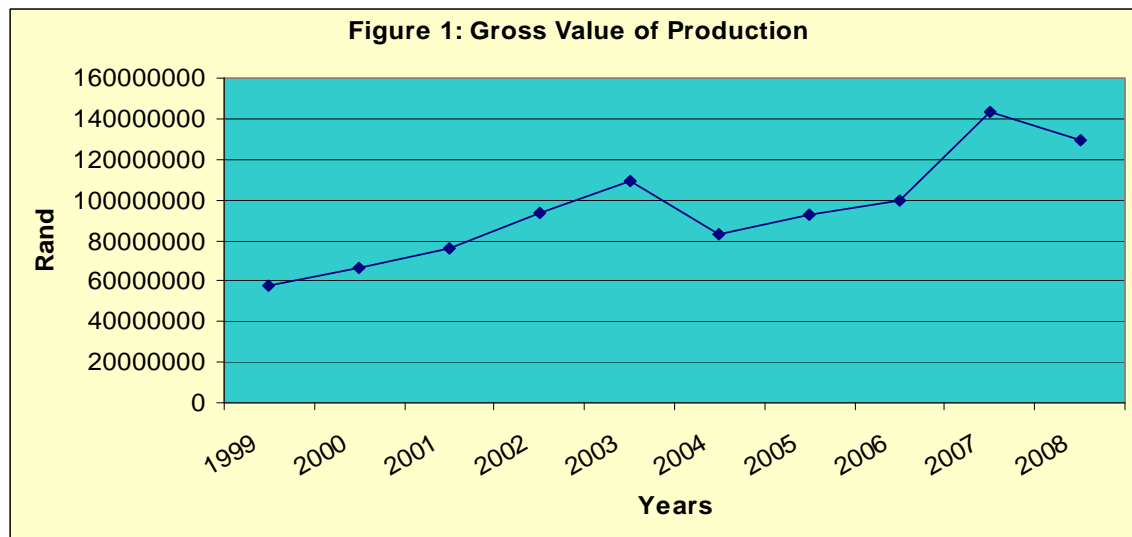


# CABBAGE VALUE CHAIN PROFILE

## 1. DESCRIPTION OF THE INDUSTRY

Cabbage belongs to a class of vegetables called Brassica, also known as cruciferous vegetables because their flowers are cross-shaped. Other crucifers are broccoli, kale, cauliflower and Brussels sprouts. As with most vegetable crops, cabbages are mostly produced for and marketed through the national fresh produce markets, the informal market and chain stores. Cabbage is used raw in salads, such as coleslaw, as a cooked vegetable, or preserved in pickles or sauerkraut. Cabbage is 90% water and an excellent source of minerals, Vitamin A and C and the B vitamins.



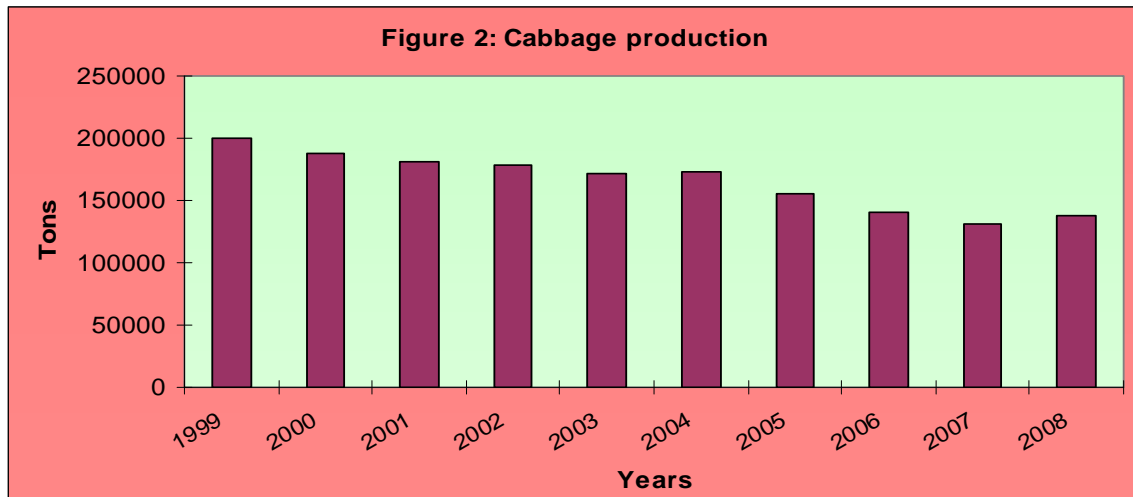
*Source: Agricultural Statistics*

Figure 1 above illustrates the contribution of the cabbage industry to the gross value of agricultural production over 10 years period. The industry contribution has increased steadily from 2000 to 2003. There was a sharp decline in gross value due to high production which occurred while the prices were not favorable for the producers. From 2005, the gross value increased steadily reaching the peak in 2007. In 2008, there was 10% decline in contribution due to decline in producer price in the same year.

### 1.1 Production areas

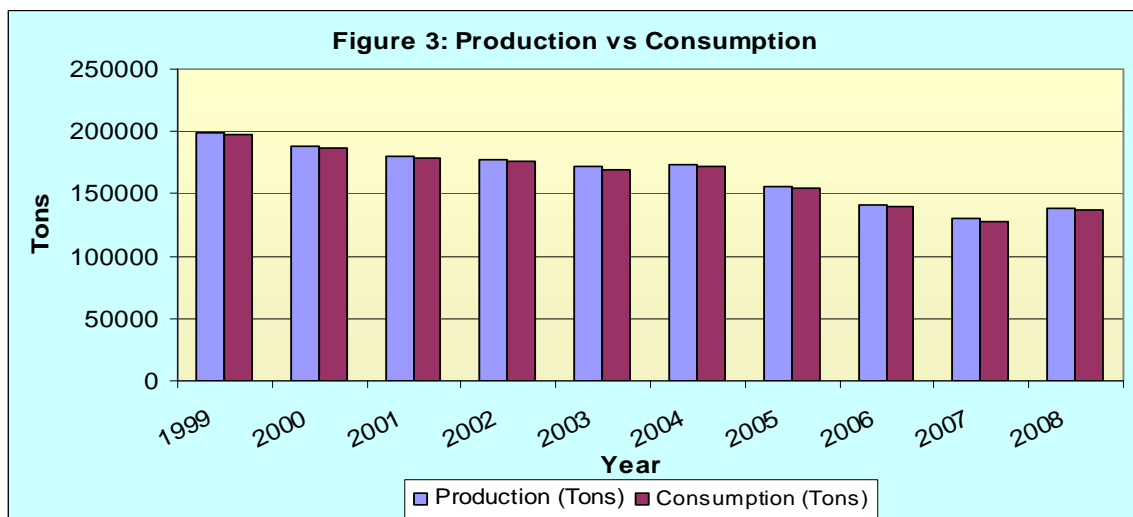
Cabbage grows best under cool conditions cabbage. Cabbages are produced in all provinces of South Africa but the production is concentrated in Western Cape, Kwazulu Natal, Eastern Cape, Gauteng, Free State and North West provinces. Globally, China is a leader in production of cabbages, followed by India and Russian Federation.

## 1.2 Production trends



Source: Agricultural Statistics

Figure 2, illustrate the production volumes over the past ten years. Peak production volumes were recorded in 1999, and then from 2000 to 2003 there was a steady decline in production volume. In 2004, the production increased slightly and then from 2005 the production declined significantly with 2007 having lowest production volumes. In 2008, there was a slight increase in production. The decline in production can be attributed to increasing high production input costs and unfavorable climatic conditions.



