

PEOPLES' DEMOCRATIC REPUBLIC
OF ETHIOPIA

CENTRAL STATISTICAL AUTHORITY

CROP PRODUCTION FORECAST
1990/91 (1983 E.C)
RESULTS OF
AREA AND PRODUCTION
OF MAJOR CROPS

(PRIVATE PEASANT HOLDINGS MEHER SEASON)

ADDIS ABABA , DEC. 1990

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ADDIS ABABA , DEC. 1990

C O N T E N T S

	<u>PAGE</u>
Introduction.....	1-2
Methodology of the Forecast.....	3-5
Results of the Forecast on Area and Production 1990/91 (1983 E.C.) at national, administrative and autonomous regions.....	6-35
References.....	36

1. Introduction

- 1.1 This is the basic crop production forecast for 1990/91. It is based on three major factors the actual area under crops (measured objectively after sowing in September 1990), last year's (1989/90) crop yield obtained from crop cutting survey and the so called condition factor. Unlike the other years the condition factor compares the yield of this year to that of last year. All specific conditions (weather and pest damage) affecting the growing crops during the current season have been taken into account in this condition factor.
- 1.2 The calculation of the forecast has been performed for all major and minor temporary crops for which objective area measurements were conducted. Only the Meher season area and production forecast are available in this publication. The results of the forecast are related to the national as well as the administrative and autonomous regions (excluding Eritrea, Tigray, Assab and Ogaden autonomous regions). The crop production forecast for Cooperatives and State Farms are not included. In North Wollo the survey was not conducted but the forecast estimates are presented in this publication using a different method of estimation.

To correct the last year's yield by condition factor the following specific factors were taken into account.

- A. Reason for expected decrease
- Too much rainfall
 - Shortage of rainfall
 - Insect and pest damage
 - Hail and frost damage
 - Wild animal and locust damage
 - Shortage of seed
 - Depletion of the soil
- B. Reason for expected increase
- Good weather conditions
 - Improved seed
 - Application of fertilizers
 - " " Insecticides

This information was collected subjectively by interviewing 17700 households. The expected increase or decrease of yield was reported in percent as compared to last years yield.

1.3 One should take a few limitations into account for obtaining good accuracy in the results of this forecast. The forecast has been calculated for private peasant holdings only, from sampled 708 Farmers Associations (FAs).

The results of this forecast should be interpreted with great care. Even though the magnitude of the change is expressed in percentage, it should not be taken as an indicator of true change, but rather as an indicator of the general trend of change.

In addition the users of this reports should know that the information on what is called condition factors was collected in the month of September 1990. During that period the response of the farmers varies according to circumstances preceeding that period in an area. There fore, the results should be used with great caution in light of the favourable or adverse condition of weather and rainfall which has ocured since then on crops. The effects of which are not examined in this report.

Attempts have also been made to present the results by administrative regions. However, only results for the national level should be considered as reliable, because of the rather small sample size allotted to each particular administrative region.

2. Methodology of the forecast

The methodology used for 1990/91 crop production forecast was the same as in the previous years.

The objectively measured area under crops in all holdings in the selected agricultural household is used for estimating crop area at the Farmers Association (FA) level. This production forecast is based on objective statistical data on area and yield at FA level and partly on the subjective crop condition factor.

2.1 Area under the specific main crops

The average area per sampled household $XB(h_i)$ in each selected FA from the h -th Awraja is the sum of all areas of fields under a specific crop in the sampled households in the i -th FA of the h -th awraja.

$$XB(h_i) = E_{J=1}^{m(h_i)} EX(hijk)/m(h_i) \quad (1)$$

where:

$X(hijk)$ = the area under a specific crop measured objectively for k -th field of the j -th household in the i -th FA of the h -th awraja.

$m(h_i)$ = the number of sampled households in the i -th FA of the h -th Awraja

The estimate of the total area under the specific crop at the FA level $XH(h_i)$ is defined as:

$$XH(h_i) = M(h_i) \cdot XB(h_i) \quad (2)$$

where:

$M(h_i)$ = the total no. of agricultural households the i -th FA of the h -th awraja.

