

South Africa's food security conditions

October 16 marked World Food Day, commemorating the founding of the United Nations Food and Agriculture Organization in 1945. Across the world, this day offers an opportunity for countries to assess their food security conditions and efforts to boost agricultural production. One of the measures that some often use to evaluate the food security condition of each country relative to the world is The Economist's Global Food Security Index, which Corteva sponsors. This latest index ranks South Africa at 59 out of 113 countries, an improvement from the 70th position in 2021. This places South Africa as the most food-secure country in the African continent, followed by Tunisia at 62nd.

This improvement is commendable. When looking at the index scoring's technical position, it becomes clear why South Africa's food security ranking has improved. South Africa's scoring came in at 61,4, up from 57,8 in 2021. This shows that South Africa's progress in the Global Food Security Index is not merely because other countries have regressed, particularly since the start of the Russia-Ukraine war, which increased global food prices but that there has been an actual improvement in its own underlying conditions.

The Global Food Security Index comprises four subindices, namely; (1) food affordability, (2) food availability, (3) food quality and safety, and (4) sustainability and adaption. The affordability and availability subindices carry a combined weighting of two-thirds of the total index. The affordability subindex includes the change in average food costs, agricultural trade, food safety net programs, and funding for food safety net programs. Meanwhile, the availability subindex includes the sufficiency of supply, agricultural infrastructure, and political and social barriers to food.

In 2022, South Africa experienced a mild deterioration in the food affordability subindex of 7 points. Meanwhile, the rest of the other subindices improved significantly. This decline in the affordability subindex is unsurprising as the country has witnessed a broad acceleration in consumer food price inflation since the start of the year. South Africa's consumer food price inflation averaged 8,0% y/y in the first eight months of 2022, from 6,5% over the same period in 2021. Still, what is worth emphasizing is that this challenge speaks to the rising cost of food in an environment of generally high unemployment.

Notably, the rise in food prices is a global phenomenon and not unique to South Africa. The dryness in South America, which negatively affected the crops in the 2021/22 production season, combined with growing demand for oilseeds and grains in China, and higher shipping costs, and recently, the Russia-Ukraine war, are some of the factors that have underpinned the global food price inflation surge. This, in turn, lifted prices in South Africa, despite the large domestic agricultural harvests in the past three seasons.

Nevertheless, global food prices have come off the levels we saw in the months immediately after Russia invaded Ukraine. For example, in September 2022, the FAO's Global Food Price Index was down by 1% from the previous month. This marked a sixth monthly decline and was underpinned by the deterioration in the prices of vegetable oils, sugar, meat and dairy products. This means that affordability for all countries has far improved from the third quarter of the year. Still, the current price levels are higher than in 2021. For example, the FAO's Global Food Price Index is still 6% up from September 2021. Another key point to

17 October 2022

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emphasize is that food prices were already elevated in 2021 due to disruptions in the supply chains, drought in South America, and increased demand for grains in China, amongst other factors.

A major issue to keep in mind when observing global agricultural indices, such as the Global Food Security Index, is that subjectivity can never be fully eliminated from the authors' judgment. Resource constraints can hinder objective data collection on the ground in each country, and they sometimes rely on blueprint models that might not be site specific. Sources of bias can stem from inconsistency in data quality, frequency and reliability across all countries. The weightings and rankings are also tricky because they must be tailored to suit different socio-economic contexts.

Still, the key message is that South Africa is in a better place regarding food security and leading the continent. This does not mean there should be complacency. South Africa will need to continue improving food security through expansion in agricultural production and job creation in various sectors of the economy. As we have previously stated, at a technical level, the ideas of expanding agriculture and agro-processing capacity to boost growth and job creation were well established as far back as in the National Development Plan in 2012. They were again highlighted in the 2019 National Treasury paper and, most recently, in the 2022 Agriculture and Agro-processing Master Plan.

