

Malawi's green revolution success story has been lauded around the world. While it is good to see a government investing in local food production, it is doubtful whether the achievements will be sustainable unless radical changes are implemented. Above all, land needs to be redistributed so that farmers have holdings that are big enough to produce surpluses, and the government needs to move away from its narrow focus on chemical fertilisers and hybrid maize seeds.

Unravelling the “miracle” of Malawi's green revolution

*Enough is enough. I am not going to go on my knees to beg for food.
Let us grow the food ourselves.*

Bingu wa Mutharika, President of Malawi, 4 June 2008¹



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¹ M. Nyekanyeka and A. Daudi, *Malawi: Renewed Maize Surplus*, Government of Malawi report, October 2008.

Malawi has recently been hailed as the “miracle” of Africa and a role model for other countries. After four years of chronic food shortages, Malawi turned itself around and started producing enough maize to fulfil its national requirements in 2006 and even to export maize in 2007. The reason for the turnaround? According to the Alliance for a Green Revolution in Africa (AGRA), the biotech corporate giant Monsanto, and US economist Jeffrey Sachs, the Malawi miracle came about because the

government followed the green revolution model, subsidising the distribution of chemical fertilisers and hybrid maize seeds. The Malawi story has become a very powerful marketing tool for their promotion of a new green revolution in Africa.

Others praise the government for defying its foreign donors, and giving direct support to small farmers. The government pumped millions of dollars into its programme to provide farmers with vouchers for subsidised maize seeds and fertilisers, and farmers responded by increasing production

significantly. No one can dispute the dramatic impact the programme has had on boosting domestic food production. It is a testament to what can be achieved when a government invests in its farmers.

But Malawi's success story does not go much further than that, and it is also important to keep in mind that the increase in maize production is dramatic compared with the 2002–4 crisis, but not so dramatic when compared with averages over decades. It is not a new model, neither is it a model for resolving the country's or the continent's complex problems of hunger and poverty, as some would have us believe. Rather, the government's programme has benefited from a few exceptionally good years of weather, but it is beset in the long term by limitations that, if not addressed, will doom any good intentions to failure. The three most important limitations are: the pressing issue of access to land, the reliance on costly imported inputs, and their impact on the soil.

Malawi's 30-year green revolution, and counting

When Malawi gained independence in the mid-1960s, the government of President Hastings Kamuzu Banda inherited an agriculture structure split between commercial estates, which dominated the production of tobacco, tea, sugar and other cash crops, and smallholder farms producing mainly for subsistence. The government did little to alter the colonial patterns of power. Its policies continued to favour exporters and its land reforms only furthered the expansion of estates on to communal land, turning the rightful occupants into tenants and generating a new class of landless people. Peasants were also pushed off their land by the state to make way for wildlife parks and other "protected areas", which have mainly served to support tourism. Between 1967 and 1994 more than one million hectares of customary lands held by local communities were transferred to the state and to commercial estate owners.

Even though Malawi's economy grew during the 30 years of Banda's regime, and the country was mostly self-sufficient in maize, these macro-economic figures mask the self-enrichment of the political elite and the escalating poverty of Malawi's rural population.² During the 1980s the World Bank and IMF started imposing structural adjustment programmes on Africa; in Malawi this meant phasing out subsidies for fertilisers and maize seeds, and removing price controls, creating a very volatile maize market. Less food was produced, it became more expensive, and a food crisis was in



Photo: GRAIN

Enoch Chione, a smallholder in Ekwendeni, northern Malawi, with his sorghum. He also intercropped maize with pigeon pea and other plants in order to improve soil fertility (see Box 5)

the making. In 1987, the government was forced to start importing maize in a big way.³ At the same time, the local currency was continually devalued, making fertilisers unaffordable for most farmers.

But Malawi's government, without ever putting in place a coherent, long-term food security strategy, could never completely abandon state intervention because it frequently had to react to recurring natural disasters and droughts. Between 1987 and 1995, subsidised fertiliser and hybrid seed programmes were again put in place. The devastating droughts of 1991 and 1993 reduced maize production by half, and, to add to the pressure, a million refugees arrived from Mozambique. By 1994 donor pressure to liberalise the markets intensified again and subsidies were scaled down, the credit market collapsed, food expenditure doubled and structural vulnerability intensified. Selling their labour for miserable wages to estate owners became one of the key strategies for the poor to make ends meet, but being a labourer on someone else's land (*ganyu*) meant that they did not have time to work their own land adequately, so yields fell.

² More than 60% of Malawi's people are classified as chronically poor; life expectancy has been falling from 48 years in 1990 to below 40, because of the HIV/AIDS pandemic and increasing levels of poverty and inequality.

