Tips & AusAid SADC Trade

TRADE INFORMATION BRIEF

ESSENTIALOILS

TIPS
TRADE & INDUSTRIAL POLICY STRATEGIES

Australian Government
AusAID

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.

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1. Introduction

The role of agriculture in uplifting the living standards of people in developing countries can not be disputed. In Africa and the developing world agriculture and agriculture-based industries not only form a significant share of GDP but also provides employment opportunities for unskilled labour. In Africa women produce 78% of the continent's food, including meat and staple grains, on subsistence and small land holdings with very limited access to production resources, land inclusive. And this is done in the backdrop of poor technologies. In Africa agriculture contributes 17.4% to GDP compared to 29% in Sub-Saharan Africa. Table 1 presents the state of agriculture in selected regions of the world. Of particular interest is Sub-Saharan Africa where agriculture contributed 29% in total GDP between 1998 and 2000. The Table also shows that comparatively Africa including Sub-Saharan Africa is struggling in all the other indicators and that a large portion of the population is dependent on agriculture.

Table 1: Agricultural indicators for selected regions (1998-2000)

	Africa	Sub-Saharan Africa	EU*	East and South East Asia#	South Asia	South America	North and Central America
Share of agricultural GDP in total GDP (%)	16.3	29.0	2.2	18.8	24.1	6.7	1.8
Share of population dependent on agriculture (%)	56.1	64.7	7.2	60.4	54.7	18.7	11.0
Share of labour force in total labour force (%)	58.1	66.6	7.5	62.2	59.0	18.3	9.0
Share of arable land in total agricultural land (%)	16.3	15.6	56.2	25.5	87.0	17.4	41.1
Fertiliser consumption per hectare of arable land (Kg/Ha)	21.4	8.9	170.9	224.9	110.7	80.0	95.8
Fertiliser consumption per hectare of agricultural land (Kg/Ha)	3.5	1.4	96.0	57.4	96.3	13.9	39.4
Number of tractors used per hectare of arable land	2.9	1.1	80.1	8.0	9.5	53.9	23.1
Agricultural GDP per agricultural worker (US$/Ha)	466.0	319.0	12,335.0	703.0	404.0	3,238.0	92.8
Investment per hectare of agricultural land (US$/Ha)	305.0	247.0	2,749.0	1,037.0	1,842.0	445.0	1,276.0

Source: FAO

***Excl. 7 former USSR Republics; # including China**

In recent years emphasis has been placed on high value agricultural products (HVA) such as fish, vegetables, livestock, milk, fresh fruit and essential oils. Some of these products, although labour intensive, require basic machinery for value-adding and processing. Table 1 shows that developing countries, especially African countries, struggle just to obtain tractors. A study by the International Trade Centre UNCTAD/WTO (ITC, 2004) points out that while these products offer developing countries export opportunities, producers and exporters are faced with a number of serious obstacles related to, amongst other things, organic

farming, production and product development, finance and marketing. In this Brief we focus on a very small sector of the agriculture industry – essential oils.

Essential oils have been used for more than 5,000 years. Their origin can be traced back to the ancient civilisation of Mesopotamia. In later years the technology of obtaining these oils spread to Egypt, India, Greece and Rome. The most commonly used essential oils are lavender, chamomile, peppermint, tea tree oil, eucalyptus, geranium, jasmine, rose, lemon, orange, rosemary, frankincense, and sandalwood.

Most of the trade in essential oils occurs in the European Union (EU), the North American Free Trade Area (NAFTA), South America and East Asia with very little or insignificant trade happening in Africa and in particular the SADC region. Over the past two decades there has been an increase in the amount of overall trade (imports and exports) in essential oils, from about just over US$616-million in 1990 to more than US$3.6-billion in 2005. The EU has inherently been the largest trader of essential oils. In 2005 it imported US$536m and exported US$765m of US$1.7bn and US$1.9bn world imports and exports, respectively. In the same period the North Atlantic Free Trade Area (NAFTA) imported US$378m worth of imports and exported US$476m.

SADC's trade, which the main area of focus in this report is insignificant in the context of world trade – just about 1% overall. In 2005 exports and imports amounted to US$15.4m and US$25.8m, respectively. The opportunities for the region to increase its share in world trade are plenty. This is despite the fact that big established multinational corporations (i.e. end-users) have developed solid commercial relationship with suppliers that have a proven record of supplying high quality products. There is also the question surrounding market access. These can only be taken as challenges for SADC's suppliers to measure up to the standards laid by the end-users – but never should they be construed as no-go-areas.

The report makes an honest effort to analyse the following regarding essential oils; why they present an opportunity for SADC farmers and traders; importance and common uses; production activities, that is, the stages entailed, including the type of weather conditions suitable for most plants; and, the methods used to extract oils from the plants including issues of quality. The trade section, most importantly, looks at the world's net importers, which are the countries that present export

opportunities for SADC. The latter analysis includes issues of tariffs and non-tariff barriers (NTBs).

That said, the aim of the Trade Information Brief (TIB) is to highlight potential export markets to SADC producers who may not have the capacity to engage in preliminary market research activities. The TIB is not a detailed market intelligence report but rather highlights potential lucrative business opportunities in a market. It should not be used to determine whether one enters a particular market but rather to ask questions about a market and stimulate further research.

2. Rationale for selecting essential oils products

The reasons for selecting essential oils products as potential tradable products for the SADC region are summarised below:

Essential oils farming is labour intensive. Compared to the developed world such as the EU and NAFTA, which are major essential oils consumers, the cost of labour in Africa including SADC is relatively cheap. A study by the New Zealand Insttitute for Crop and Food research noted that the greatest threat to the domestic industry was the low cost of production by developing countries.

Gender aspects: Being relatively high value and low weight, essential oils plants' farming provides enormous potential for generating improved incomes for rural women. Essential oils farming and processing is not only suited for big corporations but is also profitable for small-scale production and processing.

The regions' tropical climate favours cultivation of most essential oils plants. Cool nights with clear hot days are imperatives in order to obtain world-class quality oil.

Although the big end users deal with producers they have a history with, SADC producers can still find a niche in industries such as aromatherapy. Further, there are a number of multinational subsidiaries in the region, in particular in South Africa, which, once essential oils production is well-established in the region, these would source the oils domestically (i.e. in the region) than abroad. This would substantially reduce procurement costs.

Trading with the rest of the world will result in the transfer of technology, which would consequently result efficiency gains.

It also presents an opportunity for most SADC member countries to diversify their export portfolio instead of relying on one or two commodities for export earnings.

In line with the afore-mentioned, it presents an opportunity for other countries in the region to attract FDI into different sectors, which use essential oils as input in the production process.

3. Product definition

An essential oil is a liquid that is generally distilled (most frequently by steam or water) from the leaves, stems, flowers, bark, roots, seeds, fruits or other elements of a plant. Using the different technologies available essential oils are sourced from over 3,000 plants of which approximately 300 are of commercial importance. Most flowers contain very little volatile oil and their chemical components are too delicate and easily denatured by the high heat used in steam distillation. Instead, a solvent such as hexane or supercritical carbon dioxide is used to extract the oils. Extracts from hexane and other hydrophobic solvent are called concretes, which is mixture of essential oil, waxes, resins, and other lipophilic (oil soluble) plant material. Although highly fragrant, concretes contain large quantities of non-fragrant waxes and resins. As such another solvent, often ethyl alcohol, which only dissolves the frogman's low-molecular weight compounds, is used to extract the fragrant oil from the concrete. The alcohol is removed by a second distillation, leaving behind the absolute.

The majority of essential oils are obtained from agricultural plants but a number of oils are collected from wild sources including trees. One commercial source of essential and fragrance oils lists over 50 different oils; 25 of which are used in cooking and over 20 are used in potpourri, crafting, cosmetics, massage, aromatherapy and other uses. Other essential oils are used to repel insects and other arthropods that are pests of humans, livestock and pets (mosquitoes, fleas, ticks, etc. There are four broad sectors in which the oils are used: flavour, pharmaceutical, personal care and industrial. It is important to note that essential oils are not the same as perfume or fragrance oils. Where essential oils are derived from the true plants, perfume oils are artificially created fragrances or contain artificial substances and do not offer the therapeutic benefits that essential oils offer.

With so many plant species from which essential oils products are sourced it is even more problematic to accurately classify which plant belongs to which plant family or species. However, among the plants notable for their essential oils are members of the following plant families: carrot, ginger, heath, laurel, mint, myrtle, olive, orchid, pulse, rose and rue.

According to the HS reporting system, which is the reporting system used in this report, there are fourteen essential oils sub-categories. Table 1 shows the various components in the entire product cluster. Although, the report does not pick a specific category it is worth noting that about 60% of total trade is on lemon, concretes and absolutes, and concentrates (HS codes: 330113, 330129, and 330190, respectively). (See Figures 1 and 2 – Total exports and imports, respectively). Al-

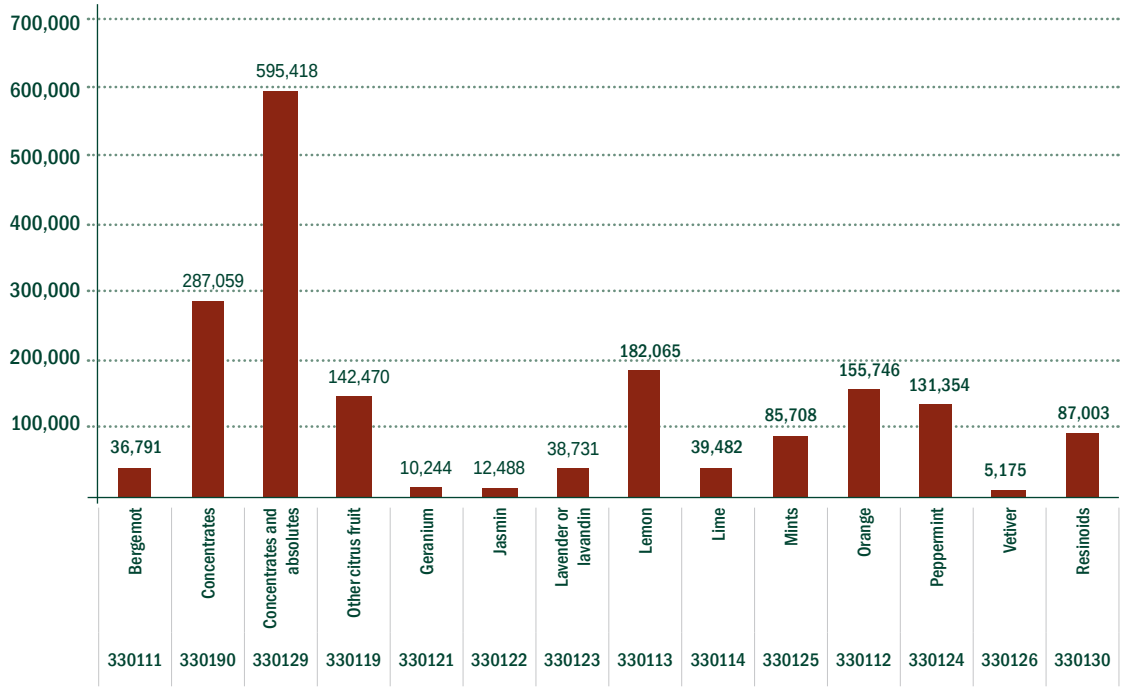
though global exports and imports is an identity, that is, what the world exports or imports should add to the same thing, the aim of Figures 1 and 2 is to highlight the importance of the mentioned oils in global trade. These products make the bulk of global trade in essential oils mainly because they are easily available and do not require sophisticated methods to produce.

