99.03	41.89	0.75	37.06	4.80	31.31	3.94	47.50	48.99	50.51
Millet	-	-	-	-	-	-	-	-	-	-
Oats	0.88	0.37	-	-	-	-	-	-	0.16	0.17
PULSES	14.85	6.28	0.23	11.61	0.22	1.43	0.35	4.16	0.90	0.92
Horse Beans	4.46	1.89	-	-	-	-	-	-	0.03	0.03
Chick Peas	0.22	0.10	-	-	-	-	-	-	0.15	0.16
Haricot Bean	6.69	2.83	0.23	11.61	0.22	1.43	0.18	2.19	0.35	0.36
Field Peas	2.68	1.14	-	-	-	-	0.15	1.78	0.35	0.36
Lentils	0.80	0.34	-	-	-	-	0.02	0.18	0.01	0.01
Vetch	-	-	-	-	-	-	-	-	-	-
OILSEEDS	1.51	0.64	-	-	-	-	-	-	0.22	0.23
Neug	-	-	-	-	-	-	-	-	-	-
Linseed	0.24	0.10	-	-	-	-	-	-	0.03	0.03
Fenugreek	1.27	0.54	-	-	-	-	-	-	0.20	0.20
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	6.89	2.91	0.07	3.48	0.14	0.89	-	-	-	-
Spices	0.24	0.10	-	-	-	-	-	-	-	-
Potatoes	1.06	0.45	-	-	-	-	-	-	0.95	0.98
Other Vegetables	10.13	4.29	0.08	4.10	1.39	9.07	-	-	1.92	1.98
TOTAL TEMPORARY	184.39	78.02	2.02	100.01	8.22	53.62	5.54	66.71	70.58	72.76
Chat	47.74	20.19	-	-	4.54	29.61	2.31	27.88	23.75	24.48
Coffee	3.70	1.56	-	-	2.31	15.03	0.45	5.40	1.33	1.37
Enset	0.14	0.06	-	-	0.07	0.45	-	-	-	-
Fruits	0.36	0.15	-	-	0.13	0.87	-	-	0.18	0.18
Other Permanent	0.10	0.04	-	-	0.07	0.43	-	-	0.01	0.02
TOTAL PERMANENT	52.03	22.01	-	-	7.12	46.38	2.76	33.28	25.27	26.05
ALL CROPS	236.42	100.00	2.02	100.00	15.35	100.00	8.29	100.00	95.85	100.00

TABLE 14. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WEST HARERGE, 1990/91(1983 E.C.)

('000' HA)

CROP NAME	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	101.71	65.00	0.59	49.02	2.07	40.81	1.86	57.71	10.95	71.10
Teff	15.29	9.77	-	-	-	-	0.36	11.23	1.42	9.22
Barley	4.97	3.18	0.02	1.95	0.04	0.85	0.03	0.82	0.18	1.17
Wheat	3.72	2.38	-	-	-	-	-	-	0.54	3.51
Maize	31.47	20.11	0.23	19.13	1.09	21.49	1.02	31.73	5.68	36.88
Sorghum	42.90	27.42	0.34	27.94	0.94	18.47	0.45	13.93	3.08	20.00
Millet	0.12	0.08	-	-	-	-	-	-	-	-
Oats	3.24	2.07	-	-	-	-	-	-	0.05	0.32
PULSES	21.81	13.94	-	-	-	-	0.14	4.20	0.56	3.64
Horse Beans	4.67	2.99	-	-	-	-	0.02	0.65	0.06	0.39
Chick Peas	2.39	1.53	-	-	-	-	0.11	3.55	-	-
Haricot Bean	10.89	6.96	-	-	-	-	-	-	0.49	3.18
Field Peas	0.61	0.39	-	-	-	-	-	-	-	-
Lentils	1.33	0.85	-	-	-	-	-	-	0.01	0.06
Vetch	1.91	1.22	-	-	-	-	-	-	-	-
OILSEEDS	1.96	1.25	-	-	-	-	0.07	2.31	-	-
Neug	-	-	-	-	-	-	-	-	-	-
Linseed	1.23	0.78	-	-	-	-	-	-	-	-
Fenugreek	0.64	0.41	-	-	-	-	0.07	2.31	-	-
Rapeseed	0.09	0.06	-	-	-	-	-	-	-	-
Other Temporary	0.20	0.13	-	-	-	-	-	-	-	-
Spices	0.25	0.16	-	-	-	-	-	-	0.02	0.13
Potatoes	0.19	0.12	-	-	-	-	-	-	-	-
Other Vegetables	5.49	3.51	0.03	2.55	0.25	4.95	0.09	2.67	0.22	1.43
TOTAL TEMPORARY	131.60	84.12	0.62	51.57	2.32	45.76	2.15	66.89	11.75	76.30
Chat	12.58	8.04	-	-	1.46	28.82	0.09	2.94	0.66	4.29
Coffee	11.73	7.49	0.59	48.44	1.20	23.66	0.97	30.16	2.86	18.57
Enset	0.06	0.04	-	-	-	-	-	-	-	0.00
Fruits	0.33	0.21	-	-	0.09	1.76	-	-	0.13	0.84
Other Permanent	0.17	0.11	-	-	-	-	-	-	-	-
TOTAL PERMANENT	24.87	15.90	0.59	48.44	2.76	54.24	1.07	33.11	3.65	23.70
ALL CROPS	156.48	100.00	1.21	100.00	5.08	100.00	3.22	100.00	15.40	100.00

TABLE 15. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN GAMBELA, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	8.44	64.93	0.79	56.83	-	-	0.79	100.00	0.18	34.62
Teff	0.27	2.09	-	-	-	-	-	-	-	-
Barley	0.19	1.42	-	-	-	-	-	-	-	-
Wheat	0.13	0.99	-	-	-	-	-	-	-	-
Maize	6.87	52.81	0.79	56.83	-	-	0.79	100.00	0.11	21.15
Sorghum	0.99	7.61	-	-	-	-	-	-	0.07	13.46
Millet	-	-	-	-	-	-	-	-	-	-
Oats	-	-	-	-	-	-	-	-	-	-
PULSES	0.33	2.52	-	-	-	-	-	-	-	-
Horse Beans	0.21	1.61	-	-	-	-	-	-	-	-
Chick Peas	-	-	-	-	-	-	-	-	-	-
Haricot Bean	0.12	0.91	-	-	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-	-	-
Vetch	-	-	-	-	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-	-	-	-	-
Neug	-	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	0.07	0.51	-	-	-	-	-	-	-	-
Spices	0.06	0.48	-	-	-	-	-	-	-	-
Potatoes	0.01	0.09	-	-	-	-	-	-	-	-
Other Vegetables	0.26	2.03	-	-	-	-	-	-	-	-
TOTAL TEMPORARY	9.18	70.55	0.79	56.83	-	-	0.79	100.00	0.18	34.62
Chat	-	-	-	-	-	-	-	-	-	-
Coffee	3.62	27.87	0.59	42.45	-	-	-	-	0.32	61.54
Enset	0.05	0.42	-	-	-	-	-	-	0.01	1.92
Fruits	0.13	0.99	-	-	-	-	-	-	-	-
Other Permanent	0.02	0.15	-	-	-	-	-	-	-	-
TOTAL PERMANENT	3.83	29.44	0.59	42.45	-	-	-	-	0.33	63.46
ALL CROPS	13.00	100.00	1.39	100.00	-	-	0.79	100.00	0.51	98.08

TABLE 16. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ILUBABOR, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	339.94	78.85	0.83	22.56	0.35	92.88	7.92	88.39	80.09	88.85
Teff	106.97	24.81	0.15	4.18	0.09	23.20	6.91	77.15	52.34	58.06
Barley	15.63	3.62	-	-	-	-	0.23	2.52	0.09	0.10
Wheat	11.43	2.65	-	-	-	-	-	-	0.07	0.07
Maize	145.55	33.76	0.68	18.38	0.26	69.68	0.68	7.60	25.26	28.02
Sorghum	52.61	12.20	-	-	-	-	-	-	2.33	2.59
Millet	6.98	1.62	-	-	-	-	0.10	1.11	-	-
Oats	0.78	0.18	-	-	-	-	-	-	-	-
PULSES	33.37	7.74	-	-	-	-	-	-	3.31	3.68
Horse Beans	16.25	3.77	-	-	-	-	-	-	2.17	2.40
Chick Peas	0.35	0.08	-	-	-	-	-	-	-	-
Haricot Bean	2.19	0.51	-	-	-	-	-	-	-	-
Field Peas	13.95	3.23	-	-	-	-	-	-	1.08	1.20
Lentils	0.50	0.12	-	-	-	-	-	-	0.06	0.07
Vetch	0.13	0.03	-	-	-	-	-	-	-	-
OILSEEDS	4.28	0.99	-	-	-	-	-	-	-	-
Neug	3.06	0.71	-	-	-	-	-	-	-	-
Linseed	1.11	0.26	-	-	-	-	-	-	-	-
Fenugreek	0.12	0.03	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	0.16	0.04	-	-	-	-	-	-	-	-
Spices	2.24	0.52	-	-	0.03	7.12	-	-	0.09	0.10
Potatoes	0.31	0.07	-	-	-	-	-	-	-	-
Other Vegetables	6.97	1.62	0.17	4.75	-	-	-	-	2.78	3.08
TOTAL TEMPORARY	387.29	89.83	1.00	27.31	0.38	100.00	7.92	88.38	86.27	95.69
Chat	6.28	1.46	0.04	1.21	-	-	-	-	1.38	1.53
Coffee	25.43	5.90	2.61	70.95	-	-	1.04	11.61	0.52	0.57
Enset	9.84	2.28	0.02	0.53	-	-	-	-	1.57	1.74
Fruits	1.00	0.23	-	-	-	-	-	-	0.28	0.31
Other Permanent	1.30	0.30	-	-	-	-	-	-	0.01	0.02
TOTAL PERMANENT	43.85	10.17	2.67	72.69	-	-	1.04	11.61	3.76	4.18
ALL CROPS	431.13	100.00	3.68	100.00	0.38	100.00	8.96	100.00	90.03	100.00

TABLE 17. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN KEFA, 1990/91(1983 E.C.)

CROP NAME	(000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	64.54	60.88	0.13	13.74	-	-	3.31	99.40	0.42	66.34
Teff	8.91	8.41	-	-	-	-	-	-	-	-
Barley	4.01	3.79	0.02	1.99	-	-	-	-	-	-
Wheat	0.97	0.91	-	-	-	-	-	-	-	-
Maize	24.75	23.35	0.06	6.50	-	-	-	-	0.42	66.34
Sorghum	14.10	13.30	0.05	5.25	-	-	-	-	-	-
Millet	11.80	11.13	-	-	-	-	3.31	99.40	-	-
Oats	-	-	-	-	-	-	-	-	-	-
PULSES	16.58	15.64	-	-	-	-	-	-	0.06	9.57
Horse Beans	9.73	9.18	-	-	-	-	-	-	0.06	9.57
Chick Peas	0.66	0.63	-	-	-	-	-	-	-	-
Haricot Bean	2.55	2.40	-	-	-	-	-	-	-	-
Field Peas	3.63	3.43	-	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-	-	-
Vetch	-	-	-	-	-	-	-	-	-	-
OILSEEDS	0.18	0.17	-	-	-	-	-	-	-	-
Neug	0.17	0.16	-	-	-	-	-	-	-	-
Linseed	0.01	0.01	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	0.23	0.21	-	-	-	-	-	-	-	-
Spices	2.58	2.43	-	-	0.01	100.00	-	-	-	-
Potatoes	0.10	0.10	0.08	8.27	-	-	-	-	-	-
Other Vegetables	5.52	5.21	0.03	3.08	-	-	-	-	0.04	6.68
TOTAL TEMPORARY	89.72	84.65	0.24	25.09	0.01	100.00	3.31	99.40	0.52	82.59
Chat	0.17	0.16	-	-	-	-	-	-	-	-
Coffee	7.96	7.51	0.62	66.62	-	-	0.01	0.30	0.06	9.04
Enset	7.12	6.72	0.08	8.28	-	-	-	-	0.05	7.39
Fruits	0.45	0.43	-	-	-	-	-	-	-	-
Other Permanent	0.58	0.55	-	-	-	-	-	-	0.01	0.98
TOTAL PERMANENT	16.29	15.37	0.69	74.91	-	-	0.01	0.30	0.11	17.42
ALL CROPS	106.01	100.00	0.92	100.00	0.01	100.00	3.33	100.00	0.63	100.00

TABLE 18.

ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ADDIS ABABA, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	84.14	74.89	0.79	84.64	-	-	10.34	98.55	40.22	92.28
Teff	36.77	32.73	0.12	13.39	-	-	7.62	72.56	24.18	55.48
Barley	25.68	22.85	0.23	24.64	-	-	1.27	12.11	5.30	12.16
Wheat	20.19	17.97	0.39	42.19	-	-	1.43	13.62	10.54	24.19
Maize	0.87	0.77	-	-	-	-	-	-	0.07	0.17
Sorghum	0.52	0.47	0.04	4.42	-	-	-	-	0.10	0.24
Millet	-	-	-	-	-	-	-	-	-	-
Oats	0.11	0.10	-	-	-	-	0.03	0.26	0.02	0.06
PULSES	25.77	22.93	0.04	4.30	-	-	0.13	1.26	3.00	6.89
Horse Beans	7.29	6.49	0.04	4.30	-	-	0.04	0.41	1.06	2.42
Chick Peas	8.56	7.62	-	-	-	-	-	-	1.51	3.47
Haricot Bean	0.12	0.11	-	-	-	-	-	-	-	-
Field Peas	1.50	1.33	-	-	-	-	0.05	0.46	0.17	0.39
Lentils	5.87	5.22	-	-	-	-	0.03	0.25	0.14	0.32
Vetch	2.43	2.17	-	-	-	-	0.01	0.14	0.13	0.29
OILSEEDS	1.59	1.41	-	-	-	-	-	-	0.06	0.15
Neug	0.63	0.56	-	-	-	-	-	-	-	-
Linseed	0.72	0.64	-	-	-	-	-	-	0.03	0.06
Fenugreek	0.19	0.17	-	-	-	-	-	-	0.04	0.09
Rapeseed	0.05	0.04	-	-	-	-	-	-	-	-
Other Temporary	0.26	0.23	-	-	-	-	-	-	-	-
Spices	-	-	-	-	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-	-	-	-	-
Other Vegetables	0.47	0.42	0.10	11.06	0.04	100.00	0.02	0.20	0.26	0.61
TOTAL TEMPORARY	112.23	99.89	0.92	100.00	0.04	100.00	10.50	100.01	43.55	99.95
Chat	-	-	-	-	-	-	-	-	-	-
Coffee	-	-	-	-	-	-	-	-	-	-
Enset	0.06	0.05	-	-	-	-	-	-	0.02	0.04
Fruits	-	-	-	-	-	-	-	-	-	-
Other Permanent	0.06	0.05	-	-	-	-	-	-	0.01	0.03
TOTAL PERMANENT	0.12	0.11	-	-	-	-	-	-	0.03	0.07
ALL CROPS	112.36	100.00	0.93	100.00	0.04	100.00	10.50	100.00	43.58	100.00

TABLE 19. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN EAST SHEWA, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	161.03	76.72	0.25	39.68	0.05	100.00	17.65	89.23	108.29	96.36
Teff	100.28	47.77	—	—	—	—	14.95	75.58	85.40	75.99
Barley	8.12	3.87	—	—	—	—	0.11	0.56	2.62	2.33
Wheat	25.86	12.32	0.08	12.70	0.05	100.00	2.59	13.09	18.91	16.83
Maize	25.18	11.99	0.17	26.98	—	—	—	—	1.36	1.21
Sorghum	1.54	0.73	—	—	—	—	—	—	—	—
Millet	—	—	—	—	—	—	—	—	—	—
Oats	0.06	0.03	—	—	—	—	—	—	—	—
PULSES	47.62	22.68	0.36	57.14	—	—	2.11	10.67	3.76	3.35
Horse Beans	4.92	2.35	—	—	—	—	0.31	1.57	0.07	0.06
Chick Peas	8.66	4.13	0.27	42.86	—	—	0.14	0.71	0.25	0.22
Haricot Bean	16.37	7.80	—	—	—	—	—	—	1.14	1.02
Field Peas	8.71	4.15	—	—	—	—	1.55	7.84	1.12	1.00
Lentils	3.62	1.73	—	—	—	—	0.06	0.30	0.95	0.84
Vetch	5.32	2.54	0.09	14.29	—	—	0.05	0.25	0.24	0.21
OILSEEDS	0.50	0.24	—	—	—	—	0.02	0.10	0.12	0.10
Neug	0.04	0.02	—	—	—	—	—	—	—	—
Linseed	0.07	0.03	—	—	—	—	—	—	—	—
Fenugreek	0.36	0.17	—	—	—	—	0.01	0.05	0.12	0.10
Rapeseed	0.03	0.01	—	—	—	—	—	—	—	—
Other Temporary	0.06	0.03	—	—	—	—	—	—	—	—
Spices	0.02	0.01	—	—	—	—	—	—	—	—
Potatoes	0.16	0.08	—	—	—	—	—	—	0.05	0.04
Other Vegetables	0.24	0.11	0.01	1.59	—	—	—	—	0.10	0.09
TOTAL TEMPORARY	209.62	99.87	0.62	98.41	0.05	100.00	19.77	99.95	112.33	99.94
Chat	—	—	—	—	—	—	—	—	—	—
Coffee	—	—	—	—	—	—	—	—	—	—
Enset	—	—	—	—	—	—	—	—	—	—
Fruits	—	—	—	—	—	—	—	—	—	—
Other Permanent	0.28	0.13	—	—	—	—	—	—	0.07	0.06
TOTAL PERMANENT	0.28	0.13	—	—	—	—	—	—	0.07	0.06
ALL CROPS	209.90	100.00	0.63	100.00	0.05	100.00	19.78	100.00	112.40	100.00

TABLE 20.

ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN NORTH SHEWA, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	145.42	63.27	-	-	1.24	48.89	3.06	90.94	18.86	81.95
Teff	35.36	15.38	-	-	-	-	1.06	31.59	11.15	48.44
Barley	37.40	16.27	-	-	-	-	1.32	39.15	3.93	17.06
Wheat	57.57	25.05	-	-	1.24	48.89	0.68	20.20	3.02	13.13
Maize	2.42	1.05	-	-	-	-	-	-	0.29	1.28
Sorghum	12.24	5.33	-	-	-	-	-	-	0.47	2.05
Millet	-	-	-	-	-	-	-	-	-	-
Oats	0.44	0.19	-	-	-	-	-	-	-	-
PULSES	71.77	31.22	-	-	0.50	19.62	0.31	9.06	4.08	17.73
Horse Beans	50.93	22.16	-	-	0.50	19.62	0.31	9.06	4.08	17.73
Chick Peas	1.47	0.64	-	-	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-	-	-	-	-
Field Peas	8.26	3.59	-	-	-	-	-	-	-	-
Lentils	5.54	2.41	-	-	-	-	-	-	-	-
Vetch	5.56	2.42	-	-	-	-	-	-	-	-
OILSEEDS	10.27	4.47	-	-	-	-	-	-	-	-
Neug	8.51	3.70	-	-	-	-	-	-	-	-
Linseed	1.57	0.68	-	-	-	-	-	-	-	-
Fenugreek	0.10	0.04	-	-	-	-	-	-	-	-
Rapeseed	0.08	0.04	-	-	-	-	-	-	-	-
Other Temporary	0.02	0.01	-	-	-	-	-	-	-	-
Spices	0.13	0.05	-	-	0.01	0.41	-	-	-	-
Potatoes	-	-	-	-	-	-	-	-	-	-
Other Vegetables	0.62	0.27	0.01	100.00	-	-	-	-	0.04	0.16
TOTAL TEMPORARY	228.22	99.28	0.01	100.00	1.75	68.92	3.37	100.00	22.98	99.85
Chat	-	-	-	-	-	-	-	-	-	-
Coffee	0.02	0.01	-	-	0.02	0.83	-	-	-	-
Enset	-	-	-	-	-	-	-	-	-	-
Fruits	-	-	-	-	-	-	-	-	-	-
Other Permanent	1.61	0.70	-	-	0.77	30.25	-	-	0.04	0.16
TOTAL PERMANENT	1.63	0.71	-	-	0.79	31.08	-	-	0.04	0.16
ALL CROPS	229.85	100.00	0.01	100.00	2.54	100.00	3.37	100.00	23.02	100.00

TABLE 21.

ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH SHEWA, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	385.89	77.17	0.83	49.71	0.97	84.59	49.38	89.59	162.13	72.14
Teff	90.61	18.12	0.27	15.92	-	-	31.59	57.31	62.43	27.78
Barley	14.90	2.98	-	-	-	-	0.60	1.10	10.67	4.75
Wheat	53.02	10.60	-	-	0.73	63.37	14.06	25.50	37.03	16.47
Maize	197.59	39.51	0.57	33.80	0.24	21.22	1.81	3.28	49.08	21.84
Sorghum	26.89	5.38	-	-	-	-	0.53	0.97	1.61	0.71
Millet	0.99	0.20	-	-	-	-	-	-	0.28	0.12
Oats	1.90	0.38	-	-	-	-	0.79	1.43	1.04	0.46
PULSES	49.08	9.81	0.25	15.16	0.01	0.59	4.06	7.37	22.44	9.98
Horse Beans	14.41	2.88	-	-	-	-	0.91	1.65	9.61	4.28
Chick Peas	5.62	1.12	-	-	-	-	-	-	0.89	0.40
Haricot Bean	13.41	2.68	0.25	15.16	0.01	0.59	-	-	0.60	0.27
Field Peas	11.22	2.24	-	-	-	-	3.05	5.53	9.03	4.02
Lentils	3.82	0.76	-	-	-	-	0.10	0.19	2.14	0.95
Vetch	0.59	0.12	-	-	-	-	-	-	0.17	0.07
OILSEEDS	1.28	0.26	0.05	2.85	-	-	-	-	0.17	0.08
Neug	0.04	0.01	-	-	-	-	-	-	-	-
Linseed	0.23	0.05	-	-	-	-	-	-	0.11	0.05
Fenugreek	0.75	0.15	0.05	2.85	-	-	-	-	0.06	0.03
Rapeseed	0.25	0.05	-	-	-	-	-	-	-	-
Other Temporary	0.17	0.03	-	-	-	-	-	-	-	-
Spices	14.26	2.85	0.24	14.19	-	-	0.21	0.38	7.00	3.11
Potatoes	6.30	1.26	-	-	0.04	3.75	-	-	3.11	1.38
Other Vegetables	8.84	1.77	0.18	10.85	0.13	11.06	0.18	0.32	5.12	2.28
TOTAL TEMPORARY	465.81	93.14	1.56	92.77	1.15	99.99	53.83	97.66	199.98	88.97
Chat	3.20	0.64	0.02	1.14	-	-	0.59	1.07	1.62	0.72
Coffee	8.46	1.69	0.03	1.55	-	-	0.58	1.05	5.57	2.48
Enset	20.42	4.08	0.08	4.55	-	-	0.10	0.18	16.12	7.17
Fruits	0.38	0.08	-	-	-	-	-	-	0.18	0.08
Other Permanent	1.79	0.36	-	-	-	-	0.02	0.03	1.26	0.56
TOTAL PERMANENT	34.25	6.85	0.12	7.23	-	-	1.29	2.34	24.75	11.01
ALL CROPS	500.06	100.00	1.68	100.00	1.15	100.00	55.12	100.00	224.73	100.00

TABLE 22. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WEST SHEWA, 1990/91(1983 E.C.)

