Nalukui is a farmer in Zambia. She harvested only 10 kg of maize this year due to drought, and has been forced to weed other people’s farms for 12 hours a day to make enough money to purchase food for her family. Photo: Misozzi Tembo

MAKING MAIZE MARKETS WORK FOR ALL IN SOUTHERN AFRICA

In most of Southern Africa, maize is a staple food crop, but the region also has some of the highest malnutrition rates in the world. Small-scale maize producers face numerous obstacles as both buyers and sellers of maize. So how maize markets work is fundamentally important – and currently they work badly.

A major reason markets fail is that there is so little trust and cooperation between governments and private traders, both large and small. Unless the trust deficit is addressed, markets will continue to operate at woeful levels of inefficiency, no matter what other reforms are undertaken.

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'Maize is life’ – chimanga ndi moyo – is a common saying in Malawi and a general sentiment across Southern Africa and beyond. It is impossible to exaggerate the importance of maize as a food crop. High in calories, maize alone makes up 90 percent of dietary calories in poor households in Malawi. Across sub-Saharan Africa, maize is grown on some 33 million hectares of the total 194 million hectares of cultivated land. Despite this, Southern Africa has some of the highest rates of chronic malnutrition in the world. That is the case even in normal years. In bad years, hunger and malnutrition increase to catastrophic levels. Clearly, many things are going wrong.

Producers in the region living in poverty face numerous obstacles. What is sometimes less well understood is that most poor producers are both sellers and buyers of maize – sellers after the harvest, buyers before the next. How maize markets work is fundamentally important. But maize markets work badly. This paper explores some of the reasons. It argues that a major reason markets fail is that there is so little trust or cooperation between governments and private traders, both large and small. It concludes that unless the trust deficit is addressed, markets will continue to operate at woeful levels of inefficiency, no matter what other reforms are undertaken, perpetuating a history of poverty and malnutrition.
2  MAIZE, MARKETS, AND HUNGER

Clearly many things are wrong. Small farmers in Southern Africa are locked into a set of vicious circles whose end product is hunger. The problems start with production, but production is only one aspect of the problem. Malawi, for example, has produced a national maize surplus in nine of the last 11 years from 2006/7 onwards; yet every year families suffer months of hunger. The way maize is traded is loaded against the tens of millions of small-scale farmers who are both sellers and buyers of maize.

Smallholder farmers toil unceasingly and with great skill and ingenuity to farm well. They seek to spread risk by varying their planting times and, if possible, locations. But they face enormous obstacles. A lack of basic irrigation infrastructure and a lack of access to capital to purchase fuel for pumps means that most maize is almost entirely rain-fed, and often on tiny plots and in poor soils. In Southern Africa, where there is just one rainy season, farmers face the danger that the rain will not coincide with crucial stages of the crop’s development, combined with the threat of long spells of excessively high temperatures. Climate change is increasing these risks. Farmers are frequently ill-served by their governments and by markets when it comes to being able to acquire essential inputs of seeds and fertilizers.

If the cycles of the weather are erratic and hard to predict, the economic laws of the market have a grim inevitability. It is what happens after the harvest that determines whether and when people go hungry. Maize prices follow the laws of supply and demand. Very few small-scale farmers grow more maize than their family requires; most do not grow enough. Nevertheless, when the harvest arrives (from about March through to April/May), poor households face enormous pressures to sell a large amount of what little maize they have. They have to pay back debts incurred in growing the crop and they need money for school fees and to buy other necessities. With so many people pressed to sell, prices fall. Small-scale growers may sell some maize themselves, sometimes travelling long distances to market; or they sell to village maize-buyers and petty traders who aggregate supplies.

“IT IS WHAT HAPPENS AFTER THE HARVEST THAT DETERMINES WHETHER AND WHEN PEOPLE GO HUNGRY.”