Table 2: HS* codes for essential oil at HS33

3301	**Essential oil, resinoids, concentrates, concretes and absolutes.**
330111	Bergamot
330112	Orange
330113	Lemon
330114	Lime
330119	Other fruits
330121	Geranium
330122	Jasmin
330123	Lavender and lavendin
330124	Peppermint
330125	Mints
330126	Vetiver
330129	Concretes and absolutes
330130	Resinoids
330190	Concentrates

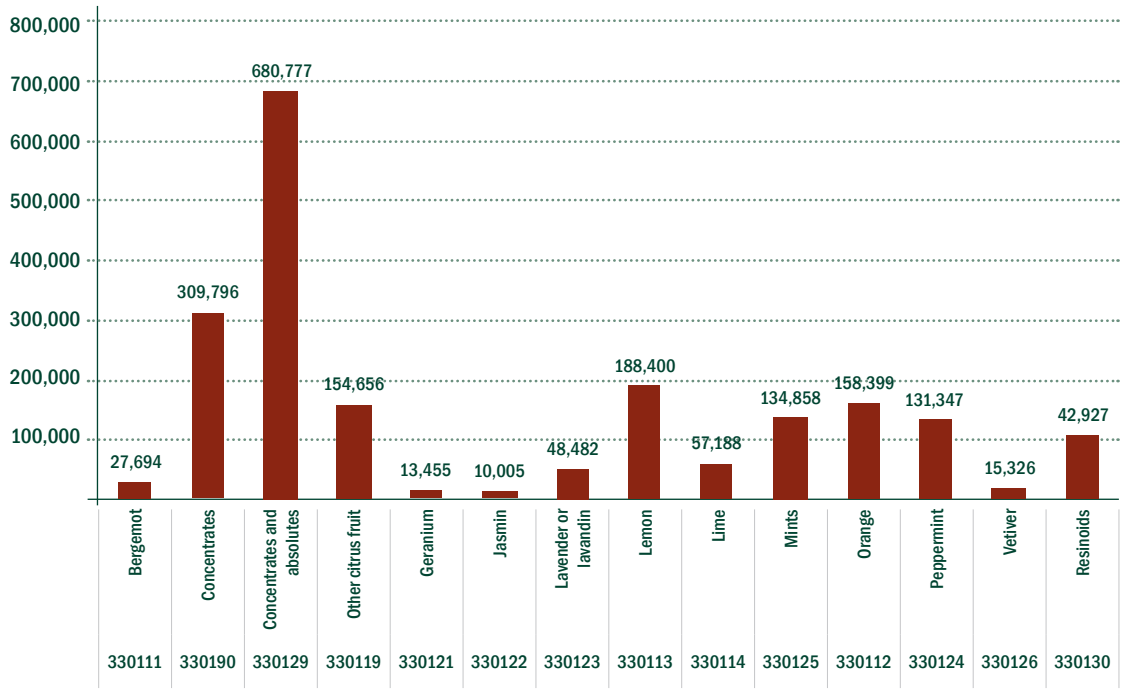
Source: www.customs.gov.au

Figure 1: Gross exports of essential oils per sub-category (2005, US$'000)



Source: Wits

Figure 2: Gross imports of essential oils per sub-category (2005, US$'000)



Source: Wits

3.1 Why are essential oils so essential?

- The importance of essential oils is provided in the list below:
- They are antibacterial, antiviral, antifungal, and antimicrobial.
- Essential oils by-pass the digestive system so they are beneficial for people with poor digestion/assimilation.
- They require no refrigeration and require very little storage space.
- They have the longest shelf life of any plant known to man.
- Essential oils are highly oxygenating. It is said that oxygen and disease can nott exist in the same environment.
- They are very cost-effective because they are one of the few substances that "the more you use them, the less you need them."
- They are suitable for babies since they cannot swallow tablets and capsules thus essential oils provide a solution as they only come in liquid form.
- There are a number of uses for essential oils in general. These include use in fragrances, cosmetics, soaps, food, confectionary, pharmaceuticals and cigarettes. They are also used in medicinal products to add taste or smell or to suppress the less desirable medicated flavour. Table 3 shows a list of common uses for selected essential oils.

Table 3: Common uses for selected essential oils

Essential oil	Common uses
Citrus	Industrial solvents, fragrance for cleaning products, flavouring
Spearmint	Toothpaste, mouthwash, confectionery flavouring
Peppermint	Toothpaste, mouthwash, chewing gum, food flavouring, cosmetics, tobacco
Lavender/lavandin	Fragrances, toiletries
Eucalyptus	Cough/cold remedies, solvents, cleaning agents, flavouring
Tea tree	Toiletries, insect repellents, germicides, cosmetics
Boronia	Food flavouring, fragrance
Blackcurrant bud	Food and beverage flavouring

Source: http://www.rirdc.gov.au/pub/essentoi.html

For more information the uses of essential oils in the medical field go to: http://inspie3.home.mindspring.com/oils.htm#medicinal_uses_.

3.2 Value chain

The value chain at farm gate and wholesale levels vary greatly across products such that it is impossible to develop stylised value chains. Figure 3 presents a general essential oils' value chain. FRIDGE 2004 summarises the stages as follows:

Crop selection stage - knowledge about the local soil, climate, correct genotype and potential markets;

Crop cultivation – sourcing of plant material (seeds or seedling), planting, crop management (pests and irrigation) and harvesting;

Primary processing – drying, distillation, quantities (economic yields), qualities (chemical and sensory qualities) and certification;

Figure 3: Essential oils value chain

Further beneficiation – involves rectification, fractionating and formulations; and

Sales and marketing – market knowledge, reputation and access.

While it is difficult to quantify costs from farm gate to wholesale levels it is estimated that harvesting costs make up between 10 to 35% of farm gate costs, with an average of 22%. Pest, weed and disease management costs are about 11 to 37%, with a mean of 22%. Nutrition, which includes irrigation and fertilisers are about 10% of grower costs. At wholesale level there is even greater variability as it depends on the extent of refinement and processing of the oil. Extraction costs are estimated to range between 60 to 75% of processor costs.

In the past traders in the importing country have demanded 5-10% commission, but are now under increasing pressure from major end-users to lower margins. Brokers, who effectively trade in documents, get a 3.5% commission while merchants who purchase and stock the oil aim for 7.5% incentives.

4. Production activities

Trends in production and domestic consumption in India and China will hugely affect the global market. Both have enormous and growing populations. A good measure of the essential oils' industry performance in the two countries can be seen by the steady growths of the world's most popular soft drinks, Coca Cola and Pepsi. The concern, however, is the adequacy of growth in the supply of some essential oils ingredients, which go into the productions of these drinks.

The major producers of essential oils are Brazil, China, USA, Egypt, India, Mexico, Guatemala, Morocco and Indonesia. All of them with the exception of USA are developing countries with low cost, peasant type economies. It is estimated that about 65% of world production emanates from developing countries. The major consumers are the USA (40%), Western Europe (30%) and Japan (7%). While the EU as a whole dominate world trade, exports and imports, no individual country from this bloc features in the list of major producers. Most of the major producing countries have large populations with huge internal appetite for essential oils. They have invested immensely in scientific and technical training and have well developed export businesses. There are about twenty most utilised essential oils worldwide (see Table 3). Production data for essential oils are hard to find, as it is very difficult to do an exhaustive compilation covering the broad spectrum of all of essential oils produced. The data in Table 4 are meant to provide an overview of the market and its composition. The essential oils industry is dynamic with tastes and preferences of consumers changing by the day. The top 10 crops in terms of production account for about 80% of the total world market for essential oils.

One of the most important things to do for farmers who want to be involved in essential oils production is selecting the right seed or plant material for sowing. It is recommended that this be obtained from a reputable supplier. Farmers should also be knowledgeable on weed control and management as this will affect the quality of the end product. If weeds are harvested and distilled with the crop, the oil from weeds can contaminate the desired oil, which would compromise quality. Worse, it would lead to a total rejection of the crop's oil. It must be noted that essential oils crops can be harvested as either plants or seeds. The quality of the oil is volatile. It changes as the crop grows. Quality is determined by a chemical analysis of the crop. This means that a farmer should ensure that such analytical services are easily and quickly accessible so that the crop is harvested at the right time.

Essential oils crops can be harvested as either plants or seeds. For plants the proximity of the steam distillation plant is important. If the period between harvesting and distillation is too long the oil from the

plant can evaporate or decline in quality. Quality aspects are further examined in Section 4.2.

With so many plant species to extract essential oils from, when considering which essential oil crops are best suited for what areas, it is essential to consider rainfall, temperature, frost free periods and soils.

Many of these crops can be grown with normal rainfall although supplementary irrigation is recommended for maximum production and quality. Lavender for instance can need minimum amount of water whereas peppermint requires a high amount of moisture. What this means is that from the outset it is important that the plant is well nurtured.

Table 4: The most utilised essential oils and major producers

The most utilised essential oils and major producers	
Product	**Country**
Orange	Australia, Brazil, Dominican Republic, Israel, Italy and USA.
Cornmint	Brazil, China, India, Japan, N. Korea, Paraguay, Taiwan and Thailand.
Eucalyptus (cineole-type)	Australia, Austria, Brazil, China, India, Paraguay, Portugal, South Africa and Spain.
Citronella	China, India and Vietnam.
Peppermint	Australia, China, Italy, Japan and USA.
Lemon	Argentina, Australia, Brazil, Greece, Spain, Italy, USA and Peru.
Eucalyptus (citronellal-type)	Australia, Austria, Brazil, China, India, Paraguay, Portugal, South Africa and Spain.
Clove leaf	Brazil, Indonesia, Madagascar, Sri Lanka and Tanzania.
Cedarwood (U.S.)	USA
Litsea cubeba	China
Sassafras	Brazil and the USA
Lime	Brazil, China, Cuba, Ghana, Haiti, Ivory Coast, Jamaica, Mexico and Peru.
Spearmint	Argentina, Australia, Brazil, Bulgaria, China, Egypt, France, Hungary, Japan, Korea, Morocco, New Zealand, Paraguay, Romania, Russia, Taiwan, the UK, the USA and Yugoslavia.
Cedarwood	China

Source: http://www.hort.purdue.edu/newcrop/proceedings1993/v2-620.htmll

Over and above the amount of water required by the plant, temperatures are a crucial factor when it comes to the quality of oil produced. To produce peppermint oil, for instance, cool nights with clear hot days are important in order to obtain world-class quality oil. Although some essential oil crops may withstand light frosts the most important climatic requirement for most crops is to have a frost free period for at least 150 days.

