

**AGRICULTURAL MANAGEMENT,
MARKETING AND FINANCE
WEB DOCUMENT**

**Small farmer participation in export production:
The case of Ethiopia**



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By

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Preface

In January of 2003, the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) and the Eastern and Central Africa Programme for Agricultural Policy Analysis (ECAPAPA), in conjunction with the Food and Agriculture Organization of the United Nations (FAO), commissioned research studies on small farmer participation in export production in four countries: Uganda, Ethiopia, Kenya and Tanzania. The four African countries selected for the case studies belong to a group of countries for which agricultural trade is particularly important and their economies are highly dependent on agricultural exports.

The country case studies aimed at providing information for improving producer capacity to respond to market changes, provide policy guidelines for institutional support to small farmer export production and understand small farmer responses to market incentives for export production and corresponding support needs. This entailed assessing the potential of improving small farmer production of export crop (traditional and non-traditional crops) and examining farmer and institutional constraints critical to farmers' participation in export crop production.

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The studies on small farmer participation in export crop production in four African countries were initiated by Angelika Schückler (2005), Farm Management Economist, Agricultural Management, Marketing and Finance (AGSF) Service of the Food and Agriculture Organization of the United Nations (FAO). Gratitude is owed to Angelika and to her dedication to all that she did. This series of web documents on small farmer participation in export crop production is dedicated to her memory.

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Acronyms

ADLE	Agricultural Development Industrialization Led strategy
AfDB	African Development Bank
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
BOA	Bureau Of Agriculture
Birr	Ethiopian Currency Unit
DBE	Development Bank of Ethiopia
EEPA	Ethiopian Export Promotion Agency
ECAPAPA	Eastern and Central Africa Programme for Agricultural Policy Analysis
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
MASL	Meters Above Sea Level
NBE	National Bank of Ethiopia
NGO	Non-Governmental Organization
NTB	Non-Tariff Barriers
PA	Peasant Association
RSDP	Road Sector Development Plan
WB	World Bank
WTO	World Trade organization

1. Resource endowments of Ethiopia

Ethiopia has several climate zones suitable for various types of agricultural undertakings; more than half of the country has a highland climate (1 500 meters above sea level (MASL)) suitable for various field food and horticultural crops. The majority of the country is endowed with adequate rainfall for sustainable crop production and agriculture exerts a big influence on the Ethiopian economy, accounting for about 53 percent of the Gross Domestic Product (GDP), 90 percent of the foreign exchange earnings and 85 percent of total employment. Further 70 percent of the raw material requirements for large and medium-sized industries are agro-based. Out of the export earnings generated, coffee accounts for about 70 percent of the foreign exchange earnings followed by hides and skins (MEDAC, 1999). The agriculture sector is still predominantly small-scale and the seven million smallholder farmers produce more than 90 percent of agricultural production (MEDAC, 1999). The country's agricultural potential is believed to be quite substantial, it is estimated that 65 percent of the total area of the country is suitable for agricultural purposes and over 15 percent of the total land mass is potentially cultivable. Major irrigation schemes could be developed in the semi-arid low lands for the production of high value cash crops.

The major crops produced include cereals (teff (*Eragrostic tef*)), maize, sorghum, barley, wheat, millet, oats), pulses (faba bean, chickpea, field pea, haricot bean, grass pea, lentil, fenugreek), oil crops (noug, linseed, rapeseed, sesame), roots and tubers (enset, potato, sweet potato, taro, yam), vegetables (tomato, onions, brassicas), fruit crops (citrus, grapes), coffee, sugar cane, spices and cotton. In terms of hectares, cereals cover 74.7 percent of the cultivated land (7 million hectares) followed by pulses, perennials (coffee, enset, etc.), oilseeds, and other annuals covering in order; 11.4 percent, 7.0 percent, 4.3 percent and 2.5 percent respectively (CSA, 2002).

Despite these facts, agricultural production had been sluggish for the 20 years before 1991, with an average annual growth rate of only 0.6 percent for major food grains. Compared to the high population growth rate of about 2.9 percent per annum there was an annual decline of 2.3 per capita in food grain availability from domestic production. This suggests that the country was not self-sufficient in food (MEDAC, 1999).

The overall performance of Ethiopia's economy is highly influenced by the performance of the agricultural sector which itself is subject to vagaries of weather and related natural and man-made factors. Consequently, GDP growth has been registering year-to-year fluctuations that are highly correlated with fluctuations in GDP originating from agriculture. The overall real GDP growth, 1.5 percent, was very dismal during the whole period of the military government; spanning between 1974 to 1991 and during 1992/93 to 1997/98 the agriculture sector grew by 3.4 percent per annum in real terms (MEDAC, 1999).

Clearly the country has not been self sufficient in food; it has been chronically dependent on food aid. The average yield for grain crops has remained very low at about 11 quintals /hectare. Available evidence reveals an average annual growth rate of only 0.6 percent for

the major food grains compared with the corresponding population growth rate of around 3 percent. Thus there has been an annual decline by 2.4 percent per capita in food grain availability from domestic production (MEDAC, 1999).

2. Government policies and strategies

Following a period of stagnation and decline for nearly two decades, the Ethiopian economy came to a turning point in 1991 when the chapter for the protracted war closed and peace and stability reigned as a result of the demise of the Dergue. In response to the challenges posed by the decline in economic and social performance, the government adopted a new economic policy in 1992 with the principal aims of stabilizing the economy and deregulating economic activities to prepare the ground for a free-market economy. Among the notable measures undertaken were: liberalization of both the input and output markets, provisions of management autonomy to public enterprises, deregulation of the transport sector and reducing the role of the state in the economy. The major points of the policy were:

- promoting domestic and foreign private investment;
- enhancing popular/community participation in development;
- mobilizing external resources;
- involving regional administrations in economic management.

The issuance of the new economic policy in November 1991, by the Government of Ethiopia, laid a corner-stone for improving the overall policy environment. It dissolved producer cooperatives, encouraged smallholders' and private commercial farms, drastically reduced public investment in state farms, abolished all compulsory food-grain quotas and restored free food-grain trade. Based on this policy the government developed and adopted the Agriculture Development-Led-Industrialization (ADLI) strategy, which was geared towards the transformation of the backward economic structure. The strategy was two-pronged; (i) incorporating the external sector (export-led part), (ii) the internal sector which showed the forward and the backward-linkages between agriculture and industry. In this connection; (1) agriculture would supply commodities for exports, domestic food supply and industrial output and (2) expand the market for domestic manufactures.

According to this strategy, growth in agriculture could be realized through:

Improved productivity of smallholder agriculture (where crop and livestock production were strongly interdependent) through mutually reinforcing ways of achieving enhanced productivity levels which included:

- combining resources of the farmer i.e. land, labour and capital in a better way;
- introducing new technologies i.e. improved seeds, improved farm implements, fertilizers and pesticides;
- widespread use of better cultural practices, minimization of post-harvest losses, greater and more efficient use of extension work and management techniques;
- the promotion of private commercial agriculture, by leasing land not occupied by small-scale cultivators and which did not jeopardize the livelihood of pastoralists.

Within this framework, in the short-term, extensive mechanized agriculture could be developed under rainfall conditions with or without fertilizers and soil amendments, while intensive commercial agriculture (medium to large-scale farms) producing high-value products for export and raw materials for domestic industries were expected to be realized in the medium and long-term.

Contrary to the previous credit programme, which involved only the Development Bank of Ethiopia (DBE) in financing rural credit, the National Bank of Ethiopia (NBE) issued a revised rural credit policy to expand credit operations in the rural sector by providing: (1) short-term credit for agricultural production and (2) investment credits for the agricultural activities in the rural sector. Therefore, to implement this policy, both the NBE and DBE increased credit outlets through branch expansion.

