

SOUTH AFRICAN FERTILIZERS MARKET ANALYSIS REPORT

2019



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1. DESCRIPTION OF THE INDUSTRY

The South African fertilizer industry operates in unprotected trade and no government support market. The industry is therefore interlinked with global fertilizer market forces with no trade protection and government support. Fertilizer consumption in South Africa represents about 0.5% of the total global consumption and as such the local fertilizer industry is a price taker. For this reason it is important to study the international fertilizer supply and demand balances and other factors which influence this market as they have a direct impact on the domestic market. The South African fertilizer industry is fully exposed to world market forces and operates in a totally deregulated environment with no import tariffs or government sponsored support measures. In this deregulated market environment, fertilizer prices are strongly influenced by international prices, currency exchange rates (R/US\$) and shipping costs. Farm gate prices of fertilizer evidently include the cost of distribution, intermediate storage and packaging.

Maize accounts for 41% of total fertilizer application while the second largest fertilizer consumer is sugar cane at 18%. The horticultural and fruit crop sectors account for 20 percent of fertilizer consumption but their contribution to the total value of crop production is much greater. The South African fertilizer market is very competitive, with a handful of national and regional operators. Competition is driven through price incentives, product differentiation and specialized services such as individual agronomic advice, custom blending and application. South Africa is a net importer of fertilizers. All of our potassium, as well as 60% to 70% of our nitrogen requirements are imported. This means that the local prices would be subjected to the same supply and demand drivers as in the international industry. Local prices are therefore also influenced by the shipping costs and the rand/dollar exchange rate. Most of the international fertilizer prices (dollar per ton) increased on an annual basis and due to the significant depreciation of the exchange rate international fertilizer prices increase even more.

2. GLOBAL FERTILISER PRODUCTION AND CONSUMPTION

Table 1 below presents the top-ten fertilizer producers in the world during 2018, with China occupying the top spot with approximately 104 million tons while Russia occupied the tenth spot with 39 million tons.

Table 1: Global fertilizer production rankings - 2017

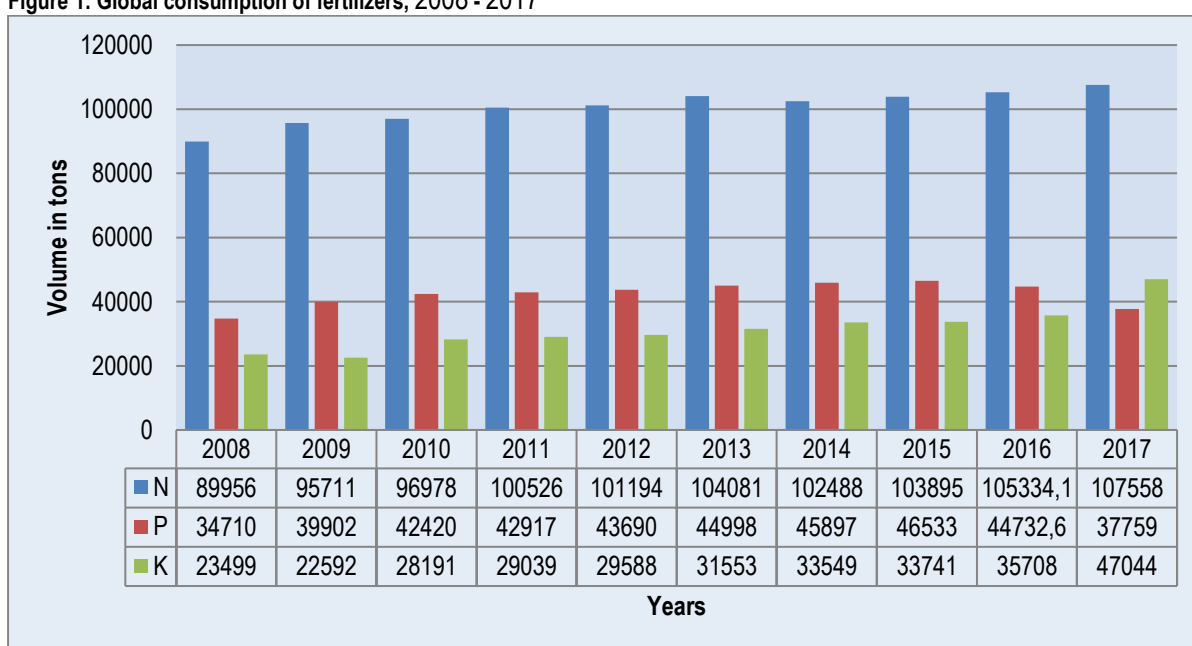
Rank	Country	Tons (thousands)
1	China	104 848
2	Russia	39 220

Rank	Country	Tons (thousands)
3	India	36 282
4	Canada	32 935
5	United States of America	31 920
6	Belarus	16 356
7	Morocco	10 492
8	Saudi Arabia	8 194
9	Indonesia	8164
10	Pakistan	7 110

Source: IFADATA, 2018

Figure 1 below shows the global consumption of fertilizers based on the three major nutrients namely, Nitrogen (N), Phosphorus (P) and Potassium (K) between 2008 and 2017 marketing seasons.

Figure 1: Global consumption of fertilizers, 2008 - 2017



Source: IFADATA, 2018

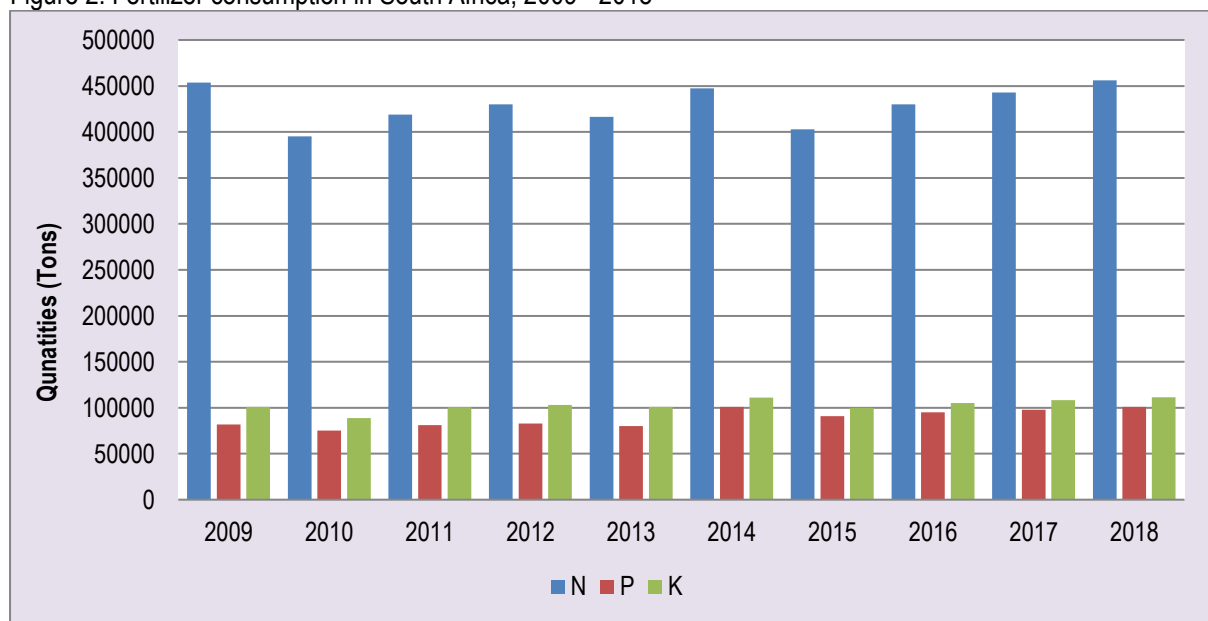
It is quite clear from the Figure 1 above that, generally fertilizer consumption increased marginally over the period between 2008 and 2017. The demand for nitrogen fertilizers was high over the past ten years under review, followed by potassium and phosphorus respectively. The figure also shows that global consumption of nitrogen fertilizer consistently increased from 2008 except for a slight decline in 2014, recording a drop of 2%. In 2017, the demand for nitrogen fertilizer increased slightly by 2% and peaked at approximately 107 million tons in 2017. Globally, the demand for phosphorus and potassium fertilizers was very low compared to Nitrogen during the ten year period under review and recorded not more than

50 million tons per annum. Nitrogen-based fertilizers are the most used for crop production. The international price of nitrogen fertilizer automatically went up because of high demand for the product. During the same period, the price of phosphorus and potassium fertilizers declined substantially due to very low demand globally.

3. SOUTH AFRICAN FERTILISER CONSUMPTION

The utilisation of fertilisers in South Africa between 2008 and 2017 is depicted in Figure 2 below.

Figure 2: Fertilizer consumption in South Africa, 2009 - 2018



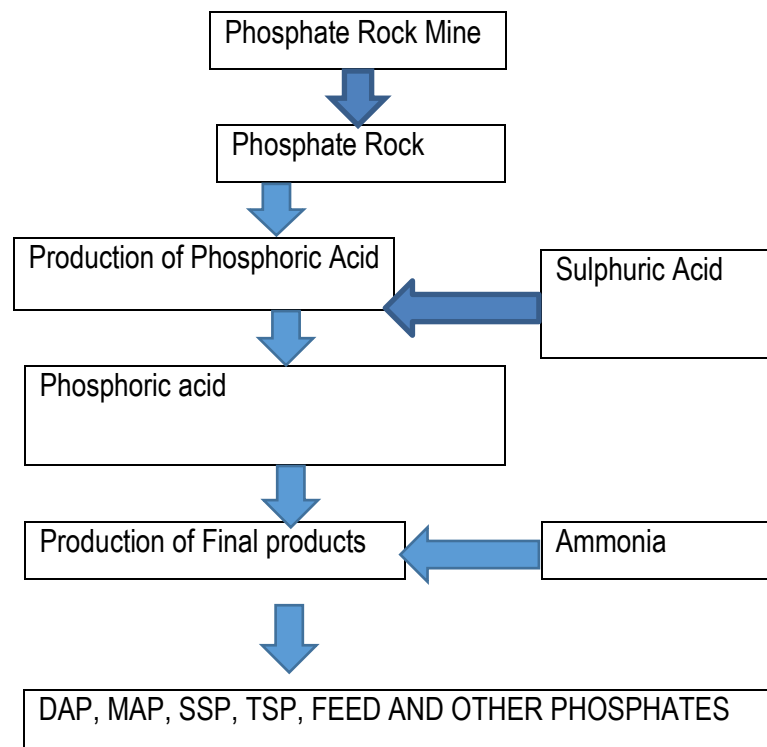
Source: FERTASA

It is quite clear from Figure 2 above that nitrogen fertilizers were stable and the mostly used fertilizers throughout the period under review, followed by potassium and phosphorus. The figure also shows that South Africa's consumption of fertilizer was relatively stable during the period under review. During the period under review, Nitrogen fertilizers were highest used, averaging 428 8893 tons. Domestically, the demand for phosphorus and potassium fertilizers was very low during the ten year period under review and remained on average at 100 000 tons per annum. During 2015 season, consumption volumes for NPK fertilizers declined significantly by 10%. In 2018, NPK fertilizers increased by 3% during the same period.

3. MANUFACTURING OF FERTILIZER

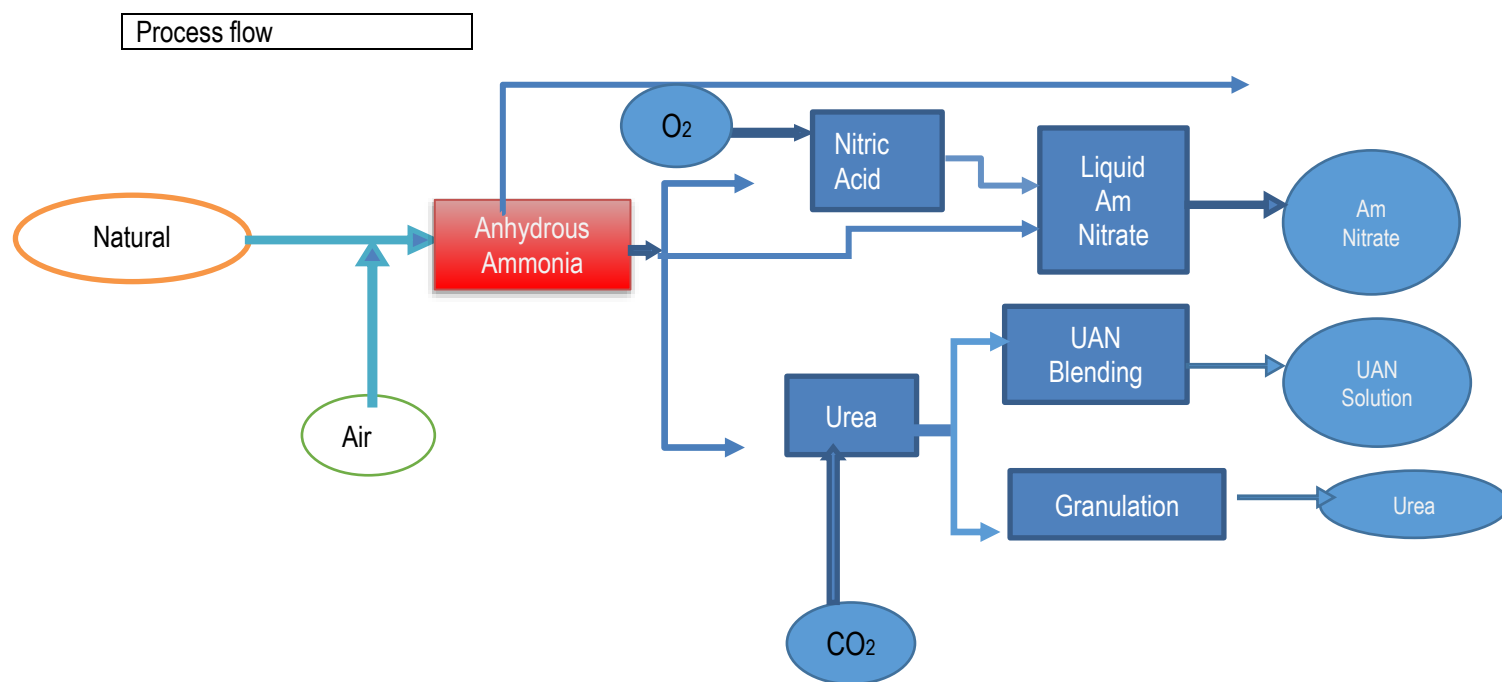
The phosphate fertiliser manufacturing process is depicted in Figure 3 below.

