

### Supply, Demand, Prices and Marketing for the 2010/2011 Zambian Maize Marketing Season

1. Making decisions about GRZ price and procurement policy for FRA before the crop forecast and balance sheet are properly finalized, and before the new maize crop is sufficiently field dried is risky politics and economics, and not recommended. Factors explaining why are discussed below.
2. To do a proper job in the crop forecast and balance sheet takes quality data collection on some 14,000 farms, verification and analysis time. 2010 is the fourth year that MoFNP has provided additional funding to CSO and MACO to allow a much larger number of farmers to be interviewed for the annual crop forecast, thus providing statistically valid District-level estimates. Progress in implementing this mandate should not be unduly rushed in order to protect the strong and growing reputation of CSO and MACO to correctly estimate supply and demand, and to carefully interact with the Stocks Committee based on increasing more informed choices. Effective pricing of Zambia's maize crop to protect farmers, consumers and tax payers needs to be done in a way that takes into account local supply and demand factors as well as the reality of regional and world markets.
3. It is also important to protect GRZ from costly political as well as financial mistakes from premature and misinformed market actions which have in past years driven prices during the forthcoming hungry season unduly high for Zambian consumers and have required costly GRZ subsidies to millers and consumer. The relatively high prices set by prior FRA prices have made it easy for smallholder and commercial farmers to delay in making hard decisions about technology adoption. Such changes and other practices like conservation farming techniques for maize are needed to raise productivity in order to allow Zambia farmers to produce and sell their crop at prices which allow them to sustainably compete with South African and other farmer in the region. This is the only sustainable way to capture important regional markets, especially in the DRC.
4. All indications are that Zambia will enjoy a good harvest in 2010, which first and foremost will mean that a majority of the harvest will be retained on-farm for consumption, and smallholder households will eat much better. This also means that lower prices will stimulate growth in demand in Zambian urban and industrial sectors given a more reasonable cost for domestic utilization/consumption of maize and other agricultural commodities.
5. But the forecast in other countries of the region is for a bumper harvest also, especially for maize, due to good weather and due to the fact that farmers in South Africa (SA) shifted last year away from wheat. They shifted towards planting more maize due to relatively low wheat prices, and because improved maize technology and management practices are there to help them raise productivity on maize. Farmers in SA are also expected to continue this relative shift toward maize for the forthcoming production season. So not only will SA have a large area harvested for maize for the current season, but it is expected that they will have a large area planted to maize

in the forthcoming farming season. This has important short as well as longer-term implications for the need for urgent efforts to raise agricultural productivity to gain competitiveness in Zambia

6. Zambia is also known for the supply of non-GMO maize, which might result in modest price premiums in regional markets. However if traders and FRA procure new maize before it is sufficiently field dried there is a significant risk of quality deterioration after storing, which would affect potential export opportunities as well as domestic utilization levels.
7. World supplies of maize from major growing areas in North and South America are also predicted to be high which will put downward pressure on world market price levels. The World Bank Pink Sheet has prices of \$163 USD per ton in the first quarter of 2010, on par with 2009, and down 27 % from 2008.
8. Ample world and regional supplies of maize put Zambia in a difficult situation because the extensive existing stocks and any anticipated additional stocks to be acquired by private traders and by FRA will have to be priced very competitively to capture buyers in Zambia and the region. Table 1 summarizes maize price levels and changes in regional markets.

**Table 1. Recent Trends in Regional Maize Grain Prices**

Capital City	April 2010	
	vs. April 2009	vs. January 2010
Nairobi	-22%	-19%
Kigali	-43%	-50%
Dar es Salaam	-10%	-37%
Kampala	-50%	-12%
	January: 2010 vs. 2009	
Lilongwe		-40%
Lusaka		-13%

Source: Regional Agricultural Trade Intelligence [www.ratin.net](http://www.ratin.net), and FEWSNET.

9. An additional factor for GRZ to consider for the current marketing season is how to best capture the potential political and economic benefits of the reforms in FISP. Reforms in 2009 were intended to reduce input pack size and increase significantly the number of subsidized fertilizer recipients. There are many potential benefits from the intended reforms made, given that a majority of smallholder farmers do not normally sell maize and many do not even produce enough to eat well. However if they have off-farm income, some will enter the market as buyers of maize grain or mealies to supplement their insufficient production. For the current harvest season, and because of the FISP reforms, many more farmers should have received 2 x 2 maize packs. Along with good rains, this would have facilitated their greater production of maize. With such results, these farmers will first have a more adequate diet for their families. Many of these, if not most, smallholders would not be expected to sell maize. With such results these households will just eat better which would be a very significant food security accomplishment for GRZ. This is the potential good news about a bumper harvest combined with FISP reforms. It needs to be verified with the crop forecast and if shown, such results can offer balancing factors against the threat of lower prices for those who have marketed surplus.

