

# A PROFILE OF THE SOUTH AFRICAN SWEET POTATO MARKET VALUE CHAIN

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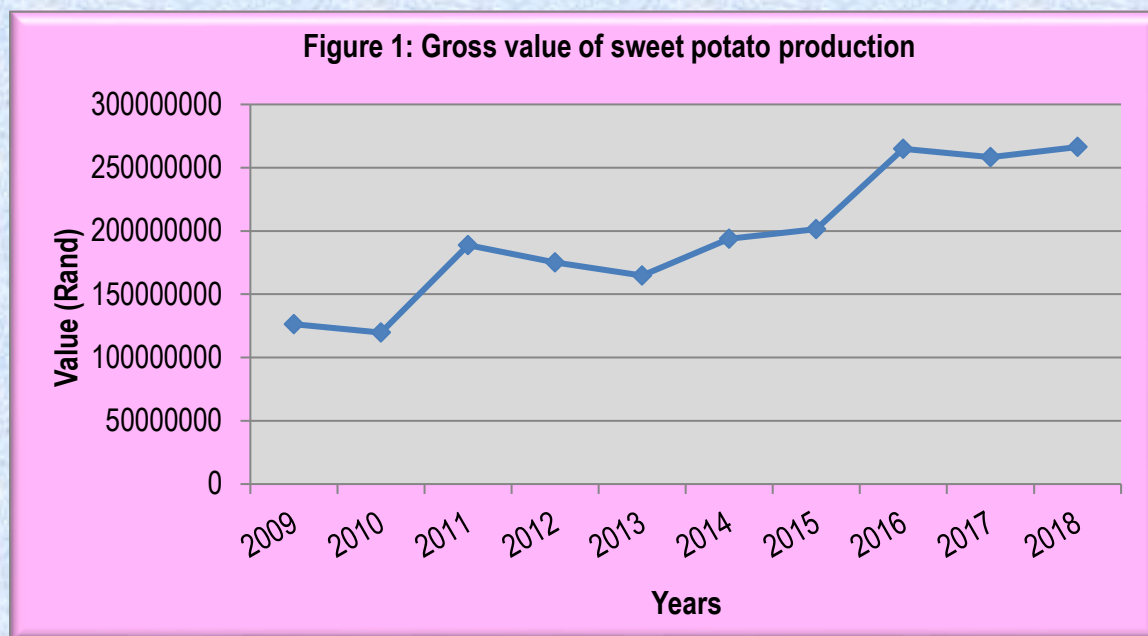
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REPUBLIC OF SOUTH AFRICA

## **TABLE OF CONTENTS**

<b>1. DESCRIPTION OF THE INDUSTRY</b>	<b>2</b>
1.1 Production Areas	3
1.2 Production Trends	3
1.3 Production vs. Consumption of sweet potato	4
<b>2. MARKET STRUCTURE</b>	<b>4</b>
2.1 Domestic market and prices	5
2.2 Sweet potato exports by South Africa	6
2.3 Share Analysis	17
2.4 Sweet potato imports by South Africa	20
2.5 Processing	24
<b>3. MARKET INTELLIGENCE</b>	<b>27</b>
3.1 Tariffs	27
3.2 Non tariff barriers	29
3.2.1 The European Union	29
3.2.2 The United States	30
3.2.3 Asian Market Access	31
<b>4. GENERAL DISTRIBUTION CHANNELS</b>	<b>31</b>
<b>5. LOGISTICAL ISSUES</b>	<b>31</b>
5.1 Mode of transport	31
5.2 Cold chain management	32
5.3 Packaging	32
<b>6. COMPETIVENESS OF SOUTH AFRICA SWEET POTATO EXPORTS</b>	<b>32</b>
<b>7. ACKNOWLEDGEMENTS</b>	<b>35</b>

## 1. DESCRIPTION OF THE INDUSTRY

Sweet potato is native to tropical America and is commonly called a yam in parts of the United States. Sweet potato is a crop plant whose large, starchy sweet tasting tuberous roots are an important root vegetable. The edible tuberous root is long and tapered, with a smooth skin whose colour ranges from white through yellow, orange and purple. Although the leaves are also edible, the starchy tuberous roots are by far the most important product. In some tropical areas, they are a staple food crop. The roots are mostly frequently boiled, fried or baked. Besides simple starches, sweet potatoes are rich in complex carbohydrates, dietary fibre, beta carotene and Vitamin C. Industrial uses include the production of starch and industrial alcohol. Sweet potato can also be processed to make starch and a partial flour substitute. The sweet potato is only distantly related to the potato and does not belong to the nightshade family. Sweet potato ranks as the world's seventh most important food crop, mainly because of its versatility and adaptability. However, the production share, which is traded in the world market, is small, as most countries plant sweet potatoes for domestic consumption.



Source: Statistics and Economic Analysis, DAFF

Figure 1 above illustrates contribution of the sweet potato industry to the gross value of agricultural production over the period of 10 years. In 2009, sweet potato gross value was a record low in a ten year period. During 2010, gross value declined by 5.5%, when compared to 2009 production year. This can be attributed to drop in producer prices that occurred in the same year. During 2011, the industry contribution increased significantly by 57.7% when compared to 2010 industry contribution. In 2012, sweet potato gross value has dropped by 7.2% due to a drop in production output and unfavourable producer prices that occurred in the same year. During 2013, potato gross value has dropped by 5.9% and this can be attributed to 20.5% increase in production output. Sweet potato gross value has gone up by 7% during 2014 in comparison to the previous year value and this can be ascribed to 26% increment in producer price. During 2015, sweet potato gross value grew by 3.9% when compared to 2014 value and this can be attributed 5% increment in production output. In 2016, sweet potato gross value eased higher by 31.5%, which can be ascribed to an increase in

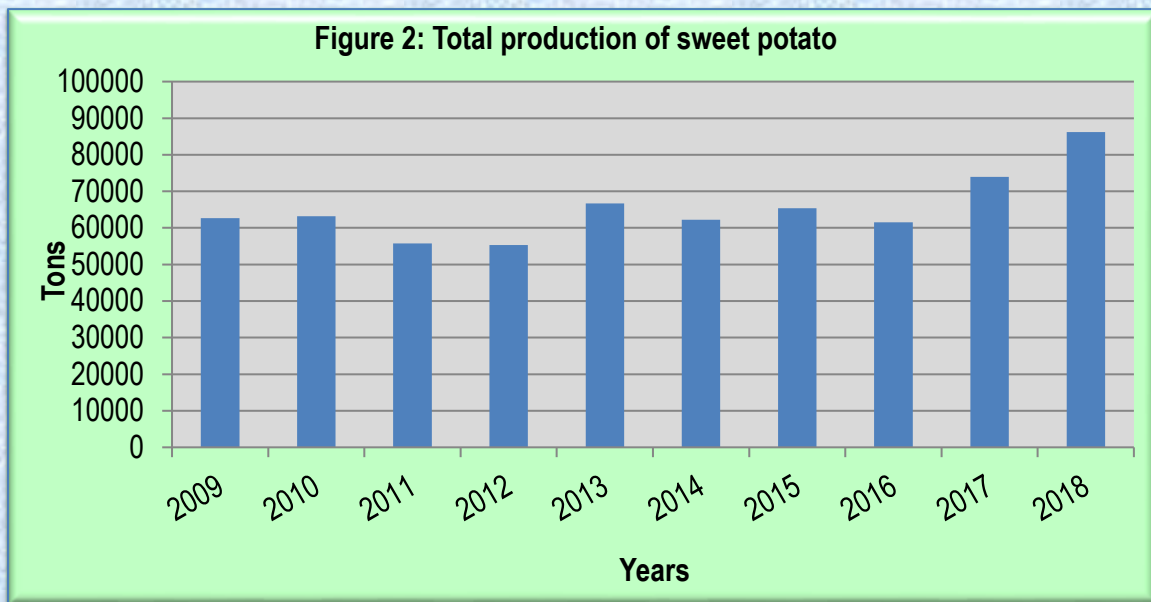
sweet potato prices during the same season. Sweet potato gross value declined marginally by 2.5% in 2017, when compared to 2016 gross value and this can be ascribed to 19% drop in producer prices during the same season. As of 2018, sweet potato gross value grew slightly by 3% relative to 2017 gross value and this can be attested to 16.5% increment in the domestic production output.

### 1.1 Production Areas

Sweet potatoes are cultivated throughout tropical and warm temperature regions wherever there is sufficient water to support their growth. The sweet potato plant does not enjoy frost. Depending on the cultivar and conditions, tuberous roots mature in two to nine months. The main producing regions are Northern Cape, Western Cape, Limpopo, Free State, Eastern Cape and Gauteng. Globally, Asia region is the largest grower of sweet potatoes; providing about 80% of the world supply. China is still the largest sweet potato producer, followed by Malawi, Tanzania, Nigeria, Indonesia, and Ethiopia. Half of Asia crop is used for feeding animals and the remainder primarily used for human consumption. According to FAOSTAT 2018, Nigeria, Tanzania, Ethiopia and Uganda are amongst the top ten sweet potato producers in the world.

### 1.2 Production Trends

Figure 2 below illustrates the sweet potato production volumes from 2009 to 2018



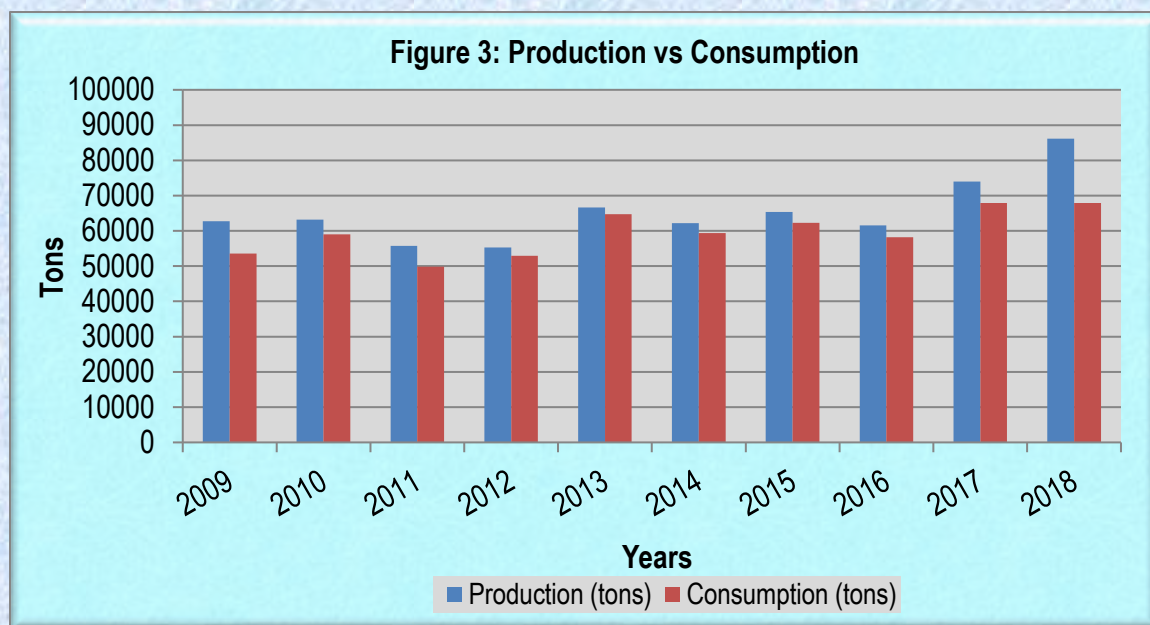
Source: Statistics and Economic Analysis, DAFF

In 2009, South Africa sweet potato production was just above 62 600 tons and during 2010, production volume grew slightly by 0.8% relative to the previous year (2009) . As of 2011, the production output dropped by 11.7% when compared to the 2010 production season. In 2012, production output eased lower by 0.9%, in comparison to the previous year output. Sweet potato

production output increased notably by 20.5% during 2013 and the volume was a record high during a 10 year period. There was a 26.6% drop in production output during 2014 in comparison to the 2013 output. In 2015, sweet potato production output eased higher by 5% when compared to 2014 production output. There was a 5.9% decline in sweet potato production output during 2016 when compared to 2015 sweet potato production output. In 2018, production output grew by 20% relative to previous year (2016) production output. As of 2018, South Africa's sweet potato production output notably grew by 16.5% relative to 2017 production output.

### 1.3 Production vs. Consumption of sweet potato

Figure 3 below depicts local consumption of sweet potato compared to the production over a 10 year period. South African average sweet potato consumption is approximately 67 866 tons per annum. In 2018, consumption volume increased by 0.01%, which can be ascribed to 16.5% increase in production output in the same year. The figure below illustrates that the production of sweet potato is higher than the consumption. This indicates that South Africa is self-sufficient in terms of sweet potato production and the surplus sweet potatoes are also exported. Papua New Guinea, followed by the Solomon Islands and Burundi has the world's highest per capita consumption of sweet potatoes.



Source: Statistics and Economic Analysis, DAFF

## 2. MARKET STRUCTURE

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

## 2.1 Domestic market and prices

Table 1 depicts quantities of sweet potatoes sold through the various marketing channels over the past ten years.