Figure 3: Phosphate fertilizer manufacturing process



The manufacturing process of phosphate fertilizers involves different ingredients. In this process, first stage shows that phosphate fertilizer is from phosphate mine that transforms it into phosphate rock which is then mixed with phosphoric acid and ammonia salts and gas and as a result, a complete product becomes phosphate fertilizer that is used in the production of food crops such as maize. The nitrogen fertiliser manufacturing process is depicted in Figure 4 below.

Figure 4: Nitrogen fertilizer manufacturing process



In this process, natural gas and steam are pumped into a large vessel. Next, air is pumped into the system, and oxygen is removed by the burning of natural gas and steam. This leaves primarily nitrogen, hydrogen, and carbon dioxide. The carbon dioxide is removed and ammonia is produced by introducing an electric current into the system. Any impurities are removed from the ammonia, and it is stored in tanks until it is further processed. While ammonia itself is sometimes used as a fertilizer, it is often converted to other substances for ease of handling. Nitric acid is produced by first mixing ammonia and air in a tank. In the presence of a catalyst, a reaction occurs which converts the ammonia to nitric oxide. The nitric oxide is further reacted in the presence of water to produce nitric acid. Nitric acid and ammonia are used to make ammonium nitrate. This material is a good fertilizer component because it has a high concentration of nitrogen. The two

materials are mixed together in a tank and a neutralization reaction occurs, producing ammonium nitrate. This material can then be stored until it is ready to be granulated and blended with the other fertilizer components. The potash fertiliser manufacturing process is depicted in Figure 5 below.

Figure 5: Potash fertilizer manufacturing process

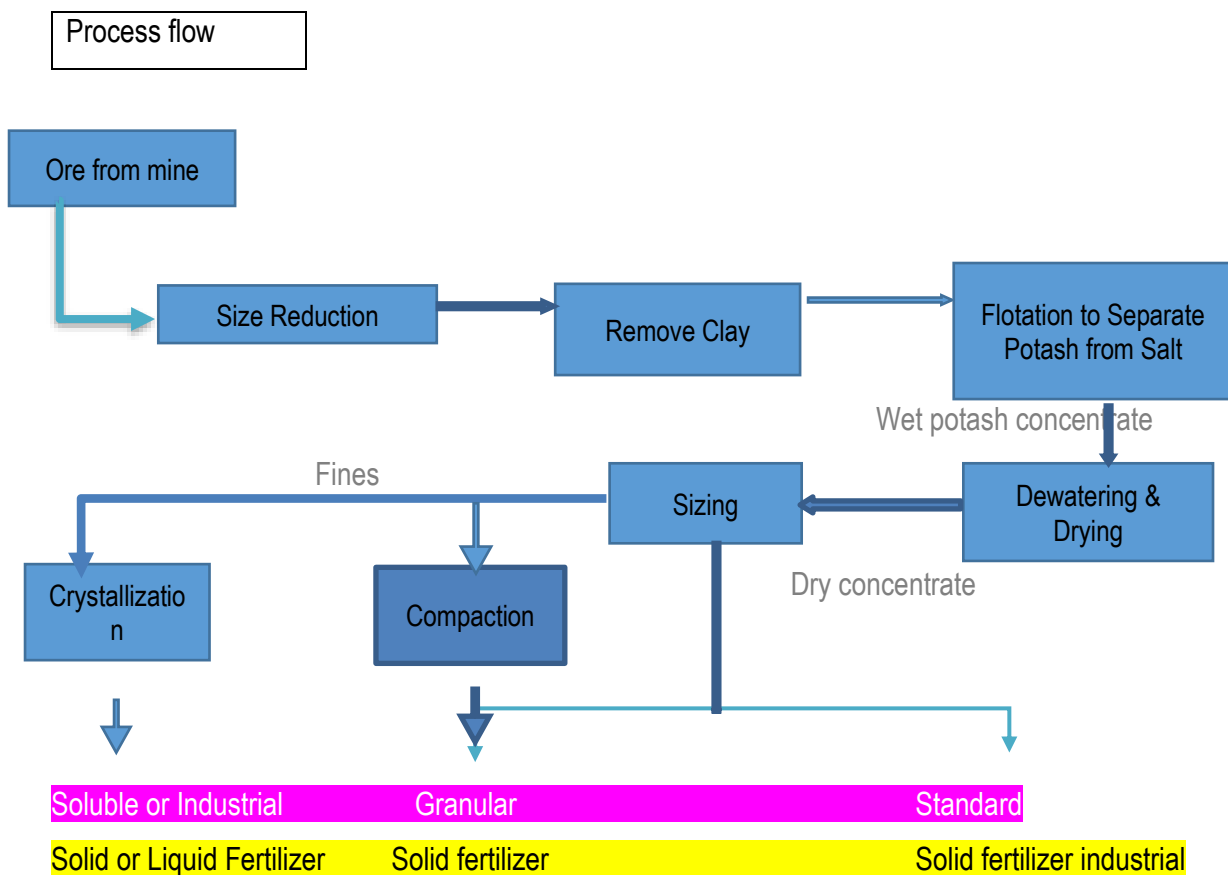


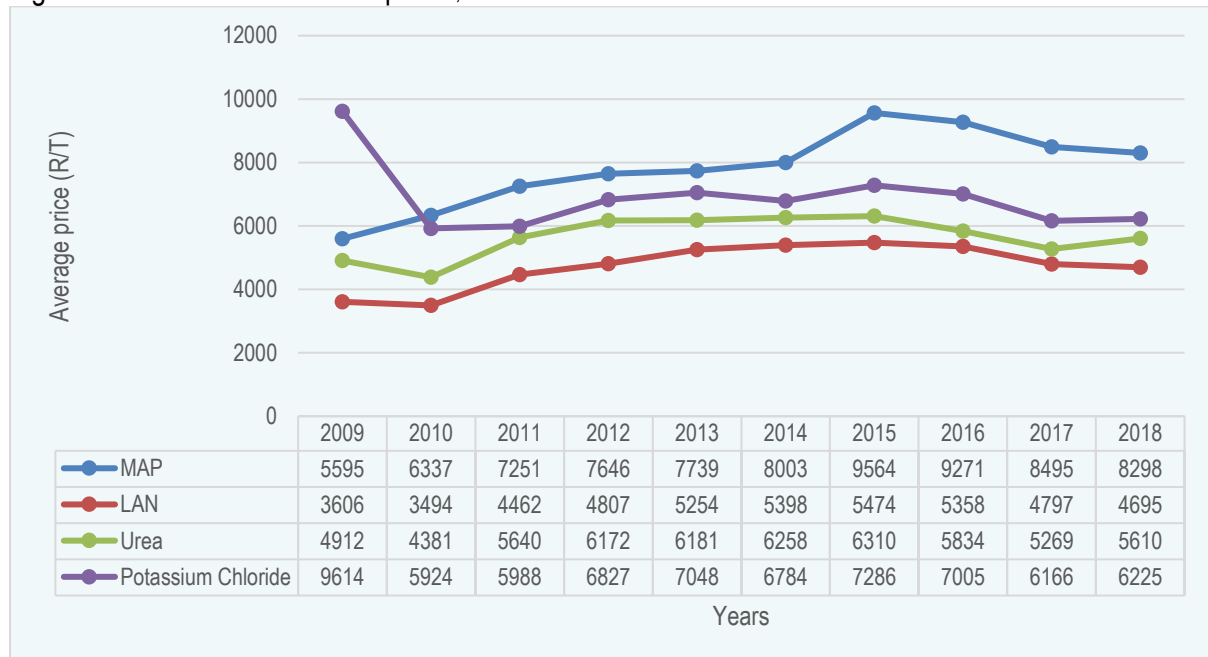
Figure 5 above indicates the manufacturing process of different types of potash fertilizers and stages / phases of manufacturing. The figure further indicates that potash fertilizer is manufactured from ore from the mines and it is then reduced in size before removing the clay content. The next stage is to separate potash from salts and wet potash concentrate becomes clear. The watering and drying phase takes place in preparation for the final stages of different types of potash fertilizer. The next stage of manufacturing is sizing, compaction and crystallization of the primary product which leads to either soluble or industrial (solid/ liquid) fertilizer, granular (solid) fertilizer or standard fertilizer.

4. FERTILIZER MARKET AND PRICING

Figure 6 shows average fertilizer prices in South Africa for the period under scrutiny (2009 to 2018). Prices of all fertilizers experienced a significant drop of prices during 2009 season. Average fertilizer prices of Mono-Ammonium Phosphate (MAP) dominated over the past eight years attaining a peak in 2015 at approximately R9 564.00 per ton. Post the peak, prices of MAP declined 13% between 2016 and 2018. Potassium Chloride average prices attained a peak in 2009 at approximately R9 614.00. Prices of

Potassium Chloride have been fairly stable between 2012 and 2016, maintaining an average of R6 990.00 per ton. The average prices of Urea (46) and Limestone Ammonium Nitrate (LAN) both attained their peaks also in 2013 at approximately R6 310.00 and R5 474.00. Generally, it is evident from the figure below that between 2010 and 2015, average prices of fertilizers in South Africa increased although at slow increasing trends. In 2015, farmers had to deal with high average prices which had an impact on production and farm income.

Figure 6: South African fertilizer prices, 2009 - 2018



Source: GrainSA

5. LOCAL FERTILIZER PRICES VS INTERNATIONAL FERTILIZER PRICES

Tables 2 and 3 below show the relationships between local and international fertilizer prices. It can be observed from the tables that there exists symmetric price transmission between local prices and international prices. This mainly due to the fact that domestic prices responded positively to changes in the international fertilizer prices over the past two years. It has to be noted that the magnitude of the price transmission is low and not fully transmitted to local market. The tables also show that there is a price gap between local and international fertilizer prices and this could be largely due to fluctuations in the exchange rate between the rand and other currencies globally.

Table 2: Local fertilizer prices in Rand terms

Fertilizers	January 2019	January 2020	% CHANGE
	R/ton	R/ton	
LAN (28)	5 855	5 760	-1.6
Urea(46)	6 963	6 387	-8.3
MAP	9 103	7 741	-15.1
Potassium chloride	7 305	7 253	-0.7

Source: GrainSA

* Estimated Import parity price (thus the c.i.f. import price plus tariff and transport cost to the purchaser's location)

Table 3: International fertilizer prices in Rand terms

Fertilizers	December 2018	December 2019	% CHANGE
	R/ton	R/ton	
Ammonia	4 509	3 216	-28.7
Urea(46)	3 939	3 331	-15.4
DAP	6 022	3 937	-34.6
Potassium chloride	3 953	3 389	-14.3

Source: Grain SA

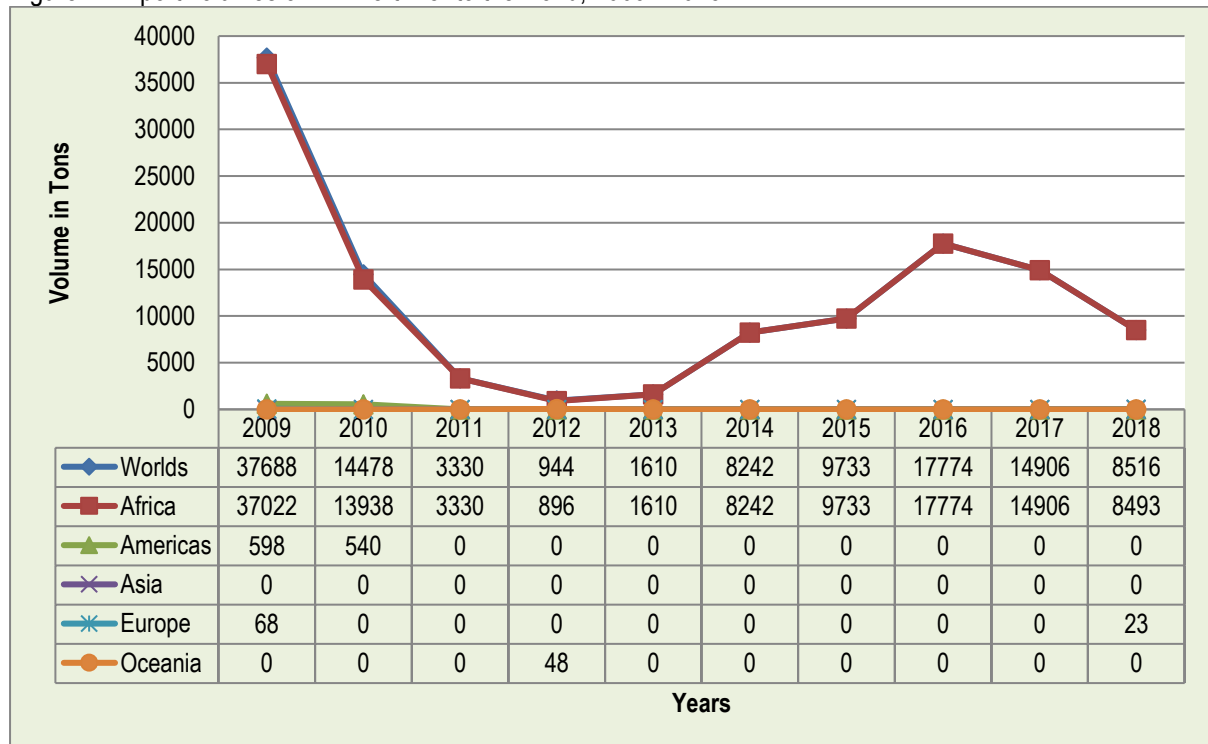
* FOB per ton (Rand)

6. EXPORT VOLUMES OF FERTILIZERS

6.1 Limestone Ammonium Nitrate (LAN)

Export volumes of limestone ammonium nitrate (LAN) fertilizers from South Africa to the world during the past ten years are shown in Figure 7. The most important South African LAN destination during the period under review remains Africa. Almost all of the export volumes of LAN from South Africa to the world went to Africa followed by minimal exports to the Americas, Europe, Oceania and Asia. It is worth noting that export of LAN to various regions of the world has been unstable during the past ten years. Export volumes of LAN to Africa attained a peak in 2009 at approximately 37 022 tons followed by a 62% decrease in 2010. In 2012, exports of LAN to Africa reached its lowest point at approximately 896 tons. There was a 544% increase in export volumes of LAN from South Africa to Africa in 2014 as compared to 2013 marketing season. During 2018, the LAN exports also increased by 43% when compared to 2017 season.