These include expanding agricultural activity in the former homelands and government land, enhancing government-commodity organizations' partnerships in extension services, investment in the network industries (water, electricity and road infrastructure), port infrastructure, and state laboratories. Some interventions are more regulation-focused and therefore do not require significant capital spending by the government, although these still need institutional capacity building. Such regulatory interventions include modernizing regulations such as the Fertilizers, Farm Feeds, Seeds and Remedies Act 36 of 1947, with which many role players in agriculture continue to express dissatisfaction. The Agricultural Product Standards Act's enforcement to ensure that the Department of Agriculture, Land Reform, and Rural Development leads the implementation and does not assign it to third parties is another critical intervention that could be explored. Regarding regional focus, Limpopo, KwaZulu-Natal and the Eastern Cape, the most food-insecure provinces, also have vast tracts of underutilized land. These provinces should be a priority in agricultural development plans. With a commercial focus where conditions permit, agriculture improvement would help job creation and household food security in South Africa.

Weekly highlights

Kenya's decision to open the door to GM maize is a good omen

In the first week of October 2022, Kenya lifted the ban on the cultivation and importing of genetically modified (GM) white maize. This change is in response to growing food insecurity in the country. Kenya has struggled with drought in the recent past and remains a net importer of maize. Still, this adjustment doesn't mean the borders are automatically open, there will be an assessment of each GM trait by the Kenyan Biosafety Authority before actual imports and cultivation can occur. Assuming some of this scientific legwork has already been done, we could see imports start in the next few months or a year.

If the work can be completed in months, this could save Kenya some trouble. In the 2022/23 season, Kenya needs to import a substantial volume of maize, estimated at about 700 000 tonnes. This is roughly unchanged from the previous season, which also posted poor domestic production. In the 2021/22 season several sub-Saharan African countries, including Zambia, Tanzania, Zimbabwe and South Africa, had ample maize harvests. This made it easy

for them to meet Kenya's import needs, with Tanzania and Zambia leading the way. However, this year things are different. Tanzania's maize harvest is down roughly 16% year on year to 5.9-million tonnes due to sparse rainfall at the start of the season combined with armyworm infestations and reduced fertiliser usage in some regions because of prohibitively high prices.

The fall in production and firmer domestic consumption mean Tanzania will have less maize to export. Tanzania's available maize for export is about 100 000 tonnes. This is well below the previous season's exports of 800 000 tonnes, which saved Kenya when the country was most in need of maize. The country in the region with the most abundant supply of maize at present is South Africa, whose maize exports for the 2022/23 season are forecast at 3,5-million tonnes. South Africa struggled to access the Kenyan market for many years because of its ban on imports of GM products. But this change in regulations offers a new opportunity for South African maize exporters (provided the Kenyan Biosafety Authority gets its ducks in a row soon).

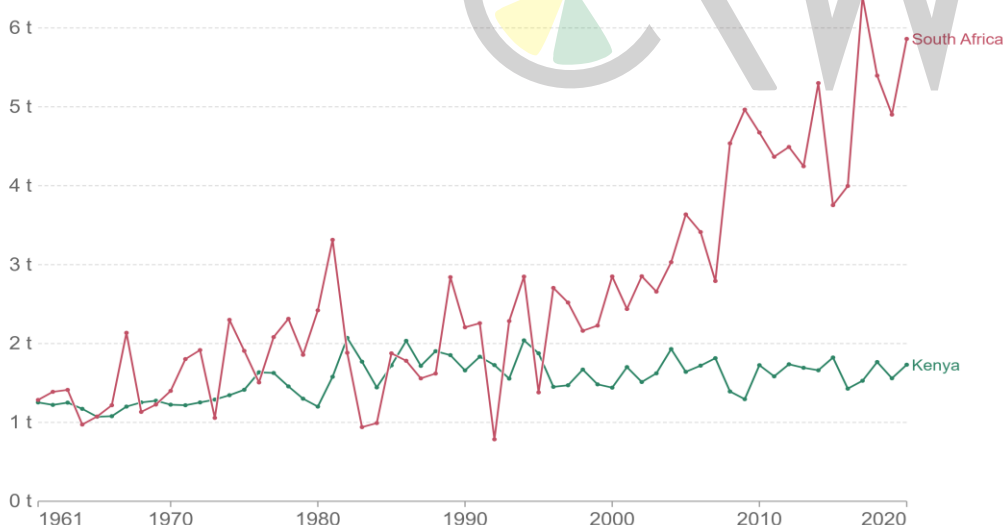
In future, the liberalisation of the Kenyan seed market should benefit its farmers in the same way as in South Africa, Brazil and the US. In fact, the sentiment towards the cultivation and importation of GM crops is changing worldwide, partly because of the global food crisis and countries' efforts to boost domestic production. For example, at the beginning of June the Chinese National Crop Variety Approval Committee released two standards that clear the path for cultivating GM crops. Now that this hurdle has been cleared, the commercialisation of GM crops in China is a real possibility. The EU is also reviewing its regulations on cultivating and importing GM crops, an essential step in a region that has long had an anti-GM stance.

