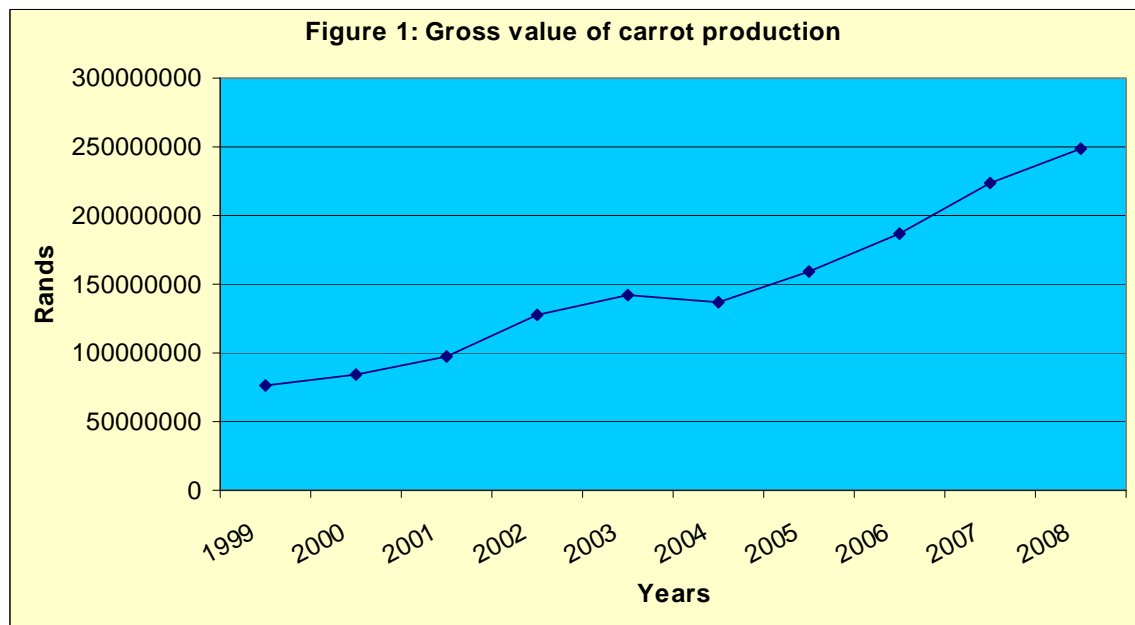


CARROT VALUE CHAIN

1. DESCRIPTION OF THE INDUSTRY

Carrot is a root vegetable usually orange, white or red, white blend in colour with a crisp texture when fresh. The edible part of carrot is the tap root. Carrots are considered one of the major vegetables consumed in South Africa. Several hundred varieties exist, but carrots are sold more by shape and type of variety. Carrots can be eaten raw, whole, chopped, grated or added to salads, for colour or texture. They are also, often chopped and boiled, fried or steamed and cooked in soups and stews, as well as fine baby foods and selected pet foods.



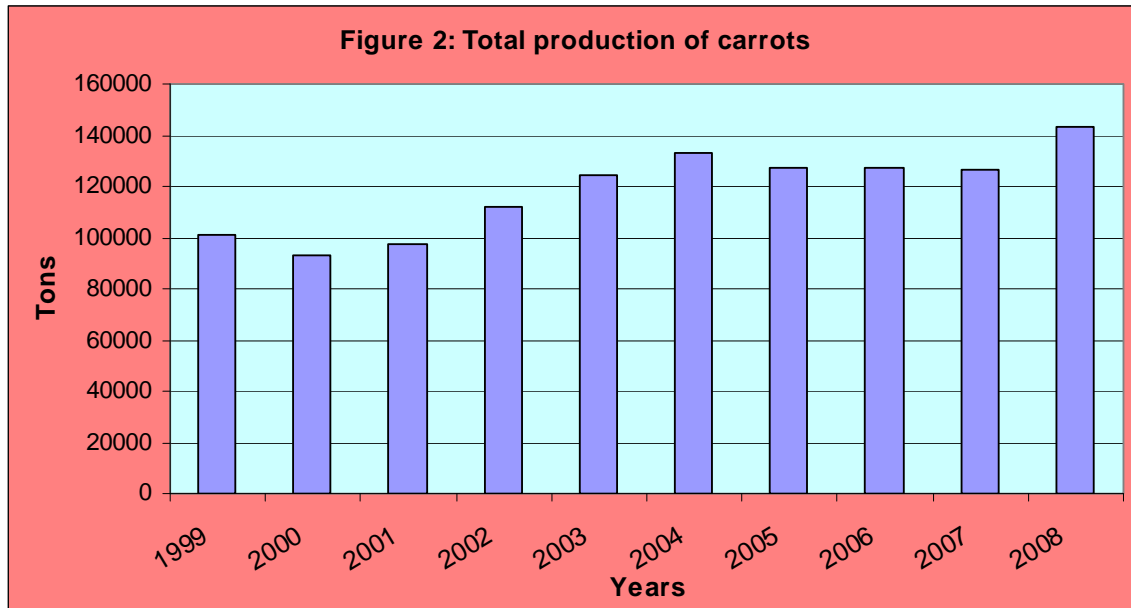
Source: Agricultural Statistics

Figure 1 above, illustrates the contribution of the carrot industry to the gross value of agricultural production over 10 years. The carrot industry contribution has increased steadily from 1999 to 2003. There was a slight decrease in gross value in 2004 due to decrease in prices received by the producers in the same year. From 2005, the gross value has increased steadily reaching the peak in 2008. High gross value in 2008 can be attributed to high production volumes which occurred while the prices were still in favorable position for producers.

1.1 Production areas

Although carrots can endure summer heat in many areas, they grow best when planted in cooler climates. Fresh grower indicated that it is difficult to establish carrots in summer because heat, rain and early blights are major causes of crop failure and quality reduction. Carrot production is concentrated in the Western Cape, Gauteng, Free State, North West, Kwazulu Natal and Mpumalanga. Globally, China is the first largest producer of carrots, followed by the United States of America and Russia is third.

1.2 Production Trends

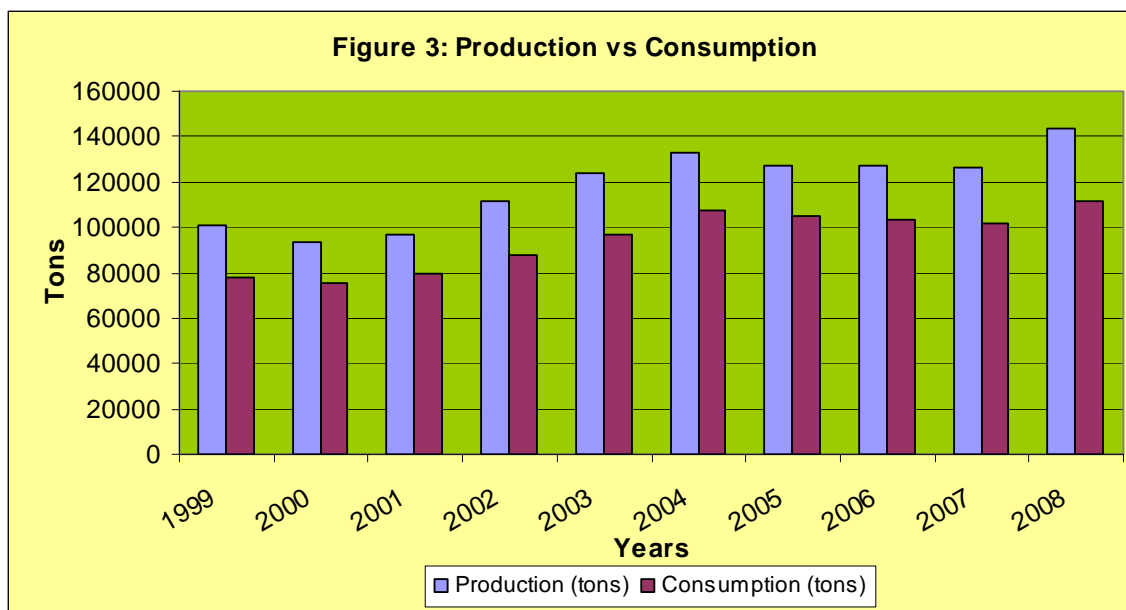


Source: Agricultural Statistics

Figure 2, illustrate the production volume over the past ten years. The production has been increasing steadily from 2001 to 2004. The production drop slightly in 2005 and increase slightly again in 2006. The highest production was recorded in 2008. Reduction in production volumes can be attributed to increasing input cost of production and unfavorable climatic conditions.

1.3 Production vs. Consumption of carrots

Figure 3 below, depicts local consumption of carrots compared to the production over the 10 year period. The figure indicates that the production of carrot is higher than the consumption. This indicates that South Africa is self sufficient in terms of carrot production and the surplus is also exported. South African average carrots consumption is approximately 94 661 tons per annum.



Source: Agricultural Statistics

2. MARKET STRUCTURE

There is no regulation or restriction in the marketing of carrots. The prices of carrots are determined by market forces of demand and supply. The industry uses local market, informal market, processor and direct selling to wholesalers and retailers. Carrots are also exported to other countries through export agents and marketing companies. South Africa also imports carrots from other countries.

