

**MEASURES TO INCREASE FOOD
PRODUCTION AND MITIGATING
AGAINST INCREASED FOOD PRICES:
THE MALAWI CASE STUDY**

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06 November 2008



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Human Sciences Research Council

06 November 2008

Acknowledgements

This paper forms part of the Food Security Project jointly funded by ComMark Trust and the HSRC Parliamentary Grant Allocation – “Ensuring affordable quality food for poor households: Considering the Short- and Long-Term contribution of Food Security to the government’s poverty and unemployment reduction strategies”. The support of both ComMark Trust and the HSRC are gratefully acknowledged. The invaluable support while doing the field work by Mr Wilson Kamwenda and Mr Blessings Botha of CIDA, Malawi who assisted to access their colleagues in other development partners in Malawi is highly appreciated. In addition, World Bank, DFID and MoAFS staff who agreed to include me in their busy schedules is also well appreciated. The insightful review and comments on the earlier versions of the report by Tim Hart, Human Sciences Research Council, Pretoria, are greatly appreciated. The views expressed are those of the author and do not necessarily reflect those of any other party.

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Abstract

The economy of Malawi is highly dependent on agricultural production and development initiatives in the country have been mostly dependent on improving agricultural production. Furthermore the sector comprises largely of smallholder farmers who produce primarily for own production and only the surplus is marketed. However, as in other parts of SSA the smallholder farming sector's productivity is quite low and the Malawi government has a history of supporting smallholder farmers but for the past three production seasons, Malawi embarked on a bold initiative to improve access to inputs and technologies through the Agricultural Input Subsidy Programme (AISP). The programme is hailed for having moved the country from a deficit producer of staple crops, especially maize, to a surplus producer. In addition, the programme has increased the food security status of the farming households and the economic growth of the country as it has been able to allow the participation of all agricultural stakeholders.

1. Introduction

Agriculture is an important sector of Malawi's economy. The sector contributes 39% of the GDP, accounts for the 80 % of the foreign exchange, and has 80% of the total workforce (Ministry of Agriculture and Food Security (MoAFS), 2008). In addition the sector "contributes significantly to national and household food security" (*ibid.* 1). The agricultural sector is dualistic in that it comprises two distinct sub-sectors being the smallholder and the large scale commercial or estate farming enterprises. The two sectors contribute 70 and 30 % respectively to the agricultural GDP of the country. The smallholder farmers mainly produce for subsistence and the main crops grown are maize, the main staple grain, cassava and sweet potatoes. The large scale or estate farmers produce high crops mainly for the export market and these include tobacco, tea, sugar, coffee and macadamia. Smallholder farmers in Malawi produce over "small and fragmented land holdings" which are mainly under customary land tenure and the yields are lower than in the estate farming sector. According to Malawi's Agricultural Development Programme (MoAFS, 2008), the national land holding size has fallen from 1.53 ha per household in 1968 to 0.8 ha per household in 2000 owing mostly to population pressure.

The smallholder agricultural sector comprises a large number of "very poor families heavily dependent on low input maize production" on small plots which are mainly nitrogen deficient (School of Oriental and African Studies (SOAS), Wadonda Consult, Michigan State University (MSU), and Overseas Development Institute (ODI), 2008). Therefore production from these farmers is commonly inadequate to meet annual consumption needs as well as provide adequate annual growth. As a result, most of the farmers engage in casual labour and other income generation activities to meet the balance of their consumption needs. The problem of low output is further compounded by the low uptake of improved production technologies, thus smallholder agriculture remains unprofitable. In addition, "the sector experiences weak links to the markets, high transport costs, few and weak farmer organizations, poor quality control and inadequate information on markets and prices" (MoAFS, 2008:1).

Based on the importance of agriculture to Malawi's economy and the challenges thereof, development initiatives (resources, strategies and policies) have been heavily biased towards agricultural development. To this end the country has been a beneficiary from substantial donor assistance over an extended period but recently experienced chronic food insecurity at both national and household level. However, studies have shown that agricultural sector performed better in the period after independence, mainly due to state interventions in markets. The growth in agricultural sector was mainly in the estate sector and smallholders with larger landholdings, therefore the poor smallholders were excluded-leaving a legacy of desperate poverty to date. The increasing numbers of the poor in Malawi is seen as a major setback for agricultural growth. In recognition of the low adoption of more productive

technologies among the poor producers, the government has sort to improve the purchasing power of the poor through several programmes to improve access to inputs and technologies. This is primarily through improving the purchasing power of the poor smallholder producers.

