Executive Summary

- Zambia received good rains last agricultural season due to the La Niña weather phenomenon ensuring a bumper harvest. However, when combined with a large carry over stock from the previous season, which is explained by the decision to close the borders, Zambia has been left with excess maize and a depressed market this season: the price of maize dropped by almost 45 percent.

- Despite having an exportable surplus of approximately 1.7 Million MT of maize, the fact that most of Southern Africa also produced a surplus means there are few opportunities for Zambia to export to its relatively accessible traditional markets.

- There is, however, high demand for Zambian maize in East Africa, but poor infrastructure links, high transport costs, and stringent standard requirements, prevent Zambia from meeting this demand. Going forward it important for Zambia to improve access to these export markets.

- The decision to close the borders in the 2016/2017 season has undermined agricultural-led growth. Not only has it contributed to a situation where Zambia has large stocks of maize for which there are limited export opportunities but closing the borders at a time when regional demand was high, cost the country significant forex. Approximately US$ 270.5 million was lost in export potential.

- The export ban undermined private sector participation in the maize trade. Grain traders suffered major losses, with a number defaulting on loans, which undermined the confidence of financial institutions in the sub-sector. Moreover, importing countries began to source grain from other more reliable suppliers of grain.

- The announcement of the FRA price that was close to the market price is a positive development. Critics argue the price didn’t accurately reflect the cost of production. But there is no single cost of production: costs vary significantly across Zambia. Rather than spending scarce resources to artificially boost maize prices, the best way to assist farmers is by raising their productivity, which translates into low cost of production.

- A much more worrying development concerns the publication of a draft Bill intended to expand the marketing activities of the FRA. Such a move would have dire consequences for agriculture in Zambia. The bill should be amended to ensure that the role of FRA is limited to the provision of a strategic grain reserve and as a buyer of last resort in remote areas.

- With the forecasted good rains, Zambia is likely to produce another bumper maize crop in the 2017/2018 production season. However, there might be a reduction in production compared to 2016/17 mainly from the net maize-sellers who may have been discouraged by the crash in maize prices in the current marketing season.

- The problem of the fall army worms effectively addressed last year will, however, likely emerge this growing season. This requires concerted action at both the national and regional level to tackle the pest now to avoid causing panic when the crop season begins.
INTRODUCTION

In the 2016/17 agricultural season, Zambia like other countries in the Southern Africa region produced huge surpluses of maize. This, however, follows an El Niño year, when Zambia was the only country with surplus maize in the region. In contrast to the previous marketing season, the current season is characterised by low maize demand as most countries in the region also produced maize surpluses due to the good rainfall caused by the La Niña weather phenomenon. As such, the price of maize dropped by almost 45 percent. This has resulted in an outcry by farmers who have indicated that such low prices are a disincentive for them to continue producing maize.

Zambia’s situation is exacerbated by the fact that due to the imposition of an export ban in 2016, the country entered the 2017/2018 marketing season with more than 500,000 MT of carryover maize stock. The combination of an export ban and the incoming bumper harvest resulted in the collapse of farm-gate prices negatively affecting surplus producing farmers.

The maize surplus recorded across Southern Africa means there are few export opportunities for Zambia to its traditional markets. There is, however, high demand for Zambian maize in East Africa, but poor infrastructure links, high transport costs, and stringent standard requirements, prevent Zambia from meeting this demand. Frustratingly, the decision to close the borders last year, when there was high demand from easily accessible markets in Southern Africa, meant Zambia failed to capitalise on significant export opportunities. This resulted in substantial foregone export revenue, which could have been used to invest in the agricultural sector and the Zambia economy more generally. The announcement of the Food Reserve Agency (FRA) maize buying price of ZMW60 per 50Kg bag in July, 2017 has proved controversial with the Zambia National Farmers Union (ZNFU) calling for the Government to reconsider and raise the price to above the current average market price (ZNFU, 2017). In his response, His Excellency the President of Zambia stated on 26th July 2017 that maize prices should be dictated by the market not government (Siame and Musika, 2017). This response is welcome and in line with IAPRI’s recommendation that the Government’s on-and-off market interventions in the maize market burdens the treasury and precludes public investments in key agricultural growth drivers such as feeder roads, extension and research and development that are required to create sustainable production and marketing opportunities for farmers.

The 2017/2018 marketing season has been very slow as market prices for maize remained low and private sector reported to have purchased only about 350,000 MT by the end of September 2017 (GTAZ, 2017). On the other hand, as of 10th November 2017, the FRA had managed to purchase 513,547 MT out of the targeted 500,000 MT. However, only ZMW103 Million has been paid to farmers for the maize supplied out of a total of ZMW600 Million owed to farmers. The amount paid represents only 17 percent of what the agency owes the farmers.