Self-sufficiency in food production and improved food security were the medium term agricultural sector policy targets in which high priority was accorded to encourage smallholder farmers to raise productivity by increasing incentive packages and other supports. Thus, the development of the smallholder farmers was envisaged to proceed in three stages; (1) improvement of agricultural practices and utilization of improved seeds; (2) development of agricultural infrastructure and; (3) increasing farm sizes which was to take place along side the population labour transfer from agriculture to non-agricultural activities.

When it came to institutions concerning export the Ethiopian Export Promotion Agency (EEPA), established on 24 November 1998, had the objective of promoting the country's exports. It is accountable to the Ministry of Trade and Industry. The EEPA provides service to promote Ethiopian exports on the international markets by: providing professional support (hands-on technical assistance) and training to exporters; alleviating problems faced by exporters by insuring that export trade related procedures are conducive to the countries export development; creating strong networks among support institutions, service providers and exporting companies; providing sub-contracting and other joint venture arrangements; assisting exporters in regional and international trade fairs and exhibitions; conducting supply studies and assisting exporters in product development and adaptation; conducting market research, identification and development of new export markets; providing assistance in the use of modern information and communication technologies; collecting, analyzing and disseminating trade related information to the business community and providing consultancy services; linking up Ethiopian exporters with foreign buyers; encouraging the existence of coordinated and efficient working arrangements among producers, exporters and service providers.

3. Ethiopian exports

Ethiopia's export is mainly dependent on primary products, especially coffee, pulses, oilseeds, leather and leather products, live animals, sugar and molasses, meat, fruits and vegetables, gold and others. The export structure is not a diversified one and is highly dominated by a single crop, coffee which generates about 60 percent of the foreign exchange earnings. Over the last two decades, the volume of export has not shown a clearly discernible and sustainable positive trend, except for a sharp rise in the second half of the 1990s. Considering the major export commodity groups, namely; coffee, pulses, oilseeds, hides and skins, fruits, vegetables, and chat, which today account for over 85 percent of total export earning, the volume of export of each commodity category, except fruits and vegetables, have been fluctuating (see Table 1). Only in the second half of the 1990s has exports of most commodities showed a sort of leapfrog (see Annex 1). It can be presumed that the shift in policies introduced in the early 1990s, as explained above, might have contributed to the rise in exports.

Table 1: Volume of export: five years average 1981-2000 (million tonnes)

Period	Coffee	Pulses and Oilseeds	Hides and Skins	Fruits and Vegetables	Chat
1981-85	84.2	45.0	9.3	7.2	2.4
1986-90	80.5	20.7	9.8	10.2	1.9
1991-95	61.8	15.0	5.2	12.3	2.1
1996-2000	109.7	65.3	7.7	19.6	8.0
Average Annual Growth-percent	3.3	15.8	-0.5	8.1	18.0

Source: NBE, *Quarterly Bulletin (various issues)*.

Table 1 shows average exports that have occurred in the last two decades. As shown in this table in two of the major export commodities, coffee and hides and skins, no appreciable growth was recorded over the decades. The volume of export in hides and skins actually declined in absolute terms, while coffee, after a steep decline until the mid 1990s, recovered significantly thereafter. However, even during this recovery period, there were a great deal of fluctuations. After a substantial increase (26 percent) in 1996/97 over the previous year, the volume of export declined consecutively and in the next two years by 2.5 and 8.2 percent respectively (NBE, Vol.16, No.30); in the period 1998/99 there was a recovery.

What can be inferred from Table 1 is that while the trend in the last two decades has been dismal, the resurgence in the second half of the last decade is impressive. However, given no structural change in the economy (still weather dependent agricultural export) and the short time period of the recovery in the second half of the 1990s, as well as the annual fluctuation in this period, there is little ground to expect that the high export growth recorded in recent years could be sustained in the future.

Given the decline and tremendous fluctuation of international commodity prices, little positive change is expected in the value of exports than what is observed in the pattern of volume of export. In fact for some commodities, such as pulses and oilseeds and chat, average growth in value terms are lower, though marginally, than the corresponding rates in physical terms. However, for other commodities, such as hides and skins and fruits and vegetables, there are indications that there have been marginal unit price increases over the same period. But the general picture is that over the two decades, unlike manufactured exports whose prices continuously rise there has been no noticeable change (except decreases) in the international prices for primary commodities.

Table 2: Value of major exports: five years average 1981-2000 (Million US\$)

Period	Coffee	Pulses and Oilseeds	Hides and Skins	Fruits and Vegetables	Chat	Total Export	Total export (% of GDP)
1981-85	247.07	21.98	4.21	2.20	2.14	397.43	7.3
1986-90	255.99	14.34	9.74	4.22	8.44	399.25	5.7
1991-95	168.96	9.97	4.69	2.83	7.15	275.16	3.4
1996-2000	317.98	39.05	4.83	5.15	45.60	499.93	7.9
Average Annual Growth-%	3.86	15.09	0.68	9.39	15.29	3.37	----

Source: NBE, *Quarterly Bulletin (various issues)*

So stagnant is Ethiopia's export that even after two decades the average annual export earning has not shown much change. The value of the five year average export, which was about US\$400 million in the early 1980s, remained just under US\$500 million after two decades. Also, over the two decades, the share of export in GDP remained stagnant.

Similar to many developing countries, Ethiopia too has gone through a series of stabilization and structural adjustment programmes. It has also taken measures to liberalize the trade sector. However, its success in enhancing export, particularly in non-traditional export, is highly limited. This is so because, irrespective of the many factors that affect exports, governments have been attempting to deal with the problem largely by increasing the volume of production of the same traditional primary commodities in the belief that Ethiopia has a comparative advantage in such commodities.

4. The study area

The study was conducted in two districts known for their production of export crops. These were the Haro Maya and the Boset districts of the Oromia state. A brief socio-economic profile of these districts is presented as follows:

