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PEOPLE'S DEMOCRATIC REPUBLIC
OF ETHIOPIA

CENTRAL STATISTICAL AUTHORITY

REPORT ON THE
**AGRICULTURAL SAMPLE SURVEY
OF RESETTLEMENT AREAS**
1987/88 (1980E.C)

ADDIS ABABA
FEBRUARY, 1991

PREFACE

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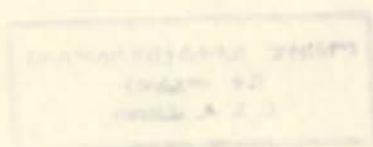
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ADDIS ABABA
February 1991

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PREFACE

Subsequent to the 1984/85 drought and consequent famine, which affected especially the northern parts of the country, a major resettlement programme has been undertaken. The government was involved in moving over half a million people who had no prospect of being self-sufficient in their old habitat which mainly consisted of degraded lands. After resettlement the government supported the settler families by providing them with food, health care, clothing, etc., until they were able to support themselves. The government also built basic community infrastructures and amenities such as schools, health stations, roads and facilitated the provision of potable water systems, market places, flour mills, etc.

Following the beginning of the resettlement programme, many concerned governmental and nongovernmental agencies have closely following up developments in these areas. The government and a number of nongovernment organizations were involved in helping and assisting settlers adjust smoothly to their new environment as conditions and ways of life. Some attempt was also made to collect some data in order to document these events and development both to capture their historical attributes and to draw appropriate lessons for any possible future resettlement programmes.

The above mentioned efforts were no substitute to the type of desired quantitative information needed by both government and nongovernment organization concerned with the monitoring and evaluation of developments of various aspects of the resettlement programme and the resettled population. The Central Statistical Authority (CSA) as the most appropriate government body regarding the provision of such information, with financial assistance of the International Development Research Center (IDRC) of Canada and the Canadian International Development Agency (CIDA) undertook a programme of data collection activities in 1988 in all the resettlement areas, covering a wide range of socio-economic fields.

The planning and implementation of the data collection and subsequent data processing, analysis and report writing was coordinated by the General Manager of CSA assisted by a committee of six experts drawn from various departments of the Authority. Each committee member was responsible for at least one survey from the beginning (preparations) to the end (analysis and report writing). The committee which was formed in early 1987 was responsible for the preparation of all major aspects of all the surveys including the planning of the studies, determination of the design and methodology, finalizing questionnaires and instruction manuals, planning and following of the recruitment, training and deployment of field staff and the conduct of data collection and processing.

By and large the data collection activities materialized from September to December 1987 in Illubabor, Keffa and Wellega and in May and June 1988 in Gojam and Gondar during which period a census of the resettled population was undertaken followed by a number of baseline socio-economic sample surveys which included Health and Nutrition Survey; Income, Consumption and Expenditure Survey; Demographic Change Survey and Community Level Variables Survey. The results of these studies are expected to provide valuable information on the state of the re-settled population.

The agricultural Sample Survey, which is the subject of this report, was concerned with generating useful data on area under major crops, production of major crops, general agricultural practices and livestock and poultry in the resettlement areas. The data collected through this survey was processed manually and the results are given in 49 tables and broadly analyzed in this report. The preparation, analysis and report writing of this survey was made by Girma Tadesse, currently head of the Agriculture Statistics Department.

.../

This study would not be possible without the financial assistance provided by the International Development Research Center (IDRC) of Canada and the Canadian International Development Agency (CIDA). The CSA wishes to express its appreciation for the financial assistance provided by IDRC and CIDA.

Thanks are also due to the regional party and government officials for their invaluable assistance in the successful execution of the field work, and to the staff of the CSA for their efforts in undertaking the data collection and compilation work as well as the preparation of this report. I am confident the results of this survey will furnish a useful information for policy makers, planners and administrators concerned with the present and future resettlement programme.

Mitik Beyene

General Manager

Central Statistical Authority

C O N T E N T S

	<u>PAGE</u>
1. INTRODUCTION.....	1
1.1 OBJECTIVES AND COVERAGE.....	2
1.2 METHODS OF DATA COLLECTION.....	3
2. ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS.....	5
2.1 AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS FOR PRIVATE HOLDINGS.....	5
2.2 AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS FOR COOPERATIVES.....	7
2.3 ASSESSMENT OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS FOR THE RESETTLEMENT AREAS (PRIVATE AND COOPERATIVES)...	9
3. CONTRIBUTION OF THE RESETTLEMENT AREAS IN THE 1987/88 (1980 E.C) AGRICULTURAL YEAR, MAIN SEASON.....	12
4. REGIONAL SUMMARIES OF THE RESETTLEMENT AREAS.....	15
4.1 GOJJAM RESETTLEMENT AREA.....	15
4.2 GONDAR RESETTLEMENT AREA.....	21
4.3 ILLUBABOR RESETTLEMENT AREA.....	24
4.4 KEFFA RESETTLEMENT AREA.....	28
4.5 WELEGA RESETTLEMENT AREA.....	33
5. DISTRIBUTION OF TOTAL AREA CULTIVATED AND PRODUCTION OF MAJOR CROPS IN RESETTLEMENT AREAS IN 1987/88 (1980 E.C).....	39
6. PERFORMANCE OF THE RESETTLEMENT POPULATION AS COMPARED TO THE INDIGINOUS (PRIVATE HOLDINGS).....	42
7. AGRICULTURAL PRACTICES IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C).....	47
7.1 IMPROVED SEED.....	47
7.2 IRRIGATED AREA.....	47
7.3 FERTILIZER APPLIED AREA AND QUANTITY.....	48
7.4 PESTICIDES.....	50
8. LIVESTOCK, POULTRY AND BEEHIVES IN THE RESETTLEMENT AREAS IN 1987/88 (1980 E.C), PRIVATE HOLDINGS.....	64
REFERENCES.....	76

LIST OF TABLES

	<u>PAGE</u>
TABLE 1 ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS FOR PRIVATE HOLDINGS IN 1987/88 (1980 E.C.).....	6
TABLE 2 ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS FOR COOPERATIVES IN 1987/88 (1980 E.C.).....	8
TABLE 3 ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS FOR BOTH TYPES OF HOLDINGS IN 1987/88 (1980 E.C.).....	11
TABLE 4 PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN AREA UNDER CROPS IN 1987/88 (1980 E.C.) MAIN SEASON (PRIVATE AND COOPERATIVES)	13
TABLE 5 CONTRIBUTION OF RESETTLEMENT AREAS IN PRODUCTION OF MAJOR CROPS IN 1987/88 (1980 E.C.), MAIN SEASON (PRIVATE AND COOPERATIVES).....	14
TABLE 6 ESTIMATES OF AREA UNDER MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN THE RESETTLEMENT AREAS OF GOJJAM FRO PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C.).....	17
TABLE 7 ESTIMATES OF PRODUCTION OF MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN THE RESETTLEMENT AREAS OF GOJJAM FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C.).....	18
TABLE 8 ESTIMATES OF YIELD OF MAJOR CROPS IN THE RESETTLEMENT AREAS OF GOJJAM FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C.).....	19
TABLE 9 PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN GOJJAM IN 1987/88 (1980 E.C.) , PRIVATE HOLDINGS AND COOPERATIVES.....	20

TABLE 10	ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN RESETTLEMENT AREAS OF GONDAR FOR PRIVATE HOLDING IN 1987/88 (1980 E.C.).....	22
TABLE 11	PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN GONDAR IN 1987/88 (1980 E.C.)PRIVATE HOLDING ONLY.....	23
TABLE 12	ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN RESETTLEMENT AREAS OF ILLUBABOR FOR PRIVATE HOLDINGS IN 1987/88 (1980 E.C.).....	26
TABLE 13	PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN ILLUBABOR IN 1987/88 (1980 E.C.),PRIVATE HOLDINGS ONLY.....	27
TABLE 14	ESTIMATES OF AREA UNDER MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN RESETTLEMENT AREAS OF KEFFA FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C.).....	29
TABLE 15	ESTIMATES OF PRODUCTION OF MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN RESETTLEMENT AREAS OF KEFFA FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C.).....	30
TABLE 16	ESTIMATES OF YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS OF KEFFA FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C.).....	31
TABLE 17	PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN KEFFA IN 1987/88 (1980 E.C.), PRIVATE HOLDINGS AND COOPERATIVES.....	32
TABLE 18	ESTIMATES OF AREA UNDER MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN RESETTLEMENT AREAS OF WELLEGA FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C.).....	35

TABEL 19	ESTIMATES OF PRODUCTION OF MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN RESETTLEMENT AREAS OF WELLEGA FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C.).....	36
TABEL 20	ESTIMATES OF YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS OF WELLEGA FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C.).....	37
TABEL 21	PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN WELLEGA IN 1987/88 (1980 E.C),PRIVATE AND COOPERATIVES.....	38
TABLE 22	DISTRIBUTION OF TOTAL AREA AND PRODUCTION OF MAJOR CROPS IN THE RESETTLEMENT AREAS BY REGION IN 1987/88 (1980 E.C), PRIVATE AND COOPERATIVES..	40
TABLE 23	AVERAGE PRODUCTION OF MAJOR CROPS PER HOUSEHOLD IN THE RESETTLEMENT AREAS BY REGION IN 1987/88 (1980 E.C).....	41
TABLE 24	PERFORMANCE OF THE RESETTLED POPULATION COMPARED TO THE INDIGINOUS FARMERS IN ILLUBABOR IN 1987/88 (1980 E.C.), PRIVATE HOLDINGS.....	44
TABLE 25	PERFORMANCE OF THE RESETTLED POPULATION COMPARED TO THE INDIGINOUS FARMERS IN KEFFA IN 1987/88 (1980 E.C), PRIVATE HOLDINGS.....	45
TABLE 26	PERFORMANCE OF THE RESETTLED POPULATION COMPARED TO THE INDIGINOUS FARMERS IN WELLEGA IN 1987/88 (1980 E.C.), PRIVATE HOLDINGS.....	46
TABLE 27	TOTAL AREA AND PERCENTAGE OF AREA UNDER DIFFERENT AGRICULTURAL PRACTICES IN THE PRIVATE HOLDINGS OF THE RESETTLEMENT AREAS IN 1987/88 (1980 E.C)....	51
TABLE 28	TOTAL AREA AND PERCENTAGE OF AREA UNDER DIFFERENT AGRICULTURAL PRACTICES IN THE PRIVATE HOLDINGS OF THE RESETTLEMENT AREAS OF GONDAR REGION IN 1987/88 (1980 E.C).....	52

TABLE 29 TOTAL AREA AND PERCENTAGE OF AREA UNDER DIFFERENT AGRICULTURAL PRACTICES IN THE PRIVATE HOLDINGS OF THE RESETTLEMENT AREAS OF ILLUBABOR REGION IN 1987/88 (1980 E.C.)..... 53

TABLE 30 TOTAL AREA AND PERCENTAGE OF AREA UNDER DIFFERENT AGRICULTURAL PRACTICES IN THE PRIVATE HOLDINGS OF THE RESETTLEMENT AREAS OF KEFFA REGION IN 1987/88 (1980 E.C.)..... 54

TABLE 31 TOTAL AREA AND PERCENTAGE OF AREA UNDER DIFFERENT AGRICULTURAL PRACTICES IN THE PRIVATE HOLDINGS OF THE RESETTLEMENT AREAS OF WELLEGA REGION IN 1987/88 (1980 E.C.)..... 55

TABLE 32 FERTILLIZER APPLIED AREA BY CROP IN THE RESETTLEMENT AREAS FOR PRIVATE HOLDINGS IN 1987/88 (1980 E.C.).. 56

TABLE 33 QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION OF THE TOTAL FERTILIZER APPLIED AND QUANTITY OF COMMERCIAL FERTILIZERS PER HECTARE OF AREA UNDER CROP BY TYPE OF FERTILIZER AND BY CROP IN THE RESETTLEMENT AREAS OF PRIVATE HOLDINGS IN 1987/88(1980 E.C.)..... 57

TABLE 34 QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION OF THE TOTAL FERTILIZER APPLIED BY TYPE OF FERTILIZER AND BY CROP IN RESETTLEMENT AREAS OF GONDAR, PRIVATE HOLDINGS IN 1987/88 (1980 E.C.)..... 58

TABLE 35 QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION OF THE TOTAL FERTILIZER APPLIED AND QUANTITY OF COMMERCIAL FERTILIZER PER HECTARE OF AREA UNDER CROP BY TYPE OF FERTILIZER AND BY CROP IN THE RESETTLEMENT AREAS OF ILLUBABOR, PRIVATE HOLDINGS, IN 1987/88(1980 E.C.).. 59

