Price tracker: key food prices

May 2021

DRAFT 2 FOR PILOT

Welcome to an updated second 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.

Each month we will provide a short summary of key trends in prices for selected staple food products. We will start with just a few products and countries and aim to expand over time.

The price tracker is motivated by the need for greater transparency on prices on the ground to smaller market participants. Small producers and agri-businesses are at the heart of growing production and value, yet prices are often not transparent and are also very volatile.

African countries face the twin challenges of growing agricultural production to meet demand while adapting to climate change. Covid-19 has highlighted the importance of resilient supply chains.

It is not widely appreciated that there is huge potential for expanded food production across many African countries. There are good soils and water availability. With fair market prices and support for investments in areas including production, storage, and processing, the massive potential can be realised.

The market observatory collects and disseminates data to help assess if prices are fair and markets are working well for small producers, within and across borders.

In this second tracker we add rice to the focus on maize and soybeans in East and Southern Africa (ESA), extend to Kenya, Malawi, Tanzania, Zambia, Zimbabwe and Uganda, and focus on the links from soybean and maize to animal feed, as a key input to poultry and fish farming.

Key international developments:

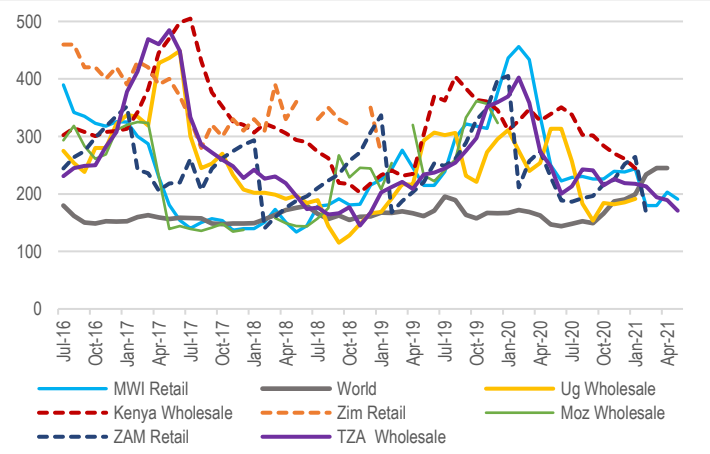
- International maize and soybean prices continue to rise, with further increases of 30% and 14% respectively from end March to mid-May 2021.
- There are huge differences in prices across ESA with low prices in some regions where supply is strong, and very high in others, reflecting lack of effective regional integration.
- Chinese demand for animal feed continues to be the main driver of increased demand for maize and soybeans.
- Lower stock estimations for maize in the US, and the drought in Brazil and Argentina is raising concern on future supply.
- In contrast, global rice prices are currently decreasing despite the third wave of Covid-19 in India.
- Covid-19 is once again raising some food security concerns, with countries such as Ukraine imposing export restrictions.

Maize prices

While maize is mainly for human consumption in many African countries, yellow maize is predominantly used for animal feed. Animal feed accounts for more than half of domestic maize demand globally. Around 13% of all maize globally is exported with the biggest producer and exporter being the USA. The second biggest producer, China, is also the biggest importer given the size of its demand, and it runs a persistent trade deficit.

Reflecting its importance in the ESA region, governments intervene quite widely, however, this has not meant stable prices. Indeed, one of the striking features is just how much volatility there is over time in maize prices and the huge difference in prices between countries which share common borders and are in free trade areas (Figure 1). In 2017 prices in Kenya, Tanzania and Uganda increased above $400/t while prices in Malawi and Zambia fell to below $200/t. Poor weather saw prices increase sharply again at the end of 2019, including with tropical cyclones in Malawi and Mozambique.

Figure 1. Maize prices, US$/tonne

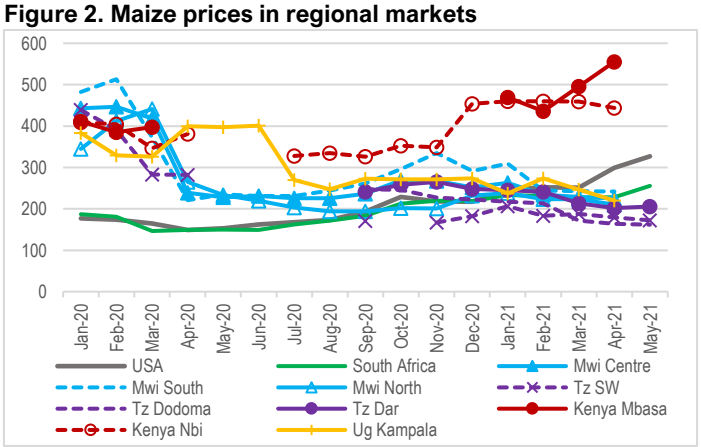


Sources: WFP's Vulnerability Analysis & Mapping (VAM); World from World Bank.
Notes: wholesale prices not available for Malawi and Zambia; Mwi – Malawi; Ug – Uganda; Zim – Zimbabwe; Zam - Zambia.