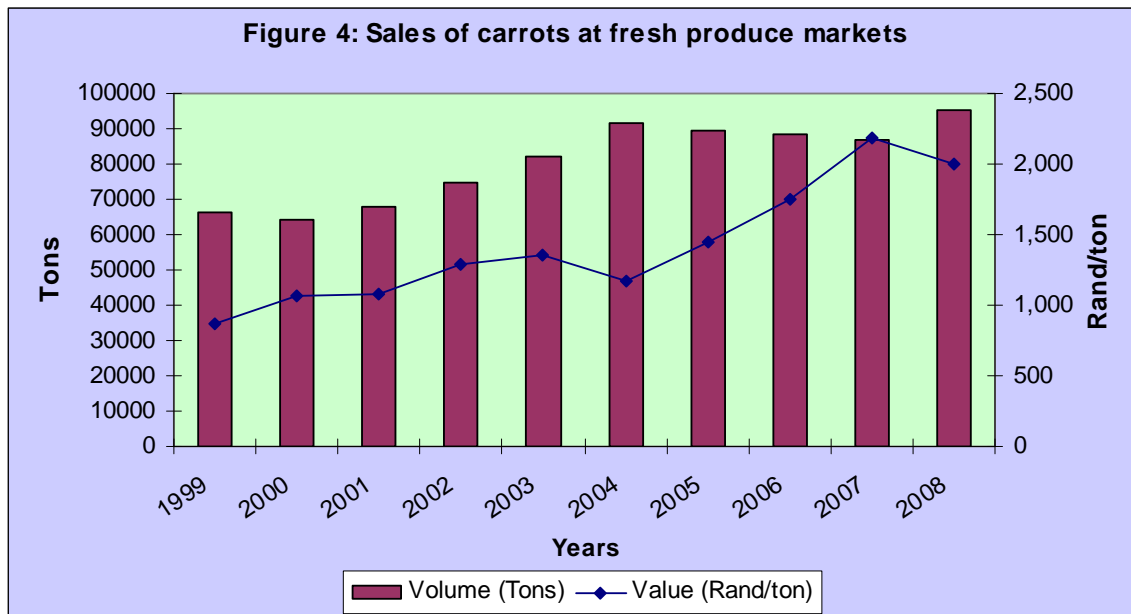
2.1 Domestic market and prices

Table 1: Carrots sold through different market channels

Years	National fresh produce market (Tons)	Exports (Kg)	Processing (Tons)
1999	66494	1992278	20728
2000	64449	1174698	16678
2001	68151	2103557	15075
2002	74970	2310468	21496
2003	82268	1804679	25875
2004	91409	1844188	23689
2005	89355	2014370	20233
2006	88244	2206785	21772
2007	86725	3472439	21759
2008	95035	4073355	25689

Source: Agricultural Statistics

Table 1 above, shows that there was a 17% increase in exports and 18% in carrots sold to the processors compared to the previous year. Despite the increase in exports and processing volumes, National Fresh Produce Markets (NFPMs) remains an important channel for sale of fresh carrots in South Africa. In 2008, 66% of all carrots were distributed through fresh produce markets. The remaining 23% represent direct sales from producers to wholesalers, retailers, processors, informal traders and consumers.



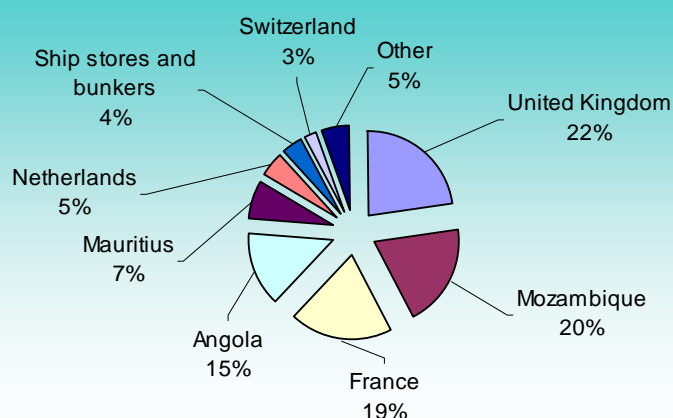
Source: Agricultural Statistics

Figure 4 above illustrates the sales of carrots in the national fresh produce markets over the period of 10 years. Carrot volumes and prices were moderately unstable. Prices increased steadily from 2000 to 2003 due to low volume supplied across the markets. In 2004 high volumes were supplied to the market, then the prices declined. The prices increased steadily from 2005 to 2007 due to slight decline in volume supplied across the markets. In 2008 the prices dropped slightly as volume increased.

2.2 Exports

South Africa is not a major carrot exporter, it represents 0.25% of world exports and is ranked number 27 in the world. Most of carrots produced were destined for domestic markets. South African carrots exports were mostly destined to United Kingdom, France, Angola, Mozambique, Mauritius, Netherlands and Switzerland. Globally China, Netherlands, USA, Italy, Spain, Belgium, France, Canada, Australia are major carrot exporters. Figure 5 below, illustrates South African carrot export destinations.

Figure 5 : South African carrots exports destinations in 2008



Source: ITC Trade Map

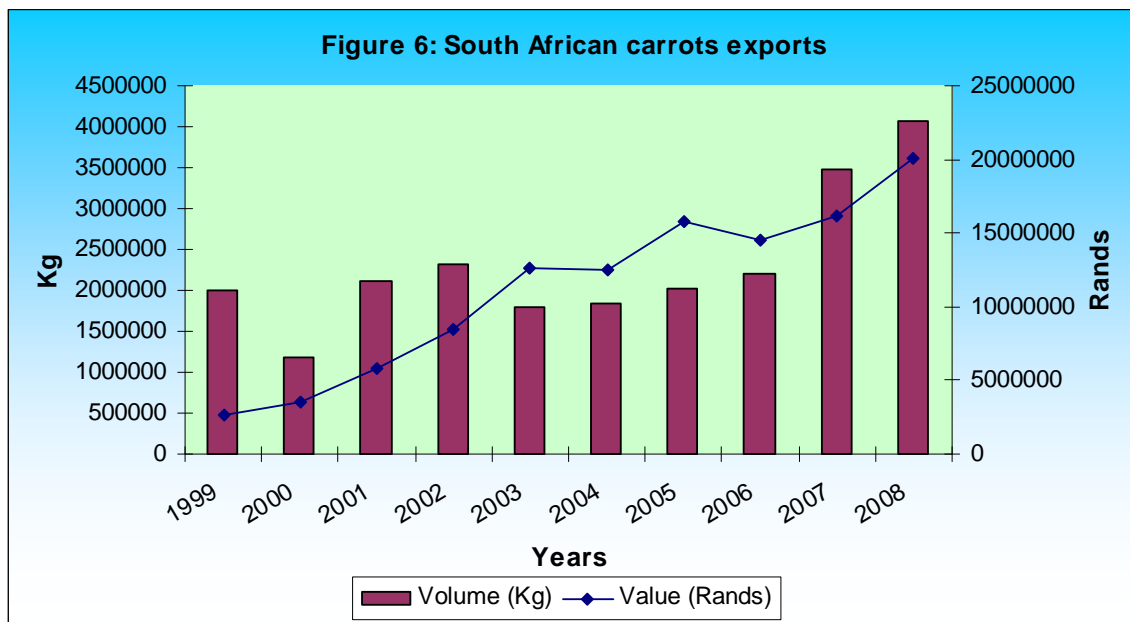
Table 2: South Africa carrot exports in 2008

Importers	Exported value 2008, USD thousand	Share in South Africa's exports, %	Exported quantity 2008	Unit value, (USD/unit)	Exported growth in value between 2004-2008, %, p.a.	Exported growth in quantity between 2004-2008, %, p.a.	Exported growth in value between 2007-2008, %, p.a.
World	2468	100	4091	603	4	24	8
United Kingdom	561	22.7	314	1787	-23	-22	-16
Mozambique	484	19.6	1572	308	97	99	90
France	480	19.4	693	693	242	367	78
Angola	358	14.5	700	511	16	13	-23
Mauritius	183	7.4	282	649	87	156	20
Netherlands	117	4.7	95	1232	-6	24	6
Ship stores and bunkers	98	4	130	754	102	89	7
Switzerland	62	2.5	43	1442		63	-5
DRC	19	0.8	25	760	65	49	-5
Seychelles	17	0.7	10	1700	67	34	6
Maldives	15	0.6	26	577	97		-6
Congo	14	0.6	16	875	111	87	56
Zambia	13	0.5	78	167	-25	-7	117
Antigua and Barbuda	9	0.4	31	290			-69

Ghana	7	0.3	12	583	27	40	17
Côte d'Ivoire	6	0.2	6	1000			
Malawi	6	0.2	10	600	17	6	-14
Gabon	5	0.2	8	625	5	8	67
Zimbabwe	4	0.2	13	308	-33	-33	-89
Germany	2	0.1	1	2000	-34		-88