10. On the other hand if GRZ takes market actions to raise prices for maize grain significantly above open market Zambian and regional levels, and depending on how they implement this, even private traders and millers may be forced to stay out of the market, and/or to raise prices. Then farmers still needing to buy maize for consumption, and urban consumers will also face higher prices and will be negatively affected. This could wipe out many of the economic and political benefits from the FSIP reform. And FRA may find itself again in a position a few months later in the marketing season where it is forced to provide subsidies to millers and traders to bring retail mealie prices down. Likewise, FRA already has some 170,000 metric tons of stocks from last season's crop. Given the original above market price paid, and the accumulated storage and finance charges from carrying this inventory, marketing these stocks at competitive prices in the region will also result in significant losses to the Zambian treasury and taxpayers.
11. Figures 1, 2 and 3 below help illustrate specifics of the maize pricing situation facing Zambia historically and in 2010/2011.
12. Points of discussion related to Figure 1. The important point in this Figure is that all indications are that imports from South Africa would be cheaper for Zambian millers than an FRA producer price of ZMK 65,000 per 50 kg. bag (not even counting what FRA marketing costs are to be added on to the producer price). There would also be a possibility of a major market reaction to such an FRA reference price. Zambian urban consumers and tax payer may ask why they would be paying more for Zambian maize than they would pay for South African maize? One question is who would stand to benefit from this level of FRA price given that 2% of the Zambian small and medium-scale farmers supply over 50% of the marketed output, and given the fact that 35-50 % of small-medium scale households normally must buy some maize supplies to complement their inadequate yearly production?
13. Points of discussion related to Figure 2. If FRA sets a price of ZMK 65,000 per 50 kg/bag + \$30 per ton FRA procurement/admin/storage/handling costs (a conservative estimate) and assuming \$80 per ton transport costs from northern Zambia to Lumbumbashi, then this means that the price of grain FOT (free on truck) Northern Zambia for export to DRC would be:  $ZMK\ 65,000\ per\ 50\ kg\ bag * 20\ bags/ton / 4750\ exchange\ rate + \$30 = US\$ 303\ per\ ton$ . The difference between the wholesale price of maize in northern Zambia if FRA purchase price is ZMK 65,000 per 50 kg/bag (i.e., US\$303) vs. the export parity price (US\$253) means that the government will lose at least US\$50 per ton on every ton it plans to sell to DRC. Just exporting existing FRA stocks could result in minimal losses of 8.5 million USD.
14. Points of discussion related to Figure 3. Here we see the potential situation from adding on to an assumed FRA price of ZMK 65,000 per 50/kg bag for 2010 to illustrate how this would exceed export parity, if export parity is defined as the landed cost of maize in Lumbumbashi minus \$80 per ton transport cost from DRC to northern Zambia. This is the price that Zambia would have to be under in order for DRC to find Zambian maize attractive.

15. If GRZ intentions are to be announced soon, and before the crop forecast/balance sheet is properly completed, what are the possibilities of GRZ announcing a contingency intention plan, laying out alternative FRA prices and quantity to be purchased, but making these subject to factoring in the results of the final crop forecast, and information on the regional market evolution? Especially important for private sector stakeholders will be having reliable information about the FRA price, the quantities that FRA will be purchasing and whether GRZ will unambiguously allow exports of maize if traders can freely buy and sell to allow them to find competitive market opportunities.
16. As a useful point of reference on the role of FRA and private traders, perhaps results from prior years in Zambia may be instructive. According to survey results from the most recent CSP/MACO/FSRP Supplemental Survey (SS), the marketing season of 2007/08 was the year of record FRA purchases of 391,294 mt of maize from small and medium-scale farmers. Maize production from these same smallholders in that year was an estimated 1,960,692 mt, of which 762,093 mt in total were marketed. Thus FRA purchases accounted for some 51 per cent of the total maize market in this season.

