



# Development Strategy for the Export-Oriented Horticulture in Ethiopia

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15 March 2007

The conclusions and recommendations expressed in this paper are based on the views of the consultant and do not necessarily reflect the position of Ethiopian Horticultural Producers and Exporters Association (EHPEA), the Royal Netherlands' Embassy in Addis Ababa or of any other stakeholder.

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# 1. Introduction

## 1.1 Background

The export-oriented horticulture sector in Ethiopia has been growing rapidly and forms an important element in the country's efforts to expand and diversify the economy, raise export earnings and create employment. This rapid growth is remarkable particularly when placed in a historic context. In the year 2000/2001 the total foreign currency earning from the Ethiopian horticulture sector amounted to USD 4.7 million. In five years time the total export earnings with increased at least five times that figure and several hundred hectares of greenhouse infrastructure have been put in production. Further growth in export production and value is expected to a total value of USD 100 million is expected in 2006/07. In an agricultural sector that is dominated by small-scale farmers using traditional low input/low output farming technologies such developments are impressive.

Whilst it is important to acknowledge the efforts and successes of the past, it is also important to assess how best to consolidate the recent achievements and strengthen the future position of the Ethiopian export-oriented horticulture as a basis for further growth and development. On the request of the Ethiopian Horticulture Producers and Exporters Association (EHPEA) and with support of the Royal Netherlands Embassy (RNE) in Ethiopia a sector analyses was undertaken to assess the competitiveness of the sector as a basis for the formulation of an Ethiopian Horticulture Development Strategy (Ethio HDS). This request was approved and coordination of this assignment was then given to Wageningen University and Research (WUR) in the Netherlands.

The **general objective** of this process was:

“a sector wide and export oriented development strategy for the horticulture sector is developed and widely accepted by relevant stakeholders”.

Apart from EHPEA other such relevant stakeholders involved and consulted during the process were amongst others: the Ministry of Trade and Industry, Ministry of Agriculture and Rural Development, Customs Authorities, producers, input suppliers, researchers, service providers, airlines, the Development Bank of Ethiopia, commercial banks, non-governmental organizations, importers, etc.

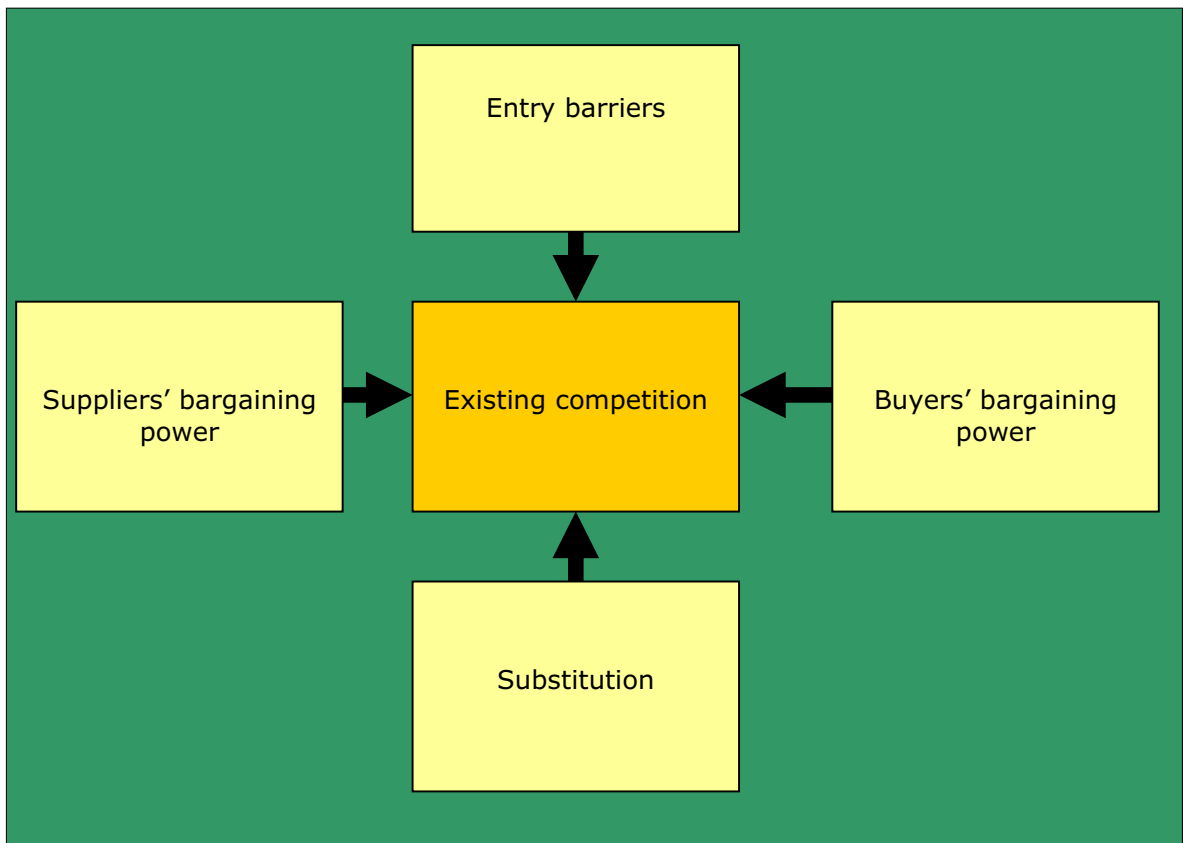
## 1.2 Framework for analysis

The basis for analysis of the sector's strengths and weaknesses is formed by Porter's framework for competitive analysis. This framework identifies five fundamental competitive forces that together determine the relative attractiveness of an industry:

- entry barriers, covering issues such as economies of scale, high capital investments, difficult access to distribution channels and markets, etc.
- bargaining power of buyers, which relates to issues such as the level of concentration of buying power, buyers' access to information, switching opportunities and costs, etc.

- bargaining power of suppliers, which covers subjects such as the level of differentiation in inputs and services, the suppliers' possibilities for forward integration, the level of supplier concentration, etc.
- substitute products, which relates to the question how easy or difficult it is that your product is substituted with another product
- rivalry among existing competitors, which assesses amongst others how diverse current competition is, whether products are considered a commodity or a speciality product, how existing rivals are positioned, etc.

The competitive analysis leads to an insight in relationships and dynamics in the sector and allows individual businesses, public sector support organisations and other service providers to make strategic decisions regarding the best defensible and most economically attractive position.



After a summary overview of the agricultural sector in Ethiopia and the floriculture and fruit and vegetable sub-sectors in particular (chapters 2-4), the main aspects related to these five competitive forces and their internal dynamics are summarized for the export horticulture in Ethiopia (chapter 5). Based on this overview a number of general recommendations and strategic options are formulated for discussion and further consideration (chapter 6).

The activities undertaken as part of this assignment, which has led to the formulation of this strategy paper, consisted of the following:

- a) Desk research.
- b) Interviews with various stakeholders related to the horticulture sector in Ethiopia:
  - government organisations;
  - association;
  - individual growers and exporters;
  - civil society organisations;
  - input suppliers and other service providers;
  - key informants in The Netherlands and the United Kingdom.
- c) Meetings and discussions to consult the various groups of stakeholders to check the validity of certain findings and obtain their views, opinions and suggestions on some of the suggestions.

### **1.3 Guide to the reader**

The summary of the main analyses is presented in chapter 5 of this discussion paper and all readers are advised to go through this section before familiarising themselves with the final chapter which contains the recommendations pertaining to sector development strategies.

Readers who are not yet very familiar with the policy background and structure of the floriculture and fruit and vegetable sectors in Ethiopia are advised to read chapter 2-4 first. These chapters provide an introductory overview of the agricultural sector and policy background (chapter 2). This is followed by a short summary of the current set-up and production and export performance in the floriculture (chapter 3) and vegetable and fruits sub-sectors (chapter 4).

## **2. The agricultural context in Ethiopia**

### **2.1 General context**

Ethiopia is a federal republic of 9 states with capital city Addis Ababa. It is a landlocked country of more than 1,125,000 square kilometres with an estimated population of well over 75 million inhabitants out of which 85% live in rural areas and are mainly subsistence farmers and pastoralists. The Ethiopian economy depends to a large extent on the agricultural sector which accounts for nearly 50% to the Gross Domestic Product (GDP). However, the contribution of agriculture is expected to be far higher as the production of subsistence farmers tends to be excluded from the calculations. In general, the agricultural sector consists of numerous scattered small farmers at subsistence level and relatively few commercial producers and exporters. For many years, the national Government had an important stake in the production of basic agricultural and food items like cereals, milk, meat, fruits and vegetables through its state farms.

For years, the focus of the Government of Ethiopia as well as international organizations in the area of poverty reduction has been on food security and self-sufficiency. From both sides more attention is now given to access to food through promotion of purchasing power and market oriented production (including exports).

Reports by the World Bank, OECD and African Development Bank on structural bottlenecks of the Ethiopian economy in general and the export oriented sectors in particular, have been well taken by the Government of Ethiopia. Privatization of state enterprises, promotion of commercial production and exports have become part of the Government's policy towards economic growth and poverty reduction (as formulated in the Plan for Accelerated and Sustained Development to End Poverty – PASDEP; September 2006). Policies have been shaped to create a more favourable investment climate and a more enabling environment for private sector development.

Agricultural exports to the European Union and North-America have been dominated by a few agro-based commodities like coffee, leather and meat. For long Ethiopia depended to a large extent on coffee for its foreign exchange earnings as it used to account for about 65% of its total export revenues. Other important export products are oilseeds, *khat*, pulses and hides and skins. Until recently, horticulture was seen as one of the most underdeveloped sectors in Ethiopia and its contribution to the country's export earnings had been almost negligible (until 2001 less than 2% in export value). Large state farms dominated the production and export of fresh fruits and vegetables. Few years ago however, most of these farms have privatised and the cultivation of fruits, vegetables and flowers for export have been promoted (see also next section).

The market oriented policy reforms also aim to attract foreign direct investment (FDI) into the agricultural sector and exports from Ethiopia. A number of sectors are reserved for domestic private investors and the state, but the horticulture sector was opened up for FDI. Now foreign investors are exempted from customs duties and import tariffs on all capital equipment and up to 15% on spare parts; income tax holidays from 1 to 5 years



are given; remittances of capital are tax exempted; and it is permitted to carry initial losses forward. Furthermore, investments in exports are exempted from income taxes if at least 50% of the output is directly exported or if at least 75% of the output is indirectly exported for a period of no less than 5 years.

In short, the agricultural context and investment climate in Ethiopia has altered over the past few years in the direction of privatisation, facilitating direct (foreign) investments, export oriented production and diversification. This trend is expected to be sustained over the coming years. After a rapid increase in production and export trade, particularly in the floriculture sub-sector, it is important to assess the needs and opportunities for consolidating the positive achievements of recent years and seizing opportunities for further growth and development. Capacities and conditions through which public and private sector partners could pursue such a strategy need to be discussed and agreed upon.

## 2.2 Government policy objectives for the export horticulture

As a follow-up from the Sustainable Development and Poverty Reduction Program (SDPRP), the Government of Ethiopia formulated a comprehensive development strategy for the period 2005/06 – 2009/10 called ‘Plan for Accelerated and Sustained Development to End Poverty’ (PASDEP). Ethiopia has set itself the objective to lay out the directions for accelerated, sustained and people-centred economic development so that the Millennium Development Goals (MDGs) will be attained by 2015. To this effect the Ethiopian Government aims amongst other to build an economy which has a modern and productive agricultural sector that plays a leading role in the economy. To achieve this, a further commercialisation of the agricultural sector and an acceleration of the private sector development are to be promoted. Expansion of the production and exports in the floriculture, fruits and vegetables sub-sectors forms an integral part of this policy objective.

Regarding the fruit and vegetable sub-sector a number of fruit species, including mango, avocado, banana, pineapple, apple and various vegetables (green beans, tomatoes, zucchini, etc.) have been identified as main crops to be focused on during the coming

Year of production	Area ('000 ha)	Productivity (Ton/ha)	Total Product ('000,000 Ton)
2004/05	367	4.22	1.55
2005/06	382	7.33	2.81
2006/07	413	7.24	2.98
2007/08	465	7.57	3.52
2008/09	372	6.69	2.49
2009/10	419	6.51	2.72

*Source: MoFED; PASDEP-document(Volume I), September 2006*

years. Specific areas (corridors) have been listed for specialised production and commercialisation of the selected crops. This should facilitate the promotion and development of post-harvest technologies,

which should contribute to the improved supply chain performance in terms of quality and efficiency. The development programmes will focus on the Eastern and Rift Valley

corridors where crops like mango, avocado and green bean will become the dominant crops. Also certain areas from the southern part of the country have been selected for the commercialisation of mango, avocado, pineapple and banana. Production and productivity projections as included in the PASDEP-document are summarized in table 1. It is furthermore foreseen that the gradual transfer of state owned farms to (private) commercial cultivation will lead to an additional 3,000 ha of land cultivated for cultivation of fruits and vegetables for export purposes.

