

MAIZE PRICING POLICY IN ZIMBABWE: IMPLICATIONS FOR MAIZE MARKETING AND TRADE DEVELOPMENT

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About LFSP: The Zimbabwe Livelihoods and Food Security Programme (LFSP), Agriculture Productivity and Nutrition Component (APN) is managed by the Food and Agriculture Organisation of the United Nations (FAO), with the aim of contribute to poverty reduction through increased incomes for a target 250,000 smallholder farming households. The programme is being implemented in four provinces covering 12 districts as follows: Mutasa, Mutare, and Makoni in Manicaland; Guruve, Bindura, Mazowe and Mt Darwin in Mashonaland Central; Kwekwe, Gokwe North, Gokwe South and Shurugwi in Midlands and Zvimba in Mashonaland West provinces. FAO is in partnership with three NGO consortia led by Practical Action, Welthungerhilfe and World Vision International, two Strategic Technical partners i.e. IAPRI for policy influence, HarvestPlus for biofortification, three Commercial Banks, 1 Wholesale Facility - the Zimbabwe Microfinance Fund (ZMF), 5 Microfinance Institutions (MFIs) and the USAID managed DCA Facility. To date the LFSP is funded for two phases to the tune of £72.4m.

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Executive Summary

White maize is the single most important strategic crop in Zimbabwe. It is the most widely grown smallholder crop and the national staple food. As a consequence, maize features prominently in Zimbabwe's agricultural policy and political economy. As evidenced by frequent attempts to control the production and marketing activities through various subsidy programmes, producer price setting, *ad hoc* import and exports bans; and more recently designating maize as a controlled product through Statutory Instrument 145 of 2019.

Due to severe and more frequent El Niño weather pattern in Zimbabwe, maize production shortfalls have continued to put pressure on the Government of Zimbabwe (GoZ) to find effective solutions to secure the country's food security. Unfortunately, similar to the early 1980s and 1990s, the country has resorted to a government controlled single marketing system through the Grain Marketing Board (GMB), a system that has in the past resulted in sub-optimal outcomes including stifling private sector-led maize market investments and development. This is likely to worsen the food security situation and overburden the already stretched National Treasury through ineffectual producer and consumer subsidies. Against this background, this paper provides an independent review of the 2018/19 marketing season and past seasons and make recommendations for government to consider to ensure sustainable food security in the country without fiscal strain on the Treasury.

A comparison of the various options available, the Government's preferred strategy where GMB was the only sole buyer and seller of maize grain in the country was the most expensive and least efficient given that the Treasury had to bear the full cost of maize procurement, storage and distribution on behalf of the private sector. The preferred option would result in the Government spending 58 percent more than what it would spend if the private sector capacity to finance part of their maize grain requirement was harnessed. With this option, the expected loss to the nation was estimated at US\$118,656,032 compared to US\$73,676,000, a whopping US\$44,980,031 saving if private sector capacity was harnessed.

In shortfall years, it is recommended that GoZ allows the private sector to import some of their requirements based on the quantity they will be drawing down from GMB. For example, if the tight foreign currency market persists, the private sector should be encouraged to innovate and work with development partners to assist with providing the needed foreign currency to import grain during the lean season. The main advantage of such a strategy is that it would limit Government's fiscal exposure as well as ensure that farmers who accessed Command support would still be able to pay back their dues through GMB stop order.

Frequent price adjustments under the Statutory Instrument 145 of 2019 would have been avoided if the Government had adopted a floating producer price of maize. Farmers can still be paid in RTGS \$ but the price has to float based on the import parity price converted at the daily official interbank rate. The rapid price erosion makes it more difficult for the farmer to derive value from maize production or prepare for the next season. This create a situation where the Government has to continuously intervene to try to correct the problem. But ad hoc and inconsistent interventions worsen the burden for the government, discourages private sector-led maize market development and creates arbitrage opportunities for a few.

To avoid knee-jerk policies, a well-managed price stabilisation policy allowing for clear triggers for maize purchases and releases by GMB needs to be formulated. This would allow normal seasonal price fluctuations to take place, a key ingredient for encouraging private sector investments into the agricultural sector. For example, an agreed price floor and ceiling could be established, it would then act as a trigger for maize purchases or releases from the strategic reserve.

Maize grain and maize meal should always be sold at market price to avoid creating distortions that discourage investments into the agricultural sector but instead creates huge government budget deficits and rent seeking behaviour. Poor and vulnerable consumers can be helped through less expensive market based government support programmes such as social cash transfers.

There is always need to increase direct access of maize grain to urban and rural consumers. Any limited stocks held by GMB should be made available to non-traditional markets at market prices rather than a few selected large scale millers or processors, this can be achieved through increasing community sales and supply maize grain at market prices to consumers and hammer mills. This is a more effective way of reducing mealie meal prices to low income consumers by providing them with cheaper alternative meal options.

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ACRONYMS

CA	Command Agriculture
GMB	Grain Marketing Board
GoZ	Government of Zimbabwe
Ha	Hectare
ICT	Information Communication Technology
MLAWRR	Ministry of Lands, Agriculture, Water and Rural Resettlement
MT	Metric Tonne
PHS	Post-Harvest Survey
RTGS	Real Time Gross Settlement
SGR	Strategic Grain Reserves
SMPP	Special Maize Production Programme
US\$	United States Dollars
ZIMSTAT	Zimbabwe National Statistical Agency
ZIMVAC	Zimbabwe Vulnerability Assessment Committee

1. INTRODUCTION

White maize is the single most important strategic crop in Zimbabwe. It is both the most widely grown smallholder crop and the national staple food. As a consequence, maize features prominently in Zimbabwe's agricultural policy and political economy. As evidenced by frequent attempts to control the production, processing and marketing activities through various subsidy programmes, producer price setting, ad hoc import and export bans; and more recently designating maize as a controlled product through Statutory Instrument 145 of 2019. One could conclude that there is an explicit 'social contract' between the government and the Zimbabwean people when it comes to the staple crop. This social contract compels government to do everything in its power to ensure that farmers receive higher producer prices whilst consumers access cheaper maize meal through government subsidies. Nevertheless, the current and past actions of attempting to balance between these two opposing objectives end up being very costly to Treasury and at the same time stifling agricultural diversification and maize market and trade development. The frequent erratic weather patterns and current sub-optimal economic environment in the country make the situation much more complicated to deal with, as adopted solutions tend to worsen the situation instead of helping ease the pressure on government.

