



NAMMC

Promoting market access for South African agriculture



Input

COST MONITORING

An update on selected items

December 2022

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EXECUTIVE SUMMARY

❖ International and domestic price trends for selected fertilizers

Between October 2021 and October 2022, international prices (Rand terms) for MOP and DAP increased by 37.4% (from R8 488/ton to R11 662/ton), 36.3% (from R9 468/ton to R12 909/ton), respectively. While Urea price decreased by 2.7% (from R10 522/ton to R10 233/ton). During the same period, the R/\$ exchange rate depreciated by 21.8% from R/\$14.84 to R/\$18.08.

Between October 2021 to October 2022, domestic fertilizer prices for KCL, MAP and Urea increased by 54.1% (from R13 190/ton to R20 321/ton), 29.6% (from R15 286/ton to R19 812/ton) and 20.5% (from R13 878/ton to R16 717/ton), respectively.

❖ Fuel prices & Illuminated paraffin

Between November 2021 and November 2022 diesel and petrol prices increased by 48.2% (from R17.19/litre to R25.48/litre) and 17.0% (from R19.54/litre to R22.87/litre), respectively. Crude oil prices in US dollar terms increased by 10.8% from US\$83.40/barrel to US\$92.41/barrel, with a 17.1% depreciation of the Rand (R15.47/\$ to R18.11/\$).

During the same period, the price of illuminated paraffin in both Coastal and Gauteng regions increased by 62.7% (R10.43/litre to R16.97/litre) and 57.9% (R11.25/litre to R17.76/litre), respectively.

❖ Freight rates

From November 2021 to November 2022, the Baltic Dry Index (BDI) and the Grain and Oilseeds Freight Index (GOFI) decreased by 54.5% and 19.7%, respectively. In November 2022, the BDI reached 1 302 index points and the GOFI reached 175 index points

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Introduction

Agricultural inputs such as fertilisers, play an important role in increasing agricultural production and yield. The Input Cost Monitoring (ICM) report, published by the National Agricultural Marketing Council (NAMC) is a quarterly report analysing historic and current trends from selected agricultural production input prices in both domestic and international markets. The data for this publication is obtained from Grain South Africa (Grain SA), the Department of Energy (DoE) and the South African Grain Information Service (SAGIS).

International price trends for selected fertilizers

South Africa represents about 0.5% of the total fertilizer global consumption and is a small player in the fertilizer global market with minimal influence in price-setting. It is therefore important to monitor the factors that influence international fertilizer supply and demand balances and understand how these factors affect domestic market. The most significant factor that influence fertilizer price movement is the exchange rate. **Figure 1** illustrates international fertilizer prices for selected fertilizers between October 2016 and October 2022. International prices (**Rand terms**) for Muriate of Potash (MOP), Urea and Di-Ammonium Phosphate (DAP) increased by 284.0% (from R3 037/ton to R11 662/ton), 263.7% (from R2 814/ton to R10 233/ton) and 180.8% (R4 597/ton to R12 909/ton), respectively. During this period, the Rand/US Dollar (R/\$) exchange rate depreciated by 29.8% (from R/\$13.93 to R/\$18.08). In terms of the **US Dollar prices**, MOP, Urea and DAP increased by 195.9% (from US\$218/ton to US\$645/ton), 180.2% (from US\$202/ton to US\$566/ton) and 116.4% (from US\$330/ton to US\$714/ton), respectively.

Between October 2021 and October 2022, international prices (**Rand terms**) for MOP and DAP increased by 37.4% (from R8 488/ton to R11 662/ton), 36.3% (from R9 468/ton to R12 909/ton), respectively. While Urea price decreased by 2.7% (from R10 522/ton to R10 233/ton). During the same period, the R/\$ exchange rate depreciated by 21.8% from R/\$14.84 to R/\$18.08.

