

## 2022 maize and soybean production in the ESA region

August 2022

Welcome to the monthly food price tracker. This is an initiative of the African Market Observatory (AMO) 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 look at the latest crop estimates in the region and the current impact of the soaring fertilizer prices in the second half of 2021.

### Key developments:

- Food prices in Kenya reached a [five-year high](#), accelerated by climate shocks
- Maize prices in Kenya have increased by over 120% since January 2022 to over US\$700/t in August, with some reports indicating prices of US\$900
- The Kenyan government launched a [US\\$66.5 million](#) national maize flour subsidy for four weeks from 22 July. However, due to [insufficient funds](#) the program was not fully implemented.
- Seed prices, including for maize, have [risen in Uganda](#), worsening the situation for farmers as government recently suspended the distribution of free seeds to farmers
- Tanzania [froze grain export permits](#) to Kenyans resulting in maize scarcity
- Africa faces at least 30 million metric tons of [food shortage](#) – particularly wheat, maize and soybean imported from Russia and Ukraine
- In response to severe drought affecting 4.1 million Kenyans, the IRC with the Kenya Red Cross Society have been distributing [relief food and animal feed](#) – 12 000 people received food and 30 000 received livestock feed.

### Maize and soybean production in the region

It is estimated that [65% of the world's uncultivated](#), arable land is in Africa and this implies that Africa cannot only feed itself but also the people beyond itself. Africa has the potential and key to unlocking its agricultural value, including through effective cross-border trade. However, while rich in land and full of potential, a lot of African countries still battle famine and/or food insecurity. The Horn of Africa region has been in urgent need of aid as it has been hit [by a drought](#).

The food insecurity issue in the region is exacerbated by the soaring fertilizer prices from the second half of 2021 (Figure 6). This has seen many countries in the region reducing planting of crops which are more intensive users of fertilizer. Fertilizer price hikes of over [300%](#) have made it difficult for African farmers to grow enough produce – wheat, maize, rice and other crops. This has been compounded by the effects of extreme weather.

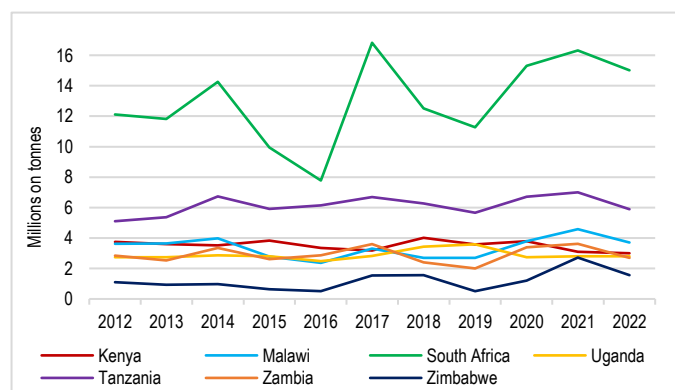
[Maize is a major agricultural crop across ESA](#) and is produced by smaller farmers in most of the countries, across large areas of land. Maize production data in the selected countries shows that maize production has increased from 30 million tons to 42 million tons over the 2010 to 2021 period (Figure 1).

With the 2022 harvest now in, the production for the year indicates declines in maize production in most of the countries in the region. Estimates project a uniform decline in the region. Aggregate maize production for the selected countries reduced from 40.1 million tons in 2021 to 34.6 million tons in 2022, a 12% reduction.

All the countries in the region are projected to have maize produce decline in the 2022 season, except for Uganda which is projected to reap the same quantity of maize in 2022 as they did in 2021. Zimbabwe records the highest reduction in maize produce from 2021 at 43%, Zambia at 25%, Malawi with a 19% reduction, Tanzania with 16% and Kenya and Malawi with 3% and 8%, respectively.

Among other things, this is partly due to high fertilizer prices in late 2021. The farmers' response to high fertilizer prices was planting less area which led to lower maize yields for the 2022 harvest. Maize production has typically used fertilizer as a result of its promotion to increase yields. High fertilizer prices mean high input costs for maize and have seen farmers in the region shift production from maize to other crops, such as soybean. The lower maize production places further strain on regional supply.

Figure 1. Maize production in the region

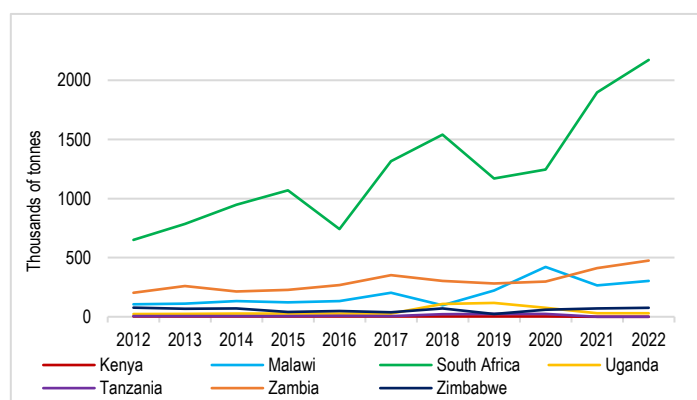


Source: FAOSTAT data for 2012 to 2020 and IPAD, USDA data for 2021 and 2022. Malawi data is from the Ministry of Trade in Malawi for 2012-2022.