In the 2016/17 agricultural season, the GoZ with the desire to become self-sufficient and a regional grain bread basket introduced the Special Maize Production Programme (SMPP) for Import Substitution, herein after referred to interchangeably as Command Agriculture (CA) or SMPP. This was necessitated by several factors including: two consecutive bad agricultural seasons due to El Niño weather patterns, the rising maize import bill, and limited formal financial support towards agricultural production from the local financial institutions. Given the urgency of implementing the programme, a lot more focus was put on production rather than post-harvest activities including storage and marketing of the maize. Coupled with the good rainfall season, the programme despite being under-funded helped to increase the country's maize production in 2016/17 and 2017/18 agricultural seasons from 511,816 Metric Tonnes (MT) in 2015/16 to 2,155,526 MT in 2016/17 and 1,708,702 in 2017/18. The rainfall season during 2016/17 agricultural season was far superior to that of 2017/18 hence the decline in production.

Due to severe El Niño weather pattern, this trend was reversed in 2018/19 agricultural seasons where the country was projected to produce only 776,635 MT against an annual national requirement of more than 2 million metric tonnes. According to ZimVAC (2019), average household cereal grain stocks at the beginning of April declined from 109.6kg in 2017 to 59.9kg and 37.5kg in 2018 and 2019 respectively. The pressure continues to mount on the GoZ to find effective solutions to secure the

country's food security. Unfortunately, similar to the early 1980s and 1990s, the country has resorted to a government controlled single marketing system through the GMB, a system that has in the past resulted in sub optimal outcomes including stifling private-sector led maize market investments and development. This is likely to worsen the food security situation and overburden the already stretched National Treasury through ineffectual producer and consumer subsidies. This is because staple grain marketing through one channel is usually opaque, and creates a situation that promotes under hand dealings and increases informal trading to the extent that the Treasury has to fork out millions of Dollars with limited impact instead of harnessing private sector resources to foster food security.

Against this background, this paper provides an independent review of the 2018/19 marketing season and past seasons and make recommendations for government to consider given the constrained fiscal space and adverse economic conditions currently prevailing in the country. In particular, exploring options of harnessing and leveraging financing from the private sector that can avert fiscal strain on the Treasury. The objectives of the paper are as follows:

- i. Distil lessons from the implementation the SMPP and maize grain pricing policy;
- ii. Explore options for establishing orderly marketing of grain and minimising Government fiscal exposure; and
- iii. Identify opportunities for improved market efficiency and sustainability of the staple grain sector in Zimbabwe.

Using a desktop approach the paper reviewed literature on the maize pricing policy in Zimbabwe. The paper analysed past maize production performance, changes in maize yield levels by farmer category and reviewed maize production for the 2018/19 marketing season. The paper also undertook a qualitative and quantitative assessment of the various interventions by government to address challenges in the maize sector including a comparative analysis of the various pricing options available to government.

The rest of the paper is organised as follows: Section 2 presents a brief analysis of key facts about the maize sub-sector that have big implications on the decisions that Government has on the sector. Section 3 presents a set of options for consideration. Whist the last section provides some conclusions and recommendations.

2. KEY FACTS ABOUT THE MAIZE SECTOR IN ZIMBABWE

The discussions about maize pricing policy in Zimbabwe and effects on the economy and the sector in particular should be grounded in the situation prevailing in the country. It is important to understand the participants and their capabilities to respond. A clear understanding of the composition and structure of the smallholder farming sector, which predominate the production of the crop, will better enable the Government to anticipate potential effects of alternative policy actions.

2.1 Maize production and productivity:

Maize yields in Zimbabwe have remained significantly lower than other countries in the region and have continued to decline. Since 2000, average yields have remained below one metric tonne per hectare (MT/ha). Rather than productivity gains, the real driver of maize production growth in Zimbabwe has been the area under maize cultivation, which shows an increasing trend with notable dips during drought or El Niño years. Without yield growth, the attainment of national maize surpluses will require bringing more land into maize cultivation, a strategy that is not sustainable. Figure 1 presents trends in area cropped and productivity of maize in Zimbabwe.

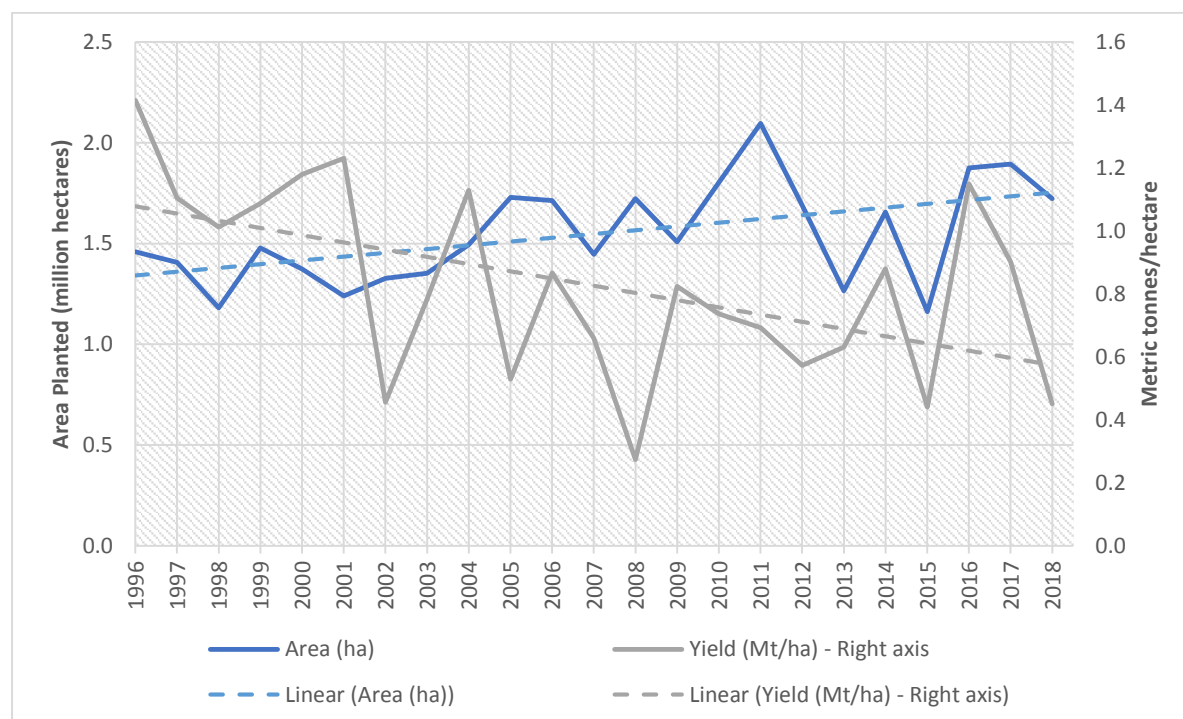


Figure 1: Maize production, area and yields from 1980/81 to 2018/19 agricultural seasons