(000' HA)

CROP NAME	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	306.15	68.23	0.47	66.70	2.37	55.34	25.64	97.94	123.75	73.11
Teff	153.79	34.27	0.22	31.05	1.44	33.52	16.98	64.86	74.57	44.05
Barley	44.01	9.81	-	-	0.26	6.10	2.66	10.16	18.94	11.19
Wheat	39.58	8.82	-	-	-	-	5.86	22.38	23.49	13.88
Maize	45.93	10.24	0.25	35.65	0.42	9.67	0.15	0.57	5.93	3.50
Sorghum	21.46	4.78	-	-	0.26	6.05	-	-	0.68	0.40
Millet	0.38	0.08	-	-	-	-	-	-	-	-
Oats	1.00	0.22	-	-	-	-	-	-	0.15	0.09
PULSES	49.95	11.13	-	-	-	-	0.40	1.53	5.68	3.35
Horse Beans	17.06	3.80	-	-	-	-	0.36	1.38	3.55	2.10
Chick Peas	18.71	4.17	-	-	-	-	0.05	0.19	0.44	0.26
Haricot Bean	0.46	0.10	-	-	-	-	-	-	0.37	0.22
Field Peas	1.62	0.36	-	-	-	-	-	-	1.22	0.72
Lentils	2.18	0.49	-	-	-	-	-	-	0.06	0.04
Vetch	9.91	2.21	-	-	-	-	-	-	0.03	0.02
OILSEEDS	40.78	9.09	-	-	-	-	0.13	0.50	0.14	0.08
Neug	33.86	7.55	-	-	-	-	-	0.00	-	-
Linseed	6.34	1.41	-	-	-	-	0.13	0.50	-	-
Fenugreek	0.20	0.05	-	-	-	-	-	-	-	-
Rapeseed	0.38	0.08	-	-	-	-	-	-	0.14	0.08
Other Temporary	0.35	0.08	0.01	0.94	-	-	-	-	-	-
Spices	3.65	0.81	-	-	0.25	5.90	-	-	0.39	0.23
Potatoes	0.30	0.07	-	-	-	-	-	-	0.26	0.15
Other Vegetables	2.67	0.60	-	-	0.17	3.91	-	-	2.20	1.30
TOTAL TEMPORARY	403.84	90.00	0.48	67.64	2.80	65.15	26.19	100.04	132.42	78.23
Chat	7.56	1.68	0.12	17.48	-	-	-	-	4.63	2.74
Coffee	2.18	0.49	0.01	2.06	-	-	-	-	1.41	0.83
Enset	31.11	6.93	0.08	11.44	0.03	0.81	-	-	27.87	16.47
Fruits	0.31	0.07	0.01	1.38	0.02	0.38	-	-	0.30	0.18
Other Permanent	3.73	0.83	-	-	1.44	33.66	-	-	2.64	1.56
TOTAL PERMANENT	44.88	10.00	0.23	32.36	1.50	34.85	-	-	36.85	21.77
ALL CROPS	448.74	100.00	0.71	100.00	4.29	100.00	26.18	100.00	169.27	100.00

TABLE 23. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN BORENA, 1990/91(1983 E.C.)

CROP NAME	(000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	16.42	36.25	0.05	18.96	-	-	-	-	0.41	16.81
Teff	1.70	3.76	-	-	-	-	-	-	-	-
Barley	4.12	9.09	-	-	-	-	-	-	0.01	0.26
Wheat	1.13	2.50	-	-	-	-	-	-	-	-
Maize	8.88	19.61	0.05	18.96	-	-	-	-	0.40	16.54
Sorghum	0.58	1.28	-	-	-	-	-	-	-	-
Millet	-	-	-	-	-	-	-	-	-	-
Oats	-	-	-	-	-	-	-	-	-	-
PULSES	4.70	10.39	0.11	45.78	-	-	-	-	0.02	0.94
Horse Beans	1.17	2.59	0.11	45.78	-	-	-	-	0.02	0.94
Chick Peas	1.27	2.80	-	-	-	-	-	-	-	-
Haricot Bean	1.55	3.42	-	-	-	-	-	-	-	-
Field Peas	0.72	1.58	-	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-	-	-
Vetch	-	-	-	-	-	-	-	-	-	-
OILSEEDS	0.01	0.03	-	-	-	-	-	-	-	-
Neug	-	-	-	-	-	-	-	-	-	-
Linseed	-	-	-	-	-	-	-	-	-	-
Fenugreek	0.01	0.02	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-	-	-	-	-
Spices	-	-	-	-	-	-	-	-	-	-
Potatoes	0.17	0.38	0.01	5.68	-	-	-	-	-	-
Other Vegetables	1.16	2.57	-	-	-	-	-	-	0.15	6.34
TOTAL TEMPORARY	22.46	49.60	0.17	70.42	-	-	-	-	0.58	24.08
Chat	0.48	1.05	-	-	-	-	-	-	0.09	3.80
Coffee	4.97	10.98	0.07	29.58	-	-	-	-	0.05	2.05
Enset	17.17	37.91	-	-	-	-	-	-	1.69	69.80
Fruits	-	-	-	-	-	-	-	-	-	-
Other Permanent	0.20	0.44	-	-	-	-	-	-	0.01	0.27
TOTAL PERMANENT	22.82	50.38	0.07	29.58	-	-	-	-	1.84	75.91
ALL CROPS	45.29	100.00	0.25	100.00	-	-	-	-	2.42	100.00

TABLE 24.

ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SIDAMO, 1990/91(1983 E.C.)

CROP NAME	(000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	96.65	38.06	0.04	1.99	0.09	3.47	0.07	3.65	63.76	45.17
Teff	17.92	7.06	-	-	0.07	2.61	0.07	3.65	7.22	5.12
Barley	14.20	5.59	-	-	-	-	-	-	7.93	5.62
Wheat	3.46	1.36	0.04	1.99	-	-	-	-	0.74	0.53
Maize	59.24	23.33	-	-	0.02	0.86	-	-	47.78	33.85
Sorghum	1.64	0.64	-	-	-	-	-	-	0.04	0.03
Millet	-	-	-	-	-	-	-	-	-	-
Oats	0.20	0.08	-	-	-	-	-	-	0.05	0.03
PULSES	13.03	5.13	0.33	17.78	0.07	2.64	-	-	3.59	2.55
Horse Beans	2.40	0.95	-	-	0.07	2.64	-	-	0.34	0.24
Chick Peas	-	-	-	-	-	-	-	-	-	-
Haricot Bean	7.64	3.01	0.33	17.78	-	-	-	-	2.07	1.47
Field Peas	2.99	1.18	-	-	-	-	-	-	1.19	0.84
Lentils	-	-	-	-	-	-	-	-	-	-
Vetch	-	-	-	-	-	-	-	-	-	-
OILSEEDS	0.05	0.02	-	0.06	-	-	-	-	0.01	0.01
Neug	-	-	-	-	-	-	-	-	-	-
Linseed	0.03	0.01	-	-	-	-	-	-	0.01	0.01
Fenugreek	0.01	0.01	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	0.10	0.04	-	-	-	-	-	-	-	-
Spices	0.43	0.17	-	-	-	-	0.01	0.28	0.12	0.09
Potatoes	0.63	0.25	-	-	0.24	8.76	-	-	0.14	0.10
Other Vegetables	14.97	5.89	0.22	11.87	0.07	2.45	0.17	9.12	9.81	6.95
TOTAL TEMPORARY	125.86	49.57	0.59	31.64	0.47	17.32	0.25	13.05	77.44	54.88
Chat	4.18	1.65	0.03	1.69	0.18	6.72	1.13	60.31	0.80	0.57
Coffee	35.47	13.96	0.49	25.96	0.47	17.39	0.09	4.84	3.88	2.75
Enset	79.22	31.19	0.66	35.31	1.48	54.84	0.37	19.97	57.26	40.57
Fruits	1.82	0.72	-	-	-	-	-	-	0.43	0.30
Other Permanent	7.42	2.92	0.10	5.34	0.10	3.73	0.03	1.83	1.33	0.94
TOTAL PERMANENT	128.11	50.44	1.28	68.30	2.23	82.68	1.62	86.95	63.70	45.13
ALL CROPS	253.96	100.00	1.87	100.00	2.70	100.00	1.87	100.00	141.14	100.00

TABLE 25. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ASOSA, 1990/91(1983 E.C.)

CROP NAME	(000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	17.13	75.96	0.02	100.00	-	-	-	-	3.33	86.49
Teff	3.33	14.76	-	-	-	-	-	-	0.06	1.56
Barley	0.09	0.39	-	-	-	-	-	-	-	-
Wheat	0.10	0.44	-	-	-	-	-	-	-	-
Maize	6.43	28.51	0.02	100.00	-	-	-	-	2.47	64.16
Sorghum	3.74	16.59	-	-	-	-	-	-	0.47	12.21
Millet	3.44	15.27	-	-	-	-	-	-	0.33	8.57
Oats	-	-	-	-	-	-	-	-	-	-
PULSES	0.26	1.14	-	-	-	-	-	-	0.12	3.12
Horse Beans	0.06	0.29	-	-	-	-	-	-	0.05	1.30
Chick Peas	-	-	-	-	-	-	-	-	-	-
Haricot Bean	0.13	0.58	-	-	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-	-	-	-	-
Lentils	-	-	-	-	-	-	-	-	-	-
Vetch	0.06	0.25	-	-	-	-	-	-	0.06	1.56
OILSEEDS	0.71	3.16	-	-	-	-	-	-	0.01	0.26
Neug	0.67	2.99	-	-	-	-	-	-	0.01	0.26
Linseed	0.04	0.17	-	-	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-	-	-	-	-
Spices	0.12	0.54	-	-	-	-	-	-	0.08	2.08
Potatoes	0.07	0.30	-	-	-	-	-	-	0.03	0.78
Other Vegetables	0.43	1.91	-	-	-	-	-	-	0.14	3.64
TOTAL TEMPORARY	18.71	82.99	0.02	100.00	-	-	-	-	3.70	96.10
Chat	-	-	-	-	-	-	-	-	-	-
Coffee	3.75	16.63	-	-	-	-	0.04	100.00	0.12	3.12
Enset	-	-	-	-	-	-	-	-	-	-
Fruits	0.03	0.15	-	-	-	-	-	-	0.01	0.26
Other Permanent	0.04	0.19	-	-	-	-	-	-	0.01	0.26
TOTAL PERMANENT	3.83	16.99	-	-	-	-	0.04	100.00	0.14	3.64
ALL CROPS	22.55	100.00	0.02	100.00	-	-	0.04	100.00	3.84	99.74

TABLE 26. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WELEGA, 1990/91(1983 E.C.)

CROP NAME	('000' HA)									
	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	277.32	75.93	15.44	87.59	0.49	68.36	6.20	95.02	109.36	94.60
Teff	86.61	23.71	—	—	0.11	14.74	0.55	8.50	54.36	47.02
Barley	12.55	3.44	0.03	0.15	—	—	—	—	1.16	1.00
Wheat	2.70	0.74	—	—	—	—	—	—	0.19	0.16
Maize	113.90	31.19	8.62	48.92	0.32	44.23	2.81	43.06	34.62	29.94
Sorghum	33.57	9.19	6.79	38.52	0.07	9.39	2.71	41.46	9.76	8.45
Millet	27.89	7.64	—	—	—	—	0.13	1.99	9.27	8.02
Oats	0.09	0.03	—	—	—	—	—	—	—	—
PULSES	29.87	8.18	1.22	6.90	—	—	0.06	0.90	2.29	1.98
Horse Beans	11.22	3.07	—	—	—	—	—	—	1.23	1.06
Chick Peas	1.69	0.46	—	—	—	—	—	—	—	—
Haricot Bean	5.90	1.61	1.22	6.90	—	—	0.06	0.90	0.28	0.25
Field Peas	10.90	2.98	—	—	—	—	—	—	0.76	0.66
Lentils	0.07	0.02	—	—	—	—	—	—	—	—
Vetch	0.09	0.02	—	—	—	—	—	—	0.02	0.02
OILSEEDS	24.13	6.61	—	—	—	—	—	—	0.74	0.64
Neug	23.00	6.30	—	—	—	—	—	—	0.63	0.54
Linseed	0.96	0.26	—	—	—	—	—	—	0.03	0.03
Fenugreek	0.04	0.01	—	—	—	—	—	—	0.01	0.01
Rapeseed	0.13	0.04	—	—	—	—	—	—	0.07	0.06
Other Temporary	5.91	1.62	—	—	—	—	—	—	—	—
Spices	2.32	0.63	0.04	0.23	—	—	—	—	0.33	0.28
Potatoes	0.40	0.11	—	—	—	—	—	—	0.24	0.21
Other Vegetables	4.22	1.16	—	—	0.13	18.31	0.09	1.85	1.87	1.62
TOTAL TEMPORARY	344.16	94.23	16.70	94.72	0.63	86.67	6.35	97.26	114.83	99.33
Chat	0.12	0.03	—	—	—	—	—	—	—	—
Coffee	19.39	5.31	0.91	5.19	—	—	0.18	2.73	0.66	0.57
Enset	—	—	—	—	—	—	—	—	—	—
Fruits	0.80	0.22	0.01	0.07	0.07	10.00	—	—	0.02	0.02
Other Permanent	0.76	0.21	—	0.01	0.02	3.32	—	—	0.04	0.03
TOTAL PERMANENT	21.07	5.77	0.93	5.27	0.10	13.32	0.18	2.73	0.72	0.62
ALL CROPS	365.24	100.00	17.62	100.00	0.72	100.00	6.53	100.00	115.61	100.00

TABLE 27. ESTIMATES OF IMPROVED SEED, IRRIGATION, PESTICIDE AND FERTILIZER APPLIED AREA AND THEIR PERCENTAGE DISTRIBUTION BY CROP FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH WOLO, 1990/91(1983 E.C.)

(000' HA)

CROP NAME	TOTAL CROP		IMPROVED SEED		IRRIGATED		PESTICIDE APPLIED		FERTILIZER APPLIED	
	AREA	%	AREA	%	AREA	%	AREA	%	AREA	%
CEREALS	130.16	83.33	1.45	98.00	1.87	55.13	0.79	66.27	17.08	82.15
Teff	39.99	25.60	—	—	0.76	22.52	0.57	48.06	3.32	15.99
Barley	4.99	3.19	—	—	—	—	—	—	0.69	3.34
Wheat	4.22	2.70	—	—	0.02	0.52	0.02	1.59	0.69	3.33
Maize	28.43	18.20	0.11	7.30	0.20	5.78	0.18	14.71	2.56	12.33
Sorghum	49.30	31.56	1.34	90.70	0.81	23.93	—	—	9.57	46.02
Millet	0.01	0.01	—	—	—	—	—	—	—	—
Oats	3.22	2.06	—	—	0.08	2.38	0.02	1.91	0.24	1.16
PULSES	20.83	13.33	—	—	0.51	14.94	0.29	24.57	2.70	13.00
Horse Beans	12.94	8.29	—	—	0.51	14.94	0.19	16.08	2.28	10.97
Chick Peas	2.06	1.32	—	—	—	—	—	—	—	—
Haricot Bean	0.20	0.13	—	—	—	—	—	—	—	—
Field Peas	1.98	1.27	—	—	—	—	0.10	8.49	0.29	1.39
Lentils	2.62	1.68	—	—	—	—	—	—	0.13	0.63
Vetch	1.03	0.66	—	—	—	—	—	—	—	—
OILSEEDS	1.30	0.83	—	—	—	—	0.03	2.26	0.16	0.76
Neug	0.61	0.39	—	—	—	—	—	—	0.01	0.04
Linseed	0.42	0.27	—	—	—	—	—	—	0.11	0.51
Fenugreek	0.27	0.17	—	—	—	—	0.03	2.26	0.04	0.21
Rapeseed	—	—	—	—	—	—	—	—	—	—
Other Temporary	—	—	—	—	—	—	—	—	—	—
Spices	0.73	0.47	—	—	0.01	0.18	0.05	3.79	0.28	1.37
Potatoes	0.06	0.04	—	—	—	—	—	—	0.01	0.06
Other Vegetables	0.23	0.15	—	—	0.04	1.16	0.01	0.57	0.07	0.32
TOTAL TEMPORARY	153.31	98.16	1.45	98.00	2.43	71.41	1.17	97.46	20.29	97.67
Chat	1.40	0.89	0.03	2.00	0.23	6.67	0.03	2.54	0.18	0.88
Coffee	1.01	0.65	—	—	0.42	12.31	—	—	0.26	1.25
Enset	—	—	—	—	—	—	—	—	—	—
Fruits	0.05	0.03	—	—	0.03	0.74	—	—	—	—
Other Permanent	0.43	0.27	—	—	0.30	8.88	—	—	0.05	0.22
TOTAL PERMANENT	2.88	1.85	0.03	2.00	0.97	28.60	0.03	2.54	0.49	2.35
ALL CROPS	156.19	100.00	1.48	100.00	3.39	100.00	1.19	100.00	20.79	100.00

PART II.

Total Fertilizer Applied Area and Quantity by Type of Fertilizer and Crop.

A. Total Fertilizer Applied Area by Type of Fertilizer and Crop.

This part briefly presents the total area fertilized by type of fertilizer and crop. The types of fertilizers most commonly used by the private peasant holders during the survey year were natural, DAP and UREA and the holders had been applied these fertilizers separately or in combination. The practice of these fertilizers were as follows.

1. Natural use only
2. DAP use only
3. UREA use only
4. DAP mixed with UREA
5. Any commercial mixed with natural

As shown in Table 1, among the fertilizers used, DAP was applied in larger proportion out of the total fertilized area. Natural and UREA were also used for considerable crop area. Moreover, smaller area was fertilized by using a mixture of natural and commercial fertilizers.

1. Natural Fertilizer Applied Area.

From the total fertilizer applied area, of 1844.96 thousand hectares, the natural fertilizer applied area was about 440 thousand hectares or 23.86 %. Temporary and permanent crops accounts for about 280 and 160 thousand hectares respectively. Maize from temporary crops and enset from permanent crops had the largest natural fertilizer applied area with 25.42% and 27.56% respectively, from the total natural fertilizer applied area.

Regional comparison are presented in Table 3 and North Omo has reported the largest natural fertilizer applied area while the smallest was reported by Gambela, 60.84 and 0.06 thousand hectares respectively. On the other hand South Omo did not report natural fertilizer applied area.

2. DAP Applied Area.

The total DAP applied area was 799.07 thousand hectares or 43.31% of the total fertilizer applied area. Temporary and permanent crops accounted for 788.84 and 10.19 thousand hectares respectively. Teff with 297.19 thousand hectares has the largest DAP applied area from temporary crops. From permanent crop chat with 5.11 thousand hectares has the largest DAP applied area.

From the regions, the largest DAP applied area, 240.04 thousand hectares was reported by Arsi followed by South Shewa with 114.57 thousand hectares. For details see Table 3.

3. Urea Applied Area.

The total UREA applied area was about 429 thousand hectares or 23.25% of the total fertilizer applied area. Temporary and permanent crops accounts for 422.63 thousand hectares or 98.53% and 6.24 thousand hectares or 1.45% respectively. Teff with 194.34 thousand hectares has the largest UREA applied area from temporary crops and chat with 3.85 thousand hectares from permanent crop.

In West Gojam, UREA was applied in larger area compared to other regions with 102.41 thousand hectares. South Shewa and welega stood second and third with 54.36 and 48.58 thousand hectares respectively.

4. DAP and UREA Applied Area.

From the total fertilizer applied area the DAP and UREA

together applied area was 145.46 thousand hectares or 7.89%. Temporary and permanent crops accounts for about 140 thousand hectares or 96.35% and 5.31 thousand hectares or 3.65% respectively, from the total DAP and UREA applied area. Here also, teff with 99.08 thousand hectares from temporary crops and chat with 5.26 thousand hectares from permanent crops have the largest DAP and UREA applied area. For regional comparison see Table 3.

5. Natural and Commercial Fertilizer Applied Area.

From the total fertilizer applied area the Natural mixed with Commercial fertilizer applied area was 31.33 thousand hectares or 1.70%. Temporary and permanent crops accounts for 25.24 thousand hectares or 80.56% and 6.08 thousand hectares or 19.41% respectively, from the total Natural and Commercial fertilizer applied area. Here, teff with 10.07 thousand hectares from temporary crops and chat with 5.87 thousand hectares from permanent crops have the largest Natural and Commercial fertilizer applied area.

Natural mixed with commercial was applied largely in East Harerge with 14.16 thousand hectares. While, Arsi, Bale, North Omo, South Omo, West Harerge, Gambela, Ilubabor, Kefa, Addis Ababa, North Shewa, West Shewa, Borena, Sidamo, Asosa, Welega and South Wolo did not report Natural mixed with Commercial fertilizer applied area. This indicates that the holders in these regions had not used such mixed fertilizer in their fields.

B. Quantity of Commercial Fertilizer Applied by Crop.

The total quantity of fertilizers applied at national level excluding Eritrea, Tigray, North Wolo, Asab and Ogaden administrative and autonomous regions was 1054.86 thousand quintals. The quantity was estimated only for commercial

fertilizers. As has been mentioned, the total area fertilized by commercial fertilizers was 1405.40 thousand hectares.

As a consequence, the average quantity of commercial fertilizer applied at national level was at the rate of 75.09 kilogram per hectare. However, the average quantity share to the total cultivated land was at the rate of 19.50 kilogram per hectare. The details are presented below.

1. Quantity of DAP Applied.

From the total quantity of fertilizer applied, quantity of DAP applied was 578.72 thousand quintals or 54.86%. The total quantity of DAP applied for temporary and permanent crops was 560.78 and 17.92 thousand quintals respectively. Teff with 209.95 thousand quintals from temporary crops and chat with 9.80 thousand quintals had the highest quantity of DAP applied.

In addition, the regional comparison are presented in Table 4 and from the total quantity of DAP, 141.62 thousand quintals were used in Arsi Administrative region. The Second is South Shewa with 105.70 thousand quintals. On the other hand, as indicated in Table 4, in South Omo, Kefa and Borena administrative regions no DAP was used by the private peasant holders during the survey year.

2. Quantity of UREA Applied.

From the total quantity of fertilizer applied, quantity of UREA applied was 271.07 thousand quintals or 25.70%. The total quantity of UREA applied for temporary and permanent crops was 259.66 and 11.41 thousand quintals respectively. Teff with 112.78 thousand quintals from temporary crops and chat with 8.00 thousand quintals have the highest quantity of UREA applied.

According to the results, UREA was highly used in West Gojam Administrative region with 55.66 thousand quintals. Kefa did not report any UREA uses while in South Omo and Borena administrative regions UREA uses were insignificant. For further details see Tables 3 and 4.

3. Quantity of DAP and UREA Applied In Mix.

From the total quantity of fertilizer applied, quantity of DAP and UREA applied in mixture was 181 thousand quintals or 17.16%. The total quantity of DAP and UREA applied in mix for temporary and permanent crops were 173.55 and 7.45 thousand quintals respectively. Teff with 126.46 thousand quintals from temporary crops and chat with 7.32 thousand quintals have the highest quantity of DAP and UREA applied.

Application of mixed fertilizer, DAP with UREA, was highest in East Shewa and least in South Wolo as indicated in Table 4.