Source: ITC Trade MAP

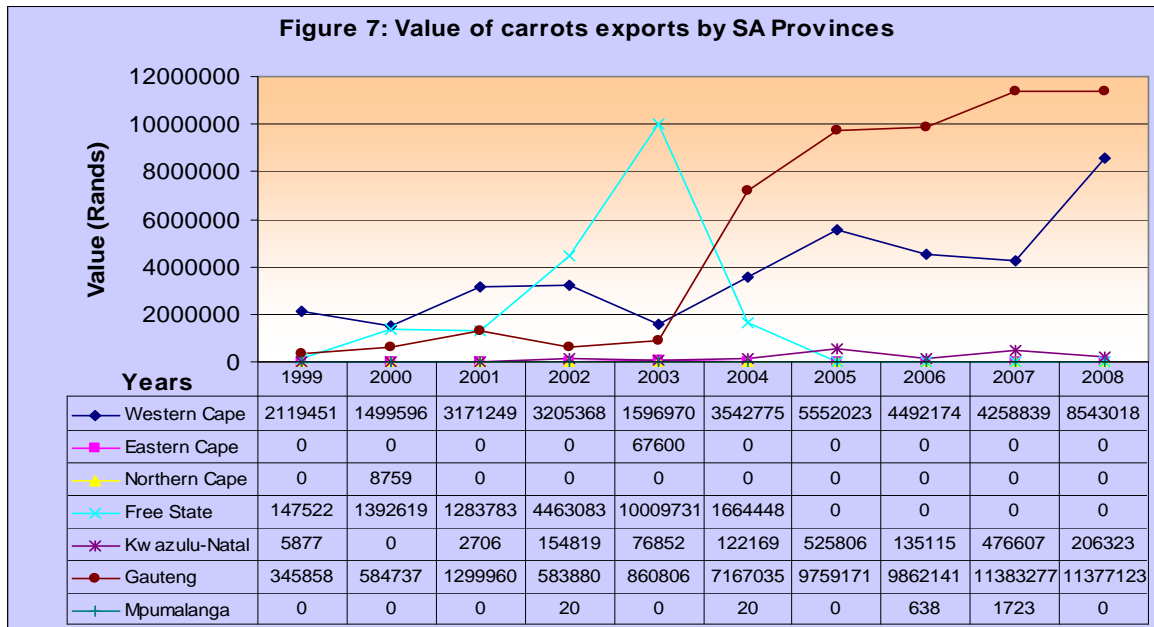
Table 2 indicates that during 2008 South Africa exported higher quantities of carrots to United Kingdom, Mozambique, France and Angola. The greatest share of South African carrot exports were destined to United Kingdom which commanded 22.7% , followed by Mozambique which commanded 19.6% of carrots exports during the year 2008. Even though United Kingdom has commanded the greatest share of South Africa’s carrot exports, there was a decrease by 22% and 23% in value and quantity respectively between the periods under review. Angola has lost 5.8% share in South Africa’s carrot exports.



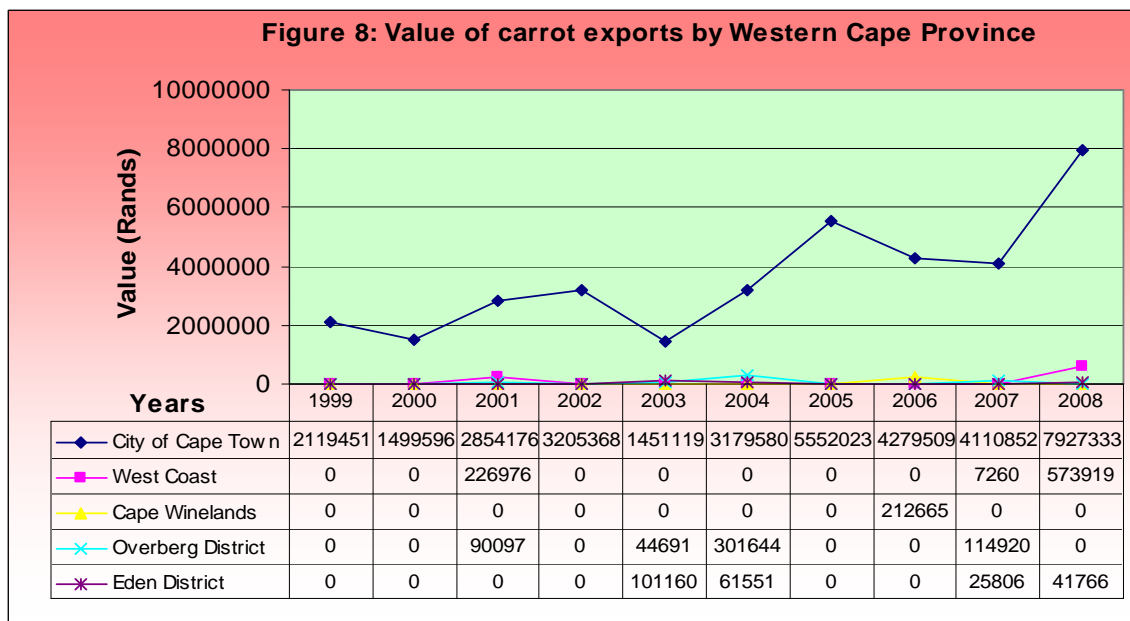
Source: Agricultural Statistics

Figure 6 above, illustrates carrots exports from South Africa over the past 10 years. The highest export volume was recorded in 2008. This can be attributed to the high in production volume in the same year. From 1999 to 2002, 2007 and 2008 it appears that it was relatively less profitable to export carrots since lower export values were recorded for higher volumes exported. From 2003 to 2006, the figure shows that it was more profitable to export carrot since higher export values were recorded for smaller volumes exported.

Figure 7 below, illustrates the carrot exports by provinces for the past ten years. The highlights of carrot exports where that of Western Cape, Gauteng, Free State and Kwazulu Natal to a lesser extent. The high export values for Western Cape and Gauteng can be attributed to the export exist points and the registered exporters located in these provinces. The following figures (figure 8 - 14) shows the value of carrot exports from the various districts in all provinces of South Africa.

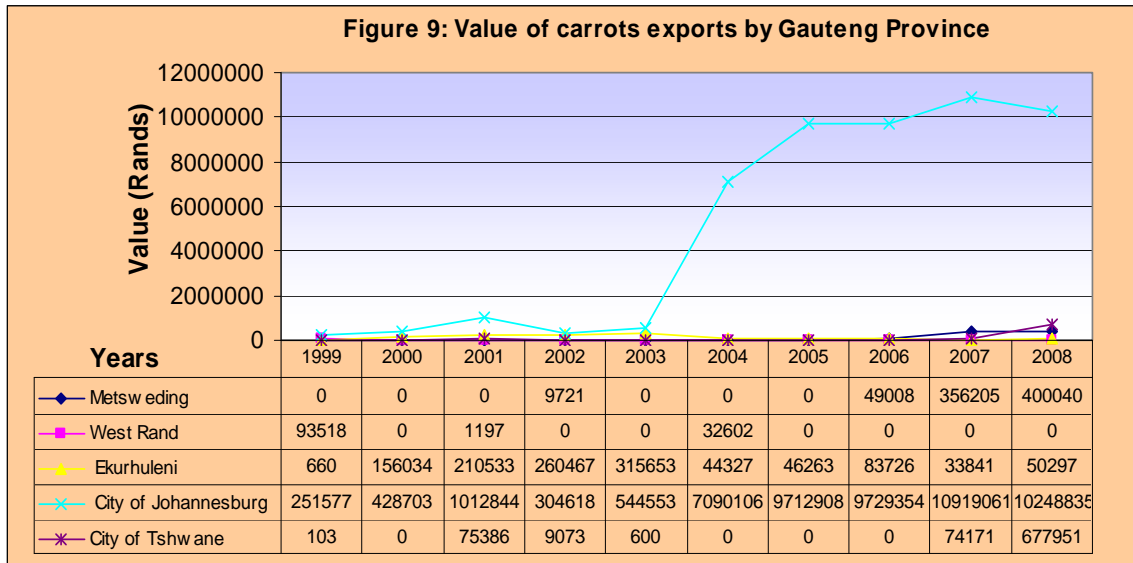


Source: Quantec Research



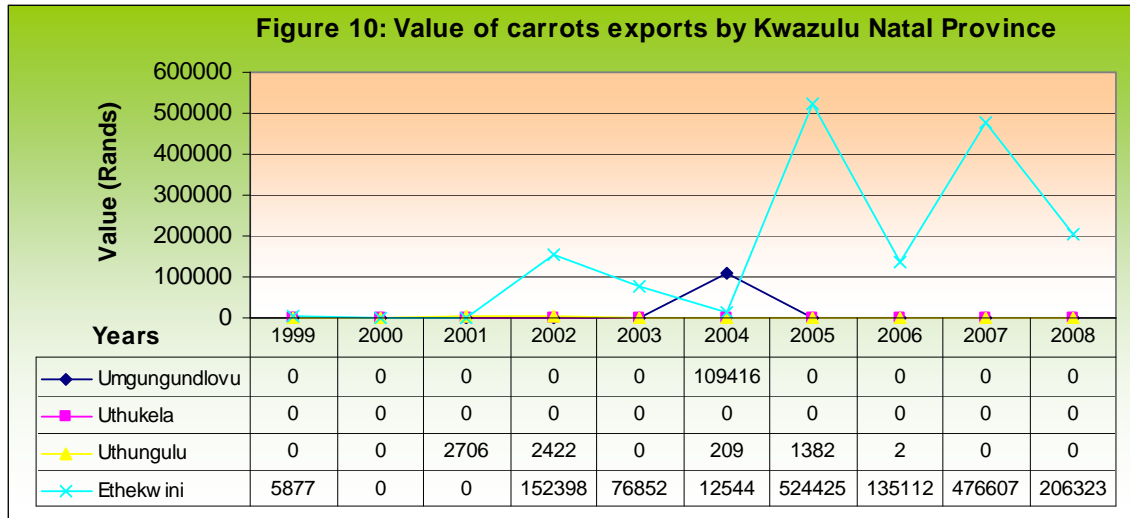
Source: Quantec Research

Figure 8 above, indicates that the carrot export by Western Cape Province were mainly from City of Cape Town. West Coast, Overberg and Eden district municipalities have contributed to a lesser extent. High carrots exports by the City of Cape Town can be attributed to Cape Town harbour which renders export exit point. The highest export value was in 2008 from City of Cape Town municipality.