International maize prices have tended to move between $150-$200/t. However, in late 2020 they increased, surpassing the $200/t mark in October 2020 and the benchmark US (free-on-board Gulf of Mexico) price jumped to $327/t in the 2nd week of May 2021 (Figure 2). International prices have not been this high since drought in America and Europe in 2012/13, coupled with increased demand from biofuels at the time.

- Prices in southern Africa have been held in check by good harvests, including in Zambia, Zimbabwe and Malawi. However, in Kenya they are around $400-600/t (Figure 2).
- Huge differences reflect lack of effective regional integration – prices in Uganda, Malawi and Zambia are below $300/t while in Kenya they are above $500/t (as government has restricted imports due to concerns about aflatoxin).
- Prices within countries such as Malawi and Tanzania also reflect large differences at times, in excess of transport costs.

Figure 2. Maize prices in regional markets



Notes: based on price tracker data from multiple sources

In mid-May 2021, in central Zambia, prices are as low as $140/t and even $101/t in the Copperbelt (Table 1). Intra-regional trade would improve returns to farmers, while dampening the high

prices elsewhere. There are also very big differences in the maizemeal prices being reported by users, which need to be understood better.

Table 1. Prices, mid-May, from users, US$/t

	Maize	Maize meal
Kenya Nairobi		
Malawi North	228	506
Malawi Central	186	627
Malawi South	177	506
Tanz Iringa/Mbeya	209	
Tanz Dodoma (Kibaigwa)	155	
Tanzania Dar	211	
Zambia Eastern	181	200
Zambia Central/Lka/Sern	140	200
Zambia Copperbelt	101	
Zimbabwe Harare	378	597
Zimbabwe (parallel exch)	267	421
South Africa inland	256	

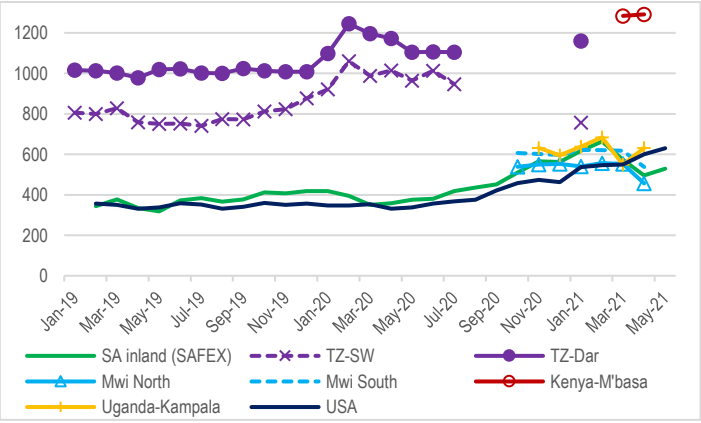
Soybean prices

Soybean is grown in tropical and subtropical climates and is one of the most valuable crops globally as an oilseed, feed for livestock and aquaculture, source of protein in human diets and as a biofuel. The global soybean market is driven by demand for the derivative products, through the crushing industry which extracts soy meal and oil. A massive 80% of global soybean demand is due to feed.

Soybeans are highly traded, with international trade accounting for more than 30% of soybean demand (which would be an even higher proportion if we included trade in derivative products, such as animal feed). The USA and Brazil lead global production, accounting for almost two-thirds of the total. Brazil is the largest exporter with supplies mainly going to meet the huge demand in China for animal feed for pork, poultry and fish farming, among others. China's demand for soybeans has driven increased prices.

International soybean prices have continued to increase to around $600/t on an export free-on-board basis from Brazil and the USA (Figure 3). This increase in prices is driven by the recovery of Chinese pork production after the outbreak of swine flu earlier last year. Although drought in 2020 and subsequent heavy rains during harvest had caused alarm regarding Brazil's harvest schedule earlier in the year, Brazil exports in March 2021 were up on the previous year.

