

Commercialising from the bottom up: Onions in central Tanzania

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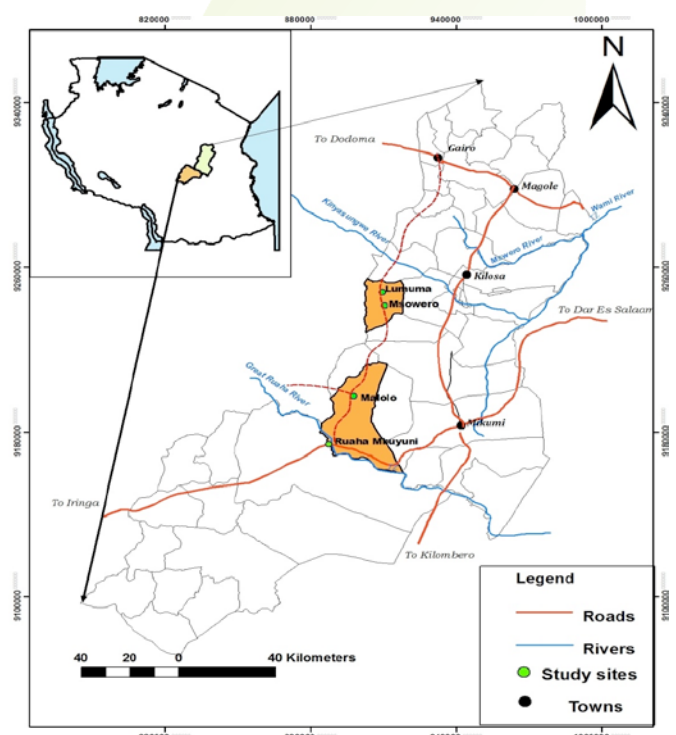
Key points:

- With minimal assistance and direction, small farmers in central Tanzania have created thriving plots of irrigated onions, marketed in Dar, other parts of Tanzania and in the region.
- Lack of formal credit has not prevented many farmers fertilising their crops heavily. Two villages have been able to overcome poor road access.
- Informal marketing work well enough: traders make small margins on the onions they buy and sell.
- Farmers are reluctant to co-operate in production or marketing; yet the irrigation depends on local water associations and these function.
- Government and donor roles have largely been keeping the peace, a stable macro-economy and investing in physical infrastructure — the roads, and upgrading the irrigation intakes. Provision of schools and health posts have brought services to the villages.

The study

Since 2009, researchers from Sokoine University of Agriculture have been studying four villages in central Tanzania — see Map, where onions are grown under irrigation for sale to domestic and regional markets. Two of the villages, Ruaha and Malolo, are located close to the main Dar-Iringa highway, while the other two, Lumuma and Moswero, have much poorer access down long and difficult dirt roads. The studies are designed to understand and explain the role of commercialisation in the villages, the processes involved

and outcomes. Surveys of 240 households have been complemented by interviews with groups of farmers, elders and key informants.



Box A: How things began: village history

Irrigation began at **Ruaha-Mbuyuni** when Mohamed Nganyali, a fisherman from Iringa, moved to the village. He showed others how to use traditional intakes to raise water level in the river so that it can flow into earth canals. During that time the rainfall was enough for a typical rainfed cropping of field crops such as maize, simsim and sorghum.

This intake was upgraded by government in 1963, after which people started to grow onions with seeds from neighbouring villages. As word spread, the village saw incomers seeking irrigated plots.

The valley of **Malolo** was settled by Wasagara, later joined by Wahehe who fled the German war against chief Mkwawa in Iringa in the late C19; attracted by the water. In-migration accelerated after 1961.

The irrigation intakes were upgraded in 2002, with 24 km of main canals lined: funds for the work came from Japanese aid.

The first settler in **Lumuma** was Byalumuma who gave his name to the place and its river. Subsequently settlers have come from all over Tanzania

In 1975 onion farming was boosted by extension services demonstrating improved techniques. The irrigation intakes were upgraded in 2003, thanks to Danish funding through the Agricultural Sector Development Programme.

A recent memorable date is September 2008, when the first mobile phone signals arrived after installation of a local mast.

Msowero was first settled by two Wakaguru and two Wasagara families who came for the chance to irrigate. The numbers rose sharply after ujamaa villagisation in 1975 which saw a school built. Its irrigation was upgraded as part of the works for Lumuma in 2003, since they draw on the same stream.