Although maize production has declined in 2022, South Africa still has a very large surplus over local demand. Other countries such as Zambia and Tanzania have surpluses from the previous season and could export to other countries within the region. Even though Zambia's maize production for the 2022 season declined from 3.6 million tons in the prior season to 2.7 million tons, due to surpluses from the previous seasons Zambia can meet domestic demand and remains with a surplus. However, regional markets are not working well, so regional trade, even when it is the most crucial, is not happening effectively. For example, there are very large variances in prices between Zambia and Kenya (Figure 3).

Soybean production is projected to see huge gains in the 2022 season as it is relatively more attractive. Farmers have opted to move some of their area planted from maize to soybean as soybean requires less fertilizer. Soybean production in the selected countries in the region increased by 14% between 2021 to 2022, from 2.6 million tons to 3.1 million tons. In Malawi and South Africa, soybean production is projected to increase by 15% from the 2021 season to 2022, with an increase by 16% in Zambia, and an increase of 6% in Zimbabwe.

**Figure 2. Soybean production in the region**



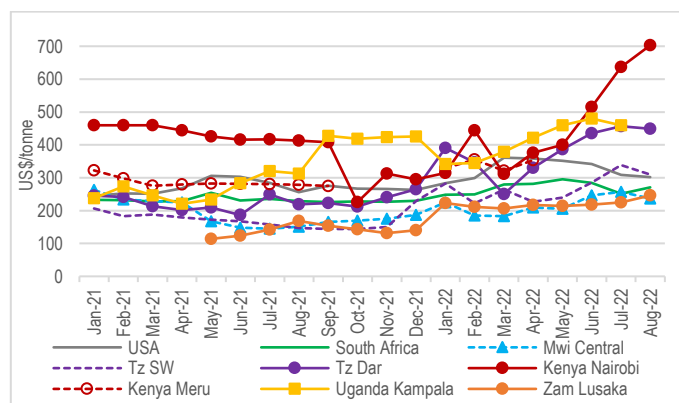
Source: FAOSTAT data for 2012 to 2020 and IPAD, USDA data for 2021 and 2022. Malawi data is from the Ministry of Trade in Malawi for 2012-2022.

Zambia’s soybean production increased from 411 115 tons in 2021 to 475 353, the highest soybean output ever recorded in Zambia. Zambia has been the [net exporter of soybean since 2013](#), and is set to [export 21% of their soybean harvest](#). Zimbabwe, which has seen a 6% increase in soybean production in 2022, remains [a net importer](#). The area under soybean planting has [doubled in South Africa over the decade spanning between 2010 and 2020](#) and 120% increase in soybean production has been recorded. The outcome of this has been increases in oilcake and soy oil production, which is helping the country in gradual import replacement.

**Maize prices**

Maize prices continue to show huge margins between producing and consuming areas (Figure 3). In August, prices in Kenya soared above US\$700, with some prices reported to be as high as US\$900. Meanwhile, farmers in Zambia and Malawi continue to receive relatively low prices and poor returns as prices remain at levels of US\$246 and US\$237 in Lusaka, Zambia and Malawi Central, respectively. Prices in Southern Malawi, however, were slightly higher at US\$311. Prices in Tanzania dropped slightly, although there is still a significantly wide gap between prices in Dar es Salaam (US\$450) and south west Tanzania (US\$310), far in excess of reasonable transport costs.

**Figure 3. Maize prices, ESA and international**



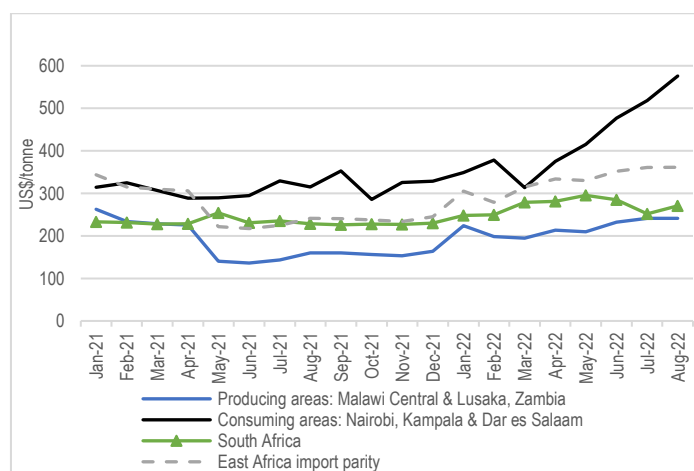
Source: based on price tracker data from multiple sources; South Africa is SA Futures Exchange price; USA is fob prices from SAGIS.

An assessment by the AMO of maize prices since the beginning of last year illustrates different dynamics at different points in time but ultimately point to lack of regional integration.