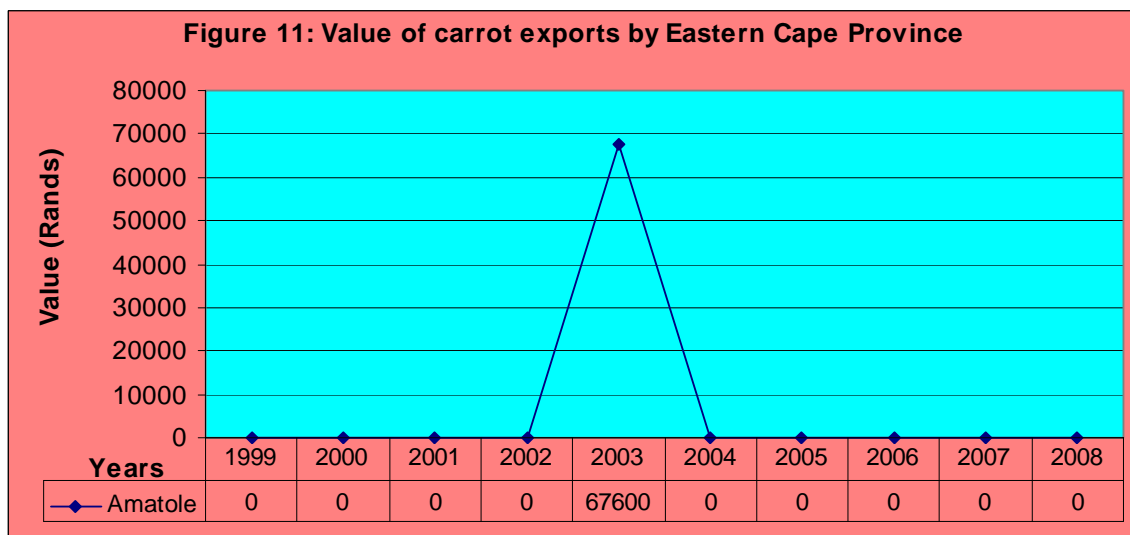
Source: Quantec Research

As can be seen from figure 9 above, carrot exports by Gauteng Province was mainly from City of Johannesburg. Metsweding, Ekurhuleni, West Rand and City of Tshwane have contributed to a lesser extent. The highest export value was recorded in 2007 from City of Johannesburg.



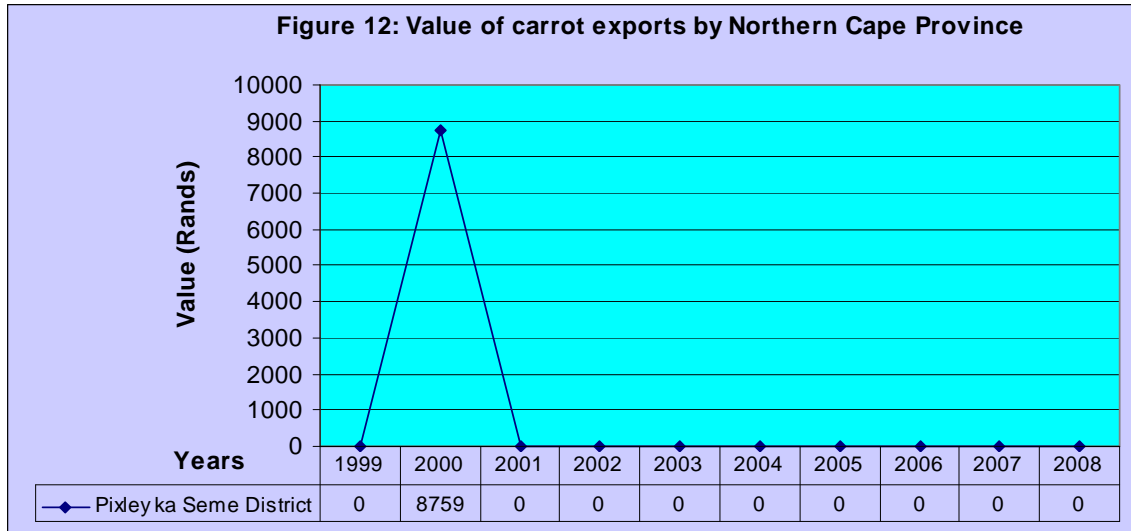
Source: Quantec Research

Figure 10 above indicated that carrot export by Kwazulu Natal Province were mainly from Ethekewini municipality due to the Durban harbor which renders export exit point. The highest export value was recorded in 2005.



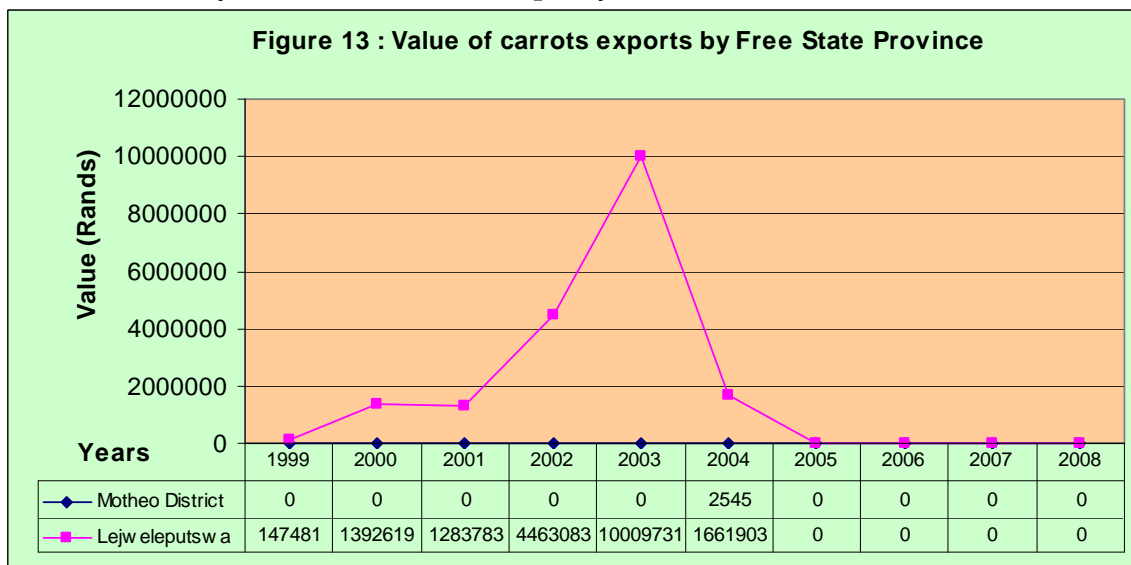
Source: Quantec Research

Figure 11 above indicates that carrots export by Eastern Cape Province was in 2003 from Amatole municipality.



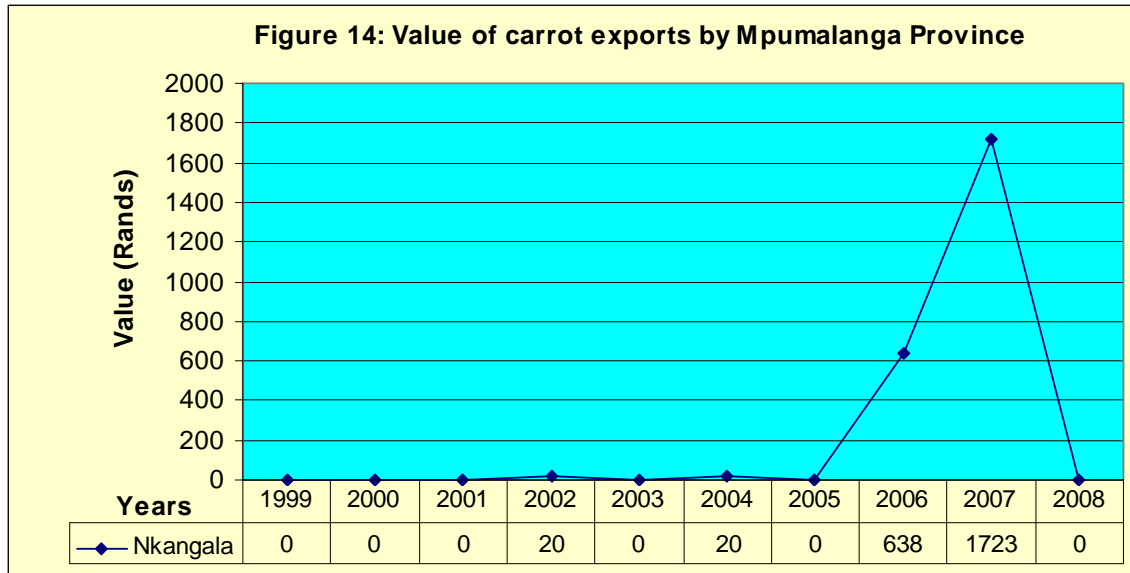
Source: Quantec Research

Figure 12 above indicates that carrots export by Northern Cape Province was in 2000 from Pixley Seme district municipality.



Source: Quantec Research

Figure 13 indicated that carrots exports by Free State Province were mainly from Lejweleputswa Municipality and the highest export value was in 2003. There was no exports value recorded from 2005 to 2008.



Source: Quantec Research

Figure 14 indicated that a carrots export by Mpumalanga Province was from Nkangala district and the highest export value was recorded in 2007.

2.2.1 Share Analysis

Table 3 below is an illustration of provincial share towards national carrot exports. Western Cape, Gauteng and Free State Province commanded the greatest share of exports. The high export shares in Western Cape and Gauteng can be attributed to registered exporters and available ports based in these provinces.