The petty traders in turn have little access to credit or storage. They too may travel long distances, including across borders, to sell maize and/or to buy it; but with so many people trading, competition is high and returns may be low. Samson, a trader from Malawi, told Oxfam how he went to buy maize flour from Zambia along a 47km road which is almost impassable in wet weather. He said: ‘I have spent three days on the road, got soaked in the rain just to bring 25 bags of flour. On the three days I was away, people were calling me [to ask] when would I bring the commodity because they have no food’.

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Headline figures

**Zimbabwe**
- Rural poverty: 76%
- Child stunting: 32%
- Child underweight: 10%
- HIV/AIDS prev.: 15%

**Malawi**
- Rural poverty: 57%
- Child stunting: 47%
- Child underweight: 13%
- HIV/AIDS prev.: 11%

**Zambia**
- Rural poverty: 78%
- Child stunting: 40%
- Child underweight: 15%
- HIV/AIDS prev.: 13%

**Mozambique**
- Rural poverty: 57%
- Child stunting: 43%
- Child underweight: 19%
- HIV/AIDS prev.: 11%
Small traders therefore quickly sell much of their stocks to larger traders. Larger traders accumulate the maize and pay to transport and store it – therefore bearing the costs and risks. They then release it for sale when there is peak demand, and higher prices. This occurs as the lean season draws on again, which may be from November/December onwards, but which can come much sooner for the poorest households. The drought of 2015/16 meant that for many of these, the lean season has started as early as August/September. The lean season starts when families have eaten the maize that they have kept and must go to the market to purchase more – in effect buying back the maize they produced just a few months earlier. But at this point, there are many buyers, and the price also reflects the costs incurred for storage and transport (which are significant, given the often dilapidated state of the infrastructure). So prices escalate, reaching a peak from January to March, just before the next year’s harvest. Poor households, who sell the least maize and purchase the most, must sell low and buy high: the essence of a poverty trap.

Extreme reliance on maize for food – in culture and psychology the terms are almost synonymous – has a further cost too, in terms of health. Although it is a good source of calories, as well as some vitamins and minerals, a diet of little else but maize can cause protein and nutritional deficiencies, especially in children. Vitamin A deficiency in particular is widely prevalent because the preferred white maize does not contain beta-carotene, which the body converts into vitamin A.

This season’s maize harvest across Southern Africa was hit by drought caused by climate change and El Niño. Poor households had little to sell and when they came to start buying maize again, they found prices had sharply increased; average maize prices in Malawi even in June were 193% above the five-year average. Steve, a small-scale trader in Mulanje, Malawi, said: ‘If we reduce the price, say to 200 Kwacha (US$ 0.30), we will be out of business. Market forces are determining the price and it is hurting consumers, but there is nothing we can do, we are in this problem together.’

**‘EXTREME RELIANCE ON MAIZE FOR FOOD HAS COSTS IN TERMS OF HEALTH.’**

Furthermore, poor people must have the money available to be able to buy back their maize. Again, the laws of supply and demand govern availability and remuneration for labour. Especially in times of drought and agricultural and economic stress, as happened in 2015/16, more people – both men and women – are out looking for work as farm labourers, but farms with poor crops have few labour opportunities and wages are low. Loss of livelihoods and cash shortages in turn hit the incomes of the small traders trying to sell maize.

Women are core participants in the whole market chain, as growers, workers and traders. Yet, as is well documented, women have limited access to and control of resources, and the additional roles of caring for children and the household. In rural households in many parts of the region, women may be acting as caregivers not only for their own children but also for numbers of orphans due to HIV and AIDS. They may be sick themselves. This increases the necessity for women to participate in the economy, and limits their ability to

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*The marketed agricultural surplus is exceedingly concentrated among a small group of relatively large smallholders.*

Less than 3% of rural farm households in Malawi sell more than 100kg/adult of maize as net surplus. More than 90% of rural farm households either break even, or are net maize purchasers.

In Zambia, officially a lower-middle income country, over 70% of households either break even or are net maize purchasers.

