

# A PROFILE OF THE SOUTH AFRICAN PINEAPPLE MARKET VALUE CHAIN

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2020



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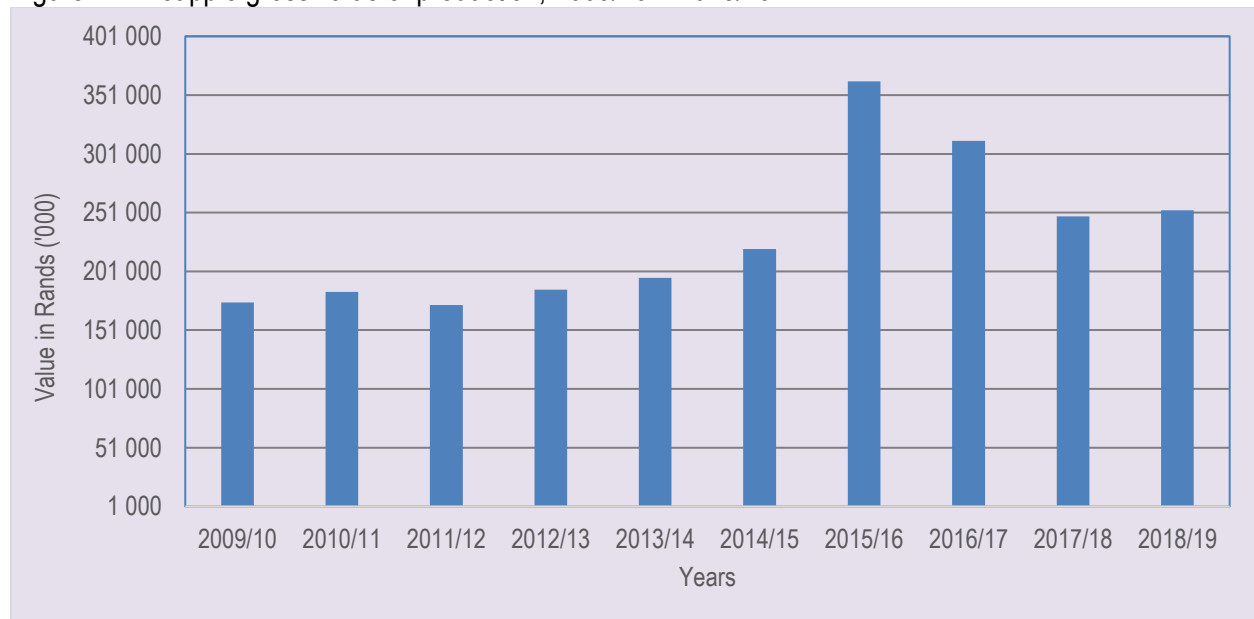
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## 1. DESCRIPTION OF THE PRODUCT AND INDUSTRY

The pineapple (*Ananascomosus*) is an edible tropical plant and berry/fruit (multiple), native to Uruguay, Brazil and Paraguay. It is a medium tall (1–1.5 m) herbaceous perennial plant with 30 or more trough-shaped and pointed leaves 30–100 cm long, surrounding a thick stem. The pineapple is an example of a multiple fruit: multiple, spirally-arranged flowers along the axis each produce a fleshy fruit that becomes pressed against the fruits of adjacent flowers, forming what appears to be a single fleshy fruit. The leaves of the cultivar 'Smooth Cayenne' mostly lack spines except at the leaf tip, but the cultivars 'Spanish' and 'Queen' have large spines along the leaf margins. There are two main varieties of pineapples commercially grown in South Africa, the smooth leaf Cayenne and the Queen. The Cayenne is the largest crop and is mostly suitable for canning because it is larger and has a lot of juice.

Pineapples are one of the most commercially important plants grown in South Africa, taking into consideration their foreign exchange earnings, employment creation and linkages with support institutions. The pineapple industry is highly linked to the processing industry with approximately 75% of pineapples being absorbed by the processing market annually. The industry operates in a deregulated environment where prices are determined by the market forces of demand and supply. Gross value of production for pineapples for the period 2009/10 to 2018/19 is shown in Figure 1.

Figure 1: Pineapple gross value of production, 2009/10 – 2018/19



Source: Statistics and Economic Analysis, DAFF

The gross value of production (GVP) for the industry was approximately R253 million in 2018/19. This represents a 2.2% increase in gross value from the 2018/19 season. The GVP for the industry has been increasing since the 2010/11 production season until 2015/16, after which a decline in gross value was recorded between 2015/16 and 2017/18. The last decade saw a peak in the gross value of pineapple production during the 2015/16 season at R362 million. What is interesting is that during the last decade total gross value has been increasing while total tonnages produced have been declining (see Figure 2). This may

be the result of, among other things, increased demand, fluctuations in the exchange rates, improved prices resulting from lower production volumes, as well as the effects of inflation.

### 1.1 Pineapple production areas

The main producing areas of pineapples in South Africa are Northern Kwazulu Natal (Hluhluwe district) and the Eastern Cape (Bathurst area). The Eastern Cape generally account for over three quarters (estimated at 66%) of the pineapples produced in South Africa while Kwazulu Natal is estimated to account for 33% of the pineapples produced in South Africa. As pineapples are indigenous to the tropics the crop requires areas where the climate is warm, humid and free from extreme temperatures (25°C being optimal).

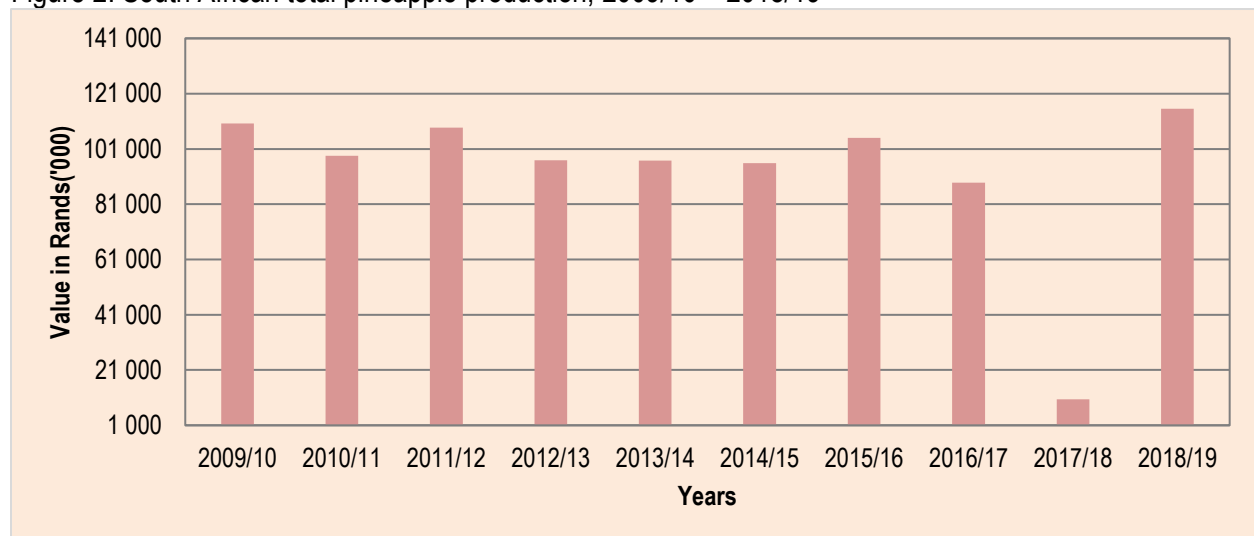
### 1.2 Production

In determining which pineapple cultivar to plant, a producer should consider the following:

- The global demand and the demand in specific markets,
- His or her (the producer's) current infrastructure in respect of being able to cope with pruning, spraying, picking, cold storage and packing of a particular cultivar, and
- The availability of natural resources like water, soil types, cold units and slopes.
- The land should be prepared so as to control water runoff and thereby limit soil erosion, facilitate good drainage and prevent root and heart rot, facilitate uniform distribution of sunlight to all plants, and have roads allowing machinery easy access to the pineapple plants to expedite spraying and harvesting.

Figure 2 shows total production of pineapples for the period 2009/10 to 2018/19.

Figure 2: South African total pineapple production, 2009/10 – 2018/19



Source: Statistics and Economic Analysis, DAFF

A total of 115 507 tons of pineapples were produced in South Africa in 2018/19 (See Figure 2). Pineapple production has been stable over the past decade. Production increased by 1007% during the 2018/19 season when compared with the 2017/18 volume. The lack of growth the past decade in production has previously

been associated with the cadmium contaminated zinc sulphate fertilizer that was used by the pineapple producers. A multi-national fertilizer distributor operating in the Eastern Cape Province sourced low cost zinc sulphate from China. This zinc sulphate contained high concentrations of cadmium and lead. The resulting effect on crops dosed with these fertilizers was contaminated fruit which has damaged the reputation for South African fruit globally. The continuous decline may be an indication that the industry is still struggling to pull itself out of the crisis. The increase experienced in 2018/19 might be due to increased production area for pineapples in the major production regions in response to demand for pineapples for health reasons.

### **1.3 Employment**

Full-time labourers employed on pineapple farms are primarily employed for a number of specialist tasks such as pruning and trellising 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 house, irrigation management, scouting for insects and diseases on a seasonal basis, tractor or forklift driving and grafting. It is estimated that the pineapple industry employs approximately 1 400 workers in the canneries or processors. An additional 3 500 workers are employed in the farms and ancillary industries. It is further estimated that approximately 30 000 people are dependent on the industry for their livelihood.

The Minimum Wage Act 9 of 2019 came into effect in January 2019. The Act applies to all workers and their employers, except members of the South African National Defence Force, the National Intelligence Agency, the South African Secret Service, and volunteers who perform work for another person without remuneration. Under this Act, farm workers are entitled to a minimum wage of R18.69 per hour. The Act establishes the National Minimum Wage Commission which is tasked to review the national minimum and wage make recommendations to the Minister on any adjustment of the national minimum wage.

### **1.4 Pineapple varieties**

The main pineapple varieties produced in South Africa are Smooth Cayenne (mainly in the Eastern Cape) for canning and the Queen (mainly in Hluhluwe) for the local and export fresh fruit market. The new MD2 variety is planted in small quantities in both regions and is aimed at fresh fruit markets as well as ready to eat products for export. Ninety percent of the fresh pineapples sold in South Africa are the Queen variety. The Smooth Cayenne is used for both canning (75% of which is exported) and as fresh fruit and because production of the Queen is relatively more costly, fresh consumption is shifting towards the Smooth Cayenne.

The Cayenne plant is the larger of the two varieties and the leaves are smooth, while the leaves of the Queen have thorns. The Cayenne fruit can reach a mass of 4kg, is very juicy and has a softer tissue with a pale yellow colour. The Queen fruit is smaller (up to 1.5kg) but has a crisp and bright yellow flesh and is less acid than Cayenne. The MD2 has a cylindrical fruit with an attractive yellow skin, the flesh is firm and it has a higher sugar and Vitamin C content than the Cayenne variety.

## **2. MARKET STRUCTURE**

Between 70% and 80% of the annual pineapple crop is normally destined for the processing market. The proportion that went to the processing market during the 2016/17 marketing season was approximately 75% (87 181 tons) of the total crop (115 507 tons). As illustrated in Figure 3, pineapple production in South Africa is primarily aimed at both the processing and local markets. Fresh fruit export market is not significant, only

averaging 2 277 tons but the industry holds great potential. The amounts of pineapples sold in the local markets and those destined for exports have been fairly stable between the 2009/10 and 2018/19 production seasons.

Figure 3: Pineapple crop distribution, 2009/10 – 2018/19



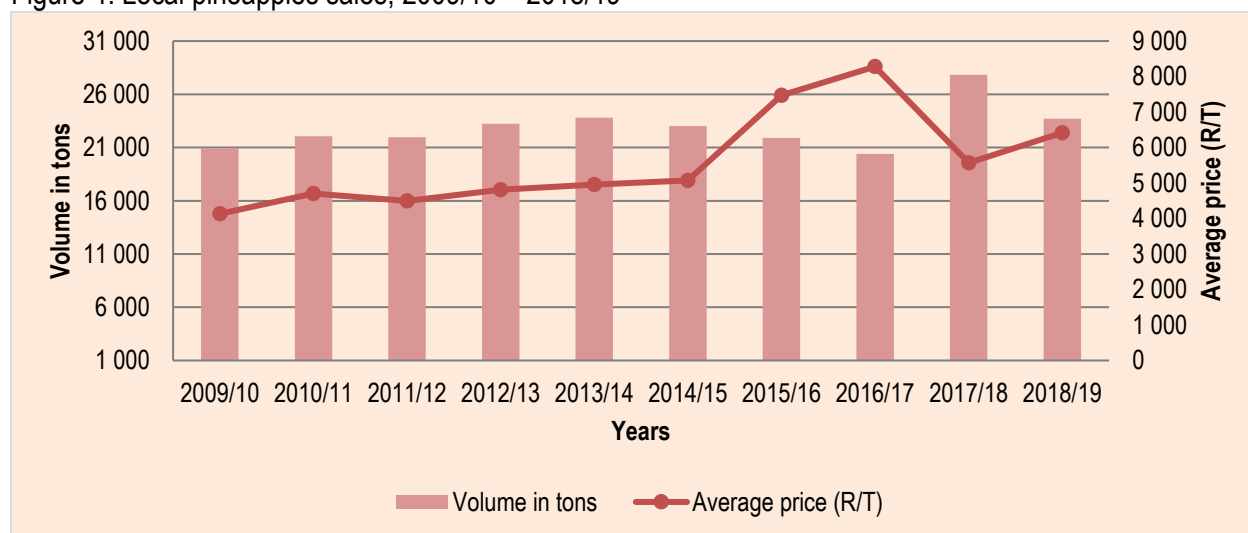
Source: Statistics and Economic Analysis, DAFF

## 2.1 Domestic markets and prices

Local pineapple market volumes and general price trends from 2009/10 to 2018/19 are presented in Figure 4. As illustrated in Figure 4, volumes of pineapples sold at the local markets have been relatively stable over the past decade, remaining below 30 000 tons and averaging 22 882 tons. Between 2014/15 and 2016/17, local sales has been on downward trend, recording a 11% decrease. Sales of pineapples sold in the local markets decreased by 36% between 2016/17 and 2017/18. However, in 2018/19 season local sales dropped by 15% from the 2017/18 peak. It is worth noting that over 90% of the pineapples sold in the local markets are of the Queen cultivar, which is specifically suited for fresh consumption.

While the amount of pineapples sold in the sold markets has been fairly stable during the past ten years, prices received have been increasing with the exception of the 2017/18 season. The average price of pineapples sold in the local markets in 2018/19 was R6 420 per ton. This was 15% higher than the average price during the previous year (2017/18) and 55% higher than the average price five years ago (2009/10).

Figure 4: Local pineapples sales, 2009/10 – 2018/19



Source: Statistics and Economic Analysis, DAFF

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

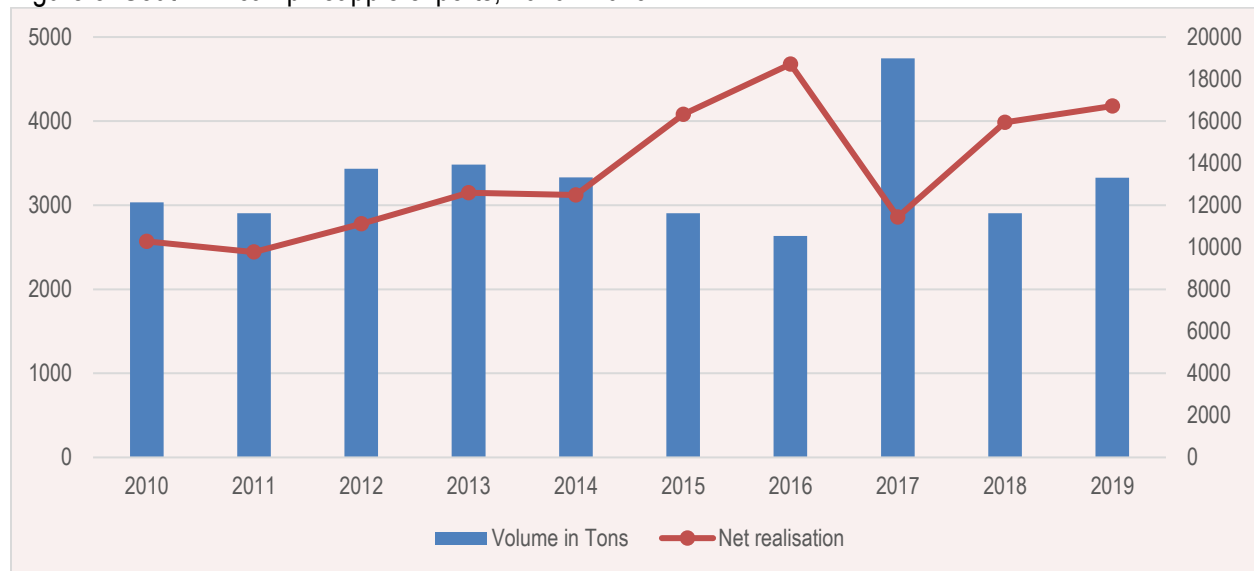
## 2.2 Pineapple exports

South Africa is a relatively small pineapple grower in terms of global hectares. Furthermore, the country is not a major volume exporter in global terms. Unlike the fresh pineapple export market, South Africa is highly competitive in the processed pineapple products particularly pineapple juice. South Africa's pineapple exports for the period 2010 to 2019 are presented in Figure 5.

As can be seen in Figure 5, South Africa's pineapple export volumes have been fluctuating between over the past decade. This fluctuating trend was followed by relatively stable export quantities between 2012 and 2014. During the period under review, pineapple exports peaked at 4 748 tons in 2017. The volume exported declined significantly from 4 748 tons in 2017 to 2 903 tons in 2018, a decrease of 39%. In 2019, pineapple increased by 15% compared to 2018 season. Since 2010, prices realised in exports have however been on the rise with the exception of the 2016 season, indicating that the pineapple market is strongly driven by market forces. Between 2014 and 2016, as exports volumes were declining, prices realised in exports increased by 50%. During 2016 season, prices went further up from R16 317/Ton to R18 709/Ton. In 2017, in response to increased quantities, prices of pineapples dropped by 39%. After the 2017 drop in prices, net realisation increased significantly between 2018 and 2019. As previously indicated, South Africa is not amongst the leading exporters of fresh pineapples. South African pineapples are primarily sold on the domestic markets for processing. This is mainly due to South Africa's location and its subtropical climate, which makes it difficult to compete against South East Asian pineapple producing countries on world markets. This limits the export potential of the South African fresh pineapples.



