

# A PROFILE OF THE SOUTH AFRICAN PEAR MARKET VALUE CHAIN

2012

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REPUBLIC OF SOUTH AFRICA

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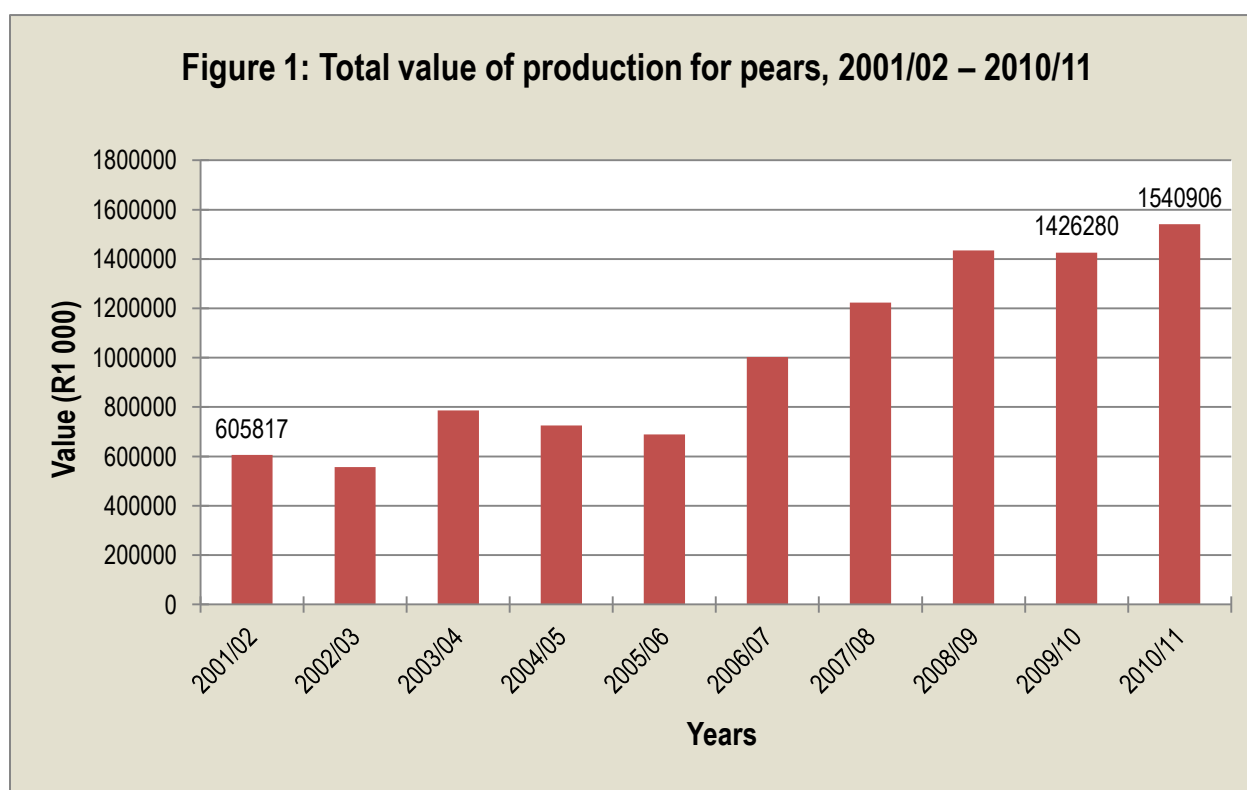
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## 1. DESCRIPTION OF THE PEAR INDUSTRY

Pears 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 2010/11 season, pears contributed approximately 16% (R1.5 billion) of the total gross value for deciduous fruits (R9.4 billion) in South Africa. Per capita consumption of deciduous and subtropical fruit in South Africa during 2011 was 24.74 kilograms per year. This represented a 5.4% increase from the 2010 figure of 23.47 kilograms per year.

The South African pear industry is export oriented with approximately half of pears being absorbed by the export market. The industry operates in a deregulated environment where prices are determined by the market forces of demand and supply. The total value of production for pears for the seasons 2001/02 to 2010/11 is shown in Figure 1.

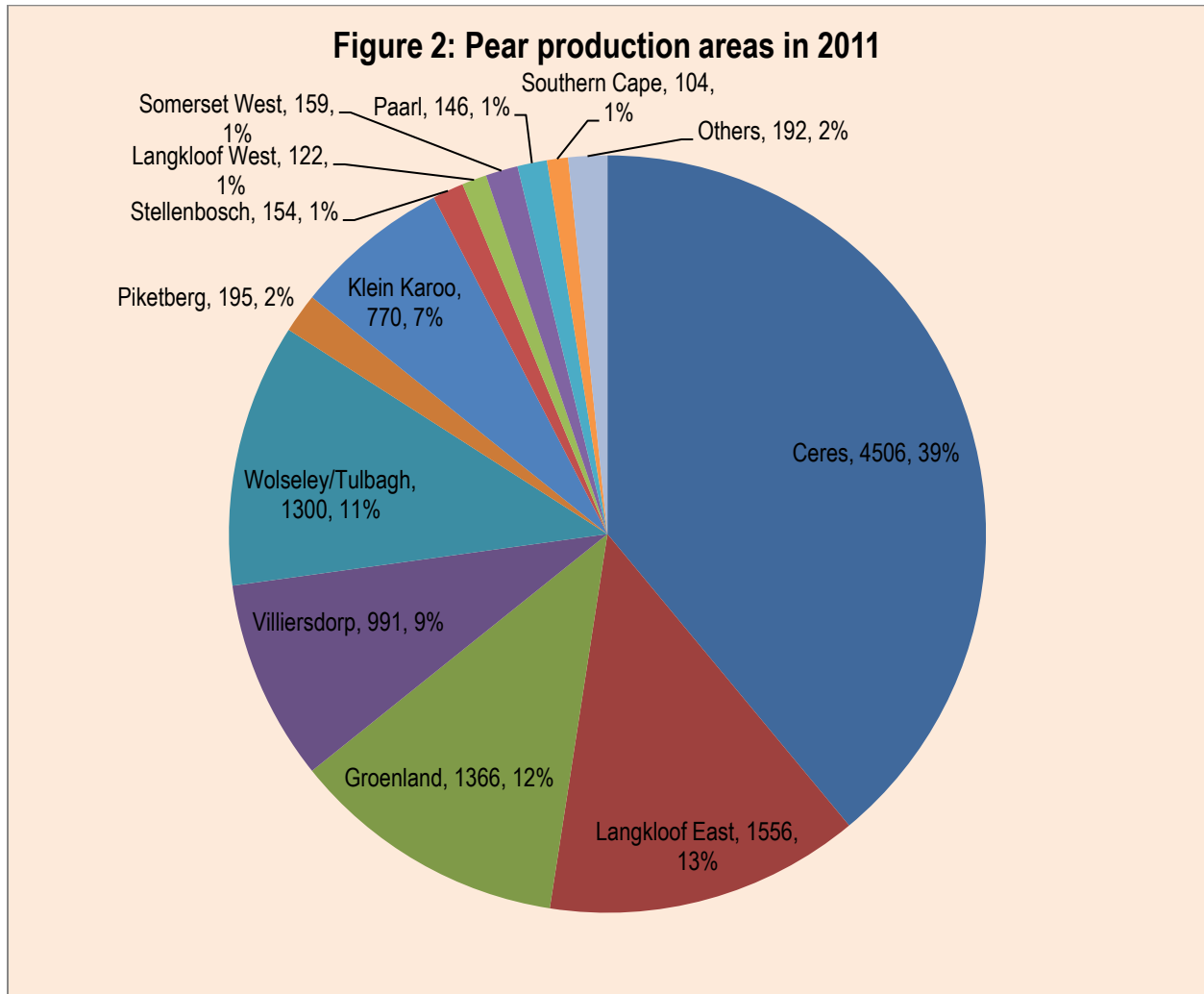


Source: Statistics and Economic Analysis, DAFF

The total value of production for the industry has been on a steady increase since 2006/07 production season. This is happening at the same time when production of pears has been relatively stable. Given this, an increase in the total value of production can only be explained by amongst other things significant increases in the demand for pears in the markets. The total value of production for pears increased by 7% between the years 2009/10 and 2010/11. It is interesting to note that the total value of production increased at the same time when the volume of production declined. During the ten years under review, the total value of production increased from R605 million in 2001/02 to R1.5 billion in 2010/11. This represents an increase of 150% in ten years.

## 1.1 Pear production areas

South Africa's main pear producing areas are Ceres, Groenland, Wolseley/Tulbagh (all in the Western Cape) and Langkloof East in the Eastern Cape. The Western Cape Province account for more than half of all the pears produced in South Africa. The major pear production areas in 2011 are shown in Figure 2.



Source: Hortgro Tree Census, 2011

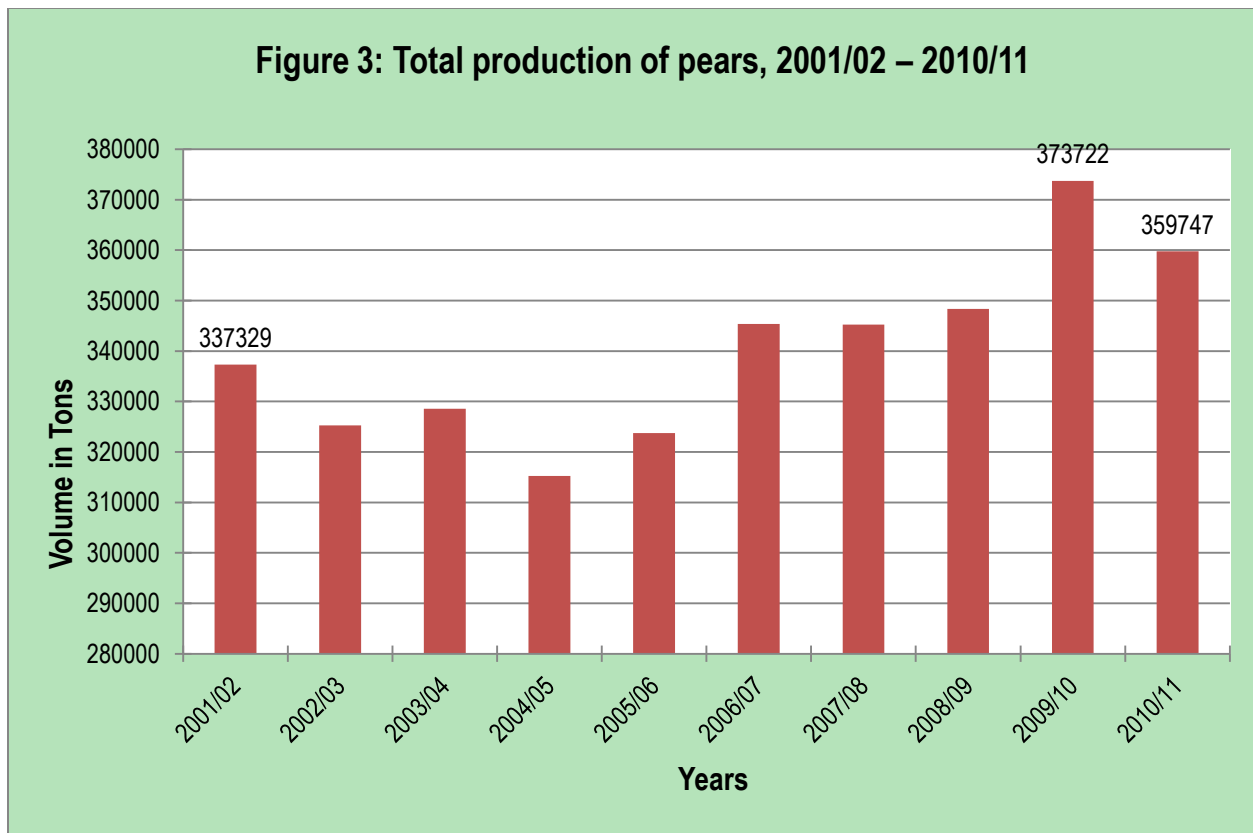
Figure 2 above shows that in terms of the area planted to pears in hectares, Ceres accounted for 39% with 4 506 ha. Langkloof East and Groenland accounted for 13% (1 556 ha) and 12% (1 366 ha) respectively, while Wolseley/Tulbagh also accounted for 11% with 1 300 ha. Total production area for pears in 2011 was 11 561 hectares. This represents a 2% increase in production area from the 2010 production year. The most increase in production area happened in the Ceres area where the area under pear cultivation increased from 4 287 ha in 2010 to 4 506 ha in 2011.

## 1.2 Pear production

In 2011 the pear orchard age distribution was as follows:

- 800 ha (7%) was in the category of 0 – 3 years;
- 2 013 ha (17%) was in the 4 – 10 years category;
- 1 900 ha (16%) was in the 11 – 15 years category;
- 3 507 ha (30%) was in the 16 – 25 years category; and
- 3 341 ha (29%) were older than 25 years.

It is important to note the over half (59%) of South Africa’s pear orchards are over 15 years old. Figure 3 illustrates total South African production of pears for the years 2001/02 to 2010/11. Generally, the production of pears in South Africa has been fairly stable since the 2001/02 production season. A total of 359 747 tons of pears were produced in South African during the 2010/11 production season. Production decreased by about 4 percent between 2009/10 and 2010/11 production seasons. During the ten years under review, production reached its peak at 373 722 tons in 2009/10 and was at its lowest at 315 244 tons in 2004/05.

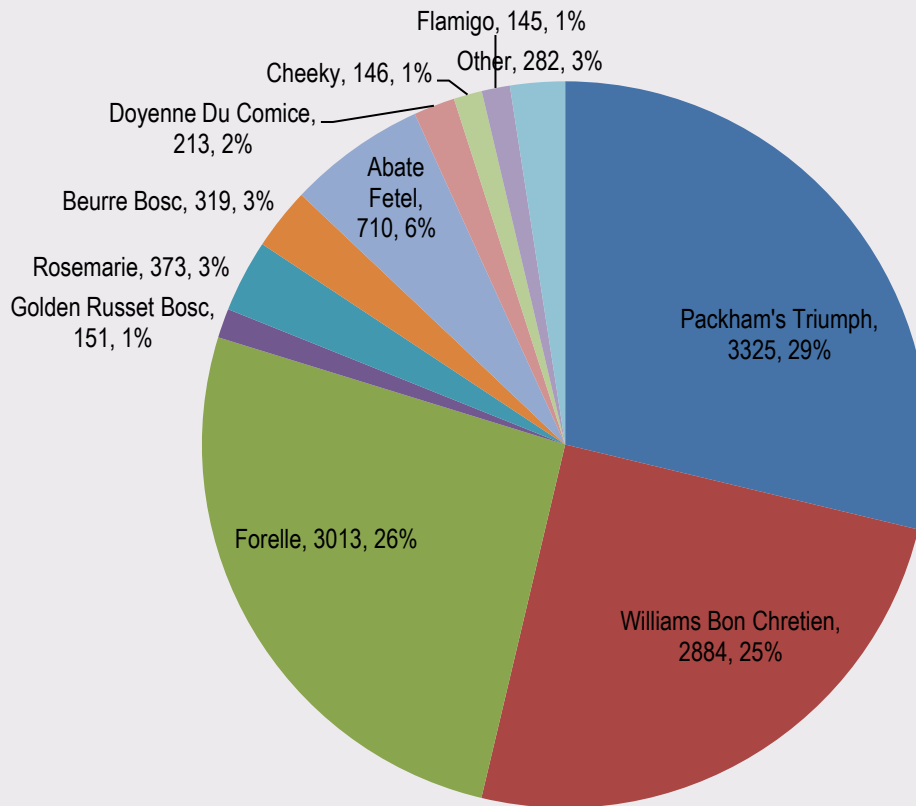


Source: Statistics and Economic Analysis, DAFF

### 1.3 Pear cultivars

South Africa’s main pear cultivars are Packham’s Triumph, Williams Bon Chretien, Forelle and Abate Fetel. Figure 4 shows that in 2011, Packham’s Triumph accounted for 29% (3 325 ha) of the total area planted (11 561 ha). It was followed by Forelle at 26% (3 013 ha), Williams Bon Chretien at 25% (2 884 ha) and Abate Fetel at 6% (710 ha).