Source: Agricultural Statistics

Figure 3 above, depicts local consumption of cabbage compared to the production over the 10 years period. South African average cabbage consumption is approximately 163 838 tons per annum. The figure illustrates that the production of cabbage is slightly higher than the consumption. Most of

cabbages are produced for domestic consumption. South Africa is self sufficient in terms of cabbage production and the surplus is also exported.

## 2. MARKET STRUCTURE

The cabbage industry operates in the deregulated environment where the prices are determined by the forces of demand and supply. Fresh cabbages are sold through fresh produce market, processors, restaurants, hawkers, retailers and chain stores. Cabbages are also exported to other countries through export agents and marketing companies. South Africa also imports from other countries.

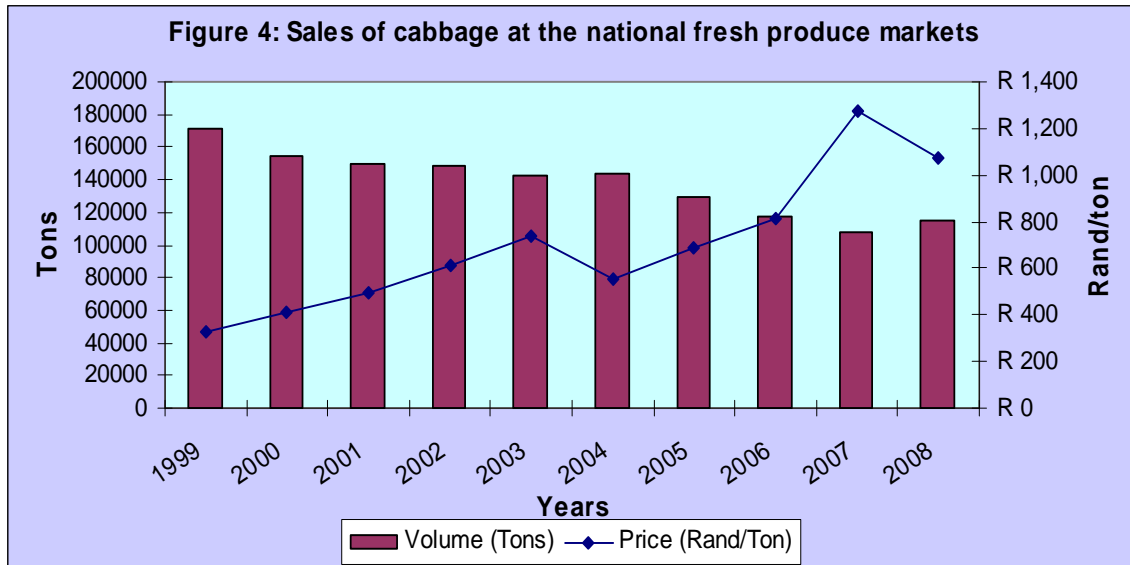
### 2.1 Domestic market and prices

**Table 1: Cabbage sold through different market channels**

Years	National fresh produce markets (tons)	Exports (Kg)	Processing (tons)
1999	171441	414520	2185
2000	154488	476336	1829
2001	150229	1029939	1568
2002	148129	485362	1647
2003	142367	801855	1970
2004	144172	814325	1339
2005	129261	604853	1069
2006	117433	752969	1452
2007	108300	1004202	2357
2008	115333	1032001	1566

*Source: Agricultural Statistics*

Table 1 above, illustrates the sales of cabbage through various marketing channels over ten years period. National Fresh Produce Market remains an important channel for the sale of fresh cabbage in South Africa. In 2008, approximately 83% of cabbages were distributed through fresh produce markets. The remaining 17% represent direct sales from producer to wholesalers, retailers, processors, informal traders and consumers.



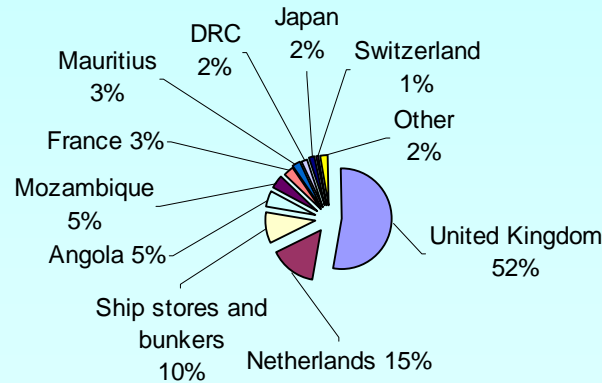
Source: Agricultural Statistics

Figure 4 above illustrate the sales of cabbage in the national fresh produce market over the period of 10 years. In 1999 the cabbages were sold at the lowest prices due to high volumes of cabbage supplied in the same period. From 2000 to 2003 the prices increased steadily due to a steady decline in volumes in the same period. In 2004, the price dropped by 26% when compared to a price in the previous year due to increased cabbage volumes across the markets. From 2005 prices increased steadily and the highest price was recorded in 2007 as the volumes decreased significantly across the markets. In 2008, the price dropped by 16% due to slight increase in volumes.

## 2.2 South Africa Cabbage Exports

South Africa is not a major cabbage exporter, it represent 0.13% of world exports and its ranked number 36 in the world. Most of cabbage produced is destined for domestic markets. South African cabbage exports were destined to United Kingdom, Netherlands, Angola, Mozambique, France, Mauritius, and Democratic Republic of the Congo. Figure 5 below illustrates South Africa cabbage export destinations.

**Figure 5: South Africa cabbage exports destinations in 2008**



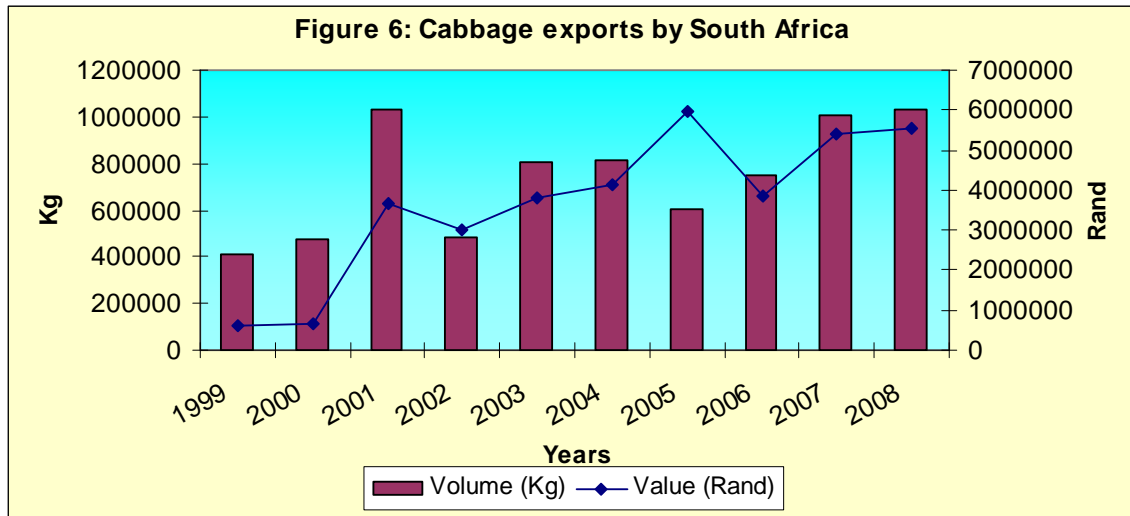
Source: Trade Map

**Table 2: South Africa major cabbage exports destinations 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	2476	100	2421	1023	15	13	16
United Kingdom	1298	52.4	851	1525	3	2	91
Netherlands	372	15	351	1060	17	28	-41
Ship stores and bunkers	253	10.2	353	717	90	77	-12
Angola	124	5	224	554	10	6	-2
Mozambique	115	4.6	354	325	35	19	21
France	82	3.3	76	1079	222	255	14
Mauritius	61	2.5	82	744	50	85	-20
DRC	46	1.9	30	1533	63	52	-19
Japan	44	1.8	37	1189			1367
Switzerland	30	1.2	24	1250		57	-27
Seychelles	19	0.8	8	2375	26	10	138
United Arab Emirates	9	0.4	2	4500	5	3	80
Congo	7	0.3	8	875	73	72	40
Zambia	5	0.2	12	417	20	64	150
Germany	2	0.1	1	2000	-31	-14	-88
Nigeria	2	0.1	2	1000	-23		-60