**Table 1: Sweet Potato sold through different marketing channels**

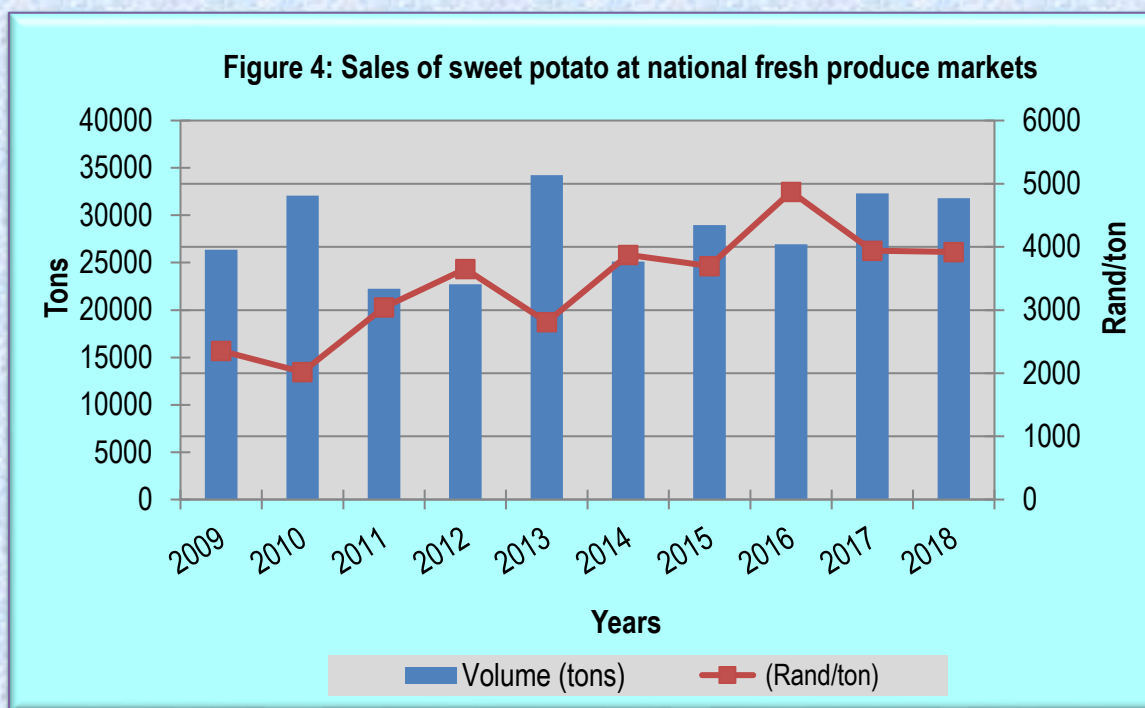
Years	National fresh produce market (Tons)	Exports (Tons)	Total Processing
2009	26 368	6 838	2 295
2010	32 080	3 489	1 577
2011	22 237	6 244	1 115
2012	22 733	1 192	1 627
2013	34 240	1 979	1 365
2014	25 770	2 477	1 219
2015	28 967	3 110	1 627
2016	26 928	2 766	1 326
2017	32 302	3 041	3 723
2018	31 802	1 534	17 449

Source: Statistics and Economic Analysis, DAFF

Table 1 above illustrates that National Fresh Produce Markets (NFPMs) remain an important channel for the sale of fresh sweet potato in South Africa. During 2018, 37% of all sweet potatoes were still distributed through fresh produce markets. There was a decline in percentage of volume sold through NFPMs, in comparison to 2017 and this can be ascribed a notable increase in processed sweet potatoes. The remaining 63% represent a direct sale from producer to wholesalers, retailers, processors, exports and informal traders. In 2018, processed sweet potato volume was incomparably higher when compared to 2017 processed volumes. In the same year, sweet potato export volume notably decreased by 49%, in comparison to the 2017 export volume.

Figure 4 below illustrates the sales of sweet potato in the national fresh produce markets over the period of 10 years. Sweet potato volumes were stable above 22 000 during the period under review. In 2009, volumes supplied at the market was just above 26 300 and during 2010, market prices dropped by 14.3% due to a 21% increase in sweet potato volumes supplied across the markets in the same year. Sweet potato price increased significantly by 51% during 2011, due to 31% decrease in sweet potato volume supplied across the markets. During 2012, market price increased by 19.8% despite a 2.2% increase in sweet potato volumes supplied across the market and this can be attributed to a strong uptake of sweet potato in the same year. In 2013, sweet potato volumes supplied across the market increased by 50.6%, which resulted in a 23% drop in market price. There was a 26.6% drop in volume supplied across the markets during 2014, and this resulted in a positive impact of 37.9% increment in market price. During 2015, there was a 15.4% increase in volume

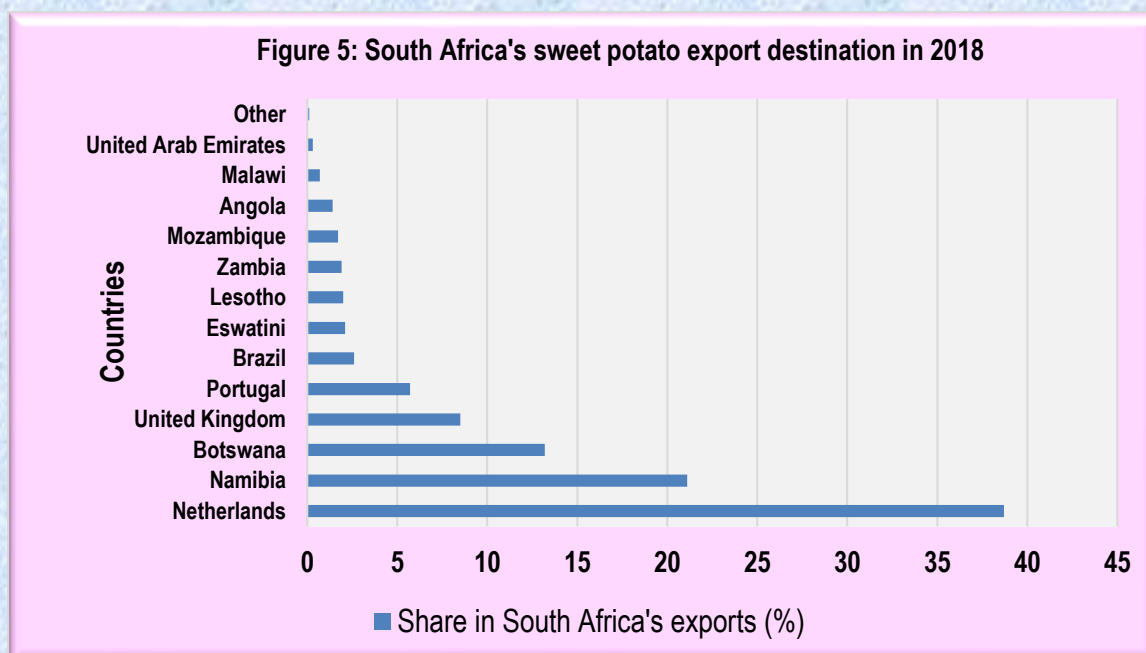
supplied at the markets, which resulted in a 4.5% decrease in the market price. Sweet potato price rose sharply by 31% in comparison to the previous year (2015) sweet potato price and this can be attributed to 7% decrease in volume supplied at the markets. In 2017, sweet potato market price dropped by 19% relative to 2016 market price and this can be attested to 20% increment in sweet potato volume supplied at the fresh produce market. As of 2018, there was a 0.4% decline in sweet potato market price despite 1.5% decrement in volume supplied at the market and this can be ascribed to poor uptake of sweet potato prices.



Source: Statistics and Economic Analysis, DAFF

## 2.2 Sweet potato exports from South Africa

South Africa is not a major sweet potato exporter. During 2018, it represented 0.2% of world exports and it was ranked number 24 in the world. South Africa's world ranking has lost its competitiveness as during 2017 it was ranked number 23 and this can be attributed to notable 49% decrement in volume exported. Most of sweet potatoes produced were destined for domestic markets. During 2018, South African sweet potato exports were destined for Netherlands, Namibia, Botswana, United Kingdom, Portugal, Brazil, Eswatini and Lesotho. Globally, United States of America, Netherlands, China, Spain, Viet Nam, Egypt, Canada, Japan and United Kingdom were major sweet potato exporters during 2018. Egypt has lost its competitiveness in terms of world sweet potato exports quantity and it has realized a negative annual growth of 13% in value between 2014 and 2018. Figure 5 below illustrates South African sweet potato export destinations.



Source: ITC Trade Map

Table 2 below indicates that, during 2018, South Africa exported higher quantities of sweet potato to Netherlands, Namibia, Botswana, United Kingdom, Portugal, Brazil and Eswatini. South Africa has exported 38.7% of sweet potato export to Netherlands; Namibia has recorded 21.1%, United Kingdom has commanded a 8.5% share, but export to this country has decreased by 17% in terms of value and 27% in quantity between 2017 and 2018 period. In the same year, Botswana has commanded 13.2% share of South Africa's sweet potato exports. South African sweet potato exports to Botswana and Eswatini have increased by 16% and 19% in terms value and the export quantity has increased by 6% and 15% respectively between 2014 and 2018 period. South Africa's sweet potato exports to Netherlands have gone up by 38% in value and 4% in quantity between 2014 and 2018 period.

**Table 2: South African sweet potato exports in 2018**

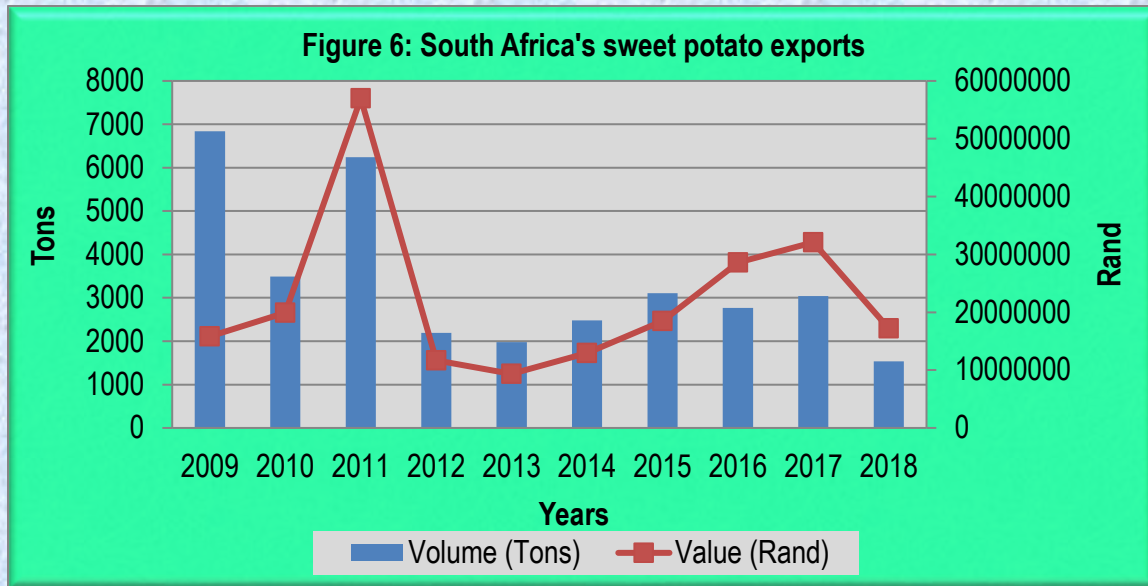
Importers	Value exported in 2018 (USD thousand)	Trade balance 2018 (USD thousand)	Share in South Africa's exports (%)	Quantity exported in 2018 (tons)	Growth in exported value between 2014-2018 (% p.a.)	Growth in exported quantity between 2014-2018 (% p.a.)	Growth in exported value between 2017-2018 (% p.a.)
World	1344	1227	100	1541	8	-9	-44
Netherlands	520	520	38.7	557	38	4	-62
Namibia	284	224	21.1	422	-3	-5	4
Botswana	177	177	13.2	209	16	6	15
United Kingdom	114	114	8.5	109	-17	-27	-56



Importers	Value exported in 2018 (USD thousand)	Trade balance 2018 (USD thousand)	Share in South Africa's exports (%)	Quantity exported in 2018 (tons)	Growth in exported value between 2014-2018 (% , p.a.)	Growth in exported quantity between 2014-2018 (% , p.a.)	Growth in exported value between 2017-2018 (% , p.a.)
Portugal	76	76	5.7	83	0	0	-7
Brazil	35	35	2.6	17	0	0	9
Eswatini	28	21	2.1	28	19	15	4
Lesotho	27	27	2	30	17	9	17
Zambia	26	26	1.9	32	47	44	37
Mozambique	23	22	1.7	26	4	-2	-15
Angola	19	19	1.4	9	-51	-66	850
Malawi	9	9	0.7	9	56	58	13
United Arab Emirates	4	4	0.3	4	8	-30	-95

Source: ITC Trade Map

Figure 6 below, illustrates South Africa's sweet potato exports over the past 10 years. The highest export was recorded in 2009 and sweet potato export volume was 6 838 tons . In 2010, sweet potato export dropped by 61% despite a 0.7 % increase in production volume. There was an 87% increase in exports during 2011, when compared to the 2010 despite an 11.7 % decrease in production output. During 2012, sweet potato exports dropped significantly by 65% and this can be attributed to a slight decline in production output in the same year. In 2013, sweet potato export dropped further by 9.7%, in comparison to the 2012 export. There was a 25% increment in sweet potato export in 2014 in spite of a 26.6% decline in domestic production output. South Africa sweet potato export has gone up by 26% in comparison to the 2014 export volumes and this can be attributed to 5% increase in the domestic production output. Generally, it was more profitable to export sweet potatoes in 2008, 2011 to 2015, since high export values were recorded for volumes exported. During 2016, South Africa's sweet potato exports eased lower by 11% in comparison to the previous year (2015) and this can be ascribed to 5.9% decline in domestic production output. In the same year, it was relatively more profitable to export sweet potatoes compared to the other years. In 2017, there was a 10% increase in sweet potato export volume relative to 2016 export volume and this can be attributed to 20% increment in domestic production output. During the same season, it was more profitable to export sweet potatoes in comparison to 2016 export value. As of 2018, South Africa sweet potato export drastically dropped by 49% relative to the previous year (2017), despite 16.5% increment in domestic production output.