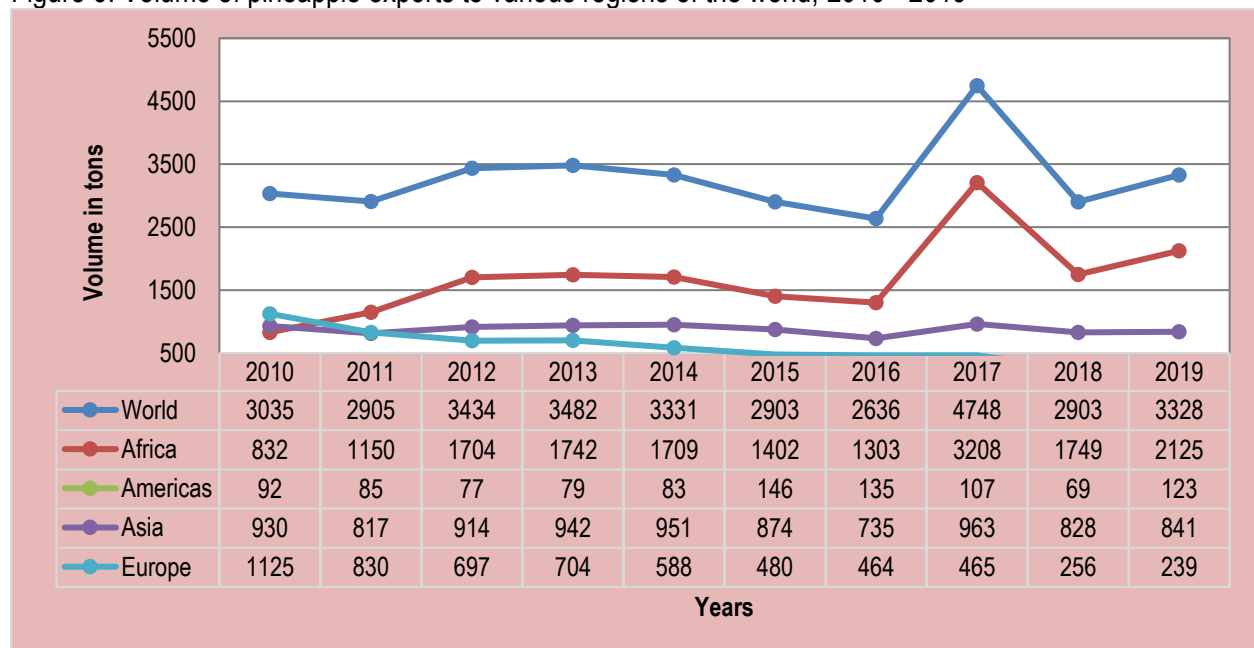
Figure 5: South African pineapple exports, 2010 - 2019



Source: Quantec Easydata

Exports of South African pineapples to the various regions of the world over the past decade are presented in Figure 6.

Figure 6: Volume of pineapple exports to various regions of the world, 2010 - 2019



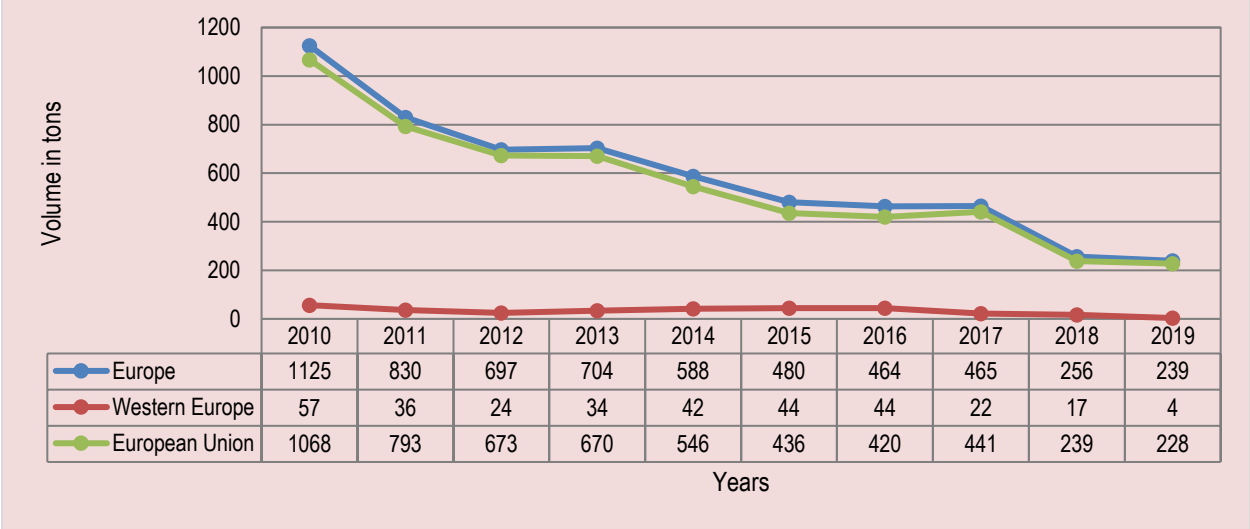
Source: Quantec Easydata

It is clear from Figure 6 that during the past four years, most of South Africa's exports of pineapples went to the African and Asian markets. In 2019, exports to Africa accounted for 64% (2 125 tons) of total South African pineapple exports (3 328 tons) while those to Asia accounted for 25%. During the past decade, South Africa's exports of pineapples to Africa increased from 832 tons in 2010 to 2125 tons in 2019, an increase of 155%. Exports to Asia have been stable during the period under review, dropping slightly from 930 tons in

2010 to 841 tons in 2019, an decrease of 10%. Export volumes to Americas have been fairly stable over the past ten years, while European exports have been in the decline in the past ten years with exports to Europe decreasing by 79% between 2010 and 2019. In 2010, Europe was the main market for South African pineapple exports, which was before Africa overtook Europe as the number one market in 2011. Due to their relative importance to exports of South African pineapples, the African, European and Asian markets will be further explored in the subsections that follow.

Volumes of South African exports of pineapples to the various regions of Europe are presented in Figure 7.

Figure 7: Volume of pineapple exports to various regions in Europe, 2010 - 2019

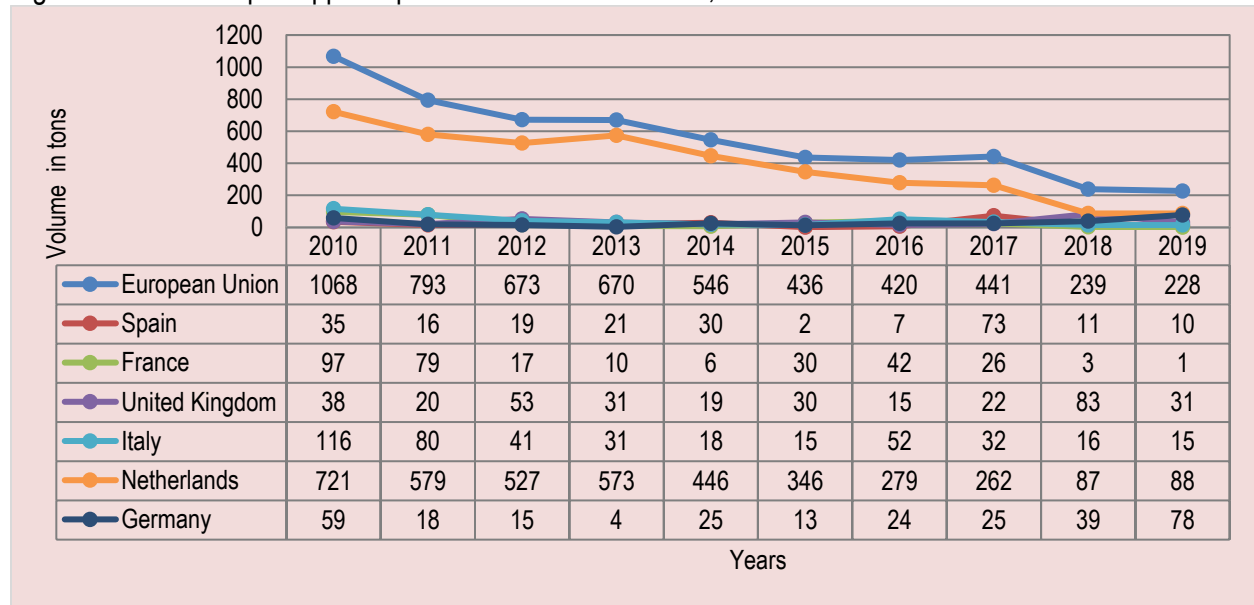


Source: Quantec Easydata

It is evident from Figure 7 that during the last ten years the bulk of South African pineapple exports that went to Europe were destined for the European Union. In 2019, almost all (95%) South African pineapple exports to Europe were absorbed by the European Union, with the remaining 5% going to Western Europe. Exports to Europe experienced a 79% decline between 2010 and 2019. The European Union market is further disaggregated in Figure 8.

It is critical to note that only those EU member states whose imports of pineapples from South Africa were at least 100 tons in at least one year during the period under review are shown in Figure 8. It can be observed from Figure 8 that the major importers of South African pineapples in the European Union are the Netherlands, Italy, France, Germany, Spain and the United Kingdom. In 2019, the Netherlands, Germany, United Kingdom, Italy and Spain accounted for 38%, 34%, 14% and 6% respectively, of total South African pineapple exports to the European Union.

Figure 8: Volume of pineapple exports to EU member states, 2010 - 2019

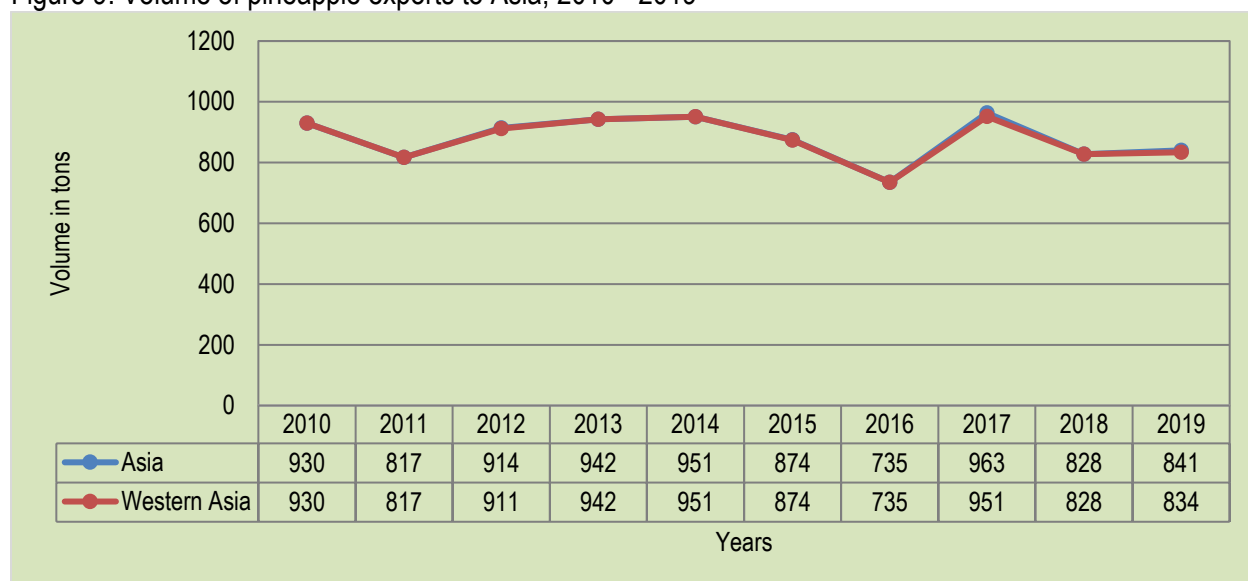


Source: Quantec Easydata

The 79% decrease in South African pineapple exports to the European Union between 2010 and 2019, was mainly caused by major decreases in pineapple imports in the major EU member states listed above except the Netherlands, whose imports from South Africa remained relatively stable. Pineapple exports to the EU recorded a 5% increase between 2018 and 2019 season.

Figure 9 presents volumes of South African exports of pineapples to the different regions of Asia. The most important Asian region in terms of South African pineapple exports is Western Asia. All South African pineapple exported to Asia since 2010 were absorbed by the Western Asia market. Overall, South African exports of pineapples to Asia decreased from 930 tons in 2010 to 941 tons in 2019, a decrease of 10%. Generally, exports to Asia have been stable over the period under review. Exports to Asia increased by 1% between 2018 and 2019.

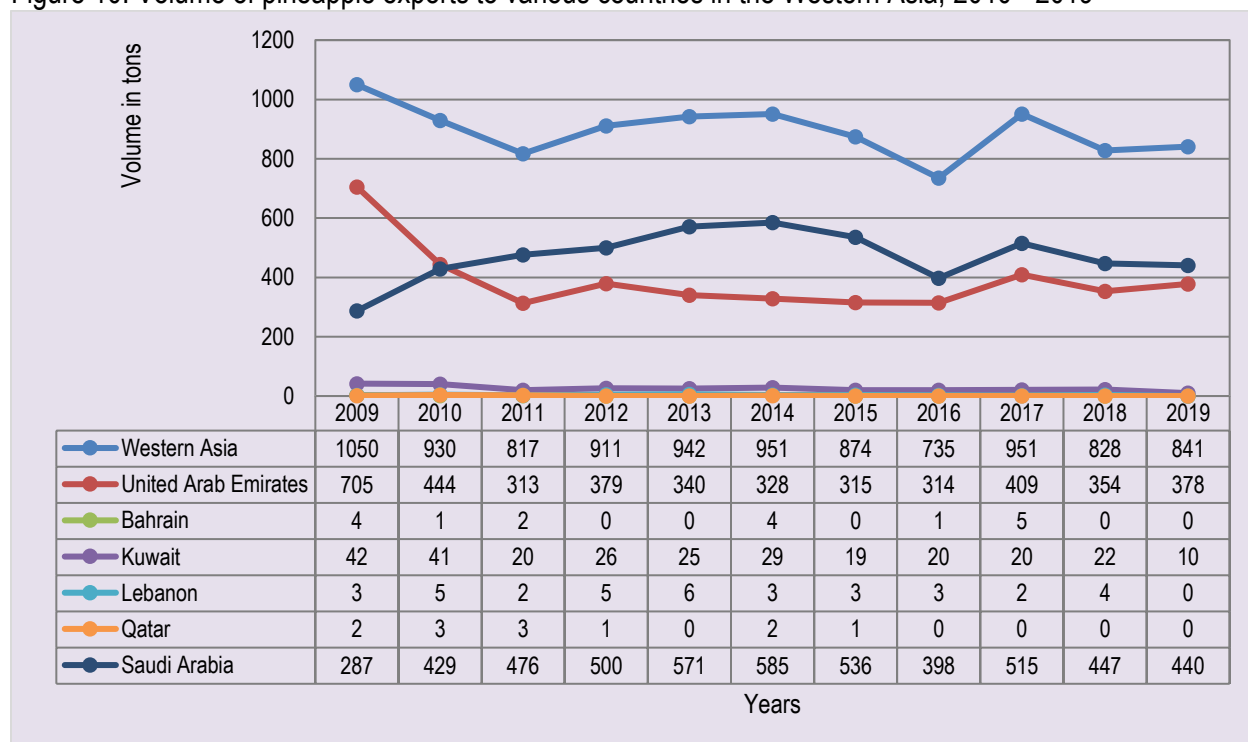
Figure 9: Volume of pineapple exports to Asia, 2010 - 2019



Source: Quantec Easydata

Volumes of South Africa pineapple exports to the different countries in Western Asia during the last decade are presented in Figure 10.

Figure 10: Volume of pineapple exports to various countries in the Western Asia, 2010 - 2019



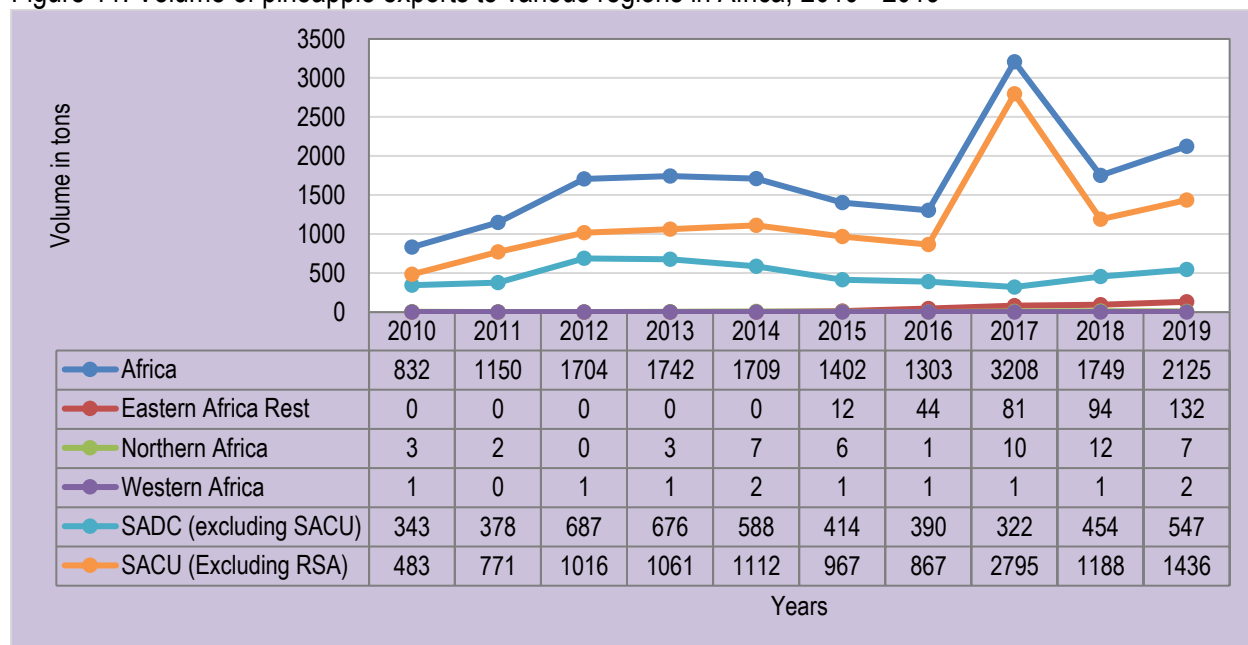
Source: Quantec Easydata

The leading importers of South African pineapples in Western Asia are the United Arab Emirates (UAE) and Saudi Arabia. In 2019, the United Arab Emirates imported 378 tons of pineapples worth over R55 million from

South Africa while Saudi Arabia imported 414 tons at a value of over R5.1 million. Between 2018 and 2019 South African exports of pineapples to the UAE increased by 7% percent while those to Saudi Arabia decreased by 1%.

South African pineapple exports to the different regions of Africa during the last decade are presented in Figure 11.