Source of data: MLAWCRR (2019)

2.2 Landholding size and ability to produce a maize surplus

Zimbabwe's agricultural sector is characterized by over a million smallholder farming households. The majority of the smallholder farmers have very small landholding sizes, which impact on their ability to produce a maize surplus for sale. As shown in Table 1, production of maize surplus is correlated to landholding size, even though more than 33 percent of the maize comes from farmers cultivating less than 2 Ha. Therefore, the implications of government's pricing and subsidy policy need to take note of this reality on the ground. For example, an above market maize producer price will benefit only those that are able to produce a surplus and disadvantage those who have to rely on the market for their food needs (net-buyers).

Table 1: Landholding distribution among farmers in Zimbabwe

Landholding size	Households (HH)		Average Land cultivated	% contribution to total	% selling maize	% contribution to total maize
	Number	%	Ha	%	%	%
Less than 1 Ha	554,747	49.3	.36	16.7	4.8	4.1
1.0- 1.99 Ha	292,837	26.0	.86	16.5	8.6	9.5
2.0 - 4.99 Ha	220,089	19.6	1.70	25.8	14.1	21.7
5 - 9.99 Ha	40,542	3.6	3.60	16.4	29.5	22.3
10.0 - 19.99 Ha	9,240	.8	8.07	7.6	34.8	9.5
20Ha or more	8,035	.7	29.06	17.0	41.4	33.0
All farmers	1,125,490	100.0	1.18	100.0	9.0	100.0

Source: Zimstat, 2014/15 PHS Survey

2.3 Maize market is highly concentrated

Table 2 shows that 50 percent of the maize sales in Zimbabwe is accounted for by between 4.4 and 6.2 percent of the farmers. Meaning, the narrative that maize output subsidy through high producer price helps smallholder farmers escape poverty tends to ignore the fact that only a small proportion of the farmers participate in maize grain markets, and that the bulk of the sales come from a small minority who are likely to be better off than the rest of the other smallholder farmers. These are the same farmers who also benefit significantly from the input support programme, thereby widening the inequality gap.

Table 2: Maize selling by farmers

	2011/12	2012/13	2013/14	2014/15
Top 50% of maize sellers	5.2	6.2	5.2	4.4

Rest of maize sellers	7.8	6.8	10.2	4.6
Households not selling	87.0	87.0	84.6	91.0

Source: Author's calculations with assistance from ZimStat based on 2011/12 to 2014/15 Post-Harvest Survey Data.

2.4 Many maize net buyers

As discussed earlier, the majority of smallholder farmers do not produce enough to sell but instead retain the little they harvest for home consumption. Data from ZIMVAC shows that the majority of rural farming households are net buyers of grain; 86 percent in 2014/15 and 76 percent in 2016/17 (See Figures 2A and B). In the context of a highly concentrated smallholder maize market, government maize purchases at elevated prices serve to transfer significant treasury resources to a small minority of relatively better off farmers. Given that most farmers, particularly the poorest farmers are net buyers of maize, GMB purchases, at the very least, do nothing to help the majority of the rural poor in Zimbabwe, and likely makes conditions worse for them by pushing up maize prices.



Figure 2: A and B: Maize net sellers, net buyers and those who neither buy nor sell

Source: ZIMVAC, 2015 and 2017

3. COMMAND AGRICULTURE

The government's transitional agricultural development strategy is structured around 'Command Agriculture', where the government is at the centre of attempting to use discretionary public spending to stimulate private sector engagement in key crop and livestock sectors. The main policy objective is to increase agricultural production and productivity in order to ensure food self-sufficiency for the country, reduce the food import bill, and associated vulnerability to regional and

global food shocks. However, in analysing the elements of the SMPP, there are three main issues that deserve scrutiny as follows:

a) *Level of productivity:*

First, is the differential productivity levels for farmers under irrigation and dry land and their implications on setting expected productivity targets? It is expected that the level of productivity, would vary between those growing maize under irrigation and dryland. Also, farmers of different types do not record the same level of productivity. Figure 3 shows the average maize productivity by farmer type based on past post-harvest surveys. It is apparent from this trend that the historical average yields have been way below the SMPP contractual target of 5MT/ha. Further, a closer look at the distribution of yields shows that only about 2.2 percent of all farmers who produced maize in the 2014/15 agricultural season attained yields of 5MT/ha and above (Table 3). The percentages are slightly higher among A2 and Large Scale Commercial farmers. Therefore, with the erratic rainfall and varied management practices, most farmers receiving the Command maize inputs are likely failing to meet their repayment obligation as they cannot easily achieve the 5MT/ha contractual target.