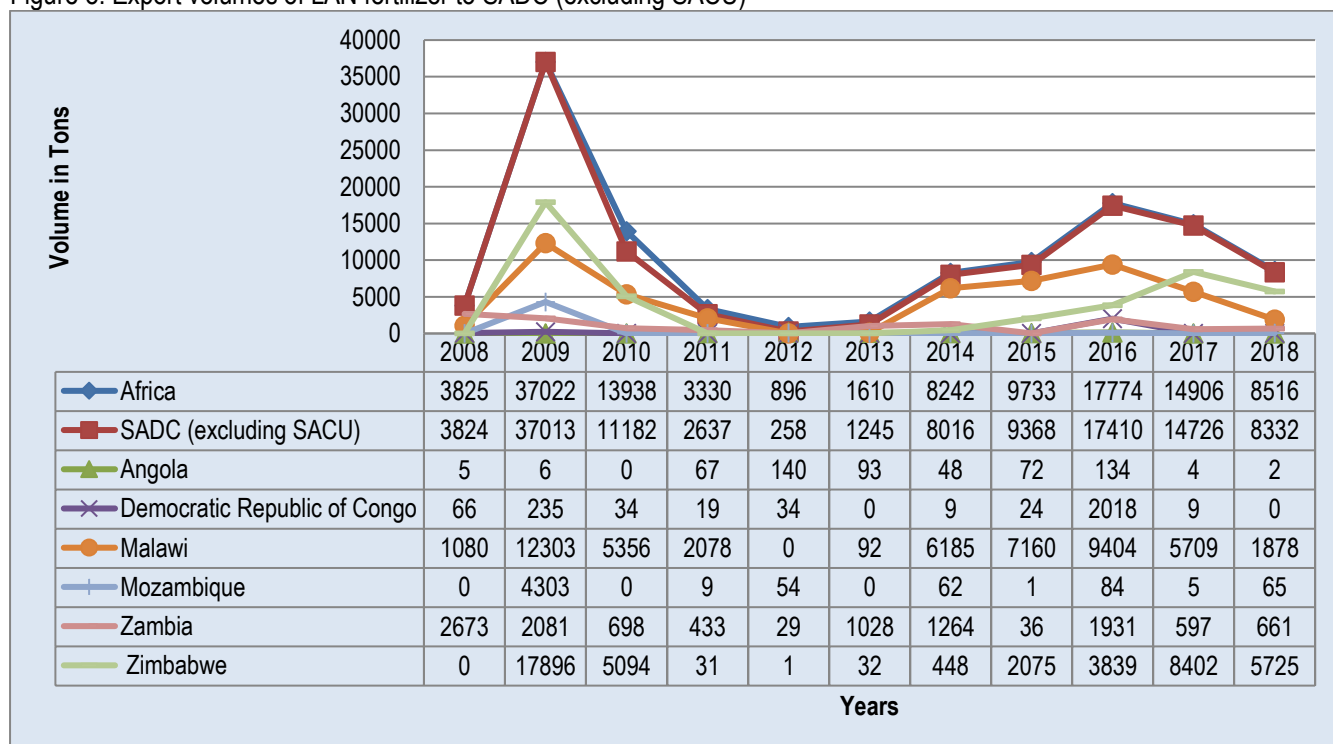
Figure 7: Export volumes of LAN fertilizer to the world, 2009 - 2018



Source: Quantec EasyData

Figure 8 indicates export volumes of limestone ammonium nitrate (LAN) fertilizer to Africa particularly the SADC region over the past decade. The major export market for LAN fertilizer to SADC was Zimbabwe, followed by Malawi during most part of the past decade. Export volumes of LAN fertilizer from South Africa to Zimbabwe attained a peak in 2009 at approximately 17 896 tons. During the second half of the ten year period, export volumes of LAN fertilizer were from a low base reaching a maximum of 8 402 tons. Exports of LAN to both Zimbabwe and Malawi were minimal in 2012. Mozambique and Zambia are other important importers of LAN from South Africa but usually record minimal quantities.

Figure 8: Export volumes of LAN fertilizer to SADC (excluding SACU)

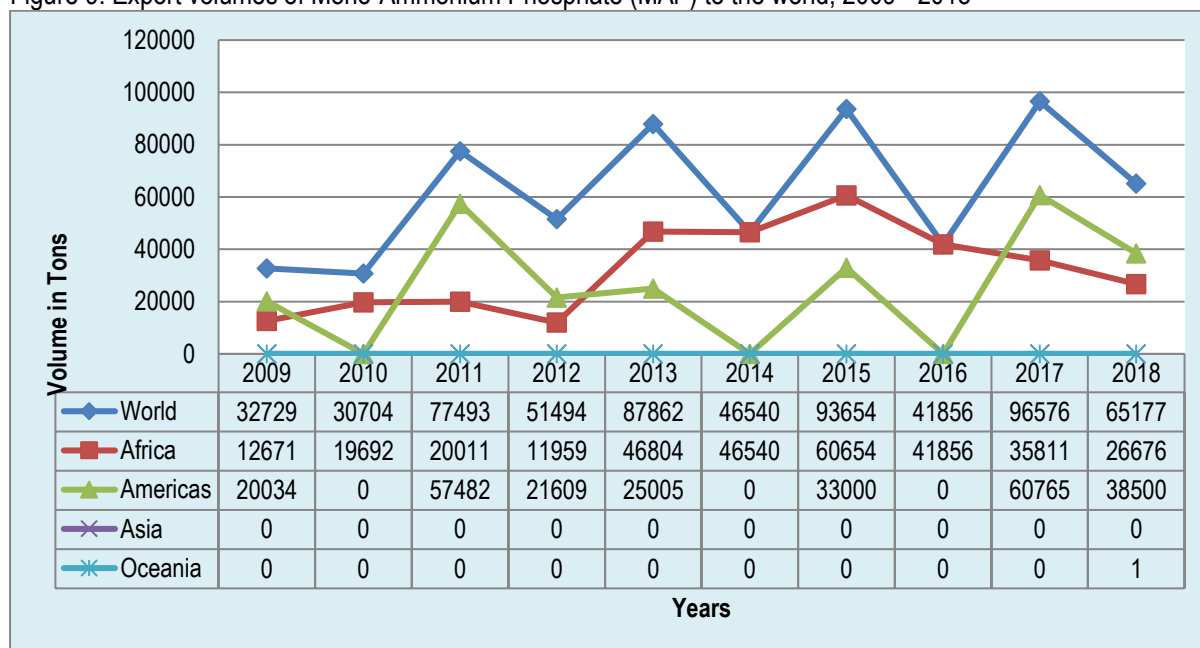


Source: Quantec EasyData

6.2 Mono-Ammonium Phosphate (MAP)

Figure 9 represents export volumes of Mono-Ammonium Phosphate (MAP) fertilizer to the world between 2009 and 2018 marketing seasons. During the past decade, exports of MAP significantly unstable. The major export market for MAP fertilizer during the past decade was mainly Africa, followed by Americas and Oceania over the past decade. During 2018, all MAP exports were destined to the African and Americas continents. Export volumes of MAP fertilizer from South Africa to Africa attained a peak in 2015 at 60 654 tons, while export volumes of MAP fertilizers to Americas attained a peak in 2017 at approximately 60 765 tons. In 2018, export to Africa fell significantly from 35 811 tons to 26 676 tons, a 26% decline when compared to 2017 season. Exports of MAP to Africa has been on a decline since 2015 peak.

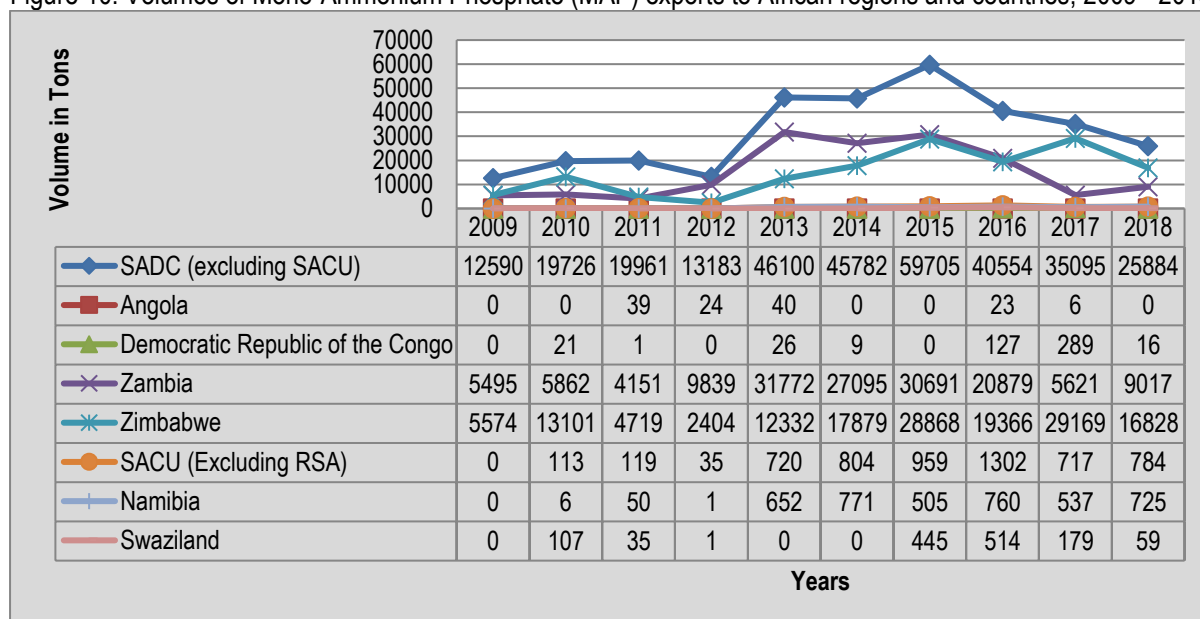
Figure 9: Export volumes of Mono-Ammonium Phosphate (MAP) to the world, 2009 - 2018



Source: Quantec EasyData

Export volumes of Mono-Ammonium Phosphate (MAP) fertilizer to Africa are depicted in Figure 10. Over the past decade, exports of MAP have been exported mainly to SADC region. Volumes of MAP fertilizer exports from South Africa to SADC went mainly to Zimbabwe and Zambia during the period under observation. Volumes to Zambia were from a high based during the second half (2013-2016) of the ten year period attaining a peak in 2013 at approximately 31 756 tons. Other notable importers over the past ten years are Malawi and Mauritius. The countries had very low or minimal volumes of MAP fertilizer of not more than 1 000 tons per annum over the past ten years. It is also clear from the figure that there was a 60% decrease in export volumes of MAP fertilizer from South Africa to Zambia in 2018 as compared to the 2017 marketing season. Exports to SACU increased by 9% in 2018 when compared to 2017 season. Most notable SACU importers of MAP from South Africa are Namibia and Swaziland.

Figure 10: Volumes of Mono-Ammonium Phosphate (MAP) exports to African regions and countries, 2009 - 2018

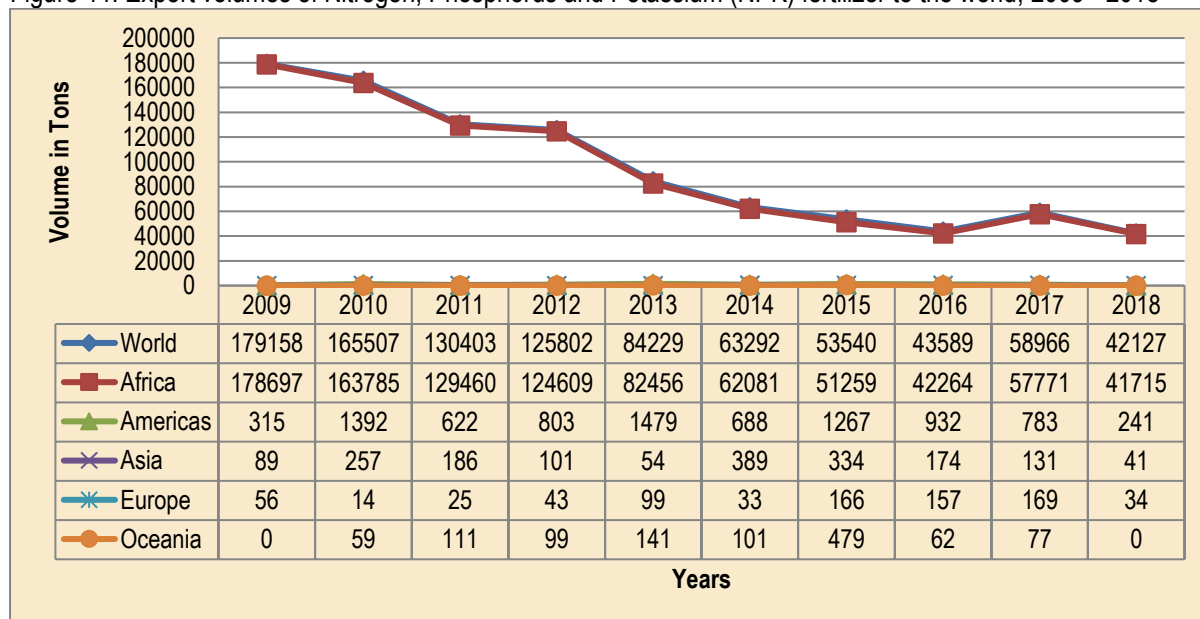


Source: Quantec EasyData

6.3 Nitrogen, Phosphorus and Potassium (NPK)

Figure 11 presents export volumes of Nitrogen, Phosphorus and Potassium (NPK) fertilizers to the world between 2009 and 2018 marketing seasons. It is clear from the figure 10 below that exports of NPK have been declining eight years. Most of the exports of NPK fertilizers to the world went to Africa, followed by minimal export volumes of NPK fertilizers to the Americas, Asia, Europe and Oceania over the past ten years. Export volumes of NPK to Africa were from a high base during the first half of the ten year period (2009-2013) attaining a peak in 2009 at approximately 179 158 tons. There was 28% decrease in export volumes of NPK fertilizers to Africa in 2018 as compared to 2017 and a fall of 77% in export volumes of NPK fertilizers to Africa in 2018 compared to 2009.