TABLE 36	QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION OF THE TOTAL FERTILIZER APPLIED AND QUANTITY OF COMMERCIAL FERTILIZER PER HECTARE OF AREA UNDER CROP BY TYPE OF FERTILIZER AND BY CROP IN THE RESETTLEMENT AREAS OF KEFFA, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	60
TABLE 37	QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION OF THE TOTAL FERTILIZER APPLIED AND QUANTITY OF COMMERCIAL FERTILIZER PER HECTARE OF AREA UNDER CROP BY TYPE OF FERTILIZER AND BY CROP IN THE RESETTLEMENT AREAS OF WELLEGA, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.)	61
TABLE 38	QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION BY REGION IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	62
TABLE 39	QUANTITY OF COMMERCIAL FERTILIZER APPLIED PER HECTARE OF APPLIED AREA IN THE RESETTLEMENT AREAS OF PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	63
TABLE 40	TOTAL NUMBER OF LIVESTOCK AND THEIR PERCENTAGE DISTRIBUTION, POULTRY AND BEEHIVES IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	66
TABLE 41	TOTAL NUMBER OF LIVESTOCK AND POULTRY BY SEX AND THEIR PERCENTAGE DISTRIBUTION AND NUMBER OF BEEHIVES IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	67

TABLE 42	NUMBER OF CATTLE AND THEIR PERCENTAGE DISTRIBUTION BY SEX AND BY REGION IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.)..	68
TABLE 43	NUMBER OF SHEEP AND THEIR PERCENTAGE DISTRIBUTION BY SEX AND BY REGION IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	69
TABLE 44	NUMBER OF GOATS AND THEIR PERCENTAGE DISTRIBUTION BY SEX AND BY REGION IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	70
TABLE 45	NUMBER OF HORSES AND THEIR PERCENTAGE DISTRIBUTION BY SEX AND BY REGION IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	71
TABLE 46	NUMBER OF MULES AND THEIR PERCENTAGE DISTRIBUTION BY SEX AND BY REGION IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	72
TABLE 47	NUMBER OF ASSES AND THEIR PERCENTAGE DISTRIBUTION BY SEX AND BY REGION IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	73
TABLE 48	NUMBER OF HENS, PULLETS, COCKS, COCKRELS AND CHICKEN AND THEIR PERCENTAGE DISTRIBUTION BY SEX AND BY REGION IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	74
TABLE 49	NUMBER OF BEEHIVES AND THEIR PERCENTAGE DISTRIBUTION BY REGION IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.).....	75

APPLIED AND QUANTITY OF COMMERCIAL FERTILIZERS PER HECTARE OF AREA UNDER CROP BY TYPE OF FERTILIZER AND BY CROP IN THE RESETTLEMENT AREAS OF ILLINOIS, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.)..

1. INTRODUCTION

Ethiopia covers a total area of 1.25 million sq.kms. Its dominant feature is the highlands, which lie between 1500-4000 meters above sea level. It is agricultural and livestock production which are the main stay of the population. However, agricultural production in large areas of the country depends on rainfall condition. Modern agricultural technology like irrigation practice is hardly practiced in most area. Agricultural production, in this sector, is carried out with traditional techniques and crop failure is potentially widespread.

The private agricultural sector, which contributes over 90% of the total agricultural production of the country, is subsistence oriented and is further characterised by low output both per head and per hectare. Various factors have been negatively contributing for the sluggish growth of agricultural production. The main ones are the rather poor state of the economy as a whole and the recurrent periods of drought affecting large parts of the country, particularly in the north.

On the other hand, the process of deforestation and soil erosion have hampered the productivity of the drought affected areas and thus on the growth of agricultural production.

The occurrence of the 1973/74 and 1983/84 severe drought and famine have called the attention of the Ethiopian Government and various internal and external agencies on the need for preventing and taking preparatory actions to mitigate the effects of the droughts, both in terms of their severity and coverage of people affected.

Hence, the Government, in order to combat existing problems and prevent further disaster and provide lasting solution to the problems of drought and famine had been implementing various social and economic development as well as emergency aid programmes and projects. Among these programmes was the resettlement of over half a million people from the drought affected areas to the other fertile areas of the country.

Hence, in order to assess and evaluate the status and conditions of agricultural activities of the settlers it was found necessary to conduct an agricultural survey in conjunction with other socio-economic household surveys.

1.1 OBJECTIVES AND COVERAGE

This agricultural sample survey which was conducted in the resettlement areas is primarily devised to provide reliable and basic information in the field of agricultural activities that will serve as basis for planning and implementing future agricultural development policies and programmes in these areas. The survey, specifically aimed at assessing the major agricultural characteristics such as area under crop, production, yield, agricultural practices and livestock and poultry population.

The population under study were the Private Peasant Holdings and Cooperative Farms in the resettlement areas of Gojjam, Gondar, Illubabor, Keffa and Wellega.

.../

1.2 METHODS OF DATA COLLECTION

During the agricultural sample survey conducted in the resettlement areas both subjective and objective methods of data collection were used. In Illubabor, Keffa and Wellega resettlement areas for private holdings data on area under crop and yield were collected by actually measuring the fields under different crops and conducting crop-cutting experiments. However, information on agricultural practices and livestock and poultry were collected by interviewing the individual sample holder.

On the other hand, all the information from cooperative farms were collected subjectively. In the resettlement areas of Gojjam and Gondar, all the data were collected by interviewing the sampled holders.

The survey was conducted in two phases. The first one was conducted from September 1987 to February 1988 in the resettlement areas of Illubabor, Keffa and Wellega. The second phase of the survey was conducted in June 1988 in the resettlement areas of Gojjam and Gondar.

Here in this report, estimates of area, production and yield of major crops in the resettlement areas (total and regional) are presented. For comparison purposes, estimates of area, production and yield of major crops of the result of the 1987/88(1980 E.C) agricultural sample survey at national level and regional level are also presented. In addition, estimates on agricultural practices, i.e. type and amount of fertilizer used, irrigation practice, seed variety, etc... are presented in this report.

.../

It should also be noted that as part of this survey, data on Livestock, Poultry and Beehives were collected. Hence, the estimates of number of Livestock and Poultry Population by type and sex and estimates of the number of Beehives in the resettlement areas are presented from Table 40 to Table 49 in this report.

2. ESTIMATES OF AREA, PRODUCTION AND YIELD OF

MAJOR CROPS IN RESETTLEMENT AREAS

2.1 AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS FOR PRIVATE HOLDINGS

As indicated in the introductory section, the survey covered the five administrative regions (Gojjam, Gondar, Illubabor, Keffa and Wellega) where the resettlement programme has been launched since 1984/85.

As the survey result indicates, in these areas, the estimate of area under major crops for private peasant holdings is 32.44 thousand hectares with a total production of 413.12 thousand quintals.

Of this total area under crop, 30.34 thousand hectares (93.5%) is under cereals, 0.84 thousand hectares (2.6%) is under pulses and the remaining 1.26 thousand hectares (3.9%) is under other crops such as Neug, Linseed, Sesame and Ground nut.

As this result indicates, the resettled peasants, on their private holdings, seem to concentrate mainly on the production of cereal crops such as Maize, Teff and Sorghum. Area under Maize, for example is estimated to be 15.59 thousand hectares (48.1%) and its production is 284.41 thousand quintals (68.8%) with a mean yield of 18.2 quintals per hectare. Teff is the second major crop which covered an area of 7.06 thousand hectares (21.8%) with a total production of 37.59 thousand quintals and with a mean yield of 5.3 quintals per hectare. The third major crop is Sorghum with an area of 6.14 thousand hectares (18.9%) and with production 67.5 thousand quintals and mean yield of 11.0 quintals per hectare.

TABLE 1:-

ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN
RESETTLEMENT AREAS FOR PRIVATE HOLDINGS IN 1987/88 (1980 E.C)

C R O P	AREA (000'HA)	PERCE- NTAGE	PRODUCTION (000'QT)	PERCE- NTAGE	YIELD QT/HA
CEREALS	30.34	93.5	401.97	97.3	13.25
TEFF	7.06	21.8	37.59	9.1	5.32
BARLEY	0.59	1.8	3.20	0.8	5.42
WHEAT	0.49	1.5	5.20	1.3	10.61
MAIZE	15.59	48.1	284.41	68.8	18.24
SORGHUM	6.14	18.9	67.50	16.3	10.99
MILLET	0.46	1.4	4.01	1.0	8.72
RICE	0.01	0.0	0.06	0.0	6.00
PULSES	0.84	2.6	6.39	1.6	7.61
HORSE BEANS	0.04	0.1	0.30	0.1	7.50
CHICK PEAS	0.34	1.0	1.65	0.4	4.85
FIELD PEAS	0.01	0.0	0.01	0.0	2.00
HARICOT BEANS	0.40	1.2	4.39	1.0	10.98
SOYA BEANS	0.05	0.2	0.04	0.0	0.80
OTHERS	1.26	3.9	4.76	1.2	3.78
NEUG	0.25	0.8	1.48	0.4	5.92
LINSEED	0.01	0.0	0.00	0.0	0.00
SESAME	0.98	3.0	3.12	0.8	3.18
GROUND NUT	0.02	0.1	0.16	0.0	8.00
ALL CROPS	32.44	100.0	413.12	100.0	12.73

These three major cereal crops (Maize, Teff and Sorghum) occupy about 89% of the total area under major crops with a total production of 389.5 thousand quintals (about 94% of the total production of major crops in the private holdings of the resettlement areas). For details see Table 1.

2.2 AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS FOR COOPERATIVES

The total area under major crops in cooperative farms organized in the resettlement areas of Gojjam, Keffa and Wellega is assessed at 58.75 thousand hectares with a total production of 596.85 thousand quintals. However, there is no report from Gondar and Illubabor resettlement areas about the agricultural activities of cooperative farms.

As it is the case with private peasant farms, in these areas, the cooperatives also tend to concentrate on cereal production where over 82% (48.32 thousand hectares) of area and 92% (548.48 thousand quintals) of production is that of cereal crops.

Here again in cooperative farms, Maize and Sorghum are the major crops among cereals. As it is shown in Table 2, area under Maize occupies 27.12 thousand hectares (46.2%) with a total production of 392.53 thousand quintals (65.8%) and with mean yield of 14.5 quintals per hectare. While area under Sorghum, which is the second major crop for cooperative farms in the resettlement areas, is about 15.54 thousand hectares (26.5%) with a total production of 136.98 thousand quintals (23%). Unlike private farms, for cooperatives, rice is the third major crop with respect to area and production magnitude, i.e. occupies 6.6% of the total area

TABLE 2:- ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS FOR COOPERATIVES IN 1987/88 (1980 E.C)

C R O P	AREA (000'HA)	PERCE- NTAGE	PRODUCTION (000'QT)	PERCE- NTAGE	YIELD QT/HA
CEREALS	48.32	82.3	548.48	91.9	11.35
TEFF	1.55	2.6	3.58	0.6	2.30
BARLEY	0.03	0.1	0.06	0.0	2.00
MAIZE	27.12	46.2	392.53	65.8	14.47
SORGHUM	15.54	26.5	136.98	23.0	8.81
MILLET	0.24	0.4	0.53	0.1	2.21
RICE	3.85	6.6	14.80	2.5	3.84
PULSES	6.13	10.4	22.22	3.7	3.62
HORSE BEANS	0.02	0.0	0.02	0.0	0.10
CHICK PEAS	1.05	1.9	2.20	0.4	2.10
HARICOT BEANS	2.84	4.8	10.46	1.8	3.68
SOYA BEANS	2.22	3.8	9.56	1.6	4.31
OTHERS	4.29	7.3	26.15	4.4	6.10
NEUG	0.96	1.6	2.34	0.4	2.44
LINSEED	0.01	0.0	0.01	0.0	1.00
SESAME	1.38	2.3	6.20	1.0	4.49
SUNFLOWER	0.09	0.2	6.55	1.1	7.28
GROUND NUT	1.04	1.8	11.05	1.9	10.63
ALL CROPS	58.75	100.0	596.85	100.0	10.16

(3.85 thousand hectares) and 2.5% of the total production (14.8 thousand quintals) of major crops. Here again, for cooperative, as it was the case for private farms, other crops such as Neug, Linseed, Sesame and Ground nut cover less than 10% of the total area and production of major crops. For details, see Table 2.

2.3 ASSESSMENT OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS FOR THE RESETTLEMENT AREAS (PRIVATE AND COOPERATIVES)

The assessment of area, production and yield of major crops for both private and cooperative farms in the resettlement areas in 1987/88 (1980 E.C) is given in Table 3.

As indicated in this table, both the private and cooperative farms in the 1987/88 agricultural year had given over 86% of their land for cereal crops while about 7.6% and 6.1% of these holdings were under pulses and other crops respectively.

Of the total area under major crops which is 91.20 thousand hectares, it is maize which occupies 42.71 thousand hectares (46.8%) of land and sorghum occupies an area of 21.68 thousand hectares (23.8%).

On the other hand, the total production of major crops is assessed to be 1009.97 thousand quintals. Of this total, production of Maize is 676.94 thousand quintals (67%) and that of Sorghum is 204.48 thousand quintals (20.2%). If we consider these two cereal crops together, they comprise over 87% of the total production and over 70% of the total area under major crops in the resettlement areas.