With regard to the production of flowers for exports, the PASDEP-programme targets an intensification of the recently initiated flower production in areas with altitude between 1,600 – 2,600 metres above sea-level. Accordingly out of the total of 2,031 ha of land leased to investors, the land covered by greenhouses is expected to reach 1,600 ha; an additional 400 ha of land will be put under green



house shelter. The area under flower production (roses, cuttings, summer flowers) would thus increase from 519 ha in 2005/06 to 2,000 ha in 2009/10. In terms of employment generation the policy objectives is to increase the number of employees from well over 21,000 in 2005 (64.4% female workers) to a total of 70,000 in 2009/10.

### 3. Overview of the Ethiopian floriculture sector

#### 3.1 General introduction to the sector

Floriculture is a relatively new sub-sector to Ethiopia as for long the production of flowers had been limited to few varieties of field flowers (like Allium). However, this situation has changed very rapidly over the past years (see table 2) and nowadays producers in other countries eagerly look at the developments in Ethiopia, either to be prepared for future competition or also to invest in the country. In 2006 Ethiopia was the second largest exporter of large roses to the Dutch auctions (after Kenya) and the third largest supplier for small roses (after Kenya and Uganda).

The majority of flower growers with an estimated 80% of the production area cultivate roses. The first rose producer started around 1997, a second in 1999. From 2001 onwards, other growers started coming in. Some 20% of the production area is under cultivation of cuttings and bouquet fillers, primarily Hypericum, Carnation, Gypsophila, Allium and Carthamus. The number of farms producing other cut-flowers than roses is still limited, but growing.

At altitudes of around 2,400 to 2,600 metres, the Ethiopian Highlands around Addis Ababa are characterised by high daily temperatures and cool nights, high solar radiation and annual rainfall of about 1,200 mm. These climatic conditions make the highlands very suitable for the production of medium- to large-sized rose varieties (intermediates and T-hybrids). Other regions that are located at lower altitudes of 1,100 to 1,800 metres (Rift Valley, Upper Awash and Ziway) are suitable for the production of small- to medium-sized rose varieties (sweethearts and intermediates) and other flowers like summer flowers and cuttings.

#### Floriculture in Ethiopia consists of

- ⇒ Roses under greenhouse.
- ⇒ Cuttings under greenhouses (Chrysanthemum and poinsettias).
- ⇒ Summer flower (gypsophila, carnation, hypericum, Geranium)

#### Area covered under floriculture as of October 2006

- ⇒ Roses under greenhouse = 525.9 ha
- ⇒ Cuttings under greenhouse = 42.5 ha
- ⇒ Summer flowers = 77 ha

Year	Number of farms	Cultivated area (ha)	Number of exported stems	Export value (US\$)
2001/02			-	305,000
2002/03			16,000,000	2,900,000
2003/04			32,000,000	5,500,000
2004/05	30	150	83,000,000	12,700,000
2005/06	69	345	186,000,000	26,900,000
2006/07 <sup>1</sup>	80	645	1,114,000,000	113,000,000

<sup>1</sup> Estimation by Ministry of Trade and Industry

Because of logistical reasons, most flower farms are located within a radius of 4 hours driving to the airport in Addis Ababa. Nevertheless, the main reasons for farmers choosing a certain location are altitude and soil type preference.

### 3.2 Floriculture export markets

The European market is by far the most important market for Ethiopian roses, cuttings and other floriculture products. The opportunities for exports of floriculture products emerged in the 1980's and 1990's when the markets in Europe increased massively and high prices were offered. In addition, the year-round supply grew in the most important markets. This triggered cut flower production in non-traditional production countries such as Israel, Africa (e.g. Kenya, Zambia, Tanzania, Uganda) and Latin America (e.g. Colombia, Ecuador). In a period of five years these newcomers managed to fully replenish the emerging markets and year-round demand. By that time the market was supply-driven and volume based and a 'take-it-or-leave' approach prevailed among the suppliers. The expected market growth in Central and Eastern Europe was much slower than expected and competition increased and prices started to decline.

At the time of market entry by Ethiopia around the turnoff the millennium the European cut-flower market is much more demand driven. Ethiopian growers and exporters have the advantage that they can learn from the experiences in other exporting countries. Some of these experiences and insights gained over the past years have been well documented<sup>1</sup> and Ethiopian growers and exporters are advised to take note of these. Annex 2 contains a brief overview of the floriculture sectors in some of the other African exporting countries.

**Table 3: Foreign Export Projection 2006/2007**

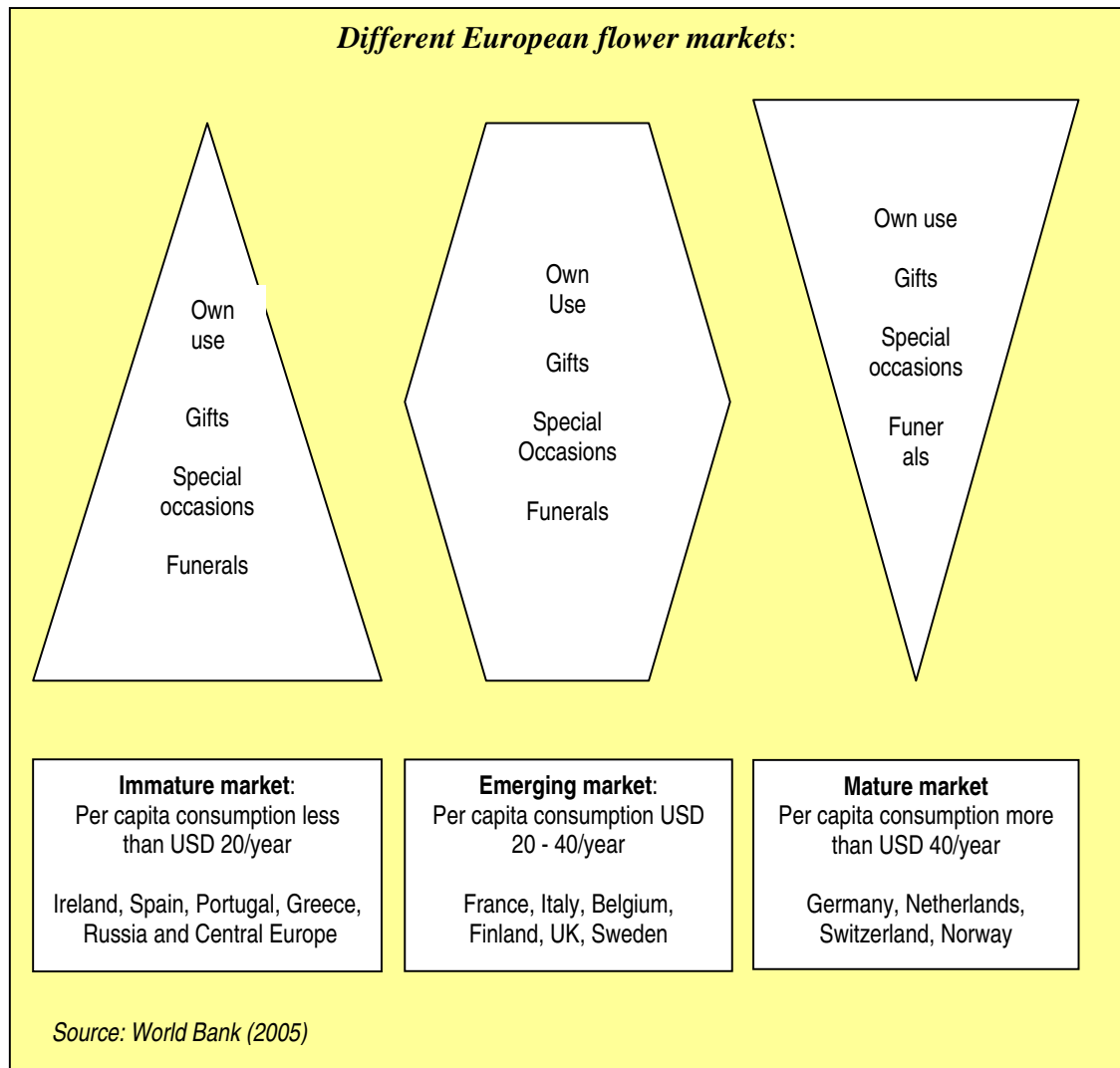
Type of flower	Expected no. of stems produced	Expected foreign currency (USD)
Cut Roses	711,000,000	87,000,000
Cuttings	325,000,000	17,000,000
Summer flower	78,000,000	9,000,000
Total	1,114,000,000	113,000,000*
* Land area 645 ha Source: Ministry of Trade and Industry		

The first flower farms in Ethiopia exported their products mainly via the German wholesale company Florimex. As the number of growers increased, the Ethiopians diversified their sales to other European markets and the Middle East (Dubai). Over the past few years, the role of the Dutch auctions as market facilitator (for auction sales as well as direct supplies by contract) has strongly increased. It is estimated that about half

<sup>1</sup> For example:

- World Bank (2005); The European Horticulture Market; opportunities for Sub-Saharan African Farmers; World Bank Working Paper no. 63
- J. Wijnands (2005); Sustainable International Networks in the Flower Industry; bridging empirical findings and theoretical approaches. International Society for Horticultural Science. Also available on internet: [http://www.actahort.org/chronica/pdf/sh\\_2.pdf](http://www.actahort.org/chronica/pdf/sh_2.pdf)

of all flowers is currently exported via the two main Dutch import auctions (i.e. FloraHolland and Aalsmeer Flower Auction VBA). Both auctions now have a representative in Ethiopia. Other important destinations for Ethiopian cut flowers are Germany, UK, Switzerland, Russia, etc. Each of these markets have their own characteristics in terms of volumes, organisation of retail sales, etc. The figure below summarises some of the main characteristics of three different categories of end markets. More information on the flower markets and their implication for the Ethiopian floriculture's competitiveness is included in chapter 5.



### 3.3 Floriculture production

#### 3.3.1 Cut-flower cultivation

Around 60-70 farms are currently involved in cut-flower production of which more than 30 are indeed also exporting. The export volume is still increasing significantly each year as gradually a larger area s coming under production. For example, near the town of

Ziway, Sher-Ethiopia (subsidiary of Sher-Holland, the biggest flower producer in the world), is leasing about 1,000 hectares of land to develop what will be the largest flower farm in the country. Sher plans to build about 40 to 50 hectares of greenhouses every year up to a total of 250 hectares. The intention is to rent out most of the greenhouses to other growers in parts of 9 hectares plus handling area. Sher may deploy its own transport and cargo plane to shuttle its exports between Addis Ababa and The Netherlands. Also in other parts of the country such as Debre Zeyt, Nazaret, Holetta and Sebeta new greenhouses are erected for production expansion.

The average farm size is between 3.5 – 10 ha, with few larger producers have an area under cultivation of up to 20 ha. The majority of the farms grow only roses. Most of the farms grow multiple rose varieties, six to ten on average. The most important rose varieties currently in use are *Pascha*, *Circus*, *Aloha*, *Milva*, *Shanty*, *Duett*, *T. Amazon*, *Paschamina*, *Jupiter*, *Indian Sunset*, *Sweet Candia*.

Most farmers grow their roses on soil, but a few rose growers have started to use hydroponics as growing medium. All exporters of floriculture products have their own cooled processing and packing warehouse where the roses are prepared for transport after harvest. Virtually all export growers also have their own refrigerated truck which is use



to deliver the flowers to the airport. As in most other African exporting countries the international transport and marketing constitutes the largest part of the overall farm-to-market cost. A recently conducted value chain analysis for the Ethiopian rose sector<sup>2</sup> provides an insight in the costs and benefits of using the growing mediums. It furthermore outlines in details the production, transport and marketing costs in the Ethiopian rose sector.

