A PROFILE OF THE SOUTH AFRICAN SWEET POTATO MARKET VALUE CHAIN

2012

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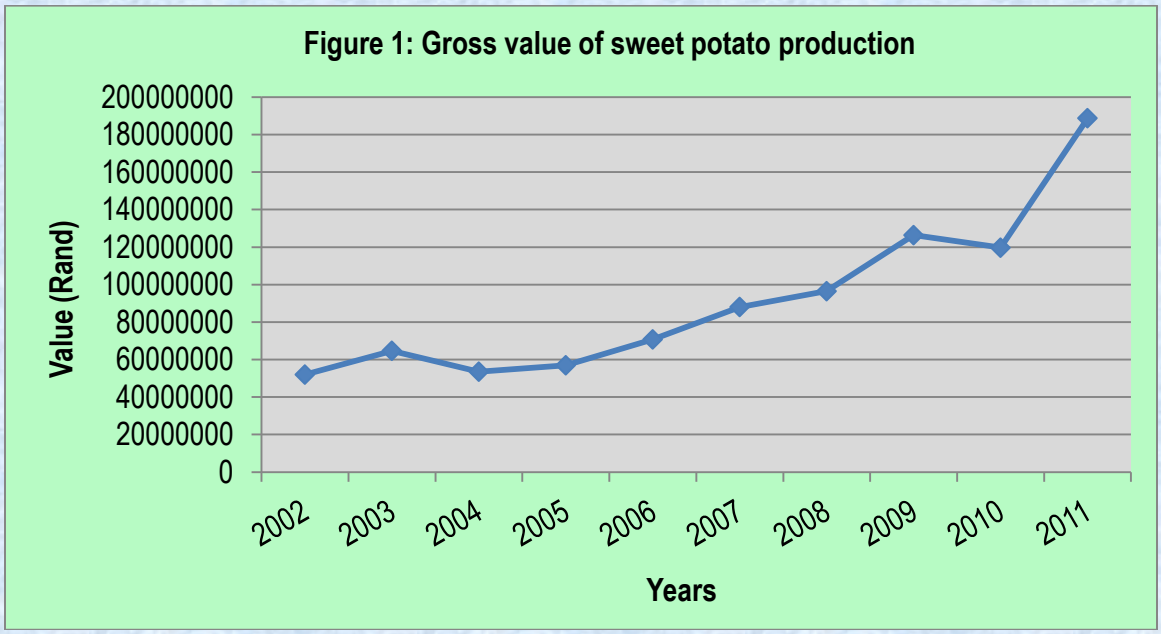
1. DESCRIPTION OF THE INDUSTRY

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 fiber, 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.



Source: Statistics and Economic Analysis, DAFF

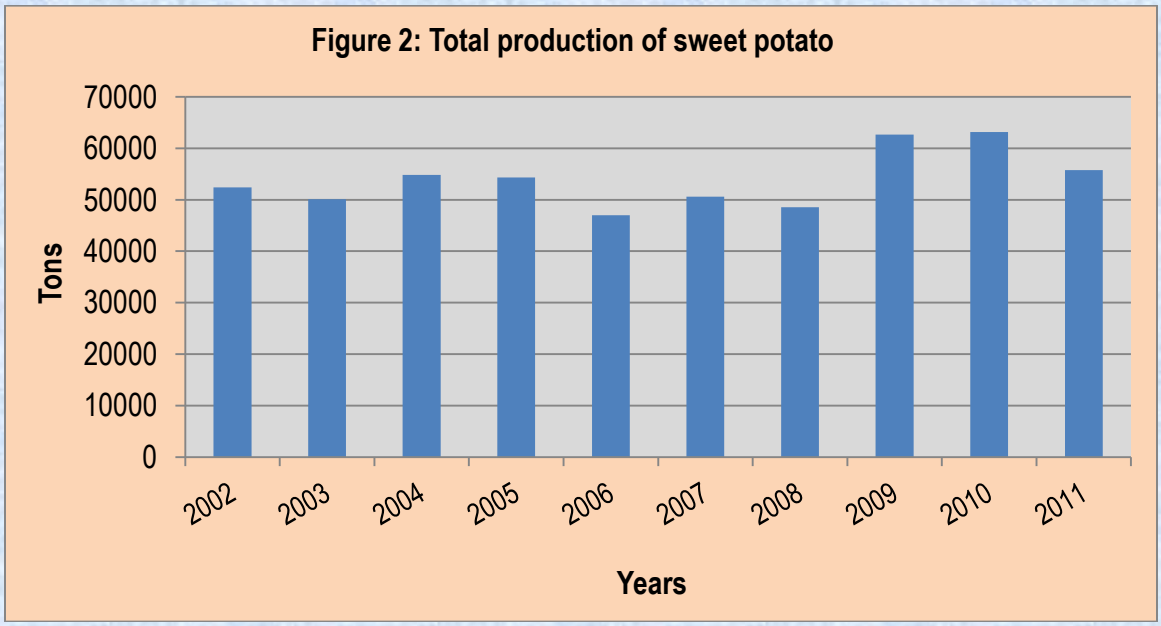
Figure 1 above illustrates contribution of the sweet potato industry to the gross value of agricultural production over the period of 10 years. In 2003, the industry contribution increased by 24.2% when compared to 2002. In 2004 the contribution of sweet potato contribution dropped by 17% due to high production that occurred while the producer prices were not favorable to producers. From 2005 the contribution increased steadily reaching the peak in 2009. In 2009, the contribution increased by 30%, this can be attributed to high production that occurred while the prices are still favorable to producers. In 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.

1.1 Production Areas

Sweet potatoes are cultivated throughout tropical and warm temperature regions wherever there is sufficient water to support their growth. 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 is the largest grower of sweet potatoes; providing about 80% of the world supply. According to FAOSTAT, Nigeria, Tanzania and Uganda, they represent half of African sweet potato supply.

1.2 Production Trends

Figure 2 below illustrates the production volumes over the past ten years.



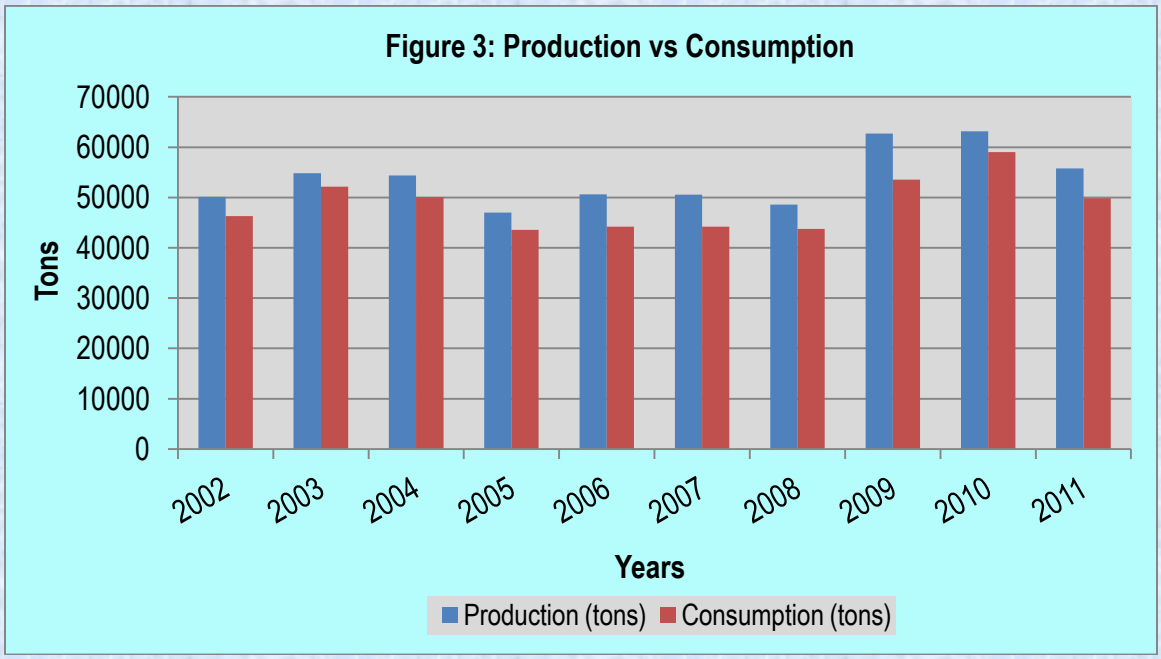
Source: Statistics and Economic Analysis, DAFF

Over the past decade sweet potato production was fairly unstable. In 2003, production output decreased by 4.3% to 50 129 tons when compared to 2002 and then increased by 9.3% in 2004. In 2006, the production dropped by 14% and the production volumes was found to be the lowest in ten year period. The drop in production can be attributed to climatic conditions and increased cost of production. In 2008, there was also a 4% decline in production compared to 2007. In 2009, the production increased by 41% and the highest production was recorded in 2010. During 2011, the production output dropped by 11.7% when compared to 2010 production season.

1.3 Production vs. Consumption of sweet potato

Figure 3 below depicts local consumption of sweet potato compared to the production over 10 year period. South African average sweet potato consumption is approximately 48 662 tons per annum. In 2011 consumption decreased by 15.5% and this can be attributed to 11.7% decrease 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. The Salomon Islands in the South Pacific 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 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.