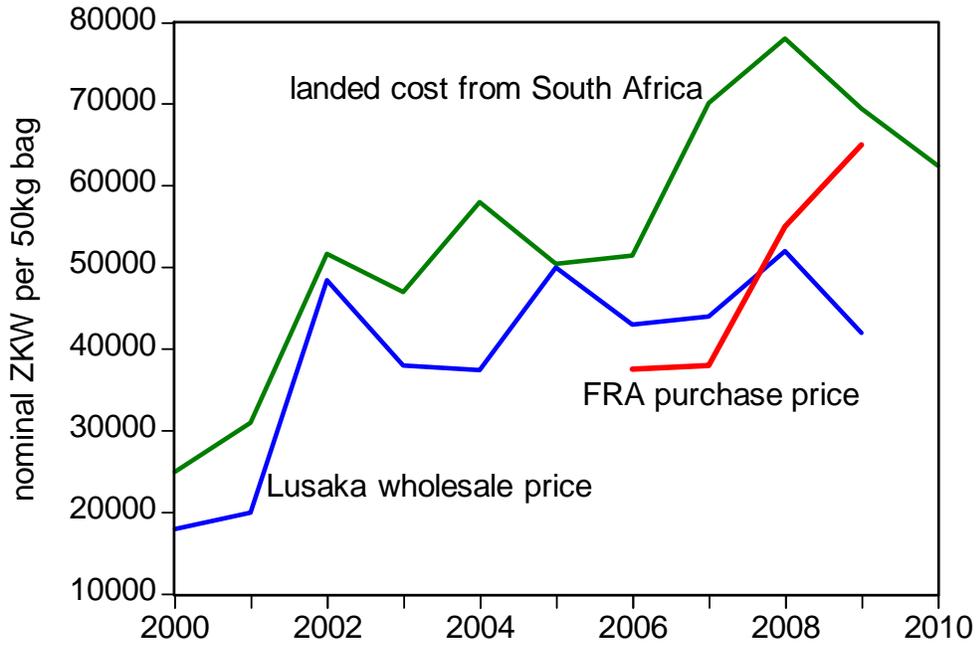
SS results also show that some 224,184 small and medium-scale farmers were responsible for 89 percent of all sales to FRA. And the average sale to FRA from each of these farmers was 3.9 mt. This means that only 15 percent of all small and medium-scale farmers (18 % of maize growers) in Zambia in that year supplied the vast majority of what FRA purchased. In the same marketing season, an additional 103,415 smallholders sold maize grain to private traders, with average farmer sales units of 2.3 mt.

This recent history helps put in perspective the important question of the role that private, as well as FRA purchases make in the Zambian market. The location of FRA and private purchases is also quite important to price determination. Buying in larger lots, and along tarmac roads allows buyers to offer more attractive prices because assembly costs are lower. The circumstances surrounding farmer marketing may have also changed since the 2007/2008 marketing season, as FRA has been mandated to procure primarily in more outlying areas where commercial traders find it uneconomical to purchase, or can only meet costs of purchasing in those area by offering farmers relatively lower prices to cover their considerable costs of assembly and transport from outlying catchment areas.

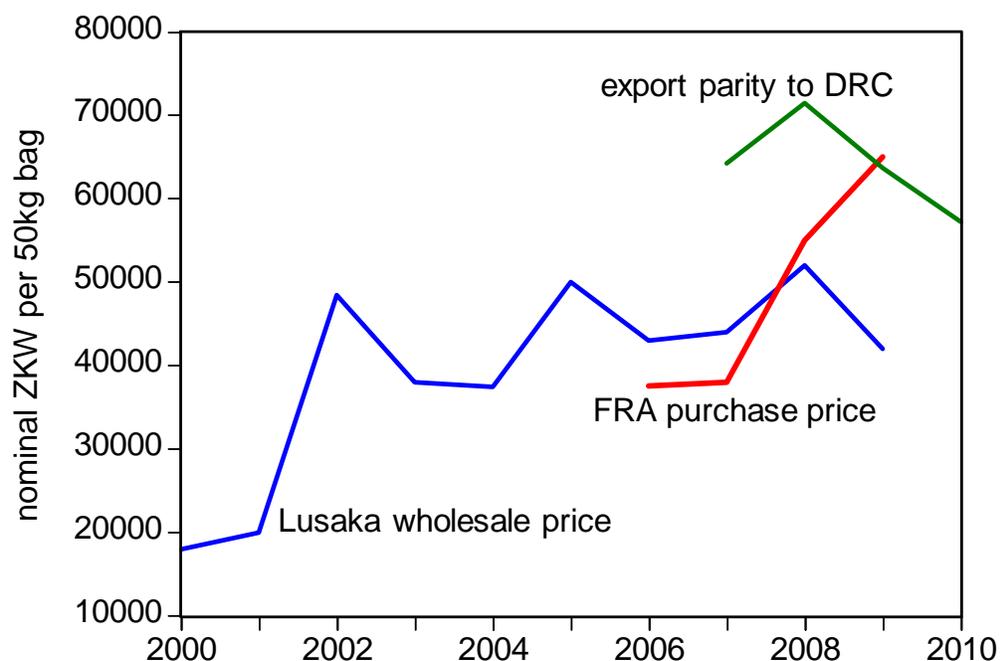
A much longer view of history also demonstrates the limitations of price policy as a development tool. In developed as well as developing countries around the world untargeted price policy is a very blunt instrument. Once farmers produce enough to feed their families, those who produce more are always the ones who sell more. So those who sell the most receive the majority of the benefits of market subsidies delivered via prices. A related lesson is that farmer revenue is always more stable than prices because during a very good production years, as it appears Zambia is going to have, the volume of sales will go up the most for those who produce the most, and even if prices are lower, total revenue from sales will go up. And perhaps the most important lesson of all is that in a country like Zambia where typically 2/3<sup>rd</sup>s of production of maize among

