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STAPLE FOODS VALUE CHAIN ANALYSIS

COUNTRY REPORT - ETHIOPIA

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Acronyms

ADLI	Agricultural Development Led Industrialization
AfDB	African Development Bank
AISCE	Agricultural Inputs Supply Enterprise
ATEP	Agribusiness and Trade Expansion Program
CET	Common External Tariff
COMESA	Common Market for East and South Africa
COMPETE	Competitiveness and Trade Expansion Program
CSA	Sentral Statistical Agency
DFID	UK Department for International Development
ECEA	Ethiopia Commodity Exchange Authority
ECX	Ethiopia Commodity Exchange
EGTE	Ethiopian Grain Trade Enterprise
EIAR	Ethiopian Institute of Agricultural Research
EOPEC	Ethiopian Oil Seeds and Pulses Export Corporation
ESE	Ethiopian Seed Enterprises
FAO	United Nations Food and Agriculture Organization
Ha	Hectare
IFPRI	International Food Policy Research Institute
IHEA	U.S. Initiative to End Hunger in Africa
IT	Information Technology
JICA	Japan International Cooperation Agency
kg	Kilogram
MoAR	Ministry of Agriculture and Rural Development
MoFED	Ministry of Finance and Economic Development
MoTI	Ministry of Trade and Industry
MT	Metric ton
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
QSAE	Quality and Standards Authority of Ethiopia
SDPRP	Sustainable Development and Poverty Reduction Program
SPS	Sanitary and phyto-sanitary
UNDP	United Nations Development Program
UNECA	United Nations Economic Commission for Africa
USAID	United States Agency for International Development
VCA	Value Chain Analysis
WFP	United Nations World Food Program

CONTENTS

1. INTRODUCTION.....	1
1.1. The Context of the Study	1
1.2. The Significance, Objectives and Scope of the Study	2
1.3. The Methodology Used in the Study.....	3
1.4. Study Limitations	4
1.5. Structure of the Report.....	4
PART ONE: THE ECONOMY	5
2. AN OVERVIEW OF ETHIOPIA’S ECONOMY	5
3. THE STATUS OF THE AGRICULTURAL SECTOR	7
3.1. The Significance of the Agricultural Sector	7
3.2. Dynamics of Growth of the Sector	8
3.3. Main Commodities Produced.....	11
3.4. Main Challenges and Constraints.....	11
3.5. Agricultural Sector Policies.....	13
PART TWO.....	16
VALUE CHAIN ANALYSIS FOR SELECTED STAPLE COMMODITIES	16
4. THE MAIZE SUB-SECTOR.....	16
4.1. Maize Production	16
4.2. Maize Consumption	17
4.2.1. Domestic Production vs. Consumption	17
4.2.2. Maize Exports and Imports	18
4.3. Value Chain Mapping	19
4.4. Constraints and Opportunities	23
5. THE WHEAT SUB-SECTOR	25
5.1. Wheat Production	25
5.2. Wheat Consumption	26
5.2.1. Domestic Production vs. Consumption	26
5.2.2. Wheat Exports and Imports	27
5.3. Value Chain Mapping.....	28
5.4. Constraints and Opportunities	34
6. THE RICE SUB-SECTOR.....	36
6.1. Rice Production	36
6.2. Rice Consumption	37
6.2.1. Domestic Production vs. Consumption	37
6.2.2. Rice Exports and Imports	38
6.3. Value Chain Mapping.....	38
6.4. Constraints and Opportunities	41
7. THE SORGHUM SUB-SECTOR	43
7.1. Sorghum Production	43
7.2. Sorghum Consumption	44
7.2.1. Domestic Production vs. Consumption	44
7.2.2. Sorghum Exports and Imports	45
7.3. Value Chain Mapping.....	45

7.4. Constraints and Opportunities	49
8. THE MILLET SUB-SECTOR	51
8.1. Millet Production.....	51
8.2. Millet Consumption.....	52
8.2.1. Domestic Production vs. Consumption	52
8.2.2. Millet Exports and Imports.....	53
8.3. Value Chain Mapping.....	53
8.4. Constraints and Opportunities	56
9. THE BEANS SUB-SECTOR	57
9.1. Beans Production.....	57
9.2. Beans Consumption	58
9.2.1. Domestic Production vs. Consumption	58
9.2.2. Beans Exports and Imports	59
9.3. Value Chain Mapping.....	60
9.4. Constraints and Opportunities	64
10. THE PULSES SUB-SECTOR	66
10.1. Pulses Production	66
10.2. Pulses Consumption	68
10.2.1. Domestic Production vs. Consumption	68
10.2.2. Pulses Exports and Imports	69
10.3. Value Chain Mapping	70
10.4. Opportunities and Constraints.....	75
11. THE GROUND NUTS SUB-SECTOR	76
11.1. Ground Nuts Production.....	76
11.2. Ground Nuts Consumption.....	77
11.2.1. Domestic Production vs. Consumption	77
11.2.2. Ground Nuts Exports and Imports	78
11.3. Value Chain Mapping	78
PART THREE.....	83
THE BUSINESS ENABLING ENVIRONMENT IN AGRICULTURAL	
COMMODITIES	83
12. THE POLICY ENVIRONMENT.....	83
12.1. Pricing and marketing Policies.....	83
12.2. Tariffs and Non-Tariff Charges	86
12.2.1. Tariffs.....	86
12.2.2. Non-Tariff Charges	87
12.3. Regional Structured Trading Systems Platform	89
12.3.1. The Food Balance Sheet.....	89
12.3.2. Warehouse Receipt System	89
12.3.3. The Commodity Exchange	90
13. THE REGULATORY FRAMEWORK.....	92
13.1. Customs Documentation and Clearance Procedures	92
13.2. Standards.....	94
13.3. Sanitary and Phyto-Sanitary Requirements	101
13.4. Trade (Import and Export) Restrictions	103
13.5. Non-Tariff Barriers	105

PART FOUR	107
CONCLUSIONS, POLICY IMPLICATIONS AND RECOMMENDATIONS.....	107
14. MAIN CONCLUSIONS	107
15. POLICY IMPLICATIONS.....	111
16. RECOMMENDATIONS.....	112
REFERENCES.....	113
ANNEXES	116

1. INTRODUCTION

1.1. The Context of the Study

Agriculture has a substantial contribution to Africa's economy in terms of employment, aggregate output, foreign exchange earnings, and tax revenue. The continent has abundant natural and human resources which can be translated into increased production, incomes and food security if sound policies are designed and implemented. However, this immense potential could not be put into use because of a number of constraints, including low investment and productivity, poor infrastructure, lack of funding for agricultural research, inadequate use of yield-enhancing technologies, weak linkages between agriculture and other sectors, unfavorable policy and regulatory environments, and climate change (ECA 2009).

Moreover, Africa's position in global trade is still insignificant and the continent, as a whole, continues to trade in raw materials, which makes it highly vulnerable to changes in the global commodity market. According to the ECA (2009), Africa accounts for only 3% of world total exports, of which less than 10% is within Africa, indicating a low-level of regional integration.

It is generally believed that regionally integrated value chains and markets offer better opportunities for transforming African agriculture, because they have the potential of expanding market opportunities and enhancing incentives for private investors to undertake long-term investments in agribusiness and agro-processing. Without a strong regional integration, Africa can not compete in the global economy, because African agriculture is dominated by small-scale producers and markets are small and fragmented.

According to the Economic Commission for Africa (ECA 2009), developing regional value chains for strategic agricultural commodities is essential for African countries to enhance their agricultural transformation and global competitiveness. It is argued that regional value chains are important for various reasons, including the following:

- They provide market access for smallholder farmers and agribusinesses,
- They help in increasing profitability of optimal-sized investments in agro-processing as markets expand,
- .they help keep jobs and agro-processing industries in Africa, and
- They ensure dynamic efficiency of agricultural commodities and high-value exports

In order to help bring about regional integration, the Competitiveness and Trade Expansion Program (COMPETE) is currently working on regional value chains of staple foods in East and Central Africa. COMPETE is a regional program that is working to improve trade in East and Central Africa by harmonizing regional trade and transit policies and procedures, developing financial markets, supporting private

sector trade associations, developing value chains in staple foods and cash crops and building capacity of regional businesses to take advantage of preferential trade opportunities. The program is funded by the US Agency for International Development under the East Africa region. With support through the U.S. Initiative to End Hunger in Africa (IEHA), COMPETE is working to reduce poverty and enhance food security by increasing small holder farmers' access to commercial staple foods markets (COMPETE 2009).

At present, COMPETE is undertaking market assessment and baseline studies in selected countries of Eastern and Central Africa, including Ethiopia. This report is the outcome on the market assessment and baseline value chain study of selected staple foods conducted in Ethiopia in October-November 2009.

1.2. The Significance, Objectives and Scope of the Study

The Staple Foods value chain in Eastern and Central Africa is significant, because it has enormous potential to empower and economically liberate the majority of the population in the ECA region. Staple foods include maize, beans, pulses and coarse grains. A majority of the population is involved in agricultural production, particularly production of staple food items such as maize, beans, pulses and coarse grains. People depend on agriculture for food security, income and sustenance.

The biggest challenge to the Staple Foods value chain is to have a chain that is linked and fully integrated at the national and regional levels, anchored on free market principles and is responsive to all players along the value chain including smallholder farmers and the ultra poor.

The full potential of the Staple Foods sector is hampered by the high cost of doing business in the region driven largely by high transportation and other costs along major transit/trade corridors handling the region's imports and exports. The key to unlocking the potential of the Staple Foods sector is to devise and implement strategies to reduce transport and transit logistics costs to enhance competitiveness.

The objective of this study is to conduct a market assessment of staple foods in Ethiopia including a value chain analysis (VCA) that provides a framework for the development of a strategic plan to improve the value and or the volume of staple foods marketed in Ethiopia. The scope of work includes the following:

- Synthesize value chain assessment reports (staples and non-staples) by Governments development partners and map out activities of development partners by identifying who is doing what and where.
- Conduct a VCA starting with production/farm gate, and moving through all points of market transfer and value-added including service providers (input/service suppliers), producers, traders, grain reserves, parastatals, exporters, and processing companies.

- List all “players” along the chain by name, location type of entity and contact information; including all major producer organizations, cooperatives, and key corporate (commercial) estates if any; all processing companies, status of operation, i.e. dormant, % capacity, and ownership structure.
- Identify and explain all issues, problems and constraints at each transfer point in the chain; i.e. yields, prices, payment systems, transport, quality, frequency of transfers (points of sale); storage limitations; processing limitations, etc.
- Identify volume flow between sectors and cover all local use (rural) and consumption of Staple foods and Staple foods by-products.
- Identify and explain the value change between transaction points adjusting for measurement differences (baskets to kilograms) and conversions from one type to another type.
- Identify and analyze all trade regulations that govern intra-country flow; exports and imports of Staple foods – Local Authorities regulations, Quality Standards, Sanitary and Phyto-sanitary and Pest Risk requirements, tariff and other non tariff charges on Staple foods imports, customs clearance procedures.
- Assess the status, impact, opportunity for reform and measures necessary to facilitate reform of pricing and marketing policies
- Assess the status, effects, policy framework and opportunities structured trading system-Ethiopia Warehouse Receipt System (WRS) and Commodities Exchange
- Provide insight and personal perspective on the issues and problems and make recommendations on interventions at “links” in the value added chain that may assist the industry in general and the smallholder farmer in particular to improve on volume and/or value.
- Develop a five year base line of data for volume and value ending with the 2008/2009 for production, exports (disaggregated by destination country), domestic sales, and imports (disaggregate by countries of origin)

1.3. The Methodology Used in the Study

This report is based on secondary and primary data sources. The secondary data sources include CSA annual area and production data by zone, Plant Quarantine Services of the Ministry of Agriculture and Rural Development, Customs Authority of Ethiopia, Quality and Standards Authority of Ethiopia, and various documents and studies conducted by different organizations. Primary data were collected from focus group discussions and interviews with different key informants including producers, traders and intermediaries, processors, exporters, and cooperatives.

Focus group discussions and interviews were conducted with key informants in selected administrative zones and markets that have significant contribution in the production of maize, wheat, millet, rice, beans, ground nuts and pulses. A total of 12 administrative zones were visited, 87 organizations and individuals were interviewed (see annex table 3). Various data were collected on the marketing channels of the different crops, the type and role of the different market actors, volume and flow

pattern of the commodities along the value chain of each commodity considered in the study, the buying and selling behavior of the different market players, and value change along the value chain including buying prices, marketing, handling and processing costs and the selling prices at each stage of the value chain. Data pertaining to marketing and operational constraints were also gathered during the field work.

A range of other data were also collected using the COMPETE Template for Trade Policy Platform for Selected Staple Foods. These include: tariffs and non-tariff charges, standards specification and application on import and export items, sanitary and phyto-sanitary requirements and their application on import and export items, seasonal import/export restrictions, and pricing and marketing policies.

1.4. Study Limitations

A number of problems were encountered during the field work. The problems include the short time frame allowed to conduct the field data collection work, lack of cooperation by some of the key informants, frequent interruption of power and internet connection. In some areas, interviewees demanded a letter of introduction from relevant government organizations to provide data and in some cases interviewees and discussants were not easily accessible.

The commodities covered in this study are grown in different parts of the country-north-west, east, central and eastern parts, and this required a lot of travel time, which substantially increased the duration of the data collection task. Browsing of basic reference materials and documents via the internet was hampered by the frequent interruption of internet connections.

1.5. Structure of the Report

The report is structured as follows: Part One deals with the overview of the Ethiopian economy and the status of the agricultural sector, including its significance, dynamics, agricultural policies and constraints. Part Two analyzes the value chain of the main staple foods, including maize, sorghum, wheat, rice, millet, beans, pulses and ground nuts. The analysis of the value chain of each commodity focuses on production, consumption, import and export, value chain map, and constraints and opportunities. Part Three has two components: the assessment of the policy environment and the regulatory framework. In the first part, pricing and marketing policies, regional structured trading systems are assessed. In the second section, the regulatory framework: customs documentation and clearing procedures, standards and their application on import and export of commodities, sanitary and phyto-sanitary requirements and their application on import and export commodities; trade restrictions; and non-tariff barriers have been analyzed. Finally, the main conclusions and recommendations are presented in Part Four.

PART ONE: THE ECONOMY

2. AN OVERVIEW OF ETHIOPIA'S ECONOMY

According to the 2008 World Development Report (World Bank 2008), Ethiopia, with a total population of 73.9 million, is the third most populous country in Africa following Nigeria and Egypt. It is also the 16th largest country in the world. About 51.9% of the population is in the working age group (15-64 years). During the period 2001-07, Ethiopia's total population and labor force grew by about 2.6% and 2.9% per annum, respectively. These growth rates are slightly higher than those of SSA, which are 2.5% and 2.6%. While 80% of the labor force is engaged in agriculture, the rest is employed in industry (8%) and government and services (12%)¹. Nearly 84% of the population is rural. In terms of geographical area, Ethiopia is also the ninth largest country in Africa. It covers a total area of 1,104,300 km², out of which agricultural land is about 33.9%².

Ethiopia is also one of the poorest countries in the world ranking 171st out of 182 countries in the UNDP Human Development Index Score (UNDP 2009). In 2007 its per capita GNI³ was US\$ 220, which is low compared to that of Sub-Saharan Africa (US\$ 952). About 23% of the population lives below the international poverty line of US\$ 1/day and the income share of the lowest 20% is about 9%.

Agriculture remains the leading sector of the Ethiopian economy accounting for about 47.5% of GDP in 2007. The other sectors-industry and services- contribute 12.5% and 40.0%, respectively. During the period 2004-2008, GDP grew by an annual average of more than 10% and the registered growth in GDP has been contributed by all sectors. For example, agriculture grew by 10.4%-13.5% between 2005 and 2007, while the industrial sector showed growth of 9.4%-10.4% during the same period. Similarly, the services sector which contributes about 40% of GDP has been growing by 12.8%-17% (AfDB/OECD/UNECA 2007). The major drivers of GDP growth were crop production and, expansion of electricity and water supply as well as manufacturing and other sectors, including health and social services (Access Capital 2009).

With regard to external trade, Ethiopia's exports also showed impressive expansion in recent years. According to some studies, export grew by an average of about 25% in the past five years mainly due to increase in volume exported and improvement in world market prices of many commodities. Currently, exports are estimated at nearly US\$ 1.5 billion or 6% of GDP, solely dominated by the private sector (Access Capital 2009).

¹ State of the Ethiopian Economy by Tekola Hagos (PPT presentation).

² World Bank, Data Profile of Ethiopia.

³ GNI or Gross National Income is defined as the total value added from domestic foreign sources, claimed by residents. GNI comprises Gross Domestic Product (GDP) plus net receipts of primary income from foreign sources. Data are converted from national currencies to current US\$ using the WB Atlas Method. This involves using 3-year exchange rate to smooth out FOREX fluctuations.

Ethiopian exports have also been more diversified now than before with respect to product and market mix. The country's heavy dependence on coffee has gradually decreased from 39.6% of export earnings in 2005 to 35.8% in 2008. On the other hand, the share of oilseeds, pulses, meat and meat products, flowers and gold has shown increasing trend over the past 5 years. For example, earnings from oilseeds increased by nearly 41%, earnings from leather and leather products increased by 12%, earnings from pulses increased by 53%, and earnings from meat and meat products increased by 79%. Likewise, earnings from non-traditional export commodities such as flowers have substantially increased to become the fourth largest export after coffee, oilseeds, and pulses in 2007/08, accounting for 7.6% in the total merchandise exports (AfDB/OECD/UNECA 2007).

The AfDB/OECD/UNECA African Economic Outlook Report also shows that Ethiopian imports grew at an average annual rate of 30% during the past five years due mainly to the rising price of oil imports. Fuel imports surpassed consumer goods to become the second largest import, next to capital goods, in 2007/08, accounting for 23.8% of total imports. The substantial growth in imports in 2007/08 was also due to rapid growth in imported raw materials and semi-finished goods.

The above report further shows that Ethiopia's intra-Africa regional trade relationship is weak. For example, over half of Ethiopian exports in 2006/07 went to European countries, mainly Germany, Switzerland, the Netherlands and Italy. About a third of exports went to Asia, mainly China, Saudi Arabia and Japan. Within Africa, neighboring countries such as Somalia, Djibouti and Sudan were the largest importers of Ethiopian products. Likewise, close to three-fifths of Ethiopian imports came from Asia-mostly from China, Saudi Arabia and Japan. Over a quarter of imports came from Europe-mostly Italy, Germany and France. Close to a tenth of imports came from African countries.

3. THE STATUS OF THE AGRICULTURAL SECTOR

3.1. The Significance of the Agricultural Sector

Several reports and studies show that agriculture has been and would continue to be the backbone of the Ethiopian economy for many years to come. It is estimated that the agricultural sector contributes about 48% to GDP, employs more than 85% of the rural population, contributes about 90% of export earnings, and provides about 70% of the raw material requirement of the country's agro-industries. Consequently, the agricultural sector is crucial for the overall performance of the Ethiopian economy. The smallholder sector is the main source of employment, agricultural GDP, export earnings, and food and raw materials supplies to urban areas and food industries. Crop production contributes more than 60% to agricultural GDP, while livestock represents about 30% and the other sub-sectors account for about 10% of agricultural GDP (Mulat, Fantu, and Tadele 2006). About 28% of the smallholders cultivate up to 0.50 Ha of land, 53% have between 0.51 Ha and 2.00 Ha, and 17% have 2.01-5.00 Ha. About 80% of the smallholder produce is destined for home consumption and seed.

Poverty rate in the rural and urban areas is significantly high-45.8% and 37%, respectively (IFPRI 2005) and more than 50% of the rural poor are found in the food deficit zones, where the staple food availability per household is half the national average level-530 kilograms per household, even in good years. On the contrary, food availability per household in the food surplus areas averages 1,800 kilograms, which is 70 percent above the national average (IFPRI 2005). Given the substantial share of the agriculture sector in the national GDP and the high incidence of poverty in both rural and urban areas, the sector is expected to play a central role in decreasing poverty and increasing growth in Ethiopia.

The above mentioned IFPRI study shows that agricultural growth primarily focusing on staple crops and livestock could reduce poverty by half by 2015. Moreover, the study reveals that a 50% increase in national staple availability by 2015 would significantly help to reduce poverty in Ethiopia and indicates that productivity has to be significantly increased through irrigation, increased use of productivity enhancing technology, and provision of road and marketing infrastructure.

As regards irrigation, the country has immense potential. According to a recent report (Seleshi et al. 2006), Ethiopia possesses 12 river basins with an annual runoff volume of 122 billion m³ of water with an estimated 2.6 billion m³ of ground water potential that can put up to 4.0 million Ha of land under irrigation. However, due to lack of investment on water storage facilities, farmers could not be able to produce more than one crop per year. Currently, some 180,000 Ha of land is irrigated by 1.2 million smallholders (CSA 2008), producing mainly staple foods.

Another important factor for enhancing the productivity of agriculture is fertilizer and improved seed use. However, the utilization of such inputs was low; in 2008, about

280,000 metric tons of chemical fertilizers (DAP and Urea) was applied on 1,725,000 hectares of land or only 15% of the total cultivated land and 18,728 metric tons of improved varieties of seed were used on 432,107 hectares or about 4% of the total cultivated area (CSA 2008).

Thus, despite the country's vast potential for irrigated agriculture and the crucial role of agricultural inputs in enhancing productivity, the agriculture sector is currently rain-fed and uses traditional inputs. Presently, agricultural production is mainly concentrated in the highlands where annual rainfall ranges from 800 to 2200 mm. The highlands represent 43% of the country and accommodate 88% of the human population, over 65% of the livestock, comprise 90% of the cultivated land and nearly 100% of the industrial forest cover (Bekele 2001 quoted in Seleshi).

With appropriate development policy and sufficient investment in agriculture and related sectors, therefore, the agricultural sector could play a significant role in bringing about speedy socio-economic development and poverty reduction.

3.2. Dynamics of Growth of the Sector

As mentioned above, in spite of the current and potential significant contribution of agriculture to the national economy, its performance is largely determined by weather and rainfall conditions, and consequently the country faces severe food shortages during drought years. Even during good harvest years, some 10% of the population faces food shortages, and food aid has been a major source of supply which helped narrow down the deficit. In the chronically food insecure areas, in particular, food aid, through the Productive Safety Net Program (PSNP), has been an important intervention tool that helped many vulnerable households to have access to food.

In the past 12 years (1997-2009), the performance of the agricultural sector has significantly improved; according to government statistics, production of grain (cereals, pulses and oilseeds), in particular, has increased by about 6.3% per annum on average, mainly because of increase in area cultivated and improvement in yields. Area under cereals, pulses and oilseeds increased by 3.7% per annum, while yield increased by an annual average of 2.5%. Production of the major staple food, including cereals and pulses, increased by 5.9% per year, area under increased by 3.1% and yield increased by 2.6%. See figures 1a-1d.

Over the past five years, in particular, production of cereals reached 15.2 million metric tons in 2009 from only 9.7 million metric tons in 2004. The growth achieved in cereal production was due to an increase in area (3.1% per annum) and

productivity improvement (2.6%). Similarly, production of pulses increased from 1.0 million metric tons in 2004 to 2.0 million metric tons in 2009. This was also achieved because of increase in area cultivated (5.5%) and increase in yield (2.9%).

As a result of the overall growth in the production of staple foods (cereals and pulses), the per capita consumption increased from 137.4 kg in 2004 to 196.6 kg in 2009. Out of the total cereals and pulses made available for domestic consumption, food aid accounted for about 3.4-9.8%.

Figure 1a: Area, Production and Yield Trends of Cereals (1997-2009)

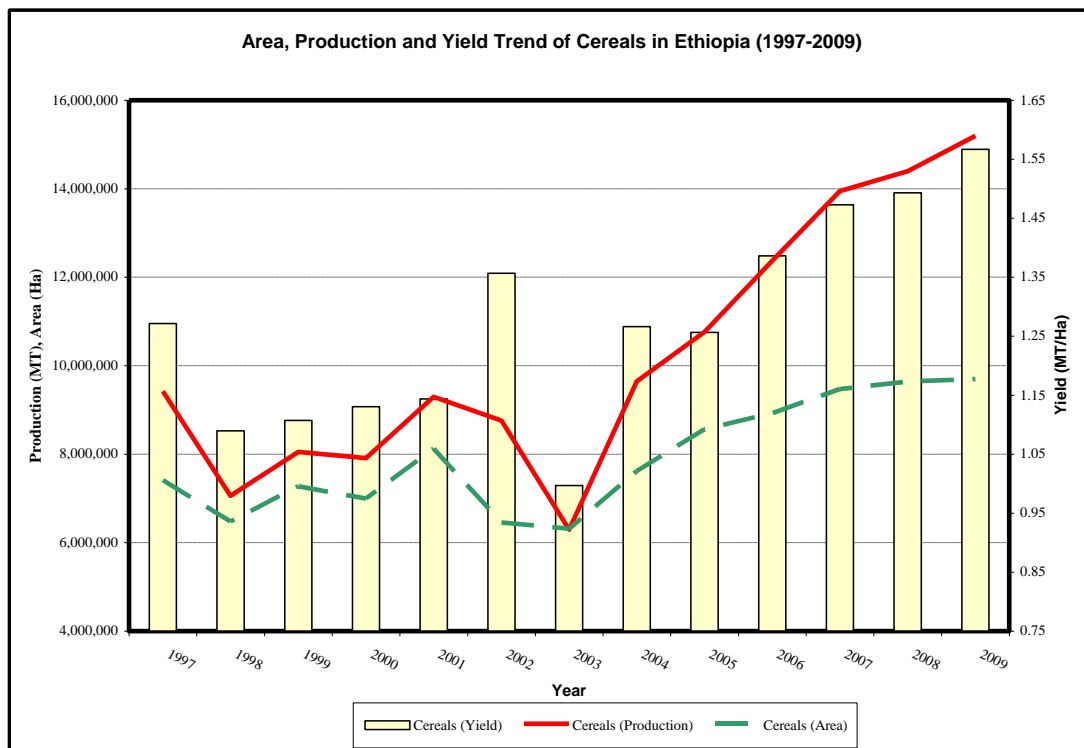


Figure 1b: Area, Production and Yield Trends of Pulses (1997-2009)

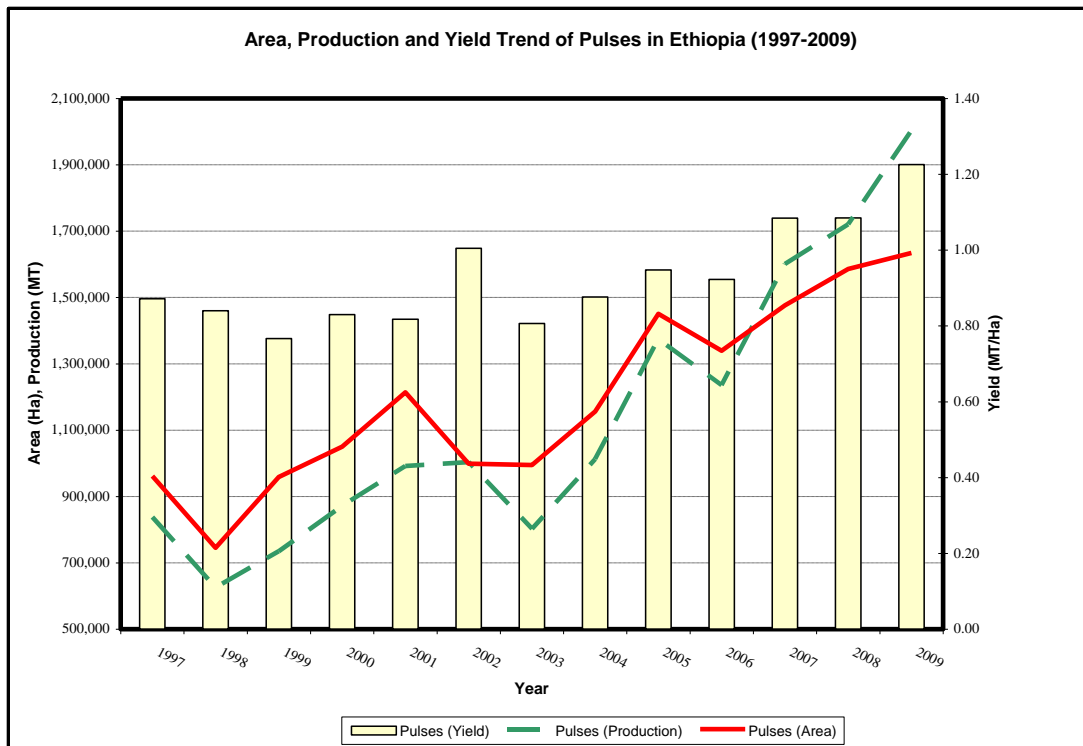


Figure 1c: Area, Production and Yield Trends of Oilseeds (1997-2009)

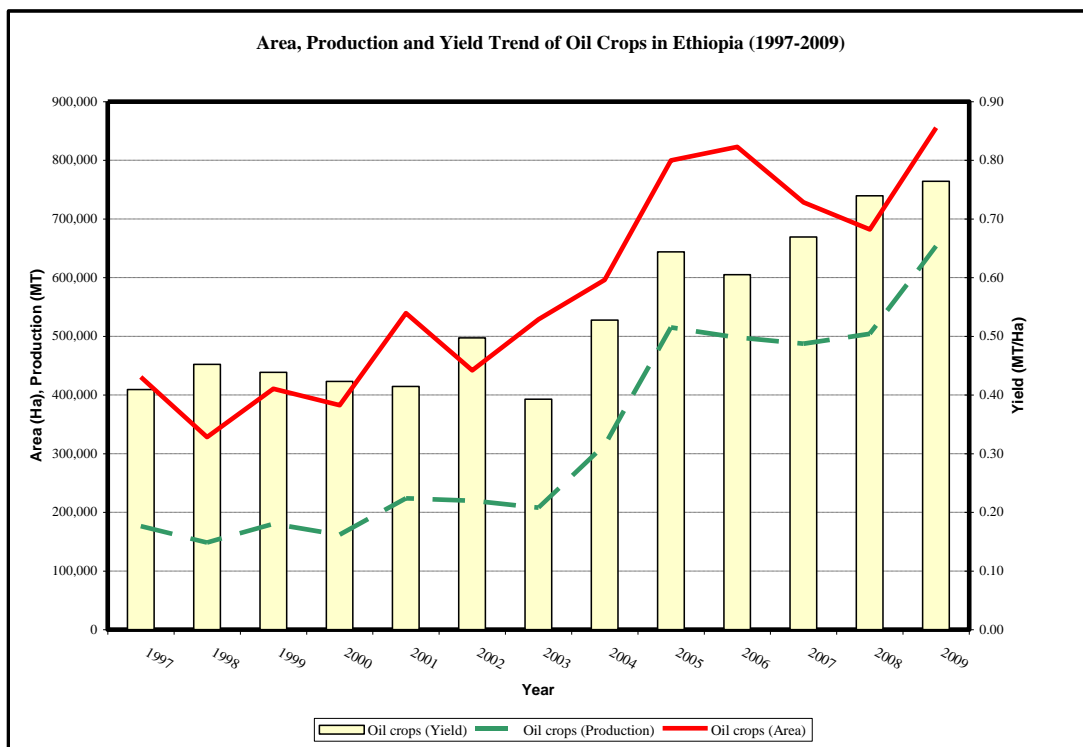
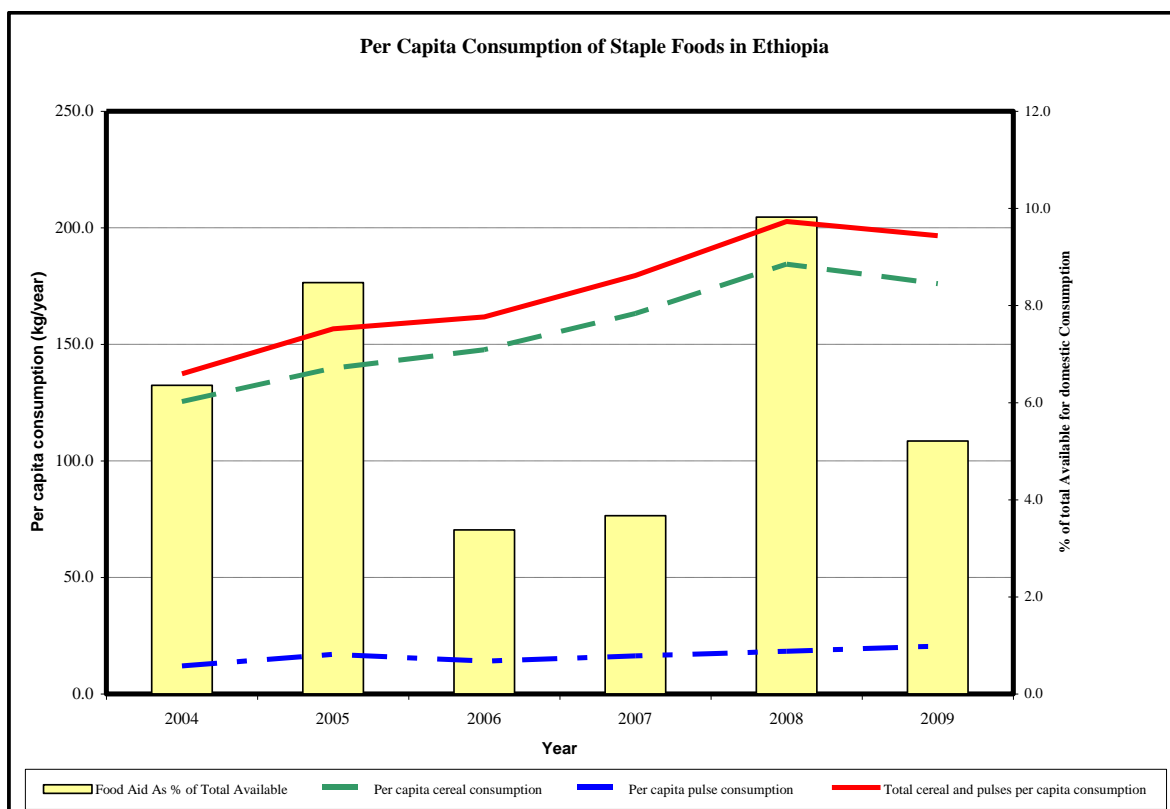


Figure 1d: Per Capita Consumption of Staple Foods (2004-2009)



3.3. Main Commodities Produced

The major crops produced include cereals, pulses and oilseeds. During the period 2004-2009, cereals accounted for about 86.8% of total production, whereas, pulses and oilseeds had 9.9% and 3.1% share, respectively. Of the cereal crops produced, maize represented about 30%; whereas sorghum, teff, barley, and wheat had 17%, 19%, 11.4% and 18.7% share, respectively. The share of millet and rice was insignificant -3.3% and 0.1%.

Horse bean (faba bean) is the most important pulse crop produced in Ethiopia, accounting for nearly 39% of total pulse production in 2004-2009. Haricot bean, with 17.8% share, is the second most important pulse crop, and it plays a crucial role in foreign exchange earning. Chick peas and field peas follow haricot beans with 14.7% and 15.4% share in total pulse production. Lentils are also important pulse crops for domestic and export market and accounts for about 4.8% (see annex table 1).

Other crops produced include vegetables (345,000 metric tons), root crops (1,410,000 metric tons and fruit crops (460,000 metric tons).

3.4. Main Challenges and Constraints

There are several challenges and constraints facing the Ethiopian agricultural sector, of which the following are critical.

- Environmental degradation: land degradation, the most important feature of environmental degradation, is one of the principal challenges and constraints that have negatively affected the performance of the agricultural sector. According to the 1986 Highlands Reclamation Study of Ethiopia, water erosion, which has been the most important process of land degradation, some 27 million Ha or almost 50% of the highland area was significantly eroded, 14 million ha seriously eroded and over 2 million Ha beyond reclamation. Erosion rates were estimated at 130 tons/Ha/year for cropland and 35 tons/Ha/year average for all land in the highlands (Berry 2003). It has also been indicated in the same report that rate of deforestation was about 62,000-150,000 Ha/year.

The root causes of land degradation include population growth, inappropriate land use practices, inappropriate land policy, overgrazing, deforestation, low level of investment in agriculture and animal husbandry, poor rural infrastructure and markets and low levels of technology, etc. The limited availability of arable land and lack of other employment opportunities outside the agricultural sector in particular, have increased pressure on the forest and grazing land resource in Ethiopia (Girma 2001). Some estimates indicate that about 62,000 Ha of woodland is cleared every year and the direct loss of productivity due to land degradation is about 3% of agricultural GDP (Berry, 2003).