Since 1998, government has introduced a number of interventions aimed at subsidizing maize fertilizer seed access for poor farmers. Some of these include the starter pack scheme (SPS) and targeted input program (TIP) as well as some interventions in the maize market. In 2005, these broad-based initiatives were developed into the Agricultural Input Subsidy Programme (AISP). Recent reports indicate that the programme has contributed significantly to the macro-economic growth of the country (GDP average growth of 8%) and a good performance of the agricultural sector in the 2005/2006 and 2006/2007.

2. Objectives and methodology

The current report aims to understand how Malawi managed to move from a food insecure country and to surplus producer of maize. Specifically the report will determine the role of the AISP in this success. The program has seen widespread support in agricultural development thinking. The report uses data from various published and unpublished reports, as well as notes and observations from a fieldwork undertaken during the second week of September 2007. During the fieldwork, various stakeholders were contacted who provided valuable information. This included the development partners, research organizations and government departments. These included:

- The World Bank,
- Department for International Development (DFID),
- Norwegian Agency for Development Cooperation (NORAD),
- Canadian International Development Agency (CIDA),
- European Union (EU) delegation, and
- Government of Malawi- Ministry of Agriculture and Food Security's (MoAFS): Directorate of Planning Services.

3. Results and discussion

In the presentation of the results and the discussion, it is important to give brief overview of the Agricultural Input Subsidy Program¹ (AISP).

- Main objectives are improving smallholder agricultural productivity, improve food and cash crop production, and reducing vulnerability to food insecurity and hunger
- Implemented through the use of coupons, in proportion to cropped maize and tobacco areas (allocations per ha and per grower varied widely).
- Coupons could be redeemed at a reduced price for any of the four fertiliser types (maize- NPK (23:21:0)) and urea; tobacco-compound D and CAN). Redeemed at a rate of 1 coupon and MK950 (~ R70) for a 50kg bag of 23:21:0 or urea and 1 coupon and MK1450 (~R105). This represented about 28% of the full cost and the remainder being paid by government. In addition to fertilizers, coupons were also provided for the purchase of OPV maize seed
- Coupons allocated to targeted households (ie able farmers who would otherwise not be able to purchase the inputs) and distributed by traditional authorities through the Village Development Committees

4. Major contributions of AISP

The programme resulted in increased crop productivity during the two years of its existence especially maize which a staple food for Malawi. In addition, the country was able to realize surpluses in maize production, allowing the country to export to other countries in the region like Botswana, Zimbabwe, Lesotho and Namibia (FANRPAN, 2008).

The increased crop production (mt/ha) before the inception of the programme (2004/2005) and after the inception of the programme (2005/2006& 2006/2007) is highlighted in table that follows.

Table 1: Crop productivity over the three different seasons

¹ A full description of the program is provided in the interim report of the Evaluation of the 2006/2007 Agricultural Input Subsidy programme, Malawi, 2007 by SOAS, Wadonda Consult, MSU and ODI.

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Crop	YIELD (mt/ha)		
	2004/2005	2005/2006	2006/2007
Maize	0.83	1.61	2.04
Rice	0.91	1.75	1.95
Groundnuts	0.57	0.83	1.02
Pulses	0.42	0.62	0.69
Cotton	0.67	0.94	1.04
Cassava	14.27	17.13	18.78
Sweet potatoes	8.08	13.51	15.32
Tobacco	0.51	0.89	0.99
Wheat	0.46	1.20	2.30
Millet	0.30	0.65	0.72
Sorghum	0.28	0.77	0.86

Adopted from FANRPAN, 2008

From Table 1, AISP led to a general increase in yields. For maize, the yields per hectare more than doubled maize production in the first year of introduction (0.83 mt/ha to 1.61) and continued to increase in the subsequent production season. In addition, the country was able to attain surpluses above the national requirements for maize and other crops. Table 2 shows the surplus (deficit) that country realized above (below) the national requirements.

It is worth noting that the majority of the producers are smallholder farmers, some of whom were targeted by the input subsidy program. The fertilizer subsidy reached 1.7m vulnerable households producing maize and 250 000 tobacco and cotton producers, and 2m households received OPV and more productive hybrid seeds. The households on crop on average 0.5-0.6 ha of land on dryland. It can thus be concluded that the programme has contributed significantly to this increased productivity and production. As result, the country has been able to move being from being food insecure to a surplus producer of staple foods. As one of the respondents noted, the impact of the food price shocks was not felt by the majority of the households as they produce their own food. However, another stakeholder did mention that apart from the input subsidy program, the country also had favourable planting seasons as they had good rains over the seasons that the programme was started.

