

Agriculture: Future Scenarios for Southern Africa

Food Production in Mozambique and Rising Global Food Prices

Gilberto Biacuana¹

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Abstract

This paper analyses the state of food production in Mozambique and the policy responses that the government has adopted to mitigate the transmission of international food prices into domestic food markets. The paper argues that Mozambique has been affected by the increase in global food prices, with global increases in prices of rice and wheat having the greatest impact on domestic prices of these commodities. This impact has been severe because of limited domestic production of these food commodities.

The paper argues that private sector participation will be crucial for the development of the agricultural sector in Mozambique. However, in order to attract private investors to the sector, the government will have to improve the country's investment climate situation, roads, marketing infrastructure and credit markets and resolve the problems that still persist with regard to land tenure. The success of new strategies to redevelop the agricultural sector will depend on how they are implemented.

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Agriculture: Future Scenarios for Southern Africa – Food Production in Mozambique and Rising Global Food Prices

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Acronyms and Abbreviations

FAO	Food and Agriculture Organization
FPAP	Food Production Action Plan
SAP	structural adjustment programme

Executive Summary

The analysis in this paper shows that the Government of Mozambique's underinvestment in agriculture and its limited participation in markets of key agricultural inputs have affected food production. However, the "Green Revolution" strategy, the Food Production Action Plan and the continued investments in key agricultural infrastructure can be expected to reverse the current food production situation in the medium to long term. If these plans are realized, the agricultural potential of the country can be fully utilized and food shortage and high prices can be a thing of the past. However, in fulfilling this goal, the country still faces a number of challenges that need to be resolved, such as poor roads, limited marketing infrastructure and land tenure issues.

The paper further argues that private sector participation will be crucial for the development of the agricultural sector in Mozambique. However, in order to attract private investors to the sector, the government will have to improve the country's investment climate situation, roads, marketing infrastructure and credit markets and resolve the problems that still persist with regard to land tenure. The success of new strategies to redevelop the agricultural sector will depend on how they are implemented.

1 Introduction

Mozambique, like other net food importing countries, has been affected by the recent increase in world food prices. The hardest hit sections of the population have been the poor and vulnerable communities in both rural and urban areas. Despite the country's impressive economic growth, averaging around seven per cent in the last four years, 54 per cent of the population still lives below the poverty line and 34 per cent of households are food insecure and face perpetual hunger.²

The negative impacts of the price spikes have been worsened by the fact that, while food prices have increased, wages and incomes of the poor have not risen fast enough to keep up with price increases. Poor households spend roughly 66 per cent of their monthly income on meeting their basic food requirements.³ With the increasing global food prices, these households are finding it increasingly difficult to meet their minimum dietary requirements.

This situation has further been worsened by rising inflation as a result of higher fuel prices. In the long term, high food prices will severely affect the urban poor, if the current levels of food production are not improved. The country's urban population is growing and is expected to exceed 50 per cent of the population by 2025⁴ and, in that period, demand for food is expected to double in urban areas. However, this growth can also present an opportunity for farmers in the country, provided they respond by increasing the output of basic food products. As will be argued in section 3 of this paper, this can only be possible if the current supply-side constraints are dealt with.

It is against this background that this paper analyzes the state of food production in Mozambique and the policy responses that the government has adopted to mitigate the transmission of international food prices into domestic food markets. The rest of the paper is structured as follows. Section 2 discusses the production of maize, wheat and rice—the most important staple food commodities in Mozambique, which are influenced by what happens in the global food markets. Supply constraints affecting food production in Mozambique are discussed in section 3, and section 4 gives a brief discussion of the evolution of prices of the three key staples. Section 5 presents a discussion of food imports and emphasizes how domestic production (especially of maize) plays a major role in stabilizing domestic prices of food commodities. Policy options adopted by the Government of Mozambique in response to rising global food prices are discussed in section 6, while the basic principles of Mozambique's land tenure system are outlined in section 7. The conclusion of the paper is given in section 8.