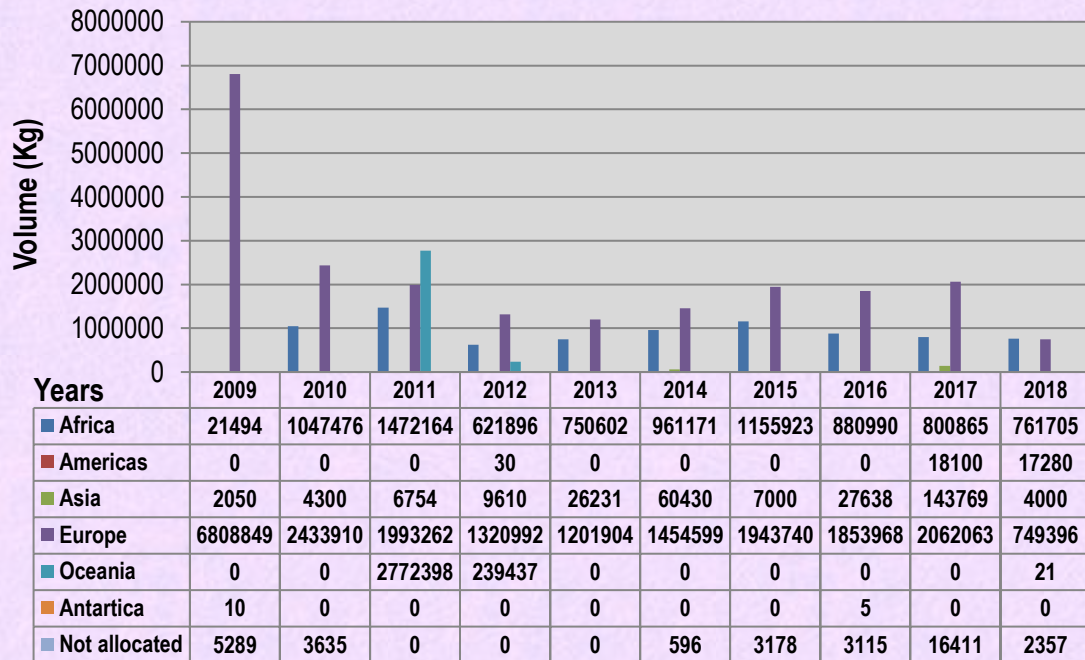
Source: Quantec Easydata

\* Quantec easy data has revised export data to include export to SACU countries from 2010.

Figure 7 below indicates that South Africa sweet potato export market is mostly in European Countries (United Kingdom and Netherlands). South Africa also exports small quantities of sweet potatoes to African countries. A small fraction of exports was exported to Asia and other exports were not allocated. The highest export volumes were recorded in 2009 and it was exported to the European region. In 2011, South Africa exported high quantities of sweet potato to the Oceania region (Australia and New Zealand). Exports to Asia have increased by 57% in 2011 when compared to 2010 sweet potato exports. During 2012, Europe continued to be the biggest market for sweet potato exports from South Africa. In the same year, considerable volumes were also exported to Oceania and Africa regions.

Europe region followed by Africa region continued to be the primary export markets for South Africa's sweet potato exports during 2013. Notable volume was also exported to the Asia region during the same year. In 2014, Europe was still the preferred export market for South African sweet potato exports. During the same time, there was a sharp increment in exports to Africa (Namibia, Angola, Botswana and Zimbabwe) and Asia (Malaysia and United Arab Emirates). During 2015, Europe region (Netherlands and United Kingdom) has continued to be the primary export market for sweet potato export, followed by Africa region (Namibia, Botswana and Angola). In the same year, sweet potato export to Asia has sharply dropped, while the unallocated exports have considerably increased. In 2016, Europe (Netherlands and United Kingdom) and Africa (Namibia and Botswana) regions were still the main recipient of sweet potato exported from South Africa. At the same time, a considerable export volume of sweet potato was destined to the Asia region. During 2017, Europe (Netherlands, United Kingdom and Portugal) has remained the primary export market for sweet potato exported from South Africa, followed by Africa region and Asia. In the same period, there was a notable increase in sweet potato destined to the America region and the unallocated export has experienced a notable increment. As of 2018, Africa region, followed by Europe region was the preferred market for South Africa's sweet potato exports from South Africa. At the same time, there was a notable decline in export volume destined for Asia, America and unallocated exports.

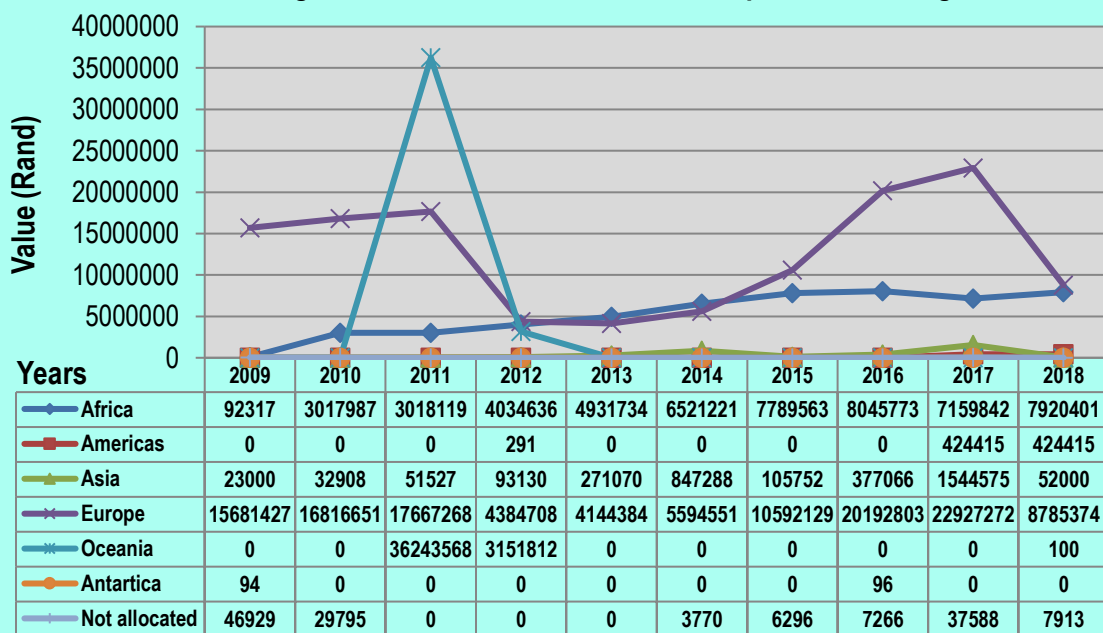
**Figure 7: South Africa sweet potato exports to the regions**



Source: Quantec Easydata

Figure 8 is an illustration of the value of South Africa's sweet potato export to the regions.

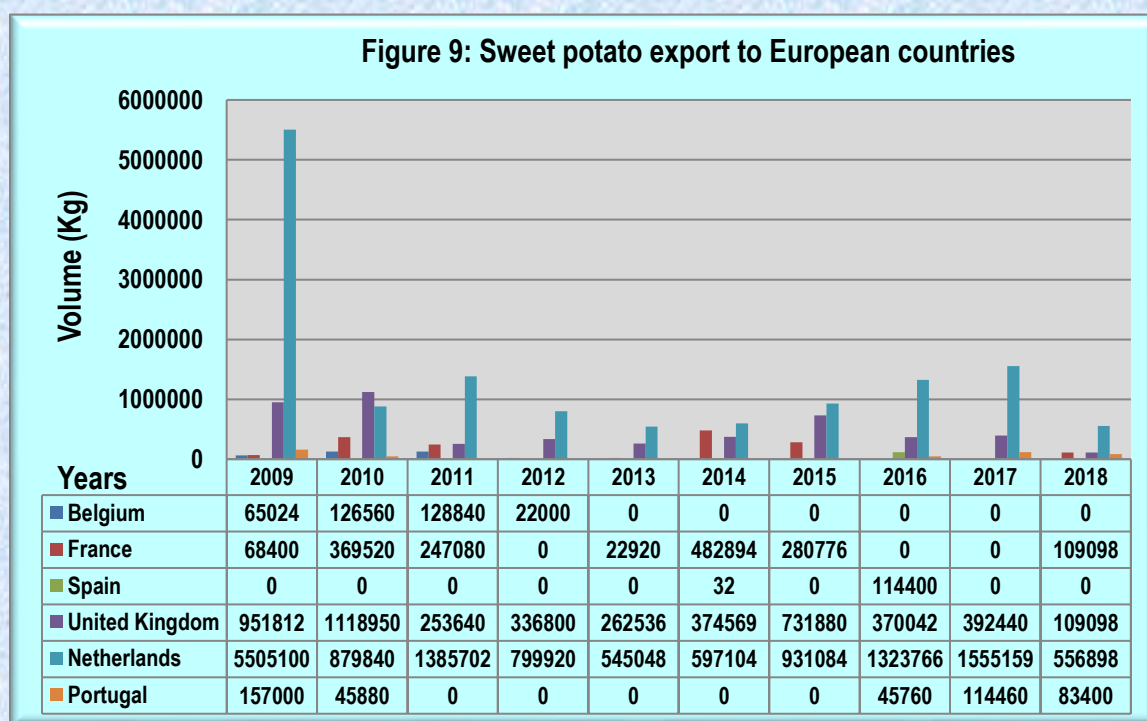
**Figure 8 : Value of South Africa sweet potato to the regions**



Source: Quantec Easydata

Figure 8 above indicates that the exports to Europe mostly have higher value than exports to other region. The value to Asia, Africa and the unallocated exports were insignificant due to low volume exported to those regions. In 2010, it was more profitable to export sweet potato to Africa and Europe, when compared to the previous year. During 2011, it was more profitable to export sweet potatoes to Oceania followed by Europe. In 2012, it was more profitable to export to Oceania and Asia, while European markets were the less profitable market during the same year. During 2013, it was more profitable to export sweet potato to Asia and Europe was the least profitable export market. Asia export market was still more profitable in 2014, then followed by African market and Europe region remained the least profitable market. During 2015, it was by far more profitable to export sweet potatoes to Asia, followed by Africa region and Europe region was less profitable. In 2016, it was more profitable to export sweet potato to Africa, followed by Europe and Asia market was least profitable. In 2017, America region was still the most profitable export market, followed by Europe and Africa and Asia region was the least profitable market for sweet potatoes from South Africa. As of 2018, America region was still by far the most profitable market for South Africa's sweet potato export, followed by Asia, Europe and Africa, whilst export destined to Oceania was least profitable.

Figure 9 illustrates South Africa's sweet potato exports to European Countries during a ten year period.

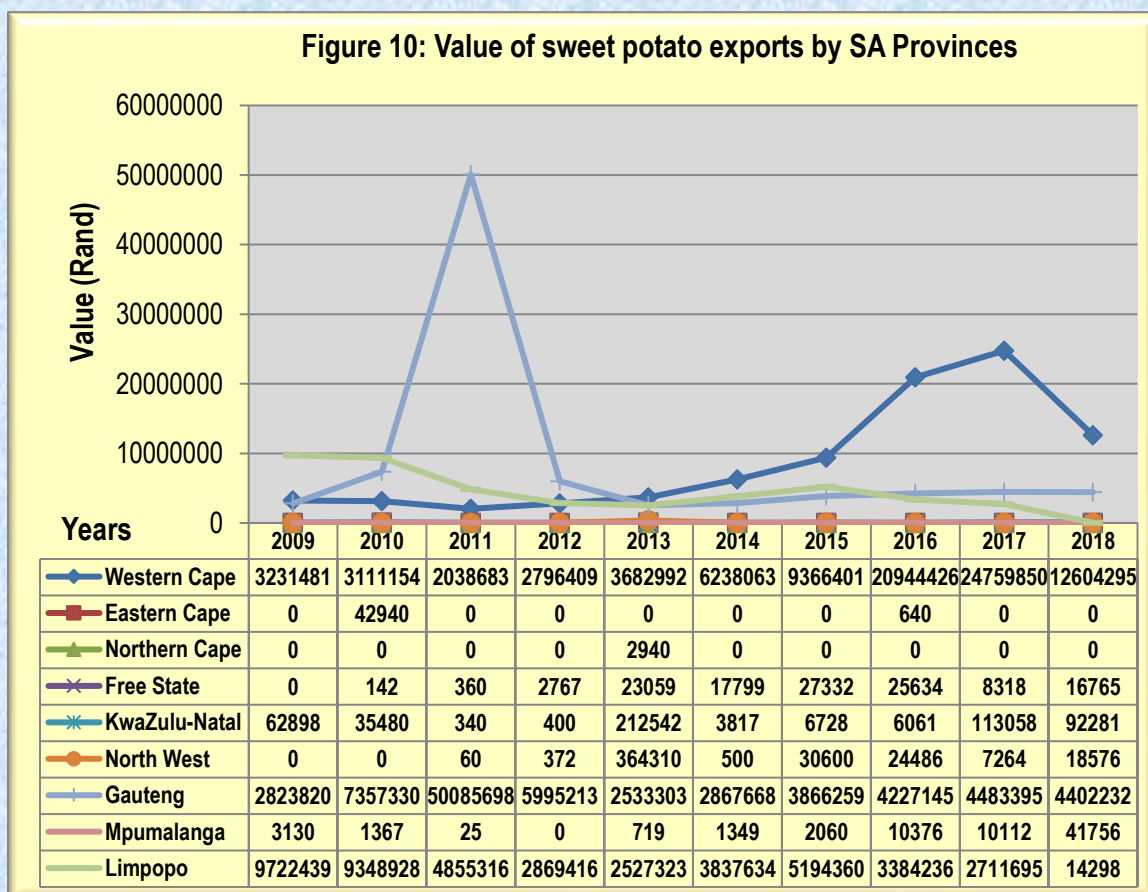


Source: Quantec Easydata

Netherlands, United Kingdom, France and Belgium were the primary market for sweet potato export originating from South Africa. The high volumes were exported to the Netherlands during 2009. In 2008 and 2009, notable volume of sweet potatoes was exported to Portugal. Sweet potato export to Germany and Greece were insignificant. During 2013, South Africa exported sweet potatoes to France, United Kingdom and Netherlands. In 2014, South Africa's exports to Europe region were destined to the Netherlands, United Kingdom and France. During 2015, South African sweet potato

exports destined to Netherlands and United Kingdom have notably increased while export to France has substantially dropped. In 2016, Sweet potato exports destined to the Netherlands, Spain and Portugal have sharply increased whilst sweet potato exports to the United Kingdom eased lower by 49% in comparison to 2015 exports. As of 2017, there was a notable increase in sweet potato export volumes destined to Netherlands, United Kingdom and Portugal relative to 2016 export volumes. During 2018, Netherlands was still the primary market for South Africa's sweet potato export, however the export volume declined 64%. In the same year, there was a notable increase in sweet potato export destined for France, whilst exports destined for United Kingdom and Portugal have dropped by 72% and 27% respectively.