- Recurring drought: the dependence of agriculture on weather and rainfall patterns has made production highly variable from year to year, because of the erratic and unpredictable nature of seasonal rains. A study by Z.G. Alemu (2005) shows that production instability in Ethiopia was caused more by increased yield instability than instability in an area or other variables such as technology or policy. The instability in cereal production is again directly reflected in increased market and price instabilities and therefore directly influences the welfare of farmers.

Other sources (DFID 2000) also show that agricultural production in Ethiopia is highly variable and unpredictable, due mainly to erratic weather, which has triggered famines in some years. The report indicated that a 10% decline in rainfall below its long-term average reduces national food production by 4.4%. Thus, since the entire Ethiopian economy is dependent on low productivity rainfed agriculture, and rainfall is the single most important determinant of Ethiopia's economic success or failure from year to year, recurrent droughts greatly affect the performance of the entire economy.

- Low level of utilization of modern agricultural inputs: Although studies show that the adoption of basic technologies such as fertilizers and improved seed

varieties can double cereal yield in Ethiopia, the current utilization pattern is low. For example, utilization of improved seed varieties covers not more than 4% of cultivated area and the utilization of improved seed mainly focuses on few crops like maize and wheat. The majority of the Ethiopian farmers use local seed. Similarly, chemical fertilizer use covers about 15% of the total cultivated area.

- Lack of alternative employment opportunities: off-farm employment opportunities outside agriculture are limited in both availability and income-generating potential. Although some of the rural population is sometimes engaged in non-farm employment, income generated from such employment activities is not more than 10% of household annual income.
- Inadequate infrastructure: although infrastructure including roads, storage, processing and marketing as well as information, is crucial for the transformation of the Ethiopian agriculture, it is currently inadequate. For example, according to the Ethiopian Economic Association report (2006/07), the total road density in the country is about 38.6 km/1000 km², which is low compared to the situation in Sub-Saharan Africa. The density of all-weather road in rural areas is even much lower-about 8 km/1000 km² -and farmers have to travel 40 km before they reach all-weather road network. The inadequacy of road infrastructure, therefore, has impacted negatively on the competitiveness and efficiency of the market.

Market information service is also deficient in Ethiopia. Although the CSA collects and publishes price data regularly, there is no established mechanism for their dissemination and utilization.

3.5. Agricultural Sector Policies

Since poverty and hunger are the country's main social and economic problems, the Ethiopian government's development policies are centered on the Poverty Reduction Strategy. Accordingly, since 2003 two Poverty Reduction Strategies: i) the Sustainable Development and Poverty Reduction Program (SDPRP) - 2002/2003-2004/2005 and, ii) the Plan for Accelerated and Sustained Development to End Poverty (PASDEP)-2005/06-2009/10), have been formulated and implemented.

The focus of the SDPRP was on improving rural development and food security through the transformation of the agricultural sector. The effort to address the poverty problem rests on three major directions: rapid economic development, elimination of the countries dependence on food aid, and making the poor the main beneficiary of economic growth.

Although the first Poverty Reduction Strategy (SDPRP) had four building blocks, including the Agricultural Development Led Industrialization (ADLI); Justice system reform and civil service reform; Governance, Decentralization and Empowerment;

and Capacity building in public and private sector, major emphasis was given to the agricultural sector because of its crucial role in the livelihood of the majority of the population and its potential to generate surplus to stimulate the growth of other sectors of the economy.

The second Poverty Reduction Strategy (PASDEP) is a five-year strategic framework that builds on the strategic directions pursued under SDPRP but also includes some new directions including a major focus on growth with particular emphasis on commercialization of agriculture, private sector development, and the scaling up of resources to achieve the Millennium Development Goals. PASDEP is linked to the Millennium Development Goals but gives due emphasis to agriculture.

In addition to implementing more general policies addressing poverty, the Government of Ethiopia has also adopted a policy response specific to Ethiopia's food security and agricultural productivity challenge. The most important agricultural development policy is the Agricultural Development Led Industrialization (ADLI) strategy. The ADLI strategy is the Government's central policy response to Ethiopia's food security and agricultural productivity challenge. According to the policy document, the agricultural strategy will revolve around a major effort to support the intensification of marketable farm products -both for domestic and export markets, and by both small and large farmers. Elements of the strategy include the shift to higher-valued crops, promoting niche high-value export crops, a focus on selected high-potential areas, facilitating the commercialization of agriculture, supporting the development of large-scale commercial agriculture where it is feasible, and better integrating farmers with markets -both locally and globally.

Although the private sector, including smallholders, is expected to play a crucial role in implementing the strategy, the Government envisages a range of public investments and services to initiate the development process at the initial stage. The instruments to achieve this under PASDEP include the following:

- Constructing farm-to-market roads,
- Development of agricultural credit markets,
- Specialized extension services for differentiated agricultural zones and types of commercial agriculture;
- The development of national business plans and tailored packages for specialized export crops (such as spices, cut flowers, fruits and vegetables);
- Supporting small-scale irrigation and area irrigation through multi-purpose dams;
- Measures to improve land tenure security, and to make land available where feasible for large-scale commercial farming;
- Reforms to improve the availability of fertilizer and seeds; and,
- Better-functioning agricultural markets for both inputs and outputs, and institutions, including improved value chains, information flows, quality and standards support, and cooperatives that strengthen the position of farmers in the market

PART TWO

VALUE CHAIN ANALYSIS FOR SELECTED STAPLE COMMODITIES

4. THE MAIZE SUB-SECTOR

4.1. Maize Production

According to the FAO (FAOSTAT), Ethiopia is the second most important producer of maize among the COMESA member countries with 15% share of the total maize production in the region. Average area under maize during the period 2004-2009 was about 1,994,294 hectares and accounts for 22% of the total area under cereals. Average annual production of maize was also about 3,683,077 metric tons or nearly 30% of the national cereal production. Maize is second to teff in terms of area, but it ranks first among cereals in production. Yield levels vary from 1.56 metric tons/Ha to 2.08 metric tons. The area under maize, production and yield during the period 2004-2009 is shown in table 1 below.

Table 1: Area Under Maize, Production and Yield (2004-2009)

Description	2004	2005	2006	2007	2008	2009
Area (Ha)	1,626,456	1,831,297	1,961,612	2,144,992	2,204,751	2,196,658
Production (MT)	2,792,232	2,849,821	3,960,711	4,432,735	4,379,887	4,577,619
Yield (MT/Ha)	1.72	1.56	2.02	2.07	1.99	2.08
National Cereal Production (MT)	9,646,142	10,763,518	12,371,122	13,946,756	14,395,425	15,194,923
Share of Maize in National Cereal Production (MT)	28.9	26.5	32.0	31.8	30.4	30.1

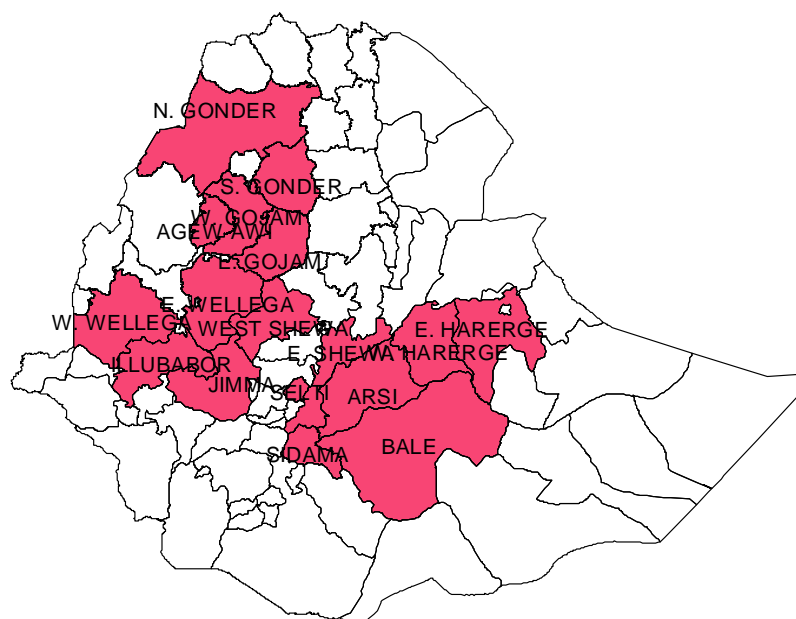
Source: CSA

Because of its large geographical coverage and the scale of production, maize plays a critical role in the food security of the country and particularly the poor. It is a widely grown crop in Ethiopia; although the extent of cultivation varies, maize is cultivated in some 74 important maize producing administrative zones, of which 20 contribute almost 80% of the national production. Marketable surplus is mainly produced in these high potential zones, and the production in the other zones is mainly for subsistence. The largest surplus producers of maize include: West Gojam (11.3%), Jimma (7.9%), East Shoa (7.8%), East Wellega (6.4%), West Wellega (5.5%), Illubabor (4.3%), Arssi (4.3%), West Shoa (4.2%), East Hararghe (3.5%), Agewawi (3.4%), West Hararghe (2.9%), and Sidama (2.9%). The other important maize producing zones are West Arssi, East Gojam, North Gondar, Horo Gudru, Bale, South Gondar, Silti and Kelem (see map-figure 2). At the national level About 8 million smallholders, one state farm and 12 private commercial farms are engaged in maize production. Holding size of total cultivated land considerably varies from less than 0.5 Ha to over 10.0 Ha. Almost 30% of the households own up to 0.5 Ha, 26% from 0.51 to 2.0 Ha, 16% between 1.01-2.00 Ha, and 1.3% over 5.0 Ha.

Maize production in Ethiopia has been increasing since 1997, reaching a high of 4,577,619 metric tons in 2009. In 2003, it substantially decreased to 1,794,697 metric

tons due to the sever drought the country faced. During the period 1997-2009, maize production increased by 5% per annum due to area expansion (3.2%) and yield improvement (1.8%). Although there has been an increase in the adoption of improved technologies, maize yield did not show much change in 2004-2009.

Figure 2: Major Maize Producing Zones of Ethiopia



These zones produce about 80% of national maize production

4.2. Maize Consumption

4.2.1. Domestic Production vs. Consumption

Overall net maize supply from domestic production and net import was in the range of 2.3-3.8 million metric tons, the largest share being that of domestic production. In most of the non-drought years, domestic production has been the most important source of maize for domestic consumption (see table 2).

Table 2: Supply and Consumption of Maize in Ethiopia (2004-2009)

Description	2004	2005	2006	2007	2008	2009
Gross domestic production (MT)	2,792,232	2,849,821	3,960,711	4,432,735	4,379,887	4,577,619
Net domestic production (MT)	2,317,552	2,365,351	3,287,390	3,679,170	3,635,307	3,799,424
Commercial import (MT)	30,488	251	378	1,952		6,131
Commercial export (MT)	11,840	1,921	22	2		
Food aid import (MT)					31,792	
Net maize available for domestic consumption (MT)	2,336,200	2,363,681	3,287,746	3,681,120	3,667,099	3,805,555
Population	68,440,172	70,219,616	72,045,327	73,918,505	75,840,386	77,812,236
Actual consumption (kg/capita)	34	34	46	50	48	49
Share of Net Domestic Production in Total Supply (%)	99	100	100	100	99	100
Share of Maize in Total Cereal Consumption (%)	27	24	31	31	27	28
Actual consumption (kg/capita)	124.16	139.22	146.69	162.93	179.51	172.67

Source: CSA (production), WFP (food aid import), Customs (Commercial import/export)

As shown in table 2, the national per capita consumption of maize has substantially increased from 34 kg/per capita in 2004 and 2005 to 46 kg in 2006, 50 kg in 2007, 48 kg in 2008 and 49 kg in 2009. Maize constitutes about 24%-31% of national cereal consumption and is mainly covered by domestic production. Maize is consumed as a staple food in different forms, including: *injera* (alone or mixed with teff), porridge, bread, grits and *nefro*. It is also consumed roasted or boiled (especially at green stage) and grits. Moreover, it brewed into *tella*, *araki* and other local spirits.

4.2.2. Maize Exports and Imports

Food aid import has been the main source of cereal supply in Ethiopia, and wheat has been the most preferred commodity by donors and the recipient country. Consequently, there has not been much import of cereal food aid other than wheat. However, since 1996 some donors - particularly the EU and WFP in collaboration with the Government have devised a system for the local purchase of food aid, focusing on certain crops including maize, sorghum and wheat from high production areas.

The system of local food aid purchase put in place has been an important market intervention mechanism for stimulating maize producers in the high potential areas as well as traders. During the period 2004-2006, total local purchase of maize by donors was about 79,000 metric tons/year, but it substantially decreased after 2006 because of the high cereal prices in the domestic market. This has forced donors to import some 31,792 metric tons of maize in 2008.

As can be seen from table 3, there was some 30,488 metric ton maize commercially imported in 2004, but since then the quantity imported has been negligible. Commercial export of maize was also the highest in 2004 but became insignificant after 2004. Some maize cross-border trade with neighboring countries has been mentioned in a recent MoARD study, but its magnitude is not documented. Maize based processed food such as cornflakes are also commercially imported, but there is no data on the quantity imported.

Table 3: Import and Export of Maize 2004-2009 (MT)

Description	2004	2005	2006	2007	2008	2009
Commercial import	30,488	251	378	1,952		6,131
Commercial export	11,840	1,921	22	2		
Commercial net import	18,648	-1,670	356	1,950		6,131
Food aid import					31,792	
Total net import	18,648	-1,670	356	1,950	31,792	6,131

Source: WFP and Customs Authority of Ethiopia

4.3. Value Chain Mapping

As the first largest crop among cereals, the importance of maize as a consumption item is obvious. It is the most important staple food in many parts of rural and urban Ethiopia. Hence, most of the maize production is primarily used for on-farm consumption and seed. The marketed quantity of maize from the smallholders represents about 18% of national production, but it varies from area to area depending on their production potential. Marketable surplus from the state and private commercial farms, however, could reach up to 80% of their annual production. Overall the quantity of maize marketed by smallholders and commercial farms is estimated at about 895,916 metric tons. Of the total quantity of maize marketed, nearly 96% comes from the smallholder sector and the balance from state and private commercial farms. The marketed quantity of maize accounts for nearly 28% of all cereals marketed.

Maize is customarily sold in grain form and is processed at household level using traditional means or using the services of small grain mills; only 6% of the marketed quantity is processed by medium and large-scale processors. Producers of maize have alternative marketing channels through which they sell their product. As shown in figure 3, the key players include rural assemblers, cooperative unions, wholesale grain traders and retailers. The role and significance of each market participant and the volume of maize that passes through the different channels is discussed as follows.

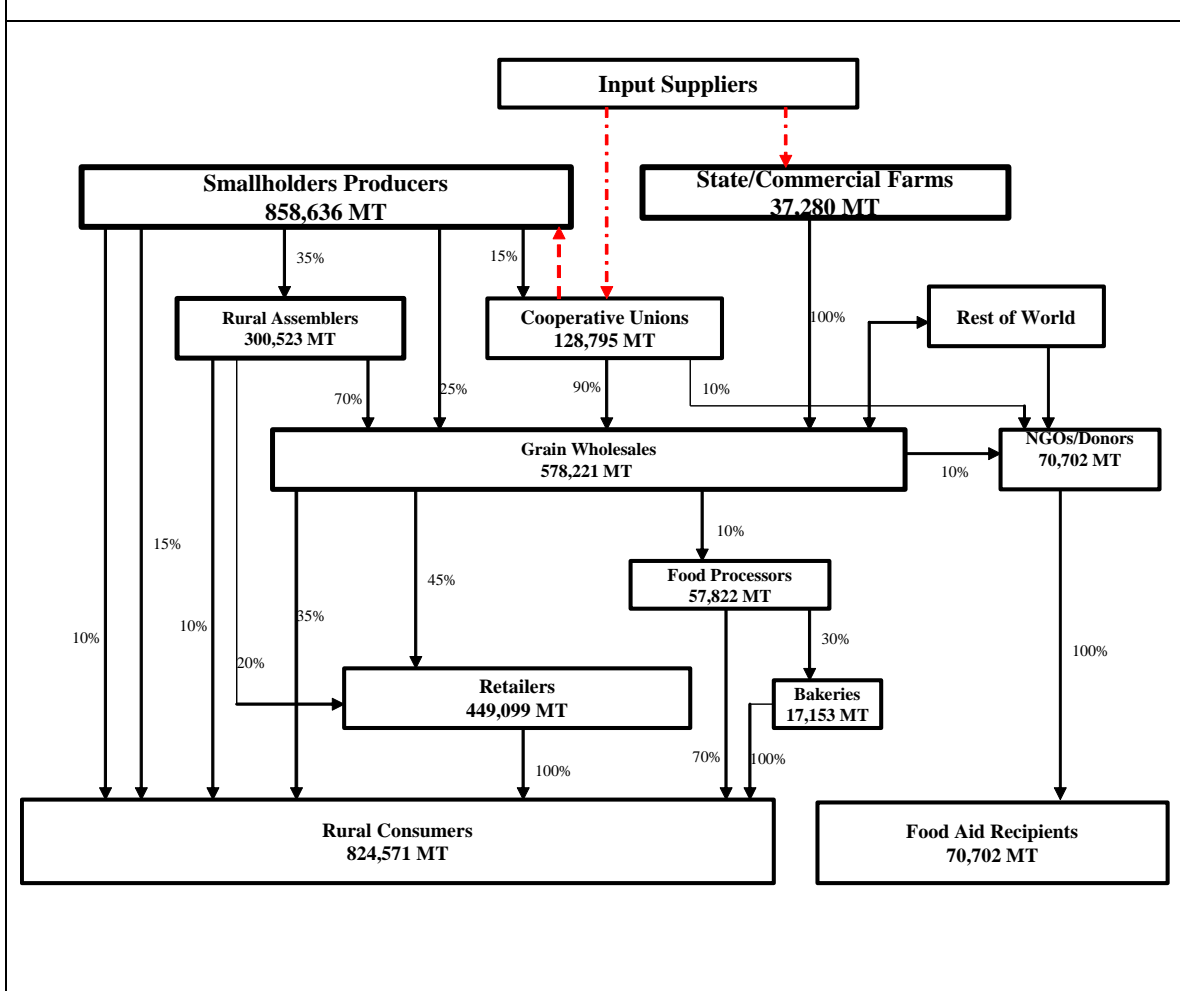
Input Suppliers

Inputs suppliers consist of the Government owned Agricultural Inputs Supply Enterprises (AISCE), Ambassel, Wondo, and 10 farmer owned cooperative unions. While AISCE, Ambassel and Wondo are engaged in the fertilizer import business, the cooperative unions are involved in both the importation and distribution of fertilizers. Although 10 unions are engaged in fertilizer import, there are more than 60 cooperative unions that distribute inputs to about 800,000 farm households organized under 1,200 primary cooperatives. Another government organization-the Ethiopian Seed Enterprise (ESE)-and one private company called Ethiopian Pioneer Hybrid Inc. deal with the production and marketing of improved seed varieties.

The 13 input suppliers handle about 521,000 metric tons (including stocks and new purchases) annually, of which the share of cooperative unions is about 56% and AISCE, Ambassel and Wondo handle 23%, 12%, and 9% respectively. According to the CSA, a total of 74,000 metric tons of DAP and Urea was distributed to 1.1 million smallholder maize growers in 2008. The quantity of chemical fertilizers used by the state and private commercial farms for maize production is also estimated at 2,500 metric tons. Some 8,660 metric tons of improved maize seed varieties were also distributed to 990,000 maize growers. The area covered by chemical fertilizers and improved seed varieties is about 25% of the total area under maize.

Agricultural inputs are normally distributed to maize growers on credit through their cooperatives and the source of the credit has been the government owned Commercial Bank of Ethiopian, and the regional governments provide credit repayment guarantee.

Figure 3: Maize Value Chain Map



Rural Assemblers

Rural assemblers play a key role in collecting and bulking maize marketable surplus from small rural markets and transporting it to urban markets for delivery to wholesalers, retailers and consumers. They handle about 300,000 metric tons of maize or some 35% of the marketable surplus from the smallholder sector and sell it to grain wholesalers (70%), retailers (20%) and directly to consumers (10%).

Cooperative Unions

There are some 61 cooperative unions that are engaged in input and output marketing, which serve about 1,000 member primary cooperatives and more than 700,000 farm households. Some of these unions are located in the major maize producing zones of the country and are engaged in the procurement of maize from their members.

The cooperative unions' annual maize purchase is estimated at 128,795 metric tons, of which 90% is sold to wholesalers and the remaining balance to donors/NGOs that locally purchase food for relief and development activities.

Grain Wholesalers

The grain wholesalers include wholesalers in surplus grain producing areas, wholesalers in major terminal markets, wholesalers in deficit areas, private companies, and a government enterprise called Ethiopian Grain Trade Enterprise (EGTE). The wholesalers in surplus and deficit areas are licensed and operate in major grain markets and are connected by a network of brokers. The wholesalers as a group handle about 578,221 metric tons or nearly 65% of the national marketable maize annually. Out of this, some 75,000 metric tons or 13% of the total quantity of maize handled by the wholesalers is that of the EGTE. Their principal suppliers are smallholders (37%), rural assemblers (36%), cooperative unions (20%) and state and private commercial farms (7%).

Grain wholesalers do not specialize in certain commodities but they mostly focus on the main crops grown in their respective areas of operation. There is a lot of transaction among the wholesalers themselves; traders in deficit markets buy maize or other crops from those operating in surplus areas directly or indirectly through the services of brokers. Various studies show that the brokers operating in the main terminal markets, particularly those in Addis Ababa, coordinate inter-market grain flows. The brokers are specialized by route, and coordinate grain buying, selling, transporting and pricing activities.

In addition to coordinating inter-market grain flow, the brokers provide very important services to the grain wholesalers, including: selling of grain on behalf traders, providing market information, identifying and connecting buyers and sellers, arranging transport services, etc.

Food Processors

There are few flour mills that use maize as a raw material and their annual purchase does not exceed 17,000 metric tons. Currently only 6% of the marketable maize is processed and distributed in flour form.

Grain Retailers

Grain retailers, particularly those in deficit areas and terminal markets, are the second most important actors in the maize value chain, following the wholesale traders. Nearly 449,000 metric tons or about 50% of the national market supply of maize is supplied to consumers through retailers. The retailers obtain their supplies from wholesalers (58%), directly from smallholders (29%) and rural assemblers (13%).

Donors/NGOs

Since 1996 donors and NGOs have been purchasing different cereals from the domestic market for their relief and development activities and at the same time to encourage domestic surplus producers. During 2004-2006, they bought on average about 71,000 metric tons of maize/year through this mechanism. The major suppliers have been wholesale traders and cooperative unions. The grain wholesalers supply about 57,822 metric tons and the cooperative unions 12,880 metric tons.

Distribution of Value Added Across the Value Chain.

The maize value chain that connects producers and consumers throughout Ethiopia has three key actors: assemblers, wholesalers and retailers. As mentioned earlier the producer→assembler→wholesaler→retailers→consumer channel is the most important in terms of the magnitude of the marketed maize that flows from producers to consumers. About 449,000 metric tons or 50% of the national marketed quantity of maize passes through this channel. Accordingly, the value added by the different actors along this channel has been computed using the data obtained from key informants.

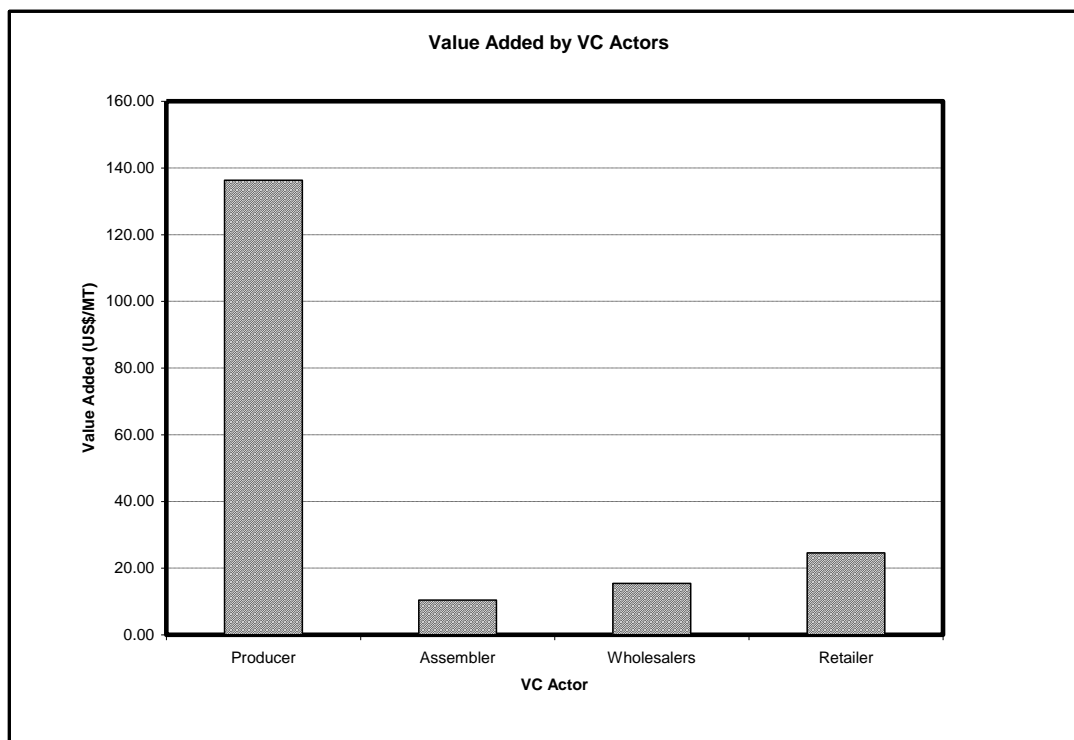
Smallholder maize producers incurred various cost in the production of maize, including: seed and fertilizer cost, labor cost for land preparation, weeding and harvesting, etc. The total cost they incurred was about US\$ 155.39/metric ton and sold their product for US\$ 291.67/metric ton to wholesale merchants.

According to the focus group discussions conducted in Shashemene and Nazret markets, the assemblers operating around Shashemene bought maize from various small rural markets and paid the producers US\$ 291.67/metric ton. They also incurred various costs including, loading, stacking, storage rent and spillage allowance and finally sold their maize supplies to wholesalers at Shashemene at a delivery price of US\$ 322.92/metric ton. The total handling and marketing costs are estimated at US\$ 20.83/metric ton.

The Shashemene wholesalers sold part of their purchases to retailers in Nazret at US\$ 375.00/metric tons and the selling price included different costs, including transport, fumigation, loading, warehouse rent, and brokerage fee, totally amounting to US\$ 36.67/metric ton. Similarly, the retailers in Nazret incurred about US\$ 16.56/metric ton for different expenditure items including store rent, labor, spillage, etc and sold their supplies at US\$ 416.67/metric ton to the final consumers.

Thus, the total valued added along this channel is estimated at US\$ 186.7/metric ton, of which US\$ 136.28 went to maize producers, US\$ 10.42/metric ton was that of assemblers, US\$ 15.42 to wholesalers, and US\$ 24.58/metric ton went to retailers. The value added distribution is shown in figure 4.

Figure 4: Distribution of Value Added Along the Maize Value Chain



4.4. Constraints and Opportunities

A number of high yielding and disease resistant maize seed varieties have been released by different organizations, including the Ethiopian Agricultural Research Institute, Horomaya University, Pioneer, and others. For example, a total of 28 improved maize seed varieties that are adaptable to various ecological zones have been released since 2001 (MoARD 2008). Some of the varieties released are hybrid and others are open pollinated varieties. Thus, there is substantial potential to increase farmers' productivity in both high potential areas and the areas with moisture stress.

However, the seed varieties have not reached the farmers because of the government's limited seed multiplication and distribution capability. The quantity of certified maize seed annually produced and distributed to farmers is about 5,000 metric tons, and this is only enough to cover about 200,000 hectares or about 10% of the area annually planted for maize. Moreover, with the exception of Pioneer, the private sector involvement in the seed industry is almost non-existent.

Therefore, given the fact that maize is one of the priority crops of the country and the existence of enormous potential for improving yield, a number of constraints that face the agricultural sector should be addressed to increase productivity and improve market performance. The major constraints include the following.

- Shortage of certified maize seeds varieties suitable for different agro-ecological zones;
- Inadequate supply and marketing of maize seed;
- Nonexistence of export market and agro-industries that use maize as a raw material and diversify the utilization of the crop;
- Inadequate transport infrastructure and high cost of transport;
- Lack of reliable and timely market information;
- Inadequate access to credit facilities by grain traders;
- Lack of storage and marketing facilities in both the surplus producing and the consumption centers;
- Lack of universally acceptable and enforceable quality standards that reduce transaction costs;
- Weak producers' organizations and limited participation in maize seed production, distribution and marketing of members' output.

5. THE WHEAT SUB-SECTOR

5.1. Wheat Production

Ethiopia is the second largest wheat producer among the COMESA countries, following Egypt. Of the total COMESA wheat production of about 11.2 million metric tons, Egypt's share is substantial-nearly 66%, and that of Ethiopia is about 20%. Ethiopia also ranks 35th in the world wheat production (FAOSTAT 2007).

In terms of area cultivated and annual wheat production, wheat is the third most important cereal crop in Ethiopia following maize and teff. Average annual area under wheat and wheat production during the period 2004-2009 was 1.51 million hectares and 2.29 million metric tons, respectively. Some 4.1 million smallholders (CSA 2006/07) and few state and commercial farms, residing in 60 administrative zones in the different regional states of the country produce wheat, but only 14 zones account for about 80% of the country's annual production of wheat (see map-figure 5). Nearly 98% of the wheat is produced by smallholders.

The most important wheat producing areas include: Arssi with 14.7% share of total wheat production, Bale (13.2%), North Shoa (8.3%), West Shoa (8.1%), East Shoa (6.6%), East Gojam (5.9%), South Wello (5.0%), West Arssi (4.0%), South West Shoa (3.5%), Southern Tigray (3.0%), South Gondar (2.8%), Hadiya (2.8%), and West Gojam (2.3%).

Since 1997 wheat production has increased by about 8.7% per year due to area expansion and yield improvement. Analysis of the growth pattern of wheat during the period 1997-2009, using the CSA data, shows that area under wheat has increased by 5.0% and yield per hectare by nearly 3.4%. During the period 2004-2009 in particular, wheat production increased from 1.76 million metric tons in 2004 to a record level of about 2.66 million metric tons in 2009 (see table 4). If past growth trends continue, production of wheat is expected to grow to 2.8 million metric tons in 2010 and 3.1 million metric tons in 2013.

Table 4: Area, Production and Yield of Wheat in Ethiopia (2004-2009)

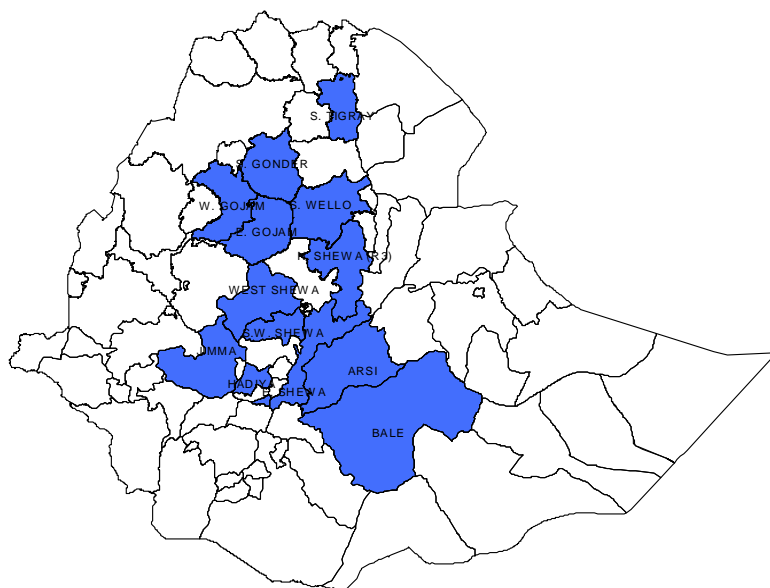
Description	2004	2005	2006	2007	2008	2009
Area (Ha)	1,199,119	1,531,028	1,596,429	1,621,333	1,538,522	1,583,022
Production (MT)	1,755,621	2,289,249	2,361,486	2,615,024	2,408,610	2,663,647
Yield (MT/Ha)	1.46	1.50	1.48	1.61	1.57	1.68
National Cereal Production (MT)	9,646,142	10,763,518	12,371,122	13,946,756	14,395,425	15,194,923
Share of Wheat in Cereal Production (%)	12.4%	14.2%	12.9%	11.6%	10.7%	10.4%

Source CSA

According to the 2007/08 agricultural sample survey conducted by the CSA, of the total 253,000 metric tons of DAP and Urea used for cereals, some 79,400 metric tons or nearly 31% was applied on 446,709 hectares of wheat. This indicates that about 29% of the total area under wheat was treated with chemical fertilizers at a rate of 178 kg/hectare. Likewise, improved seed varieties of wheat accounted for about 42% of

the 17,942 improved seed varieties of various cereals used in the same year. The wheat area on which improved seed varieties was applied represented nearly 3% of total wheat area.

Figure 5: Major Wheat Producing Zones of Ethiopia



These zones produce more than 85% of national wheat production

5.2. Wheat Consumption

5.2.1. Domestic Production vs. Consumption

The total wheat supply available for domestic consumption, including net domestic production⁴, net import and food aid was in the range of 1.92 million metric tons in 2004 and 3.36 million metric tons in 2008 (see table 5). Out of the total supply of wheat, net domestic production accounted for nearly 74%, on the average, during the period 2004-2009, but it varied from 59.5% in 2008 to 87.25% in 2006. the Government imported some 545,325 metric tons in 2008 and

⁴ Net domestic supply = Gross domestic production less seed and wastage (estimated at 17% of production).

308,295 metric tons in 2009 to curb the impact of the then prevailing inflation and stabilize grain markets. Per capita wheat consumption also varied from 28.07 kg in 2004 to 44.29 kg in 2008.

Table 5: Supply and Consumption of Wheat in Ethiopia 2004-2009

Description	2004	2005	2006	2007	2008	2009
Gross domestic production (MT)	1,755,621	2,289,249	2,361,486	2,615,024	2,408,610	2,663,647
Net domestic production (MT)	1,457,165	1,900,076	1,960,034	2,170,470	1,999,147	2,210,827
Commercial import (MT)	18,958	20,000	20,000	20,000	545,325	308,295
Commercial export (MT)	130	420	8	155		
Food aid import (MT)	445,090	808,077	266,519	434,025	814,140	504,895
Net wheat available for domestic consumption (MT)	1,921,083	2,727,733	2,246,545	2,624,340	3,358,612	3,024,017
Actual consumption (kg/capita)	28.07	38.85	31.18	35.50	44.29	38.86
Wheat consumption as % of total cereal consumption	22.61	27.90	21.26	21.79	24.67	22.51
Share of Net Domestic Production in Total Supply (%)	75.85	69.66	87.25	82.71	59.52	73.11

Source: CSA, Ethiopian Customs Authority, WFP

5.2.2. Wheat Exports and Imports

In Ethiopia food import, particularly food aid has been an important component of the cereal supply. Commercial import has been insignificant-amounting not more than 20,000 metric tons until 2008. On the other hand, food aid import of wheat was substantial, ranging from 266,519 metric tons in 2006 to 814,140 metric tons in 2008 (see table 6). On the average, food aid import of wheat accounted for nearly YY% of total wheat import in 2004-2007 and ZZ% in 2008-2009.

The major providers of wheat aid were WFP (47%), USAID (28.4%), and EU (9.6%).

Table 6: Import of Wheat to Ethiopia in 2004-2009

Particular	2004	2005	2006	2007	2008	2009
Commercial import	18,958	20,000	20,000	20,000	545,325	308,295
Food aid import	445,090	808,077	266,519	434,025	814,140	504,895
Total import	464,048	828,077	286,519	454,025	1,359,465	813,190

Source: Customs Authority and WFP

As can be seen from the above table, the level of wheat import has over the years been varying depending on the magnitude of the food shortages faced. The largest amount of total import was in 2008, when the Government imported 545,325 metric tons to stabilize the grain market throughout the country and WFP and other donors delivered about 814,140 metric tons. Wheat has generally been the most preferred food aid commodity in Ethiopia.

Formal wheat export from Ethiopia is negligible. It was 130 metric tons in 2004; 420 metric tons in 2005; 8 metric tons in 2006; and 155 metric tons in 2007. There was no export in 2007 and 2008. Although different commodities are exported through cross-border trade, a recent study by the Ministry of Agriculture and Rural Development (MoARD) does not show wheat as an export item.

5.3. Value Chain Mapping

As mentioned earlier, the total net annual quantity of wheat available for domestic consumption during the period 2004-2009 was about 2.65 million metric tons, but it varied from year to year, mainly due to domestic production fluctuation. In 2008, for example, the total quantity available for domestic consumption was 3,358,612 metric tons, of which 1,999,147 metric tons was from domestic production, 545,325 metric tons was from commercial import and 814,140 metric tons was food aid.