On the back of very lukewarm private sector participation in the market, the ZNFU called on government to increase FRA purchases above the stipulated Strategic Grain Reserve (SGR) target of 500,000 MT. The main reason given was that Zambia needed a higher SGR because the country’s population had increased. Unfortunately, this argument fails to take into account a number of developments that have taken place in the country with regards to maize production and marketing. For example, there is evidence showing that consumption patterns today are different from many years ago—demand for non-maize food products is increasing (Chisanga and Zulu-Mbata, 2017); the country’s irrigation capacity has improved since the 1990s — commercial farmers at short notice can be contracted to produce maize to fill anticipated shortfalls; the infrastructure to procure and import grain has improved over the years; and moreover there are cheaper alternatives compared to physically holding all strategic reserves for at least eight months. For example, the Government through FRA can diversify its strategic reserve portfolio to include both physical and virtual stocks through instruments such as purchasing an option from commodity exchanges such as South African Futures Exchange (SAFEX) or Zambian Commodity Exchange (ZAMACE) when fully functional.

Against this backdrop, this market outlook sought to review the 2017/2018 maize marketing season in order to provide deeper insights into the domestic and regional factors affecting market performance and their major outcomes. The analysis herein is based on the analysis of the 2017/2018 marketing season (current season) and the immediate past season (2016/2017). Data is drawn from various sources, including Ministry of Agriculture (MoA) Crop Forecast Survey,(CFS) Central Statistical Office (CSO), Food and Agriculture Organisation (FAO) and Famine Early Warning Systems Network (FEWSNET) among others. Data from these sources were used to generate the key trends and make assumptions about likely outcomes in the 2017/2018 marketing season. These data were also complemented by a snap survey carried out in selected districts and border posts across the country to ascertain farm-gate prices, private sector participation, border prices and trade flows (formal and informal) among other issues. Key informant interviews with industry players and government officials were also conducted to augment the above data sources.
CARRY-OVER STOCK AND EXPORT BAN

For much of the 2016/2017 marketing season, Zambia maintained export restrictions and ultimately imposed an export ban in October 2016. The export ban was motivated by two factors – firstly the government was concerned about rising mealie meal prices and second it feared that due to high regional demand, too much maize would be exported by the private sector creating food shortages. As will be shown, the decision to close the borders backfired significantly. The net effect was first to have put Zambia in a situation where it is now sitting on large stocks of maize for which there is relatively low demand (meaning it must be stored at a high cost). Second, the Government missed a major opportunity to generate much needed forex last season; and third, the private sector has taken a significant financial hit, deterring them from participating in the market, in turn undermining smallholder farmers who benefit from selling to traders.

The background to the export ban is that mealie meal prices started rising around October 2016, rising above ZMW90 per 25 kg in Lusaka and over ZMW100 in border towns. This prompted high level intervention from the Head of State, President Edgar Lungu, who instructed the millers, traders and FRA to find a solution to the rising mealie meal prices (Lusaka Times, 2017a).

The other relevant factor is that in 2016/2017 marketing season the private sector had outbid the FRA, meaning that FRA was not able to buy its stipulated 500,000 MT SGR, which unnerved the Government who became worried about holding sufficient food stocks. Once the ban was in place the Government made attempts to buy maize from the private sector in order to boost the strategic reserves level which were below 500,000 MT. This was initially done through a tender process for 220,000 Mt by the FRA, which had attracted limited response. Further an agreement dubbed the “tripartite agreement” was entered into between Grain Traders Association of Zambia (GTAZ), FRA and Millers Association of Zambia (MAZ) on 1st February 2017 (Chanda, 2017a). In this contract, millers were buying subsidized maize at a price of ZMW2,200 per MT, while the maize market price was ZMW2,700 (a subsidy of ZMW500 per MT). Unfortunately, the agreement did not work well because it did not translate into a reduction of mealie meal prices nor did it help the private sector. The private sector couldn’t sell their maize stocks locally due to the subsidised maize sales going to the millers, or export their stock due to the ban.

The decision to close the borders hit the private sector hard: A number of traders interviewed indicated that Government actions in 2016 led to them losing a lot of money in grain storage costs and lost export market opportunities. The bigger traders defaulted-on loans, undermining their ability to access credit (this is discussed in more detail below). One consequence is the limited ability of the private sector to fully and actively participate in the 2017/2018 maize market. A huge loss for the smallholder farmers who benefit from...
their participation.

By March 2017, Zambia had approximately 915,000 MT held by FRA and the private sector (see Figure 1). When the Crop Forecast results were announced in May 2017, Zambia had carry over stock of nearly 570,000 MT. In November 2017, the total maize stock in the country amounted to about 1,400,000 MT with the FRA holding the majority of the stocks followed by millers. Indications from field visits showed that some farmers have been holding on to some maize stocks meaning the total stocks could be higher.

Figure 1: Maize Stocks held by various players between May 2016 and November 2017

Source: Stocks Monitoring Committee, (2016-17)

MAIZE PRODUCTION

In the 2016/2017 maize production season, Zambia crop forecast projected a record maize production of 3,608,549 MT, with a surplus of 1,178,516 MT. Due to the La Niña weather conditions and an increase in the area of maize production, Zambia was expected to increase its maize crop by 26 percent, between 2015/2016 and 2016/2017 seasons according to the CFS. The increase is explained by high market prices of maize prevailing in Zambia and the region in the last marketing season and El Niño weather patterns. Total area under maize was reported to have increased by 21 percent from 1,364,977 Hectares in 2015/2016 to 1,644,741 Ha in the 2016/2017. Note, however, that the maize yield only changed marginally from 2.10 MT/Ha to 2.19 MT/Ha in 2015/16 and 2016/17 agricultural seasons respectively (Ministry of Agriculture, 2017). Zambia’s 2016/2017 food balance sheet, indicated a total maize supply of 4,175,866 MT, which included a carryover stock of 569,319 MT from the previous season (see above for the impact of the export ban). Given the total national maize requirement of 2,997,350 MT, which includes human, industrial, strategic reserves and structural cross-border trade, Zambia has an exportable maize surplus of about 1,178,516 MT (Ministry of Agriculture, 2017). However, as we discuss below in the section on regional trade, important barriers stand in the way of Zambia being able to export this substantial surplus.