**Figure 4: Leading pear cultivars planted in 2011**



Source: Hortgro Tree Census, 2011

#### 1.4 Employment

The industry makes an important contribution to direct employment in the pear production and processing. It provides indirect employment for numerous support industries in the areas where pears are grown. In 2011, direct employment within the industry was estimated at 14 606 people with 58 416 dependents. This represents a 2 percent increase in the number of people employed in the pear industry between 2010 and 2011. A total of 14 315 people were employed in the pear industry in 2010.

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 2013 to 1 February 2016 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 previous year's minimum wage plus CPI + 1.5%.

**Table 1: Minimum wages for farm workers in the Republic of South Africa, 2013 - 2015**

Minimum rate for the period				Minimum rate for the period			Minimum rate for the period		
1 March 2013 to 28 February 2014				1 March 2014 to 28 February 2015			1 March 2015 to 28 February 2016		
Monthly	Weekly	Daily	Hourly	Monthly	Weekly	Hourly	Monthly	Weekly	Hourly
R2273.52	R524.70	R105.00 <sup>1</sup>	R11.66	Previous year's minimum wage + CPI <sup>2</sup> + 1.5%			Previous year's minimum wage + CPI + 1.5%		

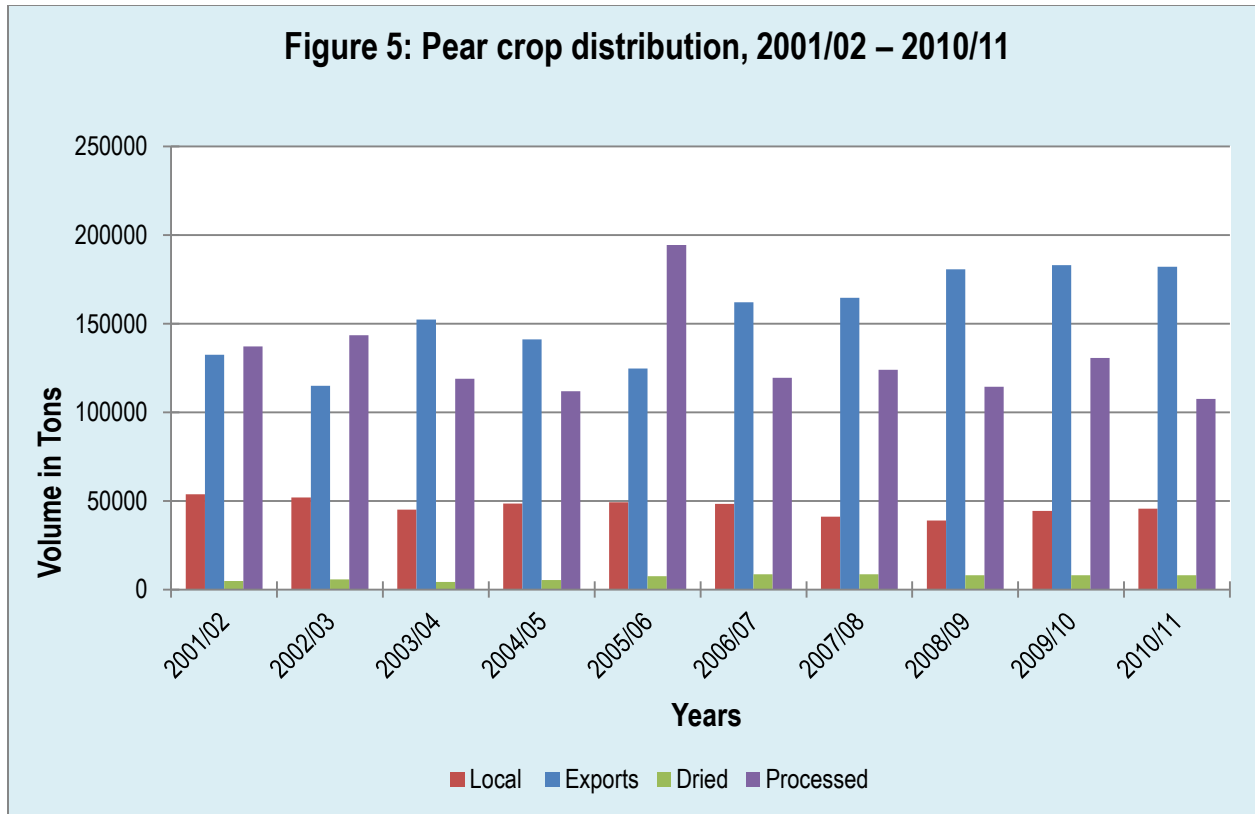
Source: Department of Labour, 2013

## 2. MARKET STRUCTURE

The distribution of pears across the various markets for the period 2001/02 to 2010/11 is presented in Figure 5. As illustrated in the figure, pear production in South Africa is primarily aimed at mainly exports and processing markets and to a lesser extent local markets. Dried fruit production is relatively insignificant. A total of 182 076 tons of pears were exported in 2011 while a total of 107 618 tons of pears were absorbed by the processing industry during the same year. Between 2009/10 and 2010/11 marketing seasons the proportion of pears destined for the export markets declined by 2% while the proportion of pears destined for the processing market also declined by 18%. The declines in the volumes exported and processed follow the 4% decrease in production volumes between 2009/10 and 2010/11. It would be interesting to see whether this had any significant impact on prices of pears in the above-mentioned markets (or vice-versa), an issue that is looked at in the following subsections.

<sup>1</sup> For an employee who works 9 hours per day

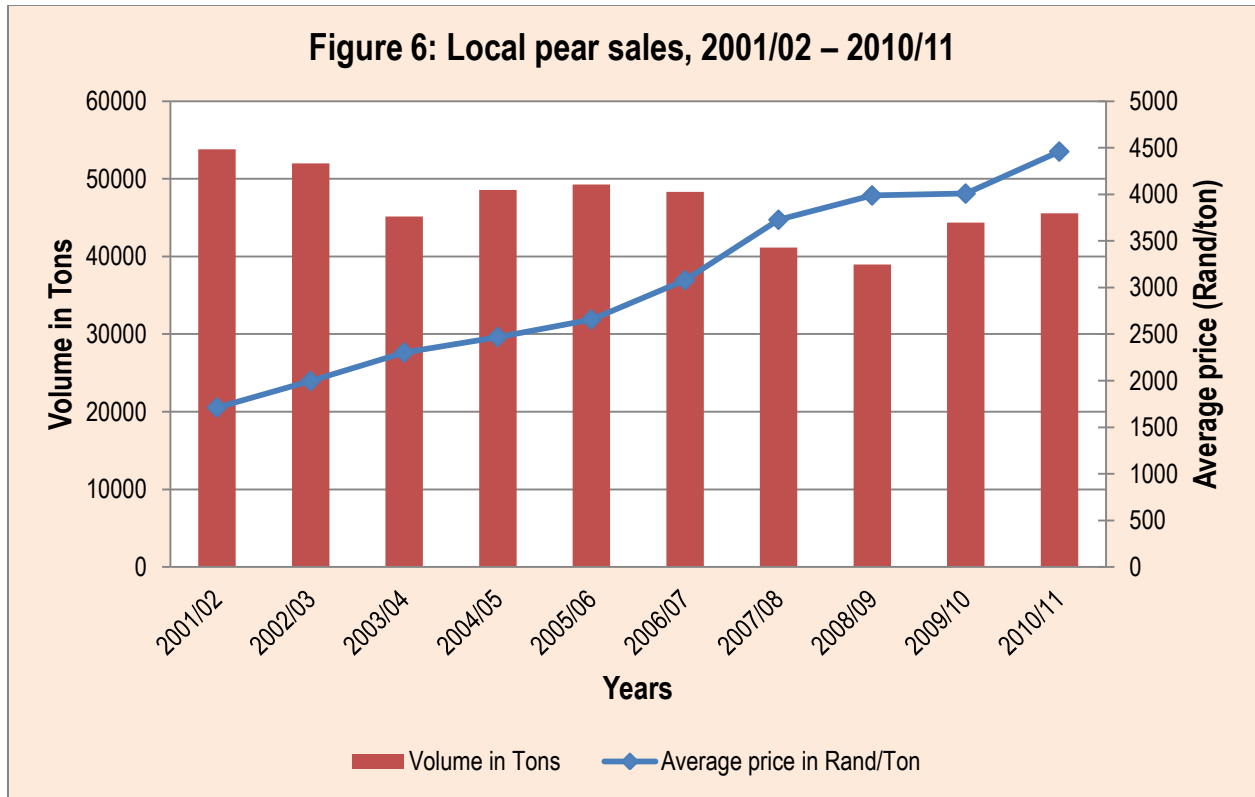
<sup>2</sup> The CPI to be utilised is the available CPI for the lowest quintile as released by Statistics South Africa six weeks prior to the increment date.



Source: Statistics and Economic Analysis, DAFF

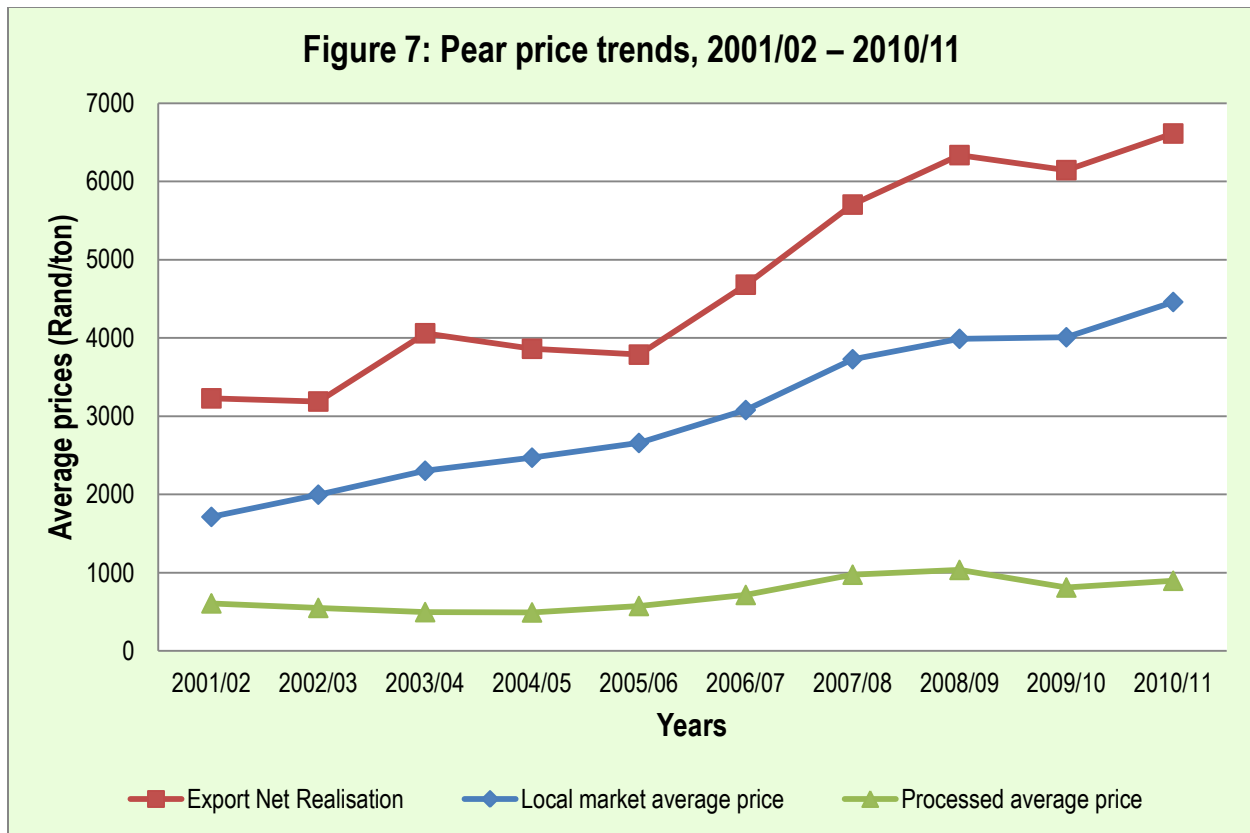
## 2.1 Domestic markets and prices of pears

Local pear market volumes and general price trends from 2001/02 to 2010/11 are presented in Figures 6 and 7.



Source: Statistics and Economic Analysis, DAFF

As illustrated in Figure 6, volumes of pears at local market have been declining since the 2001/02 marketing season before recovering again during the 2004/05 and 2005/06 seasons. The recovery did not last long as volumes declined again during 2007/08 and 2008/09 seasons before picking up again in 2009/10. The increase continued into the 2010/11 marketing season. A total of 45 576 tons of pears were sold through the local markets in the 2010/11 marketing season. This was 3% higher than the volume sold through the same channel during the previous year. Prices realised in the local markets increased from R1 712/ton in 2001/02 to R4 459/ton in 2010/11. The lack of serious growth in the local market in terms of volume during the past decade may be due to a lack of coordinated marketing. Growth in the sector has been absorbed by the increased exports to the traditional markets, resulting in significant increases in the average prices at the local markets during the period between 2001/02 and 2010/11. Figure 7 illustrates price trends for pears for the period 2001/02 to 2010/11.

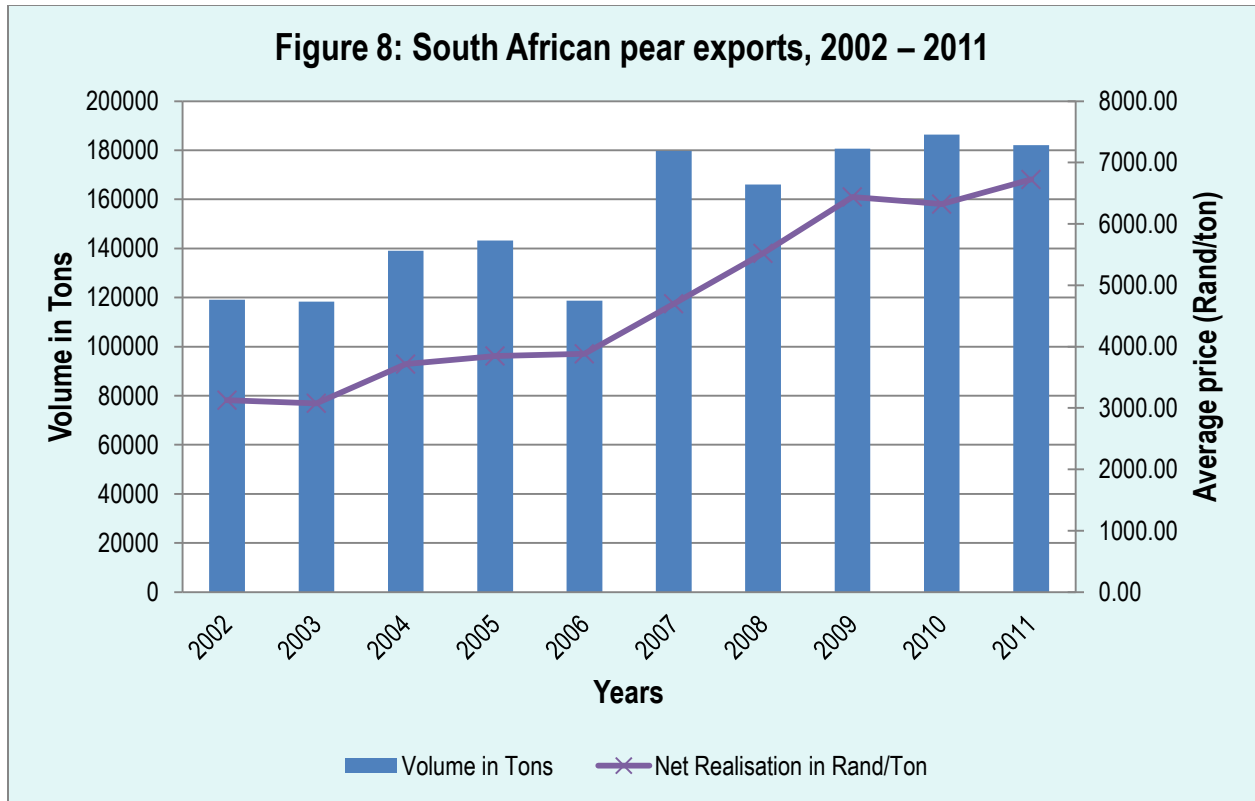


Source: Statistics and Economic Analysis, DAFF

As can be seen in Figure 7 pears generally fetch higher prices in export markets. Prices at both export and local markets have generally been on the increase during the period under review. Given the fact that during the period under review volumes destined for the export markets have been increasing while those destined for the processing and local markets have been declining, it can therefore be argued that pear prices in the processing and local markets are strongly determined by prices in the export markets (production during the period under review has been fairly stable). Between 2009/10 and 2010/11 prices received in the export markets increased by 8% while those received in the local and processing markets also increased by 11% and 10% respectively.