4. Quantity of Commercial with Natural Applied in Mix.

From the total quantity of fertilizer applied, quantity of commercial along with natural applied was 24.02 thousand quintals or 2.28%. The total quantity of commercial with natural applied for temporary and permanent crops was 15.48 and 8.54 thousand quintals respectively, from the total quantity of commercial with natural fertilizer applied. Sorghum with 4.39 thousand quintals from temporary crops and chat with 8.25 thousand quintals have the highest quantity of commercial with natural fertilizer applied.

In most of the regions, a mixture of natural and commercial fertilizer had not been applied. Such applications were reported only in nine out of twenty five administrative regions. Details are presented in Table 4.

NOTE: If in some tables figures do not add up to total it is because of rounding.

TABLE 1. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN *ETHIOPIA, 1990/91(1983 E.C.)

CROP NAME	TOTAL		NATURAL		DAP		UREA		DAP + UREA		NAT + COMM	
		%		%		%		%		%		%
CEREALS	1506.03	81.63	200.10	45.45	734.56	91.93	410.81	95.78	136.78	94.03	23.81	76.00
Teff	622.13	33.72	21.43	4.87	297.19	37.19	194.34	45.31	99.08	68.11	10.07	32.14
Barley	227.38	12.32	29.52	6.70	130.59	16.34	59.69	13.92	5.63	3.87	1.94	6.19
Wheat	243.38	13.19	6.18	1.40	158.92	19.89	57.18	13.33	18.04	12.40	3.05	9.74
Maize	247.48	13.41	111.91	25.42	100.76	12.61	29.71	6.93	1.29	0.89	3.79	12.10
Sorghum	83.51	4.53	29.10	6.61	16.52	2.07	21.54	5.02	11.60	7.97	4.74	15.13
Millet	73.18	3.97	1.33	0.30	23.74	2.97	46.94	10.94	0.97	0.67	0.21	0.67
Oats	8.98	0.49	0.62	0.14	6.80	0.85	1.37	0.32	0.18	0.12	-	-
PULSES	79.70	4.32	27.39	6.22	39.02	4.88	9.42	2.20	3.05	2.10	0.82	2.62
Horse Beans	33.67	1.82	16.82	3.82	14.20	1.78	2.04	0.48	0.22	0.15	0.37	1.18
Chick Peas	4.70	0.25	1.24	0.28	1.89	0.24	0.24	0.06	1.34	0.92	-	-
Haricot Bean	10.03	0.54	3.80	0.86	4.12	0.52	1.77	0.41	0.08	0.05	0.26	0.83
Field Peas	24.46	1.33	5.24	1.19	13.88	1.74	4.48	1.04	0.70	0.48	0.19	0.61
Lentils	6.04	0.33	0.24	0.05	4.59	0.57	0.84	0.20	0.35	0.24	-	-
Vetch	0.79	0.04	0.06	0.01	0.33	0.04	0.04	0.01	0.35	0.24	-	-
OILSEEDS	11.07	0.60	6.86	1.56	3.21	0.40	0.66	0.15	0.05	0.03	0.27	0.86
Neug	2.09	0.11	2.08	0.47	0.01	-	-	-	-	-	-	-
Linseed	1.16	0.06	0.16	0.04	0.81	0.10	0.19	0.04	-	-	-	-
Fenugreek	1.16	0.06	0.22	0.05	0.75	0.09	0.11	0.03	0.05	0.03	0.02	0.06
Rapeseed	6.66	0.36	4.40	1.00	1.65	0.21	0.35	0.08	-	-	0.25	0.80
Other Temporary	0.26	0.01	0.13	0.03	0.01	0.00	0.06	0.01	0.05	0.03	0.01	0.03
Spices	11.34	0.61	5.96	1.35	4.88	0.61	0.47	0.11	0.01	0.01	-	-
Potatoes	11.19	0.61	7.50	1.70	3.27	0.41	0.11	0.03	-	-	0.30	0.96
Other Vegetables	37.67	2.04	32.37	7.35	3.93	0.49	1.16	0.27	0.21	0.14	0.04	0.13
TOTAL TEMPORARY	1657.26	89.83	280.31	63.67	788.84	98.72	422.63	98.53	140.15	96.35	25.24	80.56
Chat	33.23	1.80	13.14	2.98	5.11	0.64	3.85	0.90	5.26	3.62	5.87	18.74
Coffee	20.82	1.13	15.54	3.53	3.25	0.41	1.92	0.45	0.03	0.02	0.08	0.26
Enset	122.98	6.67	121.32	27.56	1.19	0.15	0.34	0.08	0.02	0.01	0.08	0.26
Fruits	1.78	0.10	1.39	0.32	0.26	0.03	0.12	0.03	-	-	-	-
Other Permanent	8.99	0.49	8.53	1.94	0.38	0.05	0.01	-	-	-	0.05	0.16
TOTAL PERMANENT	187.80	10.18	159.92	36.32	10.19	1.28	6.24	1.45	5.31	3.65	6.08	19.41
ALL CROPS	1844.95	100.00	440.28	100.00	799.06	100.00	428.92	100.00	145.46	100.00	31.33	100.00

* EXCLUDING ERITREA, TIGRAY, NORTH WOLO, ASAB AND OGADEN AUTONOMOUS REGIONS.

FIG 2. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER
 FOR MAJOR CROPS OF PRIVATE HOLDINGS IN ETHIOPIA
 1990/91 (1983 E.C.)

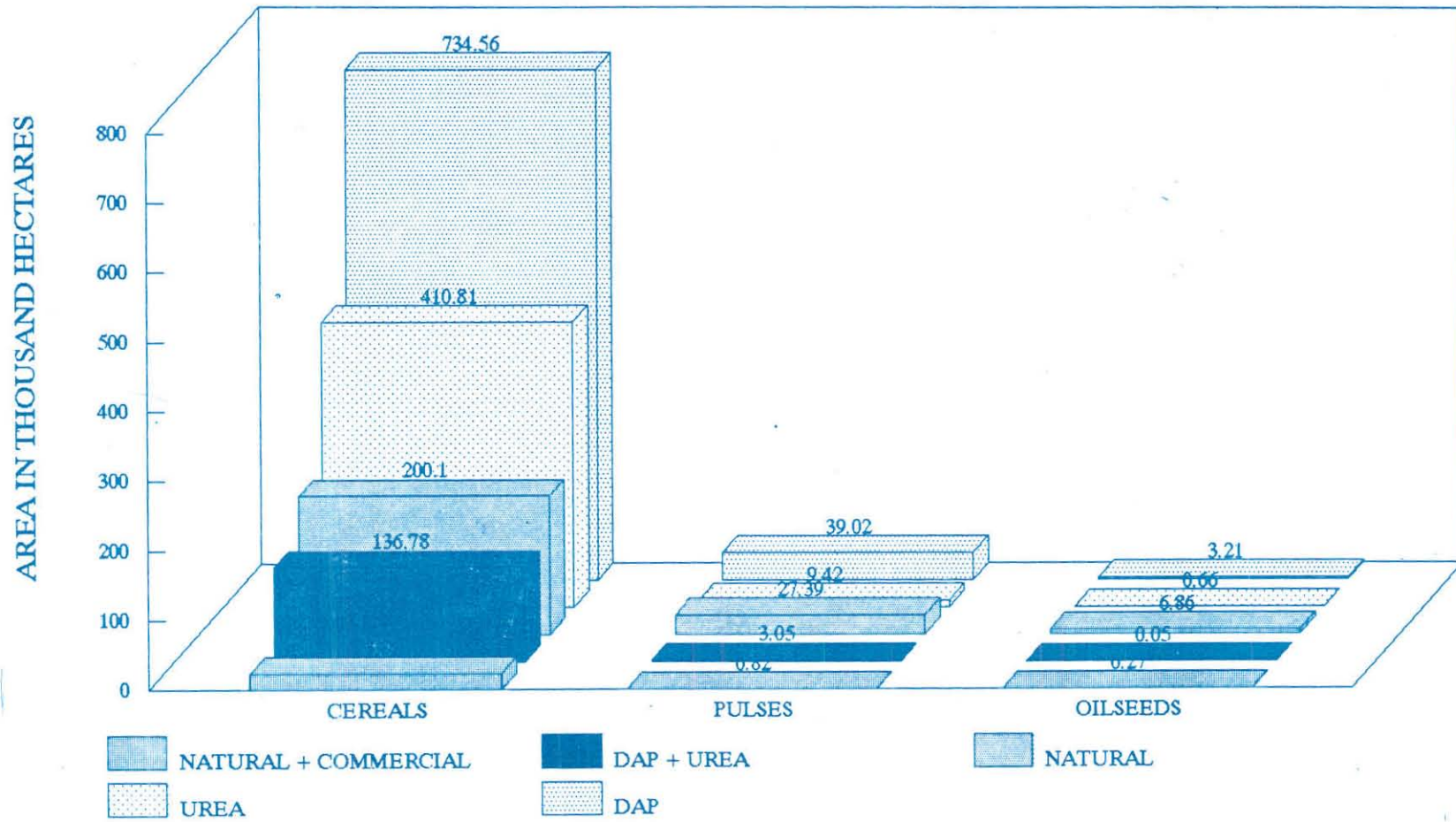


TABLE 2. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE
OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN
*ETHIOPIA, 1990/91(1983 E.C.)

CROP NAME	(000* Qt.)									
	TOTAL	%	DAP	%	UREA	%	DAP +UREA	%	COMM W/NAT	%
CEREALS	950.23	90.08	516.59	89.26	249.23	91.94	170.20	94.03	14.17	58.99
Teff	452.19	42.87	209.95	36.28	112.78	41.61	126.46	69.87	3.00	12.49
Barley	133.09	12.62	88.31	15.26	34.71	12.80	8.52	4.71	1.55	6.45
Wheat	182.37	17.29	115.57	19.97	41.59	15.34	23.24	12.84	1.95	8.12
Maize	104.47	9.90	77.96	13.47	19.19	7.08	4.10	2.27	3.22	13.41
Sorghum	37.52	3.56	10.03	1.73	15.81	5.83	7.28	4.02	4.39	18.28
Millet	35.88	3.40	10.96	1.89	24.39	9.00	0.44	0.24	0.06	0.25
Oats	4.71	0.45	3.81	0.66	0.76	0.28	0.16	0.09	-	-
PULSES	33.39	3.17	22.44	3.88	7.48	2.76	3.05	1.69	0.45	1.87
Horse Beans	12.22	1.16	9.57	1.65	1.85	0.68	0.67	0.37	0.15	0.62
Chick Peas	2.22	0.21	1.07	0.18	0.26	0.10	0.88	0.49	-	-
Haricot Bean	3.57	0.34	1.89	0.33	1.43	0.53	0.03	0.02	0.22	0.92
Field Peas	11.97	1.13	8.15	1.41	3.10	1.14	0.65	0.36	0.08	0.33
Lentils	2.47	0.23	1.50	0.26	0.82	0.30	0.16	0.09	-	-
Vetch	0.94	0.09	0.26	0.04	0.02	0.01	0.66	0.36	-	-
OILSEEDS	2.09	0.20	1.11	0.19	0.86	0.32	0.03	0.02	0.08	0.33
Neug	0.01	-	0.01	-	-	-	-	-	-	-
Linseed	0.50	0.05	0.31	0.05	0.19	0.07	-	-	-	-
Fenugreek	0.45	0.04	0.21	0.04	0.20	0.07	0.03	0.02	-	-
Rapeseed	1.13	0.11	0.58	0.10	0.47	0.17	-	-	0.08	0.33
Other Temporary	0.64	0.06	0.28	0.05	0.17	0.06	0.03	0.02	0.15	0.62
Spices	11.26	1.07	10.50	1.81	0.05	0.02	-	-	-	-
Potatoes	4.27	0.40	3.62	0.63	0.11	0.04	-	-	0.53	2.21
Other Veget	7.65	0.73	6.22	1.07	1.11	0.41	0.24	0.13	0.04	0.17
TOTAL TEMP	1009.53	95.70	560.78	96.90	259.66	95.79	173.55	95.88	15.48	64.45
Chat	33.37	3.16	9.80	1.69	8.00	2.95	7.32	4.04	8.25	34.35
Coffee	8.48	0.80	5.32	0.92	3.01	1.11	0.01	0.01	0.12	0.50
Enset	1.24	0.12	1.08	0.19	0.02	0.01	0.11	0.06	0.04	0.17
Fruits	0.35	0.03	0.06	0.01	0.29	0.11	-	-	-	-
Other Perm	1.88	0.18	1.66	0.29	0.09	0.03	0.01	0.01	0.13	0.54
TOTAL PERMANENT	45.32	4.30	17.92	3.10	11.41	4.21	7.45	4.12	8.54	35.55
ALL CROPS	1054.86	100.00	578.72	100.00	271.07	100.00	181.00	100.00	24.02	100.00

* EXCLUDING ERITREA, TIGRAY, NORTH WOLO, ASAB AND OGADEN AUTONOMOUS REGIONS.

FIG 3. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED
 BY TYPE FOR MAJOR CROPS OF PRIVATE HOLDINGS
 IN ETHIOPIA, 1990/91 (1983 E.C.)

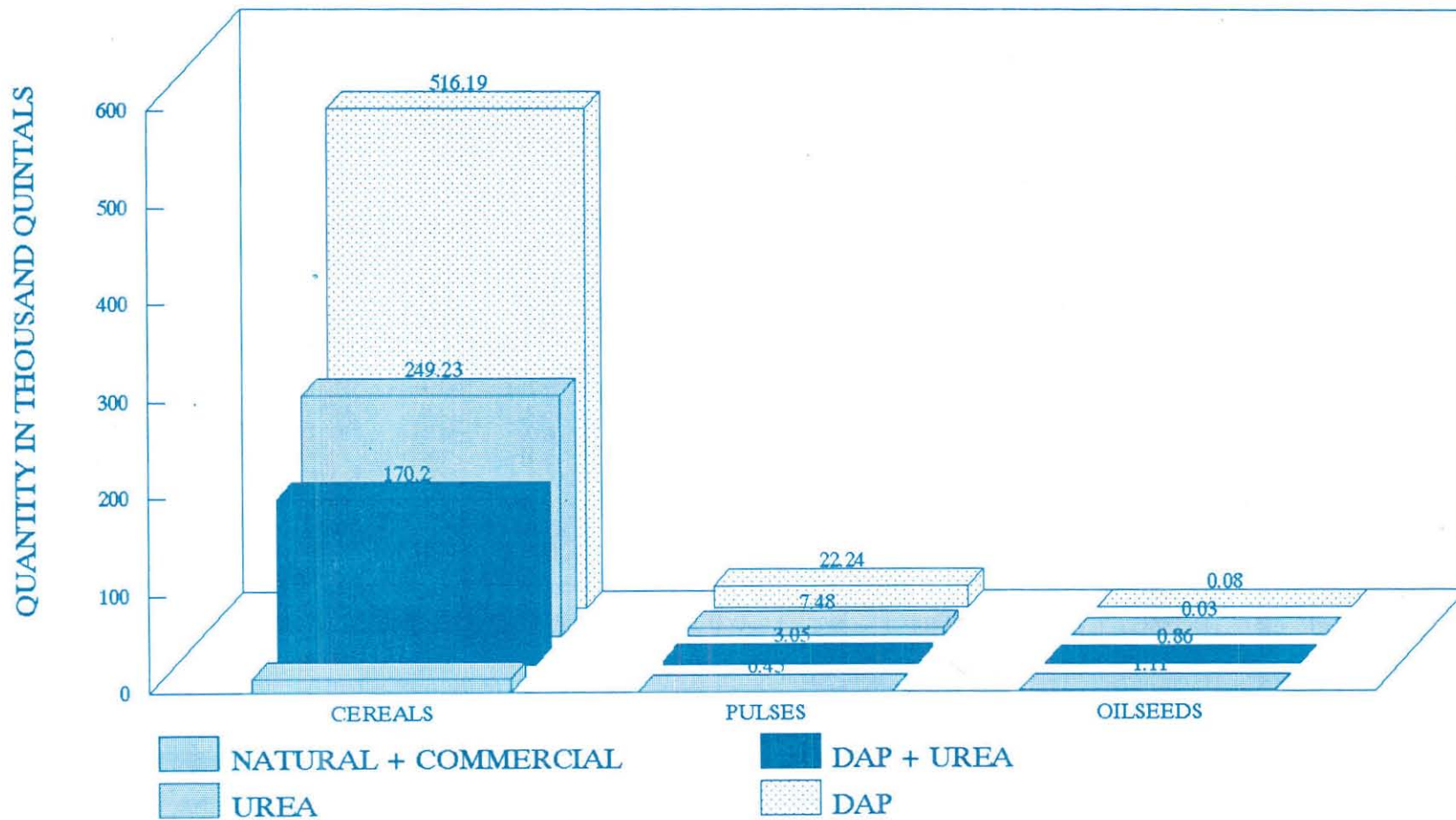


TABLE 3. ESTIMATES OF FERTILIZER APPLIED AREA BY REGION AND BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN *ETHIOPIA, 1990/91(1983 E.C.)

REGION	(000' HA)											
	TOTAL	%	NATURAL	%	DAP	%	UREA	%	D'AP + UREA	%	NAT + COMM	%
ARSI	288.14	15.62	4.06	0.92	240.04	30.04	44.02	10.26	-	-	-	-
BALE	24.78	1.34	0.15	0.03	9.58	1.20	13.95	3.25	1.10	0.76	-	-
NORTH OMO	78.84	4.27	60.84	13.82	16.89	2.11	0.96	0.22	0.16	0.11	-	-
SOUTH OMO	0.01	-	-	-	-	-	0.01	-	-	-	-	-
EAST GOJAM	109.81	5.95	16.54	3.76	30.40	3.80	40.06	9.34	10.12	6.96	12.69	40.50
WEST GOJAM	227.88	12.35	50.80	11.54	72.82	9.11	102.41	23.88	1.16	0.80	0.70	2.23
METEKEL	14.20	0.77	6.01	1.37	3.25	0.41	4.42	1.03	0.12	0.08	0.40	1.28
NORTH GONDER	21.26	1.15	2.44	0.55	11.80	1.48	5.25	1.22	1.75	1.20	0.02	0.06
SOUTH GONDER	19.35	1.05	4.49	1.02	8.76	1.10	1.49	0.35	4.42	3.04	0.21	0.67
DIREDAWA	1.45	0.08	1.22	0.28	0.01	-	0.06	0.01	0.09	0.06	0.06	0.19
EAST HARERGE	95.85	5.20	23.29	5.29	16.73	2.09	23.43	5.46	18.22	12.53	14.16	45.20
WEST HARERGE	15.40	0.83	7.86	1.79	4.64	0.58	2.90	0.68	-	-	-	-
GAMBELA	0.51	0.03	0.06	0.01	0.40	0.05	0.05	0.01	-	-	-	-
ILUBABOR	90.03	4.88	11.43	2.60	48.02	6.01	30.69	7.15	-	-	-	-
KEFA	0.63	0.03	0.63	0.14	-	-	-	-	-	-	-	-
ADDIS ABABA	43.58	2.36	1.24	0.28	15.05	1.88	7.95	1.85	19.35	13.30	-	-
EAST SHEWA	112.40	6.09	1.44	0.33	30.09	3.77	7.85	1.83	72.88	50.10	0.11	0.35
NORTH SHEWA	23.02	1.25	6.45	1.46	9.94	1.24	6.63	1.55	-	-	-	-
SOUTH SHEWA	224.75	12.18	52.66	11.96	114.57	14.34	54.36	12.67	0.19	0.13	2.98	9.51
WEST SHEWA	169.27	9.17	50.16	11.39	74.67	9.34	29.46	6.87	14.99	10.31	-	-
BORENA	2.42	0.13	2.13	0.48	-	-	0.30	0.07	-	-	-	-
SIDAMO	141.14	7.65	85.24	19.36	51.80	6.48	4.00	0.93	0.10	0.07	-	-
ASOSA	3.84	0.21	3.21	0.73	0.57	0.07	0.06	0.01	-	-	-	-
WELEGA	115.59	6.27	27.60	6.27	38.67	4.84	48.58	11.33	0.78	0.54	-	-
SOUTH WOLO	20.79	1.13	20.33	4.62	0.37	0.05	0.05	0.01	0.03	0.02	-	-
TOTAL	1844.96	100.00	440.28	100.00	799.07	100.00	428.94	100.00	145.46	100.00	31.33	100.00

TABLE 4. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY REGION AND BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN
*ETHIOPIA, 1990/91(1983 E.C.)

REGION	(000 Qt.)									
	TOTAL	%	DAP	%	UREA	%	DAP +UREA	%	COMM W/NAT	%
ARSI	161.63	15.32	141.62	24.47	20.04	7.39	-	-	-	-
BALE	13.68	1.30	3.35	0.58	9.17	3.38	1.17	0.65	-	-
NORTH OMO	12.41	1.18	11.29	1.95	0.80	0.30	0.32	0.18	-	-
SOUTH OMO	-	-	-	-	0.00*	-	-	-	-	-
EAST GOJAM	54.03	5.12	22.33	3.86	18.91	6.98	9.46	5.23	3.32	13.82
WEST GOJAM	95.16	9.02	37.92	6.55	55.66	20.53	1.29	0.71	0.27	1.12
METEKEL	2.02	0.19	0.91	0.16	0.99	0.37	0.03	0.02	0.08	0.33
NORTH GONDER	10.90	1.03	6.87	1.19	2.63	0.97	1.33	0.73	0.04	0.17
SOUTH GONDER	7.67	0.73	3.93	0.68	0.41	0.15	3.27	1.81	0.06	0.25
DIRE DAWA	0.14	0.01	0.01	-	0.02	0.01	0.06	0.03	0.06	0.25
EAST HARERGE	87.26	8.27	24.60	4.25	25.78	9.51	19.22	10.62	17.65	73.48
WEST HARERGE	3.45	0.33	2.01	0.35	1.44	0.53	-	-	-	-
GAMBELA	0.44	0.04	0.40	0.07	0.03	0.01	-	-	-	-
ILUBABOR	78.54	7.45	58.79	10.16	19.75	7.29	-	-	-	-
KEFA	-	-	-	-	-	-	-	-	-	-
ADDIS ABABA	43.31	4.11	13.67	2.36	6.07	2.24	23.55	13.01	-	-
EAST SHEWA	119.97	11.37	20.60	3.56	3.56	1.31	95.74	52.90	0.07	0.29
NORTH SHEWA	16.76	1.59	10.60	1.83	6.16	2.27	-	-	-	-
SOUTH SHEWA	157.19	14.90	105.70	18.26	48.96	18.06	0.05	0.03	2.47	10.28
WEST SHEWA	108.17	10.25	62.42	10.79	20.84	7.69	24.93	13.77	-	-
BORENA	-	-	-	-	0.00*	-	-	-	-	-
SIDAMO	31.95	3.03	29.14	5.04	2.69	0.99	0.12	0.07	-	-
ASOSA	0.23	0.02	0.22	0.04	0.01	0.00	-	-	-	-
WELEGA	49.87	4.73	22.29	3.85	27.13	10.01	0.43	0.24	-	-
SOUTH WOLO	0.10	0.01	0.06	0.01	0.01	0.00	0.03	0.02	-	-
TOTAL	1054.88	100.00	578.73	100.00	271.06	100.00	181.00	100.00	24.02	100.00

0.00* Insignificant.

FIG. 4 ESTIMATES OF QUANTITY OF DAP AND UREA

USED BY REGION, 1990/91(1983 E.C.)

