

Price tracker: Competitive market expectations

March 2022

Welcome to the eleventh monthly food price tracker. This is an initiative of the Market Observatory of the Centre for Competition, Regulation and Economic Development, at the University of Johannesburg, and its partners. It summarises key trends in prices in East and Southern Africa (ESA) for selected staple food products, focusing on highlighted areas. Please also see the [previous trackers](#).

In this issue of the price tracker, we focus on understanding fair market prices in the context of trade. In addition, we look at the flow of prices from maize and soybean to animal feed prices in Zambia.

Africa's food systems are fragile and urgently need to become more resilient. This requires a combination of measures to increase production and value addition, improve productivity and ensure sustainability. The conflict between Russia and Ukraine is having a significant impact on market outcomes and trade globally. Therefore, it is critical that we continue to track the effect it has on markets by tracking prices of food commodities across the ESA region.

Key developments:

- In spite of the Ukraine war's effect on world prices, in ESA regional developments drive prices, highlighting the importance of regional value chains.
- Prices have been converging with lower maize prices in Kenya and for soybeans in Malawi, Kenya and Tanzania.
- Ongoing effects of drought in Kenya are being mitigated by the coming good harvests and exports from other countries.
- There are higher prices in producing areas of Zambia and south-west Tanzania reflecting exports to the region.
- The war in Russia and Ukraine is expected to have medium and long-term effects on future ESA production via high fertilizer prices.

Maize prices

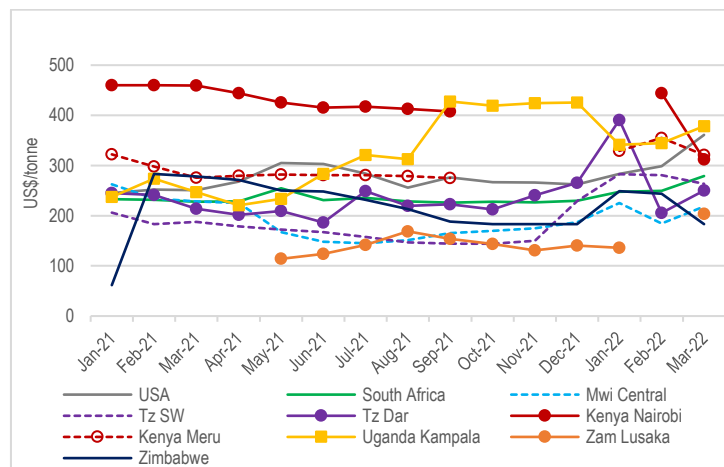
As the harvest season begins, prices across the region, with the exception of Uganda, have dipped below international prices (represented by the USA export price) (Figure 1). Notwithstanding the ongoing drought in Kenya, the price of maize in Nairobi dropped to levels around US\$320/t in March 2022. This is in line with sales from producing areas such as Meru in Kenya and exports from Zambia and Malawi, as indicated in interviews. Maize prices in Dar es Salaam are in line with prices in south-west Tanzania at US\$250/t. Zambia and Malawi prices have increased in line with regional export opportunities to US\$200/t.

Meanwhile, international and South African prices have risen due to pressures resulting from the conflict between Russia and Ukraine. The price in the USA is at the highest level on record since 1990¹ at US\$360/t while South Africa trends towards US\$300/t.

At the end of 2021, pre-planting producer prices were set in Zimbabwe by the Grain Marketing Board. In local currency terms, this represented an increase of 83% from Zim\$32 000 in 2021 to Zim\$58 553 in 2022. However, when the changes in the parallel exchange rate are taken into account (quoted on zimrates.com),

the maize price is around US\$180/t, similar to the second half of 2021, as well as being close to Malawi and Zambia prices.

Figure 1. Maize prices, ESA and international

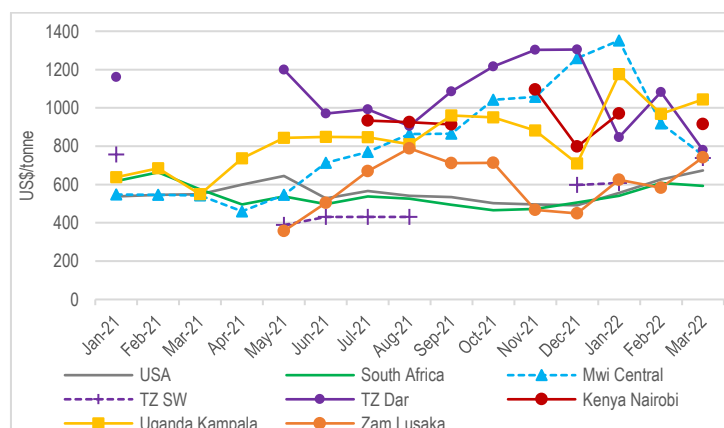


Notes: based on price tracker data from multiple sources

Soybean prices

Soybean prices in Dar es Salaam and Nairobi have fallen substantially from levels in late 2021 and more in line with intra-regional exports (Figure 2). Dar es Salaam prices are below US\$800/t for the first time in more than 12 months. This is in line with prices in south-west Tanzania at US\$740/t and exports from Zambia. However, prices in Uganda remain very high, just above US\$1000/t.

