Tips & AusAid

SADC * Trade

trade information brief

cut flowers & foliage

Participation in international trade has become one of the most important factors in increasing the prosperity of countries. Yet for many developing countries, perhaps particularly for those in Sub-Saharan Africa (SSA), trade is viewed primarily from a defensive perspective, with a focus on the disruptive effects of imports rather than on the opportunities presented by increased access to world markets. A key reason is the existence of information market gaps that are often associated with trade facilitation and development in developing countries – information on the export performance and potential of many developing countries remains incomplete.

The TRADE INFORMATION SERVICE series of market briefs aims to contribute to bridging this information gap for existing producers in the Southern African Development Community (SADC) who may not have the financial resources to generate a fully fledged market research process. The briefs are not intended to act as the detailed export market intelligence that `successful exporting requires, but rather as a basic first-cut analysis of export prospects, to allow enterprises to make the decision on whether to initiate further market research.

Each Trade Information Brief will cover a product cluster of particular interest to members of SADC. The cluster may represent an existing key set of export products with potential for expansion, or a relatively new set where there is an indication of competitive advantage for the region.

1. Introduction

Over the last 20 or 30 years, the demand for cut flowers has increased significantly and important changes occurred in consumption patterns. Rather than occasional purchases of traditional species for special occasions, flowers are becoming a regular decorative part of middle- and upper-income homes, and exotic and interesting varieties are increasingly popular.

Linked to this change of when, how and which flowers are bought, are how and where these flowers are produced. Although much of the domestic demand in major consuming countries is still satisfied by domestic production, commercial production has become a highly globalised trade. The widespread use of air-freight transport, together with increases in the use of logistical practices such as cold-chain management, have allowed a shift in production to countries that enjoy competitive advantages in land, labour and climate – hence the importance of the industry for developing countries.

One of the biggest success stories in cut flower production is in fact an SSA country, Kenya, which is currently the fourth-largest exporter in the world. With similar geographical, infrastructural and competitive conditions, other SSA countries have tried to emulate the success of the Kenyan industry. Within SADC, Zimbabwe has had particular success. In 2003, Zimbabwe was the eighth-largest exporter of cut flowers (10th in 2004). Other SADC countries demonstrating relative success in cut flower exports include South Africa (SA) in 21st place, Zambia (23rd), Tanzania (29th) and Mauritius (38th). SA, ranked 15th-largest in world terms, is the only significant SADC exporter of foliage.

SADC countries' demonstrated ability to develop export market shares indicates a degree of competitive advantage in this cluster of products. Sources of advantage in the region emanate from cheap and available land, low labour costs, excellent climatic conditions as well as (the occasionally double-edged sword of) counter-seasonality with many of the major markets.

However, increasingly these advantages are not sufficient to compete on the world markets as they become ever more competitive – and traditional cost and pricing advantages are being replaced by demands for quality and efficient management systems.

This Trade Information Brief surveys in more detail these advantages and where they are likely to have the most effect. It also looks at some of the constraints to successful export expansion that SADC countries face.

How is SSA faring in this sector?

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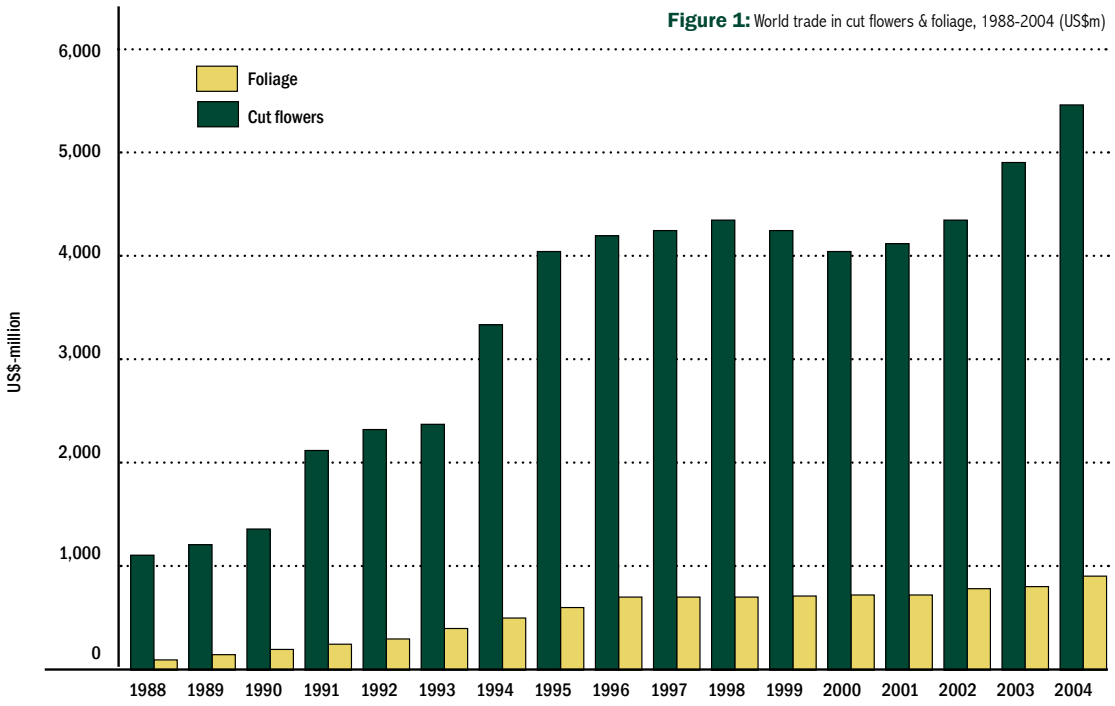
However, increasingly these advantages are not sufficient to compete on the world markets as they become ever more competitive – and traditional cost and pricing advantages are replaced by demands for exceptional quality and more efficient management systems.

Figure 1: World trade in cut flowers & foliage, 1988-2004 (US$m)



Source: International Trade Centre (ITC) COMTRADE

Table 1: HS* codes for cut flowers

603	**Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared**		
603	10	Fresh cut flowers	
603	10	10	Rosa
603	10	20	Dianthus
603	10	30	Orchids
603	10	40	Gladiolus
603	10	50	Dendranthema
603	10	80	Other fresh cut flowers
603	90	Prepared cut flowers	
604		**Foliage, other than mosses, lichens, and parts of Christmas trees**	
604	99	10	Not further prepared than dried
604	99	90	Other

* Harmonised System Code is an international method for classifying products for trading purposes

2. Product description

Cut flowers and foliage are part of a wider product cluster – Cut Flowers, Foliage and Ornamental Plants. The extended cluster includes live plants used for ornamental purposes, as well as seeds and bulbs. Only the limited product set – cut flowers and foliage – are covered in this report as the two products are marketed, cultivated and distributed in similar ways, and face similar processes along the distribution channel. Cut flowers are defined as *blossoms from flowering plants sold as stems, bunches, or arrangements*. The flowers can be fresh, dried, or preserved. Major commercial varieties include standard carnations, roses, chrysanthemums, gladioli, tulips, orchids and lilies. Within SADC, specialist indigenous species such as *protea* make up a small but important part of this category of products.

Of significantly less importance in terms of market size and value is foliage, defined as *cultivated ornamental stems, branches, or leaves grown as filler and foliage for cut flower arrangements and bouquets*.

2.1 Product characteristics

> Cut Flowers are parts of plants, characteristically including the blooms or "inflorescences" and some attached plant materials, but not including roots and soil (USITC, 2003, p.4).

Cut flowers are highly perishable products and can only maintain very limited life-supporting processes by absorbing water (and nutrients) through their stems, and are thus crucially dependent on efficient and speedy distribution channels, and excellent cold-chain management systems.

They are used for decorative purposes, as gifts, as arrangements or bouquets for formal events or special occasions, and as corsages or *boutonnieres*. They are purchased to celebrate holidays, in times of illness, for weddings or funerals, on occasions such as Mother's Day or Valentine's Day, or for everyday display in homes, businesses and public places. Demand patterns are therefore particularly seasonal and dependent on fashions.

Foliage is also a perishable product (sometimes less so than flowers), and is used with flowers or on its own to compose bouquets and/or arrangements of various types.

More than 200 varieties of cut flowers are sold commercially (on their own or along with other varieties) on the major world markets. Growing cut flowers is a particularly specialised industry in terms of knowledge requirements. To grow flowers successfully, one often has

to learn the trade over a number of years. Many flower growers learn the trade through family businesses/farms. Added to this is the incredible diversity in the product varieties (different species and breeds), different types of markets, and local conditions (soil, climate, availability of labour, finance, infrastructure, transport routes, etc.), all of which are important elements in determining whether a particular venture or industry will be successful. Some of the more important product characteristics of the cut flower industry are as follows:

- Flowers are very time sensitive. They have to reach their destined markets in as short a time as possible (around four days). An important characteristic for the end-user buyer is the length of the flowers' shelf-life (vase-life), which is obviously determined by how fast the flower reaches the point of final sale.
- Flowers are very fragile, and need careful packaging and handling. Much has been researched and written on the techniques and procedures for cutting/harvesting, packaging and storage of flowers: If these are improperly managed, the quality and durability of the product will be compromised.
- Flowers are seasonal. Seasonality affects when production occurs – although hothouses can be used to mitigate this. Consumption might also depend on seasonality, with certain varieties more popular in certain periods and/or for special occasions (particular holidays/festivals). Counter-seasonality is an important factor for SADC and other southern countries, as they can supply flowers to European (and other northern) markets during the seasons domestic producers are unable to. Even with hothouses, heating and lighting costs might render northern countries' overall costs high enough to facilitate the entry of SADC producers on a competitive basis.
- Flowers depend on fashions and consumer tastes. The demand for flowers is volatile and changes dramatically depending on trends (including colour, shape and smell) and preferences (what flowers are used for at a specific time, such as as displays or gifts).
- Flowers are income elastic. The demand for flowers increases with increased levels of income. They are also price elastic, but to a much lesser degree.

2.2 Production characteristics

2.2.1 Structures

Flowers can either be grown in open fields or in a protected environment (tunnels or greenhouses). Open field cultivation is often used for indigenous varieties, or for more robust flowers – cost being the obvious advantage – but also shorter (and easier) set-up times. Open field cultivation is much more feasible for southern or warmer regions with more suitable climates, hence the common use in the SADC region. The main disadvantages are the length of the harvest period and the quality of the produce. Harvest periods are necessarily restricted to the summer months when the temperature is above a certain minimum (no frost) and the light of a certain brightness.

Quality is reduced because of exposure to the elements and because most flowers are particularly susceptible to various pests and pathogens. Wind protection is important for all flower growing, and there are various ways to protect flower beds. Shade can also be important, and many flowers are cultivated using shade cloth. However, worldwide, most flowering and foliage plants are grown under cover or in some form of protected environment. Greenhouses allow for better and more consistent quality by controlling the environment, protecting the flowers from wind, rain and sun, and reducing the likelihood of pests and diseases. Greenhouses are also conducive to more efficient water use and the potential to manipulate plant growth – with sensors installed in or around plants in greenhouses, the timing and dosage of watering, lighting, heating and fertilising allow for shorter production cycles. Moreover, hothouses can extend harvest periods, although heating and lighting costs are often prohibitive. Hydroponic production systems are also becoming more common.

The decision about the extent of protection is in essence a question of the level of technology to use, and depends upon the climate (especially frost), access to greenhouses or other types of protection, as well as the size and suitability of open-field growing areas. As many new commercial varieties are sensitive to temperature and vulnerable to insects and disease, they increasingly need to be grown in green houses where conditions can be controlled and a certain minimum quality guaranteed.

But greenhouses represent a major capital investment, as well as increased operating costs (as noted earlier, energy for heating, maintenance, etc. could be prohibitive), and thus the decision is often a financial one (whether a grower can afford the investment or not). Unfortunately, modern standards on world markets require most flowers to be grown in greenhouses.

2.2.2 Soil, irrigation, fertilisation and climate

The soil type, including the minerals and nutrients it contains, as well as its ph level (along with the EC and P-Bray figures[1]) and water nutrient levels are important elements of the production decision. Insufficient nutrients must be augmented with fertilisers which add costs, and certain plants will not grow well (or at all) in soil that is too alkaline or acidic.

Irrigation is perhaps the most important element of growing flowers. Water quality (ph levels or hardness of the water, and whether it is filtered or chlorinated), irrigation techniques (overhead or drip irrigation), and drainage/run-off must all be managed correctly. Hydration, including fogging and spraying, is used to protect cold-sensitive plants from frost. In hot weather, plants are irrigated in the early morning or late evening to limit evaporation. In greenhouses, automated ventilation and humidification help to achieve optimal growing conditions.

Fertilisation is another vitally important component in the growing process and one needs to decide upon the type (organic or artificial) and methods. Climate and seasonality are also important determinants

[1] EC (electroconductivity) and P-Bray are soil sampling procedures.

in the decision on the varieties to produce and where the export markets lie. It will also determine to a large extent which structures are required for production.

2.2.3 Pests, diseases and weeds

Pests and diseases are important considerations, especially given the stringent quality controls of most of the major markets. Insects, fungi, bacteria and viruses can all harm flowers, and may require disinfestations through fumigation using insecticides and fungicides. These all add costs. Moreover, certain chemicals are in the process of being phased out, for example methyl bromide. So decisions on which chemicals or disinfestations techniques should be used can be vital in determining whether a grower is able to sell his/her produce on the world markets (especially the European markets). Weeds can be dealt with using certain (registered) herbicides.

2.2.4 Post-harvest handling

Cut flowers and greens are highly perishable and their shelf life depends on careful handling. Upon harvesting, flower stems are immediately placed in lukewarm water containing a floral preservative (a solution of sugar, other nutrients and a bacteriacide). The cut flowers and greens are then stored in oolers overnight for later grading and sorting, or they can be left outside in a cool location. Shipping in refrigerated containers or trucks is required for long hauls.

Different flowers need to be harvested at different opening or ripening stages (also dependent on market demands), and packaged differently. One of the most important elements is an efficient and unbroken cold chain system. Incorrect harvesting, packaging or storage can lead to flower senescence (looking older), wilting, leaf yellowing or shattering (loss of leaves/petals).

Factors that need to be considered include water type/quality/supply (and re-hydration techniques), harvesting conditions (time, temperature, pulsing[2], etc.), food supply, light (during storage) and other storage conditions (temperature, exposure to ethylene[3]), and growth tropisms (bending towards light and/or gravity). Damaged flowers or flowers with shorter vase-lives fetch lower prices, or nothing at all, therefore post-harvest handling is a critical element in producing and selling cut flowers (*also refer to section 7 on distribution channels*).

[2] The post-harvest life of cut flowers can be prolonged by 'pulsing' them after picking, that is, putting the stems in a sugar solution, usually for12-16 hours.

[3] Cut flowers are not compatible with fruit of vegetables in cold storage, as these produce ethylene, which is harmful to flowers. Ethylene pollution is also prevented by using internal combustion engines in the storage facility, servicing equipment so they don't produce ethylene, having good sanitation practices in cleaning up diseased and decaying plant material and disposing of 'old' flowers.

2.2.5 Product classification

Floriculture products can be classified into the following categories (Kaiser Associates, 2001: 24):

- Indigenous products
  - Protea and other fynbos (SA)
  - Foliage (for example, leatherleaf and coral ferns)
  - Indigenous bouquets (combining the two categories above)
- Traditional greenhouse products
  - 'Classics' (for example, roses, carnations, chrysanthemums)
  - 'Exotics' (orchids, lilies, etc.)
  - Summer flowers (used as fillers, such as Gypsophilla, Monte Casino, etc.)
  - Traditional bouquets
- Mixed bouquets (combining indigenous and traditional greenhouse products).)

Largest worldwide demand is for the classic flower varieties that are usually grown in greenhouses (*see table 3*), and this is also by far the most competitive and commoditised industry. Many developing countries produce these varieties; in fact, the SADC countries of Tanzania, Zambia and Zimbabwe produce little else. Unfortunately, overemphasis on a few particular varieties can leave an industry vulnerable to sudden world demand changes. The fastest international growth in sales is occurring in exotic or novelty flowers, including indigenous varieties.

3. Trends

3.1 Consumption trends

The world market for cut flowers has been growing. From 1999 to 2004, exports of cut flowers rose by 9% and by 13% from 2003 to 2004. According to the Flower Council of Holland (2005), consumption patterns in cut flowers will continue to rise at a rapid rate, with global consumption predicted to be 30% greater by 2014. At present, global trade in cut flowers stands at roughly US$5.5-billion, of which nearly 70% is with the EU.