## 2.2 Pear exports

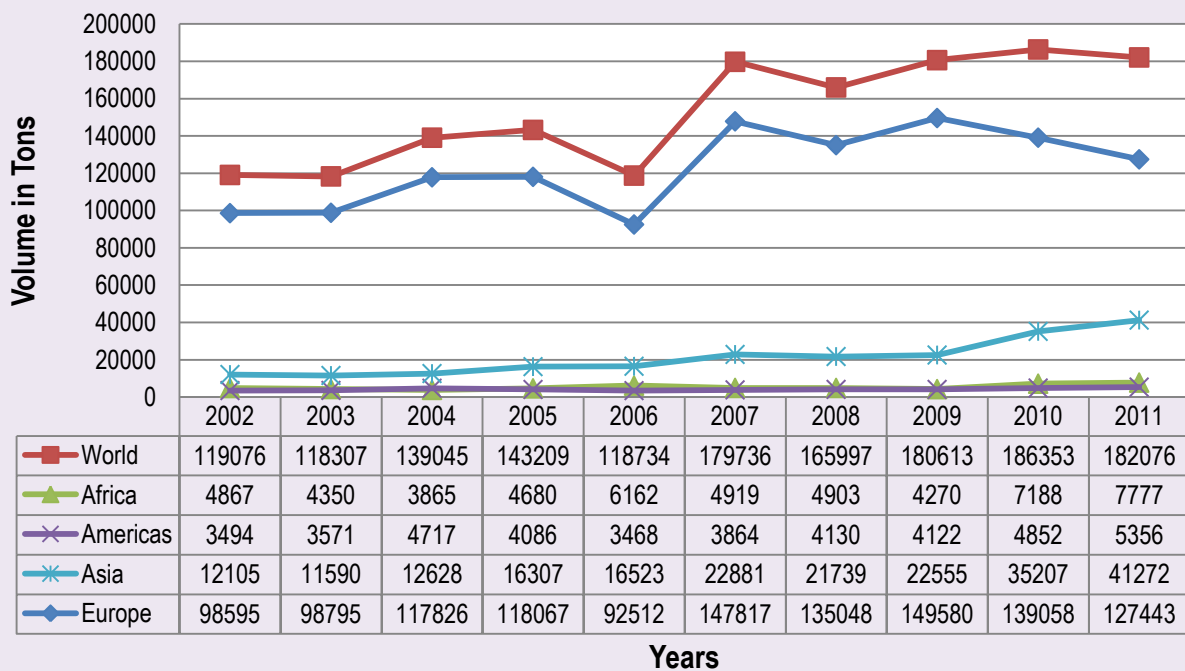
South African exports of pears for the period 2002 to 2011 are presented in Figure 8. South Africa is a relatively small pear grower in terms of global hectares. However, the country is a major volume exporter in global terms. Pears sold in the export markets generate a greater unit price than that achieved on the local market. Therefore, a thorough understanding of the rules of the export markets is necessary for success in international pear marketing.



Source: Quantec Easydata

As illustrated in Figure 8 pear exports have experienced significant growth during the last decade, increasing from 119 076 tons in 2002 to 182 076 tons in 2011. The volume exported declined by 2% between 2010 and 2011. The net realisation has also been increasing indicating that the growth in volumes exported has also been accompanied by growth in export earnings. The net export realisation increased from R3 127/ton in 2002 to R6 734/ton in 2011. Figure 9 below illustrates the South African exports of pears to the various regions of the world over the past decade.

**Figure 9: Volumes of pears exported to the various regions, 2002 - 2011**

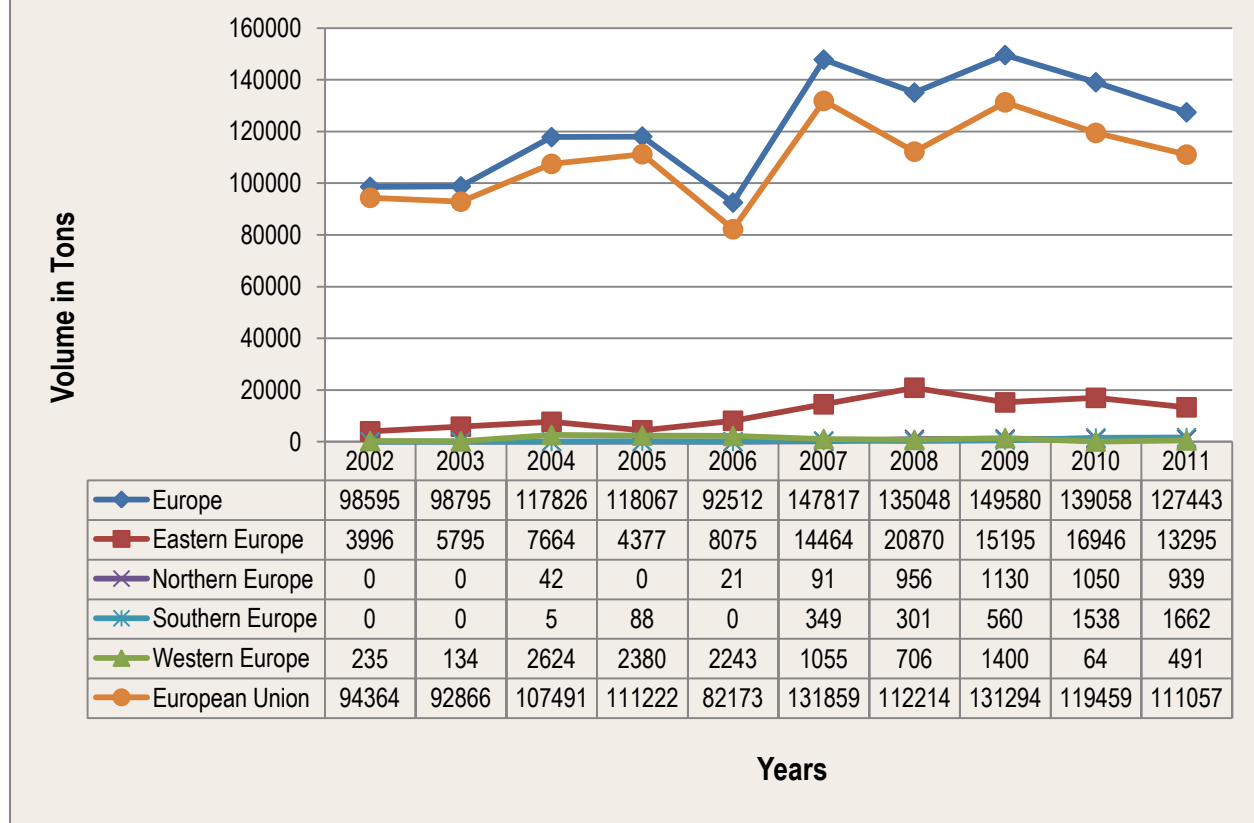


Source: Quantec Easydata

It is evident from Figure 9 that during the past decade, most of South Africa's exports of pears were destined to the European and Asian markets to a lesser extent. In 2011 exports to Europe accounted for 70% of total South African pear exports. This is a clear indication that Europe is a major market for South African pears. Following Europe is Asia. The continent contributed 23% to total South African pear exports in 2011. Cumulatively the two continents absorbed 93% of all South African exports of pears during 2011. Between 2010 and 2011 exports to Europe declined by 8%. The decline in Europe was however compensated by a 17% increase in the Asian market during the same period. Africa absorbed 7 777 tons (4%) of South Africa's pear exports in 2011 while the Americas absorbed 5 356 tons (3%) during the same period. Given the fact that Europe constitutes a significant share of South Africa's market for pear exports, Figure 10 below shows how the exports are distributed within the different regions of the European continent.

Within Europe, the European Union is the major destination of South African pears (see Figure 10). The economic block accounted for 87% of all pears exported to Europe in 2011. The European Union is followed by Eastern Europe which accounted for 10% of the total South African exports of pears to the European continent in 2011. South African exports of pears to the European Union declined by 7% between 2010 and 2011, while those to Eastern Europe also declined by 22% during the same period.

**Figure 10: Volumes of pears exported to Europe, 2002 - 2011**

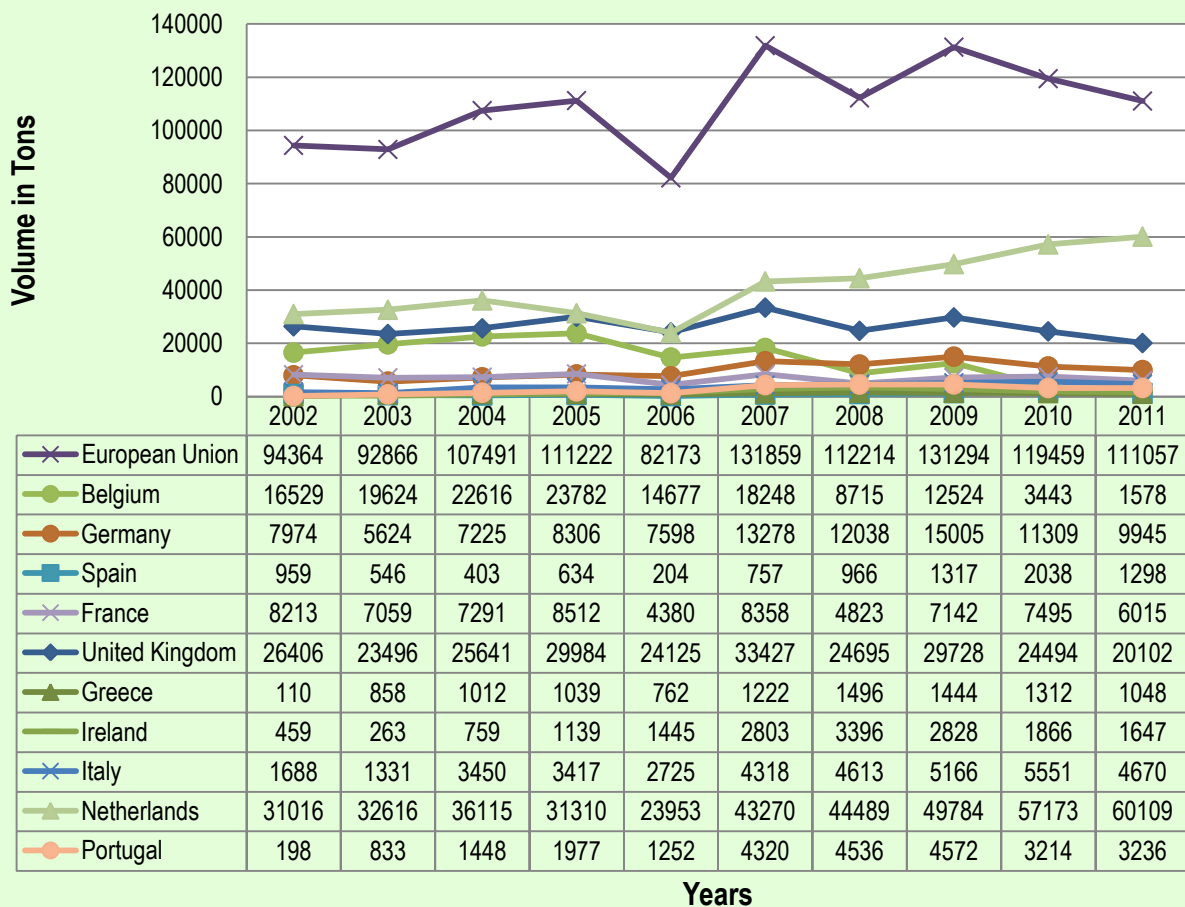


Source: Quantec Easydata

Given the importance of the European Union to the South African exports of pears (see Figure 10 above), the economic block is further broken down into its member states in Figure 11 in order that the contribution of the different member states can be isolated. Only those member states whose imports of pears from South Africa exceeded 1 000 tons in a particular year during the last decade are shown in Figure 11. This criteria produces 10 member states for the period under review (see Figure 11).

It can be seen from Figure 11 that within the European Union the Netherlands and the United Kingdom are the major destinations of South African pears. In 2011, the two countries respectively accounted for 54% and 18% to total South African exports of pears to the European Union. Other important destinations include Belgium, Germany, Italy and France. Pear exports to the Netherlands continued to rise in 2011 while those to the United Kingdom continued to fall.

**Figure 11: Volume of pear exports to the European Union, 2002 - 2011**



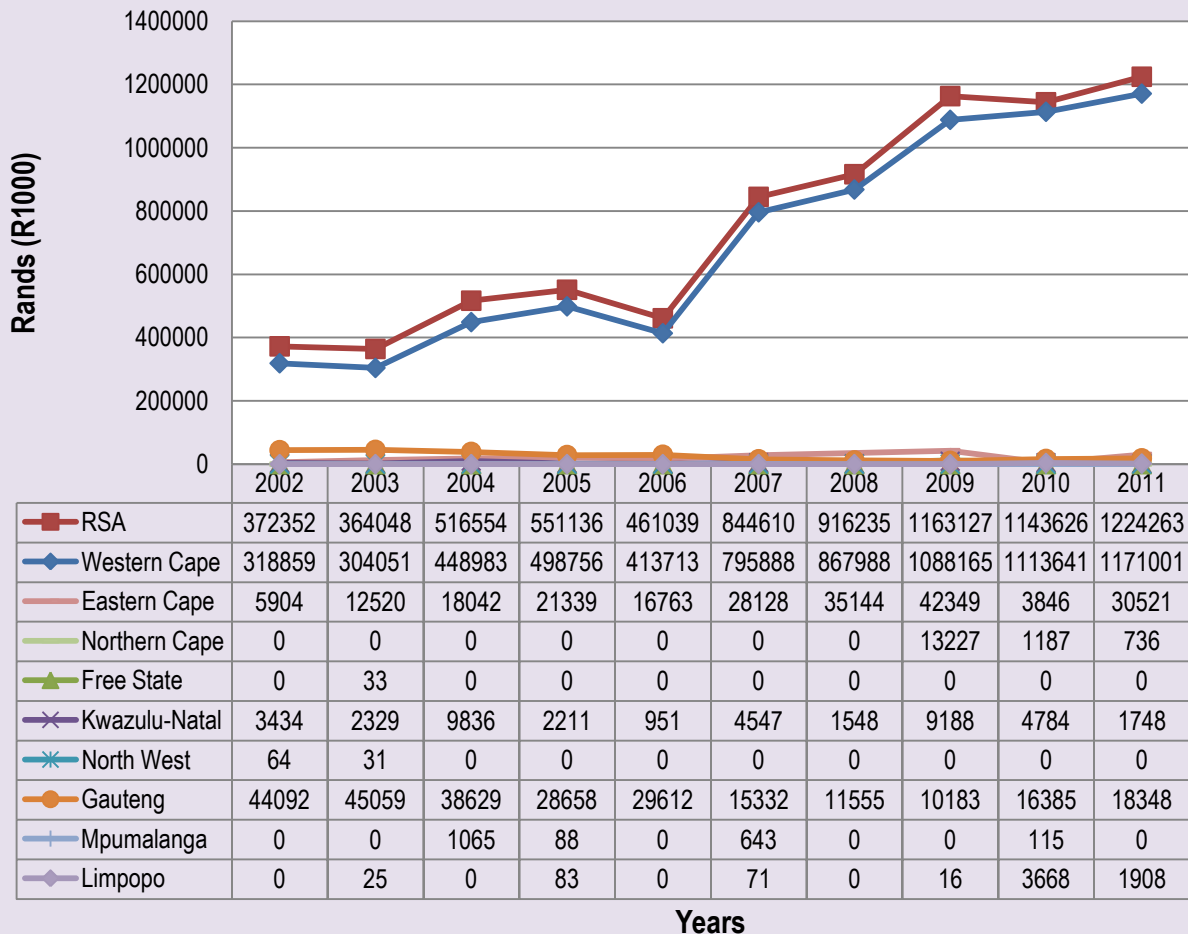
Source: Quantec Easydata

The contributions of the different provinces and districts to the total South African pear exports are explored in the following subsection.

