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# Seeds for change: a certified seed project in Malawi is boosting local incomes and supporting emerging national agricultural policy

A project working with farmers to multiply improved and certified legume seeds for Malawi's seed merchants is bringing income and food security to local participants but also widespread benefits – through links with national subsidy programmes for agricultural inputs and strong partnerships with Malawi's smallholder farmers' associations, government policy forums and the private sector.

## Overview

Agriculture remains the main source of growth and exports in Malawi. With 85 per cent of the population residing in rural areas, the sector accounts for more than 80 per cent of the country's employment, over one-third of the gross domestic product, and about 80 per cent of merchandise exports. Yet around 8 per cent of Malawians are at risk of food insecurity each year,<sup>1</sup> often because of poor harvests due to erratic rains and dry spells, and limited alternative income sources.

Many farmers struggle to meet even their annual consumption requirements. Land and water management remains poor and much agricultural production uses degraded soils, leaving crops prone to water and low-nutrient stresses. Even where production is good, poor roads have often prevented surpluses reaching markets.

Between July 2012 and March 2013 an estimated 1.97 million Malawians will have been at risk of food insecurity – the highest number for many years.

In the 1970s Malawi exported more than 50,000 tonnes of groundnuts per year, but in the 1980s the exports stopped and the area cultivated declined by two-thirds. This was partly because government pricing

at the time favoured hybrid maize seeds, and because legumes (like groundnuts) are largely grown from home-saved seeds, meaning there is little scope to improve varieties and so maintain yields. Malawi is working to diversify its predominantly maize and tobacco-based production systems, and to engage traditional (often subsistence) smallholder farmers in more market-oriented agriculture through better market access and integration into agricultural value chains.

Crops like groundnuts, pigeon peas and beans offer high nutritional value and potential income sources for poor farmers, but good quality seed is rarely available, partly because of a self-reinforcing 'vicious circle' in which seed producers believe there is no market for improved seed as farmers sow saved seeds.

Since 2008, ICRISAT (see Box 1) has been running the Malawi Seed Industry Development Project (supported by Irish Aid) to improve legume seed production and multiplication, with the aim of increasing food security and household income among poor farmers in Malawi.

Legume crops are especially important in Malawi because of their potential to both improve soil fertility (by fixing nitrogen and reducing erosion) and help to overcome nutritional deficiencies (supplying protein, oils and vitamin A).

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## LOCAL TO NATIONAL

**Box I. The International Crops Research Institute for the Semi-Arid tropics (ICRISAT)**

ICRISAT's staff of over 30 people operates from Lilongwe. The institute focuses on agricultural research and technology transfer, and helps link small-scale farmers to markets. ICRISAT ensures that new innovations are passed on to farmers through farmers clubs and field demonstration days. Crop varietal research and development is just one of the institute's research activities.

The project's objectives are to:

- develop the capacity of existing and potential local seed companies;
- improve the policy environment for the seed trade; and
- strengthen the commercial distribution network for improved seeds, complementary inputs, and resulting crop outputs.

To reach as many smallholder farmers as possible, ICRISAT works in partnership with the National Smallholder Farmers Association of Malawi (NASFAM), which is the largest agricultural membership organisation in the country. NASFAM comprises small local farmers clubs headed by a lead farmer, which feed into large associations also led by local elected leaders. Its aim is to build capacity of small-scale farmers and it has introduced conservation agriculture to drive increased climate change resilience (see *Promoting empowerment and knowledge through smallholder farmers' associations in Malawi*, also in this conference series). Besides NASFAM, ICRISAT also works with big contract growers and other smallholder farmer groups that are independent of NASFAM but organised for collective action.

## Interventions and impacts

Once a new seed variety is developed, seed multiplication stages involve farmer organisations and the private sector under the regulatory authority of the Malawi Government's Seed Services Unit. Smallholder farmers are given technical support and seed on credit, with the expectation that the premium price they will be able to command from seed distributors (K350 per kg – equivalent to US\$0.91 – for a harvest of improved seeds compared with K250 per kg – US\$0.65 – for the usual crop) will enable the farmers to become self-financing producers of high-quality seed. This distribution process ensures that any new variety is quickly

made available to benefit farmers. NASFAM, ICRISAT and Ministry of Agriculture and Food Security (MoAFS) teams introduce farmers to improved legume production technologies by helping them set up demonstration plots. The plots give farmers opportunities to choose one or more varieties as well as different crops like sorghum or rice, to suit their needs and their agro-ecological conditions. The technical support team meets with small farmers clubs on a quarterly basis to capture information on local experiences and the challenges legume seed and crop production throw up.

In the 2008-2009 season the project recruited 235 smallholder farmers (46 per cent of which were women). In the 2011-2012 season, 1,736 farmers joined the scheme (35 per cent women) and by then the total number of participants had risen to 4,431, (45 per cent women overall).

The first year of the project produced 250 tonnes of quality-certified groundnut seed and this kept on rising – to 1,679 tonnes produced during 2011-2012. In 2011 alone national legume production increased by 19 per cent.

Initially, the aim was to multiply certified seed to sell to seed companies, so they could make more good quality seed available to grain producers (once harvested, the agricultural merchants market the seeds under a new nationally recognisable brand: MASA – Malawi Seed Alliance). But ICRISAT's aims have widened as it has continued to encourage local seed companies and farmer groups (in agricultural associations or cooperatives) to take over their own production and marketing. The broader aim is now to ensure that smallholder farmers across the country have continued access to the legume and selected cereal certified seed so that there are increased yields per unit area and improved food security and incomes. Most of the certified legumes seeds produced are channelled to smallholders' farmers through the Government of Malawi's Farm Inputs Subsidy programme (FISP), distributed by the private sector. The FISP targets approximately 1.5 million smallholder farmers, who can each access a 2kg pack of certified legumes seeds, so improving crop productivity and nutrition.