Transportation costs are exceptionally high in the landlocked countries of Southern Africa, primarily as a result of clearance delays at borders and the poor state of road infrastructure.
do so. Edna, a farmer from Malawi, described how she struggled to find work. On the days when she found employment she weeded rows of maize, earning the equivalent of one US cent per row. She had to weed 26 rows of maize to be able to buy a single kilo of maize.\textsuperscript{14} In February 2016 all she and her family had left to eat was two bananas a day. She left her children with a small supply of wild fruits and cycled 80km to beg help from relatives, but returned home after three days with just some cassava leaves and a little sugarcane. By July 2016 she would have had to weed 38 rows to afford a kilo of maize, because the price had increased so much.

\textbf{“POOR HOUSEHOLDS, WHO SELL THE LEAST MAIZE AND PURCHASE THE MOST, MUST SELL LOW AND BUY HIGH: THE ESSENCE OF A POVERTY TRAP.”}

A further major factor in market operations is that the infrastructure to move large quantities of maize within the region is extremely poor. In normal years South Africa and, increasingly recently, Zambia, produce a large exportable surplus\textsuperscript{16}. Due to the El Niño drought, South Africa has been forced to import large quantities for the first time since 2008. Other countries in the region are having to source maize from countries overseas, such as Mexico. This is at significantly higher cost due to weakening local currencies. Even if maize can be bought from abroad and shipped to African ports, it then has to be transported overland on often appalling roads and across borders where lengthy delays are common. The eventual selling price will reflect the costs incurred.

\textit{In Malawi, women make up 70\% of the agricultural labour force yet less than 23\% of staple food traders.}\textsuperscript{15}
Box 1: The vicious circle of mutual distrust

Mutual distrust between governments and traders at all levels has been identified as perhaps the biggest hurdle to making maize markets work for the benefit of all. According to Paul Dorosh, Simon Dradri and Steven Haggblade:

'Trade is a valuable tool for stabilizing national food supplies. Yet, in much of Africa, governments mistrust traders. Policy makers fear a loss of government control over maize supplies and the politically sensitive maize price. They fear that collusion by traders may lead to market manipulation and profiteering that could, in turn, lead to politically damaging food shortages and price spikes. The mistrust is mutual. In part, traders have difficulty anticipating what governments will actually do [...] In deficit years, given strong political pressure to subsidise government-sponsored maize imports, private traders are reluctant to bring in commercial grain, which they would be able to sell only at a loss [...] Uncertainty, coupled with the fear of being undercut by subsidized public sales, induces private grain traders to remain on the sidelines or to limit their exposure by bringing in only small lots. In response, governments complain that they cannot rely on the private sector to import adequate quantities of food in times of need.

'Where private traders and African governments fail to solve staple food supply problems themselves, food aid donors stand ready to fill the gap [...] Where these three actors cooperate and interact, their actions can prove complementary. However, where they misjudge or mistrust each other, one or another may overreact, potentially aggravating both price volatility and swings in food availability ...'.

3 FOOD CRISSES AND PUBLIC–PRIVATE INTERVENTIONS

Because maize is the undisputed staple food crop of the region, utterly crucial for so many people’s livelihoods and survival, maize availability is a highly politicized commodity. There is huge political capital in being seen as ensuring that citizens have sufficient maize. Inevitably, it can be a political tool: its supply and demand manipulated to burnish political reputations and garner votes. Conversely, if maize is not available, there is a temptation to reassure people that it is, and to damp down demand. Hence, there may be repeated declarations that the market is fully supplied; or there may be heated rhetoric accusing private sector actors of hoarding. Mutual mistrust and an information vacuum make proper planning extremely difficult. In Zimbabwe for example, the FEWS NET briefing for June 2016 to January 2017 noted how there was anecdotal evidence to indicate that cereal carry-over stocks were below the five-year average; figures from the Grain Marketing Board (GMB) were available but ‘grain stock levels among the private sector have not been established’.
Governments have tended to react to looming food crises with non-transparent, sudden and haphazard interventions including price controls, trade barriers and subsidy programmes. However, this creates huge uncertainty for everyone, and private traders are tempted to keep stocks back because they can’t know what the price will be in the near future. Governments in turn suspect traders of price-gouging, which justifies government intervention in the market. Unfortunately, this can create a vicious circle: ad hoc government intervention can lead to less competitive markets which in turn can create an even higher risk of price gouging by traders who are either very large or politically connected.

