A PROFILE OF THE SOUTH AFRICAN APPLE MARKET VALUE CHAIN

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1. DESCRIPTION OF THE APPLE INDUSTRY

Apples are one of the most important deciduous fruits grown in South Africa, taking into consideration their foreign exchange earnings, employment creation and linkages with support institutions. During the 2009/10 season, apples contributed approximately 34% (R2.9 billion) of the total gross value for deciduous fruits (R8.8 billion) in South Africa. Per capita consumption of deciduous and subtropical fruit in South Africa during 2010 was 23.38 kilograms per year. This represented a 6.6% decline from the 2009 figure of 25.03 kilograms per year.

The South African apple industry is export oriented with approximately half of the apples produced being absorbed by the export market. Majority of South African apples are available in many northern hemisphere countries during their winter and spring seasons. The bulk of these sales to the consumer are by means of contractual agreements via preferred category suppliers to the large supermarket chains. Furthermore, various export companies or agents conduct this business on the basis of consignment sales on behalf of the growers or packers. The industry operates in a deregulated environment where prices are determined by the market forces of demand and supply. Total value of production of apples for the period 2000/01 to 2009/10 is shown in Figure 1.

![Figure 1: Total value of production for apples, 2000/01 – 2009/10](image)

Source: Statistics and Economic Analysis, DAFF

Figure 1 shows that there has been a general increase in the gross value of apples during the last ten years. The only declines during the period under review were recorded during the 2004/05 (14%) and 2005/06 (0.5%) production seasons. This was mainly the result of unfavourable weather conditions and drought in certain parts of the apple producing areas, especially the Western Cape. The gross value picked up again during the 2006/07 production season and has been on the rise since then. This may have been
due to amongst others, increased demand in the export markets as well as the improvement in apple size and quality of the fruit. The 2009/10 season recorded a slight increase (0.1%) in gross value compared to the previous production season (2008/09).

### 1.1 Apple production areas

South Africa's main apple producing areas are Groenland, Ceres, Villiersdorp (all in the Western Cape) and Langkloof East in the Eastern Cape. The Western Cape province account for more than half of all the apples produced in South Africa. Apple production areas in 2010 are shown in Figure 2.

![Apple production areas in hectares, 2010](image)

**Figure 2: Apple production areas in hectares, 2010**

Source: Hortgro Tree Census, 2010

Total production area for apples in 2010 was 21 553 hectares. This represents a 2.14% increase from the 2009 production year. Figure 2 above shows that in terms of the area planted to apples in hectares, Groenland accounted for 29% with 6 000 ha, Ceres accounted for 26% with 5 623 ha, Langkloof East accounted for 19% with 4 006 ha and Villiersdorp accounted for 17% with 3 721 ha. Overall, between 2010 and 2009, the smaller production areas increased their hectares while the larger ones reduced theirs.
1.2 Apple production

In 2010 the apple orchard age distribution was as follows:

- 2 126 ha (10%) was in the category of 0 – 3 years;
- 3 007 ha (14%) was in the 4 – 10 years category;
- 3 125 ha (15%) was in the 11 – 15 years category;
- 6 275 ha (29%) was in the 16 – 25 years category; and
- 7 019 (33%) were older than 25 years.

For sustainable and consistent supply the replacement stock (0 – 3 years) must be kept at 10% or higher. Production units in most of the apple growing areas are over 30 ha. A number of apple growers (units larger than 60 ha) operate their own packing and cold storage operations. Economies of scale, consistency in yield and quality are the key characteristics of these operations. Total production of apples for the period 2000/01 to 2009/10 is shown in Figure 3.

![Figure 3: Total production of apples, 2000/01 – 2009/10](image)

Source: Statistics and Economic Analysis, DAFF

Production for the apple industry was on the decline between 2003/04 and 2005/06. That may have been due to unfavourable weather conditions and drought in certain parts of the apple producing areas, especially the Western Cape and the difficult marketing environment that was experienced in the past few years. However, the 2006/07 production season seems to have been a season in which a recovery in
production started and production has been increasing since then. The 6.58% increase in production of apples experienced in 2008/09 was followed by a 2.51% decline in 2009/10.

1.3 Apple cultivars

South Africa’s main apple cultivars are Granny Smith, Golden Delicious, Royal Gala, Pink Lady, Fuji and Topred. Figure 4 shows that in 2010, Granny Smith accounted for 23% (4 782 ha) of the total area planted, followed by Golden Delicious at 21% (4 737 ha) and Royal Gala at 11% (2 720 ha). Pink Lady and Fuji follow with 9% (1 925 ha) and 5% (1 363 ha), respectively.

![Figure 4: Apple cultivars planted in hectares, 2010](image)

Source: Hortgro Tree Census 2010

1.4 Employment

Full-time labourers employed on apple farms are primarily employed for a number of specialist tasks such as pruning of trees. Labour is also required to carry out thinning practices during blooming or during the first four weeks of fruit growth. Other tasks include harvesting, supervision, operational duties in the pack
Seasonal labour is employed on a contractual basis for a fixed period of time with the main purpose of harvesting or fruit packing. The prescribed minimum wage is used as a baseline for determining basic wages in accordance with the legislation governing conditions of service. Minimum wages for farm workers for the period 1 March 2009 to 1 March 2011 are presented in Table 1. The consumer price index (CPI) is used in the calculation of annual wage adjustments. The sectoral determination stipulates that the wage increase will be determined by utilizing the CPI + 1%. In terms of percentage increase, the 2011 minimum wage is 4.5% higher than the 2010 minimum wage (CPI on 19 January 2011 was 3.5%).

<table>
<thead>
<tr>
<th>Year Frequency</th>
<th>1/03/2009</th>
<th>1/03/2010</th>
<th>1/03/2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly</td>
<td>R6.31</td>
<td>R6.74</td>
<td>R7.04</td>
</tr>
<tr>
<td>Weekly</td>
<td>R284.23</td>
<td>R303.84</td>
<td>R317.51</td>
</tr>
<tr>
<td>Monthly</td>
<td>R1231.70</td>
<td>R1316.69</td>
<td>R1375.94</td>
</tr>
</tbody>
</table>

The industry makes an important contribution to direct employment in the apple production and processing. It provides indirect employment for numerous support industries in the areas where apples are grown. In 2010, direct employment within the industry was estimated at 27 033 people with 108 131 dependents. This represents a 4.5 percent increase in the number of people employed in the apple industry between 2009 and 2010.

2. MARKET STRUCTURE

The distribution of apples across the various markets for the period 2000/01 to 2009/10 is shown in Figure 5. As illustrated in the figure, apple production in South Africa is primarily aimed at both the export and local markets as well as processing. Dried fruit production is relatively insignificant. During the 2009/10 marketing season approximately 38 percent (298 559 tons) of the crop was exported, 29 percent (232 245 tons) was processed, 32 percent (248 893 tons) was sent to the local markets, and the remaining 0.13 percent (990 tons) was dried. The export and processing markets have been increasing since 2004/05 and 2005/06 marketing seasons, respectively while volumes sold in the local markets have been declining since 2004/05. Between 2008/09 and 2009/10 the quantity of apples sold in the local markets increased by 21% while the quantities exported and processed declined by 10% and 11% respectively.
2.1 Domestic markets and prices for apples

Local apple market volumes and general price trends from 2000/01 to 2009/10 are presented in Figure 6 and Table 1 below. As illustrated in Figure 6, volumes of apples sold at local markets have been rising since the 2008/09 marketing season. This followed a sharp decline (19%) in 2007/08. The decline was mainly due to an increase in exports during 2007/08. At the same time prices realised at the local markets have been increasing throughout the past decade, and only stabilised during the last three marketing seasons. Between 2008/09 and 2009/10 volumes of apples sold on the local markets went up by 4%.
Apple price trends for the period 1998/99 to 2009/10 are presented in Table 2.

Table 2: Apple price trends, 1998/99 – 2009/10

<table>
<thead>
<tr>
<th>Years</th>
<th>Average price on national markets in Rand/Ton</th>
<th>Export net realization in Rand/Ton</th>
<th>Processed average price in Rand/Ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998/99</td>
<td>R1 772.00</td>
<td>R1 468.00</td>
<td>R272.00</td>
</tr>
<tr>
<td>1999/00</td>
<td>R1 800.00</td>
<td>R2 191.00</td>
<td>R398.00</td>
</tr>
<tr>
<td>2000/01</td>
<td>R1 903.00</td>
<td>R2 159.00</td>
<td>R388.00</td>
</tr>
<tr>
<td>2001/02</td>
<td>R2 282.00</td>
<td>R3 441.00</td>
<td>R522.00</td>
</tr>
<tr>
<td>2002/03</td>
<td>R2 409.00</td>
<td>R3 161.00</td>
<td>R420.00</td>
</tr>
<tr>
<td>2003/04</td>
<td>R2 481.00</td>
<td>R3 793.00</td>
<td>R337.00</td>
</tr>
<tr>
<td>2004/05</td>
<td>R2 721.00</td>
<td>R3 638.00</td>
<td>R341.00</td>
</tr>
<tr>
<td>2005/06</td>
<td>R3 035.00</td>
<td>R3 785.00</td>
<td>R373.00</td>
</tr>
<tr>
<td>2006/07</td>
<td>R3 293.00</td>
<td>R4 363.00</td>
<td>R447.00</td>
</tr>
<tr>
<td>2007/08</td>
<td>R4 243.00</td>
<td>R5 167.00</td>
<td>R1 056.00</td>
</tr>
<tr>
<td>2008/09</td>
<td>R4 197.00</td>
<td>R5 833.00</td>
<td>R786.00</td>
</tr>
<tr>
<td>2009/10</td>
<td>R4 301.00</td>
<td>R5 880.70</td>
<td>R534.03</td>
</tr>
</tbody>
</table>

Source: Statistics and Economic Analysis, DAFF

Apples generally fetch higher prices in export markets. Price fluctuations in the past decade can be attributed to fluctuations in production volumes which occurred mainly as a result of inconsistent weather conditions. Average prices on the national markets experienced a 2 percent increase between 2008/09 and
2009/10 while export prices went up by 1 percent during the same period. The average prices of processed apples however dropped by 32 percent.