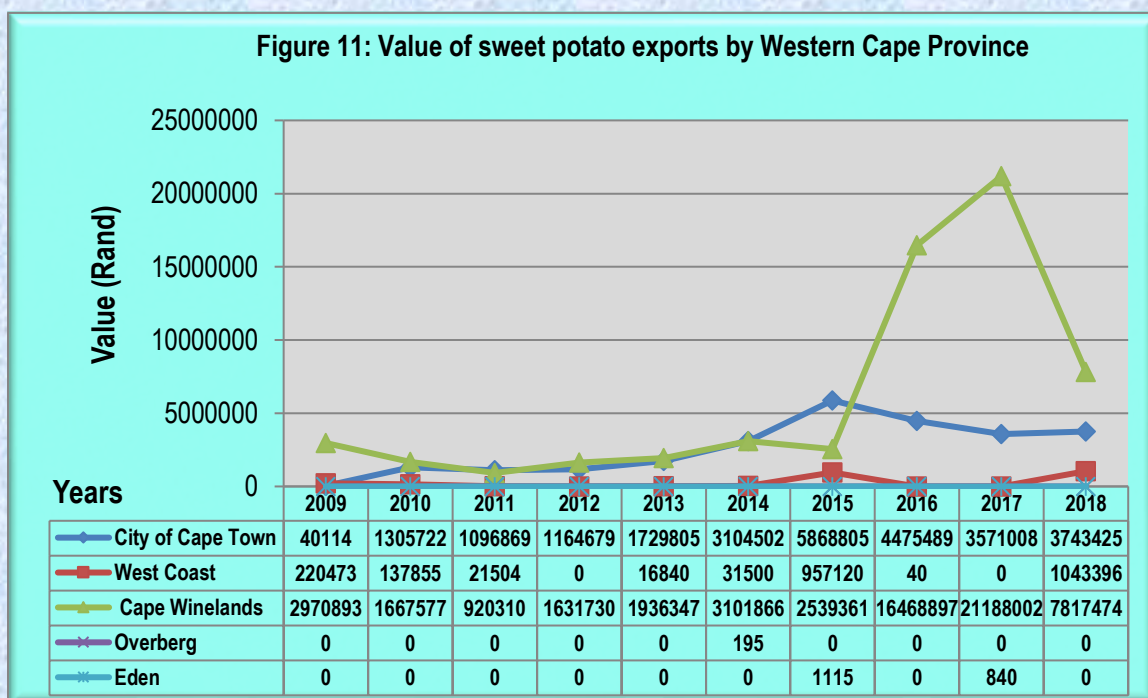
**Figure 10: Value of sweet potato exports by SA Provinces**



Source: Quantec Easydata

Figure 10 above illustrates the sweet potato exports by provinces for the past ten years. The highlights for sweet potato exports were those of the Western Cape, Gauteng and Limpopo. KwaZulu Natal has contributed to a lesser extent. In 2010, Gauteng export value has surged, Eastern Cape has recorded a notable export value whilst Limpopo export value declined notably by 38% relative to 2009 export value. The high export values from the Western Cape and Gauteng can be attributed to the exports exit points and the registered exporters located in these provinces. In 2011, Gauteng export value has increased significantly when compared to the previous years while the values for Western Cape and Limpopo provinces have dropped significantly. During 2012, export by Gauteng and Limpopo have dropped significantly while the export Western Cape province has considerably increased. In 2013, North West has contributed for the first time to South Africa's sweet potato export.

In the same year, Western Cape has notably increased its export value, while Gauteng and Limpopo export values have dropped. KwaZulu Natal export value was insignificant. In 2014, South Africa sweet potatoes were exported mainly from Western Cape, Limpopo and Gauteng. Exports from Free State, KwaZulu Natal and Mpumalanga were less significant. Sweet potato export values for Western Cape, Limpopo and Gauteng provinces have substantially increased during 2015. Western Cape and Limpopo provinces continued to be the primary exit points for South Africa's sweet potato exports in 2016. In the same year, there was a notable decline in sweet potatoes sourced from Free State, KwaZulu Natal, North West whereas Mpumalanga export value has recorded a notable increase. During 2017, Western Cape has continued to lead in sweet potato export and the export value has increased by 17.4% relative to 2016 export value. At the same time, KwaZulu Natal and Gauteng export value has drastically increased, whilst Limpopo, North West and Free State export values have substantially dropped. As of 2018, Western Cape was still the primary exit point for South Africa's sweet potato export, however the export value drastically dropped by 49% relative to 2017 export value. Gauteng export has dropped slightly by 1.8%, Mpumalanga export value was incomparably higher than 2017 export value and Limpopo export value drastically dropped by 99%. The following figures (Figure 11-14) shows the value of sweet potato exports from the various districts, provinces of South Africa.

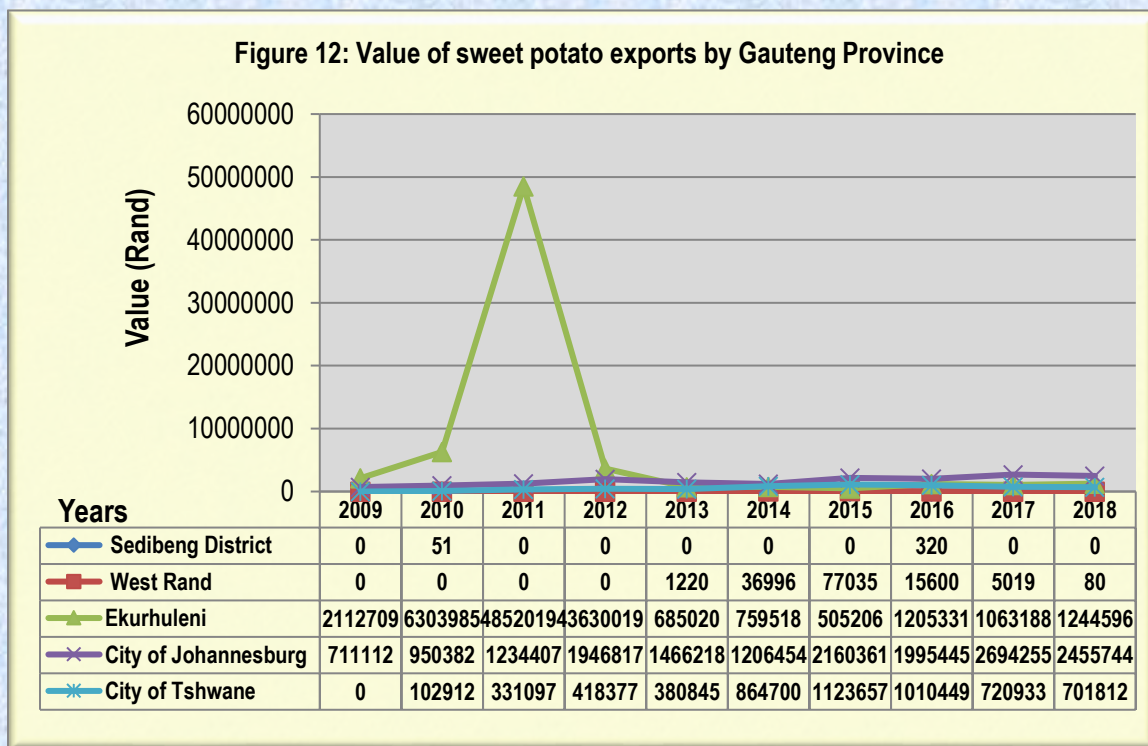


Source: Quantec Easydata

Figure 11 above indicates that sweet potato exports from Western Cape province were mainly from Cape Winelands and City of Cape Town. Cape Town harbour renders export exit point for exports from these municipalities. During 2009, Cape Winelands and West Coast municipalities contributed notably to Western Cape export. In 2010, City of Cape Town and Cape Winelands district were the main exit point for sweet potato exported from Western Cape Province. In 2011, export values for City of Cape Town, Cape Winelands and Eden has decreased significantly when compared to 2010 export values recorded for those municipalities. During 2012, export values for the City of Cape Town

has doubled, Cape Winelands and Eden has increased significantly when compared to 2011 export values recorded for these districts. In 2013, City of Cape Town export value has sharply increased, Cape Winelands and Eden have also increased their export values. During 2014, Western Cape sweet potatoes were exported mainly from Cape Winelands and City of Cape Town. Overberg and Eden export values were less significant. In 2015, Cape Winelands, City of Cape Town, West Coast and Eden export values has experienced a significant increment when compared to 2014 export values. During 2016, Winelands continued to lead in sweet potato exports from Western Cape and the export value has surged in comparison to 2015 export value. At the same time, City of Cape Town export value eased higher by 39.7% and Eden export value surged by 82%, whilst West Coast export dropped drastically to a trivial value. In 2017, Cape Winelands was by far the primary exit point for sweet potato exports from Western Cape, followed by the City of Cape Town, whereas Eden has registered a trivial export value. As of 2018, Cape Winelands was still the primary exit point for Western Cape sweet potato export, however the export value has sharply dropped by 63%, City of Cape Town export value has increased by 4.8% and West Coast district has significantly contributed to Western Cape sweet potato export.

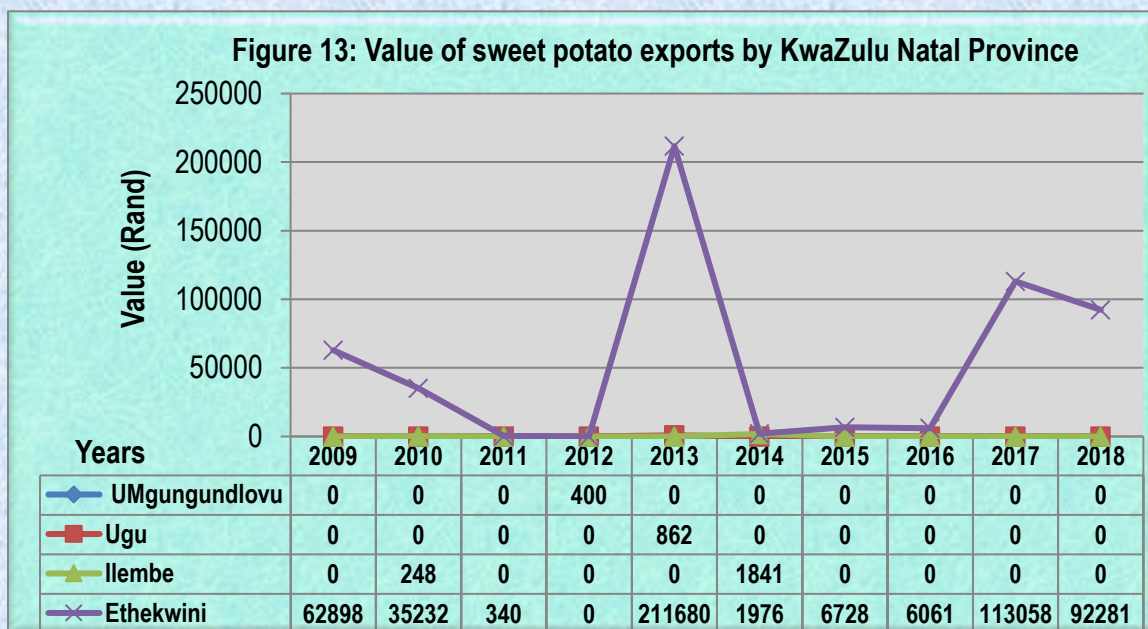
**Figure 12: Value of sweet potato exports by Gauteng Province**



Source: Quantec Easydata

As can be seen from figure 12 above, sweet potato exports from Gauteng province were mainly from the City of Johannesburg and Ekurhuleni district municipalities. City of Johannesburg was the primary exit point for Gauteng sweet potato export. City of Johannesburg and Ekurhuleni districts have notably contributed to sweet potato exports from Gauteng in 2009 and 2010. The highest export was recorded in 2011 and the exports were exported through the Ekurhuleni municipality and in 2012, export value for this municipality has dropped by 93%. In the same year, the City of Johannesburg and City of Tshwane export values have increased when compared to the previous year. During 2013, City of Johannesburg, Ekurhuleni and West Rand export values have notable

dropped and in the same year, City of Tshwane has increased its export value, in comparison to the previous year. OR Tambo international airport, serves as an export exit point for export originating from Gauteng province. In 2014, Gauteng sweet potatoes were exported through West Rand, Ekurhuleni, City of Johannesburg and City of Tshwane. During 2015, Gauteng provincial sweet potato export has substantially increased, while West Rand and the City of Tshwane export values have sharply dropped. City of Johannesburg was still the primary exit point of sweet potato export from Gauteng province during 2016, Ekurhuleni and City of Tshwane export values have notably increased, whereas West Rand export values experienced decrements. In 2017, the City of Johannesburg has remained the main exit point of Gauteng sweet potato export, followed by Ekurhuleni and City of Tshwane, whereas West Rand has registered less significant export value. As of 2018, Ekurhuleni export value increased by 17%, City of Johannesburg export value declined by 8.8% and City of Tshwane export value dropped by 2.6% relative to 2017 export values.