For instance, lemons, which are a source of lemon essential oils, cannot be successfully grown in areas where there is severe frost. Lemons are prone to attacks by insects such as aphids, scale, thrips, spider mite, psylla virus and caterpillars. Ants can also be a problem by nesting in the roots of the trees. These pests can be controlled by

fungicides and insecticides. The trees produce large, white, fragrant blossoms all year except winter. Lemons develop from the ovaries of the blossoms and ripen about seven or eight months after the flowers bloom. They can flower and fruit at the same time. They are normally grown from buds cut from trees that produce the type of lemon desired. The buds are grafted to seedling lemon trees called rootstocks, which are chosen for their resistance to disease and other factors. Lemons usually produce fruit after about 4 years and can go on bearing for up to 50 years. Lemon myrtle, an Australian native tree indigenous to the coastal, also grows in sub-tropical rainforests. It is the world's richest known natural source of citral (90 - 98%), and has an exquisite flavour and aroma described as a blend of lemongrass, lime and lemon. While lemons and oranges can grow in warmer climates, lime will definitely only grow in the tropics.

In terms of soil types, all essential crops need well drained soils that are not prone to water-logging. All areas need to be arable and have a reasonable level of fertility. Cumming (1999) discusses constraints to conventional agricultural development in Southern Africa (see Box 1).

Table 5: Production of essential oils ('000 tonnes)

	1999	2000	2001	2002
World	**22,166**	**25,177**	**28,277**	**28,209**
China	15,119	16,138	16,150	16,650
Iran	50	2,000	5,000	5,000
USA	4,530	4,140	4,140	3,970
Lebanon	1,628	2,074	2,062	1,631
Greece	232	210	270	301
Guatemala	215	230	245	250

Source: FAO (2004)

Box 1: Constraints to conventional agricultural development in Southern Africa

- Southern Africa is predominantly arid or semi-arid. Approximately 65% of the land area of Southern Africa can be classified as arid or semi-arid, with a mean annual rainfall of less than 750mm. This means that for most of the area of the region the primary determinant of plant growth is moisture, where rainfall is characterised by high spatial variability within seasons, high variability between years, and recurrent but unpredictable droughts. Furthermore, mean annual temperature in the region has increased over the last century, resulting in increased aridity.
- Soils are mostly infertile. Soils in Southern Africa are derived from an ancient basement complex and are mostly infertile, with some 66% of the region comprising Arenosols, Acrisols, Luvisols and Ferrasols; all soils which have little or no agricultural potential. Soils in the high rainfall areas have been leached and produce plants that are of generally low nutrient quality for livestock, resulting in low carrying capacities. Soils in arid areas are richer in nutrients, but plant growth is constrained by moisture and short growing seasons.
- Arable land covers about seven percent of the region and irrigable soils less than 1 per cent. At present, about 5% of the region is cultivated and only 0.28% is irrigated. There is a major mismatch between the distribution of human populations and land suitable for cultivation. The result is that cultivation is expanding rapidly into marginal land, where sustainability is unlikely.

Source: Cumming (1999)

Box 1 presents the types of soils in the Southern African region. However, it is also important to note that not all soils in the region are as described in the above. Further, modern farming techniques provide ways to mitigate the above shortcomings.

As can be seen in Tables 3 and 4 very few African countries are producers of essential oils. The characteristics of essential oils cultivation in Africa and Asia are more or less the same and are briefly discussed below.

First, farming of essential oil plants is predominantly subsistence and is cultivated by small holders who grow several other kinds of crops. Mixed cropping systems can be found in certain pockets where large plantations of monocrops such as lemon grass and basil are maintained.

Second, contrary to developed countries, a prominent feature with essential oils cultivation in Africa is that it is labour intensive. Whilst this is the general thing with essential oils farming, developed countries use machinery at certain stages of farming, which African farmers either cannot afford or access. In Africa all the stages of cultivation are labour intensive, starting from land preparation, seeding, transplanting of seedlings, to caring of plants throughout their lifecycle. These plants require heavy fertilizer application to obtain luxuriant growth in order to have a pleasant appearance to the consumer. Sometimes synthetic chemicals are not allowed to be applied to the plant and in such case even more intensive care is required.

The third characteristic is that farmers use primitive cultivars, which result in poor yield and quality. Fourth, smallholders do not have the knowledge of post-harvest treatments. This results in poor quality produce.

Several techniques are used in the production of essential oils. Some of these have been mentioned above, albeit, in passing. The distillation process uses water and steam to remove the oils from dried or fresh plants. The standard of distillation equipment varies enormously from very basic set-up for eucalyptus oil to high technology costly equipment for boronia or rose oil. During the steam distillation process, hot steam runs through the plant material and breaks down the cells of the plant and carries the essential oils to a cooling chamber where the hydrosol (water portion of the plant) and the essential oil (volatile oils of the plant) are then separated. The end result, which is the oil, is dependant on a number of factors, geography, climate, soil conditions, and most importantly, the technique and expertise of the distiller. The amount of essential oil that each distillation yields is a function of the plant type. Different plant types have different distillation times. For instance it takes about 45 minutes for lavender oil; 2 hours for geranium oil; 3 hours for pepper oil; 20 hours for ylang ylang oil; and, 48 hours for clove bud.

The expression method, which may be the oldest production technology for essential oils, is largely used to extract oils from citrus peels. This method is also referred to as the cold-pressed method. Citrus peel oils are usually cheaper than other oils due to the large quantities of oil in citrus peel and the relatively low cost to grow and harvest raw material. Other cheaper oils are lemon and sweet orange oils since they are obtained as by-products of the commercial citrus industry.

It is advisable that potential investors in essential oils farming and processing look at crops that have a reasonable demand of 20 tonnes or more per annum. Once harvesting and production and processing

have occurred the next stage is the marketing of what has been produced, although in most cases production occurs when an order has already been made, that is, the marketing is done well in advance of production.

4.1 Marketing activities

The marketing structure of essential oils is not different from most products. The traditional structure begins with the producer who sells to the flavour and fragrance houses. Fragrance houses may or may not embark on value adding to the product. They then sell it to the end users. At times this system has been supplemented by traders, agents and brokers who use their knowledge to market niches and buy directly from producers and sell directly to the flavour houses or end users.

As producers have grown larger end-users have tended to deal directly with them. This has benefited both parties; especially end-users, as issues relating to quality have been dealt with efficiently. In addition to that end users pay lower prices while producers get improved (higher) prices. Further, end-users have been assured of consistent supply while producers are certain that whatever they produce there is going to be a buyer. In most cases, as end users themselves grow they have had their own R&D (research and development) units. It must be said, though, that flavour houses have also developed their own R&D units in-house. This has been the mainstay of flavour houses as they are able to develop new flavour mixes in accordance with changing tastes and preferences of the consumers.

Although it is very difficult to enter into the essential oils industry from either side, i.e. as producers or end users, there is always an opportunity for small players. The reason for the difficulty in gaining entry is that once end users have developed a product using specific oil they do not want to change that oil or the supplier as they may fear a compromise in quality. Small players can enter the market in small industries such as aromatherapy and massage. SADC producers may target these industries.

Over and above the barriers to entry alluded to above there is also the issue of quality. Entering lucrative industries such as the rose and boronia can be difficult as they have exceptionally rigid quality standards which require sophisticated equipment to attain / extract from the plants.

Prices of essential oils products can range from US$1.50/kg for orange oil up to US$5000 / kg or more for rose or boronia oil. Prices are discussed in section 10.

4.2 Quality

Over and above the general quality requirements, storage of the product is also highly important as it can compromise quality. Storage materials should be opaque and should be glass bottles; aluminium bottles and drums (used for expensive essential oils); lacquered and lined steel drums; and, plastic drums in high density polyethylene, which are less expensive than lined steel drums. Before they are stored for shipment oils should be dried by filtration or the use of anhydrous calcium sulphate. Headspace should be filled with nitrogen gas although carbon dioxide is cheaper and easier to source in developing countries. The danger with using carbon dioxide, though, is that it might react with residual moisture to form carbonic acid, which may in turn react with essential oil constituents.

Before buyers of essential oils and essential oils products make a full order it is normal procedure that a sample is first shipped to them for assessment and quality testing. The sample shipment should show the producer name, date, sample contents, batch number and quantity represented. Plastic bottles are not suitable. Individual bottles of each sample should be sent in plastic bags to avoid or isolate leakages. Amongst other things, buyers may require the following (ITC UNCTAD/WTO, 2004:16):

Material safety data sheet;

Technical data sheet;

Pesticide residue analysis;

GMO free declaration; and

Declaration of non animal product derivatives

For flavour raw materials in the US and European market, it is important that exporters obtain a Kosher certificate and Halal certificates, respectively.

5. Consumption

There are three major countries that are major consumers of essential oils. These consume essential oils products across the board. These are; the U.S., Western Europe and Japan. Essential oils' products are used for flavour, fragrance and therapeutic and account for approximately 78% of total world consumption.

The general rise in world income in the past 60 years has also given rise to the demand for essential oil products. It is general economic theory that as incomes rise consumers' taste and preferences become sophisticated. For instance, demand for flavoring, perfumery, and aromatherapy materials has risen. There are also other factors that contribute to the surge in demand of essential oils. The steep rise in the world population and a desire for greater variety in their food by consumers in industrialized countries are some of the key reasons. Others include the increased concern for the environment and for the safety of food whereby consumers prefer the use of 'natural' ingredients in the composition of a product. Further, the general difficulty in manufacturing synthetic alternatives to essential oils has also contributed to the continued growth in demand for plant based essential oil products. Not all essential oils can be substituted with synthetics e.g. clove oil.

The demand for essential oils is influenced by a number of factors (UNCTAD, 2005):

Fashion: there is social pressure, especially in the developed world, for consumers to maintain a youthful appearance hence a higher demand for essential oils used in the cosmetic industry. Other trends include interest in natural, spa-at-home and detox products as people look for ways to feel good about themselves and escape the stresses of daily living.

Aromatherapy / Homeopathy: Aromatherapy is the use of essential oils, obtained from plants, to promote balance and harmony between mind and body. It can be used in massage, bath, shower, inhalation, burner, perfume, lotion, etc.

Health food: as mentioned above, this has to do with consumers' increased interest in a healthy lifestyle and consequently in the consumption of health food such as food products which are low in fat, limited in sugar and salt content. This includes functional foods, which have specific health-promoting properties and food products with added vitamins and minerals or bacteria supporting the intestinal function. This is the case with European consumers who are well conscious of these things.

Organic food: since European consumers have recently experienced several food scares, many people are concerned about the safety of food, as well as the effects of intensive farming on the countryside and on the environment in general. These factors, combined with the increasing awareness of the importance of diet and nutrition, have intensified interest in organic foods, which are grown according to principles laid down in European Union rules.

Nature-identical soils: Perfumes and flavour technicians are being forced to reduce the costs of their formulations. Cheaper ingredients such as nature-identical oils or flavours of synthetic origins are seen as substitute for expensive essential oils.

Personal care and detergent industry: the demand for essential oils is positively correlated with the demand for fragrances in personal care and detergent products.

5.1 Flavour/food industry

Over the years flavour oils have experienced an increase in usage in soft drinks and by the processed food industry. The development of new cuisines, especially the Asian type which employs spice oils, has benefited this industry. Companies that use organic essential oils in flavours are principally multinational manufacturers with subsidiaries in major international markets. The food industry includes the drink and beverages sector. This is an important industry, especially in EU where in 2001 total output amounted to €626bn. Essential oils used in the food industry are mostly citrus fruit, mint and clove. Considering that a number of SADC member countries are citrus fruit exporters it would be easy to vertically integrate into this type of essential oils production. Demand for oils in this sector is set to increase as drink manufacturers continue to develop trendy fashionable drinks, especially for the EU market.