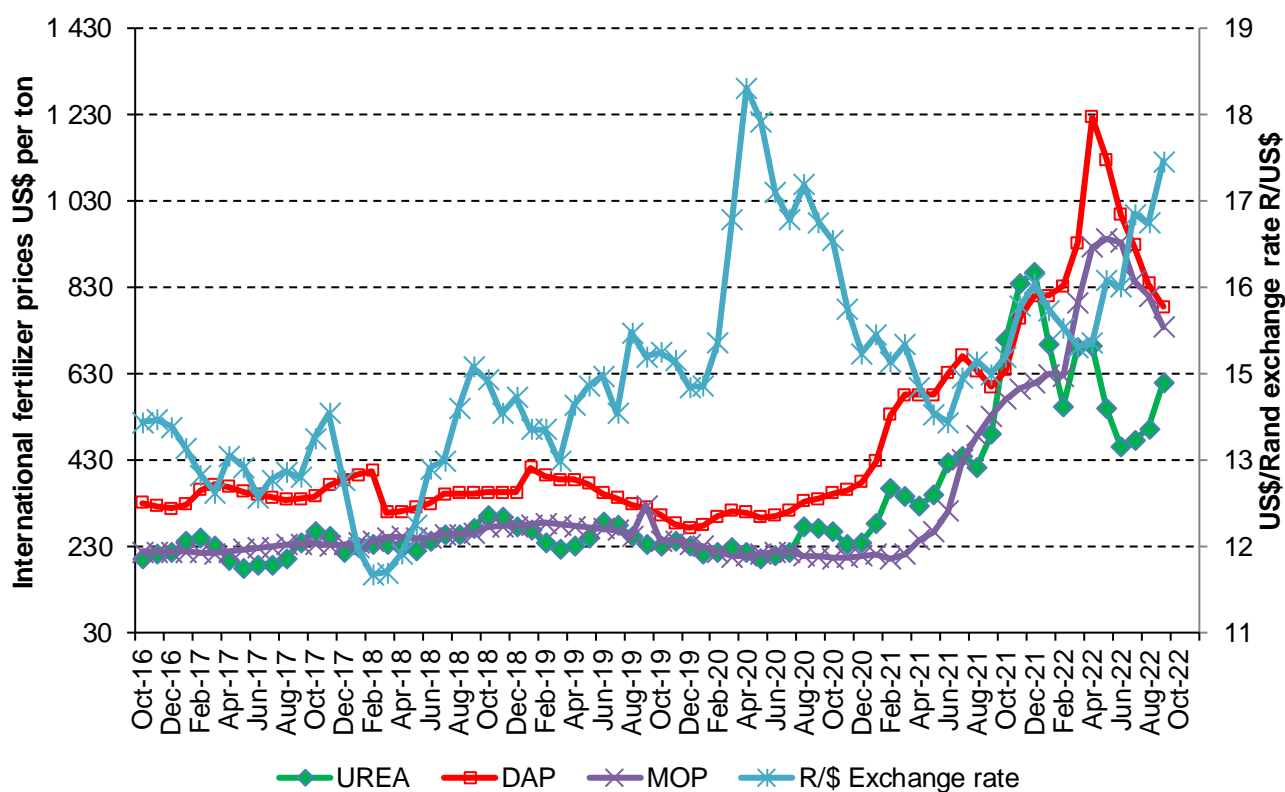


Figure 1: International price trends for selected fertilizers and R/\$ exchange rate

Source: Own calculations based on data from Grain SA, 2022.

Domestic price trends for selected fertilizers

Figure 2 shows price trends for domestic fertilizer between October 2016 and October 2022. During this period the local fertilizer prices for Potassium Chloride (KCL), Urea and Mono-Ammonium Phosphate (MAP) increased by 218.0% (from R6 391/ton to R20 321/ton), 213.7% (from R 5 329/ton to R16 717/ton) and 122.4% (from R8 908/ton to R19 812/ton), respectively.