Table 3: Share of provincial carrot exports to the total of RSA carrot exports (%)

Years Provinces	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Western Cape	80.93	43.02	55.08	38.13	12.66	28.35	35.06	31.00	26.42	42.45
Eastern Cape	0	0	0	0	0.54	0	0	0	0	0
Northern Cape	0	0.25	0	0	0	0	0	0	0	0
Free State	5.63	39.95	22.30	53.09	79.37	13.32	0	0	0	0
Kwazulu-Natal	0.22	0	0.05	1.84	0.61	0.98	3.32	0.93	2.96	1.03
Gauteng	13.21	16.78	22.58	6.95	6.83	57.35	61.62	68.06	70.61	56.53
Mpumalanga	0	0	0	0	0.0	0	0	0	0.01	0

RSA	100	100	100	100	100	100	100	100	100	100
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Source: Calculated from Quantec Research

Table 4: Share of district carrots exports to the total Western Cape Provincial carrot exports (%)

Year District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
City of Cape Town	100	100	90	100	90.87	89.75	100	95.27	96.53	92.79
West Coast	0	0	7.16	0	0	0	0	0	0.17	6.72
Cape Winelands	0	0	0	0	0	0	0	4.73	0	0
Overberg District	0	0	2.84	0	2.80	8.51	0	0	2.70	0
Eden District	0	0	0	0	6.33	1.74	0	0	0.61	0.49
Western Cape	100	100	100	100	100	100	100	100	100	100

Source: Calculated from Quantec Research

Table 4 above indicates that the City of Cape Town commanded the greatest share of carrot exports from Western Cape Province. This can be attributed to the Cape Town harbor which renders this district exit point for carrot exports.

Table 5: Share of district carrots exports to the total Gauteng Provincial carrot exports (%)

Year District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Metsweding	0	0	0	1.7	0	0	0	0.50	3.13	3.52
West Rand	27.04	0	0.09	0	0	0.45	0	0	0	0
Ekurhuleni	0.19	26.68	16.20	44.6	36.67	0.62	0.47	0.85	0.30	0.44
City of Johannesburg	72.74	73.32	77.91	52.2	63.26	98.93	99.53	98.65	95.92	90.08
City of Tshwane	0.03	0	5.80	1.6	0.07	0	0	0	0.65	5.96
Gauteng	100	100	100	100	100	100	100	100	100	100

Source: Calculated from Quantec Research

Table 5 above indicates that City of Johannesburg and Ekurhuleni commanded the greatest share of carrot exports from Gauteng Province. City of Johannesburg and Ekurhuleni are located near OR Tambo International Airport which renders exit point for carrot exports

Table 6: Share of district carrots exports to the total Eastern Cape Provincial carrot exports (%)

Year District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
---------------	------	------	------	------	------	------	------	------	------	------

Amatole	0	0	0	0	100	0	0	0	0	0
Eastern Cape	0	0	0	0	100	0	0	0	0	0

Source: Calculated from Quantec Research

Table 7: Share of district carrots exports to the total Kwazulu Natal Provincial carrot exports (%)

Years District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Umgungundlovu	0	0	0	0	0	89.56	0	0	0	0
Uthukela	0	0	0	0	0	0	0	0	0	0
Uthungulu	0	0	100	1.56	0	0.17	0.3	0	0	0
Ethekwini	100	0	0	98.44	100	10.27	99.7	100	100	100
Kwazulu Natal	100	0	100	100	100	100	100	100	100	100

Source: Calculated from Quantec Research

Table 7 above indicates that Ethekwini commanded the greatest share of carrot exports from Kwazulu Natal Province. The high export share in Ethekwini can be attributed to Durban harbor located in this district municipality.

Table 8: Share of district carrots exports to the total Mpumalanga Provincial carrot exports (%)

Years District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Nkangala	0	0	0	100	0	100	0	100	100	0
Mpumalanga	0	0	0	100	0	100	0	100	100	0

Source: Calculated from Quantec Research

Table 9: Share of district carrots exports to the total Free State Provincial carrot exports (%)

Years District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Motheo District	0	0	0	0	0	0.15	0	0	0	0
Lejweleputswa	100	100	100	100	100	99.85	0	0	0	0
Free State	100	100	100	100	100	100	0	0	0	0

Source: Calculated from Quantec Research

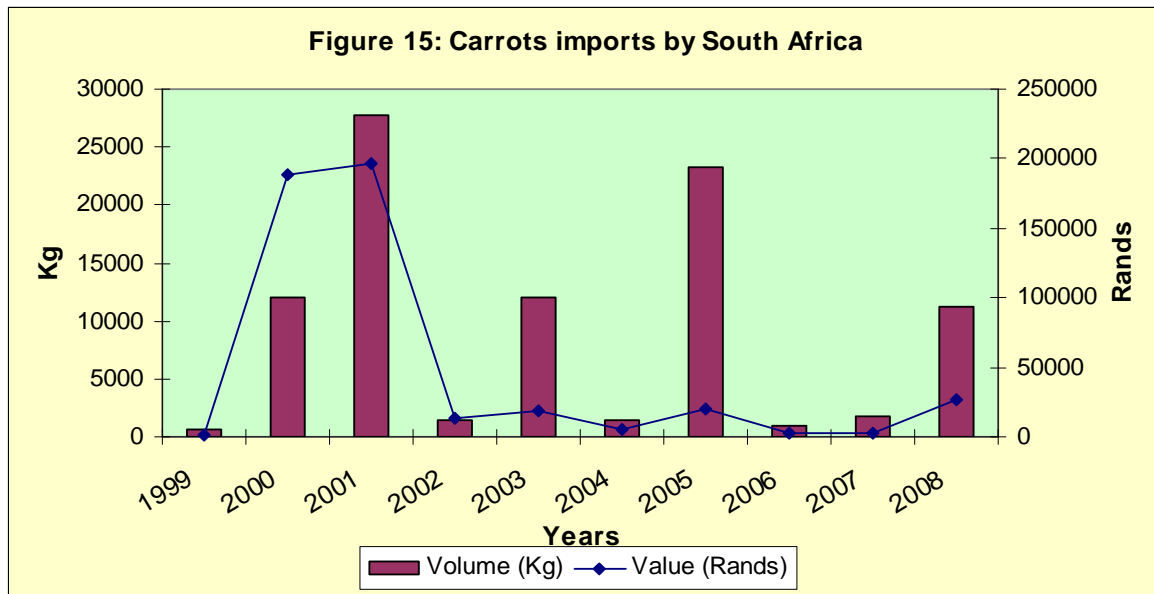
Table 9 above indicates that Lejweleputswa district commanded the greatest share of carrots exports from Free State Province.

Table 10: Share of district carrots exports to the total Northern Cape Provincial carrots exports (%)

Years District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Pixley ka Seme	0	100	0	0	0	0	0	0	0	0
Northern Cape	0	100	0	0	0	0	0	0	0	0

Source: Calculated from Quantec Research

2.3 Carrot Imports



Source: Quantec Research

Figure 15 above illustrate South African carrot imports for the past ten years. During 2000 it was relatively expensive to import carrots, while during the other years, it was cheaper to import since more volumes were imported at lesser

values. In 2001 and 2005, South Africa has imported high volumes of carrots. This can be attributed to slight decline in production volumes and cheaper imports in the same years. Globally, Canada, Germany, Russian Federation, Belgium, France, United States of America, Japan, and United Kingdom are the major carrots importers

2.4 Processing

Table 10 below indicates that the volume of carrots that went for canning have showed fluctuations over the period under review, while a considerable increase in volumes for juice making occurred from 2003 up to 2006. This is mainly due to increasing use of carrots in mixed fruit juices and health drinks. In 2008 there was a significant increase in volumes of carrots that went for freezing and dehydration. The increase in freezing activities can be attributed to increase in demand for convenience, ready to use frozen carrots

Years	Canning		Juices		Freezing		Dehydration		Total processing	
	Volume (Tons)	Value (Rand)	Volume (Tons)	Value (Rand)	Volume (Tons)	Value (Rand)	Volume (Tons)	Value (Rand)	Volume (Tons)	Value (Rand)
1999	2019	7718173	4199	1777404	12360	6730947	2150	639319	20728	16865844
2000	1345	942531	3582	2283986	11355	7777531	395	914954	16678	11919002
2001	3201	2537105	2662	1590835	8647	13435080	564	193749	15075	17756829
2002	3411	3745255	3156	1755898	13697	16724440	1233	443777	21496	22669370
2003	7223	5484102	6654	3834539	11432	9219513	566	249941	25875	18788094
2004	4819	8114407	5958	3511038	11967	5608179	945	547620	23689	17781245
2005	3414	4403106	5370	3455297	10260	6602865	1188	683357	20233	15144624
2006	4507	6521231	7359	5094531	8640	6632712	1265	701633	21772	18950108
2007	5330	7912042	3843	2656583	11971	11196175	615	350765	21759	22115565
2008	5356	7070553	3746	2256219	15431	19748290	1156	757281	26689	29832343