³ Jane Harrigan, "Food insecurity, poverty and the Malawian Starter Pack: Fresh start or false start?", in *Food Policy*, Vol. 33, No. 3, June 2008, 237–49. Abstract available at <http://tinyurl.com/yaemcmg>



Table 1: Malawi's rollercoaster Green Revolution interventions since the early 1970s

Date	Programme	Number of affected and number of beneficiaries	Disasters and cost
1970–1980s	State control over agricultural inputs, subsidised 20–60% of cost	Benefit better off farmers, marginalise poor	Up to 3% of national budget
1981–90	Structural adjustment (SAP), subsidies reduced.		
1987–90	Subsidies Food Aid	1.4–2.8 million people affected	Drought
1990–91	Shift to smallholder tobacco production – USAID funds transition from maize to tobacco		Economic stratification accelerates, maize production down.
1992–93	Food Aid to millions Drought Recovery Inputs Project (DRIP)	5–7 million people affected 1.3 million given seeds and fertilisers	Southern African drought + 1 million refugees from Mozambique
1994	Subsidies discontinued	3 million people affected and receive food aid	Drought
1994–96	Supplementary Inputs Project	Up to 800,000 per year receive subsidies	
1996–97		400,000 affected	Floods
1998–2000	Starter Pack – all smallholders receive seed and fertiliser for 0.1 ha	2.8 million receive subsidies per season	US\$20–25 million Surplus production, 2.5 MT maize per season
2000–2002	Donor pressure – scale down to Targeted Input Programme that targets specific farmers (10–20% of fertiliser subsidised).	1–2 million receive subsidies per year 2002: thousands die of hunger	US\$7.5–13 million Good production in 2000–2001, but erratic rain and floods in 2002
2003–5	Extended Targeted Input Programme	1.7–2 million receive subsidies 5 million people hungry	US\$12 million
2005–6	Agriculture Input Subsidy Programme (75% subsidy of fertilisers and maize seed)	1.3 million receive vouchers	MK5.6 billion No donor support
2006–7	Agriculture Input Subsidy Programme	1.7 million receive vouchers	MK7.5 billion US\$91 million
2007–8	Agriculture Input Subsidy Programme	2.2 million receive vouchers 1.5 million food insecure because of high prices	MK12 billion US\$200 million Surplus production
2008–9	Agriculture Input Subsidy Programme	1.7 million receive vouchers 1.5 million classified as vulnerable	MK17.8 billion
2009–10	Agriculture Input Subsidy Programme	140,000 receive food aid	39% reduced budget for AISP

Source: Jane Harrigan, "Food insecurity, poverty and the Malawian Starter Pack: Fresh start or false start?", in *Food Policy*, Vol. 33, No. 3, June 2008, 237–49. Abstract available at <http://tinyurl.com/yaemcmg>; supplemented with data from *Malawi: Renewed Maize Surplus*, Malawi Government report, October 2008 and EM-DAT: The OFDA/CRED International Disaster Database, Université Catholique de Louvain, Brussels, Belgium.

The 1990s and early 2000s were characterised by a number of ad hoc, reactive projects by government and donors to subsidise fertilisers and hybrid seeds. US donor intervention always aimed at stimulating the private seed and fertiliser sector, and if a programme did not achieve this fast enough, it was changed, regardless of the impact on farmers.

Then drought, floods and hunger struck again in the period 2002–5. What is important to understand about this dramatic period is that it was largely a human-made disaster, the result of extremely bad donor policies and a corrupt government that sold off the country's grain reserves and dithered in responding to the crisis. Since independence, successive governments had overseen decades



of land concentration, migration out of the countryside, and unfair taxing of smallholder farmers, resulting in an extremely vulnerable and impoverished rural population. These conditions, high rates of HIV/AIDS, and the general rise in food prices created a “perfect storm” of extreme food shortages for almost half the population, giving birth to Malawi’s image as a country on the verge of starvation and collapse.

It was in this context that President Bingu wa Mutharika came to power in 2004 and launched a new fertiliser coupon system in 2005–6. His programme provided a voucher for two 50-kg bags of fertiliser and 2 kg of hybrid or 4.5 kg of open pollinated seed to about 2.8 million beneficiaries at a quarter of the actual price. Seed for some legumes was also provided. This was the much-hailed new Green Revolution initiative, but in essence there was little separating it from previous seed and fertiliser subsidy programmes. Perhaps of greater importance was that, beginning with the 2005–6 season, Malawi had several years of above-average rainfall. As maize is a crop which, when grown with fertilisers, needs a great deal of water to perform, this boosted yields. So the gamble paid off, the fertiliser subsidy programme responded to

the good weather, and Malawi achieved surplus national maize production four years in a row.

Table 1 summarises Malawi’s different subsidy programmes in the past decades, and the context in which they took place. It clearly shows that subsidies are nothing new for Malawi’s farmers: they have been depending on them for decades and have been at the mercy of fluctuating donor policies and pressures for as long. Natural disasters introduce a huge element of risk (Malawi experienced 40 weather-related disasters between 1970 and 2006), but it is the affordability of maize that presents the biggest risk to poor Malawians, as sudden severe price hikes during the hungry season put food out of reach of the poor.⁴

No miracles without land

All the fertilisers and seeds in the world cannot make much difference for the great mass of farmers in Malawi, who do not even have enough land to grow the food their families need. The average small farmer in Malawi cultivates less than half a hectare, while in the fertile southern part of the country the average per capita landholding is only 0.33 ha. Access to land has become dramatically worse in

4 R. Menon, *Famine in Malawi: Causes and Consequences*, UNDP Human Development Report, 2007. http://hdr.undp.org/en/reports/global/hdr2007-2008/papers/menon_roshni_2007a_malawi.pdf

Box 1: A doubly new green revolution in Malawi?