For details it is advised to refer to this consultancy report; below a few of main findings are summarised:

- On the basis of data collected in the first months of 2006 it appeared that the average total costs of delivering soil-grown roses to a Dutch auction amounted to ETB 1.33 (USD 0.155); the per hectare cost was around ETB 2,2 million (USD 256 thousand).
- For roses grown under hydroponic conditions, the overall costs were determined at ETB 2.53 million (USD 294 thousand). However, due to higher productivity levels the farm-to-market cost per stem were somewhat lower: ETB 1.29/stem (USD 0.150).

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<sup>2</sup> GDS - Global Development Solutions (June 2006); 'Integrated Value Chain Analysis for the Floriculture (Rose) Sector in Ethiopia; prepared for the Government of Ethiopia and the World Bank.

- For both hydroponic and soil-grown roses around 74% of the total farm-to-market costs were attributed to transport and marketing; the cost share for farming amounted to 25% and less than 2% of the costs were needed for post-harvest handling.
- The study estimated the total annual costs per hectare for international transport and marketing at ETB 1,61 million (USD 188 thousand); with more than 65% the freight charges constituted the largest part of these transport and marketing costs; auction charges would average around 13% of these costs.
- According to the above mentioned value chain analysis, the farming costs of soil-grown roses amounted to ETB 544,675 (USD 63,334). The average marketable yield was established at 1,651,000 stems/ha on the basis of 65,000 plants per ha with a reported 2% loss rate.
- The use of hydroponics as growing medium raised the total farming costs to ETB 608,985 (USD 70,812). While this represented a higher per hectare cost of farming compared to soil-grown roses, the benefits would come in the form of a higher per hectare yield of 1,960,000 marketable stems. Taking into account again a loss rate of 2%, this would imply 6% farming cost reduction per stem.

Whilst these figures may be very to benchmark the own operations and cost structures, it should be noted that considerable variations in costs and benefits are possible between farms as a result of a number of factors. Very important is the level of experience of the grower with cut flower cultivation. Some growers have prior experience with cut flower cultivation in Israel, Kenya, Zimbabwe, Netherlands or Germany. Insights in terms of market requirements and consumer preferences also varies among growers, which influences the decision making on crucial cultivation decisions related to for example variety choice and quality management. The variety characteristics and the match between the varieties chosen for cultivation and the prevailing growing conditions are crucial in this context. The reported 2% loss rate may be rather low for some growers and stem yields quoted in the chain analysis are considerably higher than those achieved by some rose growers. Furthermore, freight charges vary from time to time based on the availability of cargo space at the Ethiopian Airline freight services. Cargo rates at passenger planes from KLM, Lufthansa and Emirates are considerably higher and raise the costs of international transport.

### *3.3.2 Cuttings*

Another category of floriculture farms comprises propagators, who are mainly subsidiaries of European breeding companies. They have high-tech, sophisticated production systems and supply their mother companies on direct order. Total European imports of young plant material (pot plant and cut flower planting material) amounted to € 323 million in 2004<sup>3</sup>. Unrooted and rooted cuttings each represented about half of the market.

Until 2004, Ethiopian exports of unrooted and rooted cuttings were negligible. From 2005 onwards, however, several breeding companies have set up production facilities in Ethiopia. The first exports of these new companies will be reflected in the 2005 trading

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<sup>3</sup> Source: Eurostat (2005)

statistics. The young plant business is dominated by relatively few European breeding companies that are specialised in developing new varieties and their propagation. They sell their cuttings to growers worldwide. Under strict licences of breeders, increasingly young plant material is propagated in production facilities in low-cost countries under optimal climatic conditions. At the end of 2005, there were some 5 propagation farms in Ethiopia producing pot plant and cut flower cuttings, amongst others Pelargonium, Chrysanthemum and Poinsettia. A number of rose farms also propagate cuttings for their own use and for sale to other farms. Two major Pelargonium breeders competing in the world market are represented in Ethiopia with two sites closely located to each other. This proximity to each other resulted in workers switching between these nearby employers.



Compared to flower farms, propagators are a more homogenous group. Many breeders have extensive experience in other non-European countries. As a result, they are able to set up high-quality production locations in which cuttings are propagated according to well-developed and tested production systems. Technical knowledge is not a limiting factor.

Cuttings are usually shipped to the mother company in Europe that further dispatches the products towards the clients (growers who cultivate them into end products). In other words, the farm in Ethiopia is often producing according to fixed supply contracts and is not directly involved in selling the cuttings to the clients.

The export supply period of the propagation farms tend to differ from the main export seasons of cut flower producers. While flower export for the Christmas season peaks early December, the propagators send their Poinsettia cuttings to European growers in July / August in order for them to have full grown 'Christmas Stars' by the end of November. The export volume of cuttings and plant material cannot be compared to the much more voluminous cut flowers.

In short, although the cut flowers and young plant material are commonly treated as similar parts of the floriculture sub-sector, the two are quite distinct. It is clear that local investors have been able to enter into the cut flower business, whereas the young plant business remains a somewhat closed line of trade.



## 4. Overview of the Ethiopian fruit and vegetable sector

### 4.1 General introduction to the sub-sector

Fruit and vegetable cultivation is certainly not a new activity in Ethiopia as the production of horticultural crops has been undertaken for decades. In addition, there are numerous small producers growing a small range of vegetables for the local and regional export market. The sector comprises large state farms supplying fruits and vegetables to the local market and for exports. There are still only a few private companies involved in the commercial production of vegetables and vegetables for export trade (tomatoes, strawberries, fresh herbs).

The total area under fruit and vegetable cultivation (including potatoes and other roots and tuber crops) in Ethiopia amounts to around 800 thousand ha which accounts for around 5% of the total land under cultivation. Table 4 below summarises the domestic production of fruits and vegetable production in Ethiopian smallholder sector in the season 2003/04. The fruit and vegetables are mainly supplied to the local markets.

**Table 4: fruit and vegetable production in Ethiopia (season 2003/04)**

Crop	No. of farmers ('000)	Area under cultivation ('000 ha)	Total production ('000 ton)	Productivity (ton/ha)
avocado	456	3.2	17	5.2
banana	1,355	28.7	182	6.3
mango	415	5.8	30	5.2
orange	348	3.1	17	5.6
papaya	404	2.7	15	5.6
Ethiopian cabbage	2,704	27.1	262	9.7
tomato	138	2.9	36	12.4
gr. pepper	794	4.8	44	9.3
red pepper	1,541	57.0	72	1.3
onion	952	18.0	230	12.8
potato	1,172	51.7	510	9.9
garlic	1,903	13.7	197	14.4

*Source: MoARD (2006)*

Since the objective of this paper is to formulate a development strategy for the export-oriented horticulture, the focus of the remainder of this paper is on the export oriented horticulture sector in the country.

Moreover, the domestic horticulture market tends to be very weak. Apart from tropical fruits and few selected vegetables like onions, cabbage and tomatoes, local demand for horticultural produce is minimal. The average consumption of fruit

amounts to only 1.3 kg/person/year; the mean vegetable consumption is around 25 kg/person/year. Both figures are well below the WHO-recommendations. As a result, the horticultural exports compete only in few products (i.e. tropical fruits, tomatoes, onions and cabbage) with domestic supply. On the other hand, there is little domestic market demand for produce that does not meet the high export quality standards: second grade green beans (sometimes up to 40% of total production) for example, are hardly sold at the national market, but rather used for compost. In East African countries like Kenya,

Tanzania and Uganda, the domestic vegetable market is much larger and thus serves as a development base for vegetable exports.

#### 4.2 Fruit and vegetable export markets

The EU-market is one of the world's largest markets for fresh fruits and vegetables. In 2003 the EU-15 represented a 51 million ton market for fresh vegetable and a 39 million ton market for fruits. One of the characteristics of this market is its self-supplying nature, with a yearly import of only million tons of vegetables and 7.5 million ton of fruits. However, this market is growing both in quantity and quality. Entering the EU market with one or several niche products and a minimum of logistical infrastructure was fairly easy until several years ago. This made it an attractive market for many Sub-Saharan African countries. Currently the market access situation has altered considerably. With regards to horticultural products, supplying the EU market now requires a 'license to deliver' based on professionalism in production, logistics and risk management. The responsibility for the food safety and quality risks have been increasingly moved upstream in the supply chain; from the consumer to the retailer then to the distributor and finally to the producer. The burden of proof lies with the farmer who is responsible for all risks and needs to demonstrate that all possible risks have been identified, analysed, controlled and reduced.

In Sub-Sahara Africa Kenya is the largest vegetable supplier to the EU with over 45,000 tons in 2002. Morocco is by far the largest African supplier to the EU with a supply of more than 220,000 tons. In Europe, Morocco is seen as the cheap alternative to Spanish production, just as Mexico is to the US-market. The comparative advantage of Morocco is that the production can be transported by road to Europe. The Kenyan position is the result of a synergy in logistics between flowers and fresh vegetables, the presence of a number of European-African farms, the quick adoption of market requirements such as pre-packed vegetables and process quality standards such as ISO, EurepGAP and its suitable mild climate. The traditional focus on off-season supplies and low production costs is overtaken by market developments and production technology in the EU itself.

Compared to these figures the Ethiopian exports of fruits and vegetables to the EU market have been limited and mainly restricted to a single crop. The export of green 'bobby' beans have accounted for 99% of

**Table 5: Exports of 'bobby' beans from Ethiopia**

Year	Exported volume (tons)	Export value ('000 Euro)
2002/03	2371	4165
2003/04	3334	4767
2004/05	4430	7090
Source: MoARD (2006)		

export supplies (see table 5). In addition small quantities of strawberries, (cherry) tomatoes and fresh herbs have been exported to Europe. According to MoARD negligible amounts of high quality fruits and vegetables have been exported to countries in the Middle East (Saudi Arabia, Bahrain, Kuwait). However, in the informal sector which is dominated by smallholder growers and small scale traders and transporters considerable amounts of citrus fruits, onions, tomatoes, potatoes, garlic and other vegetables are exported to Djibouti and from there to other countries in the Middle Eastern region. The

main fruit and vegetable suppliers to the Middle Eastern markets are however Pakistan, India and Sri Lanka.

The main fruits imported from outside the EU are bananas (42%), oranges (12%), apples (8.5%) and pineapples (4.8%). Central and South America are the largest suppliers. Africa supplies 22.6% of the imports from outside the EU. The volumes and market shares are fairly stable. South Africa is the largest African fruit supplier with 885 thousand tons. The country exports a wide range of products such as citrus, tropical fruits and grapes. The World Bank (2005) concludes that in general the vegetable sector provides more market opportunities for Sub-Sahara African producers than the fruit sector. This is due to the following factors:

- The growth rate of vegetable imports is higher than that of fruit imports
- The fruit product range imported from outside the EU predominantly consists of 'commodities' with a relatively low value rate per kg that demands highly efficient and effective production and distribution systems.

### **4.3 Production and exports of fruits and vegetables**

#### *4.3.1 Production of vegetables for exports*

The fresh onions, tomatoes, cabbage and potatoes for exports to Djibouti and from there to Saudi Arabia, Yemen and other Middle East destinations are mainly produced by small scale farmers. The produce is exported in bulk without any value addition and tends to have a relatively low value, price and quality. Due to a general lack of care and proper facilities during transport however, produce often arrives in poor condition. Also some of the large state farms, i.e. Upper Awash Agro-Industry Enterprise (UAAIE) near Wonji and the Horticulture Development Enterprise (HDE) near Ziway, sometime produce and transport the produce directly by state owned trucks and trains to the international harbour in neighbouring Djibouti.

These export vegetables from smallholders (some of them organized into cooperatives) are cultivated in the areas around Dire Dawa and the various Rift valley lakes where vegetables are produced on small plots irrigated with lake water. The farmers tend to sell all their produce to middlemen and traders who pick it up from the roadside in small open trucks and bring it to Djibouti for further export.

The supply of vegetables for the European market comprises predominantly green "bobby" beans (see also previous section). The export to Europe used to be somewhat more diversified, including peas, mangetouts and asparagus. However, the share of these latter crops has declined over the past years, whereas the export of green beans has been growing. The supply is limited to a relatively short export season from December through April or May. Europe does not produce fresh beans in winter season and production in countries like Egypt and Morocco in January and February can be unreliable. Main importers and distributors in Europe wish to spread their sourcing, which provides a market opportunity for Ethiopia to supplement the export production from e.g. Egypt and Senegal.