Historically, the major markets (particularly in the EU) have focused predominantly on the more standard, 'everyday' varieties of flowers, such as roses and carnations. However, more recently there have been some shifts in demand patterns, with more unusual and/or speciality species (for example, less standard roses) finding a niche. At the same time developing countries, particularly

Table 2: International flower markets: size and per capita expenditure

International flower markets							
The EU				Other selected countries			
Country	US$-million	Pop (million)	US$ per capita	Country	US$-million	Pop (million)	US$ per capita
Germany*	3,278.49	81.3	40.3	US	5,253.96	276.0	19.0
UK	2,195.79	60.5	36.3	Japan	3,362.13	127.0	26.5
France	1,743.35	59.7	29.2	Switzerland	549.05	7.4	74.2
Italy	1,600.80	56.5	28.3	Norway	235.87	4.5	52.4
The Netherlands	761.44	16.2	46.9	China	925.07	1,306.0	0.7
Spain*	823.34	40.8	20.2				
Belgium	389.58	10.2	38.1				
Austria*	373.47	8.0	46.7				
Sweden	272.70	9.1	30.1				
Poland*	289.65	39.0	7.4				
Denmark	193.90	5.3	36.3				
Greece	162.03	10.8	15.1				
Finland	156.72	5.2	30.1				
Portugal	144.32	10.2	14.2				
Hungary*	133.69	9.7	13.8				
Ireland	108.90	3.8	28.3				
Czech Republic*	102.92	10.8	9.5				
Slovenia*	53.05	2.0	26.5				
Slovakia*	96.55	10.1	9.5				
	12,880.70	449.3	28.7				

* 2002 data **Source:** The Flower Council of Holland

Colombia and Kenya, have been able to gain a foothold in these giant markets. Part of these changing patterns of trade can be ascribed to increased globalisation and the lowering of tariffs, and part to the change in consumer tastes.

However, far more important is the combined impact of advanced transport services (refrigerated aircraft) and counter-seasonality of many of the southern developing countries. Whereas the developed northern countries historically had to rely on short harvest/blooming periods (especially for summer flowers) and/or expensive heating and lighting in greenhouses, many developing countries with warmer climates have harvest periods which are not only much longer but also coincide with the Northern hemisphere's winter months. According to the CBI 2004[4] survey, despite some European countries having considerable summer flower capacity, the majority has to be imported from abroad – mostly from Kenya and Israel, but also from SADC countries such as Zimbabwe, SA, Zambia and Tanzania.

The consumption of flowers is not necessarily correlated to the level of per capita income in a country. On average, Americans consume rather few cut flowers compared to their European counterparts. Switzerland has the highest per capita consumption figure, nearly four times that of the US. According to the Dutch Flower Council, only 28% of households in the US purchase flowers, compared to Germany, the UK and France with 76%, 63% and 60% respectively.

The purchase of flowers often depends critically on what use is derived from them. For example, the US is largely an impulse market, with most flowers being sold for use as gifts (74%) and far fewer being used for personal reasons (for example, to brighten up the house). In the Netherlands, on the other hand, personal use accounts for nearly 55% of all sales. Another important determinant of demand for cut flowers is the various holidays – Mother's Day, Valentine's Day, Easter and Christmas. The first two together account for 18% of all cut flower purchases. Flowers are also popular as birthday gifts, with one out of 10 bouquets bought for this purpose. Table 2 gives an indication of the size of some of the major markets and their per capita consumption spending (Flower Council of Holland, 2005).

3.1.1 European Union

The EU consumes more than half of the world's cut flowers, which makes it an important market for any aspiring flower exporting nation. Of the 10 biggest national cut flower markets in the world, six of them are in the EU – Germany, UK, France, Italy, the Netherlands and Spain. In terms of international trade, the EU accounts for nearly 70% of world imports (however, most of this is trade between EU members). At the same time, the auction markets in the Netherlands are by far the largest and most developed in the world, and act as a meeting point for buyers and sellers from all corners of the globe. Added to this is the very high per capita consumption spending of most Europeans on cut flowers. The EU market's importance cannot, therefore, be stressed enough.

[4] The Centre for the Promotion of Imports from Developing Countries' EU Market Survey on Cut Flowers and Foliage, published in October 2004.

Consumption trends

From 1999 to 2004, exports of cut flowers rose by 9% and by 13% from 2003 to 2004. According to the Flower Council of Holland, consumption patterns in cut flowers will continue to rise at a rapid rate, with global consumption predicted to be 30% greater by 2014. At present, global trade in cut flowers stands at roughly $5.5bn, of which nearly 70% is with the EU.

Historically, the major markets (particularly in the EU) have focused on the more standard, 'everyday' varieties of flowers. Recently there have been some shifts in demand patterns, with more unusual and/or speciality species finding a niche. Developing countries like Colombia and Kenya have managed to gain a foothold in these giant markets by capitalising on counter-seasonality and exporting 'indigenous' products.

Consumer patterns and preferences differ strongly, both between and within the major importing countries in the EU. The European market is, however, characterised by its preference for high quality, a high degree of freshness and long shelf-life. Other known demand determinants of European flower sales are strong scent and a changing demand for particular colours dependent on the latest fashions of interior décor. The emotional element is also very important, so certain varieties have particular meanings and are associated with particular occasions (for example, carnations are used at funerals, poppies for Remembrance Day and roses for love).

Around 50% to 60% of flowers in the EU are purchased as gifts, 20% for own use and 15% for funerals (CBI, 2004). Flowers as gifts compete with confectionary, jewellery and wine, and are therefore rather price elastic – as the price of cut flowers increases, consumers are likely to switch to other substitute commodities, and thus sales of flowers decrease. The Flower Council reports quality (36%), price (13%), species (13%) and colour (10%) as the main criteria of flower purchases. Companies and corporations are also important consumers of fresh cut flowers to display or use as gifts. These consumer patterns vary significantly across countries: whereas Germans, Italians and the Spanish tend to purchase flowers predominantly as gifts (55%, 90% and 92% respectively), the Dutch (55%) and English (45%) tend to purchase them for personal use (CBI, 2004).

In terms of market growth, three of the top four markets – Germany, France and the Netherlands – have become saturated and are even showing signs of negative growth. The other major market, the UK, has grown at a rapid pace, doubling since 1995, and continues to expand at remarkable speed (20% growth in imports from 2000 to 2004). The Italian market has slowed while the Spanish market continues at an even pace. The newest EU members (the 2004 accession countries) are growing rapidly and are expected to do so for some time to come.

Table 3: Demand by variety

Flower variety	2003 (million)	% change 2002-2003	Leading markets' flower preference		
Rosa (Roses)	681	-2.6	Germany	1	Roses
Dendranthema (Chrysanthemum)	337	-1.5		2	Tulips
Tulipa (Tulips)	186	8.6		3	Carnations
Lilium (Lilies)	160	-4.8	UK	1	Carnations
Gerbera (African Daisies)	106	-1.7		2	Roses
Cymbidium (Orchids)	66	-0.7		3	Chrysanthemums
Freesia	60	-3.0	France	1	Roses (67%)
Anthurium	43	2.6		2	Gladioli
Alstroemeria (Peruvian Lily)	40	-10.1		3	Other
Gypsophila (Baby's Breath)	37	-7.4	Netherlands	1	Mixed bouquets
Dianthus	35	-21.4		2	Roses
Eustoma Russellianum (Bluebell)	34	-7.1		3	Tulips
Hypericum (St Johns Wort)	31	-13.1	Italy	4	Chrysanthemums
Zanthedeschia (Arum Lilies)	30	-2.6		1	Roses
Other	483	–		2	Lilies
Total	2,330	-2.6		3	Daisies

Source: CBI EU Market Survey, 2004: Cut Flowers and Foliage

3.1.2 United States

In the US, the late 1980s and early 1990s saw a shift from domestic growers to low-cost imports in major cut flower sectors. Since 1995, this growth has stabilised somewhat, with current import shares of cut flower sales at roughly 60% (64% in 2004). Most cut flower imports come from Colombia, Ecuador, the EU and Mexico (*see table 14*), with Colombia the largest source and growing rapidly (55% market share and 21% growth in 2004), followed by Ecuador (18% and 27% respectively in 2004). These rapid increases are driven by lower production costs in Colombia, Ecuador and Mexico relative to domestic costs, and by climatic conditions (year-round growing conditions and little or no heating/lighting costs). Added to this is the proximity of these countries to the US, which allows them to enjoy transport cost advantages over other competing exporters, such as those in the EU or even African countries (who may have similar production costs).

The composition of imports into the US market has also changed, with declining sales of the major brands being offset by increased demand for specialty varieties. Domestic production of roses, chrysanthemums, carnations, alstroemeria and gladioli have all decreased, whilst imports of these varieties have risen rapidly, with the exception of carnations (lower overall demand) and gladioli (all domestically produced). In response, US growers started to focus on higher value specialty cut flowers, such as orchids, irises, lilies, daisies and tulips (and have even begun to export some of these varieties). During 2004, about 36% of US cut flower imports were fresh roses, followed by chrysanthemums (9.5 %) and carnations (9.4%) (USDA, 2005).

Domestic consumption of all cut flowers has risen, from US$894.8-million in 1995 to US$1,100.5m in 2004, with per household spending at $9.19 in 1995 rising to US$10 in 2004. Overall, domestic

Table 4: US domestic production of flowers, 1995-2004 (US$'000)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Standard varieties	215,172	194,864	198,447	175,620	145,832	121,277	104,961	108,498	95,892	90,850
Roses	125,727	117,346	122,515	102,365	87,003	69,294	59,976	58,878	46,997	43,111
Gladiola	36,110	33,260	34,861	33,138	25,535	28,339	24,284	26,853	28,325	25,957
Chrysanthemums	25,076	23,583	21,891	24,190	22,264	17,214	16,831	19,351	18,196	20,030
Carnations	28,259	20,675	19,180	15,927	11,030	6,430	3,870	3,416	2,374	1,752
Newer varieties	208,458	217,836	273,122	235,975	285,792	308,686	313,142	318,583	327,090	330,781
Total domestic production	423,630	412,700	471,569	411,595	431,624	429,963	418,103	427,081	422,982	421,631

Source: US Deparment of Agriculture (USDA) 2005

Table 5: US production, consumption and trade in cut flowers, 1995-2004 (US$m)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Domestic production	413.6	412.7	471.6	411.6	431.6	430	418.1	427.1	423	421.6
Imports	511.5	572.5	595	614.4	592.4	610.5	565.5	541.7	610.9	705.6
Total supply	935.2	985.2	1,066.6	1,026	1,024	1,040.4	983.6	968.7	1,033.9	1,127.3
Exports	40.3	47.5	48.8	44.6	41.7	39.7	39.7	36.3	33.8	26.8
Domestic consumption	894.9	937.7	1,017.8	981.4	982.3	1,000.7	943.9	932.4	1,000.1	1,100.5
Use per US household	9.19	9.50	10.19	9.71	9.51	9.49	8.83	8.64	9.18	10
Share of imports	57.2	61.1	58.5	62.6	60.3	61.0	59.9	58.1	61.1	64.1

Source: USDA Floriculture Yearbook 2005 **Note:** Only for wholesalers over US$100,000 sales

growers of flowers in the US have lost domestic market share to importers, from 43% to 36%. Initially this loss of market share was accompanied by falling prices, but more recently flower prices have been on the rise again (except orchids which have fallen by 177% since 1995). The net result is that volume production and mass marketing have driven floral prices so low that US consumers are buying more flowers. While US per capita sales of floral crops are still lower than in Western Europe or Japan, it has been increasing gradually over the last 10 years (USDA, 2005).

3.1.3 Japan

Japan has one of the world's most important cut flower industries in production, consumption and imports. It is the second-biggest national market in the world, after the US. Though demand for cut flowers grew steadily from the late 1980s to the mid-1990s, the latter half of the 1990s saw a slowdown, with both domestic production and imports losing their former vitality. This was mainly caused by sluggish demand for flowers by businesses due to Japan's economic recession. The slowdown continued into the new millennium, but levelled off in 2002.

More recently there have been notable changes in import trends, with greatly increased import volume, while nations historically considered to be the major exporters have shifted in rank. The dramatic growth of imports from Asian nations is especially noteworthy. Table 6 shows the change in wholesale volume of consumption and imports of cut flowers in Japan from 1998 to 2004.

Table 6: Cut flower consumption and imports for Japan, 1998-2004, (US$'000)

	1998	1999	2000	2001	2002	2003	2004
Total*	3,204,310	3,385,512	3,365,466	2,916,032	2,785,306	2,968,544	3,240,655
Chrysanthemums	1,000,296	1,026,373	989,558	833,345	809,517	862,985	963,151
Carnations	211,811	201,626	200,355	178,064	184,178	192,999	209,256
Roses	259,967	275,914	291,329	248,544	244,386	257,276	264,876
Orchids	48,420	51,475	49,488	41,699	39,649	40,444	44,134
Gerbera	52,003	54,231	56,814	50,514	48,894	52,009	52,832
Imports**	137,395	153,040	165,606	154,743	150,737	171,258	218,089

Source: *Ministry of Agriculture, Forestry and Fisheries (MAFF) Statistics 2005, **COMTRADE Statistics Database

The major flower varieties in the Japanese market are chrysanthemums (32%), carnations (8.2%), roses (7.2%), gerbera (3.4%), lilies (3%) and orchids (1.7%). Except for gerbera, the domestic consumption of all of these varieties have been declining between 1998 and 2004, with the total quantity of flowers consumed decreasing from 6,881-million stems to 6,249-million stems (9.2%) per year. At the same time, however, total domestic production has decreased by 9.5% from 5,629-million to 5,096-million stems. This demonstrates that as the market gets squeezed, Japanese producers are losing out to foreigners who can supply cut flowers at cheaper prices.

Traditionally, flower demand was concentrated on buying for ceremonial occasions (coming of age, funerals, etc.); more recently, with the advent of home delivery, flower purchases have been for gifts and/or home use. The use of flowers for business purposes has, how-

ever, always been a strong source of demand (*see table 7*). The impact of holidays (especially ceremonial holidays) is particularly noteworthy. Key demand months are January (New Year's Day), March (Spring Equinox), May (Mother's Day), August (Ancestor worship days), September (Autumn Equinox) and December (Christmas). Wealthier households tend to spend more on flowers than the poorer households; however, even the poorest bracket of households still tends to spend over ¥10,000 a year, indicating that flowers in Japan have a robust demand.

Table 7: Flower use in Japan, 1989-1998 (%)

	1989	1992	1995	1998
Business use	39.7	35.9	32.9	32.7
Order and delivery	9.8	10.5	10.3	11.6
Shop sales	50.5	53.6	56.8	55.7
Total	100.0	100.0	100.0	100.0

Source: Japan External Trade Organisation (Jetro) 2001

4. Major importers

Total world trade in cut flowers and foliage was about $6.5bn in 2004. Of this, $5.5bn was trade in cut flowers, with a five-year growth rate of around 9% between 2000 and 2004, and a two-year growth rate of just over 13%.

The import market is heavily dominated by the EU, with seven of the top 10 importing markets in the EU or Western Europe, and only the US, Japan and very recently, Russia, outside of this region. Of the top 20, no fewer than 16 countries are from Europe. Quite clearly, the European market is extremely important, particularly the EU. The biggest national market for imports is the UK, with 18% of the world market, followed by Germany with 17%, the US with 15%, France with 9% and the Netherlands with 8%.

The foliage market is not nearly as large as that of cut flowers, with world trade at $904m. This market has also been growing at a rather rapid rate, at 7% per annum since 2000, and at 8% since 2003. Again, the majority of countries (eight of the top 10) can be found in Europe.

Table 8: Top 20 importing countries of cut flowers, 2004

	Importers	Value imported in 2004, in US$'000	Annual growth in value between 2000-2004, %	Annual growth in value between 2003-2004, %	Share in world imports, %
	World estimation	5,544,720	9	13	100
1	UK	1,018,677	19	12	18
2	Germany	975,911	7	15	17
3	US	886,979	4	15	15
4	France	507,385	9	5	9
5	The Netherlands	491,584	4	3	8
6	Japan	218,089	7	27	3
7	Italy	191,336	7	4	3
8	Switzerland	166,293	7	6	2
9	Belgium	132,745	7	14	2
10	Russian Federation	117,322	40	98	2
11	Denmark	96,676	11	20	1
12	Austria	91,773	5	1	1
13	Canada	88,353	6	12	1
14	Sweden	67,515	16	8	1
15	Spain	59,976	21	8	1
16	Ireland	39,960	7	20	0
17	Poland	36,261	15	124	0
18	Czech Republic	35,479	14	15	0
19	Norway	34,877	7	11	0
20	Greece	30,770	16	18	0

Source: ITC COMTRADE

Table 9: Importing countries of foliage, 2004

	Importers	Value imported in 2004, in US$'000	Annual growth in value, between 2000-2004, %	Annual growth in value between 2003-2004, %	Share in world imports, %
	World estimation	904,339	7	8	100
1	The Netherlands	211,841	6	4	23
2	Germany	147,066	2	-1	16
3	US	114,008	5	6	12
4	France	48,795	10	11	5
5	Japan	47,390	4	7	5
6	UK	47,297	16	5	5
7	Belgium	41,281	12	36	4
8	Switzerland	34,369	3	6	3
9	Italy	25,994	12	24	2
10	Poland	19,068	32	31	2

Source: ITC COMTRADE

4.1 Imports and exports by region

The EU, with nearly 70%, dominates the world cut flower market when it is segmented by region, followed by North America (NAFTA[5]) and Asia. From table 10 it is clear that the EU's 10% growth rate per annum is slightly slower than world growth. The next biggest regional markets, North America and Japan, have above-average growth rates of 15% and 22% respectively (over two years). The majority of imports to the North America region (90%) are destined for the US. Similarly, Japanese imports constitute roughly 75% of all Asian imports. Clearly, growth in these regions is dependent upon that of the two countries, with the US growing at 15% and Japan at 27%.