Figure 2. Soybean prices, ESA and international



Source: Tanzania and Zambia are from app users; Kenya, Uganda from RATTIN; Malawi from IFPRI; South Africa is SA Futures Exchange price; USA is fob prices from SAGIS.

The Malawi prices have continued their remarkable adjustment for this surplus producing country. The price in central Malawi fell to under US\$800/t in March, from over US\$1200/t in December 2021 and January 2022. Along with Zambia, Malawi soybean prices had been the lowest in the region at the last harvest in April/May 2021, and it is difficult to understand the drivers of the massive increases over the next eight months.

In advance of the 2022 harvest, prices are being offered for May 2022 of US\$600/t in Malawi and US\$500/t in Zambia. These are relatively close to international prices of US\$600-700/t in the USA and South Africa. However, they need to be viewed in the context

¹ <https://www.fao.org/worldfoodsituation/foodpricesindex/en/>

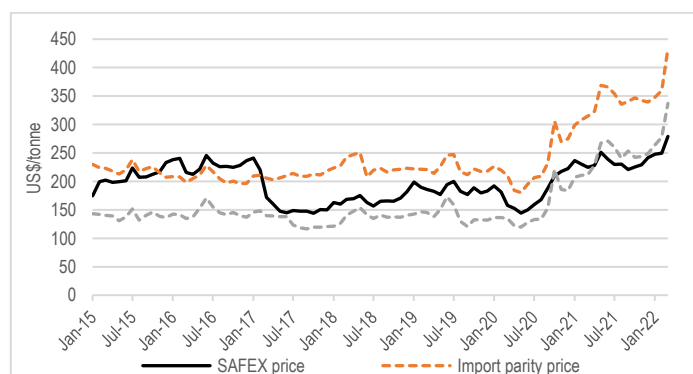
of the region as a whole remaining a net importer, implying market clearing prices at levels above international prices.

Competitive market expectations

In competitive markets for traded goods, prices should not be higher than the import parity price (international prices plus transport costs) or lower than the export parity price (international prices less transport costs). Competition in trading and supply across borders drives these outcomes. If the region as a whole is a net exporter (as is the case for maize in most years) then prices should be lower than international prices, in line with realized net export prices, and with regional variations. If the region as a whole is a net importer (as it is for soybeans) then prices will be higher than international prices. The huge variations in prices over time and geographies differ from what would be expected from effective competitive markets.

Competitive market expectations are illustrated in movements in South African exchange maize prices (on SAFEX). South Africa is a net exporter in almost all years and, as such, prices tend to export parity, which is the international price less the transport costs to ship it from the main inland producing area (Figure 3). In 2015/16 the historic drought conditions meant the price increased up to and above the import parity benchmark as there were constraints in sourcing the imports required. In 2019 poor rainfall again saw prices increase again above the export parity prices as, while South African production was sufficient for local needs, demand from neighbouring countries also had to be factored in.

Figure 3. South African exchange (SAFEX) maize prices against import parity and export parity benchmarks



Source: Import & export parity prices from SAGIS, SAFEX price from Grain SA

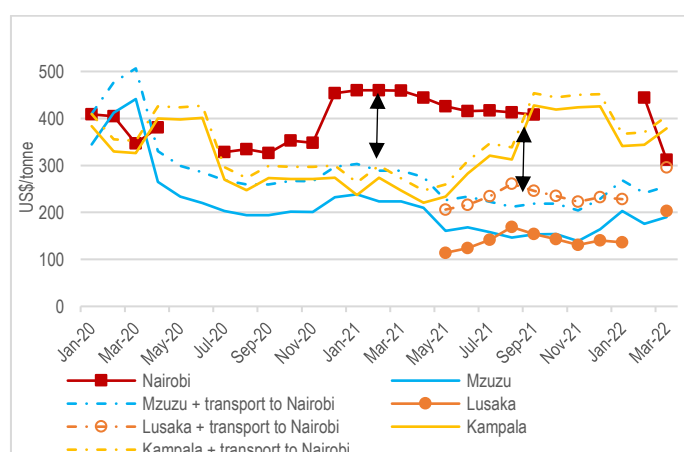
In 2021, very good harvests in South Africa meant prices fell just below the export prices to international markets, even as international prices were increasing. If prices were at import parity levels even while there were net exports, this would likely reflect market manipulation to constrain local supplies, such as by a traders' cartel. This manipulation did occur in 2002 when speculation on the part of large traders created an artificial shortage. Only because there was a lack of competition given the concentrated nature of the traders in the country was this possible. As there were net exports, competing suppliers should have been willing to sell at a price which is better than the export alternative.