As regards the marketable volume of wheat, it is estimated that about 21% of the domestic production is marketed, while the bulk of the produce is retained on-farm for consumption and seed. Accordingly, nearly 561,000 metric tons of wheat was sold by smallholders and state and private commercial farms in 2008. Although some 545,325 metric tons was commercially imported by the Government in 2008 to stabilize the market, in most of the years commercial wheat import is normally negligible, amounting to about 20,000-25,000 metric tons. Thus, the amount of wheat flowing to the market from domestic sources and import does not normally exceed 581,000 metric tons annually. The bulk of the market supply of approximately 89% comes from smallholders, while the rest is supplied by commercial farms and import.

The major players in the wheat market are the input suppliers, smallholders, state and commercial farms, rural assemblers, cooperative unions, grain wholesalers, flour mills, processed food wholesalers, grain retailers, bakeries and pastries, and retailers of processed food. Donors and NGOs also play some role in procuring wheat locally for their relief and development activities. A functional matrix of the different actors in the wheat market is shown in figure 6 below.

Figure 6; Functional matrix of major domestic market channels

Functions	Domestic Market Channels									
	Input suppliers	Farmers	Assemblers	State & private commercial farms	Cooperative Union	Wholesale grain traders	Processors	Processed food wholesalers	Bakeries	Processed food retailers
Input supply										
Production										
Storage										
Assembly/Collecting bulking										
Grain wholesaling										
Grain retailing										
Processing										
Bakeing										
Wholesale distribution of processed food										
Retailing of processed food										

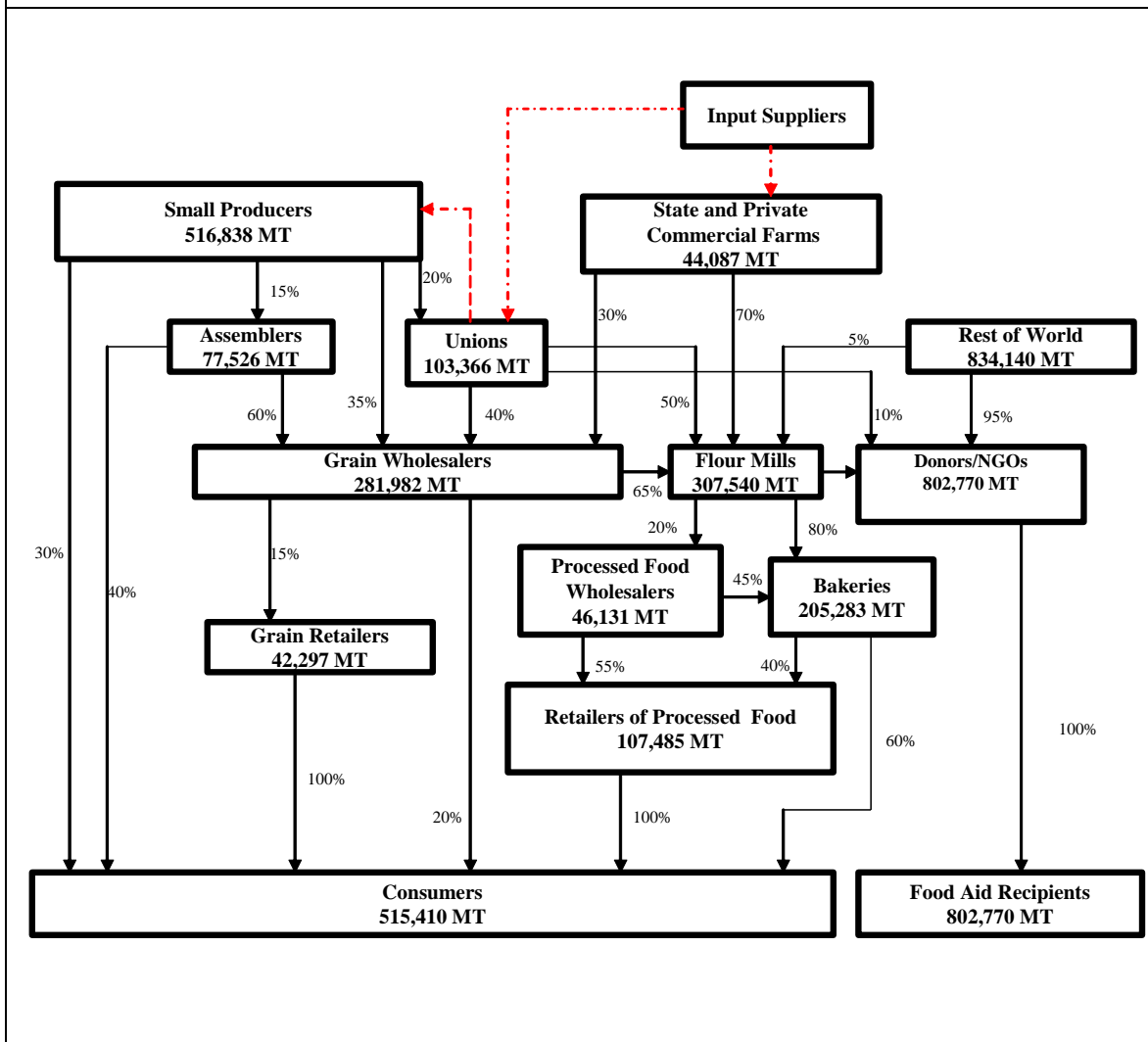
A simplified representation of the current marketing system for wheat in Ethiopia is shown in Figure 7 below. The figure provides a visual description of the wheat value chain, the flow of wheat from areas of production to areas of consumption, and flow pattern of the quantity of wheat and the different processed products that pass through the alternative marketing channels. Description of the role and significance of each actor is also provided following the visual description.

Input Suppliers

The major agricultural input suppliers include two government owned organizations: Agricultural Inputs Supply Enterprise (AISCE) and the Ethiopian Seed Enterprise (ESE), two regional government affiliated companies, and nine cooperative unions. With regard to fertilizer, though the private sector handled nearly one-third of the annual volume of fertilizer import in 1995, its role gradually diminished and currently the entire fertilizer importation and distribution is handled by the government and farmers' cooperative unions. According to the 2007 FAO/WFP Food Assessment Mission, the farmers' cooperative unions controlled about 56% of the total fertilizer handled in 2005/06, while AISCE and the two government-affiliated companies (Ambassel and Wondo) had 23% and 21% shares. Similarly, the Ethiopian Seed Enterprise (ESE) was the sole supplier of the 9,000 metric tons of improved wheat seeds distributed in 2006/07.

Agricultural inputs, mainly improved wheat seed varieties and fertilizer, are distributed on credit to smallholders through a credit guarantee scheme supported by regional governments; the credit is mostly obtained from the Commercial Bank of Ethiopia.

Figure 7: Wheat Value Chain Map



Producers

Wheat producers include smallholders and state and commercial farms. There are some 4.2 million smallholders, two state farms and several private commercial farms that produce and supply the domestic market with wheat. The major producers and suppliers, however, are the smallholders, accounting for more than 89% of the market supply.

Wheat sales by the state and commercial farms are normally conducted on tender basis or by negotiating with buyers and delivery is at farm-gate. According to data obtained from key informants, nearly 60% of the state and private commercial farms are delivered directly to flour mills and the remaining 40% is sold to grain wholesalers.

The smallholder wheat producers also have different market outlets for their produce. Depending on their proximity to the market and prevailing market and price conditions, they directly sell to rural consumers or to rural assemblers or to cooperative unions or to grain wholesalers. It is estimated that about 30% of farmers' produce is directly sold to consumers, 25% to assemblers, 20% to cooperative unions and 25% to grain wholesalers.

Assemblers

Assemblers are traders or farmer/part-time traders who collect grain from small rural markets. They play a crucial role, particularly in collecting and transporting grain from inaccessible or distant markets. Their number is not documented, but it is estimated that they handle about 78,000 metric tons of wheat annually, which they sell to consumers directly (40%) or to grain wholesalers (60%). Sales decision by assemblers is influenced by the size of the local market demand and the overall wheat and cereal supply situation.

Grain Wholesalers

Grain wholesalers include the Ethiopian Grain Trade Enterprise (EGTE), private companies, and the regional grain merchants in both surplus and deficit areas. Together, these actors handle about 281,982 metric tons or 48.5% of the total wheat supply to the domestic market. In some years, however, when the domestic supply of cereals decreases significantly, the Government imports substantial quantities and distributes it to food processors and the public. Normally, however, the sources of the wholesalers' wheat purchase are the smallholders (64%), rural assemblers (16%), cooperative unions (15%) and state and private commercial farms (5%). Although there are about 85 big grain trading companies and individuals (including EGTE), over the past 3 years their role in the purchase of wheat from domestic sources has been insignificant. These large merchants have been the major suppliers of wheat, sorghum and maize to WFP and EU for their food security programs in Ethiopia.

Currently the most active participants in the domestic wheat market are the regional merchants who purchase wheat from the surplus growing areas and distribute to deficit areas and major consumption centers directly or indirectly through their brokers. Because of the shortage of cereals in the domestic market, the Government has imported some 800,000 metric tons in 2008 and 2009 and distributed it to flour mills and the public through EGTE.

Processors

Wheat is the most important crop that is utilized as an industrial input for food processors. Food processors that use wheat as an input include 86 large and medium flour mills, 180 manufacturers of bakery products and 9 manufacturers of spaghetti and macaroni. These enterprises employ about 11,000 people. Another source

(EGTE) put the number of flour mills in the country at 207 with a combined milling capacity of about 1,946,129 metric tons. More than 50% of the processors are located in and around Addis Ababa. The annual volume of wheat handled by food processors is about 307,540 metric tons and this represents about 53% of the total wheat supply to the domestic market.

The major suppliers of wheat to the mills include grain wholesalers and cooperative unions, which supply 60% and 17% of food processors annual wheat purchase. Food processors normally operate below their capacity. For example, the capacity utilization of flour mills, bakeries and manufacturers of pasta and macaroni operated at 36%, 67% and 58% of their capacity in 2006/07 (CSA, 2008).

Processed Food Wholesalers

Wholesalers of processed wheat, especially wheat flour and spaghetti products, obtain their supplies from the domestic flour mills and supply the same to retailers and bakeries. They mostly operate in large towns.

Retailers

Wheat and wheat product retailers include grain retailers and retailers of processed food such as flour, spaghetti and bakery products. About 53% of the wheat is supplied to consumers in the form of flour, spaghetti and bakery; while the rest is distributed in the form of whole grain which is then further processed by the consumers. Retailers include small shops, bakeries, kiosks, restaurants, cafes, and supermarkets.

Value added distribution

As indicated earlier, about 53% of the wheat is processed by the mills before it reaches the final consumer and the balance (47%) is distributed to consumers in the form of whole grain. Out of the 307,540 metric tons of wheat processed by the mills, nearly 89% is supplied to consumers by the bakeries, directly or through processed food retailers. Thus, given the significance of the channel (Producer→Grain wholesaler→Processor→Bakery→Consumer), the value added by the different actors along this marketing channel has been calculated using data obtained from key informants. The value added by each of the actors; producers, grain wholesalers, processors and bakeries, was computed by deducting the costs of all intermediate inputs (including raw material purchase) from the gross value of products sold by each actor. In calculating the value added at each stage, reference has been made to one metric ton of the final product (bread) and input requirements of preceding activities were determined using standard conversion factors. The results are discussed below

According to the data obtained from farmers' focus group discussions in and around Assela, smallholders' cost of production of wheat is approximately US\$ 293.02/metric ton, and this includes land preparation US\$ 33.07, seed cost (US\$

58.59), fertilizer cost (US\$ 351.93), herbicides (US\$ 29.84), oxen rent and labor (US\$ 58.75), harvesting and related costs (US\$ 60.84). The smallholders sell their product to wholesalers, or assemblers or cooperative unions at US\$ 468.75/metric ton.

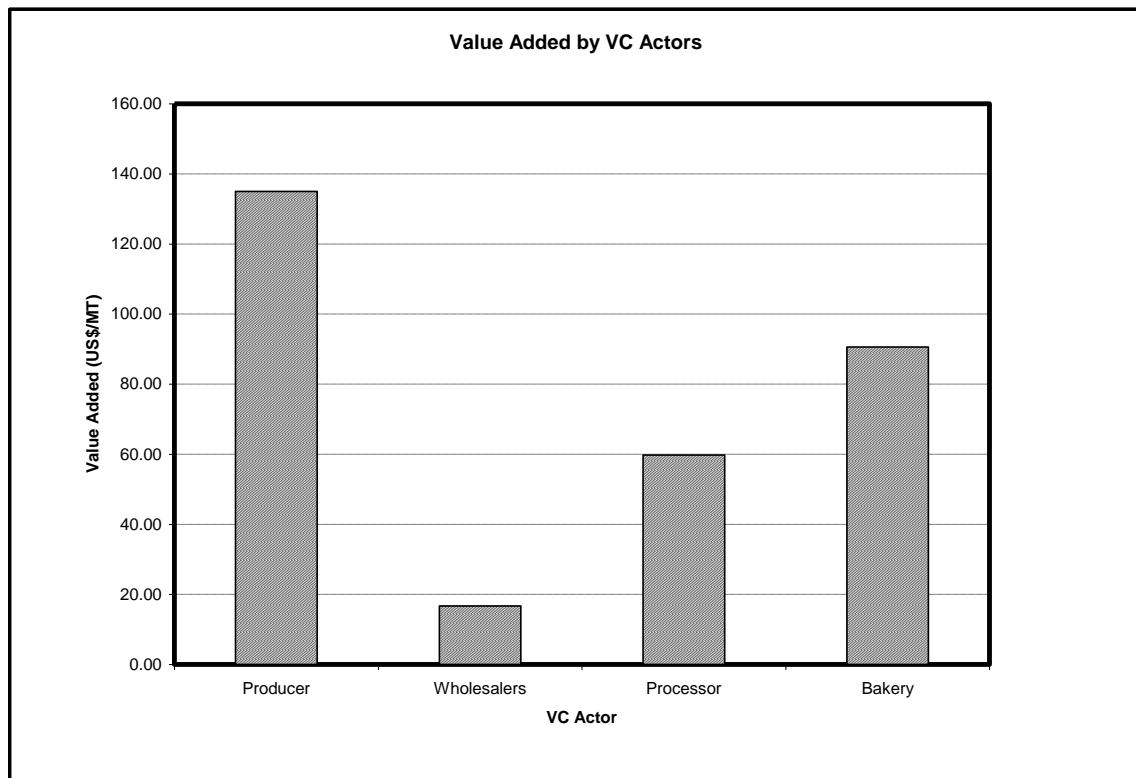
Wholesalers incur about US\$ 30.36/metric ton in organizing their wheat supplies for delivery to the flour mills, and the marketing and handling costs include: packaging and stacking, sacks and twines, warehouse rent, unloading, brokerage fee, and transport. The wholesalers operating at Assela transport and deliver the wheat to the mills in Nazret for US\$ 520.83/metric ton.

The flour mills require some 1.33 metric tons of wheat to produce one metric ton of flour. In the process of converting the wheat into flour, the mills spend approximately US\$ 151.35/metric ton of flour produced, of which processing loss/wastage (US\$ 97.66), packaging materials (US\$ 6.93), labor (US\$ 7.42), light and power (US\$ 7.06), repair, maintenance and depreciation (US\$ 6.38), administrative and selling expenses and miscellaneous costs (US\$ 24.08) are the major expenses items. The selling price of one metric ton of flour at Nazret is about US\$ 750.

The bakeries then convert one metric ton of flour into about 7,500 loaves of bread that they sell at US\$ 750/metric ton to consumers. The bakeries also cover different expenditure items in the production of bread, and the major cost items include: transport, yeast, salt, sugar, oil, improver, labor, administrative and selling expenses, utilities, and other miscellaneous expenses, all in all amounting to US\$ 108.58/metric ton.

Thus, the value added by the different actors in the wheat-bread value chain, that is, revenue less cost of raw materials and handling and marketing as well as processing expenses is about US\$ 393.24/metric ton. The share of the different actors in the total value chain is as follows: wheat growers (44.7%), wholesale traders (5.5%), flour mills (19.8%), and bakeries (30.0%)-see figure 8.

Figure 8: Distribution of the Value Added in the Wheat-Bread Value Chain



5.4. Constraints and Opportunities

As mentioned in sections 5.1 and 5.3, Ethiopia is the second largest wheat producer in the COMESA Region. Some 4.1 million smallholders and a number of state and commercial farms produce about 2.29 million metric tons of wheat on 1.51 million hectares of land. Although the crop is widely grown throughout Ethiopia, production is highly concentrated in few zones. As a result of increase in cultivated area and improvement in yield, wheat production has been growing at 8.7% per annum. If the trend continues production may reach some 3.1 million metric tons in 2013.

Unlike other cereal crops, wheat is an important industrial crop. It is used as an input for the country's modern food processing factories. Out of the total wheat production only 21% or 561,800 metric tons is marketed of which some 308,000 metric tons goes to the mills. But, the quantity bought by the flour mills is only enough to enable them operate at 36% of their capacity. If the maximum milling capacity of about 1.95 million metric tons is assumed (according to the EGTE data), the mills' current capacity utilization would be about 16%. With increase in population and urbanization, the demand for wheat and particularly of processed food in the form of bread, flour, macaroni, and pasta would be high. Thus the current trend in the production of wheat would not be sufficient to meet demand.

According to EIAR, there are a number of improved varieties of bread and durum wheat. In 2004-2009 alone, 13 improved varieties of bread wheat and 13 improved varieties of durum wheat have been released by different research centers and institutions. These varieties are high yielding and suitable for industrial processing. However, the utilization of these improved seed varieties by producers is extremely weak. At present only 3% of the country's wheat area is covered with improved seed varieties and only 79,400 metric tons of chemical fertilizer was used on 446,709 hectares of wheat area. This clearly shows that there is an immense potential for increasing domestic wheat production, but there are a number of constraints that hinder the intensification of wheat production. These include:

- Weak seed production and distribution, lack of participation by private firms and farmers' organizations in the production and distribution of improved wheat varieties,
- High seed cost due to high transport and handling costs,
- Inadequate coordination between research, seed multiplication and extension,
- Lack of market information for traders, producers and farmers' organizations,
- Lack of access to appropriate storage and marketing facilities and infrastructure,
- Non-existent of forward contractual agreement between producers and millers,
- Lack of access to bank credit, and
- Inadequate road infrastructure and high cost of transferring wheat from surplus areas to consumption centers.

6. THE RICE SUB-SECTOR

6.1. Rice Production

Although Ethiopia has immense potential for the production of rice, the crop has been introduced only recently. According to the Ethiopian National Rice Development Strategy, the country has about 20 million hectares suitable for the production of rice under ranfed and irrigation conditions.

Currently the average area planted to rice during the period 2004-2009 was about 3,900 hectares or 0.04% of total area under cereals, but it has been increasing gradually. The maximum area planted to rice reached about 20,373 hectares in 2006 and the lowest was in 2005. Average annual production of rice was also about 7,500 metric tons but considerably fluctuates from only 16 metric tons in 2005 to 35,000 in 2006. Yield levels also varied from 0.76 metric tons/Ha in 2007 to 1.72 metric tons/Ha in 2006 (see table 8).

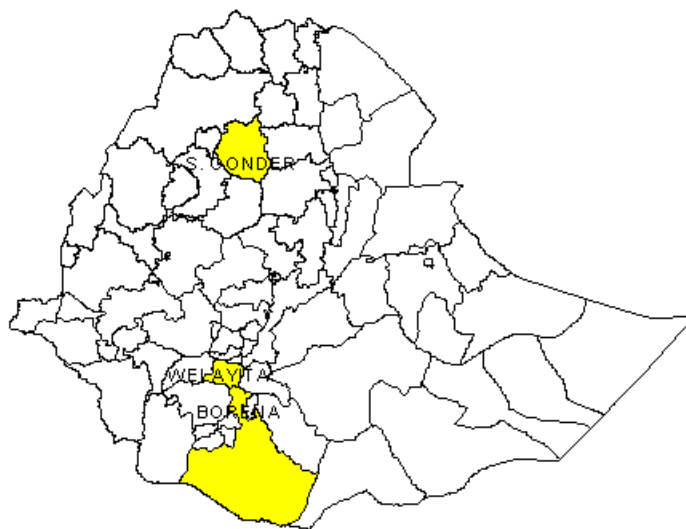
According to the CSA, rice is grown in 17 administrative zones, but production is mainly concentrated in 6 zones, including: Borena (41.3%), South Gondar (28.0%), Wolayita (20.9%), Pawe Special Woreda (2.7%), Kambata and Timbaro (2.3%), and East Gojam (2.1%)-see map-figure 9. About 80,000 smallholders are involved in the production of rice.

Table 8: Area Under Rice, Yield and Production in Ethiopia (2004-2009)

Description	2004	2005	2006	2007	2008	2009
Area (Ha)	607	16	20,373	1,579	364	264
Production (MT)	820	16	34,972	1,206	605	431
Yield (MT/Ha)	1.35	1.00	1.72	0.76	1.66	1.63
Share of Rice in National Cereal Production (%)	0.01	0.00	0.16	0.01	0.00	0.00

Source: CSA

Figure 9: Major Rice Producing Zones of Ethiopia



The selected zones produce more than 85% of the national rice production

6.2. Rice Consumption

6.2.1. Domestic Production vs. Consumption

Average annual rice supply available for domestic consumption, during the period 2004-2009, was about 14,000 metric tons, of which net domestic production accounted for about 39% and import represented 61%. However, the relative share of domestic production and import considerably varied by year. Per capita rice consumption also fluctuated from year to year, but on the average it was 0.19 kg or just about 0.12% of total cereal consumption (see table 9).

Table 9: Supply and Consumption of Rice in Ethiopia 2004-2009

Description	2004	2005	2006	2007	2008	2009
Gross domestic production (MT)	820	16	34,972	1,206	605	431
Net domestic production (MT)	680	13	29,027	1,001	502	358
Commercial import (MT)	3,933	2,620	7,435	13,769		4,614
Commercial export (MT)						
Food aid import (MT)	1,190	590	6,420	510	690	
Net rice available for domestic consumption (MT)	5,803	3,223	42,882	15,280	1,192	4,972
Actual rice consumption (kg/capita)	0.08	0.05	0.60	0.21	0.02	0.06
Rice consumption as % of national cereal consumption (%)	0.07	0.03	0.41	0.13	0.01	0.04
Share of domestic rice production in total rice supply (%)	11.72	0.41	67.69	6.55	42.12	7.20

Source: CSA, Ethiopian Customs Authority and WFP

Rice is consumed in various ways in Ethiopia. According to MOARD report on the progress made in the popularization of the crop, rice is consumed as *enjera*, bread, porridge, *mook*, soup, boiled with sauce, and local drink. The domestically produced rice is consumed by the producers and consumers in small urban areas, while that imported is distributed to major urban consumers through a network of supermarkets.

6.2.2. Rice Exports and Imports

During the period 2004-2009, there was some 6,500 metric ton commercial import of rice and 1,880 metric ton food aid import to Ethiopia per annum. The origins of the commercially imported rice were India (52%), Djibouti (25%), USA (7%), Yemen (2%) and China (1%). Thus trade with COMESA countries (Djibouti) represented about 25% of total import. The quantity and value of rice imported to Ethiopia in 2004-2009 is shown in table 10.

Table 10: Commercial Import of Rice in Quantity and Value

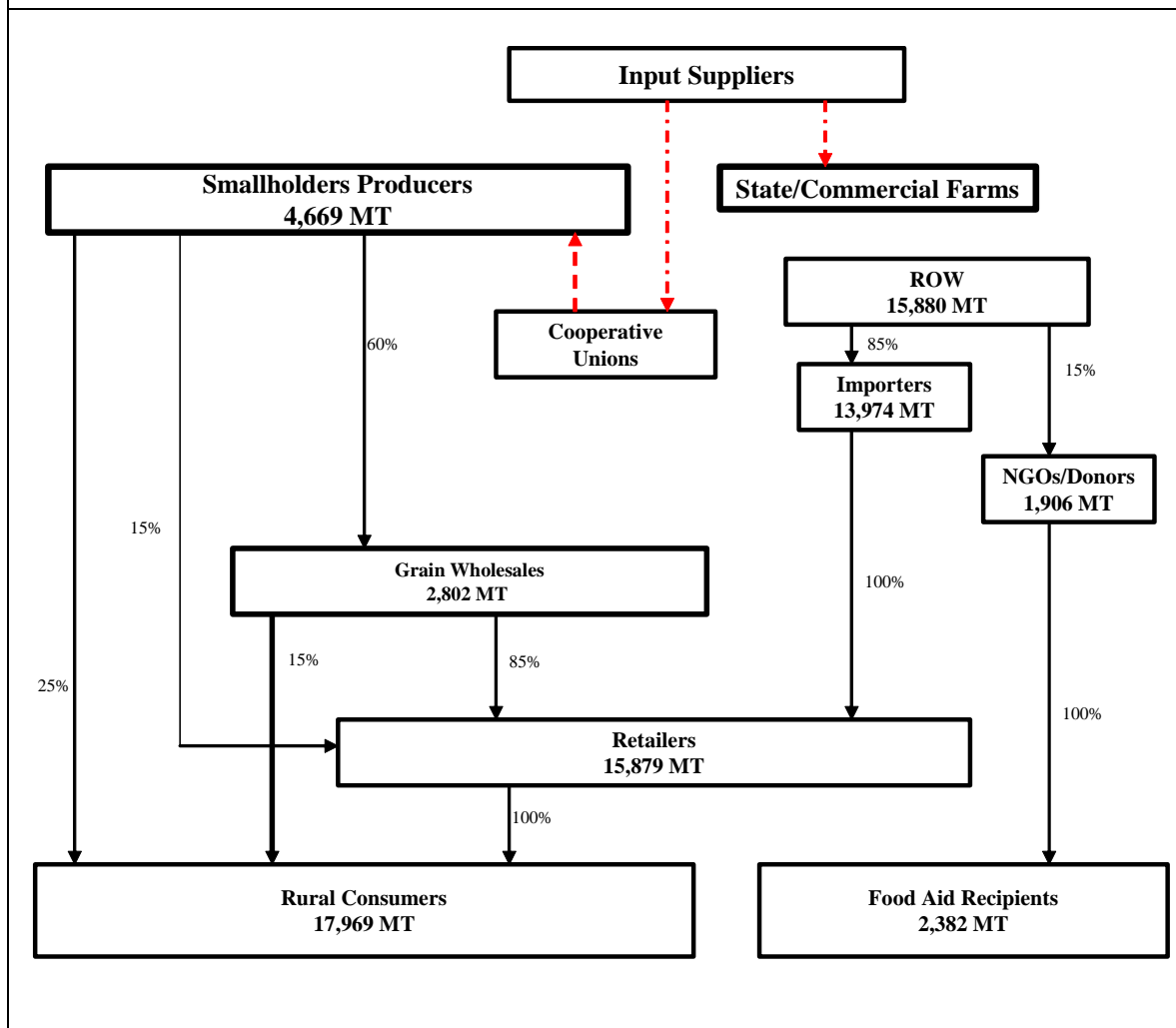
Year	MT	US\$
2004	3,933	1,776,872
2005	2,620	934,692
2006	7,435	3,688,349
2007	13,769	5,123,494
2008		
2009	4,614	2,035,142
Average	6,474	2,711,710

6.3. Value Chain Mapping

As rice is a recently introduced crop in Ethiopia, it is not widely marketed as the other cereal crops. It is estimated that roughly 4,670 metric tons or about 55% of the domestically produced rice is marketed and the rest is retained on the farm for seed and own consumption. About 14,000 metric tons is also annually imported for commercial purposes and 1,880 metric tons for food aid. The rice marketed by

smallholders as well as the commercially imported quantity is handled by wholesalers and retailers. The role of each value chain participant and the flow pattern of the commodity are shown in figure 10.

Figure 10: Rice Value Chain Map



Producers

Domestic producers sell about 4,670 metric tons of hulled rice to retailers, wholesale traders and directly to consumers. Most of their sales-roughly 60%-is to the grain merchants operating in the rice producing areas. Roughly 15% is also sold to retailers operating in the nearby markets and 25% is directly sold to local consumers. As the quality of the rice domestically produced is generally poor due to inappropriate post harvest methods, the produce is mostly consumed by the poor in urban and rural areas.

Wholesales

Wholesale traders are the primary value chain actors who handle 60% of the low quality rice domestically produced. They transport and sell the rice they buy to retailers in major urban centers and directly to local consumers. Local consumers also get directly from producers and local retailers. The wholesale traders handle about 15% of the overall rice marketed by local producers and commercial importers.

Importers

Average annual rice import is about 14,000 metric tons, and it is handled by general merchandise importers. The importers sell about 85% of their rice import to domestic retailers, mainly supermarkets. Rice importers are not specialized in one commodity, rather they handle an assortment of different food items, including pasta products, edible oil, various processed foodstuff such as breakfast cereals, powder milk, baby foods, etc.

Retailers

Retailers include individual retailers and supermarkets in big urban towns. While the local retailers handle both imported and domestically produced rice, the supermarkets focus on high quality imported rice. Both local retailers and supermarkets handle about 16,000 metric tons of rice annually.

Distribution of Value Added Across the Rice Value Chain

In this section, the value added by the key participants in the marketing of domestically produced rice has been analyzed using the data obtained from key informants. Most of the domestically produced and marketed rice passes through the producer→wholesaler→retailers→consumer channel. Along this channel, the total value added by producers, wholesale traders and retailers is about US\$424.08/metric ton, of which 85% belongs to rice producers, 5% to wholesale traders and 10% to retailers in urban areas (see figure 11).

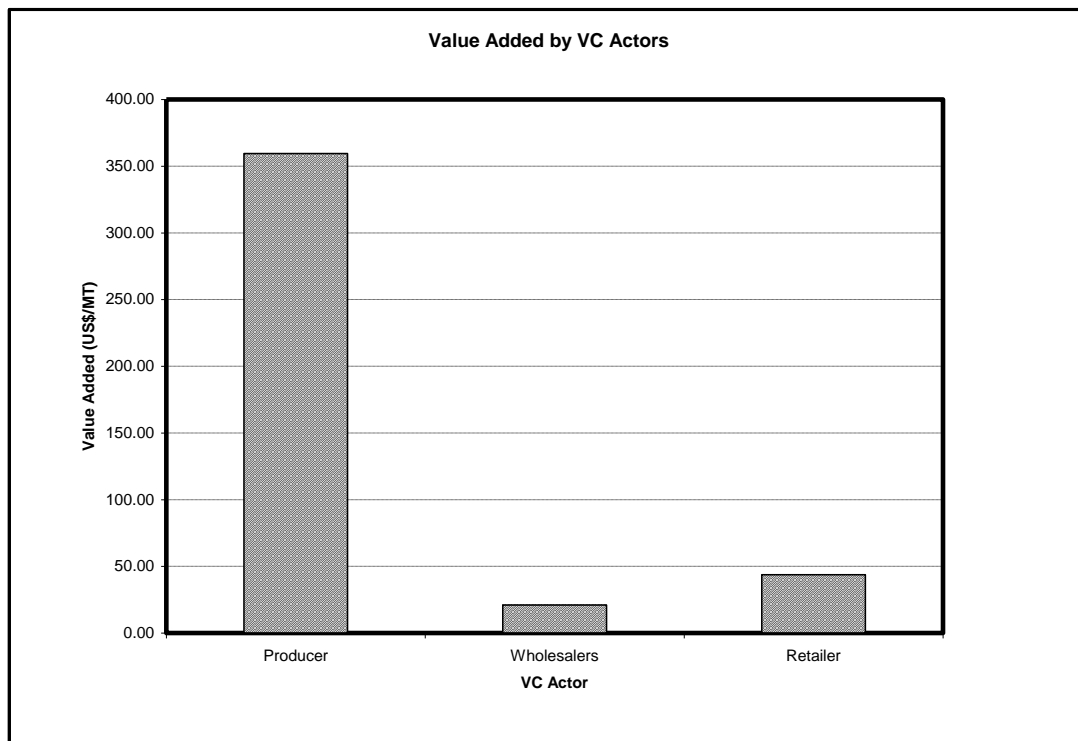
Producers sell their hulled rice to wholesale trader at US\$ 600/metric ton and spend some US\$ 265.6 to producing one metric ton of hulled rice. Thus the value added by rice producers is about US\$ 359.40. The major elements of their cost of production are: land preparation, seed, weeding, harvesting and piling, threshing and hulling, and transport of produce from farm to homestead and from homestead to market.

Wholesale traders buy the hulled rice from producers at US\$ 625/metric ton and transport it from Woreta to Addis Ababa and sell it to retailers at US\$ 697.92/metric ton. Their major handling and marketing costs include: warehouse rent, loading, unloading and stacking, sacks and twines, brokerage fee, and transport from Woreta

to Addis Ababa. The wholesale trader's total marketing and handling cost is about US\$ 51.98, which indicates that the value added is about US\$ 20.94/metric ton.

Similarly, the retailers spend some US\$ 8.33/metric ton for handling and marketing their rice supplies and sell it to the consumer at US\$ 755.21/metric ton. Thus, the value added share of retailers is roughly US\$ 43.08/metric ton.

Figure 11: Value Added Distribution in the Rice Value Chain



6.4. Constraints and Opportunities

Although Ethiopia has some 20 million hectares of land that is suitable for the production of different types of rice, rice production is not yet popularized. Recently, however, the government and its development partners, mainly Sasakawa Global 2000 and JICA, have embarked on the popularization of rice production in some parts of Ethiopia, and the production level has shown some improvement over the past few years.

Yet, there are numerous production and marketing constraints that need to be addressed if the full potential of the crop is to be realized. The major constraints include the following:

- Unavailability of improved seed varieties and related production technologies,
- Lack of access to post and pre-harvest equipment and facilities,
- Inadequate knowledge of pest and disease control and management techniques,

- Lack of knowledge and unavailability of threshing, dehulling or milling equipment
- Limited markets and buyers
- Unavailability of market information and advice
- Lack of knowledge of product grading
- Limited use of the product by local consumers

7. THE SORGHUM SUB-SECTOR

7.1. Sorghum Production

Ethiopia is the second largest producer of sorghum in the COMESA region after Sudan. Ethiopia's share of the total COMESA sorghum production is about 22%, while Sudan has nearly 58%. With an annual production of approximately 2.1 million metric tons, sorghum is the fourth most important cereal produced in Ethiopia, accounting for 17% of the total cereal produced in the country and covering some 16% of the total area under cereals. During the period 1997-2009, sorghum production has increased by nearly 6% per annum because of area expansion 93.3%) yield increase (2.7%). In the recent past, production has increased from 1.7 million metric tons in 2004 to 2.7 million in 2009 (see table 11).

Sorghum is cultivated by nearly 4.5 million smallholders and about 100 commercial farms located in some 74 important sorghum producing areas of the country. However, production is highly concentrated in about 17 administrative zones that produce almost 80% of the national output. The most important sorghum producing areas are: North Gondar with 10.6% share in national sorghum output, North Shoa (9.5%), East Hararghe (7.9%), West Hararghe (7.2%), West Shoa (4.8%), South Wello (4.3%), Jimma (4.2%), and North West Tigray (4.0%). Other important sorghum areas include North Wello, East Wellega, Illubabor, South Tigray, Central Tigray and West Tigray, each contributing 2-3% of national production (see map-figure 12).

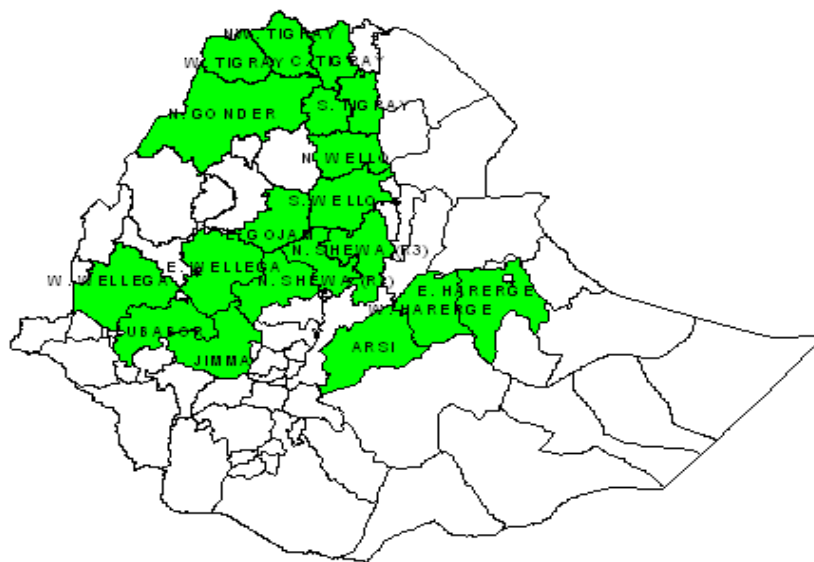
Use of improved agricultural inputs in the production of sorghum is negligible; for example, in 2008/09 only 11.1 metric tons of improved seed varieties and 1,870 metric tons of fertilizers were used. Most of the sorghum is produced by smallholders and the share of commercial farmers is about 2%. Around 4.5 million smallholders and about 100 commercial farmers are engaged in the production of sorghum.