Another region which has started to grow at a rapid rate is Central and Eastern Europe, with just under 20% and 50% growth rates for the five-year and two-year periods ending in 2004. An analysis of the fastest growing world markets (*see table 11*) reveals why this region is growing so quickly. Russia is growing at an incredible pace (presently doubling every two years), as is Poland,

Table 10: Top 10 importing regions of cut flowers, 2004

Importers	Value imported in 2004, in US$'000	Annual growth in value between 2000-2004, %	Annual growth in value between 2003-2004, %	Share in world imports, %
World estimation	5,544,720	9	13	100
EU	3,751,505	10	10	68
NAFTA	978,600	4	15	18
Asia	293,889	5	22	5
Central and Eastern Europe (CEE)	141,384	19	49	3
Middle East	22,899	7	10	-
Latin America and the Caribbean	18,276	-11	7	-
Oceania	8,349	0	25	-
Africa	5,347	9	100	-
SADC	1,902	7	69	-
Southern African Customs Union (SACU)	1,035	2	38	-

Source: ITC COMTRADE

[5] North American Free Trade Area.

Czech Republic and Hungary. It must be noted, however, that a number of the fastest-growing countries in table 11 are growing off a very small base. Should these countries continue to grow at such speeds, the flower market will keep expanding at a healthy rate for many years.

In identifying the key markets for SADC countries, it is important to analyse not only the world's biggest and fastest growing regional and national markets, but also those markets to which SADC countries have historically exported, and in which there might exist some level of competitive advantage.

Over the past 10 years or so, the EU has been the biggest market by far for SADC countries, receiving over 80% of the region's exports (most of these are exported to the Netherlands). Other big markets include Switzerland (with a 4% share), Japan (4%) and the US (2%). Markets experiencing growth are the UAE (10% growth in 2003 to 2004) and Saudi Arabia (62%). These two markets may well prove important to SADC flower growers due to their proximity and the duty-free flower markets being constructed in Dubai.

Table 11: Fastest-growing importing countries, 2004

	Importers	Value imported in 2004, in US$ '000	Annual growth in value between 2000-2004, %	Annual growth in value between 2003-2004, %	Share in world imports, %
	World estimation	5,544,720	9	13	100
1	Malaysia	2,978	50	155	0
2	Kazakhstan	2,907	47	39	0
3	Hungary	17,737	44	103	0
4	Cyprus	1,644	44	13	0
5	Russian Federation	117,322	40	98	2
6	Serbia and Montenegro	5,177	39	3	0
7	Colombia	3,213	36	33	0
8	Romania	7,307	35	30	0
9	Bulgaria	2,047	33	26	0
10	Ukraine	10,388	24	25	0
11	Belarus	2,480	24	29	0
12	Spain	59,976	21	8	1
13	UK	1,018,677	19	12	18
14	Sweden	67,515	16	8	1
15	Greece	30,770	16	18	0
16	Luxembourg	10,304	16	11	0
17	Poland	36,261	15	124	0
18	Slovakia	12,270	15	19	0
19	Estonia	5,771	15	31	0
20	Czech Republic	35,479	14	15	0

Source: ITC COMTRADE

4.1.1 European Union

Although the EU is by far the biggest market for cut flowers in the world, a large proportion of this trade is between EU members. The Netherlands supplies almost three-quarters of the EU market and an even greater proportion of the top three EU national markets – almost 80% of the UK's, 90% of Germany's and 90% of France's imports.

Intra-EU trade amounted to $2,932-million in 2004, roughly 80% of all EU cut flower imports. Of the remaining 20%, the Netherlands imported nearly 60%. Clearly, the Netherlands flower markets act as a distribution channel into the EU markets, and countries wishing to gain access into the EU should look towards these important auction markets.

Amongst countries outside of the EU that have been able to penetrate the European market to some extent, Kenya is by far the leader, with a nearly 40% share in all EU cut flower imports originating from outside of the EU. The country's EU market share is also growing rapidly – about 20% per annum for the last five years. Israel is second, followed by Colombia and Ecuador. SADC countries well-represented in the EU market are Zimbabwe (fifth), SA (seventh), Zambia (ninth) and Tanzania (12th). Unfortunately these countries, apart from SA, have been losing market share over the last few years.

The EU is clearly an important market for SADC countries to attempt to penetrate. But other African countries with similar climates that are located closer, and therefore subject to lower transport costs, are seemingly gaining a comparative advantage and market share. Kenya, Uganda and Ethiopia are all rapidly growing their exports. Added to this are the recent joint ventures entered into by Dutch businessmen in Ethiopia to grow flowers to supply the EU market.

Table 12: Top exporting nations to the EU, 2004

	Exporters	Imported value 2004, in US$'000	Share in EU's imports, %	Import trend in value between 2000-2004, %, p.a.	Import growth in value between 2003-2004, %, p.a.	Share of partner countries in world exports, %	Total export growth in value of partner countries between 2000-2004, %, p.a.
	World	3,751,505	100	10	10	–	9
1	The Netherlands	2,737,808	73	12	11	56	11
2	Kenya	285,217	8	19	25	4	24
3	Israel	112,761	3	-4	3	2	1
4	Colombia	88,299	2	1	-3	13	5
5	Ecuador	83,039	2	3	23	6	20
6	Spain	77,383	2	-1	-5	1	0
7	Italy	53,554	1	7	5	1	-1
8	Zimbabwe	49,184	1	-4	-22	0	–
9	Belgium	36,120	1	7	8	1	7
10	Uganda	25,759	1	28	33	0	-42
11	Germany	24,983	1	10	-12	0	27
12	South Africa	20,451	1	25	29	0	10
13	UK	19,898	1	6	10	0	6
14	Thailand	18,650	0	4	3	1	3
15	Zambia	17,181	0	2	-7	0	–
16	Turkey	12,952	0	18	34	0	32
17	France	11,837	0	-10	-13	0	-3
18	Denmark	8,575	0	31	-7	0	29
19	Ethiopia	6,058	0	87	76	0	96
20	Tanzania, United Rep. of	5,899	0	-8	-11	0	1

Source: ITC COMTRADE

Table 13: Intra- and extra-EU trade by country, 2004

Intra-EU Country	Total imports, US$'000	Imports from the EU, US$'000	Imports from outside the EU, US$'000	Rank	Extra-EU country	Value of exports to EU, US$'000	% share of EU external imports
Austria	91,773	88,552	3,221	1	Kenya	285,180	37.7
Belgium	132,745	111,222	21,524	2	Israel	112,491	14.9
Denmark	94,735	94,007	728	3	Colombia	79,492	10.5
Finland	19,841	18,762	1,079	4	Ecuador	76,751	10.2
France	507,385	482,013	25,372	5	Zimbabwe	49,186	6.5
Germany	975,911	896,065	79,846	6	Uganda	25,759	3.4
Greece	30,770	24,803	5,967	7	South Africa	20,443	2.7
Ireland	39,960	38,634	1,326	8	Thailand	18,657	2.5
Italy	191,336	160,831	30,504	9	Zambia	17,185	2.3
Luxembourg	10,304	10,095	209	10	Turkey	12,941	1.7
Netherlands	491,584	63,174	428,410	11	Ethiopia	6,058	0.8
Portugal	17,246	14,988	2,257	12	Tanzania	5,900	0.8
Sweden	67,515	67,124	391	13	India	5,674	0.8
UK	1,018,677	862,544	156,133	14	Cote d'Ivoire	4,505	0.6
Total	3,689,782	2,932,813	756,969	15	Morocco	3,230	0.4

Source: ITC COMTRADE

Major importers

The EU, with nearly 70%, dominates the world cut flower market when segmented by region, followed by NAFTA and Asia. Central and Eastern Europe is also growing rapidly, with just under 20% and 50% growth rates for the five-year and two-year periods ending in 2004. Russia, Poland, the Czech Republic and Hungary. are all growing rapidly.

The EU, the biggest market for SADC, receives over 80% of the region's exports. Other large markets are Switzerland (4%), Japan (4%) and the US (2%). Markets showing growth are the UAE (10% in 2003-2004) and Saudi Arabia (62%), which may prove important to SADC flower growers due to their proximity and the duty-free flower markets being constructed in Dubai. Although the EU is an important market for SADC, other African countries with similar climates that are located closer and so subject to lower transport costs are stealing market share away. Kenya, Uganda and Ethiopia are rapidly growing their exports.

4.1.2 United States

The import share of cut flower sales to the US domestic market is around 64%, and slowly rising. Domestic production of more common varieties continues to fall as US wholesalers supplement these with cheaper imports from abroad. The majority of the import market is supplied by Latin American countries, with Colombia claiming a 58% share of US imports of cut flowers, Ecuador 20% and Guatemala, Brazil, Peru and Chile featuring in the top 20. Two NAFTA countries, Mexico and Canada, and the Caribbean country Costa Rica are also in the top 10. The only SADC country to feature in the US top 20 is SA, although its market share has been declining. The US import market seems to be dominated by countries in close proximity to the US because of transport costs and long-established marketing and distribution networks.

There is also some evidence of international vertical integration, with companies in the US setting up operations in Colombia and Ecuador, whilst companies from Latin America are setting up subsidiaries to handle transport and packaging in the US. Whilst Latin American countries' share in the market has been growing, the European share has been declining. The only African country to have grown its market share – at a phenomenal rate of 200% over the last five years – is Kenya.

During 2002, about 36% of US cut flower imports were fresh roses, followed by carnations (13%) and chrysanthemums (11%).

4.1.3 Japan

In the past, almost all of Japan's demand for cut flowers was supplied domestically, with import penetration of only 3% in 1980 and 7% by 1997. However, more recently, the Japanese market has opened up and cheaper imports are beginning to price the domestic producers out of the market. At the moment the Japanese import market is

Table 14: Top exporting nations to the US, 2004

Rank	Exporters	Imported value 2004, in US$'000	Share in US imports, %	Import trend in value, 2000-2004, %, p.a.	Import growth in value, 2003-2004, %, p.a.	Partner country ranking in world exports	Partner country share in world exports, %	Total export growth in value of partner countries, 2000-2004, %, p.a.
	World	886,979	100	4	15	–	–	9
1	Colombia	511,696	58	5	21	2	13	5
2	Ecuador	174,660	20	8	26	3	6	20
3	The Netherlands	90,873	10	-2	-1	1	56	11
4	Costa Rica	23,584	3	2	13	15	0	6
5	Canada	21,654	2	5	6	18	0	5
6	Mexico	16,942	2	-15	-19	21	0	-12
7	Israel	8,749	1	4	-29	5	2	1
8	New Zealand	5,953	1	17	8	16	0	4
9	Thailand	5,507	1	7	9	9	1	3
10	Guatemala	4,745	1	-6	5	40	0	-35
11	Brazil	3,329	0	168	20	36	0	88
12	Peru	3,209	0	1	7	33	0	3
13	Australia	2,570	0	-16	-7	25	0	-2
14	Chile	2,492	0	-10	-9	39	0	-5
15	Dominican Rep.	1,607	0	1	-12	45	0	1
16	Kenya	1,559	0	208	20	4	4	24
17	South Africa	1,184	0	-6	-3	20	0	10
18	China	1,155	0	-6	-29	24	0	38
19	Italy	1,047	0	-7	-19	6	1	-1
20	France	857	0	-17	0	17	0	-3

Source: ITC COMTRADE

rapidly growing (27% from 2003 to 2004), and the balance has shifted from the traditional sources of flower imports to emerging flower industries. The Netherlands and Thailand used to account for nearly 50% of all cut flower imports into Japan; now their market shares have slipped to a combined total of 20%. The Netherlands, despite its higher priced merchandise, had clearance officers stationed in the flower markets in Amsterdam, allowing them to fast-track their merchandise into the Japanese markets, whilst Thailand mainly exported orchids for which there was large Japanese demand (JETRO, 2001).

More recently, many of the upcoming Asian economies have been able to claim a share of the market, predominantly through price advantages. The Japanese import market is now dominated by countries that are geographically close, including the Asian countries Malaysia (with a 14% share), Thailand (13%), Korea (11%), Taiwan (9%) and China (5%) all in the top 10, and Australia and New Zealand.

Most of the Asian countries are experiencing rapid growth rates of exports to Japan, especially China, with 85% growth from 2000 to 2004, and 190% in 1999. A number of countries from other regions also feature on this list, most noticeably Colombia with 13% market share. Kenya also seems to be making inroads, with 62% growth over the last couple of years. SA, too, has grown by 18%, although slower than the market's overall 27% growth rate, indicating the country has lost market share. Part of the change in market share can be explained by changing tastes, with orchid consumption (imported from Malaysia,

Singapore and Taiwan) and roses (from Colombia, Kenya and Korea) increasing, and tulips (from the Netherlands) decreasing. Chrysanthemums and carnations are remaining constant but changing their source (from the Netherlands to China and Korea).

Table 15: Top exporting nations to Japan, 2004

Rank	Exporters	Imported value 2004, in US$'000	Share in Japan's imports, %	Import trend in value, 2000-2004, %, p.a.	Import growth in value, 2003-2004, %, p.a.	Partner country ranking in world exports	Share of partner countries in world exports, %	Total export growth in value of partner countries, 2000-2004, %, p.a.
	World	218,089	100	7	27	–	–	9
1	Malaysia	31,210	14	46	82	14	0	30
2	Colombia	29,126	13	24	24	2	13	5
3	Thailand	27,899	13	0	13	9	1	3
4	Korea, Rep. of Korea	23,449	11	3	31	12	0	13
5	Taiwan, Province of China	20,069	9	20	34	27	0	14
6	The Netherlands	14,455	7	-21	3	1	56	11
7	New Zealand	14,348	7	-7	-8	16	0	4
8	China	11,878	5	85	107	24	0	38
9	Australia	8,754	4	4	22	25	0	-2
10	Ecuador	7,218	3	50	24	3	6	20
11	Viet Nam	5,667	3	39	69	32	0	42
12	Singapore	4,812	2	-9	11	19	0	0
13	India	4,095	2	19	17	26	0	3
14	Kenya	3,661	2	30	62	4	4	24
15	South Africa	2,698	1	4	18	20	0	10
16	US	1,677	1	-18	12	11	0	-8
17	Israel	1,558	1	15	42	5	2	1
18	Turkey	1,005	0	-3	18	22	0	32
19	France	705	0	34	0	17	0	-3
20	Indonesia	679	0	92	47	42	0	18

Source: ITC COMTRADE

4.1.4 Middle East

The market for cut flowers in the Middle East is small but growing, albeit relatively slowly. But it is an interesting market to watch because of a $300m 'Dubai Flower Centre' being set up as a Free Zone operation, which should transform Dubai into a specialised and highly efficient redistribution hub.

It is envisioned that this new redistribution hub will supplant some of the business routed through the Netherlands flower markets, and in time supply the Eastern European, Russian and Asian markets. The Centre is located at Dubai International airport, a major airport for over 100 airlines (including 20 freighter flights daily) and which boasts direct routes to most of the major markets in Europe, Africa and Asia. The Middle East could in future become an important export market for SADC countries, due to its proximity and decent transport links. SA already has a presence in this market, although it diminished somewhat in 2004.

Table 16: Top exporting nations to the Middle East, 2004

Rank	Exporters	Imported value 2004 in US$'000	Share in Middle East imports, %	Import trend in value, 2000-2004, %, p.a.	Import growth in value, 2003-2004, %, p.a.	Share of partner countries in world exports, %	Total export growth of partner 2000-2004, %, p.a.
	World	22,899	100	7	10	–	9
1	The Netherlands	13,882	61	3	11	56	11
2	Kenya	2,248	10	28	62	4	24
3	South Africa	953	4	14	-29	0	10
4	Ecuador	881	4	29	55	6	20
5	Colombia	763	3	0	0	13	5
6	Saudi Arabia	640	3	–	-18	0	–
7	China	388	2	-1	173	0	38
8	Malaysia	360	2	–	31	0	30
9	Thailand	328	1	–	52	1	3
10	India	275	1	2	66	0	3
11	Singapore	267	1	-21	0	0	0
12	New Zealand	210	1	76	48	0	4
13	Sri Lanka	193	1	-12	17	0	-3
14	France	193	1	106	18	0	-3
15	Israel	161	1	106	274	2	1
16	Yemen	149	1	–	–	0	–
17	United Arab Emirates	149	1	50	24	0	31
18	Italy	132	1	28	48	1	-1
19	Iran (Islamic Rep. of)	108	0	–	-8	0	26
20	Mauritius	74	0	8	-4	0	-8

Source: ITC COMTRADE

4.1.5 Central & Eastern Europe and Russia

The rapidly expanding markets of Central and Eastern Europe and Russia are expected to drive the growth in cut flower sales for the next few years, therefore these would seem important markets to try to access. At present most of the markets in Central and Eastern Europe are catered for by the Netherlands (83%) and other European suppliers, with Italy and Spain growing rapidly. Kenya is one of the few developing countries that appears to be growing its share of this market. In Russia the market is dominated by the Netherlands, Ecuador and Colombia (in that order), but there is massive growth occurring from countries such as Israel, Germany, Italy and China, and more recently, Belgium and Poland. The only SADC countries represented in either market are SA and Zimbabwe and in both markets their shares are diminishing.