Between October 2021 to October 2022, domestic fertilizer prices for KCL, MAP and Urea increased by 54.1% (from R13 190/ton to R20 321/ton), 29.6% (from R15 286/ton to R19 812/ton) and 20.5% (from R13 878/ton to R16 717/ton), respectively. The fluctuation in the domestic prices of fertilizers is subjected to price volatility in the global market since South Africa is the net importer of fertilizer. Since the beginning of 2021 international fertilizer prices have been rising steeply in response to lower global supply. For net importing countries, such as South Africa, macroeconomic factors such as the exchange rate also play a crucial role since fertilizer is procured in countries of origin using foreign currency.

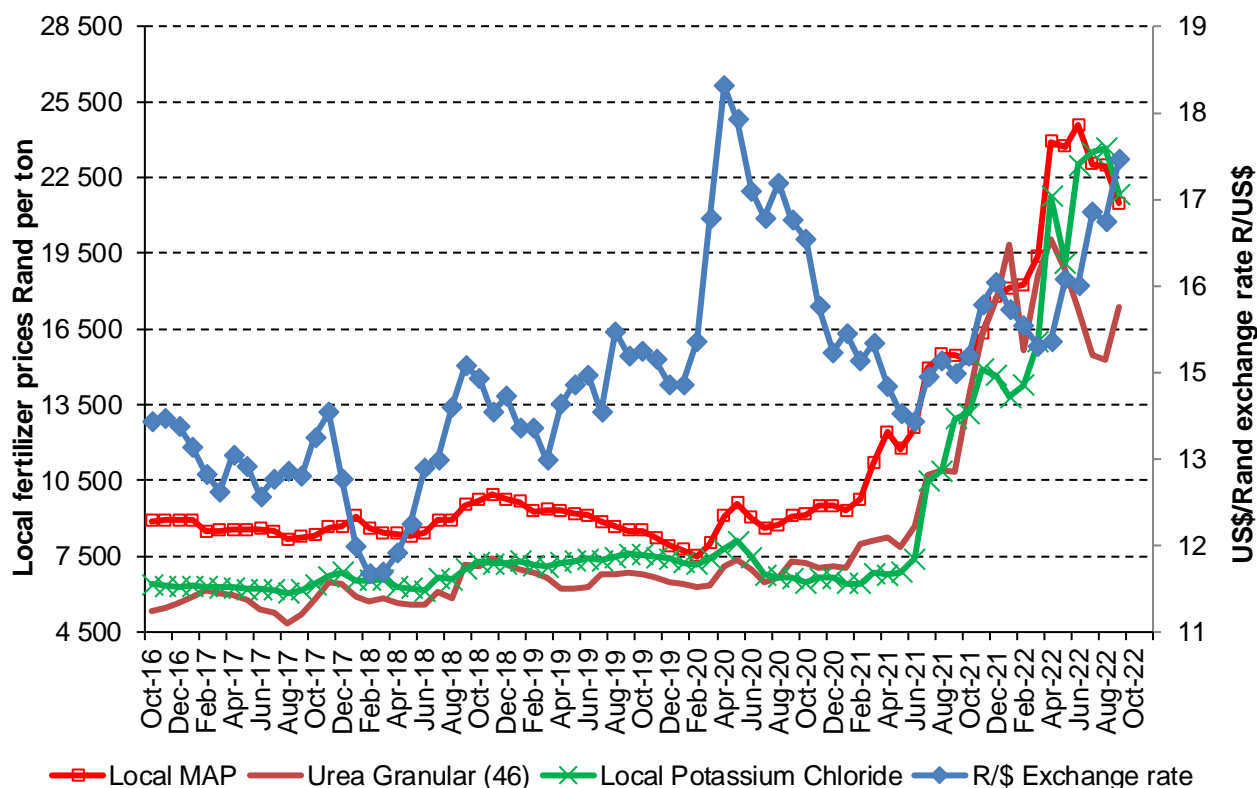


Figure 2: Domestic price trends for selected fertilizers and R/\$ exchange rate

Source: Own calculations based on data from Grain SA, 2022.