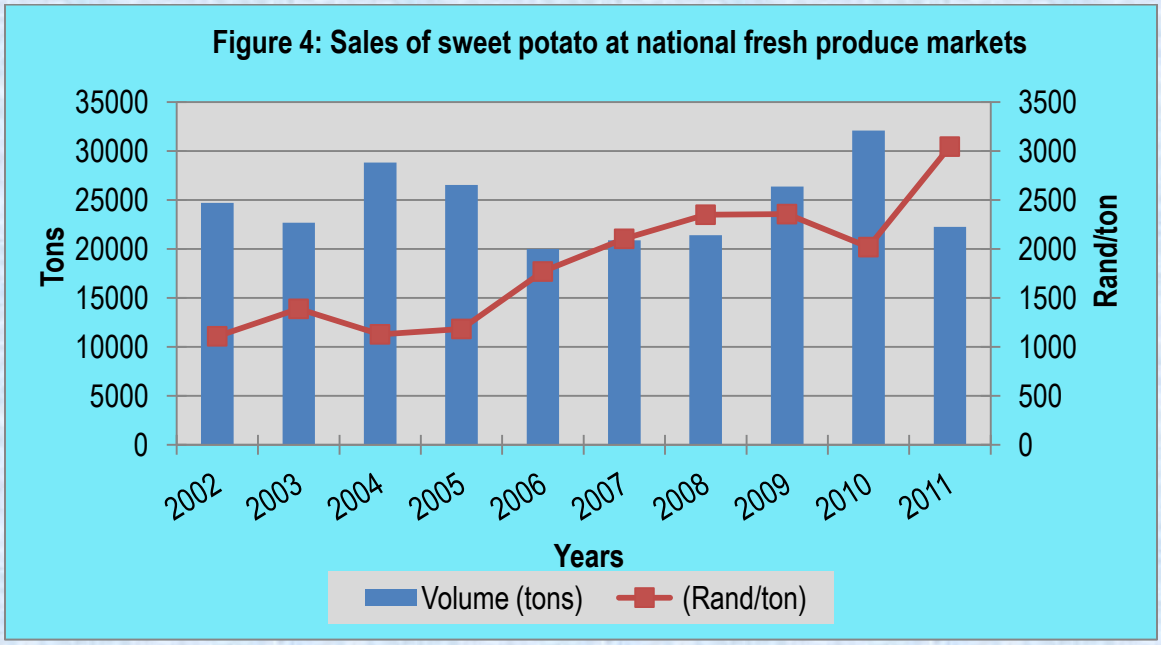
Table 1: Sweet Potato sold through different marketing channels

Years	National fresh produce market (Tons)	Exports (Tons)	Total Processing
2002	24 705	1 702	1 939
2003	22 682	1 941	1 890
2004	28 825	4 70	2 154
2005	26 541	1 161	3 132

Years	National fresh produce market (Tons)	Exports (Tons)	Total Processing
2006	20 003	931	2 534
2007	20 893	2 357	4 039
2008	21 391	1 721	3 067
2009	26 368	6 838	2 295
2010	32 080	2 603	1 577
2011	22 237	4 862	1 115

Source: Statistics and Economic Analysis, DAFF

Table 1 above illustrates that National Fresh Produce Markets (NFPMs) remains an important channel for the sale of fresh sweet potato in South Africa, however during 2011, only 40% of all sweet potatoes were distributed through fresh produce markets. The remaining 59% represent direct sales from producer to wholesalers, retailers, processors, exports and informal traders. In 2011, processed sweet potatoes also dropped by 41% when compared to 2010 processed volumes. These can be attributed to 87% increase in sweet potato export during the same year.

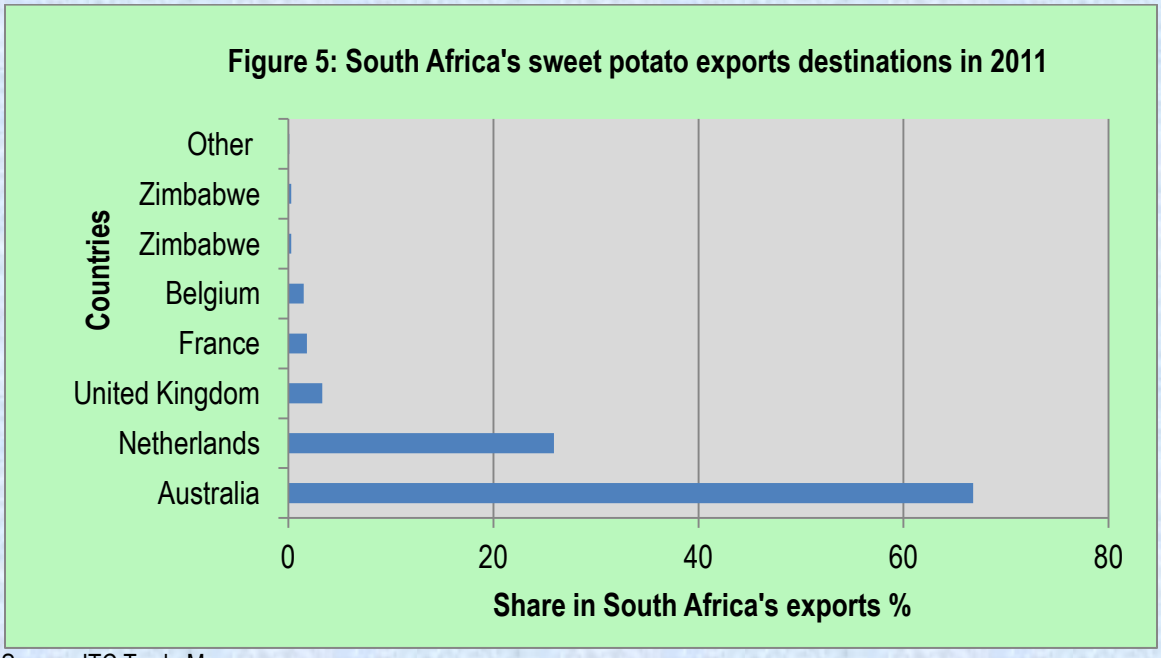


Source: Statistics and Economic Analysis, DAFF

Figure 4 above illustrates the sales of sweet potato in the national fresh produce markets over the period of 10 years. Sweet potato volumes and prices were fairly unstable from 2002 to 2011 period. In 2002, the fresh produce markets prices were very low due to high volumes supplied across the markets. In 2003, prices increase by 25% due to 8% decline of sweet potato supplies across the markets. In 2004 and 2005 prices declined as more volumes are supplied and from 2006 the price eased marginally higher reaching the peak in 2009, despite high volumes supplied. The high price in 2009 can be attributed to strong demand of sweet potato in the same year. In 2010, market prices dropped by 14.3% due to 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.

2.2 Sweet potato exports by South Africa

South Africa is not a major sweet potato exporter. During 2011, it represented 1.62% of world exports and it ranked number 8 in the world. South Africa has improved its competiveness as in 2010, it was ranked number 13. Most of sweet potatoes produced were destined for domestic markets. South African sweet potato exports were destined to Australia, Netherlands, United Kingdom, France, Belgium and Zimbabwe. Globally, Ghana, United States of America, China, Netherlands, Spain, Viet Nam and Egypt are major sweet potato exporters. Ghana has improved its competitiveness in terms of sweet potato exports; as in 2010 Ghana was not featured in the top 10 world producers. Figure 5 below illustrates South African sweet potato export destinations.



Source: ITC Trade Map

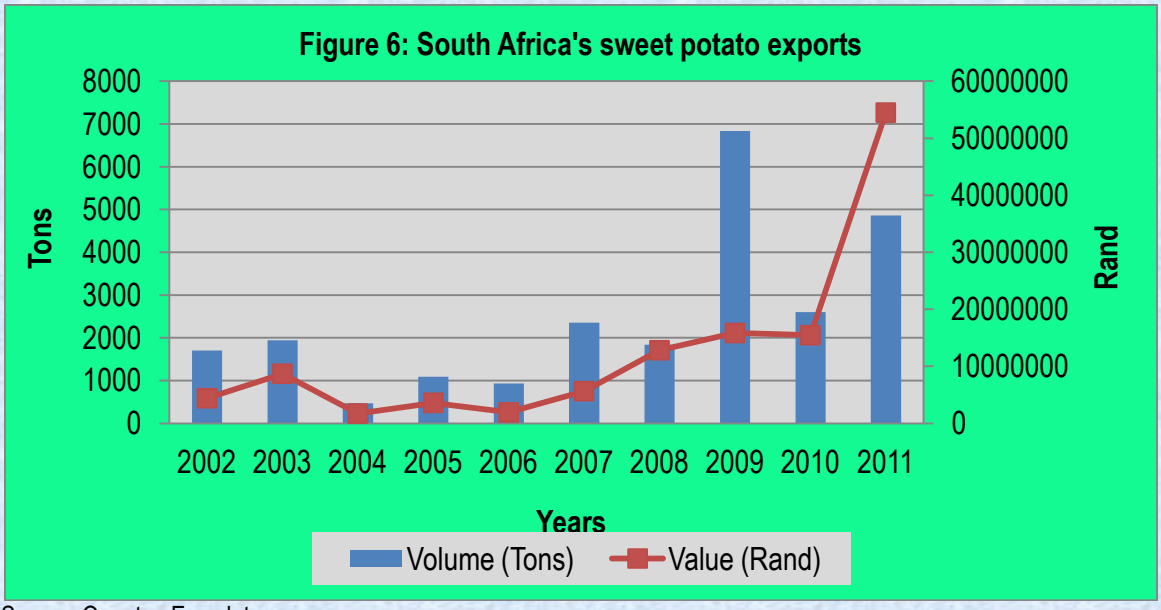
Table 2: South African sweet potato exports in 2011

Importers	Exported value 2011 (USD thousand)	Trade balance 2011 (USD thousand)	Share in South Africa's exports (%)	Exported quantity 2011 (tons)	Exported growth in value between 2007-2011 (%, p.a.)	Exported growth in quantity between 2007-2011 (%, p.a.)	Exported growth in value between 2010-2011 (%, p.a.)
World	7477	7381	100	4841	64	22	208
Australia	4992	4992	66.8	2772			
Netherlands	1939	1939	25.9	1386	38	12	266
United Kingdom	248	248	3.3	254	-2	-22	-81
France	135	135	1.8	247	228	83	-66

Importers	Exported value 2011 (USD thousand)	Trade balance 2011 (USD thousand)	Share in South Africa's exports (%)	Exported quantity 2011 (tons)	Exported growth in value between 2007-2011 (%, p.a.)	Exported growth in quantity between 2007-2011 (%, p.a.)	Exported growth in value between 2010-2011 (%, p.a.)
Belgium	113	113	1.5	107	29	-18	151
Zimbabwe	21	21	0.3	31	147		11
Mozambique	8	8	0.1	10	17	14	33
Singapore	7	7	0.1	7		56	40
Angola	6	6	0.1	10			-93
Zambia	4	-8	0.1	13			
Nigeria	3	2	0	1			
Malawi	1	1	0	1	0	0	
Saint Helena	1	1	0	2			

Source: ITC Trade Map

Table 2 indicates that during 2011, South Africa exported higher quantities of sweet potato to Australia, and Netherlands. Australia commanded the greatest share of South African sweet potatoes exports with 66.8% share, followed by Netherlands with 25.9% share. South African sweet potato exports to United Kingdom and Belgium have decreased by 22% and 18% in terms quantity between 2007 and 2011 period.