### 2.3 Provincial and district export values of South African pears

Figure 12 depicts the value of pear exports from each province of the Republic of South Africa for the period 2002 to 2011. Pears worth R1.2 billion were exported during 2011. This value was 9% higher than the value of pear exports in 2010.

**Figure 12: Value of pear exports by provinces, 2002 – 2011**



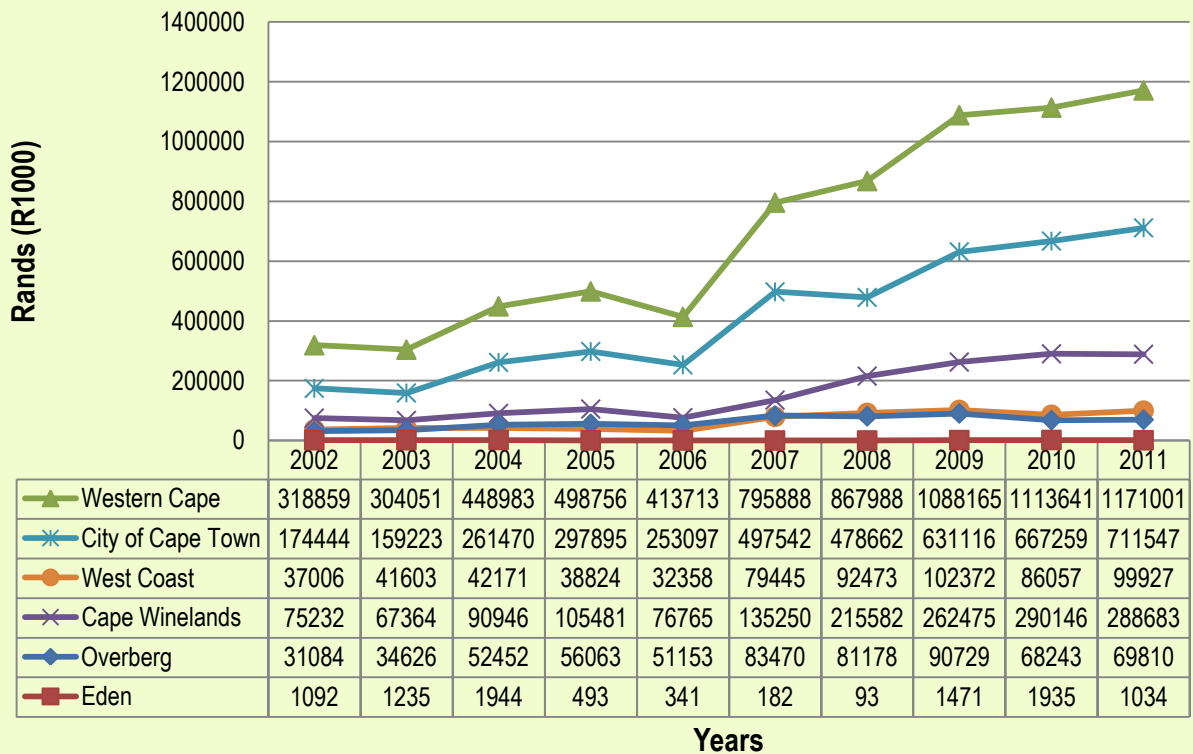
Source: Quantec Easydata

It is evident from Figure 12 that the Western Cape has consistently been the dominant pear exporting province of South Africa over the last ten years, exporting almost R1.2 billion worth of pears in 2011. It is followed by the Eastern Cape at around R31 million and Gauteng at R18 million during the same year. Other provinces featured intermittently but usually registered minimal trade.

The following figures (Figures 13 - 21) show the value of pear exports from the various districts in the nine provinces of South Africa, starting with the Western Cape in Figure 13.

It is clear from Figure 13 that exports of pears from the Western Cape are mainly from the City of Cape Town, Cape Winelands, West Coast, and Overberg municipalities. High export values for all the leading municipalities were recorded in 2011 with the exception of the Overberg district that recorded its highest values in 2009. 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 pears from the Western Cape (see Figure 13). Pear exports from all the major districts in the Western Cape increased in 2011 when compared with 2010.

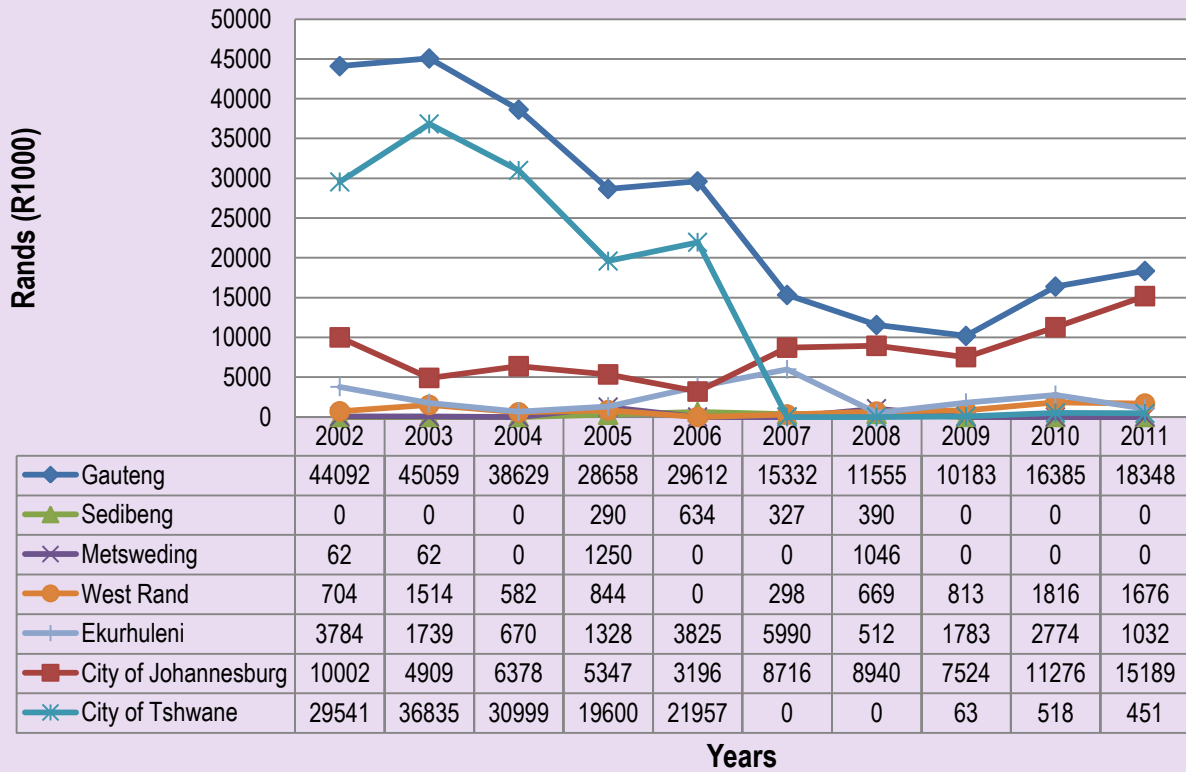
**Figure 13: Value of pear exports by the Western Cape province, 2002 – 2011**



Source: Quantec Easydata

Values of pear exports from the Gauteng province are shown in Figure 14. In Gauteng province, there have been fluctuations in pear export values for the past ten years (see Figure 14). The leading role players during the last three years have been the City of Johannesburg, Ekurhuleni and the West Rand municipalities. High export values of the leading municipalities were recorded in 2011 (for the City of Johannesburg), 2007 (for Ekurhuleni) and 2010 (for the West Rand). The City of Tshwane was the major exporter of pears from 2002 until 2006. Exports from the city have however been minimal during the last five years.

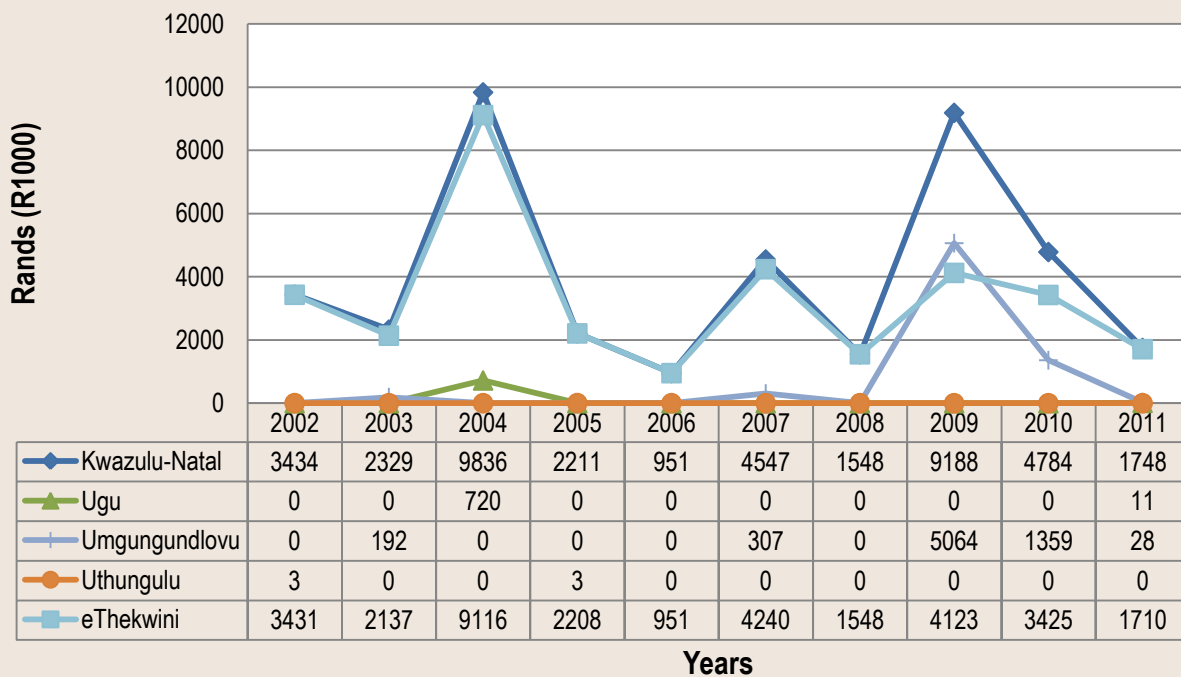
**Figure 14: Value of pear exports by Gauteng province, 2002 – 2011**



Source: Quantec Easydata

Values of pear exports from the Kwa-Zulu Natal province are presented in Figure 15. It is clear from Figure 15 that pear exports from Kwa-Zulu Natal are mainly from the Umgungundlovu and Ethekewini municipalities. High export values for the leading municipalities were recorded in 2009 (Umgungundlovu) and 2004 (Ethekewini). Exports from the Ethekewini have been fairly unstable during the past ten years. The Umgungundlovu overtook Durban as the leading exporter of pears in 2009 in value terms before retreating again in 2010. The use of the Durban harbour as an exit point may have played a major role in Ethekewini being a leader in the export of pears from Kwa-Zulu Natal in the past ten years (excluding 2009). Exports by both Umgungundlovu and eThekewini districts declined in 2011.

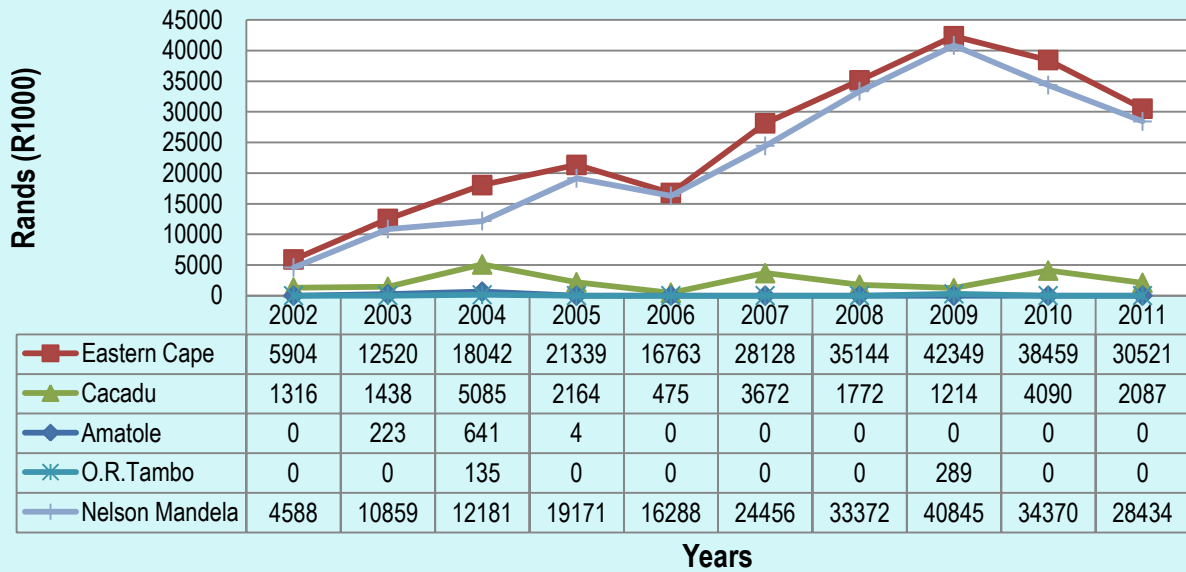
**Figure 15: Value of pear exports by the Kwa-Zulu Natal province, 2002 – 2011**



Source: Quantec Easydata

Figure 16 shows values of pear exports from the Eastern Cape Province. The Nelson Mandela district municipality is the leading exporter of pears in the Eastern Cape; exporting over R28 million worth of pears in 2011 (see Figure 16). It was followed by the Cacadu district with exports worth over R2 million during the same year. As can be seen from Figure 16 exports from the Nelson Mandela district have been increasing since 2002, only taking a slight dip in 2006 before increasing substantially again between 2006 and 2009 and then taking another dip in 2010 and 2011. On the other hand exports from the Cacadu district have been declining since 2007 before rising in 2010 and declining again in 2011. The use of the Nelson Mandela Bay harbour as an exit point may have played a major role in Nelson Mandela metropolitan municipality being the leader in pear exports from the Eastern Cape.

