

Intro to EWB

In Malawi, 40% of all waterpoints—taps and wells—don't work. Many of these pumps and wells were installed by organisations with the best of intentions and the desire to help people access clean and safe water. Yet despite the best of intentions, 40% sit broken.

Engineers Without Borders (EWB) understands that good intentions are not enough to solve the problems that confront rural communities throughout Africa. Digging wells and installing taps is only a small part of the equation. That is why our volunteers work with local organisations to understand the underlying problems that contribute to poverty, and develop solutions that address the underlying problem rather than the symptoms.

In the case of clean water in rural Malawi, a lack of local knowledge, available parts and mechanics all contribute to broken wells and taps. That's why our volunteers in Malawi are helping prepare a fleet of mechanics who can travel to rural communities by bicycles to maintain and repair waterpoints, as well as work with local organisations dedicated to rural water access to build their monitoring capacity of water availability in rural areas.

To address these root causes, EWB harnesses Canada's engineering profession. Our approach leverages engineers' problem-solving approach, analytical skills, and creative-pragmatism. This combination of skills enables our volunteers to find new ways to address challenges of poverty.

Here in Canada, our 35,000 members engage their networks in this approach. By running campaigns in their workplaces, contributing to new engineering curriculum, and running educational program for youth, our members connect Canadians to global solutions.

Article #1 For Newsletter

From subsistence farming to a business

When Danny Howard graduated from Mechanical Engineering at the University of Alberta, he probably didn't think he would be managing a cassava starch factory with 47 employees in rural Malawi.

The Alberta-born Engineers Without Borders volunteer, with his unkempt blonde hair and thin-rimmed glasses, stands out amongst his staff who are all sturdy local farmers.

Managing the Masinda Starch Factory is challenging, but Danny looks forward to each day. His day begins at 7am and he doesn't stop moving until sometimes as late as 9pm.

"My emotions are up and down like a roller coaster," grins the 24-year old as he pauses for 30 seconds between meeting with team leaders and fixing the cassava grater. "Some days I want to go back to Canada and other days I'm so happy to be here and grateful for this opportunity."

The factory is in an idyllic setting. The nearby palm-lined river gently meanders through rolling hills of cassava fields and small brick and grass huts. The factory is the only employer in the region and the only place for farmers to sell their cassava.

It was started by IITA, a research organization that, for nearly 40 years, has been promoting the growing of cassava in Malawi. Cultural bias has turned Malawi into a maize consuming society, but maize is not a reliable crop, low yielding, and consumes far more water than cassava. In the region near the factory, the sandy soil won't support maize crops and so farmers are forced to grow cassava. Point for IITA. The next step was to form a farmer's cooperative and give them a market for their product. Malawi produces matches, dry cell batteries, and packaging, all of which require starch. Up until Masinda was born, starch was procured from South Africa, which has the only other starch factory in Southern Africa.

The future is bright for Masinda as the only starch factory in Malawi. The factory has recently received an order for 6 tonnes of starch from Packaging Industries Malawi, huge for this factory which has a meager capacity of 300 kg per day. Danny has just hired 27 more people, and started a night shift. With the advance from PIM he has purchased a second sieve and a new grating roller and has quadrupled the production capacity of the factory.

Danny is leading the charge to see not only this factory succeed, but to spread the word to would-be entrepreneurs that there is a future in starch. That is, for the right kind of business person. What Danny is learning on the job is that managing a factory in Malawi is nothing like managing a factory in Alberta.

The challenge lies with a Western business-oriented mind running a factory in rural Africa with a staff of farmers-cum-factory workers who are risk adverse. Though many of the staff have gone to high school and can be considered the most educated in the region, they have no business experience and do not understand Keynesian economics. Technically the farmer's cooperative of

16 members own and run the factory, so Danny involves them at every level of decision making, but sometimes cultures clash, and perhaps so do motivations. This was, after all, started as a development project, not a money-making venture. IITA was ready to close the factory until Danny encouraged them to give it a try as a legitimate business.

“If this factory fails, I’m accountable to the farmers, to the PIM, and the IITA,” says Danny, who takes his unpaid volunteer position very seriously.

Danny isn’t the only one taking it seriously. The factory employs 47 people, buys from dozens of farmers and, by extension, supports the small local markets and feeds hundreds of family members.

“The factory is reducing poverty,” says NKoss, a 62-year old employee with matter-of-fact simplicity.

In just one month, Danny has turned the factory around. Despite break downs and cultural differences, the staff respect him and believe in him. They want to see the factory succeed and work extremely hard to make it work. Danny sees the next step as finding someone to buy 55% of the factory and put it in the hands of a local Malawian manager. The cooperative will maintain 45% of the shares. The possibilities for this fledgling factory and factories like it are incredible and the local impact immense.

Already there are interested parties nosing around the factory. Danny is certain that with the right kind of management and capital investment, it won’t be long before the lowly cassava root takes its rightful place as the money making crop of Malawi.

Article #2

On the Record: Field perspectives key to improving agricultural livelihoods

by Sarah Grant, Director of Agribusiness - Ghana

“Farmers don’t keep records,” explained Anokye, a tenured field staff with Ghana’s Ministry of Food and Agriculture (MOFA), one of EWB’s long-standing partners.

“Why not?” I inquired, assuming it was second nature for farmers to keep close track of their expenses and incomes.

Laughing slightly at my puzzled reaction, Anokye replied, “farmers keep records in their heads... it is too discouraging for them to see the small profit they make.”

Any farmer in Canada would agree that record keeping is important to running a profitable business. It is not the action of keeping records that is valuable, but the outcome – the careful analysis of farming activities, leading to profit-informed decisions.

If record keeping is important for farmers in Ghana, what can MOFA do to encourage this practice? What would you do?

The most obvious action you might take would be to work with farmers individually; you would create a template together and help them fill it in. If they were illiterate, you would likely have their school-age child look after the records.

But these actions are not working.

According to Anokye, “the Ministry has been promoting record keeping for years, and yet farmers are slow to pick it up.”

But unlike the Ministry as a whole, Anokye has successfully facilitated this behaviour change.

“I tried many approaches. I gave examples of successful farmers who keep records. When that didn’t work, I had them calculate their profit and compared it to the profits of most farmers in their area.

“When that failed, I started to believe that farmers really didn’t see any value in keeping records. But with time I came to understand that many farmers believed that something bad would happen to them if they made their assets public.”

Thanks to Anokye’s dedicated work to change this perception, dozens of farmers with Northern Ghana will experience greater security and prosperity.



Anokye's story illuminates the importance of experimenting with multiple approaches in the field. This is under-emphasized in the development sector, where projects are often designed in offices far from the field, with predetermined results tied to timelines and funds.

EWB is working with MOFA to encourage more experimentation and learning. This kind of experimentation and learning at a field-level allows us to truly explore the root causes of an issue, and to find answers to the kinds of 'why' questions that enabled Anokye to create positive changes in farmer record-keeping behaviour.