



agriculture,
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National Agricultural
Marketing Council

Promoting market access for South African agriculture

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The **TradeProbe** is a joint initiative by the NAMC and the Department of Agriculture, Forestry and Fisheries, Directorate International Trade. The aim of this initiative is to create knowledge of trade-related topics by discussing and reporting on trade statistics, to invite perspectives from people working in related sectors, to report on trade-related research and to stimulate debate.

This issue of *TradeProbe* covers the following topics:

- Whisky trade profile (HS: 220830)
- Trade profile of brandy – spirits obtained from distilled grapes (HS: 220820)
- European Union Climate Policy: Implications for South African wine exports
- Trade profile of macadamia nuts (HS: 080260)
- Product profile of South African sheep & goat Meat (HS: 0204)
- Market profile of South African fruits to Asian markets
- Trade Between South Africa and the EFTA States

1. WHISKY TRADE PROFILE (HS: 220830)¹

Whisky is an alcoholic beverage made from a variety of fermented grains. Typically, countries that have strong comparative advantage in producing fermented grains tend to produce large quantities of whisky. Whisky is usually placed in wooden barrels or casks for aging and flavour stimulation before it is bottled. Once bottled, it is deemed ready for human consumption and is consumed either on ice, with other soft drinks or just on its own. Having noted this it is important to outline the trade flows of whisky globally.

Table 1 lists the world top exporters of whisky with the United Kingdom (UK) leading and accounting for more than half of the world's exports of whisky in 2011, measured in value terms. Noteworthy is that the UK and the United States of America (USA) had a growth rate of 59.8 % and 78.9 % respectively between 2006 and 2011. Latvia had the largest growth rate, increasing from an export value of R22 thousand to R1.2 million between 2006 and 2011. *South Africa had a negative growth rate of 64.14 % from 2006 to 2011.* This suggests that value of whisky exported by South Africa declined significantly (this could be caused by a number of reasons such as the exchange rate).

Table 1: World leading exporters of whisky

Rank 2011	Exporter	Values in Rand (millions)		Global share (%) 2011
		2006	2011	
World Exports		45.71	80.8	100
1	UK	31.12	49.72	61.5
2	USA	4.55	8.14	10.1
3	Singapore	1.39	5.22	6.5
4	Ireland	1.10	2.49	3.1
5	Germany	1.00	2.07	2.6
6	Canada	1.85	1.84	2.3
7	France	0.54	1.45	1.8
8	Netherlands	0.38	1.40	1.7
9	Latvia	0.02	1.22	1.5
10	Panama	0.71	0.97	1.2
34	SA	0.10	0.05	0.1

Source: ITC, 2013

The world leading suppliers (exporters) of whiskies have been outlined and the section below outlines the world leading importers. **Table 2** shows the

world's leading importers of whisky between 2006 and 2011. The USA, France and Singapore respectively accounted for 15.4 %, 10.5 % and 6 % share of world import in 2011. It is interesting to note that USA imports indicate intra-industry trade and the same can be said of France. The Russian Federation had the leading growth rate of 322.5 % from 2006 to 2011, indicating strong consumption growth of this product.

The growing consumption has elevated the ranking of Russia to become the 6th largest importer of whisky in the world in 2011. Spain reduced the value of its whisky imports by 3.8 % between 2006 and 2011, falling in rank from 3rd in 2006 to 4th in 2011. South Africa's imports of whisky, expressed in value terms, grew from R1.2 million between 2006 to about R2.1 million in 2011, accounting for 2.8 % of global imports.

Table 2: World leading importers of whisky

Rank 2011	Importer	Values in Rand (millions)		Global share (%)
		2006	2011	2011
World exports		45.47	74.83	100
1	USA	8.26	11.50	15.4
2	France	4.31	7.83	10.5
3	Singapore	1.29	4.50	6.0
4	Spain	3.49	3.35	4.5
5	Germany	1.97	3.26	4.4
6	Russia	0.73	3.08	4.1
7	Japan	1.48	2.20	2.9
8	Australia	1.31	2.16	2.9
9	Chinese Taipei	1.28	2.16	2.9
10	South Africa	1.22	2.12	2.8

Source: ITC, 2013

It can be deduced from **Tables 1** and **2** that South Africa is a net importer of whisky, having an import value higher than export value. Noting that South Africa is a net importer of whiskies it is important to look more closely at South Africa's whisky trade.

Therefore, **Figure 1** presents countries that supply South Africa with whisky or from whom South Africa imports whisky. South Africa imported about R2.1 million worth of whisky in 2011 from the world, with 79.3 % of that whisky coming from the United Kingdom (especially Scotland). Ireland and the USA ranked 2nd and 3rd sources of whisky imported by South Africa respectively 2011 (and in 2010).

¹ This article was compiled by Ms Masego Moobi from the NAMC.

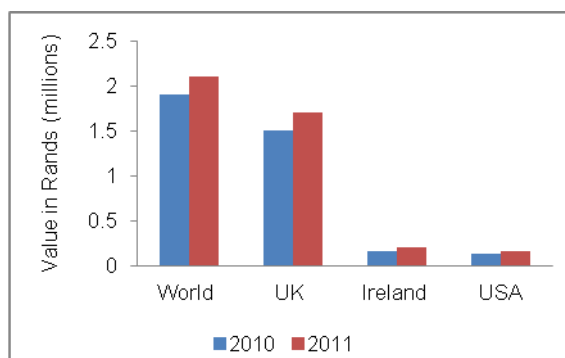


Figure 1: Markets exporting whisky to South Africa: 2010-2011

Source: ITC, 2013

South Africa's exports of whisky are outlined in **Figure 2** where destination of South Africa whisky between 2010 and 2011 are clearly put. Angola is a leading importer of South Africa's whisky even though the value declined by R78 thousand. Interestingly, the UK is major supplier of whisky to South Africa but also import some quantities from South Africa (indicating high levels of intra-industry trade).

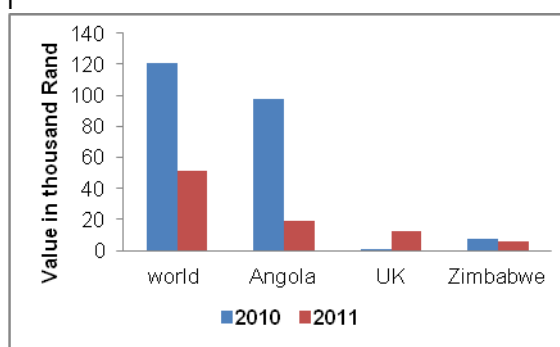


Figure 2: Markets importing South African whisky between 2010 and 2011

Source: ITC, 2013

2. TRADE PROFILE OF BRANDY – SPIRITS OBTAINED FROM DISTILLED GRAPES (HS 220820)²

Spirits derived from grapes fall into three broad categories, namely:

- Brandy, which is the spirit produced from the distillation of finished wine
- Pomace spirits, which is made by distilling the pulp, and
- Spirits obtained from the fermentation and subsequent distillation of whole unpressed grape bunches.

South Africa has been making brandy for nearly three and a half centuries and it is the fifth largest producer of brandy in the world. The bulk of South African brandy is consumed locally, but as more foreign visitors are exposed to domestic brandies, export demand has grown in recent years.

The extremely production regulations and quality standards of the South African brandy industry have

created an attraction for brandy connoisseurs worldwide and the rising number of international awards for excellence shows the level of competitiveness. Brandy is South Africa's top-selling spirits drink, with average annual sales of over 45 million litres. Part of its popularity and appeal is its versatility of usage; it can be consumed on its own with ice, with mixtures and in cocktails or in baking.

Table 3 lists the leading exporters of distilled spirits in the world between 2006 and 2011. From the global perspective, distilled spirits grew by 82 %, amounting to R41 billion in 2011. France has the largest market share of 53 %, followed by Singapore with a market share of 14.2 % and Hong Kong with a share of 5.5 %. South Africa accounts for only a 0.1 % market share for distilled spirits among world exports.