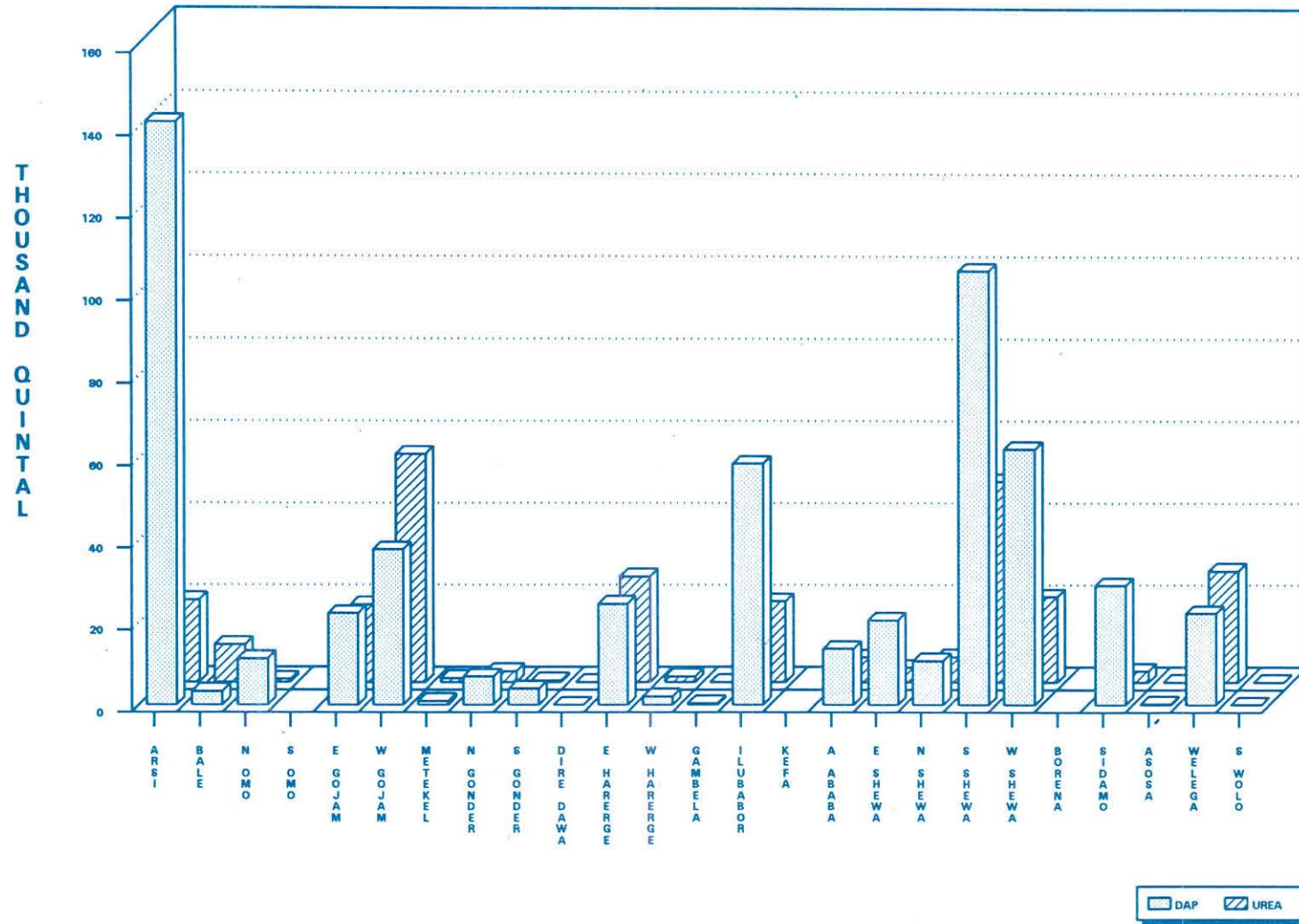


TABLE 5. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ARSI, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	('000' HA)	
					DAP +UREA	NAT + COMM
CEREALS	268.44	2.90	221.80	43.74	-	-
Teff	15.38	0.23	15.14	-	-	-
Barley	126.76	0.56	96.48	29.72	-	-
Wheat	114.35	0.29	100.53	13.53	-	-
Maize	5.71	1.78	3.93	-	-	-
Sorghum	0.48	-	0.48	-	-	-
Millet	-	-	-	-	-	-
Oats	5.76	0.03	5.24	0.48	-	-
PULSES	16.49	0.20	16.05	0.23	-	-
Horse Beans	6.52	0.19	6.23	0.10	-	-
Chick Peas	0.08	-	0.08	-	-	-
Haricot Bean	1.32	-	1.32	-	-	-
Field Peas	5.92	-	5.87	0.05	-	-
Lentils	2.50	0.01	2.41	0.08	-	-
Vetch	0.14	-	0.14	-	-	-
OILSEEDS	2.02	0.01	2.01	-	-	-
Neug	-	-	-	-	-	-
Linseed	0.62	-	0.62	-	-	-
Fenugreek	0.06	-	0.06	-	-	-
Rapeseed	1.34	0.01	1.33	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	0.09	0.05	0.04	-	-	-
Potatoes	0.02	0.02	-	-	-	-
Other Vegetables	0.84	0.67	0.11	0.06	-	-
TOTAL TEMPORARY	287.89	3.84	240.01	44.02	-	-
Chat	-	-	-	-	-	-
Coffee	-	-	-	-	-	-
Enset	0.01	0.01	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	0.25	0.22	0.03	-	-	-
TOTAL PERMANENT	0.25	0.22	0.03	-	-	-
ALL CROPS	288.14	4.06	240.04	44.02	-	-

TABLE 6. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ARSI, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	('000' Qt.)	
				DAP +UREA	COMM W/NAT
CEREALS	154.11	134.21	19.90	-	-
Teff	7.45	7.45	-	-	-
Barley	70.67	58.83	11.84	-	-
Wheat	71.76	63.87	7.89	-	-
Maize	1.00	1.00	-	-	-
Sorghum	0.05	0.05	-	-	-
Millet	-	-	-	-	-
Oats	3.17	3.00	0.18	-	-
PULSES	6.55	6.43	0.12	-	-
Horse Beans	2.89	2.89	0.01	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	0.17	0.17	-	-	-
Field Peas	2.93	2.85	0.08	-	-
Lentils	0.52	0.49	0.04	-	-
Vetch	0.02	0.02	-	-	-
OILSEEDS	0.72	0.72	-	-	-
Neug	-	-	-	-	-
Linseed	0.16	0.16	-	-	-
Fenugreek	0.03	0.03	-	-	-
Rapeseed	0.54	0.54	-	-	-
Other Temporary	0.06	0.06	-	-	-
Spices	0.02	0.02	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	0.17	0.17	-	-	-
TOTAL TEMPORARY	161.61	141.60	20.04	-	-
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	0.02	0.02	-	-	-
TOTAL PERMANENT	0.02	0.02	-	-	-
ALL CROPS	161.63	141.62	20.04	-	-

TABLE 7. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN BALE, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	('000' HA)	
					DAP + UREA	NAT + COMM
CEREALS	24.02	0.08	8.91	13.93	1.10	-
Teff	0.11	-	0.11	-	-	-
Barley	11.50	0.08	4.29	6.96	0.17	-
Wheat	11.31	-	4.07	6.48	0.76	-
Maize	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-
Millet	-	-	-	-	-	-
Oats	1.11	-	0.44	0.50	0.17	-
PULSES	0.09	-	0.08	0.01	-	-
Horse Beans	0.01	-	0.01	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	0.04	-	0.04	-	-	-
Lentils	0.04	-	0.03	0.01	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	0.59	-	0.59	-	-	-
Neug	-	-	-	-	-	-
Linseed	0.02	-	0.02	-	-	-
Fenugreek	0.57	-	0.57	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Other Vegetables	0.01	0.01	-	-	-	-
TOTAL TEMPORARY	24.72	0.09	9.58	13.95	1.10	-
Chat	-	-	-	-	-	-
Coffee	-	-	-	-	-	-
Enset	0.06	0.06	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	-	-	-	-	-	-
TOTAL PERMANENT	0.06	0.06	-	-	-	-
ALL CROPS	24.78	0.15	9.58	13.95	1.10	-

TABLE 8. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN BALE, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	('000' Qt.)	
				DAP + UREA	COMM W/NAT
CEREALS	13.59	3.26	9.16	1.17	-
Teff	0.03	0.03	-	-	-
Barley	5.83	1.25	4.31	0.27	-
Wheat	7.02	1.87	4.40	0.76	-
Maize	-	-	-	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	0.70	0.11	0.45	0.14	-
PULSES	0.03	0.02	0.01	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	0.01	0.01	-	-	-
Lentils	0.01	-	0.01	-	-
Vetch	-	-	-	-	-
OILSEEDS	0.08	0.08	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	0.08	0.08	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	-	-	-	-	-
TOTAL TEMPORARY	13.68	3.35	9.17	1.17	-
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	-	-	-	-	-
ALL CROPS	13.68	3.35	9.17	1.17	-

TABLE 9. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN NORTH OMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	(000' HA)	
					DAP +UREA	NAT + COMM
CEREALS	33.33	16.88	15.39	0.90	0.16	-
Teff	16.87	1.44	14.58	0.68	0.16	-
Barley	10.36	9.47	0.67	0.22	-	-
Wheat	1.46	1.34	0.12	-	-	-
Maize	1.33	1.31	0.02	-	-	-
Sorghum	3.32	3.32	-	-	-	-
Millet	-	-	-	-	-	-
Oats	-	-	-	-	-	-
PULSES	5.67	4.67	0.94	0.06	-	-
Horse Beans	0.67	0.67	-	-	-	-
Chick Peas	0.77	0.62	0.16	-	-	-
Haricot Bean	3.27	2.66	0.55	0.06	-	-
Field Peas	0.95	0.73	0.23	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	0.02	0.02	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	0.01	0.01	-	-	-	-
Fenugreek	0.01	0.01	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	0.47	0.47	-	-	-	-
Potatoes	4.54	4.28	0.26	-	-	-
Other Vegetables	11.35	11.25	0.10	-	-	-
TOTAL TEMPORARY	55.38	37.58	16.69	0.96	0.16	-
Chat	-	-	-	-	-	-
Coffee	3.39	3.35	0.04	-	-	-
Enset	18.32	18.22	0.10	-	-	-
Fruits	0.19	0.13	0.06	-	-	-
Other Permanent	1.55	1.55	-	-	-	-
TOTAL PERMANENT	23.46	23.26	0.20	-	-	-
ALL CROPS	78.84	60.84	16.89	0.96	0.16	-

TABLE 10. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN NORTH OMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(000' Qt.)	
				DAP +UREA	COMM W/NAT
CEREALS	11.41	10.31	0.78	0.32	-
Teff	11.00	9.93	0.75	0.32	-
Barley	0.34	0.31	0.03	-	-
Wheat	0.07	0.07	-	-	-
Maize	-	-	-	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	0.56	0.53	0.03	-	-
Horse Beans	-	-	-	-	-
Chick Peas	0.05	0.05	-	-	-
Haricot Bean	0.36	0.33	0.03	-	-
Field Peas	0.14	0.14	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	0.14	0.14	-	-	-
Other Vegetables	0.09	0.09	-	-	-
TOTAL TEMPORARY	12.20	11.08	0.80	0.32	-
Chat	-	-	-	-	-
Coffee	0.05	0.05	-	-	-
Enset	0.09	0.09	-	-	-
Fruits	-	-	-	-	-
Other Permanent	0.07	0.07	-	-	-
TOTAL PERMANENT	0.21	0.21	-	-	-
ALL CROPS	12.41	11.29	0.80	0.32	-

TABLE 11. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH OMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	(000' HA)	
					DAP +UREA	NAT + COMM
CEREALS	-	-	-	-	-	-
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	-	-	-	-	-	-
Sorghum	-	-	-	-	-	-
Millet	-	-	-	-	-	-
Oats	-	-	-	-	-	-
PULSES	-	-	-	-	-	-
Horse Beans	-	-	-	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Other Vegetables	-	-	-	-	-	-
TOTAL TEMPORARY	-	-	-	-	-	-
Chat	-	-	-	-	-	-
Coffee	0.01	-	-	0.01	-	-
Enset	-	-	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	-	-	-	-	-	-
TOTAL PERMANENT	0.01	-	-	0.01	-	-
ALL CROPS	0.01	-	-	0.01	-	-

TABLE 12. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH OMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(000' Qt.)	
				DAP +UREA	COMM W/NAT
CEREALS	-	-	-	-	-
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	-	-	-	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	-	-	-	-	-
TOTAL TEMPORARY	-	-	-	-	-
Chat	-	-	-	-	-
Coffee	-	-	0.00*	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	-	-	0.00*	-	-
ALL CROPS	-	-	0.00*	-	-

* Insignificant.

TABLE 13. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN EAST GOJAM, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	('000' HA)	
					DAP + UREA	NAT + COMM
CEREALS	106.44	13.24	30.36	40.03	10.12	12.69
Teff	81.82	5.25	28.54	29.50	9.28	9.25
Barley	8.79	2.90	0.78	3.30	-	1.80
Wheat	10.44	0.18	1.04	6.74	0.84	1.63
Maize	5.32	4.90	-	0.42	-	-
Sorghum	-	-	-	-	-	-
Millet	0.06	-	-	0.06	-	-
Oats	-	-	-	-	-	-
PULSES	2.04	2.04	-	-	-	-
Horse Beans	1.08	1.08	-	-	-	-
Chick Peas	0.22	0.22	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	0.74	0.74	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	0.82	0.79	-	0.03	-	-
Neug	0.79	0.79	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	0.03	-	-	0.03	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	0.08	0.08	-	-	-	-
Potatoes	0.01	0.01	-	-	-	-
Other Vegetables	0.02	0.02	-	-	-	-
TOTAL TEMPORARY	109.40	16.17	30.36	40.05	10.12	12.68
Chat	-	-	-	-	-	-
Coffee	0.01	0.01	-	-	-	-
Enset	-	-	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	0.40	0.36	0.04	-	-	-
TOTAL PERMANENT	0.41	0.37	0.04	-	-	-
ALL CROPS	109.81	16.54	30.40	40.06	10.12	12.69

TABLE 14. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN EAST GOJAM, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	('000' Qt.)	
				DAP + UREA	COMM W/NAT
CEREALS	53.74	22.12	18.83	9.46	3.33
Teff	45.66	21.11	13.34	9.14	2.07
Barley	3.48	0.46	2.17	-	0.85
Wheat	4.51	0.55	3.23	0.32	0.40
Maize	0.08	-	0.08	-	-
Sorghum	-	-	-	-	-
Millet	0.02	-	0.02	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	0.07	-	0.07	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	0.07	-	0.07	-	-
Rapeseed	-	-	-	-	-
Other Temporary	0.13	0.13	-	-	-
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	-	-	-	-	-
TOTAL TEMPORARY	53.95	22.25	18.91	9.46	3.32
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	0.08	0.08	-	-	-
TOTAL PERMANENT	0.08	0.08	-	-	-
ALL CROPS	54.03	22.33	18.91	9.46	3.32

TABLE 15. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WEST GOJAM, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	('000' HA)	
					DAP +UREA	NAT + COMM
CEREALS	215.40	41.52	72.09	100.19	1.16	0.44
Teff	103.39	6.70	45.89	49.64	1.16	-
Barley	14.87	4.22	6.36	4.29	-	-
Wheat	4.76	0.37	1.88	2.51	-	-
Maize	39.05	29.46	3.88	5.26	-	0.44
Sorghum	-	-	-	-	-	-
Millet	53.34	0.77	14.08	38.49	-	-
Oats	-	-	-	-	-	-
PULSES	2.62	0.73	0.26	1.63	-	-
Horse Beans	0.76	0.49	-	0.27	-	-
Chick Peas	0.14	-	-	0.14	-	-
Haricot Bean	0.12	0.12	-	-	-	-
Field Peas	1.60	0.12	0.26	1.22	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	5.15	4.03	0.32	0.55	-	0.25
Neug	0.55	0.55	-	-	-	-
Linseed	0.19	-	-	0.19	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	4.40	3.48	0.32	0.35	-	0.25
Other Temporary	-	-	-	-	-	-
Spices	1.54	1.51	0.01	0.02	-	-
Potatoes	1.66	1.53	0.11	0.02	-	-
Other Vegetables	0.52	0.52	-	-	-	-
TOTAL TEMPORARY	226.89	49.84	72.79	102.40	1.16	0.69
Chat	-	-	-	-	-	-
Coffee	0.24	0.23	0.01	-	-	-
Enset	-	-	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	0.75	0.72	0.02	0.01	-	-
TOTAL PERMANENT	0.99	0.95	0.03	0.01	-	-
ALL CROPS	227.88	50.80	72.82	102.41	1.16	0.70

TABLE 16. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WEST GOJAM, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	('000' Qt.)	
				DAP +UREA	COMM W/NAT
CEREALS	92.48	36.89	54.17	1.29	0.14
Teff	50.70	23.66	25.75	1.29	-
Barley	5.60	3.46	2.14	-	-
Wheat	1.96	0.73	1.22	-	-
Maize	6.22	2.42	3.66	-	0.14
Sorghum	-	-	-	-	-
Millet	28.02	6.61	21.40	-	-
Oats	-	-	-	-	-
PULSES	0.79	0.21	0.58	-	-
Horse Beans	0.08	-	0.08	-	-
Chick Peas	0.09	-	0.09	-	-
Haricot Bean	-	-	-	-	-
Field Peas	0.63	0.21	0.41	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	0.78	0.04	0.66	-	0.08
Neug	-	-	-	-	-
Linseed	0.19	-	0.19	-	-
Fenugreek	-	-	-	-	-
Rapeseed	0.59	0.04	0.47	-	0.08
Other Temporary	-	-	-	-	-
Spices	0.21	0.02	0.14	-	0.05
Potatoes	0.20	0.18	0.02	-	-
Other Vegetables	-	-	-	-	-
TOTAL TEMPORARY	94.49	37.33	55.57	1.29	0.27
Chat	-	-	-	-	-
Coffee	0.01	0.01	-	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	0.66	0.58	0.09	-	-
TOTAL PERMANENT	0.67	0.59	0.09	-	-
ALL CROPS	95.16	37.92	55.66	1.29	0.27

TABLE 17. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN METEKEL, 1990/91(1983 E.C.)

CROP NAME	(000' HA)					
	TOTAL	NATURAL	DAP	UREA	DAP +UREA	NAT + COMM
CEREALS	12.77	4.70	3.24	4.32	0.12	0.40
Teff	2.18	0.50	0.62	0.81	-	0.25
Barley	0.02	0.02	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	4.59	3.68	0.07	0.56	0.12	0.15
Sorghum	0.26	0.26	-	-	-	-
Millet	5.32	0.16	2.22	2.94	-	-
Oats	0.40	0.07	0.32	-	-	-
PULSES	0.13	0.12	-	-	-	-
Horse Beans	0.01	0.01	-	-	-	-
Chick Peas	0.11	0.10	-	-	-	-
Haricot Bean	0.01	0.01	-	-	-	-
Field Peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	0.78	0.78	-	-	-	-
Neug	0.08	0.08	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	0.71	0.70	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	0.48	0.37	-	0.09	-	-
Potatoes	-	-	-	-	-	-
Other Vegetables	0.03	0.03	-	-	-	-
TOTAL TEMPORARY	14.20	5.99	3.23	4.40	0.12	0.40
Chat	-	-	-	-	-	-
Coffee	-	-	-	-	-	-
Enset	-	-	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	-	-	-	-	-	-
TOTAL PERMANENT	-	-	-	-	-	-
ALL CROPS	14.20	6.01	3.25	4.42	0.12	0.40

TABLE 18. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN METEKEL, 1990/91(1983 E.C.)

CROP NAME	(000' Qt.)				
	TOTAL	DAP	UREA	DAP +UREA	COMM W/NAT
CEREALS	1.97	0.91	0.96	0.03	0.08
Teff	0.36	0.10	0.20	-	0.06
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	0.31	0.03	0.23	0.03	0.02
Sorghum	-	-	-	-	-
Millet	1.25	0.72	0.53	-	-
Oats	0.05	0.05	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	0.02	-	0.02	-	-
Potatoes	-	-	-	-	-
Other Vegetables	0.01	-	0.01	-	-
TOTAL TEMPORARY	2.00	0.90	0.99	0.03	0.08
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	-	-	-	-	-
ALL CROPS	2.00	0.90	0.99	0.03	0.08

TABLE 19. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN NORTH GONDER, 1990/91(1983 E.C.)

CROP NAME	(000' HA)					
	TOTAL	NATURAL	DAP	UREA	DAP + UREA	NAT + COMM
CEREALS	19.95	1.43	11.55	5.21	1.74	0.02
Teff	14.50	0.11	8.34	4.57	1.48	—
Barley	1.71	—	1.35	0.29	0.07	—
Wheat	0.22	0.02	0.20	—	—	—
Maize	1.37	1.28	0.06	—	—	0.02
Sorghum	1.18	—	0.76	0.23	0.19	—
Millet	0.97	0.02	0.84	0.12	—	—
Oats	—	—	—	—	—	—
PULSES	0.16	0.01	0.14	—	—	—
Horse Beans	0.01	0.01	—	—	—	—
Chick Peas	0.14	—	0.14	—	—	—
Haricot Bean	0.01	0.01	—	—	—	—
Field Peas	—	—	—	—	—	—
Lentils	—	—	—	—	—	—
Vetch	—	—	—	—	—	—
OILSEEDS	0.05	0.02	—	0.02	—	—
Neug	0.02	0.02	—	—	—	—
Linseed	—	—	—	—	—	—
Fenugreek	0.02	—	—	0.02	—	—
Rapeseed	—	—	—	—	—	—
Other Temporary	0.01	0.01	—	—	—	—
Spices	0.26	0.15	0.08	0.02	0.01	—
Potatoes	0.07	0.07	—	—	—	—
Other Vegetables	0.12	0.08	0.03	—	—	—
TOTAL TEMPORARY	20.60	1.78	11.80	5.25	1.75	0.02
Chat	—	—	—	—	—	—
Coffee	0.13	0.13	—	—	—	—
Enset	—	—	—	—	—	—
Fruits	—	—	—	—	—	—
Other Permanent	0.53	0.53	—	—	—	—
TOTAL PERMANENT	0.66	0.66	—	—	—	—
ALL CROPS	21.26	2.44	11.80	5.25	1.75	0.02

TABLE 20. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN NORTH GONDER, 1990/91(1983 E.C.)

CROP NAME	(000' Qt.)				
	TOTAL	DAP	UREA	DAP + UREA	COMM W/NAT
CEREALS	10.67	6.67	2.63	1.33	0.04
Teff	8.81	5.21	2.38	1.22	—
Barley	0.81	0.70	0.08	0.03	—
Wheat	0.12	0.12	—	—	—
Maize	0.10	0.06	—	—	0.04
Sorghum	0.33	0.12	0.12	0.08	—
Millet	0.51	0.46	0.04	—	—
Oats	—	—	—	—	—
PULSES	0.03	0.03	—	—	—
Horse Beans	—	—	—	—	—
Chick Peas	0.03	0.03	—	—	—
Haricot Bean	—	—	—	—	—
Field Peas	—	—	—	—	—
Lentils	—	—	—	—	—
Vetch	—	—	—	—	—
OILSEEDS	0.01	—	0.01	—	—
Neug	—	—	—	—	—
Linseed	—	—	—	—	—
Fenugreek	0.01	—	0.01	—	—
Rapeseed	—	—	—	—	—
Other Temporary	—	—	—	—	—
Spices	0.15	0.15	—	—	—
Potatoes	—	—	—	—	—
Other Vegetables	0.03	0.02	—	—	—
TOTAL TEMPORARY	10.90	6.87	2.63	1.33	0.04
Chat	—	—	—	—	—
Coffee	—	—	—	—	—
Enset	—	—	—	—	—
Fruits	—	—	—	—	—
Other Permanent	—	—	—	—	—
TOTAL PERMANENT	—	—	—	—	—
ALL CROPS	10.90	6.87	2.63	1.33	0.04

TABLE 21. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH GONDER, 1990/91(1983 E.C.)