Figure 3. Soybean prices, ESA and international



Source: Tanzania is from WFP(VAM) and from retail prices per kg; Kenya, Uganda from RATIN per tonne; Malawi from IFPRI, per kg. S Africa is SA Futures Exchange price. USA is fob prices from SAGIS.

However, there are still concerns about the 2021/22 global supply of soybeans as the projections for production in the USA are lower than anticipated by market analysts. The persistent dry weather conditions in Argentina and Brazil are also cause for concern and may result in tighter supply of grains in the year ahead.

Prices in southern Africa have not increased to the same extent. South Africa's soybean prices switched from March to drop below USA and Brazil levels (Figure 3). While Malawi prices have also remained below $600/t, in Zambia good production has seen prices currently below $400/t (Table 2). If there was efficient transport and competitive traders then meeting South African demand would imply higher prices for Zambian farmers in the order of $470/t.

Meanwhile prices in Dar es Salaam and Mombasa appear inflated at $1000-1200/t. Trade from Malawi and Uganda could realise better prices for farmers in those countries and more affordable soybean for fish farmers and poultry producers in Kenya and Tanzania.

Table 2. Prices, mid-May, from users, (US$/t)

	Soybean	Soymeal	Rice
Malawi North	578		759
Malawi Central	567		870
Malawi South			
Tanz Iringa	388		776
Tanz Dodoma			
Tanzania Dar	1200		712
Uganda			820
Zambia Eastern	429		1200
Zambia Central/Lka/Sern	393		1200
Zambia Copperbelt	357		
Zimbabwe Harare	567		
Zimbabwe (parallel exch)	400		
South Africa inland	529		

Aside from Kenya, the regional prices in recent months suggest that a turning point may have been reached where strong local supply is supporting more stable prices. While international prices are being pulled upwards by Chinese demand, and supply constraints including in South and North America associated with weather, prices in most ESA countries have not increased by as much meaning that downstream industries are more competitive.

As well as being good news for consumers, it is also good for those using soybeans and maize for animal feed, producing fish and poultry which has to compete with frozen imports of these products.

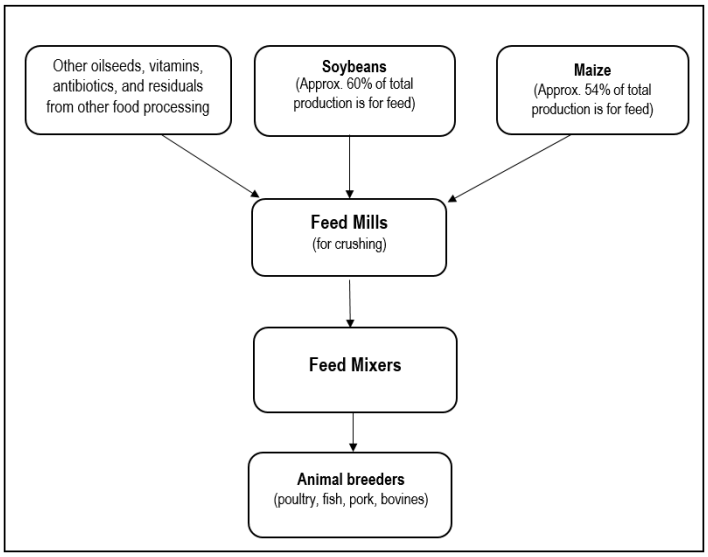
Soybean and maize to animal feed

Demand from animal feed drives soybean and maize demand internationally meaning it is crucial to assess markets at different levels through the value chains. Soybeans are the 'green gold' as the key source of protein in much of animal feed around the world.

At the upstream level, maize, soybeans, vitamins and other products are sourced by feed mills as the primary ingredients. The ingredients are then crushed in the milling facilities to produce animal feed. Typically, maize is the main energy ingredient for animal feeds whilst soybeans are a source of protein. (Figure 4)

The crushed soybean is combined in feed mixing facilities with feed typically comprises 60% of maize, 25-30% of soya, and vitamins/supplements. However, these ratios can differ depending on the class and usage of the feed. On average, globally about 713mn tonnes of maize and 313mn tonnes of soybeans are used globally in feed each year. As soybean prices are roughly double maize prices, in value terms they are roughly the same in the composition of feed.

Figure 4. Animal feed value chain



Source: derived from Centre for Competition, Regulation and Economic Development research (Goga & Bosiu, 2019; Ncube et al., 2017).