The estimate of the total area under a specific crop at the awraja level $XH(h)$ is defined as:

$$XH(h) = 1/n(h) \sum_{i=1}^{n(h)} XH(h_i) / p(h_i) \quad (3)$$

where:

$p(h)$ = the probability of selecting the i -th FA from the h -th awraja.

$n(h)$ = the number of sampled FAs in the h -th awraja.

The final estimate of total area under the specific crop at the regional level XHr ("r" stands for region) is defined as:

$$XHr = \sum_h XH(h) \tag{4}$$

2.2 Crop condition factor

The crop condition factor at the FA level is defined as the average of the crop condition factors at the holding level, derived from the reported assessment of the general growing conditions of the specific crop in each sampled household during the growing season until the date of interview of the holder.

The crop condition factors at the holding level are expressed and reported subjectively by the holders as percentage of "last year yield" expected by the holders in the current harvest (e.g. 82% or 110% or 50% etc. of last year's yield).

Let C(hij) denote the crop condition factor figures reported for the current growing season by the holders from the j-th household in the i-th FA of the h-th awraja.

Then the average crop condition factor at the FA level is defined as:

$$CB(hi) = \frac{1}{n(hi)} \sum_j C(hij) \tag{5}$$

where:

n(hi) = the actual number of individuals reporting a condition factor for the specific crop in the i-th FA of the h-th Awraja.

2.3 The total crop production forecast

The final forecast of the total production of a specific crop is made at the FA level and then aggregated at the awraja and regional levels.

At the FA level, the forecast of the total production of a specific crop is defined as:

$$QH (hi) = XH (hi), YB (hi) \cdot (CB (hi)/100) \quad (6)$$

where:

XH (hi) = the estimate of total area (measured objectively) under a specific crop in the i-th FA of the h-th awraja.

YB (hi) = last year's yield of a specific crop obtained from crop cutting in the i-th FA of the h-th awraja.

CB (hi) = the average crop condition factor for the i-th FA of the h-th awraja.

The forecast of the total production of a specific crop at the awraja level is defined as:

$$QH (h) = \frac{1}{n(h)} \sum_{i=1}^{n(h)} QH(hi) / p(hi) \quad (7)$$

where:

n(h) = the number of sampled FAs in the h-th awraja.

p(hi) = the probability of selecting the i-th FA from the h-th awraja.

Finally the forecast of the total production of a specific crop QHr at the regional level ("r" stands for region) is defined as:

$$QHr = \sum_h QH (h) \quad (8)$$

3. Results of the Forecast

National, 25 administrative and one autonomous region results of area and production forecast by crop are presented in Tables 1-29.

Crop production forecast in 1990/91 and comparison with 1989/90.

Using the methodology and formula described in section 2, it was possible to estimate the crop area and production forecast of major crops by region and crop. The results of area and production at National level excluding Eritrea, Tigray, Asseb and Ogaden autonomous regions is summarized in Tables 1 and 2.

The total production of major crops for the country is expected to increase by 1% compared to 1989/90. This change amounts to 628 thousand quintals. The highest increase is expected for Teff which amounts to about 2748 thousand quintals (28%) compared to last year. The other crops for which high production increase is expected are Horse beans about 553 thousand quintals (21%) Field pea about 440 thousand quintals (48%) and Haricot bean about 379 thousand quintals (58%) .

On the other hand, significant reduction in production were observed for Sorghum about 3472 quintals (-38%) and for Maize about 979 thousand quintals (-6%).

Area under major crops for the country is expected to increase by 334 thousand hectares i.e. 7% compared to last year. Highly significant increases in area cultivated are reported for Teff about 173 thousand hectares (15%), Maize about 124 thousand hectares (15%) and Field pea 61 thousand hectares (79%) compared to 1989/90. However, significant area reductions were observed for sorghum about 207 thousand hectares (-30%).

Forecast of yield of major crops was calculated and these results for the country are presented in Table 3. The decrease in over all yield of major crops is (-5.96%). For cereal crops it ranges from 19% for Maize to 2% for Wheat.