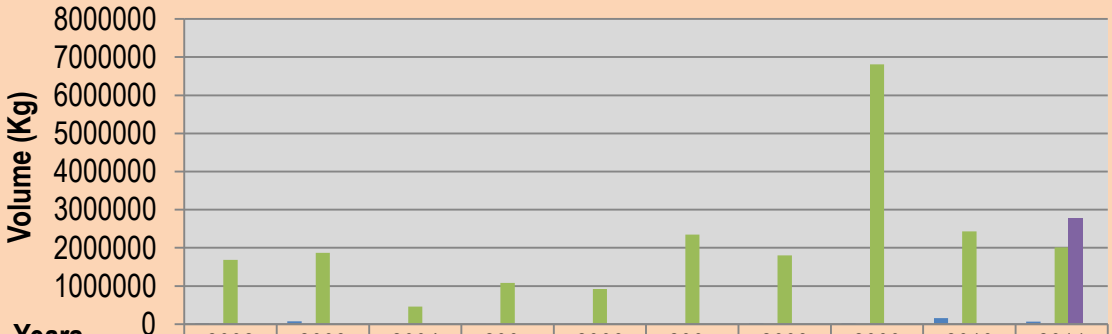


Source: Quantec Easydata

Figure 6 illustrates South Africa's sweet potato exports over the past 10 years. From 2004 to 2006 the exports decrease significantly which can be attributed to decline in production volumes in the

same years. Exports volumes increased by 153% in 2007 when compared to 2006 and this can be attributed to 7.6% increase in the domestic output. In 2009, sweet potato exports increased by 297% and this are attributed to high production volume in the same year. In 2010, sweet potato export dropped by 61% despite 0.7% increase in production volume. There was an 87% increase in exports during 2011 when compared to 2010 despite 11.7% decrease in production output. Generally, it was more profitable to export sweet potatoes in 2003, 2008, 2010 and 2011 since high export values were recorded for volumes exported.

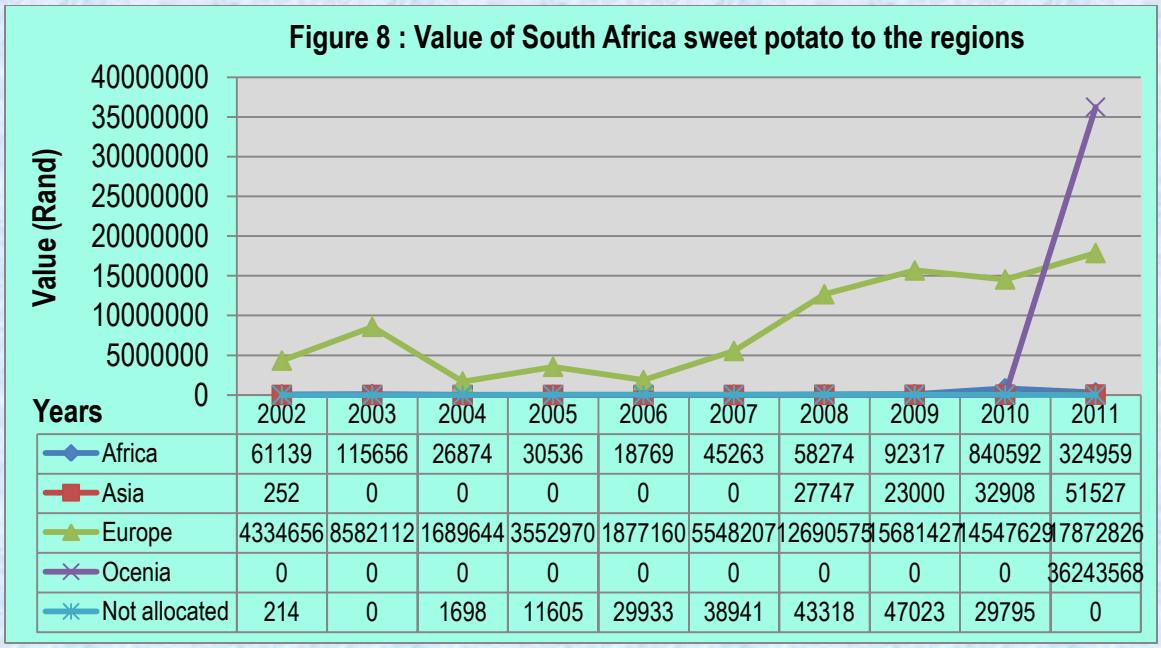
Figure 7: South Africa sweet potato exports to the regions



Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Africa	20053	75439	6622	8422	4498	8374	24050	21494	161136	68311
Asia	15	0	0	0	0	0	4800	2050	4300	6754
Europe	1681817	1865770	463191	1077733	919760	2343666	1801266	6808849	2433910	2014262
Ocenia	0	0	0	0	0	0	0	0	0	2772398
Not allocated	61	0	433	2246	10327	4989	4863	5299	3626	0

Source: Quantec Easydata

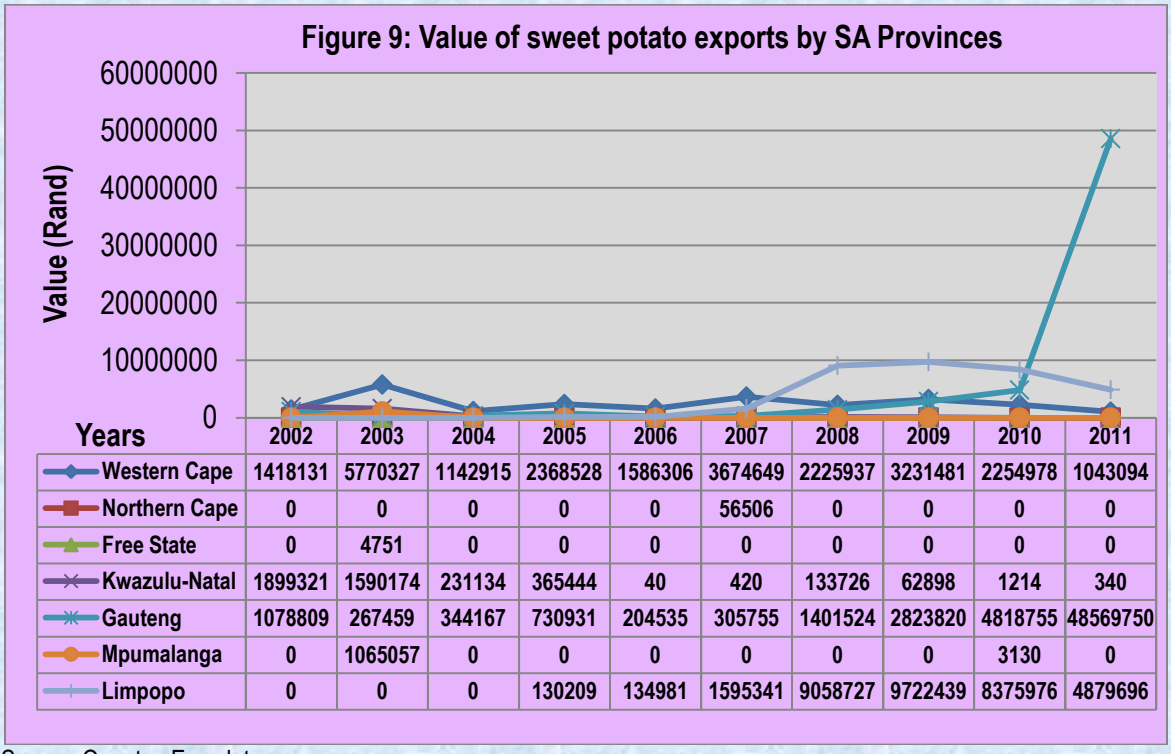
Figure 7 above indicate that South Africa sweet potato exports market in mostly in European Countries (United Kingdom, Netherlands, Belgium and France). South Africa also exports small quantities of sweet potatoes to African countries (Mozambique, Zimbabwe, Democratic Republic of Congo, Ghana, Zambia and Malawi). A small fraction of exports were exported to Asia and other exports were not allocated. The highest export volumes was recorded in 2009 and it was exported to European region. In 2011, South Africa exported high quantities of sweet potato to Oceania region (Australia and New Zealand). Exports to Asia have increased by 57% in 2011 when compared to 2010 sweet potato exports.



Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Africa	61139	115656	26874	30536	18769	45263	58274	92317	840592	324959
Asia	252	0	0	0	0	0	27747	23000	32908	51527
Europe	4334656	8582112	1689644	3552970	1877160	5548207	12690575	15681427	14547629	17872826
Ocenia	0	0	0	0	0	0	0	0	0	36243568
Not allocated	214	0	1698	11605	29933	38941	43318	47023	29795	0

Source: Quantec Easydata

Figure 8 above indicate that the exports to Europe 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 previous year. During 2011, it was more profitable to export sweet potatoes to Oceania followed by Europe.

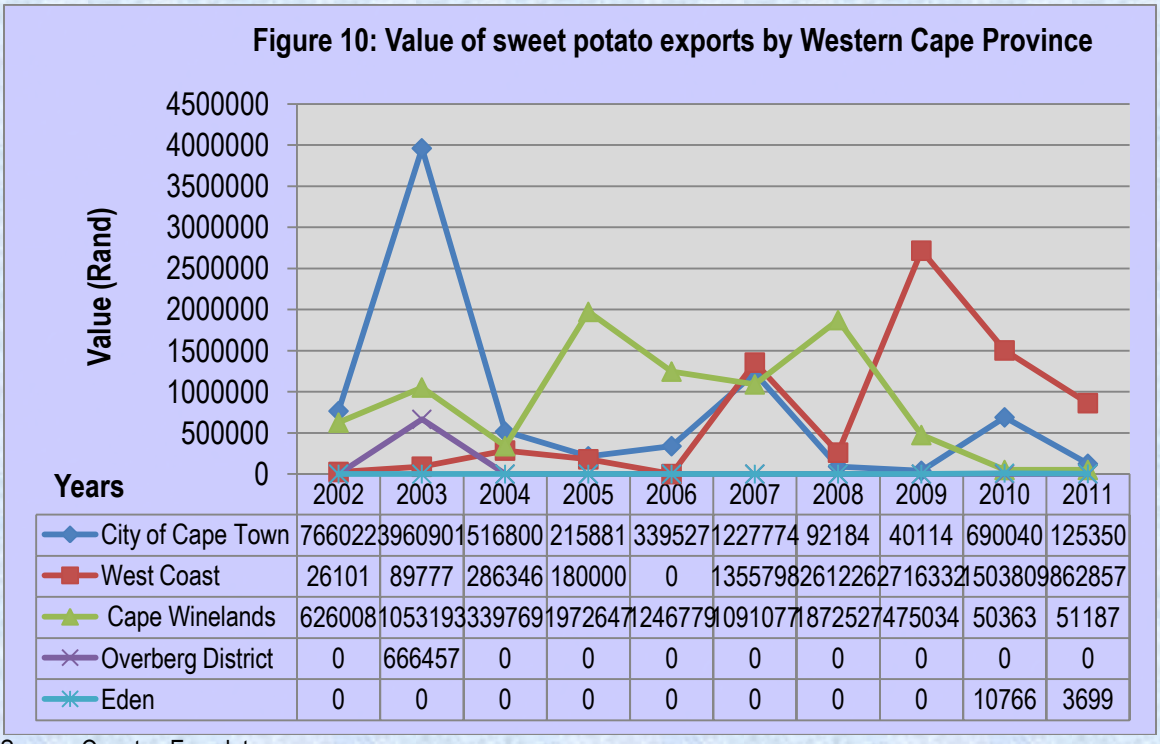


Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Western Cape	1418131	5770327	1142915	2368528	1586306	3674649	2225937	3231481	2254978	1043094
Northern Cape	0	0	0	0	0	56506	0	0	0	0
Free State	0	4751	0	0	0	0	0	0	0	0
Kwazulu-Natal	1899321	1590174	231134	365444	40	420	133726	62898	1214	340
Gauteng	1078809	267459	344167	730931	204535	305755	1401524	2823820	4818755	48569750
Mpumalanga	0	1065057	0	0	0	0	0	0	3130	0
Limpopo	0	0	0	130209	134981	1595341	9058727	9722439	8375976	4879696

Source: Quantec Easydata

Figure 9 above illustrates the sweet potato exports by provinces for the past ten years. The highlights for sweet potato exports were those of Western Cape, Gauteng, Kwazulu Natal and Limpopo provinces. High export value for Mpumalanga was in 2003 and Northern Cape has recorded export value only in 2007. The high exports values from 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. The following figures (Figure 10-16) shows the value of sweet potato exports from the various districts, provinces of South Africa.