2 Production of Basic Food Crops

Mozambique is endowed with natural resources for agricultural development. The country has a wide diversity of soil types and climatic conditions, which are suitable for a large variety of crops. Moreover, the country has an irrigation potential of about 3.3 million hectares.⁵ However, its tremendous agricultural potential is underutilized. Only 12.5 per cent (4.5 million hectares) of the total (36 million

2 WFP (World Food Programme), *Where we work: Food security situation, Mozambique*, 2008, <http://www.wfp.org/country_brief/indexcountry.asp?country=508>.

3 *Ibid.*

4 *Ibid.*

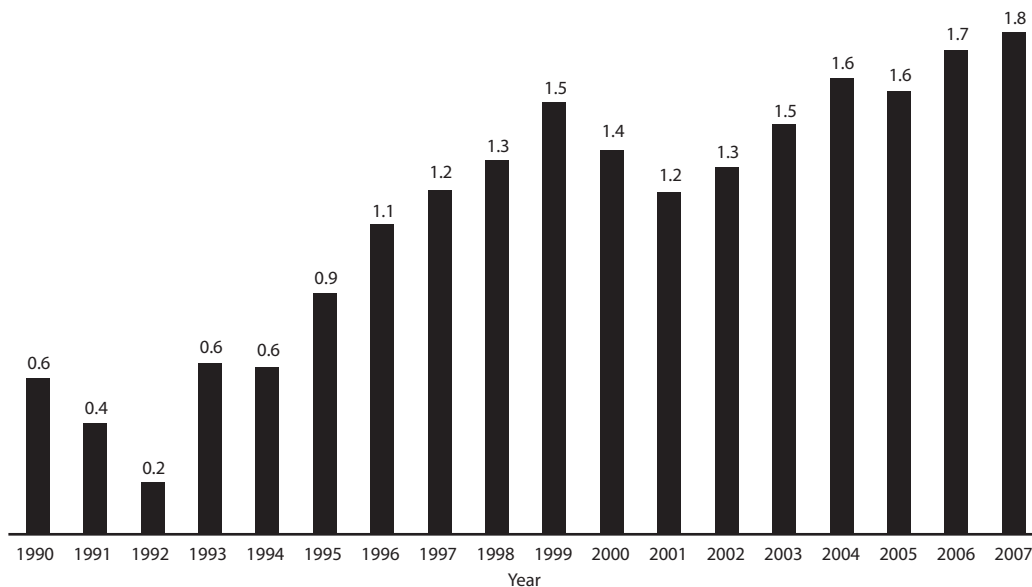
5 GoM (Government of Mozambique), "Conceito, princípios e estratégia de revolução verde em Moçambique," presentation by Reuniao Técnica do PROAGRI II, Ministry of Agriculture, Maputo, 10–12 March 2008.

hectares) arable land is cultivated, and major rivers (i.e., the Zambezi, Save and Limpopo) remain largely unexploited for irrigation purposes.⁶ Only about 50,000 hectares are under irrigation, of which about 60 per cent is under sugarcane.⁷ This agricultural potential, if well tapped into, can solve the current food deficit in the country and mitigate the impacts of the global food crisis.

The production of basic food crops (cereals) in Mozambique differs by region. The north and to a lesser extent the centre are food surplus regions, while the south is a food deficit region. The difference in production is mainly influenced by the regions' different agro-climatic conditions.

Figure 1 shows Mozambique's trends in cereal production (maize, wheat and rice) between 1990 and 2007.

Figure 1: Total cereal production, 1990–2007 (millions of tonnes)



Source: Author's own calculations from Food and Agriculture Organization (FAO) data

Cereal production has shown a consistent upward trend between 1990 and 2008, except for a dip in 2001 and 2002, caused by floods. Nevertheless, the growth in cereal production has been through an expansion of the area allocated to it, as opposed to improvement in or increased use of modern production techniques and technology, i.e., fertilizer, improved seeds and so forth. Hence, this growth may not be sustainable and may not solve the current food security problems that the country faces, unless new productivity enhancing investments are made in agriculture.

6 World Bank, *Mozambique agricultural development strategy: Stimulating smallholder agricultural growth*, report no. 32416-MZ (Washington, DC: 2006).