Table 1

Forecast 1990/91 and Estimates 1989/90 of Area and Production
in Ethiopia* Private holding Meher Season

Region	Total area (000' hectare)			Total Production (000' quintal)		
	Estimate 1989/90	Forecast 1990/91	% Change	Estimate 1989/90	Forecast 1990/91	% Change
Arssi	395.14	507.46	28.42	6684.66	7349.20	9.94
Bale	94.94	124.09	30.71	1342.01	1790.06	33.39
North Omo	146.81	163.08	11.08	1588.23	1462.36	-7.92
South Omo	11.67	9.83	-15.78	136.90	117.38	-14.26
East Gojam	304.99	399.20	30.89	3315.64	5241.26	58.08
West Gojam	396.79	438.09	10.41	4025.66	4984.07	23.81
Metekel	64.18	82.49	28.53	646.91	587.58	-9.17
North Gonder	172.12	195.81	13.76	1554.74	1488.96	-4.23
South Gonder	216.55	111.61	-48.46	1732.80	587.65	-66.09
Dire dawa	3.49	4.57	30.88	38.44	4.04	-89.48
East Hararghe	132.89	191.43	44.05	1915.95	2294.88	19.78
West Hararghe	115.75	127.67	10.30	1862.26	1600.30	-14.07
Gambella	8.61	8.22	-4.53	99.37	134.51	35.36
Illubabor	290.74	343.52	18.16	4511.38	4499.44	-.26
Keffa	82.36	76.19	-7.49	1564.98	1052.00	-32.78
Addis Ababa	138.65	124.01	-10.56	1371.84	1347.00	-1.81
East Shoa	187.28	207.16	10.62	2156.95	2187.44	1.41
North Shoa	369.80	251.81	-31.91	3714.93	2481.54	-33.20
South Shoa	395.06	418.18	5.85	5570.16	5599.77	0.53
West Shoa	311.25	405.66	30.33	4066.08	4204.86	3.41
Borena	21.99	19.36	-11.97	275.64	267.46	-2.97
Sidamo	112.58	100.63	-10.61	1989.55	1295.71	-34.87
Assosa	35.04	19.06	-45.60	584.48	316.39	-45.87
Wellega	265.02	337.65	27.41	3077.26	3817.06	24.04
North Wollo	90.25	60.87	-32.55	1412.68	731.33	-48.23
South Wollo	199.49	169.64	-14.96	2225.54	2550.41	14.60
Total	4563.44	4897.30	7.32	57465.04	57992.66	0.92

* excluding Eritrea, Tigray, Assab and Ogaden autonomous regions.

Table 2

Forecast 1990/91 and Estimates of 1989/90 Area and Production
in Ethiopia* Private holding Meher Season

CROPS	Total area(000' ha)			Total Production(000'qt.)		
	Estimate	Forecast	%	Estimate	Forecast	%
	1989/90	1990/91	Change	1989/90	1990/91	Change
Cereals	3816.03	3985.59	4.44	50704.87	49817.30	-1.75
Teff	1131.24	1304.54	15.32	9815.07	12563.07	28.00
Barley	538.92	578.88	7.41	7544.95	8318.73	10.26
Wheat	477.61	493.06	3.23	6229.39	6333.29	1.67
Maize	812.28	936.27	15.26	16086.32	15107.74	-6.08
Sorghum	680.77	474.21	-30.34	9186.05	5714.11	-37.80
Millet	149.48	163.02	9.06	1479.53	1326.31	-10.36
Oats	25.44	35.61	39.98	363.56	454.06	24.89
Pulses	547.48	681.19	24.42	5834.47	7354.52	26.05
Horse beans	211.78	258.62	22.12	2676.88	3229.57	20.65
Field peas	77.59	138.71	78.78	915.93	1356.25	48.07
Haricot bean	70.32	106.78	51.85	655.70	1034.44	57.76
Chick Peas	109.55	90.45	-17.44	939.52	900.35	-4.17
Lentil	34.22	39.82	16.35	260.40	304.41	16.90
Vetch	43.97	46.81	6.47	485.98	529.49	8.95
Oilseeds	200.10	230.52	15.20	825.75	820.84	-.59
Neug	121.84	147.03	20.68	399.34	468.83	17.40
Linseed	65.10	71.58	9.95	325.86	288.07	-11.60
Fenugreek	9.09	7.93	-12.78	60.96	44.52	-26.98
Rapeseed	3.99	3.98	-0.20	39.54	19.43	-50.87
Total	4563.44	4897.30	7.32	57465.04	57992.66	0.92

* Excluding Eritrea, Tigray, Asseb and Ogaden Autonomous regions.