The project approach has been to work in partnership, in a local to national 'value chain' that connects farmer beneficiaries, training institutions (and the research wing of ICRISAT), the private sector and finally the Malawi Government. In this way, local experience can be passed through the 'chain' to eventually inform policy. The project has deliberately sought strong partnership links and its Project Advisory Committee includes the former special



George Ntonja

Meeting with  
Chiosya farmers  
club

### Box 2. Legumes bring local benefit

The Chiosya farmers club in Mchinji district is just one NASFAM group that has been involved in the Malawi Seed Industry Development Project. Smallholder farmers like Mr. Augustino Sailes Gwizima report improved legume seed and crop diversification (for example adding soy beans, sunflower and intercropping with cassava) has boosted household nutrition. "Our children are fatter, stronger, have more energy and more are going to school", say the farmers. Proceeds of seed sales as well as of surplus produce has increased savings, helping to buy household essentials like salt or sugar as well as assets such as a bicycle or livestock.

Farmers reported a marked lessening in soil erosion due to the legumes' 'creeping' root system. And soil fertility has improved as a result of nitrogen fixation and crop rotation, meaning less reliance on bought inorganic fertiliser. Improved drought-tolerant legume seeds also mature faster than local varieties, increasing resilience to unpredictable rainfall.

In the past farmers used local saved groundnut seed and yields were 400-500kg per hectare. Now that has risen to 800-1,000kg per hectare.

advisor to the president on agriculture (who currently chairs the committee), the retired chief executive officer of the National Seed Company of Malawi

(now Monsanto Malawi), representatives from the Grain Traders and Producers Association of Malawi, ICRISAT, Irish Aid, the Ministry Of Agriculture and Food Security's Seed Services Unit, and the Seed Traders Association of Malawi (STAM).

### Main achievements and challenges

Through its partnerships with the MoAFS, NASFAM, and the government's Seed Services Unit (who provide quality testing and monitoring), the project has contributed to a wide uptake of certified legume seed among both smallholder farmers and Malawi's private sector seed companies. Through links with agricultural merchants, the project may also extend its influence beyond Malawi's borders. The project has particularly focused on working in concert with the Malawi Government's Farm Inputs Subsidy Programme (FISP) to encourage crop diversification and to make quality seeds more available within the country. In the 2010-2011 farm season, for instance, the FISP provided smallholder farmers with vouchers for 2kg of improved legume seeds from participating merchants. Around 395,000 farmers now have access to certified seed.

ICRISAT chairs a Legume Platform Committee on legumes production,<sup>2</sup> which provides a strategic platform to inform lessons that feed into nationwide policy. Legumes are now a key feature of the National Exports Strategy for Malawi (launched December 2012). And separately to the FISP, the project partners have routed 316 tonnes of groundnuts and 50 tonnes

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of rice certified seeds to Malawi's Presidential Initiative on Poverty and Hunger Reduction, which has a special component on legumes.

The project still faces challenges though, for example achieving financial sustainability for smallholder seed growers. After the initial distribution of seed on credit farmers were expected to save enough money to start buying seed for multiplication after two years. But in practice proceeds from seed sales are often used for household expenses rather than saved. ICRISAT is now considering replicating a savings scheme model that a partner organisation has successfully introduced to rice producers in the north of Malawi.

Lessons

**Engaging with national policy can rapidly scale up the impacts from smaller projects.** The Malawi Seed Industry Development Project's engagement with the Government of Malawi's Farm Input Subsidy Programme meant it could contribute to policy development, promoting crop diversification on the basis of established research findings. This synergy has resulted in rapid scale up of certified legume seed multiplication and distribution.

**Integrating research findings and local knowledge provides a powerful and effective input to national efforts to improve food and nutrition security.** The four year Malawi Seed Industry Development Project is evidence that introducing crop diversification using high quality improved seed can result in higher yields, better markets, increased household income and improved nutrition for poor farmers.

**Integrating research outcomes into private sector development can help support economies.** In Malawi, the private sector adds value by processing, packing and distributing certified legume seeds (the FISP operates through private sector outlets). The seed trade has also benefited from complementary inputs such as technical support and research.

**Working with farmers associations, especially those that reach from local to national scales, provides both crucial local knowledge and a route to rapid and widespread dissemination of 'climate-smart' agriculture strategies.** The project's partnership with NASFAM captures important farming knowledge and has facilitated extensive outreach to many farmers clubs and associations.



George Ntonya

From left to right: Augustino Gwizima, his wife Elizabeth and Teddie Chirwa (ICRISAT Senior Research Technician) in the Gwizima's groundnut garden.

Notes

■ <sup>1</sup> As determined by the Malawi Vulnerability Assessment Committee's annual assessments. ■ <sup>2</sup> Malawi's Legume Platform has been formed to strengthen national multi-stakeholder partnerships within the legumes sector. One of the key sub-committees of the platform is the legumes production development committee, which is chaired by ICRISAT. ■ <sup>3</sup> <http://ongoing-research.cgiar.org/factsheets/malawi-seed-industry-development/>