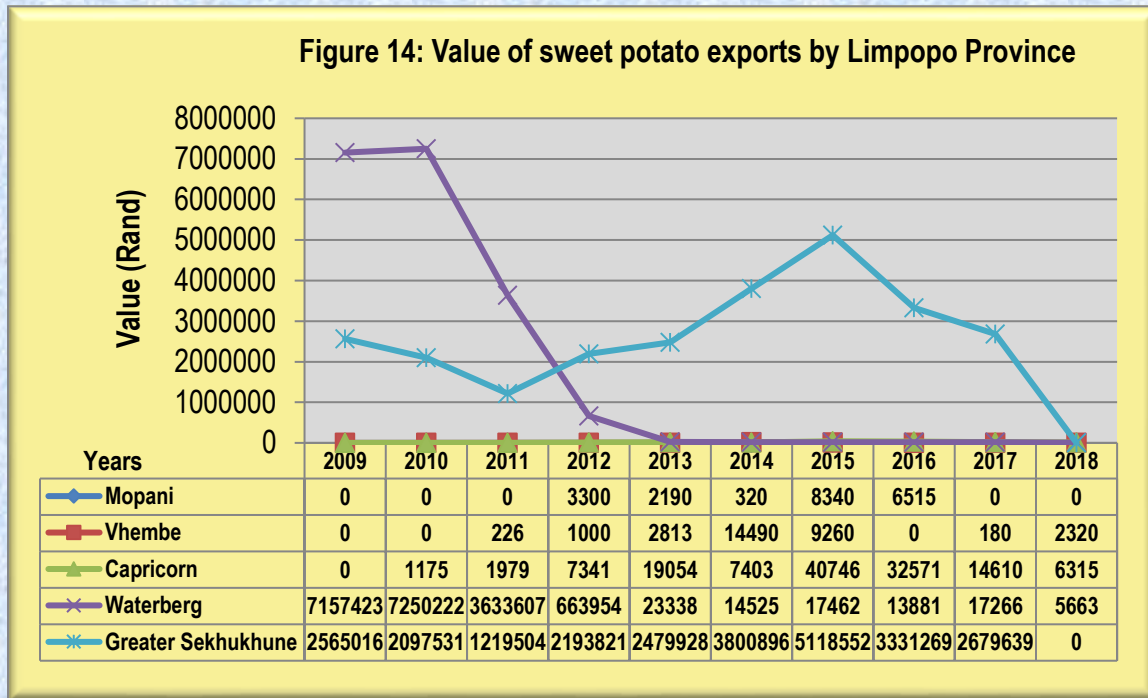


Source: Quantec Easydata

Figure 13 above indicates that sweet potato exports by KwaZulu-Natal province were mainly from Ethekwini. In 2009 and 2011, KwaZulu Natal sweet potato export was solely through Ethekwini district municipality and a recorded a high export value was recorded in 2008. During 2011, Ethekwini export value was insignificant. During 2012, KwaZulu Natal has recorded a zero trade for sweet potatoes. KwaZulu Natal exported sweet potato through Ugu district municipality for the first time in a ten year period, but the export value was insignificant. As of 2013, Ethekwini sweet potato export share surged relative to 2012 export value. During 2014, KwaZulu Natal sweet potato exports were sourced from Ilembe district. In 2015, KwaZulu Natal has exported sweet potatoes solely through Ethekwini district, however the export value was less significant. During 2016, Ethekwini was still the exit point for the sweet potato export from KwaZulu Natal export; however, the export value eased slightly lower by 9.9% in comparison to 2015 export value. In 2017, there was a surge in sweet potato export recorded for Ethekwini relative to 2016 export value. As of 2018, Ethekwini was the sole exit point for KwaZulu Natal sweet potato exports, however the export value declined by 18% relative to 2017 export value.



Figure 14 is an illustration of the value of Limpopo provincial sweet potato exports.



Source: Quantec Easydata

Figure 14 above illustrates that sweet potato exports from Limpopo province were mainly from the Greater Sekhukhune district. During 2009, Limpopo sweet potato exports were recorded for Waterberg and Greater Sekhukhune. In 2010, Waterberg export value has gone up by 10.5%, while Greater Sekhukhune export value has dropped by 21.6% when compared to 2009 values. Exports values for Greater Sekhukhune and Waterberg have decreased during 2011. At the same time, Vhembe contributed to the sweet potato export from Limpopo province for the first time in ten years, but the value was insignificant. In 2012, Greater Sekhukhune continued to lead in sweet potato exports while the export value for Waterberg has dropped when compared to 2011 export value.

During 2013, Limpopo province exported sweet potato from the Greater Sekhukhune district and the export value has increased by 11.6%, when compared to 2012 export value. In 2014, Greater Sekhukhune district continued to be the main contributor to Limpopo provincial sweet potato exports. At the same time Capricorn has recorded its first export value, however the value was trivial. During 2015, Greater Sekhukhune, Waterberg and Capricorn export values have experienced a notable increment. In the same year, Mopani has contributed for the first time to Limpopo sweet potato exports. In 2016, Greater Sekhukhune was still the main contributor to Limpopo sweet potato export, however the export values eased lower by 34.9%, Capricorn, Waterberg and Mopani export values has also dropped. During 2017, Greater Sekhukhune export value has dropped by 19.5% relative to 2016 export value, Waterberg export value grew by 24% whilst Capricorn has notably dropped by 55% relative to 2016 export value. As of 2018, the overall Limpopo sweet potato exports have drastically dropped, Vhembe district export value has increased but the value was less significant.

### 2.3 Share Analysis

Table 3 below is an illustration of the provincial share towards national exports. Western Cape, Gauteng and Limpopo have commanded the greatest share of sweet potato exports. The high export shares in the Western Cape and Gauteng can be attributed to registered exporters and exports exit points based in these provinces. From 2009 to 2010, Limpopo province has commanded marginally higher share than that of Gauteng, KwaZulu Natal and Western Cape provinces. In 2010, Limpopo province commanded 46.99% of sweet potato exports. This can be attributed to high production of sweet potato in Limpopo and exports to neighbouring countries like Zimbabwe and Mozambique, which are situated near Limpopo province. In 2011, Gauteng commanded an 87.90% share; Limpopo commanded 8.52%, while Western Cape export share has dropped to 3.58% share of sweet potato exports from South Africa. During 2012, Gauteng sweet potato export share has dropped significantly, while Limpopo and Western Cape export shares have gone fairly higher during the same year.

In 2013, Western Cape export share has increased to 39.40% and Limpopo export share has increased to 27.04%. In the same year, Gauteng province export share has dropped from 59.55% to 43.67%. During 2014, Western Cape has recorded notable 48.11% share, Limpopo has commanded 29.60% share, whereas Gauteng export share has further declined to 25.09%. Western Cape export share has increased to 50.65% during 2015, while Gauteng and Limpopo export shares have slightly decreased. Free State, KwaZulu Natal, North West and Mpumalanga export shares were trivial. In 2016, Western Cape has continued to command higher export share and the export share has increased to 73.17%, while Limpopo and Gauteng export shares has dropped to 11.82% and 14.77% respectively. During 2017, Western Cape has commanded a greatest share of Western Cape export by recording 77.15%, Gauteng export value has slightly dropped to 13.97% and Limpopo export share has marginally dropped to 8.45% share. As of 2018, Western Cape was still in the lead in South Africa's sweet potato export share and it has commanded 73.32%, Gauteng has commanded 25.65% share and other provinces have commanded trivial export shares.

**Table 3: Share of provincial sweet potato exports to the total RSA sweet potato exports (%)**

Year Province	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Western Cape	20.40	15.64	3.58	23.97	39.40	48.11	50.65	73.17	77.15	73.32
Eastern Cape	0	2.23	0	0	0	0	0	0	0	0
Northern Cape	0	0	0	0	0.15	0	0	0	0	0
Free State	0	0	0	0	0	0.14	0.15	0.09	0.03	0.10
KwaZulu Natal	0.40	0.18	0	0	2.27	0.13	0.04	0.02	0.35	0.54
North West	0	0	0	0	3.90	0	0.17	0.09	0.02	0.11
Gauteng	17.82	36.98	87.90	51.40	27.10	25.09	20.91	14.77	13.97	25.65
Mpumalanga	0.02	0	0.01	0	0	0.01	0.01	0.04	0.03	0.24
Limpopo	61	46.99	8.52	24.45	27.04	29.60	28.09	11.82	8.45	0.08
South Africa	100	100	100	100	100	100	100	100	100	100

Source: Calculated from Quantec Easydata

**Table 4: Share of sweet potato exports to the total Western Cape provincial sweet potato exports (%)**

Year District	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
City of Cape Town	1.24	29.61	12.07	12.49	19.71	47.37	34.03	21.29	14.42	29.70
West Coast	6.82	0	2.08	0	0.00	1.35	10.18	0	0	8.28
Cape Winelands	91.94	69.93	85.56	87.13	79.87	51.26	55.39	78.38	85.57	62.02
Eden	0	0.45	0.29	0.38	0.42	0.01	0.40	0.33	0	0
<b>Western Cape</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Calculated from Quantec Easydata100

Table 4 above indicates that the Cape Winelands commanded the greatest share of sweet potato exports from Western Cape province during the 10 year period. City of Cape Town has contributed to Western Cape export share to a lesser extent. Town Harbour renders the exit point of sweet potato exports from the Western Cape province. During 2009, Cape Winelands has accounted for more than 90% share of Western Cape provincial sweet potato exports. In 2011, Cape Winelands municipality commanded 85.56% and City of Cape Town dropped to 12.07% share of sweet potato export from the Western Cape. In 2012, Cape Winelands municipality continued to lead by commanding 87.13% shares of sweet potatoes from the Western Cape province. During the same year, the City of Cape Town has slightly increased their export shares. Cape Winelands has increased its sweet potato export share from 85.56% to 87.13% in 2013. In the same year, City of Cape Town has also increased its export share from 12.49% to 19.71%. During 2014, there was a sharp increase in City of Cape Town export share, whereas Cape Winelands export share has notably declined from 79.87% to 51.26%. Cape Winelands and West Coast sweet potato export share has notably increased during 2015, while the City of Cape Town export share has dropped to 34.03%. In 2016, Cape Winelands has continued to command the greatest share of Western Cape sweet potato export share and the export share increased to 78.38%, whereas City of Cape Town export share eased lower from 34.03% to 21.29%. Cape Winelands was still leading in Western Cape export share by commanding 85.57% export share and City of Cape Town export share has dropped to 14.42%. As of 2018, Cape Winelands export share has dropped slightly to 62.02%, City of Cape Town export share grew to 29.70% whereas West Coast export share has registered 8.28% share.

**Table 5: Share of sweet potato exports to the total Gauteng provincial sweet potato exports (%)**

Year District	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
West Rand	0	0	0	0	0	25.30	11.69	3.83	0.11	0
Ekurhuleni	74.82	72.10	94.35	45.43	1.66	12.81	13.16	29.09	23.71	28.27
City of Johannesburg	25.18	27.51	5.58	53.87	97.36	28.29	55.24	46.40	60.09	55.78
City of Tshwane	0	0.40	0.07	0.70	0.99	33.60	19.91	20.67	16.08	15.94
<b>Gauteng</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Calculated from Quantec Easydata

Table 5 above, indicates that Ekurhuleni and City of Johannesburg commanded the greatest share of sweet potato exports from Gauteng Province. OR Tambo International Airport renders the exit point of sweet potato exports from Gauteng Province. During 2009 to 2010, Ekurhuleni export share has dropped to just above 70% and City of Johannesburg has increased its export shares to just above 25%. In 2011, Ekurhuleni commanded a 94.35% share of Gauteng Sweet potato exports. During 2012, Ekurhuleni's export share has notably dropped to 45.43%, while the City of Johannesburg export share has sharply increased to 53.87% in the same year. In 2013, City of Johannesburg has substantially increased its export share from 53.87% to 97.38%, whereas Ekurhuleni district export share has notably dropped from 45.43% to 1.66%.

During 2014, West Rand has recorded a notable export share of 25.30%, City of Johannesburg export share has drastically dropped to 28.29% and City of Tshwane export share has sharply increased from 0.99% to 33.60%. City of Johannesburg commanded the greatest share of 55.24% in 2015, whereas West Rand export share has dropped to 11.69% and the City of Tshwane export share has declined to 19.91%. During 2016, City of Johannesburg export share has eased lower to 46.40%, Ekurhuleni export share grew to 29.09% share, whereas City of Tshwane export share has slightly increased to 20.67%. City of Johannesburg export share grew from 46.40% to 60.09%, Ekurhuleni has commanded 23.71% whilst City of Tshwane export share dropped to 16.08%. As of 2018, City of Johannesburg has commanded 55.78% share of Gauteng sweet potato export, followed by Ekurhuleni with 28.27% share and City of Tshwane has registered a 15.94% share.

**Table 6: Share of sweet potato exports to the total KwaZulu Natal Provincial sweet potato exports (%)**

Year District	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Ugu	0	0	0	0	100	0	0	0	0	0
ILimbe	0	0	0	0	0	100	0	0	0	0
Ethekwini	100	100	100	0	0	0	100	100	100	100
<b>KwaZulu Natal</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Calculated from Quantec Easydata

Table 6 above shows that from 2009 to 2011, Ethekwini commanded a 100% share of sweet potato exports from KwaZulu-Natal province. During 2012, KwaZulu Natal has recorded a zero trade in sweet potato. In 2013, Ugu contributed for the first time to KwaZulu Natal provincial export and it has commanded a 100% export share. The greatest share by Ethekwini can be attributed to Durban harbour, which renders exports exit point. During 2014, ILembe has commanded a 100% share of KwaZulu Natal sweet potato export share. In 2015 and 2016, Ethekwini has recorded a 100% share of sweet potato export from KwaZulu Natal province. During 2017, Ethekwini has continued to lead in KwaZulu Natal sweet potato export by commanding 100% share of exports. As of 2018, Ethekwini has registered a 100% share of KwaZulu Natal sweet potato export share.

Table 7 below indicates that Greater Sekhukhune commanded the greatest share of sweet potato exports from Limpopo province. In 2009 and 2013, Greater Sekhukhune has recorded 100% share of Limpopo sweet potato export. From 2009 to 2011, Waterberg commanded more than 70% share of sweet potato exports from Limpopo province. During 2012, Greater Sekhukhune export value has significantly increased from 25.13% to 76.91%, while Waterberg export value has notably dropped

from 74.87% to 23.09% share of sweet potato exports from Limpopo province. In 2014, Greater Sekhukhune commanded a 99.80% share of sweet potato exports from Limpopo. During 2015, Greater Sekhukhune has continued to command high sweet potato export share from Limpopo province. At the same time, Mopani, Capricorn and Waterberg export values were trivial. Greater Sekhukhune has commanded 98.43% share of Limpopo export share while other district has recorded insignificant export shares. In 2017, Greater Sekhukhune has registered 98.82% share of the imports whilst Vhembe and Capricorn has continued to register insignificant export shares. As of 2018, Capricorn was leading in Limpopo sweet potato export share by commanding 44.17%, Waterberg has registered 29.61% share and Vhembe district has commanded 16.23% share.