Table 3

Forecast 1990/91 and Estimates of 1989/90
of yield in Ethiopia*
Private holdings Meher Season

Crop	Estimate Yield	Forecast Yield	x Change
	1989/90	1990/91	
Cereals	131.29	12.50	-5.93
Teff	8.68	9.63	10.99
Barley	14.00	14.37	2.64
Wheat	13.04	12.84	-1.52
Maize	19.80	16.14	-18.52
Sorghum	13.49	12.05	-10.70
Millet	9.90	8.14	-17.80
Oats	14.29	12.75	-10.78
Pulses	10.66	10.80	1.31
Horse beans	12.64	12.49	-1.20
Field peas	11.80	9.78	-17.18
Haricot beans	9.32	9.69	3.89
Chick peas	8.58	9.95	16.07
Lentils	7.61	7.65	.47
Vetch	11.05	11.31	2.33
Others	4.13	3.56	-13.71
Neug	3.28	3.19	-2.71
Linseed	5.01	4.02	-19.60
Fenugreek	6.71	5.61	-16.28
Rapeseed	9.91	4.88	-50.77
All crops	12.59	11.84	-5.96

* Excluding Eritrea, Tigray, Assab and Ogaden autonomus regions.

Table 4

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Arssi

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	391.42	6292.12
Teff	35.49	275.64
Barley	153.00	2940.81
Wheat	131.81	2042.58
Maize	48.06	636.96
Sorghum	13.05	256.85
Millet	.00	.00
Oats	10.01	139.28
PULSES	73.80	906.59
Horse Beans	32.95	434.94
Field Peas	20.55	287.38
Haricot Beans	15.49	160.70
Chick Peas	.39	3.11
Lentils	3.67	14.21
Vetch	.75	6.25
OTHERS	42.24	150.50
Neug	.86	1.55
Linseed	38.04	134.36
Fenugreek	.42	2.09
Rapeseed	2.91	12.50
ALL CROPS	507.46	7349.20

Table 5

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Bale

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	102.42	1589.91
Teff	10.09	46.23
Barley	36.49	660.87
Wheat	38.84	682.62
Maize	6.84	44.28
Sorghum	.43	3.89
Millet	.10	.00
Oats	9.64	152.02
PULSES	12.08	132.92
Horse Beans	3.76	76.31
Field Peas	4.85	39.69
Haricot Beans	.12	.32
Chick Peas	1.15	5.88
Lentils	1.46	7.21
Vetch	.75	3.50
OTHERS	9.59	67.23
Neug	.68	4.96
Linseed	8.13	56.95
Fenugreek	.78	5.32
Rapeseed	.00	.00
ALL CROPS	124.09	1790.06

Table 6

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
North Omo

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	122.44	1184.42
Teff	50.30	398.41
Barley	26.70	363.18
Wheat	3.38	23.92
Maize	12.80	130.34
Sorghum	28.53	267.14
Millet	.00	.00
Oats	.72	1.44
PULSES	40.15	276.97
Horse Beans	10.73	106.89
Field Peas	15.48	95.91
Haricot Beans	12.25	66.73
Chick Peas	1.40	6.84
Lentils	.29	.60
Vetch	.00	.00
OTHERS	.49	.97
Neug	.00	.00
Linseed	.49	.97
Fenugreek	.00	.00
Rapeseed	.00	.00
ALL CROPS	163.08	1462.36

Table 7

Forecast of Area and Production* of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
South Omo