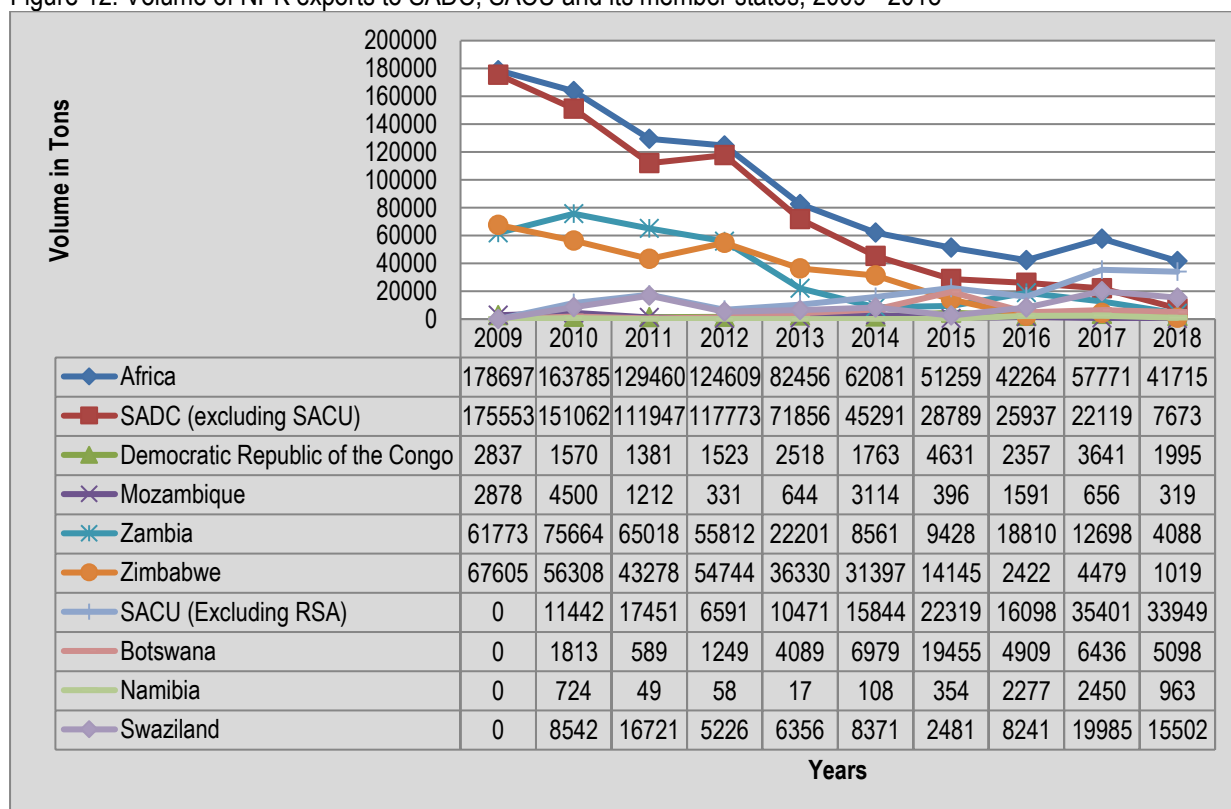
Figure 11: Export volumes of Nitrogen, Phosphorus and Potassium (NPK) fertilizer to the world, 2009 - 2018



Source: Quantec EasyData

Figure 12 presents export volumes of Nitrogen, Phosphorus and Potassium (NPK) fertilizers from South Africa to Africa particularly the SADC region over the past decade.

Figure 12: Volume of NPK exports to SADC, SACU and its member states, 2009 - 2018



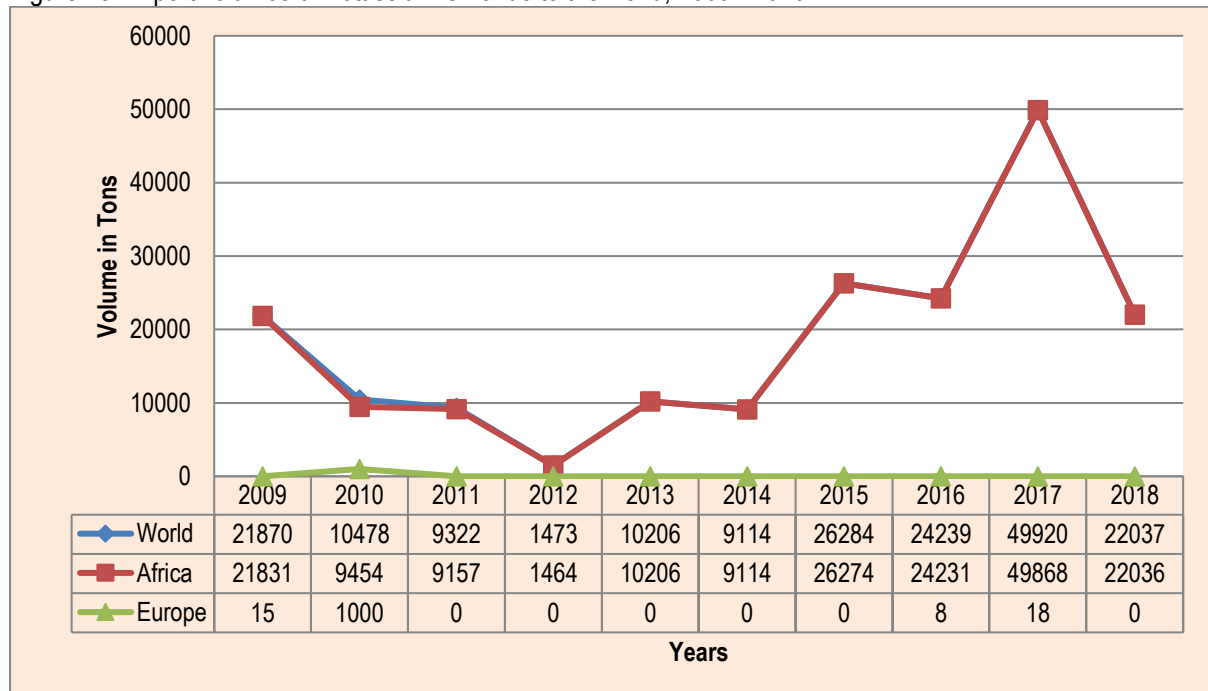
Source: Quantec EasyData

Export volumes of NPK fertilizers from South Africa to the SADC went mainly to Zambia, followed by Zimbabwe and Malawi. Volumes of NPK fertilizers to Zambia were from a high base during the first half of the ten year period (2009 - 2013) under observation attaining a peak in 2009 at approximately 61 773 tons. Volumes of NPK fertilizers to Zimbabwe were also from a high base during the first half of the ten year period (2009-2013) under observation attaining a peak in 2009 at approximately 67 605 tons. Exports to Mozambique have been fairly stable during the past ten years averaging 1 564 tons. There was a 68% decrease in export volumes of NPK fertilizers from South Africa to Zambia in 2018 as compared to the 2017 marketing season. Countries from the SACU block have also been notable importers of NPK fertilizers from South Africa. In SACU, Swaziland has been the leading importer during the past ten seasons. Swaziland was followed by Namibia and Botswana accounting for 19% and 15% of NPK fertilizer exports to SACU respectively.

6.4 Potassium Chloride

Figure 13 presents export volumes of potassium chloride from South Africa to the world during the past decade. Most of the exports of potassium chloride from South Africa went to Africa, followed by very minimal exports of potassium chloride to Europe between 2009 and 2018. South African KCL exports to the world were unstable during the period under review. However, exports to Africa were from a high base during the second two year period (2014-2018) of the decade under review. In 2012, exports of KCL were at their lowest, reaching trough at 1 304 and attaining a peak in 2017 at 49 920 tons. Between 2011 and 2015 all KCL exports from South Africa went to Africa. There was a 56% decrease in export volumes of potassium chloride from South Africa to Africa in 2018.

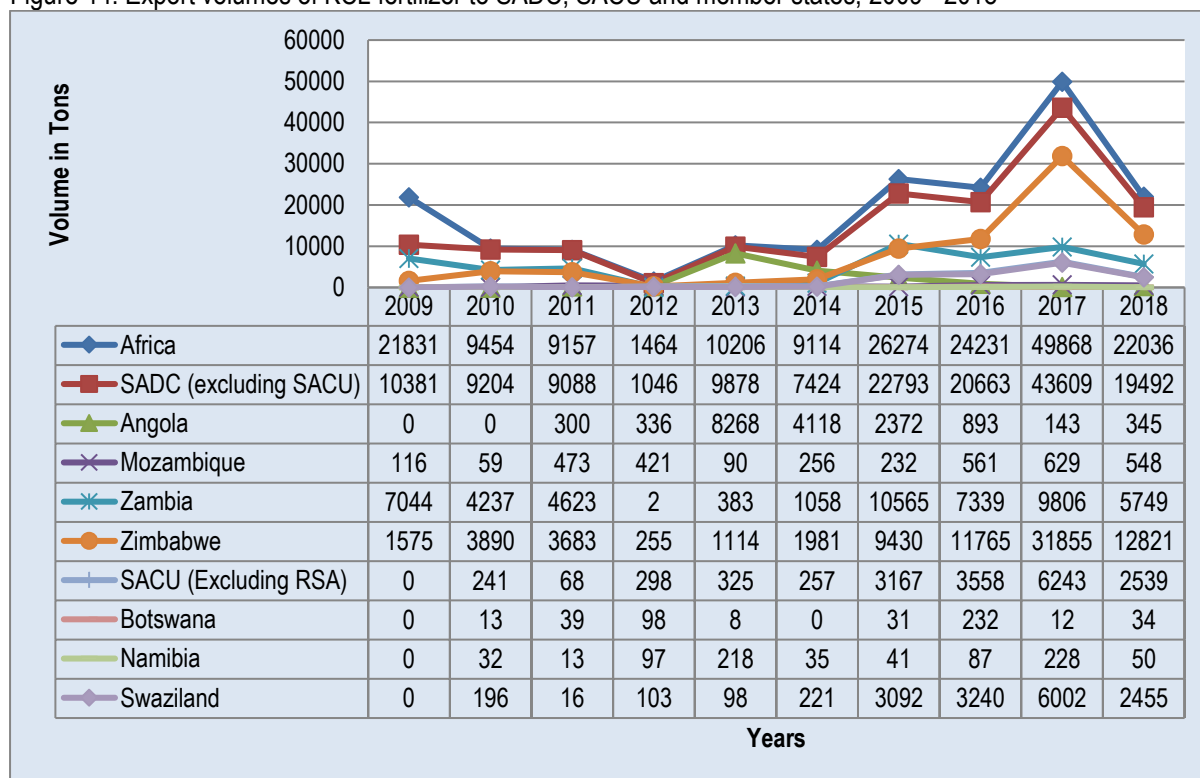
Figure 13: Export volumes of Potassium Chloride to the world, 2009 - 2018



Source: Quantec EasyData

Figure 14 presents export volumes of potassium chloride from South Africa to Africa particularly the SADC and SACU regions over the past decade. It is clear from figure 14 below that exports of KCL fertilizers to Africa, mainly went to SADC region. Export volumes of potassium chloride from South Africa to SADC went mainly to Zimbabwe, followed by Zambia and Angola. Exports to SADC and its member states have been fairly unstable during the period under review. Exports to Zimbabwe declined rapidly between 2009 and 2012, moving from 1 575 tons in 2009 to 255 tons in 2012. Zambia followed the same trends until reaching a trough of 2 tons in 2012. Between 2013 and 2018, export to Zimbabwe and Zambia increased by 2 759% and 2 460% respectively. However, both countries recorded significant declines of 60% (Zimbabwe) and 41% (Zambia). Exports to SACU region mainly destined for Swaziland. Other notable importers of KCL fertilizer from South Africa are Namibia and Botswana, but usually register minimal quantities.

Figure 14: Export volumes of KCL fertilizer to SADC, SACU and member states, 2009 - 2018

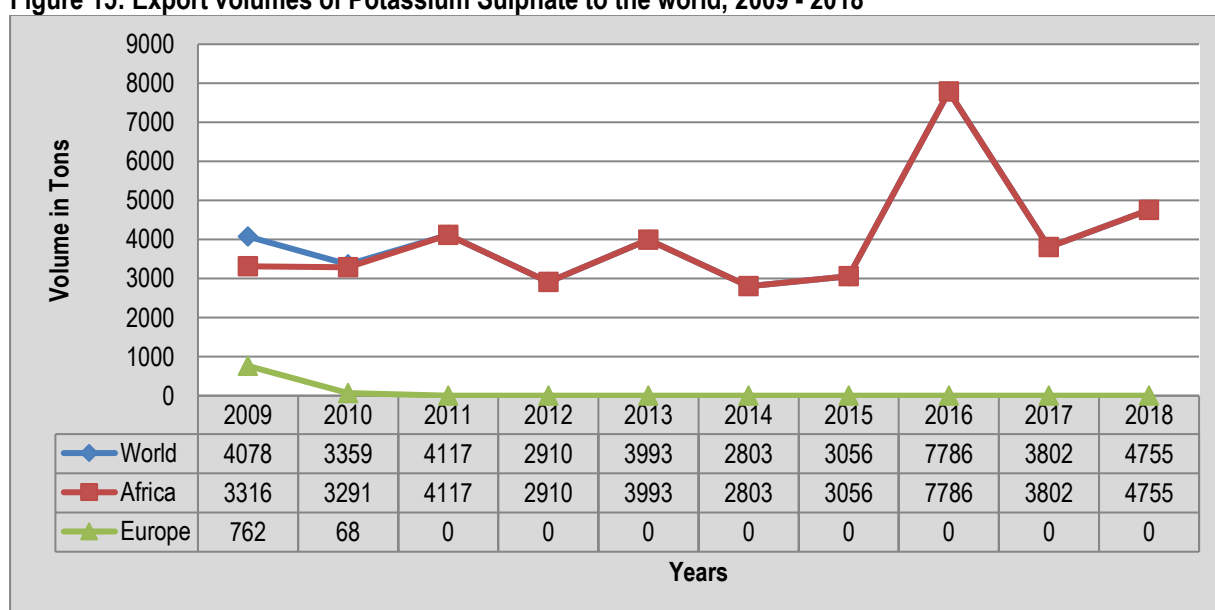


Source: Quantec EasyData

6.5 Potassium Sulphate

Figure 15 shows export volumes of potassium sulphate from South Africa to the world between 2009 and 2018.