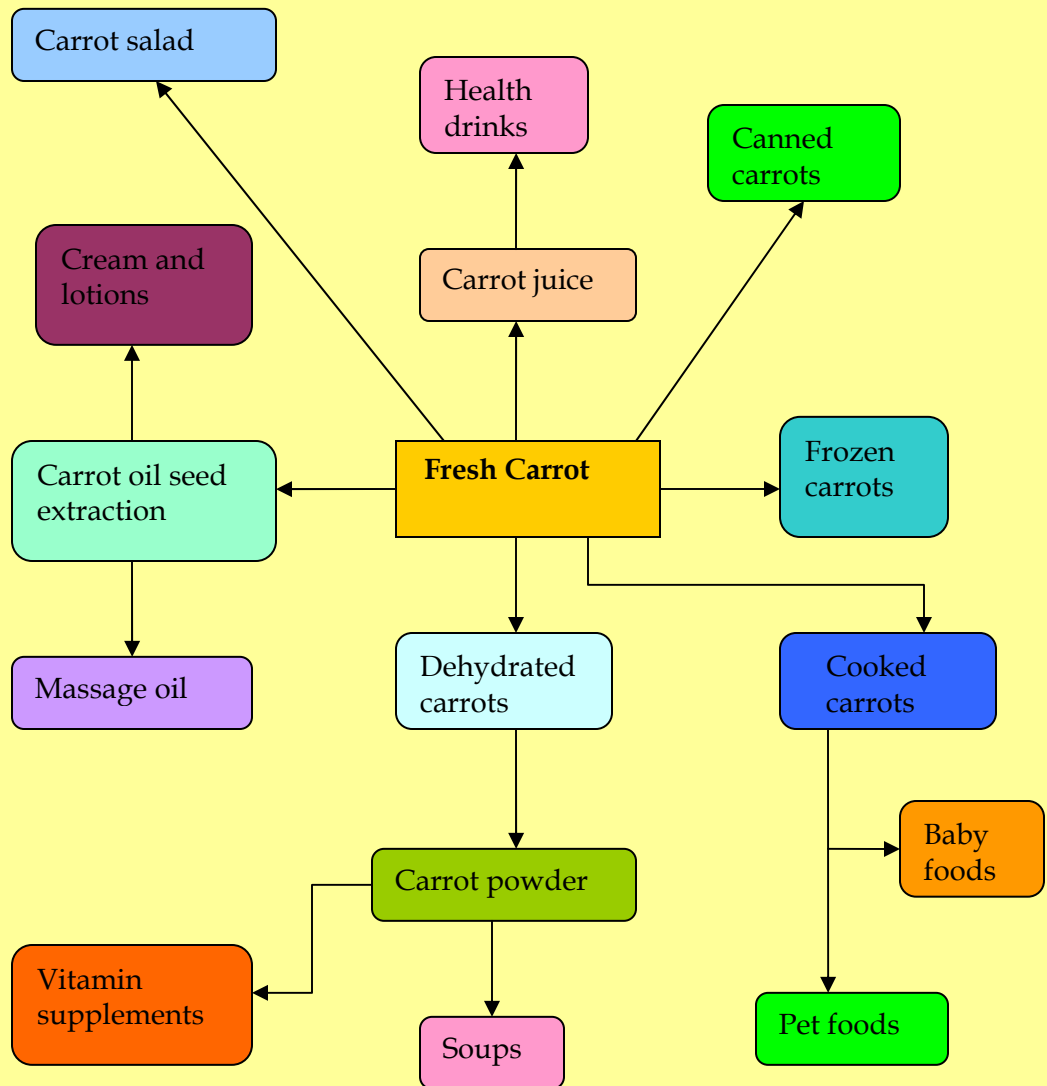
Table 11: Processed Carrots

Source: Agricultural Statistics

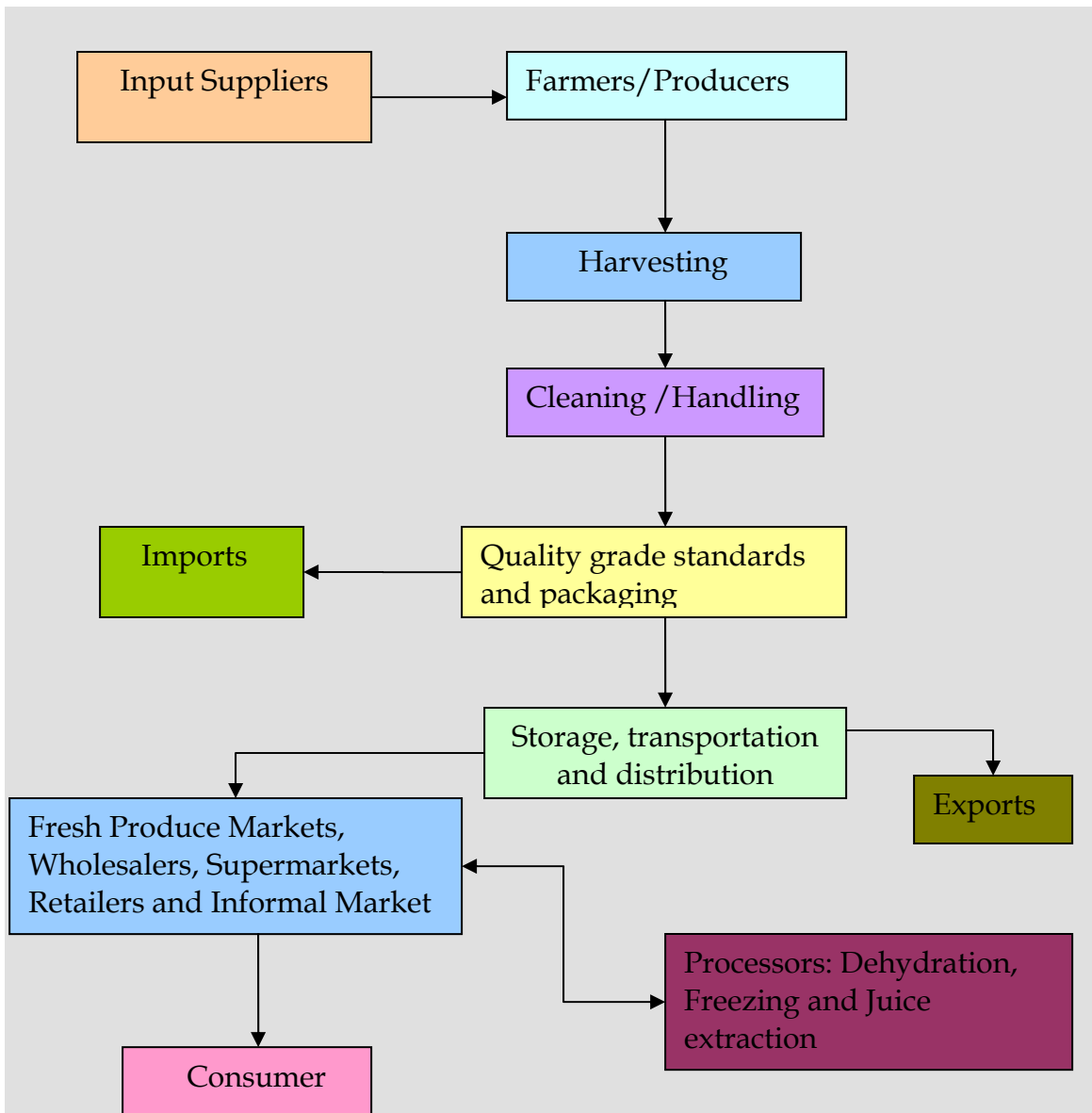
Figure 19 below illustrate carrot value chain explaining its uses. Carrot processing includes canning, freezing and dehydration. Carrot can be eaten raw,

whole, chopped, grated or added to salads for colour or texture. They are also often chopped and boiled, fried or steamed, and cooked in soups and stews, as well as fine baby foods and select pet foods grated carrots are used in carrot cakes, as well as carrot pudding. The greens are edible as a leaf vegetable, but are rarely eaten by humans. Baby carrots have been a popular ready to eat snack food available in supermarkets. Carrot juice is also widely marketed, especially as a health drink, either stand - alone or blended with other fruits and vegetables. Carrots seed oil is an essential oil extract of the seed from the carrot plant. Carrot seed oil is used as massage oil, in creams and lotions

Figure 19: Carrot Value Chain Tree explaining its uses



2.5 Market value chain for carrots



The carrot value chain can be broken down into the following levels: the producers of carrots (farmers); pack house owners (who cleans, grade and quality control); cold storage and transport facilities (who store and transport carrots on behalf of farmers); traders in carrots (who market and sell carrots); processors (who add value to carrots and process carrots to other usable forms); and end users (consumers)

3. MARKET INTELLIGENCE

The major export markets for South African carrot are United Kingdom, Angola, Netherlands, Mozambique, Zimbabwe, France and Switzerland. The following tariffs were applied by various exports markets for carrots from South Africa.

Table 12

Country	Product description (H0706100)	Trade regime description	Applied tariff	Estimated total ad valorem equivalent tariff
Angola (2008)	Carrots and turnips fresh or chilled	MNF duties (Applied)	15.00%	15.00%
Austria (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
Belgium (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
Canada (2008)	Carrots and turnips fresh or chilled	MNF duties (Applied)	\$16.5/ton	8.00%
Denmark (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
France (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
Germany (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
Ireland (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
Italy (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
Japan (2008)	Carrots and turnips fresh or chilled	MNF duties (Applied)	3.00%	3.00%
DRC (2009)	Carrots and turnips fresh or chilled	MNF duties (Applied)	10.00%	10.00%
Mozambique (2007)	Carrots and turnips fresh or chilled	MNF duties (Applied)	20.00%	20.00%
Netherlands (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
Poland (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
Portugal (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
Russian Federation (2009)	Carrots and turnips fresh or chilled	General tariff (MNF)	15.00%	15.00%
Seychelles (2007)	Carrots and turnips fresh or chilled	General tariff for South Africa	0.00%	0.00%

Switzerland (2009)	Carrots and turnips fresh or chilled	MNF duties (Applied)	\$34.92/ton	6.96%
Thailand (2005)	Carrots and turnips fresh or chilled	MNF duties (Applied)	40.00%	40.00%
United Kingdom (2009)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	1.40%	1.40%
United States of America (2008)	Carrots and turnips fresh or chilled	MNF duties (Applied)	14.90%	14.90%
Zambia (2008)	Carrots and turnips fresh or chilled	Preferential tariff for South Africa	5.00%	5.00%
Zimbabwe (2007)	Carrots and turnips fresh or chilled	MNF duties (Applied)	40.00%	40.00%
Mauritius (2009)	Carrots and turnips fresh or chilled	MNF duties (Applied)	0.00%	0.00%
United Arab Emirates (2008)	Carrots and turnips fresh or chilled	MNF duties (Applied)	0.00%	0.00%

Source: Market Access Map

The most lucrative export markets for carrots from South Africa are Seychelles, and United Arab Emirates since these countries apply zero tariff to exports of carrots originating from South Africa. In the European markets (Austria, Denmark, France, Germany, Ireland, Netherlands, Belgium, Portugal and United Kingdom) a preferential tariff of 1.40% is applied to carrots originating from South Africa, this is due to EU-SA Free Trade Agreement (FTA). The African markets in Zambia applies 5% preferential tariff, Mozambique, Zimbabwe and Angola are highly protected by high tariff of 20%, 40% and 15% respectively, in spite of the existence of the SADC-FTA.