Compared to fresh beans from some competing countries, the current export supply chain of green beans lacks value addition. The produce is usually exported in palletized open boxes, either for direct supply to supermarket chains or for repacking and sale by international traders. Due to the fact that the crop is perishable and a route by sea takes far too long, all green beans are exported by air and thus mainly airlifted from Addis Ababa by Ethiopian Airlines Cargo which flies into Brussels via Rome. The main destinations of the green beans are The Netherlands and Italy. The beans for The Netherlands are cleared in Brussels and then transported by truck to The Netherlands where they are (partly repacked into small size packets depending on the client's requirements) and distributed throughout The Netherlands, but also re-exported to Germany and France.

The production of export vegetables for the European market has been dominated by the two above-mentioned state farms. From the early 1990s onwards, upon the collapse of the Derg regime, private investments in these export vegetables have slowly but steadily come up. At the moment, two private vegetable exporters are operating around Ziway. A vegetable seeds producer in Awassa has plans in advanced stage to start fresh exports and in Ziway another one intends to start. Furthermore, an existing private exporter may start production near Koka in joint venture with a renowned Dutch vegetable producer and importer.

It is estimated that the state farms cultivate some 650 ha (UAAIE) and 200 ha (HDE) of green beans with expected export volumes of around 15,000 to 20,000 tons. The two private exporters cultivate around 50 ha of green beans each and have outgrowing arrangements with a limited number of farmers in their vicinity.

The production of green beans relies on surface or furrow irrigation, which is a cheap but very labour intensive and water inefficient method. Moreover, it requires machinery for proper levelling of the fields. The above-mentioned joint venture near Koka is the first to make the considerable investment and start with drip irrigation, which has the following advantages compared to surface irrigation:

- Far higher water efficiency;
- Reduction of water logging if fields are not properly levelled;
- Reduction of spread of water borne diseases like Brown Rot and Rust;
- Better germination as less seeds are “drowned” in the irrigation water.

Whereas the state farms used to grow and export a wide variety of crops including asparagus, peas, leeks, paprika, chilli peppers and tomatoes, the present trend in production for export to the EU market is away from a wide range towards exports of green “bobby” beans in bulk. The Horticulture Development Enterprise has reduced its produce range significantly over the past years and big chunks of its land near Ziway have been leased out for floriculture. Also the UAAIE has been for sale for several years without a buyer coming forward. On the other hand, some experiments and trials are undertaken (by private companies) of production of peas, mangetouts, cherry tomatoes and asparagus for export to the EU market.

#### *4.3.2 Production of fruits for export*

The export volume and value of fruits has always been substantially lower than vegetables and it is directed mainly at Djibouti and the Middle East while exports of fruits to Europe are negligible. The main fruits produced and exported are bananas, citrus, grapes, mangoes, papaya and avocados. The main export markets for these Ethiopian fruits are Djibouti, Saudi Arabia, Yemen and Sudan.

The majority of citrus production is still largely confined to state farms, but the productivity of their orchards is on the decline. The production of mangoes is to a large extent scattered and unprofessional; the varieties and quality tend to be not as good in quality as those produce in competing countries and are usually unfit for further processing. In the Chenchu highland apples have been grown for decades by small farmers. Apple production is expected to go up as the State of Oromia ordered 70,000 apple tree seedlings from Spain. Pineapple production is also scattered and has been unstable over the past years, which caused a pineapple drying plant near Nazareth to function below its production capacity for years in a row.

The export of fruits to the Middle East has to compete with the domestic production in those countries. Fruit production has increased notably in some Middle East countries, but demand for fresh fruits appears to be growing as well, which implies that domestic producers cannot fulfil the demand, thereby leaving a market for Ethiopian produce.

Apart from the fruits exported by the two state farms, fruit trade from Ethiopia tends to be dominated by ethnic Somalis. Poor grading, handling and transport facilities have led to a general impression that Ethiopian produce has a bad quality and the fruits are therefore only sold at the lower end market. Gurmed, a consortium of some 20 individual exporters in and around Dire Dawa, is one of the largest Ethiopian exporters to Djibouti.

In addition to the export of relatively low value fruits, nowadays there are a number of trials undertaken to produce more high value crops for export and to access new or more attractive fruits markets (i.e. grapes, avocado, passion fruit). As mentioned before also, a foreign strawberry grower ventured into the drip irrigated production of this fruit in Ethiopia mainly for the fresh export to the EU market.

## 5. Competitive analysis

The export-oriented horticulture in Ethiopia comprises several sub-sectors dealing with respectively floriculture, vegetable and fruit production. There are a number of important similarities and common determinants for each of these three sub-sectors, for example in relation to growing conditions, investment climate, infrastructure availability, etc. However, each of these sub-sectors also has a number of distinct features and characteristics in terms of for example the level of production and exports, end-market characteristics, etc. Whilst conducting a competitive analysis for the export-oriented horticulture in Ethiopia it is not possible to generalise the assessment of the various competitive forces for the sector as a whole. The sub-sector specificity will have to be taken into account.

In the next five sections of this chapter the five competitive forces are assessed first for the floriculture sector. The sixth and last section in this chapter 5 provides additional information on where the competitive analysis of the Ethiopian floriculture sub-sector differs from the vegetable and fruit sub-sectors and where additional aspects are to be taken into account.

### 5.1 Entry barriers:

#### 5.1.1 Economies of scale

The scale of production determines to a large extent the demand for inputs and services in the sector. The general assumption is that the larger scale of production has a positive impact on the unit price as well as the overall transaction costs. The rapid growth of the floriculture sector in Ethiopia is to be viewed as a positive development and it is expected that existing and new growers are to benefit from these economies of scale in terms of reduced transaction and unit costs for the use of inputs, services, etc.

	Ethiopia	Kenya
Farming costs/ha	\$63,334	\$81,134
Plants/ha	65000	80000
Stems/ha	1,685,000	2,300,000
Loss rates	2%	5%
Marketable stems/ha	1,651,000	2,180,000
Farming costs/stem	\$ 0.0384	\$ 0.0350
Farm-to-market costs/stem	\$ 0.155	\$ 0.121
Sales price/stem	\$ 0.183	\$ 0.144

*Source: GDS (2006)*

However, given the fact that the sector's expansion has gone so rapidly over the past few years, it appears that the production support in terms of input supply services, technical advice, marketing support, etc. are not yet as developed as in some of the other main production countries (Kenya, Ecuador, etc.). As such the economies of scale are not yet noticeable immediately (see for example table 6). However, expectations are that economies of scale will provide growers opportunities to reduce certain costs in due time or at least to become on par with some of the other main production countries.

#### *5.1.2 Capital requirements*

The initial capital investments to start production (hardware, general infrastructure, planting material) are considerable in the horticulture sector. Investment levels in Ethiopia seem to indicate, however, that capital is not a major restricting factor:

Number of licensed projects and their capital investment as of June 2006:

- In total number 235 licensed projects with an aggregate capital of 7.5 Billion birr.
- Foreign investors owned projects of 171 with capital of 5.3 Billion birr.
- Local investors owned projects of 64 with aggregate capital of 2 Billion birr.

*Source: Ministry of Trade & Industry (Oct 2006)*

Very important in this context is the high level of support and investment incentives provided by the Ethiopian government (see summary in the text box below). When compared with other major horticultural exporters, the Government support provides Ethiopia a clear advantage.

Effective and efficient implementation of these Government support initiatives is important to further increase the substantial impact in terms of enhanced comparative advantages of Ethiopia when compared to other production countries in the region. The processing of loan applications may take sometimes up to 12 months, which does not favour new investments and expansion. Smoothing out of some of the bureaucratic hurdles is therefore important. This will further attract both local as well as foreign investors.

***Text box: Ethiopian government support to export-horticulture***

- Government's allocation of a substantial amount of finance for investors who would like to engage in the sector.
- Special loans are provided through the Development Bank of Ethiopia.

**Ethiopia's Investment Law:**

- According to the revised investment law, a foreign investor can invest on his/her own or jointly with a domestic investor.
- The Investment law guarantees capital repatriation and remittance of dividends.
- The Investment law provides investment guarantee.
- Investment guarantee and protection; in Ethiopia both the Constitution and the Investment Code protect private property

**Investment Incentives**

- A package of incentives under regulation No.84/2003 developed
- Incentives are available both to foreign and domestic investors.
- No discrimination between a foreign and domestic investor.

**Types of Incentives**

- Customs duty exemption
- Income tax exemption
- Loss carry forward
- Remittance of fund
- Land availability for investment on leasehold basis
- Utilities: electricity, telephone, water and road

*Source: Ministry of Trade & Industry (Oct 2006)*

### ***5.1.3 Knowledge and experience***

Labour costs in Ethiopia are comparatively low, particularly when compared to non-African production countries. However, lack of skills, professional education and experience in the export horticulture can be a negative factor and hamper the successful expansion and/or entry into the market. As such the Ethiopian sector is somewhat at a disadvantage when compared to other main production countries in Europe (Netherlands), South America (Colombia, Ecuador) and also in Africa (Kenya, Zambia).

Currently the Ethiopian sector deals with this issue by mobilising know how and expertise at the level of business management and production supervision from other countries. Different constructions are in place to secure the required expertise, e.g. through joint ventures between Ethiopian and foreign business partners. Other companies solve the issue by recruiting experienced managers and farm supervisors from other countries. Foreign investors in the Ethiopian export horticulture usually ensure that key management and supervisory positions are filled with expatriate staff from the mother



company. At the same time an increasing number of Ethiopian managers are gaining experience and technical know how on horticultural production.

It is very important however that the Ethiopian export horticulture further develops its own cadre of well-trained and experienced managers and production staff. This applies not only to the primary production process, but also to farm planning, marketing management, the post-harvest handling processes and public and private services sector (e.g. phytosanitary services, chain quality management). The capacity building initiatives that are currently being developed under the Ethiopian-Dutch partnership programme and the Swedish Government are therefore of paramount importance to enhancing the competitiveness of the sector in this respect. Also the USAID technical assistance programme is contributing in this respect.

#### *5.1.4 Branding, reputation and loyalty*

Branding is very unusual in the floriculture and vegetable sector and as such there is not much opportunity to create a better market entry. Product differentiation in this sector is

##### ***Code of Practice***

With support from the Ethiopian-Dutch partnership programme EHPEA is in the process of developing a Code of Practice. The objective of the EHPEA Code of Practice is to provide a mechanism that enables the Ethiopian floriculture sector to achieve the highest performance standards in order to safeguard its continuous improvement and sustainable development, in relation to:

- Long term economic viability of the sector
- Sustainable and safe development and skills enhancement of the workers in the sector
- Responsible management of the environment
- Active contribution to the development of the community in which the floricultural companies operate.

done primarily on the basis of variety choice, which is discussed in the following chapter. It suffices here to state that UPOV-membership is important to have easy access to new and improved varieties that are required by the end-markets.

However, having a certified code of conduct is often seen as a way to lower transaction costs and improve market access and customer loyalty. The MPS-standard is the dominant code on the European market and many African and European flower producers comply with the standard. In South America local codes appear to be more

common. Exporting countries with no code of conduct have a rather low level of export growth. The current initiative of developing a Code of Conduct for the Ethiopian export horticulture as taken on by the EHPEA with support from the Dutch partnership programme is thus very timely and relevant. In addition the first group of Ethiopian growers are in the process of obtaining MPS-certification. A Code of Conduct for the export horticultural sector is very important to secure market access for the sector in general. The certification for quality standards such as MPS will be beneficial particularly at the individual company level. It contributes to the improved reputation of the suppliers and as such lead to greater customer loyalty.

**MPS** is an international certification scheme for the floriculture, bulb-, nursery stock- and vegetables sector. Environment, quality and social aspects are the main topics of the MPS certification scheme. Around 50% of all Dutch suppliers and a increasing number of growers in other export growers in Europe (Belgium, Denmark, Spain) and Africa (Kenya, Tanzania, Zambia) participate in the certification scheme. MPS has become the international standard for environmental friendly cultivation of cut flowers. Through the addition of a social chapter, also employers conditions are covered by the scheme. New MPS participants would need to comply within one year after registration and will have to be inspected by an internationally accredited independent agent. The MPS certification is recognised also by other quality schemes such as EurepGAP.

## 5.2 Substitutes

The threat of substitution in the floriculture sector is very real. Buyers of roses and other export horticulture products can easily switch from one supplier to another. A flower sold by a retailer in Western Europe these days may be produced in Colombia, the Netherlands, Kenya, Ethiopia or Israel without the customer noticing the difference.

