

A fall in Zambia's 2021/22 maize production is unlikely to cause shortages in the Southern Africa region

There are two significant maize-producing countries in the Southern Africa region: South Africa and Zambia. South Africa's 2021/22 maize harvest is down by 10% from the previous season, estimated at 14,7 million tonnes. The decline in harvest is mainly caused by the reduced area planted and poor yields in some regions following excessive rains at the start of the season. Still, this harvest will be sufficient to meet the domestic maize consumption of 11,8 million tonnes and keep the country a net exporter of maize.

In the case of Zambia, the 2021/22 season maize harvest is down sharply by 25% from the prior season to 2,7 million tonnes. These estimates are from the country's Ministry of Agriculture. Unlike South Africa, which struggled with excessive rains, Zambia faced the opposite. There were delayed rains at the start of the season and later prolonged dryness, which weighed on the yields and caused farmers to plant less area than in the 2020/21 season. With that said, Zambia's 2,7 million tonnes harvest will be sufficient to meet the domestic consumption of roughly 2,0 million tonnes. This means that the country could also remain a net exporter of maize.

In the past, whenever Zambia's maize production declined notably, even if it would still be sufficient to meet the annual demand, the government would institute export bans to drop the price in the interest of domestic consumers. However, the unintended consequence of such policies is the cost to farmers and the agribusiness that typically miss out on higher global prices that would improve their profitability. Nevertheless, in the current season, the Zambian government has signalled that it would follow the calls of multinationals such as the WTO, WFP, IMF, WBG and FAO. These multinationals have urged countries not to apply export bans in the current environment of elevated global prices and the rising need for supplies in the emerging countries.

Within the Southern and East Africa region, Zimbabwe, Botswana, Mozambique and Namibia are likely to require maize imports to meet their domestic needs later this year and into 2023. South Africa could have as much as 3 million tonnes for exports, which is even above Zambia's overall maize production. This will help boost supplies for countries in need in the region. But some countries are reluctant to import genetically modified maize, mainly Kenya. This limits South Africa's participation in markets as our maize production is about 80% genetically modified.

South Africa has embraced this technology since the early 2000s. It has helped improve the yields. Before its introduction, average maize yields were around 2,4 tonnes per hectare. This has increased to an average of 5,6 tonnes per hectare as of the 2020/21 production season. Meanwhile, the sub-Saharan African maize yields remain low, averaging below 2,0 tonnes per hectare. Admittedly, yields are also influenced by improved germplasm (enabled by non-genetically modified biotechnology) and improved low and no-till production methods (facilitated through herbicide-tolerant genetically modified technology); other benefits include labour savings and reduced insecticide use as well as enhanced weed and pest control.

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In such cases, Zambia benefits from the markets that import non-genetically modified maize. For example, Kenya currently faces a shortfall in the current season. This is about 700 000 tonnes, according to United States Department of Agriculture estimates. According to data from the International Grains Council, Kenya's expected 700 000 tonnes of maize imports account for 21% of sub-Saharan Africa's expected maize imports of 3,4 million tonnes in the 2021/22 production season (2022/23 marketing year).

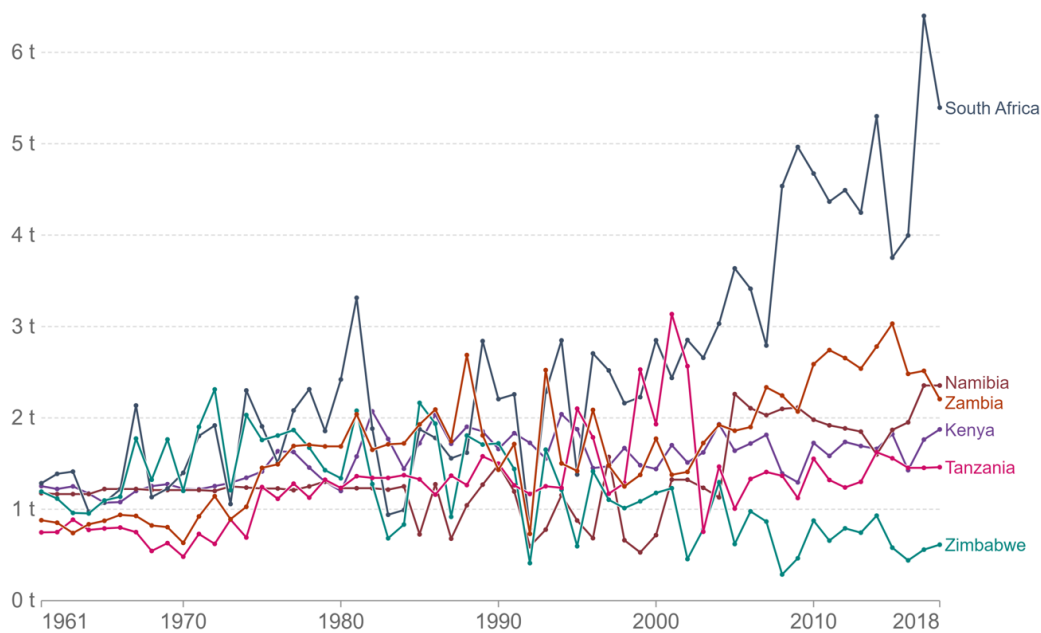
Zambia and Tanzania are likely to be the leading suppliers of maize to Kenya this season. With that said, Tanzania's role will be limited as the country expects its domestic maize harvest to fall by 16% this season to 5,9 million tonnes. This decline in harvest is due to drought at the start of the 2021/22 production season, combined with armyworm infestations and reduced fertilizer usage in some regions because of prohibitively higher prices. The consequence of the fall in production and firmer domestic consumption means that the country could have less maize for export markets. Data from the United States Department of Agriculture show that Tanzania's maize exports could decline from 800 000 tonnes last season to 100 000 tonnes this year. Such a drop would leave little for Kenya's maize needs, leaving Zambia as major regional suppliers. South Africa's role remains uncertain for the reasons outlined above about Kenya's genetically modified maize ban.

While Zambia's maize production could fall notably this year, the country will remain a significant player in export activity in the Southern Africa region. This country will join the leading exporter, South Africa, in fulfilling the regional maize needs. Broadly, the region will have to review its limits on growing and importing genetically modified maize. The likes of the EU region, which for roughly 25 years have opposed genetically modified maize, are slowly opening up for imports. Africa should take notice as such an embrace of technology would boost yields. Various considerations about seed ownership and other aspects are worth exploring to comfort African governments, but that is a discussion for another day.

Exhibit 1: Maize yields in selected African countries

Corn yields

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



Source: UN Food and Agriculture Organization (FAO)

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