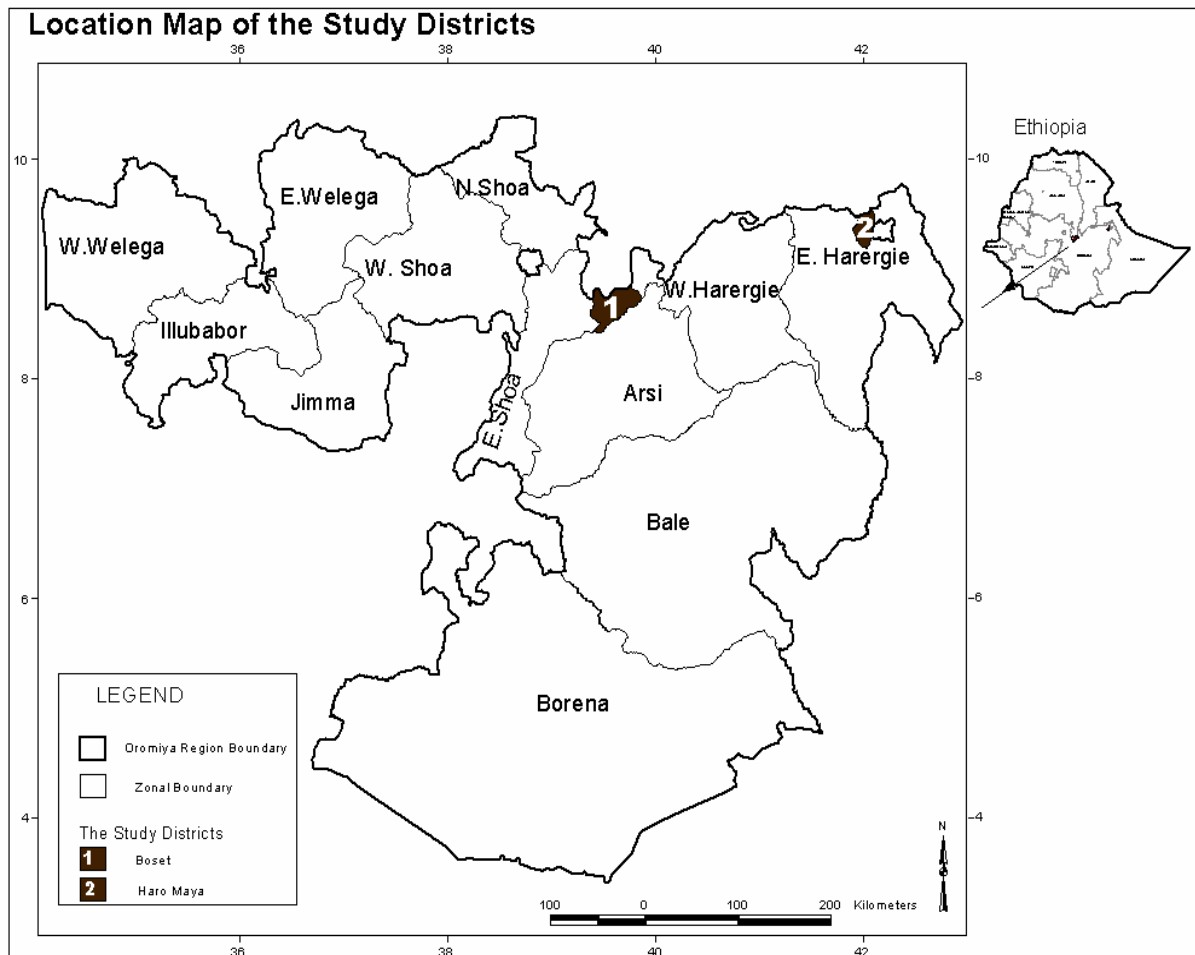
4.1. Socio-economic profile of the Haro Maya district

Having an area of 321.6 km², the Haro Maya district is found in the northern central part of the East Harerge zone. The Fedis, the Kurfachele and the Kersa districts, and the Dire Dawa administrative council and the Harari regional state border it. The Haro Maya town is the district capital. Physiographically it is characterized by the Harar plateau, mountains, hills and plains. The district stretches between 1 400 and 2 340 MASL. The district lies within the Wabi-Shebele, the Awash and inland drainage basins, and is accordingly drained by the Amaresa River, as well as the Maya Gudo and the Maya Kelo seasonal streams. The Haro Maya, the Adele and the Finkile, lakes as well as several springs are also found in the district.

The district had about 174 800 inhabitants, of which 154 690 were rural (75 851 females) and 20 140 were urban (10 060 females). (Population aged between 0-14, 15-64 and 65 years and above accounted for 45.8 percent, 52.4 percent and 1.8 percent respectively). Average household sizes for rural and urban areas were 4.5 and 5.2 persons respectively (1994 Population and Housing Census result). The crude population density of the district was estimated at 335 persons per km². It is the second most densely populated district in the zone next to Girawa and Meyu Muluke district.

About 36.1 percent, 2.3 percent and 1.5 percent of the district's total area were cultivated, pasture and forest lands respectively, while the rest was attributed to built-up, degraded and other areas. There were 33 farmers' associations and 5 Service Cooperatives with 34 422 (664 females) and 331 (9 females) member farmers respectively. The average cultivated land and farm oxen holding sizes per farmer household were 0.6 ha and 1.25 oxen. About 15 percent of the farmers were without farm ox. Maize, sorghum, potato, sweet potato vegetables and chat are widely cultivated crops in Haro Maya. Vegetables and chat are produced both for local consumption and export to Djibouti and other neighboring countries.

Variability in the amount and occurrence of rainfall, low adoption of modern agricultural inputs, lack of credit services, shortage of veterinary services, backward infrastructure facilities and natural resources' degradation (forests and soil fertility) are the major problems in the district.



4.2. Socio-economic profile of the Boset district

Boset, with an area of 1 514.1 km² is the second largest district in the East Shewa zone. It is located between 8°25' and 8°50' N latitude and 39°16' and 39°50'E longitude. It shares borders with the Fentale, the Adama and the Lume districts, the Amhara regional state and the Arsi zone; Wolenchiti town is the administrative centre of the district. The district is dominated by flat land with routing and undulating features. Nearly 90 percent of the district is below 1 500 MASL. The Awash is the most significant river in the district. The Tebo is another river that crosses the district. About 89 percent of the district is within tropical lowland (Kolla) agro-climatic zone, while about 11 percent is covered by a sub-tropical (Weina Dega) agro-climatic zone.

The district had 96 620 rural (47.7 percent male) and 20 844 urban (50.9 percent females) inhabitants. The economically active age group was 53.9 percent, while children below 15 and the elderly (65 and above) were 43.4 percent and 2.7 percent respectively. The average family size of the district was 4.5 (4.3 for urban and 4.6 for rural). The crude population density of the district was 75.6 persons per km².

The Boset district is among the districts rich in crop production and livestock rearing in the East Shewa zone. The district had 31 farmers' associations with 14 433 members (2 165 females). Similarly, there were 7 farmers' services cooperatives with 6 208 members. Cultivated and grazing lands covered about 26.2 percent and 30 percent of the district respectively. Forests and shrub lands accounted for 15.8 percent, while degraded, barren land

and others covered about 28.0 percent of the district. Cereals accounted for about 84.2 percent of the cultivated land and 76.9 percent of the production. Teff and maize from cereals and haricot beans from pluses were the major crops produced in the district. Haricot bean in particular was produced both for home consumption and export. Fallowing, crop rotation and using crop residue are traditional methods, while applying chemical fertilizer is a modern method of maintaining soil fertility in the district. The average farmland size in hectare and number of farm oxen per household were 6.3 and 1.7 respectively. The Boset district had 199 227 cattle, 50 683 sheep, 138 444 goats, 510 horses, 340 mules, 34 720 donkeys, 5 870 camels, 88 747 poultry and 830 beehives (817 cultural and 13 modern). The Boset district had 103 km of all weather and 97 km of dry weather roads, 33 km of railway line, 3 manual telephone stations and an agent post office.

5. Sampling procedure and data analysis

The study was conducted in May–June 2003 in two districts that are producers of export commodities, namely the Haro Maya and the Boset districts of the Oromia State. The selection of the sample involved a two-stage sampling procedure. The sample peasant associations (PAs) were selected using a random sampling procedure. In the course of the selection of the sample PAs, precaution was taken not to select inaccessible ones. Following the selection of the PAs, 107 and 120 farmers were randomly selected from Haro Maya and Boset districts respectively using a sampling frame obtained from the staff of development centres and/or PA offices.

Data relevant to the study were collected from both primary and secondary sources. The secondary sources of information included published and unpublished information about agricultural production in particular and the study areas in general. Such information was collected from district level offices of agriculture, planning bureaus and knowledgeable individuals. In addition, group discussion was carried out with retailers, wholesalers, traders, exporters and farmers to understand the major issues involved in export crop production and marketing. The primary data pertaining to the 2002 cropping season were collected from sample farmers using a structured questionnaire administered during May and June of 2003 in the Haro Maya and the Boset districts, respectively. Before starting the actual data collection, the questionnaire was pre-tested enabling the modification of some of the questions which were either irrelevant to the existing situation or out of context. Experienced enumerators were hired from the Melkassa research centre and the agricultural economics department of Alemaya university to administer the questionnaire. The enumerators were given training on the content of the questionnaire, methods of data collection, and on the appropriate way of approaching farmers.