Table 7 below summarises the main trends in exporting Ethiopian flowers to various markets in Europe. The Dutch auction market has become by far the most important

**Table 7: Ethiopian flower exports by major destination (2003-2005)**

	Value (€)		
	2003	2004	2005
Germany	2,720,330	3,841,112	2,765,777
Netherlands	216,651	859,152	5,141,514
UK	8,781	121,408	221,305
Total	2,945,762	4,821,762	8,128,596

*Source: GDS (2006); the 3 countries together represent for around 90% of the total exports*

destination of the Ethiopian flower exports, the German market (auctions and contract) being the second most important destination. Other destinations include the UK, Russia, etc.

Providing services (ranging from product information, provision of bar codes to pre-packing and preparation of bouquets) to the retailers can give some

additional opportunities to enter into direct supply contracts with large scale retailers and thus decrease substitution. Whether this has always major advantages in terms of higher margins and better payment terms will be discussed in the next chapter.

To reduce the risk of substitution it appears to be of paramount importance – irrespective whether the produce is sold through the auctions or under contract – that a consistent supply of (high) quality at a similar cost price is assured. Buyers’ loyalty is determined by product prices and the supplier’s reputation in terms of reliability and quality. In this respect it is interesting to analyse the recent volumes and price changes at the main market destination of Ethiopian roses (see table 8). A rough distinction is made here between the market trends for roses with large and smaller buds. In both markets

Ethiopian growers have managed to increase their market share dramatically in 2006 at the expense of exports from growers in amongst others Zimbabwe, Zambia and Uganda (the latter for small roses only). Substantially higher airfreight charges are the main reason for the substitution from the Southern African countries to supplies from Ethiopia. Inconsistency in supplies seemed to have been an added constraint for the Zimbabwean export sector.

Comparison of the average prices received by growers in the different countries show that there is indeed a considerable variation. Roses from Ecuador are known for their high quality and receive premium prices. Despite the high costs per stem, Ecuador nevertheless has managed to expand its market share (particularly in the market segments for large roses). Ethiopian roses seem to obtain an average price and will have to compete with growers in Kenya and Tanzania where roses of a similar quality are being produced at similar or slightly lower price.

*Table 8: Ethiopian exports to the Netherlands in 2006*

	No. of stems sold (x 1.000)	% change compared to 2005	Price 2006 (€ ct/st)	Price 2005 (€ ct/st)
small rose varieties	56.940	+164,2	14	13
large rose varieties	78.841	+227,9	18	18

### 5.3 Buyer power

The third element in analysing the competitive power concerns the influence of buyers. As indicated in table 3 above the main market destination for Ethiopian roses are the Netherlands and Germany followed by the UK; in the future upcoming markets such as Russia and other Eastern European countries may gain in importance as destination market. Each country has a specific group of buyers both at wholesale and retail. The prominent role of the auctions in the Netherlands (and to some extent Germany) should be viewed as a facilitating marketing instrument.

In most countries the consumption of cut flowers is still growing slightly. In Western Europe the market growth is, however,

limited, but markets in some of the new EU-members States in Central Europe and in Russia, consumption growth is more substantial (see table 9 and text box on the Russian

**Table 9: Import value (€ '000) of cut-flowers into selected countries in Central & Eastern Europe**

Country	2004	2005	% change
Russia	71,276	78,545	10.2%
Poland	34,382	49,169	43.0%
Czech Rep.	28,331	30,832	8.8%
Ukraine	6,472	15,256	135.7%
Romania	9,818	12,761	30,0 %

*Source: HBAG, 2005*

market). Significant will be the further shift towards the supermarket trade as mass market for the distribution and sales of cut-flowers. In terms of product and price specifications as well as supply chain organisation and buyer power this may have a considerable effect on the Ethiopian export sector. In the fruits and vegetable sector the market share of European supermarkets has grown to around 80% or more in some countries. In the flower sector such dramatic increases in market share are not expected; the flower shops will remain important as a retail outlet, particular for high quality products with larger margins.

***Some characteristics of the Russian flower market***

- Supplies to the Russian market is done through Russian importers who organize onward distribution; the wholesale and small scale flower retailers are their main customers (accounting for more than 50% of the total market supplies)
- Supermarket trade of flowers only accounts for a few percent of the market, but is expected to grow substantially in the coming five years (particularly among the hypermarket chains)
- The Russian market is expected to grow with about 50% over the coming five years according to the leading Russian importers; this market expansion is related to the overall economic growth and rises of average income levels.
- Thereby the market is expanding to a growing number of consumers, particularly in the mid-income groups.
- Flowers are gradually becoming more of a regular purchase rather than a specialty product; this implies a growing demand for smaller roses in addition to a niche market for high quality large roses.
- Access to the Russian market depends on good links with leading importers.

*Source: Productschap Tuinbouw(2006)*

**5.3.1 Supermarkets as buyer**

The further increase of flower trade through the supermarkets will lead to a higher level of buyer concentration in the market, particularly for roses and other cut-flowers in the lower and medium price segment. Hence, the price sensitivity will increase in this market segment and the bargaining power and margins obtained by growers and exporters will be under pressure. Supermarkets in Europe typically buy the bulk of their supplies in contract from a limited number of large suppliers, supplemented by the occasional purchase on the spot markets. Arrangements for volumes, product specifications and

**Table 10: Cut flower market share of supermarkets in different European countries**

Denmark	46%
England	64%
Germany	14%
Netherlands	25%

prices between supermarkets and suppliers are made well in advance and cover usually a long period (several months up to a year). This may have advantages for the suppliers in terms of market security and production and planning, but will only be lucrative if supplier(s) can become cost-leaders in

their respective market segment. Consistent quality and compliance to contractual specifications (volume, types, packing) is an imperative.

With the increasing volumes of production and export supplies (groups of) Ethiopian export growers may wish to develop into cost leaders and focus on the contracted supplies to the European supermarkets. However, whether the Ethiopian export sector will have sufficient competitive power to succeed depends on the primary production and the post-harvest processes alike. Cost leadership may be obtained through further chain coordination or chain integration between growers, logistical service providers and importers/wholesalers. Further discussion and study may be required to assess whether this is a feasible and desirable option for the Ethiopian floricultural sector to continue its sector growth and gain in competitive strength.

### *5.3.2 Flower shop retail as buyer*

The European flower shops are in contrast to the supermarket sector more quality sensitive and demand more differentiated products. The volume of flowers traded per shop is considerably smaller and supplies on the basis of contractual arrangements covering longer periods are rare. As such the auctions are the most common mechanism to supply the flower shop retail sector. On condition that quality requirements (length of stem, flower size and shape, vase life, richness in colour, etc.) can be met, this market segment can be very lucrative as price levels and product margins can be considerably higher than in the supermarket trade. As demonstrated by some of the Dutch and Ecuadorian growers the increased investments in product and production quality can be indeed attractive.

### *5.3.3 Importance of market information*

If the Ethiopian export growers wish to increase its market share in a specific niche of either of these markets, the access to more market information is imperative. In this respect the Ethiopian grower seems to be somewhat at a disadvantage when compared to their European and even some of their African colleagues. In addition to access to general market information on price trends and market studies, establishing and maintaining direct contacts with the main buyers on the European markets is of crucial importance.

The information from the Dutch auctions is public; even non-members can obtain price and quantity information. The auction prices are often used as a benchmark for the international price formation. However, growers in Ethiopia often do not have information about the sales from the wholesalers to the retailers. This places them at a disadvantage when planning production and sales and while bargaining contracts with potential buyers.

## **5.4 Supplier power**

The comparative strength and potentials for further growth of the Ethiopian export horticulture is not only heavily influenced by its linkages with the end-markets, but also with the various suppliers of products and services. In the context of this analysis aspects of three critical supply sub-sectors are briefly described and analysed here.

#### *5.4.1 Choice of varieties*

Product differentiation and productivity in the floriculture sector is determined to a large extent by the choice of variety. Varieties should of course be suited to the growing conditions of Ethiopia, but also meet the specifications and demands of the changing markets. Particularly in the segment of speciality products with higher margins, successful product innovations are dependent to the grower's right choice of varieties. The fast growth of the Ethiopian floriculture sector has resulted in attracting several of the main breeders establishing test sites in Ethiopia. This will put Ethiopia on par with Kenya and Ecuador and ahead in comparison with some of the other African production countries.

The right choice of varieties for production is largely dependent on the choice of market as broadly outlined in the previous sections. Individual growers may make different choices, opting for:

- a single or very limited range of high producing varieties in the middle price segment suitable for supermarket trade
- a broader range of high quality and speciality flowers and bouquets suitable for the specialised flower retail trade.

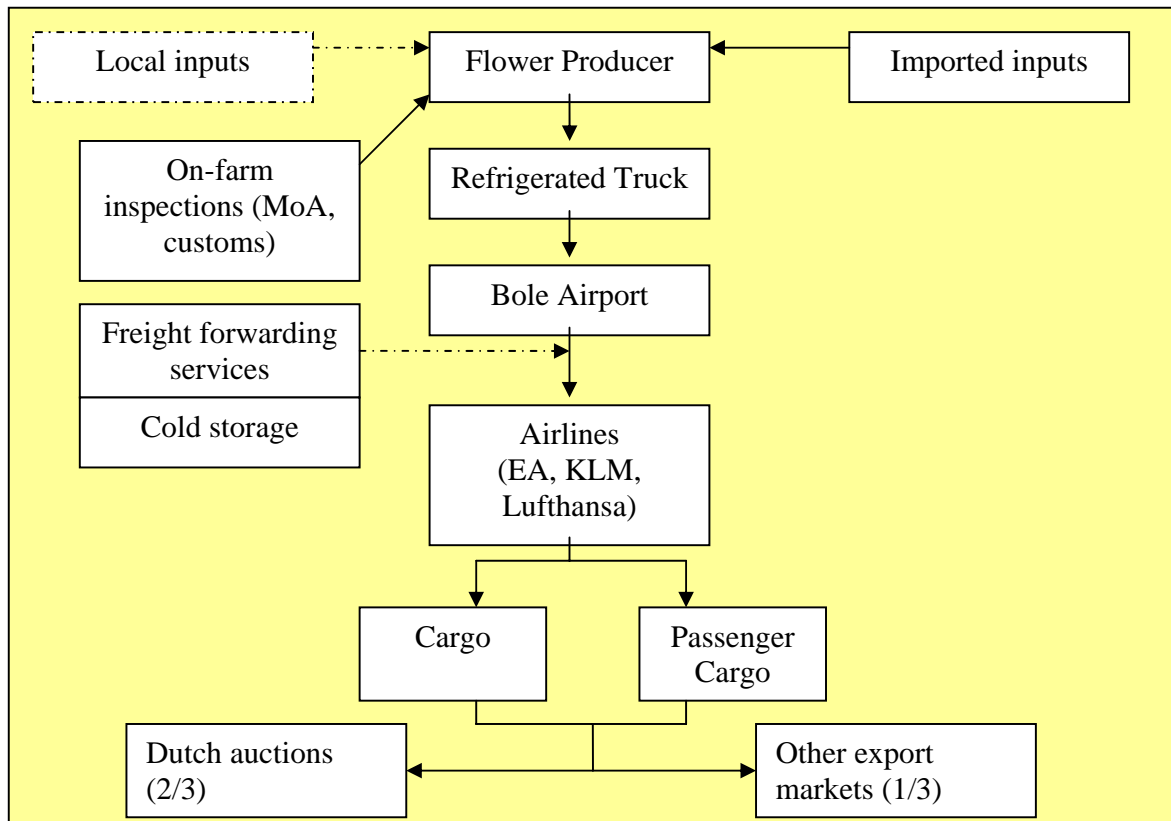
#### *5.4.2 Handling, logistics and other post-harvest services*

Products like vegetables and cut flowers are high value crops, but get the premium prices only when they make it to the markets in Europe quickly and in good shape. For example, a rose from an Ethiopian greenhouse has a potential value of € 0.10 – 0.35 per stem at the Dutch auction. However, such prices are fetched only when the produce make it to the major flower markets without any loss of quality and value. An optimal cool chain from the farm to the export market is an essential part for the Ethiopian horticultural industry.

An important feature of the Ethiopian floriculture supply chain is that very little freight forwarding services or cold storage services at the airport are purchased by the rose growers. Export growers instead prepare their own documentation and load roses from their own cold trucks directly into palletised loads for air shipment. During the logistics the flowers remain property of the grower, who thus bears the risk in case the flowers loose quality or value as a result of delays or mistakes by any of the links in the logistical chain.