The prices of soybeans, maize and the meals are therefore critical in the cost competitiveness of poultry and fish farmers. High soybean prices undermine local farmers and has seen African countries being large net importers of frozen fish and chicken. Animal feed comprises approximately 70% of the input cost in poultry, which is one of the cheapest sources of animal-based protein.[1]

The African continent had a negative annual trade balance of about US$1.3bn per year in poultry over the past decade and an annual deficit of over US$2bn in animal feed. South Africa alone imports around 15-20% of its poultry consumption (which, in effect, represents imports of soybean and maize). Coupled with the net imports of soybean and oilcake (together amounting to a deficit of US$2.5bn in 2020), used predominantly for animal feed, this massive trade deficit is an opportunity for expanded agricultural production in the region.

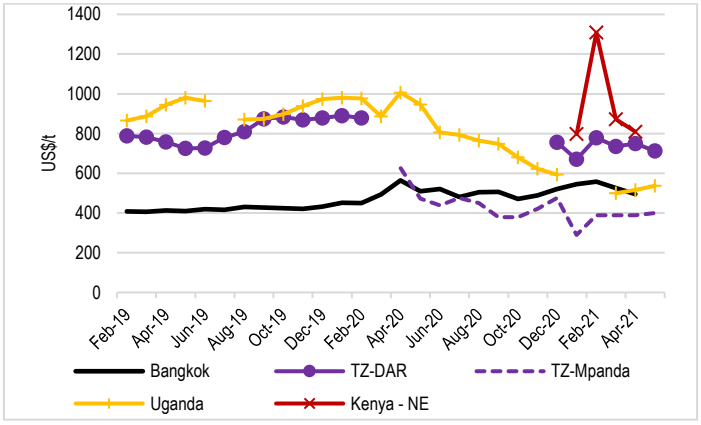
With effective value chains and integrated markets across ESA, farmers can be better connected with producers to meet demand in the major cities. This is one of the main growth and regional integration challenges facing the continent. Addressing it can contribute to African countries moving to being net food exporters rather than being import dependent. Overall, Africa has run an average food trade deficit of about $30bn a year over the last decade (FAOSTAT).

Rice prices

Rice is the staple food for over half of the world's population, providing 50% of the dietary caloric supply for millions living in poverty in Asia. It is a food staple in many African countries and is critical for food security. The main producers of rice globally include China and India, which account for approximately half of global production of around 500mn tonnes.

Despite climate change impacts and the Covid-19 pandemic, the rice market has been resilient. The international price of rice did record an increase prior to the pandemic following a severe drought in Thailand in 2019, to reach the highest price of $564/t (FOB Bangkok) in 7 years recorded in April 2020 (Figure 5). Thailand is the world's second-largest exporter after India.

Figure 5. Rice prices



Source: Tanzania and Uganda is from WFP(VAM) wholesale prices per 100kg, and the Ministry of Agriculture in Tanzania wholesale prices per 100kg. Kenya is from WFP(VAM) retail prices per kg. Bangkok prices are fob from USDA.

During the pandemic, there was strong demand in the first half of 2020 as consumers stocked up on essentials. As such, importing countries stockpiled rice while exporters curbed shipments. Over the last two months, however, the international price of rice has decreased from $557/t in February 2021 to $495/t in April 2021. In addition, India's rice production and exports are expected to increase very substantially this year.

Most countries in ESA do not produce rice but instead rely heavily on imports. The exception is Tanzania which is sometime self-sufficient in rice production, for instance in 2013, 2015 and 2017 Tanzania's trade balance was positive. Tanzania also exports to other countries in the region such as Rwanda, Uganda and Kenya in some years. Prices in ESA have been around double the international prices (noting that data are poor, and include wholesale and, in some countries, retail mark-ups).

A market observatory

Covid-19 has pointed to the challenges of ensuring resilient regional value chains, reinforcing the impacts of climate change, already evident in extreme weather events. To ensure sustainable production and stable prices of key crops investment in support to farmers and in storage and logistics are essential.

The absence of reliable price data at the wholesale and producer level means that large traders are able to take advantage of market volatility and the weak bargaining position of smaller market participants, whether as sellers or buyers. Competition authorities have also identified concerns around opportunistic price gouging in Covid-19. There have been concerns about cartels, such as identified by the CCPC in Zambia with regard to fish fingerlings and poultry.

A market observatory is an essential part of realizing the potential for sustainable food systems in East and Southern Africa which work to the benefit of smaller producers and consumers.

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[1] Goga, S. and T. Bosiu (2019) 'Governance of poultry value chains: a comparative perspective on developing capabilities in South Africa and Brazil', CCRED WP, 19/2019.