Table 3: Leading exporters in the world for distilled spirits

Rank	Exporters	Values in Rand (Million)		Growth value (%)	Global share (%)
		2006	2011	2006–2011	2011
World exports		22.7	41.4	82.0	100
1	France	14.0	22.1	58.0	53.3
2	Singapore	2.5	5.9	132	14.2
	Hong Kong				
3		1.2	2.3	96	5.5
4	Spain	1.1	2.1	83	5
5	Armenia	0.5	0.9	90	2.2
6	USA	0.1	0.9	669	2.1
7	Italy	0.5	0.9	65	2.1
8	China	0.1	0.9	800	2
9	Germany	0.4	0.8	110	2
10	Malaysia	0.3	0.8	135	1.9
28	SA	0.02	0.06	205	0.1

Source: ITC, Trade Map, 2013

Table 4 shows the leading importers of spirits between 2006 and 2011. USA was ranked as number one in 2006 with imports of distilled spirits, followed by Russia and then China, with imports worth R4.5 billion, R1.8 billion and R1.5 billion respectively. Globally, imports of distilled spirits increased by 83 %, amounting R38 billion in 2011.

In 2011, China had the largest market share of world imports, which was a 14 % share of world imports and equivalent to R5.3 billion, followed by the United States of America with share of 13.9 % and Singapore with 12.9 %. South Africa imported only R129 million worth of spirits, with a 0.3 % market share of world imports in 2011. **Table 4** indicates that the growth of brandy imports by SA has been increasing since 2006.

² This article was compiled by Ms Yolanda Potelwa from the NAMC.

Table 4: World leading importers for distilled spirits

Rank	Importers	Value in Rand (Millions)		Growth value (%)
		2006	2011	2006–2011
World imports		20.842	38.040	83
1	China	1.6	5.3	240
2	US	4.6	5.3	16
3	Singapore	2.3	4.8	106
4	Viet Nam	3.3	3.8	16
5	Russian F	1.8	2.6	44
6	HK, China	1.0	1.9	96
7	Germany	1.3	1.7	34
8	UK	1.0	1.3	29
9	Malaysia	0.3	1.0	202
10	Ukraine	0.3	1.0	152
37	SA	0.03	0.13	316

Source: ITC, Trade Map, 2013

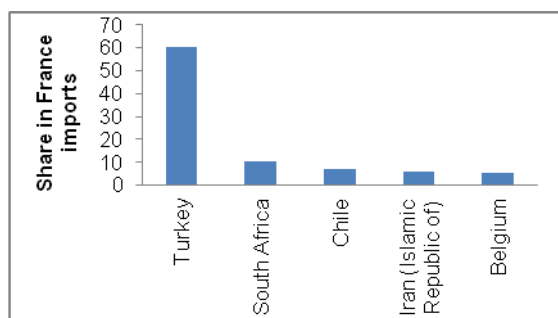
Table 5 shows the top ten export destinations for South Africa's distilled spirits in 2011. France was the top leading importer of distilled spirits (brandy), with a market share of 25.3 %, followed by Kenya (17 %) and Zimbabwe (14.1 %). The top five markets collectively accounted for 66 % of the total value of brandy exported by South Africa. France, Mozambique and Nigeria imposed 0 % tariffs on South African exported distilled spirits, while India imposed a high tariff of 150 % and the United Arab Emirates imposed a 50 % tariff on South Africa's distilled spirits.

Table 5: Top ten SA export market for distilled spirits

Rank	Importers	Exported value (ZAR Million) in 2011	Share in South Africa	MFN rate (%)
World imports		61.795	100	-
1	France	15.653	25.3	0
2	Kenya	10.519	17	25
3	Zimbabwe	8.686	14.1	33.1
4	Mozambique	3.990	6.5	0
5	Tanzania	3.695	3.1	25
6	India	1.891	2.7	150
7	UAE	1.646	2.6	50
8	Angola	1.603	2.3	30
9	Zambia	1.445	2	20
10	Nigeria	1.258	2	0

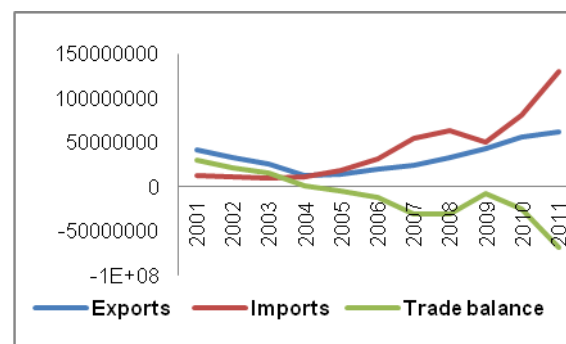
Source: ITC, Trade Map, 2013

Figure 3 shows South Africa's competitors in the French market in 2011. The top three suppliers were Turkey with a market share of 60.9 %, followed by South Africa with 10.4 % and Chile accounting for 6.9 % of the French market. The top three suppliers collectively accounted for 78.2 % of the French market.

**Figure 3:** South African competitors

Source: ITC, Trade Map, 2013

South African exports showed significant growth from 2004 whereas imports from the world showed a sharp increase in 2009. **Figure 4** shows that South Africa's trade balance has been in deficit since 2004. This means that South Africa is a net importer of distilled spirits from the world. As indicated in **Table 4**, India imposes high tariffs on distilled spirits imported from SA, thus India is protecting domestic producers of distilled spirits.

**Figure 4:** South African, Trade balance, imports and exports from the world

Source: Quantec, 2013

3. EUROPEAN UNION CLIMATE POLICY: IMPLICATIONS FOR SOUTH AFRICAN WINE EXPORTS³

Background

There is a growing consensus among policy makers and researchers that the world is rapidly becoming a carbon constrained world. Anthropogenic greenhouse gas emissions have been widely identified as a primary cause of climate change, and there is an urgent need to reduce these emissions in order to delay the projected effects of climate change (IPCC, 2007). If greenhouse gas emissions are not addressed quickly, the risk and cost associated with climate change will be equivalent to 5 % of global GDP each year in the near future and this could increase to 20 % of GDP per year by the end of the 21st century (Stern *et al.*, 2006).

Calel (2011) argues that economists across the world have been worried about the depletion and exhaustion of natural resources as a primary problem that could limit global economic growth, but worry less about the pollution of atmosphere. Perhaps pollution, rather than exhaustion, will provide the ultimate constraint on global economic growth. Anthropogenic greenhouse gas effects may constrain economic growth before the physical scarcity of energy resources ever become a problem (Calel, 2011).

The Kyoto Protocol was developed to provide a framework that will assist countries across the world to reduce their individual greenhouse gas emissions. It is seen as a solution to the challenge posed by climate change. The Protocol has flexible mechanisms that allow countries to gain economic value from reducing their emissions. Under the auspices of the Kyoto Protocol the European

³ This article was compiled by Mr Sifiso Ntombela of the NAMC.

Commission has developed and adopted a number of climate programmes aimed at reducing emissions in the Eurozone.

These included:

- **European Union Emissions Trading System (EU-ETS)** which is the cornerstone of the European Union's policy to combat climate change and its key tool for reducing industrial greenhouse gas emissions cost effectively. EU-ETS is the largest (valued at US\$ 148 billion in 2011) carbon trading scheme in the world, accounting for an 84 % share in the global carbon market (Carbon Finance, 2012).
- **The Effort Sharing Decision (ESD)** is another EU climate programme that establishes binding annual greenhouse targets for sectors not included in the EU-ETS. Sectors included in the ESD include transport, agriculture, buildings and waste.
- **Binding national targets for renewable energy:** This will help reduce EU's dependence on imported energy as well as bring down GHG emissions.
- A legal framework to promote the development and safe use of **carbon capture and storage (CCS)**.

The EU through these climate programmes aims to reduce the region's emissions by 20 % below 1990 levels, achieve a 20 % share of renewable energy consumption and a 20 % energy efficiency by year 2020. Under these climate programmes, various policy instruments and campaigns (such as carbon tariffs and taxes, carbon labelling and preference for locally produced products) have been considered that will help the EU meet its reduction targets. The considered carbon tariffs will have an impact on imports coming from carbon intense countries such as South Africa.