Prices on the local markets are largely influenced by seasonality in production, perishability of produce and the amount of apples exported (availability of apples on the local market). The impact of seasonality is to some extent cushioned by cold storage facilities that ensure regular apple supplies in the local markets. Demand factors such as consumer habits, substitution between products and per capita income also influence prices.

The variability in prices in different markets increases as the distance from the surplus apple producing regions increases. For example, the Cape Town Fresh Produce Market (FPM) which is located in a surplus apple producing region has the lowest price movements, whereas, Johannesburg, Tshwane and Durban FPMs, which are all in deficit apple production regions and distant from the Western Cape, experience more price variability. Price spread amongst the markets also increases as the distance from the surplus region increases.

2.2 Apple exports and imports

2.2.1 Exports

South Africa is a relatively small apple grower in terms of global hectares. However, the country is a major volume exporter in global terms. Apples sold in the export markets generate a greater unit price than that achieved on the local market. South African exports of apples are illustrated in Figure 7.

There has been a general increase in the volumes of apples exported by South Africa over the last decade. The quantities exported increased from 244 819 tons in 2001 to 306 324 tons in 2010, an increase of 25%. The export net realisation (price) also increased from R2 464.00 per in 2001 to R5 946.00 per ton in 2010, an increase of 141%. Between 2009 and 2010 the quantities exported declined by 10% while the price increased by 3%. The decline in quantities exported during 2010 follows declines in quantities produced during the same year.
Exports of South African apples to the various regions of the world over the past decade are presented in Figure 8 below.

Figure 8 shows that total South African exports of apples increased from 244 819 tons in 2001 to 306 324 tons in 2010. This represents an increase of 25% during the past decade. It is also evident from Figure 8 that during the past decade most of South Africa’s exports of apples were destined for the European, African and Asian markets. In 2010 exports to Europe accounted for 42% (128 000 tons) of total South African apple exports. Europe was followed by Africa and Asia at 29% (88 123 tons) and 28% (87 399 tons) respectively.

It is important to note that exports to South Africa’s traditional market (Europe) have been declining during the past four years. It is however interesting to also note that the losses in the traditional market were offset by gains in the Asian and African markets. Exports into the Asian and African markets have been increasing during the past five years. Given their ever increasing population sizes and per capita incomes, the two continents present enormous opportunities for South African apple exports.

During the period under review exports to Europe peaked at 214 363 tons in 2003 while those to Asia peaked at 97 008 tons in 2009. Exports of apples to Africa peaked at 88 123 tons in 2010 and have been increasing over the past decade, moving from 36 887 tons in 2001 to 88 123 tons in 2010, an increase of 139%. Apple exports to the Americas have been declining during the period under review, moving from 15 973 tons in 2001 to 2 646 tons in 2010, a decrease of 83%.
As already highlighted, Europe is a major destination for South African exports of apples. Volumes of South African apple exports to the different regions of Europe are presented in Figure 9. Within Europe, exports of South African apples are normally distributed between the European Union, Eastern Europe, Northern Europe and Western Europe to a lesser extent. The European Union consists of 25 member states. Eastern Europe comprises Bulgaria, Belarus, Maldova, Romania, Russia and Ukraine while Northern Europe consists of Faeroe Islands, Iceland, and Norway.

Annually (see Figure 9), over 90% of all South African apple exports that goes into Europe go to the European Union member states while the remaining 10% or less goes to the other European regions. This clearly indicates the importance of the European Union as a major market for South African apples. A total of 121 793 tons of apples were exported by South Africa to the European Union in 2010. Volumes of apple exports to the European Union and other European regions have been declining over the past four years. Between 2009 and 2010 South African apple export volumes to the European Union declined by 21% while those to Eastern Europe decreased by 53% during the same period.
Given the relative importance of the European Union to South African apple exports, volumes of South African apple exports to the different European Union member states during the last decade are depicted in Figure 10. It is important to note that only those countries whose apple imports from South Africa were at least 1 000 tons in at least one year during the period under review are shown in Figure 10.

As can be seen in Figure 10 the major importers of South African apples in the European Union include the United Kingdom, Netherlands, Belgium, and France (during the last three years). In 2010 the United Kingdom accounted for 72% (88 253 tons) of all South African exports of apples to the European Union. There was however a 21% decline in exports to the United Kingdom between 2009 and 2010. Exports to the UK peaked at 138 297 tons in 2007 while those to the Netherlands peaked in 2001 at 39 210 tons. South African exports of apples to the Netherlands also declined by 17% between 2009 and 2010.
Other important markets for South African apples are found in the Asian continent. Volumes of South African exports of apples to the different regions in Asia are presented in Figure 11. South African exports of apples into Asia have been increasing during the last decade and only declined significantly in 2010. In 2010, 87 399 tons of apples were exported to Asia. As can be seen in Figure 11 exports to Asia increased from 38 347 tons in 2001 to 97 008 tons in 2009. This represents an increase of 153% over ten years. There was however a 10% decline in exports to Asia between 2009 and 2010. Within Asia, the majority of South African apple exports go to South-eastern Asia (56% in 2010). Exports to South East Asia also recorded a 6% decline between 2009 and 2010. Western and South-central Asia represented 28% (24 275 tons) and 10%, respectively of all South African apple exports to Asia in 2010.
South African exports of apples to Africa also recorded significant increases during the last decade. Export volumes to Africa increased from 36,887 tons in 2001 to 88,123 tons in 2010, increase of 139%. Within the continent the major exports destinations for South African apples are West Africa and the Southern African Development Community (SADC). During 2010 West Africa accounted 41% (36,068 tons) of all South African apple exports to Africa while the SADC region accounted for 40% (35,846 tons). South African apple exports to East Africa, Middle Africa and Northern Africa have been relatively stable over the past decade, remaining below 10,000 tons in each region between 2001 and 2010.

<table>
<thead>
<tr>
<th>Years</th>
<th>Volume in Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>38,347</td>
</tr>
<tr>
<td>2002</td>
<td>49,084</td>
</tr>
<tr>
<td>2003</td>
<td>48,761</td>
</tr>
<tr>
<td>2004</td>
<td>54,764</td>
</tr>
<tr>
<td>2005</td>
<td>47,769</td>
</tr>
<tr>
<td>2006</td>
<td>58,931</td>
</tr>
<tr>
<td>2007</td>
<td>65,260</td>
</tr>
<tr>
<td>2008</td>
<td>81,571</td>
</tr>
<tr>
<td>2009</td>
<td>97,008</td>
</tr>
<tr>
<td>2010</td>
<td>87,399</td>
</tr>
</tbody>
</table>

Source: Quantec
2.2.2 Imports

Volumes of apples imported by South Africa from different regions of the world during the last decade are presented in Figure 13. It is evident from Figure 13 that South Africa imports less apples than it exports, resulting in trade surpluses in favour of South Africa. It is important to note however that although insignificant, imports of apples by South Africa have increased during the last five years. Imports increased from 49 tons in 2006 to 374 tons in 2010, an increase of 663%. All apple imports recorded in South Africa in 2010 were from the Americas (specifically from the USA).
2.3 Provincial and district export values of South African apples

Figure 14 depicts the value of apple exports from each province of the Republic of South Africa during the period 2001 to 2010.
Highlights of the apple exports in Figure 14 were that the provinces of the Western Cape and Gauteng were consistently the top apple exporting provinces of South Africa over the last decade. In 2010, the Western Cape accounted for about 90 percent of total South African apple exports while Gauteng accounted for about 7 percent. The remaining 3 percent was shared among the remaining provinces, with the exception of North West. Apple exports from the Western Cape declined by 7% between 2009 and 2010 while those from Gauteng went up by 25% during the same period. The following Figures (Figures 15 – 23) show the value of apple exports from the various districts in the nine provinces of South Africa. Figure 15 illustrates values of apple exports by the Western Cape Province.
It is clear from Figure 15 that exports of apples from the Western Cape Province are mainly from the City of Cape Town, Cape Winelands, Overberg and West Coast municipalities. High export values for the leading municipalities were recorded in 2008 (for the City of Cape Town and West Coast) and 2009 (for Cape Winelands). Between 2009 and 2010 apple exports by the City of Cape Town and Cape Winelands district declined by 6% and 11% respectively. The use of the Cape Town harbour as an exit point may have played a major role in the City of Cape Town being a leader in the export of apples from the Western Cape Province. Generally there have been substantial increases in the value of apple exports from the City of Cape Town and Cape Winelands since 2006. Values have however started to decline during the past two years. Values of apple exports from the Gauteng province are shown in Figure 16.
In Gauteng Province, there have been fluctuations on the apple export values for the past ten years (see Figure 16). The leading role players are City of Johannesburg, West Rand and Ekurhuleni Metropolitan Municipalities. High export values of the leading municipalities were recorded in 2008 (for the City of Johannesburg), 2010 for both the West Rand and Ekurhuleni. The value of apple exports has been on a steady decline for the Ekurhuleni Metropolitan Municipality since 2007 before picking up again in 2010. At the same time, the value of apple exports has been on a steady increase for the City of Johannesburg until 2008 before dropping again in 2009 and 2010. Apple export values from the West Rand increased by over 14 thousand percent between 2006 and 2010. Values of apple exports from the Kwazulu Natal province are presented in Figure 17.