**Table 7: Share of sweet potato exports to total Limpopo provincial sweet potato exports (%)**

Year District	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mopani	0	0	0	0	0	0	0.16	0.19	0	0
Vhembe	0	0	0	0	0	0	0	0	0.01	16.23
Capricorn	0	0	0	0	0	0.09	0.79	0.96	0.54	44.17
Waterberg	73.62	77.56	74.87	23.09	0	0.12	0.34	0.41	0.64	29.61
Greater Sekhukhune	26.38	22.44	25.13	76.91	100	99.80	98.72	98.43	98.82	0
Limpopo	100	100	100	100	100	100	100	100	100	100

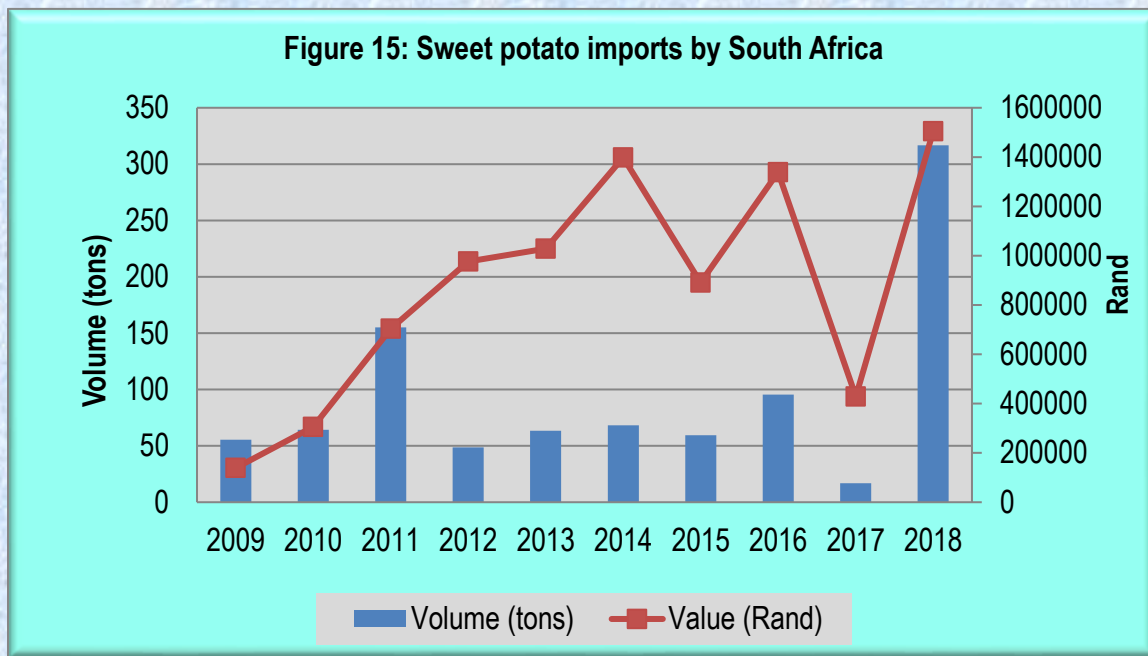
Source: Calculated from Quantec Easydata

## 2.4 Sweet potato imports by South Africa

South Africa is not a major sweet potato importer. In 2018, it represented 0% of the world imports for this product and its ranking in world imports was 74. South Africa has lost its competitiveness as in 2017; it was ranked 89 in world sweet potato imports. In 2018, Namibia was the primary supplier of South Africa's sweet potato import. Namibia has commanded 51.3% and Eswatini has supplied 6% of sweet potato imports by South Africa. In the same year, 39.3% of South Africa's sweet potato imports were not allocated to any country. Sweet potato imports from Eswatini have increased by 49% in terms of value and by 17% in quantity between 2014 and 2018 period. Globally, United Kingdom, Netherlands, Canada, France, Germany, Belgium, Japan, United States of America and Thailand were major sweet potato importers during 2018.

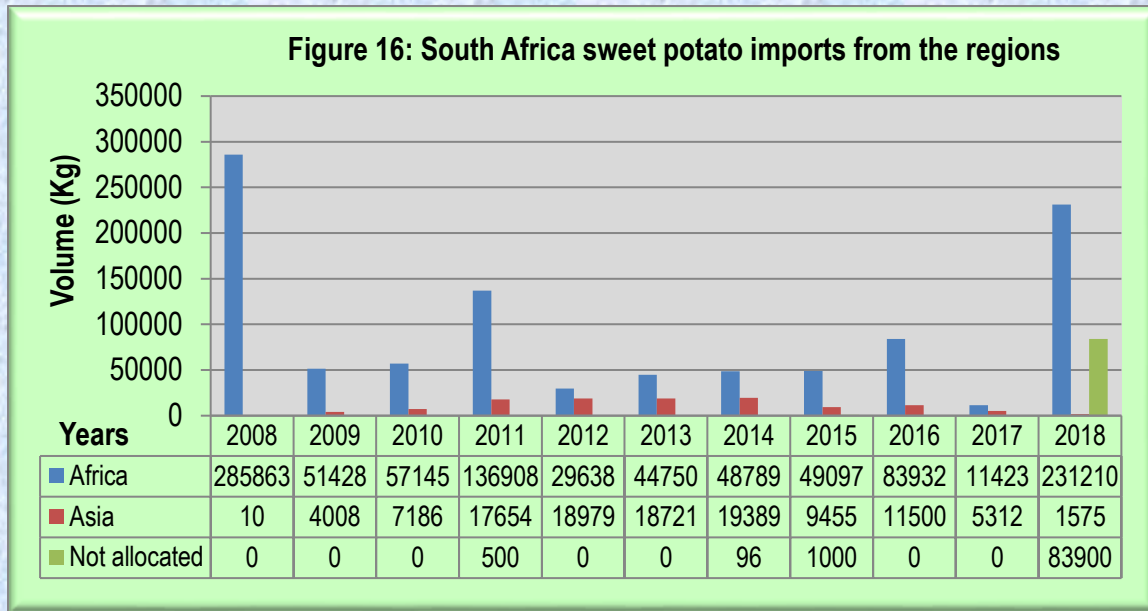
Figure 15 below illustrates the sweet potato imports by South Africa. In 2009, South Africa's sweet potato imports were just above 55 tons. In 2010, South Africa increased its sweet potato exports by 16% when compared to 2009 despite a 0.8 % increase in domestic production. During 2010 and 2011, it was more expensive to import sweet potatoes as high values were recorded for lower volumes imported. South Africa sweet potato imports increased by 139% during 2011, when compared to 2010 imports and this can be attributed to 11.7% decrease in the domestic production. During 2012, South Africa sweet potato import dropped by 70%, when compared to 2011 import. In 2013, Sweet potato imports have increased by 8.9%, when compared to the previous year imports and high value were recorded for volume imported. South Africa's imports increased despite a 20.5% increase in the domestic production output. There was a 7.6% increment in South Africa's sweet potato imports during 2014 and this can be ascribed 26.6% decline in the domestic output. It was also by far more expensive to import sweet potato during the same year. In 2015, South Africa has

imported 12.7% less sweet potatoes in comparison to 2014 imports. During 2016, South Africa has imported 60% more sweet potatoes in comparison to 2015 sweet potato imports. The increment in sweet potato import can be ascribed to 5.9% decline in the domestic sweet potato production output. From 2012 to 2016, it was relatively more expensive to import sweet potato compared to other years. In 2017, South Africa has an imported just above 16 tons, which is a record low volume of imports in a ten year period. The sharp decline in sweet potato imports can be ascribed to 16.6% increase in domestic production output. In the same year, it was by far more expensive to import sweet potatoes relative to other years. A record high volume of sweet potato imports were recorded in 2018 despite a 16.5% increase in the domestic production output. At the same time, it was relatively cheaper to import sweet potatoes relative to 2017 import value.



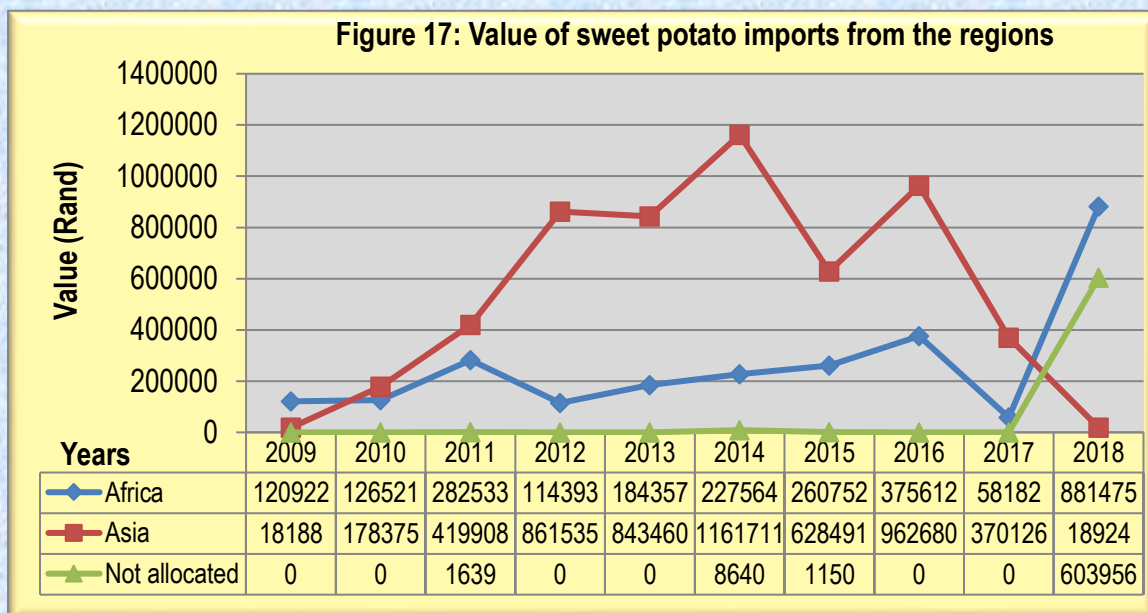
Source: Quantec Easydata

Figure 16 below illustrates the regions supplying South Africa with sweet potato imports. South Africa imported sweet potatoes mostly from Africa and Asia regions. Africa region was a primary supplier of South Africa's imports during 2009. In 2011, South Africa imported sweet potato from China, Ghana, Zambia and Nigeria. During 2012, 89% of South Africa's sweet potato imports were sourced in China and 11% of imports were sourced from Ghana. In 2013, Africa (Ghana, Swaziland and Nigeria) and Asia (China and Taipei, Chinese) regions were suppliers of sweet potatoes imported by South Africa. South Africa imported sweet potatoes mainly from China and Ghana during 2014. Africa (Ghana) and Asia (China) regions have continued to be the primary suppliers of South Africa's sweet potato imports in 2015. There was a notable increase in unallocated sweet potato imports. During 2016, Asia and Africa region were still the main suppliers of South Africa's sweet potato imports. As of 2017, Asia and Africa regions remained the primary suppliers of South Africa's sweet potato imports. In 2018, South Africa's sweet potato imports were sourced mainly from Africa (Namibia and Eswatini) region, imports from Asia declined by 70% and there was a surge in unallocated imports.



Source: Quantec Easydata

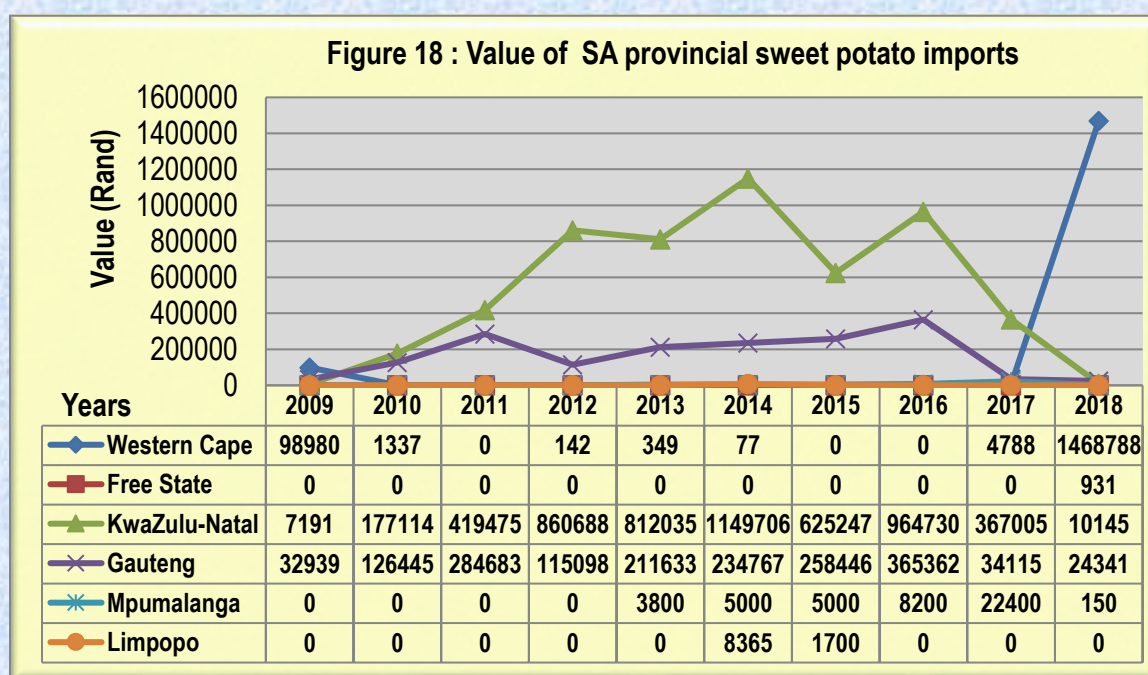
Figure 17 shows the value of South Africa's sweet potato imports from the regions.