6. Result and discussion

6.1. Demographic characteristics of farmers in the study area

Table 3 summarizes the demographic characteristics of farmers in the Boset and the Haro Maya districts. The mean age of interviewed farmers was 42 years in Haro Maya and 39 years in Boset. Farmers, who were literate and with a higher level of education would have a greater ability to obtain, process and use information about the production of export commodities. The majority of the farmers interviewed, 56 and 59 percent, were illiterate. Only 23 and 28 percent of the farmers interviewed in the Haro Maya and the Boset districts had attended primary school. Those who attended higher secondary school were insignificant.

Table 3: Demographic characteristics of farmers in the study area

Description	Haro Maya			Boset		
	N*	Mean	SD**	N	Mean	SD
Age of head of household	107	42.33	13.32	117	38.64	9.69
Family Size	105	7.30	3.10	117	6.92	2.87
Adult male (15-60 years of age)	50	1.98	1.27	120	1.40	67
Adult female (15-60 years of age)	35	1.86	1.22	114	1.45	68
Children under 14 years of age	100	3.31	1.90	57	2.32	4.01
Dependent male and female 61 years and above	52	0.16	0.02	3	1.00	00
Number of female elderly person (above 60 years of age)			9	1.00	00	
Experience in farming	107	20.3	17.55	120	22.40	15.7
Educational level	N	%		N	%	
• Illiterate	60	56		71	59.2	
• Primary school	25	23		31	25.7	
• Junior high school	1	0.9		12	10	
• Secondary school	2	1		6	5.1	
Religion						
• Muslim	107	100		54	45	
• Orthodox	-			66	55	

Source: Survey data

*N= sample size

** SD= Standard deviation

The average number of years of farming experience was 20.3 and 22 for the Haro Maya and the Boset districts respectively. The magnitude of the standard deviation of farm experience indicated a considerable variability (i.e., some farmers had little experience, while others had many years of farming experience). The average household size was 7.3 persons for the Haro Maya district and 6.92 for the Boset district. As expected, children of less than 14 years of age dominated the family composition, as in other parts of the country. The numbers of aged dependents in the Boset district were unusually small compared to similar studies. Almost all the farmers in the Haro Maya district were Muslims, while the majority of farmers, 66 percent in the Boset district were Orthodox Christians.

Table 4: Socio-economic characteristics of farmers in the study area

Description	Haro Maya		Boset	
	N*	%	N	%
Do you see labour as a problem?				
• Yes	57	53	75	63
• No	50	47	45	37
If yes what are some of the problems?				
• I cannot afford to pay for labour	20	19	-	-
• Overlapping of activities	49	46	77	64.5
• To many social commitments	38	35	43	35.5
How do you overcome labour shortages				
• Use community labour	50	47	56	46.7
• Use hired labour	30	28	15	12.5
• Use both community and hired labour	27	25	49	40.8
How often do you use hired labour?				
• Occasionally	57	53	64	53
• I don't use	50	47	44	47
Have you a job off farm?				
• Yes	29	17	15	12.5
• No	78	73	105	87.5
Does any one in the family have a job off farm?				
• Yes	11	10	8	7
• No	96	90	112	93
Types of jobs off farm				
• Petty trade	9	8	3	2.5
• Labourer	15	14	12	10
• Carpenter	5	4.6	-	-

Source: Survey data

*N= Sample size

About 53 and 63 percent of the farmers in the Haro Maya district and in the Boset district identified labour as a major problem in farm operations. Some of the problems that caused labour shortages were identified as overlap of farm activities and inability to hire labour. In order to overcome labour problems or shortages, farmers used a well-established system of community labour exchange as reported by almost 47 percent of the farmers of the study area. Only 28 percent and 12.5 percent of the farmers in the Haro Maya and the Boset districts respectively hired labour during times of activity overlap. (Households involved in off-farm jobs may have been able to afford the sum of money required to invest in the acquisition of improved production technologies). The major type of off-farm jobs in which producers were engaged was serving as labourers as reported by 14 and 10 percent of farmers in the Haro Maya and the Boset districts respectively (see Table 4).

6.2. Socio-economic characteristics of farmers in the study area

Farmland

The mean farm size per household was 6.50 timade on average, (a timade is equivalent to 0.25 hectares) of which 6.00 timade is cultivated in the Haro Maya district, while the mean farm size and the cultivated area was 7.33 and 6.00 timade in the Boset district respectively. The area of land allocated for the production of marketable commodities such as vegetables, potato and chat was 0.55, 0.54 and 0.70 timade respectively in Haro Maya, while only one timade of haricot bean on average is planted for market in the Boset district. Maize, and sorghum are the most important cereal food crops grown (see Table 5). The most important problems associated with land were identified as fragmentation and scarcity and 92 and 93 percent of the interviewed farmers in the Haro Maya district and the Boset district indicated that their land was not in one plot. To overcome this problem only about 14 percent and 65 percent of the farmers in the Haro Maya and the Boset districts leased land to augment their crop production (see Table 5).

Table 5: Size of land holding of farmers in the study area. (in timade)

Description of land holding	Haro Maya			Boset		
	N*	Mean	SD**	N	Mean	SD
Total farm size	107	6.50	1.98	120	7.33	3.08
Cultivated area in timade	107	6.00	1.48	120	6.00	2.87
Homestead and grazing area	-	-	-	78	1.33	0.67
Area allocated to maize	100	2.50	0.96	102	2.73	1.38
Area allocated to sorghum	88	1.71	0.25	100	1.00	0.93
Area allocated to vegetable	100	0.55	0.22	-	-	-
Area allocated to potato	75	0.54	0.30	-	-	-
Area allocated to haricot bean	-	-	-	100	1.00	1.11
Area allocated to teff	-	-	-	55	1.10	0.75
Area allocated to chat	79	0.70	0.47	-	-	-
Land leased in for crop production on a cash basis in timade	15	2.00	1.25	78	4.77	3.29
Duration of contract	15	8	3.75	75	10.2	5.39
Total lease rate in birr	15	260	250	72	411.88	433.
Land leased out for crop production	8	1.00	.83	48	3.25	222
Amount paid in birr for leased out land	8	500	132	48	320	225
		N	%	N	%	
Is your land in one plot						
• Yes	15	14	7	6.5		
• No	92	86	100	93.5		
Which of the following farming systems best describes your farm operation						
• Subsistence	100	93.5	120	100		
• Full-time Farming	7	6.5	-	-		
Problems associated with land						
• Scarcity	37	35	45	37		
• Fragmented	51	48	75	63		
• Infertile	19	17	-	-		
Reasons for share cropping						
• What I am getting from the land is not sufficient	47	44	48	40		
• Shortage of land	60	56	72	60		

Source: Survey data

* N= Sample size

**SD=Standard Deviation

Livestock

The mean number of animals per household was 1.58 cows, 1.95 oxen, 2.00 bulls 1.17 heifers 1.45 calves, 3.3 sheep, 4.80 goats, 1.6 donkeys and about 7.5 chicken in the Haro Maya district. On the other hand, farmers in the Boset district owned 1.33 cows, 1.14 oxen 1.0 heifer, 1.0 bull and 3.3 goats. Mules and horses, which are wealth indicators in some areas of Ethiopia, were relatively non-existent in the study area (see Table 6).

Table 6: Number of livestock owned by farmers in the study area.