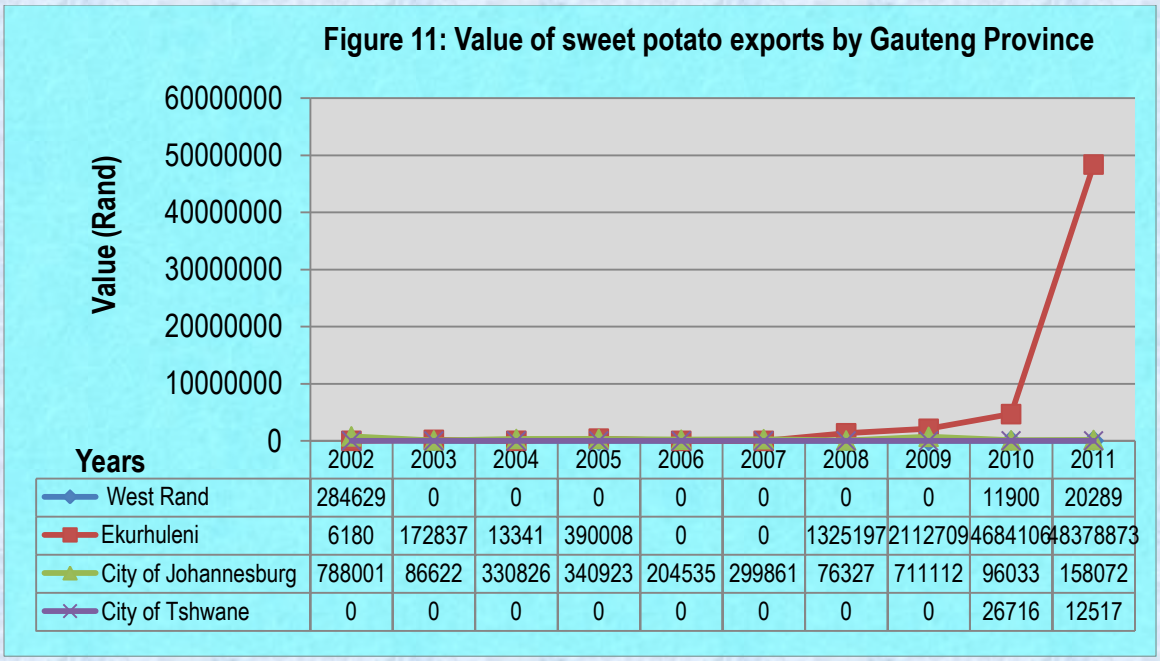
Figure 10: Value of sweet potato exports by Western Cape Province



Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
City of Cape Town	766022	3960901	516800	215881	339527	1227774	92184	40114	690040	125350
West Coast	26101	89777	286346	180000	0	1355798	2612262	716332	1503809	862857
Cape Winelands	626008	1053193	339769	1972647	1246779	1091077	1872527	475034	50363	51187
Overberg District	0	666457	0	0	0	0	0	0	0	0
Eden	0	0	0	0	0	0	0	0	10766	3699

Source: Quantec Easydata

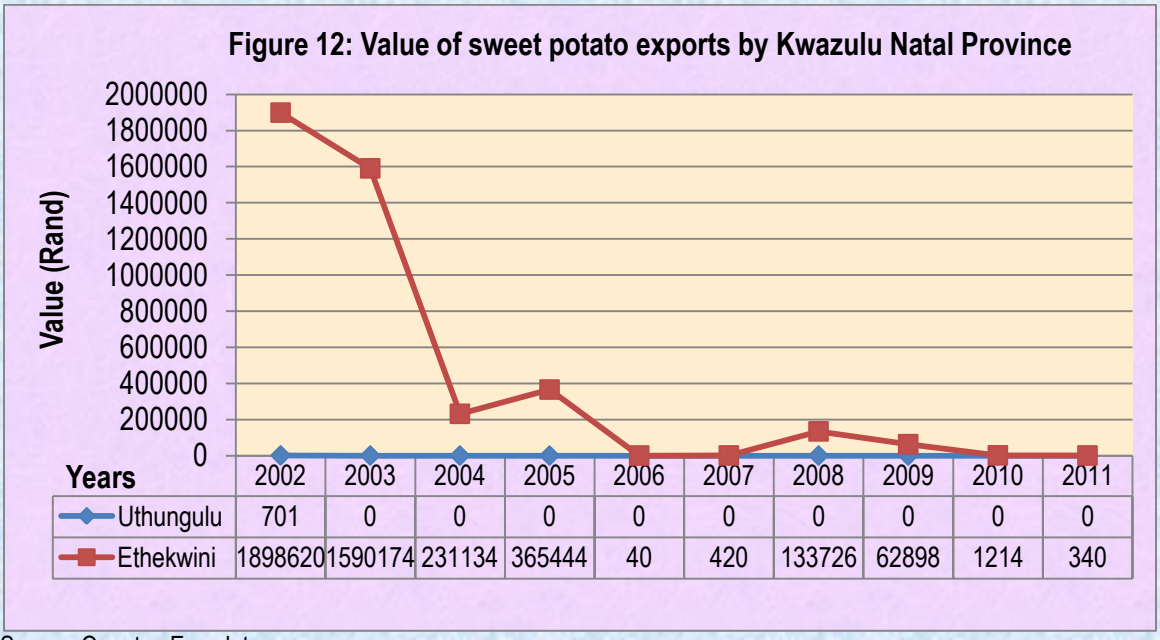
Figure 10 above indicates that sweet potato exports by Western Cape province were mainly from West Coast, Cape Winelands, and City of Cape Town. Cape Town harbor renders exports exit point for exports from these municipalities. In 2010, there was a significant increase in value of sweet potato exports by City of Cape Town while the export values for West Coast and Cape Winelands have decreased. In 2010, Eden contributed to sweet potato exports from Western Cape Province. In 2011, export values for City of Cape Town, West Coast and Eden has decreased significantly when compared to 2010 export values recorded for those municipalities.



Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
West Rand	284629	0	0	0	0	0	0	0	11900	20289
Ekurhuleni	6180	172837	13341	390008	0	0	1325197	2112709	46841064	48378873
City of Johannesburg	788001	86622	330826	340923	204535	299861	76327	711112	96033	158072
City of Tshwane	0	0	0	0	0	0	0	0	26716	12517

Source: Quantec Easydata

As can be seen from Figure 11 above, sweet potato exports by Gauteng province were mainly from the City of Johannesburg and Ekurhuleni district municipality. The high export values were recorded in 2010 for the City of Johannesburg municipality. In 2010, City of Tshwane recorded its first exports value in a ten year period. In 2002, West Rand district contributed significantly to sweet potato exports from Gauteng and the contribution in 2010 and 2011 where less significant. The highest export was recorded in 2011 and the exports were exported through Ekurhuleni municipality. This can be attributed to OR Tambo international airport which is an export exist point being located in Ekurhuleni municipality.

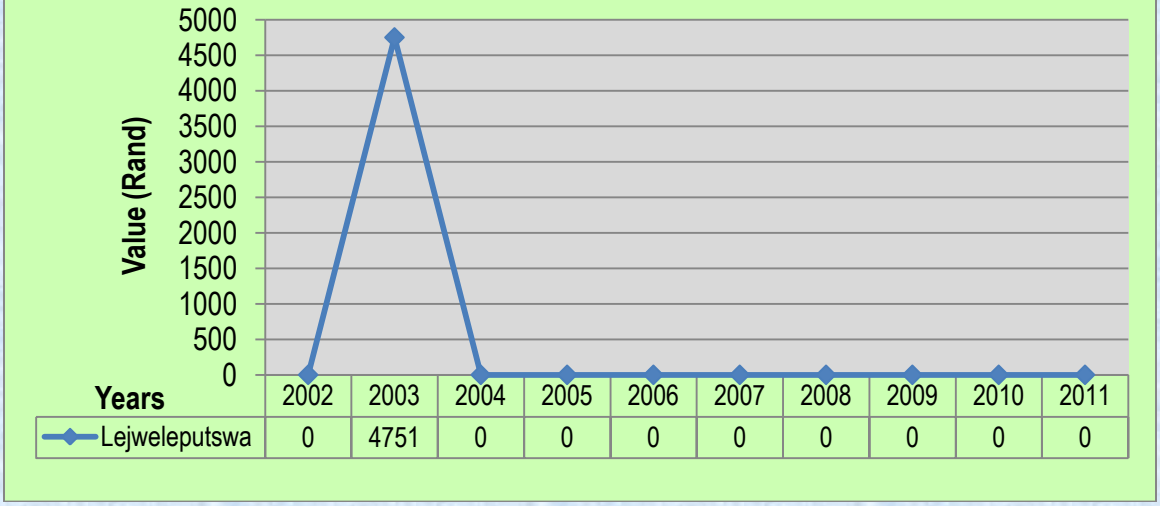


Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Uthungulu	701	0	0	0	0	0	0	0	0	0
Ethekwini	1898620	1590174	231134	365444	40	420	133726	62898	1214	340

Source: Quantec Easydata

Figure 12 above indicates that sweet potato exports by KwaZulu-Natal province were mainly from Ethekwini and the highest export value was recorded in 2002. From 2004, the exports values have decreased significantly. In 2010 and 2011, the values of sweet potato exports from Kwazulu Natal were less significant.