Figure 11: Volume of pineapple exports to various regions in Africa, 2010 - 2019

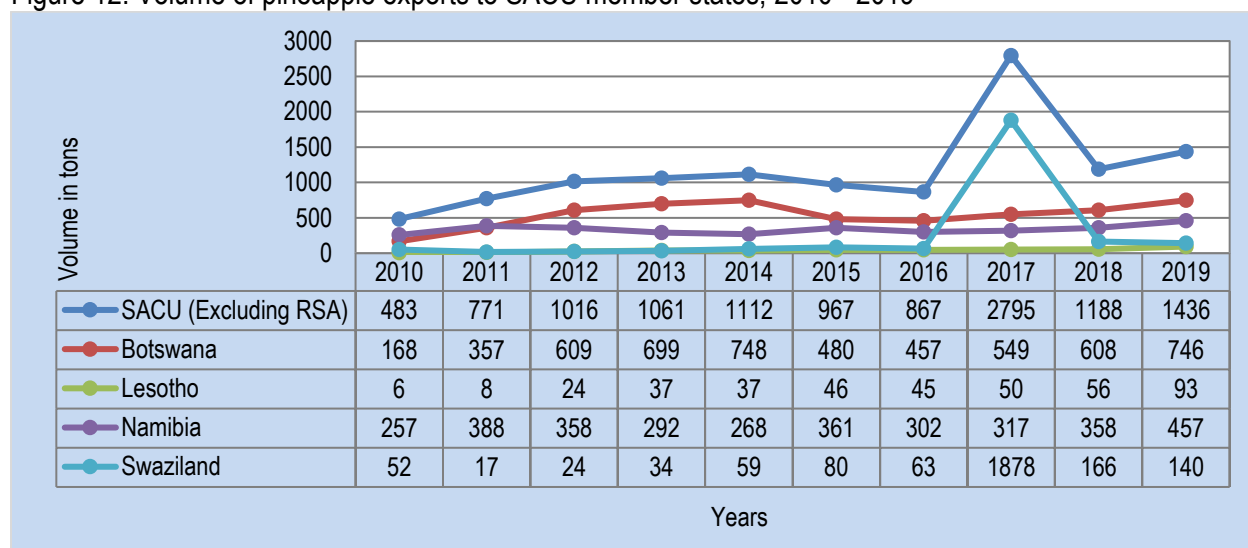


Source: Quantec Easydata

The volumes of pineapples from South Africa mainly to Africa are mostly destined for South Africa Custom Union (SACU) and Southern African Development Community (SADC). SACU is the world’s oldest union comprising Botswana, Lesotho, Namibia, Swaziland and South Africa. In 2019, the bloc accounted for more than two-third of the South African pineapple exports to African continent. Another important importer is the SADC, absorbing 26% of the South African pineapples destined to African continent in 2019. It is clear from the figure above that SACU was the main market in 2010 during the past decade. The SACU (excluding South Africa) market is further disaggregated in Figure 12.

In SACU, The main pineapples markets in the region are Botswana and Namibia. Lesotho and Swaziland are also importers but to a lesser extent. In 2019, 68% of South African pineapple destined for SACU, went to Botswana. Between 2018 and 2019, South African exports to Botswana increased by 23%. Namibia is the second most important market in SACU for South African pineapples, accounting for 32% in 2019. The region presents a good opportunity for South African pineapple growers mainly because of distance and tariff advantage.

Figure 12: Volume of pineapple exports to SACU member states, 2010 - 2019

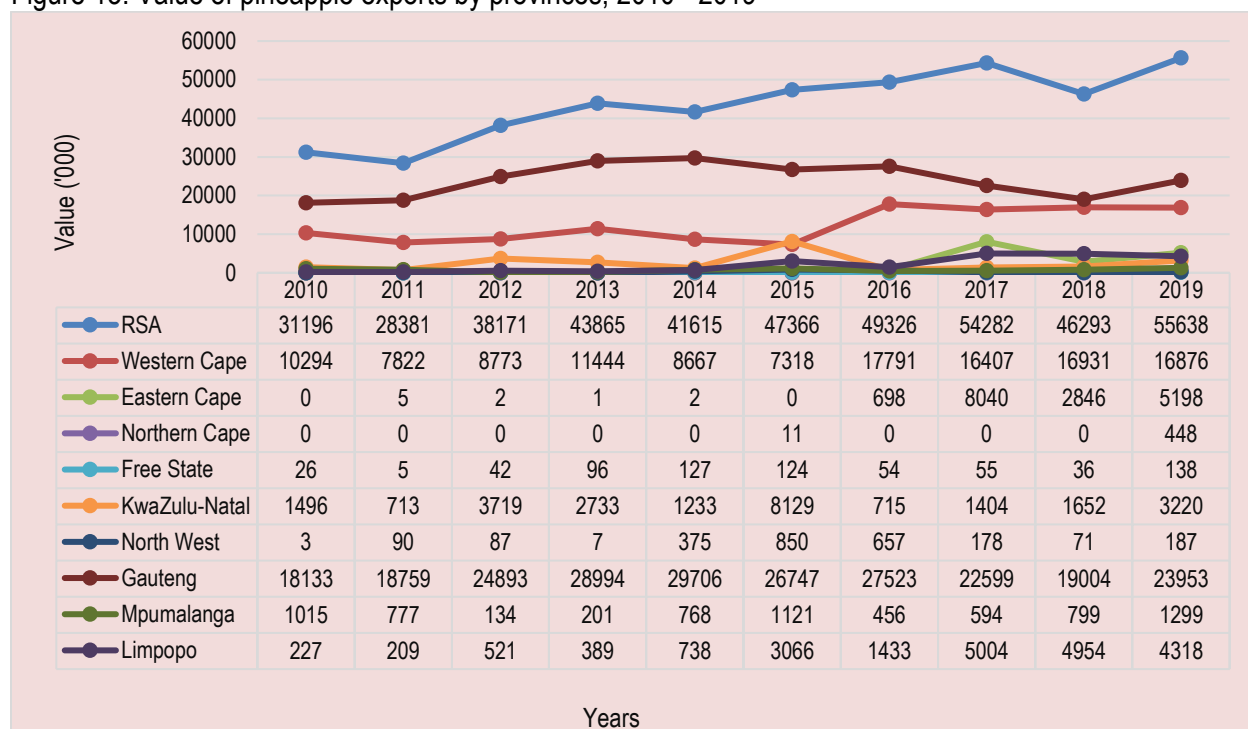


Source: Quantec Easydata

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

A review of provincial level trade data presents an interesting but somewhat misleading view of the source of pineapples destined for the export markets. Firstly, the fact that approximately 73.4% of pineapples exported in 2019 were from Gauteng (43%) and Western Cape (30%) provinces does not imply that the pineapples were produced there but that the registered exporters were based in those provinces. Secondly, a province like the Western Cape serves as exit point for pineapple exports through the Cape Town harbour. Figure 13 below depicts the value of pineapple exports from each province of South Africa for the period 2010 to 2019.

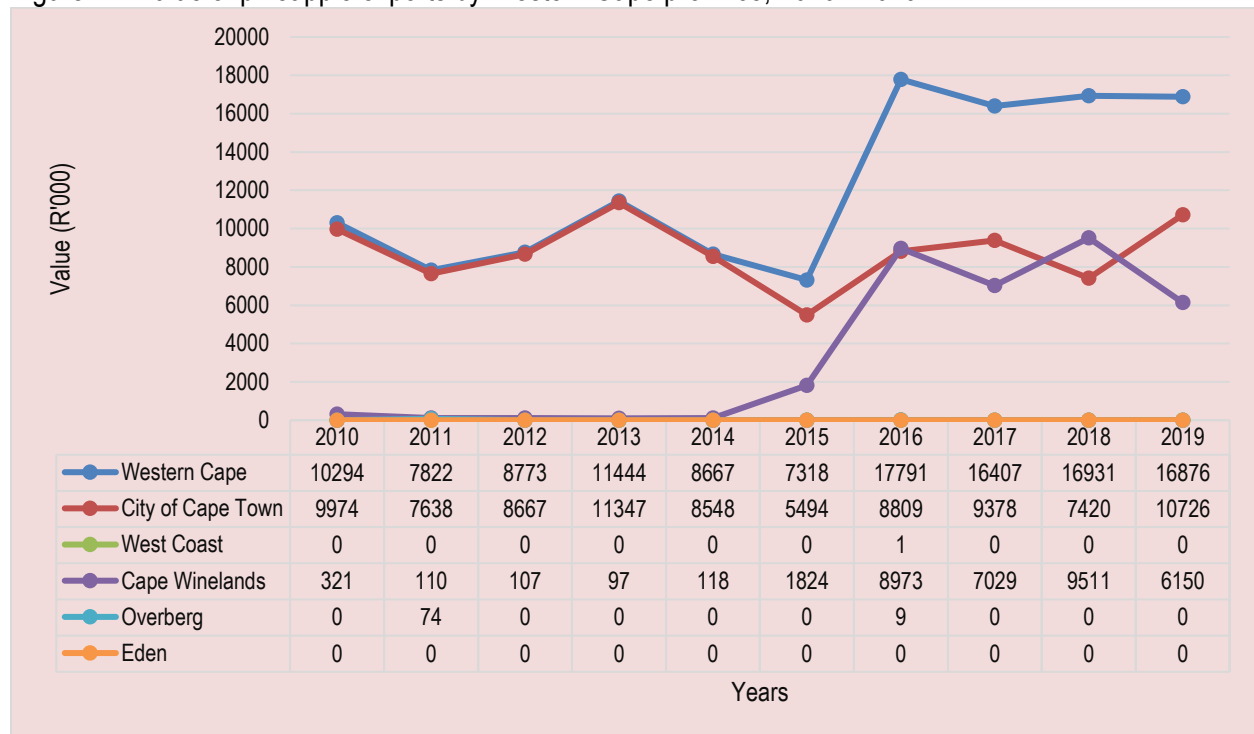
Figure 13: Value of pineapple exports by provinces, 2010 - 2019



Source: Quantec Easydata

Highlights of the pineapple exports in Figure 13 were that the provinces of Western Cape and Gauteng were consistently the top pineapple exporting provinces of South Africa over the last decade. The value of exports in all provinces increased between 2018 and 2019, with the exception of Limpopo. Gauteng remained the largest exporter of pineapples in South Africa during 2019. Western Cape was the second most exporting province after Gauteng. Other provinces featured intermittently but usually registered minimal trade. The following Figures (Figures 14 – 22) show the value of pineapple exports from the various districts in the nine provinces of South Africa. Figure 14 illustrates values of pineapple exports by the Western Cape Province during the period 2010 to 2019.

Figure 14: Value of pineapple exports by Western Cape province, 2010 - 2019



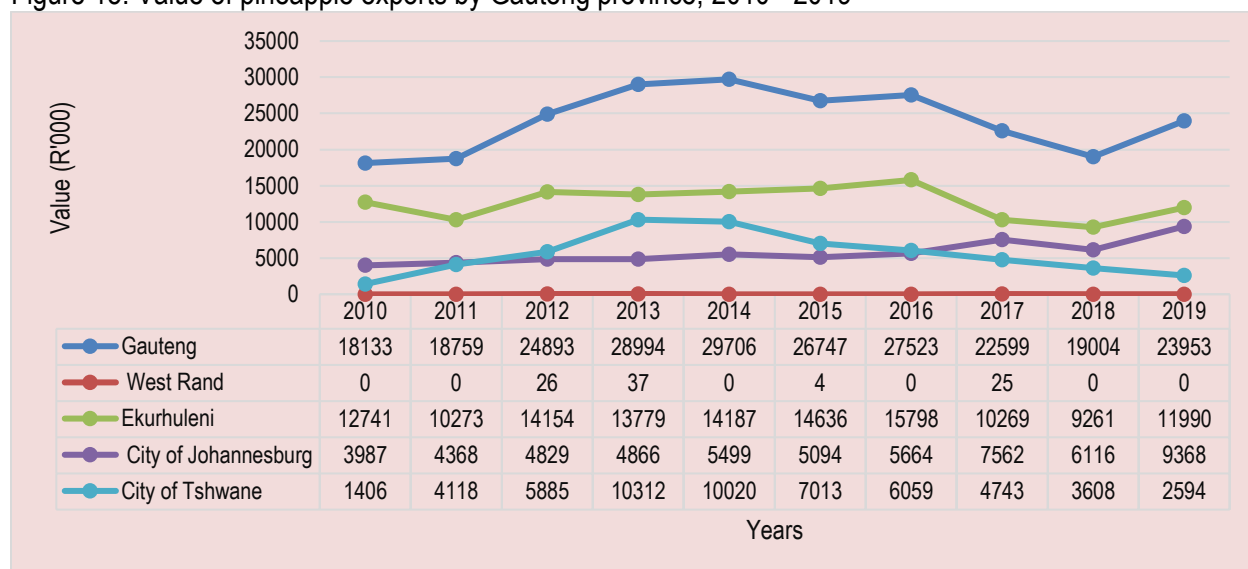
Source: Quantec Easydata

Pineapple exports from the Western Cape are mainly from the City of Cape Town. High export value for the leading municipality was recorded in 2019. 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 pineapples from the Western Cape. Pineapple exports values have in the Western Cape have been unstable. City of Cape Town has been the major exporter of pineapple until 2016. In 2016, Cape Winelands claimed the top spot as the exporter of pineapple. City of Cape Town reclaimed its position as the major exporter in 2017. In 2019, the City of Cape Town continued to dominate pineapple exports in the Western Cape.

The values of pineapple exports by the Gauteng province are illustrated in Figure 15. It is clear from Figure 15 that in Gauteng, there have generally been fluctuations on the pineapple export values for the past ten years. The leading role players are City of Johannesburg, Ekurhuleni municipalities and recently City of Tshwane. High export values of the leading municipalities were recorded in 2019 (for the City of Johannesburg) and 2016 (for Ekurhuleni). Ekurhuleni exported pineapples worth R11.9 million in 2019 while the City of Johannesburg exported pineapples worth R9.3 million during the same period.



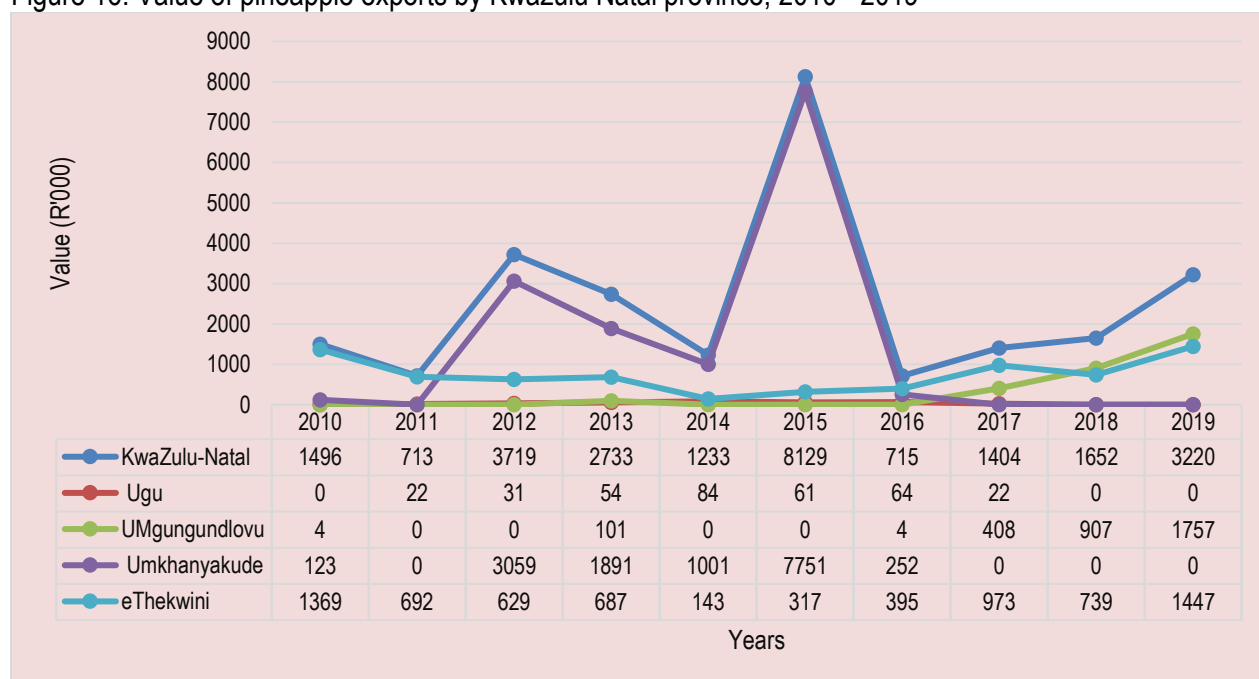
Figure 15: Value of pineapple exports by Gauteng province, 2010 - 2019



Source: Quantec Easydata

The values of pineapple exports from the Kwazulu Natal province are illustrated in Figure 16.

Figure 16: Value of pineapple exports by Kwazulu Natal province, 2010 - 2019



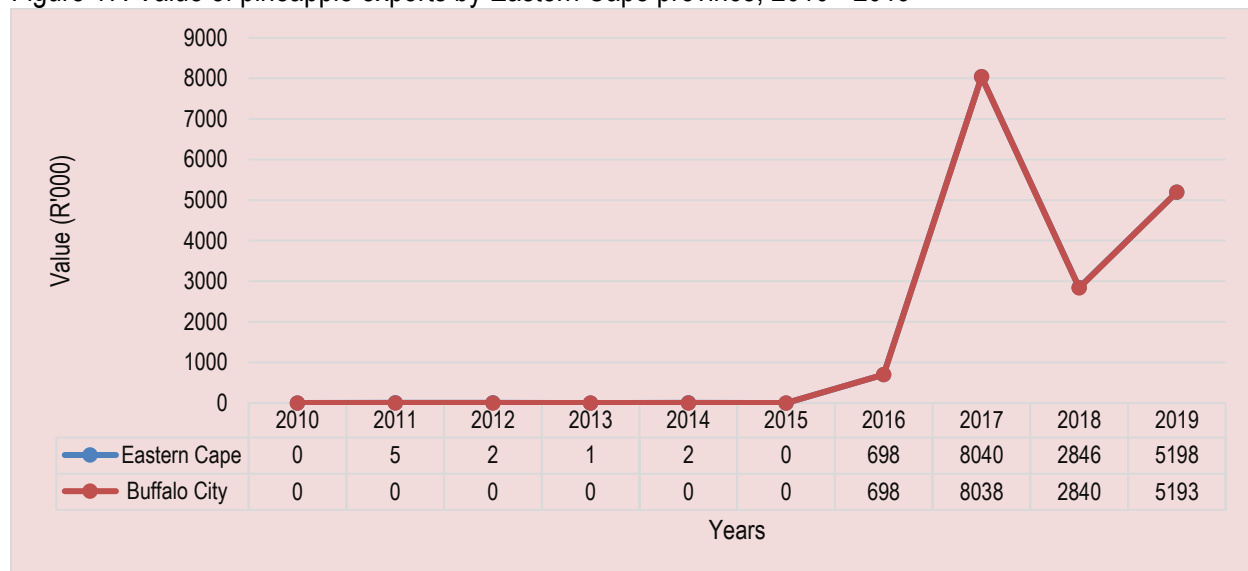
Source: Quantec Easydata

Pineapple exports in Kwazulu Natal are mainly from eThekwini municipality and Umkhanyakude. Umgungundlovu municipalities also recorded exports value for pineapple exports but usually records minimal trade. High export values for the leading municipalities were recorded in 2019 (for both eThekwini and Umgungundlovu) and 2015 (for Umkhanyakude). The value of pineapple exports recorded by the eThekwini municipality have been increasing during the first five years of the review period. However, export value of

pineapples from Umkhanyakude has been declining over the past six years. The use of the Durban harbour as an exit point plays a major role in eThekweni being a leader in the export of pineapples from the Kwazulu Natal.