Fuel prices

Domestic fuel prices are linked to factors such as international crude oil price (US\$ per barrel) and the R/\$ exchange rate. **Figure 3** presents the price of crude oil, petrol, diesel and the R/\$ exchange rate trends between November 2016 and November 2022. During this period, diesel and petrol prices increased by 124.7% (from R11.34/litre to R25.48/litre) and 81.9% (from R12.57/litre to R22.87/litre), respectively. In **US dollar terms**, crude oil prices increased by 95.5% (from US\$47.28/barrel to US\$92.14/barrel). During the same period, crude oil prices in **Rand terms** increased by 153.6% (from R660.03/barrel to R1 673.55/barrel).

Between November 2021 and November 2022 diesel and petrol prices increased by 48.2% (from R17.19/litre to R25.48/litre) and 17.0% (from R19.54/litre to R22.87/litre), respectively. Crude oil prices in US dollar terms increased by 10.8% from US\$83.40/barrel to US\$92.41/barrel, with a 17.1% depreciation of the Rand (R15.47/\$ to R18.11/\$). These fluctuations in South Africa's fuel prices have mainly been driven by the rising price of international petroleum.

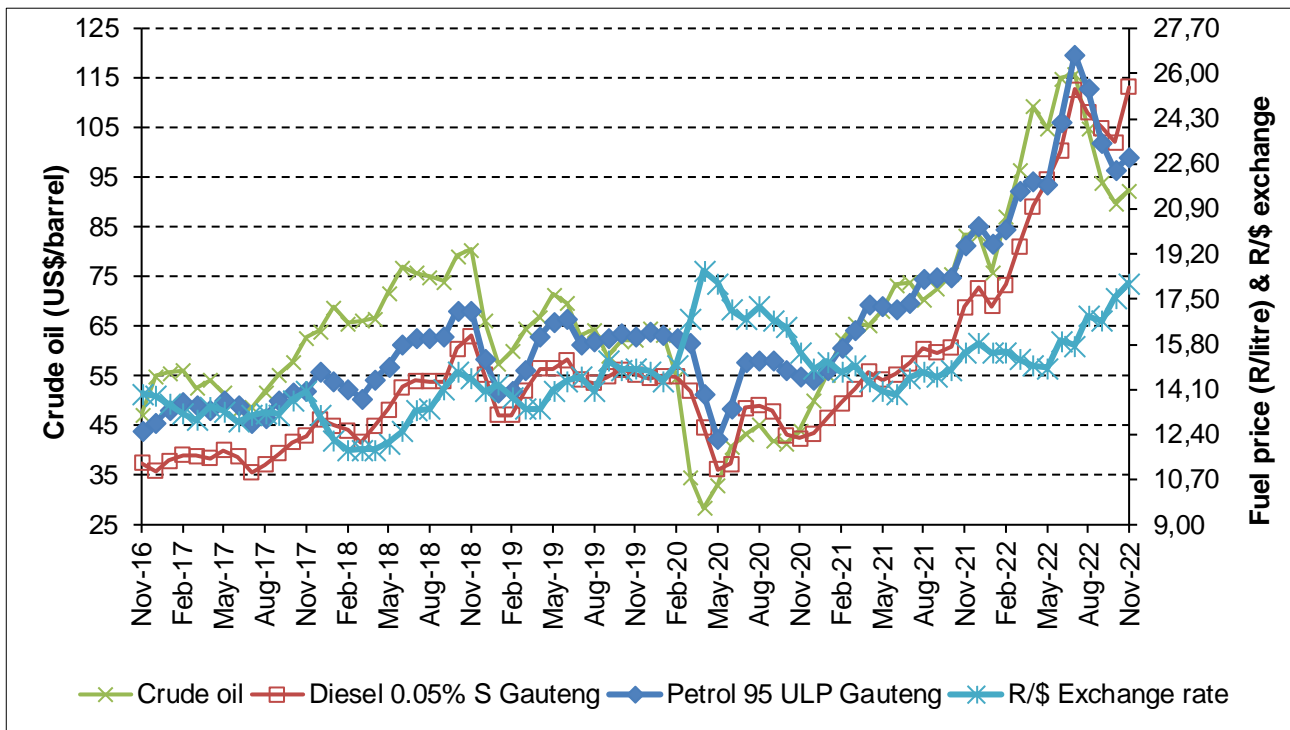


Figure 3: Crude oil and fuel prices

Source: DoE, 2022.