Some argue that the supposed increases in maize production in Malawi have been exaggerated. Researchers from Michigan State University claim that some of the figures used by the government are an overestimation of actual production. “It is widely believed that the 2007 Malawi harvest was overestimated by at least 25%. If the government had been able to produce a more accurate estimate of crop production, it might not have arranged to export maize, which in turn might have avoided the huge price surge in late 2007/early 2008 which caused great hardship for maize buying households.”¹ They also maintain that maize production estimates are routinely exaggerated for political reasons. An indication of this is that the private sector could not source enough maize to meet the government’s export promise, and imports have been streaming into the country from Mozambique and Tanzania almost continuously since mid-2007.

Yet others point to the discrepancy between the lack of food at the local level while the government maintains that there is enough maize to export. IRIN quotes a Malawi official in a southern district: “Maize shortages are a big political issue. As you can see, there is no maize in our particular district, but we cannot say anything. It is all very sensitive – the election is only about two months away.”² This was in February 2009. A few months later, the government declared 2009 another season of bumper harvest with a 36 per cent increase on the previous year.³

Whatever the assessment of the impact of the subsidy programmes, the bare truth is that Malawi still needs aid and many people are still hungry. The World Food Programme and various other agencies are still feeding more than a million people in Malawi, and 30 per cent of children receive a free school meal, which aid agencies say is far too few.⁴ And Malawians know that, come a drought, they will be at the mercy of the market and donors again.

1 T.S. Jayne et al., *The 2008/09 food price and food security situation in Eastern and Southern Africa: Implications for immediate and longer run responses*, International Development Working Paper, Michigan State University, 7 November 2008.

2 Integrated Regional Information Networks (IRIN) is a project of the UN Office for the Coordination of Humanitarian Affairs. See <http://www.irinnews.org/Report.aspx?ReportId=82987>

3 FEWSNET, Malawi food security update, June 2009. USAID, [http://www.reliefweb.int/rw/RWFiles2009.nsf/FilesByRWDocUnidFilename/MYAI-7TR2H9-full_report.pdf/\\$File/full_report.pdf](http://www.reliefweb.int/rw/RWFiles2009.nsf/FilesByRWDocUnidFilename/MYAI-7TR2H9-full_report.pdf/$File/full_report.pdf)

4 “Growing Hunger in Malawi Stirs Food Aid Debate”, http://www.pbs.org/newshour/bb/africa/jan-june08/malawi_05-02.html





Photo: GRAIN

CAPS Msukwa, showing the compost heap of a farmer near Ekwendeni

5 Bill and Melinda Gates Foundation, *Agricultural Development Strategy, 2008–2011*, 11 July 2008, p. 2.

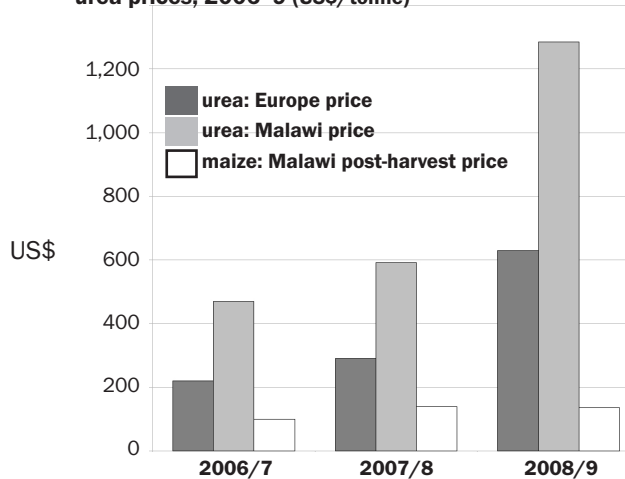
6 *Nyasa Times*, 7 September 2009: <http://www.nyasatimes.com/national/malawi-%E2%80%98sitting-on-time-bomb%E2%80%99-campaigners-want-land-policy-to-promote-citizens-interest.html/comment-page-3>

Malawi over the past few decades, and the problem is not population growth, of which Malawi has a relatively low rate, while it has a relatively high rate of rural exodus. By far the most important factor behind inadequate access to land is inequitable distribution of land. Only Brazil and Namibia have more unequal land distribution than Malawi. Today, half of Malawi’s arable land is controlled by some 30,000 estates of 10–500 hectares.