Figure 15: Export volumes of Potassium Sulphate to the world, 2009 - 2018

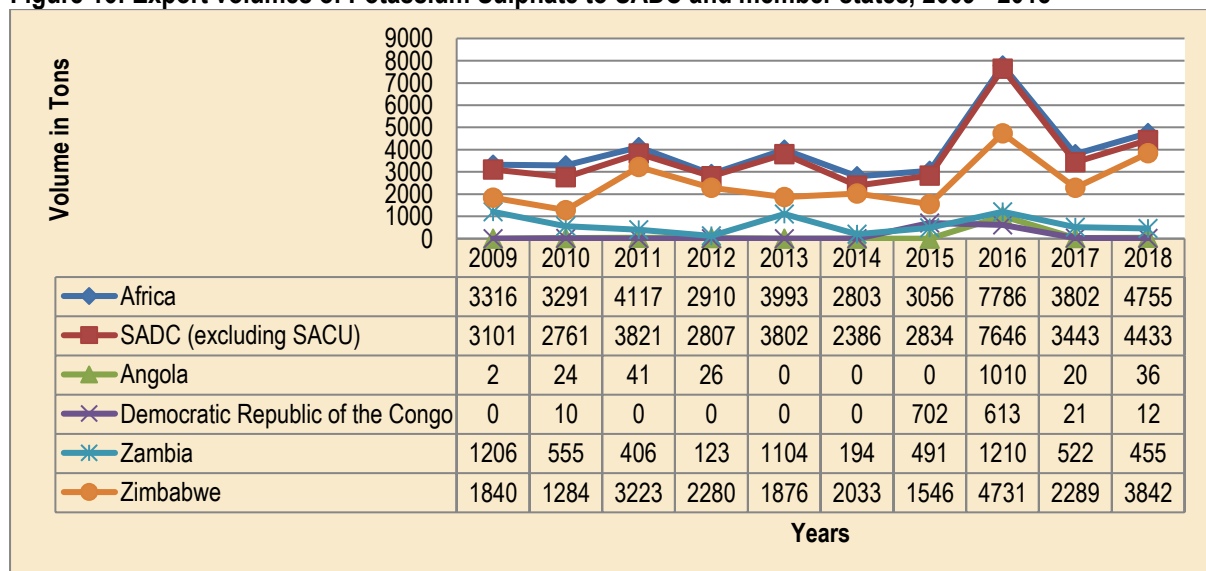


Source: Quantec EasyData

It is clear from Figure 15 that export volumes of potassium sulphate to the world went mainly to Africa, followed by minimal export volumes to Europe. Export of Potassium Sulphate to the world, diminished between 2009 and 2010, recording a 17% decline. During the period between 2013 and 2017 export volumes of potassium sulphate to the world and African continent were fairly stable. In 2018, export to Africa increased exponentially by 25% compared to 2017 season. During the past decade African Potassium Sulphate exports reached a maximum of approximately 7 786 tons in 2016. Europe only managed to import potassium sulphate from South Africa in 2009 and 2010 at an export quantity of 762 and 68 tons respectively.

Figure 16 below illustrates export volumes of potassium sulphate from South Africa to the SADC region over the past ten years. The major export market for potassium sulphate from South Africa to SADC was Zimbabwe, followed by Zambia and to a lesser extent by Angola and DRC. On average, South Africa exported 2 494 tons of potassium sulphate to Zimbabwe over the past decade. Exports of potassium sulphate from South Africa to Zimbabwe attained a peak in 2011 at approximately 3 223 tons in the first half of the ten year period (2009 - 2013). During the second half of the ten-year period (2014-2018), exports of potassium sulphate to Zimbabwe were from a high base attaining a maximum of about 4 731 tons in 2016, however in 2017, exports to Zimbabwe registered a 68% decrease as compared to 2017.

Figure 16: Export volumes of Potassium Sulphate to SADC and member states, 2009 - 2018

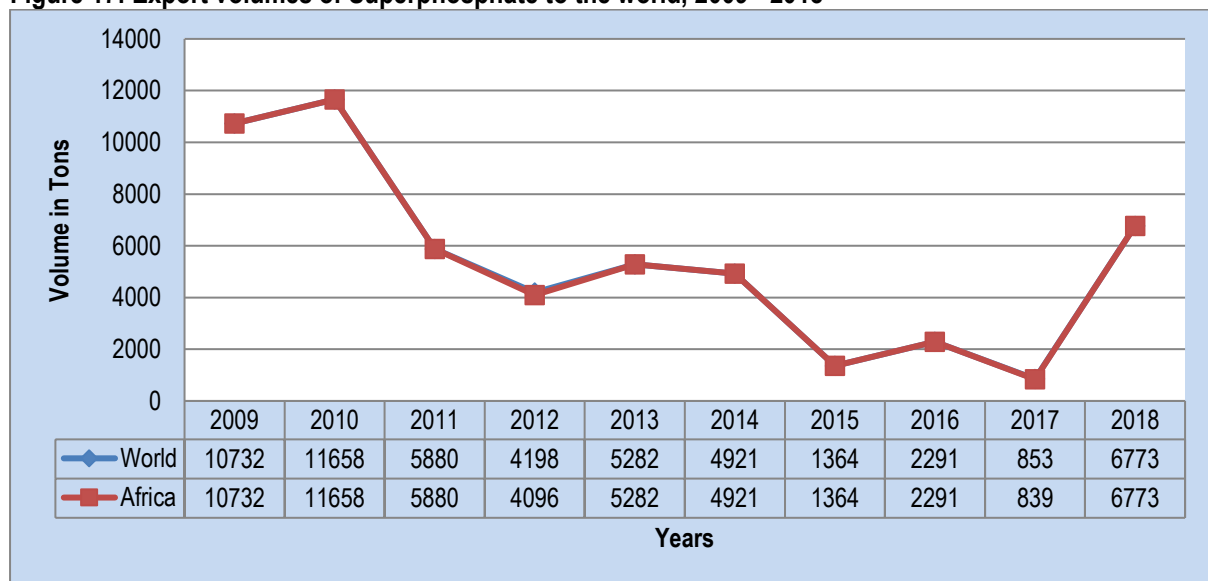


Source: Quantec EasyData

6.6 Superphosphate

Figure 17 presents export quantities of superphosphate fertilizers from South Africa to the world during the past decade. The only export market for superphosphate fertilizer during the past decade was Africa, mainly the SADC region. On average, South Africa exported 5 395 tons of superphosphate fertilizer to Africa over the past decade. Export volumes of superphosphate from South Africa to Africa were from a high base during the first half of the ten year period (2009-2013) attaining a peak in 2010 at export quantity of 11 658. There was a 707% decrease in export quantity of superphosphate fertilizer from South Africa to Africa in 2018 as compared to 2017.

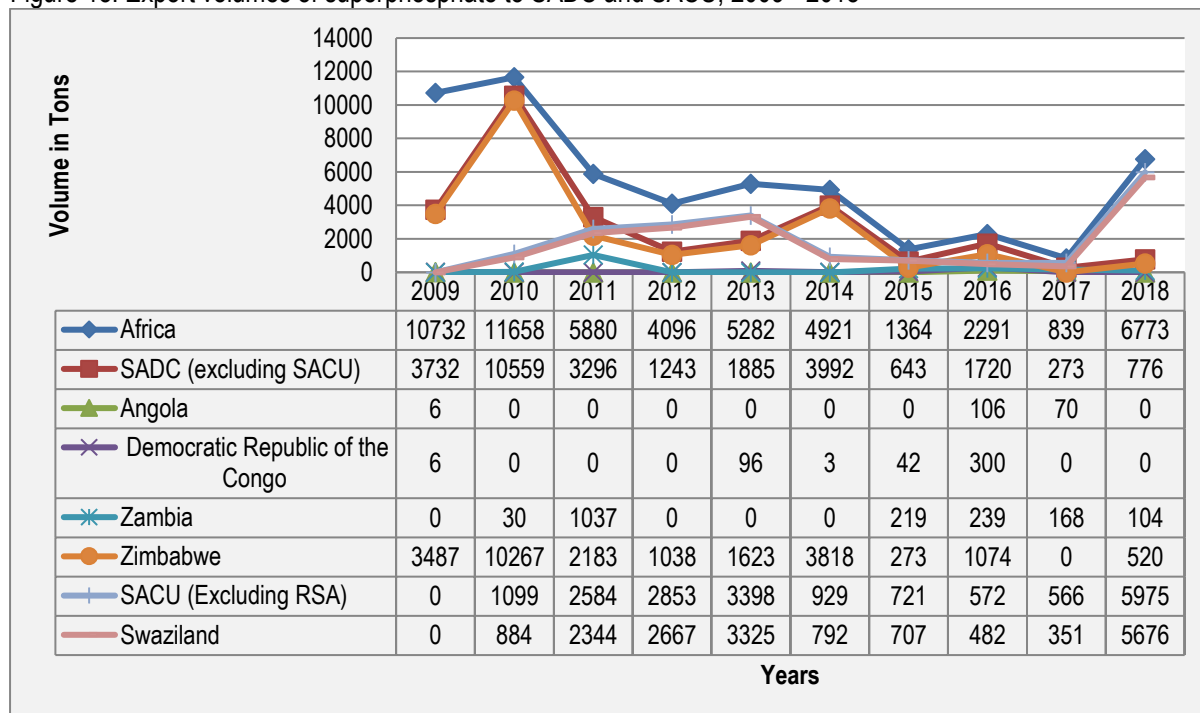
Figure 17: Export volumes of Superphosphate to the world, 2009 - 2018



Source: Quantec EasyData

Export volumes of superphosphate fertilizer from South Africa to the SADC region are shown in Figure 18 below.

Figure 18: Export volumes of superphosphate to SADC and SACU, 2009 - 2018



Source: Quantec EasyData

Most of superphosphate fertilizer exports from South Africa to SADC went to Zimbabwe, followed by minimal exports to Zambia, Angola and DRC. On average, South Africa exported 2 428 tons of superphosphate fertilizer to Zimbabwe over the past ten years. Export volumes of superphosphate fertilizers to Zimbabwe were from a high base during the second half of the ten year period (2014-2018) attaining a peak in 2010 at approximately 10 267 tons. Exports to Angola and DRC were very low and not more than 700 tons per annum. There was a 100% decrease in exports of superphosphate fertilizers from South Africa to Zimbabwe in 2018 as compared to 2017.

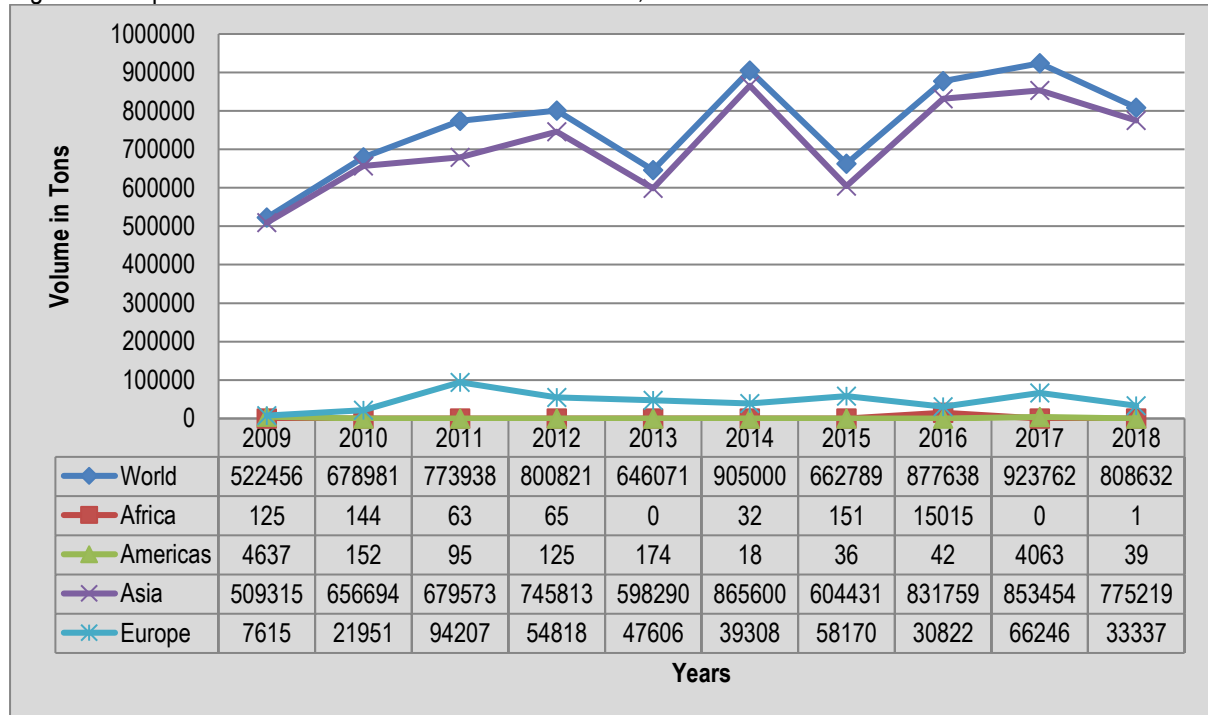
7. IMPORT VOLUMES OF FERTILIZERS

7.1 Urea

Import volumes of Urea fertilizers from the world into South Africa over the past ten years are shown in Figure 19. Most of the Urea fertilizers from the world into South Africa over the past decade were mainly from Asia, followed by minimal import volumes from Europe and Africa. On average, South Africa imported 712 015 tons of Urea fertilizer from Asia over the past ten years. Imports of Urea fertilizers from Asia into South Africa were from a low base during the first half of the ten year period (2009-2013) attaining a maximum of 745 813 tons in 2012 while the imports were from a high base during the second half of the ten year period (2014-2018) attaining a peak in 2014 at an import volume of approximately

865 600 tons. Imports from Europe and Africa were very intermittent over the same ten year period under review. There was a 9% decrease in import volumes of Urea from Asia into South Africa during 2018 as compared to 2017.