Freight rates

The Baltic Dry Index (BDI) measures international freight rates for dry bulk cargo which is affected by both the demand to move raw materials across international markets and the supply of shipping capacity. The International Grains Council (IGC) introduced a new Grain and Oilseeds Freight Index (GOFI) with January 2013 used as a base year which represents 68 major grain routes.

Figure 4 presents BDI and GOFI between November 2016 and November 2022. The GOFI and BDI during this period increased by 86.8% and 23.6%, respectively. This can be attributed to changes in shipment times, congestion in ports and demand across the world. From November 2021 to November 2022, the BDI and GOFI decreased by 54.5% and 19.7%, respectively. The shipping markets throughout 2021 were characterized by stronger demand because of the COVID-19 pandemic recovery which caused an acute shortage of containers, leading to a sharp rise in freight costs for market participants. However, the tide has changed dramatically in the second half of 2022,

In November 2022, the BDI reached 1 302 index points and the GOFI reached 175 index points.

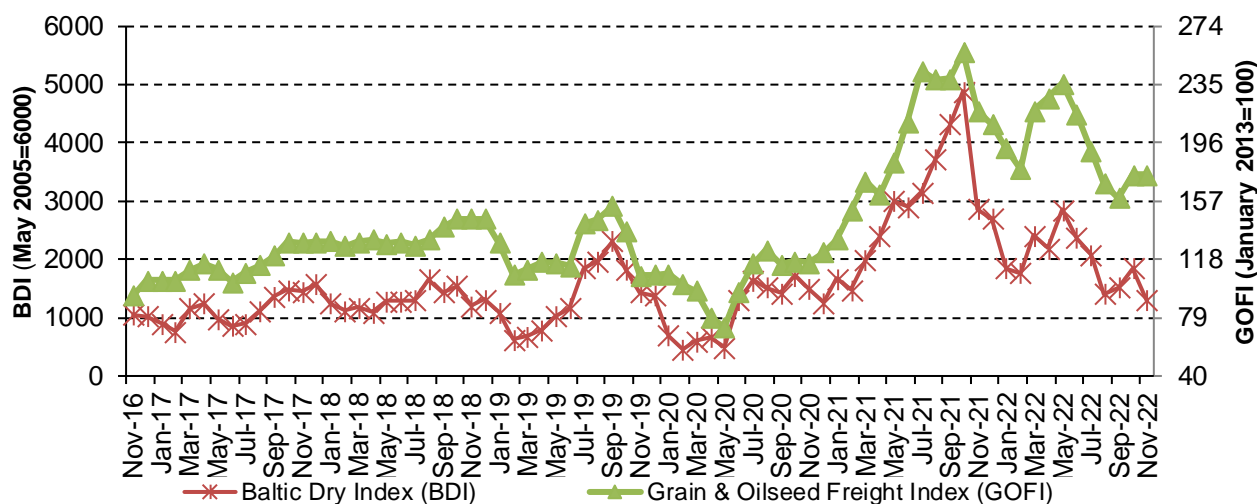


Figure 4: Baltic Dry Index versus Grain and Oilseeds Freight Index

Source: SAGIS, 2022.

Illuminated paraffin price

South African consumers utilise paraffin as an alternative source of household energy. As result, paraffin is classified as an essential backup fuel. **Figure 5** shows illuminated paraffin prices for both the Coastal and Gauteng regions from November 2016 to November 2022. During this period, illuminated paraffin prices for Gauteng and Coastal regions increased by 164.3% (from R6.72/litre to R17.76/litre) and 133.4% (from R7.27/litre to R16.97/litre), respectively.