Vickers (2012) argues that industrialised countries, including the EU have developed protectionist sentiments in recent decades driven by intensifying competition from emerging countries. He further notes that the European Commission sees trade policies as a mechanism to address climate change issues, which will consequently constrain trade from emerging countries. The fear is that trade-based measures that aim to address climate change may be designed in a protectionist manner and thereby distort trade and production from carbon intense countries (Vickers, 2012).

South Africa is especially vulnerable to the impact of the trade-based measures (e.g. carbon tariffs, carbon labelling and carbon taxes) considered by the EU because of the high proportion of its trade in goods and services that are exported to the EU. Vickers (2012) finds that nearly 30–40 % of South Africa's exports to the EU may attract taxation under the new EU climate policies and the main sectors to suffer from the considered carbon tariffs include mining and resource-based products, agriculture and manufacturing as well as wood products.

South Africa is one of the world's most carbon intensive countries when measured in terms of carbon output per capita. South Africa exports the bulk of its agricultural and non-agricultural products to the European Union. The expanding trade between South Africa and the EU is encouraged by the relatively good trading conditions provided under the TDCA agreement. CSE (2008) finds that with an implementation of 5 % carbon tariff, EU countries like the UK, Germany, the Netherlands and Spain will see a reduction of 0.3 %, 3 %, 0.7 % and 3.4 % on the imported volumes respectively. The value of imported goods will increase by 6.3 billion Euros in the UK, by 5.2 billion Euros in Germany and 4.8 billion Euros in the Netherlands. This suggests that South African exports will be hard hit by the carbon tariffs unless it starts to reduce the carbon content embodied in traded goods.

The EU is considering implementing carbon trade-based measures to (i) prevent carbon leakage problems from countries with poor environmental policies and (ii) address concerns over competitiveness. Firms in the EU will suffer reduced competitiveness due to strict carbon policies, while exporting countries without strong environmental policies may benefit from an artificial comparative advantage. The carbon tariff will act as a border adjustment measure to neutralise advantages gained by countries exporting to the EU and will enforce implementation of carbon policies in other parts of the world.

South African wine exports to Europe

Figure 5 shows the trend in South African wine exports to the world between 1996 and 2011. Between 1996 and 2008, the country's wine exports increased by an average rate of 22 % per annum, to reach R6 billion in 2008. Between 2009 and 2011, wine exports have been declining at an average rate of 5 % per annum. Ironically, the EU climate and energy policy was adopted and implemented in 2009, the year South African wine exports started to show a decline.

The bulk of South African wine exports are destined for European countries and the United Kingdom is the leading importer with a 19 % share in South African wine exports. It is followed by the Netherlands with a 12 % share and Germany with an 11 % share of exports. Sweden and Russia are emerging as important importers of South African wines.

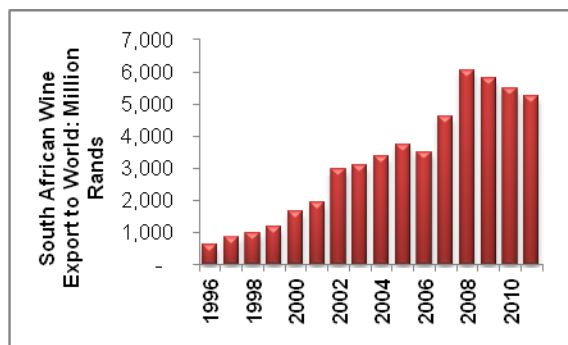


Figure 5: South African wine exports to the world: 1996–2011

Source: WTA, 2012

Figure 6 shows the shift in packaging of export wine between 2005/2006 and 2011/2012 seasons. It is evident from **Figure 6** that more South African wines are exported in bulk containers. In the 2005/2006 season, about 35 % (equivalent to 91.8 million litres) of total wine quantity was exported in bulk containers and this has grown to 61 % (equivalent to 246.5 million litres) of South African wine exported in bulk containers. The South African wine industry estimates that about 107 jobs are lost in the industry for every 10 million litres of wine exported in bulk containers rather than in small glasses and boxes (SAWIS, 2012).

The industry attributes the rapid shift in wine packaging to EU climate policies that aim to reduce greenhouse gas emissions. The EU is encouraging wine importers to import wine in bulk containers because this generates less carbon emissions compared to small packages which generate higher emissions from transport and packing materials.

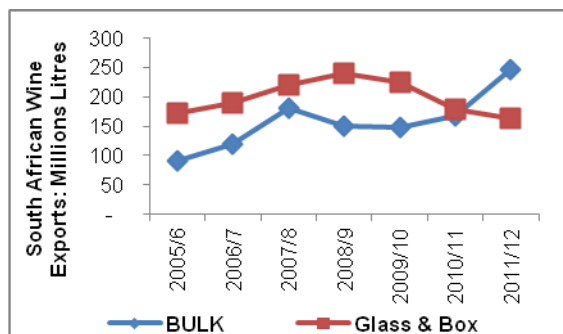


Figure 6: Changes in South African wine export packaging

Source: SAWIS, 2012

Figure 7 shows South African wine exports packaged in small glass bottles and box containers to the leading destination markets between 2002/2003 and 2011/2012 seasons. The UK reduced its small container wine imports from 82.9 million litres in 2002/2003 season to 30.4 million litres in 2011/2012 season, registering a decline of 63 %. Using South Africa's wine industry estimates, the shift in UK wine exports has resulted in roughly 535 jobs being lost in the UK market only.

Wine exports to the Netherlands packaged in small containers also saw a decrease of 51 % during the same period. This shift substantiates the claims that

EU climate policy is affecting the South African wine exports. The continued shift to bulk packaging will further shed jobs in the South African wine industry.

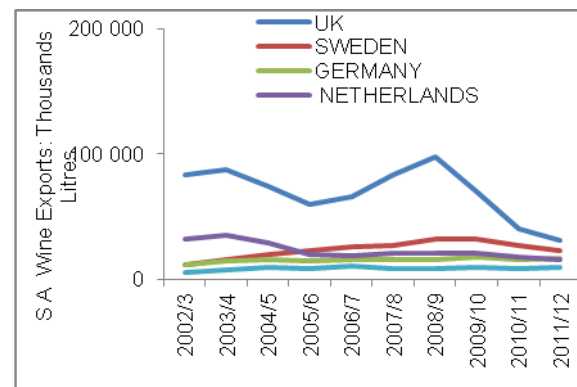


Figure 7: Wine exports packed in boxes and glass bottles

Source: SAWIS, 2012

Figure 8 shows the South African wine exports packaged in bulk containers to the leading destination markets between 2002/2003 and 2011/2012 seasons. Taking cognizance of changes displayed in **Figure 5** and **Figure 7**, it is not surprising to note that German wine imports packaged in bulk containers have increased from 8.6 million litres to 61.1 million litres and the UK's wine imports of same packaging grew from 19.3 million litres to 61.9 million litres in the reviewed period.

Russia is also importing relatively large quantities of bulk-packaged wines, while US wine imports (both packaged in small and bulk containers) from South Africa have remained relatively stable at around 10–13 million litres per annum.

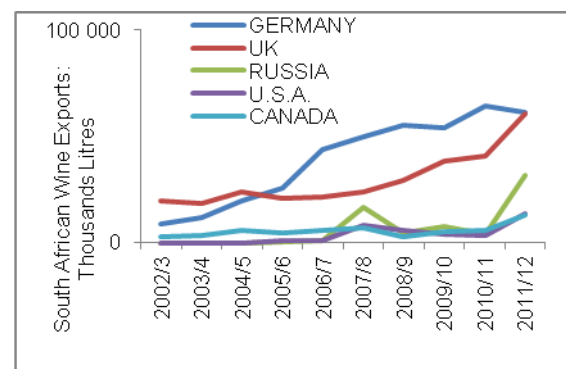


Figure 8: Wine Exports packed in bulk containers

Source: SAWIS, 2012

3.1. Concluding remarks

The role of trade in global climate policy is gaining momentum across the world and more countries are considering trade as a tool to address climate policy compliance. There are various carbon-trade based measures that have been considered as tools to enforce compliance with climate policies and their legality within the WTO rules have been assessed. The general conclusion is that climate change trade-based measures are permissible under WTO law (i.e. GATT Articles II.2 (a) and Article III.2).