5.2 Fragrance and cosmetic industry

The main demand for organic essential oil is from the fragrance and cosmetic sector. Western Europe represents a massive share of over 31% of the global cosmetics and toiletries market followed by North America and the Asia Pacific. Not only is Western Europe an important consumer of cosmetics but is also the largest producer of cosmetic products. The USA and Japan follow at a distance. Major EU producers are multinationals such as Unilever (Netherlands / UK), L'Oreal (France), Wella (Germany), Sanofi (France) and Beiersdorf (Germany) (UNCTAD / DITC / TED, 2005:17). These companies have products

that virtually cut across all essential oils' industries: pharmaceutical, chemicals, and food or household products.

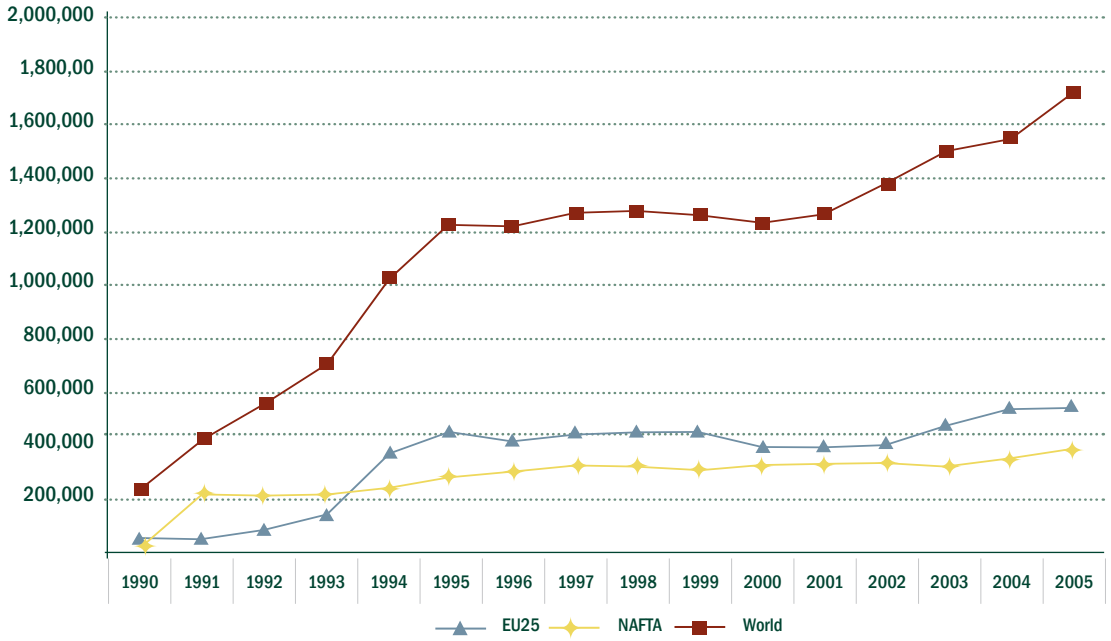
5.3 Pharmaceutical industry

This industry is also dominated by huge multinational companies and North America, EU and Japan are the three biggest markets. The demand for essential oils in this industry appears stable. In response to a perceived consumer 'green awareness' movement in the 1990s interest by mainstream 'personal care' product companies that use natural bio-active oils in shampoos and other related products, spurred demand for medicinal oils. Some new oils for specific bactericide and fungicide treatments have made successful market incursions but the level of demand is nonetheless small. The most successful entrant in the late 1980s and early 1990s has been the Australian tea tree oil, which is employed as an atmospheric bactericide in institutional air conditioning systems to combat Legionnaire's Disease. Although the development of new oils is welcome, companies' buying and production departments have reservations over using new ingredients until volume and continuity of supply are guaranteed

6. Global trade patterns

World trade in essential oils has increased exponentially since the 1990s (see Table 5 and 6). From just over US$706m in 1990 total world imports were slightly over US$1.9bn in 2005. On the other hand exports amounted to US$233m and US$1.7bn in 1990 and 2005, respectively. On average, between the 1990 and 2005 exports grew at an annual compounded rate of 49% while imports grew at 38%. Between 2000 and 2005 growth was 6.89% and 7.22% for export and imports, respectively.

Figure 4: Gross imports of essential oils per sub-Category (2005, US$'000)



Source: ?

Figure 5: Exports (left plane) and imports – developed and developing countries (US$'000)

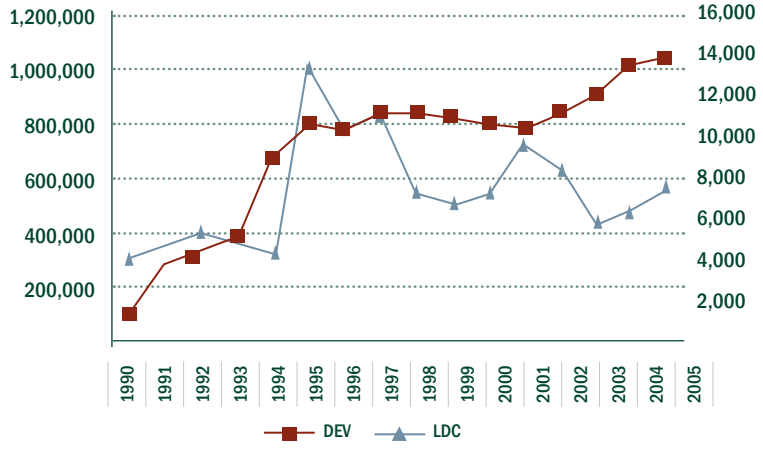


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Figure 5: Exports (left plane) and imports – developed and developing countries (US$'000)

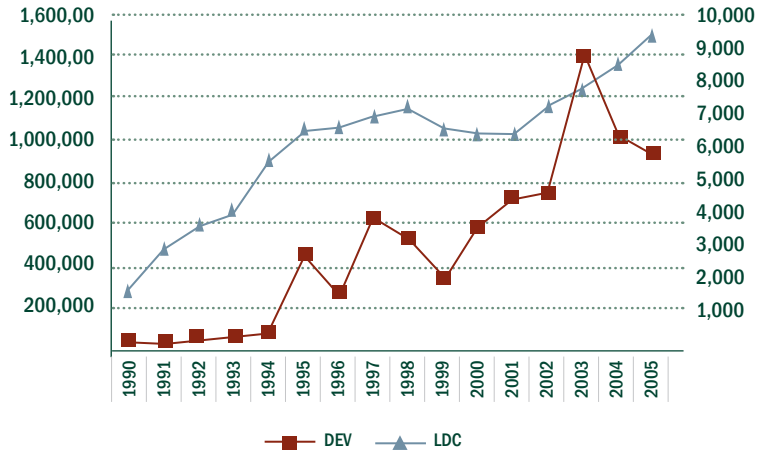

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Table 6: Regional trade in essential oils in 2005 (US$'000)

Imports				
			Average annual	Region's share (%)
Reporter	**2000**	**2005**	**Growth (%), 2000-05**	**2005**
East Asia	171,370	250,892	7.92	13.00
EU25	530,490	765,906	7.62	39.68
MEast	35,667	51,197	7.50	2.65
NAFTA	350,888	476,937	6.33	24.71
Oceania	15,599	21,428	6.56	1.11
South America	61,538	72,835	3.43	3.77
SADC	17,785	15,382	-2.86	0.80
South Asia	13,093	34,544	21.41	1.79
South East Asia	65,819	97,689	8.22	5.06
World	1,362,024	1,930,384	7.22	100.00

Exports				
			Average annual growth (%)	Region's share (%)
Reporter	**2000**	**2005**	**2000-05**	**2005**
East Asia	84,311	94,859	2.39	5.51
EU25	391,796	535,948	6.47	31.11
MEast	37,901	43,904	2.98	2.55
NAFTA	324,046	377,734	3.11	21.93
Oceania	13,909	25,440	12.83	1.48
South America	115,070	222,055	14.05	12.89
SADC	18,942	25,832	6.40	1.50
South Asia	62,582	165,468	21.47	9.60
South East Asia	100,569	120,069	3.61	6.97
World	1,234,621	1,722,731	6.89	100.00

Source: Wits and own calculations

Driving the growth in world imports in the period 2000-05 was the category of other citrus fruits, which soared by 17% annually, although the amount was far lower than the leading class of essential oils, namely; concretes and absolute. In 2005 global imports of these oils amounted to US$681m, a 5% rise from the year 2000. The EU is the largest trader of essential oils. In 2005 overall trade in the EU was valued at just about US$1.3bn, with imports outweighing exports – net importer – by more than US$230m. NAFTA and East Asia are the second and third most important traders of essential oils, although South America displaces the latter by far in terms of exports (see Table 6 - Exports).

Table 7: Global imports and exports per essential oils sub-category

Imports (US$'000)			
	2000	2005	Growth, 2000-05 (%)
Concentrates	195,850	309,796	10
Concretes and absolutes	522,658	680,777	5
Bergamot	20,612	27,694	6
Other citrus fruit	71,638	154,656	17
Geranium	15,074	13,455	-2
Jasmin	8,914	10,005	2
Lavender or lavandin	37,550	48,482	5
Lemon	129,667	188,400	8
Lime	35,686	57,188	10
Mints	97,156	134,858	7
Orange	83,007	158,399	14
Peppermint	137,024	131,347	-1
Vetiver	7,189	15,326	16
Resinoids	44,060	42,927	-1

Exports (US$'000)			
	2000	2005	Growth, 2000-05 (%)
Concentrates	184,428	287,059	9
Concretes and absolutes	420,220	595,418	7
Bergamot	22,833	36,791	10
Other citrus fruit	77,158	142,470	13
Geranium	9,681	10,244	1
Jasmin	5,934	12,488	16
Lavender or lavandin	32,267	38,731	4
Lemon	127,200	182,065	7
Lime	23,244	39,482	11
Mints	97,190	85,708	-2
Orange	82,642	155,746	14
Peppermint	147,831	131,354	-2
Vetiver	3,992	5,175	5
Resinoids	63,987	87,003	6

Source: Wits

Leading the growth in exports were jasmin essential oils, which grew at a compounded annualised rate of 16%. Again, concretes and absolutes lead exports in terms of value. In 2005 they registered US$595m represent a 7% growth annually.

6.1 Regional trade

The EU, NAFTA, East Asia and South America dominate world trade in essential oils, with the last two being third largest with respect to imports and exports, respectively. In 2005 the EU, NAFTA and East Asia collectively had 77% of the import market, which is the equivalent of more than US$1.5bn. On the other hand the EU, NAFTA and South America had a 66% of the export market or slightly more than US$1.1bn.

With a population of more than 456m people and per capita GDP of €22,300, the EU is one of the world's lucrative markets. In 2005 exports of essential oils in the EU amounted to US$536 million from US$391m in the year 2000. This represents an annualised growth of just about 6.5%.