Table 11: Area Planted to Sorghum, Yield and Production 2004-2009

Description	2004	2005	2006	2007	2008	2009
Area (Ha)	1,287,432	1,282,335	1,377,432	1,485,635	1,563,631	1,649,451
Production (MT)	1,739,184	1,724,763	1,976,249	2,325,424	2,599,935	2,666,897
Yield	1.35	1.35	1.43	1.57	1.66	1.62
National Cereal Production (MT)	9,646,142	10,763,518	12,371,122	13,946,756	14,395,425	15,194,923
Share of Sorghum in National Cereal Production (%)	18.03	16.02	15.97	16.67	18.06	17.55

Source: CSA

Figure 12: Major Sorghum Producing Zone of Ethiopia



Source: CSA

7.2. Sorghum Consumption

7.2.1. Domestic Production vs. Consumption

In Ethiopia a major part of sorghum is produced for human consumption and the production is largely based on small-scale farming. Average annual per capita consumption of sorghum was 25.34 kg in 2004-2009, and nearly all of the supply was from domestic production. The overall average annual sorghum supply from domestic sources and net import was in the order of 1.9 million metric tons and represented 16.4% of total cereal consumption in 2004-2009 (see table 12).

Sorghum is consumed in various forms, including *enjera*, porridge, *nefro*, and local spirits such as *tella* and *arekie*. The principal use of sorghum, however, is *enjera*, prepared alone or mixed with teff. Consumption of sorghum is partly determined by the availability and price of teff in the market. There are different varieties of sorghum in the market, but the varieties most demanded are the white and yellow sorghum that are mostly in North Gondar, South Wello, East and West Hararghe, North Shoa, and Southern Tigray

Table 12: Sorghum Supply and Consumption in Ethiopia 2004-2009

Description	2004	2005	2006	2007	2008	2009
Gross domestic production (MT)	1,739,184	1,724,763	1,976,249	2,325,424	2,599,935	2,666,897
Net domestic production (MT)	1,443,523	1,431,553	1,640,287	1,930,102	2,157,946	2,213,524
Commercial import (MT)	4,606					
Commercial export (MT)	1,037	2,869	10	2,575		
Food aid import (MT)		16,120			274,300	
Net sorghum available for domestic consumption (MT)	1,447,092	1,444,804	1,640,277	1,927,527	2,432,246	2,213,524
Actual consumption (kg/capita)	21.14	20.58	22.77	26.08	32.07	28.45
Sorghum consumption as % of total cereal consumption	17.03	14.78	15.52	16.01	17.87	16.47
Domestic Production as % of Total Supply	99.75	99.08	100.00	100.13	88.72	100.00

Source: Customs, WFP and CSA

7.2.2. Sorghum Exports and Imports

In 2004-2009, commercial import was negligible, except in 2004 when some 4,600 metric tons was imported. According to customs data, 1,037 metric tons was officially exported in 2004 and 2,575 metric tons in 2007. Data obtained from the Customs Authority in North Ethiopia also shows that there was about 13,000 metric tons of unofficial sorghum export to Sudan in 2009 through cross-border trade. Moreover, according to the WFP data, there were some food aid imports amounting to 16,120 metric tons in 2005 and 274,300 metric tons in 2008.

7.3. Value Chain Mapping

The marketed quantity of sorghum is about 516,000 metric tons, of which some 8% comes from the commercial farms that mostly operate in north-west Ethiopia. The overall marketed quantity represents roughly 13% of national sorghum production and 16% of total cereals marketed in Ethiopia. Almost 87% of the total national sorghum produced is retained on-farm for seed and home consumption. Because of the long distance between the major surplus producing areas and the major consumption centers and the susceptibility of the crop to storage pests, trading in sorghum has not been attractive.

Sorghum is normally marketed in grain form and is processed at household level using traditional means or using the services of small grain mills; there is no large scale processing. According to the CSA, there were 19,744 small scale grain mills all over the country in 2005/06. The sorghum value chain includes various market actors, including rural assemblers, cooperative unions, retailers, wholesale traders in surplus and deficit areas, NGOs/donors and government and private grain

trading companies. The commodity flow pattern from producers to consumers is depicted in figure 13, and the role and function of the various players is briefly described below.

Producers

Producers market 516,000 metric tons annually and deliver it rural assemblers, cooperative unions, grain wholesalers, retailers, NGOs/donors, and some quantity directly to consumers. The private commercial farms also conduct cross-border trade across the Ethio-Sudan border.

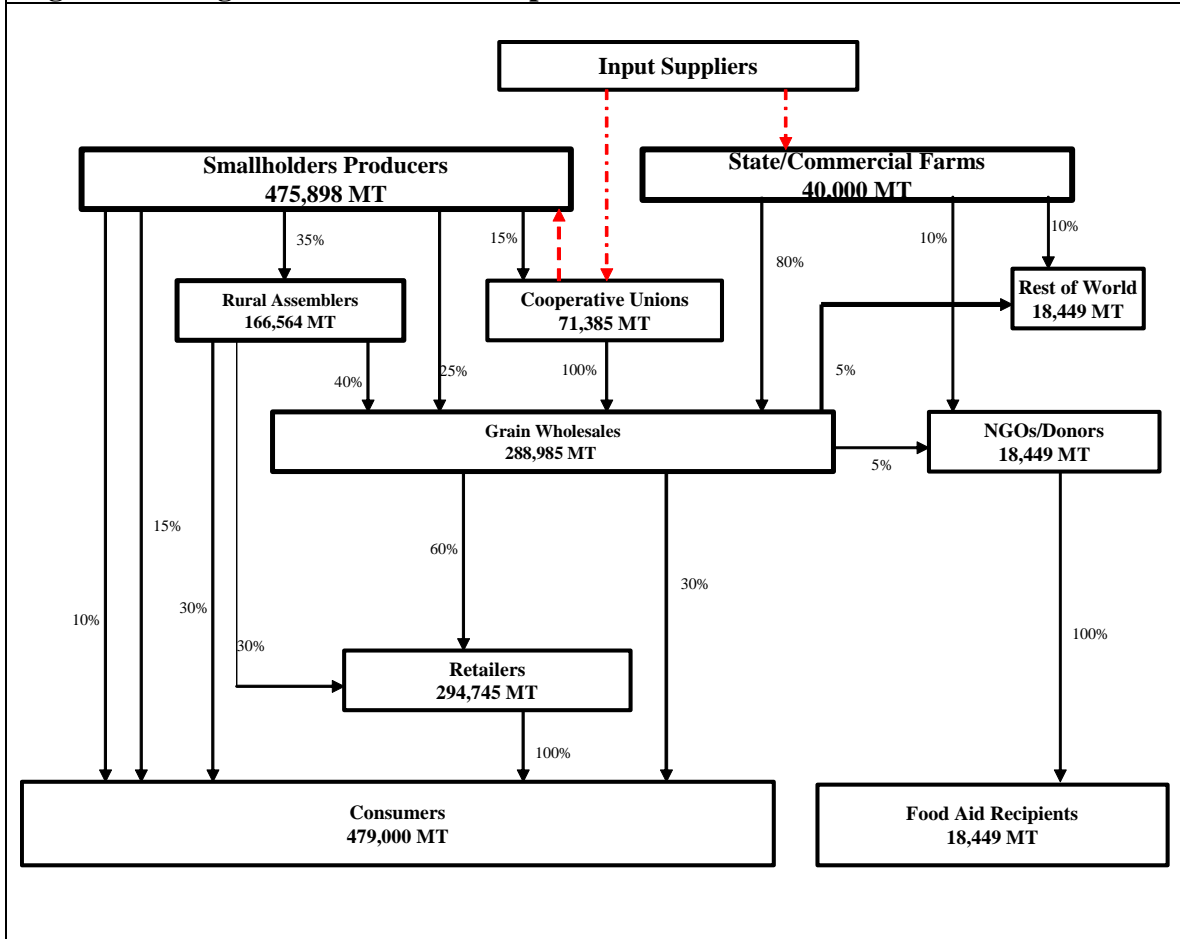
Assemblers

Assemblers play an important role in collecting grain surpluses from small producers at primary markets. They handle about 167,000 metric tons or roughly 35% of the quantity marketed by smallholders. Their primary sales outlets are grain wholesalers, retailers and consumers. The assemblers mostly operate in small rural markets, and they transport and deliver it to different buyers in big markets. They are small independent operators mainly consisting of part-time farmers and urban dwellers.

Cooperative Unions

The participation of cooperatives in grain trade is a recent phenomenon. Currently there are about 36 cooperative unions embracing 771 primary cooperatives with a total capital of about US\$ 3.7 million. Cooperative and their unions control roughly 15% of the marketable sorghum of small producers, and their primary outlets are grain wholesalers operating in their areas.

Figure 13: Sorghum Value Chain Map



Wholesalers

Grain wholesalers are the principal players in the sorghum value chain. They handle about 289,000 metric tons or nearly 56% of the sorghum marketed by smallholders and commercial farms, and they obtain most of their supplies from smallholders, rural assemblers and cooperative unions. Although the EGTE participates in sorghum purchase and sales, its role has been quite insignificant over the past 5 years. The average volume handled by EGTE was in the range 2,000 – 7,000 metric tons annually. The grain wholesalers sell most of their supplies to retailers in the food deficit areas and major consumption centers as well as to surrounding consumers, directly. About 10% of their supply is also sold to NGOs and donors and through cross-border trade.

Retailers

Grain retailers operate in small and large towns and directly deliver sorghum to consumers. The annual volume of sorghum they handle is about 295,000 metric tons

or about 57% of the total sorghum marketed by producers. Consumers also get sorghum supplies directly from producers and grain wholesalers.

Distribution of Value Added across the value Chain

The total value added by the various actors in the sorghum value chain is estimated at US\$ 240.36/metric ton and is distributed as follows: producers-US\$ 177.60 or 73.9%, assemblers-US\$ 10.94/metric ton or 4.6%, wholesalers-US\$ 21.09 or 8.8%, and retailers-US\$ 30.73 or 12.8%.

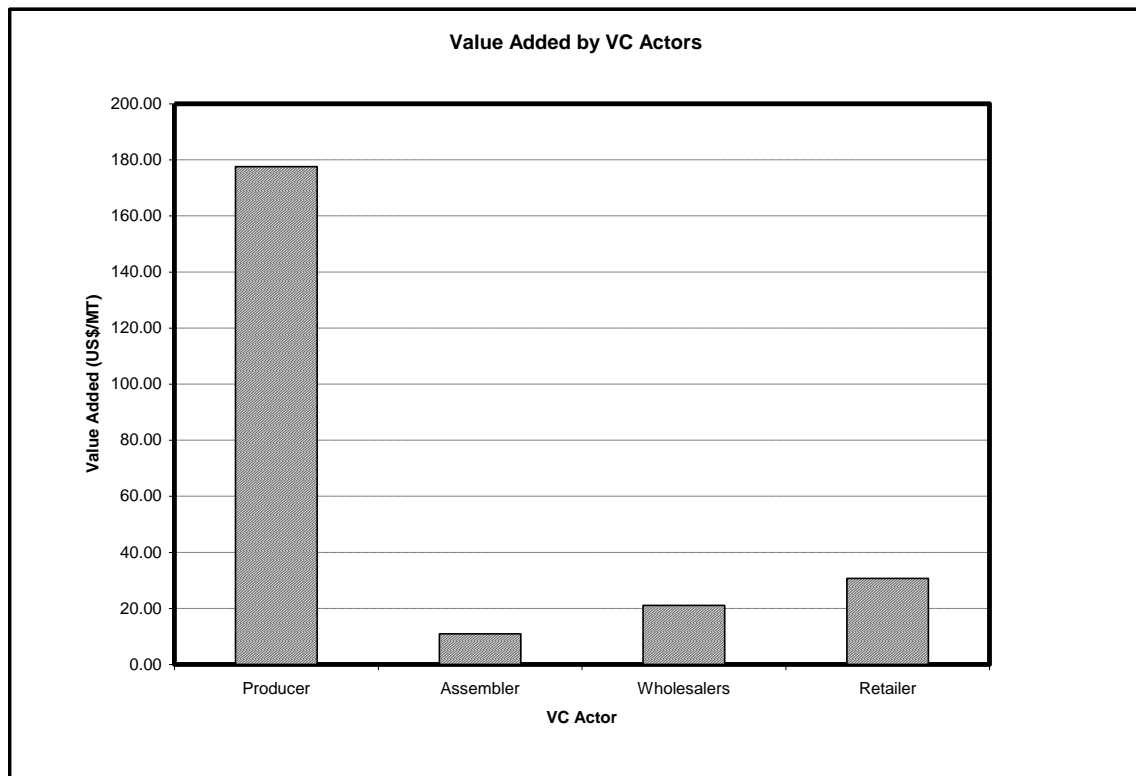
Producers sell their product in nearby markets either to wholesalers or assemblers and receive US\$ 390.63/metric ton, but they use different intermediate inputs worth US\$ 213.02/metric ton. The major input costs include seed cost (US\$ 9.38), labor for weeding (US\$ 55.21), guarding (US\$ 26.04), harvesting (US\$ 23.96), and threshing and transport of harvest to farm and to market (US\$ 46.35).

In addition to the purchase price they pay to producers, assemblers also require different intermediate inputs worth US\$ 25.52/metric ton, such as rent of weighing scale, broker fee, weighing and stacking of the produce they receive from producers, loading, and other miscellaneous expenses, to make ready their shipment to wholesalers and retailers. The assemblers receive about US\$ 427.08/metric ton when they deliver their produce to wholesalers.

The wholesale merchants spend about US\$ 57.03/metric ton, in addition to the basic commodity purchase price, on various items before they sell to retailers. The major expenses items include: packaging and stacking the supplies in their store, storage rent, loading and unloading, sacks and twines, commission fee, weight and spillage allowances, and other sundry expenditure items. Wholesaler's selling price to retailers is about US\$ 505.21.

Finally, the retailers spend US\$ 505.21 for the purchase of a metric ton of sorghum from wholesalers and spend an additional cost of roughly US\$ 21.35/metric ton to cover various handling and marketing costs, and they sell it to consumers at US\$ 557.29.

Figure 14: Value Added Distribution Across the Value Chain



7.4. Constraints and Opportunities

As the second most important sorghum producer in the COMESA Region, Ethiopia has enormous potential for the expansion of sorghum production both for domestic consumption and export. The country produces about 2.1 million metric tons annually and some 4.5 million smallholders are engaged in the cultivation of the crop. Although the crop is grown in many parts of Ethiopia, production is highly concentrated in a few areas, which makes it difficult to transport and market the product across the whole country due to poor road infrastructure and distance.

At present, yield levels range from 1.33 to 1.62 metric tons/Ha due to the limited use of agricultural inputs. As mentioned earlier, only 11.1 metric tons of improved seed varieties and 1,870 metric tons of fertilizers were used in 2008. On the other hand, government reports show that there are some 12 high yielding varieties of sorghum that have been released by research institutions since 2004 alone. Even though good quality sorghum has high urban demand (because it can be mixed with teff) and there are opportunities to improve yield levels, the sub-sector is faced with a number of production and marketing constraints, as is the case with other cereal crops. The most important constraints include the following:

- Serious problems of Striga, a parasitic weed, in many parts of the country;

- Non-acceptance of some of the released varieties by farmers for various reasons, including susceptibility to bird attacks and low biomass;
- Lack of improved seed varieties to meet the demand of farmers, because of the limited government capacity to multiply and distribute certified sorghum seed;
- Lack of strong linkage among research, extension system and producers;
- Lack of access to market information;
- High transport and transaction costs;
- Lack of storage and market infrastructure;
- Lack of access to bank credit by traders;
- Weak organization of producers;
- Lack of diversified use of the crop apart from subsistence;

8. THE MILLET SUB-SECTOR

8.1. Millet Production

Finger millet production in Ethiopia is insignificant; it accounts for only 3-3.5% of total cereal production. It occupies about 352,642 hectares or 3.92% of total area under cereals. Its yield also ranges from 1.02 to 1.40 metric tons/hectare. Finger millet is grown in 51 agriculturally important zones by about 1.5 million smallholders. Production is, however, concentrated in 12 zones that account for more than 90% of annual production.

The most important millet producing areas include: West Gojam (14.8%), North Gondar (10.8%), North West Tigray (10.6%), West Welega (10.6%), Agewawi (10.2%), and South Gondar (8.9%) that together have some 66% share of national millet production (see map-figure 15).

Although the crop responds well to fertilizer application, not much input is used by the farmers. In 2008, for example, 2,600 metric tons of DAP and Urea were used by 132,000 farmers on 33,000 hectares of millet area. In the same year no improved seed was used.

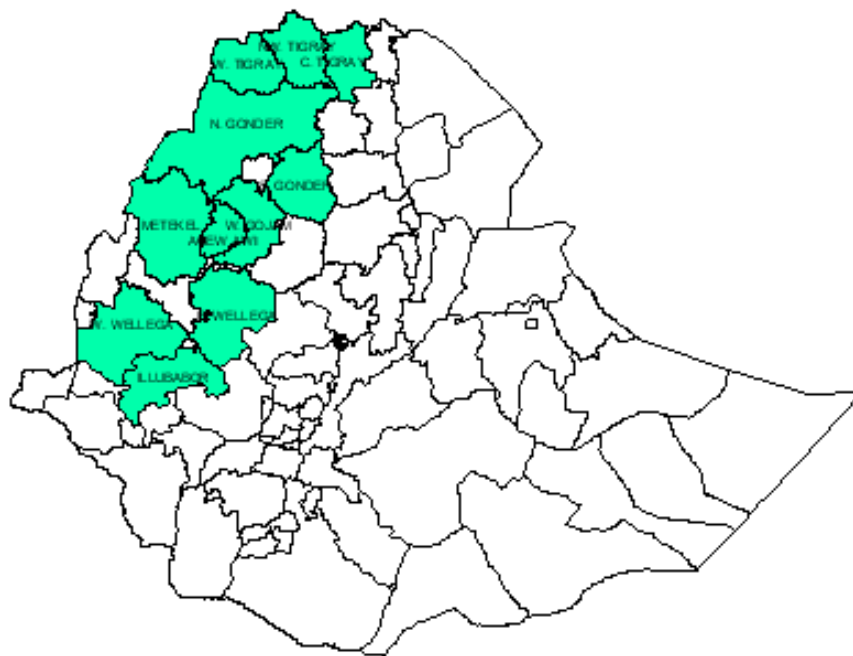
Table 13: Area Under Millet, Production and Yield 2004-2009

Description	2004	2005	2006	2007	2008	2009
Area (Ha)	319,765	311,822	337,029	382,498	387,298	377,437
Production (MT)	327,752	330,876	394,845	484,386	499,187	527,094
Yield (MT/Ha)	1.02	1.06	1.17	1.27	1.29	1.40
Share of Millet in National Cereal Production (%)	3.40	3.07	3.19	3.47	3.47	3.47

Source: CSA

During the period 1997-2009, production of millet in Ethiopia increased by 5.1% per annum, mainly because of yield improvement. The area sown to millet has shown slight growth rate of about 1.1% per annum, while yield increased by 4.0% per annum.

Figure 15: Major Millet Producing Zones of Ethiopia



These zones produce about 90% of the national millet production

8.2. Millet Consumption

8.2.1. Domestic Production vs. Consumption

During the period 2004-2009, average supply of millet for domestic consumption was about 355,000 metric tons/year, but it varied from 271,959 metric tons in 2004 to 437,488 metric tons in 2009. Accordingly, the average annual per capita consumption at national was about 4.83 kg and represents about 3.13% of total cereal consumption (see table 14). There is geographical variation, however, in the consumption of millet. Although millet represents less than 2 percent of national cereal consumption, it is an important staple food in the drought-prone and millet producing areas of North and North West parts of Ethiopia.

Finger millet has high nutritional value and is consumed in different ways, including as staple food (porridge, *enjera*, and *mook*) and as local brews (*tella* and *araki*). According to FAO data, about 41% of the millet supply is used as direct food and the balance for other uses, including local brews.

Table 14: Supply and Consumption of Finger Millet in Ethiopia (2004-2009)

Description	2004	2005	2006	2007	2008	2009
Gross domestic production (MT)	327,752	330,876	394,845	484,386	499,187	527,094
Net domestic production (MT)	272,034	274,627	327,721	402,041	414,325	437,488
Commercial import (MT)						
Commercial export (MT)	75	33	70	110	13	14
Food aid import (MT)						
Net millet available for domestic consumption (MT)	271,959	274,594	327,651	401,931	414,312	437,474
Per capita consumption (kg/capita)	3.97	3.91	4.55	5.44	5.46	5.62
Share of millet in national cereal consumption (%)	3.20	2.81	3.10	3.34	3.04	3.26

Source: CSA and Ethiopia Customs Authority

8.2.2. Millet Exports and Imports

Import and export of finger millet in Ethiopia is non-existent or insignificant; some 13-110 metric tons were exported in 2004-2009.

8.3. Value Chain Mapping

As mentioned above, average annual millet production is about 427,000 metric tons, of which only 141,000 metric tons or roughly 30% of annual production is marketed by producers. The marketable quantity of millet is mainly distributed within the major producing areas and their surrounding, through a simple market network (see figure 16). The key market participants are the rural assemblers, wholesale grain merchants and retailers, and their functions are briefly discussed below.

Rural Assemblers

Rural assemblers receive about 28,000 metric tons or 20% of the quantity marketed by producers, and they sell to wholesale traders (40%), retailers (25%), and consumers (35%). The main function of rural assemblers is to buy millet from smallholders in both accessible and distant markets and transport and deliver it to the various outlets. They are small scale market operators buying independently or as agents of the wholesale traders.

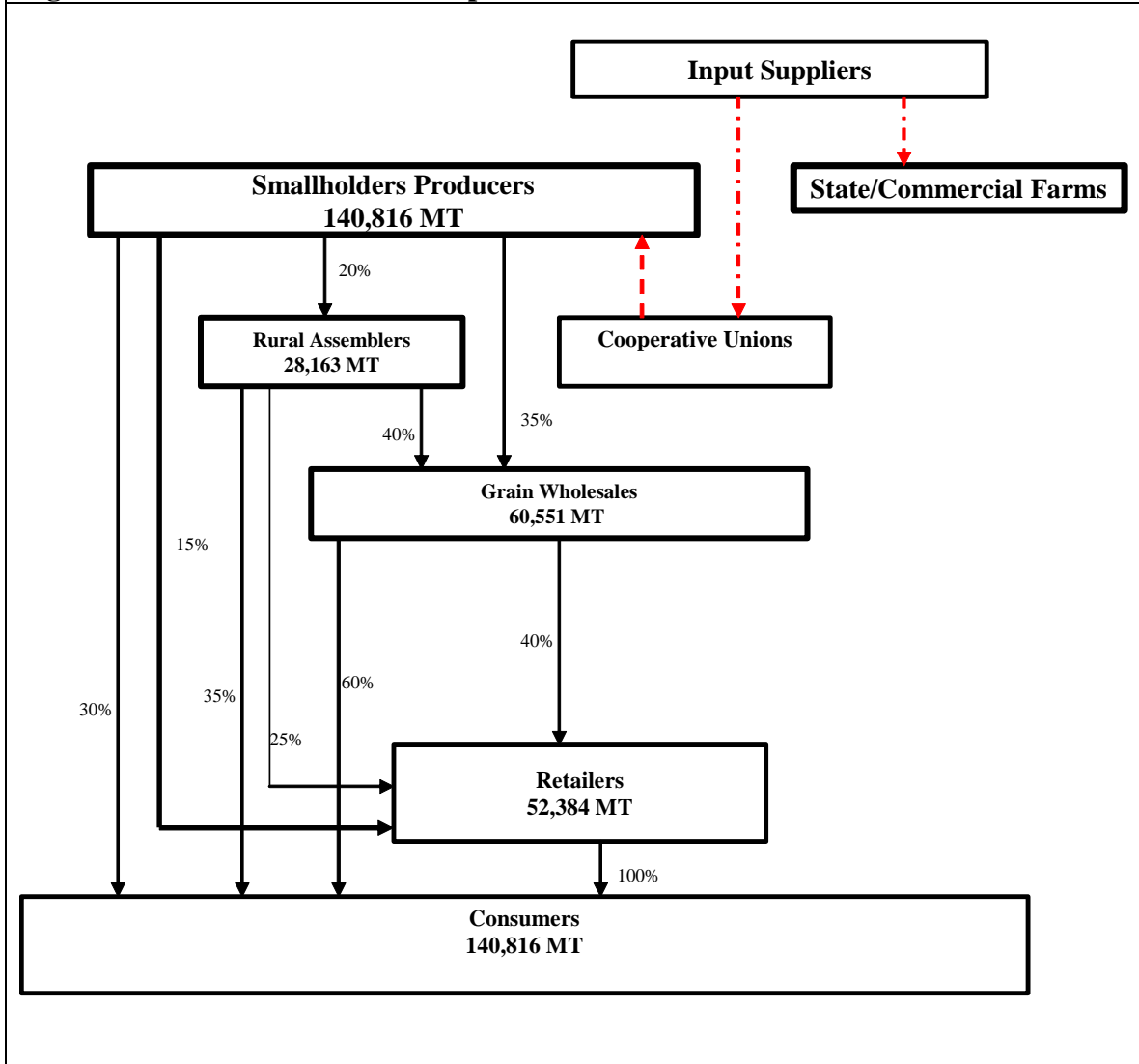
Wholesale traders

Wholesale traders in the millet producing areas get their millet supplies from producers and rural assemblers. They handle about 60,000 metric tons annually or roughly 43% of the marketed quantity by producers, and they sell it to consumers directly or through wholesalers or retailers operating in the major millet consuming areas.

Retailers

Retailers receive about 52,000 metric tons of finger millet from producers, assemblers, and wholesale traders. They then distribute it to consumers. Consumers are also supplied by wholesalers and directly by farmers.

Figure 16: Millet Value Chain Map



Distribution of Value Across the Millet Value Chain

As mentioned previously, the millet value chain is simple and short, involving rural assemblers, wholesalers and retailers. The value added along the producer→wholesaler→retailer→consumer chain has been estimated based on the data obtained from focus group discussions in the field in north-west Ethiopia. A farmer who used fertilizer in the production of millet was considered in the analysis.

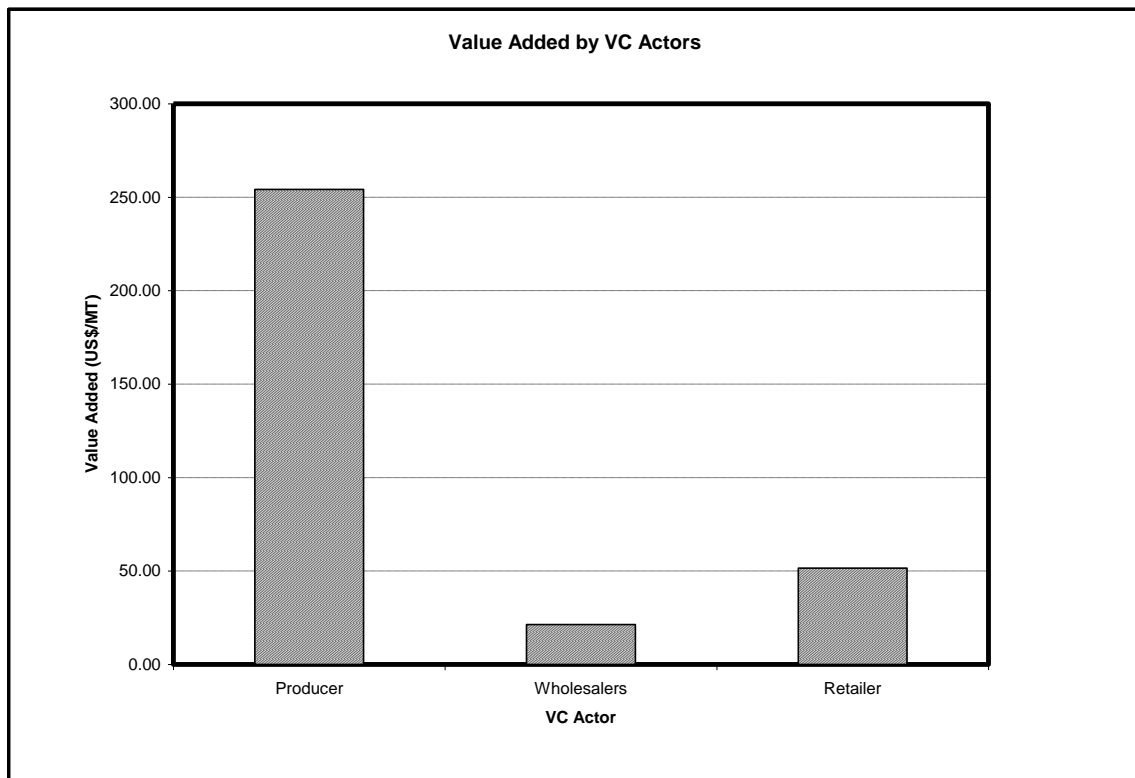
According to the focus group discussion, a typical millet farmer spends about US\$ 266.67/metric ton to produce millet, and the major costs are land preparation, seed cost, fertilizer expenses, harvesting, piling and threshing costs and transport of harvest from farm to store and from store to market. The farmer sells his produce to a wholesale merchant in nearby market at US\$ 520.83/metric ton.

The wholesale merchant also spends about US\$ 61.98/metric ton for the handling and marketing of the supply he receives from the producer. The major cost items include packaging and stacking, storage, loading and unloading, sacks and twines, transport, commission fee, weight and spillage loss, etc. overall, the wholesaler spends US\$ 520.83 for the purchase of the product from a farmer and US\$ 61.98 for handling and transport, and then sells it to a retailer in the major terminal market for US\$ 604.17/metric ton.

The retailers in the major terminal market finally sell the millet to consumers at US\$ 677.08/metric, but they have different handling and distribution expenses, including storage rent, spillage, weighing and stacking, etc. their handling and marketing costs are estimated at US\$ 20.83/metric ton.

Thus, along the producer→ wholesaler→retailer→consumer, chain, the total value added, is about US\$ 327.08/metric ton, of which 77.7% is that of the producer, while 6.5% and 15.8% is by the wholesaler and the retailer (see figure 17).

Figure 17: Value Distribution across the Millet Value Chain



8.4. Constraints and Opportunities

Finger millet is an important subsistence and food security crop with high nutritive quality compared to other cereals. It can also be stored for a long period of time without much post harvest loss. Although the crop accounts for about 3.5% of national cereal production, some studies indicate that its share ranges from 17% to 36% in some areas. Because of the diversified use of the crop for food and beverages, there is growing market demand for the finger millet in Ethiopia. However, the limited use of improved agricultural inputs and the concentration of production in few zones make it difficult to satisfy the growing demand because of shortage of supply and high transport and handling costs to move the grain from surplus to consuming markets.

Yields of finger millet can be substantially improved in Ethiopia if farmers use improved seed varieties and fertilizers. There are at least three improved varieties of finger millet released since 2005 by the agricultural research centers of the country, but as mentioned earlier, these varieties have not yet reached farmers. Thus efforts should be made to popularize the planting of finger millet in many parts of Ethiopia and encourage farmers use improved seed varieties and fertilizers.

9. THE BEANS SUB-SECTOR

9.1. Beans Production

According to FAO, Ethiopia ranks fourth among the COMESA countries in beans production following Kenya, Uganda and Rwanda, accounting for nearly 11% of the region's production. Haricot bean is an important pulse crop that has significant contribution to the country's foreign exchange earning and food security. It is produced in 75 agriculturally important administrative zones, of which 18 of them contribute nearly 80% of the national production. The most important haricot bean producing zones include: East Shoa with 14.5% share, Arssi (10.2%), West Hararghe (7.7%), East Hararghe (5.6%), Sidama (4.3%), West Wellega (3.9%), West Arssi (3.6%), Wolayita (3.1%), Borena, Kaffa, East Gojam and Gamo Gofa each contributing about 2% (see map-figure 18). Nationally it is grown by about 2.5 million smallholders.

There are different varieties of haricot bean produced in Ethiopia, of which the white haricot bean is the most important export commodity and it is grown in and around the Rift Valley area of Ethiopia, including: East Shoa, West Arssi, Arssi, West Hararghe, and Sidama. The other types of haricot bean are used for domestic consumption, particularly in the highly populated areas of Ethiopia.

During the period 2004-2009, the average area planted to haricot beans was about 322,670 hectares or 22.1% of the total area under pulses; and average yearly production was about 248,000 metric tons or 18% of total pulses production. Thus, in terms of area and production, haricot bean is the second most important pulse crop next to horse bean (faba bean). Average yield of haricot bean is about 0.82 metric tons/Ha (see table 15).

Table 15: Area Under Haricot Bean, Yield and Production 2004-2009

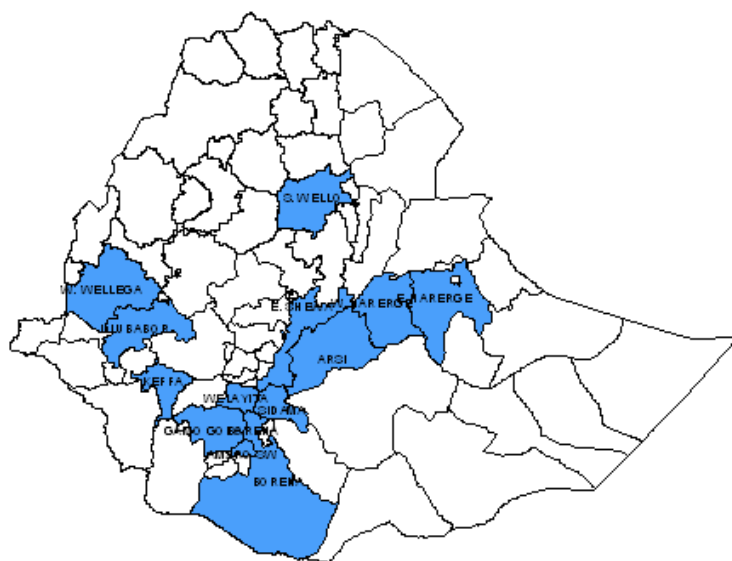
Description	2004	2005	2006	2007	2008	2009
Area (Ha)	244,467	355,584	299,578	341,895	342,834	351,842
Production (MT)	167,751	262,403	227,636	293,603	287,896	339,485
Yield (MT/Ha)	0.69	0.74	0.76	0.86	0.84	0.96
National Pulses Production (MT)	1,013,201	1,374,433	1,235,627	1,601,128	1,720,497	2,003,077
Share of Haricot Beans in National Pulses Production (%)	16.56%	19.09%	18.42%	18.34%	16.73%	16.95%

Source: CSA

Haricot bean production has shown significant increase over the past 12 years, mainly due to an increase in area cultivated which annually grew by about 8.3%. There was also an improvement in yield of about 1.3% per annum. Overall annual production increase during the period 1997-2009 was 9.7%.

With regard to modern input utilization, the CSA data shows that only 52,000 farmers used 1,300 metric tons of DAP and Urea on 3,780 hectares of land in 2009. Similarly, some 7,200 smallholders used 279 metric tons of improved seed on 2,621 hectares.

Figure 18: Major Haricot Bean Producing Zones of Ethiopia



These zones produce more than 75% of the national haricot bean production

9.2. Beans Consumption

9.2.1. Domestic Production vs. Consumption

Haricot bean consumption varies from area to area; consumption is relatively high in the rural area compared to urban areas. At a national level, however, annual per capita consumption was about 2.33 kg during the period 2004-2009, and this represents about 16.7% of total pulses per capita consumption. About 24% of the total haricot bean production was exported in 2004-2009, but varied from year to year (see table 16).