However, the implementation of carbon trade-based measures such as carbon tariffs faces a number of constraints, such as (i) which import industries should face tariffs; (ii) how the carbon-intensity of imports will be assessed; (iii) in the case of Europe, how carbon tariffs will be set in the presence of emissions trading schemes; (iv) how EU export to other countries will be impacted; and (v) whether carbon tariffs might increase the cost of living in the countries that implement them.

Despite the challenges of implementing trade-based climate policies, it is becoming clear that the probability of seeing carbon tariffs and other forms of carbon trade-based measures being implemented is getting stronger. This suggests that countries with carbon intensive products such as South Africa must start implementing climate policies that aims to reduce the emissions embodied in their trade.

The South African wine and fruit industry has launched an initiative (i.e. Confronting Climate Change) that aims to quantify the exact amount of carbon emissions embodied in fruit and wine production. This can be viewed as a first step in attempting to mitigate the greenhouse gas emission generated from the wine and fruit industry.

4. TRADE PROFILE OF MACADAMIA NUTS (HS CODE 080260)⁴

Macadamia nuts are rich, flavourful nuts native to the continent of Australia; however, they are also cultivated on other continents. These nuts made an important traditional food source for native Australians. Macadamia nuts can be found in many markets including South Africa, although they tend to be expensive. They are almost always found shelled, which means that they should be carefully stored so that they do not become rancid.

Table 6 presents the five leading exporters and importers of macadamia nuts, fresh or dried (HS code 080260) in the year 2011. South Africa was ranked the first exporter of macadamia nuts, fresh or dried, with a share of 36.8 %, followed by Australia with 17.6 % and then the Netherlands with 7.4 %. The top three leading importers of macadamia nuts in 2011 were the USA with a share of 21.8 %, the Netherlands (11.2 %), and Hong Kong, China (10.5 %), together accounting for 43.5 % of world imports.

⁴ This article was compiled by Raymond Maphaha from the Directorate, International Trade, DAFF and Solly Molepo from Agricultural Economics Services, Western Cape Department of Agriculture (Elsenburg).

Table 6: World top exporters and importers of macadamia nuts, fresh or dried in 2011

Top world exporters	Exported value (US\$ '000')	Market share (%)	Top world importers	Imported value (US\$ '000')	Market share (%)
World	315,433	100.0	World	358,841	100.0
SA	116,016	36.8	USA	78,156	21.8
Australia	55,659	17.6	Netherlands	40,079	11.2
Netherlands	23,279	7.4	HK, China	37,779	10.5
Kenya	21,054	6.7	German	37,372	10.4
Guatemala	16,859	5.3	Japan	33,857	9.4

Source: ITC Trade Map, 2012

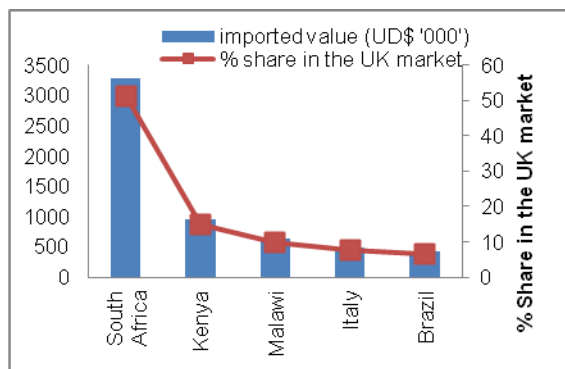
Table 7 shows the leading markets for South African macadamia exports during 2011. The top three markets for South Africa's fresh or dried macadamia nuts were the United States of America, Hong Kong (China) and the Netherlands, accounting for a 24.5 %, 20.1 % and 19 % share of South Africa's exports respectively.

Table 7: SA's top 5 export markets for macadamia nuts in 2011

Top 5 SA's markets	Exported value (USD '000')	Share in SA's Exports (%)	MFN Rate (%)
World	116 016	100.0	
USA	28 454	24.5	0
HK, China	23 313	20.1	0
Netherlands	22 073	19	0
Germany	8 234	7.1	0
UK	7 056	6.1	0

Source: ITC Trade Map, 2012

Figure 9 present the competitors of South Africa's dried or fresh macadamia nuts in the United Kingdom market in 2011. South Africa dominates the UK's dried or fresh macadamia nuts market with a percentage share of 51.1 %. All four suppliers had a market share ranging from 6.7 % to 15.1 %. There are various factors that contribute to South Africa's dominance in the United Kingdom, which might include low MFN rates in the United Kingdom and high production volumes, etc.

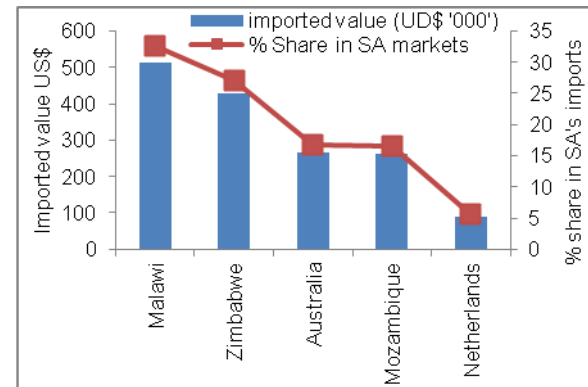
**Figure 9:** South Africa's competitors in United Kingdom for dried or fresh macadamia nuts

Source: ITC, 2013

Figure 10 indicates the leading sources of South Africa's imports of fresh or dried macadamia nuts in 2011.

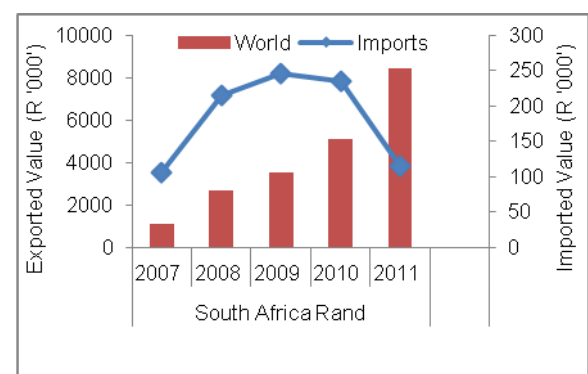
The four leading sources of South Africa's imports of fresh or dried macadamia nuts were Malawi, Zimbabwe, and Australia and Mozambique, accounting for 32.6 %, 27.1 %, 16.8 % and 16.6 %

share in imports, respectively. South Africa, Zimbabwe and Mozambique are member states of the SADC FTA and distance is the contributing factor for Zimbabwe and Mozambique's dominance in South Africa.

**Figure 10:** SA's top 5 import markets for dried or fresh macadamia nuts in 2011

Source: ITC, 2013

Figure 11 indicates that South African fresh or dried macadamia nuts exports increased between 2007 and 2011, whereas imports showed an increasing and decreasing trend during the same period. The figure further shows that South Africa was a net importer of fresh or dried macadamia nuts between 2007 and 2010. In 2011, South Africa became the number one exporter of macadamia nuts, dried or fresh in the whole world.

**Figure 11:** SA's fresh or dried macadamia nuts trade balance between 2007 and 2011

Source: ITC, 2013

Conclusion

South Africa is ranked the first exporter of dried or fresh macadamia nuts, with a share of 36.8 % of world exports. The main destination for South Africa's dried or fresh macadamia nuts is the United States of America, in which South Africa has a share of 24.5 %. The average annual growth rate of dried or fresh macadamia nuts from 2007 to 2011 was

72.2 %. South African farmers should put more effort into producing more dried or fresh macadamia nuts to increase their exports and maintain their position as the number one exporter of the product in the whole world. This will also enhance the country's economic growth and employment in the farming industry.