Figure 13: Value of sweet potato by Free State Province

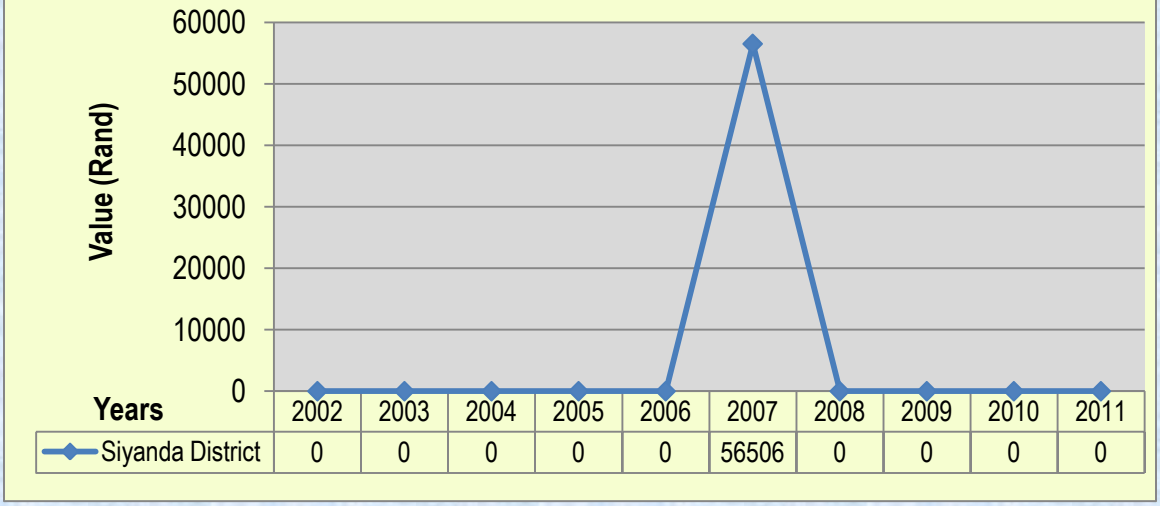


Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Lejweleputswa	0	4751	0	0	0	0	0	0	0	0

Source: Quantec Easydata

Figure 13 above indicates that sweet potato exports by Free State province were in 2003 from Lejweleputswa districts. From 2004 to 2011, the province has recorded zero trade on sweet potatoes.

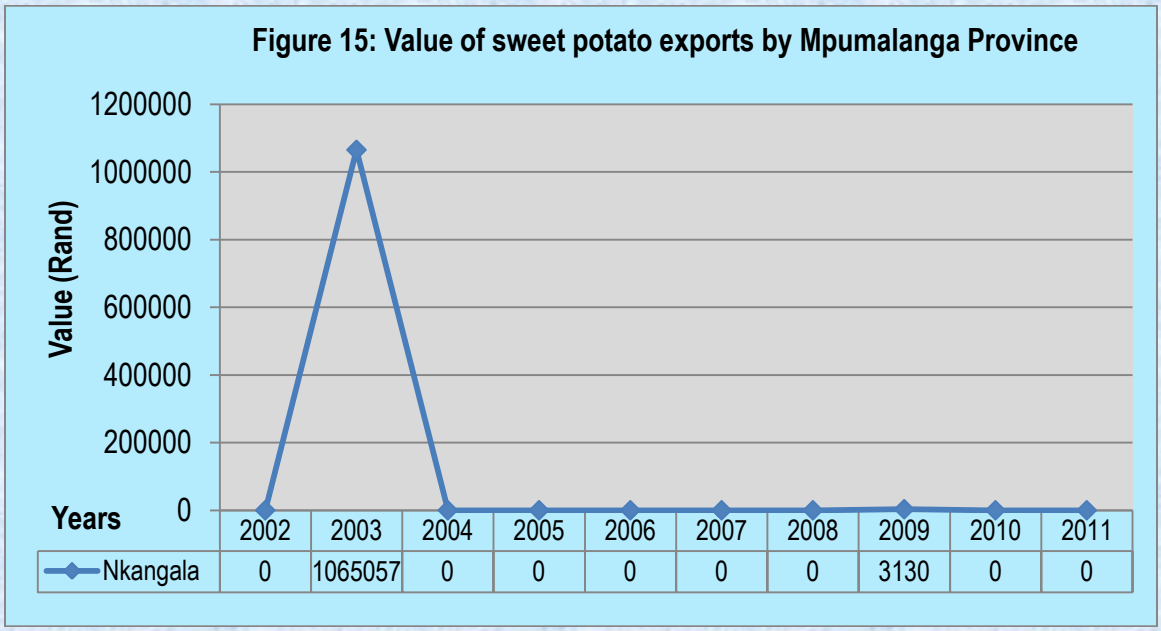
Figure 14: Value of Sweet potato exports by Northern Cape Province



Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Siyanda District	0	0	0	0	0	56506	0	0	0	0

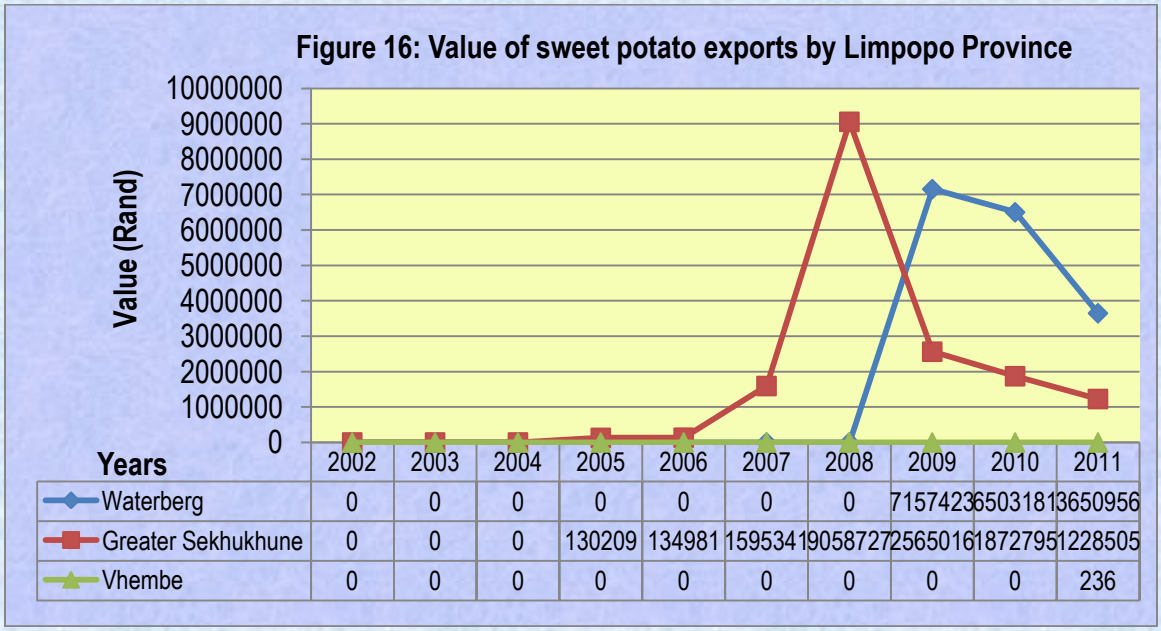
Source: Quantec Easydata

Figure 14 above indicates that sweet potato export by Northern Cape province was in 2007 from Siyanda Districts. In other years, there was no exports value recorded for Northern Cape province.



Source: Quantec Easydata

Figure 15 above, illustrates that sweet potato exports by Mpumalanga province were in 2003 and 2009 from Nkangala district. In the other years the province has recorded zero trade for sweet potato. The highest export value was recorded in 2003.



Source: Quantec Easydata

Figure 16 above illustrates that sweet potato exports by Limpopo province were mainly from Greater Sekhukhune District. In 2009 and 2010, there was a significant decline in value of sweet potato exported through Greater Sekhukhune. In 2009, Waterberg district recorded export value for the first time in period under review. In 2010 the export values have decreased when compared to

2009. Exports values for Greater Sekhukhune and Waterberg continued to decrease during 2011. Vhembe contributed to the sweet potato export from Limpopo province for the first time in ten years, but the value was insignificant.

2.3 Share Analysis

Table 3 below is an illustration of provincial share towards national exports. Western Cape, KwaZulu-Natal, Gauteng and Limpopo have commanded the greatest share of sweet potato exports. The high export shares in Western Cape, KwaZulu-Natal and Gauteng can be attributed to registered exporters and exports exit points based in these provinces. In 2008 to 2010, Limpopo province has commanded marginally higher share than that of Gauteng, Kwazulu Natal and Western Cape provinces. In 2010, Limpopo province commanded 54.20% of sweet potatoes exports. This can be attributed to high production of sweet potato in Limpopo and exports to neighboring countries like Zimbabwe and Mozambique which are situated near Limpopo province. In 2011, Gauteng commanded 89.13% share, Limpopo commanded 8.96% while Western Cape has commanded only 1.19% share of sweet potato exports from South Africa.

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

Year Provinces	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Western Cape	32.26	66.34	66.52	65.88	82.37	65.24	17.36	20.40	14.59	1.91
Northern Cape	0	0	0	0	0	1	0	0	0	0
Free State	0	0.05	0	0	0	0	0	0	0	0
Kwazulu-Natal	43.20	18.28	13.45	10.17	0	0.01	1.04	0.40	0.01	0
Gauteng	24.54	3.08	20.03	20.33	10.62	5.43	10.93	17.82	31.18	89.13
Mpumalanga	0	12.25	0	0	0	0	0	0.02	0.02	0
Limpopo	0	0	0	3.62	7.01	28.32	70.66	61.36	54.20	8.96
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	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
City of Cape Town	54.02	68.64	45.22	9.11	21.40	33.41	4.14	1.24	30.60	12.02
West Coast	1.84	1.56	25.05	7.60	0	36.90	11.74	84.06	66.69	82.72
Cape Winelands	44.14	18.25	29.73	83.29	78.60	29.69	84.12	14.70	2.23	4.91
Overberg	0	11.55	0	0	0	0	0	0	0.48	0
Eden	0	0	0	0	0	0	0	0	0	0.35
Western Cape	100	100	100	100	100	100	100	100	100	100

Source: Calculated from Quantec Easydata

Table 4 above indicates that City of Cape Town, Cape Winelands and West Coast commanded the greatest share of sweet potato exports from Western Cape province during the 10 year period. In 2008 and 2009 there has been a significant decrease in sweet potato export value for City of Cape

Town. In 2010, there was a significant increase in sweet potato export value recorded for the City of Cape Town District. Cape Town harbour renders exit point of sweet potato exports from the Western Cape province. From 2009 to 2010, there was a significant increase in value of sweet potato export value for West Coast district municipality. During 2011, West Coast municipality commanded 82.72% and City of Cape Town dropped to 12.02% share of sweet potato export from Western Cape.