It is simply impossible to imagine how a programme that provides costly seeds and fertilisers to small farmers who have so little land is ever going to work. These farmers, who account for the vast majority of the farmers in Malawi, can hardly produce enough for their own families’ food needs, let alone enough to pay off their input costs. There is a real risk therefore that any green-revolution-style programme is going to benefit only the bigger, commercial farmers over the long term. AGRA and the other funders now promoting Malawi’s success story have a not-so-secret agenda to promote the concentration of land into bigger farms in Africa. The Bill and Melinda Gates Foundation makes this quite clear: “Over time, this [strategy] will require some degree of land mobility and a lower percentage of total employment involved in direct agricultural production.”⁵

An increasing number of these bigger farms in Malawi are ending up in foreign hands. “It is not a secret that foreign nationals have acquired land in our districts, towns and cities and built at the expense of poor Malawians,” says Undule Mwakasungula, the director of the Centre for Human Rights and Rehabilitation. “At the rate we are giving up our land, one wonders whether there will be any land left for the future generation.”⁶

Graph 1: Malawian maize price compared to changing urea prices, 2006–9 (US\$/tonne)



Source: A. Dorward and C. Poulton, *The Global Fertiliser Crisis and Africa*, Future Agricultures Briefing, June 2008. www.future-agricultures.org
2009 figures from FEWSNET, June 2009.



Box 2: Agribusiness sees green

The private sector was initially up in arms about the fertiliser programme, out of concerns that it would be left out. During the 2005–6 programme, the government parastatal companies handled all of the procurement and distribution of fertilisers. But because of pressure from the World Bank, the government agreed to allow the private sector to take over a quarter of the retail distribution of fertilisers.¹ Moreover, the subsidies have given a tremendous boost to overall sales of fertilisers. In 2007–8 the programme distributed 217 million tonnes of subsidised fertiliser, which, on its own, is higher than an average year of total fertiliser sales in the country.

“There is no doubt that the programme is a success,” says Dimitri Giannakis, chairman of the Fertiliser Association of Malawi and director of Malawi’s biggest fertiliser company, Farmers’ World. “Initially we thought it would be devastating to the fertiliser industry and that the government would dominate the whole process. But with dialogue between ourselves and government, we worked together and came up with a formula that will promote our business and assist government at the same time.”

The seed companies are also satisfied. Seed sales are up dramatically because of the programme. In the 2007–8 season, 5,500 tonnes of subsidised maize seed were sold in the country. The Seed Traders’ Association of Malawi (STAM) says that seed sales by its companies have increased by about 40 per cent since the start of the subsidy programme.² The big winner here is Monsanto, which holds more than 50 per cent of the hybrid seed market in Malawi.

1 Andrew Dorward, “Fertiliser Subsidies: Potential, Pitfalls and Practice”, 3 March 2009: http://siteresources.worldbank.org/INTARD/Resources/335807-1236361651968/DorwardFertiliserSubsidyPPWBMar_2009.pdf

2 B. Bafana, “Going Against the Grain on Subsidies”, IPS news, 5 September 2008: <http://ipsnews.net/news.asp?idnews=43815>

Some foreign land grabs in Malawi are very large. The Government of Djibouti signed a deal in 2009 with the Government of Malawi for a 55,000-ha concession of irrigated farmland. China is negotiating for a similar amount.⁷ The UK farmland fund Cru Investment Management PLC recently purchased a 2,000-ha estate in Malawi to produce paprika and other crops for export to Europe. It forecasts a 30–40 per cent return from its farms and outgrower schemes in Malawi.⁸ Another UK-based company, Lonhro, says that it is negotiating a deal covering tens of thousands of hectares bordering Lake Malawi where it plans to grow rice.⁹ The sugar industry is in major expansion mode as well. Villagers in Chikwawa District were recently kicked off their land without compensation by the Illovo sugar company, a subsidiary of Associated British Foods.¹⁰

The future of Malawi’s millions of farmers cannot be built with fertilisers alone. They need access to land. A genuine agrarian reform, which redistributes land to the poor, has to precede national programmes to boost food production, whatever their form – otherwise only the big farmers will benefit.

The price of the revolution

Beyond the land question, there are also serious concerns about how sustainable this “revolution”

is. Financially, how long can Malawi afford the subsidies? And environmentally, won’t all this exclusive attention on chemical fertiliser further erode Malawi’s already fragile soils?

Malawi does not produce chemical fertiliser. It imports all of it from the international market.

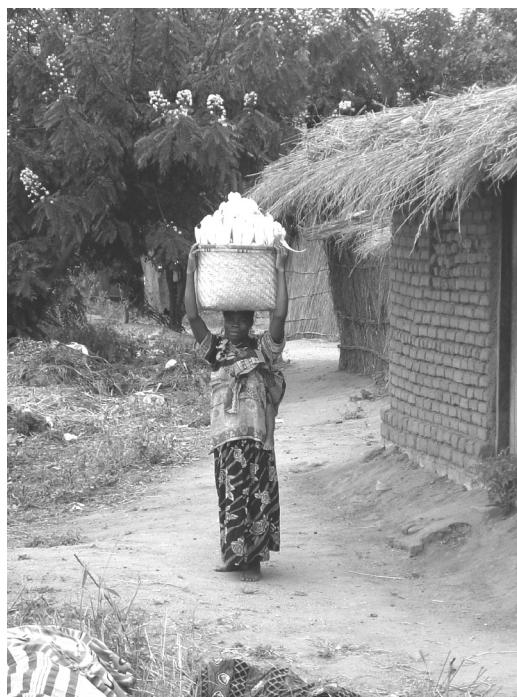


Photo: GRAIN

A woman near Nkhotakota, Central Malawi, carries home her harvest of maize to feed her family

7 <http://farmlandgrab.org/5111>

8 <http://farmlandgrab.org/2814>

9 R. Moody, “Lonhro secures rice land deal; farmers will be removed”, Nostromo Research, 2009: <http://londonminingnetwork.org/2009/02/angola>

10 <http://farmlandgrab.org/5578>



Box 3: What has tobacco got to do with food security?