Between November 2021 and November 2022, the price of illuminated paraffin in both Coastal and Gauteng regions increased by 62.7% (R10.43/litre to R16.97/litre) and 57.9% (R11.25/litre to R17.76/litre), respectively. The movement of paraffin prices is typically affected by two main factors, international petroleum costs, and the movement in the rand/dollar exchange rate.

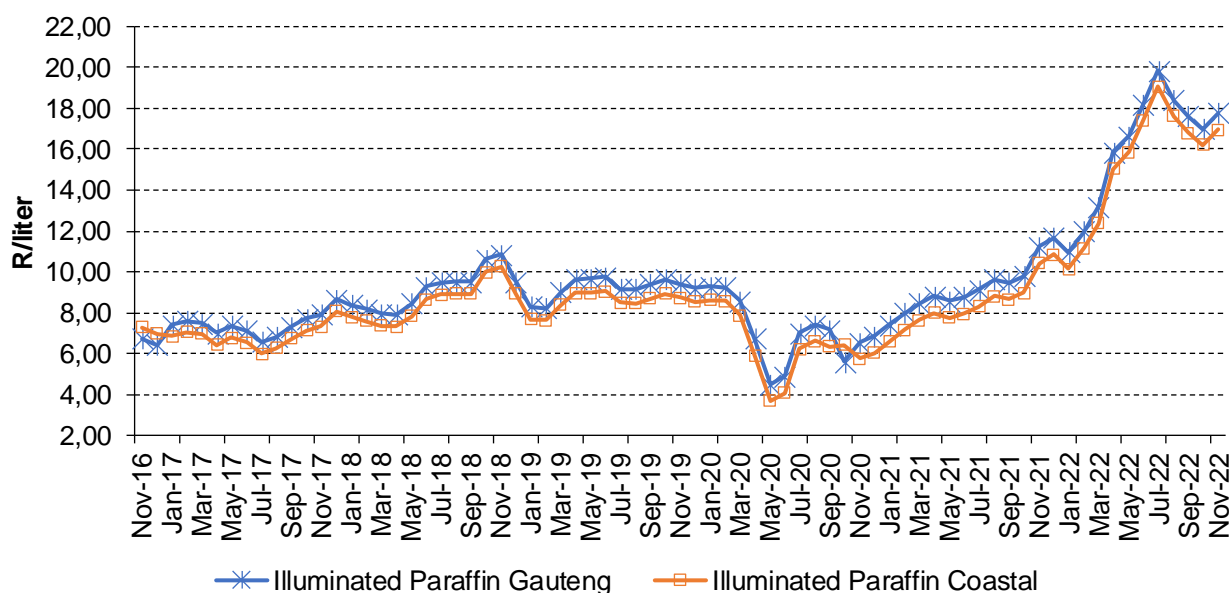


Figure 5: Comparison of illuminated paraffin price between Coastal and Gauteng regions

Source: Department of Energy, 2022.

Conclusion

The Increase of international fertilizer prices are driven by a confluence of factors, including surging input costs and supply of those inputs. Consequently, disruptions caused by sanctions imposed by Russia to restrict the flow of supply and restrictions on the exports have exacerbated price volatility of fertilisers prices. For instance, the increase in natural gas prices in Europe resulted in widespread production cutbacks in ammonia, which is an important input for nitrogen-based fertilizers. The economic sanctions and export restrictions in response to the ongoing war between Ukraine and Russia disrupted the Black Sea trading routes. Russia accounts for about 16% of global urea exports and 12% of DAP and MAP exports. Therefore, global developments affect the South African fertilizer market as the net importer of fertilizer. Similarly, South Africa's fuel prices are influenced by international and local factors. Local factors that influence fuel prices are exchange rate, inland transport costs, fuel tax, retail profit margin and fuel tax, among others. . The continued increases in input costs might affect the ability of farmers in South Africa to continue farming sustainably and profitably.

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