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

Year District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Sedibeng	0	2.99	0	0	0	1.93	0	0	0	0
West Rand	26.38	0	0	0	0	0	0	0	0.25	0.04
Ekurhuleni	0.57	64.62	3.88	53.36	0	0	94.55	74.82	97.21	99.61
City of Johannesburg	73.04	32.39	96.12	46.64	100	98.07	5.45	25.18	1.99	0.32
City of Tshwane	0	0	0	0	0	0	0	0	0.55	0.03
Gauteng	100	100	100	100	100	100	100	100	100	100

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 exit point of sweet potato exports from Gauteng Province. From 2008 to 2010, there has been a significant increase in value of sweet potato for Ekurhuleni while City of Johannesburg value has declined. Export share for West Rand and City of Tshwane was insignificant. In 2011, Ekurhuleni commanded 99.61% share of Gauteng Sweet potato exports.

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

Year District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Uthungulu	0.04	0	0	0	0	0	0	0	0	0
Ethekwini	99.96	100	100	100	100	100	100	100	100	100
Kwazulu Natal	100	100	100	100	100	100	100	100	100	100

Source: Calculated from Quantec Easydata

Table 6 above, shows that from 2003 to 2011, Ethekwini commanded 100% share of sweet potato exports from KwaZulu-Natal Province. The greatest share by Ethekwini can be attributed to Durban harbour which renders exports exit point.

Table 7: Share of sweet potato exports to the total Free State provincial sweet potato exports (%)

Year District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Lejweleputswa	0	100	0	0	0	0	0	0	0	0
Free State	0	100	0	0	0	0	0	0	0	0

Source: Calculated from Quantec Easydata

Table 7, illustrates that in 2003, Lejweleputswa commanded 100% share of sweet potato exports from Free State Province. From 2004 to 201, Free State province recorded zero trade in sweet potatoes.

Table 8: Share of sweet potato exports to the total Mpumalanga provincial sweet potato exports (%)

Years District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Nkangala	0	100	0	0	0	0	0	100	0	0
Mpumalanga	0	100	0	0	0	0	0	100	0	0

Source: Calculated from Quantec Easydata

Nkangala district commanded 100% share of sweet potato exports from Mpumalanga province in 2003 and 2009 (see Table 8). In other years, the province recorded zero trade in sweet potatoes.

Table 9: Share of sweet potato exports to total Limpopo provincial sweet potato exports (%)

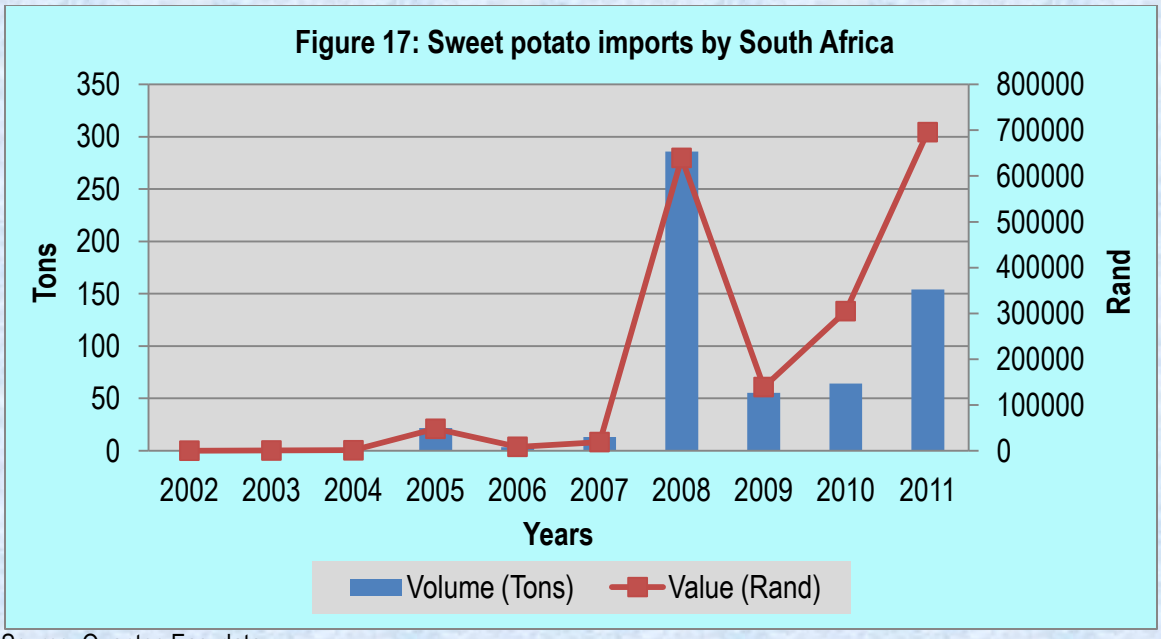
Year District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Mopani	0	0	0	0	0	0	0	73.62	77.64	74.82
Greater Sekhukhune	0	0	0	100	100	100	100	26.38	22.36	25.18
Limpopo	0	0	0	100	100	100	100	100	100	100

Source: Calculated from Quantec Easydata

Table 9 above indicates that Greater Sekhukhune commanded the greatest share of sweet potato exports from Limpopo province. In 2009, Mopani commanded 73.62% and in 2010 commanded 77.64% of sweet potato exports from Limpopo province. From 2001 to 2008 Mopani district has recorded zero trade. In 2011, Mopani continued to command higher share of sweet potato export from Limpopo.

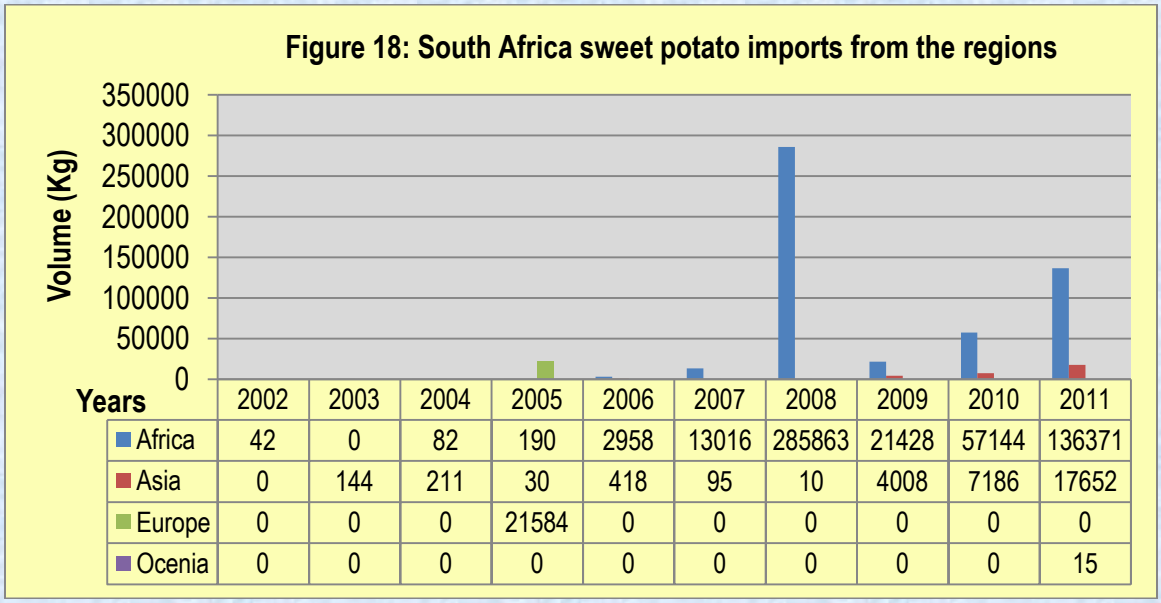
2.4 Sweet potato imports by South Africa

South Africa is not a major sweet potato importer. In 2011, it represented 0.05% of the world imports for this product and its ranking in world imports was 57. In 2011, South Africa imported sweet potatoes from Ghana, China, Zambia and Nigeria. China commanded 60.4%, Ghana has commanded 26% of and Zambia has commanded 12.5% of sweet potato imports by South Africa. Globally, Canada, United Kingdom, Netherlands, Japan, France and United States of America are major sweet potato importers.



Source: Quantec Easydata

Figure 17 above illustrates the sweet potato imports by South Africa. Considerable sweet potato imports volumes were recorded in 2005, 2007 and the highest imports were recorded in 2008. The increase in import volumes can be attributed to decline in production volumes in the same years. In 2009, there was a significant decline in imports and this can be attributed to high domestic production in the same year. In 2010, South Africa increased its sweet potato exports by 16% when compared to 2009 despite 0.8% increase in domestic production. In 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.

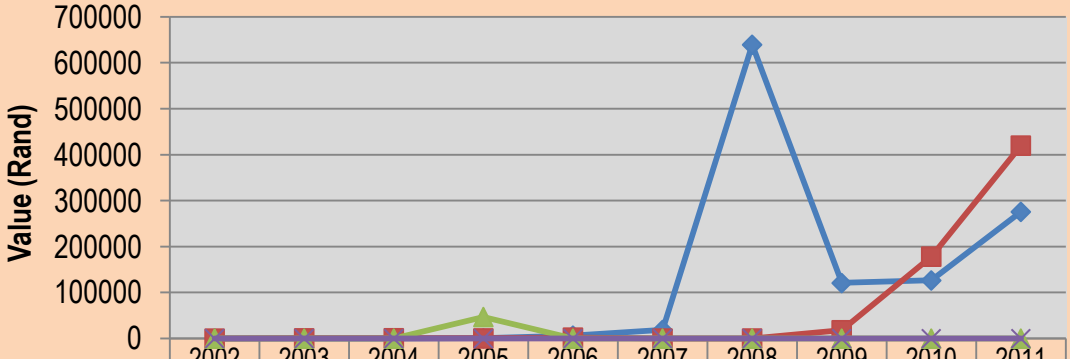


Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Africa	42	0	82	190	2958	13016	285863	21428	57144	136371
Asia	0	144	211	30	418	95	10	4008	7186	17652
Europe	0	0	0	21584	0	0	0	0	0	0
Ocenia	0	0	0	0	0	0	0	0	0	15

Source: Quantec Easydata

Figure 18 above illustrates the regions supplying South Africa with sweet potato imports. South Africa imports sweet potatoes mostly from African and Asia regions. South Africa imported sweet potatoes from European region only in 2005. In 2011, South Africa imported sweet potato from China, Ghana, Zambia and Nigeria. In 2011, South Africa also imported sweet potato from Oceania region but the volumes were insignificant.

Figure 19: Value of sweet potato imports from the regions



Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Africa	159	0	220	440	6456	18879	639339	120922	126521	275785
Asia	0	584	821	453	2142	108	226	18188	178375	419908
Europe	0	0	0	47000	0	0	0	0	0	0
Ocenia	0	0	0	0	0	0	0	0	0	78

Source: Quantec Easydata

Figure 19 above indicates the value of South Africa sweet potato imports. The figure shows that it was mostly cheaper to import from African countries. In 2005, a considerable import value for sweet potato from European region was recorded. In 2010 and 2011, it was more expensive to import sweet potatoes from Asia.