As Professor Thomas S Jayne has noted: ‘Ensuring that public interventions in grain markets are more predictable, rules-based, and less vulnerable to political interference is one of the most important challenges to stabilising food markets in Southern Africa’.\(^{18}\)

“MUTUAL MISTRUST AND AN INFORMATION VACUUM MAKES PROPER PLANNING EXTREMELY DIFFICULT.”

In such circumstances, the actions of government parastatals responsible for strategic grain reserves like ADMARC\(^ {19}\) in Malawi or the GMB in Zimbabwe become potential game changers, for better or worse. However, the situation in both countries illustrates the extreme difficulty of making the various players in the market work better together, especially when it comes to food reserves held and used for the purpose of price stabilization.

For example, FEWS NET’s Malawi Food Security Outlook for June 2016 to January 2017\(^ {20}\) reported that ADMARC had suspended the sale of subsidized maize in most outlet markets because its stocks were extremely low. This in turn was exerting upwards pressure on (already very high) maize prices. ADMARC argues it needs to replenish its stocks in order to be able to release maize onto the market later in the year at subsidized prices, in order to stabilize prices. However, if it enters the market at the same time that poor families are starting to head to market to buy maize as the lean season begins (which for many was as early as August), then attempts to purchase large amounts of maize will make the market even tighter and drive up prices further.\(^ {21}\)

Furthermore, flooding the market with relatively cheap maize does not necessarily mean that the people who need it most get more of it. On the contrary, few governments possess the resources to truly ‘flood’ an area with maize or keep it up for any length of time, so proximity affects access. There can also be political pressures to allocate maize to particular groups. One ADMARC official reflected this in an interview for this briefing, saying there was pressure to keep maize for public sector workers. He said: ‘So, if we sell them all that maize, what will we sell to ordinary citizens who are in dire need of food? We appreciate the work they do in helping the community, but that must not be the reason to deprive communities of what they seek most.’

The Government of Zambia’s Food Reserve Agency (FRA) succeeded in stabilizing food prices in 2010 and 2011, but at a cost of two percent of GDP in
2010 and three percent in 2011. The average price stabilized nearly 20 percent higher than before. So while it could be argued that the FRA was successful, it came at a high price. In Zambia this year private traders entered the market in April, earlier than usual. By offering sellers cash on the spot, and with prices on average 50 percent higher than last year, they have captured the largest share of the market. The FRA began buying in mid-July and with such stiff competition has been unable to purchase sufficient stocks so far. It is therefore likely that the government will extend the period of export restrictions to safeguard the country's food security, which might have implications for maize-deficit neighbours Zimbabwe and Malawi. Food reserves may be more effective in the context of a clear market failure, in a clear emergency, and not to stabilize prices. Situating emergency reserves locally can reduce susceptibility to national political dynamics. Managing them in a clear and transparent manner can ensure that people are able to raise concerns and suggestions. Operating them efficiently can ensure that people get maize without being forced to wait for lengthy periods. Inefficient and inconsiderate operation can put women in particular at greater risk if they have to wait overnight at food depots.

Subsidized sales of maize, while popular, are sticking plasters. They do nothing to address the core issues, namely, that vulnerable smallholder farmers are unable to produce enough of their own food, or diversify their income sources so they can secure food and all the other necessities of life. The cost of such programmes may indeed divert scarce resources away from the long-term initiatives that are needed to fundamentally change the situation: agricultural research, irrigation, rural infrastructure, and crop diversification to reduce the dangerous economic and dietary over-dependence on maize.

“SUBSIDIZED SALES OF MAIZE, WHILE POPULAR, ARE STICKING PLASTERS.”