Values of pineapple exports from the Eastern Cape Province are shown in Figure 17. It is clear Figure 17 that pineapple exports from Eastern Cape are from the Cacadu and Buffalo municipalities. High export value for the leading municipality was recorded in 2017. All the Eastern Cape municipalities have, during the decade recorded no or very minimal exports of pineapples. This is interesting given the fact that the Eastern Cape is a leading province in pineapple production. In 2019, pineapples exported by the Eastern Cape province were from Buffalo city metropolitan.

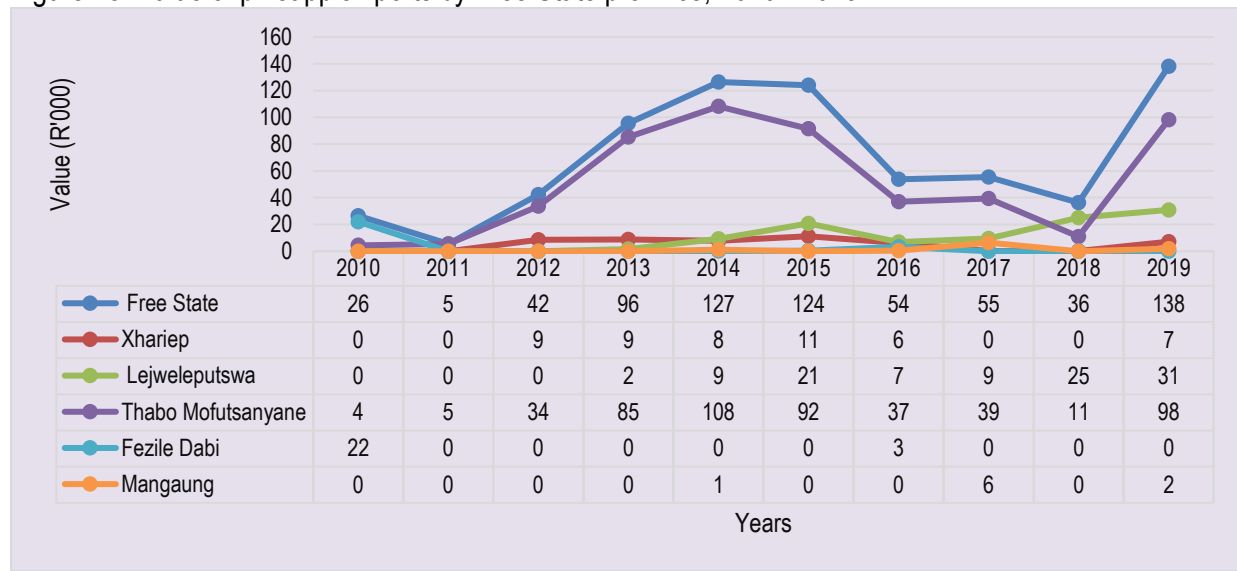
Figure 17: Value of pineapple exports by Eastern Cape province, 2010 - 2019



Source: Quantec Easydata

Values of pineapple exports by the Free State Province are shown in Figure 18. In the Free State pineapple exports are mainly from Thabo Mofutsanyane municipality. High export value for the leading municipality was recorded in 2015. Thabo Mofutsanyane and Xhariep recorded a decrease in export in 2019 compared to 2018 marketing season.

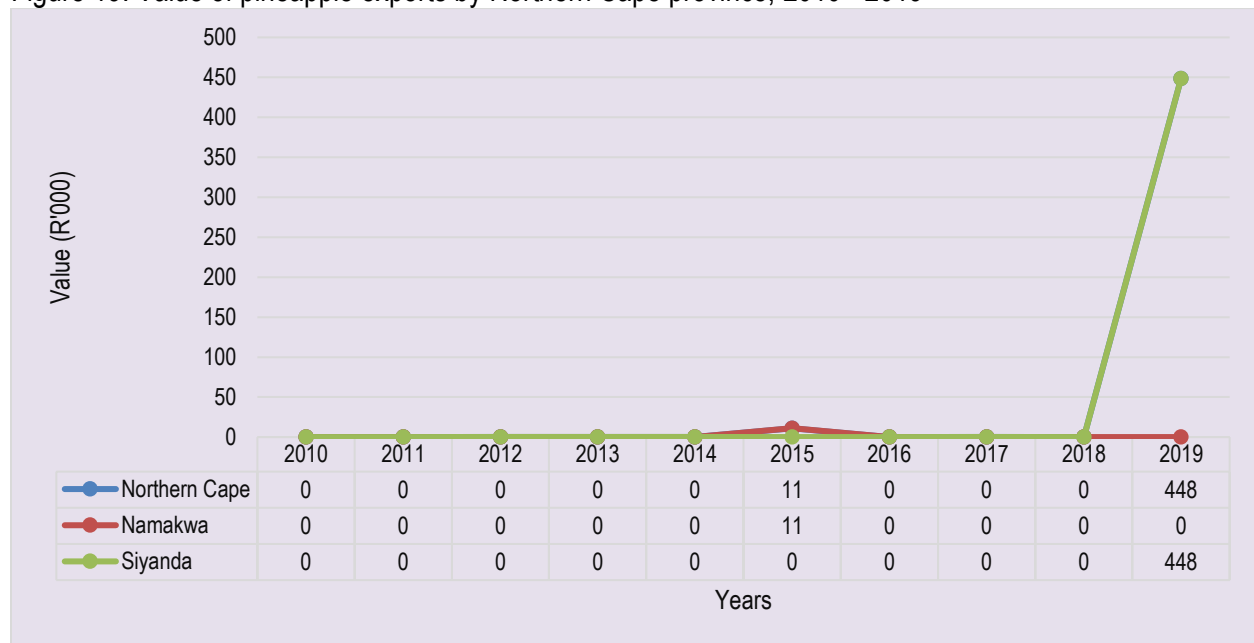
Figure 18: Value of pineapple exports by Free State province, 2010 - 2019



Source: Quantec Easydata

Values of pineapple exports by the Northern Cape Province are depicted in Figure 19.

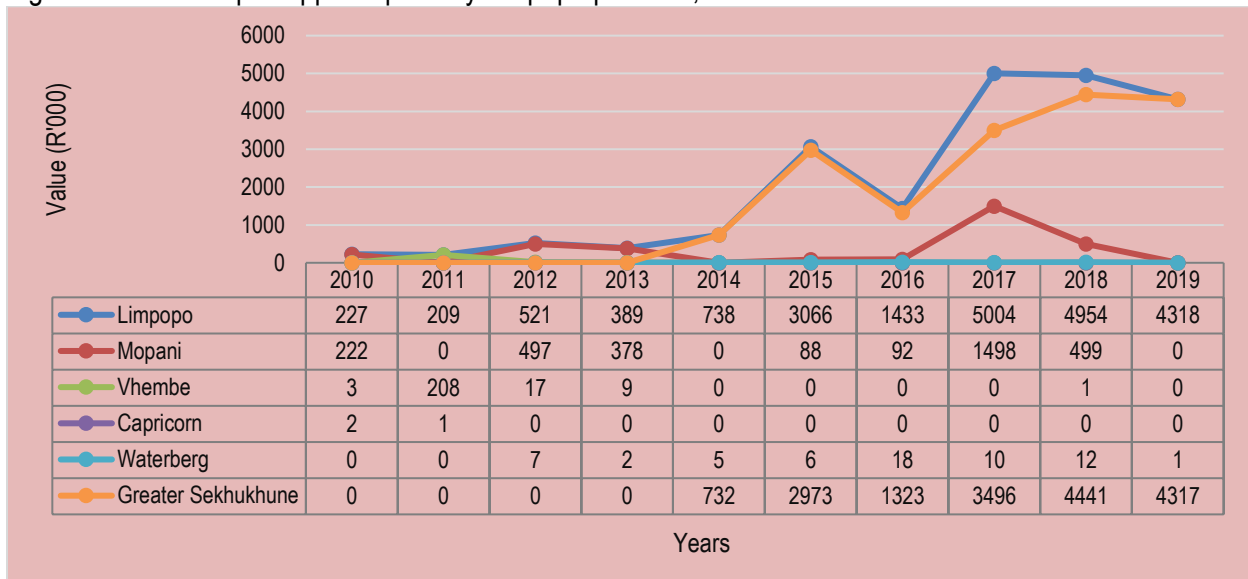
Figure 19: Value of pineapple exports by Northern Cape province, 2010 - 2019



Source: Quantec Easydata

Pineapple exports in the Northern Cape were only recorded from the Siyanda Namakwa municipalities during 2010 and 2015 respectively. Values of pineapple exports by the Limpopo province are illustrated in Figure 20. Pineapple exports from Limpopo are mainly from Sekhukhune and Mopani districts. High export values for the leading district municipalities were recorded in 2017 (for Mopani district) and 2019 (for Sekhukhune district). In the past six years, Sekhukhune district has been leading export region in Limpopo. All of the pineapple exports reported in Limpopo province during 2019.

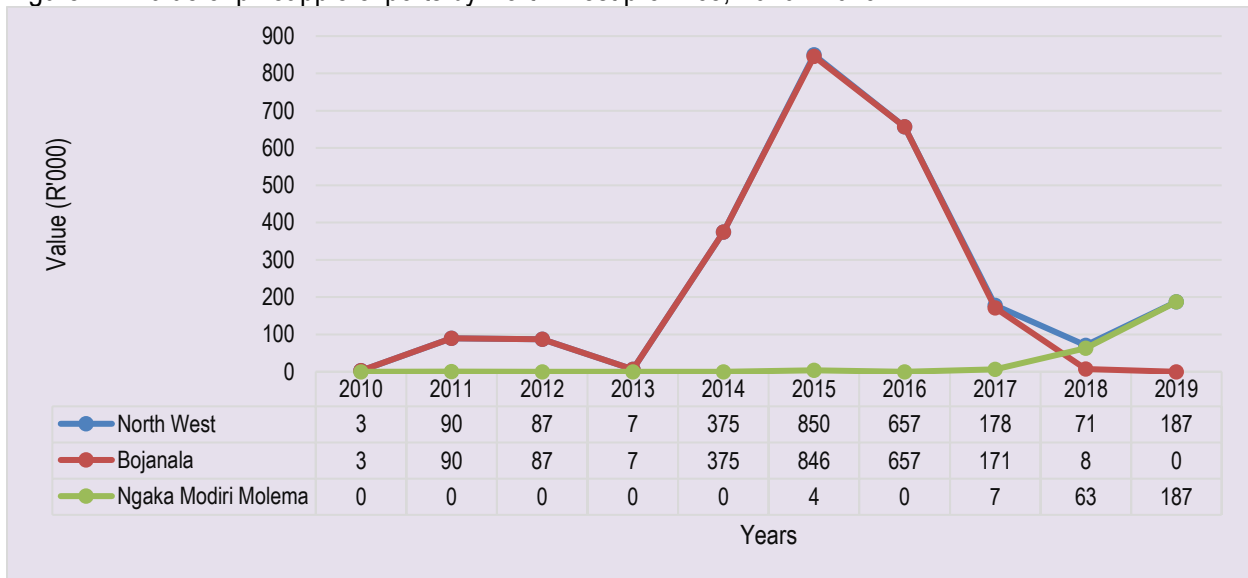
Figure 20: Value of pineapple exports by Limpopo province, 2010- 2019



Source: Quantec Easydata

Values of pineapple exports from the North West province are shown in Figure 21.

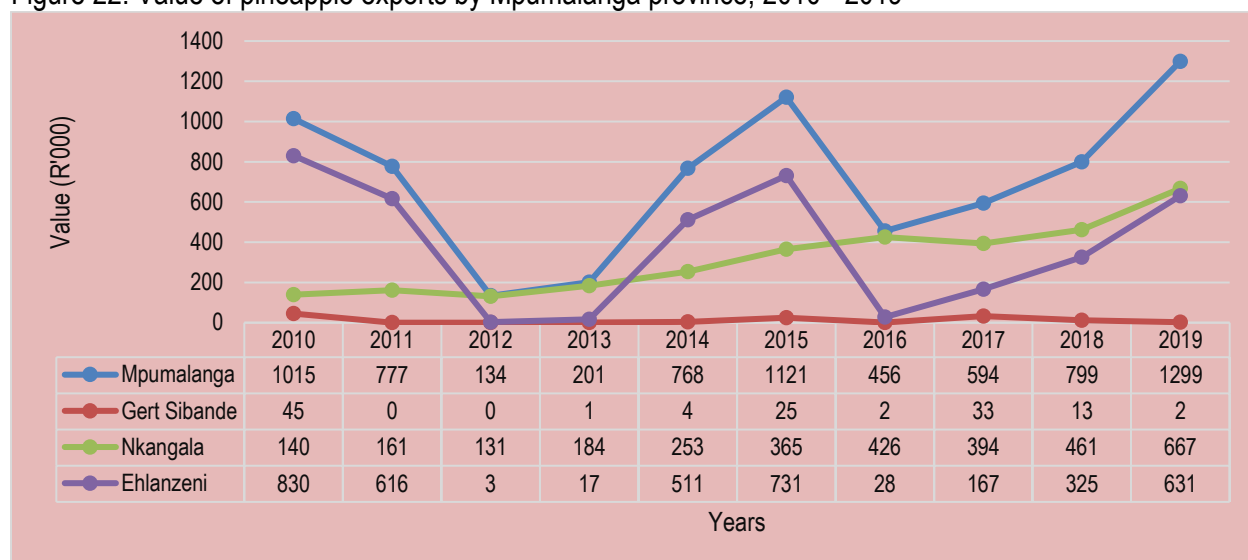
Figure 21: Value of pineapple exports by North West province, 2010 - 2019



Source: Quantec Easydata

Pineapple exports of from North West are mainly from Bojanala Platinum municipality and Ngaka Modiri Molema. High export value for the leading municipality was recorded in 2015. Figure 22 shows values of pineapple exports from the Mpumalanga province.

Figure 22: Value of pineapple exports by Mpumalanga province, 2010 - 2019



Source: Quantec Easydata

It is clear from Figure 22 that pineapple exports from Mpumalanga are from Nkangala and Ehlanzeni municipalities. High export values for the leading municipalities were recorded in 2019 (for Nkangala) and 2010 (for Ehlanzeni). The Ehlanzeni district is the leading exporter of pineapples in Mpumalanga during the decade under review. In 2012, Nkangala emerged as the leading pineapple export region surpassing Ehlanzeni region until 2019. In 2019, Nkangala accounted for 51% of all pineapple exports from Mpumalanga province.

## 2.4 Share Analysis

Table 2 illustrates provincial shares towards national pineapple exports. It shows that the Western Cape and Gauteng provinces have commanded the greatest share of pineapple exports for the past ten years. This is in spite of the fact that the Eastern Cape and Kwazulu Natal provinces are the leading producers of pineapples. The leading contributor in 2019 was Gauteng at 43.1%. It was followed by the Western Cape at 30.3% and Eastern Cape at 9.3%. As explained earlier, this means that the leading export provinces (Western Cape and Gauteng) derive their advantage from the fact that the registered exporters are based in their provinces and they also have exit points for pineapple exports.

The above scenario raises concerns about the availability of marketing infrastructure and agro-logistics in the other major pineapple producing provinces of South Africa like the Eastern Cape and Kwazulu Natal because both Gauteng and Western Cape are not pineapple producing regions and yet the sizeable share of South African pineapple exports are exported through these provinces.

Table 2: Share of provincial pineapple exports to total RSA pineapple exports (%), 2010 - 2019

| Years | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| RSA   | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| Years         | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---------------|------|------|------|------|------|------|------|------|------|------|
| Western Cape  | 29.8 | 23.9 | 16.5 | 16.8 | 16.9 | 15.5 | 36.1 | 30.2 | 36.6 | 30.3 |
| Eastern Cape  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 14.8 | 6.1  | 9.3  |
| Northern Cape | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.8  |
| Free State    | 0.0  | 0.0  | 0.0  | 0.0  | 0.2  | 0.3  | 0.1  | 0.1  | 0.1  | 0.2  |
| KwaZulu-Natal | 4.7  | 2.5  | 9.7  | 6.2  | 3.3  | 17.3 | 1.5  | 2.6  | 3.6  | 5.8  |
| North West    | 0.0  | 0.0  | 0.0  | 0.0  | 3.7  | 1.8  | 1.3  | 0.3  | 0.2  | 0.3  |
| Gauteng       | 63.4 | 70.7 | 73.5 | 76.9 | 72.8 | 57.2 | 56.4 | 41.6 | 41.1 | 43.1 |
| Mpumalanga    | 1.4  | 2.1  | 0.0  | 0.0  | 1.2  | 1.6  | 0.3  | 1.1  | 1.7  | 2.3  |
| Limpopo       | 0.7  | 0.7  | 0.2  | 0.0  | 1.8  | 6.5  | 2.9  | 9.2  | 10.7 | 7.8  |

Source: Calculated from Quantec Easydata

Tables 3 to 11 show shares of the various districts' pineapple exports to the various provincial pineapple exports. Table 3 presents the shares of district pineapple exports to the total Western Cape provincial pineapple exports for the years 2010 to 2019. The leading pineapple export district in the Western Cape is the City of Cape Town and Cape Winelands. City of Cape Town accounted for more than half (64%) of the Western Cape value of pineapple exports while Cape Winelands was the second leading district at 43.

**Table 3: Share of districts' pineapple exports to total Western Cape provincial pineapple exports (%), 2010 – 2-19**

| Years             | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|-------------------|------|------|------|------|------|------|------|------|------|------|
| Western Cape      | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |
| City of Cape Town | 96   | 96   | 100  | 99   | 98   | 75   | 0    | 57   | 44   | 64   |
| West Coast        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Cape Winelands    | 3    | 0    | 0    | 1    | 2    | 25   | 100  | 43   | 56   | 36   |
| Overberg          | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Eden              | 1    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

Source: Calculated from Quantec Easydata

The shares of district pineapple exports between 2010 and 2019 to the total Eastern Cape provincial pineapple exports are presented in Table 4. The leading districts in terms of pineapple exports in the Eastern Cape Province is the Cacadu and Alfred Nzo. The exports originating from Eastern Cape in 2019 came from Buffalo City district. The Eastern Cape commands minimal contributions towards pineapple exports. This is despite the fact that the Eastern Cape is the major producer of pineapples in South Africa.