Also fairly unique for Ethiopia is the fact that phytosanitary inspections are conducted on-farm on the basis of production inspections, rather than product inspections of the respective export consignments. The latter is most common in the major exporting countries with horticultural produce and is internationally most accepted. The phytosanitary export inspection and the subsequent certification are done in one procedure and from one office. A recent identification mission advised to change the inspection procedures towards an export inspection of consignments at Bole airport. It was furthermore advised to strengthen the capacity of the Ethiopian crop protection department in associated field such as phytosanitary monitoring and surveillance. Such capacity improvements can contribute significantly to the overall image of the export oriented horticultural sector as a reliable and quality supplier. Kenya is a very good

example in this respect; the role and communication played by KEPHIS aided the competitive development of the export sector in this respect.



Whilst the current set-up of the Ethiopian sector may have supported the quick development of an emerging export sector, it is unsure whether it also will support the scale of exports as envisaged by the rapid growth in production area. When compared with for example Kenya which still exports significantly more than Ethiopia it appears that more specialised and dedicated logistic and handling services are required in the future to attain the required levels of efficiency and quality that are required by the market. This would suggest the prerequisite for the emergence of:

- specialised support service providers such as freight forwarders and clearing agents
- functioning storage/warehousing facilities and services with established insurance provisions for losses and/or damage during handling, storage and moving the produce
- organised and centralised customs and phytosanitary services that facilitates the flow of goods and services at the airport.

As these aspects are not yet sufficiently developed in Ethiopia, this may become a comparative disadvantage of the export sector when compared to some of its main competitors.

#### *5.4.3 Input supplies*

Another characteristic of the Ethiopian floriculture sector is the lack of domestically produced inputs that flower producers can access. Also flower producers tend to purchase imported input materials themselves rather than through traders.

This is partly due to the fact that certain specialised inputs such as specific floriculture pesticides are not (yet) formally registered under the Ethiopian pesticide registration regulation. As such these inputs may only be imported by growers under special permission of the Ministry of Agriculture and Rural Development and the Ministry of Trade and Commerce. Initiatives are underway to update the pesticide registration act in this respect to facilitate the production/import, trade and utilisation of the required pesticides.

However, costs seem to be also a factor; flower producers report savings of up to 20% when comparing importing agricultural inputs themselves with procurement through traders in Ethiopia. These savings, however, do not account for additional staff and administrative costs incurred by producers who engage in direct purchasing.

The overall size of the sector should lead to possibilities to attain economies of scale in input supplies; this should lead the emergence of a specialised input supplies sub-sector that can provide the growers with quality inputs at competitive prices. Management of export farms could then focus more exclusively on their core activities. An example of such a development is the PSOM-funded initiative of HortiCoop to establish an input supply outlet and laboratory and testing services for the export horticulture in Ethiopia. More of these examples are required to enhance the competitiveness of the sector in this respect when compared to other main horticultural production countries in Europe and Africa.

### **5.5 Existing competitors**

Floriculture investors are increasingly behaving like global business players chasing comparative advantages in terms of incentives and costs for the developments of new projects. In recent years Ethiopia has demonstrated tremendous increases in investment (see chapter 2 above) and export production levels. The natural resources (land, water), climatic conditions and the availability of cheap labour in combination with the investment climate have all contributed to this development. These are, however, no guarantees for continued competitiveness of the Ethiopian export horticulture. As fifth and last element of Porter's competitive analysis framework it is also important to check the existing competitors. In this context it is important to look in particular at the general industry growth and the nature of the current and future competition; some elements have been mentioned already in the previous pages, hence only a summary of the main points are repeated below

#### *5.5.1 Industry growth*

The globally traded cut flowers and foliage had a total value of USD 12.3 billion in 2005. Over 53% of all cut-flowers traded in the world are sold in the European Union and over 60% of the cut-flowers are exported from the EU (with the Netherlands accounting for



58% of the global share). In Europe, which is by far the most important market destination for Ethiopian flowers, Ethiopia has surpassed the export volumes of some of its main competitors such as Egypt, India, Morocco and Zambia. With the rapid increase in export volumes, Ethiopian cut flower exporters are having difficulties in maintaining high unit prices. This is partly to do with the fact that cut flower prices globally have shown a decline. Another reason is the fact that with increased production volumes also pressures to sell increase. As a result average export prices to the EU-market have dropped with around 10% from 2002 onwards for all African exporters. Despite the growth in flower consumption on the Russian market and in some of the Central European countries, it is not expected that the total flower consumption will increase dramatically, nor will average price levels go up in the coming years.

Also the cyclical pattern in the demand for global flowers is expected to stay the same. Peaks in demand will remain around February – April and November-December. The summer and fall seasons are typically lower in flower demand. Although flowers are increasingly bought for personal enjoyment, the main purchasing impetus remains gift-giving (Valentines Day, Christmas, etc.).

#### *5.5.2 Equally balanced competitors*

The main competitive threat for the Ethiopian export floriculture is related to the fact that the globalising market is characterised by fierce competition between fairly equally balanced competitors. As mentioned before, the risk for substitution is real and constant attention to market trends and maintaining favourable price/quality ratios are imperative to avoid being replaced by other suppliers.

Competitiveness in terms of product price is largely determined by the costs of international transport and marketing which account for around 75% of the total costs. Airfreight rates from Addis to markets in Europe vary widely. Dedicated cargo space provided by Ethiopian Airlines costs least (USD 1.40/kg). Despite its substantial growth in recent years, the cut flower sector does not yet have sufficient volume to justify year round cargo flights. Currently the main dedicated cargo long-haul commitment at Addis Airport is provided by Ethiopian Airlines via a DC-10 freighter that is flown to Brussels. By combining cut flower exports with fresh vegetables it is possible to fill the weight requirement of dedicated cargo space. However, this is only possible in the period November to May. After this period fresh vegetable exports (mainly beans) decline and cut flower exporters have to rely on cargo space on commercial flights of Ethiopian Airlines, KLM or Lufthansa. Depending on passenger loads, cargo on these flights cannot exceed 6 MT and come at a higher price (EA USD 1.50/kg; KLM and Lufthansa USD 2.05/kg).

A major break through in international transport is expected when the transport of cut flowers by conditioned ships will become technically feasible. Tests are being done by several countries and although not yet successful, it is expected to become a realistic option in a few years time. This will completely alter the cost structure of the floriculture sectors in the various exporting countries and is definitely a development to watch.

## 5.6 Additional comments on the competitiveness of the fruit and vegetable exports

### 5.6.1 Entry barriers

Getting access to the fruits and vegetable markets in Europe, Japan and North America requires compliance with a broader range of requirements when compared to flower exports. The spot markets have become of limited importance and the imports, distribution and retail sales is predominantly organised on the basis of standing order contracts. Access to these standing order markets is based on a license to produce and a license to deliver. These license are formalised in international procedures which are usually designed by the large scale retailers (e.g, BRC, EurepGAP). The multinational buyers focus on food safety, quality standards and corporate sustainable responsibility. The required standards for the product, the production and the supply are often included in the contracts between retailers and producers/distributors and are accompanied by detailed requirements with respect to labels, packaging, pricing and production and delivery schedules. To be able to perform successfully as a supplier two golden rules are to be adhered to:

- ensure consistency in quality and supply
- provide recorded and demonstrated traceability of products and production.

These days fruit and vegetable export development for the high value horticultural markets can no longer be based on a traditional development continuum – emerging, nascent, immature, mature – but on a minimum set of basic and advanced production factors (see table 11).

**Table 11: Basic and advanced production factors required for high value horticultural production and exports**

Basic factors	Advanced factors
<ul style="list-style-type: none"> <li>▪ Non-restrictive policies in favour of horticultural development</li> <li>▪ Suitable and controllable climate conditions such as day and night temperature, humidity, solar radiation and rainfall during cultivation</li> <li>▪ Availability of labour and horticultural growing skills</li> <li>▪ Basic local general infrastructure, e.g. access to roads, train/sea/air transport, telecommunication, power, water, etc.</li> <li>▪ Basic local horticultural infrastructure, including access to horticultural inputs and services</li> </ul>	<ul style="list-style-type: none"> <li>▪ Access to logistic infrastructure linking production locations to international consumer markets</li> <li>▪ Availability of production and distribution facilities to control temperature, humidity, etc.</li> <li>▪ Transparent and guaranteed management information systems</li> <li>▪ Support from facilitating service industry (finance, input and equipment supply, technical consultants, etc.)</li> <li>▪ Entrepreneurial management and horticultural specialists</li> </ul>

*Source: World Bank (2005)*

Until a few years ago the availability of a set of basic production factors was sufficient to develop horticultural exports. This has been the case in Sub Sahara Africa where most of the successful exports (Kenya, Côte d'Ivoire) launched their horticultural exports relying

on basic production factors. Whilst market requirements became stricter and more diverse, these exporting countries have been able to gradually improve their production and supply capacities. For newcomers in the horticultural export business such as Ethiopia it would not be realistic to rely only the basic production factors. As a result of the dynamics at the high value markets, the entry level has substantially increased.

So, on top of the factors already listed for the floriculture sector in section 5.1, it should be realised that entry to the high value markets for fruits and flowers have additional entry barriers in the form of safety and quality assurance, traceability systems, consistent supplies, etc.

These stringent requirements are not prevailing on the domestic and regional market (Djibouti, Yemen, Saudi Arabia, etc.), but the lack of adequate transport infrastructure and efficient logistic services provides an entry barrier for small scale exporters and state farms. Margins made by smallholder fruit and vegetable producers and exporters to these markets are limited and possibilities to organise an effective and efficient logistical system that minimises costs and product losses are yet to be explored. Lack of transparency, organisation and investment capital are major limiting factors in this respect.

#### 5.6.2 Buyers power

When analysing the competitive strength of the fruits and vegetable export markets, the impact of the buyers' power is of major importance. In the previous section the impact of the large scale retail companies on the quality and supply arrangements was already outlined. There is a high level of concentration of buying power in the high value markets for fruits and vegetables. Table 12 provides the figures for the market share of supermarkets in Europe; a similar picture prevails in North America. Given the fact that in each country only a handful of supermarket chains are in operation, the influence and control of these chains on the volumes, specifications, delivery arrangements, prices, etc. is considerably higher than when compared to the floriculture sector. The high value fruit and vegetable markets in the world are therefore typical buyers' markets and no longer a suppliers' market.

**Table 12: market share of supermarkets in the vegetable & fruit retail sector**

Country	Market share
Netherlands	85%
England	90%
Germany	90%
Denmark	90%
France	70%
Source: Wijnands 2005	

Limited transparency combined with an element of buyers' concentration is characteristic for the low value export market chain via Djibouti. As such Ethiopian suppliers of fruits and vegetables are usually mere price takers.

#### 5.6.3 Suppliers power

As described in the section on the suppliers power in the floriculture sector, the dependency of export growers on suppliers of essential services and inputs is of vital importance to the success of the export. This also applies to fruit and vegetable export

sub-sectors. The current supply situation in these sub-sectors, however, provides a bleak picture:

- The availability of the right fruit and vegetable varieties for exports – directly or as processed product – is very limited.
- Technical know how and experience with advanced fruit and vegetable cultivation is not yet adequately developed
- Specific inputs required to meet the high standards in high value export markets (e.g. pesticides) all need to be imported under a special license
- Advice and assistance with introducing and certification of quality assurance and traceability systems required by the export market is not yet locally available

As such the Ethiopian export-oriented fruit and vegetable sectors are at a disadvantage when compared to the existing suppliers to the high value markets.

In relation to the availability of logistics and transport services there are opportunities to ‘piggy-back’ with the available services for the floriculture sector. This may even create some synergy for both sub-sectors if done in an efficient and effective manner. With increased export volumes it should be possible to bring down the unit costs for transport and marketing. Experiences in other exporting countries in Sub Sahara Africa (particularly Kenya) may be used as a reference in this context.

#### *5.6.4 Substitution*

Whilst the high value market of fruits and vegetables in Europe is still growing, the threat of substitution is nevertheless very real. Product standardisation and increasing production capacity in many of the exporting countries implies that the same products can be procured from different sources. The main importers and supermarket buyers operate with sourcing calendars for the various types of fruits and vegetables they wish to procure. Although they wish to deal usually with a limited number of reliable suppliers who can provide the quality and quantity required, occasionally a newcomer may be given a chance as part of the buyers’ strategy to reduce the supply risks.