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 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. Figure 20 presents the sweet potato value chain tree explaining its uses while Figure 21 illustrates the market value chain for sweet potatoes.

Figure 20: Sweet potato value chain tree explaining its uses

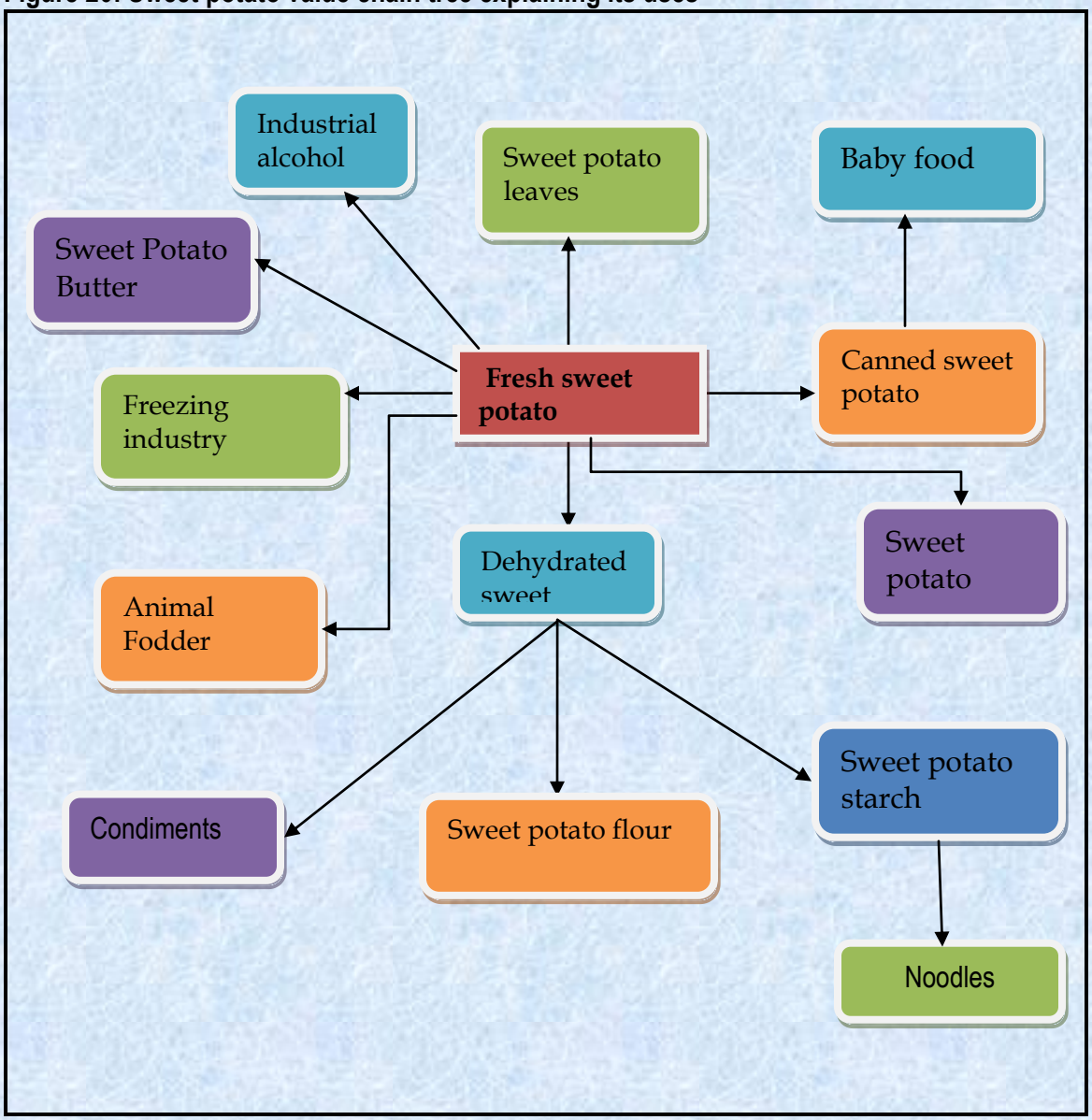
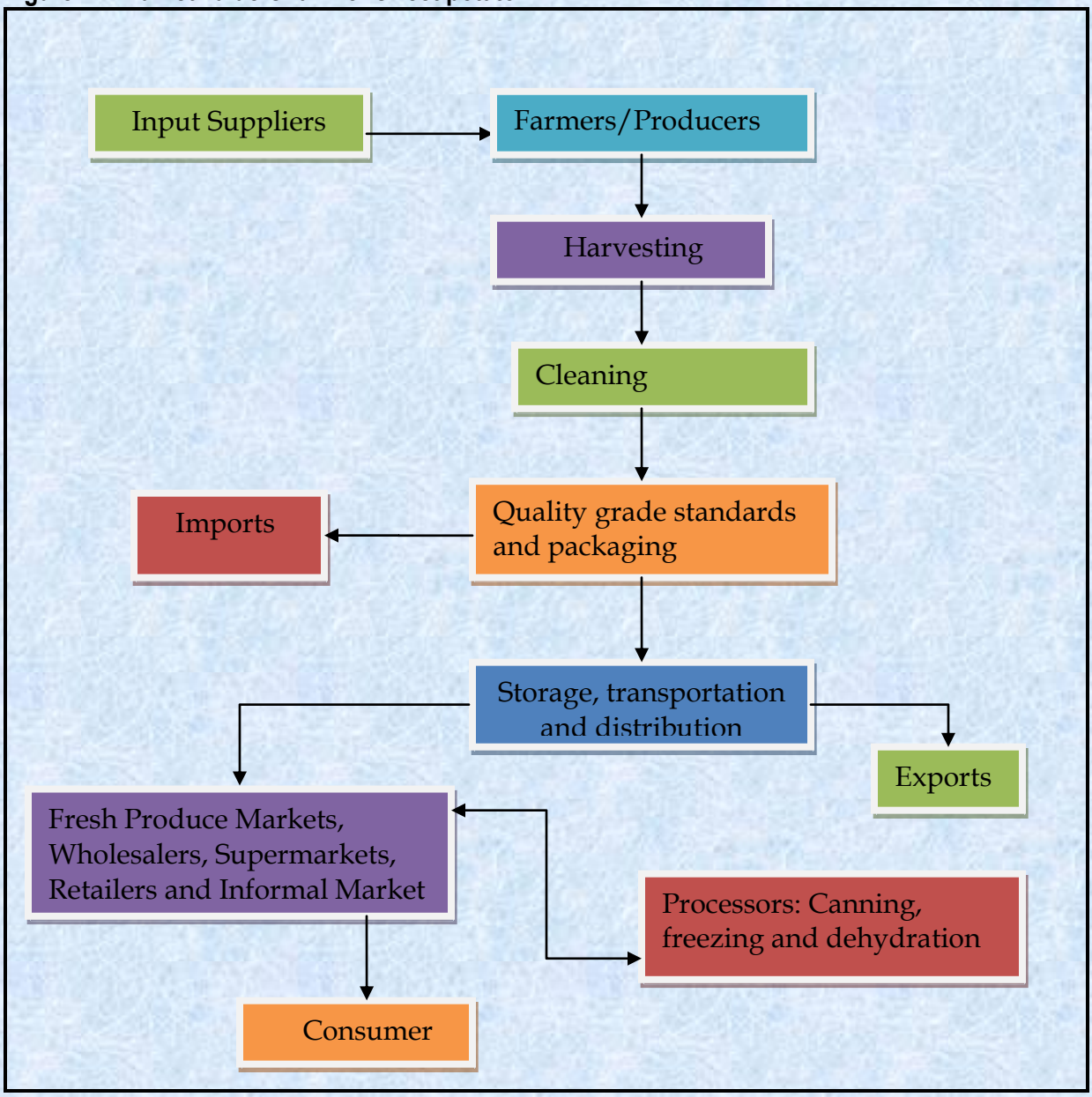


Figure 21: Market value Chain for sweet potato



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 INTELLEGENCE

3.1 Tariffs

Tariffs applied by the various markets to sweet potatoes originating from South African during 2010 and 2011 are presented in Table 10.

Table 10: Tariffs applied by various exports markets to sweet potato from South Africa

Country	Product description (H0714200)	Trade regime description	Applied tariff	Estimated total ad volorem equivalent tariff	Applied tariff	Estimated total ad volorem equivalent tariff
			2010		2011	
United Kingdom	Sweet potato, fresh for human consumption	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
Canada	Sweet potato fresh or chilled	MFN duties (Applied)	0.00%	0.00%	0.00%	0.00%
France	Sweet potato, fresh for human consumption	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
Netherlands	Sweet potato, fresh, whole for human consumption	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
Japan	Sweet potato fresh, chilled or dried	MFN duties (Applied)	12.80%	12.80%	12.80%	12.80%
United States of America	Sweet potato fresh or frozen	MFN duties (Applied)	6.00%	6.00%	6.00%	6.00%
Ireland	Sweet potato, fresh for human consumption	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
Germany	Sweet potato, fresh for human consumption	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
Switzerland	Sweet potato, fresh for human	MFN duties (Applied)	0.00%	0.00%	0.00%	0.00%

	consumption					
Denmark	Sweet potato, fresh for human consumption	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
United Arab Emirates	Sweet potato and similar root and tuber	MFN duties (Applied)	5.00%	5.00%	5.00%	5.00%
Zimbabwe	Sweet potato frozen or dried	MFN duties (Applied)	40.00%	40.00%	40.00%	40.00%
China	Sweet potato, fresh for human consumption	MFN duties (Applied)	0.00%	0.00%	0.00%	0.00%
Ghana	Sweet potato frozen or dried	MFN duties (Applied)	20.00%	20.00%	20.00%	20.00%
Mozambique	Sweet potato fresh or chilled	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%
Malawi	Sweet potato fresh or chilled	Preferential tariff for South Africa	10.00%	10.00%	10.00%	10.00%
Australia	Sweet potato fresh or chilled	Preferential tariff for South Africa	0.00%	0.00%	0.00%	0.00%

Source: Market Access Map

The lucrative exports markets for sweet potato from South Africa are United Kingdom, France, Italy, Belgium, Ireland, Portugal and Germany. These countries apply preferential tariff of 0.00% due to EU-SA Free Trade Agreement (FTA). Asian markets in Thailand and Republic of Korea are highly protected by 40.00% and 45.00% tariff respectively. In African markets Mozambique applies a 0.00% preferential tariff to sweet potatoes from South Africa due to the SADC-FTA. Ghana is a top country exporting sweet potato in the world and its domestic market is protected by 20% tariff. South Africa also exported sweet potato to Zimbabwe and this market is protected by 40% tariff despite SADC-FTA agreement.