If we look at the result by type of holding, of the total production of major crops, the cooperative farms produced about 596.85 thousand quintals (59.1%) and the remaining 413.12 thousand quintals (40.9%) is produced by private holdings.

Though over 59% of the total production is produced by the cooperatives over all, the performance of the private resettlers is better compared to the cooperatives. For instance, for all crops, the average yield of private holdings is about 13 quintals per hectare while that of cooperatives is about 10 quintals per hectare. However, the performance is better for cooperatives in the case of other crops where the yield is about 6 qt/ha, while for private is about 4 qt/ha. For details, see Table 1 and 2.

	Area (ha)	Production (thousand quintals)	Yield (quintals/ha)
Cooperatives	5,968.5	596.85	10.0
Private holdings	4,131.2	413.12	13.0
Total	10,099.7	1,009.97	10.0
Other crops	1,000.0	600.0	6.0
Private	1,000.0	400.0	4.0
Cooperatives	1,000.0	200.0	2.0

It is seen from the above that the yield of private holdings is higher than that of cooperatives. This is due to the fact that private holdings are generally smaller in size and are more intensively cultivated. However, the yield of cooperatives is higher in the case of other crops where the yield is about 6 qt/ha, while for private is about 4 qt/ha.

TABLE 3:- ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS IN
RESETTLEMENT AREAS FOR BOTH TYPES OF HOLDINGS IN 1987/88 (1980 E.C)

C R O P	AREA /000' Hec/	PERCE- NTAGE	PRODUCTION /000' Qui/	PERCE- NTAGE	YIELD QT/HA
CEREALS	78.68	86.3	950.45	94.1	12.08
TEFF	8.61	9.4	41.17	4.1	4.78
BARLEY	0.62	0.7	3.26	0.3	5.26
WHEAT	0.49	0.5	5.20	0.5	10.61
MAIZE	42.71	46.8	676.94	67.0	15.85
SORGHUM	21.68	23.8	204.48	20.2	9.43
MILLET	0.70	0.8	4.54	0.4	6.49
RICE	3.86	4.2	14.86	1.5	3.85
PULSES	6.97	7.6	28.61	2.8	4.11
HORSE BEANS	0.06	0.1	0.30	0.0	5.03
CHICK PEAS	1.39	1.5	3.85	0.4	2.77
FIELD PEAS	0.01	0.0	0.01	0.0	2.00
HARICOT BEANS	3.24	3.6	14.85	1.5	4.58
SOYA BEANS	2.27	2.5	9.60	1.0	4.23
OTHERS	5.55	6.1	30.91	3.1	5.57
NEUG	1.21	1.3	3.82	0.4	3.16
LINSEED	0.02	0.0	0.01	0.0	0.50
SESAME	2.36	2.6	9.32	0.9	3.95
SUNFLOWER	0.90	1.0	6.55	0.6	7.28
GROUND NUT	1.06	1.2	11.21	1.1	10.58
ALL CROPS	91.20	100.0	1009.97	100.0	11.07

3. CONTRIBUTION OF THE RESETTLEMENT AREAS IN THE 1987/88(1980 E.C)AGRICULTURAL YEAR, MAIN SEASON

As indicated in the introductory paragraph, the total resettled agricultural population in the resettlement areas was over half a million which constitutes about 1 percent of the total population in the country.

The total area under major crops (see Table 4) cultivated in the country (excluding Eritrea and Tigray) in the 1987/88 agricultural year by private and cooperative farms is 5136.34 thousand hectares with a total production of 57,146.94 thousand quintals. Of this, 91.20 thousand hectares (about 2%) of land is cultivated in the resettlement areas with a total production of 1009.97 thousand quintals which is again 2% of the total production produced in the country (excluding Eritrea and Tigray) during main season.

As indicated in this table, the contribution of the resettlement areas to the nation in area under other crops and cereals are about 2.9% and 1.8% respectively. Among the cereal crops, the resettled population seem to concentrate more on the production of Maize and Sorghum with a total contribution of 3.6% to the national estimate of production of the two cereal crops.

It is also shown that it is only in the resettlement areas where rice is grown which covers an area of 3.86 thousand hectares and with a total production of 14.86 thousand quintals. One can also see in table 4 and 5 that the resettlement areas are the major producing areas of Soya beans, Sesame, Sunflower and Ground nut with a total production of 36.68 thousand quintals constituted over 60% of the production estimated at national level.

TABLE 4:- PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN AREA
UNDER MAJOR CROPS IN 1987/88 (1980 E.C.), MAIN SEASON
(PRIVATE AND COOPERATIVES)

CROP	A R E A		Percentage Contribution Of Set.Areas.
	National Total (000' Hectares)	Resettlement Areas (000' Hectares)	
CEREALS	4259.32	78.68	1.8
TEFF	1222.18	8.61	0.7
BARLEY	663.28	0.62	0.1
WHEAT	581.01	0.49	0.1
MAIZE	839.56	42.71	5.1
SORGHUM	758.23	21.68	2.9
MILLET	154.65	0.70	0.5
OATS	36.55	-	0.0
RICE	3.86	3.86	100.0
PULSES	688.41	6.97	1.0
HORSE BEANS	280.81	0.06	0.0
CHICK PEAS	134.73	1.39	1.0
FIELD PEAS	104.26	0.01	0.0
HARICOT BEANS	58.80	3.24	5.5
LENTILS	45.24	-	0.0
VETCH	61.15	-	0.0
SOYA BEANS	3.42	2.27	66.4
OTHERS	188.61	5.55	2.9
NEUG	115.45	1.21	1.0
LINSEED	54.16	0.02	0.0
FENUGREEK	9.71	-	0.0
RAPE SEED	2.54	-	0.0
SESAME	3.55	2.36	66.5
SUNFLOWER	1.48	0.90	60.8
GROUND NUT	1.72	1.06	61.6
ALL CROPS	5136.34	91.20	1.8

TABLE 5:- CONTRIBUTION OF RESETTLEMENT AREAS IN PRODUCTION OF MAJOR CROPS
 IN 1987/88 (1980 E.C), MAIN SEASON.
 (PRIVATE AND COOPERATIVES.)

C R O P	P R O D U C T I O N		Percentage Contribution of Resett. Areas
	National Total (000'Quintals)	Resettlement Areas (000'Quintals)	
CEREALS	51118.01	950.45	1.9
TEFF	9680.49	41.17	0.4
BARLEY	8059.56	3.26	0.0
WHEAT	6684.21	5.20	0.1
MAIZE	15989.85	676.94	4.2
SOPGHUM	8739.25	204.48	2.3
MILLET	1607.57	4.54	0.3
OATS	342.22	-	0.0
RICE	14.86	14.86	100.0
PULSES	5243.44	28.61	0.5
HORSE BEANS	2493.86	0.30	0.0
CHICK PEAS	1051.12	3.85	0.4
FIELD PEAS	697.55	0.01	0.0
HARICOT BANS	322.76	14.85	4.6
LENTILS	232.42	-	0.0
VETCH	431.76	-	0.0
SOYA BEANS	13.97	9.60	68.7
OTHERS	785.49	30.91	3.9
NEUG	423.52	3.82	0.9
LINSEED	226.23	0.01	0.0
FENUGREEK	58.24	-	0.0
RAPE SEED	34.23	-	0.0
SESAME	14.83	9.32	62.8
SUNFLOWER	10.08	6.55	64.2
GROUND NUT	18.36	11.21	60.9
ALL CROPS	57146.94	1009.97	1.8

4. REGIONAL SUMMARIES OF THE RESETTLEMENT AREAS4.1 GOJJAM RESETTLEMENT AREA

The estimates of area, production and yield of major crops in the resettlement area of Gojjam are presented in table 6,7 and 8 respectively.

As indicated in table 6, the total area under major crops in the resettlement area of this region is assessed to be 18.59 thousand hectares; out of which 14.02 thousand hectares (75.4%) is under cereals, 2.86 thousand hectares (15.4%) under pulses and 1.71 thousand hectares (9.2%) under other crops.

Of all the major crops, Sorghum, Maize and Rice are the major ones which together occupy 13.9 thousand hectares (74.8% of the total area under major crops and 99.1% of area under cereals).

If we observe the result by holding type, the private holdings in this resettlement region gave 80% of their holding to maize with an area of 1.60 thousand hectares. However, for the cooperative farms in this area, it is Sorghum, Rice and Maize which occupy 30.7%, 23.2% and 18.9% of area under major crops respectively.

In general, over 88% (16.59 thousand hectares) of the area under crop in this area is attributed to cooperative farms while 11% (2.00 thousand hectares) is to private holdings.

From the production side, as indicated in Table 7, the total production in this area is about 169.38 thousand quintals (both private and cooperatives). Of this total, about 145.25 thousand quintals (85.6%) is that of cereals and 7.48 thousand quintals (4.4%) and 16.65 thousand quintals (9.8%) are that of pulses and other crops respectively.

In the resettlement area of Gojjam, as the result indicates, the private holdings seem to concentrate more on the production of maize which accounts to about 81.9% of the total production in this area while the cooperatives gave due importance to the production of Maize and Sorghum which account to about 43% and 33% of the total production of cooperative farms in this area respectively. It should also be noted that the cooperative farms in this area produce quite significant amount of Rice (14.8 thousand quintals) which is not a common practice of the Ethiopian farmers in general.

The cooperative farms in this area, unlike the private holdings, gave due importance to the production of pulses and other crops too. For instance, total pulse production is 7.48 thousand quintals (4.4% of the total production of cooperative farms in this area). Similarly, production of other crops amount to 16.65 thousand quintals which is about 9.8% of the total production of cooperative farms in this area.

In this agricultural year (1987/88), in Gojjam administrative region, the total area under major crops was about 871.82 thousand hectares with a total production of 9568.19 thousand quintals. Hence, the resettlement areas in this region do contribute 2.1 percent to the area under crop and about 2 percent to the total production of major crops in the region (see Table 9). However, the cooperative farms of the resettlement

TABLE 6:- ESTIMATES OF AREA UNDER MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN THE RESETTLEMENT AREAS OF GOJJAM FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C)

C R O P	AREA UNDER CROP					
	PRIVATE (000' HA)	PERCENT	COOPERATIVE (000' HA)	PERCENT	TOTAL (000' HA)	PERCENT
CEREALS	1.94	97.0	12.08	72.8	14.02	75.4
TEFF	-	-	-	-	-	-
BARLEY	-	-	-	-	-	-
WHEAT	-	-	-	-	-	-
MAIZE	1.60	80.0	3.13	18.9	4.73	25.4
SORGHUM	0.22	11.0	5.10	30.7	5.32	28.6
MILLET	0.12	6.0	-	-	0.12	0.6
RICE	-	-	3.85	23.2	3.85	20.7
PULSES	0.04	2.0	2.82	17.0	2.86	15.4
CHICK PEAS	0.02	1.0	0.80	4.8	0.28	4.4
HARICOT BEANS	0.01	0.5	0.85	5.1	0.86	4.6
SOYA BEANS	0.01	0.5	1.17	7.1	1.18	6.3
OTHERS	0.02	1.0	1.69	10.2	1.71	9.2
SESAME	0.02	1.0	-	-	0.02	0.1
SUNFLOWER	-	-	0.88	5.3	0.88	4.7
GROUND NUT	-	-	0.81	4.9	0.81	4.4
ALL CROPS	2.00	100	16.59	100	18.59	100

TABLE 7:- ESTIMATES OF PRODUCTION OF MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN THE RESETTLEMENT AREAS OF GOJJAM FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C)

C R O P	P R O D U C T I O N					
	PRIVATE (000'QT)	PERCENT	COOPERATIVES (000'QT)	PERCENT	TOTAL (000'QT)	PERCENT
CEREALS	8.21	98.4	137.04	85.1	145.25	85.6
MAIZE	6.83	81.9	69.45	43.1	76.28	45.0
SOFGHUM	0.67	8.0	52.79	32.8	53.46	31.6
MILLET	0.71	8.5	-	-	0.71	0.4
RICE	-	-	14.80	9.2	14.80	8.7
PULSES	0.08	1.0	7.40	4.6	7.48	4.4
CHICK PEAS	0.05	0.6	1.63	1.0	1.68	1.0
HARICOT BEANS	0.01	0.1	1.16	0.7	1.17	0.7
SOYA BEANS	0.02	0.2	4.61	2.9	4.63	2.7
OTHERS	0.05	0.6	16.60	10.3	16.65	9.8
SESAME	0.05	0.6	-	-	0.05	0.0
SUNFLOWER	-	-	6.38	4.0	6.38	3.8
GROUND NUT	-	-	10.22	6.3	10.22	6.0
ALL CROPS	8.34	100.0	161.04	100.0	169.38	100.0

The estimated total value produced is 7.48 thousand quanta worth

of the total production of cooperative farms in this area. Similarly

production of other crops amount to 16.65 thousand quanta worth is

about 9.8% of the total production of cooperative farms in this area.