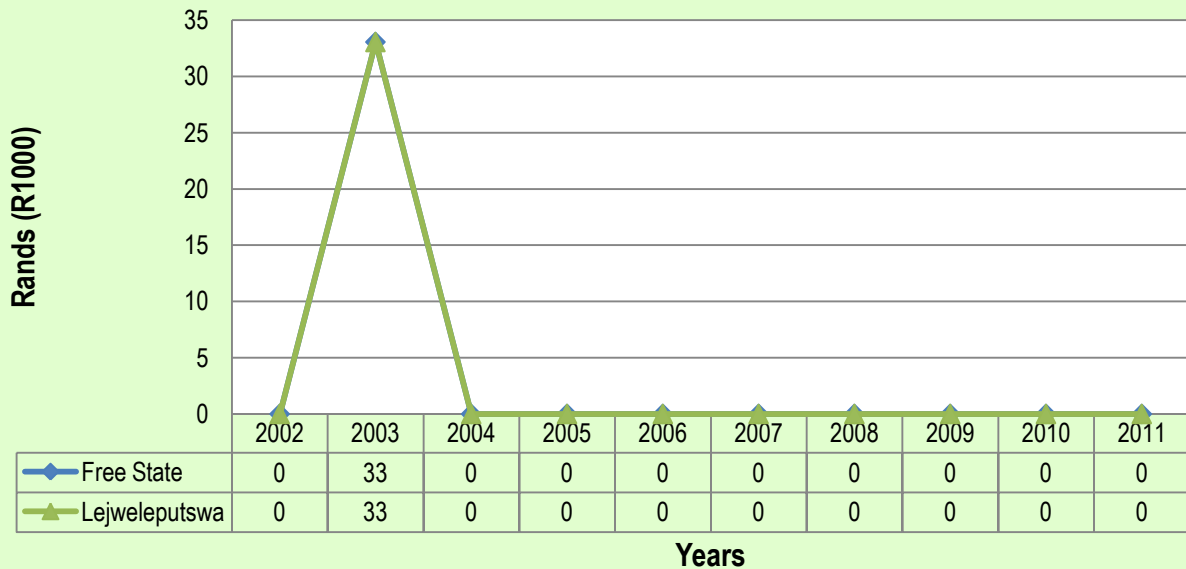
**Figure 16: Value of pear exports by the Eastern Cape province, 2002 – 2011**



Source: Quantec Easydata

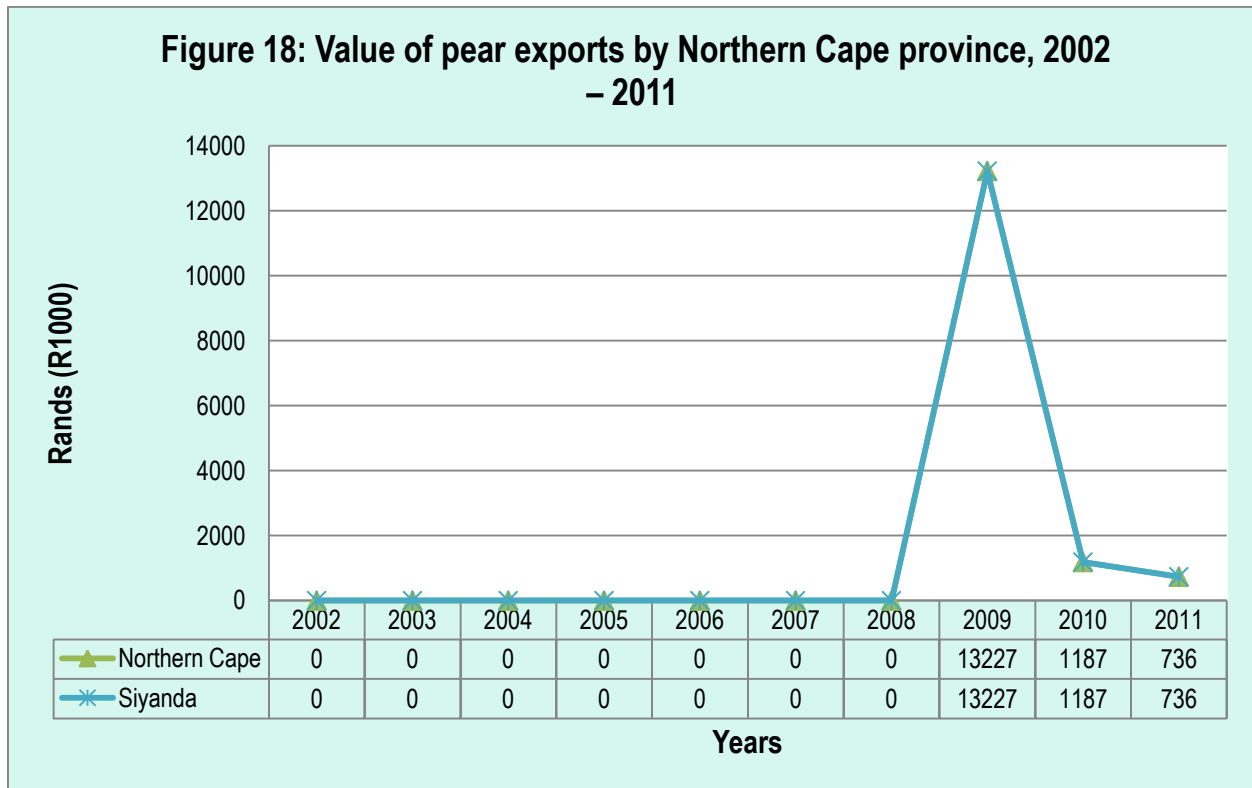
Values of pear exports from the Free State province are shown in Figure 17.

**Figure 17: Value of pear exports by Free State province, 2002 – 2011**



Source: Quantec Easydata

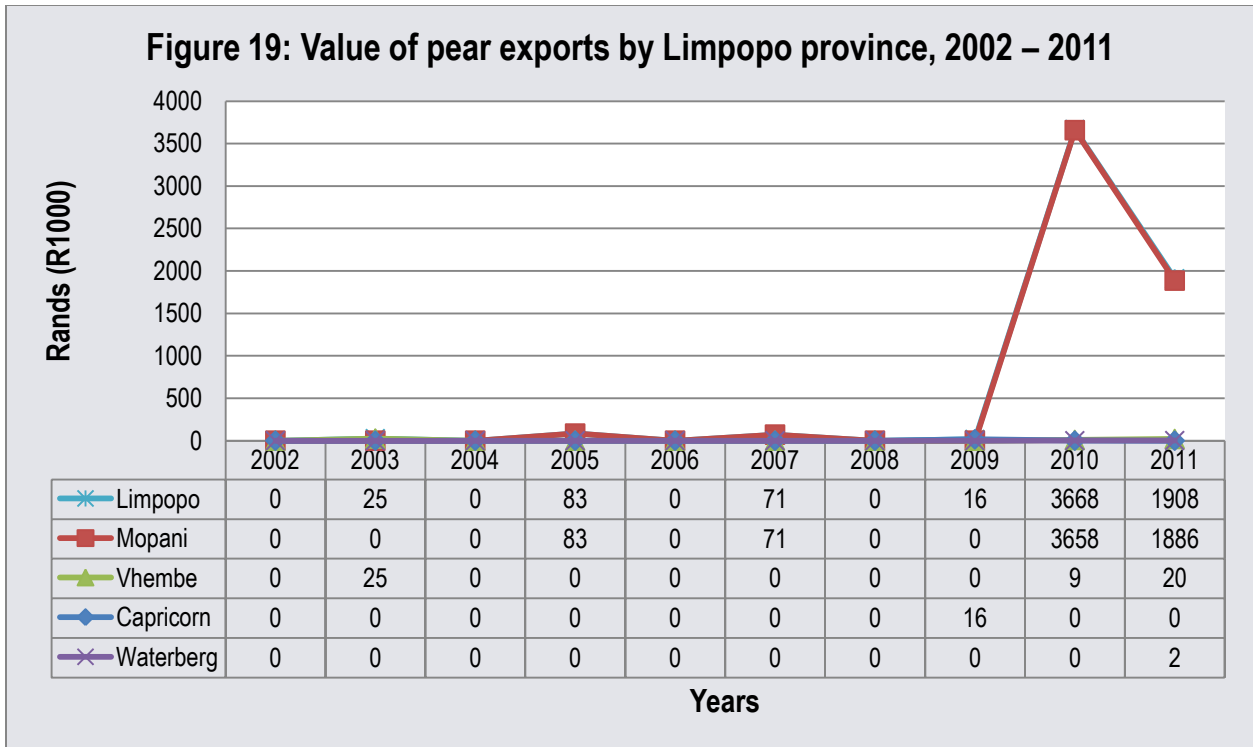
It is clear from Figure 17 that all pear exports from Free State are mainly from Lejweleputswa municipality. High export value for the leading municipality was recorded in 2003. Figure 18 depicts values of pear exports from the Northern Cape province.



Source: Quantec Easydata

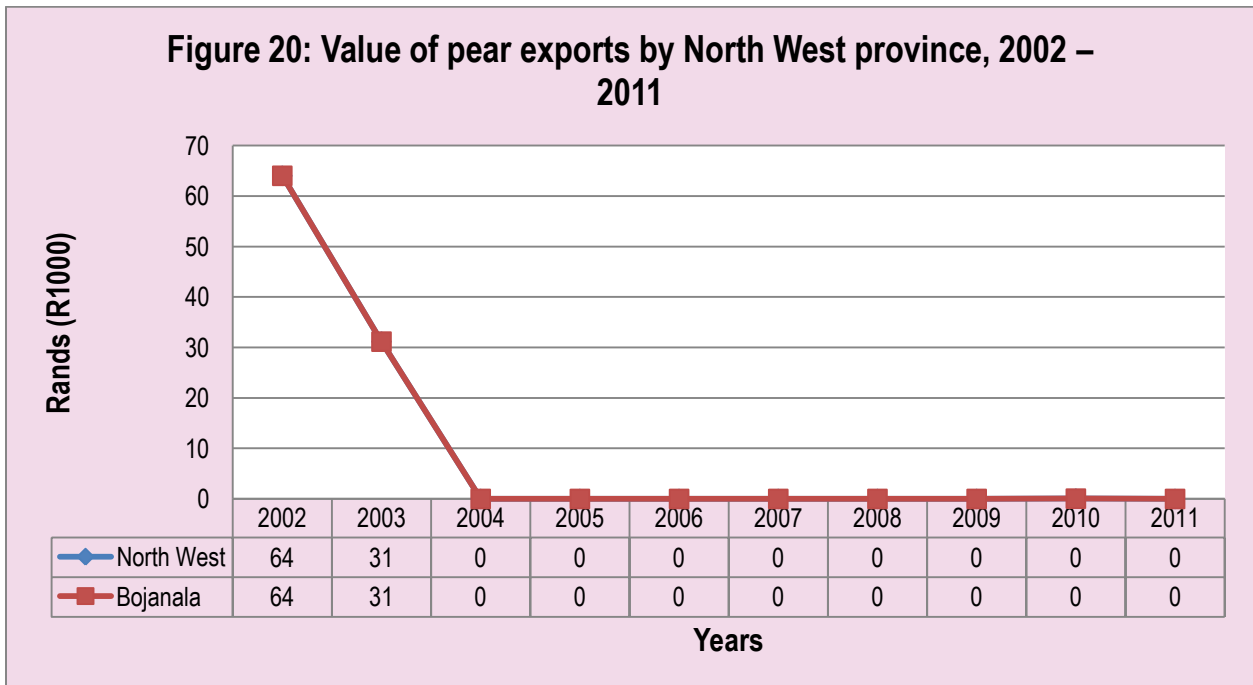
Pear exports from the Northern Cape are mainly from Siyanda municipality. High export value for the leading municipality was recorded in 2009. The municipality recorded pear exports to the value of R0.7 million in 2011.

Values of pear exports from the Limpopo province are shown in Figure 19. In 2011 almost all pear exports recorded in the Limpopo province were from the Mopani district. 2010 marked the first year in which the Vhembe district recorded pear exports after six years (see Figure 19). The Waterberg district also recorded pear exports for the first time in 2011. During the period under review the Capricorn district recorded pear exports only in 2009.



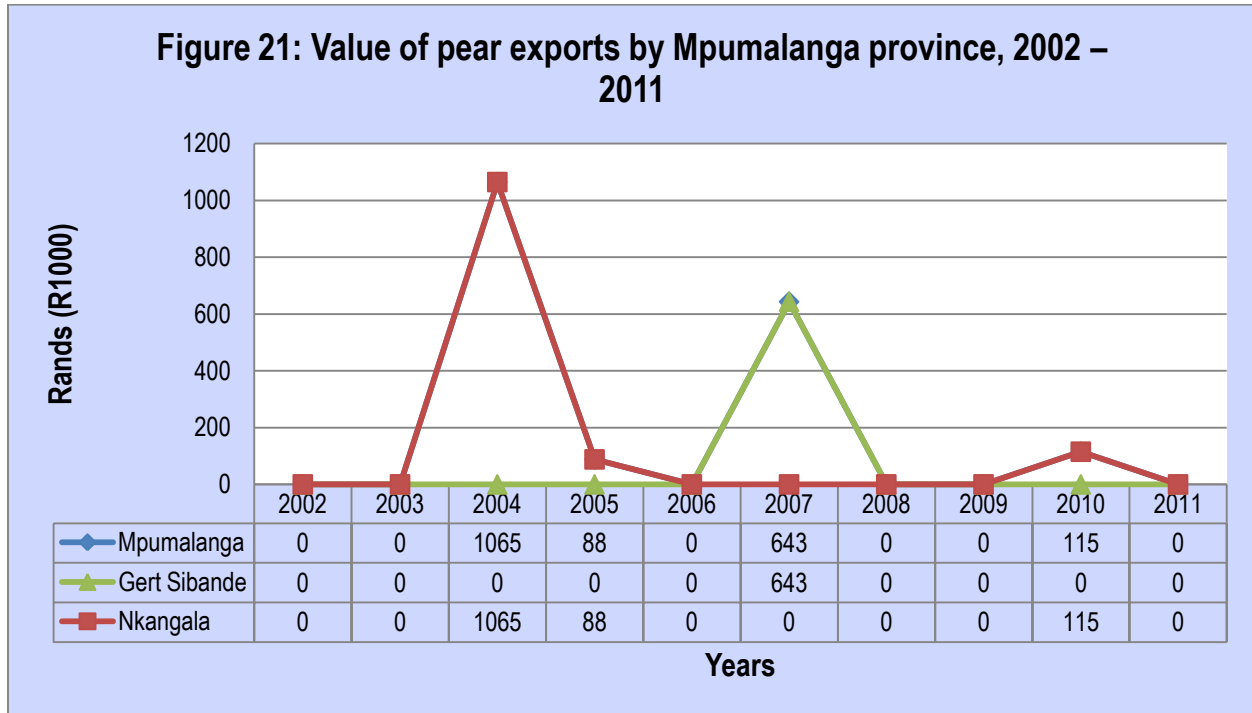
Source: Quantec Easydata

Figure 20 shows the value of pear exports from the North West province.



Source: Quantec Easydata

Pear exports recorded in the North West during 2002 and 2003 were all from the Bojanala district. No exports of pears were recorded from the North West province since then (see Figure 20). Values of pear exports from the Mpumalanga province are presented in Figure 21.



Source: Quantec Easydata

It is clear from Figure 21 that the Mpumalanga province never recorded any pear exports during 2008, 2009 and 2011. All recorded pear exports from Mpumalanga in 2010 were from the Nkangala district.

## 2.4 Share Analysis

Table 2 is an illustration of provincial shares towards national pear exports. The table shows that the Western Cape is the leading exporter of pears in South Africa, accounting for 95.6% of the total South African pear exports in 2011. It was followed by the Eastern Cape at 2.5%, Gauteng at 1.5% and Limpopo province with 0.2%. As explained earlier, this means that the leading export provinces derive their advantage from the fact that the registered exporters are based in their provinces and they also have exit points for pear exports.