Table 16: Haricot Bean Supply and Consumption 2004-2009

Description	2004	2005	2006	2007	2008	2009
Gross domestic production (MT)	167,751	262,403	227,636	293,603	287,896	339,485
Net domestic production (MT)	139,234	217,795	188,938	243,691	238,954	281,772
Commercial import (MT)	5,048	0	1,005	1,259	0	0
Commercial export (MT)	76,007	62,432	44,663	76,412	25,548	39,672
Food aid import (MT)	29,790	470	0	0	0	0
Net haricot beans available for domestic consumption (MT)	98,065	155,833	145,280	168,538	213,406	242,100
Per capita consumption (kg/capita)	1.43	2.22	2.02	2.28	2.81	3.11
Haricot beans consumption as % of total pulses consumption	12.08	13.59	14.81	14.28	15.35	15.11
Export of haricot beans as % of net domestic production	54.6	28.7	23.6	31.4	10.7	14.1

Source: CSA, Ethiopian Customs Authority and WFP

9.2.2. Beans Exports and Imports

Except for 2004, haricot bean import has been negligible. In 2004, 5,048 metric tons was commercially imported and 29,790 metric tons as food aid. The average annual import was about 6,266 metric tons or US\$ 3.56 million. On the other hand, average annual export of haricot bean in the past five years was about 54,122 metric tons, which generated US\$ 24.87 million. Despite the consistent increase in the production of haricot bean during the period 2004-2009, the quantity exported has been declining. As can be seen from table 17, except for 2006 export declined from 76,007 metric tons in 2004 to a low level of 25,548 metric tons in 2008.

Regarding the destination of haricot bean export, customs data show that about 8.7% of the total quantity exported in 2004-2009 was to COMESA countries, of which Djibouti and Sudan are the most important markets with 3.6% and 2.9%, respectively. Most of the export-91.3%-was destined to non-COMESA countries, of which Yemen with 12.5% share, UK (10.6 %), The Netherlands (6.7 %), Italy (7.3 %), U.A.E (7.8 %), and South Africa (5.9 %) are the most important. Overall, haricot bean was exported to 11 COMESA countries and 74 other countries in the past five years.

In addition to the export of haricot bean through the official channel, some haricot bean is also exported through cross-border trade to neighboring countries. According to a recent study, up to 13,500 metric tons was exported to Kenya via Moyale within a period of six months in 2007.

Table 17: Export and Import of Beans 2004-2009

Description	2004	2005	2006	2007	2008	2009
Export						
Quantity (MT)	76,007.3	62,431.8	44,662.8	76,412.0	25,548.0	39,672.1
Value (US\$ F.O.B Djibouti)	22,113,341.2	17,672,698.9	22,112,683.0	42,629,033.0	19,207,118.9	25,502,604.1
Import						
Quantity (MT)	34,838	494	1,005	1,259		
Value (US\$ C.I.F Djibouti)	19,825,715	320,610	389,333	849,132		

Source: Ethiopian Customs Authority

9.3. Value Chain Mapping

As mentioned earlier, there are different varieties of haricot beans grown in Ethiopia. In some areas, particularly in the Rift Valley, the most common haricot bean produced is the white bean, which is mainly exported. In other areas, the red bean and different other varieties are produced for domestic consumption. Overall, out of the total annual haricot bean production of 247,856 metric tons some 92,000 metric tons or about 33% is marketed, while the rest is consumed by the producers. The marketable quantity reaches domestic consumers and exporters through different outlets as shown in figure 19.

The different actors operating in the haricot bean value chain and their respective roles are discussed as follows.

Input Suppliers

There are some 11 major input suppliers in Ethiopia that import different fertilizers and one government owned company that produces and distributes improved seed varieties to producers. There are also more than 60 primary cooperatives that are engaged in the distribution of agricultural inputs and marketing of farmers' produce. The number of haricot bean producers that use chemical fertilizes and improved seed varieties as well as the amount they use is quite insignificant.

Haricot Bean Producers

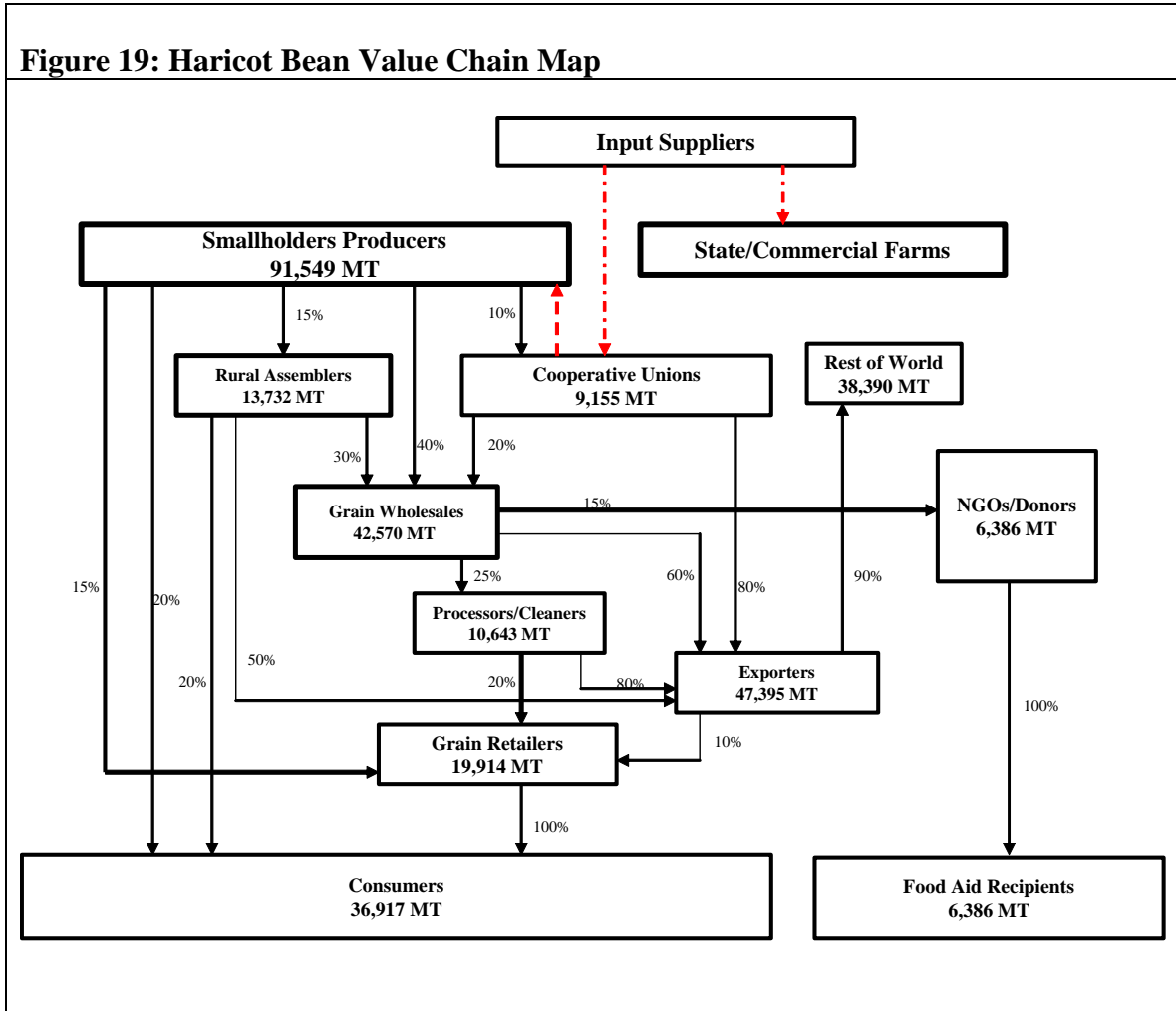
Haricot bean producers sell their produce to rural assemblers, cooperative unions, grain wholesalers, retailers, and directly to consumers. Grain wholesalers and cooperative unions purchase about 50% of the quantity marketed by smallholders and most of the haricot bean they purchase is white bean, most of which they finally sell to exporters and processors/cleaners. Red and other types of haricot beans are sold to consumers directly or through retailers and assemblers. Some of the relatively large assemblers also buy white bean for delivery to exporters and processors/cleaners.

Rural Assemblers

Rural assemblers by and large operate at primary markets as independent entities or as agents to regional merchants or exporters. They operate without a license. Although their major activity is assembling cereals, they also do the same for pulses

destined for domestic consumption. Their involvement in assembling and transporting major exportable pulses, except lentils and chickpeas, is minimal. It is estimated that rural assemblers receive about 15% of the haricot bean marketed by smallholders. Their major sales outlets are exporters who buy about 50% of the assemblers' total sales. Regional merchants also buy about 30% of the assemblers' total sales. While exporters' main focus is on white beans, the wholesalers buy both red and white beans for domestic sales and for delivery to exporters. Other sales outlets include retailers and consumers who mostly buy red and other non-exportable haricot beans.

Figure 19: Haricot Bean Value Chain Map



Cooperative Unions

According to data obtained from the Federal Cooperatives Agency, there are 36 cooperative unions engaged in grain marketing and input distribution. These unions embrace 771 primary cooperatives and have about US\$ 3.7 million capital. The cooperative unions procure cereals, pulses and oil seeds, depending on the type of crops grown in their respective areas. Unions' share of the marketed quantity of haricot bean is about 10%.

Grain Wholesalers

The wholesale grain merchants operating in the main haricot bean producing areas of Ethiopia procure their supplies from farmers, cooperative unions and assemblers. They handle about 43,000 metric tons or 47% of the total haricot bean marketed and deliver 85% of it to exporters and processors/cleaners and 15% to donors and NGOs that locally procure pulses for their development and relief activities. Although buying of red and other types of haricot beans for domestic sales is a regular activity of wholesalers, purchase of white beans for the export market is based on firm commitment from exporters. There is no formal grading in the purchases for domestic consumption, while purchase of exportable crop is carried out as per the specifications received from exporters. While white beans are sold to exporters and processors/cleaners, the red bean and other non-exportable varieties are sold to donors and NGOs. The Government is involved in the purchase of haricot beans through its parastatal-EGTE-but the quantity it handled during the past five years was 3,200 metric tons per annum or 3.5% of the total marketed quantity.

Exporters and Processors/Cleaners

There are some 42 exporters that specialize in the export of pulses and oil seeds. Among these is the EGTE, but as mentioned above its share of the market is negligible compared to the private sector. Thus, private exporters are the major players in the export of haricot bean.

In addition to government's participation, there are few large companies, such as ACOS/Ethiopia, that have been trying to modernize the haricot bean sector by introducing new varieties that are demanded by European canning factories. One of these big companies, ACOS/Ethiopia, is one of the modern and integrated factories in East Africa and is located at Nazret, the center of the haricot bean production area. It was established with an initial capital of US\$ 7.6 million in 2004. It has a processing capacity of about 35,000 metric tons/year and storage capacity of 6,000 metric tons. The Company has a vast market opportunity in Europe, which is estimated at 300,000 metric tons annually. Because of its affiliation to ACOS International, ACOS/Ethiopia has a guaranteed market for its haricot bean and other pulse crops.

ACOS Ethiopia also works closely with farmers and local research institutions to develop improved seed varieties highly demanded by Europe food canning factories. It has also attempted to distribute cleaned seeds to farmers and get back the loan in kind, but much success has not yet been registered. The company has also plans to start its own haricot bean farms in the Rift Valley area and produce under rainfed and irrigation schemes.

The exporters mostly operate in the major terminal markets of Addis Ababa, Nazret, and Dire Dawa, which are linked to the port of Djibouti by rail and road network.

Most of the exporters have their own cleaning plants, but some use the services of cleaners/processors to clean their haricot bean supplies.

The haricot bean exporters and processors handle about 59,000 metric tons of white beans annually, of which they export about 43,000 metric tons and deliver the balance (mostly reject) to retailers. The main sources of exporters' haricot bean supplies are private wholesale traders who provide them about 61% of their annual requirement. Cooperative unions and rural assemblers fulfill the remaining balance.

Purchase decisions concerning type, volume, quality and standards, purchase and delivery time, as well as prices are decided based on the market information the exporters receive from their foreign buyers. Producer and wholesale prices are then determined by deducting transport and handling costs (RATES, 2003).

Retailers

Retailers in urban and rural areas play a crucial role in supplying haricot beans, especially the red and other types, to domestic consumers. They handle about 21,000 metric tons which they get from farmers and exporters. Out of the total 37,000 metric tons of haricot bean domestically consumed, about 43% passes through the retailers, 50% is supplied directly by producers and about 7% reaches the consumers through rural assemblers.

Distribution of Value Added

As mentioned above, about 53% of the marketed haricot bean is exported. The exporters obtain their supplies from assemblers, cooperative unions, processors and grain wholesalers. White bean is almost entirely exported and red bean is domestically consumed. In analyzing the value added from production to the export level, white bean export that passes through the producer→ assembler→ wholesaler→ exporter marketing channel has been considered.

Producers' cost of production for white haricot bean is estimated to be around US\$ 170.31/metric ton, and this consists of input cost, labor cost for weeding, harvesting and threshing, and transport from farm to market. The producers sell their product to wholesalers or assemblers for US\$ 416.67/metric ton.

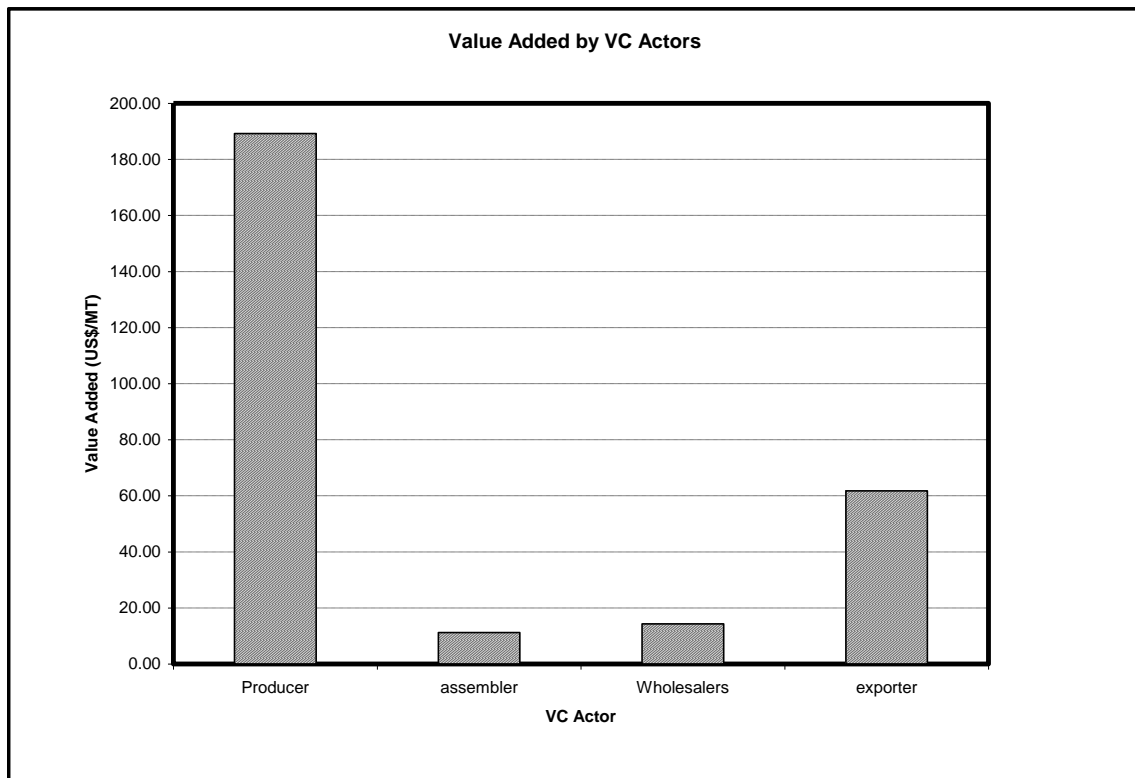
The assemblers also spend some US\$ 16.67/metric ton for rent of weighing scale, bagging and stacking, twines, loading and transporting their supplies to the secondary markets, and they sell it to wholesalers at US\$ 447.92/metric ton.

Wholesale grain merchants organize the supplies they get from producers and assemblers for shipment to the major terminal markets where the exporters operate. In the process of coordinating the shipment, they incur various costs such as packaging and stacking, storage rent, commission fee, loading and unloading and transport. They sell their supplies to exporters and cleaners in Nazret at US\$ 510.42/metric ton.

Exporters finally make ready the haricot bean for export by cleaning and bagging it in standard bags. They also certify their product for quality and arrange for quarantine, transit and customs requirements. Overall they spend about US\$ 161.25/metric ton and obtain US\$ 752.08 C.I.F Djibouti. Their major costs are cost of packaging materials, processing loss (impurities), cleaning and labor cost, quarantine and quality certification fees, customs and port dues, as well as transport to Djibouti.

On the whole, a total of US\$ 276.48/metric ton value is added from the point of production to the point of export, of which 68.4% is added by farmers, 22.3% by exporters and 5.2% by wholesalers and 4.1% by assemblers (see figure 20).

Figure 20: Distribution of Value Added in the Haricot Bean Value Chain



9.4. Constraints and Opportunities

With a total of about 322,670 hectares of haricot bean area, Ethiopia produces some 248,000 metric tons annually and exports about 54,122 metric tons and obtains US\$ 24.87 million/year. Haricot bean is an important crop for domestic consumption and the export market. It has been an important export commodity for many years, and recently private companies that are affiliated with internal firms have started operation in Ethiopia. The involvement of such companies like ACOS/Ethiopia could revolutionize the beans sector substantially by helping orient haricot bean production to the needs of European food canning factories. There are attempts to provide farmers with improved seed varieties that are high yielding and demanded in the world market.

Another existing opportunity for improving the bean sector is that production is concentrated in and around the Rift Valley area, which is well connected by good road conditions to the Addis-Djibouti railway network. Despite these opportunities, there are some limitations in the production and marketing of haricot beans. Some of the most important constraints are:

- Lack of access to land by the private companies (for example, ACOS/Ethiopia) to produce haricot bean under rainfed conditions and using modern irrigation system;
- Inadequacy of haricot bean seed multiplication and distribution;
- Lack of awareness about the need to produce and supply haricot bean acceptable to the world market;
- Inadequacy access to market information by value chain actors;
- Lack of appropriate storage and marketing infrastructure in the haricot bean producing areas as well as in the main terminal markets;
- Lack of access to bank credit.

10. THE PULSES SUB-SECTOR

10.1. Pulses Production

According to FAO, Ethiopia is the second largest producer of pulses (pulses, nes) in the COMESA region, following Sudan. Sudan and Ethiopia have 32% and 22% share of the total COMESA pulses production. Other important pulse producing countries in the region include: Eritrea (11%), Zambia (11%), and Kenya (7%), and The Comoros (6%).

In Ethiopia, pulses cover about 1.1 million hectares or nearly 10% of the total area under cereals, pulses and oilseeds. Average annual production is approximately 1.14 million metric tons and represents about 8% of national grain production (see table 18). About 7.1 million smallholders residing in 62 administrative zones of the country produce pulses both for subsistence and the market; but production is highly concentrated in 14 zones that have a combined share of about 80% of the national pulse production. The most important pulse producing areas of Ethiopia and their relative share of the national production is as follows: North Shoa (14.0%), South Wello (9.1%), East Gojam (8.1%), North Gondar (7.7%), South Gondar (5.4%), West Gojam (5.7%), West Shoa (5.6%), South West Shoa (5.3%), East Shoa (4.8%), Arssi (4.4%), and North Wello (4.2%)-see map-figure 21 for detail.

Table 18: Area Under Pulses, Production and Yield in Ethiopia 2004-2009)⁵

Description	2004	2005	2006	2007	2008	2009
Area (Ha)-excluding haricot bean	911,977	1,095,128	1,040,017	1,134,564	1,243,004	1,282,319
Production (MT)-excluding haricot bean	845,449	1,112,030	1,007,992	1,307,525	1,432,600	1,663,592
Yield (MT/Ha)-excluding haricot bean	0.93	1.02	0.97	1.15	1.15	1.30
Share of Other Pulses in Total Pulses Production (%)	83.44	80.91	81.58	81.66	83.27	83.05
Share of Other Pulses in Total Grain Production (%)	7.70	8.79	7.15	8.15	8.62	9.32

Source: CSA

The major pulse crops cultivated are horse beans (faba beans), chick peas, field peas, lentils and vetch (grass pea); of which horse bean accounts for nearly 42% of the total area under pulse crops and 47% of total pulse production (see table 19). Field pea is the second most important pulse crop following horse bean in terms of both area and production; it has about 21% and 18% share in overall pulse area and production. Chick pea is also an important pulse crop grown in Ethiopia; its share of total area under pulses and overall production is 17% and 18%, respectively. With a total area of 94,303 Ha and annual production of about 73,388 metric tons, lentils ranks fifth among the pulses.

Average yield of the different pulse crops is low-1.22 metric tons/hectare for horse beans, 1.14 metric tons for chick peas, 0.92 metric tons/hectare for field peas, 0.78 metric tons/hectare for lentils, and 1.26 metric tons/hectare for vetch.

⁵ For the purpose of this discussion, pulses do not include haricot bean

Table 19: Area Under Different Pulse Crops in Ethiopia 2004-2009 (Ha)

Crop type	2004	2005	2006	2007	2008	2009
Horse Beans	393,812	463,888	460,457	459,851	525,773	543,544
Chick Peas	153,347	170,149	211,079	201,041	219,055	232,545
Field peas	220,093	269,355	253,001	241,844	225,283	247,285
Lentils	60,444	86,213	96,323	104,982	114,645	103,231
Vetch	73,443	95,281		101,448	135,431	148,155
Gibto	10,838	10,243	19,158	25,398	22,817	7,559
Pulses	911,977	1,095,128	1,040,017	1,134,564	1,243,004	1,282,319

Table 20: Production of Different Pulse Crops in Ethiopia 2004-2009 (MT)

Crop type	2004	2005	2006	2007	2008	2009	Average	% Share
Horse Beans	425,708	548,266	515,883	570,539	649,964	760,793	578,526	47.1
Chick Peas	131,343	159,256	216,314	246,234	270,707	330,502	225,726	18.4
Field peas	177,260	234,673	196,982	222,387	237,356	269,475	223,022	18.2
Lentils	35,514	57,013	63,361	83,782	96,697	103,964	73,388	6.0
Vetch	70,812	108,196	0	161,595	163,164	192,252	116,003	9.4
Gibto	4,812	4,625	15,452	22,988	14,712	6,605	11,532	0.9
Total	845,449	1,112,030	1,007,992	1,307,525	1,432,600	1,663,592	1,228,198	100.0

Table 21: Yield of Different Pulse Crops in Ethiopia 2004-2009 (MT/Ha)

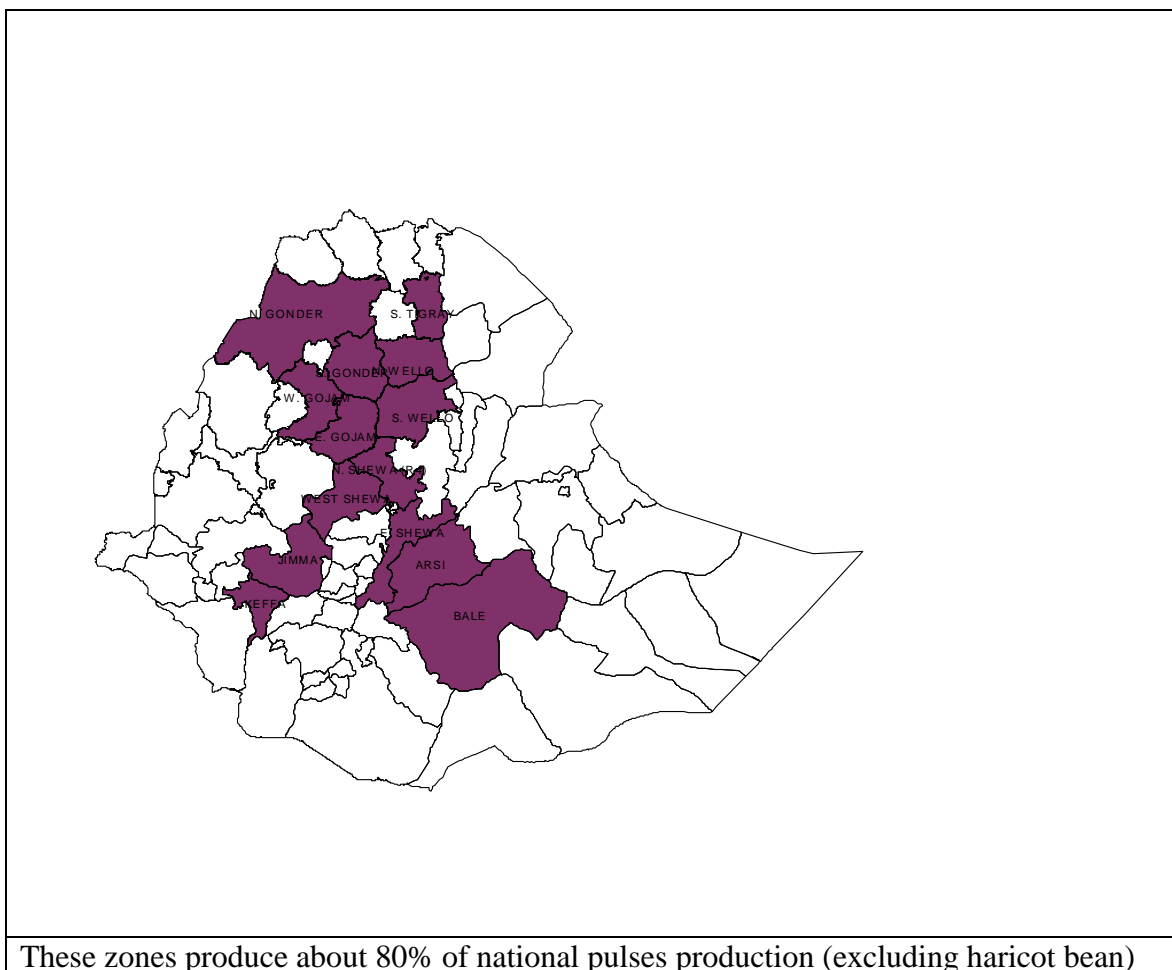
Crop type	2,004	2,005	2,006	2,007	2,008	2,009
Horse Beans	1.08	1.18	1.12	1.24	1.24	1.40
Chick Peas	0.86	0.94	1.02	1.22	1.24	1.42
Field peas	0.81	0.87	0.78	0.92	1.05	1.09
Lentils	0.59	0.66	0.66	0.80	0.84	1.01
Vetch	0.96	1.14		1.59	1.20	1.30
Gibto	0.44	0.45	0.81	0.91	0.64	0.87
Pulses	0.93	1.02	0.97	1.15	1.15	1.30

Source: CSA

Analysis of pulse production trend since 1997 shows that there has been a remarkable production growth, primarily because of area expansion. During the period mentioned above, production of pulses grew by an annual growth rate of about 8.7%, while area and yield increased by 5.6% and 2.9%.

Use of improved seed varieties and fertilizers for the production of pulses is almost non-existent in Ethiopia. According to CSA surveys (2009), only 215,000 farmers used 5,500 metric tons of fertilizer on 26,000 hectares of pulse area. Likewise, about 28,000 farmers used some 650 metric tons of improved seed varieties on 6,300 hectares of land.

Figure 21: Major Pulse Crop Producing Zones of Ethiopia



10.2. Pulses Consumption

10.2.1. Domestic Production vs. Consumption

Pulse crops are essential staple foods of the Ethiopian people and also important sources of cash for producers. They are the second most important staples following cereal crops, and the prime source of protein for the majority of the people. They are consumed in a number ways, including as *wat*, roasted, and boiled. During the period 2004-2009, the annual average net supply available for domestic consumption from different sources, including net domestic production and net import, was about 1.02 million metric tons. The per capita consumption varied from 10.43 kg in 2004 to 17.48 kg in 2009 (see table 22).

Table 22: Supply and Consumption of Pulses in Ethiopia 2004-2009

Particular	2004	2005	2006	2007	2008	2009
Gross domestic production (MT)	845,449	1,112,030	1,007,992	1,307,525	1,432,600	1,663,592
Net domestic production (MT)	701,723	922,985	836,633	1,085,245	1,189,058	1,380,781
Commercial import (MT)	279	12,756	10,262			
Commercial export (MT)	37,395	19,018	41,668	105,400	31,708	52,144
Food aid import (MT)	43,437	40,142	41,130	33,291	19,487	31,303
Net pulses available for domestic consumption (MT)	708,044	956,865	846,357	1,013,136	1,176,837	1,359,940
Actual consumption (kg/capita)	10.35	13.63	11.75	13.71	15.52	17.48

Note: Excluding haricot bean

Source: CSA, Ethiopian Customs Authority, WFP

10.2.2. Pulses Exports and Imports

In Ethiopia, there has been commercial import of some pulse crops during the period 2004-2009. Relatively significant quantities were imported in 2005 and 2006, amounting to 12,755 metric tons and 10,262 metric tons, respectively. The value of pulse import was US\$ 7.0 million in 2005 and US\$ 4.3 million in 2006.

Export of pulse crops, however, was significant during the period. In 2004 37,395 metric tons worth US\$ 11.8 million were exported, but it declined to 19,018 metric tons or US\$ 6.2 million in 2005. Exports again picked up in 2006 and 2007, when 41,668 metric tons (US\$18.8 million) and 105,400 metric tons (US\$ 51.7 million) were exported. In 2008 and 2009, exports were about 31,708 metric tons (US\$ 23.1 million) and 52,144 metric tons (US\$ 31.6 million). See table 23.

About 14% of the chick pea export was to COMESA region, mainly to Sudan (12%) and Djibouti (2%). The other principal importers of Ethiopian chick pea were U.A.E. (26.4%), Pakistan (23.5%), Bangladesh (14.5%), India (7.3%) and Singapore (4.0%).

Faba bean export was mainly to Sudan (93%) and Djibouti (3%).

About 36% of the field pea export was to Djibouti and 57% to Yemen, and the rest was exported outside COMESA.

Nearly 12.2% of lentils export was to COMESA countries, including (9.5%), Egypt (2.1%), and 0.7% to Kenya, Sudan and Mauritius. Other non-COMESA countries had about 87.8% share, of which Pakistan (24.1%), U.A.E (17.1%), Bangladesh (15.9%), Turkey (7.3%), were the principal importers.

Mung bean was exported to U.A.E. (66.7%), India (16.2%), Yemen (5%), and the balance to various non-COMESA countries.

Table 23: Import and Export of Pulses 2004-2009

Product	2004		2005		2006		2007		2008		2009	
	Quantity (MT)	C.I.F Value (US\$)	Quantity (MT)	C.I.F Value (US\$)	Quantity (MT)	C.I.F Value (US\$)	Quantity (MT)	C.I.F Value (US\$)	Quantity (MT)	C.I.F Value (US\$)	Quantity (MT)	C.I.F Value (US\$)
Import												
Cashew nut	2	1,623	9	16,356				141				
Chick peas	252	221,848	11,177	5,265,383	10,252	4,238,997						
Faba beans	7	6,240			1	1,086						
Field peas			1,301	488,797								
Lentils												
Mung bean				345	5	5,092	21	13,183				
Other nuts	18	70,105	269	1,245,239	4	14,337						
Total pulses	279	299,816	12,755	7,016,119	10,262	4,259,513	21	13,324				
Export												
Chick peas	3,926	1,152,081	6,230	1,901,473	23,409	11,768,721	45,652	26,084,510	7,322	5,177,080	19,064	9,603,617
Faba beans	30,736	9,426,153	10,218	3,111,091	14,995	5,102,581	44,383	16,087,558	21,280	15,223,983	24,265	14,062,989
Field peas	336	309,836	2	1,115	6	4,359	18	10,445	277	212,471	114	85,102
Lentils	545	237,277	628	245,319	561	199,294	9,872	5,960,055	1,132	1,394,877	8,519	7,776,959
Mung bean	1,851	652,876	1,940	950,585	2,697	1,698,221	5,475	3,539,896	1,696	1,073,676	182	114,842
Total pulses	37,395	11,778,225	19,018	6,209,582	41,668	18,773,176	105,400	51,682,464	31,708	23,082,087	52,144	31,643,509

Source: Ethiopian Customs Authority.

10.3. Value Chain Mapping

Of the total annual production of various pulse crops by smallholders, about 33% or about 440,000 metric tons is supplied to the market, while most of the crop is retained on-farm for various uses. There are different marketing channels through which the marketed quantity passes from producers to final consumers. There are also different market actors operating at different levels of the value chain. The different marketing channels and the flow the commodity through the various channels is depicted in figure 22.

Producers

Smallholders sell about 40% of their marketable pulses to wholesalers, and roughly 10% each to cooperative unions and directly to consumers. Rural assemblers and retailers each receive some 20% of the marketable quantity. In deciding how much to sell to the different actors, producers normally compare the different buying prices offered by each actor. In addition to dry pulses, farmers also sell some green crop before harvest.

Rural assemblers

Rural assemblers obtain their market supplies only from producers. They particularly play an important role in moving small surpluses from numerous producers in small village markets to major grain markets within their vicinity. They are unlicensed and may operate independently or as agents for wholesale merchants operating in the major markets. According to the focus group discussions, the assemblers sell about 45% of their annual purchases to grain wholesalers, roughly 25% to retailers and 30% directly to consumers.

Cooperative Unions

The role of cooperative unions in the handling of pulse crops is minimal; they handle about 10% of the quantity marketed by smallholders, and they deliver their supplies to grain wholesalers (60%) and exporters (40%). Generally, cooperative unions are not competitive compared to the rural assemblers, especially when there is shortage of supplies in the market.

Grain Wholesalers

The grain wholesalers are licensed market operators and include wholesale merchants in surplus producing and deficit areas as well as companies and the government parastatal-the EGTE. The role of the government in pulse marketing, however, is minimal; it has handled about 3,000 metric tons or less than 1% of the total annual pulse crop marketed by producers. Thus, the major actors are the private wholesale merchants.

Wholesale merchants handle about 242,000 metric tons of different pulses or roughly 55% of the total marketed quantity in a year. They obtain about 73% of their supplies directly from producers, 16% from rural assemblers and about 11% from cooperative unions.

Nearly 50% of the annual quantity of pulses purchased by the wholesale merchants in the surplus producing areas is sold to retailers in urban centers and deficit areas directly or indirectly through wholesale merchants operating in urban and deficit areas. Another 35% is directly sold to consumers in the vicinity and about 15% to exporters. Some quantity of pulse crops are also sold to few baby food and canning manufacturers, but the demand from such agents is not regular.

Buying and selling prices are usually determined through negotiation rather than through contractual agreements. Buying and selling prices also vary according to variety and quality, which are normally performed through visual inspection.

Because of the high market demand and prevailing high prices of pulse crops, wholesale merchants do not usually engage in storage arbitrage.

Exporters

According to data obtained from the Ethiopia Pulses, Oilseeds and Spices Processors Exporters Association, there are 80 member enterprises engaged in the export of various pulses, oilseeds and spices. While some of the enterprises such as ACOS/Ethiopia, Amal Trading, EGTE, Antypas & Brothers, Ambassel, Guna, Soreti International Trading, and etc., are well organized in terms of storage and cleaning facilities, organization, as well as experience in the business, some are small and organizationally weak.

Exporters, who are mainly concentrated in the terminal markets of Addis Ababa, Nazret and Dire Dawa, usually specialize in foreign market, and many of them own cleaning plants. Those who do not have their own cleaning facilities obtain cleaning services from the big exporters.