In this agricultural year (1987/88), in Gojjam administrative region,

the total area under major crops was about 811.52 thousand hectares

with a total production of 169.38 thousand quanta. Thus, the

resettlement areas in this region do contribute 7.4 percent to the area

under crop and about 1 percent to the total production of major crops in the

region (see Table 7). However, the cooperative farms of the resettlement

TABLE 8 :- ESTIMATES OF YIELD OF MAJOR CROPS IN THE RESETTLEMENT AREAS
OF GOJJAM FOR PRIVATE HOLDINGS AND COOPERATIVES
IN 1987/88 (1980 E.C)

C R C P	YIELD (QT/HA)	
	PRIVATE	COOPERATIVE
CEREALS	4.25	11.34
MAIZE	4.27	22.19
SORGHUM	3.05	10.35
MILLET	5.95	-
RICE	-	3.84
PULSES	2.00	2.62
CHICK PEAS	2.50	2.04
HARICOT BEANS	1.00	1.36
SOYA BEANS	2.00	3.94
OTHERS	2.50	9.82
SESAME	2.50	-
SUNFLOWER	-	7.25
GROUND NUT	-	17.62
ALL CROPS	4.17	9.71

Farms in the area.

As indicated in this table, the total area under major crops is 4.08 thousand hectares with a total production of 11.11 thousand quintals.

TABLE 9:- PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN GOJJAM
IN 1987/88 (1980 E.C)
(PRIVATE HOLDINGS AND COOPERATIVES)

C R O P	REGIONAL TOTAL		RESETTLEMENT AREAS IN THE REGION		PERCENTAGE CONTRI- BUTION OF RESETT. AREAS TO THE REGION	
	AREA (000'HA)	PRODUCTION (000'QT)	AREA (000'HA)	PRODUCTION (000'QT)	AREA	PRODUCTION
CEREALS	697.26	8335.23	14.02	145.25	2.0	1.7
TEFF	298.72	2660.55	-	-	0.0	0.0
BARLEY	99.75	1039.67	-	-	0.0	0.0
WHEAT	67.66	716.47	-	-	0.0	0.0
MAIZE	110.43	2605.33	4.73	76.28	4.3	2.9
SORGHUM	33.59	348.57	5.32	53.46	15.8	15.3
MILLET	82.89	948.15	0.12	0.17	0.1	0.1
OATS	0.37	1.69	-	-	0.0	0.0
RICE	3.85	14.80	3.85	14.80	100.0	100.0
PULSES	114.70	972.53	2.86	7.43	2.5	0.8
HORSE BEANS	46.53	373.75	-	-	0.0	0.0
FIELD PEAS	16.08	84.74	-	-	0.0	0.0
CHICK PEAS	29.98	329.09	0.82	1.68	2.7	0.5
HARICOT BEANS	1.35	8.26	0.86	1.17	64.2	14.2
LENTILS	5.10	31.37	-	-	0.0	0.0
VETCH	13.63	132.35	-	-	0.0	0.0
SOYA BEANS	2.03	7.60	1.18	4.63	58.1	60.9
OTHERS	59.92	260.43	1.71	16.65	2.9	6.4
NEUG	38.19	152.44	-	-	0.0	0.0
LINSEED	17.45	61.32	-	-	0.0	0.0
RAPE SEED	0.87	17.54	-	-	0.0	0.0
SESAME	0.03	0.05	0.02	0.05	66.7	100.0
SUNFLOWER	1.48	9.70	0.88	6.38	62.0	65.8
GROUND NUT	1.39	16.79	0.81	10.22	55.9	60.9
FENUGREEK	0.51	2.59	-	-	0.0	0.0
ALL CROPS	871.88	9568.19	18.59	169.38	2.1	1.8

areas in this region contribute significant amount to both area and production of the cooperative farms in the region, i.e. 16.2 percent to area and 14.0 percent to production.

Over all, in the resettlement areas of Gojjam region, the performance of cooperative farms is better compared to private. As presented in Table 8, cooperative farms produce 11.34 qt/ha while the private farms produce 4.25 qt/ha of cereal crops. For all crops, the yield is 9.71 qt/ha for cooperative farms and 4.17 qt/ha for private holdings in the resettlement areas of this region.

However, since the resettled people are not fully yet accustomed to the area, climate and other situations, the status where they attain during this agricultural year was not discouraging.

4.2 GONDAR RESETTLEMENT AREA

Gondar Administrative Region as discussed in the introductory section, was one of the five regions where this resettlement programme was lunched in 1984/85 and about 1.1 percent of the total resettled population were residing.

The estimates of area, production and yield of major crops obtained from the survey, for the resettlement area in this region, are given in Table 10. As indicated in this table, the results are that of private holdigs only. There is no report on any agricultural activities of cooperative farms in the area.

As indicated in this table, the total area under major crops is 4.08 thousand hectares with a total production of 11.11 thousand quintals.

TABLE 10:- ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN RESETTLEMENT AREAS OF GONDAR FOR PRIVATE HOLDINGS IN 1987/88 (1980 E.C)

C R O P	AREA IN		PRODUCTION IN		YIELD QT./HA.
	THOUSAND HECTARES	PERCENT	THOUSAND QUINTAL	PERCENT	
CEREALS	3.34	81.9	10.67	96.0	3.19
TEFF	0.003	0.1	0.004	0.0	1.33
MAIZE	1.65	40.4	1.07	9.6	0.65
SORGHUM	1.69	41.4	9.60	86.4	5.68
PULSES	0.17	4.2	0.16	1.4	0.95
CHICK PEAS	0.11	2.7	0.15	1.4	1.36
FIELD PEAS	0.003	0.1	0.001	0.0	0.33
HARICOT BEANS	0.02	0.5	0.01	0.1	0.50
SOYA BEANS	0.04	1.0	0.003	0.0	0.08
OTHERS	0.56	13.7	0.27	2.4	0.48
SESAME	0.56	13.7	0.27	2.4	0.48
ALL CROPS	4.08	100.0	11.11	100.0	2.73

TABLE 11:- PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN GONDAR
IN 1987/88 (1980 E.C), PRIVATE HOLDINGS ONLY

C R O P	REGIONAL TOTAL*		RESETTLEMENT AREAS IN THE REGION **		PER CENTAGE CONTRIBUTION OF S.A. TO THE REGION	
	AREA (000'HA)	PRODUCTION (000'QT)	AREA (000'HA)	PRODUCTION (000'QT)	AREA	PRODUCTION
CEREALS	384.81	3288.15	3.34	10.67	0.9	0.3
TEFF	130.11	765.96	0.003	0.004	0.0	0.0
BARLEY	66.38	509.29	-	-	0.0	0.0
WHEAT	30.15	171.74	-	-	0.0	0.0
MAIZE	29.30	371.38	1.65	1.07	5.6	0.3
SORGHUM	91.60	1182.30	1.69	9.60	1.8	0.8
MILLET	35.39	280.35	-	-	0.0	0.0
OATS	1.88	7.13	-	-	0.0	0.0
PULSES	114.00	665.21	0.17	0.16	0.1	0.0
HORSE BEANS	37.53	218.94	-	-	0.0	0.0
CHICK PEAS	34.88	271.63	0.11	0.15	0.3	0.1
FIELD PEAS	16.29	75.51	0.003	0.001	0.0	0.0
HARICOT BEANS	0.55	2.82	0.02	0.01	3.6	0.4
LENTILS	5.22	25.04	-	-	0.0	0.0
SOYA BEANS	0.04	0.003	0.04	0.003	100.0	100.0
VETCH	19.49	74.27	-	-	0.0	0.0
OTHERS	38.49	110.07	0.56	0.27	1.5	0.2
NEUG	27.97	72.73	-	-	0.0	0.0
LINSEED	7.20	22.61	-	-	0.0	0.0
RAPE SEED	0.01	0.02	-	-	0.0	0.0
SESAME	0.56	0.27	0.56	0.27	100.0	100.0
SUNFLOWER	0.04	0.14	-	-	0.0	0.0
FENUGREEK	2.71	14.30	-	-	0.0	0.0
ALL CROPS	573.30	4063.43	4.08	11.11	0.8	0.3

* INCLUDES COOPERATIVES

** EXCLUDES COOPERATIVES

Of these totals, about 82 percent of the area and 96 percent of the production is that of cereal crops where Maize (40.4 percent) and Sorghum (41.4 percent) are the major ones.

Although, there may be many factors which contribute to the sluggish productivity of the resettled farmers in this region, their performance is very poor. As the survey result indicates, they produce 3.2 qt/ha of cereals, less than a quintal/ha of pulses and even less than 0.5 qt/ha of other crops.

In table 11, the results of the 1987/88 (1980 E.C) Agricultural Sample Survey and of the Resettlement areas for the region are presented. As this result indicates, the contribution of the resettlement people to the region with respect to production is very small (about 0.3 percent).

4.3 ILLUBABOR RESETTLEMENT AREA

Of the total resettled population in the 1984/85 resettlement programme, over 28 percent of them were resettled in the different Awrajas of Illubabor Administrative region, where most of them in Gambela Awraja.

Although, there is no information reported on the activities of the cooperative farms in these resettlement areas of the region, there is an indication that the private settlers were accomplishing very promising work in the agricultural area.

..//..

As the result of the survey indicates, the total area under major crops cultivated by the private settled population is 15.26 thousand hectares with a total production of 220.92 thousand quintals. Of these totals, 99.5 percent of the area and 99.8 percent of the production are that of cereal crops. The major cereal crops produced in this area are Maize, 140.43 thousand quintals; Sorghum, 46.91 thousand quintals and Teff, 26.52 thousand quintals.

The performance of resettled population in this region is very encouraging. For instance, the average yield of cereals in general and that of Wheat, Maize and Sorghum in particular are above the average yield estimate for the region. For detail, see Table 12.

On the other hand, this resettlement area had also made significant contribution to the region with respect to area and production of major crops as indicated in Table 13.

As the result of the 1987/88 agricultural sample survey indicates, the total production of private holdings in the region was 1654.94 thousand quintals where 220.92 thousand quintals which is 13.3 percent was from this resettlement area in the region.

Of all the crops, Wheat, Maize and Sorghum have the major share of production which account to about 16 percent of the total production of these three crops produced in the region.

TABLE 12:- ESTIMATES OF AREA, PRODUCTION AND YIELD OF MAJOR CROPS
AND THEIR PERCENTAGE DISTRIBUTION IN RESETTLEMENT AREAS OF
ILLUBABOR FOR PRIVATE HOLDINGS IN 1987/88 (1980 E.C)

C R O P	AREA IN		PRODUCTION IN		YIELD QT./HA.
	THOUSAND HECTARES	PERCENT	THOUSAND QUINTALS	PERCENT	
CEREALS	15.18	99.5	220.44	99.8	14.52
TEFF	5.46	35.8	26.52	12.0	4.86
BARLEY	0.41	2.7	1.54	0.7	3.76
WHEAT	0.47	3.1	4.98	2.3	10.60
MAIZE	5.56	36.4	140.43	63.6	25.26
SORGHUM	3.27	21.4	46.91	21.2	14.35
RICE	0.01	0.1	0.06	0.0	6.00
PULSES	0.01	0.1	0.08	0.0	8.00
HARICOT BEANS	0.01	0.1	0.08	0.0	8.00
OTHERS	0.07	0.5	0.40	0.2	5.71
LINSEED	0.01	0.1	0.00	0.0	0.00
SESAME	0.04	0.3	0.24	0.1	6.00
GROUND NUT	0.02	0.1	0.16	0.1	8.00
ALL CROPS	15.26	100.0	220.92	100.0	14.48

TABLE 13:- PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN ILLUBABOR
IN 1987/88 (1980 E.C), PRIVATE HOLDINGS ONLY

C R O P	REGIONAL TOTAL*		SETTLEMENT AREAS IN THE REGION**		PERCENTAGE CONTRIBUTION OF S.A TO THE REGION	
	AREA (000'HA)	PRODUCTION (000'QT)	AREA (000'HA)	PRODUCTION (000'QT)	AREA (%)	PRODUCTION (%)
CEREALS	119.76	1629.50	15.18	220.44	12.7	13.5
TEFF	45.97	357.94	5.46	26.52	11.9	7.4
BARLEY	5.67	39.36	0.41	1.54	7.2	3.9
WHEAT	2.69	19.72	0.47	4.98	17.5	25.2
MAIZE	43.12	903.18	5.56	140.43	12.9	15.5
SORGHUM	19.57	288.95	3.27	46.91	16.7	16.2
MILLET	2.70	19.94	-	-	0.0	0.0
OATS	0.03	0.35	-	-	0.0	0.0
RICE	0.01	0.06	0.01	0.06	100.0	100.0
PULSES	6.46	23.71	0.01	0.08	0.2	0.3
HORSE BEANS	3.32	12.18	-	-	0.0	0.0
CHICK PEAS	0.28	1.77	-	-	0.0	0.0
FIELD PEAS	2.42	6.71	-	-	0.0	0.0
HARICOT BEANS	0.42	3.01	0.01	0.08	2.4	2.7
SOYA BEANS	0.00	0.00	-	-	0.0	0.0
VETCH	0.02	0.04	-	-	0.0	0.0
OTHERS	0.45	1.73	0.07	0.40	15.6	23.1
NEUG	0.35	1.27	-	-	0.0	0.0
LINSEED	0.04	0.06	0.01	0.00	25.0	0.0
SESAME	0.04	0.24	0.04	0.24	100.0	100.0
GROUND NUT	0.02	0.16	0.02	0.16	100.0	100.0
ALL CROPS	126.67	1654.94	15.26	220.92	12.0	13.3

* INCLUDES COOPERATIVES

** EXCLUDES COOPERATIVES

4.4 KEFFA RESETTLEMENT AREA

In the 1984/85 resettlement programme, about 10% of the resettled population were placed in Keffa Administrative Region. These people, in the 1987/88 agricultural year cultivated about 6.33 thousand hectares of land and produced 54.27 thousand quintals of crops. Of the total area 2.12 thousand hectares is cultivated by the private holders (33.5%) while 4.2 thousand hectares (66.5%) by cooperative farms in this resettlement area.