7 GoM (2008).

Market integration between deficit and surplus areas has improved in the last few years, reflecting the impact of the ongoing improvements in road infrastructure. There is some market integration, especially, for maize between the north/centre and the south of the country. However, the south generally relies on imports from South Africa, by far the main source of maize imports. The internal marketing of cereals from surplus to deficit areas is mainly affected by inadequate marketing infrastructure and bad roads, which increase marketing (transportation) costs. High transportation costs (rail, road and maritime) translate to high food prices in deficit areas, especially the south. Hence, the internal marketing of food commodities is fragmented.

3 Supply Side Constraints Affecting Production

As in most developing countries that have gone through structural adjustment programmes (SAPs), Mozambique's agricultural budget has decreased substantially compare to its pre-restructuring period. The state marketing board, AGRICOM, which served as a buyer of last resort and guaranteed producer prices, was closed. Public subsidies and marketing support schemes were also abandoned, as in most of the developing world.

Since the 1990s, there has been a major debate on whether governments should actively stabilize food prices.⁸ Some thought that, in the long run, liberalized markets would achieve efficient prices and transactions between producers and consumers. Critics, however, argued that in a fully liberalized market open to a distorted world food trade, prices would fluctuate, real incomes would decline and many households would not have access to food. SAPs in the 1990s were influenced by the former line of economic reasoning (i.e., neoliberal policies). As will be shown in the discussion below, these policies ignored the impact of market imperfections.

In the early 1980s, the government had invested in large-scale state farms⁹ for the production of basic food commodities and had various schemes to support small farmers, such as subsidized transport from the farm gate to depots owned by the state marketing board, AGRICOM. However, to qualify for conditionality rules imposed by the International Monetary Fund and the World Bank, Mozambique had to cut its support to the agricultural sector. The neglect of the sector was further worsened by the destruction of marketing infrastructure such as roads during the 17 years of civil strife. The network of rural shops that were the backbone of the agricultural marketing system also crumbled during the same period.

The SAP in Mozambique began in 1987. The government was required to decrease support to the agricultural sector in both marketing and production. The agricultural sector was left to the smallholder¹⁰ sector and the private sector, with no government support. The idea was that a free market, with little or no government intervention, would raise farm gate prices and thus stimulate production and supply response. However, what the policy advice failed to acknowledge was that the state, through targeted interventions, had an important role to play in limiting market imperfections.

8 S. Moyo, *The state of food security in Southern Africa* (Harare: African Institute of Agrarian Studies, 2008), p. 3.

9 However, it should be noted that large state farms and enterprises in general were inefficient and had bad management structures.

10 This paper looks at smallholders and ignores commercial farms, because they do not produce food commodities. The smallholder sector is dominated by the family subsector (about 2.5 million households), which accounts for about 90 per cent of the cultivated area. The remainder of the cultivated land is cultivated by large commercial farms that concentrate on cash and export crops.

Accordingly, the government stopped setting farm gate prices and marketing margins for all agricultural commodities (except for a few commodities such as cotton and sugar), and no support was given to the smallholder sector. The state also pulled out of markets for key agricultural inputs such as fertilizers and improved seeds. State storage facilities were rented out to private sector operators. There is evidence to suggest that the reforms were able to raise farm gate prices and to stimulate the smallholder milling industry (in the case of maize, for example).¹¹ However, productivity did not increase. The current consensus is that food output did not increase because of lack of government support and lack of affordable key farm inputs such as fertilizers, pesticides, and improved seeds and storage and irrigation facilities.