5. PRODUCT PROFILE OF SOUTH AFRICAN SHEEP & GOAT MEAT⁵

Background

Sheep farmers are amongst the most important role players in the agricultural sector. According to the DAFF (2011) Agricultural Abstract report, there are approximately 8000 commercial farmers in the country, employing approximately 35 000 workers, which goes a long way in contributing to the fight against unemployment. Sheep farmers are represented by various breeding organisations, mainly being the Merino South Africa and the Dorper Sheep Breeders of South Africa (DAFF, 2011). The Dorper is a popular breed amongst mutton producers as it has desired qualities (e.g. excellent carcass with a balance distribution of fat) that most producers prefer.

According to DAFF (2011), the average gross value of sheep production between 2001 and 2010 was R2 588 million per annum. A significant increase in production was observed between 2001 and 2009, which then declined in 2010. The decline is due to a combination of factors such as livestock theft, predation and many farmers converting their sheep farms into game farms (Spies, 2011).

South African mutton production

Sheep farming is popular in South Africa. It is mostly carried out in the arid regions of the country as approximately 86 % of sheep are in the Eastern Cape, Western Cape, Northern Cape Provinces, with the remaining five provinces accommodating the remaining 14 %.

The number of sheep slaughtered annually between 1975 and 2012 has fluctuated over the period, with the highest number of slaughterings (9 million) taking place in 1990, and the lowest in 1994 (5.2 million) (see figure 12). The amount of meat produced largely corresponded with the slaughterings. For example, when the number of slaughtered sheep decreases the amount of meat produced will decrease too.

The year in which the most meat was produced was in 1984, which amounted to 219.9 thousand tons and the smallest amount of meat produced was in 1994, which was 94.8 thousand tons (see Figure 12).

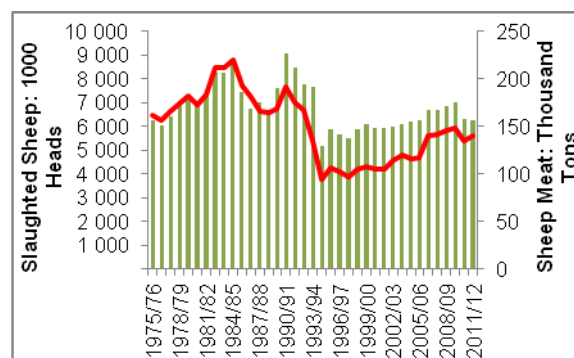


Figure 12: Sheep slaughtered and amount of meat produced, 1975–2012

Source: DAFF, 2012

Figure 13 clearly indicates that over the period the domestic consumption of sheep meat has dropped, which to a certain extent has led to a decline in production. In most years, South Africa consumes more meat than it produces, which in turn means that the shortage must be imported. As of 2006, there has been a downward trend in consumption of meat, which according to Spies (2011) is due to the fact that citizens of the country are consuming less meat due to increasing health consciousness and a shift to fresh produce such as fruits and vegetables.

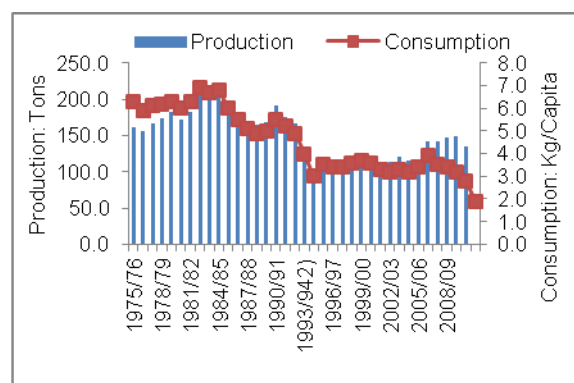


Figure 13: Production and consumption of mutton

Source: DAFF, 2012

South African mutton and lamb trade

Figure 14 shows the export trends of South Africa meat between 1996 and 2011. It is evident that meat exports have been fluctuating over the reviewed period. From 2007 to 2009 the trends were on the upwards swing for sheep and goat meat exports as well as all other South African meat exports, which include poultry, beef, pork and others. As from 2010, meat export trends have declined owing to production challenges and unattractive market conditions.

⁵ This article was compiled by Mr Buyambo Mantashe (of the UFH) and Mr Sifiso Ntombela (of the NAMC).

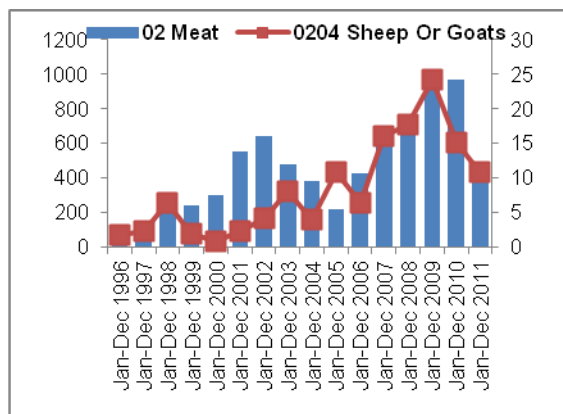


Figure 14: South Africa meat exports: 1996–2011
Source: World Trade Atlas, 2013

Figure 15 shows the main destination markets for South African sheep and goat meat exports. Mozambique was only behind Congo in 1996 and owing to its regional advantage in comparison to other countries it has grown to be the leading country to which South Africa exports. As Mozambique is part of the SADC region along with South Africa, the two enjoy preferential trade conditions, which include lowered tariffs and less stringent non-tariff barriers. Countries such as the Maldives and Qatar only started receiving sheep and goat meat from South Africa in 2011. These are only the ten leading countries to which South Africa exports to, and collectively they accounted for 90 % of South Africa's total sheep and goat meat exports in 2011.

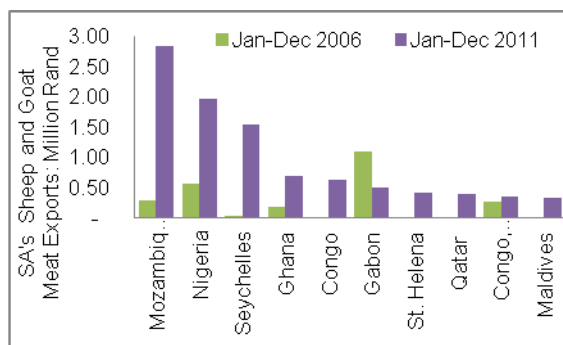


Figure 15: South Africa's main destination markets for sheep and goat meat exports
Source: World Trade Atlas, 2012

South Africa imports a large portion of its mutton and chevon (goat meat) from foreign markets. There was an upward trend in the imports of meat products by South Africa between 1996 and 2011. In the same period, imports of sheep and goat meat fluctuated, with the highest imports in 2008 (see **Figure 16**).

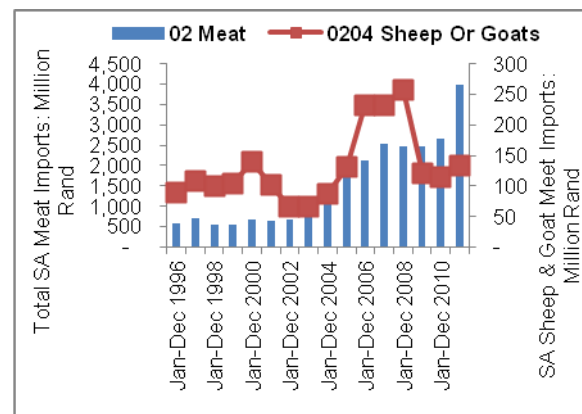


Figure 16: Sheep and goat meat imports: 1996–2011
Source: World Trade Atlas, 2012

Figure 17 indicates that South Africa imports practically all of its mutton and chevon from only two countries, namely Australia and New Zealand. With Australia exporting meat products worth an average of R85 million per annum from 1996 to 2011, it remains the leading importer for South Africa with 51 % share of total South Africa sheep and goat meat imports. New Zealand supplied the remaining 49 % of the mutton and chevon products into South Africa worth an average of R29 million per annum in the same period.