From the production side, the total estimate for the resettlement area in this region, as indicated above was 54.27 thousand quintal. Of this total production 29.26 thousand quintals (53.9%) is from private holders while the remaining which is 25.01 thousand quintals is from cooperative farms.

For both private and cooperative farms in this area, Maize, Sorghum and Teff are the major crops. For instance, Maize has taken 45 percent of the total area and 59 percent of the total production of major crops. Sorghum and Teff, the second and third major crops respectively, have a share of 21 percent and 15 percent of the total production.

As to the performance of the resettled population both the private and cooperative farms have produced comparable yield with the regional estimate. As presented in Table 16, the average yield of cereals for private and cooperatives is about 15 qt/ha and 6 qt/ha respectively. For all major crops, the average yield is 14qt/ha for private and 6 qt/ha for cooperatives which is very comparable to the regional yield

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TABLE 14:- ESTIMATES OF AREA UNDER MAJOR CROPS AND THEIR PERCENTAGE
DISTRIBUTION IN RESETTLEMENT AREAS OF KEFFA FOR
PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C)

C R O P	A R E A					
	PRIVATE (000'HA)	PERCENT	COOPERATIVE (000'HA)	PERCENT	TOTAL (000'HA)	PERCENT
CEREAL	1.90	89.6	3.88	92.4	5.78	91.3
TEFF	0.48	22.6	0.49	11.7	0.97	14.3
BARLEY	0.16	7.5	0.03	0.7	0.19	3.0
WHEAT	0.02	0.9	-	-	0.02	0.3
MAIZE	0.70	33.0	2.15	51.2	2.85	45.0
SORGHUM	0.33	14.6	0.97	23.1	1.30	20.5
MILLET	0.21	9.9	0.24	5.7	0.45	7.1
PULSES	0.16	7.5	0.13	3.1	0.29	4.6
HORSE BEANS	0.03	1.4	0.02	0.5	0.05	0.8
CHICK PEAS	0.02	0.9	0.01	0.2	0.03	0.5
FIELD PEAS	0.002	0.1	-	-	0.002	0.0
HARICOT BEANS	0.11	5.2	0.10	2.4	0.21	3.3
SOYA BEANS	0.002	0.1	-	-	0.002	0.0
OTHERS	0.06	2.8	0.19	4.5	0.25	3.9
NEUG	0.02	0.9	0.003	0.1	0.02	0.3
SESAME	0.04	1.9	0.19	4.5	0.23	3.6
ALL CROPS	2.12	100.0	4.20	100.0	6.33	100.0

TABLE 15:- ESTIMATES OF PRODUCTION OF MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN RESETTLEMENT AREAS OF KEFFA FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C)

C R O P	P R O D U C T I O N					
	PRIVATE (000'QT)	PERCENT	COOPERATIVE (000'QT)	PERCENT	TOTAL (000'QT)	PERCENT
CEREALS	27.85	95.2	24.64	98.5	52.49	96.7
TEFF	5.08	17.4	1.15	4.6	6.23	11.5
BARLEY	1.54	5.3	0.06	0.2	1.60	2.9
WHEAT	0.21	0.7	-	-	0.21	0.4
MAIZE	13.23	45.3	18.67	74.7	31.93	58.8
SORGHUM	5.18	17.7	4.23	16.9	9.41	17.3
MILLET	2.58	8.8	0.53	2.1	3.11	5.7
PULSES	1.17	4.0	0.23	0.9	1.40	2.6
HORSE BEANS	0.28	1.0	0.002	0.0	0.28	0.5
CHICK PEAS	0.22	0.8	0.001	0.0	0.22	0.4
FIELD PEAS	0.01	0.0	-	-	0.01	0.0
HARICOT BEANS	0.64	2.2	0.23	0.9	0.87	1.6
SOYA BEANS	0.02	0.1	-	-	0.02	0.0
OTHERS	0.24	0.8	0.14	0.6	0.38	0.7
NEUG	0.07	0.2	0.01	0.0	0.08	0.1
SESAME	0.17	0.6	0.13	0.5	0.30	0.6
ALL CROPS	29.26	100.0	25.01	100.0	54.27	100.0

TABLE 16:- ESTIMATES OF YIELD OF MAJOR CROPS IN RESETTLEMENT AREAS
OF KEFFA FOR PRIVATE HOLDINGS AND COOPERATIVES
IN 1987/88 (1980 E.C)

C R O P	YIELD QT/HA	
	PRIVATE	COOPERATIVE
CEREALS	14.66	6.35
TEFF	10.58	2.35
BARLEY	9.63	2.00
WHEAT	10.50	-
MAIZE	18.94	8.68
SORGHUM	15.70	4.36
MILLET	12.29	2.21
PULSES	7.31	1.79
HORSE BEANS	10.77	0.10
CHICK PEAS	11.00	0.10
FIELD PEAS	5.00	-
HARICOT BEANS	5.82	2.30
SOYA BEANS	10.00	-
OTHERS	4.00	0.73
NEUG	3.50	3.33
SESAME	4.25	0.68
ALL CROPS	13.80	5.95

TABLE 17:- PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN
 KEFFA IN 1987/88 (1980 E.C)
 (PRIVATE AND COOPERATIVES)

	REGIONAL TOTAL		RESETTLEMENT AREAS IN THE REGION		PERCENTAGE CONTRIBUTION OF S.A TO THE REGION	
	AREA (000'HA)	PRODUCTION (000'AT)	AREA (000'HA)	PRODUCTION (000'QT)	AREA (%)	PRODUCTION (%)
CEREALS	258.16	3975.62	5.78	52.49	2.2	1.3
TEFF	76.29	714.10	0.97	6.23	1.3	0.9
BARLEY	14.64	180.07	0.19	1.60	1.3	0.9
WHEAT	15.72	171.52	0.02	0.21	0.1	0.1
MAIZE	89.31	2032.05	2.85	31.93	3.2	1.6
SORGHUM	51.52	725.20	1.30	9.41	4.5	1.3
MILLET	8.24	125.43	0.45	3.11	5.5	2.5
OATS	2.44	27.25	-	-	0.0	0.0
PULSES	32.11	346.44	0.29	1.40	0.9	0.4
HORSE BEANS	24.51	272.44	0.05	0.28	0.2	0.1
CHICK PEAS	0.04	0.47	0.03	0.22	60.0	45.8
FIELD PEAS	6.20	59.98	0.002	0.01	0.0	0.0
HARICOT BEANS	1.24	13.17	0.21	0.87	17.1	6.6
SOYA BEANS	0.002	0.02	0.002	0.02	100.0	100.0
LENTILS	0.12	0.36	-	-	0.0	0.0
OTHERS	1.83	6.52	0.25	0.38	13.6	5.8
NEUG	1.41	4.46	0.02	0.08	1.4	1.8
LINSEED	0.19	1.76	-	-	0.0	0.0
SESAME	0.23	0.30	0.23	0.30	100.0	100.0
GROUND NUT	0.00	0.00	-	-	0.0	0.0
ALL CROPS	292.10	4328.58	6.33	54.27	2.2	1.3

estimates, i.e 15 qt/ha private and 6.7 qt/ha for cooperatives.

As to the contribution of the resettled people to the region, it is presented in Table 17. As indicated in this table, the resettled people in this region contributed about 1.3 percent to the total production produced in the region and about 2.3 percent to the area cultivated in the 1987/88 (1980 E.C.) agricultural year, main season.

4.5 WELLEGA RESETTLEMENT AREA

In the 1984/85 resettlement programme, about 40 percent of the resettled population were placed in Wellega Administrative Region, most of them in Asosa Awraja. These people, in their new surrounding, in the 1987/88 agricultural year, cultivated a total area of 46.94 thousand hectares of land under different crops and produced 554.29 thousand quintals. Of the total area, 8.98 thousand hectares (about 19 percent) is cultivated by the private holdings while 37.96 thousand hectares (about 81 percent) by cooperative farms of the resettled people.

Of the total production, on the other hand, in this area, 143.50 thousand quintals (25.9 percent) is from private holdings and 410.79 thousand quintals (74.1 percent) is from cooperative farms.

For the private farms of this resettlement area, Maize and Teff are the major crops which cover about 68 percent and 13 percent of the total private holding respectively. On the other hand, for cooperatives, the major crops are Maize and Sorghum covering about 60 percent and 22 percent of the area under crop, respectively, in the cooperative farms of this area. As to the production also, 85.6 percent of the total production of the private holdings and 77.1 percent of the total production

of the cooperatives farms in this resettlement area is that of Sorghum.

As to the performance of the resettled population, both the private and cooperative farms have shown better productivity. For instance, the average yield for major crops of the private holdings in this resettlement area is 16 qt/ha against 11.3 qt/ha for the region. Concerning cooperatives in this resettlement area, they produced about 11 qt/ha while the regional estimate is only 8 qt/ha. In this case, one can conclude that the agricultural activity in this resettlement area is very promising and the settlers can in very short period be self-sufficient.

As to the contribution of the resettled people in this region, the results are presented in Table 21. As indicated in this table, the resettled population of Wellega administrative region do make significant contribution to both area cultivated and production of major crops produced in the region during the 1987/88 agricultural year. For instance, the contribution to area cultivated in the region is about 12 percent and to production is about 13 percent. Of all the major cereal crops the highest contribution come from Sorghum, i.e. 26.6 percent to area and 21.7 percent to production.

TABLE 18:- ESTIMATES OF AREA UNDER MAJOR CROPS AND THEIR PERCENTAGE DISTRIBUTION IN RESETTLEMENT AREAS OF WELLEGA FOR PRIVATE HOLDINGS AND COOPERATIVES IN 1987/88 (1980 E.C)

C R O P	A R E A					
	PRIVATE (000'HA)	PERCENT	COOPERATIVE (000'HA)	PERCENT	TOTAL (000'HA)	PERCENT
CEREALS	7.98	88.9	32.37	85.3	40.35	86.0
TEFF	1.12	12.5	1.06	2.8	2.18	4.6
BARLEY	0.02	0.2	-	-	0.02	0.0
WHEAT	0.002	0.0	-	-	0.002	0.0
MAIZE	6.08	67.7	21.84	57.5	27.92	49.5
SORGHUM	0.63	7.0	9.47	24.9	10.10	21.5
MILLET	0.13	1.4	-	-	0.13	0.3
PULSES	0.45	5.0	3.18	8.4	3.36	7.7
HORSE BEANS	0.01	0.1	-	-	0.01	0.0
CHICK PEAS	0.19	2.1	0.24	0.6	0.43	0.9
HARICOT BEANS	0.25	2.8	1.89	5.0	2.14	4.6
SOYA BEANS	-	-	1.05	2.8	1.05	2.2
OTHERS	0.55	6.1	2.41	6.3	2.96	6.3
NEUG	0.23	2.6	0.96	2.5	1.19	2.5
LINSEED	-	-	0.001	0.0	0.001	0.0
SESAME	0.32	3.6	1.19	3.1	1.51	3.2
SUNFLOWER	-	-	0.02	0.1	0.02	0.0
GROUND NUT	-	-	0.23	0.6	0.23	0.5
ALL CROPS	8.98	100.0	37.96	100.0	46.94	100.0

TABLE 21:- PERCENTAGE CONTRIBUTION OF RESETTLEMENT AREAS IN
WELLEGA IN 1987/88 (1980 E.C)
(PRIVATE AND COOPERATIVES)