Types of livestock and their value	Haro Maya			Boset		
	N*	Mean	SD**	N	Mean	SD
Number of cows	62	1.58	.67	55	1.33	.34
Average price of cows in birr	62	403.23	166.42	55	376	188
Number of oxen	78	1.95	.94	43	1.14	.35
Average price of oxen in birr	78	680.77	178.60	43	750	222
Number of heifers	12	1.17	.39	10	1.0	0.00
Average price of heifers in birr	12	300.00	104.45	10	230	85
Number of bulls	8	2.00	.76	75	1.0	0.00
Average price of bull in birr	8	412.50	124.64	72	330	123
Number of calves	40	1.45	.68	-	-	-
Average price of calves in birr	40	114.25	42.84	-	-	-
Number of sheep	8	3.63	34.13	35	.55	.05
Average price of sheep in birr	8	100	138.13	31	80	42
Number of goats	10	4.80	3.74	85	3.3	1.5
Average price of goat in birr	9	82.78	21.67	80	100	35
Number of donkey	70	1.60	.77	30	1.00	.15-
Average price of donkey in birr	68	212.53	54.04	30	250	120
Number of chicken	52	7.50	7.93	107	4.35	2.45
Average price of chicken in birr	50	7.96	2.58	107	10.00	1.73

Source: Survey data

* N= Sample size

**SD=Standard Deviation

The purpose of rearing cows was mainly for the supply of milk as indicated by 78 percent and 100 percent of the interviewed farmers of the Boset and Haro Maya districts respectively. The purpose of rearing oxen was mainly for land preparation and sale. The rest of the animals were produced to serve for purposes such as consumption and sale except for donkeys, mules and horses, whose main task were to transport people and products from home to market place and vice versa (See table 7).

Table 7: Purpose of raising animals

	Boset		Haro Maya	
	N*	%	N	%
Purpose of rearing cows				
• For milk	93	77.5	107	100
Purpose of rearing oxen				
• For sale	3	2.5	10	9
• For land preparation	85	71.3	65	61
• For land preparation and sale	27	22.5	15	14
• For land preparation and home consumption	3	2.5	17	15
Purpose of rearing heifers				
• For milk	6	5.0	26	24
• For sale	8.4	7.0	30	28
Purpose of rearing bulls				
• For ploughing	18	15.0	35	33
• For sale	30	25.0	45	47
Purpose of calf rearing				
• For milk	12	10	18	17
• For sale	15	12	31	29
• For meat	12	38	27	25
• For ploughing	15	11	25	23
Purpose of rearing sheep and goats				
• For sale	17.4	14.5	73	68
• For consumption	12	10.0	34	37
Purpose of rearing donkey, mule, and horse				
• For transport	18	15	63	59

Source: Survey data

* N= Sample size

6.3. Institutional characteristics of farmers in the study area

Table 8 summarizes the institutional characteristics of farmers in the study area. Access to information or extension messages were one of the institutional characteristics that influenced a farmer's decision to plant or grow a kind of crop or to raise livestock. One can gain access to information about new technologies through various means such as attending field days, visiting demonstration fields, participating in formal training, listening to agricultural programmes on the radio, and through various forms of communication with neighbours, relatives and community leaders (Tesfaye, 2001). Of these, the main source of information in the study regarding production and marketing was the extension service of the Bureau of Agriculture (BOA) at the regional, zonal and district levels.

About 60 , 46, 35 and 27 percent of interviewed farmers of the Haro Maya and the Boset districts reported attendance to demonstrations and field days, respectively, while only 15 and 8 percent of farmers from the two districts reported attendance at a formal training course on the use of improved varieties and new forms of cultural practices (see Table 8). Farmers interviewed ,(40.2 and 53 percent), in the Haro Maya and Boset districts, indicated that they were visited by extension agents during the 2002 production season. The types of contacts made by extension agents with farmers were identified as individual, group and both individual and group, as indicated by 21.6 percent and 69.1 percent and 9.4 percent of the farmers in the Haro Maya district and 45, 22 and 33 percent of interviewed farmers of the Boset district. During the informal discussion it was found out that no formal training or discussion had ever taken place regarding the production of crops for export purposes. The major focus of the demonstration fields were to show the performance of improved varieties, fertilizer and improved cultural practices.

Table 8: Institutional characteristics in the study area

Characteristics	Haro Maya		Boset	
	N*	%	N	%
Which of the following institutions do you know?				
• Bureau of agriculture	64	59.8	95	79
• Input agency	3	2.8	25	21
• Bureau of Agriculture, NGO's (self help)	40	37.4	-	-
What kind of assistance do you get from the above institutions				
• Production information	62	57.9	70	58
• Production inputs	27	25.2	50	42
• Training	18	16.8	-	-
Participation in demonstration organized by agricultural development office?				
• Yes	64	60	55	46
• No	43	40	65	54
Attended a field day				
• Yes	46	35	33	27
• No	54	65	87	73
Attended a formal training course				
• Yes	16	15	9	8
• No	91	85	111	92
If the answer is yes did you find the sessions useful?				
• Yes	14	13	8	7
• No	-	-	-	-
Do you think such sessions help you better organize your farm business?				
• Yes	14	13	9	7
• No	-	-	-	-
If your answer is no, are you aware of any training that was conducted in the past year?				
• Yes	9	8	15	13
• No	91	92	105	87
What are the most important types of assistance you should get to improve your ability to market your produce?				
• Market information	30	28	37	31
• Assistance with inputs	72	67	63	53
• Access to training	5	5	20	16
What are the second most important types of assistance you should get to improve your ability to market your produce?				
• Assistances to production input	52	48.6	89	74
• Access to credit	55	51.4	31	26
What are the third most important types of assistance you should get to improve your ability to market your products?				
• Improved transportation services	32	29.9	24	20
• More access to land	75	70.1	96	80
Visited by extension agent				
• Yes	43	40.2	63	53
• No	64	59.8	57	47
Usual type of contacts made by extension agents				
• Individual contact	23	21.5	54	45
• Group contact	74	69.1	26	22
• Both individual and group contacts	10	9.4	40	33
Are you a member of service cooperative?				
• Yes	16	15	12	10
• No	91	85	108	90
Are you a member of an informal organization?				
• Yes	94	88	105	88
• No	13	12	15	12

Source: Survey data

* N= Sample size

Credit availability

Access to credit was hypothesized as one of the major institutional factors influencing the decision of a farmer to produce agricultural commodities. It was found that 48.6 percent and 45 percent of the farmers interviewed in the Haro Maya and the Boset districts, reported obtaining credit from the BOA. The main purpose for which farmers took credit was to purchase chemical fertilizer as reported by 88 percent and 75 percent of the farmers in the Haro Maya and the Boset districts respectively. About 54 percent and 25 percent of farmers in the Haro Maya and the Boset districts reported obtaining credit from other (non-state) sources – primarily from relatives and local money lenders. The main purpose for taking credit from the informal sector was for home consumption and for the purchase of fertilizer. The most important credit problems cited in the study area were the unavailability of loans from either formal or informal systems (see Table 9).