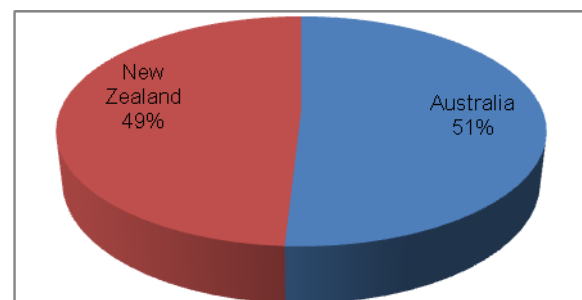


Figure 17: Main supplying countries of sheep and goat meat into South Africa
Source: WTA, 2012

Tariff and non-tariff measures

Figure 18 shows that South Africa and Mozambique have good trading relations, which is the main reason why the bulk of South Africa's sheep and goat meat exports is destined for Mozambique. South Africa only faces 3.3 % tariffs of its export value and that is due to the fact that both countries belong to the SADC. South Africa faces high tariffs in Nigeria, Ghana and Congo as it does not belong in the same trading bloc and is not a country with a preference.

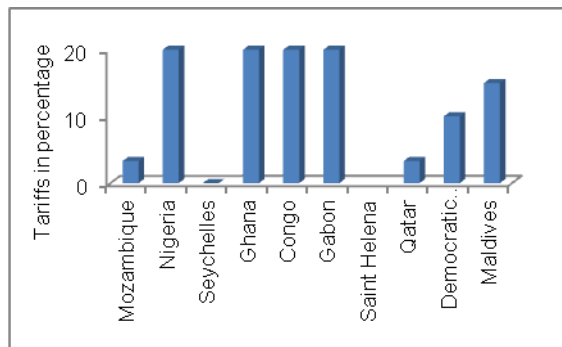


Figure 18: Tariff faced by South Africa in destination markets

Source: World Trade Atlas, 2012

SWOT analysis for the sheep & goat industry

The sheep and goat industry has formed well-structured markets which are well organised. According to Spies (2011), all members of the value chain have played an essential role in improving the performance of the chain and therefore have made it a flexible market and improved decision making in the industry by making it effective. The quantity of the mutton South Africa exports has increased since 1996, which means there is a growing market in foreign countries for South African mutton. Therefore there is an opportunity for this industry to exploit the foreign market.

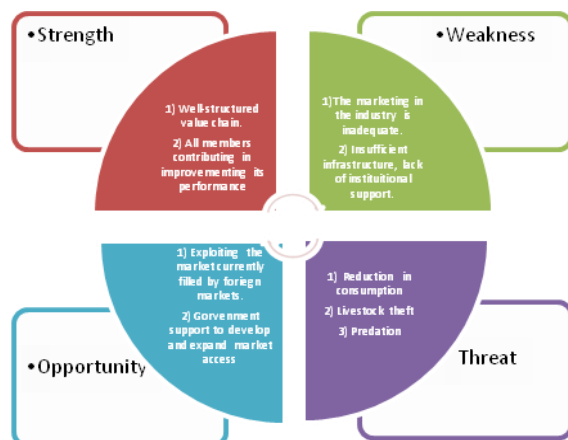


Figure 19: SWOT Analysis for South African sheep industry

Source: Author, 2013

Concluding remarks

The number of sheep and goats produced in the country has remained relatively stable at around 6 to 6.8 million heads over the last two decades. There are many reasons for this including increasing incidence of stock theft, rising production costs, intensifying competition in the international markets and growing imports into South Africa. The consumption of sheep meat is declining in South Africa, moving from nearly 7 kg per capita in the late 1970s to less than 3 kg per capita in 2010. This is concerning for a developing economy such as South Africa where household incomes are rising. Generic campaigns that are aimed at improving consumption

are required in South Africa. One of the key campaign messages is to ensure that South Africans believe that sheep and goat meat is healthy and safe to eat. Consumers are increasingly becoming aware of things such as food safety (e.g. feed additives, residue levels and the food processing techniques) and benefits of eating healthy. It is therefore important that farmers adhere to the highest food safety and quality standards in order to meet the needs of consumers.

There is a growing need for government to assist farmers by informing them of their policies and assist them in terms of conforming to minimum safety and quality requirements. The threat which international competition poses should therefore be tackled by various stakeholders such as the Red Meat Producers' Organization, whose primary duty is to create an environment in which red meat producers farm optimally and are in line with international health regulations.

6. MARKET PROFILE OF SA FRUIT TO ASIAN MARKETS⁶

This a the trade opportunities presented to South African fruit exporters by Asian markets. **Figure 20** shows the top three Asian countries that South Africa supplies fruit to, along with the two focus countries, China and India. The figure also shows commodities that generated the highest value of export revenue for South Africa in these three countries.

Exports from South Africa to Hong Kong, United Arab Emirates and Saudi Arabia grew by 256.1 %, 389.10 % and 198.30 % from 2001 until 2011 respectively. This indicates that South African exports of the selected commodities to these Asian countries are increasing. South Africa generated more export income from supplying oranges to China than exporting pears and quinces to India. Exports to India and China are still very low, as the highest value of fruits exported in 2011 by SA was R63 thousand and R24 thousand respectively. When compared against exports to the top three Asian countries SA is exporting fruits to, these are very low figures.

However, it is worthy of note that from 2009 to 2011 exports of both commodities to the two countries have been significantly increasing. It can be suggested that there is a potential for the market share to increase.

⁶ This article was compiled by Ms Heidi Phahlane, Masego Moobi and Yolanda Potelwa (all from the NAMC).

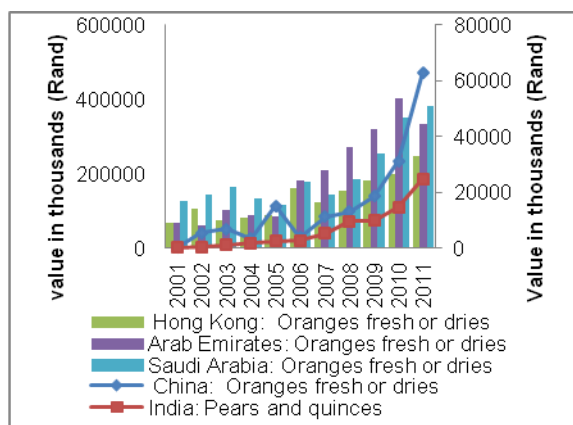


Figure 20: South African fruit exports to Asian countries
Source: ITC, Trade Map, 2013

Table 8 shows Southern hemisphere countries that South Africa could potentially or is currently competing with for a fruit market in China. In the southern hemisphere Chile is a leading exporter of fruits, having a 58.1 % fresh grapes market share while South Africa has only 0.5 %. Of the listed commodities, South Africa has the highest competing market share in macadamia nuts.

Table 8: Southern hemisphere countries exporting fruits to China

	Value in Rand (million) HS 08		% growth rate		Most exported fruits and country's share in the market %
Countries	2010	2011	2010–2011	HS Code	2011
Chile	3.61	5.39	49.0	080610	Fresh grapes – 58.1 (0.5)*
New Zealand	0.26	0.45	69.5	081050	Kiwi Fruit – 74.3 (0)
Peru	0.14	0.32	128	080610	Fresh grapes – 13.2 (0.5)
Indonesia	0.21	0.30	43.7	0810119	Coconuts (excl. desiccated) – 26.5 (0)
Australia	0.10	0.15	80.3	080260	Macadamia nuts – 72.1 (16.8)

*Figures in parenthesis show South Africa's export share in China relative to the mentioned commodity
Source: ITC, Trade Map, 2013

Table 9 outlines the top five southern hemisphere countries that export fruit to the Indian market. Indonesia is a leading fruit exporter followed by Mozambique and Australia. Mozambique had a leading growth rate, having a market share of 4.2 % of cashew nuts. It is evident from the table that South Africa has very low market share of cashew and almond nuts, while it does not have a market share of fresh apples.

From **Tables 8** and **9** it is evident that SA has relatively low market shares as compared to other Southern Hemisphere countries. South Africa can take lessons from competing countries so as to increase market share in the two mentioned Asian countries and to also create a market where initially they did not have a market share.