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	8.08	93.97
Teff	1.32	8.76
Barley	.75	8.70
Wheat	.18	2.18
Maize	3.55	46.07
Sorghum	2.27	28.27
Millet	.02	.00
Oats	.00	.00
PULSES	1.74	23.41
Horse Beans	.55	8.58
Field Peas	1.09	13.54
Haricot Beans	.10	1.28
Chick Peas	.00	.00
Lentils	.00	.00
Vetch	.00	.00
OTHERS	.00	.00
Neug	.00	.00
Linseed	.00	.00
Fenugreek	.00	.00
Rapeseed	.00	.00
ALL CROPS	9.83	117.38

Table 8

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
East Gojam

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	314.77	4426.78
Teff	166.86	2117.54
Barley	50.36	912.50
Wheat	61.02	804.99
Maize	24.32	428.08
Sorghum	10.81	160.86
Millet	.64	2.81
Oats	.76	.00
PULSES	60.08	706.11
Horse Beans	18.93	254.19
Field Peas	7.75	95.06
Haricot Beans	.45	3.39
Chick Peas	17.40	162.34
Lentils	3.89	28.56
Vetch	11.65	162.57
OTHERS	24.35	108.37
Neug	15.77	48.82
Linseed	6.33	41.29
Fenugreek	1.82	12.59
Rapeseed	.44	5.66
ALL CROPS	399.20	5241.25

Table 9

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
West Gojam

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	367.15	4508.01
Teff	175.62	2023.68
Barley	63.87	727.02
Wheat	7.49	104.45
Maize	64.90	1124.63
Sorghum	.52	3.38
Millet	54.65	524.13
Oats	.10	.71
PULSES	29.36	312.44
Horse Beans	15.39	192.32
Field Peas	7.74	64.63
Haricot Beans	.04	.03
Chick Peas	2.15	15.46
Lentils	.04	.00
Vetch	3.99	40.00
OTHERS	41.59	163.62
Neug	37.00	155.85
Linseed	4.36	7.49
Fenugreek	.17	.00
Rapeseed	.06	.27
ALL CROPS	438.09	4984.07

Table 10

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Metekel

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	72.64	552.71
Teff	22.20	115.82
Barley	.12	.73
Wheat	.81	.82
Maize	13.45	185.20
Sorghum	9.38	73.73
Millet	26.69	176.41
Oats	.00	.00
PULSES	1.46	13.17
Horse Beans	.64	8.47
Field Peas	.00	.00
Haricot Beans	.34	2.33
Chick Peas	.48	2.37
Lentils	.00	.00
Vetch	.00	.00
OTHERS	8.40	21.70
Neug	8.31	21.19
Linseed	.06	.51
Fenugreek	.00	.00
Rapeseed	.03	.00
ALL CROPS	82.49	587.58

Table 11

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
North Gonder

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	155.51	1203.19
Teff	46.96	336.39
Barley	23.93	139.59
Wheat	10.58	64.30
Maize	9.88	89.14
Sorghum	53.58	484.56
Millet	10.24	67.56
Oats	3.33	1.65
PULSES	30.19	257.80
Horse Beans	10.88	102.20
Field Peas	5.73	41.49
Haricot Beans	.00	.00
Chick Peas	12.58	105.15
Lentils	.07	.35
Vetch	.94	8.62
OTHERS	10.11	27.97
Neug	7.45	20.25
Linseed	1.00	2.33
Fenugreek	1.38	4.82
Rapeseed	.28	.57
ALL CROPS	195.81	1488.96

Table 12

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
South Gonder

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	91.14	514.13
Teff	42.68	225.51
Barley	14.88	78.70
Wheat	.69	3.38
Maize	12.48	98.37
Sorghum	1.98	7.22
Millet	18.43	100.96
Oats	.00	.00
PULSES	5.67	32.02
Horse Beans	2.12	8.37
Field Peas	.82	7.22
Haricot Beans	.00	.00
Chick Peas	.80	3.56
Lentils	.00	.00
Vetch	1.94	12.88
OTHERS	14.79	41.50
Neug	10.74	30.29
Linseed	4.06	11.21
Fenugreek	.00	.00
Rapeseed	.00	.00
ALL CROPS	111.61	587.65