South Africa was an early adopter of GM technologies. We began planting GM maize seeds in the 2001/2002 season. Before their introduction, average maize yields in South Africa were about 2,4 tonnes per hectare. This has increased to an average of 5,6 tonnes per hectare in the 2020/2021 production season. Meanwhile, the sub-Saharan African maize yields remain low, averaging below 2,0 tonnes per hectare. While yields are also influenced by improved germplasm (enabled by non-GM biotechnology) and improved low and no-till production methods (facilitated through herbicide-tolerant GM technology), other benefits include labour savings and reduced insecticide use, as well as enhanced weed and pest control. With Kenya struggling to meet its annual maize needs, using new technologies, GM seeds and other means should be an avenue to boost production in future.

Exhibit 1: Kenya and South Africa maize yields

Corn yields, 1961 to 2020

Average corn (maize) yields, measured in tonnes per hectare per year.



Source: UN Food and Agriculture Organization (FAO)

OurWorldInData.org/crop-yields • CC BY

Data releases this week

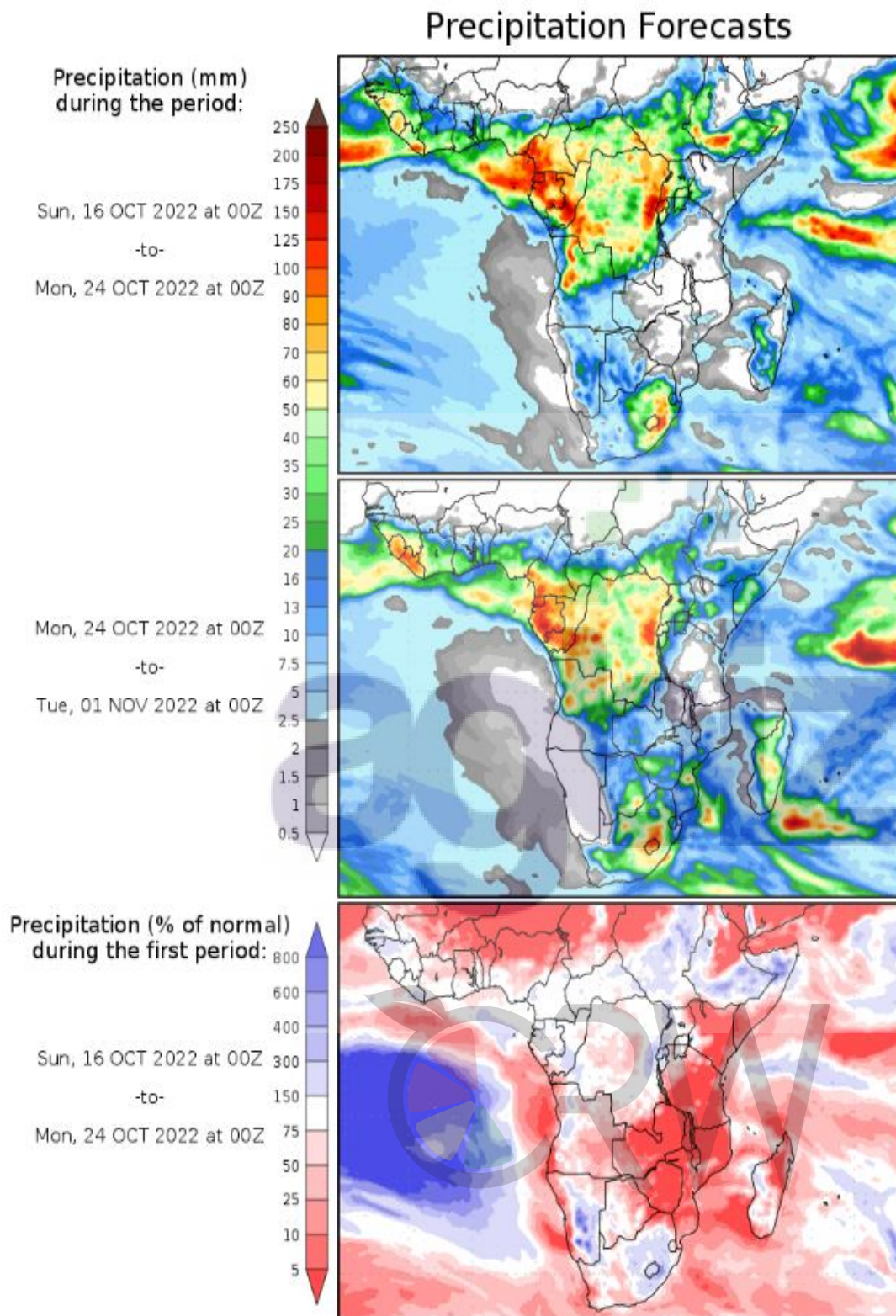
We start the week with a global focus, and today the United States Department of Agriculture (USDA) will publish its **Weekly US Crop Progress** data. In these data, our focus is on the US crop-growing conditions as the season progresses, and the harvest has started. This data also helps us form a view of the crop quality in the US. In the previous release, in the week of 09 October 2022, about 54% of the maize crop was rated good/excellent, which is the same level as the previous week. Importantly, this is down by 6% from the same week a year ago. This general decline is mainly explained by the drier weather conditions in some States over a few couple of months.