4.1.6 South Africa

SA's import market, at roughly $1m a year, is very small. The majority of imports (56%) comes from Zimbabwe, followed by Kenya (20%) and Zambia (8%). The value of cut flower imports into SA has grown by 32% over the last couple of years, with most of the growth coming from Kenya, India and Uganda.

Despite the current limited size of imports, the market could still be key to SADC countries because of the strong trade links, close proximity and existing transport capacity. SA also has good infrastruc-

ture and facilities (for example, the flower delivery service Interflora) and potential strong demand growth going forward. At present, however, most of the demand is supplied by local growers, and major new investments are underway.

Table 17: Top exporting nations to Central & Eastern Europe and Russia, 2004

Central and Eastern Europe						Russian Federation					
Rank	Exporters	Imported value 2004 (US$'000)	Share in CEEs imports, %	Growth 2000-2004, %, p.a.	Growth 2003-2004, %, p.a.	Rank	Exporters	Imported value 2004 (US$'000)	Share in Russia's imports, %	Growth 2000-2004, %, p.a.	Growth 2003-2004, %, p.a.
	World	141,384	100	19	49		World	117,322	100	40	98
1	The Netherlands	116,948	83	21	56	1	The Netherlands	46,905	40	26	41
2	Colombia	7,172	5	19	13	2	Ecuador	28,036	24	110	123
3	Turkey	3,947	3	32	36	3	Colombia	16,351	14	127	154
4	Ecuador	1,729	1	0	-16	4	Israel	7,036	6	168	98
5	Thailand	1,582	1	5	16	5	Belgium	4,350	4	112	8778
6	Italy	1,565	1	24	98	6	Germany	3,762	3	293	–
7	Kenya	1,393	1	27	55	7	Turkey	2,294	2	200	128
8	Spain	1,100	1	8	47	8	France	2,227	2	–	–
9	Israel	1,026	1	-11	-19	9	Poland	1,559	1	96	1595
10	Slovakia	748	1	11	11	10	Italy	1,297	1	226	16113
11	Germany	512	0	9	11	11	Denmark	1,296	1	–	–
12	Poland	490	0	21	31	12	Uzbekistan	621	1	-47	-36
13	India	352	0	111	22	13	China	368	0	166	1
14	South Africa	352	0	13	-12	14	Azerbaijan	312	0	-28	-16
15	Zimbabwe	160	0	-7	-20	15	Lithuania	274	0	188	303
16	Hungary	151	0	11	-22	16	Spain	257	0	56	-15
17	Azerbaijan	116	0	–	10	17	Thailand	150	0	–	614
18	Costa Rica	116	0	0	21	18	Georgia	110	0	138	100
19	US	115	0	22	576	19	Ukraine	19	0	-15	–
20	Greece	95	0	63	34	20	Armenia	16	0	-40	-36

Source: ITC COMTRADE

5. Major exporters

5.1 Major exporting countries

Table 18 shows the top exporters of cut flowers in the world. The Netherlands is by far the biggest, capturing some 56% of the world market. It must be noted, however, that most of these exports are to the EU (over 80%). Other large European exporters include Italy, Spain, Belgium and Germany; again, most of their trade is intra-EU. The Latin American countries of Colombia and Ecuador are the second- and third-biggest exporters respectively, with the majority of their exports going to the US. Kenya, the largest African exporter, is fourth, with a 4% share in the world market, and growing faster than any of the top 10 countries. Asian countries with rapid growth include China (25th), Singapore (20th) and Malaysia (15th). All three feature prominently in the Japanese market. SADC countries in the top 25 are Zimbabwe (10th), SA (21st) and Zambia (24th).

In terms of foliage (*see Table 19*), the Netherlands again leads the way, followed by Italy, the US, Denmark, Costa Rica and Canada. SA is positioned 15th in the world, but over the past five years has shown an excellent growth rate of 25% per year. Israel is also growing rapidly.

5.2 SADC export trends and performance

Whilst exports grew from 1996 to 2000 and again from 2001 to 2003, more recently there has been a downturn in the numbers of cut flowers exported. The growth figures were mainly driven by increased exports to the EU and growth in the SA, Zambian and Tanzanian flower industries. Mauritius and Malawi's flower industries have been declining over the entire period. The 2004 downturn was predominantly caused by a serious decline in Zimbabwean exports (*see table 20*). Although Zimbabwe is by far the biggest grower of cut flowers in the SADC region, this gap seems to be diminishing given its poor economic performance of late. SA's flower industry seems to be flourishing.

5.2.1 South Africa

SA production is dominated by roses (30%), chrysanthemums (25%) and carnations (13%). The average flower farm has roughly 4.5 hectares (ha) of cultivated land and employs 16 full-time and three part-time labourers per ha. In total there are 420ha of protected area and 20,000ha of natural environment (fynbos and proteas). Of the production areas, roughly 45% is unprotected, 27% under shade netting and 28% in greenhouses (Maree, 2005). Many of the most prominent flowers in the international cut flower industry have their origins in SA, such as gladioli, nerine, freesia, calla lilies and gerbera.

SADC's export performance

Whilst exports grew from 1996 to 2000 and again from 2001 to 2003, more recently there has been a downturn in the numbers of cut flowers exported. The growth figures were mainly driven by increased exports to the EU and growth in the SA, Zambian and Tanzanian flower industries. Mauritius and Malawi's flower industries have been declining over the period.

The 2004 downturn was mainly caused by a serious decline in Zimbabwean exports. Although Zimbabwe is by far the biggest grower of cut flowers in SADC, this gap seems to be diminishing given its recent poor economic performance. Zimbabwe's principal markets are the Netherlands (86%) and SA (6.9%). Australia, the Far East, Germany, the UK and the US receive the balance of the country's cut flower exports.

SA's flower industry seems to be flourishing, but alaramingly, although the country is the leading exporter of proteas, this market is gradually slipping away to Israel and Australia.

Tanzania's flower industry experienced tremendous growth since its inception in 1987. Roses are the dominant export flowers produced, contributing more than 75% of the country's total cut flower production. By 1998, 2,500 people were employed in thid industry, the majority unskilled.

These varieties have undergone many years of extensive research in Europe and have subsequently become major crops throughout the world. Now cultivated widely as greenhouse varieties, SA's comparative advantage in growing these flowers seems to have dissipated somewhat. Moreover, there is no apparent protection strategy in place. A similar situation seems to be affecting SA's national flower, the protea, and fynbos, the kingdom of plants to which it belongs (including *leucadendron* and *leucospernum cordifolium*).

Although SA is still the leading exporter of protea cut flowers, the market is gradually slipping away to its main competitors in this field – Israel and Australia. SA proteas and so-called Cape greens (fynbos) are mainly marketed in Europe as specialty varieties. What makes the industry interesting is the fact that vast sections of land in the Cape are not cultivated, so the fynbos and proteas are simply collected (wild crafting, as it is known). This is not a sustainable practice, however, as it is unable to keep up with modern international demands and standards. The SA Agriculture Research Council (ARC) is involved in research (including pathogen research) into new protea crops that can be cultivated and harvested both in the Western Cape and other provinces.

Table 18: Top exporters of cut flowers in the world, 2004

Rank	Exporters	Value exported in 2004, in US$'000	Annual growth in value, 2000-2004, %	Annual growth in value, 2003-2004, %	Share in world exports, %
	World estimation	5,229,937	9	7	100
1	The Netherlands	2,950,354	11	5	56
2	Colombia	703,441	5	3	13
3	Ecuador	342,230	20	16	6
4	Kenya	231,890	24	32	4
5	Israel	145,346	1	11	2
6	Italy	87,410	-1	5	1
7	Spain	80,103	0	-4	1
8	Belgium	69,642	7	19	1
9	Thailand	64,810	3	10	1
10	Zimbabwe	54,879	-19	-21	1
11	Germany	45,742	27	37	0
12	US	39,418	-8	-24	0
13	Korea, Rep. of Korea	36,291	13	23	0
14	UK	33,981	6	-9	0
15	Malaysia	32,226	6	35	0
16	Costa Rica	30,040	6	4	0
17	New Zealand	25,922	6	13	0
18	France	22,710	6	-2	0
19	Canada	22,493	6	5	0
20	Singapore	21,722	6	34	0
21	South Africa	21,624	6	21	0
22	Mexico	20,265	6	-5	0
23	Turkey	20,170	6	35	0
24	Zambia	18,446	6	-5	0
25	China	16,579	6	64	0
26	Australia	14,323	6	24	0
27	India	14,019	6	17	0
28	Taiwan,	13,287	6	47	0
29	Tanzania	12,934	6	13	0

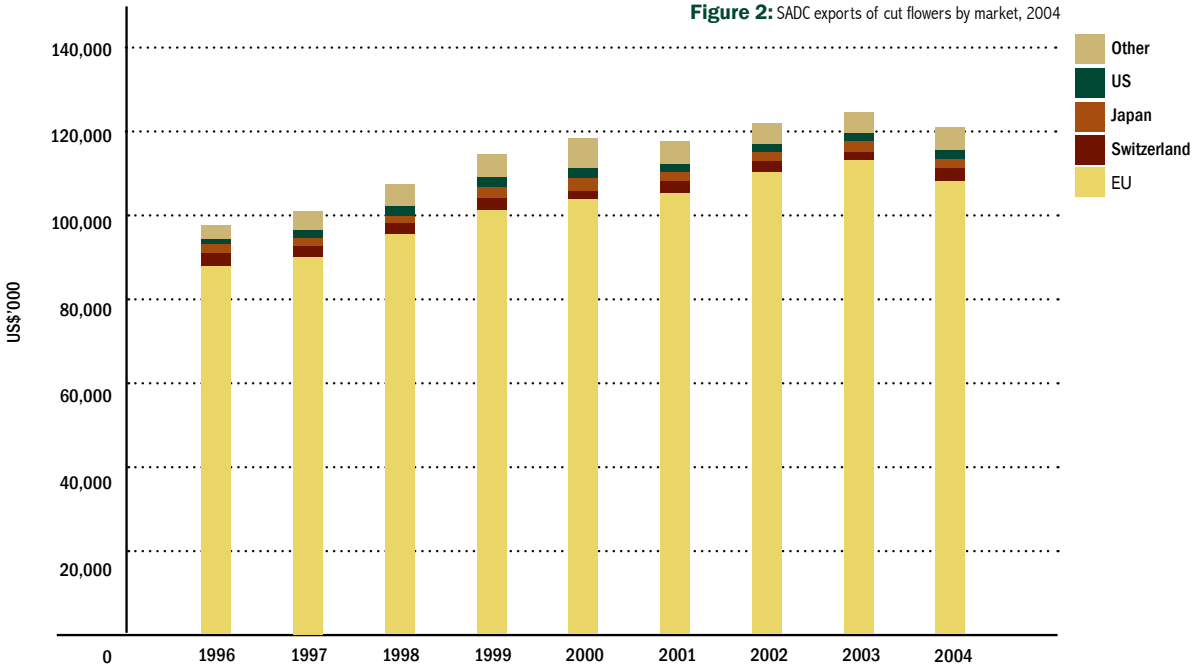
Source: ITC COMTRADE

Table 19: Top exporters of foliage in the world, 2004

	Exporters	Value exported in 2004, in US$'000	Annual growth in value, between2000-2004, %	Annual growth in value between 2003-2004, %	Share in world exports, %
	World estimation	865,060	8	7	100
1	The Netherlands	162,585	13	11	18
2	Italy	108,751	8	4	12
3	US	98,307	4	6	11
4	Denmark	90,501	10	-11	10
5	Costa Rica	61,641	-1	11	7
6	Canada	51,182	-3	-3	5
7	Belgium	36,416	9	45	4
8	Germany	33,804	9	13	3
9	Israel	23,056	24	42	2
10	India	22,823	12	4	2
11	Poland	18,433	24	18	2
12	China	15,371	0	0	1
13	France	15,192	0	-3	1
14	Guatemala	12,921	0	5	1
15	South Africa	12,749	25	7	1
16	Mexico	11,715	4	-3	1
17	Turkey	8,410	63	-13	0
18	Bangladesh	5,838		908	0

Source: ITC COMTRADE

Figure 2: SADC exports of cut flowers by market, 2004



Source: World Integrated Trade Solution (WITS)

5.2.2. Tanzania

The Tanzanian flower industry experienced tremendous growth since its inception in 1987 with the establishment of Tanzania Flowers Limited (TFL). The company started with the cultivation of cut flower/ foliage such as carnations, *euphorbia* and *ami majus*, but soon moved on to the commercial production of roses. Initially all production activi-

ties were done in open fields, rather than indoors under greenhouse conditions – a trade-off between capital investment and quality. The switch to greenhouses was rewarded by gains in productivity as well as profitability, and by 1998, 12 farms were involved in the production of flowers.

At the moment, roses are the dominant export flowers produced in and exported from Tanzania, contributing more than 75% of the country's total cut flower production. More than 10 different varieties of roses are produced. The second-most important flower produced is the Lisanthus (on one farm). Carnations, *euphorbia*, *ami majus*, *veronica* and *chrysanthemums* are also exported in significant quantities. By 1998, 80ha of land were cultivated, with almost 71ha dedicated to rose production, and 2,500 people employed, the majority unskilled.

Table 20: SADC exports of cut flower trends, by country and region, US$'000

	1996	1997	1998	1999	2000	2001	2002	2003	2004	Growth 2000-2004 (%)	Growth 2003-2004 (%)
World	97,572	102,564	110,582	117,708	123,292	122,355	124,165	127,596	117,177	-5.0	-8.2
EU	79,731	81,638	89,675	92,611	96,150	98,898	102,772	106,419	95,294	-0.9	-10.5
Switzerland	5,674	3,974	3,645	4,947	4,022	4,446	3,289	5,569	6,899	71.5	23.9
Japan	5,160	4,801	4,455	5,156	6,035	4,637	5,596	4,657	4,144	-31.3	-11.0
US	2,089	2,874	3,624	2,935	2,417	2,289	2,592	1,770	1,290	-46.6	-27.1
Other	4,918	9,277	9,184	12,060	14,669	12,086	9,916	9,180	9,549	-34.9	4.0
	1996	1997	1998	1999	2000	2001	2002	2003	2004	Growth 2000-2004 (%)	Growth 2003-2004 (%)
Malawi	3,349	2,636	3,036	1,124	636	802	582	651	334	-47.5	-48.7
Mauritius	5,884	5,614	5,138	4,355	4,814	4,208	3,675	3,371	2,997	-37.8	-11.1
South Africa	16,721	18,002	16,855	18,866	19,793	18,573	19,043	23,181	27,087	36.9	16.8
Tanzania	5,884	8,352	10,105	12,702	11,862	13,321	12,174	11,480	12,934	9.0	12.7
Zambia	8,685	9,873	13,694	18,353	18,306	17,623	21,702	19,506	18,446	0.8	-5.4
Zimbabwe	57,048	58,086	61,755	62,300	67,762	67,707	66,839	69,045	54,879	-19.0	-20.5
SA foliage	16,428	14,899	14,787	14,209	13,031	12,241	14,437	18,476	19,923	52.9	7.8

Source: WITS and own calculations

5.2.3. Zimbabwe

Zimbabwe was the real success story of the cut flower industry in the SADC region. From humble beginnings in 1986 to nearly $70m in exports in 2003, the industry grew rapidly. More recently, however, the situation has changed, with exports in 2004 down 21% to $54m. Land reforms have had their impact, with many flowers on seized farms neglected or not cared for properly, and with pressure on importers in Europe not to purchase 'stolen produce'. Protea exports, which at one stage had seen major growth (cultivated on 450ha) have suffered and European importers are now approaching other sources.