Source: Quantec Easydata

Figure 17 above indicates the value of South African sweet potato imports. The figure shows that it was mostly cheaper to import from African countries. In 2010 and 2011, it was more expensive to import sweet potatoes from Asia. During 2012, it was still relatively more expensive to import sweet potatoes from Asia when compared to imports from the African region. In 2013, it was relatively more expensive to import sweet potatoes from Asia, while the imports from Africa were fairly cheaper. In 2014, it was still relatively more expensive to import sweet potatoes from Asia in comparison to

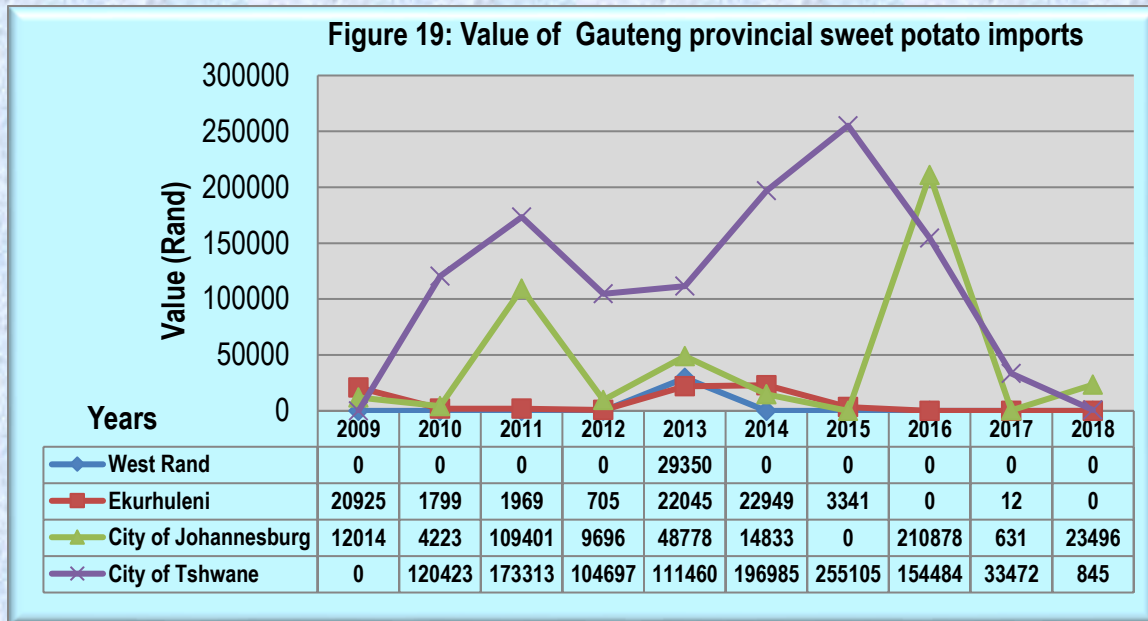
imports from Africa region. It was still by far more expensive to import sweet potatoes from Asia region during 2015 and imports from Africa were relatively cheaper. In 2016, South Africa has imported sweet potato from Asia region on a much higher value, while it was cheaper to import sweet potato from Africa region. During 2017, it was by far more expensive to import sweet potatoes from Asia region, whilst it was far cheaper to import from Africa region. As of 2018, it was more expensive to import sweet potatoes from Asia, whereas the imports from Africa region were cheaper. During the same year, unallocated imports have registered higher value.



Source: Quantec Easydata

Figure 18 above illustrates the entry point of South Africa's sweet potato imports during a ten year period. During 2009, South Africa has imported sweet potatoes through Western Cape, Gauteng and KwaZulu Natal; however, KwaZulu Natal import value was insignificant. From 2010 to 2012, South Africa imported sweet potatoes mainly through KwaZulu Natal and Gauteng provinces. During 2013, KwaZulu Natal and Gauteng were still the primary entry points for South Africa's sweet potato imports. In the same year, Western Cape import value was insignificant. In 2014, Sweet potatoes were imported through KwaZulu Natal, Gauteng and Limpopo provinces. During 2015, KwaZulu Natal, Gauteng and Limpopo import values have drastically dropped, whereas Mpumalanga import value has increased. In 2016, KwaZulu Natal and Gauteng provinces were still the main entry points for South Africa's sweet potatoes imports and the import values have significantly increased, when compared to 2015 import values. During 2017, KwaZulu Natal was still the primary entry point for South African sweet potato imports, followed by Gauteng and Mpumalanga. As of 2018, Western Cape was the primary entry for South Africa's sweet potato imports and it can be ascribed to high imports from neighboring Namibia. At the same time, there was a notable decrement in import values recorded for KwaZulu Natal, Gauteng and Mpumalanga.





Source: Quantec Easydata

Figure 19 above shows the entry point of Gauteng sweet potato imports during the ten year period. Gauteng has imported sweet potatoes mainly through City of Johannesburg and City of Tshwane. Ekurhuleni has contributed to Gauteng sweet potato imports during 2009. In 2011, there was a notable increase in sweet potato import values for the City of Johannesburg and City of Tshwane. During 2013, Ekurhuleni, City of Johannesburg and City of Tshwane import values has notably increased, in comparison to 2012 values. City of Tshwane import value has significantly increased during 2014 and 2015. City of Johannesburg import value has drastically increased in 2016, while City of Tshwane import value has dropped by 42%. During 2017, the City of Tshwane remained the primary entry point of Gauteng sweet potato imports and City of Johannesburg has registered trivial import value. As of 2018, City of Johannesburg was the main entry point for Gauteng provincial sweet potato imports and City of Tshwane import value was insignificant.

## 2.5 Processing

Sweet potato leaves and shoots are also edible, but the starchy tuberous roots are far the most important product. In some tropical areas, sweet potatoes are a staple food crop. The roots are frequently boiled, fried or baked. They can also be processed to make starch, and partial flour substitute. Industrial uses include the production of starch and industrial alcohol. Baked sweet potatoes are sometimes offered in a restaurant as an alternative for potatoes. Sweet potatoes can be sliced, fried and eaten just like potato chips. Raw sweet potato can be eaten as well, mostly in chip form. Sweet potato butter can be cooked into a gourmet spread. Taiwanese companies are making alcohol fuel from sweet potato. Sweet potato leaves are also common side dish. In South America, the juice of red sweet potatoes is combined with lime juice to make a dye for cloth and purple sweet potatoes make dye for food colouring. Figure 19 presents the sweet potato value chain tree explaining its uses while Figure 20 illustrates the market value chain for sweet potatoes.

Figure 20: Sweet potato value chain tree explaining its uses

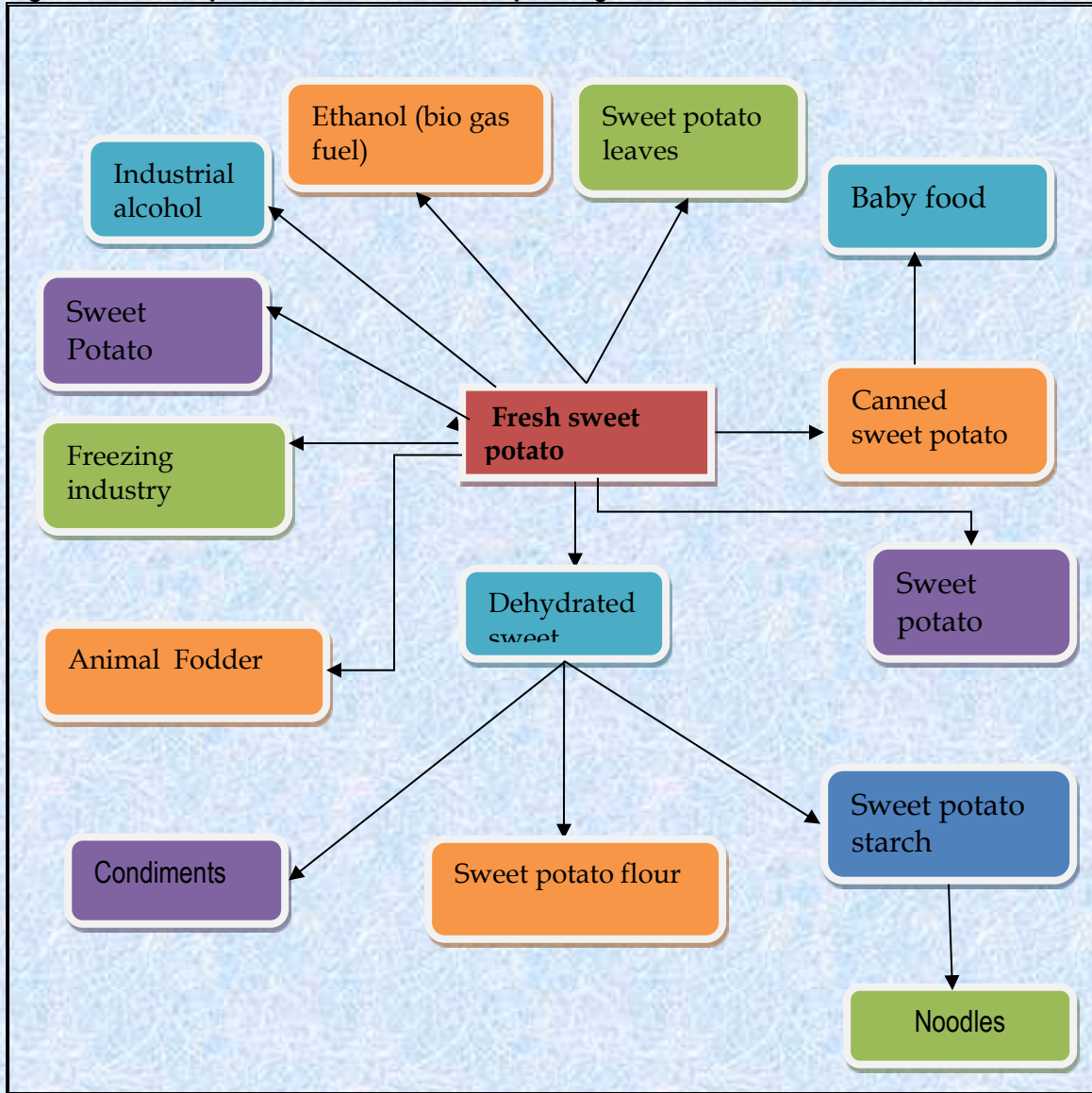
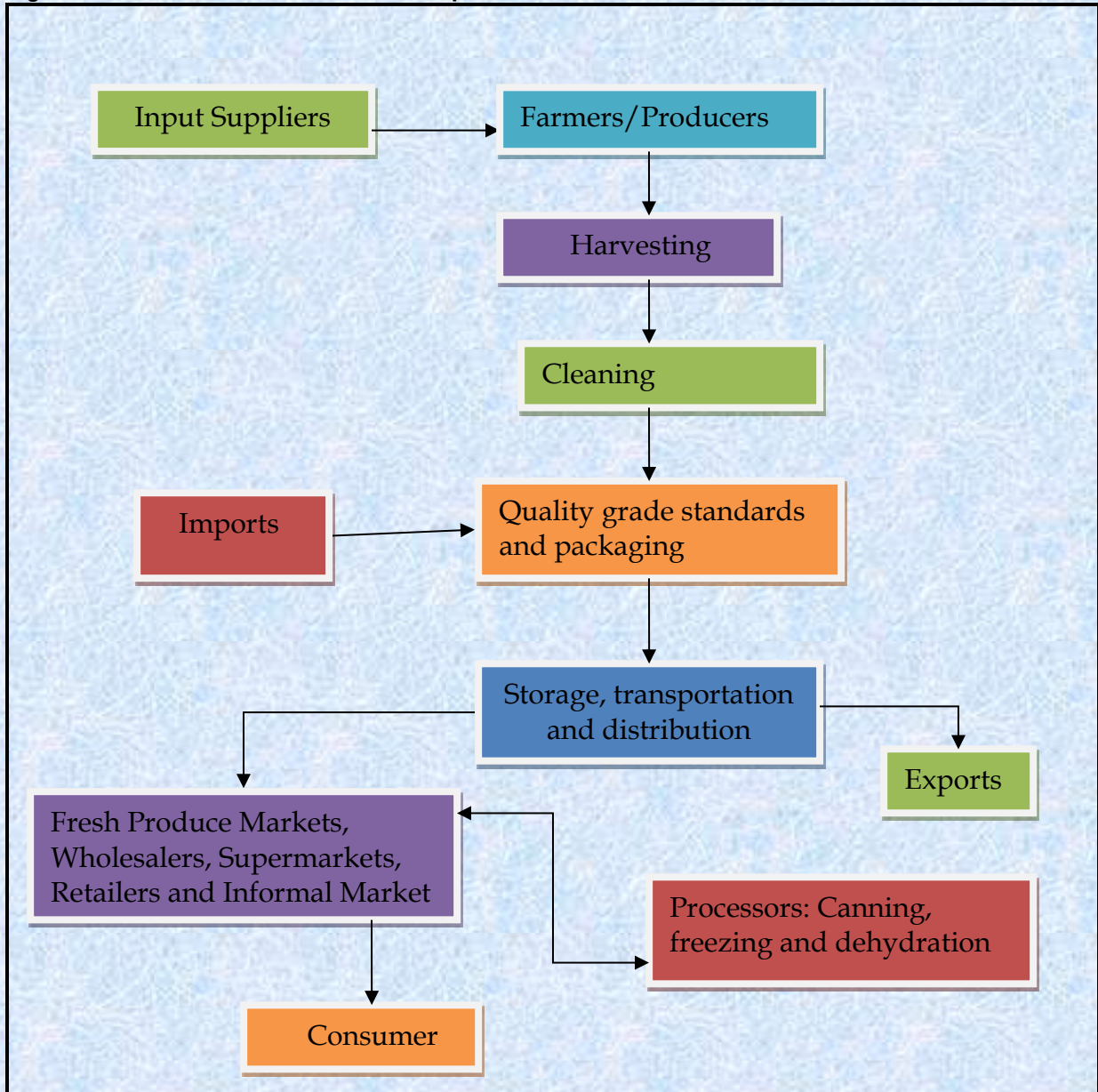


Figure 21: Market value Chain for sweet potato



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

### 3. MARKET INTELLIGENCE

#### 3.1 Tariffs

Tariffs applied by the various markets to sweet potatoes originating from South African during 2017 and 2018 are presented in Table 8.