The EU: Germany, Belgium, Ireland, the Netherlands and the UK are major markets for essential oils in the region. Most appealing in the context of SADC exporters is that they are also major importers of essential oils across all categories. France is also a significant trader but is a net exporter. In 2003 these markets accounted for 80.7% of the total cosmetic and toiletry market in the EU. An important trend with the EU market is the increasing consumer sophistication and interest in all that is natural. Consumer awareness of ingredients, performance and health benefits of using 'natural' products have grown over the years and have spurred demand for essential oils across the board. This has also had the effect of changing the personal care and cosmetic industry. The trend has turned away from synthetic products that superficially enhance beauty but have no biological effects, to therapeutic products so-called cosmeceutials, which may repair damaged tissues, smooth, protect from the sun and moisturise. Hence significant amounts of the EU's import bill, as a bloc and as individual countries, are concentrates, and concretes and absolutes. In 2005 this amount was US$469m and US$971m, respectively.

South Asia: In 2005 exports amounted to US$35m while imports were valued at US$165m translating to a net import position of more than US$100m. Being the world's populous sub-continent and still continues to grow the region through India is also a major consumer of essential oils, fragrances and flavours. The prospect for South Asia looks good as individual economies continue to grow. The most promising country is India, which is a very large consumer of all categories of essential oils, which are both produced locally (i.e. in India) and imported. As the Indian economy liberalised in the early 1990s the market experienced a new growth spurt. India was one country that was not greatly affected by the Asian crisis. Added to that is an estimated 200m Indians

who have annual incomes comparable to those of North America and still growing. This makes India a prospective lucrative market. Between 2000 and 2005 South Asia's exports and imports have been growing at an annualised rate of 21.5% and 21.4%, respectively.

South East Asia: This is a region that was mostly adversely affected by the Asian crisis, which dampened demand for essential oils products. Recovery is predicted to occur as the economies in this region, similar to South Asia, continue to grow. In 2005 imports to the region were valued at US$120m and exports at US$97.7m. During the period 2000 to 2005 imports grew at an annualised rate of 8.22% and 3.61% for exports.

East Asia: China's move from command economy towards market economy has had a dramatic effect on its consumer product market and sale of fragrance products increased by 15% annually in the early 1990s. China presents a huge growth potential as an essential oils market. The country had 150,000 super-rich people worth US$5m or more in 2006 and their ranks is rising fast, pushing up demand for luxury goods. In the same year the China luxury index, which tracks 32 items, not only shows demand rising but also prices of luxury goods jumped 8.7% compared with a 3.5% rise in the consumer price index. The main consumer and net importer of essential oils products in this region is Japan. It is a net importer in all categories of essential oils products (see Table 23). In 2005 East Asia's imports recorded US$250.9m and exports were worth US$94.9m. The growth in imports and exports over the period 2000 to 2005 was 7.9% and 2.4% compounded annually, respectively.

South America: The same as Asia, trade liberalisation in the 1990s brought about significant growth in the consumption of essential oils products such as fragrance and flavour product sales, especially in the Mercosur Economic Community in South America. The irony is that domestically produced essential oils in some countries declined as a result of the supplanting of many domestic flavour and fragrance manufacturing companies by multinationals, which source their ingredients from foreign-based subsidiaries. That said, the prospects look good as the population of South America is more than 300m and there is a substantial middle class, particularly in Brazil and Argentina.

The Middle East: Representing about 2.65% and 2.55% of world imports and exports, respectively demand for essential oils in the Middle East is centred on fragrance oils mostly supplied in pre-compounded form. Flavour oil consumption is largely in the soft drink sector. The

market in the Gulf has contracted as a result of first the Iraq/Kuwait war and the 2003 invasion of Iraq. Growth in imports compounded annually was 7.5% and 2.98% for imports and exports, respectively.

Sub-Saharan Africa including SADC: Although Sub-Saharan Africa is not represented in the regional tables overall demand for essential oils is not as great as elsewhere in the world. The main reason is the region's low buying power as measured by per capita income. There is however strong and growing demand for inexpensive fragrance oils, particularly of the citronella type. This type of essential oil is mainly used in the hard bar laundry soaps used for all purposes by the mass population. Consumption of natural citronella and its synthetics substitutes is estimated to be around 1,300 tonnes per annum and this implies that the region is the world's largest consumers of citronella oil. The consumption of flavour oil in Sub-Saharan Africa is low, with the exception, of course, of other pre-compounded soft drinks, toothpaste and other oral hygiene products. The exception is South Africa, with the largest consumer base of essential oils. Being one of the largest and most developed economies in Africa, South Africa has a strongly developing flavour industry plus branches of virtually all multinational companies, which have successfully marketed products incorporating non-traditional flavours to the predominant, urban black group.

Table 8: Regions' key trading partners in 2005 (%)

	Region's trading partner				
Exporter	**First**		**Second**		**SADC**
East Asia	EU25	34	NAFTA	26	0
EU25	EU25	48	NAFTA	17	1
Middle East	EU25	36	NAFTA	30	0
NAFTA	EU25	30	NAFTA	28	0
Oceania	EU25	29	NAFTA	22	1
South America	NAFTA	42	EU25	41	0
SADC	EU25	46	NAFTA	26	8
South Asia	NAFTA	32	EU25	27	1
South East Asia	South East Asia	33	EU26	22	0

	Region's trading partner				
Importer	**First**		**Second**		**SADC**
EastAsia	NAFTA	38	EU25	25	1
EU25	EU25	34	NAFTA	23	2
Middle East	EU25	50	NAFTA	17	0
NAFTA	EU25	23	NAFTA	21	2
Oceania	EU25	32	NAFTA	15	3
South America	EU25	29	South America	25	0
SADC	EU25	40	South Asia	21	15
South Asia	EU25	27	South East Asia	25	1
South East Asia	South East Asia	27	EU25	23	1

Source: Wits

Table 9: Top five exporters and importers of essential oils in 2005 (US$'000)

Exports (US$'000)			
	2000	2005	% Growth, 2000-05
US	300,802	351,707	3.18
France	153,324	204,518	5.93
India	62,634	166,548	21.60
UK	94,037	107,815	2.77
Brazil	45,907	105,706	18.15
South Africa*	11,504	18,431	9.88

Imports (US$'000)			
	2000	2005	% Growth, 2000-05
US	278,009	390,888	7.05
France	147,362	199,467	6.24
UK	126,807	174,908	6.64
Japan	93,972	152,304	10.14
Germany	80,395	117,242	7.84
South Africa*	6,554	9,698	8.15

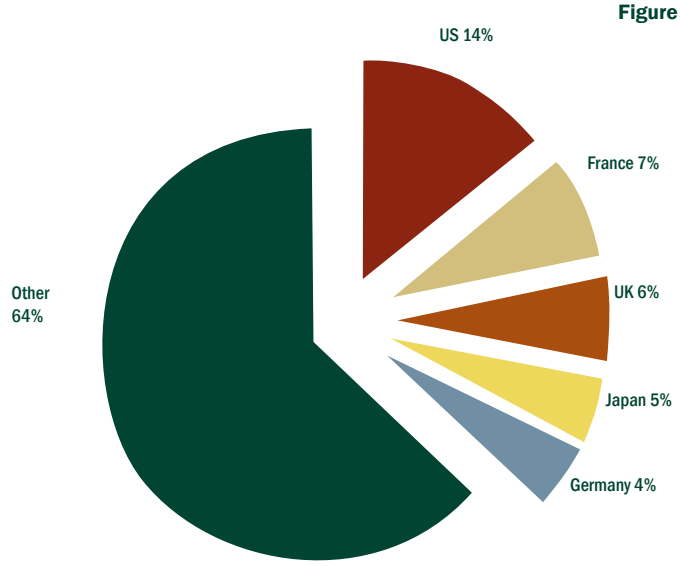
Source: Wits (*SADC's leading exporter / importer)

6.2 Major importing countries

Quite a few countries dominate the world's import market in essential oils. Figure 6 shows five countries that are leading importers. The US is leading with a 14% share or US$390.9m worth of imports in 2005. France, the UK and Germany are not only leaders in the EU but also amongst the five largest world importers (see Table 9, imports). As it has been indicated above, essential oils products are mainly used in developed countries as their consumers are more sophisticated compared to other consumers in other parts of the world. Added to this is their purchasing power. Other regions such as Oriental lands, China and Japan mainly use essential oils for reasons other than conventional ones although the proliferation of western culture has had a huge impact in changing the usage of essential oils products. In Asia essential oils are also used for cultural and religious purposes.

Brazil, Germany and the US source their imports predominantly from the EU while Japan and the UK import mainly from NAFTA (see Table 10). The EU market is much more important to Germany since in 2005 it provided for up to 42% of the country's essential oils imports or just about US$48.7m. In the same year, Japan's imports from NAFTA amounted to US$70.8m or 46% of Japan's total import bill. Table 10 also shows that on average the leading five importers of essential oils source less than 1% of their imports from SADC. More specifically, the UK imports about 3% of essential oils from the SADC region; Germany and the US both individually source 2%; and Japan and Brazil less than 0.5% of their total imports.

Figure 6: Top five importers' share of world essential oils exports (2005)



Source: Wits

Table 10: Source of imports for top five importers, 2005 (US$'000)

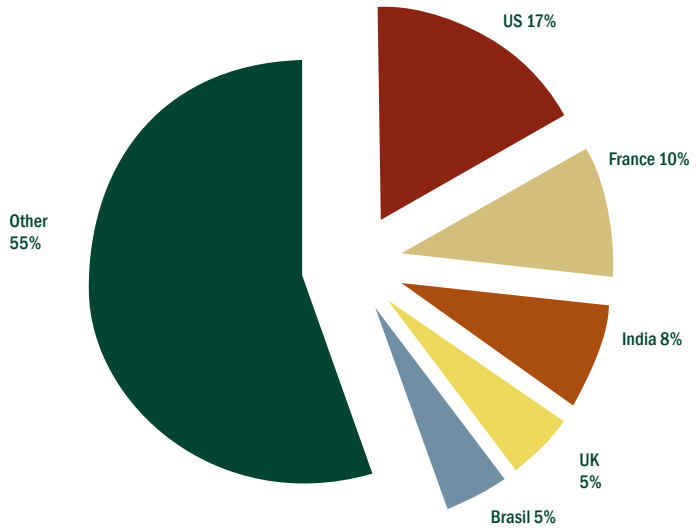
Imports 2005 (US$'000)										
Importer	**EastAsia**	**EU25**	**MEast**	**NAFTA**	**Oceania**	**S.America**	**SADC**	**SAsia**	**SEAsia**	**Other**
Brazil	1,022	13,639	61	5,189	86	13,517	39	2,114	2,946	1,421
Germany	9,579	48,680	4,504	15,685	1,417	9,979	2,237	11,682	4,661	8,818
Japan	6,177	36,091	3,048	70,816	866	8,993	671	14,568	5,060	6,014
UK	11,665	38,486	2,737	56,152	2,268	40,406	4,501	9,417	5,451	3,825
US	33,842	98,566	11,913	50,348	5,267	92,239	8,577	44,593	22,270	23,274

Source: Wits

6.3 Major exporting countries

Figure 7 shows the leading five exporters of essential oils in the world. Together they exported US$936.3m worth of essential oils product representing about 40% of world exports. Again the US is a major exporter with US$351.7m worth of exports or 17% share of world total exports. The US is followed by France, India, the UK, and Brazil (see Table 9, exports). The leading export destination for three of the five countries is the EU (France, UK and US). Brazil and India export mainly to NAFTA, with 43% and 32% worth of exports destined to that region in 2005, the equivalent of US$45.3m and US$53.1m, respectively. The SADC region exports less that 1% of essential oils products on average to these countries. Only 2% of exports from SADC are destined for the UK with France and India each importing about 1% in 2005.