Table 2: Maize surplus (deficit) over three different seasons

Year	National requirements (mt)	Production (mt)	Surplus (deficit) (mt)
2004	2 039 291	1 733 125	306 166
2005	2 115 317	1 259 332	855 985
2006	2 183 506	2 611 486	427 980
2007	2 255 049	3 444 655	1 189 606

Source: FARPAN, 2008

Other achievements of the programme included the increase in the use of improved technologies (hybrid seeds, pesticides and inorganic fertilizers). In terms of the ploughing, an improved technology was introduced. This led to increased planting population. Traditionally, the ridges on which seeds are planted were 90 cm apart and this has now been reduced to 75 cm, and the planting distance between planting stations has also been reduced to 25 cm.

According to SOAS et al (2008), the programme also improved household food security which makes part of the stated objectives of the programme. From the evaluation report (ibid), rural households subjectively ranked their economic well being to be higher (8%) in 2007 than in 2004. In addition, the proportion of households that reported major shocks due to high food prices decreased from 79% in 2004 to 20% in May/June 2007. This was mainly due to “increased household food production, higher rural wages and lower food prices benefiting the poorer households” (ibid).

In addition to the above achievements, the programme also led to an increase in the private sector participation. Of the 175 000 tonnes of fertilizer supplied, private concerns supplied 100 000 tonnes.

5. Challenges of the AISP

While the programme has had an enormous positive impact on the agricultural sector in Malawi, there are still several challenges that need to be addressed. Among these are the sustainability of the program. This is a concern raised a number of the development partners and other stakeholders consulted. Of major concerns is the lack of clarity about the programme’s milestones, for how long and what the ultimate objectives apart from just food security are. It is widely suggested that government should be looking at phasing out the program, ie, progression. However, the political principals are not very eager! Related to this concern is the fact that the size of the subsidy is increasing while one would have expected it to reduce over time. This may lead to the development dependency among the smallholder farmers.

Another challenge faced by the programme are leakages in the system, this requires that the targeting of beneficiaries needs to improve to reduce the leakages. As a result of the leakages some of the inputs have found their way into non deserving farmers. An example was given whereby a benefiting household would exchange the coupons for cash to purchase their food items as they could not raise the cash component of the coupon. As with other large scale government initiatives, there is also the problem of the late delivery of inputs due to a variety of reasons and thus government needs to look into the improvement of the value value chain. This is being taken up seriously.

More importantly, the AISP is currently being implemented as a stand alone initiative. Therefore there is a need for the programme to feed into other government programmes. The government is currently developing The Agricultural Development Programme, which will serve as a prioritized and harmonized agricultural agenda over four years (2008-2012). At the time of the fieldwork, the framework was still be adopted by cabinet (Zimalirani, 2008). A central objective of the ADP is the move from ministry's project to program approach by identifying specific results areas. The ADP thus will harmonise activities in the agricultural sector and therefore informs all initiatives in the agricultural sector.

Among some of the activities currently being driven is the development of greenbelts in order to strengthen agricultural service delivery. One of these greenbelts is in the Lilongwe Agricultural Development District. The greenbelt is 28km and in the first season, almost half of the greenbelt (12km) was cropped. The greenbelts are a measure to move farmers along major roads by encouraging farmers along the road to consolidate their small pieces of cropped land closer to each other such that the small farms would be like one large cropped area. As indicated in the background to this report, most of smallholders grow on small areas which are scattered all over and thus the idea of the greenbelts is bring these together and thus bringing farmers closer together. It allows for easier access to nearby service delivery points and allows for easy access by extension services. The MoAFS plans to have seven greenbelts in the country and the majority of these will be based on dryland production and the others on irrigation development.

6. References

Ministry of Agriculture and Food Security (MoAFS). 2008. The Agricultural Development Programme (ADP): Malawi's prioritised and harmonised Agricultural Development Agenda: 2008-2012. Government of Malawi

Dorward, A., Kydd, J., Morrison, J, and Poulton, C. 2005. Institutions, markets and economic co-ordination: linking development policy to theory and praxis. *Development Change* 36 (1):1-25

Dorward, A., Chirwa, E., Boughton, D., Crawford, E., Jayne, T., Slater, R., Kelly, V., and Tsoka, M. 2008. Towards 'smart' subsidies in agriculture? Lessons from recent

experience in Malawi. *ODI Natural Resource Perspectives* 116, London: Overseas Development Institute

7. Appendices

A1: Program of activities in Malawi (1-10 September 2008)

A. 1 - 5 September 2008

- Call Wilson Kumwenda (CIDA Malawi_Agriteam Canada) to arrange meetings the following week
- Attend workshop
- Networking
- Identify and meet relevant people
- Display and share the HSRC and specifically the Centre's work
- Participate in field trips
- Call & Meet Blessings Botha & Charity Chonde (Development Economist)