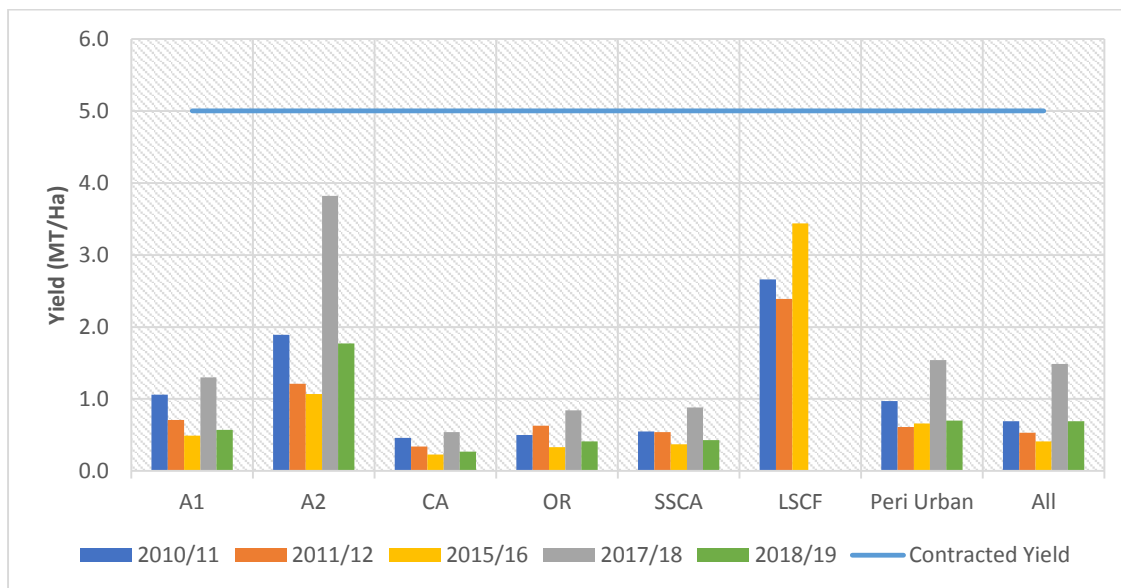


Figure 3: Yields by sector, selected years

Source: Source of data: MLAWCRR, Various years

Table 3: Maize yield distribution by farm sector, 2014/15 agricultural season

Maize yields (MT)	Farm category						
	All	A1	A2	LSCF	SSCF	OR	Communal
Number							
Mean	1.2	1.4	1.8	2.7	0.9	1.4	1.2
% Below 0.5	36.0	22.7	13.0	19.2	43.0	25.7	38.6
% 0.5 - 1.0	26.3	25.8	19.9	15.6	30.9	29.0	26.2
% >1.0 - 2.0	22.7	29.9	33.5	28.0	19.5	28.3	21.3
% >2.0 - 5.0	12.9	18.7	28.0	27.8	5.9	13.5	11.9
% Greater than 5.0	2.2	2.9	5.6	9.4	0.7	3.5	1.9

Source: ZimStat, 2014/15 PHS Survey

b) Maize Pricing Policy

The second issue pertains to the pricing policy. When the SMPP programme started in 2016, a contracted producer price of \$390/MT calculated based on cost of production and average yields was set well above the prevailing market price. While the price was favourable to the farmer and motivated farmers to increase the hectareage under maize, the above market price resulted in other unintended effects. For example, the contracted producer maize price of \$390/MT was at variance with the regional and domestic supply and demand position. This created arbitrage opportunities in the local maize market by making informal maize imports more lucrative given that there was an import ban in place. Inevitably this increased the cost of policing the bans and an increase in discretionary funding to support consumer subsidies through the GMB sales of subsidised maize grain to millers.

With regards to the 2019/2020 marketing season, maize pricing has been a challenge because of the anticipated reduction in maize production and corresponding impact on mealie-meal prices. The imposition of SI 145 of 2019 making GMB the sole buyer and seller of maize grain in the country made the pricing situation even more complicated than when the marketing season began. The situation has been compounded by the adverse macroeconomic environment characterized by exchange rate volatility and hyperinflation.

The 2019/2020 marketing season maize producer price was initially set based on cost of production plus a 15 percent return on investment and benchmarked to the import parity prices prevailing in April 2019 and to be paid in Real Time Gross Settlement (RTGS) \$. However, this price was met with fierce resistance from farmers who felt that the price was not reflective of the real cost of production in 2018/19 agricultural season as it ignored the prevailing exchange rate volatility.

Benchmarking the maize price on import parity pricing was the correct decision to make as the country is in a grain deficit situation. However, the decision to pay the price in RTGS\$ based on the RTGS \$/US\$ exchange rate on the day of announcement and not allowing it to fluctuate removed the incentives for farmers and traders to participate in the market actively.

The government decided to increase the producer price from US\$130 (RTGS\$ 390/MT as at 2 April 2019) to US\$242/Tonne (RTGS\$ 726/MT as at 12 June 2019), whilst millers would buy maize from GMB at about US\$148/MT (RTGS\$447/MT) up from the subsidised price of US\$80 (RTGS \$240/Tonne). This meant the prices to grain millers and stock feed processors had increased by more than 82.5 percent in RTGS terms. However, as at the 2nd of June 2019, RTGS to US\$ interbank and parallel exchange rates, maize grain prices in real US\$ had reduced by more than 42 percent and 60 percent respectively. Thus, within two months, the real price of maize had declined by 42 percent, from US\$242 to US\$146 and was 48 percent below import parity price). The price has ever since been revised upwards to RTGS \$2100 as at July 18th 2019, RTGS \$4200 as at October 7th 2019 and RTGS \$6958 as at February 2020. These producer price reviews have been in order but they remained unattractive to farmers due to the rapidly depreciating RTGS rate against the US\$. Table 4 demonstrates how the revised maize prices were quickly eroded by the depreciating Interbank market RTGS \$ to US\$ rate.

This situation resulted in increased demand for cheap maize grain from GMB by millers and created grain allocation nightmares for the government as well as increased arbitrage opportunities for well-connected individuals or entities. This situation increases the burden to the National Treasury.

Table 4: Maize producer prices - RTGS converted to US\$ at Interbank rates

Date	RTGS \$: 1	Maize price in RTGS\$			
	US\$	390.0	776.0	1400.0	2100.0
15-Mar-19	2.75	141.8			
30-Mar-19	3.01	129.6			
02-Apr-19	3.00	130.0	258.67		
14-Apr-19	3.16		245.57		
30-Apr-19	3.26		238.04		
02-May-19	3.26		238.04		
14-May-19	3.37		230.27		
30-May-19	5.23		148.37		
12-Jun-19	5.50		141.09	254.55	
14-Jun-19	6.00			233.33	
30-Jun-19	6.62			211.48	
02-Jul-19	7.80			179.49	
10-Jul-19	8.67			161.48	
11-Jul-19	8.71			160.73	
16-Jul-19	8.52			164.32	246.48
17-Jul-19	8.84				237.56
18-Jul-19	8.85				237.29
19-Jul-19	8.86				237.02

Maize grain US\$ price as at RTGS Interbank rate

Source: Authors calculations. Interbank exchange rates downloaded at www.fbc.co.zw

In compliance with the SI 142 of 2019, the recommendation is that farmers should be paid RTGS dollar equivalent to the real US\$ import parity price using the daily official interbank exchange rate instead of fixing it at the RTGS \$/US\$ exchange rate on the date when the price is announced. In real terms the country will continue to have the cheapest maize in the region if we factor in the rapidly depreciating RTGS rate against the US\$ (see Table 5). This creates a very artificial maize market because Zimbabwe is currently in a net importer position. Hence, the current pricing policy created lucrative arbitrage opportunities in the market that have potential to discourage farmers from producing in the next season, fail to incentivise farmers and traders to deliver to GMB as well as attract grain into the country to fill the huge supply gap.