In Malawi there are two important crops: tobacco and maize. And for a Malawian smallholder farmer there is a constant tension between growing tobacco or growing maize. Most of Malawi's tobacco used to be grown on big estates, and for decades these estate owners enjoyed favoured policies because of both the political power of the industry and the international donors' policy of encouraging exports.

Under Banda, another class of tobacco grower emerged: tenant farmers. Under this scheme the estate provides the farmer with seeds and fertiliser and then at the end of the season buys the tobacco from the farmer, deducting the cost of these inputs. Tenant farmers have no control over the production process and most of them have remained trapped in poverty. In 1994 the ban on growing tobacco by smallholder farmers was lifted. Since then, workers and tenants have been even more heavily exploited.¹ Indeed, the Tobacco and Tenant Workers of Malawi says that tobacco workers and tenants are getting poorer; it is estimated that Malawi has 1.4 million child labourers, many of them working on tobacco farms, exposed to the poisonous effects of nicotine from the age of five.

Small-scale tobacco farmers also exist on the margins, sometimes having a good year, sometimes not. In a good year, tobacco is a high-value crop, and there is a chance of making real money. However, buyers exploit small-scale growers: in 2009, for example, small-scale producers were paid as little as US\$0.90 per kilo compared to the government's recommended price of US\$2.19.²

Malawi is the world's biggest grower of burley tobacco, and its economy has been dependent on tobacco since the late 1800s.³ Tobacco provides 70–80 per cent of Malawi's foreign income, with US-based companies Alliance One and Universal Corporation the powerhouses behind the industry. Together these companies purchase over 95 per cent of the tobacco crop and sell it to global cigarette manufacturers such as Philip Morris and British American Tobacco. The tobacco industry makes up 10 per cent of the country's GDP. Tobacco earned Malawi US\$472 million in the 2007–8 season.

In the early 1990s Malawi was in debt, and the country set about earning more foreign currency through additional tobacco exports. In alliance with the tobacco industry, USAID implemented a five-year plan with the strategic objective of increasing production by 40 per cent by 2000. To make it easier to implement the plan, USAID provided the funding to set up the National Association of Small Farmers in Malawi (NASFAM), which encouraged farmers to switch from food crops to tobacco. The policy of the US and the World Bank has always been – and still is – that farmers should grow cash crops and buy their food on the market. They argue that in a good year farmers will make more than enough money from tobacco to cover the cost of buying the maize they need.

The tobacco industry imposes a huge human and environmental cost. According to a study by the tobacco industry, it takes 7.8 kg of wood to cure 1 kg of tobacco; or, to put it differently, every fortnight a tree is chopped down to support an average smoker's cigarette consumption.⁴ Moreover, such heavy reliance on one export crop is a very risky strategy for any country; for instance, tobacco prices fell by 37 per cent on the world market in 2009. This had a huge knock-on effect in Malawi, with foreign earnings falling heavily and small farmers who had invested in growing tobacco at the expense of food finding it difficult to cover their families' food bills.

1 M. Nyekanyeka and A. Daudi, Malawi: Renewed Maize Surplus, Government of Malawi report, October 2008, p. 21.

2 F. Jomo, "Malawi's Burley Tobacco Trading 39% Below State Price", 7 May 2009:

<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aW.jbXSYz5hQ>

See also Raphael Tenthani, "Malawi expels tobacco buyers for price undercuts", *Mail & Guardian* online

<http://www.mg.co.za/article/2009-09-11-malawi-expels-tobacco-buyers-for-price-undercuts>

3 F. Potani, "Growing Tobacco without puffing the benefits", posted 7 August 2009: <http://www.tobacco.org/news/288292.html>

4 "Malawi tobacco industry and the environment": <http://www1.american.edu/projects/mandala/TED/maltobac.htm>



11 See GRAIN's analysis of the food and financial crisis: <http://www.grain.org/foodcrisis/>

12 I. Minde et al., *Promoting Fertilizer Use in Africa: Current Issues and Empirical Evidence from Malawi, Zambia, and Kenya*, 2008, accessed 5 August 2009: www.aec.msu.edu/fs2/inputs/.../ReSAKSS_Fert_report_final.pdf

This means that the country is highly susceptible to currency and commodity price fluctuations, as well as profit-taking by the few multinational corporations that dominate the global fertiliser industry.¹¹ The government tried to address this in part by by-passing the companies that dominate the Malawian market, mainly Yara (Norway) and Farmers' World (Malawi), and procuring and distributing fertilisers through its parastatals. But the private sector still holds the reins, and the price

of fertilisers has skyrocketed over the past few years.