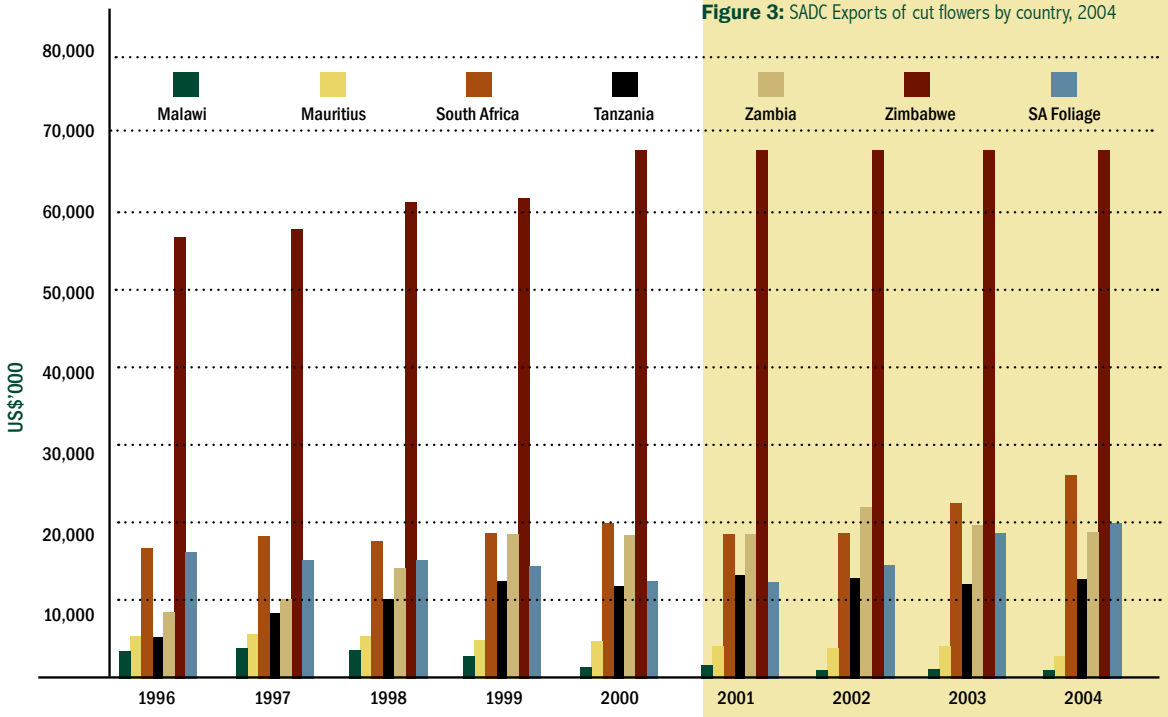
Roses constitute about 65% of Zimbabwe's flower exports, carnations 11%, chrysanthemums 7% and lilies 5%. In 2001, up to 350ha of roses were under production, and exports for 2001 was estimated in the region of 18,000 tonnes. More recently, statistics on Zimbabwe's flower exports have become unreliable. Other varieties of annual summer flowers still produced in volume include

ami majus and *bupleurum*, with smaller volumes of *delphinium*, *cathamus*, *craspedia*, *euphorbia*, *callistephus* and *molucella* also produced. Perennial varieties are increasing in volume and importance. According to the Horticultural Promotion Council (HPC) – of which the Export Flower Growers Association of Zimbabwe (EFGAZ) is a member – the Zimbabwean horticultural export industry was the second-largest agricultural foreign exchange earner after tobacco, accounting for up to 4.5% of GDP. Principal markets are the Netherlands (86%) and SA (6.9%) The balance goes to Australia, the Far East, Germany, the UK and the US.

5.2.4. Zambia

Zambia produces mainly roses (60 varieties, which form nearly 95% of the industry), while the other 5% covers summer flowers such as *atriplex*, *amaranthus*, *ami majus*, *euphorbia*, *hypericum*, *bupleurium* and *rudbeckia*. The Zambian floriculture industry employs well over 15,000 people, and in the 2004 season, over 40,000 tonnes of fresh produce were exported, contributing $18m to the national economy. There are 195ha under flower production in Zambia, with roses taking up 145ha. Almost all of the flowers and flower products are sold to European markets, with the Dutch auctions taking up more than 98% of the roses, especially in the European winter when local production ceases.

Figure 3: SADC Exports of cut flowers by country, 2004



Source: WITS and own calculations

6. Market access

Tariffs

An important reason for the globalisation of the cut flower trade is the relative lack of tariffs for cut flower and foliage products in the major world markets. This is particularly true of SADC countries which all fall under the GSP trade regime and many under even more preferential regimes, such as the Cotonou Agreement for ACP countries, or more recently, the initiative for the LDCs. Unfortunately, however, this does not necessarily translate into much of a competitive advantage for SADC countries, as the tariffs are minimal for all developing countries. Even developed countries face low tariffs in the major cut flower markets.

6.1 Tariffs in major markets

An important reason for the globalisation of the cut flower trade is the relative lack of tariffs for cut flower and foliage products in the major world markets. This is particularly true of SADC countries which all fall under the Generalised System of Preferences (GSP) trade regime and many under even more preferential regimes, such as the Cotonou Agreement for African, Caribbean & Pacific (ACP) countries, or more recently, the initiative for the Least Developed Countries (LDCs). Unfortunately, however, this does not necessarily translate into much of a competitive advantage for SADC countries, as the tariffs are minimal for all developing countries. Even developed countries face low tariffs in the major cut flower markets.

6.1.1. European Union

Most of the SADC countries face zero tariffs, as all fall under GSP, ACP or LDC classifications. However, for any of these preferential tariffs to apply, evidence of origin has to be submitted to EU Customs in the form of a Certificate of Origin. Only goods originating in a beneficiary country are eligible for GSP treatment, and the goods must be transported directly from the exporting country to the EU. SA does not qualify under the above agreements and is liable for a 4% tariff under its preferential tariff agreement (PTA). SADC's main potential competitors include the big EU exporters, who obviously do not face any trade barriers; Colombia and Ecuador from Latin America; other African countries; Turkey and various Asian countries. Ecuador and Colombia fall under a preferential tariff system and face no tariffs; Thailand, China and India fall under GSP arrangements and face a tariff of 7.33%. Turkey has its own PTA with the EU which eliminates all tariffs on cut flowers and foliage, and the biggest potential competitors – Kenya, Uganda and Ethiopia – all fall within the ACP or LDC categories and also face no tariffs. So although it does not seem as if preferential tariffs bring about any clear advantages, SADC countries should theoretically be able to take advantage of lower production costs over their European counterparts and in future claim bigger market shares.

6.1.2. United States

All SADC countries except Zimbabwe fall under the African Growth and Opportunity Act (AGOA), which stipulates zero tariffs on imports of cut flowers and foliage for this bracket of countries. However, most of the region's potential competitors also fall under various tariff agreements and are similarly not liable to pay much in the form of taxes.

Colombia and Ecuador, the two biggest suppliers of the American market, fall under the Andean PTA and pay no tariffs. Mexico falls under NAFTA and pays nothing, whilst Israel has its own PTA, with no tariffs. Kenya, Ethiopia and Uganda all fall under the AGOA agreement, while Zimbabwe, India, Turkey and Thailand qualify for GSP and pay 1.7% on fresh cut flowers (060310), and 0% on everything else.

Zimbabwe, however, pays 6.8% on fresh cut roses, the main component of its flower industry. EU countries face average tariffs of just over 5%, whilst China and Korea face average tariffs of 4.85%, giving SADC and the other developing countries mentioned above a small advantage.

6.1.3. Japan

Generally, no import duties apply to cut flowers. Foliage, however, attracts a most favoured nation (MFN) rate of 3% and a 0% preferential tariff. The low tariffs are a mixed blessing for SADC countries: low tariffs might allow some competitive advantage against domestic production; however, when up against the other developing countries currently dominating the Japanese import market (mainly from Asia), this might equate into a competitive disadvantage, as many SADC countries would typically have qualified for preferential tariffs.

6.1.4. United Arab Emirates

With the Dubai Flower Centre promising to be a hub of the flower industry, it is important to analyse the tariffs applicable in the UAE. The Centre itself will be a duty-free zone for merchandise passing through, so auctions taking place where the final destination is not in the Middle East will not be liable for any tariffs. However, if the final destination is anywhere within the Middle East region, a tariff of 5% applies to all cut flower and foliage products.

6.1.5. Switzerland

Switzerland has a range of *ad valorem* tariffs as well as specific taxes that apply to cut flowers and foliage, and these vary greatly depending on the country concerned. Most of the standard *ad valorem* tariffs are very high, although most developing countries qualify for zero tariffs under the GSP system. EU countries can also qualify for zero tariffs according to their PTA with Switzerland. Specific tariffs apply according to the quantity imported and are thus difficult to compare with the other *ad valorem* tariffs. However, specific tariffs are likely to disadvantage SADC countries which might export higher bulk, lower value commodities.

Switzerland further has a complicated import quota system, with importers being allocated quotas and licences based on historical imports, supply demands or domestic purchase requirements. Historical business links are predominantly with the EU and the Netherlands, thus quotas based on historical imports are likely to impede SADC countries' market penetration.

As the import quotas are normally given for specific, short time periods, SADC countries are again disadvantaged through lack of ready availability and constant stability of product quality. In addition, the size

of the individual quotas granted is quite small, which disadvantages those countries further away as they must spread transport costs over smaller quantities. This complication could act as an advantage for SADC countries over other developing countries (not from Africa), but would certainly reduce cost advantages over European competitors.

Table 21 compares the different tariff structures facing SADC countries and some of their bigger competitors. The final column shows the *ad valorem* equivalent of the specific tariffs levied by Switzerland on imports by quantity (these must be interpreted with some caution). Clearly, if SADC countries have any real advantage in terms of tariffs, it is not over other developing countries but rather over the more developed countries of the EU, the US and Korea.

Table 21: Comparison of tariffs by country and region, 2004, (%)

Country	Product Code	EU	US	Japan	UAE		Switzerland
		WA	WA	WA	WA	WA	AVE-specific
South Africa	0603	4.0	0	0	5	0	1.65
	0604	0	0	0	5	0	0
Tanzania	0603	0	0	0	5	0	50.64
	0604	0	0	0	5	0	0
Zambia	0603	0	0	0	5	0	45.32
	0604	0	0	0	5	0	0
Zimbabwe	0603	0	1.70	0	5	0	1.41
	0604	0	0	3	5	0	0
China	0603	7.31	4.85	0	5	0	1.42
	0604	1.08	1.17	0	5	0	0
Colombia	0603	0	0	0	5	0	1.49
	0604	0	0	0	5	0	0
Ecuador	0603	0	0	0	5	0	1.45
	0604	0	0	0	5	0	0
EU	0603	–	5.05	0	5	0	2.96
	0604	–	1.56	3	5	0	1.45
India	0603	7.31	0.85	0	5	0	1.40
	0604	1.08	0	0	5	0	0
Israel	0603	4.89	0	0	5	0	3.37
	0604	0	0	3	5	0	0.98
Kenya	0603	0	0	0	5	0	1.54
	0604	0	0	0	5	0	0
Korea, Rep	0603	9.67	4.85	0	5	124.07	1.42
	0604	2.99	0	3	5	0	1.05
Thailand	0603	7.31	0.85	0	5	0	1.57
	0604	1.08	0	0	5	0	0
Turkey	0603	0	0.85	0	5	175.73	1.29
	0604	0	0	0	5	0	1.58
US	0603	9.67	–	0	5	112.94	1.44
	0604	2.99	–	3	5	0	1.19

Source: WITS and own calculations

6.2. Known non-tariff barriers (NTBs)

6.2.1. General

Whilst tariffs may not have great bearing on cut flower exports to the major world markets, NTBs certainly do, and their effects on trade and potential opportunities need to be examined rather carefully before undertaking any venture. The main types of NTB that apply to cut flowers and foliage are:

- Phytosanitary (plant health) control;
- Breeders' rights and intellectual property;
- Quality and grading standards;
- Labelling requirements;
- Trade-related environmental and safety issues; and
- The Convention on International Trade in Endangered Species (CITES) and other regulations on such trade.

6.2.2. European Union

Exporting flowers and plants to the EU can be a complicated business, and it is very important that legislative requirements (product legislation) are taken into account. All flowers and plants are subject to phytosanitary regulations intended to prevent the introduction of plant pests and diseases which are not present in the EU. Moreover, various organisations and representative bodies are developing environmental as well as social standards connected to the conditions in which plants and flowers are grown and harvested. When exporting cut flowers to the EU, a number of legislative regulations are relevant. There are also non-legislative requirements for environmental, social and safety standards, which, though not legally required, are nevertheless vitally important for potential exporters wishing to gain a foothold in the European markets.

Plant health (phytosanitary) legislation

The EU member nations are obligated to ban the introduction of harmful organisms into their territory. As international trade in floriculture products brings with it the risk of spreading diseases and pests, there are certain restrictions to importing such products into the EU. The legislation regarding these restrictions is laid down in Directive 2000/29/EC. The harmful organisms to which this piece of legislature refers can be insects, mites, nematodes, fungi, bacteria, viruses, or the plant/flower on which these organisms reside (CBI, 2004).

The various plant products and organisms are listed in the annexes of the Directive. See http://europa.eu.int/eur-lex/pri/en/ oj/dat/2000/ l_169/l_16920000710en00010112.pdf.

Without a valid phytosanitary certificate that conforms to European standards and the importing country's specific plant health import regulations, a shipment of floriculture products will not be allowed entry. Due to increased inception of various harmful organisms, the number of cut flower varieties requiring inspection has recently increased. This list now includes such varieties as *rosa*, *dendranthema*, *dianthus*, *lisan-*

Non-tariff barriers

Whilst tariffs may not have great bearing on cut flower exports to the major world markets, NTBs certainly do, and their effects on trade and potential opportunities need to be examined rather carefully before undertaking any venture. The main types of NTB that apply to cut flowers and foliage are phytosanitary control, breeders' rights and IP, quality and grading standards, labelling requirements, trade-related environmental and safety issues, and CITES.

thus and *gypsophilla*, and entry of these varieties from non-European countries may be checked at an inspection rate of 100%, although there is a system of reduced checks in the Netherlands. SADC countries are particularly at risk of high inspection rates due to the perceived quality of produce and to the less-than-stringent phytosanitary and inspection procedures that take place at the export departure points.

For more information see the Plantenziektenkundige Dienst at www.minlnv.nl/pd.

CITES regulations

To make provision for the protection of endangered species of flora and fauna, the CITES restricts the international trade of specimens in these species. These regulations currently has a limited effect on SADC countries' exports of cut flowers. However, the exportation of proteas and various fynbos species, as well as the growing demand for more unusual species of cut flowers (predominantly indigenous), may expose potential exporters to the provisions of this agreement. The lists of prohibited or restricted species are detailed on the CITES website under three Appendixes, according to how threatened they are by international trade. *www.cites.org.*

Breeders' rights

The agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) within the World Trade Organisation (WTO) has provided an incentive for many countries to start implementing different forms of plant variety protection programmes.

Two of the key elements of any R&D programme are to develop new varieties of flowers that might gain popularity in the marketplace, and to improve the performance of existing varieties – their yield, size, appearance, resistance to disease and ability to grow under different conditions and climates. To this end, growers and institutions spend vast sums of money, and consequently need to be compensated for their investments, in the form of royalties or licences (which can take on many different forms). In many developing economies, structures to protect breeders are still underdeveloped. However, with the implementation of TRIPS, member countries of the WTO need to adhere to the protection framework standards of other member countries. At present there are several protection frameworks for new plant varieties in operation:

In the EU, exporters wishing to export cut flowers need to be aware of the regulations of UPOV (International Union for the Protection of New Plant Varieties) and CPVO (Community Plant Variety Office). Both give (25-year) rights to breeders of new varieties, allowing them to stipulate who is authorised to commercially use or sell their particular variety (and to determine the value of royalties associated with the use), to duplicate and distribute it, and to contend an essentially derivative variety should they feel that it is too close to their own. Breeders can also apply for a European trade mark (CBI, 2004).

For information on these frameworks, see www.upov.int / www.cpov.fr.

Quality and grading standards

The EU Regulation 316/68 prescribes minimum standards for imports to the EU. However, for practical purposes, the VBN (Federation of Dutch Flower Auctions) standards – required to participate in the Dutch auction sales – are the more relevant industry standard.

For more information, see www.vbn.nl.

The Euro-retailer Produce Working Group (EUREP) developed a framework for Good Agricultural Practice (EUREPGAP), predominantly to ensure food safety in various production chains, including the practices of farming flowers. It is a private standard, applicable when supplying a major supermarket retailer, but due to increased sales volumes of flowers in supermarket chains, it is becoming more influential.

Besides these standards, importers also have their own unwritten quality standards (with European consumers being particularly demanding), and might often be biased against products originating from developing countries, assuming inferior or unprofessional production processes.

The ISO 9001 quality assurance system, a highly regarded qualification developed by the International Organisation for Standardisation, is an important means of overcoming these reservations. For companies that comply with their guidelines, ISO issues certificates and allows the use of its logo on products (CBI, 2004). *www.iso.org.*

Packaging and marking

EU Regulation 802/71 stipulates minimum standards for the packaging and presentation of cut flowers. The type and quality of packaging will depend on the product type, the transport needs and the individual wishes of the importer concerned. Clearly certain minimum requirements are needed to protect the flowers from damage – and thus it is an important component of the strict quality demands.