The scale of maize production is significant considering that Zambia faced, at the beginning of the production season, a major challenge from the fall army worm which initially ravaged maize fields in the early stages of crop establishment. The swift response led by the Ministry of Agriculture and the Disaster Management and Mitigation Unit (DMMU) saw the timely distribution of chemicals and sensitisation of farmers, which averted the risk of losses. There are unverified reports that Zambia spent over ZMW30,000,000 on combatting the spread of the fall army worms. Zambia’s maize losses arising from the fall army worms were estimated to be less than 10 percent.

The problem of the fall army worms effectively addressed last year will, however, likely emerge this growing season as reports of the pest attacking winter maize and other host plants such as wheat have been reported in 2017. There are indications that the pest is still active in the country and the region as a whole. This requires concerted action at both the national and regional level to tackle the pest now to avoid causing panic when the crop season begins. It is encouraging that there are regional efforts through institutions such as the FAO and International Maize and Wheat Improvement Center (CMMYT) to provide regional protocols to combat the pest which is likely going to remain in Africa.

The fall army worm. Image Source: www.entomology.k-state.edu

Image Source: entomology.unl.edu
for a very long time.

**2017 MAIZE MARKET PRICES**

Due to the high maize production and the huge carryover stock, maize prices crashed in 2017. Figure 2 shows Lusaka’s maize and mealie meal prices between May 2016 and July 2017. Maize and mealie meal prices were generally higher in the 2016/2017 marketing season due to high regional demand. With the export ban prices contained at above ZMW80 per 25kg bag. However, prices of both maize and mealie meal began to drop as early as February 2017. In September 2017, the retail price of mealie meal was around ZMW59 per 25 kg, while the wholesale price of maize is about ZMW70 per 50 Kg.

Figure 2 shows maize wholesale prices in selected districts observed during the IAPRI snap survey conducted in September 2017. The lowest prices were in Eastern province, about ZMW40 per 50 Kg bag due to market saturation, while the highest prices were in Lusaka, Copperbelt, Muchinga and Northern provinces, with prices around ZMW70- ZMW80 per 50 Kg. In Central Province prices were around ZMW60 per 50 Kg. With the FRA buying price of ZMW60 per 50 Kg bag, it was found that wholesale prices in Copperbelt, Muchinga, Northern and Lusaka Provinces exceeded the FRA price.

**Figure 2: Lusaka wholesale maize and retail mealie meal prices**

![Graph showing maize and mealie meal prices]

Source: IAPRI Price System; GTAZ Reference Prices (2017)

**Figure 3: Maize wholesale prices in selected districts and the FRA price: Average September-October 2017**

![Graph showing maize wholesale prices in selected districts]

Source: Grain Prices Snap Survey (2017)
FRA MAIZE PURCHASES AND PRICING

The depressed maize market prices following the maize bumper harvest has been a thorny issue in the current marketing season. This was heightened by the announcement that FRA would be buying maize at market prices. On 25th June 2017, the Government through the FRA announced a maize buying price of ZMW60 per 50 Kg which was a drop from the ZMW85 per 50 Kg offered in the previous season (Musika, 2017). This price was closer to the prevailing market price offered by the private sector. (See Figure 3 above). Although the price was constant throughout the buying season and across the country, this signal by government if sustained would result in a more efficient maize market system with vibrant private sector participation. It is not, however, surprising that some stakeholders opposed the FRA price on the basis that it fell below most farmers’ cost of production. But this line of argument wrongly assumes there is a single cost of production across Zambia, which is patently not the case. Costs vary significantly across the country’s highly diverse maize sector. The Government was therefore right to resist calls to increase the FRA buying price, as to do so would be to introduce damaging price distortions in the market. Instead the best way to assist farmers is by raising their productivity, which translates into low cost of production.

Winners and losers: In any production year, prices tend to fall at harvest and the biggest losers are mostly the high cost surplus producers whose productivity is too low to cover the cost of production. The effect of lower market prices resulting from a bumper harvest can, by contrast, be absorbed by the more productive farmers because the higher yields to some extent compensate the farmer for the low price. In addition, lower market prices are good for the urban consumers and rural net buyers. All value chain participants including farmers and consumers require stable prices, which will stimulate agricultural led economic development. Nevertheless, direct government price support by Government is a costly and an ineffective way of stabilising the maize and maize meal prices for both farmers and consumers. If Government maintained the price of ZMW85 per 50Kg bag from the previous season, it would have spent ZMW850 million to purchase SGRs. At the current price of ZMW60 per 50 Kg, the government spent ZMW600 million – a saving of ZMW250 million for the national treasury. This additional expense by government would have mostly benefited inefficient farmers. Therefore, government is urged to sustain the pricing mechanism that reflects the prevailing market condition. This would eliminate market distortions that usually discourages private sector participation and investments in the maize subsector.