Source: Quantec
It is clear from Figure 17 that apple exports from Kwa-Zulu Natal Province are mainly from the Ethekwini Metropolitan Municipality. High export values for the leading municipality were recorded in 2009. The value of exports from the Ethekwini has been on the rise since 2005. The municipality however recorded a decline of 22% in 2010. Another significant player in the exports of apples from Kwa-Zulu Natal in 2010 was the Ugu district, which recorded apple exports to the value of R2.3 million. The use of the Durban harbour as an exit point may have played a major role in Ethekwini being a leader in the export of apples from the Kwa-Zulu Natal Province. Values of apple exports from the Eastern Cape Province are shown in Figure 18.
It can be observed in Figure 18 that apple exports from the Eastern Cape Province are mainly from Nelson Mandela and Cacadu to a lesser extent. High export values for the leading municipalities were recorded in 2008 (for Nelson Mandela) and 2004 (for Cacadu). Apple exports from the Nelson Mandela municipality declined by 13% between 2009 and 2010 while those from Cacadu declined by 46% during the same period. The value of apple exports from the Cacadu district have been declining since 2004, remaining below R5 000 000.00 annually. The use of the Port Elizabeth harbour as an exit point may have played a major role in Nelson Mandela Metropolitan Municipality being the leader in apple exports from the Eastern Cape Province. Values of apple exports by the Free State province are depicted in Figure 19.
Exports of apples in the Free State Province are mainly from Thabo Mofutsanyane District Municipality (see Figure 19). The value of apple exports from the district increased by 2 084% between 2009 and 2010. Values of apple exports from the Northern Cape Province are presented in Figure 20.
Figure 20: Value of apple exports by Northern Cape Province, 2001 – 2010

<table>
<thead>
<tr>
<th>Years</th>
<th>Northern Cape</th>
<th>Pixley ka Seme</th>
<th>Siyanda</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2002</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2003</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2004</td>
<td>49</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2005</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2006</td>
<td>98</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2008</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2009</td>
<td>122</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>5541</td>
<td>361</td>
<td>5180</td>
</tr>
</tbody>
</table>

Source: Quantec
Figure 20 shows that apple exports from the Northern Cape Province are mainly from the Siyanda District Municipality. The Pixley ka Seme district Municipality also recorded apple exports to the value of R360 874.00 in 2009. Between 2009 and 2010, apple exports by Siyanda district declined by 86%. Values of apple exports from the Limpopo province are shown in Figure 21.

Exports of apples from the Limpopo Province are mainly from Mopani District Municipality (see Figure 21). Apple exports from the Mopani District are emerging from two years in which no exports were reported and the district recorded a 1258% increase in apple exports between 2009 and 2010. Values of exports from the North West province are shown in Figure 22.
According to Figure 22, no apple exports were recorded from the North West Province since 2003. Values of apple exports from Mpumalanga province are depicted in Figure 23.

Source: Quantec

According to Figure 22, no apple exports were recorded from the North West Province since 2003. Values of apple exports from Mpumalanga province are depicted in Figure 23.

Source: Quantec
It is clear from Figure 23 that in 2010 apple exports from Mpumalanga Province were only from the Ehlanzeni district municipality. High export value for the leading district municipality was recorded in 2004. Generally the province registers minimal trade in apple exports. As can be seen from Figure 23 no apple exports were recorded in Mpumalanga between 2005 and 2008.

2.4 Share Analysis

Table 3 is an illustration of provincial shares towards national apple exports. It shows that Western Cape and Gauteng to a lesser extend have commanded the greatest share of apple exports for the past ten years. In 2010 the Western Cape accounted for 90% of all South African exports of apples while Gauteng contributed 7%. This is in spite of the fact that Western Cape and the Eastern Cape Province are the leading producers of apples. As explained earlier, this means that the leading export province like Western Cape derive the advantage from its huge production base and from the fact that the registered exporters are based in the Western Cape and that the province has exit points for apple exports.

Table 3: Share of provincial apple exports to the total RSA apple exports (%), 2001 - 2010

<table>
<thead>
<tr>
<th>Years</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSA</td>
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<td>100.0</td>
<td>100.0</td>
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<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Western Cape</td>
<td>88.3</td>
<td>85.0</td>
<td>88.4</td>
<td>89.5</td>
<td>90.3</td>
<td>89.1</td>
<td>91.5</td>
<td>91.7</td>
<td>90.9</td>
<td>89.9</td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>1.4</td>
<td>1.6</td>
<td>2.9</td>
<td>2.5</td>
<td>2.9</td>
<td>3.0</td>
<td>1.9</td>
<td>1.6</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Free State</td>
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<td>0.1</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
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<td>0.9</td>
<td>0.9</td>
<td>0.8</td>
<td>0.9</td>
<td>1.1</td>
<td>1.2</td>
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</tr>
<tr>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Gauteng</td>
<td>9.1</td>
<td>11.5</td>
<td>7.6</td>
<td>6.7</td>
<td>6.0</td>
<td>6.9</td>
<td>5.4</td>
<td>5.5</td>
<td>5.2</td>
<td>6.9</td>
</tr>
<tr>
<td>Mpumalanga</td>
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<td>0.0</td>
<td>0.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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</tr>
<tr>
<td>Limpopo</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Source: Calculated from Quantec

The accompanying tables (Tables 4 to 12) show shares of the various districts’ apple exports to the various provincial apple exports.

Table 4: Share of district apple exports to the total Western Cape provincial apple exports (%), 2001 – 2010

<table>
<thead>
<tr>
<th>Years District</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Cape</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>City of Cape Town</td>
<td>74.5</td>
<td>62.4</td>
<td>58.1</td>
<td>61.0</td>
<td>60.6</td>
<td>64.4</td>
<td>65.0</td>
<td>61.6</td>
<td>62.4</td>
<td>64.0</td>
</tr>
<tr>
<td>West Coast</td>
<td>7.9</td>
<td>7.3</td>
<td>11.3</td>
<td>9.9</td>
<td>9.8</td>
<td>7.6</td>
<td>10.2</td>
<td>9.6</td>
<td>7.2</td>
<td>9.1</td>
</tr>
<tr>
<td>Cape Winelands</td>
<td>8.0</td>
<td>13.6</td>
<td>8.3</td>
<td>8.2</td>
<td>9.1</td>
<td>6.8</td>
<td>8.1</td>
<td>18.4</td>
<td>19.2</td>
<td>18.7</td>
</tr>
<tr>
<td>Overberg</td>
<td>8.9</td>
<td>16.0</td>
<td>19.9</td>
<td>19.2</td>
<td>19.7</td>
<td>20.5</td>
<td>16.3</td>
<td>9.9</td>
<td>10.9</td>
<td>7.8</td>
</tr>
<tr>
<td>Eden</td>
<td>0.7</td>
<td>0.7</td>
<td>2.4</td>
<td>1.8</td>
<td>0.8</td>
<td>0.6</td>
<td>0.4</td>
<td>0.5</td>
<td>0.2</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Source: Calculated from Quantec
Table 4 presents the shares of district apple exports to the total Western Cape provincial apple exports for the years 2001 to 2010. The leading apple export districts in the Western Cape in 2010 are the City of Cape Town (64%) and the Cape Winelands (19%). Together, the two districts accounted for over 83% to the total Western Cape provincial apple exports in 2010.

Table 5: Share of district apple exports to the total Eastern Cape provincial apple exports (%), 2001 – 2010

<table>
<thead>
<tr>
<th>Years</th>
<th>District</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eastern Cape</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Cacadu</td>
<td>40.7</td>
<td>48.3</td>
<td>20.3</td>
<td>38.2</td>
<td>13.9</td>
<td>7.0</td>
<td>12.8</td>
<td>5.4</td>
<td>9.3</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>Amatole</td>
<td>0.0</td>
<td>0.5</td>
<td>6.8</td>
<td>0.8</td>
<td>0.6</td>
<td>2.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>O.R.Tambo</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>4.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>Nelson Mandela</td>
<td>59.3</td>
<td>51.2</td>
<td>72.9</td>
<td>60.9</td>
<td>85.6</td>
<td>91.0</td>
<td>87.2</td>
<td>94.6</td>
<td>86.3</td>
<td>93.7</td>
</tr>
</tbody>
</table>

Source: Calculated from Quantec

The shares of district apple exports to the total Eastern Cape provincial apple exports are presented in Table 5. The Nelson Mandela district is the leading municipality in terms of apple exports for the Eastern Cape, accounting for 97.3 percent of total apple exports from the Eastern Cape in 2010. The remaining 6.3 percent came from the Cacadu district.