Environmental, social and safety standards

The environmental, social and safety aspects of products and production have become increasingly important in Europe, with greater legislation put in place and significant consumer movements. A number of organisations control and regulate these matters:

- Floriculture Environment Programme (MPS): Assesses and certifies participants' environmental performance and links with other quality standards (ISO 9001, GAP). It is the most widely accepted environmental standard – 85% of flowers in Dutch auctions are certified and importers are predisposed to products from companies registered under MPS. Expensive audits and stringent standards make it a barrier to developing country exports. *www.st-mps.nl.*
- Flower Label Programme: Unlike the MPS, this programme labels products based on human rights and environmental standards where the labels can be viewed by the general public. It covers working conditions, child/forced labour, freedom of association, employment contracts, and health and safety standards. Products with these labels are found predominantly in German retail shops. *www.flower-labelprogramm.org.*

- Fair Flowers and Plants: This is a new international consumer label, conceived by an alliance of non-governmental organisations (NGOs) and trade unions, which will require adherence to the International Code of Conduct for the Production of Cut Flowers' (ICC) standards. The ICC's standards include labour and working standards, health and social issues, the use of pesticides and chemicals, and environmental protection standards (sustainability, water and energy, waste and pollution).
- Labels from various other flower exporting countries: These labels certify quality and codes of conduct aspects. Some of these labels, such as the Kenyan Flower Council's label, are becoming more recognised by EU importers (CBI, 2004).

6.2.3. United States

Inspection and phytosanitary requirements

The USDA's Animal and Plant Health Inspection Service (APHIS) inspects all imported agricultural products. Determining the presence of plant pests or contaminants in a commercial shipment is based on the inspection of a sample. Several factors are considered in deciding the sample: the size of the shipment, the level of pest risk based on historical data of the variety and country of origin, the number of varieties (*genera*) in a box, the number of growers, and the history of compliance.

With cut flower inspection, the paperwork provided to the officer is a key determinant of the sample size. The paperwork must include the PPQ368 Notice of Arrival, a completed invoice with box count (boxes in bundles or units must be broken out for an accurate count), the weight and *genera* (species and varieties), a packing list and a phytosanitary certificate. This certificate must include the type of plant or plant product, where it was grown, if and where it was treated and what that treatment was, and whether it complies with the USDA's phytosanitary requirements.

A list of these can be found at www.fas.usda.gov/itp/ofsts/us.html.

To avoid the spread of injurious or noxious plant pests, inspectors examine samples of plant leaves, stems, roots and seeds. If a PPQ (APHIS Plant Protection and Quarantine) officer discovers a pest or disease, a sample is taken to an entomologist or pathologist for confirmation. If possible, treatment will be afforded to the consignment at the importer's expense and risk, otherwise the consignment will face re-export or destruction. Even though the importer pays the initial cost of treatment, the likelihood is that the exporter will ultimately bear the burden (USDA, 2005).

Cut flowers with berries attached are required to have a written permit from APHIS prior to being released from the PPQ area to avoid potential pests and/or fruit flies.

CITES and ESA regulations

Both the CITES and the Endangered Species Act (ESA) prohibit trade in endangered or threatened species unless a PPQ permit is issued. PPQ may issue a permit if the trade is for scientific research,

the enhancement of propagation or survival, or for display in botanical gardens or other educational purposes. In this case the consignment has to be re-routed through designated ports with qualified specialists.

For more information see the USDA website.

6.2.4. Japan

Phytosanitary requirements

Cut flower imports to Japan must pass through Plant Quarantine Law procedures at customs clearance. Anyone who imports plants or plant products must submit an 'Application for Import Inspection' form to apply for plant quarantine inspection. The application form must be accompanied by all shipment documentation, including the phytosanitary certificate. The exporting country's customs clearance agent sends these documents to Japan via an air cargo agent, with the shipment aboard the airplane. Upon arrival, the certificate is forwarded to the customs clearance agent (or the importer) through the air cargo agent.

The import of the following items into Japan is prohibited.

- Pests and plant pathogens;
- Soil and plants with soil attached;
- Plants and plant products specifically designated as illegal by the Ministerial Ordinance of the Ministry of Agriculture, Forestry and Fisheries; and
- Packing materials and/or containers made from illegal items.

Plant quarantine officers carry out import inspections at plant quarantine stations of airports (primarily for cut flowers) or at an inspection point in container yards in harbours (for treated foliage). Plants with pests and/or pathogens are not automatically destroyed, as they may be eligible for fumigation treatment.

Although inspection is free, fumigation is for the account of the importer – and usually passed on to the exporter. Fumigated flowers are, however, not well regarded in the market place, and they have to be treated and distributed separately. Flowers with soil still attached are simply destroyed or returned. For plants found free of pests and diseases upon the inspection, the 'Official Certificate of Inspection' is issued. To speed up the import clearance for the benefit of importers, such issuance can be made at the site of inspection as soon as the inspection is done.

In some instances (the Netherlands, for example), Japanese plant officers are stationed in the country of origin to do pre-export inspection. This has the effect of clearing customs quickly in Japan – a key advantage given the short shelf life of cut flowers. However, the requirements for such a posting are fairly onerous, and such a system may be more disadvantageous than beneficial to SADC members unable to justify this in terms of scale of exports.

CITES and breeders' rights

Species registered under the Seeds and Seedlings Law may require import permission from species registration agents who may

charge royalties depending upon the item. The CITES prohibits importing endangered species, while some flowers require permits from the exporting country.

6.2.5. South Africa

SA requires phytosanitary certificates for the import of plant and plant products (seeds, bulbs, cut flowers, etc.). The Ministry (Department) of Agriculture in the country of origin usually issues such certificates. A copy of the import permit must be forwarded to the exporter as it stipulates conditions regarding the importation of plants.

6.2.6. Dubai and the Middle East

A phytosanitary certificate is required to import any floriculture products into the UAE. A recognised inspection authority in the country of origin should issue the certificate. Importing natural soil is prohibited. Importers of plants and foliage should obtain permission from the UAE Ministry of Agriculture.

The certificate should clearly attest that the shipment has been inspected according to the appropriate procedures and is considered free from all common pests and known diseases, and should include the specifics of the exporter and importer, the place of origin, the product dexcription and the issuing authority.

Inspection authorities in the UAE require that flower shipments be clearly labelled with the variety description on the packaging. If new or unfamiliar varieties are imported, quarantine officials may require the presence of a representative from the importer to answer queries about the variety. At the time of publishing, authorities accepted product labels in English and Arabic. Most of the other countries in the Middle East have the same requirements as the UAE. However, all goods imported into Saudi Arabia must have the following additional documents:

- A notarised certificate of origin authenticated at the Saudi diplomatic missions and local chamber of commerce;
- A similarly authenticated invoice (in triplicate), which must state the country of origin, name of the carrier, brand and number of goods, and description of the goods, including weight and value;
- A packing list and a bill of lading;
- Documents indicating compliance with health regulations;
- Insurance documents if shipments are sent CIF; and
- A phytosanitary/heath/radiation-free certificate, as applicable.

7. Distribution channels

7.1 General

Flower distribution is a highly transport- and logistics-dependent operation, and it is often the single most expensive and crucial element of being a successful exporter of cut flowers. Often it is essential to be located within a short distance from an international airport to have access to international freight carriers, although there is limited scope for transporting produce in cold-storage trucks from a small distance. Still, the key to being able to maintain the quality and therefore the value of the produce lies in a complete cold-chain system, which improves flowers' freshness and longevity.

This is not something that can be compromised on, especially not with the stringent standards that exist in the major markets. The faster the produce reaches the markets, the more competitive it will be and the higher the price it is likely to fetch. For most varieties, anywhere over four days is simply too long, thus adequate air freight and an efficient logistics system are necessities.

There are four main routes for growers and exporters to access international markets: directly through auctions, using an agent to sell the produce at an auction, via an import wholesaler, or directly to a retail chain.

7.1.1.Auctions

Auctions are an attractive option in that they are able to sell anything one supplies, as long as the quality is of the correct standard. Flowers are sold at the market price with secure payment, they are sold relatively quickly, and there are no quality disputes. However, auctions tend to work with larger producers of the 'mass-produced' greenhouse varieties.

To supply an auction, a supplier must have a licence that stipulates a particular variety to be supplied over a specific time period. He/she also needs to have access to at least three flights a week and agree to supply a certain percentage of his/her output – otherwise they risk losing their licence.

7.1.2.Auction via agent

The handling of flowers is not done by the auctions, and is therefore one of the growing roles that agents perform, including flower cutting, re-hydrating and packing. Agents thus provide a link for those exporters without representation in the Netherlands, transferring the flowers from the airport to the auctions, as well as providing consultancy ser-

EU distribution trends

There are 10 main auctions across Europe, four of which are in the Netherlands. The auctions in the Netherlands function as the pivot around which international floricultural trade revolves, handling about 70% of European imports and 30% to 40% of the overall European market. Concentrating demand and supply forces, they act as a price-setting mechanism, and the wholesalers who purchase flowers at these markets generally do so in order to re-export to other markets across Europe. The Dutch auction markets are therefore of vital importance in accessing the European flower market.

In the EU, traditional florists still dominate the retail distribution of flowers, but nurseries, garden centres and street/market vendors are also important. More recently the importance of supermarkets has been growing, although they offer a much narrower product range than the traditional florist. Online marketing is gaining importance, with websites publishing links to various growers and shops for direct sales.

vices, and market and product information. They can also play a role in facilitating relationships between growers and supermarket chains or foreign importers. Agents are, however, more expensive as they have their own mark-up to factor in. They are often more suited to smaller producers with less knowledge and/or marketing ability.

7.1.3. Via an import wholesaler

A producer can also sell directly to wholesalers instead of going through the auctions and/or agents. Import wholesalers often function as export wholesalers or wholesalers on the domestic market, and are able to advise and assist producers on all manner of technical and product know-how, from quality, presentation and assortment to transportation and handling matters. Wholesalers tend to conduct business at an arm's length basis and without long-term contracts, trying to source the particular products they require. Thus big savings are to be made, both in time and money, by going directly to a wholesaler. But there are also potential problems, such as quality claims, volatile demand and payment issues.

Overall the wholesaler function is becoming more important and more concentrated, with many wholesale companies becoming multinational and sending their purchases to all important world flower auctions. Added to this is the increasing role of e-commerce, where sales can be made online.

7.1.4. Directly to a retail chain

More and more retail chains, including supermarkets, DIY department stores and garden centres purchase flowers directly from growers, bypassing the auctions, agents and wholesalers altogether. This obviously requires them to co-ordinate transportation and other logistics, and set up supply chains from the growers to the various domestic markets where their stores are located. The increased importance of retail chains is particularly evident in the UK (*see table 22*). If growers are big enough and can supply end-user products (already-made single bunches, mixed bouquets, etc.) this option could offer substantial market growth.

More than 50% of the flower production in SA is distributed through the Johannesburg and Pretoria auction houses (Multiflora). 16% of the produce is exported through an agent, 6% is exported directly, 12% is sold to local wholesalers, and 11% directly to the public.

7.2. European Union

There are 10 main auctions across Europe, four of which are in the Netherlands. The auctions in the Netherlands function as the pivot around which international floricultural trade revolves, handling about 70% of European imports and 30% to 40% of the overall European market. By concentrating demand and supply forces they act as a price-setting mechanism, and the wholesalers buying flowers at these markets generally do so to re-export to other markets across Europe.

The Dutch auction markets are therefore of vital importance in accessing the European flower market. Of particular interest is the Aalsmeer Flower Auction (VBA) and FloraHolland, that together

account for nearly $2.4bn. Another important market for exporters is the NBV/UGA auction in Germany. All three these auctions have their own import departments that can facilitate support to foreign suppliers.

Tele Flora Auction (TFA) is a private auction set up by East African Flowers, the largest importer of non-EU produce in the Netherlands, and sells to the 100 largest wholesalers. It is a particularly important market for SADC countries, with its top sources including Tanzania, Zimbabwe and Zambia.

In the EU, traditional florists still dominate the retail distribution of flowers, but nurseries, garden centres and street/market vendors are also important. More recently the importance of supermarkets has been growing, although they offer a much narrower product range than the traditional florist. Florists are particularly important in the value-added service aspect of flowers, offering bouquets, arrangements and wreaths, and also catering for particular functions and occasions. They are also more likely to accept novelty products. Street vendors are normally engaged in the trade of flowers for impulse purchases (outside train stations, next to restaurants, etc).

The specifics of the retail sectors and where they source their flowers from differ from country to country. Whereas florists dominate in most of the markets, purchasing most of their produce from various wholesalers (many of them Dutch), in the UK the supermarkets Sainbury's and Tesco purchase their supplies directly from the growers (many in Kenya), eroding the market share of traditional florists.

In Germany, the distribution channels are dominated by large German and Dutch wholesale companies, whilst the retailers are for the most part small and individual florist outlets. In the Netherlands, florists and street vendors tend to buy their produce direct from the auction markets and are for the most part independent from one other, although online marketing is gaining importance, with websites publishing links to various growers and shops for direct sales (CBI, 2004).

Distribution in the US

Although US marketing channels of is becoming increasingly complex, most flowers are still distributed in the traditional mode – from growers through wholesalers to retailers and the consumer. However, the number of growers has declined significantly due to fierce competition – increasingly, flowers are being sourced from cheaper overseas producers, mainly Latin America.

The US auctions are not as developed or important as those of Europe. In California, which produces 70% of the US' cut flowers, many of the markets sell directly to retail florists, bypassing the wholesale channel. The importance of florists is diminishing, however, with online auctions becoming more important. Distribution patterns are also changing, with more vertical integration occurring. With most of the production happening overseas, many importers have assumed the role of the wholesaler, whilst bigger retail outlets source directly from the foreign growers using an agent. International integration is also taking place, with many importers being merely extensions of big flower-growing companies from Colombia and Ecuador.

Table 22: Retail distribution channels in the EU, 2002, (%)

EU distribution channels, 2002	The Netherlands	Germany	UK	France	Italy	Spain
Florists	44	57	27	68	73	82
Streets and markets	25	8	6	10	19	9
Supermarkets	24	12	58	13	4	1
Garden centres	3	4	3	3	3	2
Growers	–	16	–	3	–	–
Others	4	3	9	3	1	6

Source: CBI 2004

7.3. United States

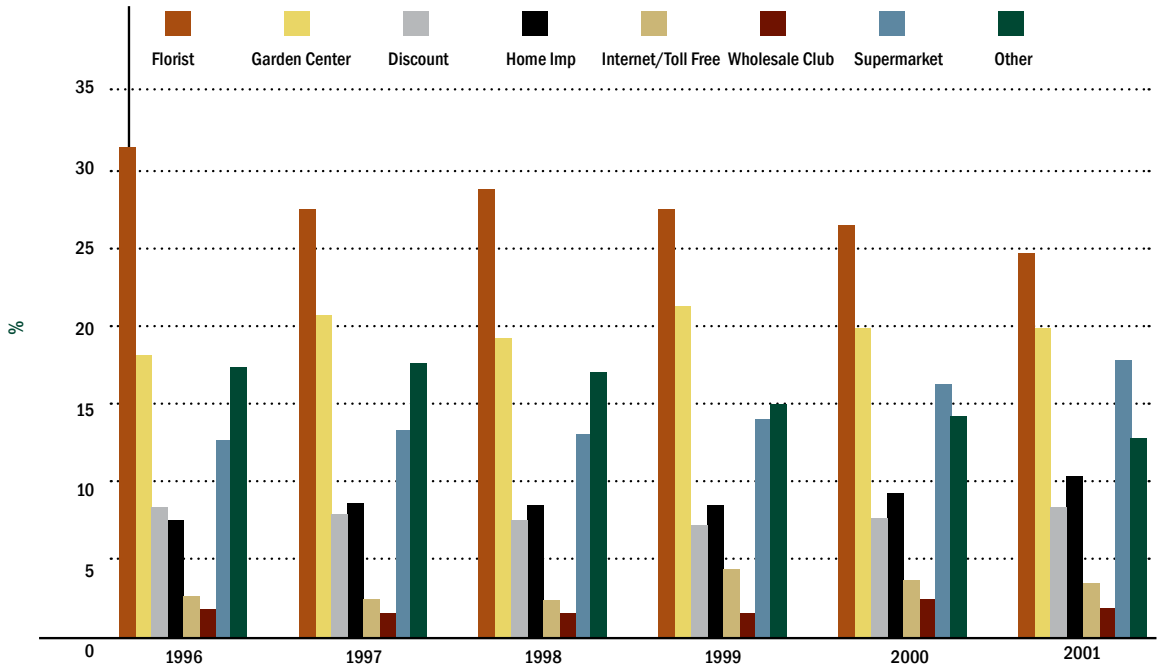
Although the marketing channels of cut flowers is becoming increasingly complex in the US, most of the flowers are still distributed in the relatively traditional mode – from growers through wholesalers to retailers and finally to the consumer. A grower can sell to a wholesaler, a florist or directly to the public. Those selling to wholesalers and florists tend to specialise more in certain products, whilst those selling directly to the public (including farmers' markets), tend to grow a variety

of flowers, and sometimes foliage and other complimentary products, and often assemble wreaths and bouquets themselves. However, the number of growers in the US has declined significantly in the last few years, with flower farms going out of business due to fierce competition, whilst others are consolidating their operations, becoming more concentrated and/or focused on a particular product.