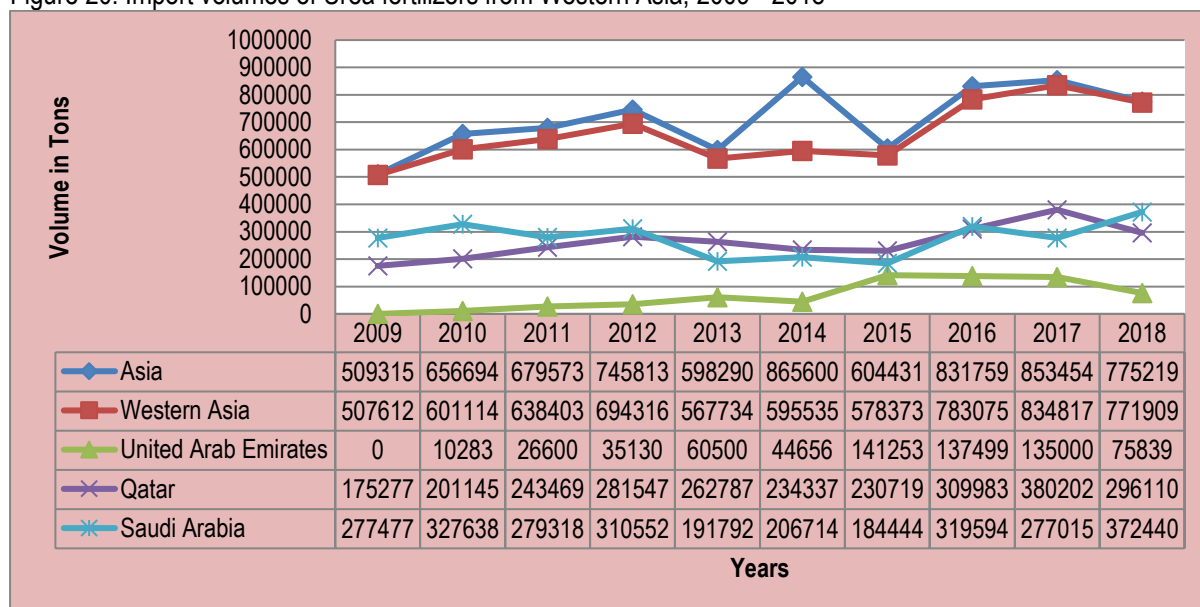
Figure 19: Import volumes of Urea fertilizers from the world, 2009 - 2018



Source: Quantec EasyData

Figure 20 presents import volumes of Urea fertilizers from Western Asia into South Africa during the past decade. Saudi Arabia was the major supplier for Urea fertilizers imported by South Africa, followed by Qatar between 2009 and 2018 marketing season. On average, South Africa imported 274 698 tons of Urea fertilizers from Saudi Arabia over the past ten years. Imports from Saudi Arabia into South Africa attained a peak in 2018 at approximately 372 440 tons. On average, South Africa imported 261 558 tons of Urea fertilizers from Qatar over the past decade. Imports from Qatar into South Africa attained a peak in 2017 at approximately 380202 tons. In 2018, there was a 22% decrease in import volume of urea fertilizers into South Africa Qatar and 34% increase in import volumes of urea fertilizers into South Africa from Saudi Arabia. There was a 44% decline in import volumes of urea fertilizers from United Arab Emirates into South Africa during 2018 as compared to 2017 marketing season.

Figure 20: Import volumes of Urea fertilizers from Western Asia, 2009 - 2018

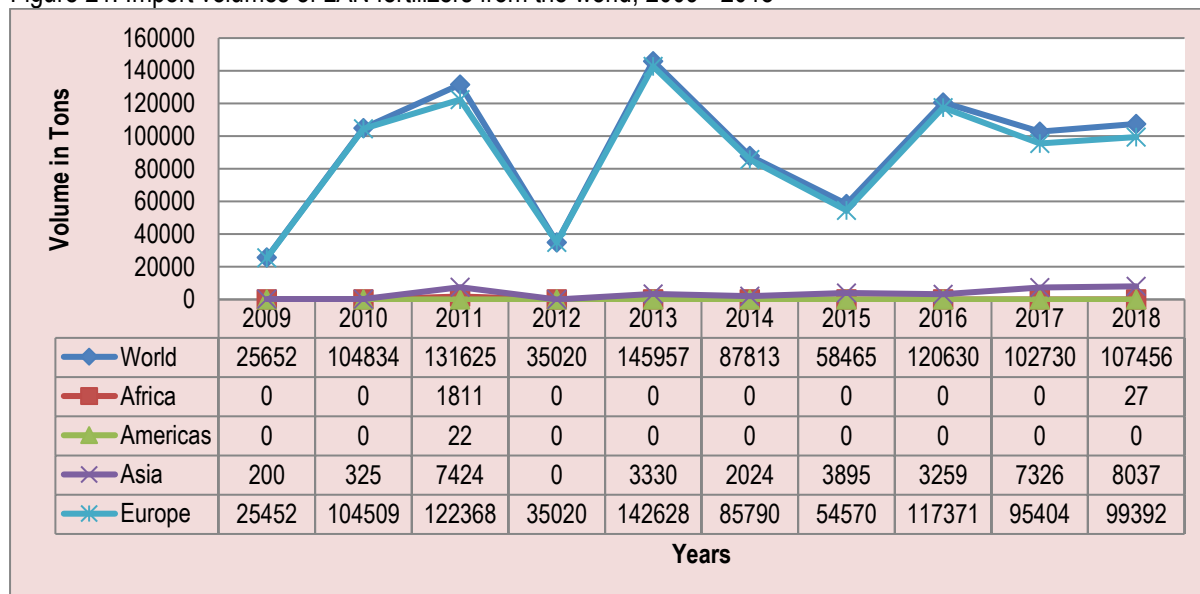


Source: Quantec EasyData

7.2 Limestone Ammonium Nitrate (LAN)

Figure 21 presents import volumes of Limestone Ammonium Nitrate (LAN) fertilizers from the world into South Africa between 2009 and 2018 marketing seasons. The major supplier of LAN fertilizers from the world into South Africa was Europe, followed by import volumes from Asia, Americas and Africa to a lesser extend over the past decade. On average, South Africa imported 88 250 tons of LAN fertilizers from Europe over the past ten years. Imports from Europe into South Africa attained a peak in 2013 at approximately 146 828 tons. Imports of LAN from Europe to South Africa were unstable during the past decade, Africa and Americas only supplied LAN to South Africa once during the past decade in 2011 to South Africa. 2018 Imports of LAN from Europe remained fairly stable over the past two seasons. Within Europe, the major supplier region of LAN is the European Union. Figure 22 below disaggregates the region.

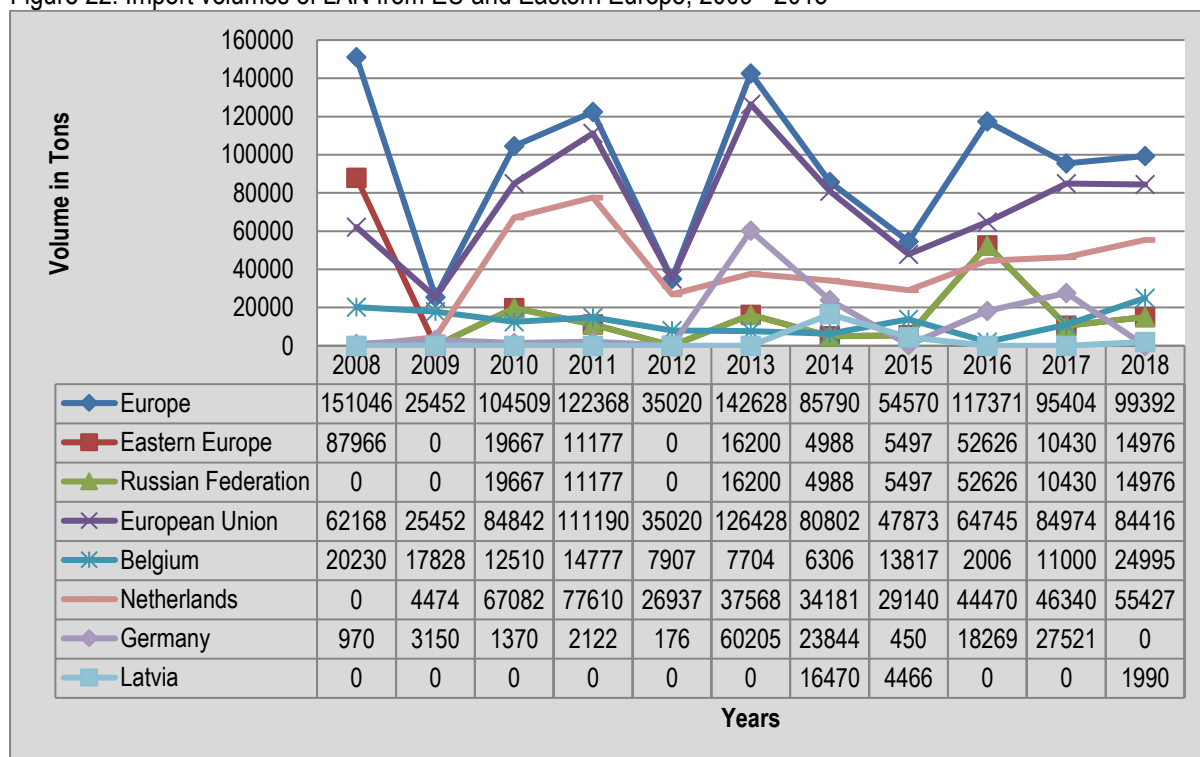
Figure 21: Import volumes of LAN fertilizers from the world, 2009 - 2018



Source: Quantec EasyData

Figure 22 shows import volumes of Limestone Ammonium Nitrate (LAN) fertilizers from the European Union into South Africa over the past ten years. The major suppliers of LAN fertilizers from European Union into South Africa was from the Netherlands, Germany and Belgium over the past ten years. In 2018, Netherlands and Belgium accounted almost all (95%) of LAN imports to South Africa from the European Union. The Eastern Europe also accounted for 15% of all LAN imports to South Africa. In Eastern Europe, all imports of LAN destined to South Africa came from Russian Federation. On average, South Africa imported 42 323 tons of LAN fertilizers from the Netherlands over the past ten years. Import volumes of LAN fertilizers from the Netherlands into South Africa attained a peak in 2011 at approximately 77 610 tons, while import volumes of LAN fertilizers from Germany attained a peak in 2013 at approximately 60 205 tons and those from Russia peaked in 2016 at 52 626 tons. There was a 20% increase in import volumes of LAN fertilizers from Netherlands into South Africa during 2018 as compared to 2017. Imports from Russia also increased by 44% and Germany recorded no import into South Africa during 2018 season.

Figure 22: Import volumes of LAN from EU and Eastern Europe, 2009 - 2018

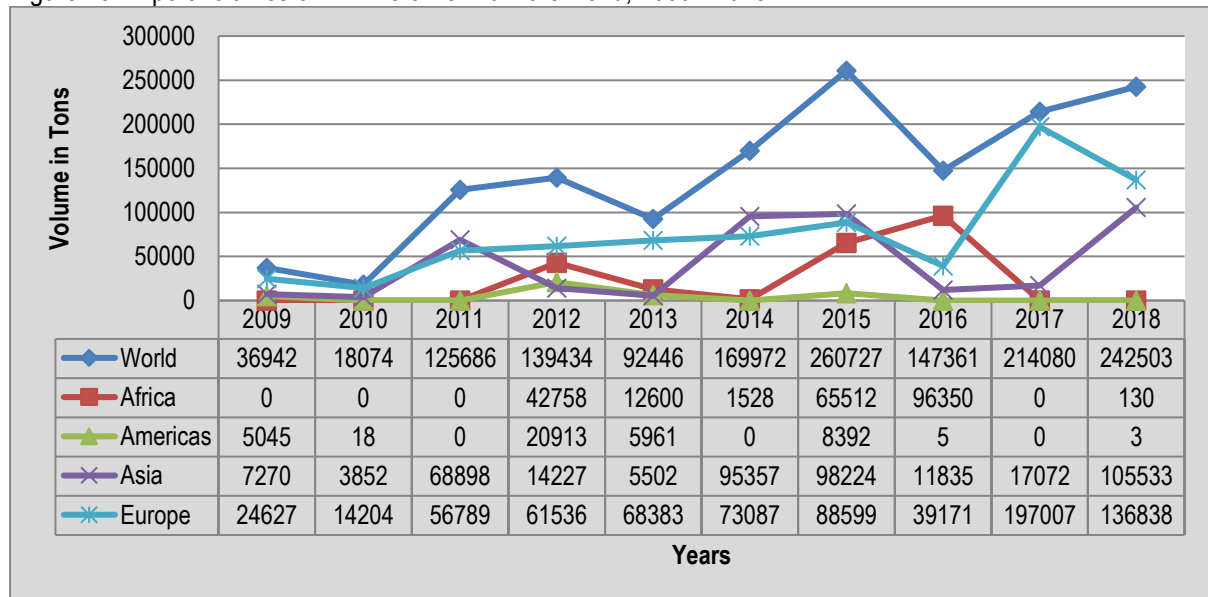


Source: Quantec EasyData

7.3 Mono-Ammonium Phosphate (MAP)

Import volumes of Mono-Ammonium Phosphate (MAP) fertilizers from the world into South Africa are depicted in Figure 23. Most of the import volumes of MAP fertilizers from the world into South Africa during the period under scrutiny were mainly from Europe, followed by Asia and minimal import volumes from Americas and Africa. On average, South Africa imported 76 024 tons of MAP fertilizers from Europe over the past decade. Imports from Europe into South Africa attained a peak in 2017 at approximately 197 007 tons, while imports from Asia into South Africa attained a peak also in 2018 at approximately 105 533 tons. There was a 31% decline in export volumes of MAP fertilizers from Europe into South Africa during 2018 as compared to 2017.