Table 13

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Dire Dawa

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	4.56	4.04
Teff	.02	.00
Barley	.00	.00
Wheat	.00	.00
Maize	.27	2.33
Sorghum	4.27	1.72
Millet	.00	.00
Oats	.00	.00
PULSES	.00	.00
Horse Beans	.00	.00
Field Peas	.00	.00
Haricot Beans	.00	.00
Chick Peas	.00	.00
Lentils	.00	.00
Vetch	.00	.00
OTHERS	.00	.00
Neug	.00	.00
Linseed	.00	.00
Fenugreek	.00	.00
Rapeseed	.00	.00
ALL CROPS	4.57	4.04

Table 14

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
East Hararghe

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	167.02	1939.29
Teff	2.08	18.22
Barley	4.45	56.94
Wheat	16.21	211.43
Maize	37.44	510.90
Sorghum	105.30	1129.27
Millet	.00	.00
Oats	1.53	12.53
PULSES	23.29	350.23
Horse Beans	6.15	118.40
Field Peas	3.14	41.79
Haricot Beans	12.77	185.08
Chick Peas	.38	.00
Lentils	.86	4.97
Vetch	.00	.00
OTHERS	1.12	5.36
Neug	.00	.00
Linseed	.27	.57
Fenugreek	.85	4.79
Rapeseed	.00	.00
ALL CROPS	191.43	2294.89

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Table 15

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
West Hararghe

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	108.00	1345.79
Teff	17.14	209.02
Barley	3.85	37.02
Wheat	4.20	71.90
Maize	37.39	404.23
Sorghum	42.33	591.74
Millet	.10	.00
Oats	2.99	31.88
PULSES	18.71	247.13
Horse Beans	3.74	58.90
Field Peas	.35	3.86
Haricot Beans	10.82	158.76
Chick Peas	1.37	8.98
Lentils	.95	5.03
Vetch	1.46	11.60
OTHERS	.96	7.38
Neug	.00	.00
Linseed	.29	1.45
Fenugreek	.67	5.93
Rapeseed	.00	.00
ALL CROPS	127.67	1600.30

Table 16

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Gambella

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	7.74	127.80
Teff	.59	12.28
Barley	.15	1.59
Wheat	.16	3.72
Maize	6.30	98.29
Sorghum	.55	11.92
Millet	.00	.00
Oats	.00	.00
PULSES	.48	6.71
Horse Beans	.28	4.45
Field Peas	.04	.00
Haricot Beans	.16	2.25
Chick Peas	.00	.00
Lentils	.00	.00
Vetch	.00	.00
OTHERS	.00	.00
Neug	.00	.00
Linseed	.00	.00
Fenugreek	.00	.00
Rapeseed	.00	.00
ALL CROPS	8.22	134.51

Table 17

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Illubabor

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	306.26	4098.28
Teff	97.98	957.55
Barley	11.36	127.46
Wheat	11.85	124.48
Maize	127.59	2119.32
Sorghum	45.98	641.92
Millet	10.69	116.51
Oats	.81	11.04
PULSES	32.93	386.37
Horse Beans	15.47	210.12
Field Peas	15.45	162.26
Haricot Beans	1.09	9.57
Chick Peas	.00	.00
Lentils	.91	4.43
Vetch	.00	.00
OTHERS	4.34	14.79
Neug	3.04	8.37
Linseed	1.20	6.42
Fenugreek	.10	.00
Rapeseed	.00	.00
ALL CROPS	343.52	4499.44

Table 18

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Keffa

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	61.38	890.32
Teff	10.69	74.85
Barley	3.41	33.51
Wheat	1.03	9.90
Maize	25.73	475.63
Sorghum	11.72	185.47
Millet	8.79	110.96
Oats	.00	.00
PULSES	14.11	158.11
Horse Beans	7.17	103.34
Field Peas	1.94	13.63
Haricot Beans	4.73	40.84
Chick Peas	.20	.30
Lentils	.00	.00
Vetch	.07	.00
OTHERS	.71	3.57
Neug	.71	3.57
Linseed	.00	.00
Fenugreek	.00	.00
Rapeseed	.00	.00
ALL CROPS	76.19	1052.00