Auctions do take place in the US (New York, Seattle, Miami, etc.) but they are not nearly as developed or important as those that take place in Europe. For the most part they work along similar structures to the European auctions, with growers sending their produce there and wholesalers buying it. In California, however, many of the auction markets sell directly to retail florists, and thus they are able to bypass the usual wholesale channel. California produces most of the cut flowers in the US (70%), and so the auctions there are particularly influential in setting prices. Another recent development is the rise of the online auction, which is beginning to become increasingly important in distribution channels. Although some retailers purchase directly from these auctions, the majority still find the services of a traditional wholesaler beneficial. Conventionally, wholesalers consolidate products from various growers and sell smaller units to retailers, usually with the products being sold on consignment. The wholesaler is thus able to pass demand information back to the grower.

Market distribution patterns are changing, however, with more and more vertical integration occurring. With most of the production occurring overseas, many importers have assumed the role of the wholesaler, whilst bigger retail outlets source directly from the foreign growers using an agent. At the same time, international integration

Figure 4: Retail distribution channels in the US, 2004



Source: Pohmer 2004

is also starting to take place, with many importers in Miami merely extensions of big flower-growing companies from Colombia and Ecuador. Some of these importers then act as processing units, assembling bouquets and wreaths to ship directly to retail outlets. One large US multinational has purchased vast tracts of land in Colombia, Ecuador and Mexico, and owns its own aircraft service that delivers the produce directly to its warehouse and processing centre.

In response to increasing import levels, many domestic growers have extended their operations and formed wholesale companies and retail outlets. And some retail outlets have begun to plant their own produce to supplement their purchases from other producers and importers. Despite all of this, the role of the wholesaler has not been completely replaced. Wholesalers still provide important services to the majority of retail outlets that rely on them for expertise in dealing with large consolidated bulk shipments, sourcing quality, maintaining perishables and extending credit (USITC, 2003). As can be seen from figure 4, the importance of florists is slowly diminishing, whilst supermarkets and home improvement stores are gaining more of the market.

7.4. Japan

There are many small flower growers in Japan, some 83,000 cultivating about 19,500 hectares. Therefore a great deal of the flower production in Japan occurs on very small farms, the average being only one-quarter of a hectare. The majority of cut flowers from these small farms are collected by local Agricultural Co-operative Associations or Gardening Co-operatives and shipped to wholesale auction markets. Other wholesalers buy directly from the growers (generally the larger ones) and transport the produce to the auctions. It is at the auctions that wholesalers, for the most part, tend to sell their produce to retailers. The auctions therefore play a very important role in the Japanese distribution channel. There are an incredible 277 wholesale markets, of which 23 are central markets located in the major cities and 42 are general wholesale markets serving specific regions.

The entire distribution network is thus far less centralised and concentrated than in Europe or the US (compared to the Netherlands, for example, which has only seven major auction markets). Wholesalers also buy produce at the wholesale markets and then redistribute it to retailers or export it to overseas wholesalers; however, the majority of the produce is purchased directly by the retailers from these markets. The wholesalers thus have a slightly different role to those in the western markets, but are nonetheless important. Many of the markets are owned privately by wholesale companies. Imported flowers can be brought to wholesale markets and auctioned, or they can be sold directly to retailers by importers (who would act as wholesalers).

In terms of retail distribution trends, less conventional channels have developed more recently, including mail order and home delivery systems, as well as online business transactions between wholesalers and retailers. At the same time, sales to supermarkets have been on the increase, from 8% in 1991 to 12% in 1997, whilst sales to florists have decreased. Despite this, florists still accounted for most of the trade at retail level – 70% in 1997.

Distribution in Japan

Auctions play a very important role in the Japanese distribution channel, and there are an incredible 277 wholesale markets. The distribution network is thus far less centralised and concentrated than in Europe or the US. The majority of produce is directly bought by retailers from these markets, while it is mostly brought to the markets by wholesalers who buy directly from the growers. Whole salers thus play a slightly different role to those in western markets.

Although the trend is towards less conventional retail distribution channels, including mail order and home delivery systems, as well as online transactions between wholesalers and retailers, florists still account for most of the trade at retail level – 70% in 1997.

8. Pricing and costs

8.1 Prices

Prices vary tremendously depending on the particular variation of species, variety, length or quality of flower, and as such it is difficult to quote meaningful average prices. Added to this is the great variation in prices depending on demand factors such as the season or, often more importantly, when the main holidays and festivals occur. Tables 23 and 24 illustrate the average prices of some of the major varieties of flowers that SADC countries export to the EU and Japan over two one-week periods, week 28 (11-17 July) and week 44 (31 October - 6 November). As can be seen, prices in general have dropped in the face of stiff competition – with the exception of small and spray roses. One can also get an idea of the difference in import prices and those obtained in markets, and the difference between peak harvest season in the European summer months (July) and towards the winter months.

Table 23: Major export variety prices in the EU market

Flower variety	Market prices (Euro/stem)			Import prices (Euro/stem)		
	Oct-05	Jul-05	Oct-04	Oct-05	Jul-05	Oct-04
Ammi Majus	0.12	0.12	0.14	0.13	0.11	0.12
Aster	0.18	0.18	0.19	0.13	0.11	0.14
Carnations - standard	0.18	0.15	0.20	0.16	0.15	0.18
Carnations - spray	0.12	0.15	0.12	0.10	0.11	0.09
Chrysanthemums	0.21	0.13	0.26	0.11	0.10	0.15
Carthamus	0.17	0.10	0.22	0.17	0.08	0.22
Delphinium	0.33	0.25	0.29	0.04	0.14	0.10
Leucadendron	0.15	0.10	0.16	0.15	0.10	0.16
Protea	1.53	1.24	1.68	1.53	1.24	1.69
Rose Large (average)	0.26	0.18	0.27	0.19	0.13	0.16
Rose - Small (average)	0.13	0.09	0.11	0.13	0.09	0.11
Rose - Spray	0.28	0.21	0.20	0.13	0.10	0.09
Rudbeckia	0.14	0.15	0.08	0.14	0.07	0.08
Veronica	0.14	0.07	0.14	0.14	0.08	0.15

Source: ITC's Market News Serrvice (MNS)

In terms of the Japanese market, there are a number of missing prices in the domestic market, which means those varieties are not produced domestically, and also a few missing in the import section, which means that no flowers of that variety are imported at all. There also tends to be a large difference between import and domestic prices, with the domestic markets not very exposed to international competition.

Table 24: Flower prices in Japannese markets

Flower variety	Domestic price (US$ per stem)		Import price (US$ per stem)	
	Oct-05	Jul-05	Oct-05	Jul-05
Ammi Majus	0.30	0.38	–	–
Buplearum	0.82	0.66	–	–
Carnations Spray	0.49	0.51	0.35	0.23
Carnations Standard	0.40	0.44	0.26	0.21
Chrysanthemum Spray	0.40	0.50	0.38	0.50
Delphinium	0.84	0.80	–	0.82
Euphorbia	0.41	0.32	–	–
Leucadendron Safari	–	–	0.66	0.49
leucospermum Cordifolium	–	–	1.02	2.07
Protea - king	–	–	3.62	7.10
Protea - Other	–	–	0.00	2.76
Rose Total	0.87	0.63	0.54	0.47
Leatherleaves	0.27	0.22	0.18	0.14

Source: ITC's MNS

8.2. Costs

Cost structures vary greatly from developing countries to developed countries. In terms of set-up or initial outlay costs, a report on the Tanzanian cut flower industry (Semboja *et al*, 2000) showed that roughly 26% of total costs can be accredited to investment. Of this, nearly half goes towards building and setting up greenhouses, 17% to purchasing and preparing land, 10% to vehicles and machinery, 5% to cold storage and pack houses, 1.5% to irrigation and 12% to planting materials. It is possible to avoid using greenhouses and produce in open fields or with shade-cloth (and other structures), but this reduces the quality and as such is inadequate for the export market for most products, .

Davies (2000), in examining the Zimbabwean cut flower industry, notes that more and more domestic greenhouses are being used instead of imported greenhouses because they are much cheaper (roughly a quarter of the cost in 2000). These domestic greenhouses are made of wood, have shorter lifespans and are low-tech compared to the imported steel structures, which are capable of producing roughly twice as much output (224 stems to 122 stems per square meter).

Of course, with the recent devaluation of the Zimbabwean dollar, imported investment goods is becoming more expensive. Nowhere is this more important than the royalties that must be paid per bush for the right to sell certain breeds, as these are normally quoted in US dollars or euros. Davies (2000) estimated that royalties were roughly $1 per bush and that there were between 60,000 and 70,000 rose bushes per ha in a typical rose project – which brings such costs to $60,000 to $70,000 per ha. Again, as exchange rates depreciate, so the outlay costs of propagated materials become more prohibitive.

In terms of operational costs, Semboja *et al* (2000) estimate the breakdown (by percentage) of costs for an average farm exporting cut flowers, as illustrated in Table 25. These results show that marketing and air freight make up a large proportion of costs. Clearly land and labour costs are minimal, and as such can be viewed as a

source of comparative advantage. However, the cost of air freight and to employ people in the Netherlands and elsewhere to market and distribute the product, as well as provide information on demand patterns and perhaps technical expertise, are the true costs of the business.

Davies (2000) reports similar results for Zimbabwe for 1992/1993, with wages only 14% and air freight nearly 60%. He goes on to note how, with the depreciating Zimbabwean dollar, the costs of imported chemicals and air freight are becoming more expensive. Before the economic crisis, the costs of freight forwarding and air freight in Zimbabwe had been decreasing dramatically with the establishment of freight-handling companies like Europort – a joint venture between a number of marketing agencies – with international standard cold-chain management facilities. Similarly Zambia, under its Zambia Export Growers Association (ZEGA), has undertaken to cut jet fuel prices, while the organisation itself manages numerous logistics and transportation issues, including the chartering of planes (Carana, 2005).

Table 25: Typical operating costs, (%)

Chemicals and fertiliser	4.2
Technical advice	0.6
Electricity	1.9
Fuel	1.6
Wages	3.4
Freight	16
Marketing (commissions)	52
Depreciation	1.3
Interest	18.9
Rent	0.2

Source: Semboja et al, 2000

9. Commercial practices

The Dutch flower auctions trade flowers and foliage according to agreements around standards and specifications between the auctions, growers and buyers. The auctions also use a number of uniform codes in the transaction process: each product has a product code, an inspection code providing information on a batch's quality, a packaging code, a product characteristics code and a grade code providing information on the product itself.

The VBN manages these codes and specifications for the auctions. They are tools for facilitating the delivery, sale and purchase of flowers and plants. The various codes and specifications are grouped in lists. These lists, accompanied by descriptions, can be found on the VBN site (*www.vbn.nl/en/productinfo/index.asp*), together with information on quality testing.

10. Strategies and tactics

Problems facing SADC

- Product quality and perceptions around quality.
- Management quality: the ability to supply a certain amount, timeously, at an agreed-upon rate, with cold-chain and other logistics well organised, and market adaptability.
- Macroeconomic conditions: depreciating currencies impact upon royalty payments and purchasing of chemicals; fuel crises on the cost and availability of air freight; and rising interest rates on calculated rates of return.
- Financing and investment costs: the ability to adhere to international quality demands in terms of cultivation infrastructure, and to attract FDI in the face of low foreign expectations about future conditions.
- Poor infrastructure: expensive and poor transport from farms to distribution hubs.
- Lack of R&D and the scarcity of (expensive) international expertise.
- Customs & Excise efficiency: export clearance procedures not always 'perishable' friendly – an imperative in the cut flower industry.

The international flower market is growing and there is potential for SADC countries to grow their exports to and market shares of various countries. Already, the cut flower trade has proved successful for four SADC countries – Zimbabwe, SA, Tanzania and Zambia – over the past 20 years or so, but there is scope for much larger volumes of exports, especially considering some of the advantages that SADC countries have in terms of climate and seasonality, land and labour costs, and geographic positioning. However, there are certain disadvantages that also need to be taken into account, including low product knowledge and minimal R&D, perceived inferior quality of produce, high transportation costs and other logistical complications, and lack of transport and marketing connections.

10.1. Problems facing SADC countries

Quality is perhaps the foremost issue in the identified markets. It is important to realise that quality does not only refer to product quality, which is by itself extremely important, but also to management quality – or the ability to supply a certain amount, timeously, at an agreed-upon rate, with the cold chain and other logistics well organised, and the ability to supply to the demands of the market (adaptability). All these factors contribute to being able to build up a long-term relationship – and this is the quintessential requirement of doing business in the EU, Japan and the US.

They are not interested in companies that only operate for a brief time, and that will not be able to meet demands in the future. To this end, many companies will wish to be involved on a first-hand basis with any developments that occur in a company, and as such there is also much scope for foreign direct investment and joint ventures.

The greatest problem facing would-be SADC producers in this regard is the macroeconomic conditions, including the value of the local currency (and its fluctuations) and how this might affect production conditions and costs, local interest rates and inflation, and these in turn a business' ability to produce and perhaps expand operations, and finally the expectations about the future of all these elements – business confidence.

Zimbabwe's cut flower industry's recent poor performance, for example, has more to do with macroeconomic conditions than with the heavily publicised seizure of farms. Apart from the effects of the rapidly depreciating currency on the import content of running a business (royalty payments for propagated materials, chemicals, etc.) and the effects of the fuel crisis on the cost and availability of air freight,

there is also the impact of rising interest rates affecting calculated rates of return, and the fact that land is not accepted as collateral in the face of the land redistribution policies that are underway. All these issues do not bode well for investor confidence in Zimbabwe's once dominant cut flower industry. Unstable macroeconomic conditions are therefore a major problem that faces SADC countries and any potential attempts to increase cut flower exporting operations.

Related to this are the problems of financing and the high cost of investment. Due to the increasing quality demands of the world's major markets, it is becoming less feasible to grow crops in open fields (except for certain hardier varieties and 'indigenous' flowers/foliage) and thus one must, necessarily, invest in greenhouses to meet these demands. In many SADC countries, interests rates are prohibitive, while expectations about future conditions can prevent foreign direct investment. Expectations also play a role in the perceptions of the quality of produce coming out of the SADC region.

Other problems include poor infrastructure in some countries – especially if the farms are any distance from an international airport – unavailability of chemicals and recent developments regarding what chemicals are acceptable to use; lack of research and development requiring foreign consultants' advice (particularly expensive) and the scarcity of experts; and the recent surge in crude oil prices. Customs and excise operations might not be 'perishable' friendly, with clearance of exports having to comply with their working hours, and often forcing growers to employ labourers in over-time hours (Vlok, 2005).

10.2. Strategies specific to South Africa

As to the particular strategies that should be pursued by SADC countries, SA is in a slightly different position than the rest, as its comparative advantage does not necessarily lie in cheap production costs or in year-long harvest periods – two of the main advantages of countries like Zimbabwe, Zambia and Tanzania.

A market strategy report commissioned by the National Economic Development and Labour Council (NEDLAC) and performed by Kaiser Associates (2000) concluded that the competitive advantage of SA's floriculture exports lay not in comparative production factors such as labour and land costs (as countries like Zimbabwe, Zambia, Kenya and Uganda were significantly less expensive), or in climate and seasonality (there are many other countries with similar advantages), but rather in infrastructure and environments designed to support export capability and supply chains, and, perhaps more importantly, in the diversity of SA's product offering.

The research reported that SA's floriculture industry had significant opportunity to grow and become an international player, earning over $250m in foreign exchange and creating over 80,000 jobs. Some of the more attractive features of the industry, especially bearing local policy objectives in mind, are that the industry has a high employment multiplier (capital expenditure to employment ratio), minimal barriers to entry and relatively low capital expenditure. In 2000, the industry employed roughly 17,500 people. One of the most important strategies that Kaiser Associates highlighted was to increase the volume of

Strengths: SA floriculture industry

- Minimal barriers to entry.
- High employment multiplier (capital expenditure to employment ratio).
- Relatively low capital expenditure.

Future strategies

- Diversify the product offering.
- Further strengthen the demand for 'indigenous' flowers.
- Establish infrastructure and environments designed to support export capability and supply chains optimally.
- Increase the volume of products exported to various markets, thereby creating the space for increased transport links and better supply chain logistics, and giving exporters the benefit of better freight rates.
- Pool together with producers of other flower varieties and other agricultural producers who harvest at different times where cold storage transport facilities are needed for exports to overcome the problem of insufficient freight because of seasonal harvests and to be able to negotiate preferential freight rates.
- Consolidate national organisations to supply effective support, education and financing.
- Compete from a value-added approach, which focuses on product quality, superior packaging and labelling, and more efficient marketing strategies. Competing on cost or climatic advantages alone is no longer feasible.