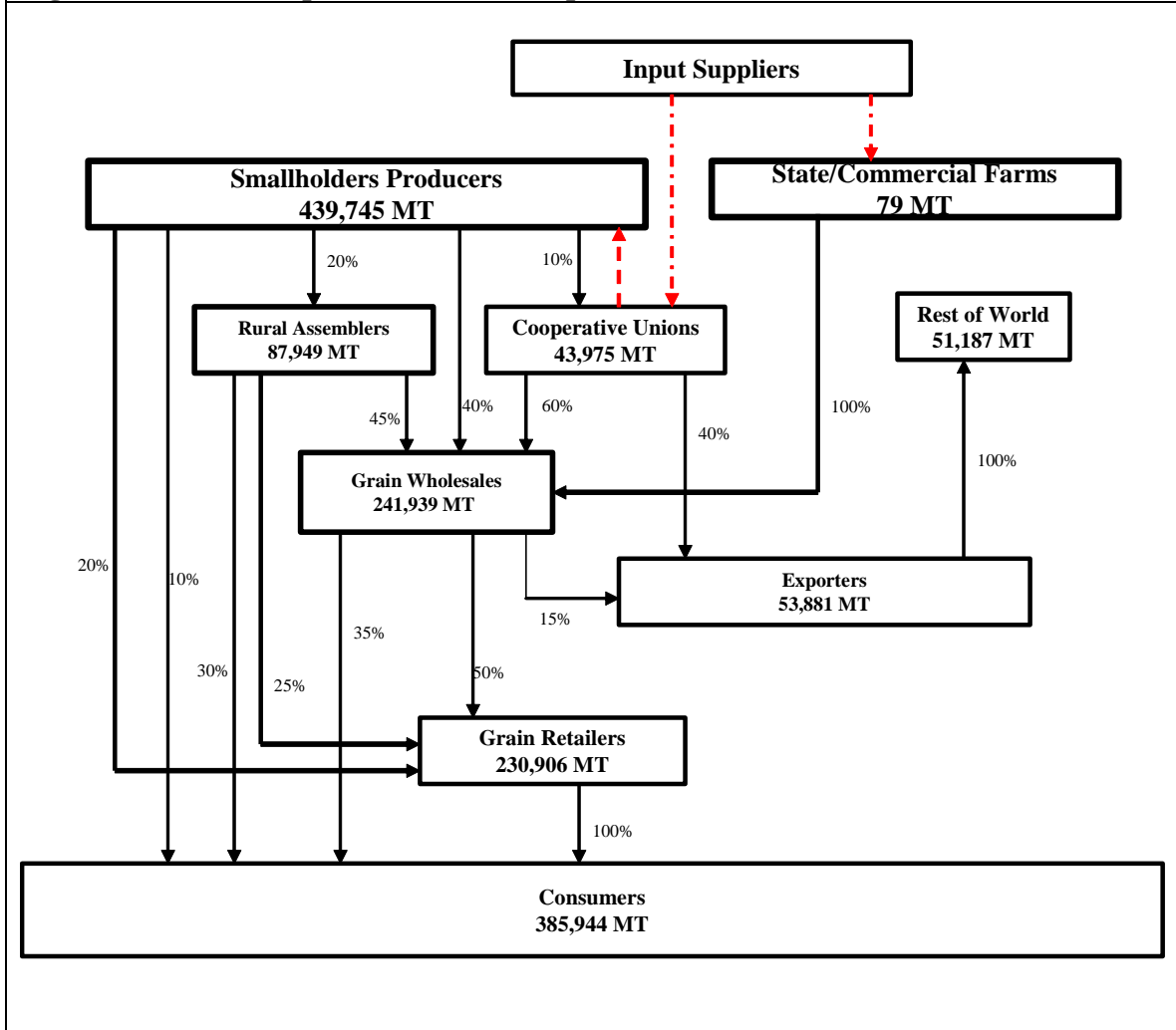
Unlike the wholesale traders, exporters have a national association that provides them with various services, including: access to market information, advocacy and capacity building, training, facilitation of participation in trade fairs, etc. Some donors, particularly the USAID, through the Agribusiness and Trade Expansion Program, also provide support to the exporters. The ATEP Program has been providing technical assistance in the production and processing of export products, business development services, support to the marketing and warehouse receipt system, establishing market linkages, etc.

Excluding haricot beans, exporters annually handle about 54,000 metric tons of various pulses, which they receive from grain wholesalers and cooperative unions. Grain wholesalers supply close to 67% of the exporters supply requirement.

Retailers

Retailers in rural and urban centers play a crucial role in the distribution of pulses to consumers. They annually handle roughly 231,000 metric tons or 60% of the quantity domestically consumed. The remaining 40% is supplied directly by producers, wholesalers and rural assemblers.

Figure 22: Pulse Crops Value Chain Map



Distribution of Value Added

Various costs are involved in the transfer of pulses from area of production to the area of final consumption. In this section, the case of chick pea is used to demonstrate the costs incurred, the revenue obtained and the value added by the principal actors in the producer→wholesaler→exporter channel.

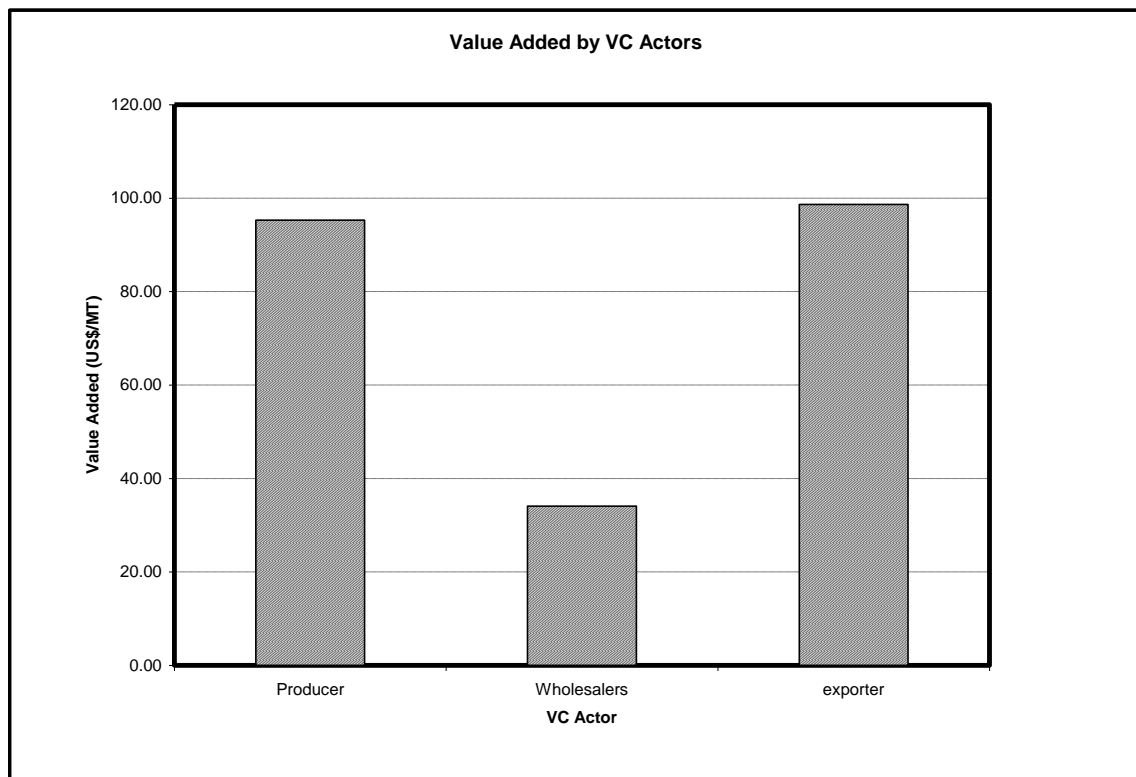
Chick pea producers' cost of production is estimated at US\$ 240.5/metric ton, of which land preparation (US\$ 69.79), seed cost (US\$ 37.03), weeding (US\$ 37.50), threshing and transport (US\$ 39.58), and other miscellaneous expenses (US\$ 5.21) are the major cost items identified by the focus group discussions. The producers sell their chick peas to wholesalers for US\$ 364.58/metric ton in the secondary markets.

In addition to the basic commodity price, the wholesale merchants bear various marketing and handling costs amounting to about US\$ 59.79/metric ton. Their main expense items are weighing scale, packaging and stacking, loading on truck, storage rent bags and twines, brokerage fee, weight and spillage allowances and transport cost. The selling price of a metric ton of chick pea at the terminal market to exporters is about US\$ 468.75.

Exporters finally clean, sort, package and make ready the shipment for export after getting quality and quarantine certificate and fulfill the customs and transit clearance procedures. All in all, they spend some US\$ 110.1/metric ton. The costs include: basic commodity buying price (US\$ 468.75), commission fee (US\$ 2.08), processing/cleaning loss (US\$ 20.83), cleaning and stacking (US\$ 9.89), sacks (US\$ 9.58), Transport to Djibouti (US\$36.46), quarantine and standards certification as well as transit, customs and port dues (US\$ 22.40), etc. the selling price of chick pea at Djibouti was about US\$ 707.29/metric ton in 2008.

Overall, the total value added by producers, wholesalers and exporters was about US\$ 228.02/metric ton, of which 42% was by producers, 15% was by wholesalers and 43% by exporters (see figure 23).

Figure 23: Value Distribution Across the Chick Pea Value Chain



10.4. Opportunities and Constraints

Ethiopia has immense potential for increasing production of different pulses crops if farmers are provided with improved production technology. Since 2004, the Ethiopian Institute of Agricultural Research (EIAR) and other research institutions have developed high yielding varieties of faba bean, field peas, chick peas and lentils. During 2004-2009, the EIAR has released 8 varieties of faba bean, 8 varieties of field peas, 9 varieties of chick peas and 2 varieties of lentils. The faba bean varieties can yield 1.1-2.8 metric tons/Ha at farmers' fields compared to current yield of 1.08-1.40 metric tons/Ha. The field peas can also yield 0.9-2.2 metric tons/Ha, which is double the current national yield level.

Despite the availability of high yielding varieties of pulse crops, farmers use their own seeds that are poor in quality and yield. As the world market requires large and uniform sized seeds, the country could not fully take advantage of the export market potential. Overall seed production and distribution system is weak, the participation of the private sector and farmer organizations in the multiplication and distribution of seeds is almost non-existent, seed prices are high because of high transport cost, and coordination between research and extension is inadequate.

Exporters have expressed their concern regarding the availability and quality of exportable pulse crops. They are usually constrained by highly fluctuating supply from year to year and high cost of cleaning and wastage during the processing stage. Consequently, although the country is the second largest producer of pulses in the COMESA region, it could not fully utilize its export potential.

Other constraints in the pulse crops sector include the following (RATES, 2003).

- lack of quality awareness and high level of impurity found during delivery;
- high variability of world market prices;
- High domestic price, sometimes even higher than the international market;
- unreliability of shipping and transport agents to deliver the product on time;
- occasional shortage of trucks;
- lack of reliable market information for all market participants;
- inadequate seed multiplication and distribution system;
- high transport cost due to poor road infrastructure;
- inadequate storage and market infrastructure in the many of the surplus producing areas;
- lack of access to bank credit by traders and exporters;

11. THE GROUND NUTS SUB-SECTOR

11.1. Ground Nuts Production

Ethiopia ranks ninth in ground nuts production among the COMESA member countries, the largest producers are the Sudan with 28.7% share, Congo Democratic Republic (18.8%), Malawi (13.3%), Egypt (11.1%), Uganda (8.4%), and Zimbabwe (6.4%). In Ethiopia, some 35 zones produce ground nuts, but production is highly concentrated in 8 zones that contribute about 90% of the total production. The major producers are: East Hararghe with 59% share in overall production, Metekel (20%), West Hararghe (6%), Harari (5%), East Welega (3%)-see map-figure 24. The number of farmers engaged in the production of ground nuts is about 226,000, rather small compared to other crops.

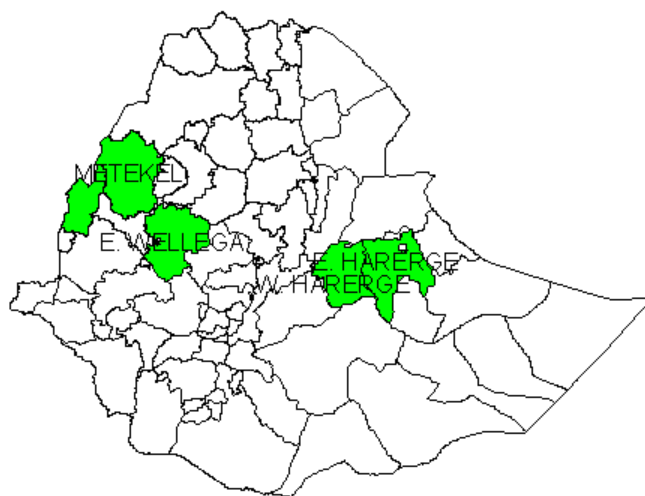
Area planted to ground nuts has been increasing over the past five years from 14,023 hectares in 2004 to a record level of 35,497 hectares in 2006. Production has shown an increasing trend from a low level of 13,739 metric tons to a record high of 49,054 metric tons in 2007. Over the period 1997-2009, overall ground nuts production has increased by 23.7% per year due to mainly area expansion of about 18.5% per annum. Average yield, however, did not show significant increase during the same period; it was in the range 0.98 – 1.4 metric tons/Ha (table 24). Ground nuts production accounts for about 6% of total oil seeds production.

Table 24: Area Under Ground Nut, Production and Yield 2004-2009

Description	2004	2005	2006	2007	2008	2009
Area (Ha)	14,023	16,954	35,497	35,070	29,277	28,469
Production (MT)	13,739	20,037	33,612	49,054	31,403	31,859
Yield (MT/Ha)	0.98	1.18	0.95	1.40	1.07	1.12
Share of Ground Nuts in Total Oil Seeds Production (%)	4.37	3.89	6.75	10.07	6.23	4.87

Source: CSA

Figure 24: Major Ground Nut Producing Zone of Ethiopia



Source: CSA 2004-2009 production data

The selected zones produce more than 95% of national ground nut production

11.2. Ground Nuts Consumption

11.2.1. Domestic Production vs. Consumption

Total national ground nuts supply from domestic production and net import was also increasing noticeably in 2004-2009 from 11,340 metric tons to a record high of 40,545 metric tons in 2007, and this was due to the increase in domestic production. Average per capita consumption of ground nuts was about 0.34 kg, but it varied from 0.17 kg in 2004 to 0.55 kg in 2007 (see table 25) in the past 5 years. Ground nut was consumed in grain form.

Table 25: Ground Nut Supply and Consumption in Ethiopia 2004-2009 (MT)

Description	2004	2005	2006	2007	2008	2009
Gross domestic production	13,739	20,037	33,612	49,054	31,403	31,859
Net domestic production	11,404	16,631	27,898	40,715	26,064	26,443
Commercial import	21	11	7	2		1
Commercial export	85	291	194	172	17	68
Food aid import						
Net ground nuts available for domestic consumption	11,340	16,351	27,711	40,545	26,047	26,376
Actual consumption (kg/capita)	0.17	0.23	0.38	0.55	0.34	0.34

11.2.2. Ground Nuts Exports and Imports

The contribution of ground nuts to the export of agricultural products is minimal, because of the high domestic consumption. According to Customs data, the quantity exported in the past five years was in the range 17.5-291.4 metric tons, and the earnings from export fluctuated from US\$ 18,478 in 2008 to US\$ 234,305 in 2005. There were also small quantities of ground nut import in 2004-2009 (see table 26).

During the period 2004-2009, Djibouti, Yemen, and Sudan had about 51.2%, 45.0%, and 3.2% share, respectively, in the total ground nut exported from Ethiopia. Other countries that imported Ethiopian ground nuts include: Saudi Arabia (0.4%) and Lebanon (0.3%).

Table 26: Export and Import of Ground Nuts in 2004-2009

Description	2004	2005	2006	2007	2008	2009
Export						
Quantity (MT)	85.32	291.40	194.19	171.58	17.49	67.71
Value (US\$)	59,522	234,205	203,489	144,681	18,478	66,649
Import						
Quantity (MT)	21.34	10.73	6.82	2.13		0.38
Value (US\$)	27,957	40,801	8,899	10,301		1,226

Source: Customs Authority of Ethiopia

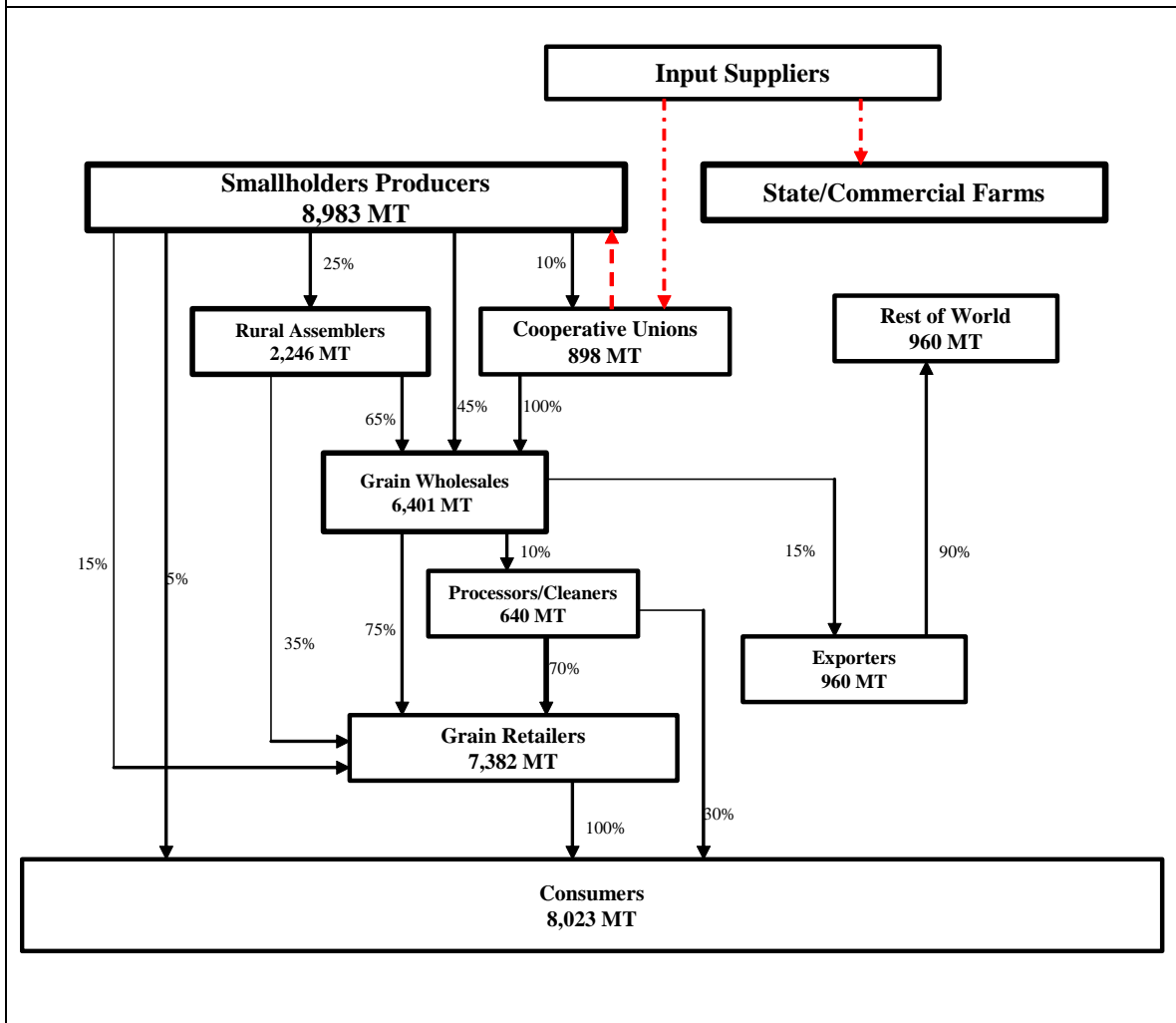
11.3. Value Chain Mapping

Although production of ground nuts is concentrated in few zones, it is marketed throughout Ethiopia. The marketed quantity is estimated at 8,983 metric tons or about 55% of total production and the rest is retained on farm for seed and home consumption. A number of actors including producers, rural assemblers, processors, wholesalers, and cooperatives play an important part in the production and marketing of the crop. The market channels involved in the distribution of ground nuts is shown in figure 25, and the role of each major participant is discussed as follows.

Producers

According to CSA data, farmers do not use improved seed varieties and chemical fertilizers for the production of ground nuts. They sell their marketable output to rural assemblers (25%), cooperative unions (10%), grain wholesalers (45%), retailers (15%), and directly to consumers (5%). Sale by farmers is in the form of shelled and unshelled ground nut.

Figure 25: Ground Nut Value Chain Map



Rural Assemblers

Rural assemblers sell the supplies they obtain from farmers to wholesale merchants and retailers in unshelled form. The rural assemblers handle about 2,246 metric tons, of which they deliver nearly 65% to wholesale merchants and 35% to retailers.

Cooperative Unions

Cooperative unions play less important role in the ground nut producing areas. The quantity of ground nuts they handle is insignificant compared to the rural assemblers.

Wholesalers

Wholesale merchants operating in the ground nut production areas are the key players in the market. They control some 6,401 metric tons or nearly 70% of the marketable quantity and their preference is shelled ground nut. Most of their supply (75%) is delivered to retailers, and the rest is sold to processors and exporters. Some of the wholesale merchants provide credit to ground nut producers, who repay their loans in kind.

Processors

In the past farmers were forced to deliver their produce to the oil mill located around Harar - the Amaharesa Oil mill at a price fixed by the government. After the liberalization of the grain market, however, farmers sell to whoever offers the highest price. Because of the high market price of ground nuts, the oil mill has shifted to the processing of rape seed. The other processors, mainly those that produce *halawa* and ground nut butter are still operating at a cottage level. Halawa is still a well know food mostly consumed in the urban areas of Eastern Ethiopia, and it is made from ground nuts and sugar. The food processors still continue to get their ground nut supplies from wholesale merchants, and their annual purchase is about 640 metric tons.

Retailers

Retailers are the most important market players, following the wholesale merchants. Out of the 8,023 metric tons of ground nut domestically consumed, close to 92% passes through retail outlets. They handle about 7,382 metric tons, and they get their supplies from wholesale merchants, producers, assemblers and processors. There are various types of retailers in the chain. Some of the retailers are engaged in the retailing of unshelled ground nuts, others roast and unshell the ground nuts and sell it to consumers either alone or mixed with roasted barley. Yet, others sell *halewa* and ground nut butter to consumers. The participants also include adult men and women as well as children who retail ground nuts and *kollo*.

Exporters

Exporters include licensed traders and those who are engaged in cross-border trade without having any permit. Nearly 96% of the export through official channels is to Djibouti and Yemen. The quantity exported through cross-border trade is not well documented. Overall, some 960 metric tons or about 11% of the marketable quantity is exported through the official channel and cross-border trade.

Value Added Distribution

As shown in figure 25, there are several flow channels for the ground nut marketed by farmers. However, in computing the distribution of the value added along the ground nut value chain, ground nut shelled by farmers and passing through the producer→ assembler→ wholesaler→ exporter channel was considered. The quantity flowing through this channel is roughly 11% of the total quantity marketed, but the analysis will provide an understanding of the value added from the production stage up to the point of export.

Based on the data obtained from the focus group discussions, value added by the different participants was computed by deducting the costs each incurred from the gross revenue each received from the sale of its product. For example, farmers incurred about US\$ 344.20/metric ton of shelled ground nut, and their major cost items included land preparation expenses, seed cost, planting and seed covering costs, weeding, harvesting and threshing costs, as well as shelling and transport costs. They reported that they got about 1.19 metric tons of unshelled or 0.80 metric tons shelled ground nuts and sold the shelled ground nut at US\$ 520/metric ton to an assembler operating in a nearby market.

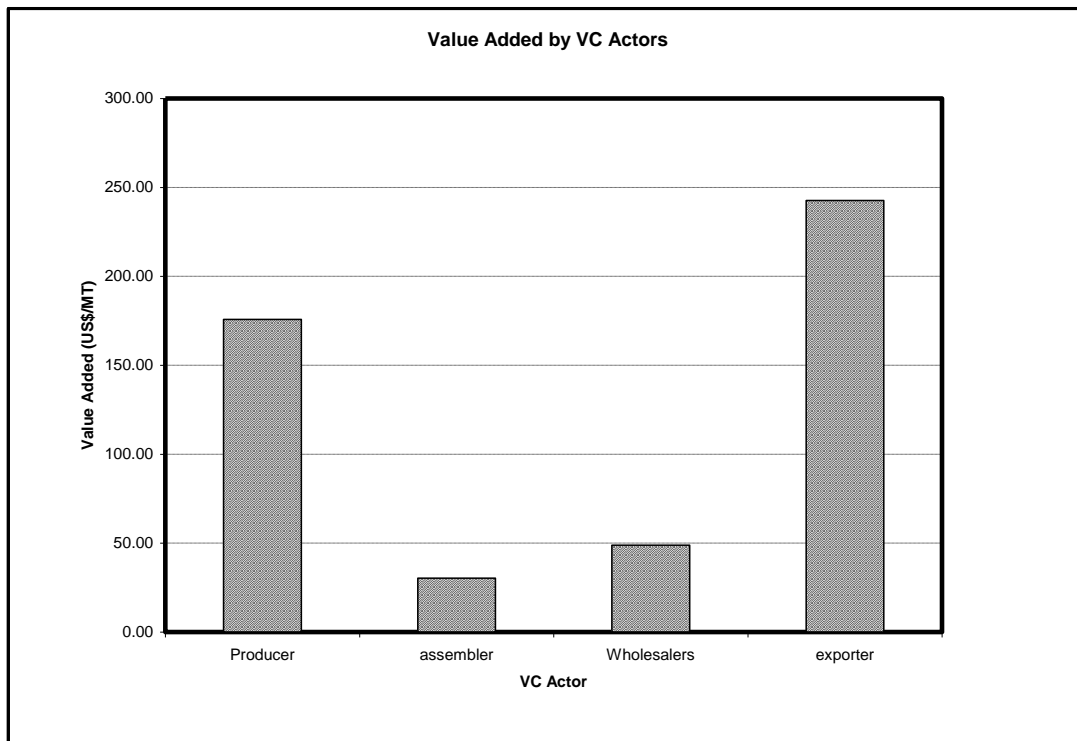
Assemblers bought the shelled ground nut from farmers and spent different marketing and handling costs and delivered their supply to wholesale merchants at US\$ 560/metric ton. Their costs included bagging and stacking, twines, loading and transport expenses, etc. The total marketing and handling costs amounted to US\$ 9.72/metric ton.

Similarly, wholesale merchants have various costs, involving storage rent, packaging and stacking, brokerage fee, sacks and twines, weight and spillage, loading and transport, which totally amount to US\$ 47.12/metric ton. The wholesalers transport and deliver their product to exporters in Nazret at US\$ 656/metric ton.

The exporters then process the supply they receive from the wholesale merchants and the assemblers and expend various costs in order to make the shipment ready for export. Their major expenses are transport, cleaning, wastage, bagging and labor. The F.O.B selling price is about US\$ 984.

In general, the total value added along the entire producer→ assembler→ wholesaler→ exporter value chain was roughly US\$ 498/metric ton. Out of the total value added, the share of the producers, assemblers, wholesalers and exporters was 35%, 6%, 10% and 49%, respectively (see figure 26).

Figure 26: Distribution of value Added in the Ground Nut value Chain



PART THREE

THE BUSINESS ENABLING ENVIRONMENT IN AGRICULTURAL COMMODITIES

12. THE POLICY ENVIRONMENT

12.1. Pricing and marketing Policies

Since 1990, there has been continuous reform in the marketing of grains in Ethiopia. The forced quota delivery system at government fixed prices to the government owned Ethiopian Grain Trade Enterprise (EGTE), formerly known as Agricultural Marketing Corporation, was abandoned; the control of inter-regional grain movement was abolished; the limitations placed on private sector participation were removed; and the EGTE was downscaled. However, the participation of the Government in the domestic grain market and export has continued. Currently, market prices are determined by supply and demand and there is no government involvement in determining buying and selling prices. The EGTE also buys and sells different grains in competition with the private sector, but at times distributes imported grain to domestic users at government-fixed prices to stabilize prices.

In 1999, the Ethiopian Grain Trade Enterprise was re-established in accordance with the Council of Ministers Regulation No. 58/92 by merging with another public enterprise-the Ethiopian Oil Seeds and Pulses Export Corporation (EOPEC)-with an authorized capital of Birr 112,012,454. Furthermore, EGTE was put under the supervision of the MoARD in 2004 by Proclamation No. 380/2004. According to Proclamation No. 58/1999, the EGTE is mandated with the following duties and responsibilities.

- To purchase grain from Farmers and sell in local and mainly in export markets.
- To contribute towards the stabilization of markets for Farmers' produces so that they will be encouraged to increase their outputs.
- To engage in other related activities conducive to the attainment of its purposes.

At present, EGTE has 10 branch offices and 52 trade/purchase centers throughout Ethiopia but mainly in the surplus producing areas. The enterprise also has about 700,000 metric ton standard storage capacity throughout the country and 49 trucks with an annual carrying capacity of about 147,000 metric tons.

EGTE's core activities include: export of oil seeds and pulses, supply of grain as raw material inputs for local food processing industries, and supply of food grain for government, non-government organization, city dwellers and other customers. It also undertakes other related activities, such as rental of warehouses and store management, and provision of fumigation, weigh-bridge and machine cleaning

services. As EGTE's warehouse capacity is in excess of its scale of operation, it rents out some of its storage capacity to WFP and private and government trading organizations; while some capacity is designated for use in operationalizing the envisaged Warehouse and Receipt System. And recently, the Government decided to engage the EGTE in coffee trade.

EGTE handles different cereals, pulses and oil seeds. During the period 2004-2009, it handled about 38,194 – 67,588 metric tons of cereals, 1,490-8,389 metric tons of pulses, and 4,914-13,450 metric tons of oil seeds per annum. In 2008/09, its local purchase reached a record level of 89,940 metric tons, of which 67,558 metric tons was cereal crop, 8,086 metric tons was pulse crop and 13,450 metric ton was oil seed (see table 27). EGTE's 2008/09 domestic grain purchase represented about 2.2% of the total marketed quantity in 2008/09. As can be seen from table 28, EGTE also exported some 15,421 metric tons of pulses and oil crop in 2007/08, of which 10,610 was oil seeds, mainly sesame seed.

Overall, the role of EGTE in the domestic market is limited to about 2.2% of the total marketed quantity, but its share in the export of pulses and oil seeds in 2008 was 8% and 16%, respectively.

Table 27: Domestic Grain Purchase by EGTE 2004/05-2008/09 (MT)

Grain type	2004/05	2005/06	2006/07	2007/08	2008/09
Teff	156	4,953	2,956	84	3,909
Wheat	10,452	16,872	5,618	2,286	
Barley	58		95	557	1,031
Sorghum	8	206	2,133		741
Maize	27,521	33,514	80,227	37,631	61,876
Cereals	38,194	55,545	91,030	40,557	67,558
Lentils	259		364	60	238
Faba Bean	443			582	1,430
Chickpea	205	463	1,853	1,257	2,259
Field peas				5,443	102
Haricot bean	2,391	1,027	3,350	340	4,057
Soya bean			732	22	
Mung Bean			953	685	
Pulses	3,298	1,490	7,253	8,389	8,086
Niger Seed	5,422	545	1,158	264	3,158
Linseed	2,386				
Rape Seed	848			9,597	1,704
Sesame	2,491	4,368	5,070		8,588
Oil seeds	11,146	4,914	6,228	9,862	13,450
All grain	52,639	61,948	104,511	58,808	89,094

Source: EGTE

Table 28: Export of Pulses and Oil Seeds by EGTE (MT)

Grain Type	2005	2006	2007	2008	2009
Maize	0	500	0		
Chickpea	1,149	558	108	1,074	1,539
Lentils	0	0	0	286	107
Haricot bean	6,150	992	1,310	2,812	2,465
Mung bean	0	0	0	230	303
Soya bean	0	0	391	0	40
Faba bean	0	0	0	230	0
Pulses	7,299	1,550	1,809	4,631	4,454
Niger Seed	1,966	3,040	4,029	459	348
Linseed	281	200	0	0	0
Sesame	493	4,461	4,693	10,151	8,086
Oil seeds	2,740	7,701	8,722	10,610	8,434
Total	10,039	9,751	10,531	15,241	12,889

Source: EGTE

In accordance with the country's five-year development plan⁶, the Ministry of Agriculture and Rural Development (MoARD) has recently formulated a master plan to enhance market-oriented production for priority crops-(wheat, barley, teff, lentil, chickpea, faba and haricot beans, cotton, sesame, coffee and spices) and livestock commodities (dairy, meat, poultry, apiculture, sericulture, fisheries, skins and hides) commodities.

With respect to crop production, the 2004 master plan aims at (1) developing a plan to enable the use of modern technologies to efficiently optimize production and productivity (at least doubling productivity of major crops), (2) encouraging selected woredas to specialize in one or two export commodities and gradually convert areas of other commodities to selected export commodities, (3) strengthening non selected woredas to double production and supply for the local market, (4) using all means of mode of production such as water harvesting, irrigation, relay cropping, inter cropping to optimize productivity, and (5) enabling farmers to be competitive in the international market and alleviate local food shortage. For the purpose mentioned above, the MoARD has also identified 173 woredas with potential for specialization in eight main food crops. However, assessment of the implementation of the master plan has not yet been carried out.

⁶ A Plan for Accelerated and Sustained Development to End Poverty (PASDEP)-(2005/06-2009/10)

12.2. Tariffs and Non-Tariff Charges

12.2.1. Tariffs

The government improved tax administration and financial sector development, which aimed at reducing the number of tariff bands and import duty rates. Currently quantitative import restrictions are applied only to used-clothing, harmful drugs and firearms. Both tariff levels and their dispersion have been reduced significantly. Import is prohibited for five items, including opium, ethyl alcohol and other similar spirits and worn clothing and textile articles or rags. These prohibitions are put in place for health reasons and for preventing illegal traders from importing contraband classified as used clothing and rags.

The major improvements on trade policy include the significant reductions in the number of items included in the negative list used to determine import eligibility for foreign exchange access. Currently, specific rates are used only for less than 3% of total tariff lines. As a result, the maximum tariff rate was reduced from 40% to 35% and the weighted average tariff rate from 19.5% to 17.5%, respectively. At present, there are five import tariff bands excluding zero rates. Currently, specific rates are used only for less than 3% of total tariff lines. Consequently, the current Ethiopia's tariff structure is roughly fully consolidated. In other words, a very large majority of import duties and taxes has been set in the external tariff.

Both import and export tariffs are based on ad valorem duties. Imports of agriculture products include a simple tariff structure consisting of only five ad valorem tariff levels, ranging from 5% to 35%. Import tariffs applied to agricultural and food products are similar to those applied on industrial products. It is important to note that the current rates are very close to those that will be used for the common external tariff of Common Market for Eastern and Southern Africa's (COMESA) Customs Union (CU), when the maximum rate will be 30%.

COMESA had reached an agreement to implement a Common External Tariff by the year 2004. As this currently stands the CET will be 0%, 5%, 15% and 30% on capital goods, raw materials, intermediate goods and final goods, respectively. However, the implementation of the CET has been delayed. There are still a number of obstacles to be faced regarding the CET, not least on the levels, on compliance, on identifying alternative sources of revenue where revenue loss could result from adopting CET (Impact Assessment of WTO Accession).

The current regular import duty applicable to staple foods is 5%. Ethiopia applies a 10% reduction of the customs duties imposed on its imports from COMESA member countries. As a result, import duty applied on imports of staple food from COMESA countries is 4.5 %. Moreover, Ethiopia applies the COMESA common external Tariff 0% for capital goods and raw materials, 10% for intermediate products and 25% for finished products (see tables 29 and 30).

Table 29: Import Duty Applicable on Imports

Product		
	COMESA Countries (%)	Rest of the World (EAC CET) (%)
Maize	4.5	5
Wheat	4.5	5
Rice	4.5	5
Sorghum	4.5	5
Millet	4.5	5
Beans	4.5	5
Cassava	4.5	5
Groundnuts		

Table 30: Tariff Applicable on Imports of Staple Food

Hs Code	Tariff Item No	Description	Unit of Quantity	Duty Rate
1001.1	1001.1	Durum wheat	kg	5%
1008.1	1008.1	- Buckwheat	kg	5%
1001.90	1001.9000	- Other	kg	5%
1003.00	1003.0000	Barley.	kg	5%
1005.10	1005.1000	Maize Seed	kg	5%
1005.90	1005.9000	Maize Other	kg	5%
1006.10	1006.1000	Rice in the husk (paddy or rough)	kg	5%
1006.20	1006.2000	Husked (brown) rice	kg	5%
1006.40	1006.4000	Broken rice	kg	5%
1007.00	1007.0000	Grain Sorghum	kg	5%
1008.20	1008.2000	Millet	kg	5%
1008.30	1008.3000	Canary seed	kg	5%
1201.00	1201.0000	Soya beans	kg	5%
1202.20	1202.2000	Ground nuts Shelled, whether or not broken	kg	5%

12.2.2. Non-Tariff Charges

Currently there is no charge or any duty levied on imports in Ethiopia other than customs duties and internal taxes. Moreover, there are no quantitative import restrictions and import quotas on agricultural goods. However, there are charges levied on imports other than customs duties and internal taxes. These include such fees as declaration form purchase fee, warehouse fee, sanitary and phyto-sanitary (SPS) inspection fees, standard inspection fees, bank service fees, and registration and licensing fees.

According to Regulation No. 13/1990, the use of the Standards Mark is mandatory by producers and traders for those goods that the Ethiopian Standards has been issued. Moreover, the regulation authorizes concerned authorities to prohibit the importation or exportation of goods which do not bear the mark the use of which is required.

Pursuant to Proclamation No. 67/1997 (Amendment Proclamation No.376/2003) and Council of Ministers Regulations No.13/1997 (Amendment Regulation No.95/2003), registered importers are required to obtain license from the Ministry of Trade and Industry (MOTI) and they pay registration and licensing fees. Table 31 summarizes non-tariff charges on imports for which data is available.