The SI 145 of 2019 criminalising private trading of maize also overburdened the Treasury in that GMB carried all the cost to procure, store and distribute grain to private sector who would otherwise finance their local procurement and storage. Thus, the strategy failed to unlock private sector financial resources for grain imports but instead created an artificial demand for subsidised maize from GMB earlier than normal. Ideally, maize grain supply on the market should not be so tight soon after harvest (even when the harvest is expected to be bad) but later in the season (around October through March) unless the price is not reflective of the market conditions.

Table 5: Maize prices and import parity prices from different countries

Country	Production (MT)	Surplus/Deficit (MT)	Maize price in...for the month of (July 2019) (USD/MT)	Transport from -- - to Harare	Handling Costs	Import parity price (Harare)
Zimbabwe (Harare)	770,000	-800.000	242*			
Zambia (Lusaka)	2,004,389	368,254	234	80.00	10.00	324
South Africa (Randfontein)	11,449,440	1,466,519	205	120.00	10.00	335
Malawi (Mitundu)	3,355,232	355,000	220	80.00	10.00	310
Mozambique (Manuto)	2,400,000	-	330	80.00	10.00	420
Tanzania (Tunduma)	5,500,000	988,000	196	120	10	326

Source: Grain Traders Association of Zambia; Ministry of Agriculture, Zambia; Department of Agriculture Food and Agriculture Food and Forestry South Africa; Ratin, 2019 at <https://ratin.net/site/ace> . Ministry of Agriculture, Irrigation and Water Development in Malawi; Transport rates are based on informal discussions with grain traders; Ministry of Lands, Agriculture, Water, Climate and Rural Resettlement * Zimbabwe price converted from RTGS price of 2100 by the Interbank exchange rate of 16 July 2019

The pricing policy has major implications on downstream industries. For example, above market maize producer prices have a negative impact on downstream value chain activities and ultimately consumer prices. Thus, higher than normal maize grain prices will result into high mealie meal prices as well as impact negatively on the cost of production in the livestock sector because maize is a major input into feed production.

The preferred solution of using GMB to cushion the impact of higher prices on consumers and downstream industries, through the sales of maize grain to processors at less than the purchase price

is not very effective and has not worked in the past. Instead, the private sector should be given an opportunity to help broaden the market for maize and save the country from spending millions of dollars on not so effective subsidises. Making GMB the sole buyer and seller creates arbitrage opportunities in the maize market that results in the Government spending more on procurement, storage and distribution of grain. The ability of the government to get revenue from formal trade activities is also diminished whilst at the same time increasing government burden to meet private sector processing needs. It is not a secret that the private sector is happy for Government to buy maize grain on their behalf as this saves them from the hassle of going out to procure and spending resources on aggregation, transportation and storage. Unfortunately, this comes at the expense of other priorities that require funding from public resources.

c) Sustainability of Command Agriculture:

The third issue pertains to the impact on the Treasury and Sustainability of CA. Table 6 shows the costs per farmer and hectare of the SMPP. On average, the government spent close to \$1000 per each hectare of maize supported in 2016/17 and 2018/19 agricultural season and more than US\$1600 in 2017/18 season. However, the repayment rates have been dismally low at 28.2 percent for the agricultural season 2016/17 and 13.9 percent in 2017/18 season. These statistics call into question the sustainability of the programme as it was initially designed as a commercial programme.

There are supposed to be social benefits derived from the SMPP if the benefit could accrue to the majority of the poor communities. However, the current design targets relatively better off farmers to help increase maize production in the country hence does not achieve sustainable broad based benefits but contributes to increasing the inequality gap in the country.

Table 6: SMPP’s released budget, hectares targeted, cost per hectare and repayment rates

Special Maize Program for Input Substitution	Released Budget	# of Hectares targeted	Cost per hectare supported	-----Repayment rates-----	
2016/17	\$160,000,000.00	171 256	\$934	\$45,178,340.00	28.24%
2017/18	\$470,186,488.60	290 000	\$1621.33	\$65,471,901.09	13.92%
2018/19	*\$242,000,000.00	290 000	\$834.48	In progress	-

Source: MLAWCRR, 2019 indicative

The sustainability of the CA programme hinges on finding financing partners who should be attracted by the success of the initial phases of CA and the repayment rates. Failure by farmers to pay back

their dues, as contracted, exposes the Treasury, a cost that has to be met by the tax payer. In this regard, the government needs to devise an incentive compatible system/framework that reduces moral hazard and ensures full compliance by financed farmers. There is need to draw lessons from past government programmes to support agriculture in order to devise effective mechanisms to enforce repayments. Leveraging on ICT, it should not be difficult to devise effective methods of maintaining farmer databases; monitor and verify productivity of farmers; target CA beneficiaries and track their performance; enforce flexible but farmer friendly stop order repayment systems. Defaulters should be blacklisted through the RBZ credit reference Bureau. Managing the programme through CBZ Holdings is a step in the right direction.

4. OPTIONS FOR 2019/2020 MAIZE MARKETING

Under SI 145 of 2019, the Government's preferred option was to buy all the marketed surplus at announced producer price of RTGS \$ 6958 (as at March 2019) and then sell at subsidised prices to Industrial Processors. Given that the country has to import grain to fill the domestic supply gap, GMB had plans to import 800,000 metric tonnes at import parity price which averaged around US\$330 at that time.

4.1 Shortcomings with the Government preferred option

The preferred Government's option of being the only sole buyer and seller of maize would result in huge government fiscal exposure. For example, based on a conservative local purchase estimate of 310,000 MT and GMB arranged maize imports of 793,915MT for onward sale to the private sector, the Government would require close to US\$ 470 million. The assumptions and computation of these figures is presented in Appendix A1.

Aside from the fact that this amount would be a big challenge to raise under the current economic environment, many would question why the government would want to spend US\$85,123,500 as a subsidy to Industrial processors instead of US\$40,143,469, especially when private sector could arrange their own imports for part of their maize grain requirements. Therefore, it was necessary to revisit the maize pricing policy and the implications of the SI 145 of 2019 on private sector market participation as well as incentives to attract maize grain deliveries to GMB. Also, a drawdown of GMB maize grain or strategic reserve should not have been permitted until the start of the lean season in October 2019. However, with SI 145 of 2019 in place, such a situation was inevitable but with big fiscal implications.