As discussed above FRA purchases in the 2017/2018 marketing season slightly exceeded the 500,000 MT target (as of 10th November it had purchased 513,547 MT). However, a significant number of farmer’s have yet to be paid. Of the total ZMW800 million that is owed to farmers who sold to FRA, only ZMW103 million has so far been paid. The amount paid represents only 17 percent of what the agency owes the farmers.

PRIVATE SECTOR PARTICIPATION IN MAIZE MARKETING

The 2017/2018 maize marketing season has been characterised by low private sector participation. In the previous marketing season, many of the large private grain traders obtained financing from banks to facilitate the purchases of grain in anticipation of high domestic and regional prices. When the government imposed an export ban, some of the traders could not fulfill contracts on grains earmarked for exports—hence the huge carryover into the current marketing season. This situation had a ripple-effect as it led to defaults on loans. As a result, financial institutions are reluctant to lend to grain traders this season, which inhibits their market participation.
However, during IAPRI’s field visits, we found that millers were more actively purchasing maize from farmers and in fact they provided a major maize market in the Copperbelt, Central and Southern Provinces. The reason for the active participation of millers this year is the low cost of maize, which supports lower cost of production. However, the challenge here is that most millers do not have sufficient storage capacity to absorb the maize surplus.

GOVERNMENT’S INTERVENTIONS IN THE MAIZE SUB-SECTOR

In the latter parts of the 2016/2017 maize marketing season there were a number of policy decisions introduced on the back of the regional situation, which was characterised by regional deficits.

Export Ban and Export Tax: The key change was the decision to close the borders in October 2016. This, as discussed above, was motivated by a desire to reduce mealie meal prices and allay fears about food security. The food security concern arose because government was uneasy about the private sector holding significant stocks, rather than the FRA, (by the end of the buying season FRA had only purchased 280,000 MT out of a target of 500,000 MT). Government (and others including the millers) worried that the private sector would seek to export maize given the high regional price, leading to food shortages in Zambia, hence the decision to close the borders.

However, the decision to close the borders overlooked the fact that Zambia had produced sufficient maize to both feed itself and raise revenue by capitalizing on the fact that Zambia was the only country in southern Africa with an exportable surplus (Chisanga and Chapoto, 2016). To add to this the weather forecast for 2016/2017 production season was predicting a higher than normal rainfall (which as we have seen proved to be the case).

We can now see the full costs to the National Treasury of closing the borders during this period. During the 2016/2017 marketing season when export parity prices were highest in the region, Zambia could have earned substantial forex from exporting maize. In the 2016/2017 marketing season, Zambia’s export potential during this period was about 1,041,000 MT but due to the ban only 221,000 MT was exported. Put another way, about 820,000 MT of exportable maize didn’t leave the country. Valuing the foregone maize exports at export parity, the foregone export value is about US$ 270.5 Million. This could have added significantly to Zambia’s revenue base at a time when its public finances are under real strain.

To some extent, the Government recognised there was an issue; which is why the Minister of Finance Honourable Felix Mutati, during his presentation of the 2017 National Budget, announced the introduction of a 10 percent export tax on maize grain. Processed maize meal products including mealie meal and maize bran were exempt from this tax because the government wanted to promote exports of value added maize products. Unfortunately, this came too late after the window of opportunity to export to the region had long closed.

In May 2017, the Minister of Agriculture announced the lifting of the maize export ban and shortly after, the 10 percent export tax was also removed but with a caveat tied to level of production. The Minister of Finance announced that the export tax would be put in place whenever Zambia’s annual maize production fell below two Million MT. The Minister also reaffirmed Zambia’s commitment to open borders policies for maize (Lusaka Times:2017.b).

Regional Trade: Encouragingly, the Government has been very supportive to private sector initiatives intended to support exports to East Africa, which faces a grain deficit. A Regional Grain Trade Facilitation Forum was organized by ZAMACE and the East Africa Grain Council in June 2017. This forum brought together grain traders from East Africa and Zambian grain traders aimed at fostering trade in grain (mostly maize) between Zambia and East Africa. This meeting resulted in maize trade deals of 382,640 MT worth approximately US$ 100 million (East Africa Grain Council, 2017). Logistical challenges and differences in standard requirements for grain between East Africa and Zambia were the immediate challenges in realising the signed trade deals. To address this challenge, a high level delegation from Zambia comprising of the Minister of Finance and the Minister of Agriculture was sent to East Africa in order to resolve these challenges.

Grain Storage Facilities: During the 2018 budget presentation, government announced its intention to expand FRA’s storage space in the country from the current 865,000 MT. This is in line with the 2014-2018 investment plan, which intends to expand overall storage capacity to 2 Million MT. This will add a total of 1,135,000 MT of FRA storage capacity. In the 2018 national budget, the FRA intends to spend ZMW75 Million on storage capacity targeting 98 rural storage sites (Chulu, 2017). This initiative is against the background that most public and private sector storage is located along the line of rail, whereas smallholder farmers off the line of rail cannot effectively store their commodity. FRA would also like to lease out some of its storage facilities to the private sector.