Table 19

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Addis Ababa

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	92.43	1030.94
Teff	41.11	397.70
Barley	24.57	320.38
Wheat	24.91	283.79
Maize	.81	20.27
Sorghum	.83	6.84
Millet	.00	.00
Oats	.20	1.96
PULSES	29.81	307.61
Horse Beans	10.14	114.68
Field Peas	1.08	5.34
Haricot Beans	.11	1.99
Chick Peas	10.85	116.11
Lentils	5.02	43.28
Vetch	2.60	26.21
OTHERS	1.77	8.45
Neug	.87	2.30
Linseed	.75	5.88
Fenugreek	.14	.27
Rapeseed	.00	.00
ALL CROPS	124.01	1347.00

Table 20

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
East Shoa

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	160.60	1742.77
Teff	98.62	989.56
Barley	7.85	101.13 ✓
Wheat	26.18	262.12
Maize	24.84	357.84 ✓
Sorghum	3.11	32.11
Millet	.00	.00
Oats	.00	.00
PULSES	46.03	441.50
Horse Beans	3.79	46.65
Field Peas	7.11	80.51
Haricot Beans	18.97	166.61
Chick Peas	7.65	80.09
Lentils	3.32	20.06
Vetch	5.17	47.59
OTHERS	.54	3.18
Neug	.00	.00
Linseed	.03	.00
Fenugreek	.47	3.18
Rapeseed	.03	.00
ALL CROPS	207.16	2187.44

Table 21

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
North Shoa

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	163.51	1535.74
Teff	58.52	530.17
Barley	33.76	347.01
Wheat	58.44	534.57
Maize	2.28	11.42
Sorghum	9.88	110.24
Millet	.00	.00
Oats	.63	2.33
PULSES	81.29	916.97
Horse Beans	46.26	550.98
Field Peas	11.37	98.91
Haricot Beans	1.15	5.23
Chick Peas	6.55	84.85
Lentils	9.43	103.88
Vetch	6.54	73.13
OTHERS	7.01	28.82
Neug	5.16	26.05
Linseed	1.85	2.77
Fenugreek	.00	.00
Rapeseed	.00	.00
ALL CROPS	251.81	2481.54

Table 22

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
South Shoa

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	371.91	5192.78
Teff	82.81	643.60
Barley	15.31	200.01
Wheat	43.83	585.74
Maize	206.21	3484.15
Sorghum	18.84	225.37
Millet	2.43	15.60
Oats	2.48	38.32
PULSES	45.78	404.93
Horse Beans	10.68	98.16
Field Peas	11.35	136.04
Haricot Beans	15.44	119.76
Chick Peas	2.76	17.81
Lentils	3.74	24.20
Vetch	1.81	8.96
OTHERS	.49	2.03
Neug	.00	.00
Linseed	.14	.88
Fenugreek	.32	1.15
Rapeseed	.03	.00
ALL CROPS	418.18	5599.73

Table 23

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
West Shoa

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	322.60	3615.59
Teff	158.58	1422.03
Barley	59.04	653.09
Wheat	35.63	360.93
Maize	44.75	781.27
Sorghum	23.46	390.19
Millet	.25	.00
Oats	.88	8.09
PULSES	45.85	483.62
Horse Beans	17.79	187.46
Field Peas	3.07	26.72
Haricot Beans	.10	.00
Chick Peas	14.68	143.98
Lentils	2.22	12.64
Vetch	7.99	112.83
OTHERS	37.22	105.64
Neug	33.76	92.92
Linseed	2.93	9.41
Fenugreek	.46	2.90
Rapeseed	.07	.42
ALL CROPS	405.66	4204.86

Table 24

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Borena

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	15.13	221.44
Teff	1.89	5.22
Barley	2.93	34.62
Wheat	1.15	6.31
Maize	8.80	171.82
Sorghum	.36	3.47
Millet	.00	.00
Oats	.00	.00
PULSES	4.05	45.78
Horse Beans	1.59	20.23
Field Peas	.70	7.13
Haricot Beans	1.12	15.67
Chick Peas	.65	2.75
Lentils	.00	.00
Vetch	.00	.00
OTHERS	.17	.24
Neug	.00	.00
Linseed	.08	.00
Fenugreek	.09	.24
Rapeseed	.00	.00
ALL CROPS	19.36	267.46