Figure 7: Top 5 exporters' share of world essential oils exports (2005)



Source: Wits

Table 11: Destination of exports for top five countries, 2005 (US$'000)

Exports 2005 (US$'000)										
Exporter	**East Asia**	**EU25**	**M East**	**NAFTA**	**Oceania**	**S America**	**SADC**	**S Asia**	**S E Asia**	**Other**
Brazil	10,358	38,246	1,770	45,285	847	2,594	84	815	1,797	3,912
France	19,752	85,230	7,574	41,425	1,439	8,619	1,062	3,151	5,159	31,109
India	28,694	42,186	9,830	53,108	1,928	3,741	2,459	2,602	15,881	6,119
UK	17,924	43,521	3,538	14,794	3,422	3,206	1,990	1,430	4,361	13,628
US	92,811	101,778	8,058	83,305	2,427	26,819	1,516	3,772	12,001	19,220

Source: Wits

7. SADC

The Southern African Development Community (SADC) is an insignificant player in the world market for essential oils. It is difficult to obtain production and consumption data from SADC member countries with the exception of South Africa. However, from the trade statistics it is apparent that SADC is a price-taker in the world market but is also hugely dominated by South Africa. South Africa's share of trade is at least 60% of the regions total trade in terms of value. The region's share in world trade, exports and imports, is about 1%, amounting to US$25.8m and US$15.4m, respectively, in 2005. In fact in 2005, its share of world exports and imports was 1.5% and 0.8%, respectively.

In terms of essential oils sub-categories, SADC mainly imports concentrates, peppermint and mints. The region is also a net importer of lime, and lavender and lavendin oils. South Africa has the largest chunk of the import bill, slightly below 50% or about US$16.3m of the US$34.3m, which is the total import bill for SADC as a whole. This not only emphasises the size of the South African economy but also highlights the level of sophistication of the South African consumer. In addition to that, a number of multinational firms that use essential oils as an input in the production process have subsidiaries in the country. These include Unilver, Procter & Gamble, L'Oreal, Colgate-Palmolive, GlaxoSmithKline, Pfizer which are either in the cosmetic, pharmaceutical and food industries.

Table 12: SADC's net trade by essential oils sub-category (US$'000)

	Net Imports (-) / Exports					
	2000	2001	2002	2003	2004	2005
Concentrates	-147	4,860	942	471	-640	-4,729
Concretes and absolute	7,885	9,590	9,045	5,717	8,599	9,365
Bergamot	-1,675	-137	-51	110	450	465
Other citrus fruit	728	1,854	1,855	1,023	2,651	3,738
Geranium	14	456	-5	124	68	192
Jasmin	-18	214	-102	213	80	-1
Lavender or lavandin	-19	-126	-235	-124	-171	-292
Lemon	-3,555	2,187	1,781	1,233	1,870	4,097
Lime	780	-126	-152	-64	125	-634
Mints	-962	-728	-678	-1,063	-1,020	-1,256
Orange	-255	-40	499	163	879	770
Peppermint	-1,116	-1,040	-1,013	-1,063	-809	-661
Vetiver	4	70	80	104	5	61
Resinoids	-958	43	13	-136	-36	-91

Source: Wits

Table 13: South Africa's net trade in essential oils sub-category (US$'000)

Net Imports (-) / Exports						
	2000	2001	2002	2003	2004	2005
Concentrates	1,005	1,386	1,276	2,471	1,262	-3,332
Concretes and absolute	2,398	2,722	2,747	2,344	4,269	3,448
Bergamot	25	18	32	382	662	667
Other citrus fruit	1,094	1,884	2,091	2,244	3,188	4,256
Geranium	-40	24	14	122	-11	112
Jasmin	-1	163	3	271	105	-2
Lavender or lavandin	-33	-118	-166	24	23	-200
Lemon	1,472	2,535	2,586	1,328	1,919	4,309
Lime	810	2	-61	75	79	-104
Mints	-683	-530	-515	-452	-389	-439
Orange	299	295	756	550	713	803
Peppermint	-1,111	-1,005	-856	-1,084	-765	-695
Vetiver	-2	-2	-3	-0	-1	-0
Resinoids	-284	-230	-62	-151	-32	-89

Source: Wits

Table 14: SADC countries' exports of essential oils in 2005 (US$'000)

Exports (US$'000)			
	2000	2005	% Growth, 2000-05
Botswana	2		n/a
Madagascar	6,508	7,226	2.12
Malawi	0	84	252.06
Namibia	655	38	-43.53
South Africa	11,504	18,431	9.88
Swaziland	70		n/a
Tanzania	0	10	193.55

Source: Wits

Table 15: SADC countries' imports of essential oils in 2005 (US$'000)

Imports (US$'000)			
	2000	2005	% Growth, 2000-05
Botswana	215		n/a
Lesotho	37		n/a
Madagascar	37	75	14.96
Malawi	87	179	15.51
Mauritania	11	196	79.56
Mozambique	329	346	1.01
Namibia	1,244	1,174	-1.15
South Africa	6,554	9,698	8.15
Swaziland	8,823		n/a
Tanzania	751	2,465	26.84
Zambia	166	662	31.88

Source: Wits

Table 16: SADC countries' regional exports

Exports in 2005 (US$'000)									
	East Asia	EU25	Middle East	NAFTA	Oceania	South America	SADC	South Asia	South East Asia
Madagascar	391	4,525	0	330	50	-	41	477	1,281
Malawi	-	23	5	-	-	-	62	-	-
Mauritius	-	13	-	-	-	-	3	-	-
Namibia	-	0	-	-	-	-	38	-	-
South Africa	1,044	7,298	15	6,470	642	18	1,790	103	51
Tanzania	-	-	-	-	-	-	10	-	-
Zambia	-	20	-	-	-	-	11	-	-

Source: Wits

Table 17: SADC countries' regional imports

Imports in 2005 (US$'000)									
	East Asia	EU25	Middle East	NAFTA	Oceania	South America	SADC	South Asia	South East Asia
Madagascar	0.16	59.74	0.00	-	-	-	4.60	-	-
Malawi	0.01	20.59	0.01	9.69	-	-	145.97	3.11	-
Mauritius	1.51	783.88	3.41	0.17	26.95	0.04	8.43	23.80	8.16
Mozambique	-	2.39	1.33	105.52	-	-	184.54	52.38	-
Namibia	19.47	0.61	-	-	-	-	1,152.88	0.13	0.02
South Africa	130.70	3,813.32	58.88	1,916.80	304.32	233.68	280.42	2,595.72	89.11
Tanzania	6.57	1,590.56	31.38	0.12	-	-	0.81	586.72	2.09
Zambia	-	2.01	1.18	0.12	-	-	567.21	49.49	-

Source: Wits

Table 18: Net importers/exporters in the world's lucrative markets by country (US$'000)

	Net Importer (-) / Exporter					
	2000	**2001**	**2002**	**2003**	**2004**	**2005**
Austria	-1,155	-1,041	-18	1,426	3,021	2,132
Belgium	-11,027	-15,907	-16,143	-21,719	-19,665	-20,155
Cyprus	-95	-212	35	-154	-163	-60
Czech Republic	-4,175	-4,733	-4,928	-5,368	-5,001	-2,818
Denmark	-3,952	-4,267	-5,216	-3,700	-4,229	-6,313
Estonia	-210	-133	-182	-189	-80	-210
Finland	-1,133	-1,189	-1,029	-1,207	-1,400	-1,513
France	5,962	4,062	-6,765	14,963	17,985	5,051
Germany	-49,315	-50,537	-54,584	-61,747	-62,046	-48,240
Greece	440	386	450	246	1,035	244
Hungary	-7	31	574	-75	1,652	-145
Ireland	-23,953	-22,421	-21,652	-21,814	-52,588	-72,998
Italy	10,646	10,754	12,621	13,845	19,798	19,231
Latvia	-50	-237	-234	-306	-346	-271
Lithuania	110	42	47	69	-37	-144
Luxembourg	-367	-98	-203	-211	-336	-35
Malta	-51	-68	-80	-102	-73	-65
Netherlands	-18,711	-21,318	-25,141	-17,661	-21,188	-16,674
Poland	-2,164	-1,080	-2,807	-1,970	-3,674	-4,279
Portugal	-1,169	-1,193	-4,176	-840	-302	-367
Slovak Republic	-610	-759	-891	-1,485	-2,037	-998
Slovenia	191	-539	-569	-920	-1,421	-1,032
Spain	1,551	-5,621	-8,954	-21,208	-10,648	-6,703
Sweden	-2,573	-2,488	-3,042	-2,915	-2,216	-2,751
UK	-32,770	-28,955	-58,669	-32,883	-59,403	-67,094
Canada	-18,404	-16,071	-23,472	-18,626	-13,157	-10,585
Mexico	-20,300	-28,878	-28,730	-23,756	-15,203	-13,018
US	22,793	24,808	10,522	-29,368	11,160	-39,181
Japan	-86,660	-91,665	-84,793	-97,736	-124,024	-147,773

Source: Wits

8. Tariffs and non-tariff-barriers (NTBs)

The aim of tariffs and non-tariff barriers (NTBs) is to protect the domestic industry from competition emanating from other countries that produce similar products. A tariff is basically a tax on foreign goods upon importation. It can either be ad valorem tariff or specific tariff. The former is a proportion or percentage of the value of the good whereas a specific tax relates to how many units of currency are to be levied per unit of quantity. Such protection is intended, ideally, to last until that particular industry can develop and compete with international firms. However this is not normally the case as some countries use the tariff collection as revenue, which directly go to the fiscus without necessarily developing the protected industries. This is the case, especially in developing countries, which have a relatively small revenue base. The advent of free trade together with globalisation is major threats to this base source of revenue.

8.1 Tariffs in major markets

The principal reason countries apply tariffs to imports is to protect domestic primary industries. Once those industries have developed ideally tariffs should be removed. Developing countries, especially from Africa have been adversely affected by tariffs imposed by developed economies in particular tariff escalation clauses, which basically encourage poor countries to export primary commodities in their raw form. Tariff escalation means increased difficulty for exporting of mainly processed agricultural products by developing countries, which have an advantage in labour-intensive products. It must be noted, though, that the definition does not only cover agricultural products. This is usually the case in the EU market, which together with the US are the world's biggest economies in terms of purchasing power. There are no significant tariff barriers for trade in essential oils between developing and industrialised country markets.

The EU and Japan do not apply import tariffs to essential oils from SADC. This includes a majority of developing countries. There are also no quota restrictions on imports of essential oils into the EU. The only condition is that the shipment is accompanied by the appropriate certificate or origin. Useful websites for import tariffs to the EU visit: http://www.douane.nl/taric-nl and http://exprthelp.cec.eu.int. The same applies to NAFTA and in particular the US where essential oils exports from most African countries are exempt of tariffs.