Table 6: Share of district apple exports to the total Mpumalanga provincial apple exports (%), 2001 – 2010

<table>
<thead>
<tr>
<th>Years</th>
<th>District</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mpumalanga</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Gert Sibande</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>Nkangala</td>
<td>0.0</td>
<td>97.4</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>Ehlanzeni</td>
<td>100.0</td>
<td>2.6</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Calculated from Quantec

In 2010 all recorded exports of apples in Mpumalanga province were from the Ehlanzeni District Municipality (see Table 6).

Table 7: Share of district apple exports to the total Free State provincial apple exports (%), 2001 – 2010

<table>
<thead>
<tr>
<th>Years</th>
<th>District</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Free State</td>
<td>100.0</td>
<td>0.0</td>
<td>100.0</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Thabo Mofutsanyane</td>
<td>100.0</td>
<td>0.0</td>
<td>100.0</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Calculated from Quantec

In 2010 all recorded exports of apples in the Free State province were from the Thabo Mofutsanyane District Municipality (see Table 7).

Table 8: Share of district apple exports to the total Gauteng provincial apple exports (%), 2001 - 2010

<table>
<thead>
<tr>
<th>Years</th>
<th>District</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
</table>

In 2010 all recorded exports of apples in the Gauteng province were from the Thabo Mofutsanyane District Municipality (see Table 8).
The shares of district apple exports to the total Gauteng provincial apple exports are presented in Table 8. In 2010, the City of Johannesburg contributed almost two-thirds (65.5%) to total Gauteng provincial apple exports. The City of Johannesburg was followed by the West Rand district at 15.5% and Ekurhuleni at 14.6%, with the remaining 4.4% coming from the City of Tshwane.

Table 9: Share of district apple exports to the total North West provincial apple exports (%), 2009 – 2010

<table>
<thead>
<tr>
<th>Years</th>
<th>District</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>North West</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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<td>Bojanala</td>
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<td>0.0</td>
<td>7.0</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>Southern</td>
<td>0.0</td>
<td>0.0</td>
<td>93.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

The North West province never reported any exports of apples since 2004 (see Table 9).

The shares of district apple exports to the total Limpopo provincial apple exports are presented in Table 10. In 2010, the Mopani district contributed over four-fifth (89.5%) to total Limpopo provincial apple exports. The Mopani district was followed by the Capricorn district at 5.7% and Vhembe at 4%.

Table 10: Share of district apple exports to the total Limpopo provincial apple exports (%), 2001 – 2010

<table>
<thead>
<tr>
<th>Years</th>
<th>District</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limpopo</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Mopani</td>
<td>0.0</td>
<td>6.9</td>
<td>0.0</td>
<td>98.2</td>
<td>96.3</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>89.5</td>
</tr>
<tr>
<td>Vhembe</td>
<td>0.0</td>
<td>93.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Capricorn</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.8</td>
<td>3.7</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>5.7</td>
</tr>
<tr>
<td>Waterberg</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.8</td>
</tr>
</tbody>
</table>

The shares of district apple exports to the total Northern Cape provincial apple exports are presented in Table 11. In 2010, the Mopani district contributed over four-fifth (89.5%) to total Limpopo provincial apple exports.
In 2010 all exports of apples recorded in the Northern Cape province were from the Siyanda district (see Table 11).

Table 12: Share of district apple exports to the total Kwa-Zulu Natal provincial apple exports (%), 2001 – 2010

<table>
<thead>
<tr>
<th>Years</th>
<th>District</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Northern Cape</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Pixley ka Seme</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>6.5</td>
<td>0.0</td>
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<tr>
<td></td>
<td>Siyanda</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>100.0</td>
<td>93.5</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Calculated from Quantec

Table 12 presents the shares of district apple exports to the total Kwa-Zulu Natal provincial apple exports for the years 2001 to 2010. The Ethekwini district is the leading municipality in terms of apple exports from Kwa-Zulu Natal, accounting for 89.3% of total provincial apple exports in 2010. It is followed by the Ugu district at 8.6 percent and Umgungundlovu at 2.1 percent.

2.5 Processing

The volumes of apples available for processing in South Africa fluctuate yearly, depending on the crop size and the percentages of exportable fruit. In 2009, the processing industries absorbed approximately 30% (232 245 tons) of all apple production (780 687 tons). That represents direct purchases from growers and quantities of apples purchased from the National Fresh Produce Markets. The volumes and average prices of apples purchased for processing are shown in Figure 24. Volumes purchased for processing has been increasing since 2006/07 before declining again in 2009/10. Prices paid for processing apples have been declining during the last two years following significant increases in quantities supplied for processing.
Virtually all processed apples are subject to post-harvest activities that change their chemical and physical characteristics. These include sorting, cleaning, dividing the commodity into its main component parts, heating, cooling, freezing, soaking, fermenting, compressing, and cutting, shredding, waxing, combing and polishing.

Apples can be canned, juiced and optionally fermented to produce apple juice, cider, vinegar and pectin. Distilled apple cider produces the spirits. Apple wine can also be made. They make a popular lunchbox as well. Apples are an important ingredient in many winter desserts, for example apple pie, apple crumble, apple crisp and apple cake. They are often eaten baked or stewed, and they can also be dried and eaten or re-constituted (soaked in water, alcohol or some other liquid) for later use. Pureed apples are generally known as apple sauce. Apples are also made into apple butter and apple jelly. They are also used cooked in meat dishes.

In the United Kingdom, a toffee apple is a traditional confection made by coating an apple in hot toffee and allowing it to cool. Similar treats in the USA are candy apples (coated in a hard shell of crystallized sugar syrup), and caramel apples, coated with cooled caramel. Apples are eaten with honey at the Jewish New Year of Rosh Hashanah to symbolize a sweet new year.

The hard wood is used for turnery, canes and pipes. Apples are a good detergent food for cleaning teeth. The oil from the seeds is used for cooking and illumination.

3. MARKET INTELLIGENCE
3.1 Competitiveness of South African apple exports

Competitiveness is described as an industry’s capacity to create superior value for its customers and improved profits for the stakeholders in the value chain. The driving force in sustaining a competitive position is productivity that is output efficiency in relation to specific inputs with regard to human, capital and natural resources. In 2010 South African apple exports represented 3.9% of world exports and its ranking in world apple exports was number 9.

As depicted in Figure 25 below, South African apple exports are growing faster than the world imports in Bangladesh, Cameroon, Kenya, Ghana, Chinese Taipei, Singapore, Senegal, and Angola markets. South Africa’s performance in these markets can be regarded as gains in dynamic markets.

South African apple exports are growing while the world imports are declining the Netherlands, United Kingdom, Saudi Arabia, and France markets. South Africa’s performance in those markets can be regarded as gains in declining markets and should be viewed as an achievement in adversity.

South African apple exports are declining while the world imports are growing in Zimbabwe, Benin, Malaysia, United Arab Emirates, Russia, Zambia and Ivory Coast markets. These markets are dynamic and South African performance should be regarded as an underachievement.
Figure 25: Growth in demand for the South African apples in 2010

Growth in demand for the selected export product from South Africa in 2010
Product: 080810 Apples, fresh

Source: TradeMap, ITC
Figure 26 below illustrates prospects for market diversification by South African apple exporters. UK and the rest of Europe hold a bigger market share of South African apple exports. Malaysia and Benin are also important export destinations for South African apples. 29% of South Africa’s total exports of apples were destined for the UK in 2010.

In terms of market size, the Russian Federation was the largest apple market in 2010 with just over $667 million (1 204 175 tons) worth of apple imports, or roughly 10.2% of the world apple market. Second was Germany with just over $547 million (621 501 tons) worth of apple imports, or roughly 8.4% market share followed by the UK with just over $507 million (457 425 tons) worth of apple imports, or roughly 7.8% market share and Iraq with just over $326 million (408 150 tons) worth of apple imports, or roughly 5.0% market share.

Whilst four countries dominate world apple imports, it is interesting to note that countries like Zimbabwe, together with Bangladesh and Zambia have experienced higher annual growth rate from 2006 – 2010 in value terms (see Figure 26). Zimbabwe experienced an annual growth rate of just under 79%. Second was Bangladesh with 44% annual growth rate. Bangladesh is followed by Zambia at around 30% annual growth rate. It is important to note that growth by all the mentioned countries has been from a low base. These countries represent possible lucrative markets for South African apple producers and exporters.

It is also important to note that imports of apples from the world to countries such as France, Saudi Arabia, United Kingdom, and Netherlands has declined from 2006 – 2010 and as a result those countries has recorded a negative growth rate.
Figure 26: South African apples' prospect for market diversification in 2010

Prospects for market diversification for a product exported by South Africa in 2010
Product: 080810 Apples, fresh

Source: TradeMap, ITC
3.2 South Africa vs. Southern hemisphere production

Figure 27 represents southern hemisphere production of apples. It is clear that South Africa was the fourth largest producer (16.3% in 2010) of apples in the southern hemisphere after Brazil, Chile and Argentina. Production in most of the southern hemisphere countries has been fairly stable over the past ten years. The total volume of production in Chile and Argentina declined significantly between 2009 and 2010 while that of Brazil increased.