3.1 Non tariff barriers

3.1 The European Union

Non-tariff barriers can be divided into those that are mandatory and laid out in the EU Commission's legislature, and those that are as a result of consumers, retailers, importers and other distributions' preferences.

3.1.1 Product legislation: quality and marketing

There are a number of pieces of EU legislation that govern the quality of produce that may be imported, marketed and sold within the EU.

General Food Law covers matters in procedures of food safety and hygiene (micro-biological and chemical), including provisions on the traceability of food (for example, Hazard Analysis and Critical Control Points, of HACCP).

EU Marketing Standards, which govern the quality and labeling of vegetables, are laid out in the CAP framework under regulation EC 2200/96. These regulations include diameter, weight and class specifications, and any produce that does not comply with these standards are not allowed to be sold on the EU markets (detailed lists of products and their standards can be found in the annexes to the directive). The legislation (under EU 1148/2001) also dictates that a Certificate of Conformity must be obtained by anyone wishing to export and sell vegetables in the EU, if that particular vegetable falls under the jurisdiction on the EU marketing standards, Vegetables to be used in further processing needs a Certificate of Industrial Use, whilst another legislative directive covers the Maximum Residue Limits (MRL) of various pesticides allowed.

3.1.2 Product legislation: phytosanitary regulations

The international standard for phytosanitary measures was set up by the International Plant Protection Committee (IPPC) to protect against the spreading of diseases or insects through the importation of certain agricultural goods. The EU has its own particular rules formalized under EC 2002/89, which attempts to prevent contact of EU crops with harmful organisms from elsewhere in the world.

The crux of the directive is that it authorizes the Plant Protection Services to inspect a large number of vegetable products upon arrival in the EU. This inspection consists of a physical examination of a consignment deemed to have a level of phytosanitary risk, identification of any harmful organisms and certification of the validity of any phytosanitary certificate covering the consignment. If the consignment does not comply with the requirements, it may not enter the EU, although certain organisms can be fumigated at the expense of the exporter.

3.1.3 Product legislation: packaging

The EU commission lays down rules for materials that come into contact with food and which may endanger people's health or bring about an unacceptable change in the composition of the foodstuffs. The framework legislation for this EC 1935/2004. Recycling packaging materials are also emphasized under 94/62/EC, whereby member states are required to recycle between 50% and 65% of packaging waste. If exporters do not ship produce in packaging which is reusable, they may be liable for the costs incurred by the importing companies. Wood packaging is subject to phytosanitary controls (see Directive EC 2002/89) and may need to undergo heat treatment, fumigation, etc.

3.1.4 Non-legal market requirements: social and environmental accountability

To access a market, importers must not only comply with the legal requirements set out above, but also with market requirements and demands. For the most part, these revolve around quality and the perceptions of European consumers about the environmental, social, health and safety aspects of both the products and the production techniques. Whilst supplying vegetables that complies with these issues may not be mandatory in the legal sense, they are becoming increasingly important in Europe and cannot be ignored by existing or potential exporters.

(i) Social responsibility is becoming important in the industry, not only amongst consumers, but also for retail outlets and wholesalers. The Social Accountability 8000 (SA8000) certification is a management system based on International Labour Organization (ILO) conventions, and deals with issues such as a child labour, health and safety, and freedom of association, and requires an on-site audit to be performed annually. The certificate is seen as necessary for accessing any European market successfully. The major retailers in the EU also play an important role in tackling environmental issues, which means that exporters have to take these into account when negotiating exporting arrangements.

(ii) Environmental issues are becoming increasingly important with European consumers. Consumer movements are lobbying against purchasing non-environmental friendly or non-sustainable produce. To this end, both governments and private partners have created standards (such as ISO 14001 and EUREPGAP) and labels to ensure produce adhere to particular specifications. Labels are an absolute must for exporters attempting to enter the rapidly expanding organic produce market. The EU Commission has recently adopted an EU label for identifying food produced according to EU organic standards in the directive EEC 209/91

3.1.5 Consumer health and safety requirements

Increasing consumer conscience about health and safety issues has prompted a number of safety initiatives in Europe, such as EUREPGAP on good agricultural practices (GAP) by the main European retailers, the international management system of HACCP, which is independently certified and required by legislation for European producers as well as food imported into Europe (EC 852/2004), and the ISO 9000 management standards system (for procedures and working methods), which is certified by the International Standards Organization (ISO).

3.2 The United States

The USDA has quality standards for vegetables that provide a basis for domestic and international trade and promote efficiency in marketing and procurement. At the same time the USDA issues quality certificates based on these standards and a comprehensive grading system. Graders are located around the country at terminal markets. These certification services, which facilitate the ordering and purchasing of products by large-volume buyers, assure these buyers that the product they purchase will meet the terms of the contract in terms of quality, processing, size, packaging and delivery.

3.3 Asian Market Access

Japan's agricultural sector is heavily protected, with calculations from the Organization for Economic Co-operation and Development (OECD) estimating that almost 60% of the value of Japan's farm production comes from trade barriers or domestic subsidies. Japan uses tariff rate quotas (TRQ) to protect its most sensitive products, and reserves the right for trading many of these products (within the quota) for one or two state trading enterprises. However, these extremely protective measures apply only to some products; others are able to compete more effectively with outside competition, often on the grounds of higher quality.

Perhaps the biggest barrier to trade with Japan in vegetable markets is its strict phytosanitary requirements, which have often been challenged in the WTO as having little or no scientific justification. Other measures that are being challenged include Japan's use of fumigation on agricultural products when cosmopolitan pests (already found in Japan) are detected. Japan is also increasing its labeling requirements

4. GENERAL DISTRIBUTION CHANNELS

There are roughly three distinct sales channels for exporting vegetables. One can sell directly to an importer with or without the assistance of an agent (usually larger, more established commercial farms/orchards). One can supply a vegetable combine, which will then contract out importers/marketers and try to take advantage of economies of scale and increased bargaining power. At the same time vegetable combines might also supply large retail chains. One can also be a member of a private or co-operate export organization (including marketing boards) which will find agents or importers and market the produce collectively. Similar to a vegetable combine, an export organization can either supply wholesale markets or retail chains depending on particular circumstances. Export organizations and marketing boards will wash, sort and package the produce.

5. LOGISTICAL ISSUES

5.1 Mode of transport

The transportation of vegetables falls within two categories – *ocean cargo* and *air cargo* – with ocean cargo taking much longer to reach the desired location but costing considerably less. Of course, the choice of transportation method depends, for the most part, on the fragility of the produce and how long it can remain relatively fresh. With the advent of technology and container improvements, the feasibility, cost and attractiveness of sea transportation have improved considerably. As more developing countries begin to export and supply major developed countries markets, so the number and regularity of maritime routes, and the container vessels travelling these routes, increase.

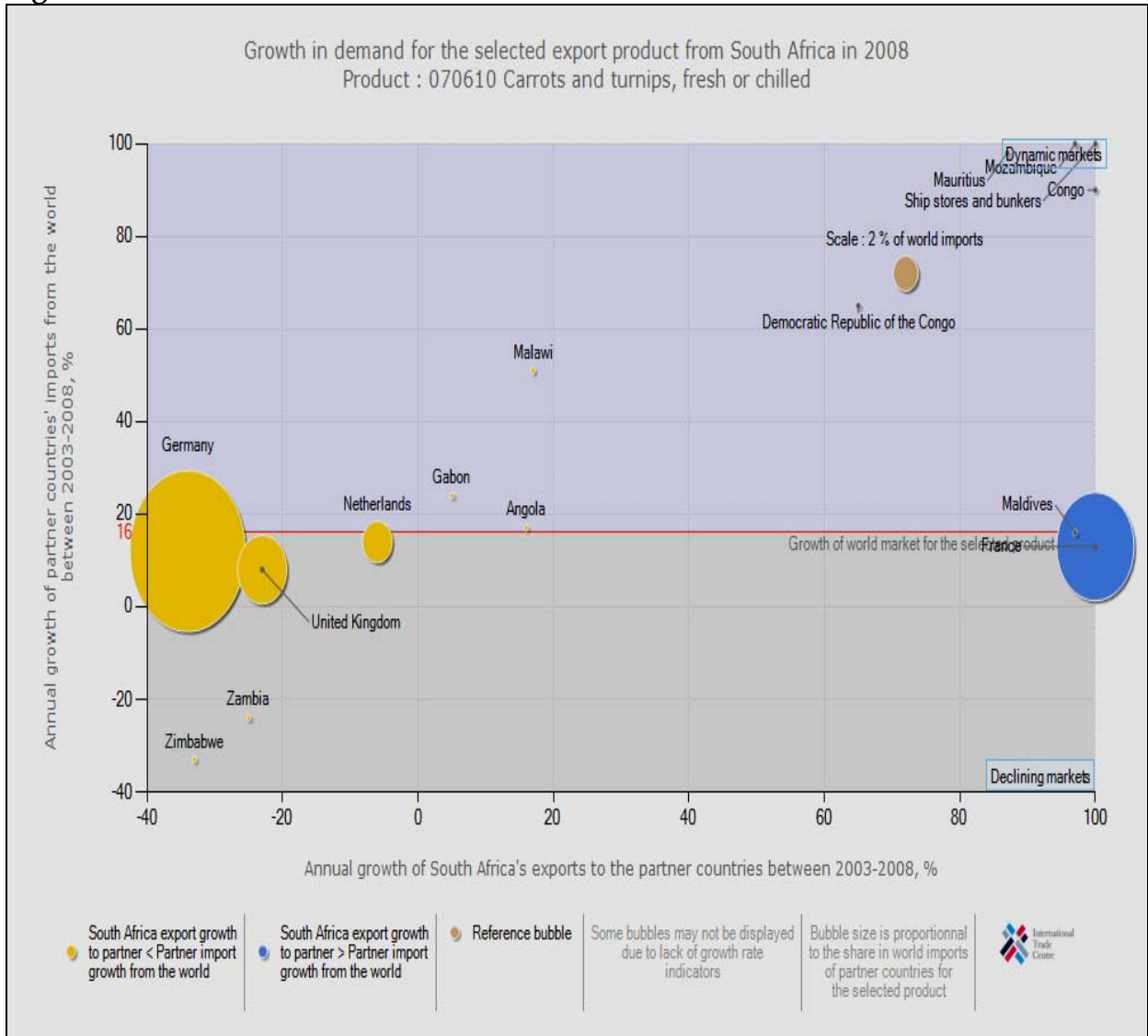
Presently South American countries like Peru benefit from the asparagus trade, which has led to some level of economies of scale with other vegetable products, and this has enabled cheaper transport prices for their other vegetable varieties. Such economic of scale could benefit SADC countries if more producers became exporters and took advantage of the various ports which have special capabilities in handling vegetable produce (for example, the proposed terminal in Maputo). For some products, in order to reach the destination market with an acceptable degree of freshness, air transport is the only option (asparagus, for example, is flown from Peru to the sufficient to cover the transport costs, and collective agreements between farmers of different commodities with different harvest periods can become particularly important.