Table 9: Southern hemisphere countries exporting to India

	Value in Rand (Million) HS 08		% growth rate	Most exported fruits and country's share in the market %
Countries	2010	2011	2010–2011	2011
Indonesia	0.33	0.46	40.3	Cashew nuts – 4.7 (0.1)*
Mozambique	0.22	0.34	56.9	Cashew nuts – 4.2 (0.1)
Australia	0.22	0.26	17.7	Almond nuts – 7 (0.1)
Chile	0.19	0.16	–16.4	Fresh apples – 11.1 (0)
New Zealand	0.07	0.1	47.5	Fresh apples – 6.3 (0)

*Figures in parenthesis show South Africa's export share in India relative to the mentioned commodity
Source: ITC, Trade Map, 2013

6.1. Lessons learned from South Africa's competitors⁷

The main fruit export markets are the United States (28 %), Asia (28 %), the European Union (24 %), South America (18 %) and Africa (2 %). The Chilean fruit industry has experienced dramatic growth due to the implementation of a successful internationalisation strategy based on open and free trade, as well as its comparative advantages – counter-season production, our mild Mediterranean-style climate, coupled with natural phytosanitary protection and high regulatory standards, which have made it one of the global leaders in the production and an exporter of fresh fruit around the world. Notably, in the wake of the signing of the Free Trade Agreement with China, fruit exports to China have increased eightfold in the last five years.

In improving the competitiveness of the Chilean fruit agribusiness, Grasty (2011) highlighted the following challenges, where Chile ceased the opportunities by investing in different areas, such as:

⁷ This article was compiled by Ms. Heidi Phahlane, Ms. Masego Moobi and Ms. Yolanda Potelwa

- **Improved management of the fruit industry investment portfolio:** Increasing the share of premium and high-value varieties, such as organic products, cherries, red apples, Red Globe grapes and avocados.
- **Diversification of Fruit Species:** Introduction and development of new premium and high-value varieties through off-shoring, biotechnology, royalties and nurseries, etc. A prime example is the golden-fleshed kiwifruit now known as ZESPRI® GOLD Kiwifruit, which was developed in New Zealand and is marketed successfully in Asia.
- **Branding:** it is critical to create awareness in the importing country's market if a fruit exporter wants to become a powerful presence.
 - ✓ One way to advance in this sense is to create collaborative strategies at an industry level.
 - ✓ In Chile, there are a large number of small or medium size producers trapped in low-value, undiversified and saturated markets.
 - ✓ As companies focus on the ever-increasingly lucrative Chinese market, they will benefit from an opening to both foreign and local capital injections, which will allow them to focus on marketing, branding and onsite commercial representation.
- **Achieving enhanced quality in the final product by introducing greater value added processes to the value chain:** Irrigation technology, traceability, biosafety, biofertilisers, conservation equipment, environmental and quality control equipment and systems, processing plants for dehydrated and frozen products, pulp, juices, concentrates and canned fruits, packaging, waste treatment, etc.

7. TRADE BETWEEN SOUTH AFRICA AND THE EUROPEAN FREE TRADE ASSOCIATION (EFTA) STATES⁸

Introduction

This article aims to assess the trading relationship between South Africa and EFTA states on agriculture, forestry and fisheries products. The trade relations between South Africa and the EFTA states are governed by a Free Trade Agreement between SACU and EFTA and three bilateral FTA Agreements with regard to primary agriculture. The Southern African Customs Union (SACU⁹) – European Free Trade Association (EFTA¹⁰) Free Trade Agreement (FTA) was concluded in July 2006 and came into force as from 01 May 2008.

Table 10: % contribution of the agricultural sector to the GDP of SA and EFTA countries

Countries	% contribution of the agricultural sector to GDP				
	2007	2008	2009	2010	2011
Iceland	5.1	4.9	5.2	5.5	5.4
Norway	2.5	2.2	2.3	2.6	2.8
Switzerland	1.4	1.4	1.3	1.3	1.3
Liechtenstein	–	7.1	–	–	–
South Africa	3.0	3.0	2.9	2.4	3.0

Source: Economist Intelligence Unit

The average contribution of agriculture from 2007 to 2011 in Iceland, Norway, Switzerland Liechtenstein and South Africa are 5.2 %, 2.5 %, 1.5 %, 1.4 % and 2.9 % respectively. Agriculture in Liechtenstein does not play an important role anymore, whereas agriculture in Iceland contributes to the GDP with an average of 5.22 % from 2007 to 2011. For South Africa and Norway, agriculture's contribution fluctuated over the period whereas Switzerland maintained a constant percentage contribution towards GDP from 2009 to 2011. On the other hand, Norway's agricultural contribution towards GDP has been increasing steadily from 2008 to 2011

Overview of three sectors

Agricultural sector

Table 11 shows the top 10 South African agricultural exports to the EFTA states. Wine is the most exported product from South Africa to the EFTA states and accounts for about R43.6 million in 2011 as shown by Table 11 above. Switzerland is the largest market for South African exports amongst other EFTA states and ranked 42nd as an agricultural export destination for South Africa. Table 12 (See Appendix A) shows the top ten imported agricultural products from the EFTA countries. Cigarettes are the most imported agricultural product from the EFTA countries and amounted to approximately R71.3 million in 2011. Switzerland is ranked 27th with regard to origin of South Africa's agricultural imports.



Figure 21: SA trade balance with EFTA states

Source: Global Trade Atlas, 2012

⁸ This article was compiled by Ms Nyadzanga Mulalo Madzivhandila of DAFF, Directorate of International Trade.

⁹ SACU states are South Africa, Botswana, Namibia, Lesotho and Swaziland.

¹⁰ EFTA states are Norway, Iceland, Switzerland and Liechtenstein.

Table 11: SA Agricultural exports to the EFTA Countries

Commodity	Description	SA Rand (Millions)				
		2007	2008	2009	2010	2011
HS code	Description	442.4	466.5	484.8	447.6	359.8
220421	Wine	60.4	68.9	57.3	57.9	43.6
080610	Table grapes	31	34.5	40.9	41.2	40.9
220429	Orange Fresh	25.7	43.7	47.7	32.9	36.8
020890	Meat	34.3	62.3	66.1	74.4	18.8
200870	Peaches	27.2	11.5	15.6	16.5	18.1
200892	Fruit mixtures	20.7	17.3	24.1	22.5	18.1
200840	Pears	18.7	10	13.7	15.2	12.7
081310	Apricots	8.9	10.3	14.7	12.2	11.9
080620	Raisins	15.1	13.1	16.7	12.4	8.9

Source: Global Trade Atlas, 2012

South Africa has maintained a positive trade balance with the EFTA states since 2007 to 2011, as shown in **Figure 22** above. From 2009 to 2011, South African agricultural exports have been showing a decline whilst imports from EFTA states showed great volatility during the same period. The global financial and economic crisis of 2008–2009 affected South Africa's trade as a whole, including agriculture.

Forestry Products

Table 13 (see Appendix A) shows the top ten forestry products exported from 2007 to 2011. Folding carton boxes are the most exported product to the EFTA states, accounting for R3.9 million in 2011. Amongst the EFTA states, Switzerland remained the largest market for South Africa's forestry products and Switzerland is ranked 62nd as a forestry product export destination for South Africa.

The total forestry products imported amounted to R68.6 million in 2011 and chemical wood pulp was the most imported forestry product in 2011. Amongst the EFTA states, Switzerland is the top supplier of forestry products to South Africa.

South Africa had a negative trade balance with the exception of 2008. Most of these products are imported from Switzerland amongst the EFTA states.



Figure 22: Forestry trade balance between SA and EFTA states

Source: Global Trade Atlas, 2012

Fisheries products

South Africa is a constant supplier of rock lobster to the EFTA states from 2007 to 2011, as shown in **Table 15** (see Appendix A). For all other fish products, South Africa shows inconsistency in exports, with Switzerland being South Africa's largest export market for fish products amongst the EFTA states.

Table 16 (Appendix A) lists the top ten fisheries products imported from the EFTA states during the period 2007 to 2011. The total fisheries products imported from EFTA states amounted to about R86.2 million in 2011. Amongst the EFTA States, Norway is the top supplier of fish products to South Africa. Norway is ranked 4th as an overall source of South Africa's fisheries imports.