Figure 27: Southern hemisphere production of apples, 2001 - 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>1429</td>
<td>1157</td>
<td>1307</td>
<td>1262</td>
<td>1206</td>
<td>1280</td>
<td>1280</td>
<td>1300</td>
<td>1300</td>
<td>851</td>
</tr>
<tr>
<td>Australia</td>
<td>325</td>
<td>321</td>
<td>328</td>
<td>355</td>
<td>327</td>
<td>276</td>
<td>276</td>
<td>270</td>
<td>295</td>
<td>264</td>
</tr>
<tr>
<td>Brazil</td>
<td>716</td>
<td>857</td>
<td>842</td>
<td>980</td>
<td>851</td>
<td>883</td>
<td>883</td>
<td>1121</td>
<td>1220</td>
<td>1276</td>
</tr>
<tr>
<td>Chile</td>
<td>1135</td>
<td>1150</td>
<td>1250</td>
<td>1300</td>
<td>1400</td>
<td>1370</td>
<td>1370</td>
<td>1370</td>
<td>1100</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>474</td>
<td>531</td>
<td>501</td>
<td>546</td>
<td>524</td>
<td>354</td>
<td>354</td>
<td>355</td>
<td>355</td>
<td>320</td>
</tr>
<tr>
<td>South Africa</td>
<td>563</td>
<td>591</td>
<td>702</td>
<td>765</td>
<td>680</td>
<td>640</td>
<td>640</td>
<td>681</td>
<td>702</td>
<td>740</td>
</tr>
</tbody>
</table>

Source: FAOSTAT

The majority of these countries are vying for the lucrative European market. Since supply and demand are the main price determining factors in a relatively free market environment it should be obvious that this has an impact on apple prices in this tightly fought market territory. This, combined with the strengthening of the Rand has the potential to threaten the profitability of local apple producers.

The fact that a country can produce a large output does not necessarily mean it will be a big net exporter as this depends on the size of the domestic market and whether excess produce is harvested. In the case of Brazil, the third largest producer of apples in the southern hemisphere, the domestic market is so large that the country exports relatively little. Brazil contributed 5.92% to the total southern hemisphere apple exports in 2009, as can been seen in Table 13 below.
3.3 South Africa vs. Southern hemisphere exports in 2010

It can be observed from Table 13 that Chile is the largest exporter (50.05%) of apples in the southern hemisphere followed by South Africa and New Zealand, contributing 18.16% and 15.42% respectively.

Table 13: Southern hemisphere exports of apples, 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>Export - Quantity in Metric Tons (MT)</th>
<th>Contribution to Southern Hemisphere Exports (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>World exports</td>
<td>8 394 755</td>
<td>100.00</td>
</tr>
<tr>
<td>Southern Hemisphere</td>
<td>1 683 526</td>
<td>100.00</td>
</tr>
<tr>
<td>Chile</td>
<td>842 668</td>
<td>50.05</td>
</tr>
<tr>
<td>Argentina</td>
<td>180 309</td>
<td>10.71</td>
</tr>
<tr>
<td>Brazil</td>
<td>90 839</td>
<td>5.39</td>
</tr>
<tr>
<td>South Africa</td>
<td>305 783</td>
<td>18.16</td>
</tr>
<tr>
<td>New Zealand</td>
<td>259 683</td>
<td>15.42</td>
</tr>
<tr>
<td>Australia</td>
<td>4 244</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Source: Trademap, ITC

South Africa’s main competitors from the southern hemisphere in the EU market for apple exports are Chile, New Zealand and Argentina. As indicated above, Chile is by far the largest apple exporter from the southern hemisphere. Historically, Chile has been exporting to the USA but recently, it has been increasing its share in the EU market.

Argentina exports primarily within the South American markets (particularly Brazil), EU countries (mainly Netherlands and Belgium) and the rest of European countries such as Russia. New Zealand exports apples primarily to the EU countries (mainly Netherlands and Germany), North America (particularly USA) and Far East (mainly Hong Kong and Taiwan). Brazil exports apples primarily to the EU countries (mainly Netherlands, UK, France, Spain and Portugal).

Australia produces primarily for local markets and exports very little (0.25% of total southern hemisphere exports in 2010). All these countries with the exception of Australia pose a serious threat for South Africa in all the leading import markets such as the EU.

4. MARKET ACCESS

Barriers to trade can be divided into tariff barriers (including quotas, ad valorem tariffs, specific tariffs and entry price systems) and non tariff barriers (sanitary and phytosanitary measures, labels, etc). The main markets for fruit (including apple) employ various measures, both tariff and non tariff to protect the domestic industries. Whilst many of the non tariff measures can be justified under the auspices of issues such as health and standards, the tariff measures are increasingly under the scrutiny of the World Trade Organization (WTO), and as such are gradually being phased out. Nevertheless, exporters need to be aware of all the barriers that they may encounter when trying to get their produce on foreign shelves.
4.1 Tariffs, quotas and the price entry system

Tariffs are either designed to earn government revenue from products being imported or to raise the price of imports so as to render local produce more competitive and protect domestic industries.

Quotas can be used to protect domestic industries from excessive imports originating from areas with some form of competitive advantage (which can therefore produce lower cost produce). Tariffs and quotas are often combined, allowing the imports to enter at a certain tariff rate up to a specified quantity. Thereafter, imports from that particular region will attract higher tariffs, or will not be allowed at all. This phenomenon is referred to as tariff-rate quotas (TRQs).

The entry price system, which is used in many northern hemisphere markets, makes use of multiple tariff rates during different periods when domestic producers are trying to sell their produce, and lower the tariffs during their off-season. Alternatively, the tariff rate can be a function of a market price – if the produce enters at a price which is too low (and therefore likely to be too competitive), it qualifies for a higher tariff schedule.

Whilst tariff regulations can be prohibitive and result in inferior market access, it is often the non-tariff barriers that restrict countries like South from successfully entering the large developed markets. Many of these barriers revolve around different types of standards, including sanitary and phytosanitary standards (SPS), food health and safety issues, food labelling and packaging, organic produce certification, quality assurance and other standards and grades. Table 14 presents tariffs applied by top-ten export markets to apples originating from South Africa during 2010. It is important to note that two European Union (EU) member states (United Kingdom and Netherlands) were in the top-ten list. Tariffs applied by these countries are therefore reported together as EU tariffs and not individually.

Table 14: Tariffs applied by various export markets to apples (fresh) originating from South Africa, 2010

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>HS CODE</th>
<th>PRODUCT DESCRIPTION</th>
<th>TRADE REGIME</th>
<th>APPLIED TARIFFS</th>
<th>TOTAL AD VALOREM EQUIVALENT TARIFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Union</td>
<td>0808101000</td>
<td>Fresh cider apples, in bulk, from 16 September to 15 December</td>
<td>MFN duties (Applied)</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>080810801001</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December)</td>
<td>MFN duties (Applied)</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>080810801002</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December)</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 10.99 $/Ton</td>
<td>5.86%</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>HS CODE</td>
<td>PRODUCT DESCRIPTION</td>
<td>TRADE REGIME</td>
<td>APPLIED TARIFFS</td>
<td>TOTAL AD VALOREM EQUIVALENT TARIFF</td>
</tr>
<tr>
<td>---------</td>
<td>---------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>---------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td></td>
<td>080810801003</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Cider apples. If the declared price is higher than or equal to 43.9 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 21.97 $/Ton</td>
<td>6.92%</td>
</tr>
<tr>
<td></td>
<td>080810801004</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Cider apples. If the declared price is higher than or equal to 43 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 32.96 $/Ton</td>
<td>7.99%</td>
</tr>
<tr>
<td></td>
<td>080810801005</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Cider apples. If the declared price is higher than or equal to 42 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 45.17 $/Ton</td>
<td>9.17%</td>
</tr>
<tr>
<td></td>
<td>080810801006</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Cider apples. If the declared price is higher than or equal to 41.1 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 56.15 $/Ton</td>
<td>10.23%</td>
</tr>
<tr>
<td></td>
<td>080810801007</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Cider apples. If the declared price is higher than or equal to 40.2 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 67.13 $/Ton</td>
<td>11.29%</td>
</tr>
<tr>
<td></td>
<td>080810801008</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Cider apples. If the declared price is higher than or equal to 39.3 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 78.13 $/Ton</td>
<td>12.35%</td>
</tr>
<tr>
<td></td>
<td>080810801009</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Cider apples. If the declared price is higher than or equal to 0 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 290.53 $/Ton</td>
<td>32.89%</td>
</tr>
<tr>
<td></td>
<td>080810809001</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December)</td>
<td>MFN duties (Applied)</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>HS CODE</td>
<td>PRODUCT DESCRIPTION</td>
<td>TRADE REGIME</td>
<td>APPLIED TARIFFS</td>
<td>TOTAL AD VALOREM EQUIVALENT TARIFF</td>
</tr>
<tr>
<td>---------</td>
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<td>---------------------</td>
<td>--------------</td>
<td>-----------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td></td>
<td>080810809002</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Other. If the declared price is higher than or equal to 45.7 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 10.99 $/Ton</td>
<td>5.86%</td>
</tr>
<tr>
<td></td>
<td>080810809003</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Other. If the declared price is higher than or equal to 44.8 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 21.97 $/Ton</td>
<td>6.92%</td>
</tr>
<tr>
<td></td>
<td>080810809004</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Other. If the declared price is higher than or equal to 43.9 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 32.96 $/Ton</td>
<td>7.99%</td>
</tr>
<tr>
<td></td>
<td>080810809005</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Other. If the declared price is higher than or equal to 42 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 45.17 $/Ton</td>
<td>9.17%</td>
</tr>
<tr>
<td></td>
<td>080810809006</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Other. If the declared price is higher than or equal to 41.1 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 56.15 $/Ton</td>
<td>10.23%</td>
</tr>
<tr>
<td></td>
<td>080810809007</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Other. If the declared price is higher than or equal to 40.2 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 67.14 $/Ton</td>
<td>11.29%</td>
</tr>
<tr>
<td></td>
<td>080810809008</td>
<td>Fresh apples (excl. cider apples, in bulk, from 16 September to 15 December) : Other. If the declared price is higher than or equal to 39.3 EUR/100 kg</td>
<td>MFN duties (Applied)</td>
<td>4.80% + 78.13 $/Ton</td>
<td>12.35%</td>
</tr>
<tr>
<td></td>
<td>080810809009</td>
<td>Fresh apples (excl. cider apples)</td>
<td>MFN duties</td>
<td>4.80%</td>
<td>32.89%</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>HS CODE</td>
<td>PRODUCT DESCRIPTION</td>
<td>TRADE REGIME</td>
<td>APPLIED TARIFFS</td>
<td>TOTAL AD VALOREM EQUIVALENT TARIFF</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
<td>----------------------------------------------------------</td>
<td>--------------</td>
<td>-----------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Malaysia</td>
<td>08081000</td>
<td>Fresh apples</td>
<td>MFN duties</td>
<td>5.00%</td>
<td>5.00%</td>
</tr>
<tr>
<td>Benin</td>
<td>0808100000</td>
<td>Pommes, poires et coings, frais.: Pommes</td>
<td>MFN duties</td>
<td>20.00%</td>
<td>20.00%</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>08081000</td>
<td>Apples, pears and quinces, fresh: Apples</td>
<td>MFN duties</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Singapore</td>
<td>08081000</td>
<td>Apples fresh</td>
<td>MFN duties</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>08081010</td>
<td>Apples, fresh, wrapped/canned upto 2.5kg</td>
<td>MFN duties</td>
<td>25.00%</td>
<td>25.00%</td>
</tr>
<tr>
<td></td>
<td>08081020</td>
<td>Apples, fresh, nes</td>
<td>MFN duties</td>
<td>25.00%</td>
<td>25.00%</td>
</tr>
<tr>
<td>Angola</td>
<td>08081000</td>
<td>Maçãs, frescas</td>
<td>MFN duties</td>
<td>10.00%</td>
<td>10.00%</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>08081000</td>
<td>Fresh apples</td>
<td>MFN duties</td>
<td>40.00%</td>
<td>40.00%</td>
</tr>
<tr>
<td>Kenya</td>
<td>08081000</td>
<td>Fresh apples</td>
<td>MFN duties</td>
<td>25.00%</td>
<td>25.00%</td>
</tr>
<tr>
<td>Ghana</td>
<td>0808100000</td>
<td>Fresh apples</td>
<td>MFN duties</td>
<td>20.00%</td>
<td>20.00%</td>
</tr>
<tr>
<td>Cameroon</td>
<td>0808100000</td>
<td>Pommes fraîches</td>
<td>MFN duties</td>
<td>30.00%</td>
<td>30.00%</td>
</tr>
</tbody>
</table>