Table 9: Credit availability

Characteristics	Haro Maya		Boset	
	N*	%	N	%
Do you get credit for your farm operation?				
• Yes	52	48.6	54	45
• No	55	51.4	66	55
Purpose of taking credit				
• To purchase fertilizer	50	85.7	90	75
• To purchase seed and fertilizer	37	14.3	30	25
• For home consumption	-	-	-	-
Were you satisfied with the terms of credit services?				
• Yes	57	53	41	34
• No	50	46.7	79	66
If no, what were the reasons for your dissatisfaction?				
• High interest rate	50	46.7	42	35
• Difficult to cover the cost	27	25	13	11
• Repayment term is not favourable	30	28	65	54
Source of credit				
• Bureau of Agriculture	49	46	90	75
• Cooperatives	10	9	-	-
• Relatives	23	21	18	15
• Local money lenders	25	23	12	10
Purpose of credit from other sources				
• For home consumption	21.4	33.3	84	70
• For purchasing fertilizer	66.7	9.5	36	30
Have you encountered any problems in getting credit?				
• Yes	80	57.5	88	73
• No	20	42.5	32	27
Nature of credit problems				
• Bank loan not available	7	6	30	25
• MOA loan not available	8	7	18	15
• Loan from informal sources not available as required	13	12	-	-
• Repayment terms unfavourable	57	53	32	27
• Interest rates too high	22	21	40	33
Have you experienced any difficulties in collecting money for produce sold on credit?				
• Yes	18	15.0	10	9
• Do not sell on a credit basis	102	85.0	97	91

Source: Survey data

* N= Sample size

6.4. Marketing of agricultural products produced in the study districts

Most farmers in the study area were not producing crops for export purposes as indicated by 92 and 80 percent of interviewed farmers in the Boset and Haro Maya districts. The types of crops produced in the two districts were haricot bean, teff, sorghum and maize in the Boset district ; vegetable, potato, chat sorghum and maize in the Haro Maya district. However, as can be seen in Table 10, the percentage of farmers who were producing deliberately for export were less than 21 percent in both districts.

Table 10: Farmers perception of production for export and local markets

	Boset		Haro Maya	
	N*	%	N	%
Do you produce crops for export purpose?				
• Yes	10	8	21	20
• No	110	92	86	80
What are the types of crops produced for export?				
• Haricot bean	20	17		
• Vegetables	-		22	21
• Potato	-		12	11
• Chat	-		15	14
What are the reasons for not producing crops for export purposes?				
• I am not aware of which crops are produced for export purpose	87	73	68	64
• Produce mainly based on the production techniques that I inherited from my parents	13	11	22	20
• Not aware of the term export itself	20	16	17	16
Do you produce crops for marketing purpose?				
• Yes	97	81	95	89
• No	23	19	12	11
What are the main reasons for producing crops for the local market?				
• To overcome government commitments such as taxes	45		39	
• To cover household expenditures	36		51	
• To educate my children	39		27	
What are the types of crops produced for the local market?				
• Haricot bean	120	100		
• Vegetables			67	
• Potato			55	
• Chat			107	100
• Teff				
What are the types of crops produced for consumption?				
• Maize	120	100	107	100
• Sorghum	73	61	95	89
• Teff	33	29	-	-

Source: Survey data

* N= Sample size

The major reason for not producing crops for export purposes was that most of the farmers were not aware of which crops could be produced for export purposes. Few farmers indicated that they produced crops mainly based on the production techniques that they had inherited from their parents. Farmers in the study area, though not aware of the production of crops for export purpose, did produce crops for marketing in order to overcome government commitments, to cover household expenditure and to educate their children as indicated by 45, 36, and 39 percent of the sample farmers of the Boset district and 39, 51, and 27 percent of the farmers in the Haro Maya district.

Maize and sorghum were produced mainly for home consumption as indicated by 65 and 84 percent of the farmers in the Boset district and by 75 and 42.5 percent of the farmers interviewed in the Haro Maya district. Only a few individuals in both districts used teff for consumption purposes. However most of the teff produced was sold to nearby town markets followed by wholesalers. Haricot bean was mainly produced in the Boset district and most farmers sold haricot bean to nearby markets. Chat, vegetables and potato were produced in the Haro Maya district and were sold mainly to nearby town markets and to wholesalers (see Table 11).

Table 11: Place of sale of some agricultural products in the study districts

Attributes	Boset		Haro Maya	
	N*	%	N	%
Where do you sell teff ?				
• Village market	3	2.5	-	-
• Nearby town markets	75	62.5	-	-
• Direct to retailers	6	5.0	-	-
• Direct to wholesalers	21	17.5	-	-
Where do you sell maize?				
• Village market	3	2.5	18	16.8
• Near by town market	33	27.5	9	8.4
• Direct to retailers	6	5.0	-	-
• Produced for consumption	78	65	80	75
Where do you sell chat?				
• Village market	-	-	22	20.6
• Near by town market	-	-	71	66.4
• Others	-	-	4	3.7
Where do you sell sorghum?				
• Village market	19	16	8	7.5
• Produced for consumption	101	84	45	42.1
Where did you sell potato?				
• Nearby town market			40	37
• Wholesalers	-	-	37	34.6
• Town consumers	-	-	8	7.5
• Village market	-	-	22	20.6
Where do you sell vegetables?				
• Wholesalers	-	-	50	46.7
• Local near by markets	-	-	24	22.4
• Cooperatives	-	-	33	30.8
Where do you sell Haricot bean?				
• Village market	31	26	-	-
• Near by markets	74	62	-	-
• Cooperatives	15	12	-	-

Source: Survey data

* N= Sample size

The purchasers of the different commodities produced in the study area are presented in table 12. As indicated previously, maize and sorghum were intentionally produced for consumption. However, the small amounts brought to market were mostly sold to retailers and wholesalers. Teff, haricot bean, vegetables, potato and chat were sold to retailers and wholesalers (see Table 12).

Table 12: Purchasers of some agricultural commodities as identified by farmers in the study area

Type of purchasers	Boset		Haro Maya	
	N*	%	N	%
To whom did you sell teff?				
• Retailers	30	25.0		
• Wholesalers	69	57.5		
• Village collectors	3	2.5		
• Traders	3	2.5		
To whom do you sell maize?				
• Retailers	18	15.0	-	-
• Wholesalers	9	7.5	16	15
• Millers	9	7.5	-	-
• Village collectors	3	2.5	-	-
• Traders	3	2.5	-	-
• I don't sale maize. It is produced for home consumption	78	65	91	85
To whom did you sell haricot bean?				
• Retailers	30	25.0	-	-
• Wholesalers	81	67.5	-	-
• Village collectors	3	2.5	-	-
• Traders	3	2.5	-	-
To whom did you sell vegetables?				
• Retailers	-	-	47	43.9
• Wholesalers	-	-	45	42.1
• Village collectors	-	-	-	-
• Traders	-	-	15	14.0
To whom did you sell potato?				
• Retailers	-	-	38	35.5
• Wholesalers	-	-	44	42.0
• Consumers in the local market	-	-	24	22.5
• Traders	-	-	-	-
To whom did you sell chat?				
• Retailers	-	-	63	59
• Wholesalers	-	-	33	31
• Consumers	-	-	11	10
• Traders	-	-	-	-

Source: Survey data

* N= Sample size

Almost all the farmers in the Boset district indicated that they would like to specialize in haricot bean production and farmers in the Haro Maya district indicated that they would like to specialize in vegetable and chat production, if they were given the opportunity to specialize in one of the crops they were growing. The reason why they were growing all the other crops was to avoid the risk of food shortage and failure of crops, because of drought and other exogenous factors. The main reason for selecting these crops for specialization was because of the good price that they obtained as indicated by 72 and 70 percent of the farmers in the Boset and the Haro Maya districts respectively.