Sources: Interviews with elders and other key informants



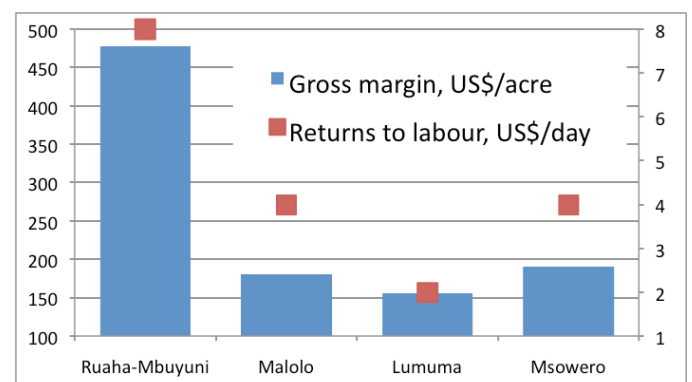
What can be seen in the villages?

Commercial production of onions began when farmers, shown how to do it by an incomer in the 1960s, diverted water from the streams that flow off surrounding hills to irrigate small plots on the flood plain. Box A tells more of the history of the villages. Later farmers soon realised that onions were a profitable crop on the irrigated land and began to specialise in their cultivation.

Onions are sold to traders, mainly small-scale operators who lack their own transport, who buy and bag the onions, then hire trucks to take them to Dar and Mbeya, and sometimes beyond to Zanizibar, the Comoros, and south to Malawi and Zambia. Onions are sold on spot deals to whoever arrives and offers a good price. There are plenty of traders and although farmers complain of their lack of bargaining power, the marketing chains appears competitive. Some farmers are making use of the ubiquitous mobile phones to arrange times for traders to come and collect harvests, and to check prices in distant markets.

The villages have few alternatives to farming, but the onion trade has given them a living that they could not aspire to from growing food crops — see Figure A, showing returns to crops.

Figure A: Returns to land and labour in the four villages, median values in US\$



One surprising finding is that many of the farmers who are most engaged in irrigated onions have few or no food crops. Instead they seem to be obtaining most of their maize and other staples from neighbours who grow a surplus on rainfed fields. Surveys in rural Africa usually find farmers preferring to grow their own staples on part of their land, even when they have more profitable cash crops.

What has made the difference?

Most of what has happened has come from the initiative of local farmers, linked to traders who are mainly small operators from other rural areas. It was the farmers who built rustic offtakes, diverted the water, levelled the plots and learned how to grow onions.

Almost all the capital invested is local: very few farmers obtain credit, yet they apply 135–175 kg/ha of manufactured fertiliser on their plots. Almost all of them finance this from their retained earnings.

At first sight, government has played a minor role. But that would be unfair. Government has ensured a stable economy where farmers can invest, innovate and market their crops. It has also built roads, maintained them. The villages have schools and health posts. When disasters have struck in the past — major droughts and floods, government has provided some relief. In one case, onion producers benefited from extension.

Most interesting of all, government guided two donors, Denmark and Japan, to the villages where they funded the modernisation of the intakes. Ideal aid: the donors just helped the farmers improve on what they were already doing, without trying to tell them what to do. The irrigation systems are maintained by the farmers, through water users associations.

What might the future hold?

Some scope exists to improve onion cultivation through use of certified, improved varieties instead of relying on the sometimes variable quality of local seed.

Marketing might be improved by farmers investing in storage allowing them to extend sales to the months when onion prices rise. Use of text messages to the mobile phones could supply them with regular price updates that would help them make better decisions on selling.

There are threats. Population has been rising steadily in the area, as farmers from dryland areas come looking for irrigated plots. Rents correspondingly are rising. With a heavy concentration on onions, there is always the threat of disease or a new pest that could spell disaster.

Moreover, the onions are so profitable, one wonders how long before more villages take up the crop and begin to compete in the market. For the two remote villages, there is the prospect that one day the road will be improved: at the moment they are less than 40 km from district headquarters at Kilosa, but cannot drive there directly and instead have to take a circuitous route where it takes five hours to reach the Dar to Dodoma tarmac highway. The road to Kilosa has been in development plans for some years, but it has yet to be built.

What are we going to look at next?

Current studies are looking at the water associations. These function well enough: they have to, water supply is vital. Yet farmers do not co-operate in production, marketing or almost anything else. The question then is, when people are reluctant to co-operate, how do the water bodies work and what is the secret of their success?

Next year it is intended to go back and resurvey the farmers, so that changes can be tracked through time.

This Research Update was written by **Khamaldin Mutabazi, Ntengua Mdoe & Steve Wiggins** of the Future Agricultures Consortium. The series editor is Beatrice Ouma. Further information about this series of Research Updates at: www.future-agricultures.org

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