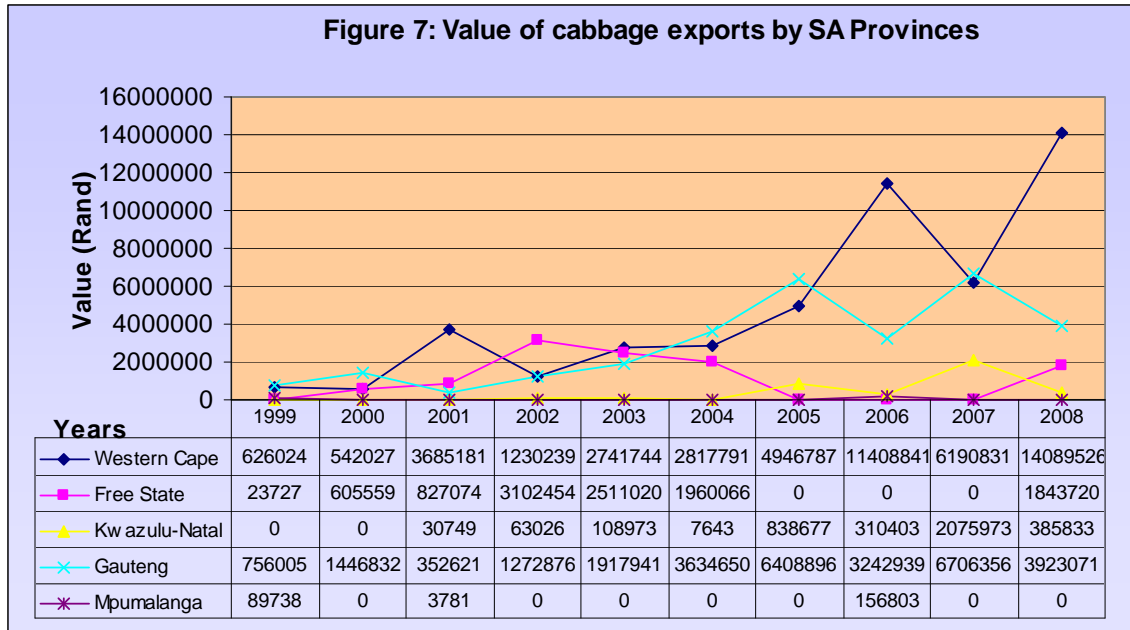
Source: Trade Map

Table 2 indicates that during 2008, South Africa exported higher quantities of cabbages to United Kingdom and Netherlands. United Kingdom commanded 52.4% and Netherlands commanded 15% share of South African cabbage exports. Cabbage exports to United Kingdom have grown by 91% in value between 2007 and 2008 period. South African exports to Germany have decreased by 31% and 14%, in value and quantity respectively between 2004 and 2008. This can be attributed to the decline in production between 2004 and 2008.



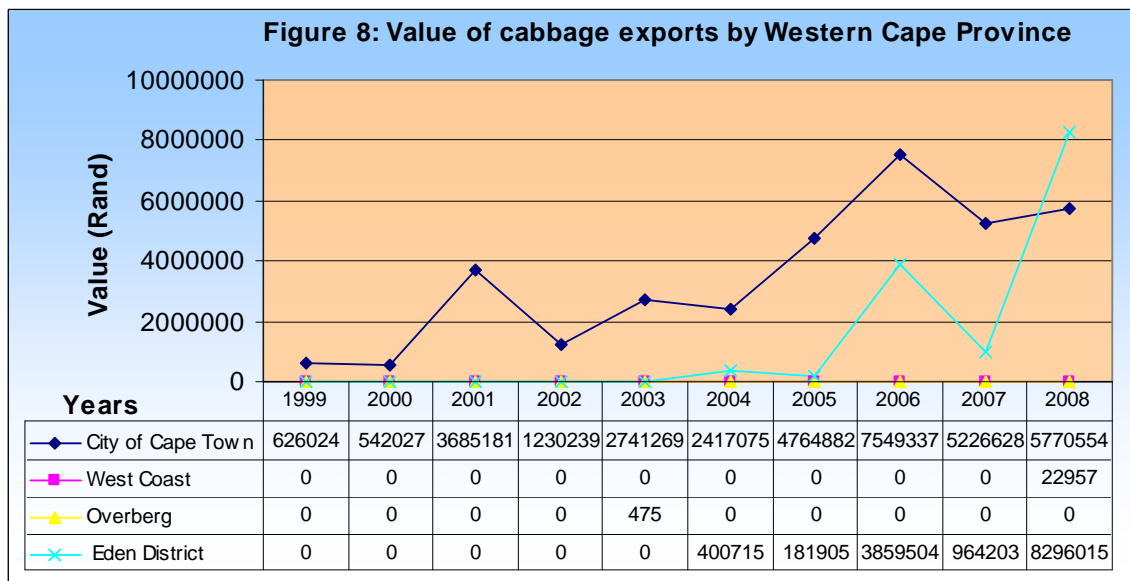
Source: Quantec Research

Figure 6, illustrate cabbage exports from South Africa over the past 10 years. The export increased significantly in 2001, 2007 and 2008 despite the decline in production volumes in the same years. It was generally less profitable to export cabbage in the past between 10 years except for 2005, since lower export value were recorded for relatively higher volumes exported.



