



### Will southern Africa cope with the current drought?

#### Introduction

The beginning of 2016 saw heightened concerns around the erratic rainfall distribution, with all previous maize projections being revised downwards to “severe” and “disaster” scenarios. Many fear that southern Africa may be on the brink of the worst drought in recorded history, surpassing the impact levels reached in 1992.

There are several differences between the 1992 situation and present. Firstly, the regional dynamics are quite different in that there are more surplus producers in the region today than existed in the past, namely Zambia, Tanzania and Malawi in addition to South Africa. Secondly, the region is far more exposed to the impacts of global food markets, with efforts to integrate regional food markets making the region somewhat more able to move more grain from one place to the other compared to any period in the past. Thirdly, a steadily growing population has been matched by a declining proportion of people that are food insecure<sup>1</sup>.

Given these structural changes in national, regional, and global food markets, the region faces what could be an entirely new challenge to what is fundamentally an old problem. Chief among these challenges is determining the level of production and import requirements. There is a need to start thinking of possible strategies that would ensure that food is available to the entire regional population at an affordable price.

This involves answering the following questions:

- (i) Will there be enough grain to feed the population within the region?
- (ii) If not, where are the grain imports going to come from?
- (iii) Is the infrastructure going to be able to cope with the level of imports needed to augment regional production? This article reflects on these three fundamental questions.

#### Will there be enough maize to feed the population within the region?

For the next 18 months at least, southern Africa will not have sufficient grain to feed the population from the region’s own production and carry-over stocks. It is clear that there is likely going to be a

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<sup>1</sup> The food insecure population in the SADC region has declined from 22 million in 2003/04 season to 14.5 million in the 2013/14 season (SADC FSEWS, 2013).

significant amount of maize (and other grains) that will be imported from outside the region, with the likely sources being Argentina, Brazil, Mexico, USA and the Ukraine.

In a normal season, gross estimated available maize for the southern African Development Community (SADC) averages 30 million tons, against requirements of 27 million tons (SADC, Various Years). South Africa contributes between 40% and 42% of the regionally available maize. From a maize perspective, the region has been relatively self-sufficient, with record harvests from a number of countries, namely, South Africa, Zambia and Malawi in the recent past.

In the previous season, a less favourable climate led to lower maize production that reduced the crop by around 30% in South Africa, 17% in Zambia, 26% in Malawi and 50% in Zimbabwe (Grain SA, 2015 and GIEWS, 2016). The steep decline in production meant that the region could count on its carry-over stocks to stabilise prices, which remained reasonably low across the region.

Given that all net exporting countries are under severe pressure due to a second consecutive drought throughout southern Africa, the large parts of the region's written off crop triggered expectations of a further significant decline in expected production.

Revised expectations coming out of Zambia are that output will decline by a third to 1.6 million tons, whereas sentiments from South Africa suggests that this season's harvest could possibly be between 5 and 6 million tons. The situation is worse in net importing countries such as Zimbabwe, where production is expected to halve yet again, compared to the previous season.

### **Where are the grain imports going to come?**

The resultant effect of the expected steep declines in maize production are significant maize imports. The expectation is that South Africa (including BLNS) may import at least 5 million tons of maize (~2.0 million tons white, and ~3.0 million tons yellow). Zimbabwe will expectedly import 1.2 million tons of maize (Agbiz, 2016, USDA, 2016, ReNAPRI, 2016). In contrast, minimal imports are expected in Tanzania with good rainfall supporting production estimates of above 6 million tons (SADC FSEWS, 2016; ReNAPRI, 2016).

Meanwhile, recent reports have highlighted that Zambia might be compelled to import, even though an estimate is not yet available. Zambia's maize balance sheet seems to suggest, however, that they can rely on their carry-over stocks and a 500,000 tons strategic grain reserve that could minimise the level of imports. This means that Zambia's capacity to export into the region is curtailed. The aggregate picture of the regional total maize imports could be at least 7 million tons, most if not all, of which are from deep sea imports.

The question then is, from which countries will southern Africa import the much-needed (white) maize? Of the expected 7 million tons of imported maize required for the region, at least half of it should ideally be white maize meant for human consumption (Authors' Calculations).

The issue of SADC maize import requirements needs to be answered concurrently with how much white maize is available in the global market. While yellow maize is readily available in the global market, white maize remains in limited supply amid a growing import need in the southern African region and a few Latin American countries.

Outside of the African continent, Mexico is the only major white maize producer (roughly 22 million tons of maize, with more than half of this being white maize), followed by the USA (which produces volumes between three and four million tons)<sup>2</sup>.

Reports suggest that Mexico has current surplus stocks of at least 1.5 million tons of non-GMO white maize available for export markets. In fact, Mexico will be the only global supplier of non-GM white maize, with their surplus falling short of the regional import demand for southern Africa. It is therefore imperative that the region communicates its message to Northern Hemisphere producers on time, to allow them to increase white maize plantings. The current price signal of white maize on the JSE Agricultural Derivatives Market should stimulate this production.