**Table 2: Share of provincial pear exports to the total RSA pear exports (%)**

Years Province	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
RSA	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Western Cape	85.6	83.5	86.9	90.5	89.7	94.2	94.7	93.6	97.4	95.6
Eastern Cape	1.6	3.4	3.5	3.9	3.6	3.3	3.8	3.6	0.3	2.5
Northern Cape	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.1	0.1
Free State	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kwazulu-Natal	0.9	0.6	1.9	0.4	0.2	0.5	0.2	0.8	0.4	0.1
North West	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gauteng	11.8	12.4	7.5	5.2	6.4	1.8	1.3	0.9	1.4	1.5
Mpumalanga	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Limpopo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2

Source: Calculated from Quantec Easydata

The accompanying tables (Tables 3 to 11) show shares of the various districts' pear exports to the various provincial pear exports.

**Table 3: Share of district pear exports to the total Western Cape provincial pear exports (%)**

Years District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Western Cape	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
City of Cape Town	54.7	52.4	58.2	59.7	61.2	62.5	55.1	58.0	59.9	60.8
West Coast	11.6	13.7	9.4	7.8	7.8	10.0	10.7	9.4	7.7	8.5
Cape Winelands	23.6	22.2	20.3	21.1	18.6	17.0	24.8	24.1	26.1	24.7
Overberg	9.7	11.4	11.7	11.2	12.4	10.5	9.4	8.3	6.1	6.0
Eden	0.3	0.4	0.4	0.1	0.1	0.0	0.0	0.1	0.2	0.1

Source: Calculated from Quantec Easydata

Table 3 presents the shares of district pear exports to the total Western Cape provincial pear exports for the years 2002 to 2011. The leading pear export districts in the Western Cape in 2011 are the City of Cape Town (60.8%) and the Cape Winelands (24.7%). Together, the two districts accounted for 85.5% of total Western Cape provincial pear exports in 2011.

**Table 4: Share of district pear exports to the total Eastern Cape provincial pear exports (%)**

Years District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Eastern Cape	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cacadu	22.3	11.5	28.2	10.1	2.8	13.1	5.0	2.9	10.6	6.8
Amatole	0.0	1.8	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
O.R.Tambo	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Nelson Mandela	77.7	86.7	67.5	89.8	97.2	86.9	95.0	96.4	89.4	93.2

Source: Calculated from Quantec Easydata

In the Eastern Cape, the leading district in pear exports is the Nelson Mandela district (see Table 4). The district contributed 93.2% to total Eastern Cape provincial pear exports in 2011. The remainder was from the Cacadu (6.8%) district.

**Table 5: Share of district pear exports to the total Mpumalanga provincial pear exports (%)**

Years District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Mpumalanga	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0
Gert Sibande	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Nkangala	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0
Ehlanzeni	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0

Source: Calculated from Quantec Easydata

The shares of district pear exports to the total Mpumalanga provincial pear exports are presented in Table 5. All recorded pear exports in 2010 were from the Nkangala district. No pear exports were recorded in Mpumalanga in 2011.

**Table 6: Share of district pear exports to the total Free State provincial pear exports (%)**

Years District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Free State	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lejweleputswa	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Calculated from Quantec Easydata

The Free State province never recorded any exports of pears since 2003 (see Table 6). Exports recorded in 2003 were from the Lejweleputswa district.

**Table 7: Share of district pear exports to the total Gauteng provincial pear exports (%)**

Years District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Gauteng	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sedibeng	0.0	0.0	0.0	1.0	2.1	2.1	3.4	0.0	0.0	0.0
Metsweding	0.1	0.1	0.0	4.4	0.0	0.0	9.0	0.0	0.0	0.0
West Rand	1.6	3.4	1.5	2.9	0.0	1.9	5.8	8.0	11.1	9.1
Ekurhuleni	8.6	3.9	1.7	4.6	12.9	39.1	4.4	17.5	16.9	5.6
City of Johannesburg	22.7	10.9	16.5	18.7	10.8	56.8	77.4	73.9	68.8	82.6
City of Tshwane	67.0	81.7	80.2	68.4	74.1	0.0	0.0	0.6	3.2	2.5

Source: Calculated from Quantec Easydata

In 2011 the biggest contributor to total Gauteng provincial pear exports was the City of Johannesburg, which contributed over four-fifths (82.6%) (see Table 7). Another consistent contributor is the Ekurhuleni district (5.6% in 2011). The remainder was shared by the West Rand (9.1%) and City of Tshwane (2.5%).

**Table 8: Share of district pear exports to the total North West provincial pear exports (%)**

Years District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
North West	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bojanala	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Calculated from Quantec Easydata

The North West province never reported any exports of pears since 2003 (see Table 8). Recorded exports in 2002 and 2003 were all from the Bojanala district.

**Table 9: Share of district pear exports to total Limpopo provincial pear exports (%)**

Years District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Limpopo	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0
Mopani	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	99.7	98.8
Vhembe	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
Capricorn	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
Waterberg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

Source: Calculated from Quantec Easydata

In 2011, almost all (98.8%) exports of pears recorded in the Limpopo province were from the Mopani district (see Table 9). The remainder (0.2%) was from the Vhembe (1.1%) and Waterberg (0.1%) districts.

**Table 10: Share of district pear exports to the total Northern Cape provincial pear exports (%)**

Years District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Northern Cape	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0
Siyanda	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0

Source: Calculated from Quantec Easydata

All recorded exports of pears in the Northern Cape province in 2011 were from the Siyanda district (see Table 10).

**Table 11: Share of district pear exports to the total KwaZulu Natal provincial pear exports (%)**

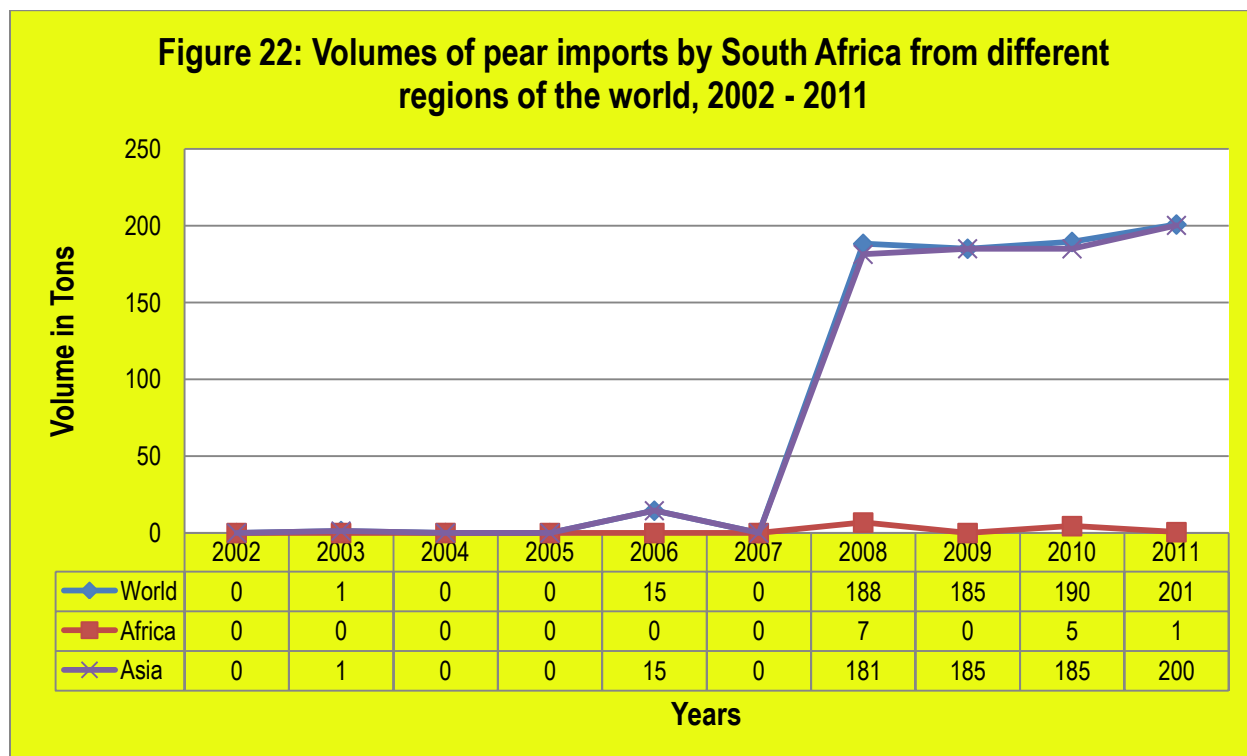
Years District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Kwazulu-Natal	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ugu	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Umgungundlovu	0.0	8.2	0.0	0.0	0.0	6.7	0.0	55.1	28.4	1.6
Uthungulu	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
eThekwini	99.9	91.8	92.7	99.9	100.0	93.3	100.0	44.9	71.6	97.8

Source: Calculated from Quantec Easydata

The shares of district pear exports to the total KwaZulu Natal provincial pear exports are presented in Table 11. In 2011, almost all (97.8%) pear exports from the KwaZulu Natal province were from the eThekwini metropolitan municipality. The Umgungundlovu district accounted for 1.6% while the remaining 0.6% came from the Ugu district.

## 2.5 Imports

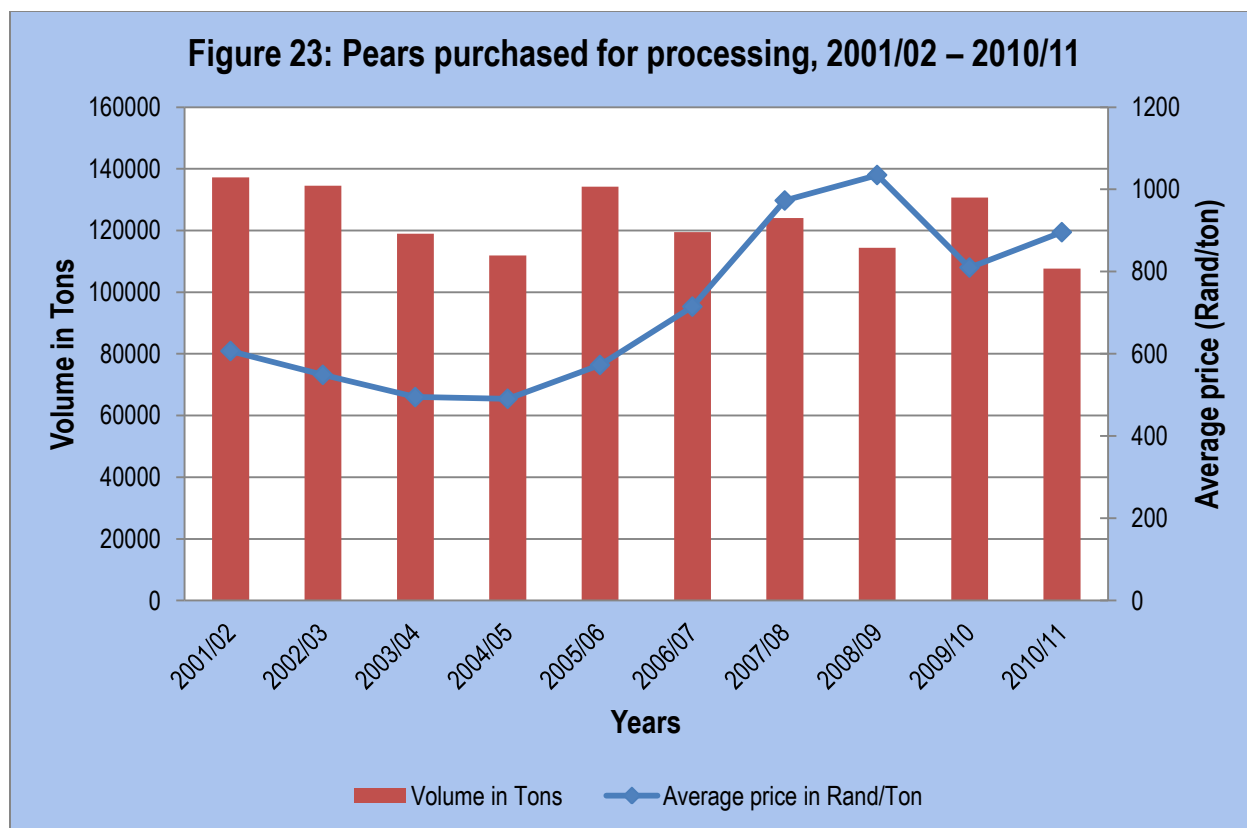
Volumes of pears imported by South Africa from different regions of the world during the last ten years are depicted in Figure 22. South Africa is a net exporter of pears. It is critical to note that although insignificant, imports of pears by South Africa have increased during the last four years, reaching 201 tons in 2011. 99.5% (200 tons) of all South Africa's imports of pears in 2011 came from Asia and the remaining 0.5% (1 ton) came from Africa. All 200 tons of pears imported by South Africa from the Asian continent in 2011 came from China. In 2011 South Africa's imports of pears represented 0.01% of world imports and its ranking in the world was 126.



Source: Quantec Easydata

## 2.6 Processing

The volumes of pears available for processing in South Africa fluctuate yearly, depending on the crop size and the percentages of exportable fruit. In 2010/11, the processing industry absorbed approximately 30% (107 618 tons) of all pear production (359 747 tons). This figure represents direct purchases from growers and quantities of pears purchased from the National Fresh Produce Markets (NFPMs). The volumes processed and prices received during the last ten years are shown in Figure 23. As can be seen from Figure 23, the volumes of pears processed have been declining since 2005/06 while prices have been increasing. Volumes processed increased by 8% between 2008/09 and 2009/10 while prices dropped by 23% during the same period. Volumes processed however declined again by 18% between 2009/10 and 2010/11 seasons while prices realised went up by 11% during the same period.



Source: Statistics and Economic Analysis, DAFF

Pears are consumed fresh, canned, as juice or dried. The juice can also be used in jellies and jams, usually in combination with other fruits or berries. Fermented pear juice is called perry. Pears will ripen faster if placed next to bananas in a fruit bowl. They stay fresh for longer if kept in a fridge. Pears are the least allergic of all fruits. Pear wood is one of the preferred materials in the manufacture of high quality woodwind instruments and furniture. It is also used for wood carving, and as firewood to produce aromatic smoke for smoking meat or tobacco.

### 3. MARKET INTELLIGENCE

#### 3.1 Competitiveness of South African pear 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 2011, South African pear exports represented 6.48% of world exports and its ranking on the world exports was number 7.