Rising international prices have had a huge impact on the ability of Malawian farmers to afford fertilisers and on the government's ability to continue with the subsidy programme at the same level. Graph 1 illustrates the tremendous increase in fertiliser prices, in relation to the price of maize.¹²



While it may be honourable for a government to provide direct support to small farmers, more dollars spent on fertilisers means less money for other public expenditure, and with the continuing high international fertiliser prices the strain on the budget can be severe.

The cost of the programme doubled – to nearly 9 per cent of the overall national budget – in 2008 because of the jump in fertiliser prices.¹³ Signs that Malawi’s fertiliser programme might not last are already showing. In the 2009 budget the government announced that only food crops, not cash crops, will be subsidised, and that there will be a 39 per cent reduction in the subsidy, with a budget of MK 17.8 billion (US\$127 million).¹⁴

The cost of the fertiliser programme is not only financial. There is a high environmental cost as well. Healthy soil is vital to farming. Declining soil fertility in Africa is increasingly recognised as one of the biggest reasons for low production and hunger. In Malawi, maize productivity in 1997 was only 84 per cent of what it had been in 1988. Local maize grown on fertile soil produces twice the yield that hybrids can on poor soil. Therefore the constraint for farmers was not necessarily related

to seed, but rather to soil fertility.¹⁵ Owing to land pressures, farmers have been forced to deplete the soils on their farms, and because there has never been a concerted national effort to support farmers in replenishing soil organic matter, the soils have now become very poor, which means that their water-holding capacity is much lower than it once was. Continual focus on inorganic fertilisers not only deprives the soil of organic matter but also has a very detrimental effect on soil and water in the long term. Soils become hard and too acidic, and excessive nitrogen leaking into rivers and lakes eventually destroys their ecosystems.

Sub-Saharan soil is generally not very fertile, with low soil organic matter and poor land cover and soil structure, making it susceptible to erosion. In Africa, soil fertility was traditionally managed through a system of leaving the land fallow for a few years. The basis of traditional shifting cultivation is nutrient recycling, and intercropping also plays a role. There is a great deal of skill and traditional knowledge involved in this system. A large body of scientific literature on soil fertility agrees that without traditional and organic methods such as agro-forestry, legumes, integration of crop residue and manure to increase the organic matter in

13 http://siteresources.worldbank.org/INTARD/Resources/335807-1236361651968/DorwardFertiliserSubsidyPPWBMAR_2009.pdf; Nicolas Minot, IFPRI, “Smart fertiliser subsidies in Sub-Saharan Africa,” 24 July 2009: <http://www.slideshare.net/ifpri/minot-presentation-july-24-2009>

14 *Nyasa Times*, 3 July 2009. <http://www.nyasatimes.com/national/kandondo-unveils-k257-billion-malawi-budget.html/comment-page-2>

15 A. Orr, “Green Gold? Burley Tobacco, smallholder agriculture and poverty alleviation in Malawi”, *World Development*, Vol. 28, No. 2, 2000, 347–63.

16 Personal communication, CAPS Msukwa, May 2009. See also a press release from the recent World Agroforestry Congress, <http://www.worldagroforestry.org/af/node/390> about the Acacia (Mgunga) tree, which could dramatically increase crop yields in Africa



Box 4: The politics of maize

For Malawians maize = food, maize is life (*chimango ndi moyo*). Malawi has the highest per capita maize consumption in Africa. But it was not always so, as maize was introduced only during the colonial era; as elsewhere in southern Africa, the key staples used to be millet and sorghum. For decades there has been a constant effort to displace these crops with maize and then to displace farmers' varieties with hybrid maize, but the adoption rates of hybrid maize have been very erratic, going up mainly when there is a subsidy, and going down as soon as there is none. Today farmers still maintain some of their own varieties because they prefer the taste and because weevils do not attack them as much. Up to 40 per cent of hybrid maize can be destroyed post-harvest.¹

In a rain-fed system like that in Malawi, there is only one season of maize production, and because of low per capita production and little diversification, farmers experience a hungry season from October to March, when they become consumers of maize.² Before liberalisation, many African governments had policies to deal with the price and the supply gap during the hungry season, and had state marketing institutions in place, which kept strategic grain reserves. This allowed it to sell grain again at a ceiling price. "Unfortunately for poor rural Africans, these policies contradicted the basic principles of neo-liberal 'Washington consensus' thinking, which declared institutions like parastatals and grain reserves to be inefficient and corrupt, and policies like producer and consumer price subsidies to be fiscally unaffordable in poor countries. More generally, the Bretton Woods agencies decreed that public interventions in markets undermine incentives for private traders."³

Currently the government again controls the maize market by restricting exports, and the Agricultural Development and Marketing Corporation (ADMARC) is contracted by government to buy enough maize to distribute during the hungry season at a ceiling price. Malawians are still subject to extreme price fluctuations, the volatility of which is sometimes much greater than in neighbouring countries or even on the world market. In January 2009 maize sold for up to MK90 (US\$0.71) per kg, but once the harvest came in and there was clearly a surplus, the price dropped in June 2009 to MK30 per kg.⁴