Farmers in the study districts were not selling their product on a credit basis. They rather sold their products based on a system of cash upon delivery, especially to avoid the risk of not getting the money in time and sometimes outright defaults. Farmers in the Boset district produced crops and livestock based on the erratic rainfall, because of the recurrent drought, their production was adversely affected and most of them ended up relying on food aid. In Haro Maya, farmers in addition to the rains, depended on water from lake Haro Maya to produce vegetables, potato, sweet potato and chat. However, because of the deterioration in the water content of lake Haro, the Haro Maya farmers were facing a problem of producing the above-mentioned agricultural products. Because of these problems and the anticipated high production costs, farmers preferred the government to lead any diversification processes in agricultural production. In addition to the role government was playing in the diversification process, farmers also indicated that cooperatives could also play an important role if they were strengthened properly in terms of management and capacity. In particular, 59 percent and 68 percent of interviewed farmers in the Boset and Haro Maya districts indicated that export of non-traditional crops and the diversification of production could be led by cooperative unions that were in establishment by strengthening their capacity in terms of logistics and management (see Table 13).

Table 13: Different attributes of agricultural commodity marketing

Different attributes	Boset		Haro Maya	
	N*	%	N	%
If you do sell your farm produce what terms of trade do you use?				
• Cash on delivery	120	100.0	107	100
If you have a choice of specializing in the production of any one of the crops mentioned above which one would you choose?				
• Maize	9	7.5	7.5	7
• Haricot bean	111	92.5	-	-
• Vegetable	-	-	45	42
• Chat	-	-	32	30
• Sorghum	-	-	12	11
• Teff	18	17	-	-
Three main reasons in order of importance for your choice of the crop				
• Good yield	12	10.0	10	10
• Fetches high price	87	72.5	74	70
• Easy to produce	3	2.5	2.6	2
Do you think exporting non-traditional crops could offer you an opportunity to make a reasonable living?				
• Yes	117	97.5	97.5	91
• No	3	2.5	2.5	2
Do you keep written records for your farm business?				
• Yes	33	27.5	10	9
• No	87	72.5	90	84
If no, give reasons for not keeping records				
• Not used to	6	5.0	6.7	6
• Don't know the advantages and disadvantages	3	2.5	3.3	3
• Not educated to keep record	81	67.5	90	84
Do you think that your government should lead the agricultural diversification process or the private sector like wholesalers, exporters, farmers' organizations, etc?				
• Government	66	55	60	56.1
• Cooperatives	43	36	43	40.2
• Private sector	11	9	4	3.7
If you had a say who would you prefer to see lead the export of non-traditional export crops?				
• Cooperative union	71	59	73	68.2
• Private exporters	49	41	34	31.8
Do you think that having grades and standards should be enforced for non traditional crops?				
• Yes	43	36	36	34
• No	75	63	61	66

Source: Survey data

* N= Sample size

7. Major export constraints identified

Commodity exporters sell to foreign markets through personal communications. This means that different exporters have a different level of bargaining power, based on foreign attachment, experience (marketing skills) and capacity. In other words, exporters are not marketing their products in an organized manner. On the contrary, it has been indicated that, in some cases there is unnecessary competition among exporters in terms of price, customer handling, and information and communication, among others, creating unnecessary competition among exporters.

The survey result and previous studies show that surplus production for export is very limited because of low productivity caused by low soil fertility; low yielding varieties that are susceptible to pests and diseases and agro-ecological constraints. Farmers also use traditional technology on small and fragmented land. Besides, the linkage between research and extension has been poor and unable to promote the transfer of improved production technologies available in the country. Lack of effective and sustainable multiplication and dissemination of improved research findings is another bottleneck for the improvements of commodity production.

Farmers, during the open discussion, indicated that they obtained seeds from different formal and informal sources. Farmers, who grow crop for market, obtain seeds mainly through informal channels. The formal system (national seed enterprise) is limited in scope because it produces mainly wheat and maize seeds and fixes prices beyond the farmers' capacity to buy. The informal seed system suffers from low quality seeds, poor organization, and limited capacity to disseminate seeds beyond their immediate localities. This affects performance by limiting the availability of required seeds for export in terms of colour, size and other quality attributes of export commodities.

Discussion held with exporters in the study area, indicated that farmers do not produce quality products for export. Some are mixed and may not meet the size and colour requirements of exports. Some are adulterated either at the farm gate or at one of the levels in the marketing channel. The existence of poor quality products has an implication on the countries international competitiveness.

Farmers get their information from development and extension agents at all levels regarding their crop and livestock development and have also revealed that they have problems in getting information on marketing export commodities. The only information they get is mainly regarding production of cereals. On the other hand, exporters get market information from the National Bank of Ethiopia (NBE), the EEPA, the Trade Council, and personal communication with foreign buyers. However, knowledge about world export production and the supply and demand situation is not that much known by many exporters. Village collectors and wholesalers get information from exporters and brokers. The information provided by different sources varies sometimes and this creates a problem for business decision-making.

To be competitive in foreign trade, each exporter should develop marketing skills both individually and communally. Most of the exporters lack experience and marketing skills to take advantage of the opportunities in foreign markets. Some training arrangements like business plan development and awareness creation has been done by the EEPA, but this needs to be further strengthened in a continuous and coordinated way. In addition, farmers' awareness about the production and marketing of exportable agricultural commodities in general and about the production of quality products in particular has been very limited. A concerted action has to be made to train farmers in the production and quality maintenance of export commodities.

Many exporters and farmers revealed that they are constrained to develop their businesses and their farms because of lack of finance.

As indicated in the socio-economic profile of the study districts, the road network as well as the infrastructure required for the production and export of commodities is very limited. Poor transportation facilities, poor road, and storage and telecommunication services especially in remote high potential producing areas are the bottleneck to boosting export commodities in the country ,since it increases marketing costs and therefore reduces the countries' price competitiveness.

The major constraints placed on commodities imported by the industrialized countries have been non-tariff barriers (NTBs) to trade and domestic subsidies to producers (Lord, 1991). The NTBs, like the phytosanitary regulations of the European Union (EU) and other developed countries, are obstacles for developing countries like Ethiopia to access the markets of developed countries. Besides, commodities produced and marketed in Ethiopia are done with almost no subsidies, as opposed to income and price support programmes of the EU, United States and other developed countries, which have significant effects on Ethiopia's export competitiveness.

8. Conclusions and recommendations

The prospect of agricultural commodity trade in Ethiopia mainly depends on world demand and is likely to increase. Ethiopia's agricultural commodity trade needs to be competitive and its competitiveness in the international market has to increase. In order to boost the export performance and to contribute to the foreign currency earnings of the country, the following measures need to be given due attention.

Production and productivity of crops produced for export purposes should be improved. To this effect there is a need to look into the development of appropriate technologies that will boost production and productivity. Research centres that are established in different agro-ecological zones and higher learning institutions should first identify the commodities produced for export purposes in their respective mandate areas and then give more emphasis to developing technologies that will improve the productivity and production of exportable commodities. One major problem identified by farmers during group discussions was the production and supply of quality seeds. This problem has emanated because there is no formal institution involved in the production of quality seeds for most of the exportable commodities such as oil seeds, pulses, fruits and vegetables. Hence the government should create a system of producing quality seeds using existing institutions such as research centres, seed enterprises and the BOA. In addition, ways and means have to be created to involve the private sector in the production of seeds for export commodities. Besides, the Ethiopian Quality and Standard Authority, seed quality certification should be developed in line with world standards, especially along the lines of the phytosanitary regulations of the World Trade Organization (WTO).

There is a need to establish an information and communication network that will provide information regarding the production and marketing of export crops both to farmers and exporters. Most of the farmers included in the survey did not know much about export. They are not aware that the products they produce are exported outside the country and contribute to the foreign exchange earning of the country. Hence the BOA and the administrative bodies of the different districts, zones and regions have to take the responsibility of creating awareness and train farmers about the importance of the commodities that they are producing, about the quality requirements and the problems observed during previous season's production and export of commodities. The role of development and extension agents of the BOA cannot be over emphasized in providing extension services to producers through formal training, demonstrations and other mechanisms. In addition, farmers should be aware (through continuous training) of the quality requirements of export commodities, if they have to produce for export.