Tables 7 summarises the advantages and disadvantages of the government preferred choice of dealing with maize market during the 2019/20 marketing season. Clearly, the preferred option is very expensive with the main advantage only being the ability for the government to deduct at source the

cost of the loan advanced to a selected group of farmers under the Command Agriculture for maize. However, this is also not guaranteed because the price offered by GMB in RTGS\$ was not competitive. Generally, farmers who produced a marketable surplus would love to receive a higher price but as discussed earlier, the biggest beneficiaries would be the larger and relatively better-off farmers. On the other hand, Industrial Processors and Traders who possess the ability to access subsidized GMB maize would surely always welcome the possibility of the government to buy for them and bear all the logistical costs.

Table 7: Preferred Government marketing option-GMB route as a sole buyer and seller

Government Current Option (1)	<ul style="list-style-type: none"> • Government as the sole buyer of farmers' maize in 2019/20 marketing season at import parity price • To reduce downstream impacts on input and consumer prices, GMB to sell maize to Industrial Processors at subsidized price
Estimated GMB Purchases	310,000 MT local purchases and 793,915 MT imports for both human and livestock needs
Estimated Total Costs	US\$ 466,397,207
Estimated Total Losses	US\$ 118,656,032
Advantages	<ul style="list-style-type: none"> • Government has the ability to deduct at source the loans advanced to farmers under the Special Maize Production Programme; • With full enforcement of SI 145 of 2019, there would be no opportunity for the farmers to side market.
Disadvantages	<ul style="list-style-type: none"> • Big fiscal cost to the Treasury as government meets all the costs for grain procurement, storage and distribution • Fails to harness the Private sector players' ability to finance their own requirements; • Possibility of increasing corruption and round tripping- thus, buying grain from GMB at subsidized price and sell it back at the higher price; • Limited fiscal space may result in late payments to farmers which may affect 2019/20 maize production; • Marketable surplus is sucked out of production zones to urban areas disadvantaging rural maize net buyers. Net buyers end up buying at higher prices. During the lean season, grain may need to be hauled back into rural areas at a cost to Treasury;

	<ul style="list-style-type: none"> • Creates a culture of dependence on government without addressing the real problem of low productivity.
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Source: Authors

4.2 Alternative: Blending financing option with private sector importing 50% of import requirements

The main disadvantage of the Government’s preferred strategy is that the Treasury would bear the full cost of maize production and procurement, which will result in close to US\$ 118,656,032 million loss to Treasury (Appendix 1). However, if given an opportunity, the private agribusinesses (milling industry, downstream livestock and meat industry) can be innovative to help government meet the cost of ensuring food security in the country.

As an alternative, the GoZ could compel the private sector to import some of their requirements based on the quantity they draw from GMB at subsidised prices. A 50 percent split hybrid procurement arrangement would have saved public resources. As before, the development partners could assist with bridging the foreign currency gap, by exchanging foreign currency with RTGS \$ at a mutually agreed RTGS \$/US\$ exchange rate. This facility would allow the private sector to bring in maize grain into the country at a time when it is needed the most. On the other hand, the development partners could use the RTGS to enhance their other equally important social protection programmes such as the social cash transfer programmes.

The main advantage of this strategy is that it would limit Government’s fiscal exposure by harnessing private sector financing to pay for their requirements without GMB buying for them. The other notable advantage is that farmers who accessed Command Agriculture support would still be able to pay back their dues through GMB. If this is done, the possibility that the country could quickly move back to an open market system where private trade in maize grain is allowed will be enhanced. Table 8 summarises the advantages and disadvantages of this policy option.

Table 8: Blending option with private sector importing 50% of import requirements

Alternative Option # 2	Policy	<ul style="list-style-type: none"> • GoZ allows the private sector to import some of their requirements based on the quantity they will be drawing down from GMB
Estimated GMB Purchases	310,000 MT local purchases and 96,415 MT maize imports	
Estimated Total Costs	US\$191,590,926	

Alternative Option # 2	Policy	<ul style="list-style-type: none"> • GoZ allows the private sector to import some of their requirements based on the quantity they will be drawing down from GMB
Estimated Total Losses	US\$73,676,000	
Advantages	<ul style="list-style-type: none"> • Fiscal exposure to government is estimated to be 59.88% lower than the preferred option of GMB being the sole buyer and seller • Government still has the ability to deduct at source the loans advanced to farmers under Command Maize; • Government can partially harness the Private Sector's ability to finance their own requirements; • Presumably savings from purchasing grain on behalf of Private sector could be spent on other social protection high return public investments such as research and development, extension to enhance productivity, irrigation development. 	
Disadvantages	<ul style="list-style-type: none"> • The direct subsidy to millers on grain is less effective if not self-targeted. Subsidy should be on straight run or roller meal • Price support for local purchases suck out maize surplus from production zones to urban areas disadvantaging rural maize net buyers. 	

Source: Authors

4.3 How the country can deal with the rising mealie meal prices?

As usual, the policy makers are confronted by the classic "food price dilemma." On the one hand, they are under pressure to ensure that maize producers received a higher price while on the other hand, they are under pressure to keep mealie-meal prices at tolerable prices for consumers.

As the 2019/20 marketing season progresses, it is realistic to project that maize grain and mealie meal prices in the country will rise as supplies on the market dwindle. With coordinated planning between government, private sector and development partners, the country's food security will not be threatened. However, knee-jerk policies that disregard market supply and demand fundamentals within the country and the region would be disastrous. The question is how much the prices should be allowed to go up without causing panic to stakeholders. The solution lies in properly harnessing the maize market based solutions and not the costly government interventions through instruments such as SI 145 of 2019 and consumer subsidies to selected millers.

The need to keep maize prices low has to be balanced against national food security. Given the high regional demand, artificially low prices are increasing the incidences of informal dealing and smuggling which can result into food insecurity. Also, passing consumer mealie meal subsidies through commercial millers is not an effective way to lower prices to the consumers as the subsidy is not targeted. The production of super refined meal using the subsidized maize means that the government is subsidizing maize bran production which the millers in turn can export. In other words, Zimbabwe would be helping to subsidize consumers of maize bran in export markets. Instead, the subsidized maize should only target straight run or roller meal. This is because the price of straight run and roller meal is much lower than the super refined, many of the disadvantaged consumers in the urban and rural areas would be able to afford. Those, who prefer to consume the super refined mealie meal which in any case is less nutritious would pay the market price. This is because it is difficult to enforce the price agreements in a free market.