CROP NAME	(000' HA)					
	TOTAL	NATURAL	DAP	UREA	DAP +UREA	NAT + COMM
CEREALS	19.09	4.21	8.76	1.49	4.42	0.21
Teff	10.87	0.21	6.25	1.47	2.94	-
Barley	0.89	0.03	0.35	-	0.51	-
Wheat	-	-	-	-	-	-
Maize	3.71	3.70	-	0.01	-	-
Sorghum	-	-	-	-	-	-
Millet	3.61	0.28	2.15	-	0.97	0.21
Oats	-	-	-	-	-	-
PULSES	-	-	-	-	-	-
Horse Beans	-	-	-	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	0.10	0.10	-	-	-	-
Potatoes	0.10	0.10	-	-	-	-
Other Vegetables	0.05	0.05	-	-	-	-
TOTAL TEMPORARY	19.33	4.47	8.75	1.48	4.42	0.21
Chat	-	-	-	-	-	-
Coffee	-	-	-	-	-	-
Enset	-	-	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	0.02	0.02	-	-	-	-
TOTAL PERMANENT	0.02	0.02	-	-	-	-
ALL CROPS	19.35	4.48	8.76	1.49	4.42	0.21

TABLE 22. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH GONDER, 1990/91(1983 E.C.)

CROP NAME	(000' Qt.)				
	TOTAL	DAP	UREA	DAP +UREA	COMM W/NAT
CEREALS	7.66	3.93	0.41	3.26	0.06
Teff	5.74	2.79	0.40	2.55	-
Barley	0.41	0.13	-	0.28	-
Wheat	-	-	-	-	-
Maize	0.01	-	0.01	-	-
Sorghum	-	-	-	-	-
Millet	1.51	1.01	-	0.44	0.06
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	-	-	-	-	-
TOTAL TEMPORARY	7.67	3.93	0.41	3.27	0.06
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	-	-	-	-	-
ALL CROPS	7.67	3.93	0.41	3.27	0.06

TABLE 23. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN DIRE DAWA, 1990/91(1983 E.C.)

CROP NAME	(000' HA)					
	TOTAL	NATURAL	DAP	UREA	DAP +UREA	NAT + COMM
CEREALS	1.16	1.04	0.01	0.03	0.04	0.05
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	0.06	0.06	-	-	-	-
Sorghum	1.10	0.97	0.01	0.03	0.04	0.05
Millet	-	-	-	-	-	-
Oats	-	-	-	-	-	-
PULSES	-	-	-	-	-	-
Horse Beans	-	-	-	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	0.08	-	-	0.02	0.05	0.01
Spices	0.01	0.01	-	-	-	-
Potatoes	-	-	-	-	-	-
Other Vegetables	0.01	0.01	-	-	-	-
TOTAL TEMPORARY	1.26	1.05	0.01	0.05	0.09	0.06
Chat	0.12	0.10	-	-	0.01	-
Coffee	-	-	-	-	-	-
Enset	-	-	-	-	-	-
Fruits	0.06	0.06	-	-	-	-
Other Permanent	-	-	-	-	-	-
TOTAL PERMANENT	0.18	0.17	-	-	0.01	-
ALL CROPS	1.45	1.22	0.01	0.06	0.09	0.06

TABLE 24. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN DIRE DAWA, 1990/91(1983 E.C.)

CROP NAME	(000' Qt.)				
	TOTAL	DAP	UREA	DAP +UREA	COMM W/NAT
CEREALS	0.08	-	0.01	0.02	0.04
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-*
Maize	-	-	-	-	-
Sorghum	0.08	-	0.01	0.02	0.04
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	0.05	-	-	0.03	0.01
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Veget	-	-	-	-	-
TOTAL TEMP	0.12	-	0.01	0.05	0.06
Chat	0.01	-	-	0.01	-
Coffee	-	-	-	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Perm	-	-	-	-	-
TOTAL PERM	0.01	-	-	0.01	-
ALL CROPS	0.14	0.01	0.02	0.06	0.06

TABLE 25. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN EAST HARERGE, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	('000' HA)	
					DAP + UREA	NAT + COMM
CEREALS	66.59	14.94	12.05	18.80	12.79	8.00
Teff	0.56	0.17	0.27	0.12	-	-
Barley	0.96	0.34	0.28	0.19	0.01	0.14
Wheat	5.62	0.75	2.10	1.90	0.34	0.52
Maize	10.30	3.98	0.76	1.75	1.07	2.73
Sorghum	48.99	9.63	8.59	14.80	11.37	4.61
Millet	-	-	-	-	-	-
Oats	0.16	0.07	0.05	0.04	0.01	-
PULSES	0.89	0.24	0.06	0.19	0.14	0.26
Horse Beans	0.03	0.03	-	-	-	-
Chick Peas	0.15	0.01	-	-	0.14	-
Haricot Bean	0.35	0.03	0.02	0.03	-	0.26
Field Peas	0.35	0.15	0.04	0.16	-	-
Lentils	0.01	0.01	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	0.23	0.13	0.03	0.06	-	-
Neug	-	-	-	-	-	-
Linseed	0.03	0.03	-	-	-	-
Fenugreek	0.20	0.10	0.03	0.06	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Potatoes	0.95	0.13	0.52	0.09	-	0.20
Other Vegetables	1.92	1.36	0.12	0.39	0.06	-
TOTAL TEMPORARY	70.58	16.79	12.78	19.53	13.00	8.46
Chat	23.75	5.15	3.95	3.72	5.22	5.70
Coffee	1.33	1.21	-	0.11	-	-
Enset	-	-	-	-	-	-
Fruits	0.18	0.12	-	0.06	-	-
Other Permanent	0.01	0.01	-	-	-	-
TOTAL PERMANENT	25.27	6.50	3.95	3.90	5.22	5.70
ALL CROPS	95.85	23.29	16.73	23.43	18.22	14.16

TABLE 26. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN EAST HARERGE, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	('000' Qt.)	
				DAP + UREA	COMM W/NAT
CEREALS	50.06	13.37	16.28	11.79	8.62
Teff	0.13	0.06	0.07	-	-
Barley	1.26	0.19	0.36	0.02	0.70
Wheat	7.79	3.31	3.03	0.60	0.84
Maize	12.48	3.56	2.16	3.98	2.77
Sorghum	28.32	6.17	10.66	7.18	4.31
Millet	-	-	-	-	-
Oats	0.09	0.08	0.01	0.01	-
PULSES	0.98	0.11	0.55	0.10	0.22
Horse Beans	-	-	-	-	-
Chick Peas	0.10	-	-	0.10	-
Haricot Bean	0.60	0.03	0.35	-	0.22
Field Peas	0.28	0.07	0.21	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	0.18	0.06	0.12	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	0.18	0.06	0.12	-	-
Rapeseed	-	-	-	-	-
Other Temporary	0.39	0.09	0.16	-	0.14
Spices	-	-	-	-	-
Potatoes	1.58	1.02	0.09	-	0.46
Other Vegetables	0.54	0.15	0.30	0.08	-
TOTAL TEMPORARY	53.74	14.79	17.52	11.97	9.44
Chat	32.96	9.80	7.70	7.25	8.21
Coffee	0.31	-	0.31	-	-
Enset	-	-	-	-	-
Fruits	0.25	-	0.25	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	33.52	9.80	8.26	7.25	8.21
ALL CROPS	87.26	24.60	25.78	19.22	17.65

TABLE 27. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WEST HARERGE, 1990/91(1983 E.C.)

CROP NAME	(000' HA)					
	TOTAL	NATURAL	DAP	UREA	DAP +UREA	NAT + COMM
CEREALS	10.95	4.64	3.83	2.47	-	-
Teff	1.42	0.16	0.85	0.41	-	-
Barley	0.18	0.15	0.04	-	-	-
Wheat	0.54	0.06	0.46	0.02	-	-
Maize	5.68	2.47	2.45	0.76	-	-
Sorghum	3.08	1.80	-	1.27	-	-
Millet	-	-	-	-	-	-
Oats	0.05	0.01	0.04	-	-	-
PULSES	0.56	0.47	0.09	-	-	-
Horse Beans	0.06	0.06	-	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	0.49	0.40	0.09	-	-	-
Field Peas	-	-	-	-	-	-
Lentils	0.01	0.01	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	0.02	0.02	-	-	-	-
Potatoes	-	-	-	-	-	-
Other Vegetables	0.22	0.22	-	-	-	-
TOTAL TEMPORARY	11.75	5.36	3.93	2.46	-	-
Chat	0.66	0.54	0.08	0.05	-	-
Coffee	2.86	1.84	0.64	0.38	-	-
Enset	-	-	-	-	-	-
Fruits	0.13	0.13	-	-	-	-
Other Permanent	-	-	-	-	-	-
TOTAL PERMANENT	3.65	2.51	0.71	0.43	-	-
ALL CROPS	15.40	7.86	4.64	2.90	-	-

TABLE 28. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WEST HARERGE, 1990/91(1983 E.C.)

CROP NAME	(000' Qt.)				
	TOTAL	DAP	UREA	DAP +UREA	COMM W/NAT
CEREALS	2.66	1.80	0.86	-	-
Teff	0.43	0.21	0.22	-	-
Barley	0.02	0.02	-	-	-
Wheat	0.54	0.54	-	-	-
Maize	1.60	1.01	0.59	-	-
Sorghum	0.05	-	0.05	-	-
Millet	-	-	-	-	-
Oats	0.01	0.01	-	-	-
PULSES	0.02	0.02	-	-	-
Horse Beans	0.02	0.02	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	-	-	-	-	-
TOTAL TEMPORARY	2.67	1.81	0.86	-	-
Chat	0.02	-	0.02	-	-
Coffee	0.76	0.20	0.56	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	0.78	0.20	0.58	-	-
ALL CROPS	3.45	2.01	1.44	-	-

TABLE 29. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN GAMBELA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	(000' HA)	
					DAP +UREA	NAT + COMM
CEREALS	0.18	0.03	0.16	-	-	-
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	0.11	0.03	0.08	-	-	-
Sorghum	0.07	-	0.07	-	-	-
Millet	-	-	-	-	-	-
Oats	-	-	-	-	-	-
PULSES	-	-	-	-	-	-
Horse Beans	-	-	-	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Other Vegetables	-	-	-	-	-	-
TOTAL TEMPORARY	0.18	0.03	0.15	-	-	-
Chat	-	-	-	-	-	-
Coffee	0.32	0.03	0.24	0.05	-	-
Enset	0.01	-	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	-	-	-	-	-	-
TOTAL PERMANENT	0.33	0.03	0.25	0.05	-	-
ALL CROPS	0.51	0.06	0.40	0.05	-	-

TABLE 30. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN GAMBELA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(000' Qt.)	
				DAP +UREA	COMM W/NAT
CEREALS	0.10	0.10	-	-	-
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	0.07	0.07	-	-	-
Sorghum	0.03	0.03	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	-	-	-	-	-
TOTAL TEMPORARY	0.10	0.10	-	-	-
Chat	-	-	-	-	-
Coffee	0.32	0.28	0.03	-	-
Enset	0.02	0.02	-	-	-
Fruits	-	-	-	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	0.34	0.30	0.03	-	-
ALL CROPS	0.44	0.40	0.03	-	-

TABLE 31. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ILUBABOR, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	(000' HA)	
					DAP +UREA	NAT + COMM
CEREALS	80.09	5.58	44.27	30.24	-	-
Teff	52.34	0.37	28.42	23.55	-	-
Barley	0.09	0.05	-	0.04	-	-
Wheat	0.07	-	0.07	-	-	-
Maize	25.26	4.94	15.59	4.74	-	-
Sorghum	2.33	0.22	0.20	1.91	-	-
Millet	-	-	-	-	-	-
Oats	-	-	-	-	-	-
PULSES	3.31	2.90	0.41	-	-	-
Horse Beans	2.17	2.16	0.01	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	1.08	0.68	0.40	-	-	-
Lentils	0.06	0.06	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	0.10	0.10	-	-	-	-
Spices	0.09	0.09	-	-	-	-
Potatoes	-	-	-	-	-	-
Other Vegetables	2.78	0.53	2.12	0.13	-	-
TOTAL TEMPORARY	86.27	9.20	46.81	30.37	-	-
Chat	1.38	0.39	0.92	0.08	-	-
Coffee	0.52	0.05	0.30	0.17	-	-
Enset	1.57	1.57	-	-	-	-
Fruits	0.28	0.22	-	0.06	-	-
Other Permanent	0.01	0.01	-	-	-	-
TOTAL PERMANENT	3.76	2.23	1.21	0.32	-	-
ALL CROPS	90.03	11.43	48.02	30.69	-	-

TABLE 32. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ILUBABOR, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(000' Qt.)	
				DAP +UREA	COMM W/NAT
CEREALS	71.92	53.61	18.31	-	-
Teff	41.75	29.02	12.73	-	-
Barley	0.01	-	0.01	-	-
Wheat	0.16	0.16	-	-	-
Maize	26.84	24.06	2.78	-	-
Sorghum	3.16	0.38	2.79	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	0.20	0.20	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	0.20	0.20	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	3.82	3.79	0.03	-	-
TOTAL TEMPORARY	75.94	57.61	18.34	-	-
Chat	0.28	-	0.28	-	-
Coffee	2.28	1.18	1.10	-	-
Enset	-	-	-	-	-
Fruits	0.04	-	0.04	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	2.60	1.18	1.42	-	-
ALL CROPS	78.54	58.79	19.76	-	-

TABLE 33. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN KEFA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	(000' HA)	
					DAP + UREA	NAT + COMM
CEREALS	0.42	0.42	-	-	-	-
Teff	-	-	-	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	0.42	0.42	-	-	-	-
Sorghum	-	-	-	-	-	-
Millet	-	-	-	-	-	-
Oats	-	-	-	-	-	-
PULSES	0.06	0.06	-	-	-	-
Horse Beans	0.06	0.06	-	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Other Vegetables	0.04	0.04	-	-	-	-
TOTAL TEMPORARY	0.52	0.52	-	-	-	-
Chat	-	-	-	-	-	-
Coffee	0.06	0.06	-	-	-	-
Enset	0.05	0.05	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	0.01	0.01	-	-	-	-
TOTAL PERMANENT	0.11	0.11	-	-	-	-
ALL CROPS	0.63	0.63	-	-	-	-

TABLE 34. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ADDIS ABABA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	('000' HA)	
					DAP + UREA	NAT + COMM
CEREALS	40.22	0.61	14.07	7.33	18.21	--
Teff	24.18	0.09	6.14	2.72	15.23	--
Barley	5.30	0.13	1.55	3.59	0.02	--
Wheat	10.54	0.29	6.30	1.00	2.95	--
Maize	0.07	0.04	0.01	0.02	0.01	--
Sorghum	0.10	0.06	0.04	--	--	--
Millet	--	--	--	--	--	--
Oats	0.02	--	0.02	--	--	--
PULSES	3.00	0.53	0.89	0.48	1.11	--
Horse Beans	1.06	0.43	0.26	0.36	--	--
Chick Peas	1.51	0.09	0.47	--	0.95	--
Haricot Bean	--	--	--	--	--	--
Field Peas	0.17	--	0.05	0.12	--	--
Lentils	0.14	--	0.10	--	0.04	--
Vetch	0.13	--	0.01	--	0.11	--
OILSEEDS	0.06	--	0.05	--	0.01	--
Neug	--	--	--	--	--	--
Linseed	0.03	--	0.03	--	--	--
Fenugreek	0.04	--	0.03	--	0.01	--
Rapeseed	--	--	--	--	--	--
Other Temporary	--	--	--	--	--	--
Spices	--	--	--	--	--	--
Potatoes	--	--	--	--	--	--
Other Vegetables	0.26	0.07	0.04	0.14	0.02	--
TOTAL TEMPORARY	43.55	1.20	15.05	7.95	19.34	--
Chat	--	--	--	--	--	--
Coffee	--	--	--	--	--	--
Enset	0.02	0.01	--	--	--	--
Fruits	--	--	--	--	--	--
Other Permanent	0.01	0.01	--	--	--	--
TOTAL PERMANENT	0.03	0.03	--	--	--	--
ALL CROPS	43.58	1.24	15.05	7.95	19.35	--

TABLE 35. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ADDIS ABABA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	('000' Qt.)	
				DAP + UREA	COMM W/NAT
CEREALS	41.62	13.06	5.65	22.92	--
Teff	28.70	6.41	2.17	20.12	--
Barley	3.75	1.04	2.67	0.03	--
Wheat	9.10	5.57	0.79	2.73	--
Maize	0.05	0.01	0.02	0.02	--
Sorghum	0.01	0.01	--	--	--
Millet	--	--	--	--	--
Oats	0.01	0.01	--	0.01	--
PULSES	1.18	0.39	0.18	0.61	--
Horse Beans	0.25	0.09	0.16	--	--
Chick Peas	0.56	0.19	--	0.37	--
Haricot Bean	--	--	--	--	--
Field Peas	0.07	0.05	0.02	--	--
Lentils	0.09	0.06	--	0.03	--
Vetch	0.22	--	--	0.22	--
OILSEEDS	0.02	0.01	--	0.01	--
Neug	--	--	--	--	--
Linseed	--	--	--	--	--
Fenugreek	0.02	0.01	--	0.01	--
Rapeseed	--	--	--	--	--
Other Temporary	--	--	--	--	--
Spices	--	--	--	--	--
Potatoes	--	--	--	--	--
Other Vegetables	0.48	0.22	0.24	0.01	--
TOTAL TEMPORARY	43.31	13.67	6.07	23.55	--
Chat	--	--	--	--	--
Coffee	--	--	--	--	--
Enset	--	--	--	--	--
Fruits	--	--	--	--	--
Other Permanent	--	--	--	--	--
TOTAL PERMANENT	--	--	--	--	--
ALL CROPS	43.31	13.67	6.07	23.55	--

TABLE 36. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN EAST SHEWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	('000' HA)	
					DAP + UREA	NAT + COMM
CEREALS	108.29	1.29	28.43	7.30	71.20	0.08
Teff	85.40	0.20	21.07	5.14	58.93	0.06
Barley	2.62	-	1.18	0.29	1.16	-
Wheat	18.91	-	5.95	1.87	11.09	-
Maize	1.36	1.09	0.23	-	0.02	0.02
Sorghum	-	-	-	-	-	-
Millet	-	-	-	-	-	-
Oats	-	-	-	-	-	-
PULSES	3.76	-	1.56	0.56	1.64	-
Horse Beans	0.07	-	-	-	0.06	-
Chick Peas	0.25	-	-	-	0.25	-
Haricot Bean	1.14	-	0.58	0.48	0.08	-
Field Peas	1.12	-	0.42	-	0.70	-
Lentils	0.95	-	0.56	0.07	0.31	-
Vetch	0.24	-	-	-	0.24	-
OILSEEDS	0.12	-	0.06	-	0.04	0.02
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	0.12	-	0.06	-	0.04	0.02
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Potatoes	0.05	-	0.04	-	-	-
Other Vegetables	0.10	0.10	-	-	-	-
TOTAL TEMPORARY	112.33	1.39	30.09	7.85	72.88	0.10
Chat	-	-	-	-	-	-
Coffee	-	-	-	-	-	-
Enset	-	-	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	0.07	0.05	-	-	-	0.01
TOTAL PERMANENT	0.07	0.05	-	-	-	0.01
ALL CROPS	112.40	1.44	30.09	7.85	72.88	0.11

TABLE 37. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN EAST SHEWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	('000' Qt.)	
				DAP + UREA	COMM W/NAT
CEREALS	117.13	19.57	3.49	94.00	0.07
Teff	91.69	12.26	1.91	77.46	0.06
Barley	1.76	0.83	0.13	0.80	-
Wheat	23.47	6.30	1.44	15.73	-
Maize	0.20	0.18	-	0.01	0.01
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	2.73	0.92	0.09	1.72	-
Horse Beans	0.09	-	0.03	0.06	-
Chick Peas	0.41	-	-	0.41	-
Haricot Bean	0.36	0.30	0.03	0.03	-
Field Peas	1.11	0.47	-	0.65	-
Lentils	0.31	0.16	0.02	0.13	-
Vetch	0.44	-	-	0.44	-
OILSEEDS	0.06	0.03	-	0.02	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	0.06	0.03	-	0.02	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	0.07	0.07	-	-	-
Other Vegetables	-	-	-	-	-
TOTAL TEMPORARY	119.97	20.60	3.56	95.74	0.07
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	-	-	-	-	-
ALL CROPS	119.97	20.60	3.56	95.74	0.07

TABLE 38. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN NORTH SHEWA, 1990/91(1983 E.C.)

CROP NAME	(000' HA)					
	TOTAL	NATURAL	DAP	UREA	DAP +UREA	NAT + COMM
CEREALS	18.86	2.41	9.82	6.63	-	-
Teff	11.15	0.79	8.92	1.44	-	-
Barley	3.93	0.17	-	3.75	-	-
Wheat	3.02	0.88	0.70	1.44	-	-
Maize	0.29	0.29	-	-	-	-
Sorghum	0.47	0.27	0.20	-	-	-
Millet	-	-	-	-	-	-
Oats	-	-	-	-	-	-
PULSES	4.08	3.97	0.11	-	-	-
Horse Beans	4.08	3.97	0.11	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Other Vegetables	0.04	0.04	-	-	-	-
TOTAL TEMPORARY	22.98	6.41	9.93	6.63	-	-
Chat	-	-	-	-	-	-
Coffee	-	-	-	-	-	-
Enset	-	-	-	-	-	-
Fruits	-	-	-	-	-	-
Other Permanent	0.04	0.04	-	-	-	-
TOTAL PERMANENT	0.04	0.04	-	-	-	-
ALL CROPS	23.02	6.45	9.94	6.63	-	-

TABLE 39. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN NORTH SHEWA, 1990/91(1983 E.C.)