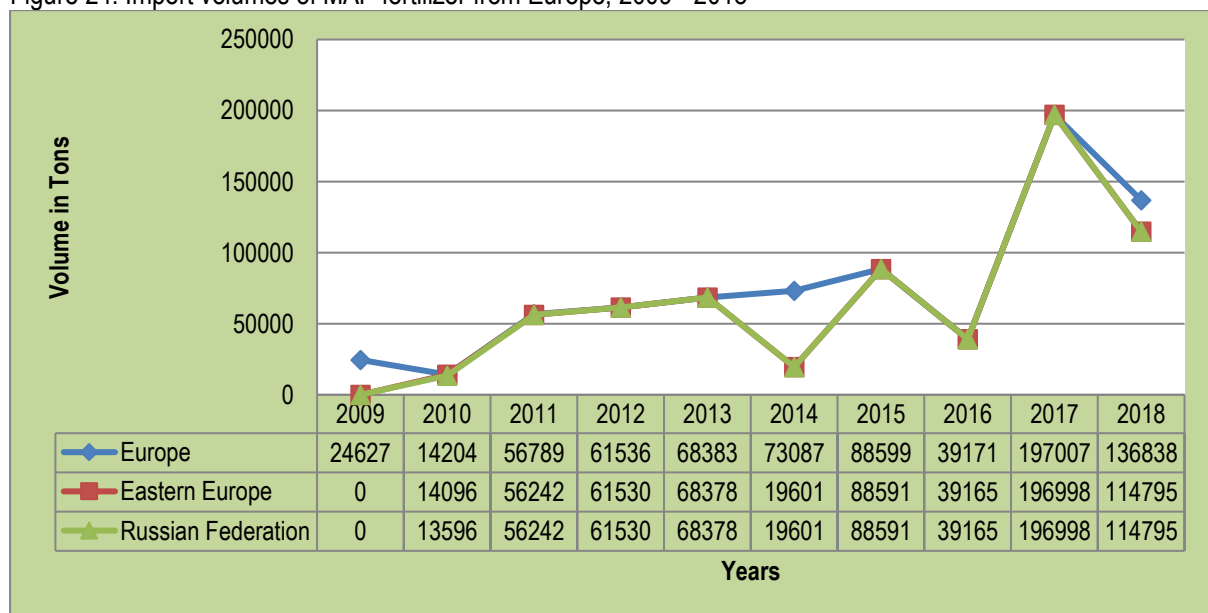
Figure 23: Import volumes of MAP fertilizer from the world, 2009 - 2018



Source: Quantec EasyData

Figure 24 illustrates import volumes of Mono-Ammonium Phosphate (MAP) fertilizers from European regions and its member states into South Africa over the past ten years.

Figure 24: Import volumes of MAP fertilizer from Europe, 2009 - 2018



Source: Quantec EasyData

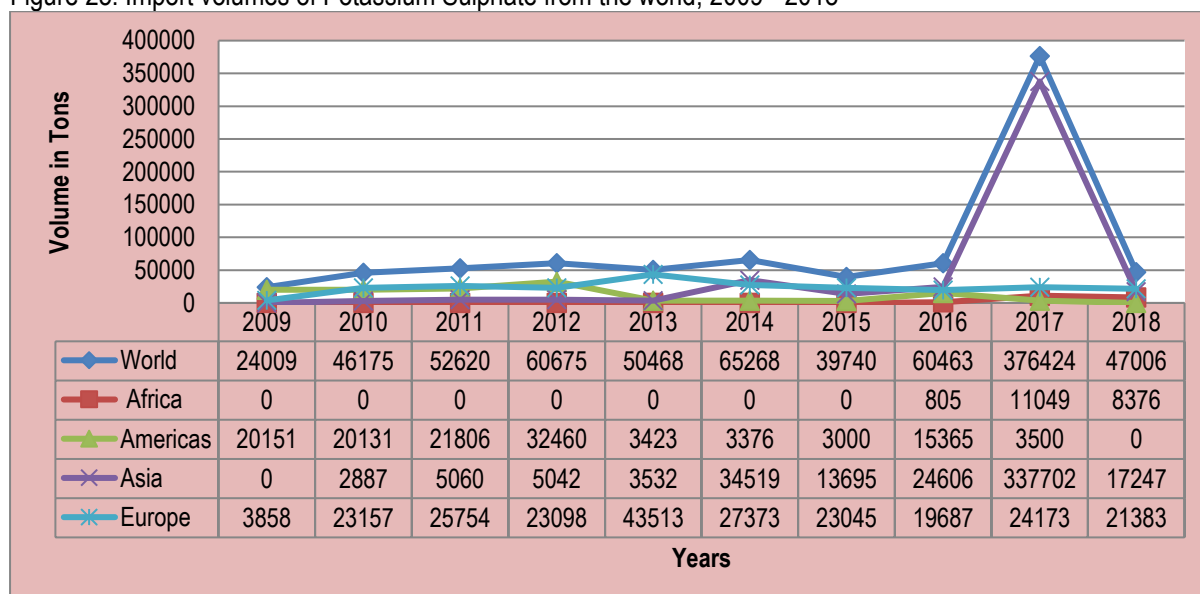
As it can be seen from the figure above (Figure 21), all imports of MAP fertilizers originates from Eastern Europe in particular the Russian Federation. In 2009, European Union, in particular Belgium and Finland were one of the major suppliers of MAP fertilizers into South Africa. With the exception 2009, Russia has been the major supplier. On average, South Africa imported 65 890 tons of MAP fertilizers from Russian Federation over the past decade. Imports from Russian Federation into South Africa were from a high

base during the second half of the ten year period (2014-2018) under review attaining a peak in 2017 at approximately 196 998 tons. There was a 42% decrease in import volumes of MAP fertilizers from the Russian Federation into South Africa during 2018 as compared to 2017.

7.4 Potassium Sulphate

Import volumes of potassium sulphate from the world into South Africa over the past ten years are shown in Figure 25. The major supplier of potassium sulphate fertilizers from the world into South Africa was Europe, followed by the Asia and Americas over the same period under examination. Americas surpassed Europe as the leading supplier of South African Potassium Sulphate on two occasions that is in 2009 and 2012 while Asia claimed the top spot in 2014, 2016 and 2017. On average, South Africa imported 23 504 tons of potassium sulphate fertilizers from Europe over the past ten years. Imports from Europe into South Africa attained a peak in 2013 at approximately 43 513 tons, while imports from the Americas into South Africa attained a peak in 2012 at approximately 32 460 tons. Imports from Asia into South Africa attained a peak in 2017 at approximately 337 702 tons. It is also clear from Figure 25 that there was a 95% decline in import volumes of potassium sulphate from Asia into South Africa during 2017 as compared to 2017 peak and also those from Americas decreased by 100% and Asia increased by 12% during the same period.

Figure 25: Import volumes of Potassium Sulphate from the world, 2009 - 2018

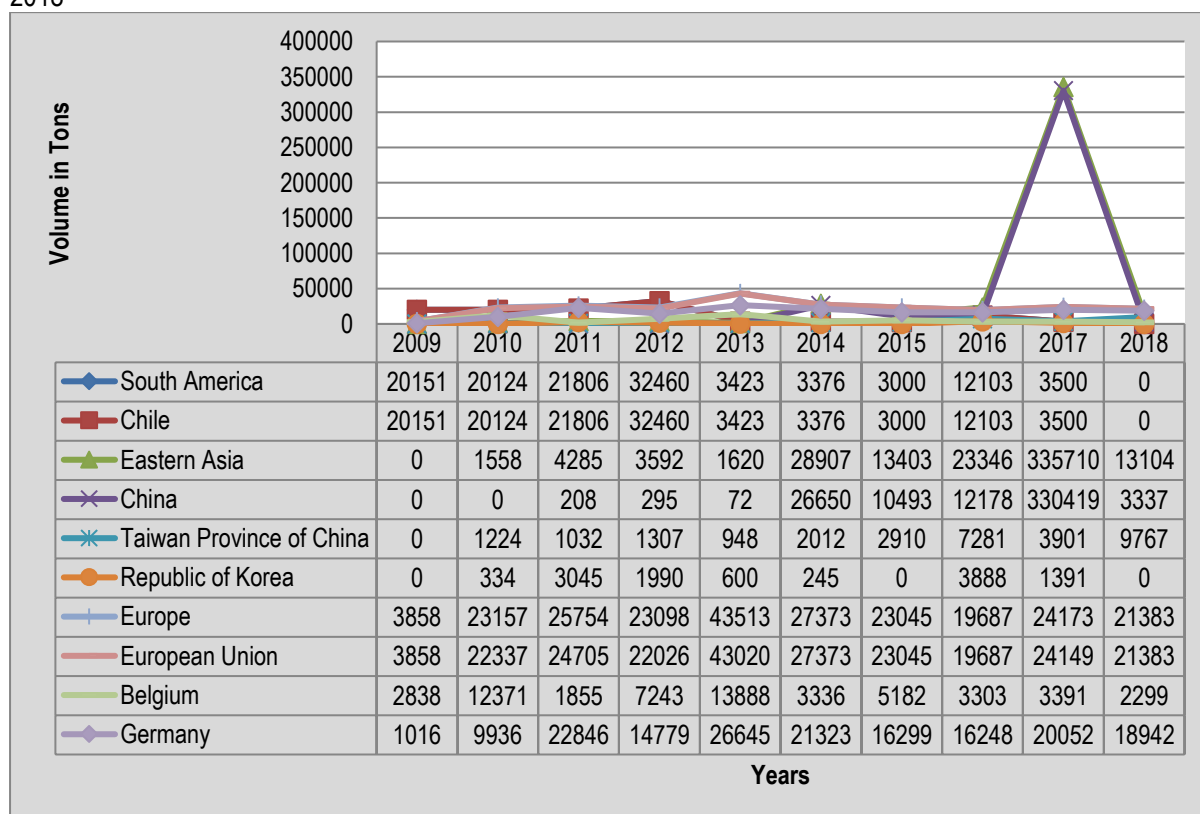


Source: Quantec EasyData

Import volumes of potassium sulphate from European Union, South America and Eastern Asia into South Africa over the past decade are illustrated in Figure 26. Most of potassium sulphate fertilizer imports from

the European Union into South Africa were from Germany, followed by Belgium over the past ten year period under review. Other dominant suppliers over the period under review was Eastern Asia and South America regions. In the Eastern Asia, China, Taiwan and Republic of Korea have been dominant counties that supplied South Africa with potassium sulphate fertilizer. In 2018, according to ranks, Germany was the top supplier followed by Taiwan and China. On average, South Africa imported 38 365 tons of potassium sulphate fertilizers from China over the past decade. Imports from China into South Africa attained a peak in 2017 at approximately 330 419 tons, while imports from Germany into South Africa attained a peak in 2013 at approximately 26 645 tons. There was 99 percent decline in import volumes of potassium sulphate fertilizers from China into South Africa during 2018 as compared to 2017 while those from Germany also declined by 6% and Taiwan increased by 120%.

Figure 26: Import volumes of Potassium Sulphate from EU, South America and Eastern Asia countries, 2009 - 2018

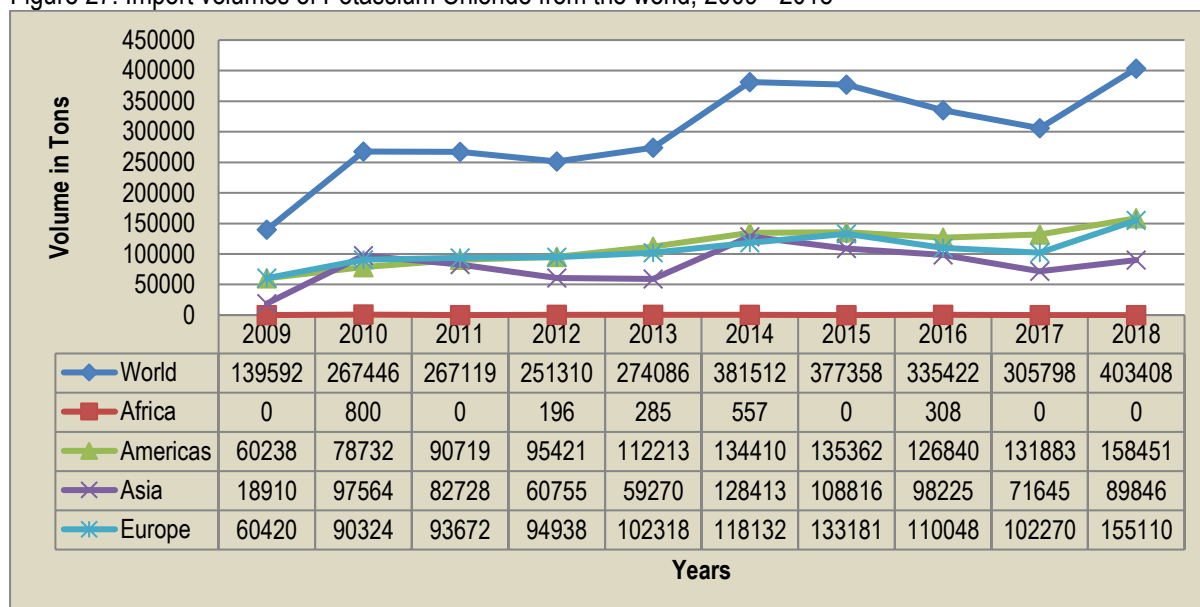


Source: Quantec EasyData

7.5 Potassium Chloride

Import volumes of potassium chloride from the world into South Africa during the past ten years are depicted in Figure 27.