Figure 23: Fisheries trade balance between SA and EFTA states

Source: Global Trade Atlas, 2012

South Africa had a negative trade balance with the EFTA states regarding trade in fisheries products from 2007 to 2011.

Conclusion

Although the EFTA states are not South Africa's biggest market for agricultural, forestry and fisheries products in the world, South Africa has preferential market access for agriculture under the SACU–EFTA FTA. The fisheries trade between South Africa and Norway has continued to grow even after the coming into effect of the free trade agreement. Switzerland remains South Africa's largest trading partner amongst the EFTA states.

Appendix A

Table 12: South Africa Agricultural imports from the EFTA Countries

Commodity	Agricultural products	South Africa in Rand (Millions)				
		2007	2008	2009	2010	2011
HS code	Description	154.3	251.1	250.6	22.3	298.8
240220	Cigarettes	11.5	20.2	29.7	25.3	71.3
210690	Food Preparations	38.3	34.8	37	40.2	47.4
180631	Chocolate	12.9	35.7	27.4	36.1	39.9
090121	Coffee	1.4	4.1	8.5	12.1	25.2
151790	Edible Fats & Oil Mixtures	7.6	11.9	16.2	15.2	21.6
180632	Chocolate	8.6	21.4	20.7	19.4	15.7
180620	Chocolate Prep Nesoi	5.8	14.3	8.3	9.8	9.1
220210	Waters, incl. Mineral	0.7	1.5	4.5	3.7	6.9
170490	Sugar Confection	2.1	4.8	4.4	5.7	6.3
210390	Sauces	1.3	2.4	0.8	4.4	5.5

Source: Global Trade Atlas, 2012

Table 13: South Africa Forestry exports to the EFTA Countries

Commodity	Description	SA Rand (Million)				
		2007	2008	2009	2010	2011
HS code	Description	21.7	48.5	10.6	1.8	4.8
481920	Folding Cartons, Boxes	0.003	0.001	0.01	0.03	3.9
442190	Articles of Wood, Nesoi	0.03	0.03	0.07	0.07	0.2
441900	Tableware and Kitchenware	0.009	0.02	0.2	0.004	0.1
490199	Printed Books, Brochures	0.1	0.9	0.2	0.08	0.1
490110	Printed Books/Brochures	0.00004	0.009	0.003	0.02	0.09
442010	Statuettes and other Ornaments	0.2	0.3	0.03	0.5	0.08
460290	Basketwork	0.002	0.0005	0.04	0.0001	0.04
441890	Builders' Joinery and Carpentry	0.05	0	0.01	0	0.03
441400	Wooden Frames for Paintings	0.02	0.06	0.1	0.4	0.02
482090	Blotting Pads/Book Covers	0.0001	0.005	0.006	0.01	0.02

Source: Global Trade Atlas, 2012

Table 14: South Africa Forestry imports from the EFTA Countries

Commodity	Description	SA Rand (Millions)				
		2007	2008	2009	2010	2011
HS code	Description	27.5	44.7	35.8	42.9	68.6
470321	Chemical Wood Pulp, Soda	0	0	0	4.1	27.7
490199	Printed Books, Brochures	3	5.7	6	10.9	10.9
480620	Greaseproof Paper (as manufactured) in Rolls/Sheet	4.6	8.6	5.8	6.9	7.1
481200	of Paper Pulp	4.3	7.4	5.9	5.1	5.7
481190	Paper	1.2	1.3	0.6	0.5	5.3
481920	Folding Cartons, Boxes	0.4	0.9	2.3	0.9	2.7
480540	Filter Paper & Paperboard, Uncoated, in Rolls/Sheets	2.2	1.8	1.3	1.3	1.7
482370	Moulded or Pressed Articles	0.5	0.9	2	3.9	1.3
480451	Kraft Paper/Paperboard, Uncoated	0.98	2.3	0.9	3	0.6
441299	Plywood, Veneer Panels	1.5	0.9	0.5	1.2	0.6

Source: Global Trade Atlas, 2012

Table 15: South Africa Fishery exports to EFTA Countries

Commodity	Description	South Africa (Million Rand)				
		2007	2008	2009	2010	2011
HS code	Description	4.1	3.1	1.2	6.5	8.5
030611	Rock Lobster	0.4	2.9	0.8	5.6	6.2
030378	Whiting & Hake	0	0	0	0.4	1.3
160420	Fish, Prepared or Preserved, Nesoi	0	0	0	0	0.6
160530	Lobster	3.4	0	0	0	0.2
030549	Fish including Fillets	0	0	0	0	0.1
030269	Fish	0.00004	50	0	0	0
030349	Tunas Nesoi	0	0	0.0001	0	0
030371	Sardines except Fillets	0	0.1	0	0	0

Source: Global Trade Atlas, 2012

Table 16: South Africa Fishery imports from the EFTA Countries

HS code	Description	SA Rand (Millions)				
		2007	2008	2009	2010	2011
030212	Salmon, Pac	13.5	25.2	29.3	42.1	52.4
030322	Atlantic And Danube	12.9	12.3	6.4	5.1	18.3
030551	Cod, Dried	11.9	12.5	15.09	10.6	11.5
030374	Mackerel Except Fillets	0.7	0.9	1.1	1.1	1.9
030321	Trout	0.1	0.5	0.9	0	0.7
160430	Caviar And Caviar	0.7	0.9	0.7	0.7	0.5
030541	Pacific, Atlantic	0.004	0.9	0.4	0.4	0.4
160520	Shrimps And Prawns	0.5	0.3	0.5	0.3	0.3
030561	Herrings, Salted, Or In Brine, Not Dry Or Smoked	0	0	0	0	0.07
030110	Fish, Ornamental, Live	0.07	0.08	0.2	0.2	0.07

References

- Calel, R. 2011. Climate change and carbon markets: a panoramic history. Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy. London School of Economics and Political Science. Paper No. 62. Available online: www.ise.ac.uk/grantham. Accessed on 22 November 2012.
- Carbon Finance. 2012. *Carbon Market: State and Trends in 2012*. World Bank Institute (WBI). Westland Printers, Washington
- CSE (Confederation of Swedish Enterprise), 2008. European Carbon-Based Trade Measures: A solution in search of the Problem. Available online: www.svensktnaringsliv.se. Accessed on 05 March 2013.
- DAFF (Department of Agriculture, Forestry and Fisheries). 2011. *A Profile of the South African Value Chain*. Pretoria: Directorate of Marketing.
- EC (European Commission), 2013. European Climate Change Policies. Available online: www.ec.europa.eu/clima/policies. Accessed on 05 March 2013.
- IPCC (Intergovernmental Panel on Climate Change). 2007. Climate Change 2007: Synthesis Report. Fourth Assessment Report. *Intergovernmental Panel on Climate Change, Geneva*
- NPO (National Red Meat Producers Organisation). 2012. *National Red Meat producers' Organisation Chairman's report*. Kwazulu Natal.
- Spies, David Cornelius. 2011. *Analysis and Quantification of the South African Red Meat Industry*. Bloemfontein: Department of Agricultural Economics, University of the Free State.
- Stern, N., Peters, S., Bakhshi, V., Bowen, A., Cameron, C., Catovsky, S., Crane, D., Cruickshank, S., Dietz, S., Edmonson, N., Garbett, L., Hamid, L., Hoffman, G., Ingram, D., Jones, B., Patmore, N., Radcliffe, H., Sathiyarajah, R., Stock, M., Taylor, C., Vernon, T., Wnajie, H., and Zenghelis, D. 2006. *Stern Review: The Economics of Climate Change*. London: HM Treasury.
- Veel, Paul-Erik. 2009. Carbon Tariffs and the WTO: An Evaluation of Feasible Policies. *Journal of International Economic Law*, 12 (3): 749-800
- Vickers, B. 2012. Trade and Climate Change: Harnessing European Multilateralism for Africa's Development. E-paper No.22. Available online: www.mercury-fp7.net. Accessed on 11 December 2012.



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