Table 31: Non-Tariff Charges on Imports

Non Tariff Item	Description	Charges
Inspection and standard mark use fee	<ul style="list-style-type: none"> Oil seeds(specification) Pulses(Grading of Beans) Pulses (Grading of lentils) Pulses(Grading of Chick peas) Pulses (Grading of dry beans) 	0.2 %t of unit selling price
Banking service charge	Service charge levied on franco - valuta imports	2 percent of value
Banking charges	Export letter of credit confirmation commission	<ul style="list-style-type: none"> 0.5% for values up to birr 1million .495% for values over birr 1 million
Banking charges	Import letter of credit advising and extension commission	<ul style="list-style-type: none"> 0.55 of value up to birr 1 million .495 for value ranging birr 1to 4 million 0.490% for value over birr 4 million
Customs declaration form purchase fee	A form which importers fill valid information for customs clearance	Birr 2 per piece
Warehouse fee		Charges depend on the type, ,volume and duration of storage
Pre-shipment service	The regulation stipulate that importer shall pay pre-shipment service of the CIF value of all imports for which clear report of findings have been issued	Service fee of 1% of the CIF value
Trade Registration fees	No person shall engage in commercial activities unless registered	Birr 80 per registration
Licensing fees	For importation and exportation of goods license is required.	Birr 80 per license
Phyto-sanitary inspection fees	Chemical Import Plant import	Birr 300 per consignment Birr 119.50
	Charges based on the weight of goods	<ul style="list-style-type: none"> 10-99 kg birr 10 100-1000kg birr 20 > 1000 kg additional .5cents per 100kg
For changing phytosanitary certificate	An inspection certificate is valid for a give number of days	Birr 10 per change made
Investment certificate fees	Investors are required to pay for investment certificate	<ul style="list-style-type: none"> New investment birr 600 Expansion birr 300
Work permit	Work permit is a required while investing	Birr 300
Clearing and handling fees import cargos	Port and inland import and export cargo handling and clearing transit charges	<ul style="list-style-type: none"> birr 600/20feet container birr 10130/40feet container
Clearing and handling fees export cargos	Port and inland import and export cargo handling and clearing transit charges	<ul style="list-style-type: none"> birr 3300/20feet container birr 6600/20feet container

Note: current Exchange rate at the time of study 1USD= 12.78

With regards to control of in-country movements of products, non-tariff items used to include restriction of movement of products between regions by setting up *Kellas* (check points) and collect fees for various purposes. However, this practice is no more in effect.

12.3. Regional Structured Trading Systems Platform

12.3.1. The Food Balance Sheet

Timely and reliable statistical information is one of the most important prerequisites for the formulation of sound development plans and policies aimed at improving the efficiency of production and distribution of food and agricultural products in a country. In the marketing and distribution of basic staple foods, an appropriate assessment of a country's supply and demand situation is very helpful. In this regard, preparation of food balance sheet is important, because it presents a comprehensive picture of the pattern of a country's food supply and utilization during a specified reference period.

Despite the importance of the food balance sheet as a tool for managing food supply and utilization, it is not currently practiced in Ethiopia. However, some donors, particularly the FAO/WFP annual food assessment missions to Ethiopia and the USAID annual Bellmon Studies carry out national level assessments for their own purposes. The primary objective of the food balance sheets prepared by FAO/WFP and USAID/Ethiopia is to estimate the food gap between domestic production and consumption requirement and determine the type and quantity of food aid needed each year.

In preparing food balance sheets, the FAO/WFP Missions and USAID Bellmon Studies use simple supply and utilization accounts of cereals, pulses and oil seeds, taking into consideration such elements as production, import, export, and change in stocks.

During the discussion with key informants (wholesale traders and exporters), they expressed their desire to obtain reliable and timely production and demand data for the commodities they trade in the domestic and foreign markets.

12.3.2. Warehouse Receipt System

The Government of Ethiopia, with the intension to protect farmers from adverse situations where supply exceeds demand, price shocks and to promote efficient marketing of standardized agricultural products, established the Warehouse Receipts System (WRS) by Proclamation No. 372/2003.

Even though the WRS was introduced in 2003, it is not operational to date. It is envisaged that the Commodity Exchange will launch warehouse Receipt Financing System that allow producers and traders of agricultural commodities to access bank loans by pledging warehouse receipt by the ECX for commodities held in its stores starting January 2010.

As recently as October 20, 2009, the officials of Ethiopia Commodity Exchange Authority (ECEA) revealed that it is envisaged to give service in 14 different

locations of the country and in 8 of theme the WRS service will be operational. The service for coffee will be given in Addis Ababa, Jimma, Dilla and Awassa. And for Staple foods in Nazareth, Bale Robe, Bure and Hossana.

12.3.3. The Commodity Exchange

Agricultural markets in Ethiopia are generally characterized by high costs and high risks of transactions, and trading normally takes place between buyers and sellers who knew each other to avoid being cheated because there was no assurance of quality or quantity. Moreover, farmers who produce most of the marketable output come to the market place with little information on commodity price to negotiate and minimize their market risks.

Cognizant of this problem, the government took initiative to put in place an efficient, orderly and integrated agricultural commodities marketing system. Thus, by proclamation No.550/2007, the Ethiopia Commodity Exchange (ECX) was established.

According to the ECX, the following are some of the purposes of the establishment of the Ethiopia Commodity Exchange:

- Create an efficient, transparent and orderly marketing system
- Publicly disseminate information on Exchange transactions
- Conduct trading on the basis of product grade certificate and guaranteed warehouse receipts
- Market surveillance.

The Ethiopia Commodity Exchange is public and private partnership entity with clear separation of ownership, membership, and management. The rules of the exchange developed by ECX provide the blueprint for all rules governing membership, management, trading, warehousing, and clearing operations of ECX. Ethiopian Commodity Exchange Authority (ECEA), a regulatory body of ECX was formed by Proclamation No. 551/2007. The Authority has powers and duties to extend and oversee ECX actors, clearing institutions, exchange traded contracts. ECEA has the power to investigate and act upon violation of the law concerning the regulation of a Commodity Exchange.

The Ethiopia Commodity Exchange commenced trading operations in April 2008 and to date ECX has 450 private members. There has been trading in five commodities: maize, wheat, beans, sesame and coffee; the ECX started operation of trading coffee in November 2008. It has 496 members-346 are suppliers and 150 are sellers from the coffee industry. The Exchange offers an integrated warehouse receipt system from the receipt of commodities on the basis of industry accepted grades and standards for each traded commodity delivery.

Commodities, primarily coffee and grains are deposited in warehouses operated by ECX. Currently, ECX operates warehouses with a total capacity of 85,000 metric tons, located in Addis Ababa, Dire Dawa, Nazareth, Bure, Nekemt and Humera. Coffee accounts for over 76% of this total storage capacity. A national payment system has been set up in partnership with seven commercial banks handling some 150,000 metric tons of commodities in different warehouses in the country.

Trading sessions vary from commodity to commodity. Export coffee and sesame trading session are conducted daily, while grains and local coffee trading sessions are once and three times in a week, respectively. It is observed that in this year coffee worth 2.8 billion birr was made available for transaction in the domestic and export market by ECX.

The challenges faced by ECX are the decline in coffee production, the major transaction commodity. Moreover, transformation from traditional to modern transaction system, shortage of testing laboratories, low storage capacity, the existence of numerous variety of coffee are also among the challenges faced by ECX.

13. THE REGULATORY FRAMEWORK

A large number of government ministries and their Agencies are responsible for the development, implementation and maintenance of regulations in Ethiopia. These include: the Ministry of Agriculture and Rural Development, Ministry of Works and Urban Development, Ministry of Health, Ministry of Mining and Energy, Ministry of Trade and Industry, Ministry of Transport and Communication, Ministry of Science and Technology and Ministry of Finance and Economic Development.

Regulatory Authorities include the Electricity Agency, Drug Administration and Control Authority, Radiation Protection Authority, Telecommunications Agency, the Transport Authority, the Environmental Protection Authority, the Ethiopian Standards and Quality Authority and the Revenue and Customs Authority.

The import of certain goods and materials are regulated from the line of responsibility entrusted upon government offices and authorities. The products that need authorization and the relevant institutions are indicated below:

- Road Transport Authority - for imports of motor vehicles and transport machinery
- Ministry of Health (Drug Administration and Control Authority) - for human and animal drugs and medical equipments
- Ministry of Agriculture and Rural Development - for pesticides, seeds, plants and other articles, which are liable to be infested or infected with plant pests, live animals and animal products.

The Quality and Standard Authority of Ethiopia gives import accreditation by inspecting and certifying products for which relevant Ethiopian Standards have been established and are made mandatory under Regulation.

13.1. Customs Documentation and Clearance Procedures

In Ethiopia, the customs clearance process and procedures are governed by the rules and regulations promulgated by various government authorities as summarized in table 32 below. For the importer/exporter to clear the goods for import/export and thus to successfully complete transactions it needs to comply with the rules and regulations.

In customs documentation and clearing process, the Customs Declaration form is the important document that should be submitted to customs offices at the time of importation/exportation or transit of goods. The importer/exporter should fill the form carefully since the customs revenue and the customs control is based on the declared information. On the presentation of the customs declaration other supporting documents that should be supplied with the declaration to customs in a number of copies determined by the authority.

Table 32: Customs Documentation and Clearance

Documents required to clear imports of staple food	Location where the documents are obtained from	Fees for Accessing the documents	Procedures for lodging the documents for customs clearance
Commercial invoice	Supplier		
Packing list	Supplier for imports and the Ethiopian Chamber for Exports		
Certificate of origin	Supplier		
Bill of lading/Airway bill	Transporters		
Bank permit	Banks		<ul style="list-style-type: none"> • Application letter • Copies of Performa invoice • Valid import license • Insurance certificate • Clearance certificate from NBE • Inspection certificate
Clearance certificate	National Bank of Ethiopia		
Container release	Ethiopian Shipping Lines		
Inspection certificate	Ministry of Agriculture & Rural Development/		<ul style="list-style-type: none"> • Fill in Import application form • Fill in Customs Import Authorization form • Get the goods inspected • Observe plants and plant products prohibited from entry into the country • Ascertain that imported seedling plants are free of soil • Pyto –sanitary certificate from origin of export • Observe that soil is prohibited from entry into the country in any form
Inspection certificate	Quality & Standards Authority Ethiopian	0.2 percent of unit sales price	<ul style="list-style-type: none"> • Application letter with the following documents • Port of entry • Bill of loading • Consignment quantity • Letter of credit permit(L/C) • Certificate of compliance to importing product
Trade Registration/License	Ministry of Trade & Industry	Birr 80	<ul style="list-style-type: none"> • Nationals a complete application form • A recent pass port size photograph • A photocopy of applicant's ID card • Foreign nationals complete the application <p>Form with two copies of the following</p> <ul style="list-style-type: none"> • recent passport size photograph, • photocopy of the applicant's passport • Photocopy of resident permit • Registration/or licensing fee
TIN certificate	Revenue & Customs Authority		

At the customs clearing stage all the documents mentioned above should be submitted to the customs and revenue authority to acquire customs clearance that would enable the goods to pass all customs check points.

According to the directives of the National Bank of Ethiopia, the commercial banks are authorized to issue import permits. To acquire the import permits one has to fulfill the following:

- Application letter
- Three copies of Performa invoice
- Valid import license
- Insurance certificate

- Clearance certificate from the National Bank of Ethiopia that the importer has settled its outstanding commitment
- Inspection certificates from pertinent government organization depending on the type of the commodity
- Valid import license

At present the goods clearance (release time) time is substantially reduced provided that the importer submitted all required documents as per the requirements set by regulations. However, traders concern is lack of adequate information on all clearing procedures and the size of some fees charged.

In general, apart from QSAE which conducts inspection by itself for products falling within the scope of mandatory standards, other ministries or regulatory Agencies provide the Customs Authority with lists of their respective mandatory standards, and the lists of registered or approved products. For all other products not regulated by institutions customs allow entry of the product into Ethiopia after examining and confirming relevant information.

Customs valuation rules are also perceived to act as trade barriers on some occasions. Most complaints describe overestimation of prices for customs purposes as one of the major problems. Other complaints relate to inconsistent and varying customs classification. Customs import procedures sometimes require consignment documents to be presented twice to the final customs clearance post. Customs procedures and institutional issues are reported to create delays causing trade barriers on both exports and imports. Interviewees testify that import-licensing procedures frequently bear the effect of delaying or hampering imports.

The customs procedures in the area of imports are reported to cause obstacles. All in all, most of the impacts reported are related to customs and administration particularly in the area of custom clearance formalities, and of cost in the fulfillment of sanitary and phyto-sanitary measures and technical standards.

In another study (Imani 2007) documentation requirements for meat, covers not less than ten different institutions. Even for live animals eight different institutions eight different institutions are involved, with significant transaction costs. This is particularly critical for perishable goods such as meat, where these administrative arrangements have to be completed, which take at least seven days. In effect, exporters often need to withdraw shipments of chilled meat, because of absenteeism.

13.2. Standards

Quality and Standards Authority of Ethiopia (QSAE) is the national Standards body of Ethiopia. QSAE develops and publishes Ethiopian Standards. QSAE also administers mandatory standards and hence is also a Regulatory Authority. The Quality and Standards Authority of Ethiopia regulates all exports and imports.

Standards are consistent with international norms. Pharmaceuticals that have been extensively tested and licensed in other countries are allowed to enter the Ethiopian market with no further testing. A commonly reported trade impact of these barriers is the unnecessary (and often significant) increase in costs that effectively impedes exports.

A standard is a document, established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.

A technical regulation is a document providing binding legislative rules that provide technical requirements, either directly or by referring to or incorporating the content of a standard, technical specification or code of practice that is adopted by an authority.

A mandatory standard is a standard the application of which is made compulsory by virtue of a general law or exclusive reference in a regulation.

Tables 33a-33h show summary of those mandatory and voluntary standards specification for staple foods for which standards are developed and published. As can be seen from the tables, the staple foods (wheat, sorghum, rice and maize) have voluntary standards while beans, pea beans, horse beans and chick peas have mandatory standards. National Standards on cereals are implemented on voluntary basis and no control is carried out by the QSAE and do not have import or export procedure. However, in disputes arising from the contractual agreement between two parties these voluntary standards can be used as a tool to settle the quality problems.

Some three hundred eighty national standards covering one hundred and four products are implemented on mandatory basis and these standards comprise agricultural products (pulses and oilseeds), food products (edible oil, fruits and vegetables), building and construction materials (aggregates, concrete blocks and pipes, nails, steel sheets) and chemical products.

Table 33a: Standards Specification for Wheat

Product	Type of standard	Type of implementation mode	Summary of Standards specifications				
Wheat	National	Voluntary		Grades			
			Grading characteristics	1	2	3	4
			Test mass Kg/hl,min	78.0	76.0	74.0	70
			Impurities	Maximum permissible In % by mass			
			Broken kernels	1.0	2.0	3.0	4.0
			Shriveled kernels	3.0	4.0	6.0	8.0
			Unsound grains	1.0	1.0	1.0	1.0
			Grains attacked by pests	1.0	1.50	3.0	2.0
			Other cereals	1.0	2.0	2.0	3.0
			Organic extraneous matter	1.5	1.5	2.5	3.0
			Inorganic extraneous matter	0.5	0.5	0.5	0.5
			Contrasting class	0.50	1.50	2.0	3.0
			Pieces of glass	0.0	0.0	0.0	0.0
			Stone	0.10	0.20	0.40	0.60
Each class of wheat shall not contain more than 13% by mass moisture							
Source: QSAE							

Table 33b: Standards Specification for Sorghum

Type of standard	Type of implementation mode	No.	Summary of Standards specifications					
National ES 674:2001	Voluntary		Grades					
			1	Grading characteristics	1	2	3	4
			Test mass Kg/hl,min	72	70	68	66	
			Impurities	Maximum permissible In % by mass				
			2	Broken grains	2	4	6	8
			3	Foreign matter of which:	1	1.5	2	3
			- Inorganic matter	0.5	0.5	0.5	0.5	
			4	Blemished grain including strained, discolored, sprouted grain, damaged, diseased, insect damaged grain of which:	3.0	5.0	7.0	10.6
			- Diseased grains	0.5	0.5	0.5	0.5	
			- Insect damaged grains	0.5	1.5	2.0	3.0	
			5	Contrasting class	1.0	2.0	4.0	6.0
Each class of sorghum shall not contain more than 12.5% by mass moisture								
Source: OSAE								

Table 33c: Standards Specification for Rice

Type of standard	Type of implementation mode	Summary of Standards specifications					
National ES ISO 7301:2001	Voluntary	Defects	Reference to the definition	Husked rice % max.	Milled rice (Non glutinous) % max.	Husked parboiled rice % max	Milled parboiled rice % max
		Extraneous matter					
		a) organic	3.7	1.5	0.5	1.5	0.5
		b) inorganic		0.5	0.5	0.5	0.5
		Paddy	3.1	2.5	0.3	2.5	0.3
		Husked rice	3.2	-	1	-	1
		Milled rice	3.3	-	-	2	2
		Heat damaged kernels	3.8	4	3	8	6
		Damaged kernels	3.9	4	3	4	3
		Immature Kernels	3.1	12	2	12	2
		Chalky kernels	3.11	11	11	-	-
		Red kernels	3.12	12	4	12	4
		Red streaked Kernels	3.13	-	8	-	8
		Glutinous rice	3.5	1	1	1	1
		Pecks	3.14	-	-	4	2
Rice shall not contain more than 13% by mass moisture							
Source: QSAE							

Table 33d: Standards Specification for Maize

Type of standard	Type of implementation mode	Summary of Standards specifications				
National ES 679:2001	Voluntary	Grades				
		Grading characteristics	1	2	3	4
		Test mass Kg/hl,min	71	68	66	64
		Impurities	Maximum permissible In % by mass			
		Broken kernels	2	3	4	5
		Foreign matter	0.5	1	1.5	2
		Blemished grain including stained ,discolored, sprouted frost ,damaged diseased insect damaged and of which:	3	5	7	10
		a) diseased grain	0.5	0.5	0.5	0.5
		b) insect damaged	0.5	1.5	2	3
		Immature grains	1	2	4	6
		Other grains	0.5	0.5	1	1.5
		Contrasting class	1	2	4	6
Each class of maize shall not contain more than 13% by mass moisture						
Source: QSAE						

Table 33e: Standards Specification for Beans

Type of standard	Type of implementation mode	Summary of Standards specifications								
National ES 16:2001	Compulsory	Grade requirements for class of Haricot and flat beans								
		Maximum permissible In % by mass								
		Grades	Total blistere, dwrinkled,and or broken beans	Splits	Damaged		Foreign matter		Pieces of Glass	Contrasting class
					Total	Badly damaged	Total	Stones		
		1	2.5	2	1.5	0.5	0.2	0.01	Nil	0.2
		2	3	3	3	1.5	0.5	0.2	Nil	0.5
		3	5	5	4	2	1	0.3	Nil	1
		4	8	8	5	2.5	1.5	0.6	Nil	2
		5	Sub standard grades beans are beans that do not meet the requirements specified							
Each class beans shall not contain more than 14% by mass moisture										
Source: QSAE										

Table 33f: Standards Specification for Pea Beans

Type of standard	Type of implementation mode	Summary of Standards Specifications						
National ES 16:2001	Compulsory	Grade requirements for class of Pea beans						
		Maximum permissible In % by mass						
		Grades	Total defects	Badly damaged peas	Foreign matter		Glass metal	Contrasting class
		Hand pick			Total	Stones		
		1	2	0.3	0.1	0.01	Nil	0.01
		2	2.5	0.5	0.5	0.05	Nil	0.01
		Screened						
		1	3.5	0.8	0.8	0.2	Nil	0.5
		2	4	1	1	0.4	Nil	1
Sub standard grades pea beans are pea beans that do not meet the requirements specified in clause 5								

Table 33g: Standards Specification for Horse Beans

Type of standard	Type of implementation mode	Summary of Standards specifications				
National ES 16:2001	Compulsory	Grade requirements for class of Horse beans				
		Maximum permissible In % by mass				
		Grades	Total defects	Foreign matter		
				Total	Stones	Glasses and metals
		1	4	1.5	0.2	Nil
		2	6	2	0.4	Nil
		3	8	2.5	0.6	Nil
Sub standard grades horse beans are beans that do not meet the requirements specified in clause 5						

Source: QSAE

Table 33h: Standards Specification for Chick Pea

Type of standard	Type of implementation mode	Summary of Standards specifications						
National, ES 18:2001	Compulsory	Grade requirements for class of Chick peas						
		Maximum permissible limits In % by mass						
		Grades	Damaged Chick peas		Splits	Shriveled Chick peas	Chick peas with cracked seed coats	Foreign matter
			Badly damaged	Total				
		1	0.3	1	0.5	2	3	0.2
		2	0.8	1.5	1	4	5	0.5
		3	1.5	2	1.5	8	7	0.5
		4	Sub standard grades Chick peas are chickpeas that do not meet the requirements specified in clause 5					

Source: QSAE

The application of the different standards on import and export are discussed below.

Application of Standards for Imports

Importers are required to obtain permit from the national standards body-QSAE-to import those staple foods that have mandatory standards. Importers are required to provide the following information to the regulatory body along with their application for importation or exportation.

- Port of entry
- Bill of loading
- Consignment quantity
- Letter of credit permit (L/C)
- Certificate of compliance to importing product

The mandatory inspection procedures for import products comprise the following steps:

- Submission of application
- Reviewing of the application
- If application is valid get registered /if not customer is notified
- Assigning an inspector
- Conduct inspection physically if necessary draw sample
- Submit sample to laboratory
- Collect test report
- Prepare inspection report
- evaluate the inspection process
- If the product complies with the requirement, permit is given; if not reject and band import/export

Mandatory inspections are carried out by the QSAE at all entry points of the country where customs Authority offices are found. However, concerning voluntary standards importers or exporters are not obliged to provide import or export permits to National Standard Body. Import or export processes are brought into effect by mutual agreement between the supplier and the buyer.

The national standard body of Ethiopia (QSAE) is a member of ISO, ARSO, IEC, COMESA and Codex Alimentareous; as a result, QSAE has mutual recognition with several standard bureaus. The majority of Ethiopian Standards are fully identical adoption of international standards (ISO, IEC, OIML, CODEX etc).

Application of the Standards on Export

Mandatory export inspection is carried out on products covered under compulsory standards. Exporters are required to provide Letter of Credit permit, export destination information along with their application. The QSAE provides product compliance certificate and export permit to the exporter based on inspection procedure and inspection results described above.

Many complaints pertain to the area of testing and certification. Reported concerns are a general absence of information and lack of transparency on the procedural norms and regulations regarding specifications as well as methods of sampling, inspection, and testing. Aside from cost and awareness concerns, business people report that they lose customers simply due to the time required for further testing by laboratories of the importing country before the required certificates are completed

for shipments to be released from the Ethiopian Customs Authority. Table 34 depicts challenges faced by the National Standards Body and traders and proposed solutions.

Table 34: Challenges Faced by the QSAE and Traders and Proposed Solutions

Challenges face by the National Standard Body	
Challenge faced by Bureau of Standard in facilitating cross border trade of staple foods	Proposed solutions
Severe shortage of accredited laboratories and of competent testing and certification institutes	Accreditation of the testing laboratories by internationally recognized accreditation body
No Accredited certification organization exist in Ethiopia	Establish accredited certification organizations
Advanced testing of agricultural products for the major markets, is not possible in Ethiopia,	Establishing the laboratories and/or obtaining the required accreditation
Absence of information and lack of transparency	Procedural norms, and regulations regarding specifications should be transparent
Challenges faced by Traders	
Challenge faced by traders in meeting standards requirements for cross border trade of staple foods	Proposed solutions
Unable to comply customer's requirements due to stringent standards	Processing products based on customer's requirements
Lack of acceptance of product test report by the buyer	Provide laboratory test report from accredited laboratory
Information gap on both mandatory and voluntary requirements and customer preference	Establish an institution that provides such information
Requirements concerning marking, labeling and packaging complicated to implement	Improve the implementation process equally for all products
Lack of Awareness in testing and certification procedures	Improve public information dissemination And put in place transparent procedures

13.3. Sanitary and Phyto-Sanitary Requirements

In the public sectors, the implementation of SPS measures touches a number of government organizations, including the Ministry of Trade and Industry and QSAE, Ministry of Agriculture and Rural Development, Ministry of Health, the Drug Administration and Control Authority, Ministry of Transport, the Ethiopian Custom Authorities. Some examples of SPS measures include:

- Requiring animals and animal products to come from disease free area
- Inspection of products for microbiological contaminants
- Mandating specific fumigation treatment for products
- Setting maximum allowable levels of pesticide residues in food

Application of SPS Measures for Imports and Exports

Importers are required to apply in order to have their products certified as having met SPS measures. And the authority's approval procedures include inspection of products for pests, diseases, and toxins before they are permitted entry into or going out of the country and approving the presence or maximum tolerance level of a contaminant in an imported food product.

Imported live plants and plant products should meet the following requirements:

- For plants and plant products, which are categorized as restricted materials under the Plant Quarantine Regulation, an import permit as well as phyto-sanitary certificate, issued by the Ministry of Agriculture and Rural Development (MoARD) is required;
- For plants and plant products not listed as restricted materials, only a phyto-sanitary certificate is required. The plant quarantine services of the MoARD ensure phyto-sanitary controls at the border and issue import permits and phyto-sanitary certificates upon request of importers and exporters. The plant quarantine services keep the list of plant pests and disease of plant quarantine concern in Ethiopia.

Regarding imported animals, animal products and by-products, the importation of any animal, semen, embryo, hatching eggs, animal products, animal by-products, biological products and pathological samples require import permit from the MoARD and shall be accompanied by recognized international animal health or sanitary certificate from the exporting country.

Currently SPS inspection service is available in the following points of entry: Addis Ababa, Nazareth, Moyale, Metema, Kombolcha, Humera and Gondar. However, in these entry points, inspection service is carried but certificates are issued in Addis Ababa, Moyale, Nazareth and Metema. Importers and exporters can get their goods inspected in any one of the entry points and get their certificates from those that issue certificates.

The following are the details that importers are required to observe.

- Fill in Import application form indicating the type of the commodity to be imported;
- Fill in Customs Import Authorization form;
- Get the goods inspected by pertinent professional;
- Observe plants and plant products prohibited from entry into the country;
- Ascertain that imported seedling plants are free of soil;
- Obtain phyto-sanitary certificate from origin of export and
- Observe that soil is prohibited from entry into the country in any form.

While exporters are required to observe the following:-

- Fill in an export application form sign and put official seal of the enterprise;
- Fill in customs export Authorization form;
- Observe plants and plant products that are illegible for export;
- Pay service fee;
- If first time export provide export license and bank permit;
- Get the goods inspected by pertinent professional;
- If inspected good is not exported within fourteen days re-inspection is required;

- If a change of certificate is needed for various reasons, it is required to provide the previously issued certificate with application;
- To re-export products or goods from Ethiopia, it is required to provide certificate that was obtained from the exporting country and obtain re-export phyto-sanitary certificate.

The major challenges faced by SPS authorities in facilitating cross-border trade include:

- Compliance with SPS measures set by the importing countries;
- Lack of harmonization of standards and regulations;
- Insufficient phyto-sanitary and veterinary inspection at national borders, and lack of inspection equipment;
- Testing and certification arrangements.

The traders' major complaint in this area pertains specifically to testing, certification and other conformity assessment related to SPS. While SPS measures may serve legitimate purposes, exporters report extra formalities, time, and costliness. And obtaining SPS approvals also reportedly involves tedious and substantial documentation and bureaucratic procedures.

On the other hand the reports from interviews show (Imani 2007) that the impact of NTBs to exporters and importers ranges from a delay in creating a simple production and distribution problem to a loss in substantial amount of profit and market. The products that are mostly affected include the export of live animals in which case NTBs result in the inability to reach COMESA market as per the agreement with importers resulting in serious loss of money. The responsible organization for this NTB is identified to be MoARD, emanating from sanitary and phyto-sanitary measures in which the ministry is responsible.

In order to alleviate the above-mentioned constraints, the following improvements in the area of SPS have been suggested.

- Enhance capacity implementation standards;
- Close coordination among public sector and public private cooperation;
- Improvement in the procedures in obtaining SPS approvals, and
- Upgrading the capacity of the SPS organization.

13.4. Trade (Import and Export) Restrictions

As indicated elsewhere, the export or import of a few goods have been restricted or forbidden by legislation. In addition to these goods seasonal export bans or restrictions on staple foods were in place by directives issued by concerned ministries and authorities (see table 35). These staple foods include: teff, wheat, millet, sorghum, and maize. The seasonal ban also includes the aforementioned staple foods

exportation in the form of flour. The export restrictions or bans were made with the objective to stabilize the domestic staple food markets and curb down soaring prices.

As of 2008 the Ministry of Finance and Economic Development issued the directive that lifted the value added and turnover taxes to contain the high inflation rate exhibited by the following major food items:

- Cereals:- teff, wheat, millet, maize, sorghum, oats and rice
- Pulses: - peas, chick peas, lentils, etc.
- Flour of the above mentioned staple foods.

According to a recent study by the government on illegal export and import movement (2007/08), the major cross border imported commodities include: packed food items, sugar, spare-parts, fire arms, medicine and medical equipment, ready made cloth, cigarette, used-cloth and edible oil; while cross-border exports include coffee, live animals, pulses (chick peas, cowpeas), teff, beans, oilseed, cereal flour, maize, and millet, gold, hides and skin and petroleum.

The aforementioned study estimated based on opinions obtained from private and public institutions the unrecorded border export for the following products:

- 1,131,000 goats and sheep daily
- 15,000 camels
- 351,000 cow and oxen
- Some 300 quintals of teff per day
- 13,500 tons of beans (mainly to Kenya)

The same study indicates that in the absence of export bans/prohibitions the legal export quantity of agricultural products is not as expected due to ever-increasing illegal agricultural cross-border trade, and this impact on and discourages legal trade and investment.

In relation to this a study conducted by the Ethiopian Chamber of Commerce (National Business Agenda, 2007/2008) states that contraband trade, which is still endemic despite strong government action in the past, is heavily taxing legal business activities and is the culprit for quality deterioration of commodities and price fall.

Table 35: Trade (Import and Export) Restrictions Seasonal Export Restrictions

Products	Legal provisions for Export Restrictions in place	If Yes, specific article and responsible Ministry/institution	Trigger conditions for importing and exporting	Dates when export restrictions /ban was instituted in the last 5 (date when imposed/ or removed Cite official gazette/notice	Involvement of the private sector before the export ban
Teff	Yes	Ministry of Trade and Industry Directives	High prices and short supply	December 2006 Circular imposed	No involvement
Maize	Yes	Ministry of Trade and Industry Directives	High prices and short supply	December 2006 Circular imposed	No involvement
Wheat	Yes	Ministry of Trade and Industry Directives	High prices and short supply	December 2006 Circular imposed	No involvement
Sorghum	Yes	Ministry of Trade and Industry Directives	High prices and short supply	December 2006 Circular imposed June 2006 Circular removed March 2008 circular imposed	No involvement
Millet	Yes	Ministry of Trade and Industry Directives	High prices and short supply	2008 circular imposed	No involvement

13.5. Non-Tariff Barriers

Customs administrative entry barriers appear to be the major NTB affecting Ethiopia's trade with COMESA member states. The NTBs reported in this area with greatest frequency include, customs valuation and formalities, including import licensing and to the lesser extent classifications. Other potential impediments that were reported by importers include influx of contraband goods, unfair competition from the informal sector, high transportation cost and to a lesser extent customs clearance difficulties.

In terms of customs systems, the identified problems range from customs valuation to bureaucratic, and non-transparent manual systems that lead to considerable delays in the clearing of goods. However, there have been a number of significant improvements made in facilitating trade, including the adoption of automated systems (such as ASYCUDA), the harmonization of documentation; the use of the COMESA Certificate of Origin and increased application of IT solutions. However, simplified,

transparent procedures and awareness of the rules and procedures of the system have not been fully implemented (Imani 2007).

Transit Issues require that transporters using the road network should use the Ethiopian transporters and immigration/Consular requirements for cross-border trade that goods exported to Ethiopia should be transported through the National Shipping Lines are other complaints of exporters to Ethiopia. (Non-Tariff Barriers Monitoring Mechanism.htm)

On the other hand, neither quantitative restrictions on imports nor import licensing requirements present a notable trade barrier. These can still be further improved along with some other remaining regulatory impediments that work as a hindrance to import and export activities.

According to key issues from interviews and desk researches (Imani 2007), the key issues that can be discerned from the assessment of NTBs that affect Ethiopian both import and export trade with COMESA member states can be categorized in to the following areas:

- Customs and administration procedures remain one of the main problem areas that Ethiopian exporters and importers face;
- Need to enhance and develop trade facilitation infrastructure; and
- Sanitary and phyto-sanitary measures on one hand, technical regulations and standards on the other hand are also indicated to present concern.

PART FOUR

CONCLUSIONS, POLICY IMPLICATIONS AND RECOMMENDATIONS

14. MAIN CONCLUSIONS

The main conclusions of the study are as follows::

- Ethiopia is one of the poorest countries in the world ranking 171st out of 182 countries. Its per capita GNI is US\$ 220, which is quite low compared to that of Sub-Saharan Africa (US\$ 952). Agriculture is still the dominant sector of the economy contributing close to 48% of GDP. It also employs more than 85% of the rural population, contributes about 90% of export earnings, and provides about 70% of the raw material requirement of the country's agro-industries.
- The smallholder sector is the main source of employment, agricultural GDP, export earnings, and food and raw materials supplies to urban areas and food industries. Crop production contributes more than 60% to agricultural GDP, while livestock represents about 30% and the other sub-sectors account for about 10% of agricultural.
- Poverty rate in the rural and urban areas is significantly high-45.8% and 37%, respectively and more than 50% of the rural poor are found in the food deficit areas.
- Given the substantial share of the agriculture sector in the national GDP and the high incidence of poverty in both rural and urban areas, the sector is expected to play a central role in decreasing poverty and increasing growth in Ethiopia.
- Studies show that agricultural growth primarily focusing on staple crops and livestock could reduce poverty by half by 2015. It has been shown that a 50% increase in national staple availability by 2015 would significantly help to reduce poverty in Ethiopia by improving productivity through irrigation, increased use of productivity enhancing technology, and provision of road and marketing infrastructure.
- The country has immense irrigation potential; with an annual runoff volume of 122 billion m³ of water and an estimated 2.6 billion m³ of ground water potential, up to 4.0 million Ha of land can be put under irrigation for the production of high value agricultural commodities. However, due to lack of investment on water storage facilities, farmers could not be able to produce more than one crop per year. Currently, some 180,000 Ha of land is irrigated by 1.2 million smallholders producing mainly staple foods.
- Agricultural productivity can also be improved with the use of critical inputs such as improved seed varieties and fertilizers. Over the past five years alone, a number of improved crop varieties of cereals and pulses have been released by research institutions; however, because of the country's limited capacity to multiply and distribute seed, these improved seed varieties have not reached the farmers. At present, only 18,728 metric tons of improved varieties of seed are used on 432,107 hectares or about 4% of the total cultivated area. Fertilizer

utilization is also low; about 280,000 metric tons of chemical fertilizers (DAP and Urea) are applied on 1,725,000 hectares of land or on only 15% of the total cultivated land.

- Official statistics show that the performance of the agricultural sector has significantly improved during the period 1997-2009. Production of grain (cereals, pulses and oilseeds), in particular, has increased by about 6.3% per annum on average, mainly because of increase in area cultivated and improvement in yields. The major crops produced include cereals, pulses and oilseeds. Cereals account for about 86.8% of total production, whereas, pulses and oilseeds have 9.9% and 3.1% share, respectively. Of the cereal crops produced, maize represents about 30%; whereas sorghum, teff, barley, and wheat have 17%, 19%, 11.4% and 18.7% share, respectively. The share of millet and rice is insignificant -3.3% and 0.1%.
- Horse bean (faba bean) is the most important pulse crop produced in Ethiopia, accounting for nearly 39% of total pulse production in 2004-2009. Haricot bean, with 17.8% share, is the second most important pulse crop, and it plays a crucial role in foreign exchange earning. Chick peas and field peas follow haricot beans with 14.7% and 15.4% share in total pulse production. Lentils are also important pulse crops for domestic and export market and accounts for about 4.8%.
- Ethiopia's external trade has also shown impressive expansion in recent years. Export grew by an average of about 25% in the past five years mainly due to increase in volume exported and improvement in world market prices of many commodities. Export commodities are now more diversified than before and the private sector plays a dominant role in the export market. Similarly, Ethiopian imports also grew at an average annual rate of 30% during the past five years due mainly to the rising price of oil imports. Fuel imports surpassed consumer goods to become the second largest import, next to capital goods, in 2007/08, accounting for 23.8% of total imports. The substantial growth in imports in 2007/08 was also due to rapid growth in imported raw materials and semi-finished goods.
- Despite the country's impressive growth in external trade, Ethiopia's intra-Africa regional trade relationship is weak. Over half of Ethiopian exports in 2006/07 went to European countries and about a third of exports went to Asia. Within Africa, neighboring countries such as Somalia, Djibouti and Sudan were the largest importers of Ethiopian products. Likewise, close to three-fifths of Ethiopian imports came from Asia and over a quarter of imports came from Europe. Only one-tenth of imports came from African countries.
- Despite these recent improvements, the Ethiopian agricultural sector still faces numerous overwhelming problems, including: environmental degradation; recurring drought; low level of utilization of modern agricultural inputs; inadequate road, storage and marketing infrastructure; poor market linkages and lack of market information service.
- Analysis of the value chains of various staple foods in Ethiopia shows that the quantity that flows to the market is not more than 22% of total production and most of the produce is retained on-farm for seed and subsistence consumption. The proportion marketed differs from crop to crop-maize (18%), wheat (21%), sorghum (13%), millet (30%), rice (55%), pulses (33%), and ground nuts (55%).