However, it is surely questionable whether it is prudent and cost effective to significantly increase storage capacity at a time when government has also said that FRA purchases should be restricted to 500,000 MT. While there may be a case for FRA depots in remote areas, overall private sector is better positioned to invest in storage facilities with the right policies and incentives. For example, private grain traders’ investments in grain storage grew from 550,000 MT in 2013 to about 947,000 MT in 2017 with the total value of investments growing from about US$ 34 million to US$80 million over the same period (GTAZ, 2013; GTAZ, 2017). Millers have a total storage capacity amounting to 558,000 MT bringing total private sector storage capacity to 1,505,500 MT. Government would be much better placed using its scarce resources to invest in requisite transport infrastructure such as feeder roads to open up rural areas for more private sector investments.
Grain Marketing Innovations and Investments in Zambia:

Creating Marketing Opportunities for Smallholder Farmers?

Zambia in the past decade has been experiencing massive grain marketing innovations. These innovations have opened up lucrative alternative marketing channels to farmers, especially those producing surpluses for sale.

Private sector investments in the sector have endured trade policy changes which have to some extent hindered their growth. Investments in grain storage and marketing infrastructure require a stable marketing environment.

What is the current status on grain marketing innovations

Maize and soya beans have experienced the largest value chain growth among smallholder farmers in recent years.

Between 2011/12 and 2014/15, maize sales to large grain traders increased from 3% to 12%. Large grain traders also accounted for 40% of the marketed surplus during the 2016/17 marketing season.

Innovations are mainly driven by large grain traders who are mostly multinational corporations including AFGRI Corporation, NWK Agri Services and Cargill.

The majority of the investments are mainly in Central, Eastern, Southern and some parts of the Copperbelt Provinces.

In 2015, Central Province accounted for 53% of maize and 56% of soya bean sales followed by Eastern Province at 24% and 14% sales respectively.
ZAMACE: Warehouse Receipt Systems are operated by ZAMACE, which is the authorised agency for implementation of the warehouse receipt system under Agricultural Credits Act 35 of 2010 (Government of Zambia, 2010). Through the warehouse receipt system a farmer or trader can deposit their grain to a ZAMACE certified warehouse and they are issued a warehouse receipt, which can be used as collateral to access finance or agricultural inputs. Currently ZAMACE has certified four warehouse operators with a total storage capacity of about 800,000 MT for the warehouse receipt system. These are spread across 18 districts of Zambia. Most of these are large grain traders including Afgri Corporation, CHC Commodities Limited, NWK Commodity Services Limited and Zdenakie Limited. However, transactions conducted through ZAMACE are still very low. As of 15th November 2017, only 180 MT of maize had been traded using ZAMACE. There is need for the Government to support the capitalisation of ZAMACE by participating in the exchange.

FRA Reforms: The Government has made proposals to reform the FRA Act of 2005. A draft Bill has since been circulated to stakeholders for comments. Unfortunately, this Bill is proposing an expanded marketing role of FRA, contradicting all the evidence which demonstrates and recommends that Government’s role in food markets should be minimal in order to promote sustainable private sector-led market development. An expended role would place a highly unsustainable financial burden on the exchequer. This could crowd out revenue that could be used to boost agriculture productivity and job creation. The draft Bill therefore needs amending so that FRAs’ role is limited to the provision of strategic grain reserves and as a buyer of last resort in remote areas. Furthermore, what is required to resolve ad hoc Government interventions in the market is the enactment of a comprehensive Agricultural Marketing Act. This would see the creation of a council consisting of Government and other key stakeholders to jointly make recommendations on grain marketing in the country.

REGIONAL MAIZE PRODUCTION AND TRADE

Due to the covariate rainfall in the Southern Africa region and the La Niña weather event, most of the countries in the region produced major maize surpluses with South Africa producing the highest exportable maize surplus of over five Million MT (Department of Agriculture, Forestry and Fisheries South Africa, 2017). Zimbabwe, which has been Zambia’s main market for maize was projected to produce a nearly sufficient maize harvest of over two Million MT and has also imposed an import ban of maize until the government purchases sufficient quantities of maize from its farmers supported through its Command Agriculture Initiative. Malawi also rebounded from the previous year’s deficit to produce over three Million MT (FAO, 2017a; FAO, 2017b).

The overproduction particularly of maize in Southern Africa is in sharp contrast to East Africa where an estimated 17 million people may be facing hunger, amidst concerns about food shortages, which are driving up prices as Governments scramble to secure imports. This is attributed to the La Niña and El Niño weather events, which exemplified extreme conditions between the Southern and Eastern parts of Africa (Dzonzi, Mitimingi and Crowley, 2017). However, due to poor infrastructure linking Southern Africa with East Africa, it has been difficult for maize to move from surplus countries in the South to deficit countries in the East.