Future strategies for SADC

- Identify products with a potential comparative advantage.
- Expand the product range rather than focusing on a few of the more common and commercial varieties and competing for international market share with numerous other developing countries.
- Harness the combined bargaining effect of pooling together, for example Zambia and Zimbabwe.
- Attract international expertise, capital and other advantages (well-established marketing and distribution channels) flowing from joint ventures such as those between Ethiopia and the Netherlands, and Colombia and Ecuador with US firms.
- Standardise packaging and labels.
- Develop efficient cold chain management protocols and post-harvesting techniques.
- Implement industry-wide marketing campaigns and supportive export councils.
- Improve access to and the dispersion of information on market trends, prices, product variations, and demand and supply for key stakeholders.
- Develop education initiatives to train and support emerging farmers.
- Provide tailored finance packages designed with the export market in mind to potential farmers.
- Devise strategies to overcome the hurdle of NTBs, especially phytosanitary requirements, for example, by adopting a joint label that complies with EU standards.

products being exported to the various markets. The key concern here is that with increased volumes, exporters will be able to benefit from increased transport links and better overall supply chain logistics – and better freight rates. Related to this was the idea of the 'pooling together' of companies to combine their exports to the three major markets of the Netherlands, the UK and Germany. Pooling together with flower producers of other varieties and with other agricultural producers (whose produce is harvested at different times) who also require cold storage transport facilities will enable producers to overcome the problem of insufficient freight caused by seasonal harvests and be able to negotiate preferential freight rates which are based on minimum quantities per month.

Key to SA strategies is the idea that trying to compete on cost or climatic advantages alone is no longer feasible, and a much broader value-added approach which focuses on the quality of products and packaging as well as the perceptions of quality (labels, etc.) should be used, along with more efficient marketing strategies. Also emerging from the suggestions above is the need to consolidate national organisations into a unified force that is adequately funded and staffed, in order to provide support, education and financing.

Another strength that should be developed is the demand for 'indigenous' flowers, especially in Europe. A good example is the recent collaboration of Marks & Spencer and Shell to farm indigenous flowers in the Agulhus plain for wreaths that will be sold in the UK. Foliage is already a major product and should also be afforded more focus, as most of the competitors are developed countries and, with the exception of Israel and other EU countries, located much further away than SA (mainly in the Americas). Leatherleaf fern has particular potential.

10.3. Strategies specific to other SADC countries

Tanzania has one of the most perfectly suited climates for flower growing, especially in the highland regions to the north (for roses) where there is an export gateway through Kilimandjaro International Airport. Here seasonality and harvest periods are less of a concern, as the region is only a few degrees off the equator, and hence the harvest season is almost year-round. This means that transport costs are not likely to have huge peak seasons, followed by seasons when there is very little in the way of produce.

However, they could still benefit from the combined bargaining effects of pooling together, as could countries like Zimbabwe and Zambia. As investment costs are particularly high in many of these countries, packages made available by the various export organisations will also benefit the industry, as will other initiatives for these organisations to identify particular products for which there might be a potential comparative advantage.

For example, at present most of these countries only focus on a few of the more common and commercial varieties, and compete on world markets with almost every other developing country that exports cut flowers. Hence there is scope for expanding the range of products that are produced – including, perhaps, the cultivation of foliage. An interesting development that has recently taken place is the emergence

of Ethiopia as one of the fastest growing exporters. This is mainly due to the involvement of the Dutch in the country's cut flower industry. Similar joint ventures have taken place in Colombia and Ecuador with US firms. Perhaps there is similar scope for joint ventures, attracting European capital and some of the bigger companies that are involved with flowers, into setting up farms in the SADC region. The benefits for both parties concerned are enormous, as these companies have a cheap source of produce, while the farmers have access to long-established marketing and distribution channels.

10.4. General strategies

One of the more important aspects of the cut flower industry is that it is a relatively open industry, so there is always the potential threat of new entrants and competitors. It is thus crucial to develop more of a competitive advantage rather than relying on existing conditions.

Some of the suggestions made by Kaiser Associates (and backed by Boshoff, 2004) are applicable to all SADC countries. Many of these suggestions revolve around various aspects of the value chain, including the standardisation of packaging (sizes, materials, logos) and labels; the development of cold chain management protocols (and post-harvesting techniques); and industry-wide marketing campaigns and support by national bodies (export councils). Representation at the various markets by agents working directly for national bodies; the dispersion of information (market trends, prices, product variations, and demand and supply) to key stakeholders, including websites and education initiatives to both train and support emerging farmers; and the provision of financial support to potential farmers via tailored packages (which can be designed according to various prerequisites and controls with the export market in mind) will also bring enormous benefits.

One of the most important areas to look at is the increasing use by the major markets of what is often referred to as non-tariff barriers. In Europe, the US and Japan, phytosanitary requirements are becoming ever more stringent, and the lists of those plant varieties that are either wholly banned from entry or require extensive inspection and fumigation are lengthening.

This affects SADC countries in that their produce is liable to encounter lengthy delays at entrance points, and due to the perishable nature of the produce and the highly competitive flower markets where the main criteria is quality, SADC flowers may be less fresh, perhaps have a shorter vase-life or be perceived as inferior (because of the low regard for fumigated flowers), and thus lose out to others. The inspection or fumigation costs are also ultimately borne by the producer. Added to this is the increasing emphasis placed on environmental and social standards as embodied in the various eco-labels.

One of the often-cited reasons for Kenya's success is the adoption by the Kenyan Flower Council (KFC), under pressure from various organisations, of a label that has become more and more accepted as not only complying with the various eco-labels requirements, but also as a symbol of quality.

Future SADC strategies for the EU

- Countries must position themselves to take advantage of the continued shift in flower production from the EU to (East) Africa.
- Balance input cost advantages against the advantages of European (and other) producers' location, well-established marketing and distribution channels, and hi-tech processes that enhance productivity and quality.
- Adopt a label that conform to the various EU environmental and social standards.
- Address the issue of prohibitive transport and logistics costs by making full use of opportunities such as the Dubai Flower Centre.
- Ensure minimum standards and quantities to be able to secure contracts with major international retailers. Use collective associations / joint ventures.

Thus SADC countries and their various flower export promotion organisations (EFGAZ, ZEGA, TAFA and SAFGA[6]) should look at adopting a joint label that complies with European standards. COLEACP[7] is attempting to harmonise the Codes of Practice of the member countries with regards to environmental and socially responsible conditions of production. To qualify for certification, a producer needs to comply with COLEACP's framework and be visited by their auditors annually. At present Kenya, Uganda, Mauritius, Tanzania, Zimbabwe and Zambia are members, as well as three other Caribbean nations. This certification could be of great benefit to African exporters if it were to be accepted by European companies as a 'substitute' of sorts for the various European labels presently setting the standards.

Having said this, it is important to remember that there is growing demand for flowers, especially 'summer flowers', different 'indigenous' varieties and year-round flowers to complement the major world markets, thus the market potential is there. Moreover, the Dubai Flower Market is set to grow in importance on the international stage and, due to its location and historical trading patterns, will serve to benefit SADC countries as a distributional hub and a major market where buyers from all over the globe will be present.

Again there is much potential to be exploited here, with most major airlines flying in and out of the Dubai International Airport on a daily basis. DAS Air cargo recently announced that it will be operating flights to the Dubai Flower Centre from Entebbe, Uganda, with direct links to Zambia, Zimbabwe, SA, Malawi and Tanzania, and onwards to major European cities (to where it flies up to six times a week).

10.4.1. The European Union

The EU is already the number one destination of flower exports from SADC countries – and the share of exports from developing countries, especially African countries, in the EU is on the rise. The success of Kenya is well documented, but other countries like Ethiopia and Uganda have experienced phenomenal growth in flower cultivation destined for Europe in the past few years.

Their growth points to a continued shift in future flower production from the EU to Africa (East Africa), and thus it is essential that SADC countries position themselves to take advantage of this potential. Whilst African countries might seem to enjoy cost advantages from various inputs, these have to be balanced against the location of European (and other) producers, their existing distribution and marketing channels and higher levels of technology that enhance output and produce quality.

Environmental and social matters are foremost in the mind of the European consumer, and as such eco-labels are particularly important. The adoption of a label that conforms to various standards should be a priority. Addressing transport and logistics costs is also important, otherwise SADC countries will lose out to the more favourably

[6] The Tanzania Floriculture Association and the SA Flower Growers Association.

[7] COLEACP, the 'Liaison Committee Europe, Africa, Caribbean Pacific', is an inter-professional association of exporters, imports and other stakeholders of EU-ACP horticultural trade.

positioned Ethiopia and Uganda or already established European companies. This is an area where the Dubai Flower Centre could prove invaluable. Marketing is crucial, and being able to secure a deal with major retailers (as large Kenyan companies have done) would be one of the most effective ways of growing market share. However, in order to be eligible, producers would have to be able to guarantee minimum standards (EUREP-GAP) and quantities – requiring either large commercial farms or some form of collective association to back such bids. Another potential pathway is through joint ventures with companies in Kenya (or even Uganda), with SADC providing complementary flowers to be included in assembled bouquets and wreaths in Kenyan production outlets. SA chrysanthemum producers have recently agreed on such a deal with Kenyan producers supplying British retail chains.

10.4.2. Japan

Despite having no tariffs on the importation of flowers, Japanese markets can be very difficult to penetrate. This is due primarily to the existence of complicated distribution channels, phytosanitary demands and the heavy subsidies provided to domestic growers. Japan's zero tolerance on its demanding phytosanitary requirements is well known, and there are many reports of lengthy and non-transparent inspection delays for those importing without the assistance of Japanese freight forwarders (Grell, 1998).

Using Japanese wholesale importers and freight forwarders is thus the only real way of gaining access to this massive market, but they too are unfavourably disposed to fluctuating prices (due to unstable exchange rates) or flowers that have been fumigated. Attempting to compete with domestically produced flowers that are often fresher can be difficult, despite apparent cost advantages – Japanese markets will not necessarily open up for exporters of standard varieties from Zimbabwe, Zambia and Tanzania, unless they have longer shelf-lives. There is, however, growing demand from Japanese consumers for proteas and other 'indigenous' species such as *leucodendron* and *leucospermum cordifolium.* These are exported predominantly from Australia and New Zealand – this market thus has opportunity for SA.

Another way to gain contacts in Japan is through market fairs, such as the Tokyo IFEX. At the moment most flowers are grown domestically, and the domestic prices are relatively high, thus there is a possibility for competing on varieties such as *aster*, *buplearum* and *euphorbia*. Again, the Dubai Flower Centre could prove an invaluable link in the distribution channel towards Eastern markets, especially if Japanese freight forwarders and inspection officers are stationed at the Centre.

10.4.3. The United States

Local production in the US market is decreasing and slowly being replaced by imports. The world's largest economy is yet to consume at European per capita levels, but unlike Europe, the market for cut flowers and foliage is still growing rapidly. Thus it is an important market to consider. Most of the imports are supplied by nearby countries, but there is scope for increased market shares for SADC countries, especially in 'indigenous' products or products that do not compete directly with the Colombian/Ecuadorian specialties.

Future SADC strategies for Japan

- This is a very difficult market to penetrate because of zero tolerance on phytosanitary requirements, the fact that the Japanese market will still prefer domestically produced flowers that are fresher to flowers that are produced cheaper elsewhere, and the fact that it is almost impossible to gain access to this market without the assistance of Japanese wholesale importers and freight forwarders.
- SADC producers should focus on the growing demand from Japanese consumers for proteas and other indigenous species.
- SADC cut flower exporters could gain contacts and business links in this market by attending market fairs. At the moment most flowers are grown domestically, with the domestic prices often relatively high. SADC countries could therefore compete on certain varieties.

Future SADC strategies for the US

- The US market for cut flowers and foliage is growing rapidly, and there is scope for SADC countries with 'indigenous' products or products that do not compete directly with the Colombian and Ecuadorian specialities.

11. Trade fairs

International trade fairs are very important for growers and exporters, not only to display their produce but also to get to know more about their potential markets and competitors. As some markets can be very difficult to access without some help from within (agents, freight forwarders, wholesalers, etc.), fairs serve as an excellent meeting place to make contacts and business links. This section lists some of the more important trade fairs from around the world.

AUSTRIA

IGM

International Horticultural Exhibition, cut flowers & plants, horticultural technology
Frequency: annual (August 2006)
E-mail: messe@tulln.at
Internet: http://www.tulln.at/messe

CHINA

Taipei International Flower Show

Cut flowers, exotic flowers, orchids, foliage, bonsai, pot plants
Frequency: biennial (April)
E-mail: info@taiwan.com.au
Website: http://www.taiwan.com.au/Envtra/Taipei/report12.html

Hong Kong Flower Show 2005

Cut Flowers, Plants, landscape and floral art displays and other horticultural products
Frequency: annual (March)
E-mail: skwong@lcsd.gov.hk
Website: http://www.lcsd.gov.hk/green/hkfs/2005/en/index.php

DENMARK

DAN-GAR-TEK/DAN-PLANT

Horticultural technology
Frequency: biennial (August 2005)
E-mail: tc@occ.dk
Internet: http://www.dan-gar-tek.dk

FRANCE

Salon du Végétal

International horticultural trade fair
Frequency: biennial (16-18 February 2005)
E-mail: salon@bhr-vegetal.com
Internet: http://www.salon-du-vegetal.com/

Florissimo

International exhibition fair for exotic plants, flowers and foliage
Frequency: every 4 years (11 - 20 March 2005)
E-mail: contact@dijon-congrexpo.com
Internet: http://www.dijon-congrexpo.com

Hortiflor

Retail-oriented trade fair for cut flowers and pot plants
Frequency: annual (March 2006)
E-mail: communication@idexpo.com
Internet: www.hortiflor-expo.com

GERMANY

IPM

International trade fair for cut flowers and plants, equipment and florists' requisites
Frequency: annual (January 2006)
E-mail: info@messe-essen.de
Internet: http://www.ipm-messe.de

Internationale Gartenfachmesse (GAFA)

International garden trade fair
Frequency: annual (3-5 September 2006)
E-mail: info@koelnmesse.de
Internet: http://www.koelnmesse.de

International Green Week (IGW)

International exhibition for the food, agricultural, and horticultural industries
Frequency: annual (January 2006)
E-Mail: igw@messe-berlin.de
Internet: http://www.gruenewoche.com

ITALY

Flormart-Miflor

Flowers, plants, equipment
Frequency: semi-annual (February 2006)
Email: info@padovafiere.it ; info@padovafiere.it
Internet: http://www.flormart.it/

The NETHERLANDS

International Horti Fair

Equipment, flowers and plants
Frequency: annual (2-5 November 2006)
Email: info@hortifair.nl
Internet: http://www.hortifair.nl

JAPAN

International Flower Expo Tokyo (IFEX)

Cut flowers, exotic flowers, orchids, foliage, bonsai, pot plants
Frequency: annual (February)
E-mail: ifex-english@reedexpo.co.jp
Website: http://www.ifex.jp/english/index.html

Japan Flower and Garden Show (Chiba)

Cut flowers, garden designs, garden tools
Frequency: annual (March)
E-mail: ncc@m-messe.co.jp
Website: http://www.m-messe.co.jp/index_e.html

KENYA

Nairobi

Cut flowers, pot plants, equipment
Frequency: every two years (8-10 March 2006)
E-mail: info@eventsafrica.com
Website: http://www.eventseye.com/fairs

RUSSIA

Flowers 2006, Moscow

Cut flowers and related
Frequency: annual (31 Aug – 3 Sep 2006)
E-mail: info@hpp.nl
Website: http://www.eventseye.com/fairs

SPAIN

Iberflora

Garden and horticultural technology show
Frequency: annual (October 2006)
E-mail: amorales@feriavalencia.com; jbadenes@feriavalencia.com
Internet: http://www.feriavalencia.com/iberflora

UNITED KINGDOM

Four Oaks Trade Show

Equipment, flowers and plants
Frequency: annual (September 2006)
Email: show@fouroaks.u-net.com
Internet: http://www.fouroaks-tradeshow.com/

Chelsea Flower Show

Show gardens, horticultural specimens, garden equipment, technology
Frequency: annual (May 23-27 2005)
Email: info@rhs.org.uk
Internet: http://www.rhs.org.uk/chelsea

United States

World Floral Expo 2006,Miami Florida

International expo on cut flowers, pot plants and foliage, equipment and horticultural technology
Frequency: annual (March 15-17 2006)
E-mail: info@hpp.nl
Internet: http://www.eventseye.com/fairs

Northwest Flower and Garden Show

Flower, garden displays, garden equipment
Frequency: annual (February 8-12 2006)
Internet: http://gardenshownw.com/

San Francisco Flower and Garden Show

Flower, garden displays, garden equipment
Frequency: annual (March 15-19 2006)
Internet: http://www.gardenshow.com/sf/

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TRADE AND INDUSTRIAL POLICY STRATEGIES (TIPS) &

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