What about the rural folk? There is evidence that indicates that a small percentage of the rural households consume industrial commercially milled mealie meal. Thus, availability of grain on local markets in the rural areas is very critical especially during the lean season. This means, the Government has to seek other less costly solutions to benefit both urban and rural consumers.

One option is to increase direct access of maize grain to consumers. Any limited stocks held by GMB should always be made available to non-traditional markets at market prices rather than to large scale millers at subsidized price. Thus, GMB should increase the community sales and supply maize grain directly to consumers and hammer mills at market prices. The option of disposing grain to the informal markets would relieve some of the food price pressure on low-income consumers, who normally buy more expensive commercially milled maize. This could be one of the more effective ways of reducing mealie meal prices to low income consumers by providing them with cheaper alternative meal options.

To avoid a backlash, communities would need to be sensitized that given the low production and high demand for grain in the country and the region, mealie meal prices would increase in the short-run but that government will help resource the more cost-effective alternative programs to help cushion the impact on the poor consumers. For example, the social cash transfer programme, which can be enhanced by increasing the number of recipients under the system. This enhances the cooperation between the humanitarian organisations and the government. Furthermore, this approach would help deal with the political sensitiveness of maize grain and maize meal prices. Such a programme can be run at a fraction of the current subsidy programmes.

5. CONCLUSION AND RECOMMENDATIONS

This paper has critically and objectively analysed the maize pricing policy in Zimbabwe with a view to provide advice with regards to policy options that the GoZ can consider for efficient and cost-effective attainment sustainable food security in shortfall years. Maize production and marketing arrangements under programmes such as the SMPP and SI 145 of 2019 are often too costly for the country. As evidenced during the implementation of SI 145 of 2019, the demand for GMB maize spiked earlier than normal and the cost to the government continue to increase without a significant positive impact on retail price of maize meal. Furthermore, the current arrangement tend to disadvantage the majority of smallholder farmers, who cannot benefit from the SMPP, and net grain buyers in rural areas, who have to suffer the brunt of exorbitant maize prices on the local market.

In programmes such as CA, there is need to ensure effective mechanisms to enforce repayments. Leveraging on ICT, effective methods of maintaining farmer databases; monitor and verify productivity of farmers; target CA beneficiaries and track their performance; enforce flexible but farmer friendly stop order repayment systems. Defaulters should be blacklisted through the RBZ credit reference.

Ideally, maize grain and maize meal should always be sold at market price to avoid creating distortions that discourage investments into the agricultural sector. Excessive Government controls create huge government budget deficits that stifles real public investments in key drivers of agricultural development. Poor and vulnerable consumers can be helped through market based programmes such as social cash transfers that help provide relief to rising prices. Hence, during the 2019/2020 marketing season, the government should allow maize grain prices to fluctuate based on import parity.

It is commendable that the government has continued to revise the maize grain price upwards in tandem with exchange rate dynamics as a way to unlock maize grain supply to GMB. However, GoZ hesitancy to allow maize grain prices to float based on the prevailing import parity price converted to RTGS \$ using the daily official interbank rate meant that farmers lost value of their commodity whilst awaiting payment by GMB.

The Government needs to create incentives to harness the potential of industrial processors to provide their own finances to import grain instead of them solely relying on GMB procured maize.

Thus, for every subsidised metric tonne received from GMB, the processors should commit to import an equivalent amount.

To avoid knee-jerk policies, a well-managed price stabilisation policy allowing for clear triggers for maize purchases and releases by GMB needs to be urgently formulated. This would allow normal seasonal price fluctuations to take place, a key ingredient for encouraging private sector investments into the agricultural sector. For example, an agreed price floor and ceiling could be established, it would then act as a trigger for maize purchases or releases from the strategic grain reserve. If the government allows private sector to buy and sell freely, this will likely trigger a private sector funded supply response through direct contracts with maize farmers. Well managed private sector led initiatives would lower the government's fiscal burden and secure the country's food security in a less disruptive manner.

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Appendix 1

Assumptions:		
For every tonne drawn from GMB, millers need to import a tonne using own resources		
Total maize grain annual requirements (estimated)	MT	2,200,000.00
Expected Production	MT	776,000.00
Carryover stock from 2017/18 harvest as April 1st 2019	MT	630,085.00
Carryover stock from 2017/18 harvest as April 1st 2019	MT	320,000.00
Import requirements during 2019/20 marketing season	MT	793,915.00
GMB Import success rate	%	100.00
GMB Local purchases @ 40% of 2018/19 harvest	MT	310,400.00
Proportion of maize not in GMB bags (based on storage type)	perce	80.00
Grain handling costs (in and out)	US\$	2.50
Average storage costs/month (US\$/MT)	US\$	3.60
Cost of bagging and rebagging (US\$/MT)	US\$	2.00
Average storage losses	perce	2.00
Indicative import parity price (Zambia)	US\$	324.00
Indicative import parity price (South Africa)	US\$	335.00
Subsidy rate to industrial processors	%	38.50
Livestock sector GMO maize imports per month (reducing GMB d	MT	35,000.00
<i>Monthly GMB purchases</i>		
June 2019	MT	42,008.00
July 2019	MT	86,912.00
August 2019	MT	86,912.00
September 2019	MT	62,080.00
October 2019	MT	21,728.00
November 2019	MT	5,101.17
December 2019	MT	2,273.68
January 2020	MT	1,831.12
February 2020	MT	1,117.44
March 2020	MT	434.56