C R O P	REGIONAL TOTAL		RESETTLEMENT AREAS IN THE REGION		PERCENTAGE CONTRIBUTION OF S.A TO THE REGION	
	AREA (000'HA)	PRODUCTION (000'QT)	AREA (000'HA)	PRODUCTION (000'QT)	AREA (000'HA)	PRODUCTION (000'QT)
CEREALS	342.25	4011.23	40.35	521.60	11.8	13.0
TEFF	133.86	908.77	2.18	8.42	1.6	0.9
BARLEY	21.65	184.80	0.02	0.12	0.1	0.1
WHEAT	6.16	55.55	0.002	0.01	0.0	0.0
MAIZE	104.90	1966.44	27.92	427.23	26.6	21.7
SORGHUM	51.99	689.04	10.10	85.10	19.4	12.4
MILLET	23.49	204.95	0.13	0.72	0.6	0.4
OATS	0.20	1.48	-	-	0.0	0.0
PULSES	26.83	193.25	3.63	19.42	13.5	10.0
HORSE BEANS	14.26	115.27	0.01	0.02	0.1	0.0
CHICK PEAS	0.99	6.81	0.43	1.80	43.4	26.4
FIELD PEAS	7.51	46.77	-	-	0.0	0.0
HARICOT BEANS	2.72	18.13	2.14	12.72	79.0	70.0
SOYA BEANS	1.32	6.25	1.05	4.96	79.5	79.2
VETCH	0.03	0.02	-	-	0.0	0.0
OTHERS	24.45	101.97	2.96	13.20	12.1	12.9
NEUG	19.98	80.42	1.19	3.74	6.0	4.7
LINSEED	1.49	6.16	0.001	0.01	0.1	0.2
RAPE SEED	0.10	0.41	-	-	0.0	0.0
SESAME	2.58	13.82	1.51	8.46	58.3	61.2
SUNFLOWER	0.02	0.17	0.02	0.17	100.0	100.0
GROUND NUT	0.25	0.89	0.23	0.83	92.0	93.3
FENUGREEK	0.03	0.10	-	-	0.0	0.0
ALL CROPS	393.53	4306.45	46.94	554.29	11.9	12.9

5. DISTRIBUTION OF TOTAL AREA CULTIVATED AND PRODUCTION

OF MAJOR CROPS IN THE RESETTLEMENT AREAS

IN 1987/88 (1980 E.C.)

As explained in the previous section, the resettled people in the five administrative region have cultivated a total area of 91.20 thousand hectares, with a total production of 1009.97 thousand quintals (in both private and cooperative farms of the resettlement area). Of these totals, 51.5 percent of the area and 54.9 percent of the production is accomplished in the resettlement areas of Wellega. Gojjam resettlement areas is found second place with respect to size of area under major crops which is 20.4 percent of the total. Illubabor, Keffa and Gondar took the 3rd, 4th and 5th place respectively (i.e. 16.7%, 6.9% and 4.5). (See Table 22)

From the production side, the resettlement area of Illubabor took a share of 21.9 percent of the total production whild Gojjam, Keffa and Gondar resettlement areas have taken 16.8%, 5.3% and 1.1% of the production, respectively.

TABLE 22:- DISTRIBUTION OF TOTAL AREA AND PRODUCTION OF MAJOR CROPS
 IN THE RESETTLEMENT AREAS BY REGION IN 1987/88 (1980 E.C.)
 (PRIVATE AND COOPERATIVES)

REGION	AREA		PRODUCTION	
	THOUSAND HECTARES	PERCENT	THOUSAND QUINTALS	PERCENT
GOJJAM	18.95	20.4	169.38	16.8
GONDER	4.08	4.5	11.11	1.1
ILLUBABOR	14.26	16.7	220.92	21.9
KEFFA	6.33	6.9	54.27	5.3
WELLEGA	46.94	51.5	554.29	54.9
TOTAL	91.20	100.0	1009.97	100.0

TABLE 23:- AVERAGE PRODUCTION OF MAJOR CROPS PER HOUSEHOLD
IN THE RESETTLEMENT AREAS

BY REGION IN

1987/88 (1980 E.C.)

REGION	TOTAL No. OF H/H IN THE RESET. AREA*	TOTAL PROD- UCTION IN RESETTLEMENT AREAS (IN QUINTAL)	AVERAGE PRODUCTION PER H/H IN QUINTAL
GOJJAM	21,423	169,380	7.9
GONDAR	1,333	11,110	8.3
ILLUBABOR	33,549	220,920	6.6
KEFFA	11,926	54,270	4.6
WELLEGA	48,926	554,290	11.3
TOTAL	117,157	1,0009,970	8.6

* CSA, UNPUBLISHED DOCUMENT

6. PERFORMANCE OF THE RESETTLEMENT POPULATION AS COMPARED
TO THE INDIGINOUS
(PRIVATE HOLDINGS)

As explained in the introductory section, this resettlement programme was launched in five administrative regions, namely, Gojjam, GONDAR, Illubabor, Keffa and Wellega. In these regions, when implementing this programme, two types of settlement scheme were exercised. The first type, known as Conventional or 'MEDEBEGNA' is resettlement in open but cultivable areas largely uninhabited. On the other hand, the second type of resettlement was what is called Integrated or 'SIGISEGA' is resettlement within sparsely or under populated areas and where settlers are integrated into the already existing Peasant Associations.

It should be noted that, among the five administrative regions where resettlement programme was launched, both the Medebegna and Sigisega type were exercised in Illubabor, Keffa and Wellega regions; however, Gojjam and Gondar had only the Medebegna type of settlement.

To evaluate the performance of the farmers in the resettlement areas, it will be enough to look at the yield data of indiginous farmers visa vie Medebegna and Sigisega settlers. Hence we will be looking at the yield data of Illubabor, Keffa and Wellega settlers where both types of settlement exist.

In Table 24, for example, yield data of the indiginous, the 'Medebegna' and 'Sigisega' settlers are presented by type of crop. The yield estimates, as shown in this table; for most cases are almost very close for all the three types of inhabitants with respect to cereal crops.

The Medebegna settlers, for example, produce 14.65 qt/ha and the Sigisega 14.49 qt/ha. On the other hand, the indiginous farmers produce 13.37 qt/ha. Hence all of them do show very competitive performance though the indiginous farmers have all the advantages over the new settlers.

Though it should not be exaggerated, the new resettled population do have very encouraging performance. One should bear in mind that the resettled people are new to the surrounding where they are residing now. Most of the resettlement sites are the low lands of Wellega, Illubabor and Gojjam though there are some exceptions. On the other hand, these displaced people are from the highlands. Though the resettled people were assisted by the government as well as international bodies during the earley periods of their settlement, their agricultural performance as measured by the findings of this survey is clear testimoney of their success as agriculturalist and their adaptation to local conditions. In Table 25, the yield data for the resettled people in Keffa and Table 26 for Wellega is presented where we can see the comparable performance of the settlers with the indiginous farmers. In fact, for some crops, the new settlers show better performance than the indiginous.

TABLE 24:- PERFORMANCE OF THE RESETTLED POPULATION COMPARED TO THE
INDIGENOUS FARMERS IN ILLUBABOR IN 1987/88 (1980 E.C)
(PRIVATE HOLDINGS)

C R O P	YIELD (QT/HA)		
	INDIGENOUS	MEDEBEGNA	SIGSEGA
CEREALS	13.37	14.65	14.49
TEFF	6.58	-	4.86
BARLEY	5.68	-	3.76
WHEAT	9.11	-	10.60
MAIZE	22.44	16.75	20.06
SORGHUM	14.40	14.31	14.52
MILLET	4.81	-	-
RICE	-	6.00	-
PULSES	3.72	-	8.00
HORSE BEANS	3.96	-	-
CHICK PEAS	4.80	-	-
FIELD PEAS	1.67	-	-
HARICOT BEANS	4.00	-	8.00
VETCH	2.33	-	-
OTHERS	-	6.67	0.00
LINSEED	-	-	0.00
SESAME	-	6.00	-
GROUNDNUT	-	8.00	-
ALL CROPS	13.19	14.50	14.47

TABLE 25 :- PERFORMANCE OF THE RESETTLED POPULATION COMPARED TO THE INDIGINOUS FARMERS IN KEFFA IN 1987/88 (1980 E.C) , PRIVATE HOLDINGS

C R O P	YIELD (QT/HA)		
	INDIGINOUS	MEDEBEGNA	SIGISEGA
CEREALS	16.30	18.78	11.91
TEFF	11.72	6.88	12.61
BARLEY	10.91	9.00	9.67
WHEAT	10.50	-	10.50
MAIZE	20.70	27.05	9.85
SORGHUM	14.65	12.22	17.00
MILLET	10.00	15.83	7.56
PULSES	10.18	6.52	7.92
HORSE BEANS	11.18	3.00	12.50
CHICK PEAS	-	11.00	-
FIELD PEAS	0.50	-	5.00
HARICOT BEANS	12.00	5.50	6.20
SOYA BEANS	-	10.00	-
OTHERS	-	4.00	-
NEUG	-	3.50	-
SESAME	-	4.25	-
ALL CROPS	16.18	16.57	11.67

TABLE 26:- PERFORMANCE OF THE RESETTLED POPULATION COMPARED TO THE INDIGINOUS FARMERS IN WELLEGA IN 1987/88 (1980 E.C.), PRIVATE HOLDINGS

C R O P	YIELD (QT./HA.)		
	INDIGINOUS	MEDEBEGNA	SIGSEGA
CEREALS	11.81	18.94	11.67
TEFF	6.86	8.89	5.04
BARLEY	6.75	-	6.00
WHEAT	10.84	-	5.00
MAIZE	22.68	20.13	20.66
SORGHUM	12.91	6.53	10.33
MILLET	7.37	2.80	7.25
OATS	12.30	-	-
PULSES	10.02	13.82	6.06
HORSE BEANS	10.92	-	2.00
CHICK PEAS	13.78	5.50	6.73
FIELD PEAS	6.31	-	-
HARICOT BEANS	13.55	15.21	0.00
OTHERS	3.76	7.67	3.00
NEUG	3.71	7.44	3.14
LINSEED	4.44	-	-
FENUGREEK	2.25	-	-
SESAME	-	7.80	2.50
ALL CROPS	10.62	17.92	10.98

7. AGRICULTURAL PRACTICES IN RESETTLEMENT AREAS

PRIVATE HOLDINGS, 1987/88 (1980 E.C)

7.1 IMPROVED SEED

The amount and estimates of the use of improved seed, irrigated area, use of commercial fertilizers and use of pesticides and insecticides by farmers are the major indicators of the adaptation of modern technology in the agricultural sector. This practice has also direct relation to the increase in yield for different crops.

In this section, area under crop under different agricultural practices i.e. seed variety, irrigation, fertilizer and pesticides (total and by region); type and amount of fertilizers applied by crop and respective percentages in the resettlement areas are presented from Table 27 to Table 37.

In all the resettlement areas of the private holdings, it is estimated that 27.1 thousand hectares of land (83.5% of the total area) was under local seed where 3.35 thousand hectares which is about 10 percent of the total cultivated area by private farmers was under improved seed (See Table 27). Of this total area under improved seed, over 85 percent is that of sorghum and the remaining 15 percent goes to maize (13 percent) and sesame (2percent).

If we observe this data by region, of the total area of land under improved seed which is 3.35 thousand hectares, it is in Illubabor where over 82 percent (2.8 thousand hectares) of area under improved seed is found among the resettlement regions. The remaining percent goes to Gondar (19.1 percent), Wellega (7.5 percent) and Keffa (about 0.3 percent). We should also note that in the resettlement areas of Gojjam, there is no report on use of improved seed in particular and no report on any type of agricultural practices in general.

2 IRRIGATED AREA

It is known that the majority of Ethiopian farmers (almost all) grow rain fed crop. However, since the 1973/74 drought, the government as well as other

.../...

agencies have been encouraging and helping the farmers to get used to the advantage of irrigation practice. Having this in mind, during the survey irrigation practice in the resettlement areas have been assessed. But the estimates we have in table 27 (for the total resettlement areas) and table 28 to 31 (regional estimates) are not encouraging.

As indicated earlier, for example, the total area cultivated in the private holdings is 32.44 thousand hectares. However, of this total, it is only 0.25 thousand hectares (less than 1 percent) which is irrigated. It should also be noted that even this small percent is practiced only in the resettlement areas of Illubabor administrative region. The other regions where resettlement was launched did not report any irrigation practice.

7.3 FERTILIZER APPLIED AREA AND QUANTITY

As it has been reported in the survey, apart from the natural fertilizers, there are two types of commercial fertilizers which are known and used by our farmers. The two commonly used commercial fertilizers are: DIAMMONIUM PHOSPHATE (DAP) and AMONIUM NITRATE (UREA) where the farmers could easily identify them by their colours.

As indicated in table 32, it is estimated that commercial fertilizers were applied on 4.45 thousand hectares (13.7 percent) of land under major crops by private holdings in the resettlement areas.

The application of commercial fertilizers differs from crop to crop. The highest percentage of area on which commercial fertilizes were used is for Sorghum, 54.2 percent of the total applied area, followed by Teff, 38.2 percent, Maize 16.5 percent and less than 1 percent of area under sesame reported to have applied commercial fertilizers.