Source: Market Access Map, ITC

The European Union operates an entry price system for apples originating from South Africa. As can be seen in Table 14, the system makes use of multiple tariff rates during different periods. The tariffs are higher when producers in the European Union member states are harvesting and selling their produce while they are lower during the off-season. The African countries in the top-ten list also impose higher tariffs (10% and above) on apple imports from South Africa. Apple exports from South Africa enter Singapore and the United Arab Emirates free of duty. South African apples face the highest tariff in Zimbabwe at 40%. Cameroon also imposes a higher tariff of 30% on imports of South African apples. Kenya and Bangladesh also apply high tariffs (25%) to apples originating from South Africa.

In reality, the tariffs are likely to be far lower for South Africa when considering the preferential agreements, but at the same time, most tariff structures are particularly complex, with quotas, seasonal tariffs and specific tariffs (an amount per unit rather than a percentage of value) all contributing to many different tariff lines and often higher duties payable than one might have anticipated initially. One must also bear in mind that most tariffs are designated to protect domestic industries, and as such are likely to discriminate against those attempting to compete with the domestic producers of that country.
4.2 European Union (EU)

The EU has a seasonal tariff structures which are highest during the European peak harvesting seasons (the price entry system), quotas and specific tariffs, and various policies that allow, amongst other things, government organizations to purchase produce should supply rise too quickly (and thereby maintain prices), and then release this excess back onto the market as and when supply drops again. The immediate implication of these policies for South Africa is that an opportunity exists to supply apples to the European market in the off season periods, as the produce will not compete directly with the European producers and thus would not be liable to a whole array of tariffs and other protective mechanisms.

There are other non-tariff barriers, including the phytosanitary and food health regulations laid down by the EU legislation, marketing standards and certificates of conformity, and the ever changing demand patterns of the EU consumers.

4.2.1 Tariff barriers

The EU applies a system known as entry price system. With this system, the EU establishes an ‘entry price’ at which produce may enter the EU market, which is not only based on the market price for the current year (demand and supply) and for previous years, but also on the prices of the domestic producers (prices they need to maintain profitability). It is calculated by the regulatory authorities so that it can be used in combination with tariffs and quotas to aid EU’s attempts at protecting its agricultural system. The entry price is the minimum price at which produce may enter the market. If the price of the produce is lower than its calculated price, it is liable to have duties imposed upon it over and above any duties/quotas it might originally attract. Agricultural duties are applied as follows:

- When the value of the imported party is between 92% and 94% of the entry price, 8% of the entry price will be added to the normal customs duty.
- When the value of the imported party is between 94% and 96% of the entry price, 6% of the entry price will be added to the normal customs duty.
- When the value of the imported party is between 96% and 98% of the entry price, 4% of the entry price will be added to the normal customs duty.
- When the value of the imported party is between 98% and 100% of the entry price, 2% of the entry price will be added to the normal customs duty.

There are tariffs applicable over and above the entry price tariffs, depending on the produce, where it originates from and whether that country has any preferential trading agreements with the EU.

4.2.2 Non tariff barriers

Non tariff barriers can be divided into those that are mandatory and laid out in the EU Commission’s legislature and those that are a result of consumers, retailers, importers and other distributors’ preferences.
4.2.2.1 Legal requirements

i) Product legislation: quality and marketing

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

**General Food Law** which 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 Points, or HACCP), and it is laid out under regulation EC 178/2002.

**EU Marketing Standards** which govern the quality and labelling of fruit are laid out in the Common Agricultural Policy (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 will not be sold on the EU markets.

**Certificate of Conformity** must be obtained by anyone wishing to export and sell fruits in the EU, if that fruit falls under the jurisdiction of the EU marketing standards.

**Certificate of Industrial Use** must be obtained if the fruit is to be used in further processing.

**Maximum Residue Limits (MRL)** of various pesticides allowed.

ii) 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 of 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 fruit products upon arrival in the EU. This inspection consist of 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.

iii) 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 is 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 and may need to undergo heat treatment, fumigation, etc.
4.2.2.2 Non-legal requirements

To access the market, importers must not only comply with legal requirements set out above, but must also with market requirements and demands. For the most part, these revolve around quality and the perception of European consumers about environmental, social, health and safety aspects of both the products and the production techniques. Whilst supplying fruit 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 accountability is becoming important in the industry, not only amongst consumers, but also for retail outlets and wholesalers. The Social Accountability 8000 (SA 8000) certification is a management system based on International Labour Organization (ILO) conventions, and deals with issues such as 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 tool for accessing any European market successfully.

ii) Environmental issues are becoming increasingly important with European consumers. Consumer movements are lobbying against purchasing non-environmentally friendly or non-sustainable produce. To this end, both governments and private partners have created standards (such as ISO 14001 and GLOBALPGAP) and labels to ensure that produce adhere to particular specifications.

Although eco-labels (for example, the EU Eco-label, the Netherlands Milieukeur, the German Blue Angel and the Scandinavian White Swan) are voluntary, they can afford an exporter a marketing edge, as consumers wishing to purchase environmentally sound produce demand products that are easily recognizable.

Another important emerging label is Fairtrade, and includes those labels offered by Max Haavelaar Foundation, TransFair International and the FLO (Fairtrade Labelling Organization). Recently a 'universal' logo was adopted based on international fair trade standards developed by FLO, which covers amongst other things, minimum quality and price, various processing requirements, compensation of small farmers that covers sustainable production and living standards, and contracts that allow for long term planning and development.

4.2.2.3 Consumer health and safety requirements

Increasing consumer conscience about health and safety issues has prompted a number of safety initiatives in Europe, such as GLOBALPGAP (formerly 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 producers and working methods) which is certified by the International Standards Organization (ISO).

The development of public and private standards involves interventions at multiple points along the value chain. An illustration of the multiple points and multiple standards that are applied for fresh fruit and
vegetables and for fish is shown in Figure 28. There are controls by different agents carried out in different ways at different points along the value chain in response to the requirements of private sector companies, coalitions of private-sector standards setters and public agencies. Standards in agribusiness value chains operate, by definition, at multiple points. They are created, adopted, applied and verified by different actors (enterprises and institutions) at different points in the value chain.

Figure 28: Food safety and quality control in the fruit and vegetable supply chains

Source: UNIDO

4.3 United States of America (USA)

4.3.1 Tariff barriers

South African exporters have completely free access to the USA markets under the Generalized System of Preference (GSP), the GSP for LCDs (Least Developed Countries) or the African Growth and Opportunity Act (AGOA). South African exporters must always compare with what Chile (the main supplier of fruit to the USA and South Africa’s potential rival) must pay in terms of tariff duties when exporting fruit to the USA.
Chile’s access to the USA fruit market is considered to be highly preferential under its own Preferential Trade Agreement (PTA).