For example, in contrast with the 1980s, when Mozambique consumed 400,000–800,000 tonnes of fertilizer and 2–3 million litres of pesticides, in the late 1990s (the post-structural adjustment period) the whole of Mozambique used 10,000 tonnes of fertilizer and 40,000 litres of pesticides.¹² Among smallholder farmers, only 2.7 per cent use fertilizer and 4.5 per cent pesticides, but mostly for cash crops and not basic food commodities.¹³ Usage has decreased because of the high cost of fertilizers due to high transportation costs and the high margins charged by local suppliers. Moreover, the production of basic food crops in Mozambique is highly dependent on erratic rainfall. Unlike in the 1980s, there has been little public investment in irrigation infrastructure to tap into the vast water resources of the country. Only about 11 per cent of households use some form of irrigation.¹⁴

Hence, in the absence of government support and investment in key agricultural inputs and infrastructure, production of most food crops has decreased. Yields per hectare are below the region's average for most food crops. As elsewhere in the developing world, this “policy failure,” coupled with continued trade protectionism and subsidized exports in the global North, undermined food production in the global South.¹⁵ However, as will be discussed in section 6, new investments by the state can be expected to reverse this trend in the medium to long term.

4 Food Prices in Mozambique

Given that Mozambique is a net importer of food commodities, domestic increases in food prices have generally followed global trends, especially for rice, wheat and, to a lesser extent, maize. An analysis from the Ministry of Agriculture reveals that real prices of wheat flour started increasing in January 2007, while the prices of rice and maize meal started increasing in 2005 and 2006, respectively.¹⁶ The FAO reports that prices of maize (a staple food in Mozambique) in March 2008 were 43 per cent higher in Maputo than a year before.¹⁷

However, it should be noted that national production (supply) plays a major role in stabilizing domestic prices of maize, unlike for wheat and rice, which are mostly imported. Local maize production stabilizes prices by making sure that the price of imported maize is not higher than that of local maize.

11 D. L. Tschirley and M. T. Weber, *Mozambique food security success story*, policy synthesis no. 19 (Maputo: USAID, 1996).

12 P. E. Coughlin, *Agricultural intensification in Mozambique: Infrastructure, policy and institutional framework – When do problems signal opportunities?* (Maputo: EconPolicy Research Group, 2006), p. 18.

13 *Ibid.*, p. 19.

14 World Bank, p. 5.

15 Moyo, p. 2.

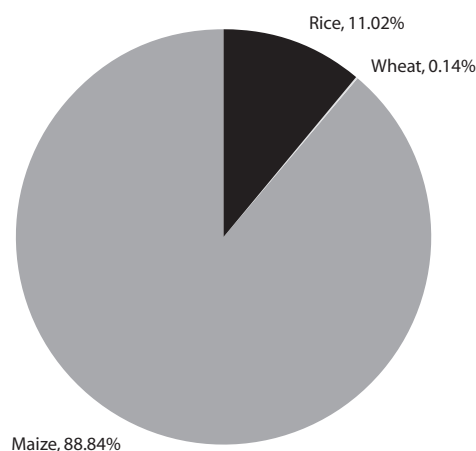
16 A. Mabote *et al.*, *A realidade a cerca da subida de preços: A dinâmica dos preços de alimentos em Moçambique e as implicações políticas*, SIMA flash no. 50P (Maputo: Ministry of Agriculture, 2008), p. 2.

17 FAO (Food and Agriculture Organization), *Crop prospects and food situation* no. 2 (Rome: FAO, 2008), p. 16.

5 Food Imports

Mozambique generally relies on both imports (mainly rice and wheat) and its own production (mainly maize) for its food consumption needs. Figure 2 shows the shares of maize, rice and wheat in total cereal production 2007.

Figure 2: Shares of maize, rice and wheat in total cereal production, 2007



Source: Author's own calculation from FAO data

Mozambique relies on imports for all its domestic wheat requirements. Imports of rice account for about 75 per cent of total domestic consumption, and those of maize (mostly from South Africa) account for about 13 per cent of total domestic consumption.¹⁸

As discussed above, Mozambique is a net importer of basic food commodities. The cereal deficit varies from 430,000 to 580,000 tonnes and is mainly composed of wheat (mostly imported from Argentina) and rice. Mozambique's food insecurity problem is further exacerbated by the fact that the country is vulnerable to natural disasters such as cyclones, floods and droughts, which affect the total amount of food harvested and available almost every year.

Hence, from this analysis it is clear that the increase in world commodity prices (especially of rice, wheat and maize) in the last few years has serious implications for the food security situation of poor and vulnerable Mozambican communities who use most of their limited resources to buy food. Moreover, increasing prices also increases Mozambique's food import bill, diverting scarce financial resources from other social expenditures such as health care and education.