smallholders stays on farm for household consumption, a majority of consumers benefit tremendously from a bumper crop because they are able to eat more adequately.

**Figure 1: Lusaka Wholesale, FRA Past Purchase Prices and CIF Landed Price to Lusaka from South Africa - May-October Average Maize Prices, Nominal Zambia Kwacha per 50kg bag**



**Figure 2: Lusaka Wholesale, FRA Past Purchase Prices and Export Parity Price to DRC  
- May-October Average Maize Prices, Nominal Zambia Kwacha per 50kg bag**

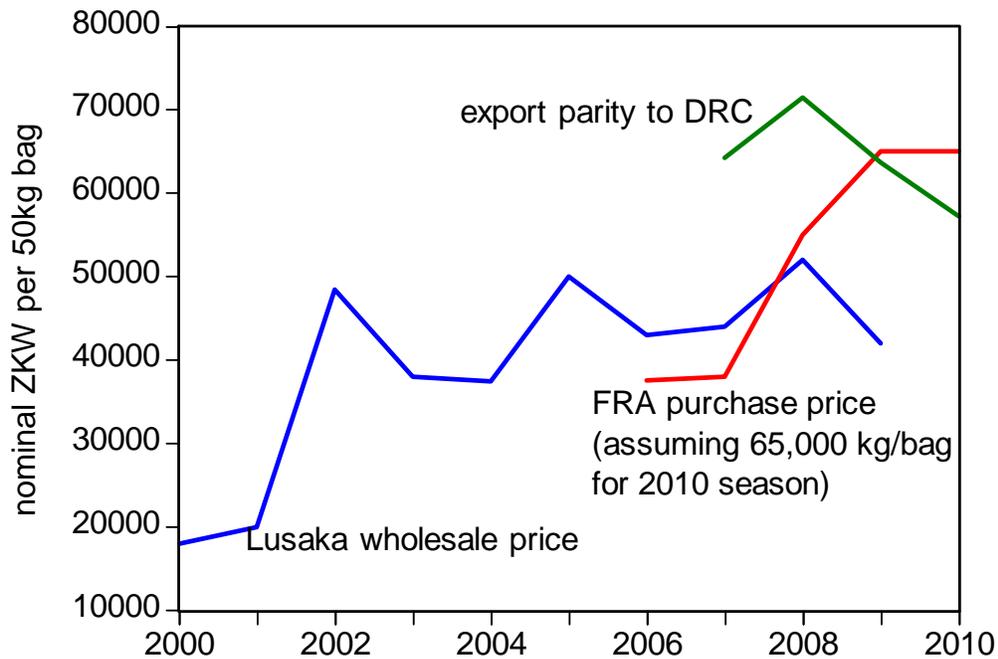


Notes: Export parity to Lumbumbashi in 2010 appears to be in the range of 60,087 kwacha per 50kg bag - exporting from Kabwe/Ndola. This is computed as follows:

Sept 2010 futures price on SAFEX: 1145 rand/ton + US\$190 transport cost = maize landed in Lumbumbashi from South Africa = \$333 per ton

Minus \$80 per ton Lumbumbashi to northern = US\$253 per ton FOB northern Zambia (= 60,087 kwacha per 50kg). In other words, wholesale maize would need to be priced at 60,087 kw/bag and ready for export in order to match the cost of maize in Lumbumbashi if imported from South Africa. South Africa also has better quality maize so true export parity is really below US\$253.

**Figure 3: : Lusaka Wholesale, FRA Past Purchase Prices and Assumed FRA 2010 Price of 65,000 ZWK per Bag - May-October Average Maize Prices, Nominal Zambia Kwacha per 50kg bag**



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