4.3.2 Non tariff barriers

The USA’s phytosanitary regulation is conducted by Animal and Plant Health Inspection Service (APHIS), which is divided into nine sub-sections. Plant Protection and Quarantine (PPQ) and Veterinary Services (VS) are responsible for issuing permits for commodities and determining whether a commodity can be imported. The Policy and Program Development (PPD) division works with both these divisions in determining long term plans and procedures.

Some products can get pre-clearance from International Services (IS) personnel stationed in the country of origin, either at exporting terminals or site inspections. The PPQ’s main focus is to prevent the spread of diseases and pests into the USA’s agriculture resources, and it has personnel stationed at all airports, seaports and border stations that check imported cargo and oversee the quarantine process. Exporters or importers must make a request to export/import a commodity, provide as much information as possible on the product, its region of origin and its status that is whether there are restrictions or regulations governing that particular product from that particular region before a permit is issued, along with the conditions of importation (disinfections treatment) or mitigation measures. Denials can be challenged and governments and companies can request a change in the status of a prohibited commodity (an investigation must be performed by the PPQ scientific team), as long as sufficient conditions have changed or a risk assessment has not been conducted within the last 10 years.

Most approved commodities can enter with inspection alone, but some may have to undergo mitigating measures including post-harvest treatments (hot/cold temperature treatments, irradiation or fumigation, depending on the requirements and which particular treatment is least harmful). The establishment of specifically and maintained pest-free areas in a country (which obviously requires extensive co-operation between the country’s plant health services and APHIS IS division) or systems approaches (field surveys, random inspections or various on site treatments.

In additions to phytosanitary regulations, the USDA Food Safety Inspection Services (FSIS) regulates sanitary practices in the packing of food products, while the Food and Drug Administration (FDA), which is part of the US Department of Health, regulates packaging and labelling. The HACCP protocol is used extensively. The USDA quality standards for fruits and vegetables provide basis for domestic and international trade and promote efficiency in marketing and procurement.

5. DISTRIBUTION CHANNELS

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

They will also market the goods under their own name or on behalf of the member, which includes taking care of labelling, bar-coding, etc. Most of the time, export organizations will enter into collective agreements with freight forwarders, negotiating better prices and services (more regular transport, lower peak season prices, etc). Some countries have institutions that handle all the produce (membership compulsory) and sell only to a restricted number of selected importers.

Agents will establish contacts between producers/export organizations and buyers in the importing country, and will usually take between 2% and 3% commission. In contrast, an importer will buy and sell his/her own capacity, assuming the full risk (unless on consignment). They will also be responsible for clearing the produce through customs, packaging and assuring label/quality compliance and distribution of the produce. Their margins lie between 5% and 10%. The contract importers of fruit combines market and distribute the produce of the combines, clear it through customs and in some cases treat and package it.

Only few exporters have long term contracts with wholesale grocers who deliver directly to retail shops, but with the increasing importance of standards (EurepGap, etc) and the year round availability of fruit, the planning of long term contractual relationships is expected to increase.

6. LOGISTICS

6.1 Mode of transport

The transport of fruits falls into two categories namely ocean cargo and air cargo. Ocean cargo takes much longer to reach the desired location but costing considerably less. The choice of transportation method depends, for most parts 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 transport have improved considerably. With the increased exports by South Africa, the number and the regularity of maritime routes have increased. These economies of scale could benefit South Africa if more producers were to become exporters and take advantage of the various ports which have special capabilities in handling fruit produce (for example, Durban’s new fruit terminal).

6.2 Cold chain management

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, onto actual shipping vessels and containers, and finally on to the importers and distributors that must clear the produce and transport it to the markets/retail outlets. For every 10 Degree Celsius increase above the recommended temperature, the rate of respiration and ripening of produce can increase twice or even thrice. Related to this are increasing important traceability standards which require an efficient controlled supply chain and internationally accepted business standards.
6.3 Packaging

Packaging can also play an important role in ensuring safe and efficient transport of a product and conforming to handling requirements, uniformity, recyclable material specifications, phytosanitary requirements, proper storage needs and even attractiveness for marketing purposes.

The business panel of any carton (including printed carton labels) should comply with the requirements as established by the EU or any other regulations that are specified by a target market. Producers are advised to present their designs to the Perishable Products Export Control Board (PPECB) before they can order any cartons from a manufacturer. The following is normally required:

- Class I or II
- Fruit type
- Carton depth
- Country of Origin: “Produce of South Africa”
- Complete address of exporter or producer
- Name of variety
- Content of carton: “14 x punnets or bags”
- PUC or PHC code: Registered producer – or Pack House Code with DAFF
- Date code
- Food safety accreditation number: Global Gap, Nature’s Choice registration number, etc

7. ORGANIZATIONAL ANALYSIS

7.1 Producer and associated organizations

Grower participation and control of their interests in the industry are structured by means of fruit type producer associations (Section 21 companies), as illustrated on Figure 29. The industry consists of Hortgro Services as its mouthpiece. Hortgro Services is responsible for administrative services and financial administration, as well as operational industry services such as transformation and training, information, communication and social programmes.

Hortgro Services comprises of its members, affiliated members and service entities. The members are the South African Apple and Pears Producers Association (SAAPPA), South African Stone Fruit Producers Association (SASPA), Dried Fruit Technical Services (DFTS), Protea Producers of South Africa (PPSA), South African Cherry Growers’ Association (SACGA), and the South African Olive Industry Association.


The service entities are Fruitgro Science (DFPT Research), South African Plant Improvement Organisation (SAPO) Trust, Cultivar development Company (CULDEVCO), Sterile Insect Technique (SIT) Africa, Entomon Technologies and the SA Fruit Journal.
The main association responsible for the apple industry is the South African Apple and Pear Producers Association (SAAPPA). It is a Section 21 company and its objectives are as follows:

- To rationalize and promote the production and marketing of apples and pears, apple and pear products.
- To support and assist the development of the Association's decision-making systems and structures.
- To encourage and pursue constructive dialogue and mutual cooperation with government and other role players in order to promote the interest of the Association and its members.
- To foster mutual trust and long term relationships among role players and stakeholders.
- To establish and promote a reciprocal information system and promote the maintenance of responsible and sustainable production and marketing practices.
Figure 29: Structure of the producer interest in the deciduous fruit industry

HortgroSA
National communication platform
No capacity
PA’s affiliated & services / functional entities associated

Each with own deed, constitution, board, members, priorities & funds
Mouthpiece for own affairs, manage own funding
Own or shared / contracted capacity

Source: Hortgro
7.2 Strengths, Weaknesses Opportunities and Threat analysis

Some of the strengths, weaknesses, threats and opportunities of the apple production sector in South Africa are the following:

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
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<tbody>
<tr>
<td>• The industry’s export operations and leading players who account for approximately 80% of the overall exports are well established.</td>
<td>• Production is largely dependent on climatic conditions which can only be partially manipulated by man through irrigation.</td>
</tr>
<tr>
<td>• An efficient export infrastructure exists and market access has been improved.</td>
<td>• Deteriorating research infrastructure and capacity may limit new technology development in the future.</td>
</tr>
<tr>
<td>• The South African apple industry is known for excellent overall quality for fruit (strong reputation in major international markets).</td>
<td>• Saturation of traditional export markets.</td>
</tr>
<tr>
<td>• Sound communication mechanisms to majority of industrial participants.</td>
<td>• Reliance on the UK and EU as main export market.</td>
</tr>
<tr>
<td>• High level of investment in current technology within pack houses and cold chain facilities.</td>
<td>• Relatively high input and capital costs.</td>
</tr>
<tr>
<td>• Industry has all traceability systems in place, as required by accreditation protocols.</td>
<td>• An element of fragmentation in the industry.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Threats</th>
<th>Opportunities</th>
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<tbody>
<tr>
<td>• Increased competition from the Southern Hemisphere counterparts like Chile, Brazil, Argentina and Australia.</td>
<td>• Market access initiatives to the Middle East, Asia (India, Indonesia) and China.</td>
</tr>
<tr>
<td>• Oversupply of fruit into established export markets.</td>
<td>• Increasing demand for fresh apples in Africa.</td>
</tr>
<tr>
<td>• Availability and cost of irrigation water.</td>
<td>• Potential for increased local market consumption.</td>
</tr>
<tr>
<td>• Impact of climate change especially in the Western Cape.</td>
<td></td>
</tr>
<tr>
<td>• Inflation rate with regard to cost of labour and farming and also packing prerequisites.</td>
<td></td>
</tr>
<tr>
<td>• Currency variability.</td>
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</tr>
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7.3 Strategic challenges
7.3.1 Labour markets

The critical need for labour at harvest time offers seasonal work to unemployed persons in the immediate vicinity of plantations. In most countries, workers migrate from one region to another as the harvest season progresses from early to late. However, in the local scenario, labourers lack mobility as well as skills to find work outside crop harvesting.

A major challenge in terms of labour is the lack of skilled labour. At the same time, farm wage levels do not attract skilled or qualified people to undertake menial and hard work. Smaller producers, who pay comparatively lower wages, are more exposed than the larger producers to the threat of labour shortages.