The role of the EEPA and other governmental and non-governmental organizations (NGOs) should be further strengthened in providing training, awareness creation on matters related to international trade, market information collection, analysis and dissemination for Ethiopian exporters.

Availability of formal and informal credit facilities has been identified as one of the major problems encountered in export commodity production and marketing in the study districts. In this line, the government should look into the possibilities of expanding credit facilities to small farmers who are involved in export crop production. In addition the loan repayment has to be scheduled in such a way that farmers will not be forced to sell their product immediately after harvest when prices are low. To date, most of the credit available to farmers is only for the purchase of fertilizers and sometimes for fertilizers and seeds. More credit should be available to improve the asset base (construction of improved storage, purchase of oxen, etc) of farmers. Exporters should also have more access to credit in order to facilitate their information and communication network nationally and internationally.

Reduction or elimination of NTBs and domestic subsidies in the industrialized countries would offer an opportunity of expanding Ethiopia's exports. Therefore, Ethiopia has to continue to negotiate strongly with the WTO.

To improve the countries agricultural export capacity there is a need for a comprehensive assessment of the overall performance of agricultural commodities produced for export in the different areas of the country in order to address and take appropriate measures. The evaluation should encompass all stakeholders involved in the production and marketing of export commodities.

Over the past 10 years Ethiopia has been undergoing major political and economic changes. An authoritarian, centrally planned and controlled economy was replaced by a more democratic, decentralized and free market-oriented economy. The government's first five-year development plan made food self-sufficiency and food security the highest priority development goals. Sustainable food security in Ethiopia depends primarily on increasing the productive capacity of small-scale farmers who comprise 85 percent of the population. Increasing the productive capacity of small-scale farmers requires increasing their access to modern agricultural inputs, technologies and services. One method for accomplishing this is to organize farmers, based on their expressed needs, into cooperatives. This allows them to pool their scarce resources and knowledge, and achieve economies of scale with regard to input access and services beyond the means of individual farmers.

The Agricultural Cooperative Proclamation No. 85/1994 encouraged the formation of voluntary, private and democratically run, business-oriented agricultural cooperative societies. The Proclamation has some discriminatory aspects to it with regard to cooperatives as compared to private investor rights, but contains the basic internationally accepted cooperative principles. Efforts by the regional Cooperative Promotion Bureaus during the past few years have focused on restructuring existing cooperative societies in line with the criteria set out in the Proclamation. As of 1 January 2001, there were 3 873 agricultural cooperatives in Ethiopia, with a total membership of 3 938 678 and total capital of Birr 304 177 313 (US\$35 500 000). These cooperatives are involved in a number of business activities, including agricultural input supply, marketing of members' produce, credit, and consumer goods supply.

The Ethiopian Government's commitment to expanded private sector development has created an enabling environment for private, agricultural-based cooperative businesses. This is reinforced by the up grading of the support structure for cooperative development to that

of a separate Bureau in the four major food producing regions of Ethiopia. However, there are still a number of issues that need to be addressed for cooperatives to flourish and contribute their full potential to Ethiopia's agricultural development: These include:

- limited access to commercial credit;
- lack of collateral to secure loans;
- limited access to markets,
- lack of market information;
- shortages of skilled manpower trained in management, marketing, storage, savings and credit operations, and cooperative banking;
- lack of experience and knowledge in diversifying cooperative activities.

Ethiopia's surface transport infrastructure is inadequate and underdeveloped. In fact, Ethiopia has the lowest road density per capita in the world. The country's main route from Addis Ababa to the port of Djibouti along the Assab road could become a bottleneck to the movement of goods, despite efforts currently underway to improve it. Only 21 percent of the highway network is paved, with few interconnecting links between adjacent regions and a grossly insufficient feeder road network. As a result, large parts of Ethiopia are isolated and dependent on pack animals for transport. The poor road sector has hampered economic development and remains an obstacle to economic integration, export growth, and the realization of greater economic potential in general.

With the help of the World Bank (WB), the EU, the African Development Bank (AfDB), and other donors, the Ethiopian Government is implementing a Road Sector Development Plan (RSDP). The programme will also lead to the repair and renovation of major and minor trunk roads and help develop private road construction and contracting capacity.

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Annex 1: Volume of export by major agricultural commodities

Period	Coffee	Oil Seeds	Hides & Skins	Pulses	Meat & Meat products	Fruits and Veggies	Sugar	Oil cakes	Live Animals	Chat
1990/91	268 451	3 633	92 206	15 716	1 015	12 001	16 362	36	5 169	20 422
1991/92	168 324	383	58 654	386	18	6 399	1 759		467	5 073
1992/93	536 982	1 186	13 4515	4 050	418	2729	5 090	14	1 322	65 727
1993/94	718019	44 187	202 610	27 704	672	6 864	25 723	5	10 757	107 932
1994/95	1 799 034	50 130	373 549	103 287	6 073	18192	2 227		7 655	172 339
1995/96	1 724 008	41 938	309 701	77 224	12 119	21 029			770	174 444
1996/97	2 30 7394	74 239	372 253	87 854	24 175	45 793	4 735		11 201	199 533
1997/98	2 88 9531	314 660	347 699	102 953	29 340	31 479			10 562	272 355
1998/99	2 112 713	271 462	243 052	101 658	31 644	40 564	1 241		5 724	444 988
1999/00	2 133 646	255 329	286 459	80 021	32 708	44 250	23 958		14 137	618 772
2000/01	1 453 254	256 398	616 686	68 561	14 065	44 015	68 472		2 360	509 952
2001/02	1 346 589	277 551	472 776	281 283	9 085	65 848	85 106		6 522	193 529

Annex 2: Volume of import by major commodity groups (in 000 tonnes)

Period	Food and Live Animals	Beverages	Tobacco	Petrol crude	Petrol products	Chemicals	Fertilizers	Medical & pharmaceutical	Soap & Polish	Rubber products	Paper & Paper Manfc.
1990/91	26 3350	16 163	3 564	185 376	25 050	85 072	79 548	36 305	26 013	41 867	27 775
1991/92	14 402	6 291	1 105	92 246	100 907	42 580	150	48 294	14 433	35 740	11 760
1992/93	497 536	20 867	4 845	444 282	376 808	135 269	13 106	131 578	37 490	73 278	30 565
1993/94	574 094	8 581	20 271	406 531	331 036	228 155	89 678	187 200	58 522	15 6585	61 251
1994/95	906 743	13 305	10 580	522 564	471 350	179 614	343 947	193 305	30 818	184 843	53 780
1995/96	575 263	21 210	7 241	445 953	485 912	161 265	330 578	165 785	64 023	279 453	81 700
1996/97	37 222	8 590	93	76 900	1 427 200	47 021	173 813	77 317	55 593	188 170	78 351
1997/98	72 853	35 583	18 402	166 469	2 099 046	99 001	51 224	142 163	81 408	274 938	169 841
1998/99	558 422	37 405	26 393	22 81	1 306 707	142 008	377 582	315 940	100 718	345 274	199 440
1999/00	766 560	34 667	27 129	31	2 012 189	140 912	336 379	246 179	92 105	273 429	163 924
2000/01	641 597	34 628	28 561	0	2 151 326	153 782	126 860	293 784	140 236	408 838	217 050
2001/02	1 143 501	26 020	32 811	0	2 089 580	110 019	522 209	258 626	95 614	281 735	219 625