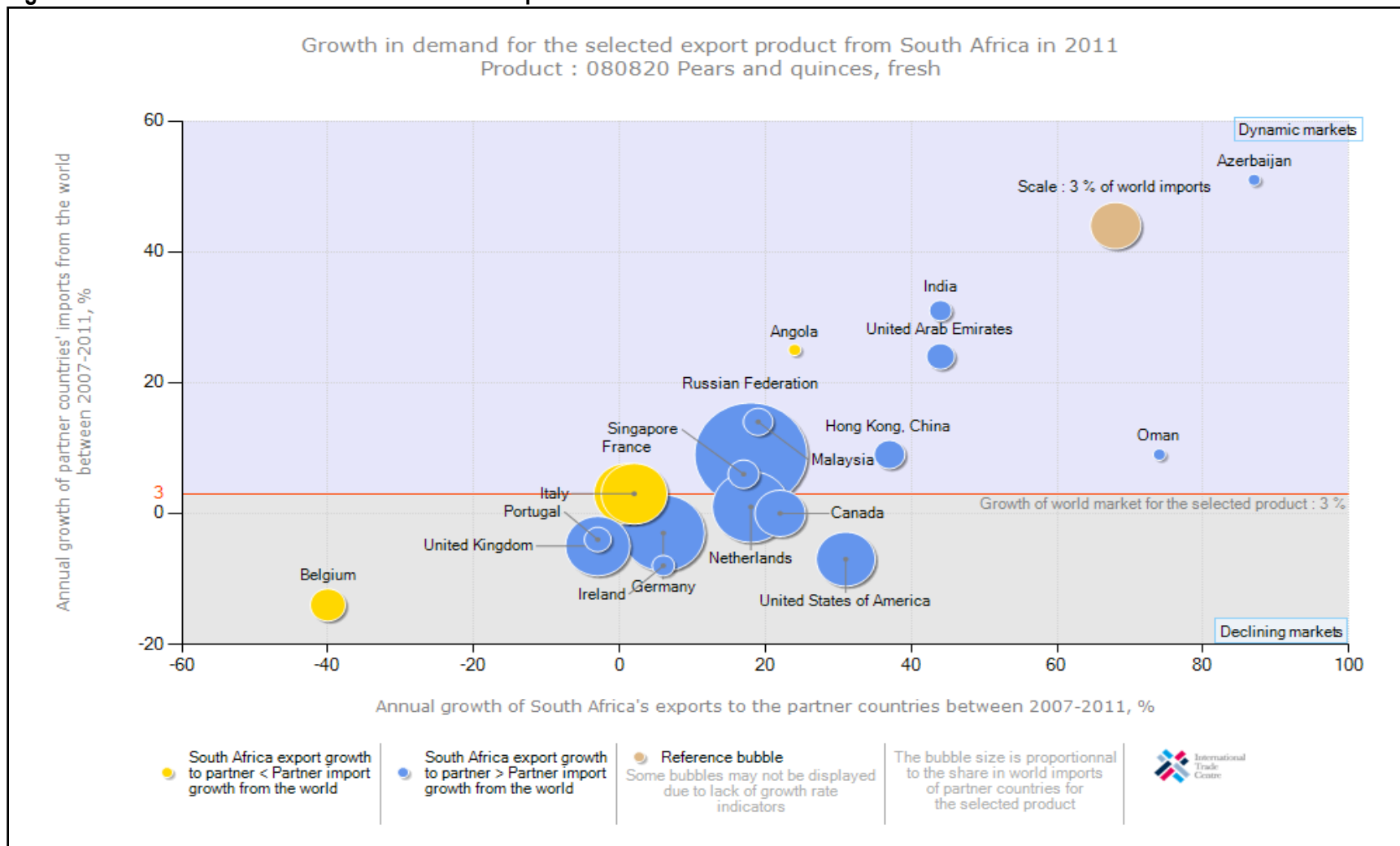
As depicted on Figure 24 below, South African pear exports are growing faster than the world imports in Azerbaijan, Oman, India, United Arab Emirates, Hong Kong, Malaysia, Russia, and Singapore markets. South Africa's performance in those markets can be regarded as gains in dynamic markets.

South African pear exports are growing while the world imports are declining in the United States of America, Canada, Netherlands, Germany, Ireland, Portugal, and the United Kingdom markets. South Africa's performance in those markets can be regarded as gains in declining markets and should be viewed as achievement in adversity.

South African pear exports have declined faster than world imports in the Belgian market. South Africa's performance in this market can be regarded as loss in a declining market.

At the same time, South Africa's pear exports are declining while the world imports are growing in Angola, France and Italy markets. These markets are dynamic and South Africa's performance in these markets should be regarded as an underachievement.

**Figure 24: Growth in demand for the South African pears in 2011**



Source: TradeMap, ITC

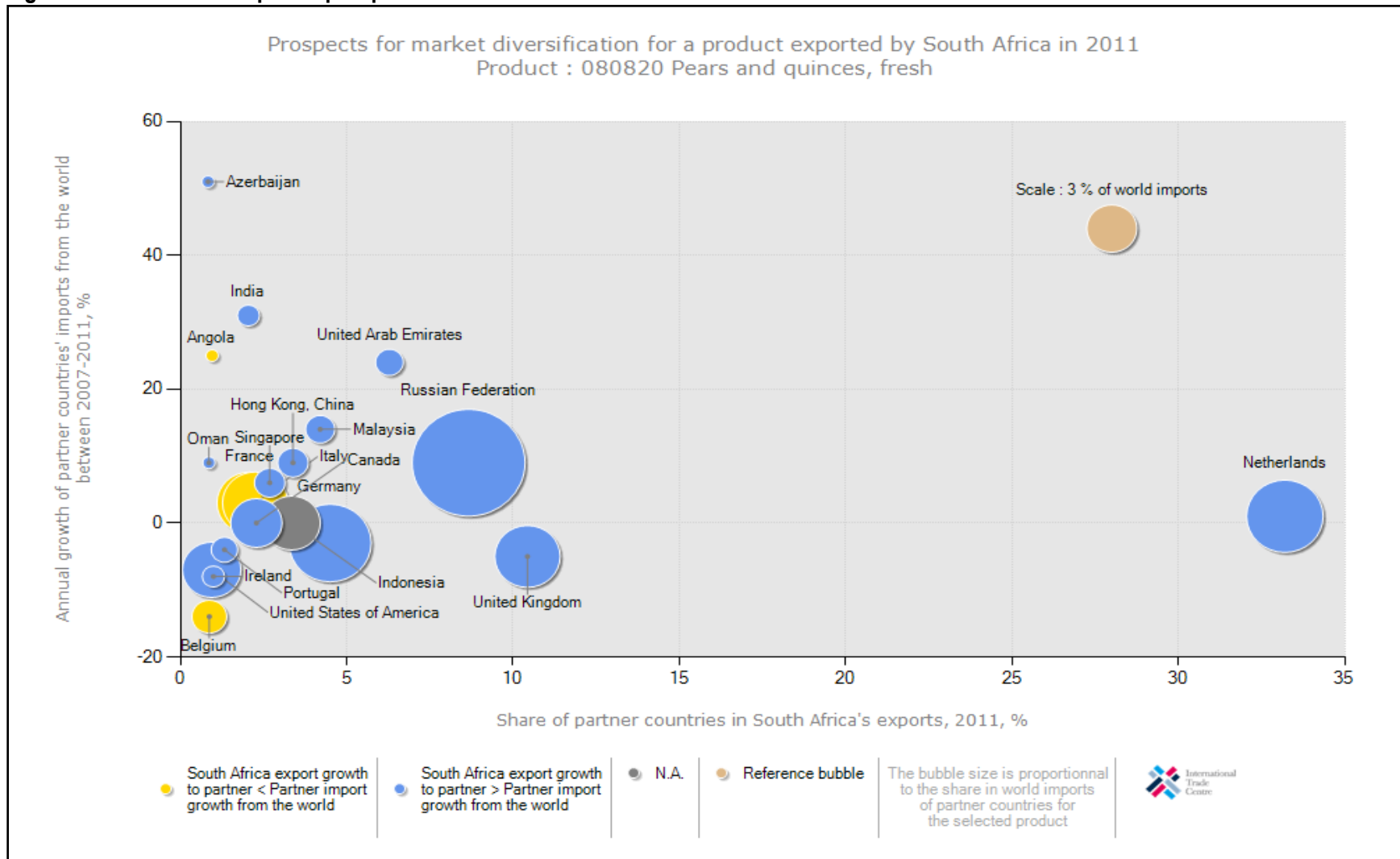
Figure 25 below illustrates prospects for market diversification by South African exporters of pears. The Netherlands, United Kingdom, Russia and United Arab Emirates hold a bigger market share of South African pear exports.

In terms of market size, Russia was the largest pear market in 2011 with just over \$452 million (422 518 tons) worth of pear imports, or roughly 16.5% of the world pear market. Second was Germany with just over \$235 million (170 615 tons) worth of pear imports, or roughly 8.6% market share followed by the Netherlands with just over \$206 million (178 514 tons) worth of pear imports, or roughly 7.5% market share and Brazil with just over \$204 million (210 402 tons) worth of pear imports, or roughly 7.5% market share.

Whilst four countries dominate world pear imports, it is interesting to note that countries like Azerbaijan, together with India and Angola have experienced higher annual growth rates in terms of imports from 2007 – 2011 (See Figure 25). Azerbaijan experienced an annual growth rate of 51%. Second was India with 31% annual growth rate followed Angola at 25%. It is important to note that growth by all these mentioned countries has been from a low base. These countries represent possible lucrative markets for South African pear producers.

It is also important to note that pear imports from the world to countries such as Belgium, United States of America, Ireland, Portugal, United Kingdom, and Germany have declined from 2007 to 2011 and as a result these countries recorded negative growth rates in pear imports.

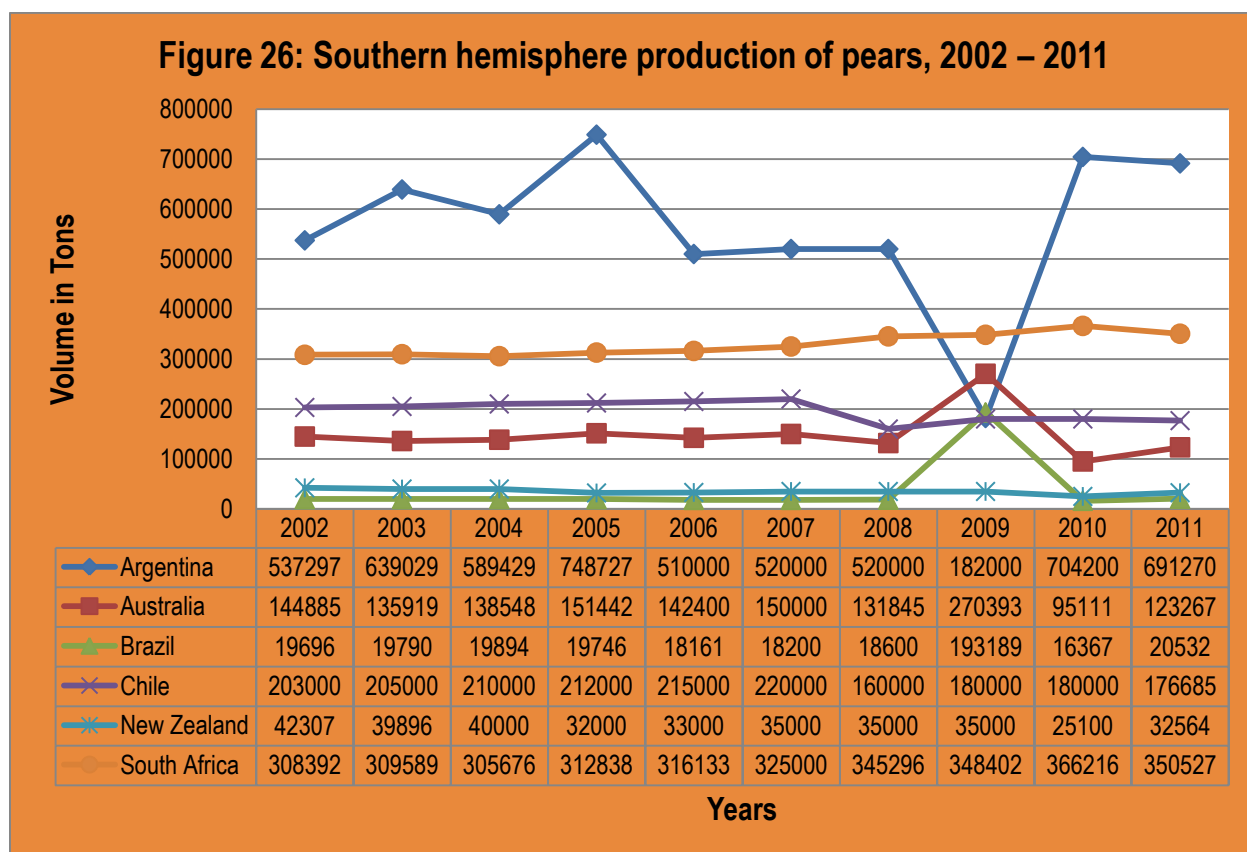
Figure 25: South African pears' prospects for market diversification in 2011



Source: TradeMap, ITC

### 3.2 South Africa vs. Southern hemisphere production

Figure 26 presents southern hemisphere production of pears for the period 2002 to 2011.



Source: FAOSTAT

It is clear that South Africa was the second largest ( 350 527 tons in 2011) producer of pears in the southern hemisphere after Argentina with total production of 691 270 tons of pears during the same year. South Africa was followed by Chile with 176 685 tons The major markets for these countries are the lucrative European and North American markets.

South Africa' main competitors from the southern hemisphere in the EU and the rest of European markets for pear exports are Chile and Argentina. The main impact of the southern hemisphere pears into the European market is that it drives prices down. Market coordination by the southern hemisphere can reduce the pressure on price by controlling the supplies into the European markets. New Zealand, Brazil and Australia produce primarily for local markets and exports very little. Both these countries pose no serious threat in the European markets.

### 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 phyto-sanitary measures, labels, etc). The main markets for fruit (including pear) 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 onto 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 phyto-sanitary standards (SPS), food health and safety issues, food labelling and packaging, organic produce certification, quality assurance and other standards and grades. Table 12 presents tariffs applied by the top-ten export markets (countries) to pears originating from South Africa. It is important to note that in 2011 five of the top ten export markets for South African pears were members of the European Union. Because members of the EU have the same tariff structure, only the EU will appear in Table 12 as opposed to the different member states. They include the Netherlands, United Kingdom, Germany, France, and Italy.

**Table 12: Tariffs applied by various markets to pears originating from South Africa**

COUNTRY	HS CODE	PRODUCT DESCRIPTION	TRADE REGIME	APPLIED TARIFFS	TOTAL AD VALOREM EQUIVALENT TARIFF
European Union	0808301000	Fresh perry pears, in bulk, from 1 August to 31 December	MFN duties (Applied)	0.00%	0.00%
	080830901001	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Of the variety Nashi (Pyrus pyrifolia), Ya (Pyrus bretschneideri). If the declared price is higher than or equal to 51 EUR/100 kg	MFN duties (Applied)	5.00%	5.00%
	080830901002	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Of the variety Nashi (Pyrus pyrifolia), Ya (Pyrus bretschneideri).	MFN duties (Applied)	8.00% + 13.20 \$/Ton	9.14%

COUNTRY	HS CODE	PRODUCT DESCRIPTION	TRADE REGIME	APPLIED TARIFFS	TOTAL AD VALOREM EQUIVALENT TARIFF
		If the declared price is higher than or equal to 50 EUR/100 kg			
	080830901003	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Of the variety Nashi (Pyrus pyrifolia), Ya (Pyrus bretschneideri). If the declared price is higher than or equal to 49 EUR/100 kg	MFN duties (Applied)	8.00% + 26.40 \$/Ton	10.29%
	080830901004	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Of the variety Nashi (Pyrus pyrifolia), Ya (Pyrus bretschneideri). If the declared price is higher than or equal to 47.9 EUR/100 kg	MFN duties (Applied)	8.00% + 40.92 \$/Ton	11.55%
	080830901005	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Of the variety Nashi (Pyrus pyrifolia), Ya (Pyrus bretschneideri). If the declared price is higher than or equal to 46.9 EUR/100 kg	MFN duties (Applied)	8.00% + 54.12 \$/Ton	12.69%
	080830901006	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Of the variety Nashi (Pyrus pyrifolia), Ya (Pyrus bretschneideri). If the declared price is higher than or equal to 0 EUR/100 kg	MFN duties (Applied)	8.00% + 314.16 \$/Ton	35.22%
	080830909001	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Other. If the declared price is higher than or equal to 51 EUR/100 kg	MFN duties (Applied)	5.00%	5.00%
	080830909002	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Other. If the declared price is higher than or equal to 50 EUR/100 kg	MFN duties (Applied)	8.00% + 13.20 \$/Ton	9.14%
	080830909003	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Other. If the declared price is higher than or equal to 49 EUR/100 kg	MFN duties (Applied)	8.00% + 26.40 \$/Ton	10.29%
	080830909004	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Other. If the declared price is higher than or equal to 47.9 EUR/100 kg	MFN duties (Applied)	8.00% + 40.92 \$/Ton	11.55%