7.3.2 Infrastructure

Some of the infrastructural challenges are as follows:

- Lack of storage capacity at certain times of the year, when apples and other fruits are being harvested (mid January until end of February).
- Hygiene and micro-bacterial quality of water available for use in pack houses and domestic purposes on farms.
- Poor or no communication between the agricultural sector and service providers in terms of planning and future expansion on issues such as energy and transport.
- Transport from the pack house to the market – road, ship or rail.
- Logistical systems which are not applied at full efficiency.
- Inefficient handling operations at South African ports, giving rise to costly delays and breaks in the cold chain.

7.3.3 Other challenges

Producers are being confronted with more regulations to control the production from farm to fork. These include regulating soil, air, water, chemical, labelling and safety. On the retailing side pressure mounts to introduce measures for increased traceability of products. The consumer wants a safe product produced with socially acceptable environmentally friendly production methods. Combined with this many consumers are up in arms about GMO’s and the USA government is introducing a bio terrorism act that will put even more pressure on exporters to the USA.

Competition for scarce natural resources (land and water) is putting continued pressure on good farmland that can otherwise be used for agricultural purposes.

There is a threat of climate change particularly in the Western Cape Province. Production of apples and other fruits could be adversely affected by the warming of the winter season due to rising average temperatures and subsequent loss in chilling hours. Lack of winter chilling gives rise to delayed foliation and the problem of small fruit of poor quality. Increased average maximum temperatures in January and February may result in poor colour development. The risk of sunburn is also increased.
7.4 Opportunities

The promotion of the consumption of apples and other fruits should be implemented. Per capita consumption of apples at 4kg, in comparison to Asia's 13.25kg and the EU's 17.6kg highlights the scope for possible increase in sales of the local market.

7.5 Empowerment issues and transformation in the sector

According to Hortgro Services, transformation in the deciduous fruit industry has four focus areas. These are economic development, the Deciduous Fruit Development Chamber (DFDC), networking and agri-villages.

With regards to economic development, Hortgro Services serves as an implementation agent of CASP grants for the Western Cape Department of Agriculture. This provides an opportunity for Hortgro to provide matching funds for the implementation of targeted transformation projects in the province. The main focal point of economic development is the tree project. The tree project aims to increase production or footprint for Black Economic Empowerment (BEE) farmers.

To overcome transformation challenges and encourage it, the Deciduous Fruit Development Chamber (DFDC) was established as a national support structure for emerging deciduous fruit farmers. The DFDC provides space for incubator interactions that guide the business and technical assistance to emerging fruit farmers. The DFDC aims to fulfil a dynamic capacity building and advocacy role and to exert pressure in order to mobilise resources from various quarters, including government and the donor community.

Networking entails the building of relationships and networks in order to enhance the procurement of funds and other resources to help with the transformation process. This includes building working relations with all commercial banks and other DFIs and parastatals such as the Land Bank, Industrial Development Corporation (IDC), the Agricultural Research Council (ARC), and other industry stakeholders.

Agri-villages focus specifically on the provision of housing for farm workers and their families. Hortgro Services has committed itself to participating in organised agricultural initiatives to explore the following options as possible solutions to farm worker housing:

- On-farm housing without ownership rights.
- Off-farm housing without ownership, e.g. renting.
- Off-farm housing with ownership.

8. APPLE SUPPLY VALUE CHAIN

The supply value chain is a complex linkage of various production and operational role-players (see Figure 30). Key stakeholders include producer organisations, organised labour, NOGs, financial institutions, government, exporters and other traders. The following discussion focuses on the main segments of the apple value chain.
8.1 Suppliers of inputs and farming requisites

Fruit farming is a large user of specialised inputs and sophisticated agricultural chemicals. Input suppliers ensure that all inputs needed by farmers for successful production, including farm equipment, pesticides, insecticides and others, are always available at reasonable prices so as to ensure a competitive fruit industry in South Africa.

8.2 Producers

The core business of producers is to produce a high quality crop within “Good Agricultural Practice” protocols. Consistency, reliability of supply and producing varieties as demanded by the markets at affordable prices are also important facets of the producer’s responsibility and business activities.

8.3 Fresh produce markets

FPMs are the dominant player and form of wholesaling in the South African apple and fresh fruit and vegetable (FFV) sector. However other wholesale forms do exist including independent wholesalers, contract buyers, supermarkets, wholesaling subsidiaries, as well as farmer sales direct to retailers and to consumers.

Being the largest wholesalers, the FPMs have emerged as the FFV price-setters or, as nicknamed, the “fresh produce stock exchange”. The prices at the FPMs are arrived at through a bargaining process mediated by market agents who have a dual objective to collect the best prices (and hence commission) for sales while ensuring that the highly perishable stocks are cleared. These prices are then used as reference prices even in private transactions outside the FPMs.

8.4 Retailers

South African apple retailers exist in both the formal and informal sectors. In the former this includes formally registered retail chains, supermarkets and neighbourhood stores. The latter covers tuck shops (sphaza), and hawkers. In this environments apples sales are at predetermined prices and are typically individually or in small packages.

8.5 Processors

As explained earlier, the processing of apples consists of canning, drying and juice manufacturing. There is also a set of further processors not captured in the group above. These entities use apples (and apple products) in food preparations. This includes caterers, hospitality and other institutions such as corporates, government institutions like hospitals, prisons, etc.
8.6 Cold storage operators and transporters

Cold storage operators are responsible for receiving, handling, cooling the apples to the required temperature and for ensuring that the correct fruit is loaded out according to the exporter’s specifications into a truck or container that has been approved or registered by Perishable Produce Export Control Board (PPECB). A flat bed truck or other non-approved vehicle may be used in journeys shorter than two hours in total.

Transporters perform a key link in the fresh fruit supply chain by facilitating the physical transfer of the products between parties such as the producer, cold store and terminal operator. Transporters are responsible for maintaining the cold chain during transit.

8.7 Exporters

The core business of exporters is to market and sell the fruit of primary producers at the best market price that they are able to negotiate. In order to realize this, the exporter needs to communicate with many of the role players in the logistics chain (cold stores, transporters, shipping lines, port terminals, clearing and forwarding agents, PPECB, regional producers associations and special market inspectors, etc). It is the exporters’ responsibility to manage the cold chain, handle the fruit in an acceptable manner and, they are accountable for the quality of fruit that reaches the destination market.

The main organisation that handles the export of fruits in South Africa is the Fresh Produce Exporters’ Forum (FPEF). The FPEF was registered in 1998 as a non-profit organisation and its membership is voluntary and open to all companies that export fresh fruit from South Africa. The FPEF’s mission is to create, within free market principles and a deregulated environment, a prosperous but disciplined fruit export sector. It was established mainly to provide leadership and services to its members and the international buying community. The forum sees itself as the international community’s gateway to providing South Africa’s finest quality produce from highly reputable South African exporters.

8.8 PPECB

In terms of the PPECB Act (Act 9 of 1983) the PPECB is responsible for the “control of perishable products intended for export from the Republic of South Africa”. This mainly involves the control of the cold chain (including the shipping process). PPECB also acts as a government “assignee” in terms of the APS (Agricultural Products Standards) Act (Act 119 of 1990) and is responsible for the “control over sale and export of agricultural and related products”. PPECB controls (and certifies) that the quality standards of these products are met. The National Department of Agriculture, Forestry and Fisheries (DAFF) issues the phytosanitary certificates.

All PPECB and other inspection regulations, protocols or requirements must be met and adhered to. The Information and Communication Procedure (ICP) must therefore be seen in conjunction with the PPECB Act and its regulations, the APS Act, as well as those temperature and other specialized handling protocols and procedures as established by PPECB in conjunction with the industry. As more emphasis is placed on food safety and customers are demanding higher standards of quality, PPECB and other inspection bodies
play an increasingly important role in the export of fresh produce from South Africa. PPECB may make the following information available to exporters and producers on request:

- **Packed volumes**
  - Inspected and approved for export
  - Inspected and rejected for export
- **Product quality**
  - Reasons for rejection
- **Shipped volumes**
  - This information is available on a product and destination region level
- **Cold chain information**
  - Vessel carrying instructions (temperature letter, vessel temperature log, statements of facts, deviations, etc.

The information outlined above is available in varying degrees of detail.

### 8.9 Terminal and port operators

Terminal operators must inform exporters, PPECB and other relevant parties in the supply chain such as transporters, producer associations, producers and cold stores about port related delays such as labour strikes, wind delays, plug-in congestion and other traffic congestion in the port that will impact on the flow of fresh produce into and out of the harbour. The South African Port Operations (SAPO) container terminal reports to shipping lines.
Figure 30: The deciduous fruit and table grape supply value chain

Source: OABS
9. ACKNOWLEDGEMENTS

The following industries/organizations are acknowledged.

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Directorate: Statistics and Economic Services
Private X 246
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0001
Tel (012) 319 84 54
Fax (012) 319 8031
www.daff.gov.za

9.3 Optimal Agricultural Business Systems (OABS)
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Fax: (021) 890 2915
www.oabs.co.za

9.4 Trade and Industrial Policy Strategies (TIPS)
P. O. Box 11214
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0028
Tel (012) 431 7900
Fax (012) 431 7910
www.tips.org.za

9.5 National Agricultural Marketing Council (NAMC)
Private Bag X 935
Pretoria
0001
Tel (012) 341 1115
Fax: (086) 626 4769
www.namc.co.za
9.6 International Trade Centre (ITC)
www.intracen.org

9.7 United Nations Industrial Development Organization
www.unido.org

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