**Table 4: Share of districts' pineapple exports to total Eastern Cape provincial pineapple exports (%), 2010– 2019**

| Year         | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|--------------|------|------|------|------|------|------|------|------|------|------|
| Eastern Cape | 0    | 100  | 0    | 0    | 100  | 100  | 100  | 100  | 100  | 100  |

| Year               | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|--------------------|------|------|------|------|------|------|------|------|------|------|
| Cacadu             | 0    | 100  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Joe Gqabi          | 0    | 0    | 0    | 0    | 33   | 0    | 0    | 0    | 0    | 0    |
| Alfred Nzo         | 0    | 0    | 0    | 0    | 34   | 100  | 0    | 0    | 0    | 0    |
| Nelson Mandela Bay | 0    | 0    | 0    | 0    | 33   | 0    | 0    | 0    | 0    | 0    |
| Buffalo City       | 0    | 0    | 0    | 0    | 0    | 0    | 100  | 100  | 100  | 100  |

Source: Calculated from Quantec Easydata

In the Mpumalanga Province, the main contributor to total provincial pineapple exports in 2019 was the Nkangala (51%) district and Ehlanzeni district (49%) (see Table 5).

**Table 5: Share of districts' pineapple exports to total Mpumalanga provincial pineapple exports (%), 2008 – 2017**

| Year         | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|--------------|------|------|------|------|------|------|------|------|------|------|
| Mpumalanga   | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |
| Gert Sibande | 11   | 0    | 0    | 0    | 1    | 3    | 1    | 6    | 2    | 0    |
| Nkangala     | 0    | 0    | 0    | 0    | 0    | 0    | 81   | 66   | 58   | 51   |
| Ehlanzeni    | 89   | 100  | 100  | 100  | 99   | 97   | 18   | 28   | 41   | 49   |

Source: Calculated from Quantec Easydata

In the Free State Province, Thabo Mofutsanyane district was the leading contributor to provincial pineapple export at 71%. The remaining pineapple exports were recorded by Lejweleputswa, Xhariep districts and Fezile Dabi districts (see Table 6).

**Table 6: Share of districts' pineapple exports to total Free State provincial pineapple exports (%), 2010 – 2019**

| Year               | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|--------------------|------|------|------|------|------|------|------|------|------|------|
| Free State         | 0    | 0    | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |
| Xhariep            | 0    | 0    | 100  | 100  | 7    | 9    | 11   | 0    | 1    | 5    |
| Lejweleputswa      | 0    | 0    | 0    | 0    | 0    | 17   | 13   | 17   | 69   | 22   |
| Thabo Mofutsanyane | 0    | 0    | 0    | 0    | 93   | 74   | 71   | 71   | 30   | 71   |
| Fezile Dabi        | 0    | 0    | 0    | 0    | 0    | 0    | 6    | 0    | 0    | 0    |
| Mangaung           | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 12   | 0    | 1    |

Source: Calculated from Quantec Easydata

In the Gauteng Province, the contributions of the various districts to total provincial pineapple exports are distributed between three main districts (see Table 7). In 2019, the leading district was Ekurhuleni with 50% share. The City of Johannesburg and City of Tshwane at 39% and 11% respectively followed it.

**Table 7: Share of districts' pineapple exports to total Gauteng provincial pineapple exports (%), 2010 – 2019**

| Years     | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|-----------|------|------|------|------|------|------|------|------|------|------|
| Gauteng   | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |
| West Rand | 0    | 0    | 0    | 0    | 1    | 2    | 3    | 0    | 0    | 0    |

| Years                | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|----------------------|------|------|------|------|------|------|------|------|------|------|
| Ekurhuleni           | 64   | 49   | 49   | 40   | 51   | 54   | 57   | 45   | 49   | 50   |
| City of Johannesburg | 29   | 32   | 35   | 42   | 22   | 20   | 22   | 33   | 32   | 39   |
| City of Tshwane      | 8    | 19   | 16   | 17   | 25   | 24   | 20   | 21   | 19   | 11   |

Source: Calculated from Quantec Easydata

All the pineapple exports recorded by North West Province during 2019, was recorded by the Ngaka Modiri Molema district. (see Table 8).

**Table 8: Share of districts' pineapple exports to total North West provincial pineapple exports (%), 2010 – 2019**

| Year                | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---------------------|------|------|------|------|------|------|------|------|------|------|
| North West          | 0    | 0    | 0    | 0    | 100  | 100  | 100  | 100  | 100  | 100  |
| Bojanala            | 0    | 0    | 0    | 0    | 100  | 100  | 96   | 96   | 11   | 0    |
| Ngaka Modiri Molema | 0    | 0    | 0    | 0    | 0    | 0    | 4    | 4    | 89   | 100  |

Source: Calculated from Quantec Easydata

In 2010, almost all exports of pineapples recorded in the Limpopo province were from the Mopani district (see Table 9). The contributions however changed significantly in 2011. All pineapple exports recorded in Limpopo during 2011 were from Vhembe. Between 2010 and 2013 Mopani and Vhembe exchanged position as leading export district. During 2013, Vhembe district was the leading contributor to pineapple export with 96% share. Waterberg district was followed by Mopani district at 19%. Between 2014 and 2019, Sekhukhune district was the main contributor to pineapple exports.

**Table 9: Share of districts' pineapple exports to total Limpopo provincial pineapple exports (%), 2010 – 2019**

| Year               | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|--------------------|------|------|------|------|------|------|------|------|------|------|
| Limpopo            | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |
| Mopani             | 98   | 0    | 81   | 4    | 0    | 3    | 6    | 30   | 10   | 0    |
| Vhembe             | 1    | 100  | 19   | 96   | 0    | 0    | 0    | 0    | 0    | 0    |
| Capricorn          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Waterberg          | 0    | 0    | 0    | 0    | 1    | 0    | 1    | 0    | 0    | 0    |
| Greater Sekhukhune | 0    | 0    | 0    | 0    | 99   | 97   | 93   | 70   | 90   | 100  |

Source: Calculated from Quantec Easydata

All recorded exports of pineapples in the Northern Cape Province in 2015 were from the Namakwa district (see Table 10). No pineapple exports were recorded from the Northern Cape between 2010 and 2014. In 2019, all Northern Cape pineapple exports came from Siyanda district.

**Table 10: Share of districts pineapple exports to total Northern Cape provincial pineapple exports (%), 2010 – 2019**

| Year          | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---------------|------|------|------|------|------|------|------|------|------|------|
| Northern Cape | 0    | 0    | 0    | 0    | 0    | 100  | 0    | 0    | 0    | 100  |
| Namakwa       | 0    | 0    | 0    | 0    | 0    | 100  | 0    | 0    | 0    | 0    |



| Year    | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---------|------|------|------|------|------|------|------|------|------|------|
| Siyanda | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 100  |

Source: Calculated from Quantec Easydata

The shares of district pineapple exports to the total Kwazulu Natal provincial pineapple exports are presented in Table 11. In 2019, the Umgungundlovu and eThekweni district contributed 55% and 45% of Kwazulu Natal's provincial pineapple exports respectively.

**Table 11: Share of districts' pineapple exports to the total Kwazulu Natal provincial pineapple exports (%), 2010 - 2019**

| Years         | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---------------|------|------|------|------|------|------|------|------|------|------|
| KwaZulu-Natal | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |
| Ugu           | 0    | 3    | 1    | 2    | 6    | 1    | 9    | 2    | 0    | 0    |
| UMgungundlovu | 0    | 0    | 0    | 4    | 0    | 0    | 1    | 29   | 55   | 55   |
| UMkhanyakude  | 8    | 0    | 82   | 69   | 74   | 95   | 35   | 0    | 0    | 0    |
| eThekweni     | 92   | 97   | 17   | 25   | 20   | 4    | 55   | 69   | 45   | 45   |

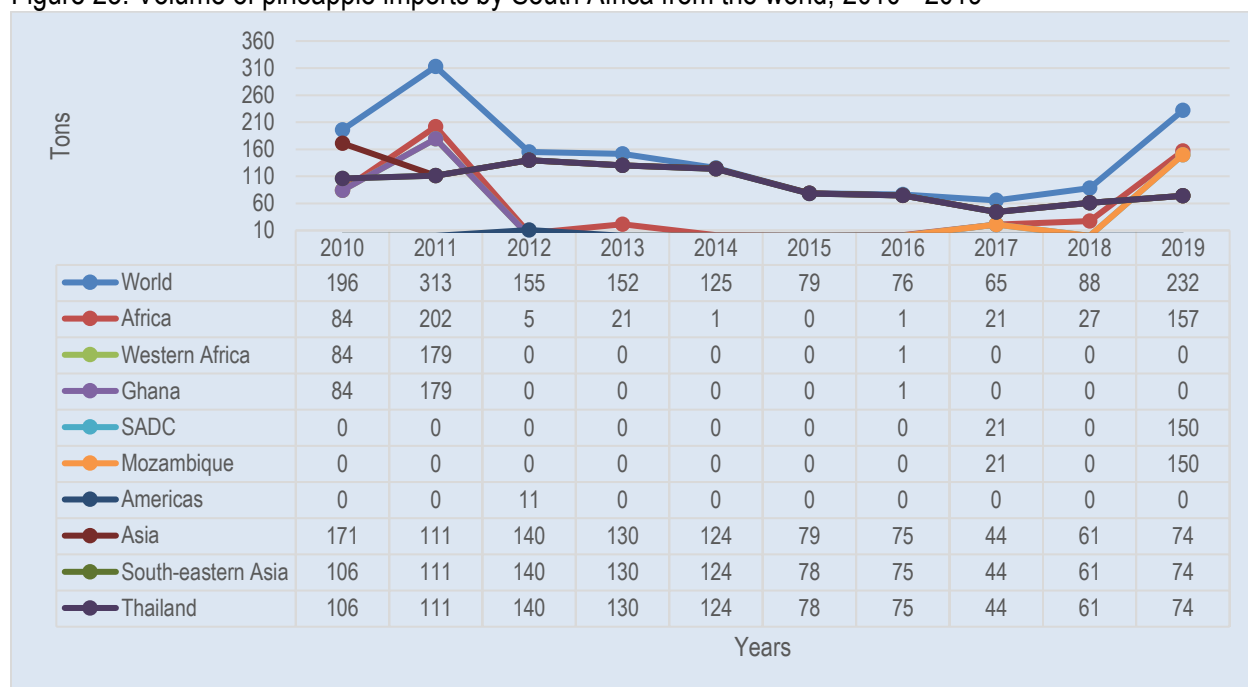
Source: Calculated from Quantec Easydata

## 2.5 Pineapple imports

The volumes of pineapples imported by South Africa during the last decade are presented in Figure 23. South Africa imported 232 tons of pineapples during 2019. The highest volume imported during the period under review was 313 tons in 2011. During 2019, 65% of South African imports of pineapples came from Africa (specifically Mozambique in the SADC region). The remaining 74 ton came from Africa, mainly from Thailand. In 2011, Africa was the main supplier of pineapple. The largest and only supplier of South African pineapple imports in Africa between 2010 and 2011 was Ghana in Western Africa while Namibia and Swaziland was the main supplier of pineapples between 2012 and 2014 although in minimal quantities. On the other hand, South Africa imported 2 854 tons of prepared or preserved (200820) in 2019 mainly from Eswatini (1 343) Indonesia (759 tons) and Thailand (750 tons). South Africa also imported 616 tons of pineapple juice (200949) in 2019 from Eswatini (611 tons).

During 2019, South Africa's imports of pineapples (080430) represented 0.01% of world imports and its ranking in the world was number 101. At the same time, South Africa's imports of prepared or preserved pineapples (200820) represented 0.7% of world imports and its ranking in the world was number 24. On the other hand, South Africa's imports of pineapple juice (200949) represented 0.2% of world imports and its ranking in the world was number 65.

Figure 23: Volume of pineapple imports by South Africa from the world, 2010 - 2019



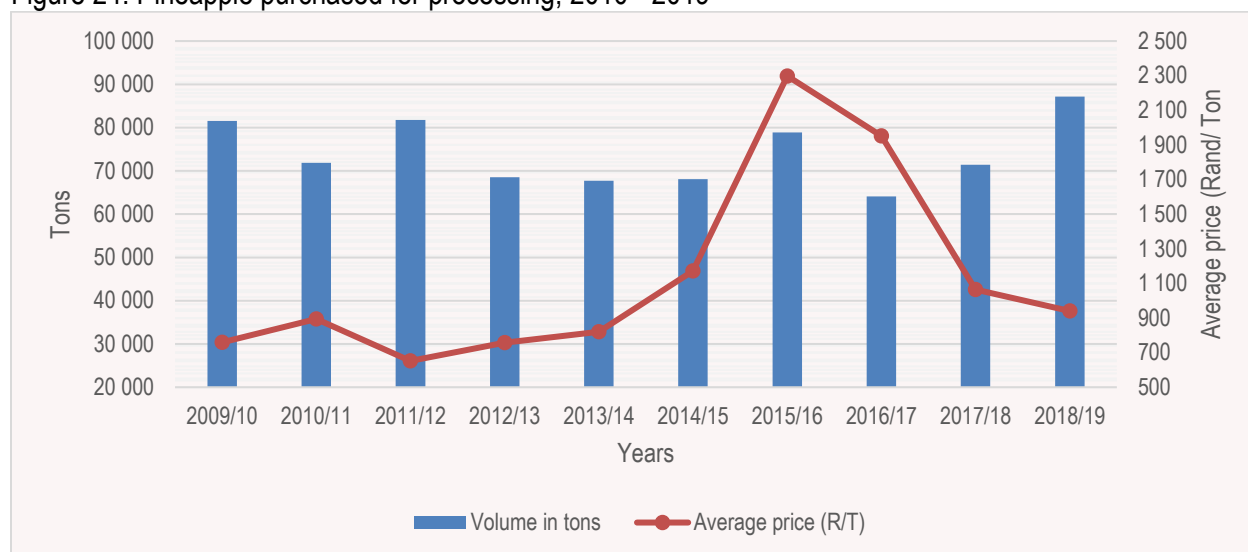
Source: Quantec Easydata

## 2.6 Processing

The pineapple processing industry in South Africa is significant. In 2018/19, the processing industries absorbed 87181 tons. This represented 75% of all pineapples (115 507 tons) produced in South Africa during the same period. Generally, pineapple volumes purchased for processing follow similar trends with production quantities (see Figure 2). The total purchases represent direct purchases from growers and quantities of pineapples purchased from the National Fresh Produce Markets. According to Figure 24, volumes purchased for processing have been unstable during the past ten years. Prices realised have been increasing during the same period only decreasing during 2011/12 season, indicating that prices are greatly influenced by the amount of produce available for sale. Between 2014/15 and 2015/16 the volumes processed increased slightly by 15% while prices increased by 96%. Processed volumes declined in 2016/17 by 19% compared to the 2015/16 season. Prices continued to decline from R1 064 per ton to R941 per ton in 2019.

Field ripe fruits are best for eating fresh, and it is only necessary to remove the crown, rind, eyes and core. In countries like Panama, very small pineapples are cut from the plant with a few inches of stem to serve as a handle, the rind is removed except at the base, and the flesh is eaten out-of-hand like corn on the cob. The flesh of larger fruits is cut up in various ways and eaten fresh, as dessert, in salads, compotes and otherwise, or cooked in pies, cakes, puddings, or as a garnish on ham, or made into sauces or preserves. Malaysians utilize the pineapple in curries and various meat dishes. In the Philippines, the fermented pulp is made into a popular sweetmeat called *nata de pina*. The pineapple does not lend itself well to freezing, as it tends to develop off flavours.

Figure 24: Pineapple purchased for processing, 2010 - 2019



Source: Statistics and Economic Analysis, DAFF

Canned pineapple is consumed throughout the world. The highest grade is the skinned, cored fruit sliced crosswise and packed in syrup. Undersize or overripe fruits are cut into "spears", chunks or cubes. Surplus pineapple juice used to be discarded after extraction of bromelain (q.v.). Today there is a growing demand for it as a beverage. Crushed pineapple, juice, nectar, concentrate, marmalade and other preserves are commercially prepared from the flesh remaining attached to the skin after the cutting and trimming of the central cylinder. All residual parts cores, skin and fruit ends are crushed and given a first pressing for juice to be canned as such or prepared as syrup used to fill the cans of fruit, or is utilized in confectionery and beverages, or converted into powdered pineapple extract which has various roles in the food industry. Chlorophyll from the skin and ends imparts a greenish hue that must be eliminated and the juice must be used within 20 hours as it deteriorates quickly. A second pressing yields "skin juice" which can be made into vinegar or mixed with molasses for fermentation and distillation of alcohol. Sugar/acid ratio and ascorbic acid content vary considerably with the cultivar. The sugar content may change from 4% to 15% during the final 2 weeks before full ripening.

### 2.6.1 Other Uses

**Bromelain:** The proteolytic enzyme, bromelain, or bromelin, was formerly derived from pineapple juice; now it is gained from the mature plant stems salvaged when fields are being cleared. The yield from 368 lbs (167 kg) of stem juice is 8 lbs (3.6 kg) of bromelain. The enzyme is used like papain from papaya for tenderizing meat and chill proofing beer; is added to gelatin to increase its solubility for drinking; has been used for stabilizing latex paints and in the leather-tanning process. In modern therapy, it is employed as a digestive and for its anti-inflammatory action after surgery, and to reduce swellings in cases of physical injuries; also in the treatment of various other complaints.

**Fibre:** Pineapple leaves yield a strong, white, silky fibre which was extracted by Filipinos before 1591. Certain cultivars are grown especially for fibre production and their young fruits are removed to give the plant maximum vitality. The 'Perolera' is an ideal cultivar for fibre extraction because its leaves are long, wide and rigid. Chinese people in Kwantung Province and on the island of Hainan weave the fibre into coarse textiles resembling grass cloth. It was long ago used for thread in Malacca and Borneo. In India the thread is prized

by shoemakers and it was formerly used in the Celebes. In West Africa it has been used for stringing jewels and also made into capes and caps worn by tribal chiefs. The people of Guam hand-twist the fibre for make fine casting nets. They also employ the fibre for wrapping or sewing cigars. Pina cloth made on the island of Panay in the Philippines and in Taiwan is highly esteemed. In Taiwan they also make a coarse cloth for farmers' underwear.

The outer, long leaves are preferred. In the manual process, they are first decorticated by beating and rasping and stripping, and then left to ret in water to which chemicals may be added to accelerate the activity of the microorganisms which digest the unwanted tissue and separate the fibres. Retting time has been reduced from 5 days to 26 hours. The rested material is washed clean, dried in the sun and combed. In mechanical processing, the same machine can be used that extracts the fibre from sisal. Estimating 10 leaves to the lb (22 per kg), 22,000 leaves would constitute one ton and would yield 50-60 lbs (22-27 kg) of fibre.

**Juice:** Pineapple juice has been employed for cleaning machete and knife blades and, with sand, for scrubbing boat decks.

**Animal Feed:** Pineapple crowns are sometimes fed to horses if not needed for planting. Final pineapple waste from the processing factories may be dehydrated as "bran" and fed to cattle, pigs and chickens. "Bran" is also made from the stumps after bromelain extraction. Expendable plants from old fields can be processed as silage for maintaining cattle when other feed is scarce. The silage is low in protein and high in fibre and is best mixed with urea, molasses and water to improve its nutritional value.

In 1982, public concern in Hawaii was aroused by the detection of heptachlor (a carcinogen) in the milk from cows fed "green chop" leaves from pineapple plants that had been sprayed with the chemical to control the ants that distribute maize bugs. There is supposed to be a one year lapse to allow the heptachlor to become more dilute before sprayed plants are utilized for feed.