More success may be achieved by joining suppliers in the form of joint ventures or co-contracting. For Ethiopian export growers to enter the market and substitute an existing supplier a ‘license to produce’ is to be obtained first by having the capacity to comply to standards and regulations. The ‘license to deliver’ is, however, usually obtained on the basis of past track records and a good reputation; joining forces with existing suppliers may be the best strategy in this context.

#### *5.6.5 Existing rivalry*

As a relative newcomer onto the high value fruits and vegetable markets Ethiopian export growers will be confronted with a high level of competition. Despite the shorter distance to the market the Ethiopian exporters will have a difficult time to match the South African fruit sector in terms of product quality, reliability, consistency of supplies and transport and marketing efficiency. West African fruit exporters have a major advantage in that pineapples, mangos, etc. can be shipped to the European market. Similarly, in the vegetable export sector Kenya in particular is well established as a reliable and efficient

supplier of high value crops such as mangetous, baby corn, etc. Semi-processing and pre-packing provides the growers and exporters furthermore with added value for their export products.

The competition levels at the Middle Eastern fruit and vegetable markets come from different sources but are equally high. Given the lower prices to be made, Ethiopia may become a serious contender on this market with efficient and transparent transport and marketing arrangements in place. Further chain integration will be essential to reduce the transaction costs and handling, packing and transport of the produce will have to improve to reduce losses.

## 6. Conclusions and recommendations

### 6.1 Competitive status of the Ethiopian export horticulture

On the basis of the analyses in the previous pages it may be concluded that the Ethiopian export floriculture has performed very well in the past few years. From a new-comer in the market the floriculture sub-sector has managed to become a recognised supplier with a significant share of the global market in a mere few years. An additional 300 hectares are expected to come into production in the coming year. As such further growth in the export market is still foreseen and is also reflected in the Government's policy projections for the sector. A dramatic expansion in the area under floriculture production in the year 2008 and onwards is, however, not necessarily to be expected. The availability of skilled and experienced human capital – both at operational and supervisory level – is an area to improve upon, before going into further drastic expansion of the area under floriculture production.

The global horticultural market is predominantly a substitution market with not much opportunity for differentiation. By offering cut flowers and cuttings at a good price/quality level, Ethiopian export growers have managed to capture a significant part of the European flower market. To consolidate the current competitive position in the global market requires, however, constant attention to price/quality factors. The competitive analysis shows that there is room for improvement both in the primary production as well as the transport and marketing area. With the increasing influence of the supermarket sector in both the established and the upcoming flower market, Ethiopian export growers will have to be alert on the implications this will have in terms of quality demands, supply consistency, pricing and payment conditions. Elements of cost leadership will have to be emphasized if the cut-flower export sector wishes to be successful in this growing market segment.



Competitiveness of the floriculture sub-sector may also be strengthened by further development of the supply sector. In addition to the transport and logistics sector, also capacities and links with the input supplies (varieties, agro-chemicals) and technical services (vocational and in-service training, research support services, technical consultancy services) may be strengthened. The Government sector can play an important facilitating role in this respect, particularly where it concerns:

- the formalisation of the new pesticide registration act, which is required for:

- the introduction of quality assurance systems and a Code of Conduct
- facilitating the development of an input supply sector
- strengthening the floriculture research capacity
- membership of the international Union for the Protection Of new Varieties of plants (UPOV)
  - whilst the Ethiopian Intellectual Property Rights Act covers also breeders rights, membership of UPOV provides added trust and confidence among international breeders and as such lower the threshold for breeding and propagation companies to establish in Ethiopia.

The favourable investment conditions and incentives provided by the Ethiopian government have been an important factor in attracting both foreign and domestic investors to the export horticulture. However, this has so far been mainly restricted to the increased investment levels in the floriculture sub-sector. Investment levels in the fruit and vegetable sub-sectors for the development of export production for the high quality markets in Europe, North America and Japan have been restricted to a few projects only. Entry barriers in the international fruit and vegetable markets appear to be a major restricting factor. The high concentration of buying power among the supermarkets in combination with their strict demands in terms of quality and safety compliance, traceability and consistency of contracted supplies implies that any newcomer onto the high value fruit and vegetable markets will have to have highly effective and efficient production and post-harvest systems in place from the beginning onwards. Furthermore levels of competition from existing exporting countries (Morocco, South Africa, Kenya, Egypt, etc.) are high. Successful development of the export-oriented fruit and vegetable sub-sectors aimed at the high value markets in Europe and elsewhere thus will require additional efforts from the sector to raise the competitiveness of the sector and create market entry.

The performance of the smaller scale fruit and vegetable growers and exporters in the supply chains aimed at the lower value markets in Djibouti, Yemen and elsewhere in the Middle East is not always easy to assess. Lack of market transparency combined with buyers' concentration at the importers' side are hampering further growth and development of the sector. The current transaction costs are high and handling, packing and transport of the produce create considerable losses during the post-harvest process. Competitiveness can only be enhanced in these supply chains with a comprehensive approach that simultaneously addresses these issues.

## 6.2 Recommendations for the floriculture sub-sector

Below a number of recommendations are drafted for consideration by the different stakeholders in the Ethiopian floriculture sector.

Recommendations for the floriculture sub-sector	Main responsibilities
<b>Market</b>	
More explicit choices to be made on the market strategy to be pursued; accordingly market partnerships, variety choices and production arrangements are modified; main end-market options are: (a) special flower shops requiring variety of high quality cut flowers; (b) supermarket sector requiring a limited range but constant supply of mid-quality products at very competitive prices; develop business strategy as ‘cost – leader’	Businesses (growers & exporters)
Market information services to be developed further to ensure better understanding of trends and developments at the end market; maintaining close contacts with buyers important; two-way information supply to inform buyers also on product and production quality in Ethiopia	EHPEA
<b>Post-harvest</b>	
Logistics and handling services to further increase in capacity and development of specialised forwarding and handling services; challenge will be to handle the increasing volume of produce at competitive prices to give Ethiopian exports a price advantage compared to other countries in East and Southern Africa	Business sector (airlines, handling & forwarding)
Phytosanitary inspection and certification of produce to develop into consignment based inspections at the airport	MoARD
Capacity building in quality management issues too further improve the sorting, packing, cooling, etc. in line with requirements of the chosen end-market	Consultants; formal training / education
<b>Primary production</b>	
Capacity building leading to further production improvements; better understanding of interactions between variety-growing conditions; increased productivity and cost-awareness; quality management and certification systems; this requires further development of vocational and university education, floriculture research capacity and in-service training for staff and management working in the sector (‘constant training’)	Formal training / education; research, consultants
Further development of a conducive legislative framework – UPOV membership and pesticide registration system	Government (MoT&I; MoARD)
Development of a Code of Conduct at sector level to demonstrate compliance with general standards (environment, workers’ welfare, etc.)	EHPEA



Strengthen the sector's relationship with the Environmental Protection Agency (EPA) for environmental impact assessments and licensing purposes; in addition EPA's capacity to provide efficient and effective services within their mandate need to be considered.	EHPEA and EPA
Reduction of bureaucracy in provision of Government investment support	Government
Production support services to be developed further particularly in relation to production input supplies, soil testing, breeding, etc. Economies of scale are to be achieved to ensure competitiveness with other major flower exporting countries	Business sector

### 6.3 Recommendations for the fruits and vegetable exports

The recommendations listed above will be beneficial also for the export-oriented fruit and vegetable sub-sectors that are focused on the high value horticultural markets. However, given the fact that these two sub-sectors are not yet substantially developed, a few additional recommendations are formulated to address a few specific short-term issues that are important to the competitiveness of these sub-sectors.

For the fruits and vegetable supply chains aimed at the Middle Eastern market a different set of recommendations has been drafted for discussion.

<b>Recommendations for the high-value fruits and vegetable export sectors</b>	<b>Main responsibilities</b>
<b>Market</b>	
Market studies and feasibility studies to be implemented into opportunities for Ethiopian exporters; raising market awareness on key characteristics	Business sector, donor organisations
Development of joint ventures between Ethiopian growers and existing international suppliers/importers to the high value vegetable and fruit markets	Business sector
<b>Post-harvest</b>	
Identify options for synergy between floriculture and vegetable/fruit in handling, transport and logistics; includes planning for additional cooling and warehousing capacity, freight planning, quality handling services, etc.	Business sector
<b>Primary production</b>	
Production support services to include also technical advice and inspection services of qualified, respectively accredited organisations for quality and food safety assurance systems	Business sector, donor support
Specific training support to be developed for improved production of fruits and vegetables	Government; donor support

<b>Recommendations for the low-value fruits and vegetable export sectors</b>	<b>Main responsibilities</b>
<b>Market</b>	
Create market awareness on functioning of the markets in Djibouti, Yemen, Saudi Arabia; price information, trends in demand and supply are to be provided	Govt. services, donor organisations
Market surveys in potential end-markets to be conducted to check the opportunities and pre-conditions for successful operations at these specific end-markets	Govt. services
<b>Post-harvest</b>	
Feasibility to be checked in terms of operations and economics of improving the supply chain arrangements, through chain integration, improved logistics, local packing and warehousing facilities	Government (MoARD)
<b>Primary production</b>	
Testing of improved varieties for production improvements, preservation, etc.; importation of improved varieties for fruits and vegetables in demand at end-markets	Research
Technical advice and training for primary producers	Government; donor support

#### **6.4 Medium and long term development of the sector**

The various recommendations listed above are mainly addressing current issues that need to be addressed to enhance the competitiveness of the various export-oriented sub-sectors. The competitiveness of an individual business or sub-sector is however not stagnant and its status is under constant development. In terms of a comprehensive and overarching strategy for the export-oriented horticultural sector as a whole it is also important to look at the institutional arrangements of a sector and how these institutions can contribute to the medium and longer term competitiveness of the sector. This discussion has not been adequately held in Ethiopia yet.

When going from a pioneering sort of approach to business and sector development towards a strategy aimed at consolidation and expansion it is important that the institutional arrangements are covered and where necessary strengthened. In this context the following questions may be relevant:

- Which opportunities are available to further increase the level of horizontal integration among different suppliers in the sector? Will this lead to a relative improvement of the growers' position towards other chain players? What will be the specific roles of the growers' and exporters' association in this respect?
- Does the fact that in several locations the density of export-oriented farms is high provide possibilities for 'cluster' – formation? Which synergies would be possible through better clustering? Which other stakeholders (research? support services?)

should be present to make these clusters effective? What attitude and approach is required among the various cluster partners to be successful? Who should facilitate such a process?

- How to sustain and further strengthen the public-private partnership between Government and business sector? Is the business sector adequately represented? Does the Government have adequate capacity and the policies in place to support business development? What will be the role of donor agencies in this context and how can their contributions be made more effective?

# **Annexes**

## **Annex 1: Main reference documents**

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GDS - Global Development Solutions (June 2006); 'Integrated Value Chain Analysis for the Floriculture (Rose) Sector in Ethiopia; prepared for the Government of Ethiopia and the World Bank.

MoARD – Ministry of Agriculture & Rural Development (2006); 'Horticulture Development in the Smallholders' Sector in Ethiopia'; paper prepared by Dr. Workafes Tsadik, (Head of Department for Horticultural Development), Government of Ethiopia Addis Ababa.

MoFED – Ministry of Finance & Economic Development (2006); 'Ethiopia: Building on Progress – A Plan for Accelerated and Sustained Development to End Poverty (PASDEP)'. Government of Ethiopia, Addis Ababa.

Wijnands, J. (2005); 'Sustainable International Networks in the Flower Industry; bridging empirical findings and theoretical approaches'; International Society for Horticultural Science. Also available on internet: [http://www.actahort.org/chronica/pdf/sh\\_2.pdf](http://www.actahort.org/chronica/pdf/sh_2.pdf)

World Bank (2005); 'The European Horticulture Market; opportunities for Sub-Saharan African Farmers'; World Bank Working Paper no. 63

## **Annex 2: Brief overview of developments in African flower exporting countries**

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### ***Kenya***

Since the early 1970s, Kenya's flower exports have shown strong growth. In the beginning, *Dianthus* (carnations) was the major crop. Later, the industry changed towards growing roses, which now constitute more than 70% of its flower exports. The sector also diversified into other flowers (like *Hypericum*, *Zantedeschia* and *Lilium*), foliage, propagation material and prepared flowers. Cultivation techniques are becoming more sophisticated and more attention is being paid to the use and quality of inputs. Steel and aluminium greenhouses now rapidly replace wooden structures.