Within East and Southern Africa there are clear areas of demand that need to be met by imports from surplus producing regions. We consider Nairobi maize prices, as an area of demand, compared to the prices to deliver products under competitive cross-border export trading from different locations where supply has been strong. These include Malawi, Zambia and Uganda.

Good rains in southern Africa and central eastern Africa have seen strong production and low prices at around US\$140-160/t in Zambia and Malawi in 2021. Assuming no restrictions on trade, this maize can be exported to areas of demand such as in Kenya.

The Kenyan demand has been exacerbated by the ongoing drought conditions in parts of the country. Our assessment shows that the Nairobi prices have been much higher than they should have been when compared against the possible regional sources of supply plus transport costs. In late 2020 and the first half of 2021, prices were around US\$160-200/t higher (or 80% more) than reasonable prices delivered from Uganda, as well as Malawi or Zambia (Figure 4). When Uganda prices increased in the second half of 2021, in an integrated region there could have been sourcing from further afield. The high Kenyan prices were initially due to restrictions on imports because of quality concerns. However, these restrictions were relaxed.

Figure 4. Maize prices in Nairobi against market clearing supplies from Malawi (Mzuzu), Zambia (Lusaka) and Uganda (Kampala)



Source: Price tracker data and own calculations

In March 2022, the maize price in Nairobi is in line with what we would expect to be fair prices as it dropped to around US\$300/t while the price in Lusaka plus the transport costs to Nairobi indicates a market-clearing price of US\$295/t. Interviews have indicated that traders have now been transporting from these countries to Nairobi and thus ameliorating price pressures there.

The tracking and analysis of prices for key commodities enables us to identify concerns in market developments over time and across locations, including across borders. This points to changes relating to seasons, the impacts of market information and the effects of short-term trade restrictions.

Animal feed prices in Zambia

Soybean is predominantly used in animal feed production and can be obtained from milling as soy meal or as a co-product of oilcake for feed from the crushing process to extract the vegetable oil. The price of soybean is therefore a critical factor in the cost of animal feed production and thereby in the competitiveness of downstream activities such as poultry and fish farming. Animal feed typically, by weight, consists of 60% of maize and 25-30% of soya. As soybean prices are more than double maize prices, in

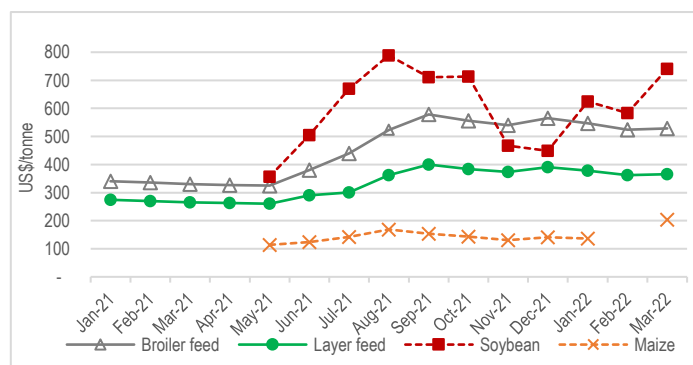
value terms soybeans and maize are similar costs in animal feed.² For example, in Zambia, the current maize price is US\$200/t and for soybean is US\$740/t, meaning soybeans are the more important cost.

As soybean production has increased in countries such as Zambia this supports feed production and the growth of the value chains to poultry and fish farming. The demand for soybeans also benefits farmers, with the production of soybeans in Zambia being by both commercial farmers and smallholder farmers.³ Smallholder soybeans marketing is reliant on product aggregation to minimize on transport costs. On the other hand, commercial farmers have a well-structured market that may sometimes involve forward contracts and preferential procurement arrangements.

Zambian production has also grown from a very low base and, given its demand (at around 200-250 thousand tonnes per annum), it has moved from being a net importer to be a net exporter.⁴ Zambia exports soybean and oilcake to Zimbabwe in the region, as well as Kenya, Malawi, South Africa and Tanzania.⁵

We can trace the linkages from soybean and maize prices through to feed prices. Following the harvest in April/May 2021, soybean prices in Zambia increased sharply from May to August 2021 (Figure 5). This impacted on feed prices, which increased by 54% for layer feed and 78% for broiler feed, from May to September. However, prices decreased as the government imposed an export ban in August but feed prices only decreased marginally. When the ban was lifted in December 2021, soybean prices began to increase in response to the opportunity to export.