Lack of storage capacity at various levels is also a significant challenge. Community grain banks and seed banks have particular potential to give small-scale producers greater control over market conditions. Such banks can enable communities to keep grain in the community, to release it at the height of the lean season. As community members can then obtain maize to eat, they do not need to leave in search of casual labour elsewhere and can work on their own farms. As Wilson Chiphale, a farmer in Malawi told Oxfam: ‘When we don’t have enough we resort to piecework, but by doing that we are recycling hunger, because we are putting our labour into helping somebody else and not doing anything on our own land.’
4 ENABLING CRISIS-RESPONSIVE MARKETS – RECOMMENDATIONS

Can markets be made to work better? It is crucial to try, for the lives of tens of millions of people across Southern Africa are intimately bound up in market operations. In the course of an average year, most of them may be by turns growers, sellers, traders and consumers.

In 2016, it is especially crucial to make the market work better. The region’s maize harvests have been seriously damaged by two years of climate disasters, starting with poor rains (but in some places, floods) in the 2014–2015 agricultural season, followed by a major drought in 2015–2016 driven by one of the strongest El Niño events on record. Of the roughly 292 million people living in Southern Africa, SADC reported in June that 23 million needed immediate emergency humanitarian assistance.

As we have seen, all the links in the chain must be improved, starting with the ability of smallholder farmers to grow more maize (and other drought-resistant food crops too). But as we have also seen, even if production increases, even if roads improve, unless the trust deficit is addressed, markets will continue to operate at woeful levels of inefficiency.

It is therefore imperative that national governments take the lead to:

• consult, develop, communicate, implement and then stick to rules-based systems in which rules, conditions, and timetables are clear, predictable and transparent;
• apply these to all aspects of the system, including strategic grain reserve stock levels, release triggers and procurement planning;
• communicate and regularly meet with the private sector to build trust and understanding.

They should also:

• take steps to depoliticize maize, including refraining from using heated rhetoric against small-scale traders; oppose blanket trading bans and politically motivated price setting;
• incentivize cross-season grain storage by the private sector and accept moderate price fluctuations to drive domestic trade;
• ensure competitive and transparent bid processes are adhered to in the allocation of government grain import contracts and licences;
• strengthen sub-national mechanisms for monitoring and preventing graft, exploitation and corruption in the operation of public and state-owned operations;
• simplify cross-border trade, lower transaction costs and reduce import barriers and tariffs;

‘Perhaps the single most important challenge for stabilising African food markets is to make the governments’ role in the markets more predictable.’

27
facilitate and incentivize small-scale traders, including reforming licensing requirements and easing tax restrictions for small-scale cross-border trade;

produce a clear and transparent process for translating official National Vulnerability Assessment Committee results into budget allocations for food assistance and timetables for action.

NOTES

All links last accessed September 2016.

1 This briefing note focuses on Zambia, Zimbabwe, Malawi and Mozambique but note that in the period September 2016–March 2017, FEWS NET expects that 18 million people across the 15 member countries of SADC will face IPC phase 3 ‘crisis’ levels of acute food insecurity and require urgent humanitarian assistance. See FEWS NET: Southern Africa Food Security Outlook (July 2016–January 2017).

2 FEWS NET (June 2014).


4 Sources:
UNICEF. http://data.unicef.org/nutrition/mainnutrition.html

5 Sources:
SADC. Regional Humanitarian Appeal June 2016. p.5.

6 Stunting rates above 20 percent are generally considered to exceed the acceptable threshold for this particular indicator.

7 IndexMundi. Malawi corn production by year. http://www.indexmundi.com/agriculture/?country=mw&commodity=corn&graph=production


14 Edna was interviewed in March. By the end of July, a kilo of maize had increased in price from 26 cents to 38 cents.


Farmers have ambivalent feelings toward ADMARC. 'On the one hand, they often do not trust ADMARC agents to fairly weigh their maize, and they complain about low prices paid to farmers, late payments, and limited buying schedule. On the other hand, they see ADMARC as keeping the maize in the region, making it available for purchase during the lean season.' – N. Minot (2010) Staple Food Prices in Malawi.


Ibid.