Over 60% of Kenya's flowers are exported to The Netherlands, either to the auctions or via direct market channels. However, the sales of bouquets to supermarket chains, particularly in the UK, are increasing. Currently, the sector contributes more than 12% of Kenya's foreign exchange earnings and is a major employer.

The Horticultural Crops Development Authority (HCDA) is responsible for regulating the industry and issuing licenses to exporters. Kenya has two major producer organisations: the Kenya Flower Council (KFC) with about 40 members (mainly large-scale foreign growers) and the Fresh Produce Exporters Association of Kenya (FPEAK) with about 25 members.

### ***Uganda***

In Uganda, floriculture started in the early 1990s with roses and foliage. The sector expanded rapidly for a few years, but then ran into trouble in 1997-98 when several growers went out of business. From 1998 onwards however, the sector has come back on track, as a result of an encouraging government policy towards flower exports and initiatives by the Uganda Flower Exporters Association (UFEA). For instance, UFEA has set up its own cold store and export handling facilities at Entebbe Airport (called Fresh Handling Air Cargo).

Despite a lack of new floriculture investors, Ugandan flower exports have kept growing over the past ten years, particularly in terms of volume. While growing conditions favour a limited number of varieties (like sweethearts and few intermediates), roses continue to be the leading product. In sweetheart roses, high yields of up to 500 stems per m<sup>2</sup> and good consistent quality are achieved. Almost all Ugandan rose exports are now of small flowered varieties.

### ***South Africa***

East African countries have very small local floriculture markets and rely thus heavily on exports. Further south, the South African flower market is growing and is centred on a Dutch-style auction in Johannesburg. On the other hand, the South African flower exports are also growing, particularly the typical South African flowers and foliage like *Protea* and other so-called Fynbosch products.

More traditional floricultural crops like roses encounter major difficulties as a result of the relatively high transportation costs.

### ***Tanzania***

Floriculture is a relatively small industry in Tanzania and the country plays a minor role in the international flower trade. The production and export of cut flowers from Tanzania is often seen as part of Kenya's floriculture, as the sector is geographically close and institutionally well connected to Kenya (more than 50 percent of all cut flowers are exported via Nairobi).

In 1987 the flower sector started with the cultivation of *Dianthus* (carnations), *Euphorbia* and *Ami majus* in open fields for export to the EU. During the 1990s, more growers entered the sector and there was a steady growth in the area under flower production (from 28 ha in 1995 to close to 80 ha in 1998). Thereafter, the number of companies and production area has been practically stagnant. Due to the political situation in Zimbabwe, few (*Hypericum*) growers shifted their production to Tanzania. The industry has not reached the critical mass required to boost its exports, like regular cargo flights out of Kilimanjaro Airport, registration and regular supply of chemicals, and local capacity building of staff and labourers.

In addition to cut flowers, Tanzania is an exporter of chrysanthemum cuttings and other pot plant material. Moreover, growing circumstances in the hills around Arusha and Moshi have attracted several plant breeder propagating pot plant material, summer flower seeds, bean seeds and hybrid vegetable seeds.

Recently, the Tanzania Horticulture Association (TAHA) was established which has already been able to enter into a constructive dialogue with the relevant authorities resulting into some concrete projects to attract fresh investment to its horticulture sector.

### ***Zambia***

In Zambia, the floricultural sector was practically dormant until the late 1980's at which time the Government of Zambia began the liberalization of the economy giving capacity to private entrepreneurs and easing import and export restrictions. The Government strongly encouraged export diversification towards non-traditional produce, floriculture included.

Zambia's floriculture industry is dominated by roses, which account for about 95% of the total production while 5% is covered by summer flowers. Almost all flowers are sold in the EU with the Dutch auctions accounting for more than 90%. The Government of Zambia and the Zambia Export Growers' Association (ZEGA) have a good working relationship and jointly they set up a training trust including a horticulture pilot farm.

### ***Zimbabwe***

Floriculture exports from Zimbabwe commenced in the mid-1980s. Until recently, the flower industry was the fastest growing agricultural sub-sector in the country. From 1986 to 1999, horticultural exports recorded an average annual growth of about 15 percent.

After the controversial land reform in 2000, many foreign growers left the country. Current growers have been struggling with shortages of capital, chemicals and technical know-how. Many farmers do not have the foreign currency to pay royalties. The government's agrarian reform resulted in a strong fall in production. Nevertheless, the remaining and new growers have shown remarkable resilience to the political situation.

Roses constitute about 70% of Zimbabwe's flower exports. Other products include Proteas and summer flowers. The principal markets are The Netherlands and South Africa with the surplus going to Australia, the Far East, Germany, United Kingdom and USA.



### **Annex 3: Stakeholder analysis**

This annex introduces the main public and private stakeholders with regard to the horticulture sector Ethiopia.

#### ***Public stakeholders***

The main Governmental stakeholders that are active in or have influence over the horticulture sector are the Ministry of Agriculture & Rural Development (MoARD), Ministry of Trade & Industry (MoTI) and its Export Promotion Department and Ethiopian Investment Authority, Ministry of Finance (MoF) and its Customs Office, Development Bank of Ethiopia (DBE), Ethiopian Airlines (EA) and the national research system.

#### ***Ministry of Agriculture and Rural Development (MoARD)***

Promotion of agricultural development and issues of plant protection and regulation on the use of agrochemicals are under this Ministry. The Crop Protection Department has the mandate to deliver phytosanitary services of regulation and control of the import and export of planting material and produce. The Phytosanitary Service carries out inspections of seeds, seedlings and other imported plant materials and pre-shipment inspections of fresh produce.

#### ***Ministry of Trade and Industry (MoTI)***

This Ministry has the mandate on trade development. Promotion of foreign investment and exports has become a priority area of the Government, which implies close consultation with the Prime Minister's Office on this. The Ethiopian Export Promotion Agency (EEPA) has become a department under MoTI (Export Promotion Department EPD). The EPD services include training to exporters, enabling conducive export procedures, information sharing and networking, market studies, and facilitating participation in international trade fairs.

UNCTAD established a Trade Point at the then EEPA in order to upgrade the quality and to improve the efficiency of its trade support services and aiming to increase the participation of small and medium enterprises in the export business.

The Centre for the Promotion of Imports from developing countries (CBI) of The Netherlands Ministry of Foreign Affairs has also been collaborating closely with the EEPA and now EPD on an Integrated Institutional and Export Development Programme (IIEDP). Floriculture and vegetable exports are amongst the selected products to be supported under this IIEDP.

The Ethiopian Investment Authority (EIA) is a parastatal company under the responsibility and coordination of the MoTI. It serves a one-stop window for investors and has played a role in facilitating foreign investment in the horticulture sector. Aiming to promote investment, the main services to be provided by the EIA are provision of information, screening and approval of investment plans, and issuing of investment permits.

### ***Development Bank of Ethiopia (DBE)***

Ethiopia counts with a Government Bank for economic development. EDB manages a public fund (international loan), which is allocated particularly for the development of horticultural exports. The financial package is relatively attractive and the fund is substantial. However, its implementation is weak due to bureaucracy being a typical Government institution and due to lack of expertise in reviewing horticulture investment proposals. Furthermore, the package favours foreign growers and local investors have barely access to it.

### ***Ethiopian Agricultural Research Organisation (EARO)***

Recently EARO developed a plan for research into horticultural production and for extension activities. However, the implementation of this plan has not yet come off the ground. The two main research institutes (Melkasa near Nazareth for the lowland crops and Holeta for highland crops) lack experience and expertise on export oriented horticulture and floriculture.

### ***Jimma University (JU)***

The College of Agriculture of Jimma University offers the only formal horticulture education in the country. The College launched a B.Sc degree and a diploma programme in horticulture recently. Relationships with horticulture training and/or education institutes in other countries as well as collaboration with existing growers are yet to be established.

### ***Private stakeholders***

The main stakeholders of the private sector that are active in or have an influence over the export oriented horticultural sector are the Ethiopian Horticulture Producers & Exporters Association (EHPEA), the Ethiopian Horti Share Company (EHSC), airlines, handling agents in Ethiopia and Europe, importers and the (Dutch) flower auctions.

### ***Ethiopian Horticulture Producers and Exporters Association (EHPEA)***

The EHPEA was established at the end of 2003 as a not-for-profit organisation based on the voluntary membership of horticultural growers cum exporters. EHPEA is the only association related to the horticulture sector in Ethiopia and aims to promote the sustainable growth of the sector in general and the private sector participation in particular. EHPEA is recognised by Government, international organisations and other agencies as the representing body of the horticulture sector. It has facilitated constructive dialogue and coordination (see EHSC below) amongst stakeholders in and around the sector. The association has difficulties to keep up with the rapid growth of horticulture industry and requires strengthening of its organisational and institutional capacity urgently.

### ***Ethio Horti-Share Company (EHSC)***

Mid 2004 the EHSC was established by a number of horticulture producers and exporters with the objective to collectively arrange for airfreight and handle administrative issues with the airlines. In its few years of existence, EHSC has contributed to the launch of

chartered regular cargo flights operated by Ethiopian Airlines. Moreover, it has ventured into collective purchase of supplies like agro-chemicals and small equipment.

### ***Environmental Protection Agency (EPA)***

The Environmental Protection Agency (EPA) was established as by proclamation no. 9/1995 with statutory responsibility for the overall environment. As one of its first responsibilities the Environmental Policy of Ethiopia (EPE) was formulated, which was formally approved by the government in 1997. One of the main responsibilities of the EPA is the provision of guidelines and support for an Environmental Impact Assessment (EIA). Before an investment permit (e.g. a floriculture farm) can be issued to the relevant applicant an EIA must be conducted by an Independent Assessor following the EIA Guidelines as provided by the EPA. Conducting an EIA is since 2002 a legal requirement, however enforcement is still minimal and the EPA does not yet have the recognised mandate or the capacity to register independent consultants and assessors.

### ***Airlines***

All exports of flowers, cuttings and vegetables are by air. The B-757 of EA takes the majority of all cargo, but fresh produce is exported and loaded onto different passenger planes operated by KLM and Lufthansa. EA also leases DC-10 cargo planes for freight services during peak seasons. Other airlines do not operate dedicated cargo planes out of Ethiopia to Europe as yet. The number of cargo flights varies between 2 and 7 flights weekly.

### ***Handling agents***

Bole airport has a number of handling agents who expand to be able to handle large volumes of fresh produce. EA recently opened new facilities and a Dutch/Ethiopian consortium is preparing a complete cool chain service (Ethiopian Perishable Logistics). With these new facilities Bole airport will be as good as or better than airports in Nairobi and Entebbe.

### ***Flower Auctions & importers***

A substantial part of the cut flowers is sold through the Dutch flower auctions FloraHolland and VBA (Aalsmeer). Both auctions have their own representatives in Ethiopia. Upon arrival on the auctions, flowers are handled and prepared for auctioning by an importer (like Global Flower Service, Van Beek Bloemen and Decofresh).

### ***Suppliers to the industry***

The horticultural industry requires inputs like greenhouses, irrigation equipment, cold stores, young plants and varieties/cultivars. The suppliers of these inputs and equipment play a very important role, since they do not only provide the hardware, but also valuable information and expertise as an embedded service to the client. At the moment, growers import most of their inputs and equipment.

### ***Civil society organisations***

Apart from public and private stakeholders, there are a number of civil society organisations that are active in the horticulture sector. Civil society organisations monitor

the use of natural resources such as land and water as well as the use of agro-chemicals and its impact on the natural environment. Moreover, primary as well as secondary labour conditions are monitored and discussed with relevant authorities and EHPEA. Recently six civil society organisations have organized themselves into the National Flower Alliance (NFA).

***National Flower Alliance (NFA)***

The National Flower Alliance (NFA) is a group of six civil society organizations (i.e. Forum for Environment, Organization for Social Justice in Ethiopia, Panos Ethiopia, Confederation of Ethiopian Trade Unions, Ethiopian Wildlife & Natural History Society, Ethiopian Women Lawyers Association) chaired by the Forum for Environment (FfE).

The NFA aims to work constructively together with floriculture stakeholders and aspires to contribute to the sustainability, corporate social and ecological responsibility of the flower industry. The NFA and EHPEA have entered into discussion on a number of issues focusing particularly on the development and implementation of a sector wide code of conduct. NFA has formulated a positive proposal of its envisaged contribution