CROP NAME	(000' Qt.)				
	TOTAL	DAP	UREA	DAP +UREA	COMM W/NAT
CEREALS	16.72	10.56	6.16	-	-
Teff	11.35	10.08	1.27	-	-
Barley	3.52	-	3.52	-	-
Wheat	1.79	0.42	1.37	-	-
Maize	-	-	-	-	-
Sorghum	0.05	0.05	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	0.05	0.05	-	-	-
Horse Beans	0.05	0.05	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	-	-	-	-	-
TOTAL TEMPORARY	16.76	10.60	6.16	-	-
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	-	-	-	-	-
ALL CROPS	16.76	10.60	6.16	-	-

TABLE 40. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH SHEWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	(000' HA)	
					DAP +UREA	NAT + COMM
CEREALS	162.13	20.03	89.84	50.28	0.06	1.92
Teff	62.43	0.54	31.97	29.41	-	0.51
Barley	10.67	0.19	8.56	1.92	-	-
Wheat	37.03	0.16	24.35	11.57	0.06	0.90
Maize	49.08	18.70	23.32	6.63	-	0.43
Sorghum	1.61	0.36	0.75	0.41	-	0.08
Millet	0.28	-	0.28	-	-	-
Oats	1.04	0.08	0.61	0.35	-	-
PULSES	22.44	2.56	15.82	3.40	0.10	0.56
Horse Beans	9.61	2.09	6.86	0.19	0.10	0.37
Chick Peas	0.89	0.10	0.69	0.10	-	-
Haricot Bean	0.60	0.21	0.05	0.34	-	-
Field Peas	9.03	0.15	6.57	2.13	-	0.19
Lentils	2.14	0.02	1.49	0.62	-	-
Vetch	0.17	-	0.15	0.02	-	-
OILSEEDS	0.17	0.06	0.11	-	-	-
Neug	-	-	-	-	-	-
Linseed	0.11	-	0.11	-	-	-
Fenugreek	0.06	0.06	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	0.03	0.02	0.01	-	-	-
Spices	7.00	2.03	4.68	0.29	-	-
Potatoes	3.11	0.68	2.33	-	-	0.10
Other Vegetables	5.12	4.51	0.43	0.15	-	0.04
TOTAL TEMPORARY	200.01	29.90	113.21	54.13	0.16	2.62
Chat	1.62	1.36	0.09	-	-	0.17
Coffee	5.57	4.58	0.66	0.23	0.03	0.08
Enset	16.12	15.66	0.36	0.01	-	0.08
Fruits	0.18	0.18	-	-	-	-
Other Permanent	1.26	0.98	0.24	-	-	0.04
TOTAL PERMANENT	24.75	22.76	1.35	0.25	0.03	0.37
ALL CROPS	224.75	52.66	114.57	54.36	0.19	2.98

TABLE 41. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH SHEWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(000' Qt.)	
				DAP +UREA	COMM W/NAT
CEREALS	124.96	77.67	45.46	0.03	1.80
Teff	53.33	26.72	25.80	-	0.81
Barley	10.67	8.47	2.20	-	-
Wheat	34.53	23.09	10.70	0.03	0.71
Maize	24.35	17.61	6.50	-	0.24
Sorghum	1.22	1.05	0.13	-	0.04
Millet	0.21	0.21	-	-	-
Oats	0.66	0.53	0.12	-	-
PULSES	14.82	11.78	2.81	0.01	0.22
Horse Beans	6.38	5.95	0.27	0.01	0.15
Chick Peas	0.67	0.49	0.17	-	-
Haricot Bean	0.49	0.30	0.19	-	-
Field Peas	5.67	4.15	1.45	-	0.08
Lentils	1.51	0.79	0.72	-	-
Vetch	0.11	0.10	0.01	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	10.74	10.21	0.53	-	-
Potatoes	2.27	2.20	-	-	0.07
Other Vegetables	0.69	0.60	0.05	-	0.04
TOTAL TEMPORARY	153.50	102.47	48.84	0.04	2.14
Chat	0.04	-	-	-	0.04
Coffee	2.53	2.28	0.12	0.01	0.12
Enset	0.43	0.39	-	-	0.04
Fruits	-	-	-	-	-
Other Permanent	0.69	0.56	-	-	0.13
TOTAL PERMANENT	3.69	3.23	0.12	0.01	0.33
ALL CROPS	157.19	105.70	48.96	0.05	2.47

TABLE 42. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WEST SHEWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	('000' HA)	
					DAP + UREA	NAT + COMM
CEREALS	123.75	8.47	72.89	27.62	14.78	-
Teff	74.57	0.73	52.35	12.40	9.09	-
Barley	18.94	1.63	8.49	5.13	3.69	-
Wheat	23.49	0.56	10.84	10.08	2.00	-
Maize	5.93	4.80	1.13	-	-	-
Sorghum	0.68	0.68	-	-	-	-
Millet	-	-	-	-	-	-
Oats	0.15	0.07	0.08	-	-	-
PULSES	5.68	2.35	1.43	1.84	0.06	-
Horse Beans	3.55	1.69	0.68	1.12	0.06	-
Chick Peas	0.44	0.10	0.35	-	-	-
Haricot Bean	0.37	-	0.37	-	-	-
Field Peas	1.22	0.56	-	0.66	-	-
Lentils	0.06	-	-	0.06	-	-
Vetch	0.03	-	0.03	-	-	-
OILSEEDS	0.14	0.14	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	0.14	0.14	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	0.39	0.33	0.06	-	-	-
Potatoes	0.26	0.26	-	-	-	-
Other Vegetables	2.20	1.87	0.21	-	0.13	-
TOTAL TEMPORARY	132.42	13.42	74.59	29.45	14.97	-
Chat	4.63	4.56	0.07	-	-	-
Coffee	1.41	1.41	-	-	-	-
Enset	27.87	27.85	-	-	0.02	-
Fruits	0.30	0.30	-	-	-	-
Other Permanent	2.64	2.62	0.01	-	-	-
TOTAL PERMANENT	36.85	36.74	0.08	-	0.02	-
ALL CROPS	169.27	50.16	74.67	29.45	14.99	-

TABLE 43. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WEST SHEWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	('000' Qt.)	
				DAP + UREA	COMM W/NAT
CEREALS	102.84	60.18	18.61	24.05	-
Teff	56.90	37.14	5.86	13.90	-
Barley	24.82	12.48	5.25	7.09	-
Wheat	19.42	8.86	7.50	3.07	-
Maize	1.69	1.69	-	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	0.02	0.02	-	-	-
PULSES	4.00	1.17	2.23	0.60	-
Horse Beans	2.43	0.54	1.30	0.60	-
Chick Peas	0.31	0.31	-	-	-
Haricot Bean	0.18	0.18	-	-	-
Field Peas	0.90	-	0.90	-	-
Lentils	0.03	-	0.03	-	-
Vetch	0.14	0.14	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	0.10	0.10	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	0.78	0.63	-	0.15	-
TOTAL TEMPORARY	107.72	62.09	20.84	24.81	-
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Enset	0.11	-	-	0.11	-
Fruits	-	-	-	-	-
Other Permanent	0.34	0.33	-	0.01	-
TOTAL PERMANENT	0.45	0.33	-	0.12	-
ALL CROPS	108.17	62.42	20.84	24.93	-

TABLE 44. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN BORENA, 1990/91(1983 E.C.)

CROP NAME	(000' HA)					
	TOTAL	NATURAL	DAP	UREA	DAP +UREA	NAT + COMM
CEREALS	0.41	0.35	-	0.06	-	-
Teff	-	-	-	-	-	-
Barley	0.01	0.01	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	0.41	0.35	-	0.06	-	-
Sorghum	-	-	-	-	-	-
Millet	-	-	-	-	-	-
Oats	-	-	-	-	-	-
PULSES	0.02	0.02	-	-	-	-
Horse Beans	0.02	0.02	-	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	-	-	-	-	-	-
OILSEEDS	-	-	-	-	-	-
Neug	-	-	-	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Potatoes	-	-	-	-	-	-
Other Vegetables	0.15	0.11	-	0.04	-	-
TOTAL TEMPORARY	0.59	0.49	-	0.10	-	-
Chat	0.09	0.09	-	-	-	-
Coffee	0.05	0.05	-	-	-	-
Enset	1.69	1.49	-	0.20	-	-
Fruits	-	-	-	-	-	-
Other Permanent	0.01	0.01	-	-	-	-
TOTAL PERMANENT	1.84	1.64	-	0.20	-	-
ALL CROPS	2.43	2.13	-	0.30	-	-

TABLE 45. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN BORENA, 1990/91(1983 E.C.)

CROP NAME	(000' Qt.)				
	TOTAL	DAP	UREA	DAP +UREA	COMM W/NAT
CEREALS	0.00*	-	0.00*	-	-
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	0.00*	-	0.00*	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	0.00*	-	0.00*	-	-
TOTAL TEMPORARY	0.00*	-	0.00*	-	-
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Enset	0.00*	-	0.00*	-	-
Fruits	-	-	-	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	0.00*	-	0.00*	-	-
ALL CROPS	0.00*	-	0.00*	-	-

TABLE 46. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SIDAMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	(000' HA)	
					DAP + UREA	NAT + COMM
CEREALS	63.76	13.48	47.92	2.30	0.07	--
Teff	7.22	--	5.93	1.30	--	--
Barley	7.93	7.93	--	--	--	--
Wheat	0.74	0.52	0.22	--	--	--
Maize	47.78	4.94	41.77	1.00	0.07	--
Sorghum	0.04	0.04	--	--	--	--
Millet	--	--	--	--	--	--
Oats	0.05	0.05	--	--	--	--
PULSES	3.59	1.77	1.14	0.69	--	--
Horse Beans	0.34	0.34	--	--	--	--
Chick Peas	--	--	--	--	--	--
Haricot Bean	2.07	0.25	1.14	0.69	--	--
Field Peas	1.19	1.19	--	--	--	--
Lentils	--	--	--	--	--	--
Vetch	--	--	--	--	--	--
OILSEEDS	0.01	0.01	--	--	--	--
Neug	--	--	--	--	--	--
Linseed	0.01	0.01	--	--	--	--
Fenugreek	--	--	--	--	--	--
Rapeseed	--	--	--	--	--	--
Other Temporary	--	--	--	--	--	--
Spices	0.12	0.12	--	--	--	--
Potatoes	0.14	0.14	--	--	--	--
Other Vegetables	9.81	9.17	0.48	0.16	--	--
TOTAL TEMPORARY	77.44	24.70	49.54	3.15	0.07	--
Chat	0.80	0.77	--	--	0.03	--
Coffee	3.88	1.85	1.30	0.73	--	--
Enset	57.26	56.40	0.73	0.13	--	--
Fruits	0.43	0.22	0.20	--	--	--
Other Permanent	1.33	1.29	0.04	--	--	--
TOTAL PERMANENT	63.70	60.54	2.27	0.86	0.03	--
ALL CROPS	141.14	85.24	51.80	4.00	0.10	--

TABLE 47. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SIDAMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(000' Qt.)	
				DAP + UREA	COMM W/NAT
CEREALS	27.30	26.23	1.01	0.06	--
Teff	4.40	3.77	0.63	--	--
Barley	--	--	--	--	--
Wheat	0.08	0.08	--	--	--
Maize	22.82	22.38	0.38	0.06	--
Sorghum	--	--	--	--	--
Millet	--	--	--	--	--
Oats	--	--	--	--	--
PULSES	1.34	0.58	0.76	--	--
Horse Beans	--	--	--	--	--
Chick Peas	--	--	--	--	--
Haricot Bean	1.34	0.58	0.76	--	--
Field Peas	--	--	--	--	--
Lentils	--	--	--	--	--
Vetch	--	--	--	--	--
OILSEEDS	--	--	--	--	--
Neug	--	--	--	--	--
Linseed	--	--	--	--	--
Fenugreek	--	--	--	--	--
Rapeseed	--	--	--	--	--
Other Temporary	--	--	--	--	--
Spices	--	--	--	--	--
Potatoes	--	--	--	--	--
Other Vegetables	0.54	0.47	0.07	--	--
TOTAL TEMPORARY	29.18	27.28	1.84	0.06	--
Chat	0.06	--	--	0.06	--
Coffee	2.04	1.20	0.84	--	--
Enset	0.59	0.58	0.02	--	--
Fruits	0.06	0.06	--	--	--
Other Permanent	0.02	0.02	--	--	--
TOTAL PERMANENT	2.77	1.86	0.85	0.06	--
ALL CROPS	31.95	29.14	2.69	0.12	--

TABLE 48. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ASOSA, 1990/91(1983 E.C.)

CROP NAME	(000' HA)					
	TOTAL	NATURAL	DAP	UREA	DAP +UREA	NAT + COMM
CEREALS	3.33	2.71	0.56	0.06	-	-
Teff	0.06	-	0.06	-	-	-
Barley	-	-	-	-	-	-
Wheat	-	-	-	-	-	-
Maize	2.47	2.30	0.17	-	-	-
Sorghum	0.47	0.41	0.06	-	-	-
Millet	0.33	-	0.27	0.06	-	-
Oats	-	-	-	-	-	-
PULSES	0.12	0.12	-	-	-	-
Horse Beans	0.05	0.05	-	-	-	-
Chick Peas	-	-	-	-	-	-
Haricot Bean	-	-	-	-	-	-
Field Peas	-	-	-	-	-	-
Lentils	-	-	-	-	-	-
Vetch	0.06	0.06	-	-	-	-
OILSEEDS	0.01	-	0.01	-	-	-
Neug	0.01	-	0.01	-	-	-
Linseed	-	-	-	-	-	-
Fenugreek	-	-	-	-	-	-
Rapeseed	-	-	-	-	-	-
Other Temporary	-	-	-	-	-	-
Spices	0.08	0.08	-	-	-	-
Potatoes	0.03	0.03	-	-	-	-
Other Vegetables	0.14	0.14	-	-	-	-
TOTAL TEMPORARY	3.70	3.07	0.57	0.06	-	-
Chat	-	-	-	-	-	-
Coffee	0.12	0.12	-	-	-	-
Enset	-	-	-	-	-	-
Fruits	0.01	0.01	-	-	-	-
Other Permanent	0.01	0.01	-	-	-	-
TOTAL PERMANENT	0.14	0.14	-	-	-	-
ALL CROPS	3.84	3.21	0.57	0.06	-	-

TABLE 49. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ASOSA, 1990/91(1983 E.C.)

CROP NAME	(000' Qt.)				
	TOTAL	DAP	UREA	DAP +UREA	COMM W/NAT
CEREALS	0.23	0.21	0.01	-	-
Teff	0.01	0.01	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	0.02	0.02	-	-	-
Sorghum	0.01	0.01	-	-	-
Millet	0.18	0.17	0.01	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	0.01	0.01	-	-	-
Neug	0.01	0.01	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
Other Temporary	-	-	-	-	-
Spices	-	-	-	-	-
Potatoes	-	-	-	-	-
Other Vegetables	-	-	-	-	-
TOTAL TEMPORARY	0.23	0.22	0.01	-	-
Chat	-	-	-	-	-
Coffee	-	-	-	-	-
Enset	-	-	-	-	-
Fruits	-	-	-	-	-
Other Permanent	-	-	-	-	-
TOTAL PERMANENT	-	-	-	-	-
ALL CROPS	0.23	0.22	0.01	-	-

TABLE 50. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WELEGA, 1990/91(1983 E.C.)

CROP NAME	('000' HA)					
	TOTAL	NATURAL	DAP	UREA	DAP + UREA	NAT + COMM
CEREALS	109.37	22.52	38.24	47.83	0.78	—
Teff	54.36	1.06	21.39	31.13	0.78	—
Barley	1.16	0.95	0.21	—	—	—
Wheat	0.19	0.07	0.09	0.04	—	—
Maize	34.62	18.84	7.28	8.50	—	—
Sorghum	9.76	1.51	5.36	2.89	—	—
Millet	9.27	0.10	3.90	5.27	—	—
Oats	—	—	—	—	—	—
PULSES	2.29	1.93	0.04	0.33	—	—
Horse Beans	1.23	1.19	0.04	—	—	—
Chick Peas	—	—	—	—	—	—
Haricot Bean	0.28	0.11	—	0.17	—	—
Field Peas	0.76	0.63	—	0.14	—	—
Lentils	—	—	—	—	—	—
Vetch	0.02	—	—	0.02	—	—
OILSEEDS	0.74	0.71	0.03	—	—	—
Neug	0.63	0.63	—	—	—	—
Linseed	0.03	—	0.03	—	—	—
Fenugreek	0.01	0.01	—	—	—	—
Rapeseed	0.07	0.07	—	—	—	—
Other Temporary	0.04	—	—	0.04	—	—
Spices	0.33	0.27	0.01	0.05	—	—
Potatoes	0.24	0.24	0.01	—	—	—
Other Vegetables	1.87	1.50	0.29	0.09	—	—
TOTAL TEMPORARY	114.87	27.18	38.61	48.34	0.78	—
Chat	—	—	—	—	—	—
Coffee	0.66	0.36	0.06	0.24	—	—
Enset	—	—	—	—	—	—
Fruits	0.02	0.02	—	—	—	—
Other Permanent	0.04	0.04	—	—	—	—
TOTAL PERMANENT	0.72	0.42	0.06	0.24	—	—
ALL CROPS	115.59	27.60	38.67	48.58	0.78	—

TABLE 51. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN WELEGA, 1990/91(1983 E.C.)

CROP NAME	('000' Qt.)				
	TOTAL	DAP	UREA	DAP + UREA	COMM W/NAT
CEREALS	48.87	21.91	26.53	0.43	—
Teff	33.66	13.94	19.29	0.43	—
Barley	0.14	0.14	—	—	—
Wheat	0.05	0.03	0.02	—	—
Maize	6.62	3.85	2.78	—	—
Sorghum	4.21	2.16	2.05	—	—
Millet	4.18	1.78	2.39	—	—
Oats	—	—	—	—	—
PULSES	0.14	0.03	0.12	—	—
Horse Beans	0.03	0.03	—	—	—
Chick Peas	—	—	—	—	—
Haricot Bean	0.07	—	0.07	—	—
Field Peas	0.03	—	0.03	—	—
Lentils	—	—	—	—	—
Vetch	0.01	—	0.01	—	—
OILSEEDS	0.15	0.15	—	—	—
Neug	—	—	—	—	—
Linseed	0.15	0.15	—	—	—
Fenugreek	—	—	—	—	—
Rapeseed	—	—	—	—	—
Other Temporary	0.01	—	0.01	—	—
Spices	0.02	—	0.02	—	—
Potatoes	0.01	0.01	—	—	—
Other Vegetables	0.50	0.08	0.41	—	—
TOTAL TEMPORARY	49.69	22.17	27.08	0.43	—
Chat	—	—	—	—	—
Coffee	0.18	0.12	0.05	—	—
Enset	—	—	—	—	—
Fruits	—	—	—	—	—
Other Permanent	—	—	—	—	—
TOTAL PERMANENT	0.18	0.12	0.05	—	—
ALL CROPS	49.87	22.29	27.13	0.43	—

TABLE 52. ESTIMATES OF FERTILIZER APPLIED AREA BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH WOLO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	NATURAL	DAP	UREA	(000' HA)	
					DAP +UREA	NAT + COMM
CEREALS	17.08	16.62	0.37	0.05	0.03	--
Teff	3.32	2.88	0.35	0.05	0.03	--
Barley	0.69	0.69	--	--	--	--
Wheat	0.69	0.69	--	--	--	--
Maize	2.56	2.55	0.01	--	--	--
Sorghum	9.57	9.57	--	--	--	--
Millet	--	--	--	--	--	--
Oats	0.24	0.24	--	--	--	--
PULSES	2.70	2.70	--	--	--	--
Horse Beans	2.28	2.28	--	--	--	--
Chick Peas	--	--	--	--	--	--
Haricot Bean	--	--	--	--	--	--
Field Peas	0.29	0.29	--	--	--	--
Lentils	0.13	0.13	--	--	--	--
Vetch	--	--	--	--	--	--
OILSEEDS	0.16	0.16	--	--	--	--
Neug	0.01	0.01	--	--	--	--
Linseed	0.11	0.11	--	--	--	--
Fenugreek	0.04	0.04	--	--	--	--
Rapeseed	--	--	--	--	--	--
Other Temporary	--	--	--	--	--	--
Spices	0.28	0.28	--	--	--	--
Potatoes	0.01	0.01	--	--	--	--
Other Vegetables	0.07	0.07	--	--	--	--
TOTAL TEMPORARY	20.29	19.84	0.36	0.05	0.03	--
Chat	0.18	0.18	--	--	--	--
Coffee	0.26	0.26	--	--	--	--
Enset	--	--	--	--	--	--
Fruits	--	--	--	--	--	--
Other Permanent	0.05	0.05	--	--	--	--
TOTAL PERMANENT	0.49	0.49	--	--	--	--
ALL CROPS	20.79	20.33	0.37	0.05	0.03	--

TABLE 53. ESTIMATES OF QUANTITY OF COMMERCIAL FERTILIZER APPLIED BY TYPE OF FERTILIZER FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN SOUTH WOLO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(000' Qt.)	
				DAP +UREA	COMM W/NAT
CEREALS	0.10	0.06	0.01	0.03	--
Teff	0.09	0.05	0.01	0.03	--
Barley	--	--	--	--	--
Wheat	--	--	--	--	--
Maize	0.01	0.01	--	--	--
Sorghum	--	--	--	--	--
Millet	--	--	--	--	--
Oats	--	--	--	--	--
PULSES	--	--	--	--	--
Horse Beans	--	--	--	--	--
Chick Peas	--	--	--	--	--
Haricot Bean	--	--	--	--	--
Field Peas	--	--	--	--	--
Lentils	--	--	--	--	--
Vetch	--	--	--	--	--
OILSEEDS	--	--	--	--	--
Neug	--	--	--	--	--
Linseed	--	--	--	--	--
Fenugreek	--	--	--	--	--
Rapeseed	--	--	--	--	--
Other Temporary	--	--	--	--	--
Spices	--	--	--	--	--
Potatoes	--	--	--	--	--
Other Vegetables	--	--	--	--	--
TOTAL TEMPORARY	0.10	0.06	0.01	0.03	--
Chat	--	--	--	--	--
Coffee	--	--	--	--	--
Enset	--	--	--	--	--
Fruits	--	--	--	--	--
Other Permanent	--	--	--	--	--
TOTAL PERMANENT	--	--	--	--	--
ALL CROPS	0.10	0.06	0.01	0.03	--

PART III.

Rate of Commercial Fertilizer Application and Rate of share of fertilizer to the total cultivated land by Type of Fertilizer and Crop.

It is pointed out in part II that the average rate of commercial fertilizer application at national level was about 75.09 kilogram per hectare and the rate of share to the total cultivated land was 19.50 kilogram per hectare.

However, in both cases, the rate of fertilizer consumption is very low in the country as a whole. Obviously, as discussed in other parts, it may be due to less availability of fertilizers or the peasants could not afford to buy fertilizers because of high costs.

In case of type of fertilizer, DAP was used at the rate of 72.43 kilogram per hectare whereas UREA was used at the rate of 63.20 kilogram per hectare. This shows that the most widely used and available fertilizer is DAP compared to UREA.

One can also see in Table 3 that the rate of fertilizer application is high in East Harerge compared to other regions and it is about 120 kg per hectare. On the other hand, the rate is very low in South Wolo which is about 22 Kg per hectare.

In addition, the rates of fertilizer application for each region by type of crops, actually major crops only, were also computed and presented separately in Tables 5 - 48. For detailed information of all cases refer to the tables.

TABLE 1. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ETHIOPIA, 1990/91 (1983 E.C.)