**Folk Medicine:** Pineapple juice is taken as a diuretic and to expedite labour, also as a gargle in cases of sore throat and as an antidote for seasickness. The flesh of very young (toxic) fruits is deliberately ingested to expel intestinal worms; and as a drastic treatment for venereal diseases. In Africa the dried, powdered root is a remedy for edema. The crushed rind is applied on fractures and the rind decoction with rosemary is applied on haemorrhoids. Indians in Panama use the leaf juice as a purgative, emmenagogue and vermifuge.

### **2.6.2 Ornamental Value**

The pineapple fruit with crown intact is often used as a decoration and there are variegated forms of the plant universally grown for their showiness indoors or out. Since 1963, thousands of potted, ethylene treated pineapple plants with fruits have been shipped annually from southern Florida to northern cities as indoor ornamentals.

### **2.6.3 Toxicity**

When unripe, the pineapple is not only inedible but poisonous, irritating the throat and acting as a drastic purgative. Excessive consumption of pineapple cores can cause the formation of fibre balls (bezoars) in the digestive tract.

### 3. GROWTH, VOLATILITY & STABILITY ANALYSIS

Table 9 presents the results of growth and coefficient of variation estimations. They were calculated using yearly statistics and covered the same ten-year period under review beginning in 2010 and ending in 2019. The coefficient of variation is a measure of volatility or stability. When the coefficient of variation is less than one, the variable in question is said to be relatively stable, meaning that there were minimal changes. When the coefficient of variation is more than one, it is said to be volatile, meaning there were major changes during the period under review.

**Table 12: Pineapple industry growth rates & variation coefficients (2010 – 2019)**

| Category              | Subcategory      | Growth Rate (%) | Coefficient of Variation |
|-----------------------|------------------|-----------------|--------------------------|
| <b>Production</b>     | Gross Value (GV) | 2.08            | 0.27                     |
|                       | Volume           | 0.32            | 0.32                     |
| <b>Sales at NFPMs</b> | GV/Price         | 1.16            | 0.24                     |
|                       | Volume           | 1.21            | 0.09                     |
| <b>Export</b>         | Gross Value      | 1.40            | 0.23                     |
|                       | Volume           | 0.76            | 0.18                     |
| <b>Import</b>         | Gross Value      | 1.23            | 0.41                     |
|                       | Volume           | 0.43            | 0.53                     |

Source: Calculated from data from Statistics and Economic Analysis, DAFF and Quantec

As shown in Table 9 above, the pineapple industry experienced a negative growth rate from 2010 to 2019 in terms of volumes of production, sales at the NFPMs, exports and imports while values of production, average prices at the NFPMs, net realisation for exports and gross value of imports experienced positive growth over the same period.

Table 9 also shows various levels of volatility at different levels of the pineapple industry's yearly figures over the same period (2010 to 2019). Low volatility was indicated by the coefficients of variation that were less than one (<1). All variables have values less than 1, which means that on a weighted variance scale, they displayed minimal changes for pineapple during the ten years under review.

### 4. MARKET INTELLIGENCE

#### 4.1 Competitiveness of South African pineapple 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 2019, South African fresh or dried pineapple exports represented 0.2% of world exports and its ranking on the world exports was number 33.

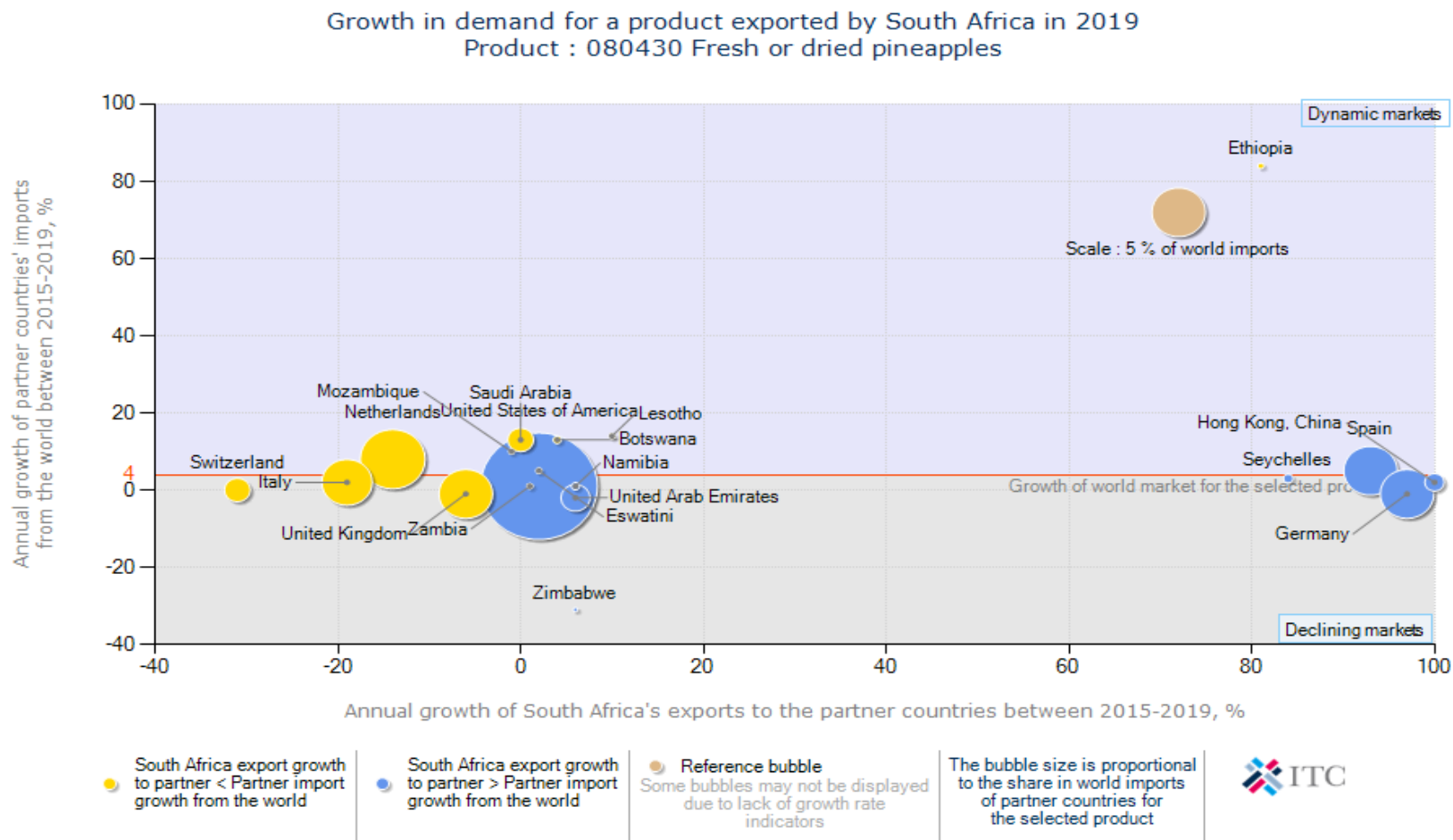
As depicted in Figure 25 below, South African fresh or dried pineapple (080430) exports are growing faster than the world imports in Seychelles, Spain and Hong Kong, China market. South Africa's performance in these markets can be regarded as gains in dynamic markets.

South African fresh or dried pineapple exports are growing while the world imports are declining in Eswatini and Zimbabwean markets. South Africa's performance in those markets can be regarded as gains in declining markets and should be viewed as achievements in adversity.

South African fresh or dried pineapple exports have declined faster than world imports in Zambian markets. South Africa's performance into those markets can be regarded as loss in a declining market.

South African fresh or dried pineapple exports are declining while the world imports are growing in Ethiopian markets. These markets are dynamic and South African performance should be regarded as an underachievement.

Figure 25: Growth in demand for the South African fresh or dried pineapples (080430) in 2019



Source: TradeMap, ITC

Figure 26 below illustrates prospects for market diversification by South African exporters of fresh or dried pineapples (080430). The Spain, Netherlands and USA holds a bigger market share of South African fresh or dried pineapple exports.

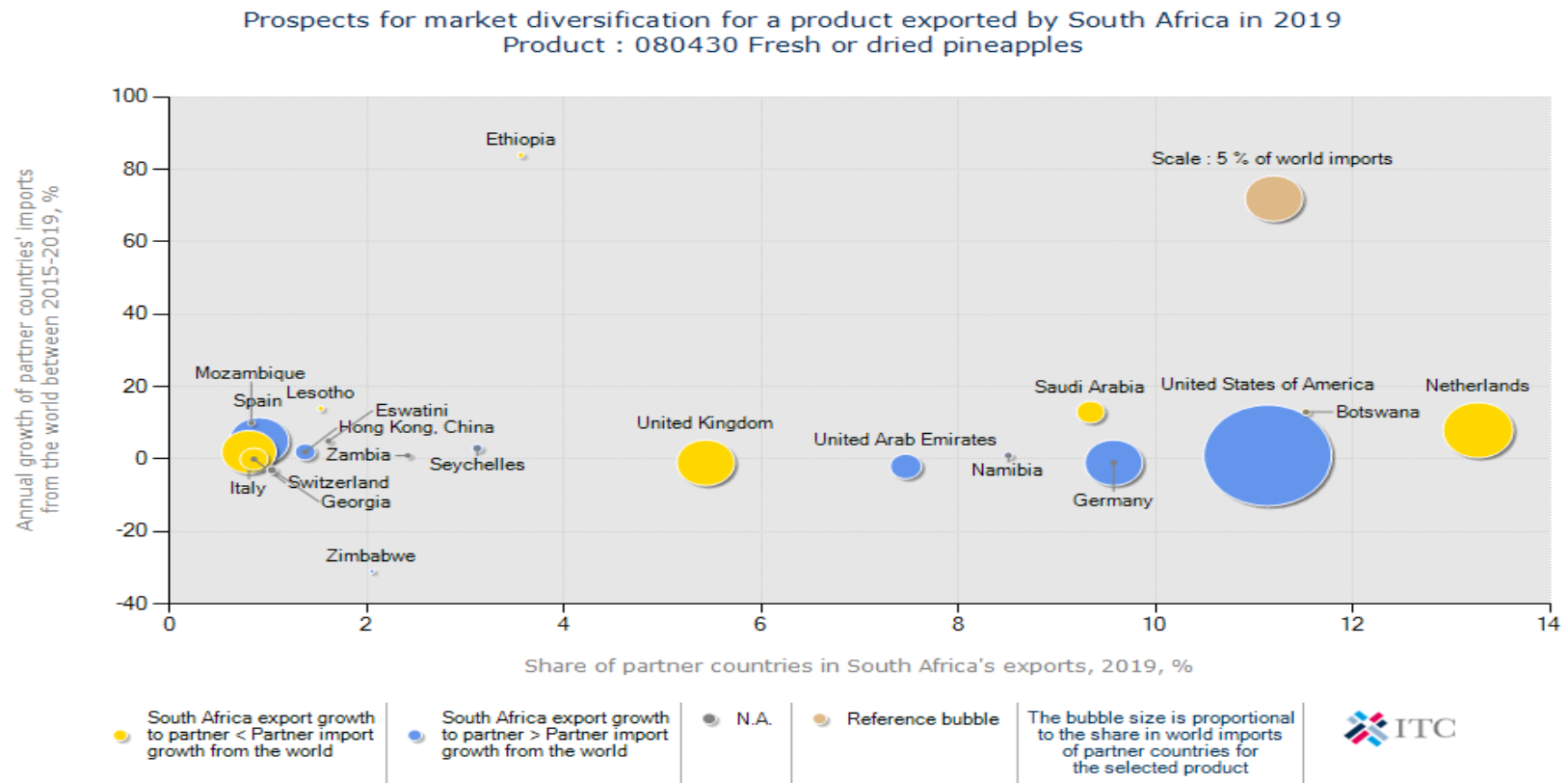
In terms of market size, USA was the largest fresh or dried pineapple market in 2019 with just over \$714 million worth of fresh or dried pineapples imports, or roughly 26.4% of the world fresh or dried pineapple market. Second was China with just over \$232 million worth of fresh or dried pineapple imports, or roughly 8.6% market share followed by United Kingdom with just over \$202 million worth of fresh or dried pineapple imports, or roughly 7.5% market share.

Whilst three countries dominate world fresh or dried pineapples imports, it is interesting to note that countries like Botswana, Namibia and Slovakia have experienced higher annual growth rate from 2015 – 2019. Botswana experienced an annual growth rate of 28% while Namibia experienced an annual growth rate of 23%. It is important to note that growth by all these mentioned countries has been off a low base. These countries represent possible lucrative markets for South African fresh or dried pineapples producers.

It is also important to note that fresh or dried pineapples imports from the world to countries such as New Zealand and Sweden have declined from 2015 – 2019 and as a result those countries have recorded negative growth rates in fresh or dried pineapples imports.



Figure 26: South African fresh or dried pineapples' (080430) prospects for market diversification in 2019



Source: TradeMap, ITC

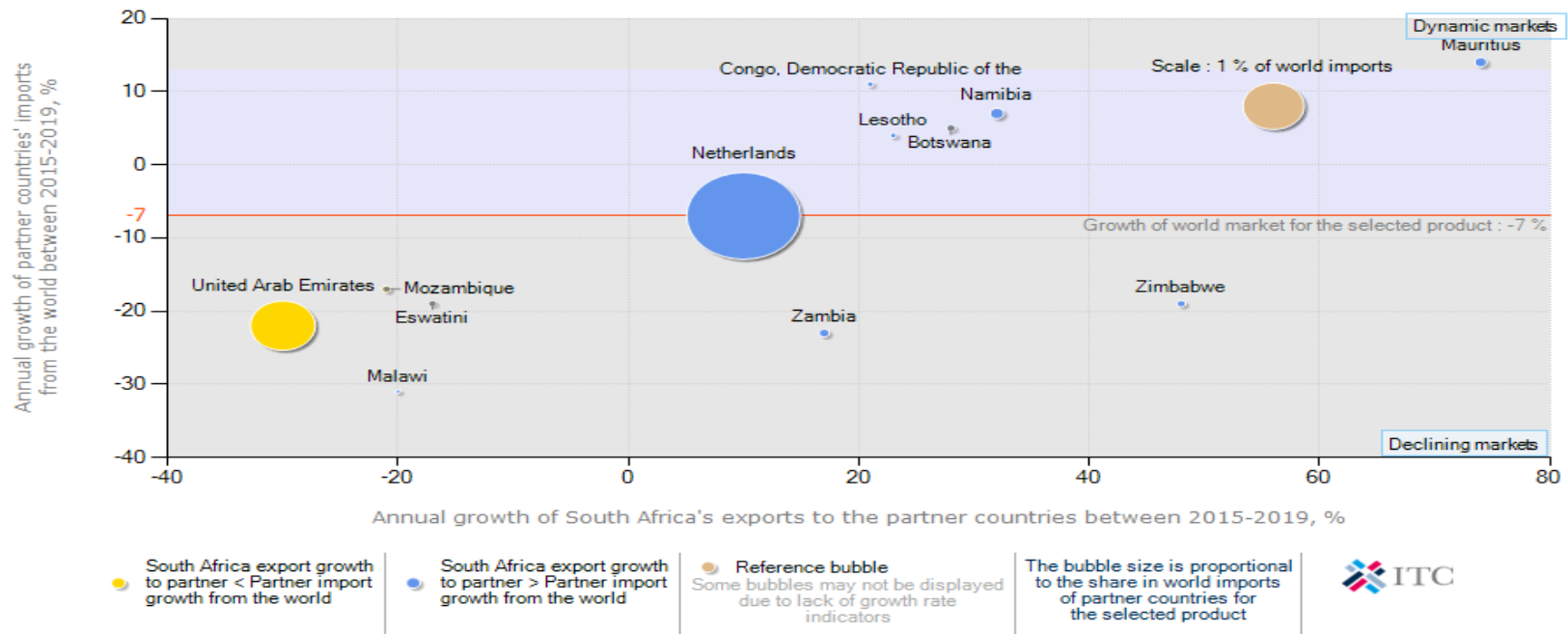
In 2019, South African pineapple (otherwise prepared or preserved, sugared, sweetened, spirited or not) (200820) exports represented 0.00% of world exports and its ranking on the world exports was number 36.

South African pineapple (otherwise prepared or preserved, sugared, sweetened, spirited or not) exports have declined faster than world imports in the countries such as DRC, Lesotho, Namibia and Mauritius markets. South Africa's performance in these markets can be regarded as loss in declining markets.

South African pineapple (otherwise prepared or preserved, sugared, sweetened, spirited or not) exports are declining while the world imports are growing in UAE markets. South Africa's performance into this market can be regarded as loss in a declining market

Figure 27: Growth in demand for South African pineapples (otherwise preserved or prepared, sugared, sweetened, spirited or not) in 2019

Growth in demand for a product exported by South Africa in 2019  
 Product : 200820 Pineapples, prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit (excluding preserved with sugar but not laid in syrup, jams, fruit jellies, marmalades, fruit purée and pastes, obtained by cooking)



TradeMap, ITC

Figure 28 below illustrates prospects for market diversification by South African exporters of pineapples (otherwise prepared or preserved, sugared, sweetened, spirited or not) (200820). The ESwatini, Namibia, Botswana and Zambia hold a bigger market share of South African pineapple (otherwise prepared or preserved, sugared, sweetened, spirited or not) exports.