Table 1 shows maize production, prices, transport and handling costs and export parity prices for Zambia to export to these markets in Southern and Eastern Africa. In Southern Africa, the only potential maize market for Zambia is Zimbabwe with an export parity price of US$189 per MT. However, Zimbabwe imposed an import ban until its Grain Marketing Board (GMB) purchases all the grain from farmers at the price of US$390 per MT. Therefore, the main markets for Zambia’s maize this season are in East Africa; mainly Kenya, Tanzania, Rwanda and Burundi, with export parity prices indicating that traders would make reasonable profits. Figure 4 shows the surplus/deficit position in selected countries.
in Eastern and Southern Africa and the direction of trade flows.
The major challenges in meeting the demand for maize in East Africa is the high cost of transportation to reach these markets, as well as differences in standards requirements, particularly for the Tanzania and Kenya markets. Maize from Zambia does not consistently meet the standards for Tanzania and Kenya as it is discolored up to 3 percent, while the standard in these markets only allows up to 1 percent².

This is mainly because most of the Zambian maize being exported to these markets are carryover stocks from the previous season, and also because traders buy unsorted and sieved grain. Standards are specified by the importing country who set a number of parameters to be met by the exporting country. Tanzania and Kenya, particularly, go beyond the usual requirements for pests and diseases as they specify higher standards. The Tanzania Bureau of Standards (TBZ) has contracted SGR Zambia to conduct

Table 1: Regional prices and export parity prices for different markets for Zambia: October, 2017.

<table>
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<tr>
<th>Country</th>
<th>Production (MT)</th>
<th>Maize price in US$</th>
<th>Transport and handling costs in US$</th>
<th>Export parity prices in US$--</th>
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<td>South Sudan</td>
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Source: FAO GIEWS; FAO Country Briefs; Ministry of Agriculture Zambia; Department of Agriculture Food and Agriculture Food and Forestry South Africa; RATIN, 2017 at http://www.ratin.net/; FEWSNET, Grain Traders Association of Zambia

Figure 4: Maize surplus/deficit positions in selected Eastern and Southern Africa in the 2017/18 season and trade flows

Source: Author’s Depiction

Figure 4: Maize surplus/deficit positions in selected Eastern and Southern Africa in the 2017/18 season and trade flows

The main market for Zambia’s maize this season is Kenya accounting for 24 percent of exports, followed by DRC (14 percent), although DRC takes mainly mealie meal. Most of the mealie meal, however, is exported informally. Botswana and Namibia are also important markets for Zambia, importing mostly maize bran for their vibrant livestock industries. Botswana has so far accounted for 13 percent of maize exports, Namibia (11 percent), while Tanzania is also at 11 percent. Exports to Zimbabwe and Malawi are low this season due to the improved production by these countries and the imposition of an import ban.

² Personal Interview with WFP
testing and certification of products including maize on its behalf. To help put these barriers to trade with East Africa in some context, note that of the 50,000 MT tendered by the World Food Programme (WFP) from large grain traders, only 3,000 MT has so far been exported. The challenges of meeting standards in Kenya and Tanzania have proved especially problematic. Maize exports in the current marketing season are additionally constrained by the imposition of import bans by some countries in the region. We have discussed the example of Zimbabwe (the situation here is likely to change as a deficit of 100,000 MT is forecast for later in the season). Tanzania had also imposed an import ban but later removed it, while Malawi also has an import ban in place.

Table 2 shows Zambia’s maize and maize products exports in the 2017/2018 maize marketing season by partner country per month. Between March and August 2017, Zambia had only managed to export formally about 144,000 MT of maize to the region out of its huge surplus of over 1.17 Million MT. During the 2015/2016 season, the export ban cost Zambia heavily in terms of foregone revenue. During the 2016/2017 marketing season, Zambia has the double whammy of not being able to export its significant surplus to easily accessible markets in southern Africa due to low demand; while trade opportunities will go unrealised because of the practical barriers associated with exporting to deficit markets in East Africa.

Zambia Maize Exports: Zambia’s maize exports have increased steadily since May 2017 (when the export ban was lifted), but are still much lower compared to the previous year (prior to the introduction of the ban). On average, Zambia is exporting 26,000 MT of maize and its products per month compared to the 2016/2017 marketing season when it was exporting on average 75,000 MT per month.

Informal exports have generally been low in the current marketing season owing to the low regional demand. Informal mealie meal exports to DRC are much lower compared to the average trade flows around the same time. In August 2017, prices of mealie meal were around ZMW60 per 25 Kg bag, while the price of maize was around ZMW65 per 50 kg bag.

The low border prices at one of the active borders (Kasumbalesa) between Zambia and its largest market for maize products (DRC) is indicative of low demand for the commodity this season. Another contributing factor to this, is that when Zambia banned exports in the previous season, the DRC started relying more on South Africa and Tanzania, which supplied its requirements. Hence, this season, there has been limited demand for maize and mealie meal from the DRC even informally.

By contrast, there are significant informal maize exports flowing through Nakonde border post, on the Zambian/Tanzania border. The high demand mainly from Kenya is the major pull factor for maize for most of Muchinga and Northern provinces in the current marketing season. Maize bought from this region is exported mostly informally to Tanzania but is headed for the Kenyan market.

