

Government and United Nations schemes are helping smallholders to increase their yields, writes Alan Beattie

Try walking 25 kilometres carrying a 50-kilogramme bag of fertiliser on your head, as farmers in Malawi do, and you might get a sharper appreciation of the difficulties in building agricultural supply chains in Africa.

It is hard to find a country that more embodies the struggles to improve African farming. Landlocked, crowded, one of the poorest countries on earth, Malawi's 10m semi-subsistence smallholders coax harvests of corn from poor soils in family plots averaging just half a hectare.

Yet a nationwide experiment, and a more intensive local pilot operating as part of an international trial, have shown the gains possible from giving farmers access to inputs that their counterparts elsewhere in the world would regard as routine.

A widely-watched government subsidy scheme, which gives smallholders vouchers to buy seed and fertiliser,

A widely-watched government subsidy scheme helped double the harvest in 2005-06

helped to double the harvest between 2004-05 and 2005-06, and has just helped produce another rich corn crop.

Meanwhile, in the south of the country near the high Zomba plateau, a cluster of settlements that is home to about 35,000 people has become part of the international "millennium villages project" inspired by Jeffrey Sachs, director of the Earth Institute at Columbia University, and backed by the United Nations.

The millennium villagers receive intensive help across a wide range of areas such as education, healthcare and setting up small businesses. On the agricultural front they get seeds and fertiliser on a more generous basis than the nationwide government scheme, and advice to help them diversify into cash crops such as groundnuts, cabbages, tomatoes and fish farming.

Glenn Denning, who helps run the project as director of the Millennium Development Goals Centre in Kenya, says that the villages should reach sustainably higher

World News | African Agriculture

Malawi cultivates cash gains for its farmers

output in five to 10 years, though the Malawi one is likely to take longer. Currently, the corn cribs in the villages are literally overflowing with the second successive year of bumper harvests, two or three times the national average yield, which is helping to support the project's other aims. A school-feeding programme giving corn porridge to pupils has increased attendance at the local primary school from 380 children to 500, the headmaster says.

Esnart Kaphesi, a farmer in the millennium village, used to harvest about eight 50kg bags of corn from planting traditional varieties of seed. Having been given higher-yielding hybrid seed and 100kg of fertiliser, her crop is now 21 bags and counting. "This year is the best yet," she says. Her first priority is an iron roof for her house to replace the thatch. If she continues to generate surpluses she wants to open a sideline trading rice.

Connecting farmers to the cash economy requires overcoming considerable challenges in itself. Although the Zomba villages are closer to the nearest town than many in Malawi, some farmers still have to walk or cycle 25km to buy inputs or sell produce. Some club together to hire pick-up trucks to take their crops to the market. Cecilia Natchengwa, another villager, says that the rising cost of fuel is cutting into the money to be made from selling cabbages, although they remain her most profitable cash crop.

Whether the schemes of subsidised inputs are sustainable, or indeed applicable, elsewhere in Africa, remains in question. The national voucher scheme will be repeated for next year's harvest. But global fertiliser prices, which

largely reflect the cost of energy used to make it, will increase by 70 per cent. Ms Kaphesi estimates that, after keeping enough for her family to eat, she will be able to sell 10 bags of corn this year

to raise 15,000 kwacha (\$110, €70, £57).

Last year, that would have been enough to buy the seed and fertiliser she was given, suggesting the scheme could be self-supporting. This year,

fertiliser prices have doubled to K9,000 for 50kg, meaning she would not break even without the free inputs.

Experts say that it is tricky to design large-scale government interventions

Crop insurance to be piloted

Malawi and the World Bank will pilot a crop insurance scheme against adverse weather which could be repeated elsewhere, the country's finance minister Goodall Gondwe has said. Reuters reports from Blantyre

Malawi will have its crops insured against the effects of climate change, which this year destroyed corn crops in the southern parts of the country and left close to a million people in need of food aid. Malawi's economy is largely dependent on agriculture. "We have... agreed to pilot a World Bank weather insurance scheme under which a premium is paid and if it is found that the weather conditions have impaired crop production,

the insurance company would pay Malawi," Mr Gondwe said. He said the monthly premium would be paid by the UK government on Malawi's behalf, but declined to say how much the premium would be.

Malawi's corn crop estimate for the 2008-09 season has fallen to 2.9m tonnes from 3.2m last season, with agriculture experts saying floods and a four-week drought in some parts of the country contributed to the drop.

Malawi has long operated a crop insurance scheme under which companies buy corn with an undertaking that, in case of a shortage, government would buy the corn at the price the company in question purchased it.

that correct market failures rather than add to them.

A recent review of the national subsidy programme led by Andrew Dorward, a UK academic, was generally positive - especially since

the scheme now encourages private markets to develop by allowing farmers to buy their fertiliser from agro-dealers rather than the government procuring it centrally.

But Prof Dorward says great care is needed when translating lessons from Malawi to other areas in Africa such as, say, western Kenya, which have better access to ports and more scope for agribusinesses to penetrate rural areas on their own. "Input subsidies may also be appropriate here, but would need to be implemented very carefully to build on and strengthen the existing demand and supply systems," he says.

Mr Denning is enthusiastic about the Malawian voucher scheme, but refers to the experience as "an inspiration rather than a model".

The UK's Department for International Development is one of Malawi's biggest donors, and after much internal debate has continued to support the programme. However, it is cautious about replicating it. Douglas Alexander, international development secretary, says: "I would not at this stage say the lesson is to increase agricultural subsidies across Africa."

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Bumper crop: a woman with her corn crop in a village in Malawi, part of the millennium villages project

Alan Beattie

Knowledge of local market reaps rewards

By Alan Beattie

When the generals of an African green revolution go looking for local shock troops to put boots on the ground, they come across people such as Frank Samidu.

Mr Samidu, who runs Seed-Tech, a company in Blantyre, Malawi's biggest city, says it is not the absence of appropriate technology that has prevented Malawi's farmers becoming more productive, but a lack of marketing to get them the best and cheapest seeds available.

A former employee of Malawi's state seed company, which was bought by Cargill, the US agribusiness giant, Mr Samidu then worked for the South African company Pannar Seed, which is active in Malawi. He founded Seed-Tech several years ago.

"The big companies want to promote their own varieties, which are not always the best," he says. "I knew the market and what the people in the villages wanted, and knew that good [seed] materials bred by government scientists were sitting idle."

In particular, he says, hybrid corn seeds from agribusiness giants, though producing much higher yields than traditional varieties, were often unpopular with local farmers. The resulting grain had softer kernels that

were harder to pound into flour. They also proved more vulnerable to the dreaded corn weevil when the harvest was stored in farmers' houses for months to see the family through the dry season.

Malawian government institutions had bred new high-yielding varieties of corn that protected against disease and could be grown over a shorter season if there was less rain than usual. But up against the heavy advertising and better distribution networks of the big companies, Mr Samidu struggled to make an impact until he joined the seeds of development programme run by Market Matters, a US non-profit organisation. He then received a \$150,000 (€96,000, £76,000) grant from the Alliance for a Green Revolution in Africa, a public-private partnership.

By being able to lease a warehouse and sell in bulk, Mr Samidu is increasing his annual output from 23 tonnes to 90-100 tonnes of seed this year, and expects to double it again next year. The infusion of capital also enables him to have a machine process his seed, blowing off the chaff and grading it, rather than doing it by hand. "When a farmer goes to a shop to buy seed, he must have the confidence that it will not be trash," he says. "My mission is to sell affordable seed that farmers want."