Moreover, about 31% of the crop had already been harvested, slightly behind last year's pace of 39% in the same week. Meanwhile, about 57% of the soybean crop was rated good/excellent, also unchanged from the previous week. This is down by 2% from the previous year's rating in the same week. In terms of the harvest, about 44% of the crop had already been harvested, compared with 47% in the same week last year. In addition, the USDA will release the **US Weekly Export Sales** data on Thursday.

On the domestic front, on Wednesday, SAGIS will release the **Weekly Producer Deliveries** data for 14 October 2022. This data will help us get insight into the size of the crop as harvesting has been recently completed in most regions of the country. In the previous release of the week of 07 October, about 13,7 million tonnes of maize had already been delivered to commercial silos, out of the expected harvest of 15,3 million tonnes. In the same week, about 2,1 million tonnes of soybeans had already been delivered to commercial silos out of the expected harvest of 2,2 million tonnes. Moreover, 832 610 tonnes of sunflower seed had already been delivered on the same day out of the expected harvest of 845 550 tonnes.

On Thursday, SAGIS will publish the **Weekly Grain Trade** data for 14 October 2022. In the previous release on 07 October 2022, which was the 23rd week of South Africa's 2022/23 maize marketing year, the weekly exports amounted to 58 514 tonnes. About 42% of this went to Japan, 40% to Taiwan, and the rest to the Southern Africa region. This brought the total 2022/23 exports to 1,9 million tonnes out of the seasonal export forecast of 3,5 million. This is slightly down from 4,1 million tonnes in the past season due to an expected reduction in the harvest.

South Africa is a net wheat importer, and 07 October was the first week of the 2022/23 marketing year. The total imports are now 44 406 tonnes, from Australia, Germany and Poland. The seasonal import forecast is 1,53 million tonnes, slightly down from 1,58 million tonnes in the previous season. In the 2021/22 season, the major wheat suppliers are Argentina, Lithuania, Brazil, Australia, Poland, Latvia and the US. As we stated in our previous notes, if one looks into South Africa's wheat imports data for the past five years, Russia was one of the major wheat suppliers, accounting for an average share of 26% yearly.



Source: George Mason University (wxmaps)

The weather forecast has improved notably, currently pointing to prospects of widespread rains across South Africa over the next two weeks.

The rains will help improve soil moisture, and subsequently, enable farmers to continue with summer crop plantings.