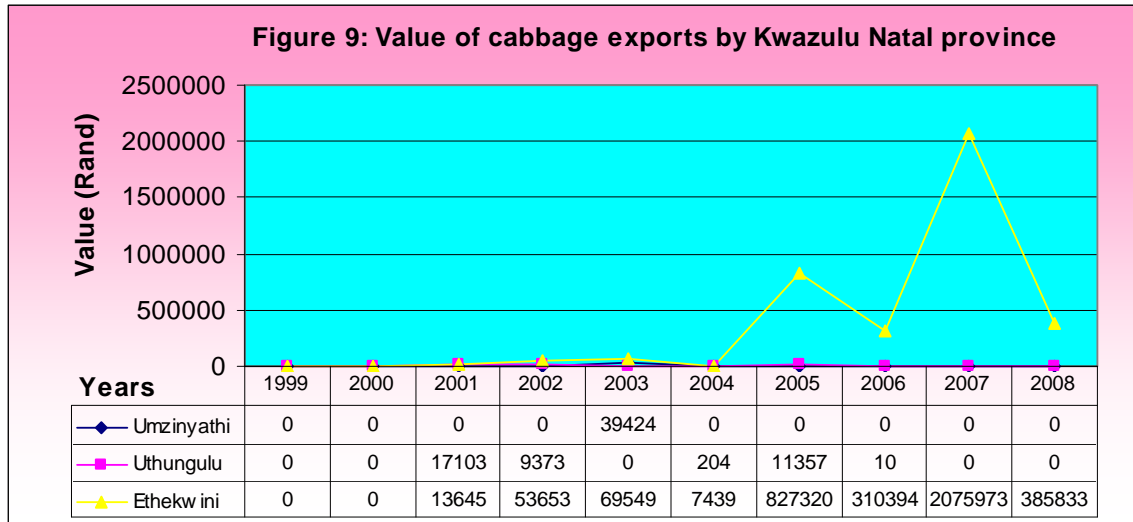
Source: Quantec Research

Figure 7, above illustrate the cabbage exports by the provinces of the past ten years. The highlights of cabbage exports were that of Western Cape, Gauteng, Free State and Kwazulu Natal to a lesser extent. The high export values from Western Cape, Gauteng, and KwaZulu Natal can be attributed to the export exit points, Cape Town harbour, OR Tambo International Airport and Durban harbour. The following figures (figure 7-12) show the value of cabbage exports from the various districts in all Provinces in South Africa.



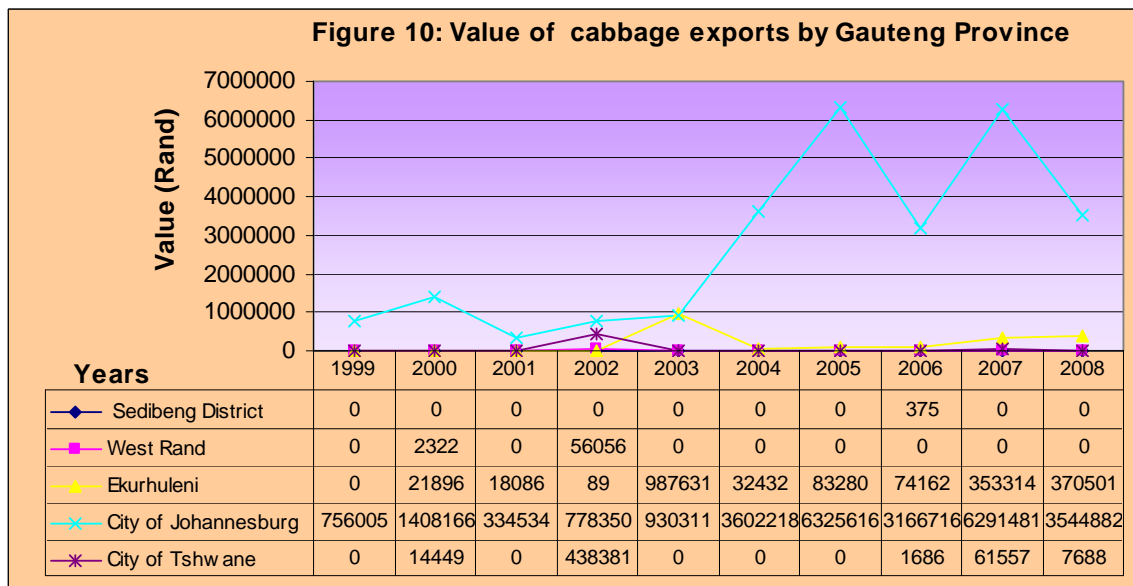
Source: Quantec Research

Figure 8 above, indicates that cabbage exports from Western Cape Province were mainly from City of Cape Town and Eden district municipalities. The highest export value was recorded in 2008 from Eden municipality.



Source: Quantec Research

Figure 9, above indicates that cabbage exports from Kwazulu Natal Province were mainly from Ethekewini and Uthungulu Municipalities. The significant export values were in 2005 and 2007 from Ethekewini Municipality.

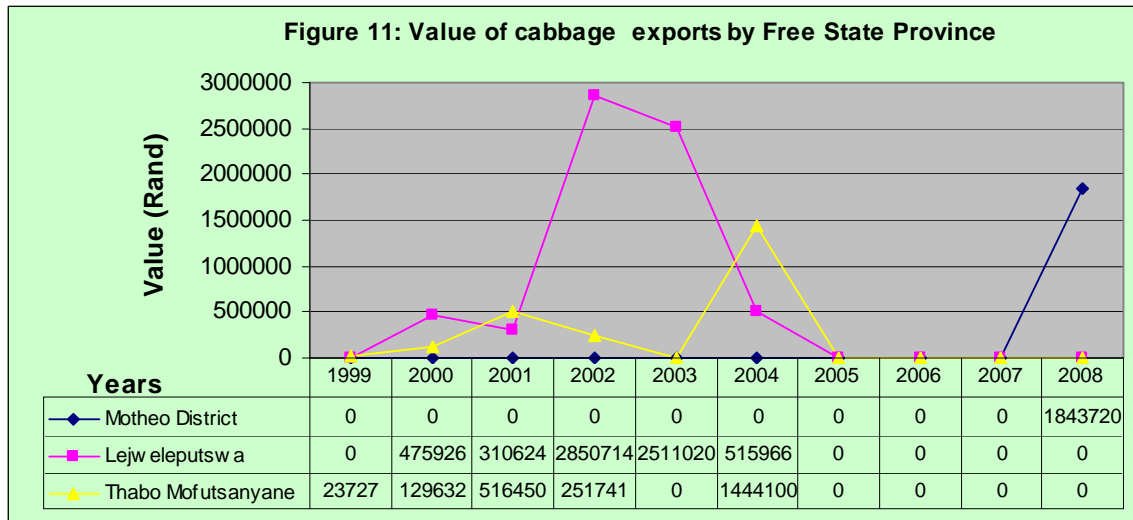


Source: Quantec Research

As can be seen from figure 10 above, cabbage exports from Gauteng Province are mainly from the City of Johannesburg municipality and Ekurhuleni

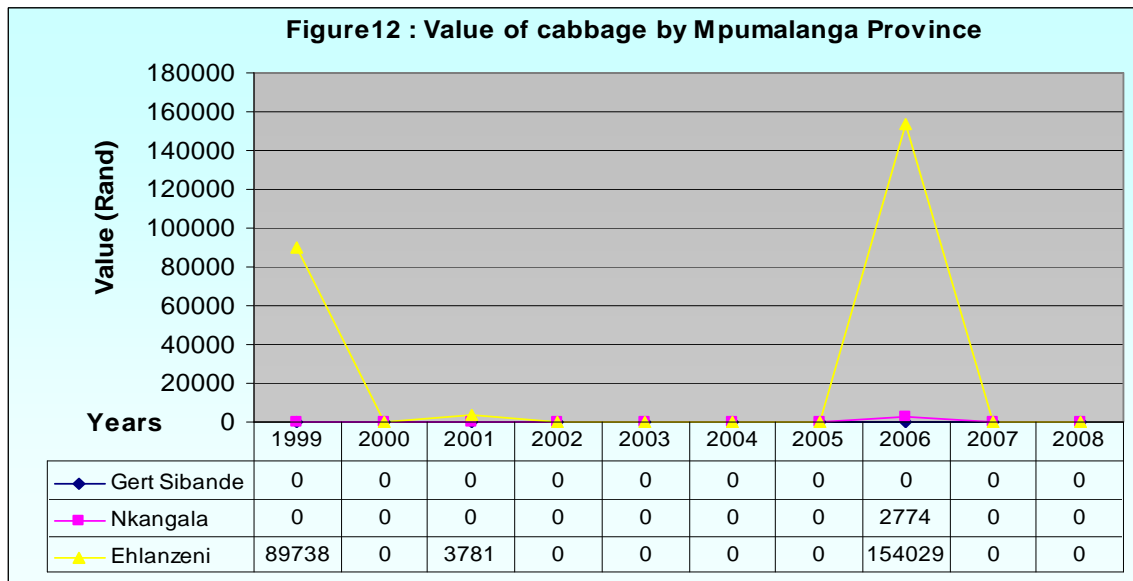


municipality. City of Tshwane municipality contributed to a lesser extent. The high exports values were recorded 2005 and 2007 from City of Johannesburg municipality.