¹⁸ Mabote *et al.*, p. 3.

6 Policy Responses to Current Food Prices

In response to the current food price crisis, the Mozambican government has implemented a number of policy responses (short- and long-term) to mitigate the impact of rising food prices on poor and vulnerable communities. The policy measures include an increased agricultural budget to boost food production; trade policy instruments to increase food imports, thus limiting the increase in food prices; and investments in infrastructure for storing strategic food stock reserves to stabilize food prices in the long term. These measures are discussed below.

6.1 Increased budget allocation to agriculture

In June 2008, the government increased the budget of the Ministry of Agriculture to boost agricultural production through a proposed “Green Revolution.”¹⁹ The objective of this strategy is to increase food production to improve the country’s food security situation. The strategy is centred on the production of rice, maize, wheat, cassava and potatoes to guarantee food security. It also seeks to rehabilitate infrastructure such as roads and to equip farmers with machinery to increase food production. The strategy includes plans for fertilizer and seed imports, as well as the development of irrigation systems and extension services (the training of new officers).

In June 2008, the government also approved the 2008–11 Food Production Action Plan (FPAP) to specifically deal with the rising global food prices. The FPAP shares most of the objectives of the Green Revolution strategy, but, unlike the Green Revolution, the FPAP is a short-term plan starting on the 2008/09 agricultural year aimed at reducing the country’s grain deficit to mitigate the rising food prices. As part of the FPAP, the agricultural budget has been increased to 10 per cent of the total state budget, from only four per cent.²⁰ The 2008 state budget is US\$3.5 billion.²¹ The three-year plan, which will run from 2009 to 2011, is expected to reduce the country’s current grain deficit of about 580 million tonnes. The World Trade Organization’s Agreement on Agriculture affords special and differential treatment for least developed countries such as Mozambique. The agreement has three pillars: market access, export competition and domestic support. Under all three pillars, least developed countries are not required to make any commitments.

The Green Revolution strategy and the FPAP, if successful, will improve food production and the food security of the country. The success of these strategies will be highly influenced by how they are implemented. In addition to the strategies above, the government will also import about 1.2 million tonnes of rice from Vietnam over a period of three years at a negotiated price.²²

19 Interview with a government official from the Ministry of Trade and Industry, quoting an article in the Mozambican daily *Jornal Noticias*, 18 June 2008.

20 C. Mangwiro, “Mozambique ups agriculture budget to boost output,” *Moneybiz*: 2008a, <http://www.moneybiz.co.za/business_in_africa/Mozambique_ups_agriculture_budget_to_boost_output.asp>.

21 *Ibid.*

22 C. Mangwiro, “Mozambique to import Vietnam rice to curb shortages,” *Reuters*: 2008b, <<http://africa.reuters.com/business/news/usnBAN355098.html>>.

6.2 Trade policy instruments

To mitigate the short-term effects of increasing global food prices, the government reduced import tariffs in early 2008, cutting the import tariffs of major staples (maize, wheat and rice) from 25 per cent to 2.5 per cent, a reduction of 90 per cent. However, it not clear how long these tariff cuts will last and whether they will undermine the production goals envisaged in the Green Revolution strategy and the FPAP.

6.3 Construction of strategic silos

As part of the FPAP, in July 2008 the Ministry of Trade and Industry in Mozambique launched a public tender for the construction of strategic silos for the storage of cereals. In phase 1 of the project, the silos are to be built in the food surplus provinces of Niassa, Nampula, Zambezia, Sofala and Manica in the north and centre of the country. An estimated US\$10 million is to be spent in the first phase.²³ Phase 2 of the project will cover Gaza, Tete and Cabo Delegado provinces.

The idea is that the strategic silos would act as a reservoir of surplus domestic production that would result from the Green Revolution strategy and the FPAP. In the long term, the strategic food reserves are expected to improve the food security situation of the country by stabilizing increases in prices of staples, and to minimize the impact of international food crises. Fiscal incentives have been made available through the Centre for Investment Promotion to encourage bidders (investors) to invest in the construction of silos.