Price in the consuming cities of Nairobi, Kampala and Dar es Salaam in the first part of 2021 were in line with the costs of importing (East Africa import parity prices) from producing areas in Zambia and Malawi. At the harvest in May 2021, prices in the producing areas of Malawi Central and Lusaka fell well below \$200/t, with farmers getting very low returns, substantially lower also than in South Africa. This persisted over the rest of 2021.

After a brief dip in March 2022, the prices have climbed even higher with large excess margins of \$150/t over the import prices after taking into account higher transport costs due to more expensive fuel. Our analysis indicates that prices in August should be 30-40% lower in these East African cities than they were, while better prices for farmers in countries such as Zambia and Tanzania would have assisted with the higher fertilizer prices and supported stronger levels of production.

**Figure 4. Maize prices in producing and consuming areas**



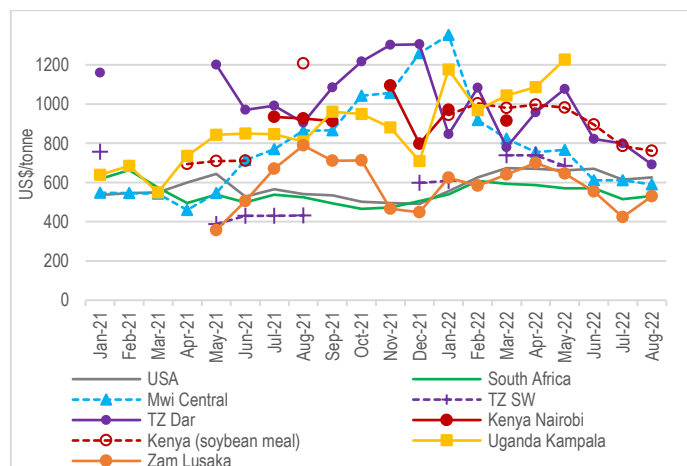
Source: based on African Market Observatory price tracker data from multiple sources

South African prices, which are used as a benchmark for international prices, are generally at levels received for net exports into international markets, as long as there have been good rains.

**Soybean prices**

After trending downwards since April, prices in Zambia increased to US\$530, although some app users reported prices as high as US\$610. Prices in Central Malawi dropped slightly to US\$590. Dar es Salaam prices continued to decrease from their high levels in May to US\$690 in August and soybean meal prices in Kenya have been declining towards Zambia and Malawi soybean prices since April 2022. These indicate some convergence, with reasonable transport costs as the differences between prices in the areas of demand and in the areas of supply.

**Figure 5. Soybean prices, ESA and international**



Source: based on price tracker data from multiple sources. South Africa is SA Futures Exchange price; USA is fob prices from SAGIS.

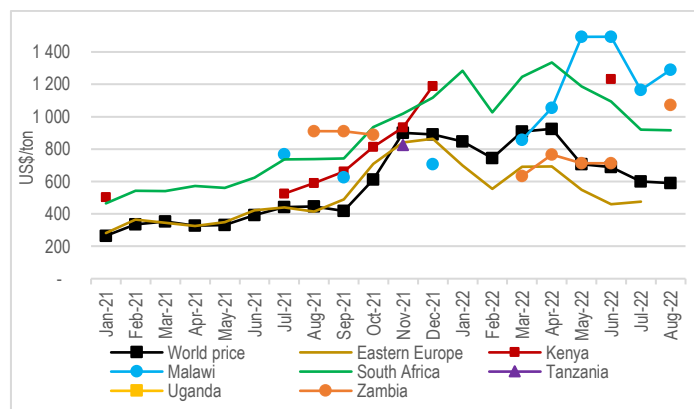
**Fertilizer prices**

International fertilizer production has been negatively impacted by production cuts by one of the world's leading chemical companies. Yara International reduced production, bringing [Yara's European capacity utilization for ammonia to 35%](#). Ammonia is the main ingredient in nitrogen fertilizers. This follows production cuts by other fertilizer companies in the UK, Lithuania, Hungary and Poland due to increasing natural gas prices. These production cuts could potentially impact agricultural production and prices when the planting season begins in the region over the next few months.

Fertilizer prices in Malawi increased in August (Figure 4) as the country faces a shortage of foreign exchange reserves which is affecting fertilizer imports. President Lazarus Chakwera has committed to taking action to mitigate the significant increase in fertilizer prices in Malawi over the past year. Approximately [80% of farmers in Malawi](#) can no longer afford fertilizer.

Meanwhile, international prices have declined from their high levels earlier this year while the margins with prices in ESA remain higher than transport costs. The wide gaps between fertilizer prices in the region and international fertilizer prices point to issues within the fertilizer supply chain. There are concerns with the [increase in market concentration](#) due to takeovers of regional producers by multinationals and mergers between global producers.

**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.

**Market Observatory App**

For crowd-sourcing data, we use a Market Observatory App which is available for download on the Google play store (POKET, only available on android devices), please contact [gnsomba@uj.ac.za](mailto: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](http://www.competition.org.za).

African Market Observatory email address: [info.amo@uj.ac.za](mailto:info.amo@uj.ac.za).

If you are interested in partnering with us, please get in touch with us at [info.amo@uj.ac.za](mailto:info.amo@uj.ac.za).