Source: Quantec Research

Figure 11 above, shows that cabbage exports from Free State Province are mainly from Lejweleputswa and Thabo Mofutsanyane Municipalities. The significant exports values were recorded in 2002 and 2003 from Lejweleputswa district municipality.



Source: Quantec Research

Figure 12 above, shows that the cabbage exports from Mpumalanga Province are mainly from Ehlanzeni Municipality. The highest cabbage export value was recorded in 2006.

### 2.2.1 Share Analysis

Table 3 illustrates the provincial share towards national cabbage exports. Western Cape, Gauteng, Free State and KwaZulu-Natal commanded the greatest share of exports. The high exports share in Western Cape, Kwazulu Natal and Gauteng can be attributed to registered exporters and exports exit points based in these provinces. In 2008, Western Cape province commanded 69.60% share of South Africa cabbage exports.

**Table 3: Share of provincial cabbage exports to the RSA cabbage exports (%)**

Year Province	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Western Cape	41.86	20.89	75.22	21.70	37.66	33.46	40.57	75.46	41.35	69.60
Free State	1.59	23.34	16.88	54.73	34.49	23.28	0	0	0	9.11
Kwazulu-Natal	0	0	0.63	1.11	1.50	0.09	6.88	2.05	13.86	1.91
Gauteng	50.55	55.77	7.20	22.45	26.35	43.17	52.56	21.45	44.79	19.38
Mpumalanga	6	0	0.08	0	0	0	0	1.04	0	0
South Africa	100	100	100	100	100	100	100	100	100	100

Source: Calculated from Quantec Research

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

Year District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
City of Cape Town	100	100	100	100	99.98	85.78	96.32	66.17	84.43	40.96
West Coast	0	0	0	0	0	0	0	0	0	0.16
Overberg	0	0	0	0	0.02	0	0	0	0	0
Eden District	0	0	0	0	0	14.22	3.68	33.83	15.57	58.88
Western Cape	100	100	100	100	100	100	100	100	100	100

Table 4 above, indicates that City of Cape Town and Eden to a lesser extent commanded the greatest share of cabbage exports from Western Cape Province. Cape Town harbour renders exit point of cabbage exports. In 2008 commanded 58.88% share of Western Cape Provincial cabbage export.

**Table 5: Share of district cabbage exports to the Kwazulu Natal Provincial cabbage exports (%)**

Year District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Umzinyathi	0	0	0	0	36.18	0	0	0	0	0
Uthungulu	0	0	55.62	14.87	0	2.67	1.35	0	0	0
Ethekwini	0	0	44.38	85.13	63.82	97.33	98.65	100	100	100
Kwazulu Natal	0	0	100	100	100	100	100	100	100	100

Source: Calculated from Quantec Research

Table 5 above, indicates that Ethekwini and Uthungula commanded the greatest share of cabbage exports from Kwazulu Natal Province. The greatest share by Ethekwini can be attributed to Durban harbour which renders exports exit point.

**Table 6: Share of district cabbage exports to the Gauteng Provincial cabbage exports (%)**

Year District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Sedibeng District	0	0	0	0	0	0	0	0.01	0	0
West Rand	0	0.16	0	4.40	0	0	0	0.0	0	0
Ekurhuleni	0	1.51	5.13	0.01	51.49	0.89	1.30	2.29	5.27	9.44
City of Johannesburg	100	97.33	94.87	61.15	48.51	99.11	98.70	97.65	93.81	90.36
City of Tshwane	0	1.00	0	34.44	0	0	0	0.05	0.92	0.20
Gauteng	100	100	100	100	100	100	100	100	100	100

Source: Calculated from Quantec Research

Table 6 above, indicates that City of Johannesburg and Ekurhuleni commanded the greatest share of cabbage exports by Gauteng Province. OR Tambo International Airport renders exit point of cabbages exports from Gauteng Province.

**Table 7: Share of district cabbage exports to the Free State Provincial cabbage exports (%)**

Year District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Motheo District	0	0	0	0	0	0	0	0	0	100
Lejweleputswa	0	78.59	37.56	91.89	100	26.32	0	0	0	0
Thabo Mofutsanyane	100	21.41	62.44	8.11	0	73.68	0	0	0	0
Free State	100	100	100	100	100	100	0	0	0	100

Source: Calculated from Quantec Research

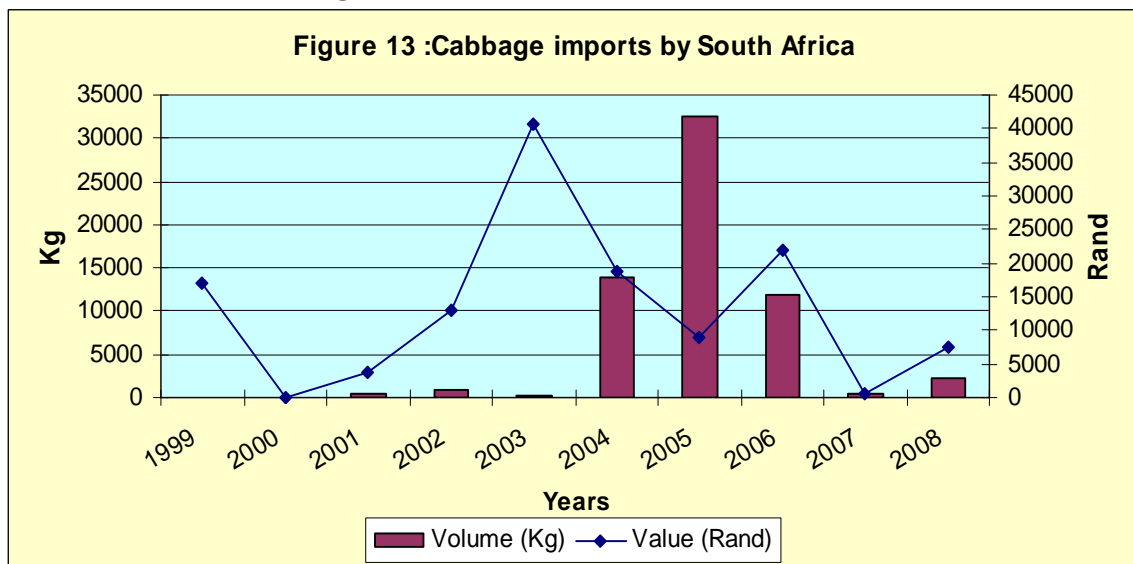
Table 7 above, indicate that Lejweleputswa and Thabo Mofutsanyane commanded the greatest share of cabbage exports from Free State Province.