Figure 27: Import volumes of Potassium Chloride from the world, 2009 - 2018



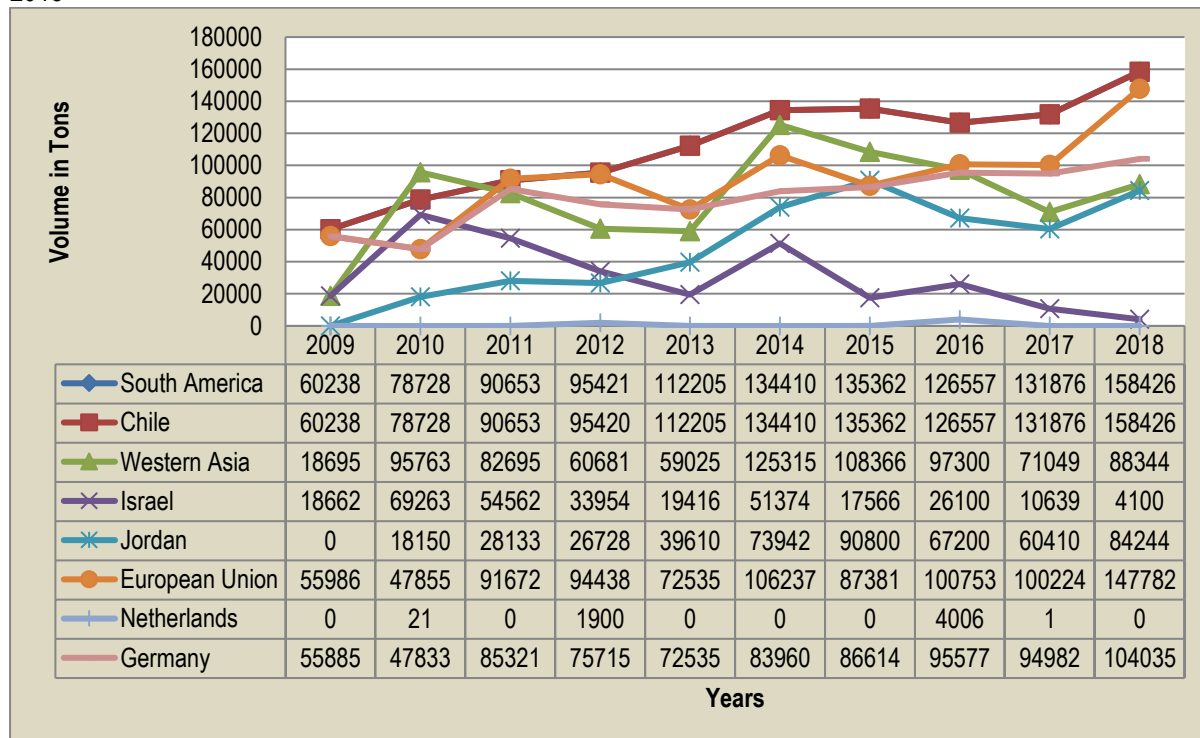
Source: Quantec EasyData

The major suppliers for potassium chloride fertilizers from the world into South Africa in the past ten years were Europe, followed by Asia, Americas and minimal import volumes from Africa. On average, South Africa imported 106 041 tons of potassium chloride fertilizers from Europe between 2009 and 2018 marketing seasons. Import volumes of potassium chloride from Europe into South Africa have been fairly stable, averaging 106 041 and attaining a peak in 2018 at approximately 155 110 tons. Imports from Asia into South Africa attained a peak in 2014 at approximately 128 428 tons. There was a 52% increase in import volumes of potassium chloride from Europe into South Africa during 2018 as compared to 2017.

Figure 28 presents import volumes of potassium chloride fertilizers from the European Union, South America and Western Asia into South Africa over the past ten years. The three regions have been the top exports of potassium chloride to South Africa of the past decade. Most of the potassium chloride fertilizers from the European Union into South Africa were mainly from Germany, followed by very minimal imports from Netherlands over the same period under scrutiny while those from South America have been coming solely from Chile. In the Western Asian region, Israel and Jordan have been the main suppliers of potassium chloride fertilizer into South Africa. On average, South Africa imported 112 387 tons, 80 246 tons and 48 922 tons of potassium chloride fertilizers from Chile, Germany and Jordan respectively between 2009 and 2018 marketing seasons. Imports from Chile and Jordan into South Africa were from a high base during the second half of the ten year period (2014-2018) under review both attaining a peaks in 2018 at approximately 158 426 tons and 147 782 tons respectively. There was a 20% increase in import volumes of potassium chloride fertilizers from Chile and 39% increase in import

volumes of potassium chloride fertilizers from Jordan in 2018. Imports from Germany increased by 10% while those from Israel decreased by 61% during the same period.

Figure 28: Import volumes of Potassium Chloride from South America, EU and Western Asia countries, 2009 - 2018

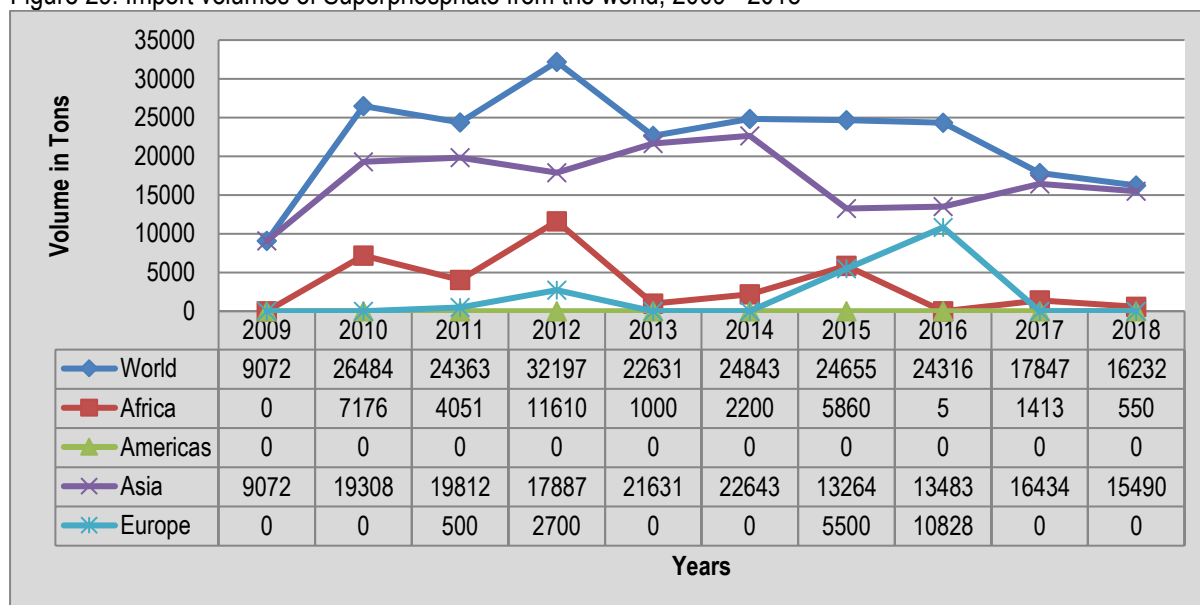


Source: Quantec EasyData

7.6 Superphosphate

Figure 29 presents import volumes of superphosphate fertilizers from the world into South Africa over the past decade. The major supplying market for superphosphate fertilizers from the world into South Africa was Asia, followed by very minimal imports from Africa and Europe over the same period under review. On average, South Africa imported 16 902 tons of superphosphate fertilizers from Asia between 2009 and 2018 marketing seasons. Imports from Asia into South Africa attained a peak in 2014 at approximately 22 642 tons. There were no imports of superphosphate fertilizers from Africa into South Africa in 2009 while Europe did not register any exports to South Africa in 2009, 2010, 2013, 2014, 2017 and 2018. Imports from Asia have been fairly stable between 2010 and 2018. In 2018, import volumes of superphosphate fertilizers from Asia into South Africa increased by 6% in 2018 as compared to 2017.

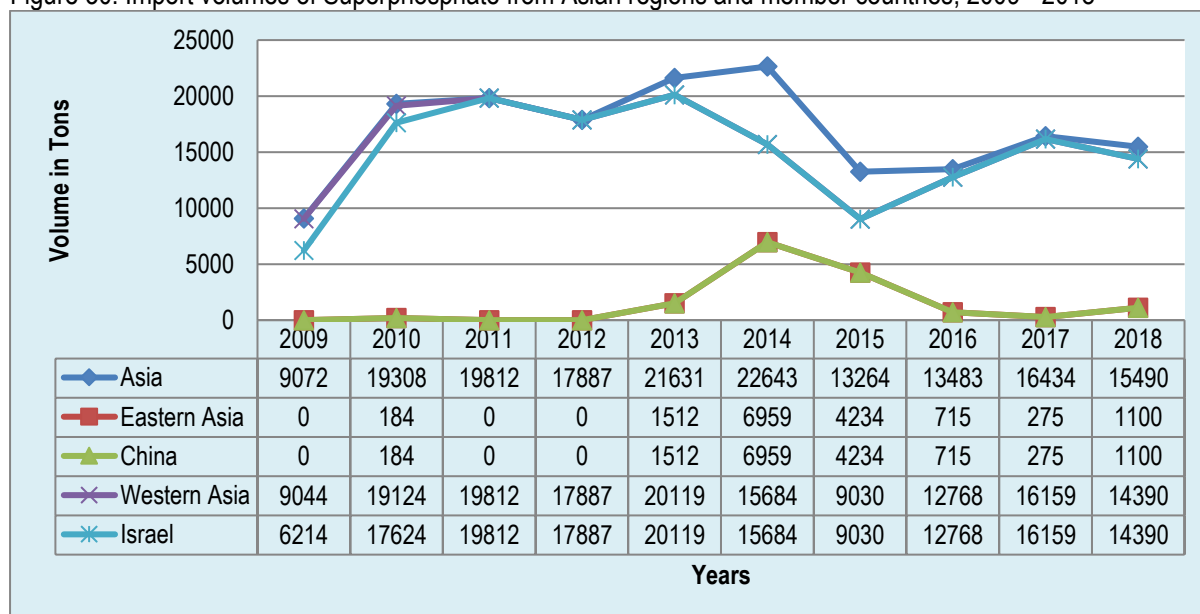
Figure 29: Import volumes of Superphosphate from the world, 2009 - 2018



Source: Quantec EasyData

Import volumes of superphosphate fertilizers from Western and Eastern Asia into South Africa during the past ten years are indicated in Figure 30. The major supplying market for superphosphate fertilizers from Western Asia into South Africa was Israel and China in the Eastern Asian region. On average, South Africa imported 14 969 tons of superphosphate fertilizers from Israel between 2009 and 2018. Imports from Israel into South Africa attained a peak in 2013 at approximately 20 119 tons. During the second half of the ten year period (2014-2018), imports from Israel into South Africa were stable, averaging 14 969 tons. There was a 11% decline in import volumes of superphosphate fertilizers from Israel into South Africa during 2018 as compared to 2017.

Figure 30: Import volumes of Superphosphate from Asian regions and member countries, 2009 - 2018



Source: Quantec EasyData

8. SWOT Analysis (Strengths, Weaknesses, Opportunities, Threats)

Strengths

- Financial leverage – ability for farmers to use debt to expand business and increase profits;
- Customer loyalty- customers are loyal to manufacturer/blender according to additional service provided;
- Customer services manufacturers/blenders often supply technical assistance;
- Brand name- consumers place value in the brand name.

Opportunities

- Online market- online markets offers the industry to expand by reaching much broader audience;
- Innovation – space remains for innovations to produce unique products or service that meet customer needs;
- Loosening regulations- South Africa 's fertilizer industry operates in a free market;
- New markets- a great opportunity are the African countries and exports to India, Japan and Columbia.; and

Weaknesses

- High debt burden – A total growth in total farm debt;
- Out-dated technology- South Africa's infrastructure that is used to produce primary fertiliser materials is very old and very expensive to replace;
- Weak supply chain - a highly concentrated fertiliser supply chain;

Threats

- Volatile currency- price differences are also caused by factors such as the volatile exchange rate;
- Natural factors -Seasonal variations are caused by regional droughts and short term fluctuations in the financial position of the farm sector;
- Intense competition- The South African fertilizer market face stiff competition from overseas countries;
- Volatile revenue - fertilizer is a vitally important determinant of the profitability; and
- Political risk- policy uncertainty and political will to invest fertilizer exploration and capacity expansion programmes.

9. ROLE PLAYERS IN THE FERTILIZER INDUSTRY

Table 4: Key Stakeholders

Fertilizer industries	Type of fertilizers	Physical Address	Postal Address	Telephone number	Email address
8.1 Kynoch	Liquid, Granular and water soluble fertilizers	Ross street Johannesburg 2125 South Africa		011 317 2000	info@kynoch.co.za
8.2 Sasol	Granular and Liquid fertilizers	1 Sturdee Avenue Rosebank Johannesburg(SA) 2196	P.O Box 5486 Johannesburg(SA) 2000	011 441 3111	
8.3 Omnia (Nutriology- Nutrilogie)	Liquid, Granular and specialty fertilizers	Omonia house Epsom Downs office park 13 Sloane st Bryanston	P.O .Box 69888 Bryanston 2021	011 709 8888	Fertilizer@omnia.co.za
8.4 Profert	Granular and Liquid fertilizers	43 Ross street Potchefstroom North West (SA) 2531		018 293 3530	info@profert.co.za
8.5 TRIOMF	Granular, Liquid and Specialty fertilizers	TRIOMF road Potchefstroom 2531 North West (SA)	P.O Box 505 Potchefstroom 2520	086 187 4663/ 018 285 1291	info@triomf.co.za

Fertilizer industries	Type of fertilizers	Physical Address	Postal Address	Telephone number	Email address
8.6 Nutri-flo	Granular and Liquid fertilizers		P.O Box 242 Umhlali 4390	032 947 0211	info@nutriflo.co.za
8.7 Greenlands		2 Michelin street, N.W 7 Vanderbijlpark 1911	P.O Box 6852 Vanderbijlpark 1900	016 986 0130	info@greenlands-kunsmis.co.za
8.9 Nitrophoska (PTY) Ltd	Liquid, Granular and other fertilizers	Showgrown, George 6529, SA Western Cape	P.O Box 1138 George 6530	044 873 6221/ 044 873 6261	
8.10 Jara	Liquid and Granular fertilizers	5167 Russel street George 6529 SA Western Cape		044 514 3185	

10. ACKNOWLEDGEMENTS

The following organizations are acknowledged:

9.1 Quantec Easy Data

www.easydata.co.za

9.2 Grain SA

www.grainsa.co.za

9.3 Fertilizer Association of Southern Africa (FERTASA)

www.fertasa.co.za

9.4 Statistical and Economic Analysis, DAFF

www.daff.gov.za