Option 1: GMB sole buyer and seller

		June	July	August	September	October	November	December	January	February	March	April	Total
Carry over stock as at June 30th 2019	MT	325,672											325,672
GMB local purchases	MT	42,008	86,912	86,912	62,080	21,728	5,101	2,274	1,831	1,117	435		310,398
GMB planned imports 800,000 MT [70% success rate)	MT	0	0	88,213	88,213	88,213	88,213	88,213	88,213	88,213	88,213	88,213	793,915
Private sector planned imports (human consumption)	MT	0	0	0	0	0	0	0	0	0	0	0	0
Private sector drawdown from GMB	MT	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	1,320,000
Subsidised grain (@ 38.5% percent subsidy rate	MT	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	1,320,000
Grain in storage each month	MT	247,680	214,592	269,717	300,010	289,950	263,264	233,751	203,795	173,125	141,772	109,985	
Conservative storage losses @ 2%	MT	4,954	4,292	5,394	6,000	5,799	5,265	4,675	4,076	3,462	2,835	2,199.700	48,953
Value of crop purchased by GMB based on average import parity price													
GMB local Purchases	US\$	13,841,636	28,637,504	28,637,504	20,455,360	7,159,376	1,680,837	749,177	603,355	368,196	143,188	0	102,276,133
GMB imports	US\$	0	0	29,066,110	29,066,110	29,066,110	29,066,110	29,066,110	29,066,110	29,066,110	29,066,110	29,066,110	261,594,993
Less storage losses	US\$	1,632,211	1,414,161	1,777,434	1,977,063	1,910,773	1,734,912	1,540,417	1,343,007	1,140,893	934,279	724,801	16,129,950
Net value of GMB maize grain	US\$	12,209,425	27,223,343	55,926,181	47,544,407	34,314,714	29,012,036	28,274,870	28,326,459	28,293,414	28,275,019	28,341,309	347,741,175
Summary of Costs to Treasury													
GMB local purchases	US\$	13,841,636	28,637,504	28,637,504	20,455,360	7,159,376	1,680,837	749,177	603,355	368,196	143,188	0	102,276,133
GMB handling in and out costs	US\$	105,020	217,280	217,280	155,200	54,320	12,753	5,684	4,578	2,794	1,086	0	775,995
GMB Imports	US\$	0	0	29,066,110	29,066,110	29,066,110	29,066,110	29,066,110	29,066,110	29,066,110	29,066,110	29,066,110	261,594,993
Rebagging costs (for local purchases)	US\$	67,213	139,059	139,059	99,328	34,765	8,162	3,638	2,930	1,788	695	0	496,637
Grain storage losses	US\$	1,632,211	1,414,161	1,777,434	1,977,063	1,910,773	1,734,912	1,540,417	1,343,007	1,140,893	934,279	724,801	16,129,950
Consumer subsidy through millers (based on draw downs @ 3	US\$	7,738,500	7,738,500	7,738,500	7,738,500	7,738,500	7,738,500	7,738,500	7,738,500	7,738,500	7,738,500	7,738,500	85,123,500
Gross Cost to Treasury	US\$	23,384,580	38,146,504	67,575,887	59,491,561	45,963,844	40,241,274	39,103,526	38,758,480	38,318,281	37,883,858	37,529,411	466,397,207
Estimated Loss (Net value of GMB grain - Gross Cost	US\$	-11,175,155	-10,923,162	-11,649,706	-11,947,154	-11,649,130	-11,229,238	-10,828,657	-10,432,021	-10,024,867	-9,608,839	-9,188,102	-118,656,032

Option 2: For every tonne drawn from GMB, millers need to import a tonne using own resources

		June	July	August	September	October	November	December	January	February	March	April	Total
Carry over stock as at June 30th 2019	MT	325,672											325,672
GMB local purchases	MT	42,008	86,912	86,912	62,080	21,728	5,101	2,274	1,831	1,117	435		310,398
GMB planned imports 800,000 MT [70% success rate)	MT	0	0	10,713	10,713	10,713	10,713	10,713	10,713	10,713	10,713	10,713	96,415
Private sector planned imports (human consumption)	MT	0	0	42,500	42,500	42,500	42,500	42,500	42,500	42,500	42,500	42,500	382,500
Private sector planned imports (Livestock feed)				35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	315,000
Private sector drawdown from GMB	MT	120,000	120,000	42,500	42,500	42,500	42,500	42,500	42,500	42,500	42,500	42,500	622,500
Subsidised grain (@ 38.5% percent subsidy rate	MT	120,000	120,000	42,500	42,500	42,500	42,500	42,500	42,500	42,500	42,500	42,500	622,500
Grain in storage each month	MT	247,680	214,592	269,717	300,010	289,950	263,264	233,751	203,795	173,125	141,772	109,985	
Conservative storage losses @ 2%	MT	4,954	4,292	5,394	6,000	5,799	5,265	4,675	4,076	3,462	2,835	2,199,700	48,953
Value of crop purchased by GMB based on average import parity price													
GMB local Purchases	US\$	13,841,636	28,637,504	28,637,504	20,455,360	7,159,376	1,680,837	749,177	603,355	368,196	143,188	0	102,276,133
GMB imports	US\$	0	0	3,529,860	3,529,860	3,529,860	3,529,860	3,529,860	3,529,860	3,529,860	3,529,860	3,529,860	31,768,743
Less storage losses	US\$	1,632,211	1,414,161	1,777,434	1,977,063	1,910,773	1,734,912	1,540,417	1,343,007	1,140,893	934,279	724,801	16,129,950
Net value of GMB maize grain	US\$	12,209,425	27,223,343	30,389,931	22,008,157	8,778,464	3,475,786	2,738,620	2,790,209	2,757,164	2,738,769	2,805,059	117,914,925
Summary of Costs to Treasury													
GMB local purchases	US\$	13,841,636	28,637,504	28,637,504	20,455,360	7,159,376	1,680,837	749,177	603,355	368,196	143,188	0	102,276,133
GMB handling in and out costs	US\$	105,020	217,280	217,280	155,200	54,320	12,753	5,684	4,578	2,794	1,086	0	775,995
GMB Imports	US\$	0	0	3,529,860	3,529,860	3,529,860	3,529,860	3,529,860	3,529,860	3,529,860	3,529,860	3,529,860	31,768,743
Rebagging costs (local purchases)	US\$	67,213	139,059	139,059	99,328	34,765	8,162	3,638	2,930	1,788	695	0	496,637
Grain storage losses	US\$	1,632,211	1,414,161	1,777,434	1,977,063	1,910,773	1,734,912	1,540,417	1,343,007	1,140,893	934,279	724,801	16,129,950
Consumer subsidy through millers (based on draw downs @ 38.5	US\$	7,738,500	7,738,500	2,740,719	2,740,719	2,740,719	2,740,719	2,740,719	2,740,719	2,740,719	2,740,719	2,740,719	40,143,469
Gross Cost to Treasury	US\$	23,384,580	38,146,504	37,041,856	28,957,530	15,429,813	9,707,242	8,569,495	8,224,449	7,784,250	7,349,827	6,995,380	191,590,926
Estimated Loss (Net value of GMB grain - Gross Cost to T	US\$	-11,175,155	-10,923,162	-6,651,925	-6,949,373	-6,651,349	-6,231,457	-5,830,876	-5,434,240	-5,027,086	-4,611,058	-4,190,321	-73,676,000
Private sector contribution to maize imports		0	0	25,536,250	25,536,250	25,536,250	25,536,250	25,536,250	25,536,250	25,536,250	25,536,250	25,536,250	229,826,250