**Table 8: Share of district cabbage exports to the Mpumalanga Provincial cabbage exports (%)**

Year District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Gert Sibande	0	0	0	0	0	0	0	0	0	0
Nkangala	0	0	0	0	0	0	0	1.77	0	0
Ehlanzeni	100	0	100	0	0	0	0	98.23	0	0
Mpumalanga	100	0	100	0	0	0	0	100	0	0

Source: Calculated from Quantec Research

### 2.3 South Africa Cabbage Imports



Source: Agricultural Statistics & Quantec Research

Figure 13 above, shows that cabbage imports were relatively unstable for the past 10 years and the significant imports were in 2004, 2005 and 2006. The increase in imports in 2005 can be attributed to the slightly decrease in production of cabbage in the same year and it was also cheap to import since higher volumes were imported at a lower value. In 1999, 2001, 2002, 2006 and 2008 it was expensive to import cabbage since less volumes were imported at higher values.

### 2.4 Processing

Fresh cut cabbage is used raw in salads such as coleslaw and as cooked vegetable (added to soups or stews). Cabbage is also dehydrated (dried, flaked or powder) for use as a flavoring agent in soups and as an ingredient in other dehydrated

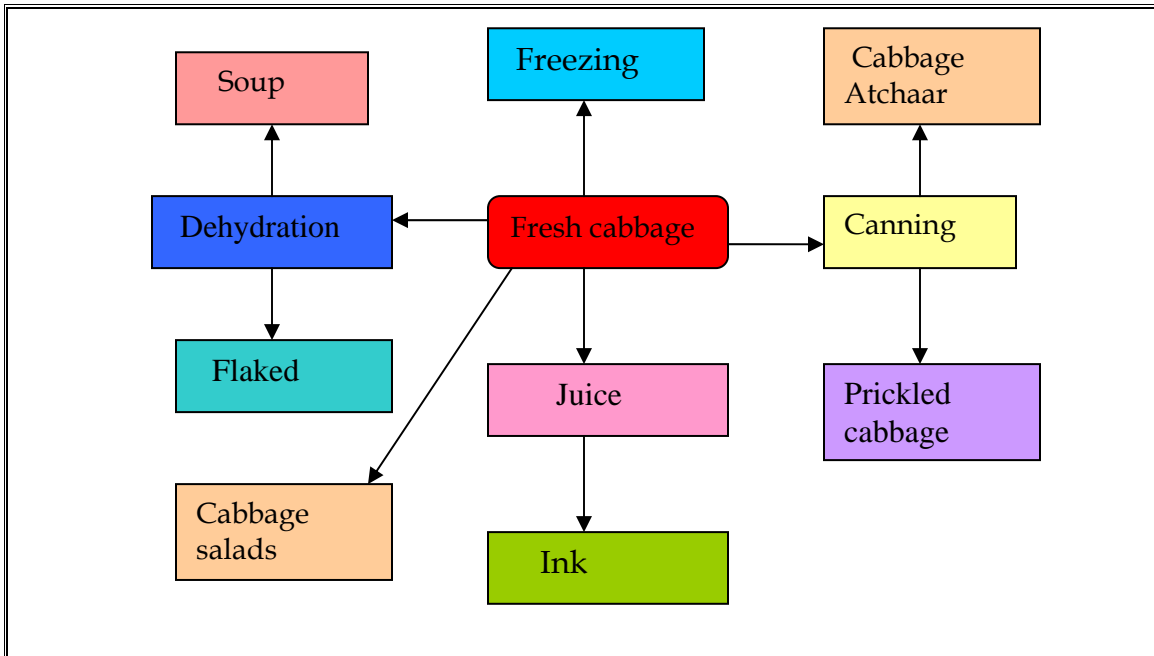
foods. Cabbage leaves are used to treat acute inflammation. A paste of raw cabbage may be placed in a cabbage leaf and wrapped around the affected area to reduce discomfort. Cabbage can also be canned, pricked, frozen and cabbage juice can be extracted to make ink. In 1999, 2003 and 2007 there has been a considerable increase in volumes that were canned. There were juice extraction activities in 1999 and 2002. In 2003 and 2004 there was no cabbage freezing activities recorded. In 2008, there was a 33% in cabbage volume that was processed when compared to 2007 production year.

**Table 8: Processed cabbages**

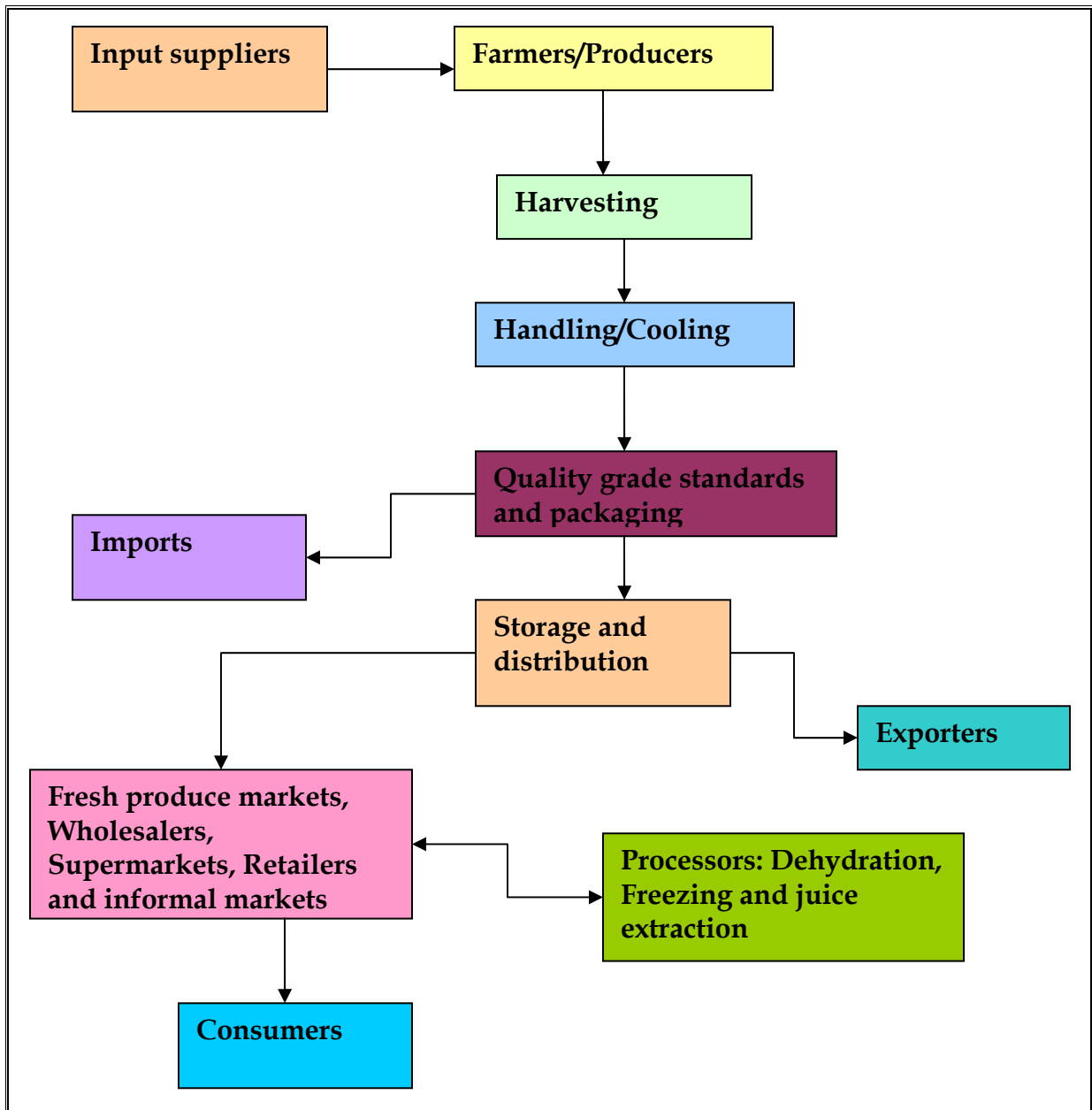
Years	Canning		Juices		Freezing		Dehydration		Total processing	
	Volume (Tons)	Value (Rands)	Volume (Tons)	Value (Rands)	Volume (Rands)	Value (Rands)	Volume (Tons)	Value (Rands)	Volume (Tons)	Value (Rands)
1999	1384.7	R 631,053	82.8	R29,062	155.2	R 74,394	562.5	R 115,283	2185.2	R 849,792
2000	933.4	R 370,335	0	0	342.8	R 115,814	552.9	R 504,116	1829.1	R 990,266
2001	412.5	R 290,757	0	0	678.7	R 256,794	476.5	R 269,197	1567.7	R 816,748
2002	807.2	R 778,573	10	R 5,010	673.5	R 244,610	156.2	R 33,596	1646.9	R 1,061,788
2003	1125	R 1,172,880	0	0	0	R 0	845.4	R 211,360	1970.4	R 1,384,240
2004	934.5	R 1,168,618	0	0	0	R 0	404.9	R 109,330	1339.4	R 1,277,947
2005	928.1	R 1,284,425	0	0	105.6	R 52,428	35	R 10,158	1068.7	R 1,347,010
2006	993.8	R 1,361,082	0	0	112.5	R 60,420	345.9	R 103,791	1452.2	R 1,525,294
2007	1333	R2,120,016	0	0	186	R117,952	839	R259 928	2357	R2,497,896
2008	1116	R1,503,537	0	0	182	R140,688	269	R85,759	1566	R1,729,984