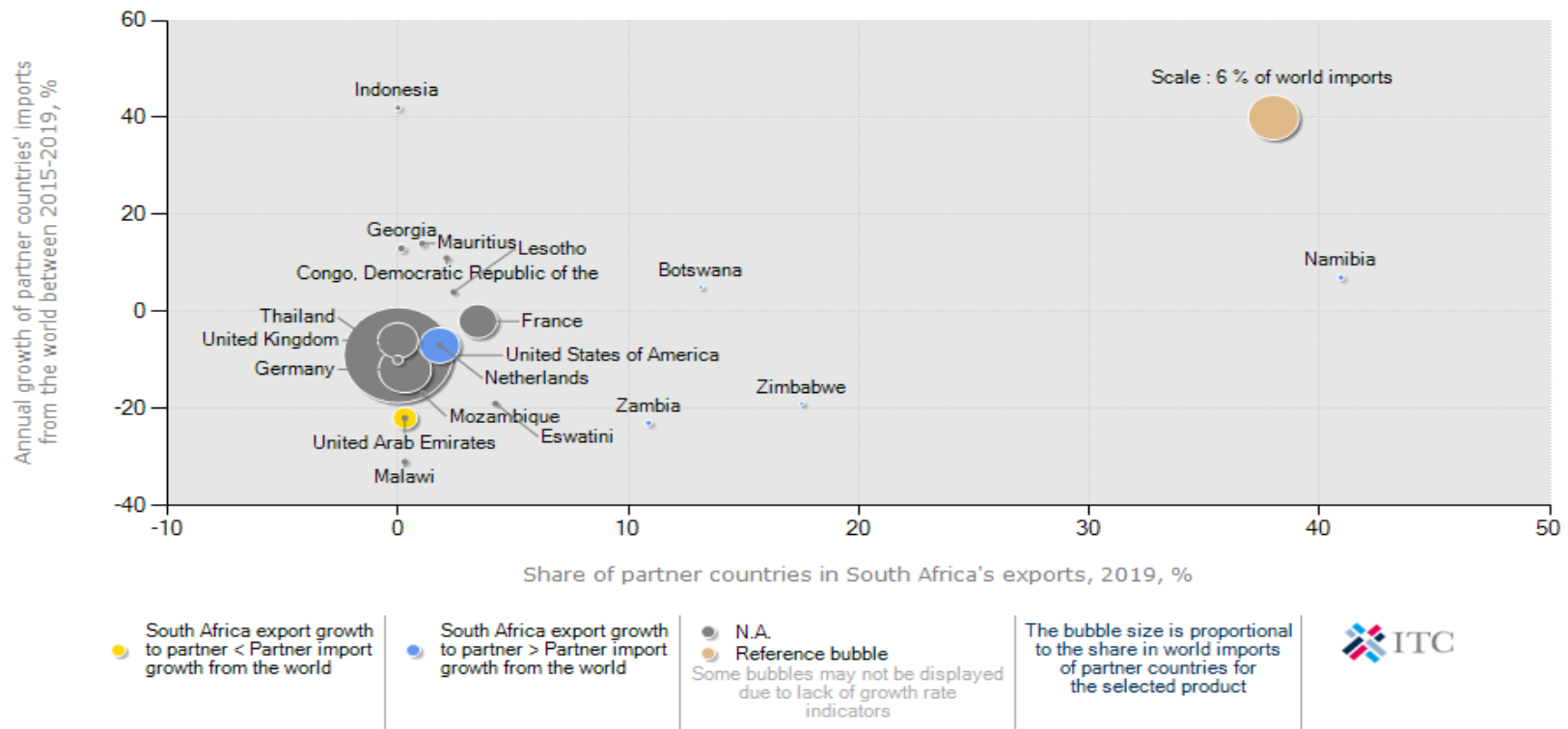
In terms of market size, the USA was the largest pineapple (otherwise prepared or preserved, sugared, sweetened, spirited or not) market in 2019 with just over \$309 million worth of pineapples (otherwise prepared or preserved, sugared, sweetened, spirited or not) imports, or roughly 31.1% of the world pineapple (otherwise prepared or preserved, sugared, sweetened, spirited or not) market. Second was Germany with just over \$65 million worth of pineapple (otherwise prepared or preserved, sugared, sweetened, spirited or not) imports, or roughly 6.6% market share followed by Spain with just over \$50 million worth of pineapple (otherwise prepared or preserved, sugared, sweetened, spirited or not) imports, or roughly 5.1% market share.

Whilst three countries dominate world pineapples imports, it is interesting to note that countries like Malawi, Swaziland and Lesotho have experienced higher annual growth rate from 2015 – 2019. Thailand experienced an annual growth rate of 90%. Second was China with 41% annual growth rate followed by Finland at 18% respectively. It is important to note that growth by all these mentioned countries has been off a low base. These countries represent possible lucrative markets for South African pineapple (otherwise prepared or preserved, sugared, sweetened, spirited or not) producers.

It is also important to note that pineapples (otherwise prepared or preserved, sugared, sweetened, spirited or not) imports from the world to countries such as Portugal and Sweden have declined from 2015 – 2019 and as a result those countries have recorded negative growth rates in pineapples (otherwise prepared or preserved, sugared, sweetened, spirited or not) imports.

Figure 28: South African pineapples (otherwise preserved or prepared, sugared, sweetened, spirited or not) prospects for market diversification in 2019

Prospects for market diversification for a product exported by South Africa in 2019  
 Product : 200820 Pineapples, prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit (excluding preserved with sugar but not laid in syrup, jams, fruit jellies, marmalades, fruit purée and pastes, obtained by cooking)



Source: TradeMap, ITC

In 2019, South African pineapple juice (unfermented, Brix value > 20 at 20°C)(200949) exports represented 3.6% of world exports and its ranking on the world exports was number 7. As depicted in Figure 29 below, South African pineapple juice (unfermented, Brix value > 20 at 20°C) exports are growing faster than the world imports in the Botswana markets. South Africa's performance in those markets can be regarded as gains in dynamic markets.

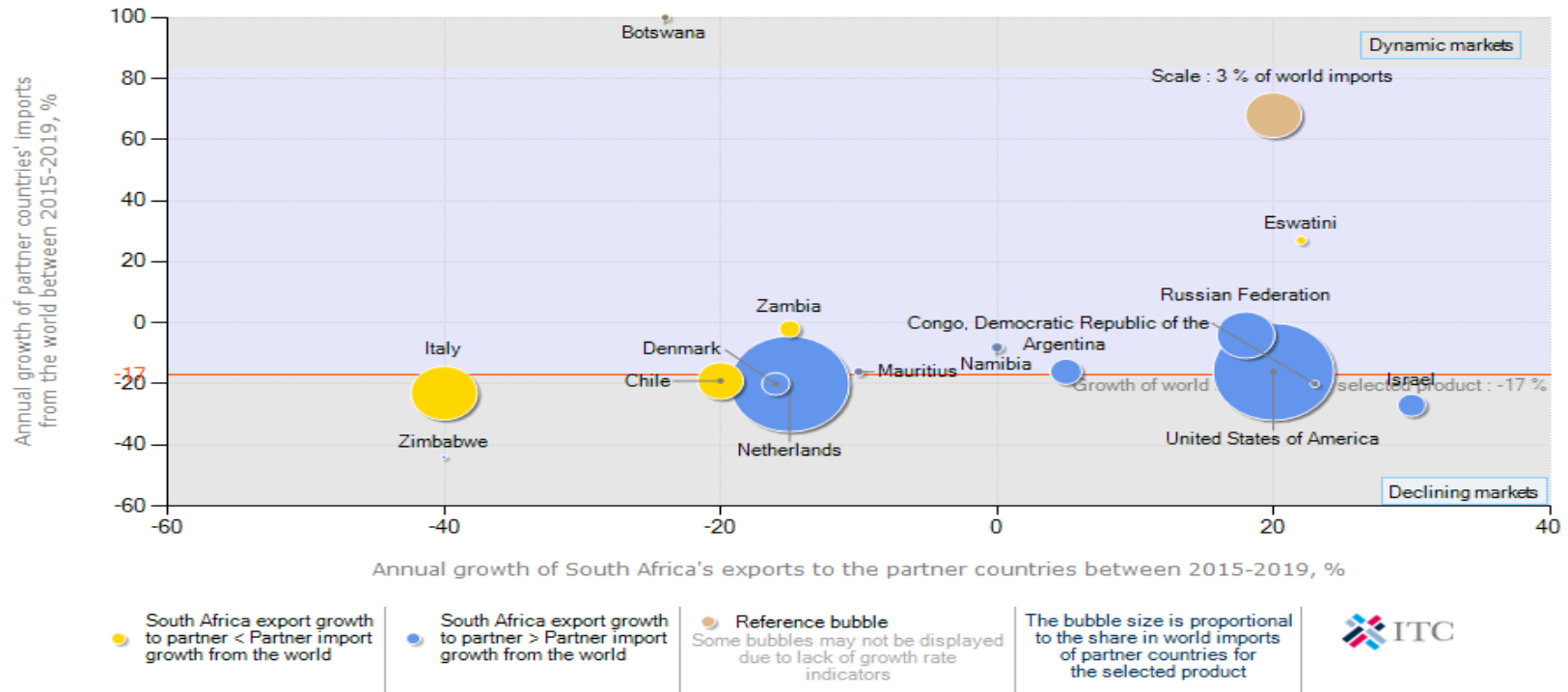
South African pineapple juice (unfermented, Brix value > 20 at 20°C) exports are growing while the world imports are declining in the Netherlands, Namibia, Israel and Mauritius markets. South Africa's performance in those markets can be regarded as gains in declining markets and should be viewed as achievement in adversity.

South African pineapple juice (unfermented, Brix value > 20 at 20°C) exports have declined faster than world imports in Chile, Zambia and Zimbabwean markets. South Africa's performance into these markets can be regarded as losses in declining markets.

South African pineapple juice (unfermented, Brix value > 20 at 20°C) exports are declining while the world imports are growing in the Eswatini markets. These markets are dynamic and South African performance should be regarded as an underachievement.

Figure 29: Growth in demand for the South African pineapple juice (unfermented, Brix value > 20 at 20 C in 2019)

Growth in demand for a product exported by South Africa in 2019  
 Product : 200949 Pineapple juice, unfermented, Brix value > 20 at 20°C, whether or not containing added sugar or other sweetening matter (excluding containing spirit)



Source: TradeMap, ITC

Figure 30 below illustrates prospects for market diversification by South African exporters of pineapples juice (unfermented, Brix value > 20 at 20°C) (200949). The Netherlands, Chile and Russia hold a bigger market share of South African pineapple juice exports (unfermented, Brix value > 20 at 20°C).

In terms of market size, the USA was the largest pineapple juice (unfermented, Brix value > 20 at 20°C) market in 2019 with just over \$45 million worth of pineapples juice (unfermented, Brix value > 20 at 20°C) imports, or roughly 15.4% of the world pineapple juice (unfermented, Brix value > 20 at 20°C) market. Second was the Netherlands with about \$44 million worth of pineapple juice (unfermented, Brix value > 20 at 20°C) imports, or roughly 15.3% market share followed by Spain with about \$22 million worth of pineapple juice (unfermented, Brix value > 20 at 20°C) imports, or roughly 7.7% market share.

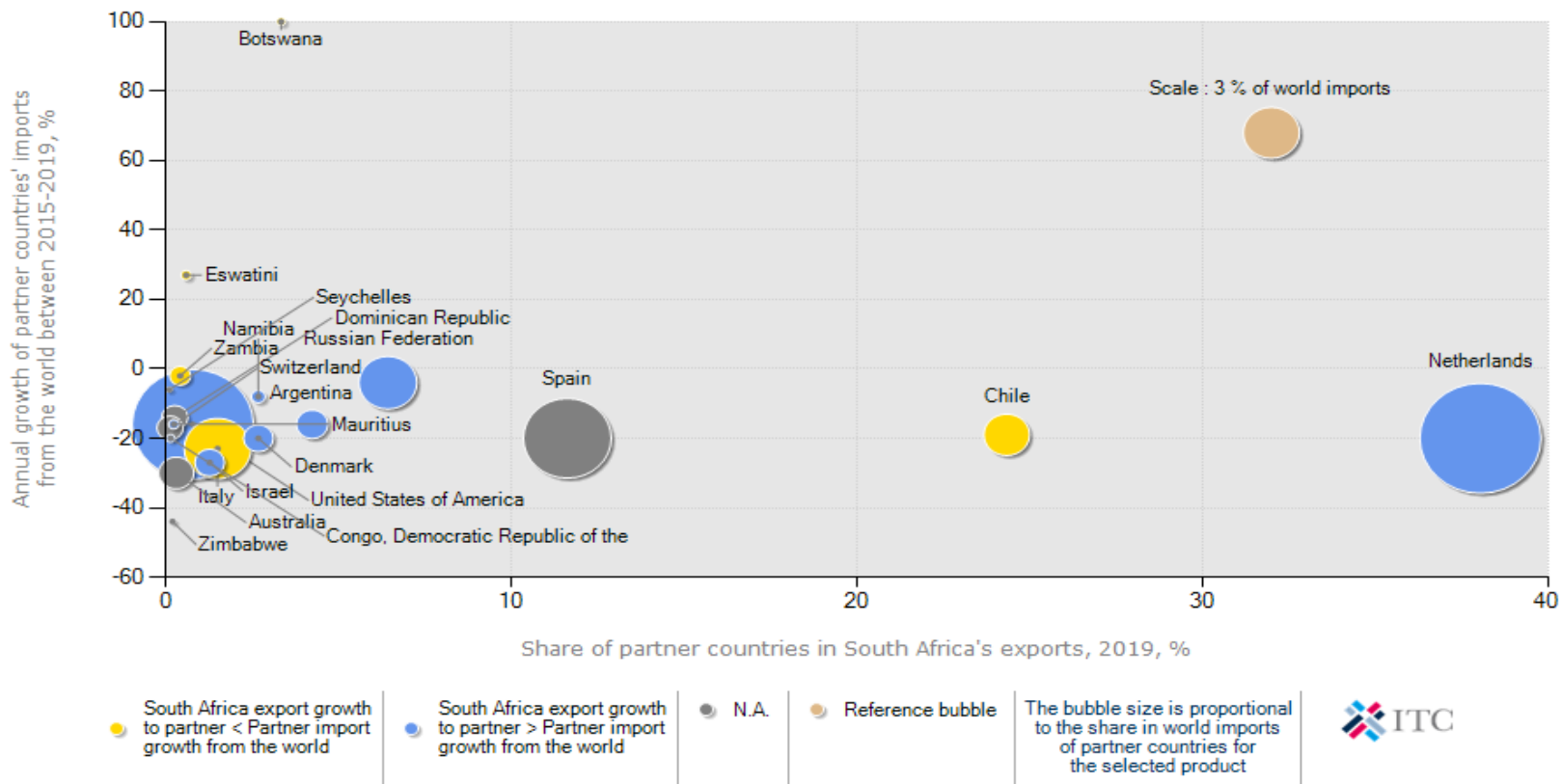
Whilst three countries dominate world pineapples imports, it is interesting to note that countries like the, China together with Nigeria and Senegal have experienced higher annual growth rate from 2015 – 2019. China experienced an annual growth rate of 247%. Second was Nigeria with 149% annual growth rate followed by Senegal at 70%. It is important to note that growth by all these mentioned countries has been off a low base. These countries represent possible lucrative markets for South African pineapple juice (unfermented, Brix value > 20 at 20°C) producers.

It is also important to note that pineapple juice (unfermented, Brix value > 20 at 20°C) imports from the world to countries such as Austria and Lebanon have declined from 2015 – 2019 and as a result those countries have recorded a negative growth rate in pineapples juice (unfermented, Brix value > 20 at 20°C) imports.



Figure 30: South African pineapple juice (unfermented, Brix value > 20 at 20 C) prospects for market diversification in 2019

Prospects for market diversification for a product exported by South Africa in 2019  
 Product : 200949 Pineapple juice, unfermented, Brix value > 20 at 20°C, whether or not containing added sugar or other sweetening matter (excluding containing spirit)



Source: TradeMap, ITC

## 5. 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 pineapple) 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.

### 5.1 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 Africa 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 13 presents tariffs applied by the leading export markets for pineapples (fresh or dried) originating from South Africa during 2019. The European Union member states that featured as the leading export destinations for South African pineapples (fresh or dried) include the Netherlands, Italy, France, United Kingdom, Spain, and Germany. Because the tariff schedule of the European Union member states is the same, only one schedule for the EU is presented in Table 13.

**Table 13: Tariffs applied by leading markets to pineapples (fresh or dried) from South Africa (080430)**

| COUNTRY        | HS CODE    | PRODUCT DESCRIPTION | TRADE REGIME                         | APPLIED TARIFFS | TOTAL AD VALOREM EQUIVALENT TARIFF |
|----------------|------------|---------------------|--------------------------------------|-----------------|------------------------------------|
| European Union | 0804300010 | - Pineapples: Dried | Preferential tariff for South Africa | 0.00%           | 0.00%                              |
|                |            |                     | MFN duties (Applied)                 | 7.70%           | 7.70%                              |

| COUNTRY                  | HS CODE    | PRODUCT DESCRIPTION  | TRADE REGIME                                | APPLIED TARIFFS | TOTAL AD VALOREM EQUIVALENT TARIFF |
|--------------------------|------------|--|---|-----------------|------------------------------------|
|                          | 0804300090 | Pineapples: Fresh  | Preferential tariff for South Africa        | 0.00%           | 0.00%                              |
|                          |            |  | MFN duties                                  | 5.80%           | 5.80%                              |
| Botswana                 | 08043010   | Pineapples: Other  | Intra SACU rate                             | 0.00            | 0.00                               |
| United Arab Emirates     | 08043000   | - Pineapples   | MFN duties (Applied)                        | 0.00%           | 0.00%                              |
| Switzerland              | 08043000   | -Pineapples  | Preferential Tariff for SACU countries      | 0.00%           | 0.00%                              |
|                          |            |  | MFN duties (Applied)                        | 41.31\$/Ton     | 0.81%                              |
| Saudi Arabia             | 08043000   | - Pineapples   | MFN duties (Applied)                        | 0.00%           | 0.00%                              |
|                          | 08043020   | Pineapples, fresh or dried, not reduced in size, in bulk                     | Preferential tariff for AGOA countries      | 0.00%           | 0.00%                              |
|                          |            |  | MFN duties (Applied)                        | 0.72%           | 0.72%                              |
| United States of America | 08043040   | Pineapples, fresh or dried, not reduced in size, in crates or other packages | Preferential tariff for AGOA countries      | 0.00%           | 0.00%                              |
|                          |            |  | MFN duties (Applied)                        | 1.68%           | 1.68%                              |
|                          | 08043060   | Pineapples, fresh or dried, reduced in size                                  | Preferential tariff for AGOA countries      | 0.00%           | 0.00%                              |
|                          |            |  | MFN duties (Applied)                        | 0.14%           | 0.14%                              |
| Zimbabwe                 | 08043000   | - Pineapples   | Preferential tariff (SADC) for South Africa | 0.00%           | 0.00%                              |
|                          |            |  | MFN duties (Applied)                        | 40.00%          | 40.00%                             |
| Seychelles               | 08043000   | Pineapples, fresh or dried   | General tariff                              | 15.00%          | 15.00%                             |
| Zambia                   | 08043010   | - - - Fresh  | Preferential tariff for South Africa        | 0.00%           | 0.00%                              |
|                          |            |  |   | 25.00%          | 25.00%                             |

| COUNTRY    | HS CODE  | PRODUCT DESCRIPTION | TRADE REGIME                         | APPLIED TARIFFS | TOTAL AD VALOREM EQUIVALENT TARIFF |
|------------|----------|---------------------|--------------------------------------|-----------------|------------------------------------|
|            | 08043020 | - - - Dried         | MFN duties (Applied)                 |                 |                                    |
|            |          |                     | Preferential tariff for South Africa | 0.00%           | 0.00%                              |
|            |          |                     | MFN duties (Applied)                 | 25.00%          | 25.00%                             |
| Australia  | 08043000 | -Pineapples         | MFN duties (Applied)                 | 0.00%           | 0.00%                              |
| Mozambique | 08043000 | - Pineapples        | Preferential tariff for South Africa | 0.00%           | 0.00%                              |
|            |          |                     | MFN duties (Applied)                 | 20.00%          | 20.00%                             |

Source: Market Access Map, ITC

Table 13 shows that South African pineapples enjoy preferential market access into the EU because of the preferential trading agreement (PTA) with the EU. This is clearly indicated by a tariff of 0.00% applied to pineapples originating from South Africa. South Africa has access to the USA market under the AGOA, which significantly lowers the tariff barriers for South African pineapples (fresh or dried). Switzerland has a preferential tariff for Southern African Customs Union member states. South African pineapples (fresh or dried) also have duty free access in countries such as United Arab Emirates, Saudi Arabia, Zambia, Mozambique, Zimbabwe and Australia. South African pineapple exports however face tariffs in Seychelles (15%).