COUNTRY	HS CODE	PRODUCT DESCRIPTION	TRADE REGIME	APPLIED TARIFFS	TOTAL AD VALOREM EQUIVALENT TARIFF
	080830909005	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Other. If the declared price is higher than or equal to 46.9 EUR/100 kg	MFN duties (Applied)	8.00% + 54.12 \$/Ton	12.69%
	080830909006	Fresh pears (excl. perry pears in bulk from 1 August to 31 December) : Other. If the declared price is higher than or equal to 0 EUR/100 kg	MFN duties (Applied)	8.00% + 314.16 \$/Ton	35.22%
Russia	0808301000	Apples, pears and quinces, fresh: Pears: No description at level 10	General tariff(MFN)	10.00%	10.00%
	0808309000	Apples, pears and quinces, fresh: Pears: No description at level 10	General tariff(MFN)	10.00%	10.00%
United Arab Emirates	08082010	Apples, pears and quinces, fresh: Pears and quinces: Pears	MFN duties (Applied)	0.00%	0.00%
	08082020	Apples, pears and quinces, fresh: Pears and quinces: Quinces	MFN duties (Applied)	0.00%	0.00%
Malaysia	08082000	Fresh pears and quinces	MFN duties (Applied)	5.00%	5.00%
Hong Kong	08082000	Apples, pears and quinces, fresh: Pears and quinces	MFN duties (Applied)	0.00%	0.00%
Indonesia	0808200000	Apples, pears and quinces, fresh: Pears and quinces	MFN duties (Applied)	5.00%	5.00%
Singapore	08082000	PEARS & QUINCES FRESH (TNE)	MFN duties (Applied)	0.00%	0.00%
Canada	08082010	Fresh pears and quinces : Pears for processing	MFN duties (Applied)	8.00% or 20.43 \$/Ton whichever is the greater	8.00%
	08082021	Fresh pears and quinces : Other pears : Imported during such period specified by order of the Minister of Public Safety and Emergency Preparedness or the President of the Canada Border Services Agency, not exceeding 24 weeks in any 12 month period ending 31st March	MFN duties (Applied)	10.50% or 27.07 \$/Ton whichever is the greater	10.50%
	08082029	Fresh pears and quinces : Other pears : Other	MFN duties (Applied)	0.00%	0.00%
India	08082000	Apples, pears and quinces, fresh: pears and quinces	MFN duties (Applied)	30.00%	30.00%
Angola	08082000	Pêras e marmelos, frescos	MFN duties	10.00%	10.00%

COUNTRY	HS CODE	PRODUCT DESCRIPTION	TRADE REGIME	APPLIED TARIFFS	TOTAL AD VALOREM EQUIVALENT TARIFF
			(Applied)		

Source: Market Access Map, ITC

Tariffs imposed by the European Union on pears originating from South Africa vary depending on the month during which pears are imported, ensuring that tariffs are higher during the European pear season and lower when European pear stocks are low. Asian countries such as the United Arab Emirates, Singapore as well as Hong Kong do not impose any tariff on pears originating from South Africa. These countries present great potential for South African exporters given their ever-increasing disposable incomes, populations, as well as their changing consumption and lifestyle patterns. Russia imposes a 10% tariff on pears originating from South Africa while Malaysia and Indonesia impose a 5% tariff on South African pears. In the Canadian market, South African pears face tariffs of up to 10.5% while Angola and India impose tariffs of 10% and 30% respectively.

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 than 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)

As can be observed from Table 12 above the EU has a seasonal tariff structure with tariffs at their peak during the European peak harvesting seasons (the price entry system). The Union also has 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 pears 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 higher tariffs and other protective mechanisms.

There are other non-tariff barriers, including the phyto-sanitary 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 a 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: phyto-sanitary regulations**

The international standard for phyto-sanitary measures was set up by the International Plant Protection Committee (IPPC) to protect against 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 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 phyto-sanitary risk, identification of any harmful organisms and certification of the validity of any phyto-sanitary 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 phyto-sanitary 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 EUREGAP) 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 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).

### **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 phyto-sanitary 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 (disinfection 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 addition to phyto-sanitary 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, well established commercial operations). One can supply fruits 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 (Global-Gap, etc) and the year round availability of fruit, the planning of long term contractual relationship 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, phyto-sanitary 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**

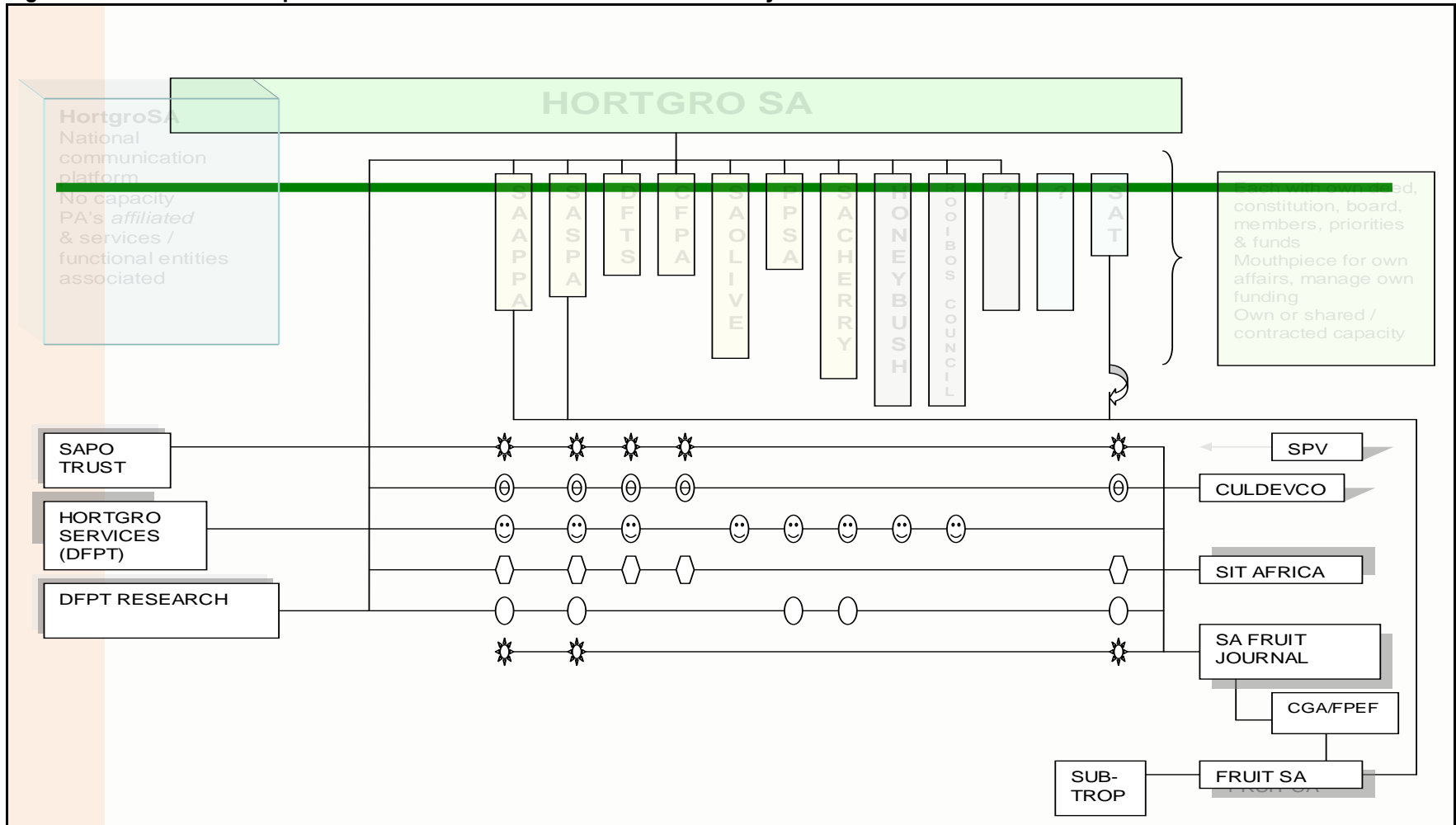
Grower participation and control of their interests in the industry are structured by means of fruit type producer associations (Section 21 companies), as illustrated on Figure 27. The industry consists of Hortgro Services as its mouthpiece. Hortgro Services is responsible for administrative services 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 affiliated members are Rooibos Tea Producers Association, Pomegranate Producers Association, Cape Flora, South African Honeybush Tea Association (SAHTA), South African Bee Industry Organisation, South African Berry Producers 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.

Figure 27: Structure of the producer interest in the deciduous fruit industry



Source: Hortgro

The main association responsible for the pear 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.

## 7.2 Strengths, Weaknesses, Opportunities and Threat analysis

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

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• The industry's export operations and leading players who account for approximately 80% of the overall exports are well established.</li> <li>• An efficient export infrastructure exists and market access has been improved.</li> <li>• The South African pear industry is known for excellent overall quality for fruit (strong reputation in major international markets).</li> <li>• Sound communication mechanisms to majority of industrial participants.</li> <li>• High level of investment in current technology within pack houses and cold chain facilities.</li> <li>• Industry has all traceability systems in place, as required by accreditation protocols.</li> </ul>	<ul style="list-style-type: none"> <li>• Production is largely dependent on climatic conditions which can only be partially manipulated by man through irrigation.</li> <li>• Deteriorating research infrastructure and capacity may limit new technology development in the future.</li> <li>• Saturation of traditional export markets.</li> <li>• Reliance on the UK and EU as main export market.</li> <li>• Relatively high input and capital costs.</li> <li>• An element of fragmentation in the industry.</li> <li>• Lengthy supply chain beyond the pack house.</li> <li>• Lack of industry control on efficiency and productivity in supply chain beyond farm gate and pack house door.</li> <li>• Poor skills and knowledge of the new entrants.</li> <li>• Delays due to degradation of the supporting infrastructure within the supply chain (handling facilities at ports, roads and energy supply).</li> </ul>

Threats	Opportunities
<ul style="list-style-type: none"> <li>• Increased competition from the Southern Hemisphere counterparts like Chile, Brazil, Argentina and Australia.</li> <li>• Oversupply of fruit into established export markets.</li> <li>• Availability and cost of irrigation water.</li> <li>• Impact of climate change especially in the Western Cape.</li> <li>• Inflation rate with regard to cost of labour and farming and also packing prerequisites.</li> <li>• Currency variability.</li> </ul>	<ul style="list-style-type: none"> <li>• Market access initiatives to the Middle East, Asia (India, Indonesia) and China.</li> <li>• Increasing demand for fresh apples in Africa.</li> <li>• Potential for increased local market consumption.</li> </ul>

### **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 pears 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 and environmentally friendly production methods. Combined with this many consumers are up in arms about GMO's.

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 pears 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 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. PEAR SUPPLY VALUE CHAIN**

The supply value chain is a complex linkage of various production and operational role-players (see Figure 28). 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 pear 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 pear 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 pear 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 pears sales are at predetermined prices and are typically individually or in small packages.

### **8.5 Processors**

As explained earlier, the processing of pears consists of canning, drying and juice manufacturing. There is also a set of further processors not captured in the group above. These entities use pears (and pear 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 pears 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 phyto-sanitary 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:

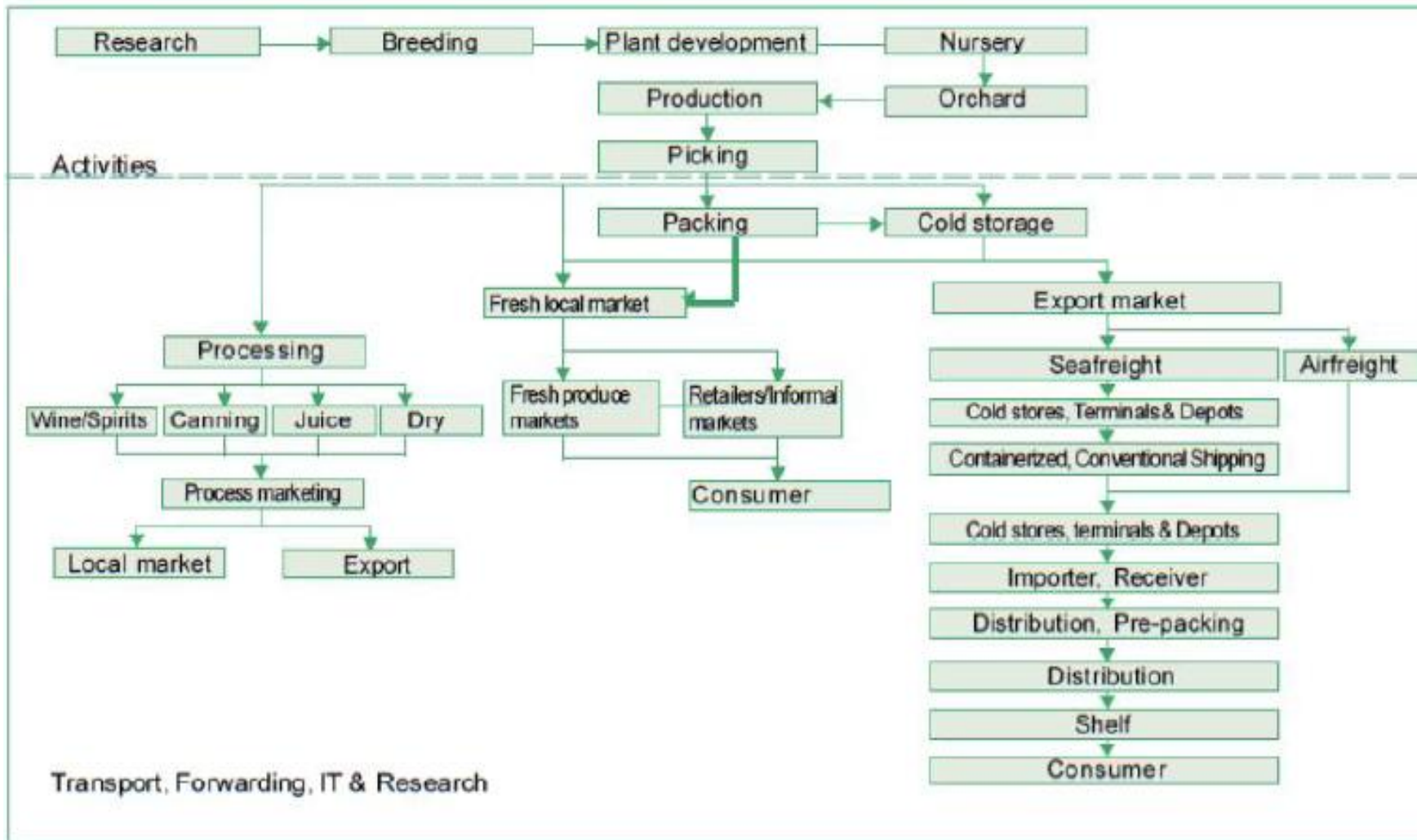
- Packed volumes
  - ✓ Inspected and approved for export
  - ✓ Inspected and rejected for export
- Product quality
  - ✓ Reasons for rejection
- Shipped volumes
  - ✓ This information is available on a product and destination region level
- Cold chain information
  - ✓ Vessel carrying instructions (temperature 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 28: The deciduous fruit and table grape supply value chain



Source: OABS

## 9. ACKNOWLEDGEMENTS

The following industries/organizations are acknowledged.

### 9.1 South African Apple and Pear Producers Association

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### 9.2 National Department of Agriculture, Forestry and Fisheries

**Directorate: Statistics and Economic Services**  
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0001  
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Fax (012) 319 8031  
[www.daff.gov.za](http://www.daff.gov.za)

### 9.3 Optimal Agricultural Business Systems (OABS)

P. O. Box 163  
Paarl  
7622  
Tel: (021) 890 2953  
Fax: (021) 890 2915  
[www.oabs.co.za](http://www.oabs.co.za)

### 9.4 National Agricultural Marketing Council (NAMC)

Private Bag X 935  
Pretoria  
0001  
Tel (012) 341 1115  
Fax: (086) 626 4769  
[www.namc.co.za](http://www.namc.co.za)

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