Source: Agricultural Statistics

## 2.5 Cabbage value chain tree explaining its uses



## 2.6 Market value chain for cabbage



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

### 3. Market intelligence

#### 3.1 Tariffs

**Table 9: Tariffs applied by various exports markets for cabbage from South Africa.**

Country	Product description (H07490)	Trade regime description	Applied tariff	Estimated total ad valorem equivalent tariff
United States of America (2008)	Cabbage fresh or chilled	MFN duties (Applied)	\$5.40/ton	0.91%
France (2009)	White or red cabbage fresh or chilled	Preferential tariff for South Africa	1.20%	1.20%
Mozambique (2007)	White or red cabbage fresh or chilled	MFN duties (Applied)	20.00%	20.00%
Singapore (2008)	Cabbage fresh or chilled	MFN duties (Applied)	0.00%	0.00%
United Kingdom (2009)	White or red cabbage fresh or chilled	Preferential tariff for South Africa	1.20%	1.20%
Angola (2008)	Cabbage fresh or chilled	MFN duties (Applied)	15.00%	15.00%
Germany (2009)	White or red cabbage fresh or chilled	Preferential tariff for South Africa	1.20%	1.20%
Netherlands (2009)	White or red cabbage fresh or chilled	Preferential tariff for South Africa	1.20%	1.20%
Malaysia (2007)	Cabbage fresh or chilled	MFN duties (Applied)	0.00%	0.00%
Sweden (2009)	White or red cabbage fresh or chilled	MFN duties (Applied)	\$5.21/ton	12.00%
Thailand (2005)	Cabbage fresh or chilled	MFN duties (Applied)	\$108.18/ton	42.34%
Switzerland (2009)	Cabbage fresh or chilled	MNF duties (Applied)	\$26.19/ton	4.62%
Mauritius (2009)	Cabbage fresh or chilled	MNF duties (Applied)	0.00%	0.00%
Canada (2008)	Cabbage fresh or chilled	MFN duties (Applied)	\$18.10 or 6.00%	6.00%
Russian Federation (2009)	Cabbage fresh or chilled	General tariff	0.00%	0.00%



Hong Kong (2009)	Cabbage fresh or chilled	MFN duties (Applied)	0.00%	0.00%
Japan (2008)	Cabbage fresh or chilled	MNF duties (Applied)	3.00%	3.00%
DRC (2009)	Cabbage fresh or chilled	MNF duties (Applied)	10.00%	10.00%
Belgium (2009)	White or red cabbage fresh or chilled	Preferential tariff for South Africa	1.20%	1.20%
Congo (2007)	Cabbage fresh or chilled	MNF duties (Applied)	30.00%	30.00%

*Source: Market Access Map*

The lucrative exports markets for cabbage from South Africa exist in Singapore, Mauritius, Russian Federation, Malaysia and Hong Kong since these countries apply zero tariffs to cabbage exports originating from South Africa. In European markets (France, United Kingdom, Germany, Netherlands and Sweden) preferential tariff of 1.20% is applied to cabbage exports originating from South Africa due to EU-SA Free Trade Agreement (FTA). African markets in Angola, Congo and Mozambique are protected by 15%, 30% and 20% tariffs respectively in spite of the existence of the SADC-FTA

### **3.2 Non tariff barriers**

#### **3.2.1 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.

#### **3.2.2 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.

### **3.2.3 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.

### **3.2.4 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.

### **3.2.5 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 successful. 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

### **3.2.6 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).

### **3.3 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.

### **3.4 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).

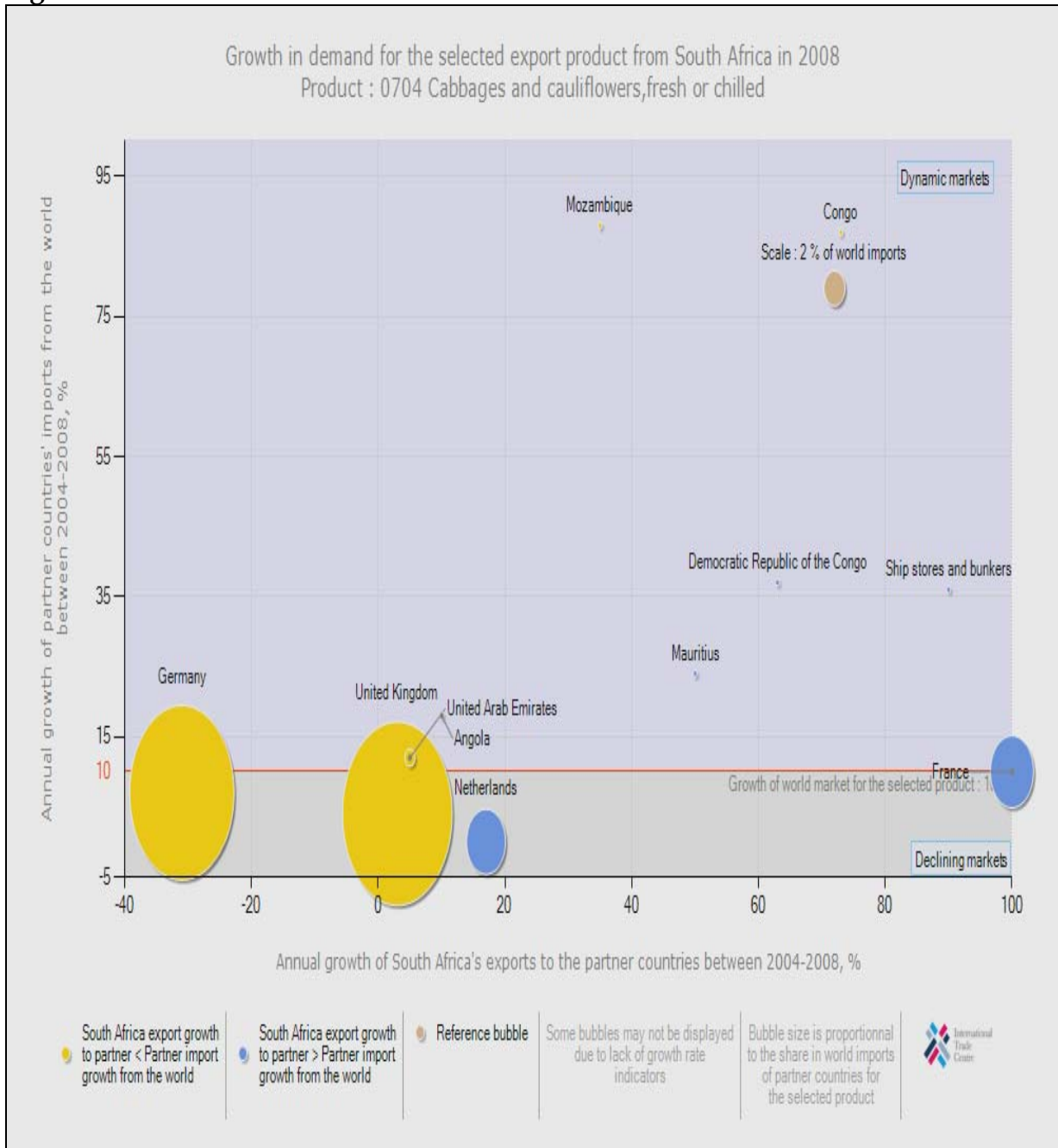
**5.2 Cold chain management** is crucial when handling perishable products, from the initial packing houses to the refrigerated container trucks that transport the produce to the shipping terminals, through to the storage facilities at these terminals (and their pre-cooling capability), onto the actual 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 African cabbage exports