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.

Table 14 presents tariffs applied by leading export markets to pineapple juice (unfermented, Brix value > 20 at 20°C) originating from South Africa during 2019. The European Union member states that featured in the leading list of export destinations for South African pineapple juice (unfermented, Brix value > 20 at 20°C) include the Netherlands, Denmark, Italy, Spain, Latvia and France. Because the tariff schedule of the European Union member states is the same, only one schedule for the EU is presented in Table 14.

**Table 14: Tariffs applied by leading markets to pineapple juice (unfermented, Brix value > 20 at 20°C) from South Africa (200949)**

| COUNTRY        | HS CODE    | PRODUCT DESCRIPTION   | TRADE REGIME   | APPLIED TARIFFS                            | TOTAL AD VALOREM EQUIVALENT TARIFF         |
|----------------|------------|---|--|--|--|
| European Union | 2009491111 | ---- powdered With an added sugar content not exceeding 30% by weight   | Preferential tariff for South Africa<br><br>MFN duties (Applied) | 0.00%<br><br>OQTR: 51.97%<br>IQTR : 20.00% | 0.00%<br><br>OQTR: 51.97%<br>IQTR : 20.00% |
|                | 20094991   | ----- containing > 30% added sugar (excl. containing spirit) : powdered   | Preferential tariff for South Africa<br><br>MFN duties (Applied) | 0.00%<br><br>33.57%                        | 0.00%<br><br>33.57%                        |
|                | 20094930   | ---- containing added sugar (excl. containing spirit)   | Preferential tariff for South Africa<br><br>MFN duties (Applied) | OQTR:11.70%/I QTR: 7.90%<br><br>15.20%     | OQTR:11.70%/ IQTR: 7.90%<br><br>15.20%     |
|                | 2009499310 | ----- With an added sugar content not exceeding 30 % by weight  | Preferential tariff for South Africa<br><br>MFN duties (Applied) | 11.70%<br><br>15.20%                       | 11.70%<br><br>15.20%                       |
|                | 20094999   | ----- Not containing added sugar  | Preferential tariff for South Africa<br><br>MFN duties (Applied) | 0.00%<br><br>16.00%                        | 0.00%<br><br>16.00%                        |
|                | 2009491910 | ---- Other  | Preferential tariff for South Africa<br><br>MFN duties (Applied) | 0.00%<br><br>OQTR: 33.60%<br>IQTR : 20.00% | 0.00%<br><br>OQTR: 33.60%<br>IQTR : 20.00% |
| Chile          | 20094900   | Jugos de frutas u otrosfrutos (incluido el mosto de uva) o de hortalizas, sin fermentar y sin adición de alcohol, incluso con adición de azúcar | MFN duties (Applied)   | 6.00%                                      | 6.00%                                      |

| COUNTRY | HS CODE    | PRODUCT DESCRIPTION   | TRADE REGIME   | APPLIED TARIFFS   | TOTAL AD VALOREM EQUIVALENT TARIFF |
|---------|------------|---|--|---|------------------------------------|
|         |            | u otroedulcorante:<br>Jugo de piña (ananá):<br>Los demás  |  |   |                                    |
| Russia  | 2009411001 | --- value exceeding<br>67: Containing added<br>sugar  | Preferential<br>tariff for GSP<br>countries<br><br>MFN duties<br>(Applied) | 7.50% or 38.42<br>\$/Ton<br>whichever is the<br>greater<br><br>10.00% or<br>51.22 \$/Ton<br>whichever is the<br>greater | 7.50%<br><br>10.00%                |
|         | 2009491902 | ---- value exceeding<br>67: Not containing<br>added sugar   | MFN duty   | 0.00%   | 0.00%                              |
|         | 2009491903 | --- value exceeding<br>67: Not containing<br>added sugar  | Preferential<br>tariff for GSP<br>countries<br><br>MFN duties<br>(Applied) | 3.75%<br><br>5.00%  | 3.75%<br><br>5.00%                 |
|         | 2009491908 | ---- value exceeding<br>67: Not containing<br>added sugar   | Preferential<br>tariff for GSP<br>countries<br><br>MFN duties<br>(Applied) | 7.50% or 38.42<br>\$/Ton<br>whichever is the<br>greater<br><br>10.00% or<br>51.22 \$/Ton<br>whichever is the<br>greater | 7.50%<br><br>10.00%                |
|         | 2009493000 | ---- unfermented<br>and not containing<br>added spirit, whether<br>or not containing<br>added sugar or other<br>sweetening matter                     | Preferential<br>tariff for GSP<br>countries<br><br>MFN duties<br>(Applied) | 7.50% or<br>38.42 \$/Ton<br>whichever is<br>the greater<br><br>10.00% or<br>51.22 \$/Ton<br>whichever is the<br>greater | 7.50%<br><br>10.00%                |
|         | 2009499100 | ---- unfermented,<br>not vegetable juices,<br>unfermented, not<br>containing added<br>sugar or other<br>sweetening matter:<br>pineapple juice: other: | Preferential<br>tariff for GSP<br>countries<br><br>MFN duties<br>(Applied) | 7.50% or<br>38.42 \$/Ton<br>whichever is<br>the greater   | 7.50%<br><br>10.00%                |

| COUNTRY   | HS CODE    | PRODUCT DESCRIPTION  | TRADE REGIME  | APPLIED TARIFFS   | TOTAL AD VALOREM EQUIVALENT TARIFF |
|-----------|------------|--|---|---|------------------------------------|
|           |            | of a brix value exceeding 20 but less than 67: Containing added sugar  |   | 10.00% or 51.22 \$/Ton whichever is the greater   |                                    |
|           | 2009499300 | unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter: Pineapple juice   | Preferential tariff for GSP countries<br><br>MFN duties (Applied) | 7.50% or 38.42 \$/Ton whichever is the greater<br><br>10.00% or 51.22 \$/Ton whichever is the greater | 7.50%<br><br>10.00%                |
|           | 2009499901 | --- value exceeding 20 but less than 67: Not containing added sugar  | MFN duty  | 0.00%   | 0.00%                              |
| Argentina | 20094900   | -- Los demás/ Jugo de piña (ananá)   | MFN duties (Applied)  | 14.00%  | 14.00%                             |
| Botswana  | 20094900   | Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter: Pineapple juice | Intra SACU rate   | 0.00%   | 0.00%                              |
| Namibia   | 20094900   | Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter: Pineapple juice | Intra SACU rate   | 0.00%   | 0.00%                              |
| Honduras  | 2009400001 | Jugos de frutas u otros frutos (incluido el mosto de uva) o de hortalizas, sin fermentar y sin adición de alcohol, incluso con adición de azúcar   | MFN applied duty  | 15.00%  | 15.00%                             |

| COUNTRY    | HS CODE  | PRODUCT DESCRIPTION                                       | TRADE REGIME                                | APPLIED TARIFFS | TOTAL AD VALOREM EQUIVALENT TARIFF |
|------------|----------|---|---|-----------------|------------------------------------|
|            |          | u otro edulcorante:<br>Jugo de piña (ananá):<br>Los demás |   |                 |                                    |
| Zimbabwe   | 20094900 | -- Other  | Preferential tariff (SADC) for South Africa | 0.00%           | 0.00%                              |
|            |          |   | MFN duties (Applied)                        | 40.00%          | 40.00%                             |
| Lesotho    | 20094900 | -- Other  | Intra SACU rate                             | 0.00%           | 0.00%                              |
| Mozambique | 20094900 | -- Other  | Preferential tariff (SADC) for South Africa | 0.00%           | 0.00%                              |
|            |          |   | MFN duties (Applied)                        | 20.00%          | 20.00%                             |

Source: Market Access Map, ITC

Table 14 shows that South African pineapple juices enjoy preferential market access into the EU because of the preferential trading agreement (PTA) with the EU. Tariffs applied by the EU are at 11.70% outside Quota Tariff rate and 7.90% inside Quota Tariff rate. Chile applies a 6% tariff across all imports of agricultural products as part of its liberalisation agenda. South African pineapple juice exports into Argentina face a 14.00% duty while those to the Russian Federation face an average duty of 8.78%. Honduras also imposes a 15% import duty of South African pineapple juice exports while Zimbabwe imposes import duties of 40.05%. Exports of pineapple juice by South Africa enter Namibia, Botswana, Lesotho, Zambia, and Mozambique duty free, 5.2 European Union (EU)

The EU has 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.



### 5.2.1 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.

The entry price system applies to apples, pears and lemons year-round and to citrus fruit, table grapes, apricots, cherries, peaches, nectarines and plums during their peak seasons. As can be seen in Tables 12 and 13 the price entry system does not apply to pineapples. 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.

### 5.2.2 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.

#### 5.2.2.1 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 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 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.

### **5.2.2.2 Non-legal requirements: social and environmental accountability**

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.

### **5.2.2.3 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).

## **5.3 United States of America (USA)**

### **5.3.1 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).

### **5.3.2 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 (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 onsite treatments).

In addition 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.

#### **5.4 Japan**

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

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

Japan is also increasing its labelling requirements. It now requires fresh food, including fruit, to be labelled with the place of origin, whilst new technological ('smart') labels that have embedded semi-conductors and information on just about everything are being adopted in various agricultural sectors.

Food containing genetically modified organisms (GMOs) need to be assessed for environmental food safety by the MAFF or the Ministry of Health, Labour and Welfare (MHLW). At the same time, the MHLW tests food imports for maximum residue levels from pesticides and as of May 2006, any food with pesticides not on approved list, regardless of the residue levels, are not allowed entry.

Japanese organic definitions changed in 2001 (they roughly corresponded to world standard definitions), and any foreign producers wishing to enter the Japanese market must be certified under the Japanese standards (not general world standards).

## **5.5 China**

China has a massive system of government support for farmers and generally rural dwellers (who are lagging behind urban dwellers). To this end, most of the agricultural sectors are protected and promoted through a series of subsidies, tax cuts and infrastructure spending policies (as well as low cost loans, research, land use protection, market stabilization measures, etc.). Part of the protection of its massive farming population, which for most part consists of small farmers not benefiting from economies of scale, necessarily occurs in the form of high tariffs and other restrictions. However China is obliged to reduce tariff levels as a condition of being a member of WTO. It therefore remains to be seen just what policies will be adopted going forward, but the general consensus is that it is a vitally important market to watch, and endeavour to enter.

## **6. 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 a fruit combine, which will then contract out importers/marketers and try to take advantage of economies of scale and increased bargaining power. At the same time fruit combines 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 a fruit combine, 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 product 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. Finally, a new medium of e-commerce is expected to have a significant impact on potential exporters/suppliers and their ability to supply directly to wholesalers/distributors in the target markets.

## **7. LOGISTICS**

## **7.1 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).

For some products, in order to reach the destination market with an acceptable degree of freshness, air transport becomes the only option. Obviously, the price fetched on these markets needs to be sufficient to cover the transport costs. Collective agreements between farmers of different commodities with different harvest periods become particularly important if air transport costs are to be managed efficiently.

## **7.2 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.

## **7.3 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.

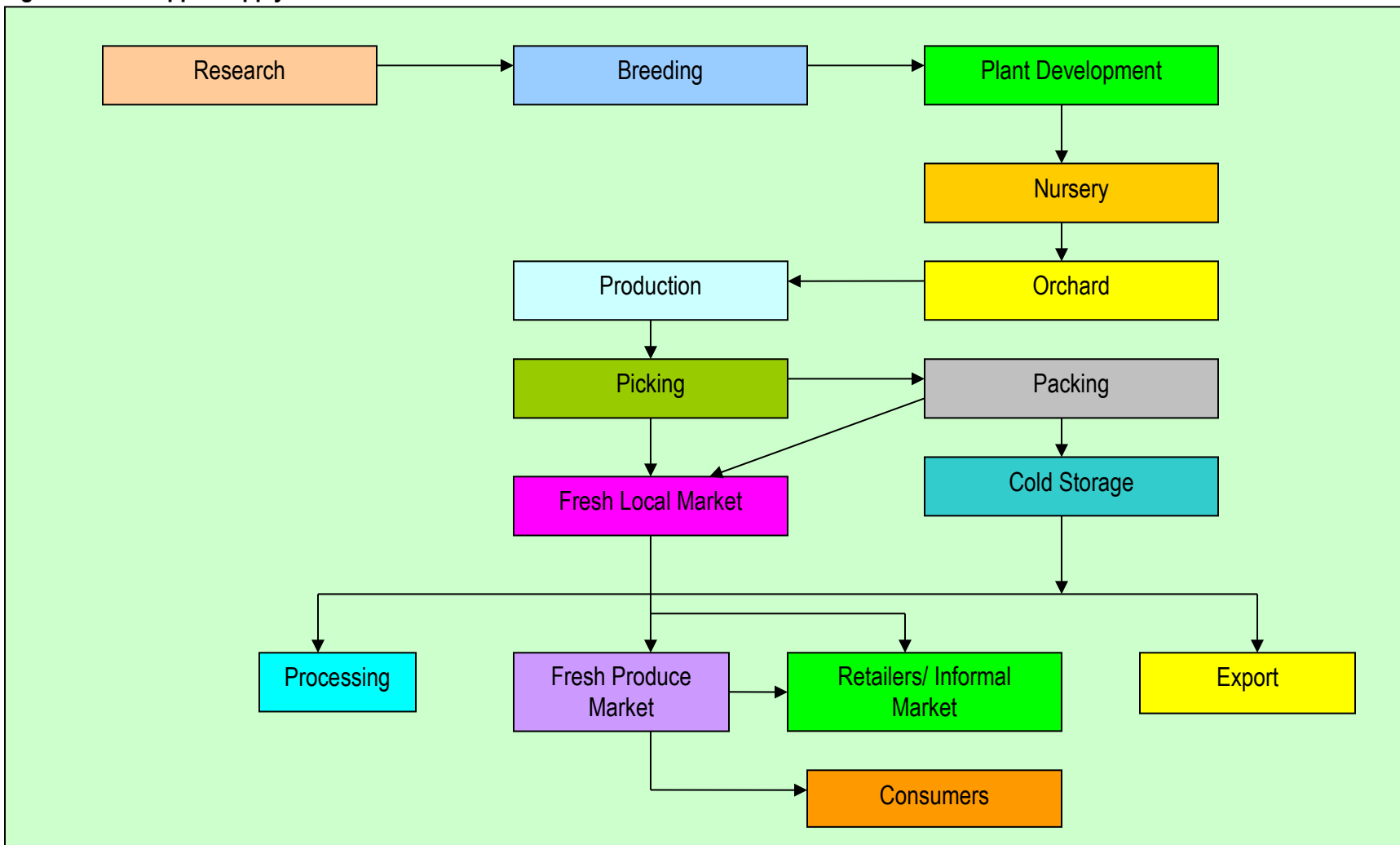
The business panel of any carton (including printed carton labels) used for packaging should comply with the requirements as established by the EU or any other regulations that are specified by a target market. Producers are advised to present their designs to the Perishable Products Export Control Board (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.

## **8. PINEAPPLE SUPPLY VALUE CHAIN**

Figure 29 presents the pineapple supply value chain. The supply value chain is a complex linkage of various production and operational role-players. Key stakeholders include producer organizations, organized labour, NGOs, financial institutions, government, fresh produce markets, processors, exporters and other traders.

Figure 29: Pineapple supply value chain



Source: Fruit Industry Plan Project Team (FIPPT)



## **8.1 Research**

Research and Development in the South African pineapple industry is mainly carried out by the Institute for Tropical and Subtropical Crops of the Agricultural Research Council (ARC). Research conducted by the institute focuses mainly on breeding and plant improvement, nutrition, nematode control, pests and diseases, growth regulators and post-harvest handling. Producer organizations also carry out research based on their needs from time to time.

## **8.2 Producer organisations**

Pineapple producers in Kwazulu Natal are mainly represented through the Hluhluwe Queen Pineapple Marketing Association. The association was established in 1988 to promote pineapples. The association's main goals are:

- To market and promote queen pineapples produced by its members;
- To act as mouth-piece of the members and represent them in promoting queen pineapples produced in the Hluhluwe area; and
- To utilize funds collected for pineapple research

## **8.3 Pineapple processors**

Data from Statistics and Economic Analysis (Abstract, 2011) indicate that during the 1980's more than 200 000 tons of fresh pineapples were produced and supplied to five canneries/processors in the Eastern Cape. However, between 1983 and 1993 South East Asian pineapple producers increased their production of pineapples threefold and flooded the world market resulting in a sharp decline in prices. This, together with sanctions against South Africa, fluctuating exchange rates and the compulsory purchase of the South African government of large areas of land under pineapple production for incorporation into the former Ciskei homeland contributed to the near collapse of the pineapple industry in the Eastern Cape.

By 1993 only three canneries/processors remained in operation and the multinational owners of two of these sold out to local farmers. Of these three canneries, one closed in 1995. The remaining two are both located in East London and are Summerpride Foods and Collondale Cannery. Summerpride Foods has a capacity of 120 000 tons while the Collondale Cannery has a capacity of 40 000 tons, bringing the total processing capacity per annum to 160 000 tons. The ownership of these two canneries is vested in the pineapple producers. This means that they are vertically integrated.

## **8.4 Fresh produce markets**

Over 90% of all Queen Pineapples sold for fresh consumption in South Africa are distributed through the fresh produce markets (FPMs). FPMs continue to serve as centres for price discovery in the marketing of pineapples in South Africa.

## **8.5 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.

## **8.6 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.

## **9. OPPORTUNITIES AND THREATS**

A significant proportion of South African pineapple output is processed (Cayenne) and canned. The world market for canned pineapples is notoriously cyclical in nature. This is mainly because of the dominance of South East Asia (Thailand, Malaysia, Indonesia and the Philippines) who produce 80% of world production. Any climatic or economic adversity in these areas leads to a significant shift in world supply. Furthermore, due to their tropical climate, these Asian countries can produce a pineapple crop in one year whereas in South Africa it takes at least two years to produce a crop. South East Asian producers can therefore come on stream much quicker than the South African industry. This places them in a better position to take advantage of upswings in demand and higher prices.

However, the South African industry does have a competitive advantage over East Asia when it comes to selling the product to the Americans as the freight rates from South Africa are lower than those from Asia. The South African fruit is also well-known for its "tartness" of taste as opposed to the superior colour but somewhat "bland" taste of the South East Asian pineapple. Certain markets also prefer the South African pineapple and have become niche markets. The USA market, for example, prefers fruit packed in natural juice and not syrup.

## **10. ACKNOWLEDGEMENTS**

The following industries/organizations are acknowledged.

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**10.2 International Trade Centre (ITC)**  
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**10.3 Quantec Easy Data**  
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**10.4 Hluhluwe Pineapple Marketing Association**  
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