The marketed quantity flows from producers to consumers through various marketing channels, and the key market players are rural assemblers, wholesale traders, food processors, exporters and retailers.

- Among the cereal crops, wheat is the most significant crop that is used as a raw material for food processors; about 53% of the domestic wheat supply to the market is processed into flour, bread, and spaghetti products by 86 large and medium flour mills, 180 manufacturers of bakery products and 9 manufacturers of spaghetti and macaroni. Other cereals are handled by the different actors of the market, notably, through the producer→ assembler→ wholesaler→ retailer→ consumer channel.
- Pulse crops such as haricot beans, chick peas, faba bean, lentils and field peas are sold for both domestic consumption and export. About 52% of the haricot bean (mostly white type) and 12% of other pulse crops are annually exported, and most of the marketable quantity is handled through the producer→ wholesaler→ exporter→ export market channel.
- Analysis of the distribution of the value added across the entire value chain of each commodity also shows that a large part of the value added is attributed to producers; but flour mills, bakeries and exporters also have significant share in the commodities they normally handle.
- The flour mills and pulse crop exporters have national associations. The objectives of the Ethiopian Pulses, Oilseeds and Spices Processors and Exporters is provide market information and linkages, build advocacy capacity and strategy and provide training, and facilitate participation in trade fairs and exhibitions to its members. The millers association-Ethiopian Millers Association-mostly provides lobbying and advocacy services to its members. All other market participants, including assemblers, wholesale traders and retailers operate independently and are not organized in associations.
- Buying and selling decisions by all market actors is done in competition with one another and payments are usually made at the time of the transaction. There is no formal or contractual agreements between buyers and sellers, and each sell to whoever offers the better price.
- Cooperative unions have recently started to participate in the handling of members' crops, but the level of their participation is not significant compared to the private traders.
- The value chain of each commodity considered in the study is constrained by a number of problems, including: weak seed production and distribution, lack of participation by private firms and farmers' organizations in the production and distribution of improved wheat varieties; high seed cost due to high transport and handling costs; inadequate coordination between research, seed multiplication and extension; lack of export opportunities and diversified uses for some commodities such as maize and sorghum; lack of universally acceptable and enforceable standards; poor quality of exportable commodities-particularly, haricot beans, chick peas, lentils, and faba bean; lack of market information for traders, producers and farmers' organizations; lack of access to appropriate storage and marketing facilities and infrastructure; non-existent of forward contractual agreement among market actors; lack of access to bank credit; inadequate road

infrastructure and high cost of transferring wheat from surplus areas to consumption centers.

- Both import and export tariffs are based on *ad valorem* duties. Import tariffs applied to agricultural and food products are similar to those applied on industrial products. The current regular import duty applicable to staple foods is 5%. Ethiopia applies a 10% reduction of the customs duties imposed on its imports from COMESA member countries. As a result, import duty applied on imports of staple food from COMESA countries is 4.5 %. The current rates are very close to those that will be used for the common external tariff of Common Market for Eastern and Southern Africa's (COMESA) Customs Union (CU), when the maximum rate will be 30%.
- There is no charge or any duty levied on imports in Ethiopia other than customs duties and internal taxes. Moreover, there are no quantitative import restrictions and import quotas on agricultural goods. However, there are charges levied on imports other than customs duties and internal taxes. These include such fees as declaration form purchase fee, warehouse fee, Sanitary and Phyto-sanitary (SPS) inspection fees, Standard Inspection fees, bank service fees, and registration and licensing fees.
- The customs procedures in the area of imports and exports that cause obstacles are related to customs administration particularly in the area of custom clearance formalities and of the cost in the fulfillment of sanitary and phyto-sanitary measures and technical standards. And lack of transparency on the procedural norms and regulations regarding specifications, inspection, and testing are also impediments.
- An importer/exporter is required to make sure that the product he/she is importing/exporting meets QSAE mandatory standards. While SPS measures may serve legitimate purposes, extra formalities, time, and costliness and obtaining SPS approvals also involve tedious and substantial documentation and bureaucratic procedures.
- Presently Ethiopia has no quantitative restrictions or quotas on imported goods. Seasonal export bans or restrictions on staple foods such as teff, wheat, millet, sorghum, maize were in place by directives issued by concerned ministries with the objective to stabilize the domestic staple food markets and particularly to curb down soaring prices of the aforementioned staple foods.
- The major NTBs affecting trade include customs administrative entry barriers, customs valuation and formalities, classifications, influx of contraband goods, unfair competition from the informal sector, and high transportation cost.

15. POLICY IMPLICATIONS

As mentioned in section 12.1, since 2004 the Ministry of Agriculture and Rural Development (MoARD) has formulated and implemented a master plan for market-oriented agricultural development for selected priority crops, including among other commodities, wheat, barley, teff, lentil, chickpea, faba bean, haricot beans, cotton, sesame, coffee and spices. Some *woredas* have been selected so that they can specialize in the production of one or two exportable commodities, and other non-selected *woredas* will specialize in the production of agricultural commodities for the domestic market.

At a national level, 25 *woredas* were selected for specialization in wheat production, 7 *woredas* for lentils, 25 for chick pea, 15 for faba bean, and 20 for haricot bean. These areas will be supplied with appropriate technologies in order to enhance productivity and enable farmers become competitive in the international market. As a pilot scheme, MoARD, in collaboration with the International Livestock Research Institute (ILRI), is piloting a project-Improving Productivity and Market Success (IPMS)-in selected sample *woredas*, with the view to experimenting the government's plan to orient smallholder production to the requirements of the market.

The government's plan of market-oriented production will obviously need a large and sustainable market that can absorb the increased production that would arise from improved production system. In this regard, the COMESA Region, with about 416 million people, can be an attractive market for Ethiopian produced staple foods. As mentioned earlier, Ethiopia is one of the most important producers of staple foods in the region, particularly maize, wheat, sorghum, beans, and pulses. However, it has to be competitive so as to fully exploit the COMESA market potential. For this, it has to enhance the productivity of its agricultural sector, expand and improve its road infrastructure, upgrade the value chain of the selected commodities, and build institutions that support productivity increase and market efficiency.

In general, the country needs to assess current and future staple food demand and supply prospects in the COMESA Region, identify its strengths and weaknesses, and formulate agricultural and trade development policies and strategies that could enable producers integrate into regional value chains and compete effectively in the regional market. This may require a regional approach to the analysis of value chains in collaboration with other countries within the region.

16. RECOMMENDATIONS

Based on the findings of the study, the following key issues are recommended.

- Ethiopia has immense potential to increase the production of staple foods for domestic consumption and the export market. Its domestic market is small in terms of size and purchasing power. Less than 16% of the population is urban and even though a large portion no of the rural population is net buyer of food, it lacks the purchasing power. With more than 37% poverty rate, the domestic market can not be a sustainable source of demand for the anticipated production under the government's market-oriented production. On the other hand, there is a vast market opportunity in the COMESA Region which Ethiopia is a member. Thus, the country needs to follow a regional approach of value chain analysis so as to be able to participate in and benefit from this large market.
- Through a regional approach to the analysis of value chains, the country needs to analyze its strengths and weaknesses and formulate strategies to sustainably transform its agriculture and establish a better position in the regional market.
- The government's plan to orient agricultural production to the requirements of the domestic and export market is a good start, but a lot remains to be done concretely in the areas of supply of productivity enhancing technology and infrastructure, including roads, storage and market facilities, market information, and promotion of private sector and cooperatives participation in the handling and marketing of staple foods.
- The private traders who currently play a crucial role in the collection, storage and distribution of staple foods are constrained by lack of access to bank credit; therefore, mechanisms should be devised to help them access financial resources.
- The envisaged warehouse receipt system along with its universally acceptable and enforceable standards should be practically implemented in collaboration with the private sector. The implementation of the warehouse receipt system will lay the ground for the country's access to world and regional markets and be competitive in terms of quantity and quality of products.
- Even if the reform made in the area of custom valuation, classification, formalities and other related categories are formidable, it is helpful that information on customs clearing procedures, sanitary and phyto-sanitary measures, non-tariff charges and technical regulations should be made transparent and public.
- The lack of the necessary capacity to comply with SPS measures and stringent requirements particularly from developed importing countries should be addressed by developing physical and institutional capacity for compliance government organizations involved in SPS issues and conformity assessment have got serious capacity constraints. They do not have the necessary skills and capabilities to develop and implement standards, technical regulations and conformity assessment. The required capacity for internationally recognized and accredited laboratories, inspection and certification should be addressed.

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ANNEXES

Annex Table 1: Area, Production and Yield of Major Crops in Ethiopia

Annex Table 2: List of Major Exporters of Pulses, Oilseeds and Spices

Annex Table 3: List of contacted persons and organizations visited

STAPLE FOODS VALUE CHAIN ANALYSIS - Ethiopia - Annex Table 1

Annex Table 1: Area, Production and Yield of Major Crops in Ethiopia (2004-2009)

Area Under Major Crops in Ethiopia 2004-2009 (Ha)

	2004	2005	2006	2007	2008	2009
Maize	1,626,456.0	1,831,296.8	1,961,611.8	2,144,992.5	2,204,751.5	2,196,657.9
Sorghum	1,287,432.0	1,282,335.4	1,377,431.6	1,485,635.4	1,563,631.5	1,649,451.5
Teff	2,060,327.0	2,248,589.8	2,357,298.1	2,531,859.7	2,684,893.2	2,602,140.8
Barley	1,088,247.0	1,305,564.9	1,210,324.6	1,256,087.6	1,218,283.5	1,206,353.2
Wheat	1,199,119.0	1,531,028.1	1,596,429.4	1,621,333.4	1,538,522.5	1,583,022.0
Millet	319,765.0	311,822.1	337,029.3	382,497.6	387,298.3	377,437.2
Oats	36,194.0	57,351.6	64,167.9	45,819.8	43,377.5	84,042.6
Rice	607.0	16.0	20,373.2	1,579.3	364.3	264.0
Cereals	7,618,147.0	8,568,004.7	8,924,665.9	9,469,805.2	9,641,122.2	9,699,369.2
Horse Beans	393,812.0	463,887.9	460,456.8	459,851.3	525,773.0	543,543.5
Chick Peas	153,347.0	170,149.2	211,078.6	201,041.1	219,054.6	232,544.5
Field peas	220,093.0	269,354.7	253,001.4	241,844.1	225,283.1	247,285.2
Haricot Beans	244,467.0	355,584.2	299,577.8	341,894.8	342,833.8	351,842.3
Lentils	60,444.0	86,212.5	96,322.9	104,982.0	114,645.4	103,231.3
Vetch	73,443.0	95,281.0		101,448.1	135,430.9	148,154.6
Gibto	10,838.0	10,243.0	19,157.5	25,397.8	22,817.5	7,559.5
Pulses	1,156,444.0	1,450,712.5	1,339,595.1	1,476,459.1	1,585,838.3	1,634,160.9
Nueg	304,397.0	349,977.0	306,917.4	270,018.8	280,970.0	328,472.7
Flax	145,022.0	248,639.0	218,280.9	173,513.7	149,282.9	195,886.1
Ground Nuts	14,023.0	16,954.0	35,497.4	35,070.2	29,277.1	28,468.8
Sunflower	5,021.0	7,053.1	13,211.2	7,402.5	5,889.2	4,430.7
Rapeseed	27,021.7	36,865.0	27,217.2	27,461.3	31,366.5	36,568.4
Sesame	84,125.0	123,115.0	205,153.7	191,589.3	153,329.1	230,660.7
Fenugreek	14,326.0	15,597.2	12,375.4	19,472.8	29,604.1	28,699.0
Soya Beans	2,167.0	1,489.1	4,073.6	3,760.8	2,357.1	2,413.5
Oil crops	596,102.7	799,689.4	822,726.8	728,289.4	682,076.0	855,599.8
Total	9,370,693.7	10,818,406.5	11,086,987.8	11,674,553.6	11,909,036.5	12,189,129.8

Annex Table 1: Area, Production and Yield of Major Crops in Ethiopia (2004-2009)

Production of Major Crops in Ethiopia 2004-2009 (MT)

	2004	2005	2006	2007	2008	2009
Maize	2,792,231.8	2,849,820.7	3,960,711.4	4,432,735.1	4,379,887.5	4,577,619.2
Sorghum	1,739,184.1	1,724,763.2	1,976,249.5	2,325,424.3	2,599,934.6	2,666,896.9
Teff	1,738,170.2	2,088,476.5	2,190,461.7	2,531,530.8	3,043,341.4	3,051,897.1
Barley	1,243,968.2	1,416,768.6	1,395,443.7	1,507,266.3	1,414,913.6	1,603,191.9
Wheat	1,755,620.7	2,289,248.5	2,361,486.2	2,615,024.1	2,408,610.4	2,663,647.1
Millet	327,751.8	330,875.6	394,844.6	484,386.3	499,187.2	527,093.9
Oats	48,394.9	63,549.2	56,952.7	49,182.6	48,945.0	104,146.0
Rice	819.8	16.0	34,972.1	1,206.2	604.9	431.1
Cereals	9,646,141.5	10,763,518.4	12,371,121.9	13,946,755.6	14,395,424.6	15,194,923.2
Horse Beans	425,708.2	548,266.3	515,883.3	570,538.9	649,963.5	760,793.3
Chick Peas	131,343.4	159,255.9	216,313.6	246,233.5	270,707.0	330,502.4
Field peas	177,259.6	234,673.4	196,982.4	222,386.6	237,356.3	269,475.3
Haricot Beans	167,751.4	262,403.1	227,635.8	293,603.3	287,896.4	339,484.5
Lentils	35,513.8	57,013.2	63,360.6	83,781.7	96,697.0	103,964.2
Vetch	70,811.9	108,196.1	0.0	161,595.5	163,164.3	192,251.8
Gibto	4,812.4	4,624.9	15,451.8	22,988.4	14,712.0	6,605.1
Pulses	1,013,200.7	1,374,432.8	1,235,627.5	1,601,127.9	1,720,496.6	2,003,076.5
Nueg	121,431.8	183,114.0	144,426.3	144,691.4	156,097.3	211,619.6
Flax	78,355.6	150,958.7	125,870.0	107,151.6	137,669.6	162,814.4
Ground Nuts	13,739.3	20,037.3	33,611.8	49,053.7	31,402.5	31,859.0
Sunflower	2,623.4	6,340.4	6,156.8	6,166.8	4,282.3	3,869.7
Rapeseed	30,075.9	33,159.6	26,104.2	26,662.1	44,944.8	41,954.8
Sesame	56,481.7	110,166.3	148,863.3	135,930.4	108,947.3	169,409.7
Fenugreek	9,761.5	9,962.2	7,855.3	14,630.8	18,931.6	29,968.8
Soya Beans	1,999.2	1,265.5	4,902.9	3,069.2	2,099.9	2,478.8
Oil crops	314,468.2	515,004.0	497,790.7	487,356.0	504,375.4	653,974.8
Total	10,973,810.5	12,652,955.2	14,104,540.1	16,035,239.6	16,620,296.6	17,851,974.5

Annex Table 1: Area, Production and Yield of Major Crops in Ethiopia (2004-2009)

Yield of Major Crops in Ethiopia 2004-2009 (MT/Ha)

Crop Type	2004	2005	2006	2007	2008	2009
Maize	1.72	1.56	2.02	2.07	1.99	2.08
Sorghum	1.35	1.35	1.43	1.57	1.66	1.62
Teff	0.84	0.93	0.93	1.00	1.13	1.17
Barley	1.14	1.09	1.15	1.20	1.16	1.33
Wheat	1.46	1.50	1.48	1.61	1.57	1.68
Millet	1.02	1.06	1.17	1.27	1.29	1.40
Oats	1.34	1.11	0.89	1.07	1.13	1.24
Rice	1.35	1.00	1.72	0.76	1.66	1.63
Cereals	1.27	1.26	1.39	1.47	1.49	1.57
Horse Beans	1.08	1.18	1.12	1.24	1.24	1.40
Chick Peas	0.86	0.94	1.02	1.22	1.24	1.42
Field peas	0.81	0.87	0.78	0.92	1.05	1.09
Haricot Beans	0.69	0.74	0.76	0.86	0.84	0.96
Lentils	0.59	0.66	0.66	0.80	0.84	1.01
Vetch	0.96	1.14		1.59	1.20	1.30
Gibto	0.44	0.45	0.81	0.91	0.64	0.87
Pulses	0.88	0.95	0.92	1.08	1.08	1.23
Nueg	0.40	0.52	0.47	0.54	0.56	0.64
Flax	0.54	0.61	0.58	0.62	0.92	0.83
Ground Nuts	0.98	1.18	0.95	1.40	1.07	1.12
Sunflower	0.52	0.90	0.47	0.83	0.73	0.87
Rapeseed	1.11	0.90	0.96	0.97	1.43	1.15
Sesame	0.67	0.89	0.73	0.71	0.71	0.73
Fenugreek	0.68	0.64	0.63	0.75	0.64	1.04
Soya Beans	0.92	0.85	1.20	0.82	0.89	1.03
Oil crops	0.53	0.64	0.61	0.67	0.74	0.76
Grain	1.17	1.17	1.27	1.37	1.40	1.46

Source: CSA

STAPLE FOODS VALUE CHAIN ANALYSIS -Ethiopia Annex Table 2

Annex Table: List of Exporters

1	ABDULSEMED TAKEKE	251-011-1558455	251-011-1569530	182992	ismael.@ethionet.et
2	ACOS Ethiopia PLC	251-011-5541336/37	251-011- 5523124	40391	makobu@ethionet.et
		251-011-4654792	251-011- 4655466		
3	Addis Zenbaba PLC	251-011-6635481	251-011- 6635480	26208	Yoshe@ethionet.et
		251-011-6636292			
4	AGRO PROM INTERNATIONAL PLC	251-011-6631836	251-011-6631824	1617	agroprom@ethionet.et
5	Ajli International Trading	251-011-5159090	251-011-5158613	43439	seidibrahim@ethionet.et
6	AL-EMAN TRADING	251-011-1114775	251-011-1551664	14498	al-eman@ethionet.et
		251-011-566652			
7	AL-Impex Import-Export	251-011-6634400/01	251-011-6630451	7185	AL-Impex@ethionet.et
8	Alene Admas Import & Export		251-011-1552482	14767	Alene_9@Yahoo.com
9	ALI ABDU ALI IMPORT & EXPORT	251-011-4670202	251-011-4670203	5723	3aie@ethionet.et
					aligdd@Yahoo.com
10	ALPHA TRADING PARTNERS PLC	251-011-5528084	251-011-5528085	1533 code 1250	alphatrp@ethionet.et
11	AMAL TRADING CO.LTD	251-011-1552512	251-011-1550958	1486	amalco@ethionet.et
12	AMBASSEL TRADING HOUSE	251-011-5533502	251-011-5505840	12617	ambaseltrading@ethionet.et
		251-011-5525695	251-011-5515312		
		251-011-5526001			
13	Amdehun G.Trading PLC	251-091-1738008	251-011-5534260		amdehun@ethionet.et
14	ANTYPAS & BROTHERS LTD	251-011-1551316	251-011-15572075	1606	antypasaddis@ethionet.et
		251-011-1123770			
15	ASNAKE ADDISSU NEGASH EXPORTER	251-011-5522068	251-011-5522067	25883	getasnake@ethionet.et
16	Bahmum Trading PLC	251-011-6616818	251-011-6616828	50319	bahmum@ethionet.et
			251-011-6633863		
17	BAJEBA PRIVATE LTD CO.	251-011-2751545	251-011-2754766	758	bajiba@ethionet.et
		251-011-4391544	251-011-4391545		
18	Bedfam PLC	251-011-2799495	251-011-2799494	57456	bedfam@ethionet.et
					muredin-bedru@Yahoo.com
19	Belayneh Kinde Export	251-011-1118533	251-011-118607		Belayneh-ki@ethionet.et
		251-011-1118740			

STAPLE FOODS VALUE CHAIN ANALYSIS -Ethiopia Annex Table 2

Annex Table: List of Exporters

20	Birhanu Nigusse Zerihun Imp & Exp	251-011-1580839	251-011-1576190	59618	bnie@ethionet.et
21	BEYEN TEKA GEN. IMP/EXP	251-011-6620813	251-011-6620813	122646	beyeneteka@ethionet.et
			251-011-1115792		
22	Bezhezgi Gediom Import Export	251-011-1246445	251-011-4669817		
23	Bio Ecoland	251-011-6639418	251-011-6639417	25883	bioecoland@ethionet.et
24	Buta International Trading PLC	251-011-5528936	251-011-5528955	1059	Butainternational@ethionet.et
25	C.G.F BUSINESS GROUP Pr.Ltd.com.	251-011-4166268	251-011-4166270	1148	gfr.en@ethionet.et
26	CAMELS TRADING Enterprise pvt. Ltd.com.	251-011-2754881	251-011-2762623	10366	camels@ethionet.et
27	CROWN TADING Pvt.Ltd.Co.	251-011-5539667	251-011-5538843	25741	crown@ethionet.et
			251-011-5533681		
28	D.D Agro Produce Impex Trading	251-011-3870188	251-011-3870211	2121362/1000	ddagro@ethionet.et
29	Dag Trading PLC	251-011-6635717	251-011-6627860	14607	dagt@ethionet.et
		251-011-6638812			
		251-011-6639402			
30	Damot Ind. Com.PLC	251-011-1564646	251-011-1555070	33808	dico@ethionet.et
31	Daniel Desalegn PLC		251-011-6626135	794	danieldesalegn@ethionet.et
32	Dawunt Business PLC	251-011-6620650/52	251-011-6620707	21560	dawunt@ethionet.et
					info@dawunt.com
33	Deming Trading PLC	251-011-4666001	251-011-4666031	100137	DEMING@ethionet.et
34	Demis Ayenew Bekele	251-011-6620328	251-011-6630757		demisAyenew@ethionet.et
35	DINA TRADING PLC	251-011-2776958	251-011-2777579	9277	dinat@ethionet.et
36	Edme Alem Ejigu	251-011-1578728	251-011-1568701	21931	EEIE@ethionet.et
37	Ethiopian Grain Trade Enterprise	251-011-4663952	251-011-4655428	3321	egte@ethionet.et
		251-011-4665037	251-011-4652792		egte-dgm@ethionet.et
		251-011-4650234			
		251-011-4652436			
		251-011-4167349			
38	Ferej & His Family PLC	251-011-1111425	251-011-1560014	774	FAF@ethionet.et
				3100 code 1250	FAF2@ethionet.et
39	Gift Trading PLC	251-011-4655580	251-011-4652154	2522	giftrading@ethionet.et
			251-011-4655435		
40	GUNA TRADING	251-011-4652288	251-011-4654633		guna.trading@ethionet.et

STAPLE FOODS VALUE CHAIN ANALYSIS -Ethiopia Annex Table 2

Annex Table: List of Exporters

		251-011-46550512			
41	Hajuta Trading	251-011-6621232	251-011-6621232	170221	Hajuta@ethionet.et
					Hajutatrading@Yahoo.com
42	HAWAS AGRI BUSINESS PVT.LTD CO.	251-011-4431596/97	251-011-4431594	5723	Hawasagri@ethionet.et
		251-011-4402164	251-022-1114321		
43	J.J KOTHARI & CO.LTD	251-011-4661155	251-011-4661122	171	J.JKothari@ethionet.et
44	K.A.S INT.TRADING	251-011-1555869	251-011-1560277	50609	kAs@ethionet.et
		251-011-1116225			nuruhssen@Yahoo.com
45	Kabew Trading PLC	251-011-6639530	251-011-6639531	2546	kat@ethionet.et
46	Kaki PLC	251-011-1572724	251-011-1575004	21048/1000	kakiimex@ethionet.et
47	KALEB SEVICE FARMERS HOUSE PLC	251-011-4391459/390930	251-011-4393674	9594	skaleb@ethionet.et
48	Kalu Transport Agriculture & In.Pr.Tr.En	251-011-284162/20	251-011-2841622	26542	Kalu@ethionet.et
49	K-mekdim Gen.Imp & Exp	251-011-6360554	251-011-6630731	170252	kmikedem@ethionet.et
50	Kana Industry & Trading	251-011-1235198	251-011-5506204	12723	kana@ethionet.et
		251-011-1223522			
51	Kassahun Mitiku Import & Export	251-011-1555701	251-011-1552482	59001	Kassahun.mitiku@Yahoo.com
52	Kebralem Degefu Export Trading	251-011-6631767	251-011-6261288	2350 code 1110	fekaduterfa@yahoo.com
53	Koonfeyekun int'bus. PLC	251-011-2131512	251-011-2788199/3383829	23445 code 1000	hesaint1@ethionet.et
54	Labora International Trading PLC	251-011-4665553/56	251-011-4665544	13823	laboraexport@ethionet.et
55	Laura Trade and Industry	251-011-2765033	251-011-2770385	8060	lauraetH@hotmail.com
56	M.Y GLOBAL TRADING PLC	251-011-4162719	251-011-4164441	20701	mayglob@ethionet.et
					ak.55h@ethionet.et
57	MALIMA PLC	251-011-2841128	251-011-2843838	32296	malima@yahoo.com
		251-011-843884			
		251-011-2843839			
58	MAM Trading PLC	251-011-4420066			
59	MANDURA ETHIOPIA	251-011-6639416	251-011-6639417	13130	mandura@ethionet.et
		251-011-6639418			

STAPLE FOODS VALUE CHAIN ANALYSIS -Ethiopia Annex Table 2

Annex Table: List of Exporters

60	MULAT ABEGAZ GENERAL EXP.ENT.	251-011-1236717	251-011-1236716	8486	mulatoil.gex@ethionet.et
61	Net-Ways International PLC	251-011-6637676	251-011-6638899	19352	netwaysint@ethionet.et
		251-011-6638979			
62	NILE SOURCE PLC	251-011-1117698	251-011-1562171	24400/17325	nilexport@ethionet.et
		251-011-1113436			
63	Osma Investment PLC	251-011-1557074	251-011-1557059	20298	osma@ethionet.et
64	Pommi International PLC	251-011-5534546/47	251-011-5531887	20084/1000	ethiopolymers@ethionet.et
65	Prosper International PLC	251-011-4404278	251-011-4404275	8655	Prospre@ethionet.et
		251-011-4404277			Sales-Prpsper@ethionet.et
66	Safemate Agri Business PLC	251-011-5540260	251-011-5540282	25890 code 1000	sulagroindplc@ethionet.et
					wondim@yahoo.com
67	Salew Baeta Import Export	251-011-1507618	251-011-4165343	23381 code 1000	henoksalew@yahoo.com
			251-011-5510803		
68	SAM Textile PLC	251-011-2788770	251-011-2788771	181402	osman@ethionet.et
69	Smart Business Group PLC	251-011-6634784/83	251-011-6634785	6329	smartbusiness@ethionet.et
70	Soreti International Trading	251-011-6182673/71	251-011-6182675	20217 code 1000	sitco@ethionet.et
71	TAYE BELAY GEN.IMP/EXPORT	251-011-2130532	251-011-2130492		inter-axxes@ethionet.et
72	Tilahun Mesafint Desta	251-011-1560496	251-011-1572826	21031	tmdexim@ethionet.et
73	Vera International Business PLC	251-011-6183474	251-011-6183475		sesameseeds@ethionet.et
		251-011-6183476			
74	WARKA TRADING PLC	251-011-1558121	251-011-1551950	19639	Warkatr@ethionet.et
75	Wondo Trading and Investments PLC	251-011-5521009	251-011-5513654	9515	
76	YAHYA SAYED OMAR(YSO)	251-011-2751296	251-011-2752911	4202	yso@ethionet.et
		251-011-2770339/40			
77	Yegenet PLC	251-011-6465610	251-011-6465611	13499	yegenet@ethionet.et
			251-011-6464709		
78	Yhaenu PLC	251-011-2841426	251-011-2841425	1778 code 1250	yhaenu@ethionet.et
		251-011-2843441/2			
79	Yibelu Mossiewa General Import & Export	251-011-2782975	251-011-2782978		Yibelu moie@ethionet.et

Annex Table 3: List of People Contacted and Organizations Visited

No.	Name of contact personnel	Place of work	Occupation	Tel.
1	Wolde Yonannes Herago	ACOS Ethiopia, Nazret	Raw materials purchasing Head	0911963384
2	Tamirat	ACOS Ethiopia	Production Unit	0911794941
3	Kassahun	ACOS Ethiopia, AA	Production Unit	0911212117
4	Mohammed Ibrahim	GG Kotari	Coordinator Nazareth Branch	0911094666
5	Ibrahim Uke	Adama Woreda cooperatives office	Head	0912218468
6	Kassahun Gadissa	Adama Woreda Office of Agriculture	Extensions	0911735495
7	Meftuh Mohammed	TM Food Complex, Nazret	Deputy manager	0911629140
8	Mitiku Alemayehu	Africa PLC, Nazret	Manager	0221114231
9	Yosef Gizaw	Africa PLC	Finance Manager	0912018431
10	Alemtsehay Tekle	Yisalemush Tekle Flour Mill	Head of Com. Dept.	0911253709
11	Yosuf Mohammed	Lome Adama Union	Deputy manager	0221161583
12	Diriba Mekonnen	Lome Adama Union	Planning & Programming	0221161581
13	Kedir Abdo	Pulses Cleaning Plant	Owner	0221110072
14	Dr. Dagne Begari	Melkassa Agricultural Research Center	Maize Researcher	
15	Dr. Setegn	Melkassa Agricultural Research Center	Haricot bean Researcher	
16	Taye	Melkassa Agricultural Research Center	Sorghum Researcher	
17	Asfaw Zewdie	Chilalo Flour Mill	Head of Admin.	0223317576
18	Abera	Asela Flour Mill	Procurement Head	0223313838
19	Desalegn Mebrahtu	Arsi Agricultural Enterprise	Acting Planning head	0911371803
20	Kemal Omer & group	Asela	Wheat producer/farmer	
21	Balcha Hunde	Asela	Grain Trader	0911841182
22	Rahmeto Tume	Shashemene	Grain Trader	0916821726
23	Habib Demo	Shashemene	Grain Trader	0916821786
24	Kedir Tura	Shashemene	Grain Trader	0911898511
25	Ilma Uleto	Shashemene	Broker	0916870508
26	Seifu Kedir	Uta Wayu Union/Shashemene	Marketing Expert	0911090807
27	Omer Kasim	Oromiya Coop. Bank/Shashemene	Loan Officer	0912167080
28	Wassie Alemu	Hawasa Investment office	Project monitoring	0916832080
29	Solomon Tsegaye	Hawasa Flour Mill	Head of Com. Dept.	0916824646
30	Tefera Biratu	Hawasa Trade & Industry	License and Registration Officer	0911398613
31	Tesema Buki	Cooperatives dev.Agency /Hawasa	Monitoring & Evaluation Officer	0916840044

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No.	Name of contact personnel	Place of work	Occupation	Tel.
32	Worku Mintesinot & group	South Gonder-Woreta	Producers	0918727423
33	Mulu Ager & group	North Gonder-Maksegnit	Producers	
34	Wale Seid	South Gonder-Woreta	Grain Trader	0918702760
35	Ahmed Abdo	South Gonder-Woreta	Grain Trader	0918714360
36	Fikadu Marew	South Gonder Bureau of Agriculture	Cooperatives dev.	0581116681
37	Baye Getaneh	Tsehay General Union	Manager	0918723008
38	Tewachew Ayele	North Gonder-Gonder City	Grain Trader	0918770024
39	Nasir Raju	North Gonder-Gonder City	Grain Trader	0918770056
40	Girmay G/Michael	North Gonder zone Trade & Industry	Officer	0918771531
41	Tatek Amanu	North Gonder Customs Office	Manager	0911794379
42	G.Meskel G.Mariam	Gonder Cleanning Plant	Manager	
43	Mengistu Gidey	Amhara Regional Coop.Agency/Bahirdar	Head	0918769089
44	Basazinew	Amhara Regional Coop.Agency/Bahirdar	Input Officer	
45	Tenaw Yenealem	Bahirdar	Grain Trader/Cross border/	0918760633
46	Tsegaye Seifu Dagne	East Hararghe Bureau of Agriculture	Head of Marketing Unit	0256667547
47	Yohannes Tesfaye	East Hararghe Bureau of Agriculture	Extension Expert	0915756975
48	Dereje Abebe	Hamaresa Oil Mill/Harar/	Manager	0915330075
49	Abdisa Teha	East Hararghe Coop. Agency	Manager	0915755173
50	Hamza Abdelkadir & gropu of farmers	Babile Woreda Coop. Office	Expert and farmers	0256650499
51	Habtamu Amensisa	Babile Woreda	Groundnut trader	0911904892
52	Bedriya Seid	East Hararghe Zone Bureau of Trade & Industry	Officer	0256666146
53	Yosuf Juhar	East Hararghe Efhankelo Union	Manager	0256610859
54	Alebachew	East Haraghe Customs Office	Officer	0251112865
55	Mame Desta	West Haraghe Bureau of Agriculture	Planning & Programming	
56	Bahiru Shanko & groups	Adama/East Shoa	Producers	
57	Jambo Bune & group	Adama/East Shoa	Producers	
58	Tamiru Gemechu	Adama Woreda Office of Agriculture	Head	
59	Kassaye	Adama Woreda Office of Agriculture	Extension Expert	
60	Tesema	PSDP (Local NGO)	Coordinator	0911944929
61	Endashaw	Melkassa Agricultural Research Center	Extension Expert	0912019834

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No.	Name of contact personnel	Place of work	Occupation	Tel.
62	Worku	Asela Seed Enterprise	Head	
63	Gadisa Urge	Tiyo Woreda Office of Agriculture	Acting Head	
64	Dereese Lema	Tiyo Woreda Office of Agriculture	Extension Expert	0911750191
65	Bekele Edo	Tiyo Woreda Office of Agriculture	Cooperatives dev.Head	
66	Kemal Omer & group	Tiyo	Producers	
67	Asefa Bira	Debub Asela Farmers Association	Chairperson	
68	Medina Tilahun	East Arsi Bureau of Agriculture/Shashemene	Planning & Programming Officer	
69	Degu Tura & group	Shashemene	Producers	0916016277
70	Fikadu Seifu & group	Shashemene	Producers	0911044534
71	Tesfaye Tadesse	Hawasa Agricultural Research Center	Cassava Researcher	0911440971
72	Tegegn Meseret	North Gonder zone Bureau of Agriculture	Extension Head	
73	Mulat Hailu	North Gonder zone Bureau of Agriculture	Marketing Head	0918711889
74	Abdelkadir Ali	Woreda Office of Agriculture/Gonder	Extension Expert	
75	Omer Hussien	Commercial Bank of Ethiopia/Gonder Br.	Loan Officer	0911809414
76	Dr. Bayu	Amhara Region Agricultural Research Center	Extension Head	
77	Siyum Zewde	Amhara Region Bureau of Agriculture	Marketing Head	
78	Alemayehu	East Hararghe Zone Bureau Agriculture	Extension Expert	0915756753
79	Teib Kelif	Babile Woreda Office of Agriculture	Extension Head	
80	Moges	Haromaya University	Research Head	0915745538
81	Balcha	Kulumsa Agricultural Research Center	Researcher	
82	Yonas Sahlu	Kulumsa Agricultural Research Center	Researcher	
83	Wegayehu Gebre Hana	Ministry of Trade and Industry	Head, Department of Domestic Trade	
84	Tamiru Geno	Ministry of Trade and Industry	Currently Agro-processing Senior Expert (MoTI), previously Standards Development Senior Expert (QSAE)	
85	Dinberu Wenie		Quarantine Service Expert	