**Table 8: Tariffs applied by various exports markets to sweet potato from South Africa**

Country	Product description (H0714200)	Trade regime description	Applied tariff	Estimated total ad valorem equivalent tariff	Applied tariff	Estimated total ad valorem equivalent tariff
			2017		2018	
Angola	Sweet potato fresh or chilled	MFN duties (Applied)	50.00%	50.00%	5.00%	5.00%
Botswana	Sweet potato fresh or chilled	Intra SACU rate	0.00%	0.00%	0.00%	0.00%
Brazil	Sweet potato fresh or chilled	Preferential tariff for South Africa	10.00%	10.00%	0.00%	0.00%
Canada	Sweet potato fresh or chilled	MFN duties (Applied)	0.00%	0.00%	5.00%	5.00%
China	Sweet potato, fresh for human consumption	MFN duties (Applied)	0.00%	0.00%	5.00%	5.00%
Egypt	Sweet potato fresh or chilled	MFN duties (Applied)	5.00%	5.00%	5.00%	5.00%
Ethiopia	Sweet potato fresh or chilled	General tariff	30.00%	30.00%	30.00%	30.00%
Swaziland	Sweet potato, fresh for human consumption	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
India	Sweet potato, fresh or dried	MFN duties (Applied)	5.00%	5.00%	5.00%	5.00%
Germany	Sweet potato, fresh for human consumption	MFN duties (Applied)	0.00%	0.00%	5.00%	5.00%
Ghana	Sweet potato frozen or dried	MFN duties (Applied)	20.00%	20.00%	20.00%	20.00%

Malawi	Sweet potato fresh or chilled	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
Mozambique	Sweet potato fresh or chilled	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
Namibia	Sweet potato fresh or chilled	Intra SACU rate	0.00%	0.00%	0.00%	0.00%
Netherlands	Sweet potato, fresh, whole for human consumption	MFN duties (Applied)	0.00%	0.00%	5.00%	5.00%
Nigeria	Sweet potato fresh or chilled	MFN duties (Applied)	20.00%	20.00%	20.00%	20.00%
Spain	Sweet potato, fresh or dried	MFN duties (Applied)	3.00%	3.00%	3.00%	3.00%
Japan	Sweet potato, fresh or dried	MFN duties (Applied)	5.00%	5.00%	5.00%	5.00%
Portugal	Sweet potato fresh or chilled	MFN duties (Applied)	0.00%	0.00%	5.00%	5.00%
United Kingdom	Sweet potato, fresh for human consumption	MFN duties (Applied)	0.00%	0.00%	5.00%	5.00%
United States of America	Sweet potato fresh or frozen	MFN duties (Applied)	0.00%	0.00%	5.00%	5.00%
Zambia	Sweet potato fresh or chilled	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
Zimbabwe	Sweet potato frozen or dried	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%

Source: Market Access Map

During 2018, South Africa sweet potato export markets were still destined to the Netherlands, Namibia, Botswana, United Kingdom and Portugal . Netherlands, Portugal and United Kingdom have changed preferential tariff applied to South Africa of 0% tariff to MFN 5% tariff. Namibia and Botswana apply 0% Intra-SACU rate to sweet potato exports from South Africa. Brazil has reduced 10% tariff to 0% preferential tariff. South African sweet potato exports. In 2018, Angola has reduced 50% tariff to 5% tariff despite SADC-FTA agreement. China is ranked number one in the world sweet potato production and it has increased 0% tariff to 5% tariff. In African markets, Nigeria and Ethiopia are amongst top ten world sweet potato producers and these countries producers were protected by 20% and 30% tariff respectively. As of 2018, Nigeria and Ethiopia have reduced their tariff to 5% tariff. Egypt is ranked number six in the world sweet potato exports and its domestic market is still protected by 5% tariff. South Africa also exported sweet potato to other African market in Eswatini and Lesotho. These markets apply 0% Intra-SACU rate to South Africa's sweet potato exports.

## **3.2 Non-tariff barriers**

### **3.2.1 The European Union**

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

#### **Product legislation: quality and marketing**

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

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

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

#### **3.2.1 (b) Product legislation: phytosanitary regulations**

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

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

#### **3.2.1(c) Product legislation: packaging**

The EU commission lays down rules for materials that come into contact with food and which may endanger people's health or bring about an unacceptable change in the composition of the foodstuffs.

The framework legislation for this EC 1935/2004. Recycling packaging materials are also emphasized under 94/62/EC, whereby member states are required to recycle between 50% and 65% of packaging waste. If exporters do not ship produce in packaging which is reusable, they may be liable for the costs incurred by the importing companies. Wood packaging is subject to phytosanitary controls (see Directive EC 2002/89) and may need to undergo heat treatment, fumigation, etc.

### **3.2.1. (d) Non-legal market requirements: social and environmental accountability**

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

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

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

### **3.2.1(e) Consumer health and safety requirements**

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

### **3.2.2 The United States**

The USDA has quality standards for vegetables that provide a basis for domestic and international trade and promote efficiency in marketing and procurement. At the same time the USDA issues quality certificates based on these standards and a comprehensive grading system. Graders are

located around the country at terminal markets. These certification services, which facilitate the ordering and purchasing of products by large-volume buyers, assure these buyers that the product they purchase will meet the terms of the contract in terms of quality, processing, size, packaging and delivery.

### **3.2.3 Asian Market Access**

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

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

## **4. GENERAL DISTRIBUTION CHANNELS**

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

## **5. LOGISTICAL ISSUES**

### **5.1 Mode of transport**

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



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

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

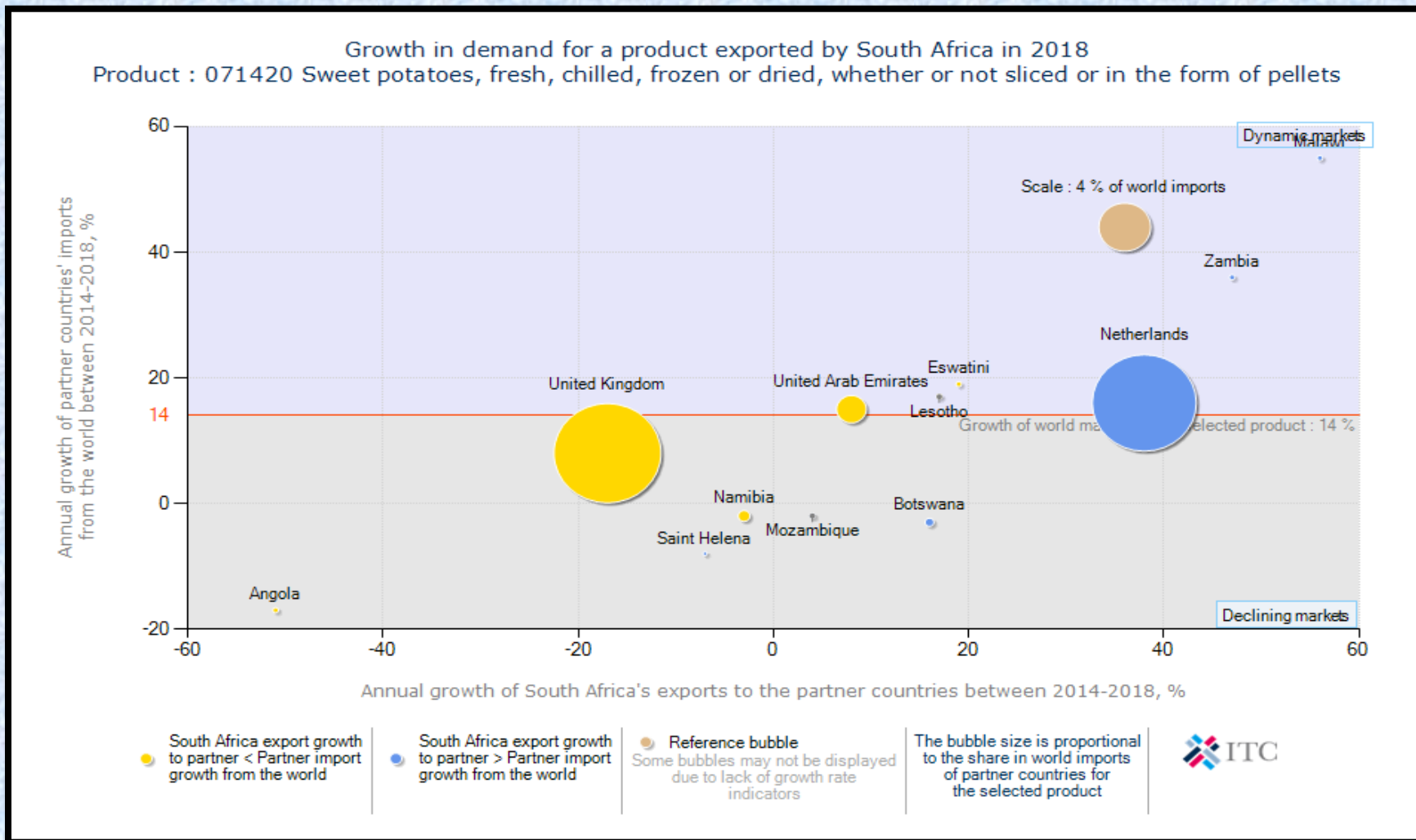
**5.3 Packaging** also plays a vital role in ensuring safe and efficient transport of a product and conforming to handling requirements, uniformity, recyclable materials specifications, phytosanitary requirements, proper storage needs and even attractiveness (for marketing purposes).

## **6. COMPETIVENESS OF SOUTH AFRICA SWEET POTATO EXPORTS**

**Figure 22** below illustrates that South Africa's sweet potato export to Malawi, Netherlands and Zambia are growing faster than the world sweet potato imports to these countries. South Africa's performance in these countries is regarded as a gain in a dynamic market. South Africa's sweet potato exports to United Kingdom, United Arab Emirates, Eswatini and Lesotho are growing slower than the world imports into these countries, and this is regarded as a loss in the dynamic market. South Africa's sweet potato exports to the Namibia and Angola are declining while world imports are growing into these countries. South Africa sweet potato exports are not declining as fast as the world imports into Saint Helena, Botswana and Mozambique.

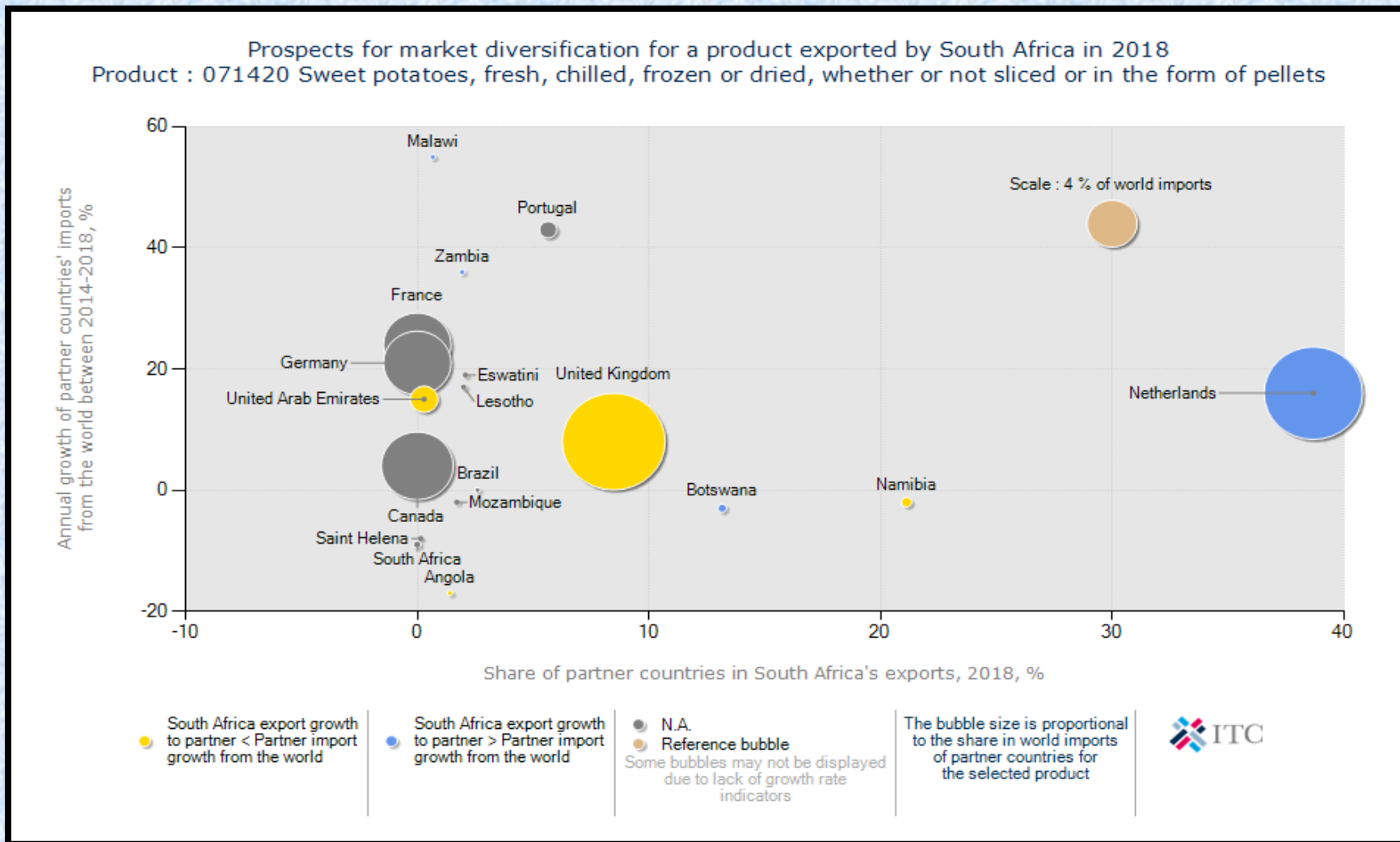
**Figure 23** below shows that during 2018, Netherlands was still the primary market for sweet potato exports from South Africa. Prospective markets for sweet potato exports are mainly France, Zambia, Germany, United Arab Emirates and Eswatini. However, if SA is to diversify its sweet potato exports, the most lucrative market exists in Malawi and Portugal, which have increased their sweet potato imports from the world between 2014 and 2018. Malawi has experienced 55% and Portugal has experienced 43% of annual growth rate. Angola, Saint Helena and Mozambique have recorded a negative growth between 2014 and 2018 period.

Figure 22: Growth in demand for sweet potatoes exported from South Africa in 2018



Source: ITC Trade Map

Figure 23: Prospects for market diversification for sweet potatoes exported from South Africa in 2018



Source: ITC Trade Map

## 7. ACKNOWLEDGEMENTS

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### **Market Access Map**

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

### **International Trade Centre (ITC)**

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

### **Economic Research Service/USDA**

[www.wikipedia.co.za](http://www.wikipedia.co.za)

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