Figure 5. Animal feed, maize and soybean prices in Zambia



Source: Grain prices from multiple sources, including the price tracker and Newgrowco in March. Feed prices from the Poultry Association of Zambia

Given the 25-30% share by mass of soybeans in feed, the feed price increases appear more than would be expected. However, maize prices were also increasing over the period and the price of vitamins and other ingredients would need to be considered. This indicates the importance of considering prices along value chains as well as at each level.

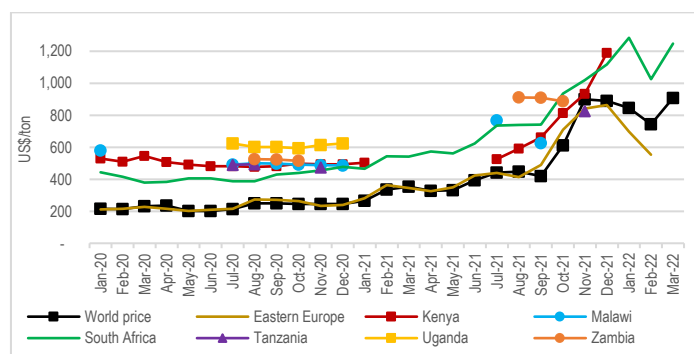
Fertilizer prices

The huge increases in fertiliser prices, being sustained by the Ukraine war, are going to affect production in the next growing

season. Both the international and South African price of Urea increased in March 2022, following a drop in preceding months (Figure 6). This increase came as a result of the Russia-Ukraine war.

Farmers will reduce fertilizer usage in response to higher prices and this will affect yields. Soybeans require less fertilizer than crops such as maize and so the impact will also be lessened. The impacts will also be lessened to the extent that governments subsidize the fertilizer price, as has been the practice to boost crop production.⁶ In Africa, the AfDB continues to assist agro-dealers and farmers with finance and access to fertilizer through the Africa Fertilizer Financing Mechanism.⁷ This year, the AfDB and partners aim to mobilise US\$1 billion to boost the production of wheat and other crops in Africa.⁸ This mechanism will have an impact on farming and production in the region in the long-term.

Figure 6. Urea prices



Source: World price is from the World Bank. Eastern Europe & South Africa prices are from Grain SA. Kenya and Uganda are from AfricaFertilizer. Malawi, Tanzania and Zambia are from AfricaFertilizer and from POKET app users.

Urgent measures are required to support agricultural markets in the face of the current war as well as the climate emergency. Making the changes necessary to deal with these challenges requires a regional approach given the differing anticipated impacts within and across different countries, and for groups of producers. Urgent interventions can be made to ensure African food value chains remain resilient and build capabilities to be better positioned in global agricultural markets. These include improving water management, storage and logistics, supporting farmers and monitoring market developments. The market observatory has an important role to play in this.

A Market Observatory App

A Market Observatory App has now been launched for crowd-sourcing data, available for download on the Google play store (POKET, only available on android devices), please contact gnsomba@uj.ac.za or +27 65 9965936 for the relevant country code.

Centre for Competition, Regulation and Economic Development, University of Johannesburg; www.competition.org.za.

Email: gnsomba@uj.ac.za

² Nsomba, G., Roberts, S. and Tshabalala, N. (2021). Assessing agriculture markets in Eastern and Southern Africa: Implications for inclusion, climate change and the case for a market observatory. CCRED Working Paper 2021/07

³ <https://www.iapri.org.zm/wp-content/uploads/2021/03/wp157.pdf>

⁴ Bell, J., J. Fleming, S. Roberts, T. Vilakazi (2020). Maize and Soybeans Markets in the Southern and East African Regions: The Case for a Regional Market Observatory. CCRED Working Paper 2020/2

⁵ Nsomba, G., Roberts, S. and Tshabalala, N. (2021). Assessing agriculture markets in Eastern and Southern Africa: Implications for inclusion, climate change and the case for a market observatory. CCRED Working Paper 2021/07

⁶ <https://www.gatesfoundation.org/ideas/articles/war-in-ukraine-and-global-food-crisis>

⁷ <https://www.afdb.org/en/news-and-events/africa-fertilizer-financing-mechanism-governing-council-calls-more-private-sector-financing-fertilizer-sector-50695>

⁸ <https://www.aljazeera.com/features/2022/3/29/afdb-president-ukraine-could-trigger-a-food-crisis-in-africa>