CROP NAME	FERTILIZER APPLICATION RATE (KG. /HECTARE)				
	TOTAL	DAP	UREA	DAP +UREA	NAT + COMM
CEREALS	72.76	70.33	60.67	124.43	59.51
Teff	75.28	70.65	58.03	127.63	29.79
Barley	67.27	67.62	58.15	151.33	79.90
Wheat	76.89	72.72	72.74	128.82	63.93
Maize	77.07	77.37	64.59	317.83	84.96
Sorghum	68.97	60.71	73.40	62.76	92.62
Millet	49.93	46.17	51.96	45.36	28.57
Oats	56.41	56.03	55.47	88.89	-
PULSES	63.83	57.51	79.41	100.00	54.88
Horse Beans	72.61	67.39	90.69	304.55	40.54
Chick Peas	63.98	56.61	108.33	65.67	-
Haricot Bean	57.30	45.87	80.79	37.50	84.62
Field Peas	62.18	58.72	69.20	92.86	42.11
Lentils	42.73	32.68	97.62	45.71	-
Vetch	130.56	78.79	50.00	188.57	-
OILSEEDS	49.88	34.58	130.30	60.00	29.63
Neug	100.00	100.00	-	-	-
Linseed	50.00	38.27	100.00	-	-
Fenugreek	48.39	28.00	181.82	60.00	-
Rapeseed	50.22	35.15	134.29	-	32.00
Other Temporary	213.33	2800.00	283.33	60.00	83.33
Spices	210.07	215.16	151.06	-	-
Potatoes	116.03	110.70	100.00	-	176.67
Other Vegetables	143.26	158.27	95.69	114.29	100.00
TOTAL TEMPORARY	72.50	69.76	61.27	123.83	61.09
Chat	166.10	191.78	207.79	139.16	140.55
Coffee	160.61	163.69	156.77	33.33	150.00
Enset	76.07	90.76	5.88	550.00	50.00
Fruits	92.11	23.08	241.67	-	-
Other Permanent	427.27	436.84	900.00	-	260.00
TOTAL PERMANENT	162.90	175.86	182.85	140.30	140.46
ALL CROPS	75.09	72.43	63.20	124.43	76.67

* EXCLUDING ERITREA, TIGRAY, NORTH WOLO, ASAB AND OGADEN AUTONOMOUS REGIONS.

FIG. 5 RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF PRIVATE HOLDINGS IN ETHIOPIA 1990/91 (1983 E.C.)

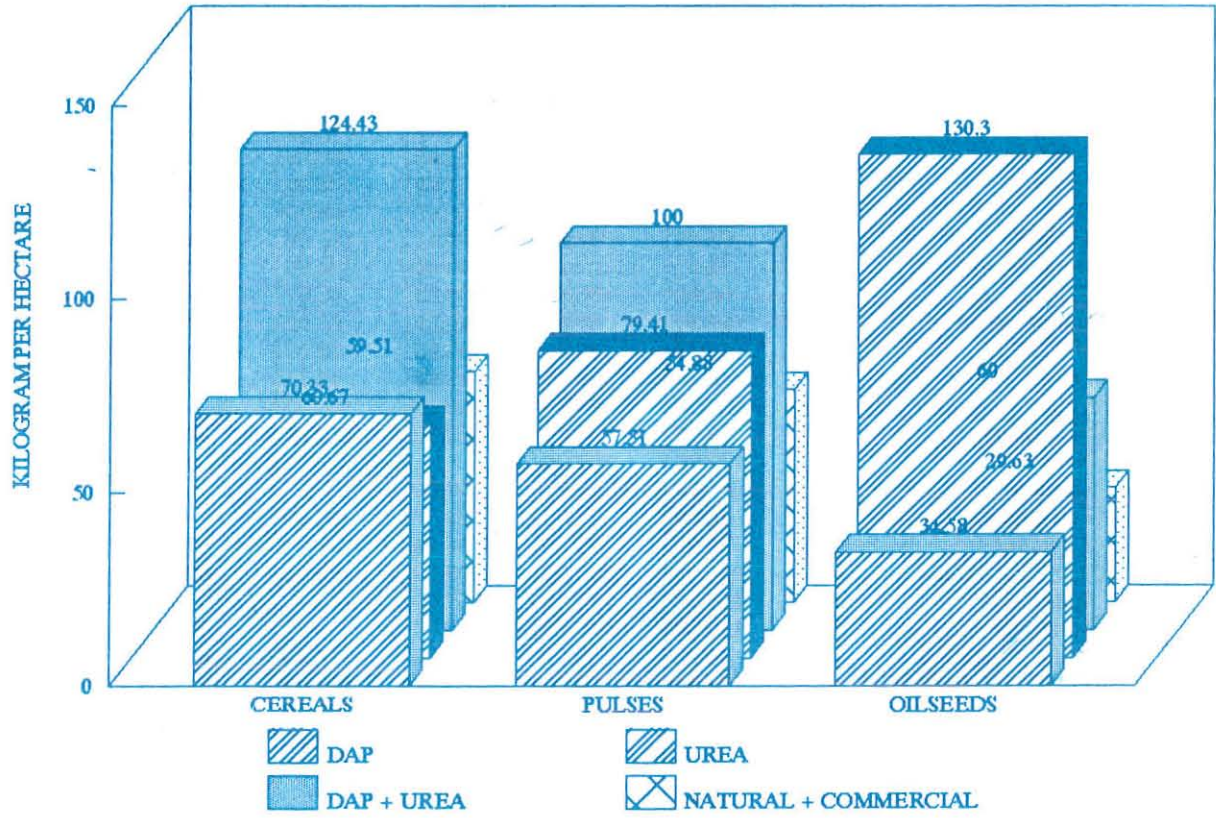


TABLE 2. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MEHER SEASON CROPS OF PRIVATE HOLDINGS IN ETHIOPIA*, 1990/91 (1983 E.C.)

CROP NAME	RATE OF SHARE (KG/HECTARE)				
	TOTAL	DAP	UREA	DAP +UREA	NAT + COMM
CEREALS	24.67	13.41	6.47	4.42	0.37
Teff	36.43	16.91	9.09	10.19	0.24
Barley	24.64	16.35	6.43	1.58	0.29
Wheat	37.53	23.78	8.56	4.78	0.40
Maize	11.51	8.59	2.11	0.45	0.35
Sorghum	7.85	2.10	3.31	1.52	0.92
Millet	21.96	6.71	14.93	0.27	0.04
Oats	13.22	10.69	2.13	0.45	-
PULSES	5.06	3.40	1.13	0.46	0.07
Horse Beans	5.17	4.05	0.78	0.28	0.06
Chick Peas	1.96	0.95	0.23	0.78	-
Haricot Bean	3.90	2.06	1.56	0.03	0.24
Field Peas	10.43	7.10	2.70	0.57	0.07
Lentils	6.23	3.78	2.07	0.40	-
Vetch	1.45	0.40	0.03	1.02	-
OILSEEDS	0.86	0.46	0.35	0.01	0.03
Neug	0.01	0.01	-	-	-
Linseed	0.80	0.50	0.31	-	-
Fenugreek	4.52	2.11	2.01	0.30	-
Rapeseed	9.67	4.97	4.02	-	0.68
Other Temporary	1.88	0.82	0.50	0.09	0.44
Spices	24.91	23.23	0.11	-	-
Potatoes	19.81	16.80	0.51	-	2.46
Other Vegetables	8.51	6.92	1.24	0.27	0.04
TOTAL TEMPORARY	20.60	11.44	5.29	3.54	0.31
Chat	39.23	11.52	9.41	8.61	9.70
Coffee	5.66	3.55	2.01	0.01	0.08
Enset	0.66	0.57	0.01	0.06	0.02
Fruits	5.38	0.92	4.45	-	-
Other Permanent	5.45	4.81	0.26	0.03	0.38
TOTAL PERMANENT	9.75	3.86	2.46	1.60	1.84
ALL CROPS	19.50	10.70	5.01	3.35	0.44

* EXCLUDING ERITREA, TIGRAY, NORTH WOLO, ASAB AND OGADEN AUTONOMOUS REGIONS.

FIG 6. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF PRIVATE HOLDINGS IN ETHIOPIA, 1990/91 (1983 E.C.)

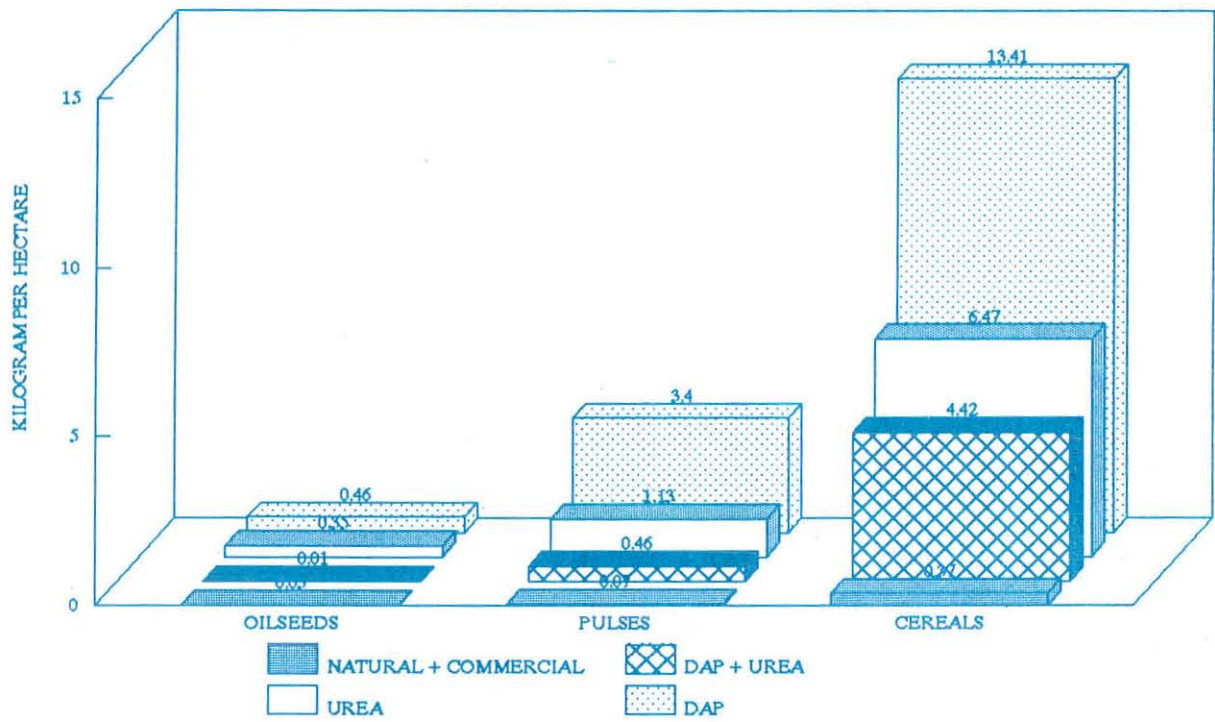


TABLE 3. RATE OF COMMERCIAL FERTILIZER APPLICATION BY
REGION FOR PRIVATE HOLDINGS IN
ETHIOPIA *, 1990/91 (1983 E.C.)

REGION	FERTILIZER APPLICATION RATE (KG. /HECTARE)				
	TOTAL	DAP	UREA	DAP +UREA	NAT + COMM
ARSI	56.90	59.00	45.52	—	—
BALE	55.54	34.97	65.73	106.36	—
NORTH OMO	68.91	66.84	83.33	200.00	—
SOUTH OMO	—	—	—	—	—
EAST GOJAM	57.93	73.45	47.20	93.48	26.16
WEST GOJAM	53.74	52.07	54.35	111.21	38.57
METEKEL	24.66	27.69	22.40	25.00	20.00
NORTH GONDER	57.92	58.22	50.29	76.00	200.00
SOUTH GONDER	51.55	44.86	27.52	73.98	28.57
DIRE DAWA	63.64	100.00	33.33	66.67	100.00
EAST HARERGE	120.29	147.04	110.03	105.49	124.65
WEST HARERGE	45.76	43.32	49.66	—	—
GAMBELA	97.78	100.00	60.00	—	—
ILUBABOR	99.78	122.43	64.39	—	—
KEFA	—	—	—	—	—
ADDIS ABABA	102.27	90.83	76.35	121.71	—
EAST SHEWA	108.15	68.46	45.35	131.37	63.64
NORTH SHEWA	101.15	106.64	92.91	—	—
SOUTH SHEWA	91.34	92.26	90.07	26.32	82.89
WEST SHEWA	90.81	83.59	70.74	166.31	—
BORENA	—	—	—	—	—
SIDAMO	57.16	56.25	67.25	120.00	—
ASOSA	36.51	38.60	16.67	—	—
WELEGA	56.65	57.64	55.85	55.13	—
SOUTH WOLO	22.22	16.22	20.00	100.00	—
TOTAL	75.09	72.43	63.19	124.43	76.67

FIG 7. RATE OF DAP AND UREA APPLICATION BY REGION
1990/91 (1983 E.C.)

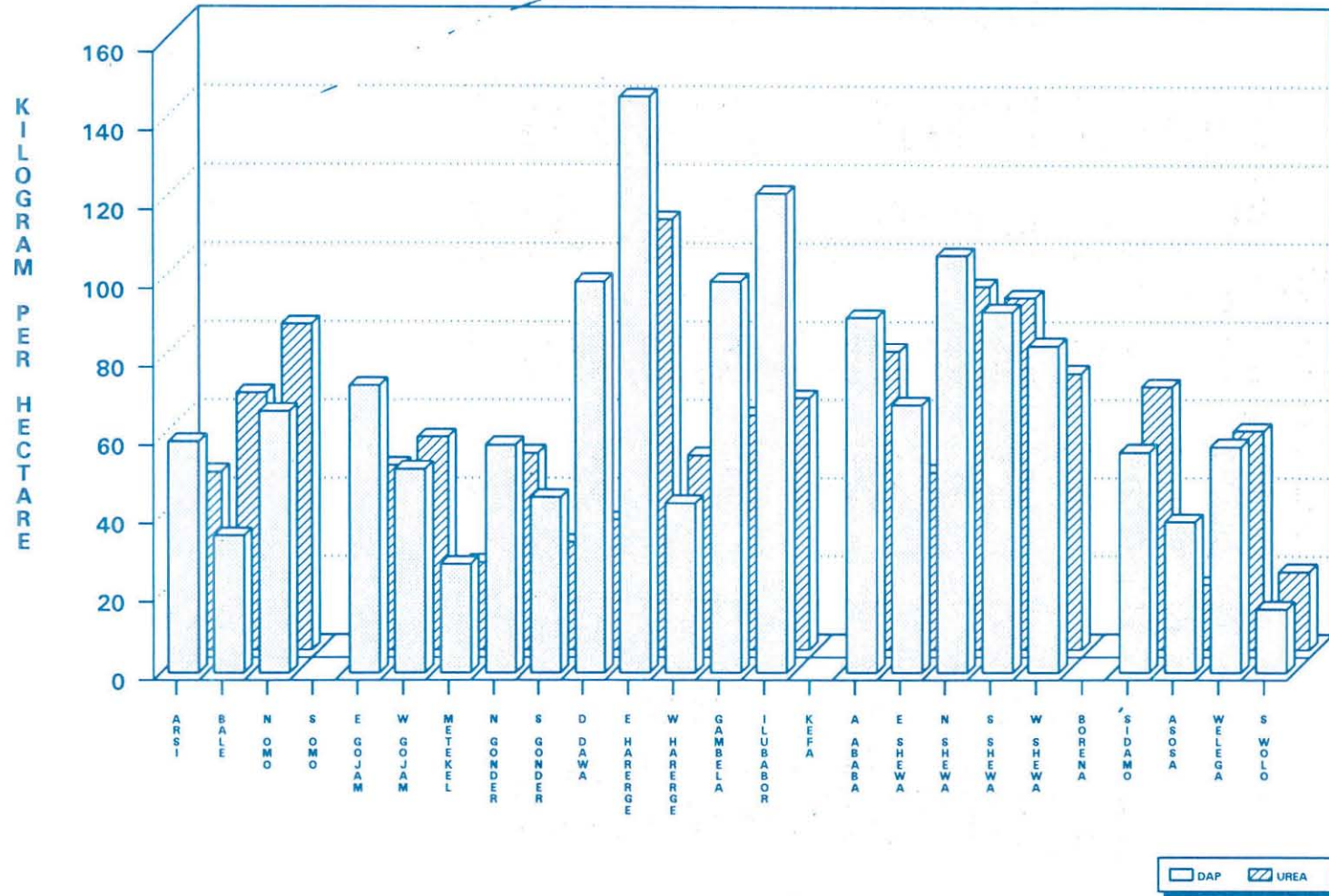


TABLE 4. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND BY REGION FOR PRIVATE HOLDINGS IN ETHIOPIA*, 1990/91 (1983 E.C.)

REGION	RATE OF SHARE (KG. /HECTARE)				
	TOTAL	DAP	UREA	DAP +UREA	NAT + COMM
ARSI	35.94	31.49	4.46	-	-
BALE	11.61	2.84	7.78	0.99	-
NORTH OMO	6.59	6.00	0.42	0.17	-
SOUTH OMO	-	-	-	-	-
EAST GOJAM	12.19	5.04	4.27	2.13	0.75
WEST GOJAM	18.42	7.34	10.78	0.25	0.05
METEKEL	3.21	1.45	1.57	0.05	0.13
NORTH GONDER	5.55	3.50	1.34	0.68	0.02
SOUTH GONDER	6.10	3.12	0.33	2.60	0.05
DIRE DAWA	2.23	0.16	0.32	0.96	0.96
EAST HARERGE	36.91	10.41	10.90	8.13	7.47
WEST HARERGE	2.20	1.28	0.92	-	-
GAMBELA	3.38	3.08	0.23	-	-
ILUBABOR	18.22	13.64	4.58	-	-
KEFA	-	-	-	-	-
ADDIS ABABA	38.55	12.17	5.40	20.96	-
EAST SHEWA	57.16	9.81	1.70	45.61	0.03
NORTH SHEWA	7.29	4.61	2.68	-	-
SOUTH SHEWA	31.43	21.14	9.79	0.01	0.49
WEST SHEWA	24.11	13.91	4.64	5.56	-
BORENA	-	-	-	-	-
SIDAMO	12.58	11.47	1.06	0.05	-
ASOSA	1.02	0.98	0.04	-	-
WELEGA	13.65	6.10	7.43	0.12	-
SOUTH WOLO	0.06	0.04	0.01	0.02	-
TOTAL	19.50	10.70	5.01	3.35	0.44

TABLE 5. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN ARSI, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	58.04	60.51	45.50	-	-
Teff	49.21	49.21	-	-	-
Barley	56.00	60.98	39.84	-	-
Wheat	62.91	63.53	58.31	-	-
Maize	25.45	25.45	-	-	-
Sorghum	10.42	10.42	-	-	-
Millet	-	-	-	-	-
Oats	55.42	57.25	37.50	-	-
PULSES	40.23	40.06	52.17	-	-
Horse Beans	45.66	46.39	10.00	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	12.88	12.88	-	-	-
Field Peas	49.49	48.55	160.00	-	-
Lentils	20.88	20.33	50.00	-	-
Vetch	14.29	14.29	-	-	-
OILSEEDS	35.82	35.82	-	-	-
Neug	-	-	-	-	-
Linseed	25.81	25.81	-	-	-
Fenugreek	50.00	50.00	-	-	-
Rapeseed	40.60	40.60	-	-	-
ALL CROPS	56.86	58.93	45.53	-	-

TABLE 6. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN ARSI, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	42.98	37.43	5.55	-	-
Teff	28.94	28.94	-	-	-
Barley	48.75	40.58	8.17	-	-
Wheat	52.92	47.10	5.82	-	-
Maize	2.84	2.84	-	-	-
Sorghum	0.57	0.57	-	-	-
Millet	-	-	-	-	-
Oats	38.29	36.23	2.17	-	-
PULSES	11.56	11.35	0.21	-	-
Horse Beans	12.15	12.15	0.04	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	1.38	1.38	-	-	-
Field Peas	19.73	19.19	0.54	-	-
Lentils	11.85	11.16	0.91	-	-
Vetch	1.90	1.90	-	-	-
OILSEEDS	2.49	2.49	-	-	-
Neug	-	-	-	-	-
Linseed	0.63	0.63	-	-	-
Fenugreek	11.11	11.11	-	-	-
Rapeseed	20.22	20.22	-	-	-
ALL CROPS	36.33	31.83	4.51	-	-

TABLE 7. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN BALE, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	56.77	36.59	65.76	106.36	-
Teff	27.27	27.27	-	-	-
Barley	51.05	29.14	61.93	158.82	-
Wheat	62.07	45.95	67.90	100.00	-
Maize	-	-	-	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	63.06	25.00	90.00	82.35	-
PULSES	33.33	25.00	100.00	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	25.00	25.00	-	-	-
Lentils	25.00	-	100.00	-	-
Vetch	-	-	-	-	-
OILSEEDS	13.56	13.56	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	14.04	14.04	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	55.65	35.07	65.78	106.36	-

TABLE 8. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN BALE, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	15.03	3.61	10.13	1.29	-
Teff	0.32	0.32	-	-	-
Barley	17.37	3.72	12.84	0.80	-
Wheat	21.41	5.70	13.42	2.32	-
Maize	-	-	-	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	8.11	1.27	5.21	1.62	-
PULSES	0.24	0.16	0.08	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	0.21	0.21	-	-	-
Lentils	0.91	-	0.91	-	-
Vetch	-	-	-	-	-
OILSEEDS	1.08	1.08	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	6.67	6.67	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	12.43	3.05	8.32	1.06	-

TABLE 9. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN NORTH OMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP +UREA	NAT+ COMM
CEREALS	69.36	66.99	86.67	200.00	-
Teff	71.34	68.11	110.29	200.00	-
Barley	38.20	46.27	13.64	-	-
Wheat	58.33	58.33	-	-	-
Maize	-	-	-	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	56.00	56.38	50.00	-	-
Horse Beans	-	-	-	-	-
Chick Peas	31.25	31.25	-	-	-
Haricot Bean	59.02	60.00	50.00	-	-
Field Peas	60.87	60.87	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	68.60	66.38	84.38	200.00	-

TABLE 10. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN NORTH OMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP +UREA	NAT+ COMM
CEREALS	11.12	10.05	0.76	0.31	-
Teff	27.78	25.08	1.89	0.81	-
Barley	1.62	1.48	0.14	-	-
Wheat	1.73	1.73	-	-	-
Maize	-	-	-	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	2.66	2.51	0.14	-	-
Horse Beans	-	-	-	-	-
Chick Peas	1.74	1.74	-	-	-
Haricot Bean	4.32	3.96	0.36	-	-
Field Peas	2.77	2.77	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	9.67	8.76	0.65	0.26	-

TABLE 11. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN EAST GOJAM, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	57.66	72.86	47.04	93.48	26.24
Teff	59.63	73.97	45.22	98.49	22.38
Barley	59.18	58.97	65.76	-	47.22
Wheat	44.00	52.88	47.92	38.10	24.54
Maize	19.05	-	19.05	-	-
Sorghum	-	-	-	-	-
Millet	33.33	-	33.33	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	233.33	-	233.33	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	233.33	-	233.33	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	57.72	72.86	47.18	93.48	26.24

TABLE 12. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN EAST GOJAM, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	16.25	6.69	5.69	2.86	1.01
Teff	25.75	11.90	7.52	5.15	1.17
Barley	6.65	0.88	4.14	-	1.62
Wheat	7.75	0.95	5.55	0.55	0.69
Maize	0.31	-	0.31	-	-
Sorghum	-	-	-	-	-
Millet	4.44	-	4.44	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	0.20	-	0.20	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	2.99	-	2.99	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	12.38	5.09	4.35	2.18	0.77