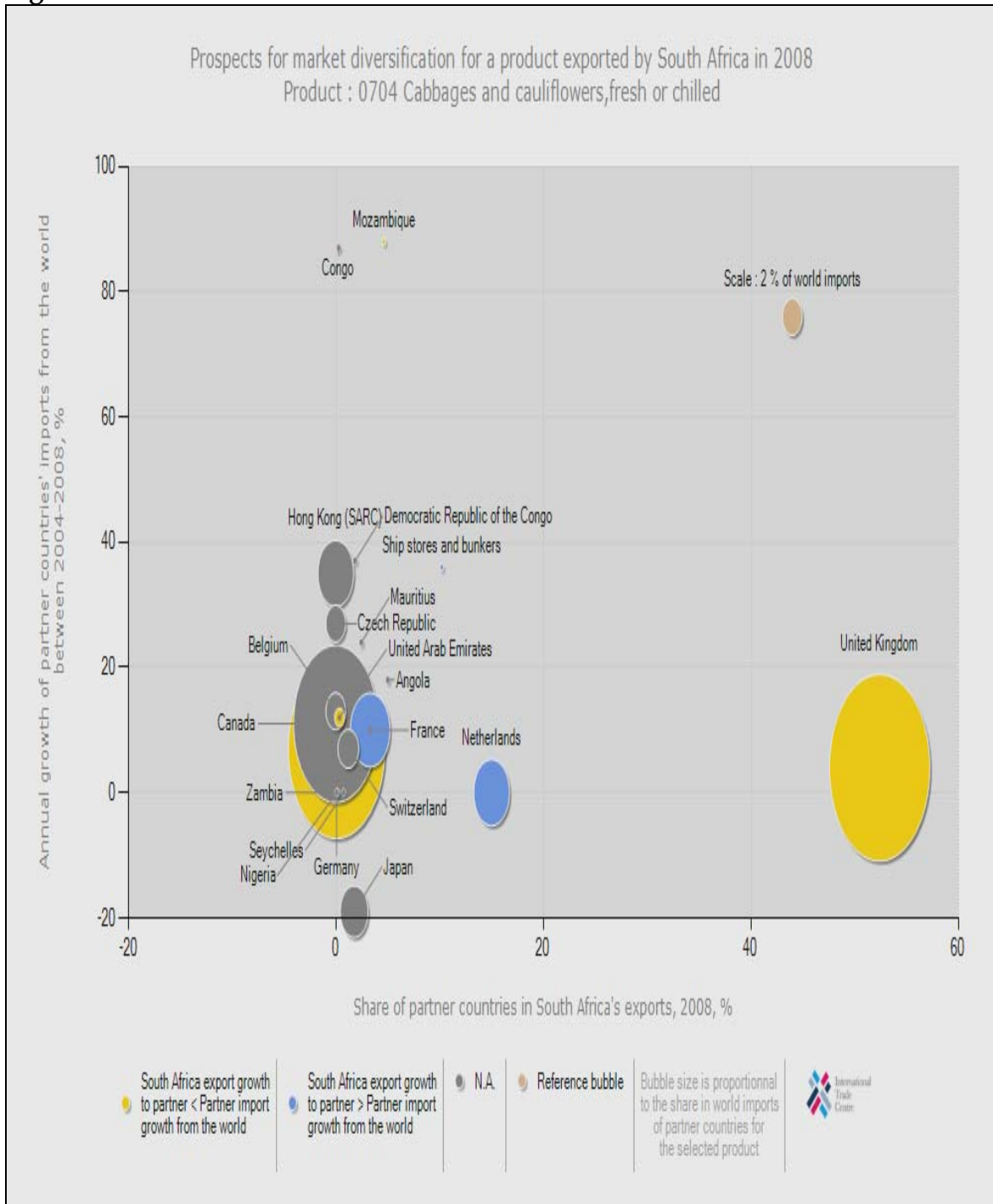
**Figure 17** below, shows that South Africa cabbage exports are growing faster than the world imports into Mauritius, Democratic Republic of Congo and France. South Africa's performance in these countries is regarded as gains in the dynamic market. South Africa cabbage exports to United Kingdom, United Arab Emirates, and Angola are growing slower than the world imports to these countries. South Africa performance in these countries is regarded as loss in the dynamic markets. . South Africa's cabbage exports are declining faster than the world imports into Netherlands. South Africa cabbage exports to Germany are declining while the world imports are growing.

**Figure 17**



Source: ITC Trade Map

**Figure 18**



Source: ITC Trade Map



**Figure 18** above shows prospective exports markets for cabbage from South Africa are mainly in United Kingdom, Hong Kong, Democratic Republic of Congo, Belgium, Netherlands and Czech Republic. Other markets exist in Switzerland, France, Angola and United Arab Emirates. However if South Africa is to diversify its cabbage exports, the most lucrative markets exist in Congo and Mozambique as they have increased their cabbage imports from the world between 2004 and 2008 period. Cabbage imports from the world to Japan have declined from 2004– 2008 and as a result those country has recorded a negative growth rate.

## **7. CHALLENGES**

Cabbage is a difficult crop to grow because it is susceptible to many insects, diseases and pest. Ensuring a quality pack can be a problem for hand harvesters. Cabbage has to be harvested only at optimum maturity to meet potential buyer's quality standards. The amount of profit made from cabbage crop depends on how well it meets market specifications. Cabbage crop quality is frequently measured using physical and sensory criteria. Rising consumer concerns about food safety have come to impact the assessment of cabbage crop quality.

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### **Market Access Map**

[www.macmap.org](http://www.macmap.org)

[www.trademap.org](http://www.trademap.org)

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