Malawi has been able to export maize, but there is also evidence that official crop estimates are too high.⁵ Cross-border imports from Mozambique and Tanzania have been continuous, at 59,000 tons in 2007–8 and 40,000 tons in 2008–9. In October 2008 the Malawi Vulnerability Assessment Committee (MVAC) announced that 1.5 million people were vulnerable to food insecurity; subsequent speculation that the food may be scarce drove prices high.⁶

1 Personal interview, CAPS Msukwa, May 2009.

2 S. Devereaux, "Seasonality: four seasons, four solutions?" 2008: http://www.future-agricultures.org/EN/Hot%20Topics/news_hottopic_archive_seasonality.html

3 Ibid.

4 FEWSNET, Malawi food security update, June 2009; USAID, [http://www.reliefweb.int/rw/RWFiles2009.nsf/FilesByRWDdocUnidFilename/MYAI-7TR2H9-full_report.pdf/\\$File/full_report.pdf](http://www.reliefweb.int/rw/RWFiles2009.nsf/FilesByRWDdocUnidFilename/MYAI-7TR2H9-full_report.pdf/$File/full_report.pdf)

5 FEWSNET 2008

6 T.S. Jayne et al., The 2008/09 Food price and food security situation in Eastern and Southern Africa: Implications for immediate and longer run responses, International Development Working Paper, Michigan State University, 7 November 2008.



soil, the soil will not regain its fertility, and even inorganic fertilisers cannot perform optimally. There is clear evidence that the starting point for improving soil fertility and productivity should be organic fertiliser technologies. Among other advantages, organic approaches to soil fertility are cheaper, the cost stays constant, and the soil stays fertile for longer, so it can be seen as a long-term investment.

Malawi cannot use large amounts of animal manure in compost as it has very little livestock. Poverty, lack of grazing, and lack of security are the main reasons why most livestock ownership is limited to chickens. On the other hand, there is considerable potential for using legumes and agro-forestry, and it is common knowledge among farmers that crops grow well near a certain species of Acacia tree.¹⁶

Intercropping has always been widely practised in Malawi, and in the 1980s it was still found on more than 90 per cent of Malawi's small farms. Farmers practise intercropping because it mitigates the risks of disease, market fluctuation and weather disaster. It is also a strategy that farmers use to diversify crops for dietary purposes, to reduce labour, to improve yields and to stabilise crop production.¹⁷

There is a clear realisation in Malawi that farmers have to move beyond fertiliser dependency and that integrated soil fertility management would be a much more viable option in terms of cost and yield.¹⁸ Malawi's government acknowledges that fertilisers are not sustainable, and encourages farmers to make compost. But for this to work, the government needs to apply much more political will, on the same scale as for the

17 S.R.Waddington et al., "Research lessons for cereal-legume intercropping", proceedings of a workshop on a research methodology for cereal-legume intercropping for Eastern and Southern Africa, CIMMYT, 1990.

18 Johannes Sauer and Hardwick Tchale, "Alternative Soil Fertility Management Options in Malawi – An Economic Analysis", International Association of Agricultural Economists, Annual Meeting, 12–18 August 2006, Queensland, Australia. This was also a recurring theme in interviews with farmers and other stakeholders in Malawi in May 2009.

Box 5: Soils, food and healthy communities

Lizzie Shumba and Rachel Bezner Kerr, Soils, Food and Healthy Communities (SFHC), Malawi

Enoch Chione is a 50-year-old smallholder who has been experimenting with different agro-ecological methods over the past five years. He intercroops different combinations to improve his soils, diversify his crops and get income for his family. This year he is trying pigeon pea and sorghum, Tephrosia, different varieties of banana, pigeon pea and maize, and pigeon pea and soya. Enoch has seen dramatic improvements in his soils, in part because he is burying the legume crop residue immediately following harvest. Enoch's food security has greatly improved from using these techniques. He estimates that he has enough food to last for two years, if the rains stopped completely. He is also teaching other farmers in his village. As the group village headman, he has tremendous influence, and the villagers also use these methods extensively.

Enoch is a member of the Soils, Food and Healthy Communities project (SFHC). Working with more than 4,000 farmers, SFHC uses agro-ecological and participatory methods to improve farmers' livelihoods in northern Malawi. Initiated by Ekwendeni hospital in order to address child malnutrition, the project has as its main objectives the improvement of soil fertility, food security and child nutrition of farming families in the region. Farmers test intercropping different leguminous plants such as groundnut, soya, pigeon pea and mucuna.

Ekwendeni catchment area is situated in northern Malawi, with a population of about 70,000 and an area of about 600 sq km. The economy is based on smallholder farming with an average landholding of less than one hectare. Approximately 60 per cent of Malawians live below the poverty line. The soil type is largely sandy loam, and the main crops grown are maize (the staple food) and tobacco, along with minor crops such as cassava, sweet potato, common beans and groundnut. The climate in Ekwendeni is semi-tropical, with annual rainfall of 600–1000 mm, falling primarily between November and April. In the past the rains came in October, and there were also rains in July. Nowadays the rains are much less reliable, which has made it difficult for farmers to plan and means that they cannot depend on a reasonable harvest. During the dry season some farmers have gardens by the rivers or wetlands, where they grow maize and vegetables. Those without access to rivers or wetlands grow vegetables in small kitchen gardens by their homes.