Although prospects of exporting to the Chinese market are huge, tariffs are 20% for Most Favoured Nation (M.F.N) and 80%, which is the general tariff rate. A useful site for the tariff rates applied to essential oils in China, visit: http://www.china-imports-exports-statistics.com/hs_code_tariff/33/01/. Like China, India remains one of the most closed economies in the world. In India duty totals up to 25%, though rates can be higher on certain products. Worse, there is no single official publication of tariffs information, which makes it difficult to ascertain the tariff rates applied to essential oils exports to that market.

8.2 Non-tariff-barriers (NTBs)

Over and above tariffs developed countries have increasingly resorted to sanitary and phytosanitary (SPS) measures for animal and plant health and technical barriers to trade (TBT) to block agricultural imports. Some non-tariffs trade barriers are expressly permitted when they are deemed necessary to protect health, safety, or sanitation, or protect depletable natural resources. The effect this has on developing economies is enormous and is difficult to quantify. Developed countries have also strengthened quarantine inspection measures for food and animal and plant health. They have made laws and regulations to impose over-elaborate and compulsory inspections of imported agricultural products and food. Worse, they also keep updating quality inspection standards, requiring more labelling and packaging procedures, environmental protection and animal welfare. For instance from 1995 to 2003, there were 48 TBT and SPS disputes concerning agricultural products among WTO members, accounting for 15.9% of the total number of WTO trade disputes. The US, EU and Japan are the countries with most technical barriers, according to WTO commissions.

9. Market access

When exporting essential oils to the EU, US and other advance markets including Japan it is important that exporters familiarize themselves with the requirements laid down by the government or industry authority itself. A starting point is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This will provide them with information about plants that are banned commercially in international trade. More than 230 medicinal plant species have been added to CITES appendices.

It is advisable that exporters confirm with their customers to ensure that the necessary registrations are in place before shipments of the good occur.

European Union: the administration and enforcement of organic standards are carried out by national authorities. This information is available at http:www.organicts.com/organic_info/certification/links/index.html.

US: the body responsible for organic registration and regulation is the National Organic Program (NOP) and is under the US Department of Agriculture. Information is available at http:/www.ams.usda.gov/nop.

Japan: organic regulations require that the products carry the mark of the Japanese Agricultural Standard (JAS). The regulations require the registration of certification bodies as well as certification of operators by registered certification bodies based on the technical criteria for certification. Details can be found at http:/www.maff.go.jp.

Canada: the Canadian Food Inspection Agency is responsible for organic regulation. See http://www.inspection.gc.ca/english/corpaffr/recarapp/recaltoce.shtml. The states of Quebec and British Columbia have their own certifying bodies and information can be found at http:/www.caqbio.org and http:/www.certifiedorganic.bc.ca.

Switzerland: the production, processing and marketing of organic products are regulated by the Swiss regulation on the Organic farming (Schweizer Bio-Verordnung).

For more information on other countries' regulation and certifying procedures two ITC websites are useful: http:/www.intracen.org/mds and http:/www.organic-research.com/LawsRegs/legislation.asp.

10. Prices

The combination of erratic supply and prices for some essential oils has resulted in the irreversible substitution of some oils by synthetics and this provides a real threat, especially with regard to perfumery oils. The latter coupled with the acute competition between suppliers has resulted in the price of many oils depreciating in real terms over the years. The main beneficiaries of this situation have been end-users.

With so many essential oils' products there is no doubt that there is a huge variance across the prices of each essential oils' products. The ITC (2004:5) study cited above notes that organic premiums for many essential oils have been higher in percentage forms than those realised for most other organic crops, which indicated that demand has outweighed supply. Table 19 provides a list of prices of the 20 most utilised essential oils. (The list should only be taken as a guide as essential oils, like most commodities are volatile). There is an increasing trend for preference of natural products, which is spurring demand for natural fragrances and flavouring. This is despite the fact that a considerable part of the market is currently shared by synthetic substitutes. The synthetic products have the advantages of lower production costs, stable pricing and regular supply. In the past there used to exist an arrangement whereby dealers would have a multi-year contracts with dealers but such arrangement is no longer popular. For instance mint growers in the US were paid £23/kg within 3-year contracts.

Prices for essential oils are published in the trade literature, either as free-on-board (f.o.b), cost and freight (c&f), cost, insurance and freight (c.i.f), or as the price of material in a merchant stock (spot). There are a few things to note about the afore-mentioned price definitions. First, the f.o.b and spot prices are not necessarily the prices at which transactions are actually concluded. Second, the f.o.b and spot prices can be misleading in periods of shortages and exceptionally high prices.

Table 19: Price list of the most utilised essential oils

Product	US$ / Kg
Orange	48 – 171.05
Cornmint	71.34
Eucalyptus (all types)	36 – 89.64
Citronella	31.8
Peppermint (all types)	42 – 152.87
Lemon (all types)	42 – 500.44
Clove leaf	185.42
Cedarwood (U.S.)	80.1 – 272.34
Litsea cubeba	65.58
Lime	92.4 – 130.09
Spearmint	55 – 114.45
Cedarwood (Chinese)	75.06
Lavandin	50
Camphor	34
Coriander	199.9
Grapefruit	145.9 – 239.4
Patchouli	148.2 – 167.02

Source: http://www.essential-oil.org/essential_oils_o.asp

As it has been alluded to earlier prices of essential oils vary enormously. For the lower end of the market prices are lower because of the (lower) quality of the oils and also because of the fact that there are synthetic substitute for these such as menthol. Generally major users hold stocks which enable them to buy when the prices are lower.

11. Prospects, opportunities and challenges

Although the demand for essential oils by the mainstream markets, the EU, NAFTA and Japan is high, it has however matured, considering the fact that population growth is static and their consumer goods markets are well developed. Consumption is however not expected to decline since essential oils is part of their culture. Any future growth, then, in essential oils consumption lies in increased consumption by developing countries along with general improvements in their economies and increased consumption of consumer products incorporating fragrance and flavour oils. With the economies of India and China, the most populous developing countries, this is already happening. These countries' economies are growing astronomically and social patterns and general culture is changing to be like that of western developed countries it is expected that a huge demand for essential oils products will emanated from these countries.

In the document above it was highlighted that huge opportunities exist for SADC countries to enter the world essential oils market. This opportunity exists in the aromatherapy sector. Since the 1980s the aromatherapy industry has experienced remarkable growth in the industrialised countries. Aromatherapy products are in fact lifestyle products and go hand in hand with fashion. There is a conception that a product with an aromatherapy label is just more than a pleasant smell. The USA and Germany appear to be the largest aromatherapy markets with a strong fashion interest, in particular since these products are considered to be 'natural' or 'green' products - anything natural and green appeals to consumers in these countries. In fact this can be said for most developed countries.

If SADC were to exploit the opportunities that exist in the EU, NAFTA, Japan, India and China the biggest threat would be low-cost-producing Asian countries. Closely tied to that is geographical aspects. SADC is much further from these markets in particular the last two emerging markets that would imply that the region exploits other areas where it has competitive advantage.

Other challenges entail:

- The general lack of knowledge and experience on the production, quality control and international trading of essential oils.
- Limited capacities within national departments and ministries responsible for say agriculture and commerce and development of new agro-industry ventures.
- Availability of capital for investment in agro-processing.

- The major challenge, though, relate to marketing sector constraints. According to an ITC (2002) report, the global experience is that the failure of new ventures is most commonly associated with poor marketing performance. Farmers or distillers may be served by an inadequate market structure and / or exporters have encountered major problems in timely shipment against time-bound contracts.

12. Developing essential oils industry in SADC

The aromatherapy industry is basically a new market yet it is fickle on the demand-side and increasingly competitive on the supply-side. Thus, the essential oils industry in general should be developed with the domestic market in mind in particular South Africa, which has a huge appetite for oils. This not only allows for a ready outlet for the initial production but it also allows time for the players to gain experience before venturing onto the competitive world market. Once the domestic market has matured and the needed experience gained international markets could then be targeted, although these could be targeted from the outset.

The exporting strategy to international markets should be as follows:

Aim for the markets listed in Tables 20 to 29. Although India and China are not the biggest importers, the fact that they are outside the circle of mature markets means that there is a huge growth potential. The EU, which is a lucrative market, is not only mature, but also has existing and well-established suppliers. It would be wise to target the general EU market at a later stage. Few countries to target at the preliminary stage in the EU are Ireland, Belgium, Germany, the Netherlands, and the UK since these are net importer of essential oils across the board.

Table 20: Ireland's net trade per essential oils sub-category (US$'000)

	Ireland					
	2000	2001	2002	2003	2004	2005
Concentrates	351	203	893	215	-18,102	-40,884
Concretes and absolutes	-8,538	-8,109	-9,008	-9,610	-11,179	-8,881
Bergamot	-784	-648	-1,379	-1,342	-2,187	-609
Other citrus fruit	-4,275	-2,867	-3,854	-1,556	-5,966	-2,794
Geranium	-1,490	-350	-325	-309	-319	-236
Jasmin	-314	-117	-106	-306	-98	-40
Lavender or lavandin	-488	-519	-452	-545	-472	-460
Lemon	-1,343	-872	-991	2,025	-2,990	-4,735
Lime	-1,400	-1,703	-2,340	-3,229	-2,614	-3,477
Mints	-238	-634	-586	-296	-373	-447
Orange	-3,551	-3,744	-3,737	-4,934	-5,898	-8,192
Peppermint	-1,401	-2,360	-1,264	-1,358	-1,530	-1,018
Vetiver	-56	-38	-97	-82	-74	-128
Resinoids	-426	-662	1,593	-487	-786	-1,097

Source: Wits

Table 21: Belgium's net trade per essential oils sub-category (US$'000)

Belgium						
	2000	**2001**	**2002**	**2003**	**2004**	**2005**
Concentrates	-323	-536	-1,109	-2,899	-2,240	-2,901
Concretes and absolutes	-2,106	-1,832	-1,802	-2,765	-1,598	-1,308
Bergamot	-158	-67	-186	-42	11	-48
Other citrus fruit	-207	-231	-274	-536	-304	-895
Geranium	-36	-33	-44	-93	80	-69
Jasmin	-9	-5	-3	-7	-0	-24
Lavender or lavandin	-125	-201	-176	-164	-202	-344
Lemon	-1,048	-615	-386	-906	-577	-702
Lime	-420	-214	-460	-1,151	-208	-635
Mints	-1,309	-2,043	-2,096	-2,405	-4,135	-4,643
Orange	-976	-816	-1,021	-1,748	-1,594	-622
Peppermint	-3,661	-8,669	-8,150	-8,262	-8,205	-7,124
Vetiver	-11	-17	-31	5	-5	-13
Resinoids	-638	-630	-405	-747	-686	-828

Source: Wits

Table 22: Germany's net trade per essential oils sub-category (US$'000)