Table 25

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Sidamo

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	88.61	1191.78
Teff	14.22	110.96
Barley	18.38	275.04
Wheat	3.90	44.02
Maize	49.55	735.24
Sorghum	2.56	26.51
Millet	.00	.00
Oats	.00	.00
PULSES	11.83	103.90
Horse Beans	3.23	40.17
Field Peas	4.24	38.96
Haricot Beans	4.28	24.75
Chick Peas	.07	.00
Lentils	.01	.01
Vetch	.00	.00
OTHERS	.19	.04
Neug	.10	.00
Linseed	.01	.04
Fenugreek	.00	.00
Rapeseed	.09	.00
ALL CROPS	100.63	1295.71

Table 26

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Assosa

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	17.97	311.60
Teff	2.89	15.59
Barley	.15	.65
Wheat	.13	1.11
Maize	6.83	218.01
Sorghum	3.26	45.79
Millet	4.72	30.44
Oats	.00	.00
PULSES	.38	3.21
Horse Beans	.12	1.31
Field Peas	.00	.00
Haricot Beans	.26	1.90
Chick Peas	.00	.00
Lentils	.00	.00
Vetch	.00	.00
OTHERS	.71	1.59
Neug	.71	1.59
Linseed	.00	.00
Fenugreek	.00	.00
Rapeseed	.00	.00
ALL CROPS	19.06	316.39

Table 27

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
Wellega

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	284.75	3504.20
Teff	93.29	934.27
Barley	6.26	61.72
Wheat	4.61	35.74
Maize	122.15	1942.41
Sorghum	33.01	368.18
Millet	25.18	160.92
Oats	.25	.96
PULSES	30.70	260.19
Horse Beans	13.86	130.05
Field Peas	9.32	60.91
Haricot Beans	6.96	67.25
Chick Peas	.26	1.15
Lentils	.30	.83
Vetch	.00	.00
OTHERS	22.20	52.66
Neug	21.28	50.51
Linseed	.69	1.46
Fenugreek	.20	.68
Rapeseed	.04	.00
ALL CROPS	337.65	3817.05

Table 28

Forecast of Area and Production of Major Crops for
Private holdings in 1990/91 (1983 E.C)
North Wollo

Crop	Total Area (000' hectare)	Total Production (000' Quintal)
Cereals	46.52	537.99
Teff	21.36	153.94
Barley	10.57	134.90
Wheat	1.43	16.99
Maize	1.07	22.78
Sorghum	10.92	197.06
Millet	0.00	0.00
Oats	1.16	12.33
Pulses	13.80	190.87
Horse Beans	6.87	110.53
Field Peas	2.18	9.19
Haricot Beans	0.00	0.00
Chick Peas	3.58	55.56
Lentils	0.98	12.46
Vetch	0.19	3.13
Others	0.55	2.47
Neug	0.03	0.00
Linseed	0.51	2.47
Fenugreek	0.01	0.00
Rapeseed	0.00	0.00
All Crops	60.87	731.33

Table 29

Forecast of Area and Production of Major
Crops for Private Holdings
In 1990/91 (1983 E.C.)
South Wollo

CROP	Total Area (000'hectare)	Total Production (000'quintal)
CEREALS	141.03	2161.72
Teff	51.23	540.13
Barley	6.77	101.58
Wheat	4.61	51.33
Maize	37.97	968.76
Sorghum	37.27	460.41
Millet	.07	.00
Oats	3.12	39.52
PULSES	27.62	385.94
Horse Beans	15.52	241.87
Field Peas	3.36	26.09
Haricot Beans	.00	.00
Chick Peas	5.10	84.06
Lentils	2.66	21.70
Vetch	.98	12.22
OTHERS	.99	2.74
Neug	.57	.60
Linseed	.37	1.60
Fenugreek	.04	.54
Rapeseed	.00	.00
ALL CROPS	169.64	2550.41

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