7 Land Tenure Issues in Mozambique

This section describes the current land tenure arrangement in Mozambique. The objective is to analyze the aspects of the land law that can constrain investments in the agricultural sector by large commercial farmers to increase food production.

The constitutional principle in Mozambique is that land belongs to the state. The country has a population density of 16 people per square kilometre. However, in the past, land tenure issues were a source of conflict between smallholder farmers and commercial farmers about use of fertile land. The Land Law of 1997 seeks to solve the conflict issues that existed. The major provisions of this law are outlined in box 1.

23 AIM (Agencia de Informação de Moçambique), "Tender for building of silos launched," 25 July 2008, <<http://allafrica.com/stories/200807250939.html>>.

Box 1: Basic provisions of the Land Law of 1997

All land remains the property of the state, but land leases can be granted for up to 50 years. These leases are renewable, inheritable and transferable, subject to administrative authorization. One condition for the award of land leases is the presentation of a development plan. If the farmer fails to comply with the stipulations of the approved plan, the lease can be cancelled. Investments in land, including infrastructure, can be bought and sold. However, administrative authorization is still required for the transaction to be effective. Traditional land use rights are recognized and formalized in a system of community land management, implemented through the co-titling of community lands. Existing users of the land are protected, provided they can demonstrate “good faith” occupation of the land. This demonstration need not be documentary evidence, and verbal evidence from members of the community can be recognized as valid. There is a right to local participation and consultation in the management of natural resources and in procedures leading to the award of land leases, in order to protect both traditional community rights and to take account of future needs of communities.

Source: World Bank (2006)

However, there are still major issues with regard to the Land Law:²⁴

- The law has not solved recurring conflict between smallholder farmers and commercial farmers.
- It has not encouraged partnerships between smallholder farmers and commercial farmers.
- The procedure of securing a land lease is cumbersome and costly and can delay investments.
- The process by which leases are granted is not transparent and is prone to corruption.
- Land still does not serve as collateral for loans.

Despite these constraints, Mozambique should be able to attract foreign direct investment to increase food production. Experience shows that the government is always willing to expedite the allocation of land for agricultural development to investors. A point in case is the allocation of land to companies interested in the development of the biofuel sector in Mozambique. The government has signed a US\$510 million investment agreement with the London-listed Central African Mining and Exploration Company to produce ethanol.²⁵ Nonetheless, the removal of these constraints can go a long way in removing red tape and consequently increasing private sector investments in agriculture.

²⁴ World Bank, p. 39.

²⁵ M. Pressend, *Biofuels and sustainable development: Hope on a slippery slope*, global insight no. 80 (Midrand: Institute for Global Dialogue, 2008), p. 2.

8 Conclusion

Mozambique has been affected by the increase in global food prices. Global increases in prices of rice and wheat have had the greatest impact on domestic prices of these commodities, an impact made more severe by limited domestic production. This assertion is supported by the fact that the country has been modestly affected by the global increase in maize prices, because of the availability of domestic supplies of maize.

The analysis also shows that food production has been affected by the state's underinvestment in agriculture and its complete withdrawal from the marketing of both key production inputs and output of food commodities. Hence, it can be argued that the combination of on-farm production constraints, off-farm infrastructural constraints, ineffective input and output markets, low investment in the sector and lack of support to smallholder farmers has undermined the production of basic food products in Mozambique. However, the Green Revolution strategy, the FPAP and the continued investments in key agricultural infrastructure can be expected to reverse the current food production situation in the medium to long term. If these plans are realized, the agricultural potential of the country can be fully utilized and food shortage and high prices can be things of the past. However, in fulfilling this goal, the country still faces a number of challenges.

The government cannot develop the agricultural sector on its own, and the private sector will also have a role to play. In order to attract private investors, the government will have to improve its investment climate situation. Roads and marketing infrastructure will have to be improved, the land tenure problems that persist will have to be addressed and credit markets will have to be improved. All these problems are cited in the "Green Revolution" strategy and the FPAP. Hence, as mentioned above, the agricultural sector will only improve if these strategies are successfully implemented.

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