As the marketing season opened in May/June 2017, informal traders from Tanzania set up buying points across Muchinga and Northern provinces where some were even bought at farm-gate, offering prices ranging from ZMW80 to ZMW110 per 50 Kg bag. As the season progressed, these prices declined for two main reasons. First, there was an increase in maize delivery by the farmers as traders bought maize for the export market. Second, it was reported that soon after the announcement of the FRA price, traders began to offer lower prices for the maize in Northern and Muchinga Provinces. As of October, maize prices at the Nakonde border post were trading between ZMW75 to ZMW90 per 50 Kg bag equivalent.

During the field visit, it was also observed that traders were buying maize in larger bags weighing about 105 Kg at a price of between ZMW150 to ZMW180. In Arusha, Tanzania, the price of the 105 Kg bag is reported to be at ZMW280 equivalent. Among the factors contributing to high informal trade at the border are the cumbersome requirements to formally export maize such as the central permit issuance by the Ministry of Agriculture. Export permits are

<table>
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<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
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Source: Authors computation from Central Statistical Office Data (2017)
Maize being packed at an Afgri Corporation depot in Mpika District, Muchinga Province for formal export to East Africa under the World Food Program (WFP) humanitarian exports mostly to Kenya.

Maize being informally traded between Zambian traders and Tanzanians at Nakonde border post. The maize is mainly exported to Kenya via Tanzania.
still only issued at the Ministry of Agriculture Headquarters in Lusaka.

SHORT TO MEDIUM-TERM OUTLOOK

According to the Zambia Meteorological Department, Zambia is forecasted to experience normal to above-normal rainfall during the 2017/2018 rainfall season. Between November and December, the country is expected to receive normal rainfall except for sub-normal rainfall in the North-Eastern parts, which include parts of Muchinga and Eastern Provinces. The rest of the season, the whole country will likely receive normal to above normal rainfall with floods expected in some of the flood-prone areas (Zambia Meteorological Department, 2017). Similar weather patterns are expected throughout the Southern Africa region (Tebele, 2017).

Zambia is also likely to face an outbreak of the fall army worm in the 2017/2018 production season. The weather conditions in the season are conducive for the incubation, development and migration of the army worms (Chanda, 2017b). It is therefore important to put together a strategy to fight the pest now to avoid panicking when the crop season begins.

All factors constant, Zambia is most likely to produce another maize bumper crop given the good weather conditions expected in the coming season. This is despite the low price of maize in the current marketing season. The production is, however, likely to be lower than it was in the 2016/2017 agricultural season. The reduction will be as a result of a cut in the area under maize production particularly by the net maize sellers who might have lost out during the current season due to the crash in maize prices. The bulk of the farmers who produce mainly for own consumption are likely to maintain the same level of production. Also, the country is likely to have a large carry over stock as it is unable to shift the large surplus due to a) low demand in southern Africa and b) the challenges associated with exporting to deficit countries in East Africa.

For the rest of the maize marketing season, maize prices are expected to remain below a five year average due to the high maize stocks available in the country. Prices will likely increase around January as regional demand increases. Mealie meal prices are expected to be low as a result of low maize prices on the market. The main market for Zambia’s maize will be East Africa, particularly Kenya, Tanzania, Burundi and Rwanda. However, due to transport challenges, these markets will be unable to absorb the huge maize surplus that Zambia has. Zimbabwe might open its borders later in the season and may import some maize from Zambia to fill its projected small deficit for this season. South Africa is targeting markets outside Africa including Asia and the Middle East. Also given the Genetically Modified Organisms (GMO) status of South Africa’s maize, countries like Kenya, Burundi and Rwanda prefer Zambia’s maize.

MEDIUM TO LONG - TERM OUTLOOK

In the medium to long-term Zambia’s maize production is likely to continue on an upward trajectory. This may, however, imply low domestic prices in some years. Farmers will have to diversify into other high value crops, horticulture, livestock and fisheries. To boost domestic demand, Zambia needs to increase domestic utilisation, including using maize as stock-feed as well as other industrial uses, and grow its export market.

CONCLUSIONS AND RECOMMENDATIONS

Over the years, Zambia has become a major grain and oilseed producer evidenced by consistent surplus maize, soya beans and near-surplus wheat production. However, policies that undermine trade prohibit Zambia from becoming the grain basket for the Eastern and Southern Africa region. Trade policies that restricted maize exports at the time when Zambia’s maize was on high demand in the region have had a ripple effect into the current season. This is not only in terms of the low maize market prices but also loss of confidence in Zambia as a preferred supplier of grain for the region. Grain traders who had invested heavily, suffered major losses and this can be seen from their reduced activity in this marketing season. Even financial institutions are also less willing to lend to the maize sub-sector.

While commendable, the lifting of the export ban and the eventual removal of the 10 percent export levy on maize exports were implemented too late to enable Zambia to capitalise on the high maize prices last season. Zambia is now in a situation where there is limited demand from Southern Africa, which has plenty of maize, leaving East Africa as the only market for maize this season. However, poor infrastructure linking Zambia and East Africa, high transport costs and stringent standard requirements make it very difficult for Zambia to supply these markets. As a result, Zambia has only managed to export a small proportion of its surplus maize this year with a significant share of these being informally traded and therefore, unaccounted for.