B. 6-7 September 2008

- Meet Wilson Kumwenda to finalise program of meetings with relevant people in government, university, NGOs and select projects to be visited
- Meet Blessings Botha
- Visit a project site? (depending on whether I can access it with public transport)

C. 8-10 September

- Meet 3 identified Malawi (2hrs each) relevant government officials_Agricultural Input Subsidy program (Ministry of Finance, Ministry of Agric & Food Security)
- Meet 3 people from development NGOs
- Meet a development specialist at the University
- Visit at least three project sites and interview local participants

D. Specific Issues to be addressed in meetings with officials, specialists and beneficiaries

- Agriculture and development policy framework of Malawi
- Definition of participating/eligible farmers

HSRC

- Gender
 - Size of holdings
 - Characteristics
 - Value chain
- Sustainability of the agricultural and food security initiatives, especially AISP
 - Technologies being used
 - The main purpose of the exercise will be sourcing information (reports, papers, monitoring & evaluations) that will be used in the food price overview paper.
 - Another major question is how Malawi managed to turn their agriculture sector around, moving from being in food deficit to being a net exporter.
 - What were the mechanics of this, from institutional, political, budgeting, social mobilisation, service delivery, etc etc perspectives?

A2: List of people consulted in Malawi

1. Mr Wilson Kamwenda, CIDA, Malawi
2. Mr Blessings Botha, Development Economist, CIDA, Malawi
3. Dr Munthali, World Bank Economist, Malawi
4. Mr Christopher Phiri, Deputy Program Manager: Growth and Social Protection, Department for International Development, Malawi
5. Mr G. Zimalirana, Director of Planning, Ministry of Agriculture and Food Security (MoAFS), Malawi
6. Frank Amanga, Planning Services, MoAFS, Malawi
7. Mr Michael Makina, Economist: Food Security, MoAFS, Malawi

A3: Malawi case study:knapshots

Background

- Agric backbone of the economy
 - 80% of forex,
 - 80% of labour force &

- 40% GDP
- Sector is dualistic
 - 70% smallholders &
 - 30% large scale (estate farming)
- Smallholders mainly produce for subsistence on very small and fragmented landholdings under customary tenure
 - National average (2000) of 0.8ha,
 - latest estimates (2008_fieldwork in September) is 0.5 ha per household
- For a long time, crop yields from smallholders too low resulting in chronic food insecurity at both household and national levels
- Mainly due to:
 - Low uptake of improved technologies
 - Weak links to the markets
 - High transport costs
 - Weak farmer organizations
 - Etc
- Studies show that agricultural sector performed better after independence, characterized by state interventions in markets
- However, growth was mainly in the estate sector and smallholders with larger landholdings, therefore the poor smallholders were excluded-leaving a legacy of desperate poverty to date
- Since 1998, Malawi engaged on broad-based initiatives to benefit the poor farmers, eg, starter packs and TIPS
- From 2005, initiatives developed to a more bold Agricultural Input Subsidy Programme (AISP)
- This recognized that the low adoption of more productive and diversified technologies was mainly due to the lack of purchasing power of the 60% of the poor
- Resulted in strong macro-economic growth (GDP average growth of 8% & inflation rate of 10.9%) due mainly to sound macro-economic policies and good performance of the agricultural sector (2005/2006 and 2006/2007)

Objectives

- To understand how the country managed to move from food insecure to a surplus producer of food

Methodology

- Literature review

- Field visits (key informants and experts)

Key findings

- AISP led to increased yields, more than doubled maize production in 2 years (0.83 mt/ha before programme to 2.04mt/ha after two years).
- Maize surplus above national requirements, other crops also had substantial increases
- Increase in the use of improved technologies (hybrid seeds, pesticides and inorganic fertilizers)
- Reached 1.7m vulnerable households producing and 250 000 tobacco and cotton producers
- Improved household food security- main objective- due to:
 - Increased household food production, higher rural wages and lower food prices
- Increased private sector participation
- Creation of green belts to strengthen service delivery

Challenges

- Sustainability of the program, what are the milestones, for how long and what are the ultimate objective apart from food security (Phasing out the program important)-however political principals not very eager!
- Targeting the beneficiaries (leakages in the system)
- Size of the subsidy is increasing while one would have expected it to reduce over time, possible to develop dependency
- Improvement of the value chain
- Late delivery of inputs
- Programme should also be feeding into other programmes and policies, currently mainly a stand alone
- While a GoM initiative, heavily supported by development partners during the second and third years after initial success had been noted at the end of the first year.