On the other hand, natural fertilizers covered only 0.2 percent of the total area under major crops. The highest percent of area under natural fertilizers was for Maize (0.1 percent). For details see table 32.

With respect to the quantity of commercial fertilizers, applied in the resettlement areas, a total of 2.85 thousand quintals of commercial fertilizers were applied.

The most commonly used commercial fertilizer in the private holdings of the resettlement areas was DAP, i.e. 86.5% of all commercial fertilizers. Of the total commercial fertilizer applied in the resettlement areas, 99.9 percent was applied on fields under cereal crops and 0.1 percent used on other crops.

The result of this survey also indicate that the amount of commercial fertilizers used per hectare of area under major crops is 8.8 kg/ha (7.6 kg/ha for DAP and 1.2 kg/ha for UREA). For details see Table 33 for all resettlement areas and Table 34 to 37 for individual resettlement areas.

As for the quantity of commercial fertilizer used per hectare of applied area, the estimates are given in Table 39. As indicated in this Table, on area where commercial fertilizer were applied, the amount of fertilizer applied for cereal crops was 90 kg/ha for DAP, 35.7 kg/ha for UREA and 74 kg/ha for mixture of both DAP and UREA. Among the cereal crops, the quantity used per hectare of applied area is the highest for Sorghum and Millet which is 105.7 kg/ha (for DAP) and 105 kg/ha (for UREA) respectively.

At regional level, the estimates of the quantity of commercial fertilizers used are given from table 34 to 37 and regional distribution in Table 38. The results in these tables indicate that of the total commercial fertilizers used in the resettlement areas, 84.3 percent is used in Illubabor and 11.5 percent in Wellega and the remaining 4.2 percent in Keffa and Gondar (3.8 percent in Keffa and 0.4 percent in Gonder resettlement areas).

Region	DAP (kg/ha)	UREA (kg/ha)	Mixture (kg/ha)	Total (kg/ha)
Illubabor
Wellega
Keffa
Gondar
...

7.4 PESTICIDES:

In the resettlement areas, the result of the survey indicates that pesticides were applied on an area of 0.9 thousand hectares (2.8 percent of the total area under crop) where the highest percentage of area on which pesticides were used are for Sorghum (1.9 percent) and Maize (0.8 percent). The result also shows that it is only on cereal crops where pesticides were applied. For details see Tables 27 to 32.

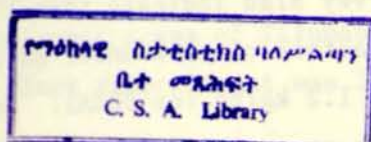


TABLE 27:- TOTAL AREA AND PERCENTAGE OF AREA UNDER DIFFERENT AGRICULTURAL PRACTICES IN THE PRIVATE HOLDINGS OF THE RESETTLEMENT AREAS IN 1987/88 (1980 E.C)

C R O P	(AREA IN 000' HA.)							
	IMPROVED SEED		IRRIGATION		FERTILIZER APPLIED*		PESTICIDE APPLIED	
	AREA	PERCENT	AREA	PERCENT	AREA	PERCENT	AREA	PERCENT
CEREALS	3.27	10.8	0.25	0.8	4.50	14.8	0.90	3.0
TEFF	-	-	-	-	1.47	20.8	0.01	0.01
WHEAT	-	-	-	-	0.01	2.0	-	-
MAIZE	0.42	2.7	-	-	0.29	1.9	0.26	0.7
SORGHUM	2.85	46.4	0.25	4.1	2.71	44.1	0.63	10.3
MILLET	-	-	-	-	0.02	4.3	-	-
OTHERS	0.08	6.3	-	-	0.01	0.8	-	-
SESAME	0.08	8.2	-	-	0.01	1.0	-	-
ALL CROPS	3.35	10.3	0.25	0.8	4.51	13.9	0.90	2.8

* COMMERCIAL AND NATURAL

TABLE 28:- TOTAL AREA AND PERCENTAGE OF AREA UNDER DIFFERENT
 AGRICULTURAL PRACTICES IN THE PRIVATE HOLDINGS
 OF THE RESETTLEMENT AREAS OF GONDAR REGION
 IN 1987/88 (1980 E.C)

(AREA IN 000' HA)

C R O P	IMPROVED SEED		IRRIGATION		FERTILIZER APPLIED*		PESTICIDE APPLIED	
	AREA	PERCENT	AREA	PERCENT	AREA	PERCENT	AREA	PERCENT
CEREALS	0.26	7.8	-	-	0.05	1.5	0.01	0.3
MAIZE	0.16	9.7	-	-	0.04	2.4	0.00	0.0
SORGHUM	0.10	5.9	-	-	0.01	0.6	0.01	0.6
OTHERS	0.08	14.3	-	-	0.01	1.8	-	-
SESAME	0.08	14.3	-	-	0.01	1.8	-	-
ALL CROPS	0.34	8.3	-	-	0.06	1.5	0.01	0.2

*

COMMERCIAL AND NATURAL

TABLE 29:- TOTAL AREA AND PERCENTAGE OF AREA UNDER DIFFERENT AGRICULTURAL PRACTICES IN THE PRIVATE HOLDINGS OF THE RESETTLEMENT AREAS OF ILLUBABOR REGION IN 1987/88 (1980 E.C)

C R O P	(AREA IN 000* HA)							
	IMPROVED SEED		IRRIGATION		FERTILIZER APPLIED*		PESTICIDE APPLIED	
	AREA	PERCENT	AREA	PERCENT	AREA	PERCENT	AREA	PERCENT
CEREALS	2.75	18.1	0.25	1.6	3.32	21.9	0.61	4.0
TEFF	-	-	-	-	0.65	11.9	-	-
MAIZE	0.10	1.8	-	-	-	-	-	-
SORGHUM	2.65	81.0	0.25	7.6	2.67	81.7	0.61	18.7
ALL CROPS	2.75	18.0	0.25	1.6	3.32	21.8	0.61	4.0

* COMMERCIAL AND NATURAL

TABLE 30:-

TOTAL AREA AND PERCENTAGE OF AREA UNDER
DIFFERENT AGRICULTURAL PRACTICES IN THE PRIVATE
HOLDINGS OF THE RESETTLEMENT AREAS OF KEFFA REGION
IN 1987/88 (1980 E.C)

(AREA IN 000' HA.)

C R O P	IMPROVED SEED		IRRIGATION		FERTILIZER APPLIED*		PESTICIDE APPLIED	
	AREA	PERCENT	AREA	PERCENT	AREA	PERCENT	AREA	PERCENT
CEREALS	0.01	0.05	-	-	0.25	13.2	0.01	0.5
TEFF	-	-	-	-	0.20	41.7	0.01	2.1
WHEAT	-	-	-	-	0.01	50.0	-	-
MAIZE	0.01	1.4	-	-	0.02	2.9	-	-
SORGHUM	-	-	-	-	0.02	6.1	-	-
ALL CROPS	0.01	0.5	-	-	0.25	11.8	0.1	0.5

*

COMMERCIAL AND NATURAL

TABLE 31:- TOTAL AREA AND PERCENTAGE OF AREA UNDER DIFFERENT AGRICULTURAL PRACTICES IN THE PRIVATE HOLDINGS OF THE RESETTLEMENT AREAS OF WELLEGA REGION IN 1987/88 (1980 E.C)

(AREA IN 000' HA.)

C R O P	IMPROVED SEED		IRRIGATION		FERTILIZER APPLIED*		PESTICIDE APPLIED	
	AREA	PERCENT	AREA	PERCENT	AREA	PERCENT	AREA	PERCENT
CEREALS	0.25	3.1	-	-	0.88	11.0	0.27	3.4
TEFF	-	-	-	-	0.62	55.4	-	-
MAIZE	0.15	-	-	-	0.23	3.8	0.26	4.3
SORGHUM	0.10	15.9	-	-	0.01	1.6	0.01	1.6
MILLET	-	-	-	-	0.02	15.4	-	-
ALL CROPS	0.25	2.8	-	-	0.88	9.8	0.27	3.0

* COMMERCIAL AND NATURAL.

TABLE 32:-
 FERTILIZERS APPLIED AREA BY CROP IN THE
 RESETTLEMENT AREAS FOR PRIVATE HOLDINGS
 IN 1987/88 (1980 E.C)

(AREA IN 000' HA.)

C R O P	FERTILIZER APPLIED AREA				
	TOTAL	NATURAL	DAP	UREA	DAT + UREA
CEREALS	4.50	0.06	3.37	1.06	0.01
TEFF	1.47	0.01	0.51	0.94	0.01
WHEAT	0.01	-	0.01	-	-
MAIZE	0.29	0.04	0.14	0.10	-
SORGHUM	2.71	0.01	2.70	-	-
MILLET	0.02	-	-	0.02	-
OTHERS	0.01	-	0.01	-	-
SESAME	0.01	-	0.01	-	-
ALL CROPS	4.51	0.06	3.38	1.06	0.01

TABLE 33:- QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION OF THE TOTAL FERTILIZER APPLIED AND QUANTITY OF COMMERCIAL FERTILIZERS PER HECTARE OF AREA UNDER CROP BY TYPE OF FERTILIZER AND BY CROP IN THE RESETTLEMENT AREAS OF PRIVATE HOLDINGS IN 1987/88 (1980 E.C)

C R O P	QUANTITY OF COMMERCIAL FERTILIZER APPLIED*				PERCENTAGE OF THE TOTAL	QUANTITY OF COMMERCIAL FERTILIZER PER HECTARE OF AREA UNDER CROP		
	DAP	UREA	DAP + UREA	TOTAL		TOTAL	DAP	UREA
						KG/HA		
CEREALS	246.51	37.87	0.74	285.12	99.9	9.4	8.1	1.2
TEFF	21.55	33.82	0.74	56.11	19.7	7.9	3.1	4.8
WHEAT	0.23	-	-	0.23	0.1	0.5	0.5	0.0
MAIZE	5.90	1.95	-	7.85	2.8	0.5	0.4	0.1
SORGHUM	218.83	-	-	218.83	76.7	35.6	35.6	0.0
MILLET	-	2.10	-	2.10	0.7	4.6	0.0	2.6
OTHERS	0.31	-	-	0.31	0.1	0.2	0.2	0.0
SESAME	0.31	-	-	0.31	0.1	0.3	0.3	0.0
ALL CROPS	246.82	37.87	0.74	285.43	100.0	8.8	7.6	1.2

* IN THOUSAND KG.

TABLE 34:- QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION
OF THE TOTAL FERTILIZER APPLIED BY TYPE OF FERTILIZER AND BY CROP
IN RESETTLEMENT AREAS OF GONDAR, PRIVATE HOLDINGS, IN 1987/88 (1980 E.C)

C R O P	QUANTITY OF FERTILIZER APPLIED (000'kg)				PERCENTAGE OF THE TOTAL	QUANTITY OF COMMERCIAL FERTILIZER PER HECTARE OF AREA UNDER CROP		
	DAP	UREA	DAP + UREA	TOTAL		TOTAL	DAP	UREA
KG/HA								
CEREALS	0.75	-	-	0.75	70.8	0.22	0.22	-
MAIZE	0.10	-	-	0.10	9.5	0.06	0.06	-
SORGHUM	0.65	-	-	0.65	61.3	0.38	0.38	-
OTHERS	0.31	-	-	0.31	29.2	0.55	0.55	-
SESAME	0.31	-	-	0.31	29.2	0.55	0.55	-
ALL CROPS	1.06	-	-	1.06	100.0	0.26	0.26	-

TABLE 35:-

QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION OF THE TOTAL FERTILIZER APPLIED AND QUANTITY OF COMMERCIAL FERTILIZER PER HECTARE OF AREA UNDER CROP BY TYPE OF FERTILIZER AND BY CROP IN RESETTLEMENT AREAS OF ILLUBABOR PRIVATE HOLDINGS, IN 1987/88 (1980 E.C)

C R O P	QUANTITY OF FERTILIZER APPLIED (000'kg)				PERCENTAGE OF THE TOTAL	QUANTITY OF COMMERCIAL FERTILIZER PER HECTARE OF AREA UNDER CROP		
	DAP	UREA	DAP + UREA	TOTAL		TOTAL	DAP	UREA
						KG/HA		
CEREALS	218.18	22.43	-	240.61	100.0	15.85	14.37	1.48
TEFF	0.59	22.43	-	23.02	9.6	4.22	0.12	4.12
SORGHUM	217.59	-	-	217.59	90.4	66.54	66.54	-
ALL CROPS	218.18	22.43	-	240.61	100.0	15.77	14.30	1.47

TABLE 36:- QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION
OF THE TOTAL FERTILIZER APPLIED AND QUANTITY OF COMMERCIAL
FERTILIZER PER HECTARE OF AREA UNDER CROP BY TYPE
OF FERTILIZER AND BY CROP IN THE RESETTLEMENT AREAS
OF KEFFA, PRIVATE HOLDINGS IN 1987/88 (1980 E.C)