TABLE 13. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN WSET GOJAM, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	53.19	51.17	54.07	111.21	31.82
Teff	52.44	51.56	51.87	111.21	-
Barley	52.58	54.40	49.88	-	-
Wheat	44.65	38.83	48.61	-	-
Maize	64.93	62.37	69.58	-	31.82
Sorghum	-	-	-	-	-
Millet	53.30	46.95	55.60	-	-
Oats	-	-	-	-	-
PULSES	41.80	80.77	35.58	-	-
Horse Beans	29.63	-	29.63	-	-
Chick Peas	64.29	-	64.29	-	-
Haricot Bean	-	-	-	-	-
Field Peas	42.57	80.77	33.61	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	69.64	12.50	120.00	-	32.00
Neug	-	-	-	-	-
Linseed	100.00	-	100.00	-	-
Fenugreek	-	-	-	-	-
Rapeseed	64.13	12.50	134.29	-	32.00
ALL CROPS	53.17	51.11	54.13	111.21	31.88

TABLE 14. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN WEST GOJAM, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	23.11	9.22	13.53	0.32	0.03
Teff	27.21	12.70	13.82	0.69	-
Barley	8.57	5.29	3.27	-	-
Wheat	20.04	7.46	12.47	-	-
Maize	9.64	3.75	5.67	-	0.22
Sorghum	-	-	-	-	-
Millet	38.29	9.03	29.25	-	-
Oats	-	-	-	-	-
PULSES	2.06	0.55	1.51	-	-
Horse Beans	0.66	-	0.66	-	-
Chick Peas	0.78	-	0.78	-	-
Haricot Bean	-	-	-	-	-
Field Peas	9.86	3.29	6.42	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	1.53	0.08	1.30	-	0.16
Neug	-	-	-	-	-
Linseed	3.77	-	3.77	-	-
Fenugreek	-	-	-	-	-
Rapeseed	9.78	0.66	7.79	-	1.33
ALL CROPS	19.21	7.59	11.32	0.26	0.04

TABLE 15. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN METEKEL, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	24.38	28.09	22.22	25.00	20.00
Teff	21.43	16.13	24.69	-	24.00
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	34.44	42.86	41.07	25.00	13.33
Sorghum	-	-	-	-	-
Millet	24.22	32.43	18.03	-	-
Oats	15.63	15.63	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	24.38	28.09	22.22	25.00	20.00

TABLE 16. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN METEKEL, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	3.72	1.72	1.81	0.06	0.15
Teff	2.21	0.62	1.23	-	0.37
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	3.16	0.31	2.35	0.31	0.20
Sorghum	-	-	-	-	-
Millet	9.34	5.38	3.96	-	-
Oats	1.02	1.02	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	3.22	1.49	1.57	0.05	0.13

TABLE 17. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN NORTH GONDER, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	57.61	57.75	50.48	76.44	200.00
Teff	61.22	62.47	52.08	82.43	-
Barley	47.37	51.85	27.59	42.86	-
Wheat	60.00	60.00	-	-	-
Maize	125.00	100.00	-	-	200.00
Sorghum	27.97	15.79	52.17	42.11	-
Millet	53.13	54.76	33.33	-	-
Oats	-	-	-	-	-
PULSES	21.43	21.43	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	21.43	21.43	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	50.00	-	50.00	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	50.00	-	50.00	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	57.33	57.31	50.48	76.44	200.00

TABLE 18. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN NORTH GONDER, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	7.94	4.97	1.96	0.99	0.03
Teff	20.69	12.24	5.59	2.87	-
Barley	4.48	3.87	0.44	0.17	-
Wheat	1.56	1.56	-	-	-
Maize	1.26	0.76	-	-	0.51
Sorghum	0.70	0.25	0.25	0.17	-
Millet	5.40	4.87	0.42	-	-
Oats	-	-	-	-	-
PULSES	0.07	0.07	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	0.13	0.13	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	0.11	-	0.11	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	0.51	-	0.51	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	5.77	3.61	1.42	0.72	0.02

TABLE 19. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN SOUTH GONDER, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	51.48	44.86	27.52	73.76	28.57
Teff	53.85	44.64	27.21	86.73	-
Barley	47.67	37.14	-	54.90	-
Wheat	-	-	-	-	-
Maize	100.00	-	100.00	-	-
Sorghum	-	-	-	-	-
Millet	45.35	46.98	-	45.36	28.57
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	51.48	44.86	27.52	73.76	28.57

TABLE 20. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN SOUTH GONDER, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	9.11	4.68	0.49	3.88	0.07
Teff	13.56	6.59	0.94	6.02	-
Barley	4.33	1.37	-	2.96	-
Wheat	-	-	-	-	-
Maize	0.08	-	0.08	-	-
Sorghum	-	-	-	-	-
Millet	10.17	6.80	-	2.96	0.40
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	6.53	3.35	0.35	2.78	0.05

TABLE 21. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN DIRE DAWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP +UREA	NAT+ COMM
CEREALS	61.54	-	33.33	50.00	80.00
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	-	-	-	-	-
Sorghum	61.54	-	33.33	50.00	80.00
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	61.54	-	33.33	50.00	80.00

TABLE 22. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN DIRE DAWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP +UREA	NAT+ COMM
CEREALS	1.57	-	0.20	0.39	0.78
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	-	-	-	-	-
Sorghum	1.67	-	0.21	0.42	0.83
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	1.56	-	0.19	0.39	0.78

TABLE 23. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN EAST HARERGE, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	96.94	110.95	86.60	92.18	107.75
Teff	33.33	22.22	58.33	-	-
Barley	203.23	67.86	189.47	200.00	500.00
Wheat	160.29	157.62	159.47	176.47	161.54
Maize	197.78	468.42	123.43	371.96	101.47
Sorghum	71.93	71.83	72.03	63.15	93.49
Millet	-	-	-	-	-
Oats	90.00	160.00	25.00	100.00	-
PULSES	150.77	183.33	289.47	71.43	84.62
Horse Beans	-	-	-	-	-
Chick Peas	71.43	-	-	71.43	-
Haricot Bean	193.55	150.00	1166.67	-	84.62
Field Peas	140.00	175.00	131.25	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	200.00	200.00	200.00	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	200.00	200.00	200.00	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	97.79	111.53	88.98	91.96	107.02

TABLE 24. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN EAST HARERGE, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	33.44	8.93	10.87	7.88	5.76
Teff	7.43	3.43	4.00	-	-
Barley	36.52	5.51	10.43	0.58	20.29
Wheat	64.17	27.27	24.96	4.94	6.92
Maize	38.45	10.97	6.65	12.26	8.53
Sorghum	28.60	6.23	10.76	7.25	4.35
Millet	-	-	-	-	-
Oats	10.23	9.09	1.14	1.14	-
PULSES	6.60	0.74	3.70	0.67	1.48
Horse Beans	-	-	-	-	-
Chick Peas	45.45	-	-	45.45	-
Haricot Bean	8.97	0.45	5.23	-	3.29
Field Peas	10.45	2.61	7.84	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	11.92	3.97	7.95	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	14.17	4.72	9.45	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	30.84	8.15	10.21	7.16	5.32

TABLE 25. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN WEST HARERGE, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	42.22	47.00	34.82	-	-
Teff	34.13	24.71	53.66	-	-
Barley	50.00	50.00	-	-	-
Wheat	112.50	117.39	-	-	-
Maize	49.84	41.22	77.63	-	-
Sorghum	3.94	-	3.94	-	-
Millet	-	-	-	-	-
Oats	25.00	25.00	-	-	-
PULSES	22.22	22.22	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	41.94	46.43	34.82	-	-

TABLE 26. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN WEST HARERGE, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	2.62	1.77	0.85	-	-
Teff	2.81	1.37	1.44	-	-
Barley	0.40	0.40	-	-	-
Wheat	14.52	14.52	-	-	-
Maize	5.08	3.21	1.87	-	-
Sorghum	0.12	-	0.12	-	-
Millet	-	-	-	-	-
Oats	0.31	0.31	-	-	-
PULSES	0.09	0.09	-	-	-
Horse Beans	0.43	0.43	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	2.14	1.45	0.69	-	-

TABLE 27. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN GAMBELA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	62.50	62.50	-	-	-
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	87.50	87.50	-	-	-
Sorghum	42.86	42.86	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	62.50	62.50	-	-	-

TABLE 28. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN GAMBELA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	1.18	1.18	-	-	-
Teff	-	-	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	1.02	1.02	-	-	-
Sorghum	3.03	3.03	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	1.14	1.14	-	-	-

TABLE 29. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN ILUBABOR, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	96.52	121.10	60.55	-	-
Teff	80.33	102.11	54.06	-	-
Barley	25.00	-	25.00	-	-
Wheat	228.57	228.57	-	-	-
Maize	132.02	154.33	58.65	-	-
Sorghum	149.76	190.00	146.07	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	48.78	48.78	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	50.00	50.00	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	96.26	120.43	60.55	-	-

TABLE 30. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN ILUBABOR, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	21.16	15.77	5.39	-	-
Teff	39.03	27.13	11.90	-	-
Barley	0.06	-	0.06	-	-
Wheat	1.40	1.40	-	-	-
Maize	18.44	16.53	1.91	-	-
Sorghum	6.01	0.72	5.30	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	0.60	0.60	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	1.43	1.43	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	19.10	14.25	4.85	-	-

TABLE 31. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN ADDIS ABABA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	105.07	92.82	77.08	125.86	—
Teff	119.14	104.40	79.78	132.11	—
Barley	72.67	67.10	74.37	150.00	—
Wheat	88.78	88.41	79.00	92.54	—
Maize	125.00	100.00	100.00	200.00	—
Sorghum	25.00	25.00	—	—	—
Millet	—	—	—	—	—
Oats	50.00	50.00	—	—	—
PULSES	47.58	43.82	37.50	54.95	—
Horse Beans	40.32	34.62	44.44	—	—
Chick Peas	39.44	40.43	—	38.95	—
Haricot Bean	—	—	—	—	—
Field Peas	41.18	100.00	16.67	—	—
Lentils	64.29	60.00	—	75.00	—
Vetch	183.33	—	—	200.00	—
OILSEEDS	33.33	20.00	—	100.00	—
Neug	—	—	—	—	—
Linseed	—	—	—	—	—
Fenugreek	50.00	33.33	—	100.00	—
Rapeseed	—	—	—	—	—
ALL CROPS	101.59	89.67	74.65	121.78	—

TABLE 32. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN ADDIS ABABA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	49.47	15.52	6.71	27.24	—
Teff	78.05	17.43	5.90	54.72	—
Barley	14.60	4.05	10.40	0.12	—
Wheat	45.07	27.59	3.91	13.52	—
Maize	5.75	1.15	2.30	2.30	—
Sorghum	1.92	1.92	—	—	—
Millet	—	—	—	—	—
Oats	9.09	9.09	—	9.09	—
PULSES	4.58	1.51	0.70	2.37	—
Horse Beans	3.43	1.23	2.19	—	—
Chick Peas	6.54	2.22	—	4.32	—
Haricot Bean	—	—	—	—	—
Field Peas	4.67	3.33	1.33	—	—
Lentils	1.53	1.02	—	0.51	—
Vetch	9.05	—	—	9.05	—
OILSEEDS	1.26	0.63	—	0.63	—
Neug	—	—	—	—	—
Linseed	—	—	—	—	—
Fenugreek	10.53	5.26	—	5.26	—
Rapeseed	—	—	—	—	—
ALL CROPS	38.40	12.07	5.23	21.11	—

TABLE 33. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN EAST SHEWA, 1990/91(1983 E.C.)

CROP NAME	(Kg/Hectare)				
	TOTAL	DAP	UREA	DAP + UREA	NAT+ COMM
CEREALS	109.46	68.84	47.81	132.02	87.50
Teff	107.62	58.19	37.16	131.44	100.00
Barley	66.92	70.34	44.83	68.97	-
Wheat	124.11	105.88	77.01	141.84	-
Maize	74.07	78.26	-	50.00	50.00
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	72.61	58.97	16.07	104.88	-
Horse Beans	150.00	-	-	100.00	-
Chick Peas	164.00	-	-	164.00	-
Haricot Bean	31.58	51.72	6.25	37.50	-
Field Peas	99.11	111.90	-	92.86	-
Lentils	32.98	28.57	28.57	41.94	-
Vetch	183.33	-	-	183.33	-
OILSEEDS	50.00	50.00	-	50.00	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	50.00	50.00	-	50.00	-
Rapeseed	-	-	-	-	-
ALL CROPS	108.14	68.29	45.55	131.37	70.00

TABLE 34. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN EAST SHEWA, 1990/91(1983 E.C.)

CROP NAME	(Kg/Hectare)				
	TOTAL	DAP	UREA	DAP + UREA	NAT+ COMM
CEREALS	72.74	12.15	2.17	58.37	0.04
Teff	91.43	12.23	1.90	77.24	0.06
Barley	21.67	10.22	1.60	9.85	-
Wheat	90.76	24.36	5.57	60.83	-
Maize	0.79	0.71	-	0.04	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	5.73	1.93	0.19	3.61	-
Horse Beans	1.83	-	0.61	1.22	-
Chick Peas	4.73	-	-	4.73	-
Haricot Bean	2.20	1.83	0.18	0.18	-
Field Peas	12.74	5.40	-	7.46	-
Lentils	8.56	4.42	0.55	3.59	-
Vetch	8.27	-	-	8.27	-
OILSEEDS	12.00	6.00	-	4.00	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	16.67	8.33	-	5.56	-
Rapeseed	-	-	-	-	-
ALL CROPS	57.34	9.81	1.71	45.78	0.03

TABLE 35. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN NORTH SHEWA, 1990/91(1983 E.C.)

CROPNAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	101.64	107.54	92.91	-	-
Teff	109.56	113.00	88.19	-	-
Barley	93.87	-	93.87	-	-
Wheat	83.64	60.00	95.14	-	-
Maize	-	-	-	-	-
Sorghum	25.00	25.00	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	45.45	45.45	-	-	-
Horse Beans	45.45	45.45	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	101.27	106.85	92.91	-	-

TABLE 36. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN NORTH SHEWA, 1990/91(1983 E.C.)

CROPNAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	11.50	7.26	4.24	-	-
Teff	32.10	28.51	3.59	-	-
Barley	9.41	-	9.41	-	-
Wheat	3.11	0.73	2.38	-	-
Maize	-	-	-	-	-
Sorghum	0.41	0.41	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	0.07	0.07	-	-	-
Horse Beans	0.10	0.10	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	7.37	4.66	2.71	-	-

TABLE 37. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN SOUTH SHEWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg/Hectare)	
				DAP +UREA	NAT+ COMM
CEREALS	87.94	86.45	90.41	50.00	93.75
Teff	86.17	83.58	87.73	-	158.82
Barley	101.81	98.95	114.58	-	-
Wheat	93.63	94.83	92.48	50.00	78.89
Maize	80.15	75.51	98.04	-	55.81
Sorghum	98.39	140.00	31.71	-	50.00
Millet	75.00	75.00	-	-	-
Oats	68.75	86.89	34.29	-	-
PULSES	74.55	74.46	82.65	10.00	39.29
Horse Beans	84.84	86.73	142.11	10.00	40.54
Chick Peas	84.81	71.01	170.00	-	-
Haricot Bean	125.64	600.00	55.88	-	-
Field Peas	63.78	63.17	68.08	-	42.11
Lentils	71.56	53.02	116.13	-	-
Vetch	64.71	66.67	50.00	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	86.24	84.57	89.92	25.00	81.45

TABLE 38. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN SOUTH SHEWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP +UREA	NAT+ COMM
CEREALS	32.38	20.13	11.78	0.01	0.47
Teff	58.86	29.49	28.47	-	0.89
Barley	71.61	56.85	14.77	-	-
Wheat	65.13	43.55	20.18	0.06	1.34
Maize	12.32	8.91	3.29	-	0.12
Sorghum	4.54	3.90	0.48	-	0.15
Millet	21.21	21.21	-	-	-
Oats	34.74	27.89	6.32	-	-
PULSES	30.20	24.00	5.73	0.02	0.45
Horse Beans	44.27	41.29	1.87	0.07	1.04
Chick Peas	11.92	8.72	3.02	-	-
Haricot Bean	3.65	2.24	1.42	-	-
Field Peas	50.53	36.99	12.92	-	0.71
Lentils	39.53	20.68	18.85	-	-
Vetch	18.64	16.95	1.69	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	32.04	20.50	11.06	0.01	0.46

TABLE 39. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN WEST SHEWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	89.20	82.56	67.38	162.72	—
Teff	77.06	70.95	47.26	152.92	—
Barley	143.39	147.00	102.34	192.14	—
Wheat	84.73	81.73	74.40	153.50	—
Maize	149.56	149.56	—	—	—
Sorghum	—	—	—	—	—
Millet	—	—	—	—	—
Oats	25.00	25.00	—	—	—
PULSES	120.12	81.82	121.20	1000.00	—
Horse Beans	130.65	79.41	116.07	1000.00	—
Chick Peas	88.57	88.57	—	—	—
Haricot Bean	48.65	48.65	—	—	—
Field Peas	136.36	—	136.36	—	—
Lentils	50.00	—	50.00	—	—
Vetch	466.67	466.67	—	—	—
OILSEEDS	—	—	—	—	—
Neug	—	—	—	—	—
Linseed	—	—	—	—	—
Fenugreek	—	—	—	—	—
Rapeseed	—	—	—	—	—
ALL CROPS	90.07	82.55	70.74	166.11	—

TABLE 40. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN WEST SHEWA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	33.59	19.66	6.08	7.86	—
Teff	37.00	24.15	3.81	9.04	—
Barley	56.40	28.36	11.93	16.11	—
Wheat	49.07	22.39	18.95	7.76	—
Maize	3.68	3.68	—	—	—
Sorghum	—	—	—	—	—
Millet	—	—	—	—	—
Oats	2.00	2.00	—	—	—
PULSES	8.01	2.34	4.46	1.20	—
Horse Beans	14.24	3.17	7.62	3.52	—
Chick Peas	1.66	1.66	—	—	—
Haricot Bean	39.13	39.13	—	—	—
Field Peas	55.56	—	55.56	—	—
Lentils	1.38	—	1.38	—	—
Vetch	1.41	1.41	—	—	—
OILSEEDS	—	—	—	—	—
Neug	—	—	—	—	—
Linseed	—	—	—	—	—
Fenugreek	—	—	—	—	—
Rapeseed	—	—	—	—	—
ALL CROPS	26.92	15.46	5.25	6.21	—

TABLE 41. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN SIDAMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	54.29	54.74	43.91	85.71	-
Teff	60.86	63.58	48.46	-	-
Barley	-	-	-	-	-
Wheat	36.36	36.36	-	-	-
Maize	53.27	53.58	38.00	85.71	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	73.22	50.88	110.14	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	73.22	50.88	110.14	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	54.95	54.65	59.20	85.71	-

TABLE 42. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN SIDAMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	28.25	27.14	1.05	0.06	-
Teff	24.55	21.04	3.52	-	-
Barley	-	-	-	-	-
Wheat	2.31	2.31	-	-	-
Maize	38.52	37.78	0.64	0.10	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	10.28	4.45	5.83	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	17.54	7.59	9.95	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	26.10	24.43	1.61	0.05	-

TABLE 41. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN SIDAMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	54.29	54.74	43.91	85.71	-
Teff	60.86	63.58	48.46	-	-
Barley	-	-	-	-	-
Wheat	36.36	36.36	-	-	-
Maize	53.27	53.58	38.00	85.71	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	73.22	50.88	110.14	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	73.22	50.88	110.14	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	54.95	54.65	59.20	85.71	-

TABLE 42. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN SIDAMO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	28.25	27.14	1.05	0.06	-
Teff	24.55	21.04	3.52	-	-
Barley	-	-	-	-	-
Wheat	2.31	2.31	-	-	-
Maize	38.52	37.78	0.64	0.10	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	10.28	4.45	5.83	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	17.54	7.59	9.95	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	26.10	24.43	1.61	0.05	-

TABLE 43. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN ASOSA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	37.10	37.50	16.67	-	-
Teff	16.67	16.67	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	11.76	11.76	-	-	-
Sorghum	16.67	16.67	-	-	-
Millet	54.55	62.96	16.67	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	100.00	100.00	-	-	-
Neug	100.00	100.00	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	38.10	38.60	16.67	-	-

TABLE 44. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN ASOSA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	1.34	1.23	0.06	-	-
Teff	0.30	0.30	-	-	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	0.31	0.31	-	-	-
Sorghum	0.27	0.27	-	-	-
Millet	5.23	4.94	0.29	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	1.41	1.41	-	-	-
Neug	1.49	1.49	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	1.33	1.22	0.06	-	-

TABLE 45. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN WELEGA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	56.27	57.30	55.47	55.13	-
Teff	63.15	65.17	61.97	55.13	-
Barley	66.67	66.67	-	-	-
Wheat	38.46	33.33	50.00	-	-
Maize	41.95	52.88	32.71	-	-
Sorghum	51.03	40.30	70.93	-	-
Millet	45.58	45.64	45.35	-	-
Oats	-	-	-	-	-
PULSES	37.84	75.00	36.36	-	-
Horse Beans	75.00	75.00	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	41.18	-	41.18	-	-
Field Peas	21.43	-	21.43	-	-
Lentils	-	-	-	-	-
Vetch	50.00	-	50.00	-	-
OILSEEDS	500.00	500.00	-	-	-
Neug	-	-	-	-	-
Linseed	500.00	500.00	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	56.34	57.66	55.34	55.13	-

TABLE 46. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN WELEGA, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	17.62	7.90	9.57	0.16	-
Teff	38.86	16.10	22.27	0.50	-
Barley	1.12	1.12	-	-	-
Wheat	1.85	1.11	0.74	-	-
Maize	5.81	3.38	2.44	-	-
Sorghum	12.54	6.43	6.11	-	-
Millet	14.99	6.38	8.57	-	-
Oats	-	-	-	-	-
PULSES	0.47	0.10	0.40	-	-
Horse Beans	0.27	0.27	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	1.19	-	1.19	-	-
Field Peas	0.28	-	0.28	-	-
Lentils	-	-	-	-	-
Vetch	11.11	-	11.11	-	-
OILSEEDS	0.62	0.62	-	-	-
Neug	-	-	-	-	-
Linseed	15.63	15.63	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	14.84	6.67	8.04	0.13	-

TABLE 47. RATE OF COMMERCIAL FERTILIZER APPLICATION FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HOLDINGS IN SOUTH WOLO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	22.22	16.22	20.00	100.00	-
Teff	20.93	14.29	20.00	100.00	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	100.00	100.00	-	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	22.22	16.22	20.00	100.00	-

TABLE 48. RATE OF SHARE OF COMMERCIAL FERTILIZER TO THE TOTAL CULTIVATED LAND FOR MAJOR CROPS OF MEHER SEASON, PRIVATE HLDINGS IN SOUTH WOLO, 1990/91(1983 E.C.)

CROP NAME	TOTAL	DAP	UREA	(Kg./Hectare)	
				DAP + UREA	NAT+ COMM
CEREALS	0.08	0.05	0.01	0.02	-
Teff	0.23	0.13	0.03	0.08	-
Barley	-	-	-	-	-
Wheat	-	-	-	-	-
Maize	0.04	0.04	-	-	-
Sorghum	-	-	-	-	-
Millet	-	-	-	-	-
Oats	-	-	-	-	-
PULSES	-	-	-	-	-
Horse Beans	-	-	-	-	-
Chick Peas	-	-	-	-	-
Haricot Bean	-	-	-	-	-
Field Peas	-	-	-	-	-
Lentils	-	-	-	-	-
Vetch	-	-	-	-	-
OILSEEDS	-	-	-	-	-
Neug	-	-	-	-	-
Linseed	-	-	-	-	-
Fenugreek	-	-	-	-	-
Rapeseed	-	-	-	-	-
ALL CROPS	0.07	0.04	0.01	0.02	-