5.2 Cold chain management is crucial when handling perishable products, from the initial packing houses to the refrigerated container trucks that transport the produce to the shipping terminals, through to the storage facilities at these terminals (and their pre-cooling capability), onto the actual shipping vessels and their containers, and finally on to the importers and distributors that must clear the produce and transport it to the markets/retail outlets, etc. For every 10°C increase above the recommended temperature, the rate of respiration and ripening of produce can increase twice or even thrice. Related to this are the increasingly important traceability standards, which require an efficiently controlled supply chain and internationally accepted business standards.

5.3 Packaging also plays a vital role in ensuring safe and efficient transport of a product and conforming to handling requirements, uniformity, recyclable materials specifications, phytosanitary requirements, proper storage needs and even attractiveness (for marketing purposes).

6. COMPETITIVENESS OF SOUTH AFRICA CARROTS EXPORTS

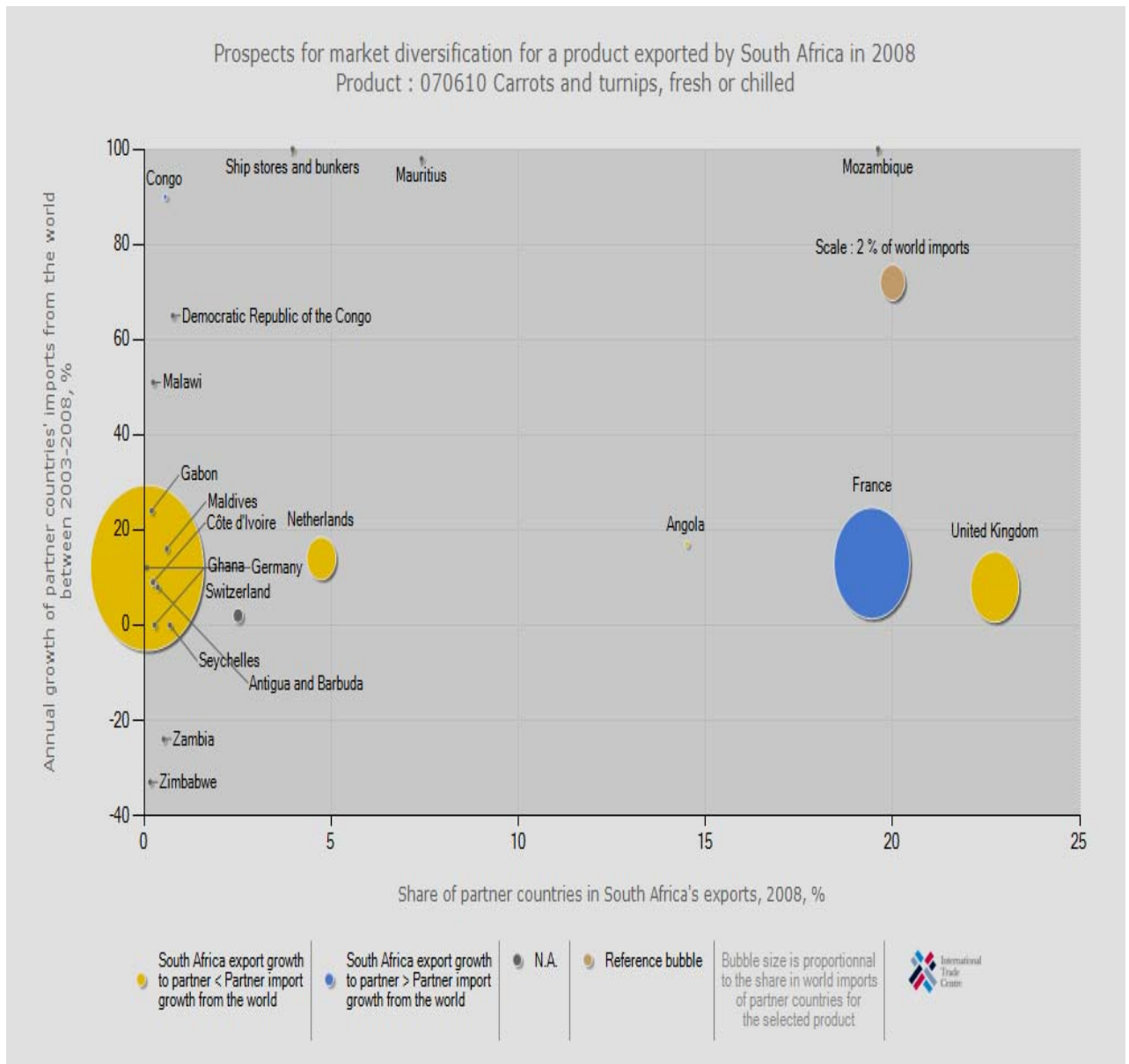
Figure 20



Source: ITC calculations based on COMTRADE statistics.

Figure 20 above, shows that South African carrots exports are growing faster than the world imports into Maldives, France and Congo. South Africa's performance in those markets can be regarded as gains in dynamic markets. South Africa's carrots exports are growing slower than the world imports into Malawi, Gabon, Angola, Mauritius and Mozambique. In Germany and Netherlands, South African carrots exports are declining while the world imports into these countries are growing. South African carrots exports have declined faster than the world imports into United Kingdom, Zimbabwe and Zambia. South Africa's performance in these countries can be regarded as a loss in a declining market.

Figure 21



Source: ITC calculations based on COMTRADE statistics.

Figure 21 above, shows that the prospective exports markets for carrots from South Africa. United Kingdom and France hold a bigger share market share of South African carrots exports. Other prospective markets exist in Germany, Netherlands, Spain, Maldives, and Belgium. In Africa markets exist in Angola, Mozambique and Ghana. However, if South Africa is to diversify its carrots exports the most lucrative markets exists in Malawi, Congo and Mauritius and Democratic Republic of Congo which have increased their carrots imports from the world between 2004-2008 period. The imports of carrots from the world to countries such as Zimbabwe and Zambia have declined from 2004 and 2008 period and as a results those counties has recorded a negative growth rate.

7. OPPORTUNITIES AND CHALLENGES

7.1 Opportunities

Carrots have found increasing favour among consumers. Several health benefits have promoted marketing this vegetable as a convenient and good tasting snack food or juice product. Carrots are popular as snacks, side dishes, salads ingredients, juice mixtures and dessert mixtures (e.g. carrot cake and carrot pudding). The rise of the fresh cut industry has meant some of the misshapen and other wise imperfect carrots have an alternative profitable outlet. Carrot that would not have made the grade in a standard pack of fresh carrots do not have to be sent to freezers or canners to be cut, diced or juiced. Today, the cutting and peeling process for various fresh-cut carrot products allows a majority of the raw carrots destined for the fresh market to become fresh market products.

7.2 Challenges:

The major concern is the production of a disease-free high quality clean carrot root. Other essential part of carrot production and marketing is the need to define the quality standards necessary for consumer acceptance. Product physical defects can be readily measured, but the flavor and sweetness characteristics must be defined and the parameters affecting these important factors understood. Numerous root diseases affect carrot but proper cultural practices can keep them under control. Carrot growers also face strong market competition from the national and international producers.

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National Department of Agriculture

Directorate: Agricultural Statistics

Private Bag X246

Pretoria

0001

Tel (012) 930 1134

Fax (012) 319 8031

Trade and Industrial Policy Strategies (TIPS)

P.O. Box 11214

Hatfield

0028

Tel (012) 431 7900

Fax (012) 431 7910

Quantec Research

www.quantec.co.za

Market Access Map

www.macmap.org

www.trademap.org

Economic Research Service/USDA

www.wikipedia.co.za

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