C R O P	QUANTITY OF FERTILIZER APPLIED (000'kg)				PERCENTAGE OF THE TOTAL	QUANTITY OF COMMERCIAL FERTILIZER PER HECTARE OF AREA UNDER CROP		
	DAP	UREA	DAP + UREA	TOTAL		TOTAL	DAP	UREA
						KG/HA		
CEREALS	10.12	0.69	-	10.81	100.0	5.69	5.33	0.36
TEFF	9.30	-	-	9.30	86.0	19.37	19.38	-
WHEAT	0.23	-	-	0.23	2.1	11.50	11.50	-
MAIZE	-	0.69	-	0.69	6.4	0.99	-	0.99
SORGHUM	0.59	-	-	0.59	5.5	1.79	1.79	-
ALL CROPS	10.12	0.69	-	10.81	100.0	5.10	4.77	0.33

TABLE 37:- QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE DISTRIBUTION OF THE TOTAL FERTILIZER APPLIED AND QUANTITY OF COMMERCIAL FERTILIZER PER HECTARE OF AREA UNDER CROP BY TYPE OF FERTILIZER AND BY CROP IN THE RESETTLEMENT AREAS OF WELLEGA, PRIVATE HOLDINGS IN 1987/88 (1980 E.C)

C R O P	QUANTITY OF FERTILIZER APPLIED (000*kg)				PERCENTAGE OF THE TOTAL	QUANTITY OF COMMERCIAL FERTILIZER PER HECTARE OF AREA UNDER CROP		
	DAP	UREA	DAP + UREA	TOTAL		TOTAL	DAP	UREA
						KG/HA		
CEREALS	17.46	14.75	0.74	32.95	100.0	4.13	2.19	1.85
TEFF	11.66	11.39	0.74	23.79	72.2	21.24	10.41	10.17
MAIZE	5.80	1.26	-	7.06	21.4	1.16	0.95	0.21
MILLET	-	2.10	-	2.10	6.4	16.15	-	16.15
ALL CROPS	17.46	14.75	0.74	32.95	100.0	3.67	1.94	1.64

TABLE 38:- QUANTITY OF COMMERCIAL FERTILIZER APPLIED AND PERCENTAGE
DISTRIBUTION BY REGION IN THE RESETTLEMENT AREAS,
PRIVATE HOLDINGS IN 1987/88 (1980 E.C)

REGION	COMMERCIAL FERTILIZER APPLIED	
	QUANTITY (000' KG)	PERCENT
GONDAR	1.06	0.4
ILLUBABOR	240.61	84.3
KEFFA	10.81	3.8
WELLEGA	32.95	11.5
TOTAL	285.43	100.0

TABLE 39:-

QUANTITY OF COMMERCIAL FERTILIZER APPLIED
PER HECTARE OF APPLIED AREA IN THE RESETTLEMENT
AREAS OF PRIVATE HOLDINGS IN 1987/88 (1980 E.C)

C R O P	FERTILIZER APPLIED AREA (000'HA.)				QUANTITY OF COMMERCIAL FER- TILIZER/HECTARE OF APPLIED AREA (KG/HA)			
	TOTAL	DAP	UREA	DAP + UREA	TOTAL	DAP	UREA	DAP + UREA
CEREALS	4.44	3.37	1.06	0.01	64.2	73.1	35.7	74.0
TEFF	1.46	0.51	0.94	0.01	38.4	42.3	36.0	74.0
WHEAT	0.01	0.01	-	-	23.0	23.0	0.0	0.0
MAIZE	0.25	0.15	0.10	-	31.4	39.3	19.5	0.0
SORGHUM	2.70	2.70	-	-	81.0	81.0	0.0	0.0
MILLET	0.02	-	0.02	-	105.0	0.0	105.0	0.0
OTHERS	0.01	0.01	-	-	31.0	31.0	0.0	0.0
SESAME	0.01	0.01	-	-	31.0	31.0	0.0	0.0
ALL CROPS	4.45	3.38	1.06	0.01	64.1	73.0	35.7	74.0

LIVESTOCK, POULTRY AND BEEHIVES IN THE RESETTLEMENT

AREAS IN 1987/88(1980 E.C.)

PRIVATE HOLDINGS

As indicated in the introductory paragraph, data on Livestock, Poultry and Beehives were collected during the agricultural survey conducted in the resettlement areas of Gojjam, Gondar, Illubabor, Keffa and Wellega.

In Tables 40 and 41, the estimates are given for the whole resettlement areas by type. As shown in Table 40, for example, the total estimates of livestock in these resettlement areas are 1,152.52 thousand. Of this total 851.55 thousand (73.95%) is that of cattle and 170.39 thousand (14.8%) Sheep and 88.01 thousand goats. The remaining 3.61 percent goes to horses, asses and mules.

On the other hand, the total number of poultry, as indicated also in this same table, is 1,069.28 thousand and that of beehives is 290.53 thousand.

The estimates of the number of livestock and poultry by sex and number of beehives are given in Table 41. As indicated in this table, of the total estimates of livestock in the resettlement areas which are 1,151.52 thousand, 716.96 thousand (62.26%) are females and 434.56 thousand (37.74%) are males.

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Of this total estimate of livestock, 851.55 thousand (73.95%) is Cattle. It is estimated that out of the 851.55 thousand cattle 494.16 thousand are females (i.e. 58.03% of the total cattle) and 357.39 thousand are males (i.e. 41.97%). These estimates indicate that for every 100 male cattle, there are 138.3 female cattle in the resettlement areas.

It is also estimated that total number of sheep in the resettlement areas is 170.39 thousand, while for goats it is 88.01 thousand. Of the total number of sheep 40.43 thousand (23.73%) are males and 129.96 thousand (76.27%) are females. For other details see Table 41.

From Table 42 to Table 48 estimates of number of cattle, sheep, goats, horses, asses, mules and Poultry by sex and their percentage distribution and number of beehives by region are presented.

* Includes Chickens

TABLE 40 : TOTAL NUMBER OF LIVESTOCK AND THEIR PERCENTAGE DISTRIBUTION, POULTRY AND BEEHIVES IN THE RESETTLEMENT AREAS PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.)

ITEM	NUMBER IN THOUSANDS	PERCENTAGE
CATTLE	851.55	73.95
SHEEP	170.39	14.80
GOATS	88.01	7.64
HORSES	11.84	1.03
ASSES	24.10	2.09
MULES	5.63	0.49
TOTAL	1,151.52	100.00
POULTRY	1,069.28	-
BEEHIVES	290.53	-

TABLE 41: TOTAL NUMBER OF LIVESTOCK AND POULTRY BY SEX
AND THEIR PERCENTAGE DISTRIBUTION AND NUMBER OF
BEEHIVES IN THE RESETTLEMENT AREAS, PRIVATE
HOLDINGS, IN 1987/88 (1980 E.C.)

ITEM	NUMBER IN THOUSANDS			PERCENTAGE		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
CATTLE	357.39	494.16	851.55	41.97	58.03	100.00
SHEEP	40.43	129.96	170.39	23.73	76.27	100.00
GOATS	19.61	68.40	88.01	22.28	77.72	100.00
HORSES	6.31	5.53	11.84	53.29	46.71	100.00
ASSES	8.55	15.55	24.10	35.48	64.52	100.00
MULES	2.27	3.36	5.63	40.32	59.68	100.00
TOTAL	434.56	716.96	1,151.52	37.74	62.26	100.00
POULTRY	677.49*	391.79	1069.28	63.36	36.64	100.00
BEEHIVES	-	-	209.53	-	-	-

* Includes Chicken

TABLE 42 : NUMBER OF CATTLE AND THEIR PERCENTAGE
DISTRIBUTION BY SEX AND BY REGION IN THE
RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN
1987/88 (1980 E.C.)

REGION	NUMBER IN THOUSANDS			PERCENTAGE
	MALE	FEMALE	TOTAL	TOTAL
GOJJAM	0.26	0.35	0.61	0.07
GONDAR	1.12	0.03	1.15	0.32
ILLUBABOR	108.23	140.34	248.57	30.28
KEFFA	47.24	69.17	115.41	12.94
WELLEGA	201.54	284.27	485.81	56.39
TOTAL	357.39	494.16	851.55	100.00

TABLE 43: NUMBER OF SHEEP AND THEIR PERCENTAGE DISTRIBUTION
 BY SEX AND BY REGION IN THE RESETTLEMENT AREAS,
 PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.)

REGION	NUMBER IN THOUSANDS			PERCENTAGE
	MALE	FEMALE	TOTAL	TOTAL
GOJJAM	-	-	-	-
GONDAR	0.01	0.01	0.02	0.02
ILLUBABOR	23.49	68.45	91.94	58.10
KEFFA	6.04	14.47	20.51	14.94
WELLEGA	10.89	47.03	57.92	26.94
TOTAL	40.43	129.96	170.39	100.00

TABLE 44: NUMBER OF GOATS AND THEIR PERCENTAGE DISTRIBUTION BY SEX AND BY REGION IN THE RESETTLEMENT AREAS, PRIVATE HOLDINGS, IN 1989/88 (1980 E.C.)

REGION	NUMBER IN THOUSANDS			PERCENTAGE
	MALE	FEMALE	TOTAL	TOTAL
GOJJAM	0.60	2.93	3.53	4.01
GONDAR	0.20	0.60	0.80	0.91
ILLUBABOR	6.81	18.07	24.88	28.27
KEFFA	3.28	12.45	15.73	17.87
WELLEGA	8.72	34.35	43.07	48.94
TOTAL	19.61	68.40	88.01	100.00

TABLE 45 : NUMBER OF HORSES AND THEIR PERCENTAGE DISTRIBUTION
 BY SEX AND BY REGION IN THE RESETTLEMENT AREAS,
 PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.)

REGION	NUMBER IN THOUSANDS			PERCENTAGE TOTAL
	MALE	FEMALE	TOTAL	
GOJJAM	-	-	-	-
GONDAR	-	-	-	-
ILLUBABOR	3.40	3.74	7.14	60.31
KEFFA	0.43	0.63	1.06	8.95
WELLEGA	2.48	1.16	3.64	30.74
TOTAL	6.31	5.53	11.84	100.00

TABLE 46 : NUMBER OF MULES AND THEIR PERCENTAGE DISTRIBUTION
 BY SEX AND BY REGION IN THE RESETTLEMENT AREAS,
 PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.)

REGION	NUMBER IN THOUSANDS			PERCENTAGE
	MALE	FEMALE	TOTAL	TOTAL
GOJJAM	-	-	-	-
GONDAR	-	-	-	-
ILLUBABOR	0.79	0.41	1.20	21.32
KEFFA	0.25	0.41	0.66	11.72
WELLEGA	1.23	2.54	3.77	66.96
TOTAL	2.27	3.36	5.63	100.00

TABLE 47 : NUMBER OF ASSES AND THEIR PERCENTAGE DISTRIBUTION
BY SEX AND BY REGION IN THE RESETTLEMENT AREAS ,
PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.)

REGION	NUMBER IN THOUSANDS			PERCENTAGE TOTAL
	MALE	FEMALE	TOTAL	
GOJJAM	-	-	-	-
GONDAR	0.01	0.02	0.03	0.12
ILLUBABOR	0.67	0.15	0.82	3.40
KEFFA	0.26	0.65	0.91	3.78
WELLEGA	7.61	14.73	22.34	92.70
TOTAL	8.55	15.55	24.10	100.00

TABLE 48 : NUMBER OF HENS, PULLETS, COCKS, COCKRELS
AND CHICKEN AND THEIR PERCENTAGE DISTRIBUTION
BY SEX AND BY REGION IN THE RESETTLEMENT AREAS,
PRIVATE HOLDINGS, IN 1987/88 (1980 E.C.)

REGION	NUMBER IN THOUSANDS				PERCENTAGE TOTAL
	MALE	FEMALE	CHICKEN	TOTAL	
GOJJAM	4.62	10.19	11.93	26.74	2.50
GONDAR	1.19	2.95	2.08	6.22	0.58
ILIUABOR	88.57	170.01	147.87	406.45	38.01
KEFFA	26.35	55.53	70.03	151.91	14.21
WELLEGA	73.01	153.11	251.84	477.96	44.70
TOTAL	193.74	391.79	483.75	1,069.28	100.00

TABLE 49 : NUMBER OF BEEHIVES AND THEIR PERCENTAGE
DISTRIBUTION BY REGION IN THE RESETTLEMENT
AREAS, PRIVATE HOLDINGS, IN 1987/88
(1980 E.C.)

REGION	NUMBER IN THOUSANDS	PERCENTAGE
GOJJAM	0.81	0.28
GONDAR	0.12	0.04
ILLUBABOR	131.09	45.12
KEFFA	49.24	16.95
WELLEGA	109.27	37.61
TOTAL	290.53	100.00

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