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

3.2.1 (b) Product legislation: phytosanitary regulations

The international standard for phytosanitory 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 phytosanitory risk, identification of any harmful organisms and certification of the validity of any phytosanitory 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 downs 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 phytosanitory 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 successful. The major retailers in the EU also play an important role in tackling environmental issues, which means that exporters have to take these into account when negotiating exporting arrangements.

(ii) Environmental issues are becoming increasingly important with European consumers. Consumer movements are lobbying against purchasing non-environmental friendly or non-sustainable produce. To this end, both governments and private partners have created standards (such as ISO 14001 and EUREPGAP) and labels to ensure produce adhere to particular specifications. Labels are an absolute must for exporters attempting to enter the rapidly expanding organic produce market. The EU Commission has recently adopted and 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 phytosanitory requirements, which have often been challenged in the WTO as having little or no scientific justification. Other measures that are being challenged include Japan's use of fumigation on agricultural products when cosmopolitan pests (already found in Japan) are detected. Japan is also increasing its labeling requirements.

4. GENERAL DISTRIBUTION CHANNELS

There are roughly three distinct sales channels for exporting vegetables. One can sell directly to an importer with or without the assistance of an agent (usually larger, more established commercial farms). 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 lead 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^{o}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.

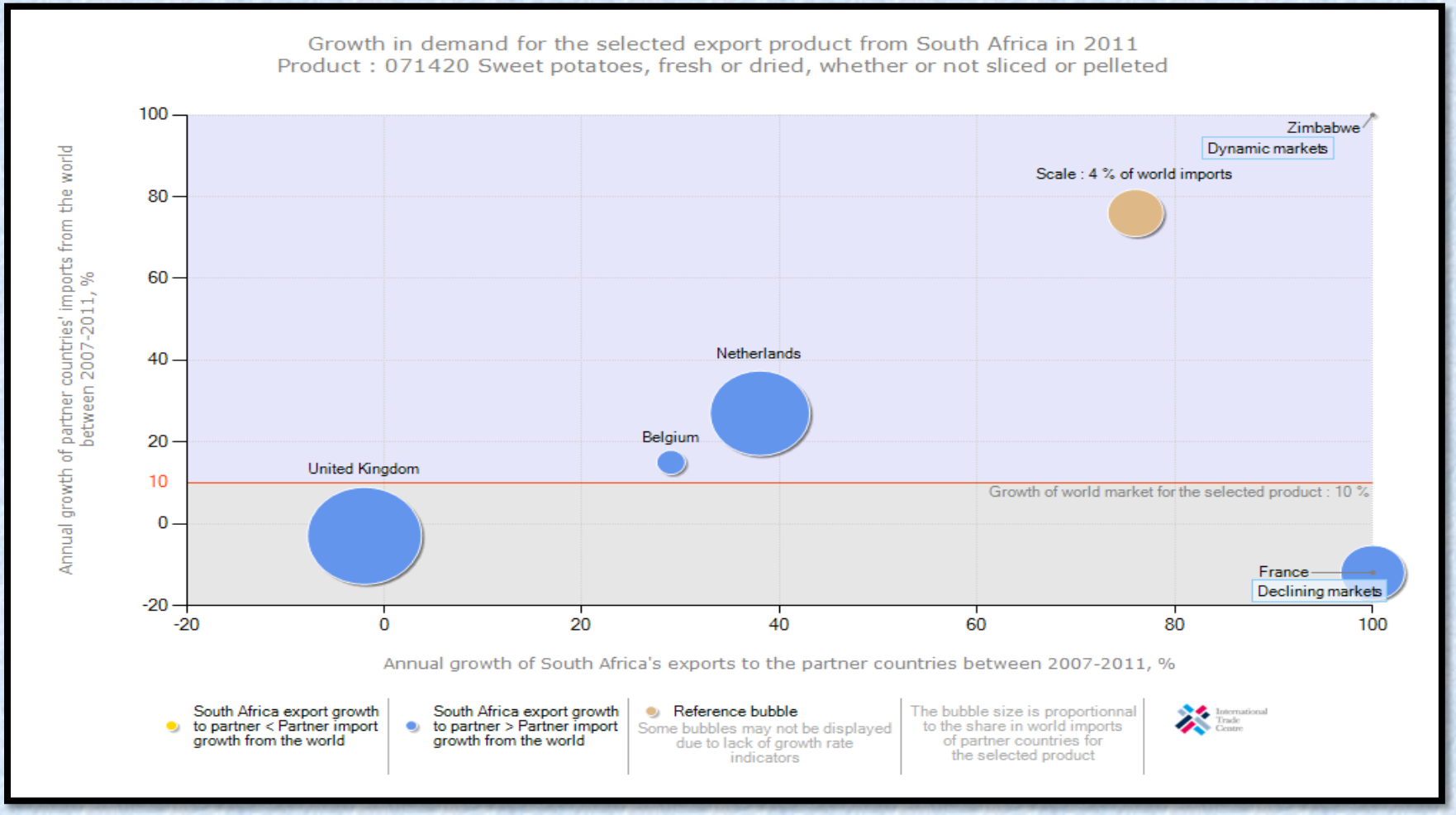
5.3 Packaging also plays a vital role in ensuring safe and efficient transport of a product and conforming to handling requirements, uniformity, recyclable materials specifications, phytosanitory requirements, proper storage needs and even attractiveness (for marketing purposes).

6. COMPETIVENESS OF SOUTH AFRICA SWEET POTATO EXPORTS

Figure 22 below illustrate that South Africa's sweet potato export to Belgium and Netherlands 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 dynamic market. South Africa's sweet potato exports to United Kingdom and France are growing while world imports are declining into these countries. South Africa has gain market share in a declining market which is regarded as an under achievement. South Africa's sweet potato exports to Zimbabwe are growing slower than world imports into this country. South Africa has lost market share in a dynamic market. South Africa's exports to United Kingdom and France are growing while the world imports are declining.

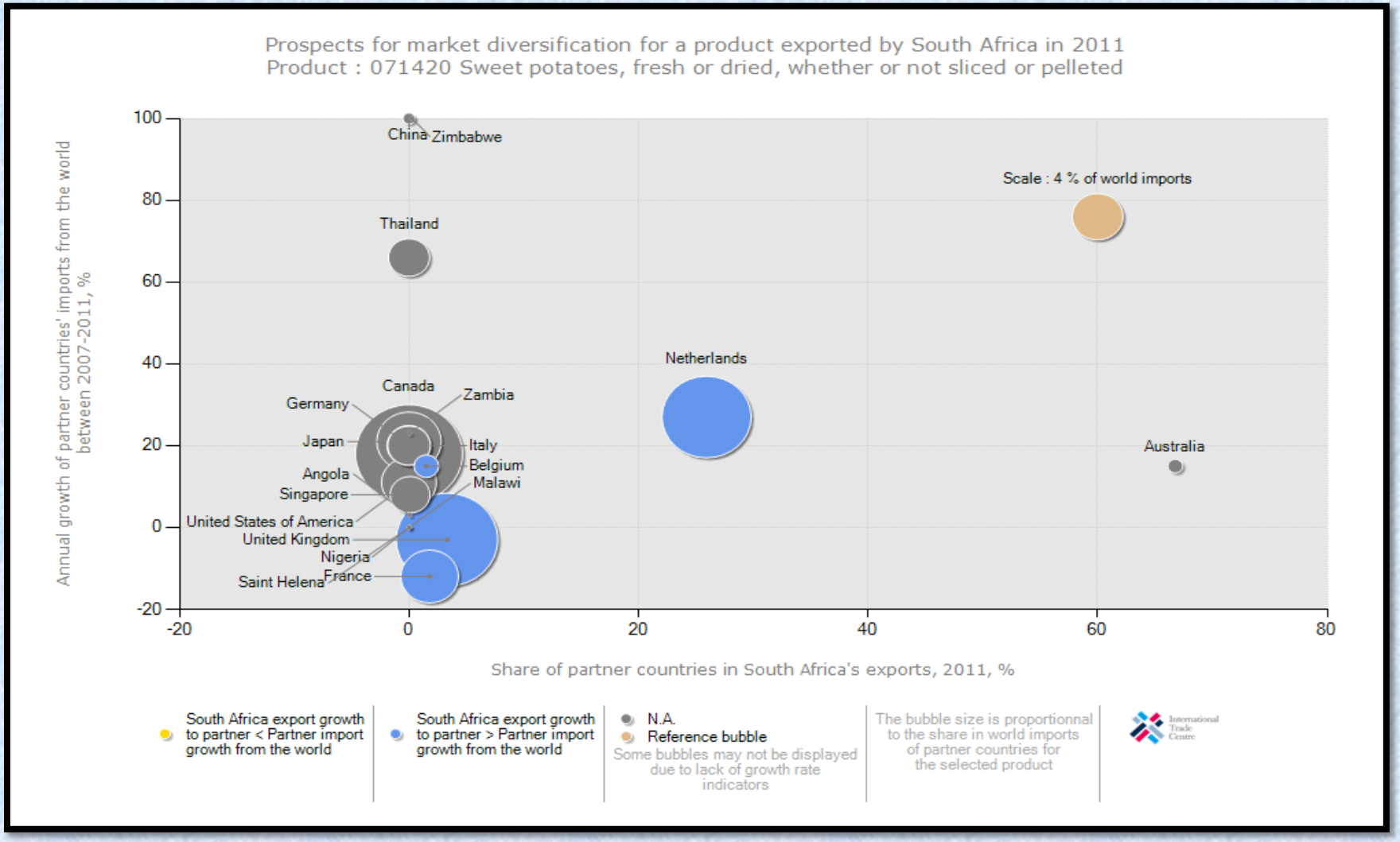
Figure 23 below shows that during 2011, Australia and Netherlands were the main sweet potato exports markets from South Africa. Prospective markets for sweet potato exports are mainly Japan, Zambia, Canada, Germany and Belgium. However, if SA is to diversify its sweet potato exports, the most lucrative market exists in China, Zimbabwe and Thailand which has increased their sweet potato imports from the world between 2007 and 2011. China has experienced 138%, Zimbabwe 147% and Thailand 66% of annual growth rate. France and United Kingdom have recorded a negative growth of 12% and 3% respectively between 2007 and 2011 period.

Figure 22: Growth in demand for sweet potatoes exported by South Africa in 2011



Source: ITC Trade Map

Figure 23: Prospects for market diversification for sweet potatoes exported by South Africa in 2011



Source: ITC Trade Map

7. ACKNOWLEDGEMENTS

The following organizations are acknowledged

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Quantec Research
www. quantec.co.za

Market Access Map
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Economic Research Service/USDA

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