Germany						
	2000	**2001**	**2002**	**2003**	**2004**	**2005**
Concentrates	-5,727	-7,165	-5,199	-6,522	-7,526	-3,431
Concretes and absolutes	-25,629	-26,638	-30,806	-33,195	-30,578	-28,061
Bergamot	-1,070	-1,091	-734	-858	-999	-797
Other citrus fruit	-3,684	-3,057	-4,382	-4,942	-6,175	-6,810
Geranium	-894	-725	-717	-668	-1,026	-1,194
Jasmin	-237	-242	-176	-295	-272	-449
Lavender or lavandin	-2,849	-3,785	-2,939	-3,451	-3,596	-3,275
Lemon	-1,319	-1,137	-1,123	-1,721	-1,460	-700
Lime	90	118	231	30	859	1,270
Mints	-2,913	-2,454	-3,837	-2,542	-4,542	-6,423
Orange	-2,039	-1,559	-493	-3,149	-3,673	-1,238
Peppermint	-3,058	-2,948	-5,056	-5,047	-4,212	-3,316
Vetiver	-155	-271	-378	-414	-658	-601
Resinoids	-1,570	-1,344	-1,455	-1,483	-2,070	-1,309

Source: Wits

Table 23: The Netherlands' net trade per essential oils sub-category (US$'000)

The Netherlands						
	2000	2001	2002	2003	2004	2005
Concentrates	-1,899	-1,586	-2,437	-3,875	-5,890	-5,983
Concretes and absolutes	-2,177	-5,565	-5,423	-1,120	-3,789	-2,574
Bergamot	-254	-322	-423	-303	-531	-681
Other citrus fruit	-2,674	-3,032	-1,988	-991	-1,367	-4,118
Geranium	-191	-169	-162	-235	-278	-114
Jasmin	-66	-58	-153	-90	-56	-65
Lavender or lavandin	-1,126	-807	-1,250	-2,140	-2,093	-1,017
Lemon	-2,515	-3,034	-3,165	-1,568	-2,304	-377
Lime	-275	-737	-1,421	-1,355	-844	-72
Mints	-314	-403	-217	-173	-122	-43
Orange	-2,299	-2,041	-4,334	-3,323	-2,747	91
Peppermint	-2,447	-1,222	-1,372	-339	134	-1,201
Vetiver	26	172	-33	-55	-85	-77
Resinoids	-2,500	-2,512	-2,761	-2,091	-1,217	-442

Source: Wits

Table 24: The UK's net trade per dssential oils sub-category (US$'000)

The UK						
	2000	2001	2002	2003	2004	2005
Concentrates	18,751	17,731	9,017	7,655	5,809	5,585
Concretes and absolutes	-21,631	-22,042	-23,804	-19,296	-22,849	-25,874
Bergamot	1,526	2,706	1,084	11,329	10,572	9,605
Other citrus fruit	5,977	3,678	2,628	3,854	3,330	6,573
Geranium	-609	-679	-615	-1,072	-449	-935
Jasmin	-136	169	-75	-5	-92	-620
Lavender or lavandin	-3,392	-2,232	-2,491	-4,199	-4,664	-5,443
Lemon	-12,426	-5,138	-20,208	-6,998	-26,296	-29,740
Lime	-1,309	-858	-159	-322	-2,531	-110
Mints	-3,722	-4,500	-4,832	-2,718	-6,596	-9,730
Orange	575	-730	-1,029	-2,618	-775	-977
Peppermint	-14,773	-15,943	-17,272	-17,254	-13,663	-14,285
Vetiver	19	30	694	79	12	-310
Resinoids	-1,619	-1,147	-1,606	-1,318	-1,210	-832

Source: Wits

Table 25: Canada's net trade per essential oils sub-category (US$'000)

Canada						
	2000	2001	2002	2003	2004	2005
Concentrates	2,523	1,940	-1,039	-1,396	-2,929	-1,492
Concretes and absolutes	-6,633	-5,275	-5,397	-4,067	-2,769	-1,276
Bergamot	-46	-43	-56	-114	-37	-59
Other citrus fruit	-1,077	-625	-1,815	-1,467	1,746	1,473
Geranium	-54	-57	-66	-97	-91	-62
Jasmin	-167	-109	-69	-70	-54	-46
Lavender or lavandin	-699	-594	-398	-460	-539	-661
Lemon	-1,248	-1,591	-2,133	-1,406	-298	-200
Lime	-714	8	-555	-515	-336	-292
Mints	-221	-94	-259	798	195	1,409
Orange	-1,746	-2,040	-4,561	-4,371	-2,033	-2,833
Peppermint	-2,985	-2,358	-2,450	-2,276	-1,984	-1,870
Vetiver	-13	-2	-3	-22	-19	10
Resinoids	-5,324	-5,232	-4,671	-3,160	-4,009	-4,686

Source: Wits

Table 26: Mexico's net trade per essential oils sub-category (US$'000)

Mexico						
	2000	2001	2002	2003	2004	2005
Concentrates	-4,256	-6,509	-6,913	-9,812	-6,603	-4,131
Concretes and absolutes	-9,032	-13,280	-17,302	-12,860	-13,014	-14,992
Bergamot	-233	-180	-223	-213	1,163	-254
Other citrus fruit	1,671	3,091	533	-47	589	2,211
Geranium	-184	-249	-306	-306	-409	-374
Jasmin	-114	-105	-184	-201	-117	-124
Lavender or lavandin	-1,707	-1,677	-1,836	-1,617	-1,466	-1,375
Lemon	3,144	-2,663	2,826	5,562	8,461	8,280
Lime	7,840	10,106	12,028	15,590	16,828	16,776
Mints	-4,290	-4,226	-4,246	-3,541	-8,492	-10,470
Orange	-723	-838	315	-2,346	-2,105	504
Peppermint	-11,161	-11,531	-12,754	-13,458	-9,249	-8,241
Vetiver	-124	-108	-83	-59	-106	-107
Resinoids	-1,132	-708	-583	-448	-684	-722

Source: Wits

Table 27: China's net Trade per essential oils sub-category (US$'000)

China						
	2000	2001	2002	2003	2004	2005
Concentrates	-411	-1,179	-4,333	-6,581	-4,410	-4,881
Concretes and absolutes	41,649	42,375	44,305	34,739	43,870	50,145
Bergamot	-72	-181	-330	-172	-202	-195
Other citrus fruit	1,647	-85	276	631	108	122
Geranium	3,321	4,487	3,703	5,374	7,368	4,496
Jasmin	-24	-5	-41	-19	-21	20
Lavender or lavandin	228	58	626	397	646	727
Lemon	-3,605	-5,994	-5,719	-6,112	-10,192	-13,839
Lime	-3,737	-6,069	-5,879	-6,196	-10,509	-14,018
Mints	-15,802	-12,236	-13,452	-13,103	-9,085	-7,075
Orange	-2,012	-2,932	-3,702	-6,703	-6,937	-6,954
Peppermint	-363	-1,768	-2,620	-3,372	-4,454	-2,451
Vetiver	50	-7	68	83	109	99
Resinoids	1,022	196	741	2,634	2,134	1,406

Source: Wits

Table 28: Japan's net trade per essential oils sub-category (US$'000)

Japan						
	2000	2001	2002	2003	2004	2005
Concentrates	-9,280	-9,184	-4,378	-12,876	-15,982	-14,397
Concretes and absolutes	-21,087	-25,536	-21,267	-23,562	-27,829	-29,717
Bergamot	-564	-466	-682	-511	-600	-648
Other citrus fruit	-13,989	-14,847	-16,627	-17,957	-26,174	-48,411
Geranium	-233	-362	-227	-340	-385	-351
Jasmin	-75	-437	-557	-318	-421	-416
Lavender or lavandin	-1,164	-1,306	-1,409	-1,639	-1,914	-2,070
Lemon	-8,602	-8,955	-9,099	-8,897	-10,792	-12,869
Lime	-1,894	-1,984	-1,954	-2,115	-2,022	-2,151
Mints	-7,102	-7,042	-7,676	-7,511	-8,121	-8,907
Orange	-12,286	-11,659	-12,462	-11,708	-17,516	-15,888
Peppermint	-6,527	-6,395	-6,836	-8,362	-10,584	-10,116
Vetiver	-160	-127	-47	-165	-171	-364
Resinoids	-3,697	-3,365	-1,573	-1,775	-1,513	-1,468

Source: Wits

Table 29: India's net trade per essential oils sub-category (US$'000)

	India					
	2000	**2001**	**2002**	**2003**	**2004**	**2005**
Concentrates	11,638	7,799	5,854	37,754	26,610	69,939
Concretes and absolutes	4,804	4,398	6,868	4,368	827	-1,461
Bergamot	242	2,596	3,258	728	309	1,229
Other citrus fruit	-384	-401	251	725	1,496	4,788
Geranium	-1,217	-1,873	-1,035	-1,729	-1,457	-1,166
Jasmin	3,154	2,242	2,801	3,181	2,437	5,088
Lavender or lavandin	-623	-677	-794	-854	-722	-1,057
Lemon	-122	-596	-675	-568	-675	-944
Lime	-15	-272	-343	-240	-410	-612
Mints	13,398	3,262	3,427	8,675	19,229	29,589
Orange	-670	-1,128	-2,265	-3 167	-2,874	-1,948
Peppermint	20,051	19,899	32,705	31,640	23,602	28,752
Vetiver	-156	-192	-211	-454	-1,164	-1,104
Resinoids	-442	-270	-98	-69	3,024	3,138

Source: Wits

Develop a few essential oils in order to reap the benefits of specialisation. These must be carefully selected most preferably from existing oils. The advantage of this is that it will present minimum problems for market access and technical difficulties that come with new production. It is advisable that primary targets include concentrates, lavender and lavendin, mints, peppermints and resinoids. These are products in which South Africa, the region's largest trader, enjoys a net import position. Thus, in a bid to develop products that would first go into the domestic market the afore-mentioned products are highly recommended.

Produce the minimum volumes to interest international buyers in the short-term. Since production will be below minimum for several years producers would be encouraged from the outset to collectively use a single export or import company to market their product. An importer agency is most preferable as it provides a high motivation for the importer to develop a market for SADC products.

Progressively develop other mainstream oils and / or niche products (such as organic types of the initial product selection).

The price offered to international buyers in the early years of development should be set at the level of the lowest established supplier to the market and, preferably at a discount. Price increases should be delayed until buyers gain confidence in the region as a regular and reliable supplier of good quality product.

13. Conclusion

Total world trade in essential oils is slightly below US$4bn and SADC's share is just about US$41m or 1% of global trade. There are good reasons to believe that there are better opportunities for the member countries in SADC to increase production of essential oils and further develop vertical industries for processing and exporting to the world's lucrative markets such as the EU and the US (Tables 20-29). SADC is a net exporter of most essential oils, the main ones being concentrates and absolutes; other citrus fruit; and lemon. Concerted effort should be made to develop these sub-categories. This may include seeking support from government departments and agencies for capacity. However, it is important that any programme designed to develop these sub-sectors should come from the private sector – government's role should be restricted to support, especially on issues of capacity.

To develop the industry it is important that initial production is concurrently aimed at the domestic market, especially South Africa and the lucrative markets alluded to in section 12. Although there is competition from India and China, it is important to note that no one country is a net exporter across all the sub-categories. Further, exports of essential oils products are not subjected to any tariff in these markets except in India and China – also potential markets.

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