In the late 1990s there were increasing numbers of malnourished children admitted to the nutrition rehabilitation unit (NRU) of Ekwendeni hospital. Interviews conducted with the families of these children revealed that they were experiencing severe food insecurity. Farmers were struggling with rising fertiliser costs; they relied heavily on maize and had lost knowledge of how to grow crops without fertiliser. To address this problem, legume intercroops were introduced to the farmers as one potential solution. The legumes are intercropped so as to have short- and long-duration crops, some of which are deep-rooted and add more organic matter to the soil (e.g. pigeon pea) while others are high-yielding and provide more food (e.g. groundnut). The legumes favoured by the farmers are the edible ones, particularly pigeon pea, groundnut and soya. Farmers test different legumes on their own fields to determine whether they improve soil fertility and nutrition. Legume intercropping began in 2000, and it is how the SFHC project was born.

Farmers do more than test legume combinations on their fields. There is a Farmer Research Team that provides support and training to participating farmers. There are recipe days and crop residue burial days. There is also a community seed legume bank, where seed is "paid back" by participating farmers and managed by the Farmer Research Team. In the following planting season the seed is distributed to new participants and to those farmers who have lost their seeds. Another initiative is the Agriculture and Nutrition Discussion Groups, which are intergenerational discussion groups about gender, agriculture and nutrition. In these discussions, facilitated by community members, people are free to share beliefs and experiences, and analyse community and family problems. Issues such as men using the money from legume sales to buy alcohol are discussed and debated, and solutions proposed. These groups have proved to teach very effectively. "We are researchers because of this project. There is no malnutrition with SFHC farmers", Enoch says proudly.

As farmers have increased their use of legumes, they have found that their soils have improved, along with nutrition and food security. They've shared different recipes within their communities to show how families can prepare their local foods and legumes for nutrition. Today, admissions to the NRU of children under five has been dramatically reduced, and children in families involved in the project have improved growth. The farmers have formed an Ekwendeni Farmer Association to work together and to try to get fair prices for their crops, and have increased their incomes through the sale of legumes as a farmer group. As Enoch says, "We farmers in this project are not just growing to sell, like tobacco farmers. We are growing for the soil, for food, for seed and for sale. So we don't worry if we can't sell the crop. They can't compete with us!"

(continued on page 12)



(from page 11)

Since land degradation and climate change have become major challenges in Malawi and sub-Saharan Africa as a whole, it is the project's wish to extend its activities into other areas. Apart from providing legume seed to farmers, there is also a need to distribute drought-tolerant seeds for crops such as sorghum, millet, cowpea and cassava. SFHC is beginning to focus on climate-change adaptation, with several hundred farmers testing different drought-tolerant crops this coming season. Despite the challenges of a global financial crisis, climate change, HIV and government policies that work against the SFHC, farmers are rising to meet these challenges. Enoch notes proudly that lots of people are "coming and admiring here" and even the government extension workers have visited his fields to learn what he is doing. "We hope they take it and apply it", he adds.

19 M. Nyekanyeka and A. Daudi, *Malawi: Renewed Maize Surplus*, Government of Malawi report, October 2008. p. 21.

Agriculture Subsidy Input Programme (AISP). It would be feasible, for this approach would be much cheaper to implement. Andrew Daudi, Malawi's permanent secretary for agriculture and food security, concludes his report on the AISP not with a call for more fertilisers but by saying: "As the rural areas are full of materials that can be turned into manure (compost), farmers are encouraged to make compost and plant agro-forestry trees which retains fertility of the soil over

a long period of time, hence reducing the need for high-cost inorganic fertilisers."¹⁹

The revolution that's needed

Malawi's Green Revolution success story is being oversold, and this not only does Malawi a disservice but also shifts the focus for investment in agriculture in Africa in the wrong direction. While it is great to see a government investing in local food production, this government has elected to pursue the tried and unsustainable policies of the past. This round of subsidies will also fail small farmers and the country if nothing is done to redistribute land to ensure that farmers have enough land to produce surpluses, and if it does not move away from its narrow focus on chemical fertilisers and hybrid maize seeds, for both financial and ecological reasons.


At this point, importing fertilisers is cheaper than importing maize, but this is not where the debate lies, as dependency on any import can transform Malawi into a begging country in an instant. Malawi and many other countries in Africa need a revolutionary approach to agriculture. Investment and subsidies are needed. But they should not be of the type that is now being promoted. What is needed is a massive programme – across Africa and in the rest of the world – to improve soils, to increase organic matter and soil fertility, to support biodiversity, and to invest in the capacity of small farmers everywhere to produce food sustainably while making a decent living. That requires looking beyond the technical quick fixes. It requires developing radical policies that give small farmers access to land, protects them from market imbalances and commodity fluctuations, and helps them to produce sustainably now and in the future. 



Photo: GRAIN

Directly after harvest, a small-scale farmer has his maize weighed by private traders, who will store the maize to sell at a higher price later in the season