Northern Hemisphere countries (Mexico and the USA) will be going into the planting season between March/April. There remains a potential for the Northern Hemisphere countries to expand their white maize production if there is sufficient demand from the southern African region. Moreover, even though it is traditionally not a white maize producer, Brazil is yet to plant its second crop (Safrinha), which then presents another opportunity for South African importers to contract Brazilian farmers.

Meanwhile, there remain concerns with GM maize, with the US GM maize asynchronous with the South African GM varieties. The price issues seem to be different in that the fob Chicago (COB) yellow maize price is US\$168 while the Mexican fob white maize prices are around US\$245, which makes Mexican maize more expensive. It is unclear what additional premium the US farmers would receive for planting white maize. If the issue around asynchronous approval of GM maize is resolved, then the supply problem of white maize can be averted. If the issues on asynchronous GM approval are not addressed, there might be a regional shortage for white maize, and there will be a real possibility that some quantity of yellow maize could end up being consumed for human use, a scenario reminiscent to the 1992 drought.

South African stocks of white maize (carry-over plus new harvest) should last until September – October at least, assuming that the country has ~1,0 million tons of carry-over and a 1.5 million tons harvest in June-July 2016. This coincides with the harvesting in the US and Brazil in October/November, with deliveries from deep sea expected to reach southern African shores from November/December.

There may be a two month lean period during which the southern African region will not have white maize supplies if the Mexico's available surpluses are not imported into the region. If regional carryover stocks, maize deliveries and imports can sustain the southern African market until November, it should be sufficient to see the region through until white maize imports reach the southern African ports.

### **Is the infrastructure going to be sufficient to handle expected import requirements?**

If the region becomes entirely dependent on deep sea imports, it brings the important question of whether the port capacity will manage to handle an unprecedented level of grain imports. The question of whether infrastructural capacity is sufficient to meet at least 6.2 million tons of maize imports, and an additional 5 million tons of other grains (e.g. rice, soybean and soybean oilcake, wheat etc.) is a question that is yet to be answered satisfactorily. In the recent past, South Africa has mainly

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<sup>2</sup> Production of white maize in the US ranges between three and four million tons, with surpluses of about 2 million tons. A million tons of US white maize is exported to Mexico, and the rest is consumed in the national market by the Latino population for tortillas.

been using the Durban, Cape Town, Port Elizabeth and East London ports – all of which have a combined capacity of roughly 4.8 million tons (refer to Table 1). However, while it is unclear what the maximum grain import capacity is, industry experts suggest that ports have an additional capacity to handle imports of roughly 7 million tons. Moreover, there are arguments that suggest the creation of additional capacity in ports that are traditionally non-grain importing ports, such as Richards Bay.

**Table 1: South Africa’s port capacity**

Port	Draft	Geared Vessel	Average Discharge Rate per month
Cape Town	11.9m	Yes	140,000
Port Elizabeth	10.8m	Yes	70,000
East London	10.4m	Yes	66,000
Durban	10.2m	n/a	130,000

Source: Ports Authority (2016)<sup>3</sup>

Emerging concerns relate to the potential traffic congestion at the ports and roads – which will affect the turn-around time of grain trucks. This point is particularly important if we consider that 80% of all grain transported inland is moved by road. The potential problem of traffic congestion could be averted, or at the very least, reduced by the possibility of increasing the use of rail transport as an alternative. Provisional estimates from Transnet show that out of the 308 wagons in their fleet, there are 108 wagons that are grain containers – which have a capacity to transport 7,920 tons per day (Transnet, 2016; Authors’ deductions).

## Conclusions

All of the estimates discussed about the import requirements and port capacity are based on expectations and in certain cases assumptions, which might not necessarily reflect the outcome. Also important to note that the summer crops are still at early growing stages, hence there is no certainty about the final crop production volumes. For example, in South Africa the first crop estimates also still have to be conducted. All these factors will affect the import volumes and prices, but the emerging outcome will be much clearer within the next 2 to 3 months, once crop assessments have been completed across the SADC region. A synthesis of the initial sentiments reflects that even though the drought is severe, the task of ensuring food availability is not insurmountable, given available options. However, a coordinated commitment from governments and private sector across the region will be required to ensure that sufficient maize supplies can be imported into the region. A higher level of coordination will be necessary, particularly with regards to export planning, to prevent congestion of port infrastructure. At the same time, the issue of GM maize is one which will need to be seriously addressed. Governments will only have two to three months to make policy decisions that can guide private and public sector players to contract Northern Hemisphere and Brazilian farmers to plant white maize. While GM maize fears are acknowledged, the gravity of the problem calls on a review of the stance of the region on GM policies, with a view to improving food security.

<sup>3</sup> Based on personal communication

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