The announcement of the FRA price that was broadly aligned with the market price is a positive development. The market is the most viable and sustainable mechanism for setting indicative commodity prices, maize included. Aligning maize prices to market conditions by all parties including Government will lead to sustainable maize and maize products market. FRA pricing based on cost of production alone is also not the answer as there is no single cost of production – costs vary considerably across Zambia’s highly populated and diverse maize sector. Therefore, pan territorial pricing based on cost of production and ignoring the market condition is an ineffective way of helping the farmers.

SHORT TERM RECOMMENDATIONS

a) FRA should continue moving towards a more dynamic pricing system in line with the demand and supply situation and the current discussions about FRA reforms represents an important opportunity to do so. As a state entity, FRA
is in a position to help fast track market development with some options to consider for the future. This entails moving away from pan-territorial pricing towards pricing that reflects regional factors such as transportation costs. FRA may simply purchase at a market price in each region and the price should be able to move along with the market price, hence there may be no need for the FRA to announce its buying price.

b) If there are populations adversely affected by low market prices then government should step in to support them through policies such as social cash transfers. These are much more effective and better value for money than government trying to artificially boost the price of maize (Harman and Chapoto, forthcoming).

c) There is need for all stakeholders in the sector to promote and encourage farmers to engage in other agricultural enterprises other than maize. Evidence shows that horticulture and fish farming, for example, are much more profitable than maize. Movement into the production of high value crops will provide higher incomes to smallholder farmers and enables the country to earn foreign exchange for those that can be exported.

d) Trade is an effective way of managing price volatility and more sector-wider effort must be made to enable Zambia to export to East Africa and the Horn of Africa. Facilitating trade is a market-friendly means of ensuring better incentives for farmers via prices instead of artificially raising prices above the market price. This year has revealed that there are major challenges with infrastructure affecting Zambia’s ability to supply to East Africa. There is need to explore other options such as rail network and water transport such as Lake Tanganyika as potential routes and making the necessary investments to make them viable means of transportation linking Zambia with East Africa.

There is also need to further harmonise grades and standards with East African countries such as Tanzania and Kenya where Zambia faces major challenges because of its discoloured maize. There is need to build the capacity of Zambian traders in terms of purchasing quality grain as well as appropriate post-harvest management in order to meet standards in key markets such as Kenya and Tanzania, which have more stringent standards enforcement.

e) Zambia needs to simplify its trade procedures in order to encourage formal trade. Many traders find the procedures too cumbersome and expensive and hence engage in informal trade as is the case with maize exports this year at Nakonde border post. Maize export permits are still being centrally issued by the Ministry of Agriculture Headquarters, despite the lifting of the export ban. Decentralisation of permits and other accompanying documents to regional offices will assist in the simplification of trade and encourage formalisation of trade.

MEDIUM TO LONG TERM RECOMMENDATIONS

a) Maize Productivity: Increased efficiency in the production of maize is the best means of lowering production costs and achieving competitiveness in local and regional maize markets. The average productivity in Zambia still remains lower than the CAADP target of five MT/ha.

b) Moderating Price Volatility through Trade: Fostering a sustainable open border policy offers Zambia a financially inexpensive means of reducing the domestic price volatility of staple foods. Assuming that private traders will get assurances that there won’t be restrictions to import or export maize when market conditions permit, then the import parity price would become the upper price bound, while export parity sets a floor below which prices will not fall. If the process is transparently managed, it will bring about price stability which benefits both consumers and producers at a very low cost to the treasury.

c) Management of the SGR: Limiting the quantity of physical stocks should be considered and a mixed portfolio of physical and virtual stocks in managing SGR is needed. This will limit the fiscal exposure of the Government through storage costs and losses. The Government can invest more to strengthen the early warning systems.

There is also need to fully embrace the use of Commodity Exchanges and Warehouse Receipts System. Zambia should be commended for having made tremendous steps towards having a private sector-led commodity exchange by passing the Credits Act of 2010 and putting in place a statutory instrument empowering ZAMACE to oversee the setting up of the Warehouse Receipt System.

In order to fully operationalize ZAMACE, there is need for the Government to take a deliberate decision to purchase SGRs requirements through the exchange. This will fast-track sustained capitalisation of the exchange as well as lower the cost of procuring and managing the SGR.
REFERENCES


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ABOUT IAPRI

Our Vision

“A Zambia free of hunger, malnutrition and poverty through sustainable agricultural transformation”

Our Mission

“To provide evidence-based policy solutions through high quality research and outreach services for the transformation of Zambia’s agricultural sector to achieve sustainable broad-based pro-poor growth”.

In achieving the stated Vision and Mission, our Core Values captured in the acronym; “IDEAS” will guide the conduct of the Board, Management, and Staff of IAPRI:

**OUR CORE VALUES**

**INTEGRITY** in how the Institute conducts itself

**DEDICATION** to achieving the Vision and Mission

**EXCELLENCE** in the quality of work

**ACCOUNTABILITY** in the actions and results delivered

**SENSITIVITY** to the needs of the poor in the agricultural sector