

farip Newsletter October 2017

English Version

Overview:

- **Metal silos:** 100 silos are now placed in farms all over Msowero village, each with a ton of maize. Now farmers wait until March-May 2018 when the price climbs to almost double. That is how they want to earn more. TBM company is now challenged to meet the demand for 1'000 silos in Msowero by July 2018 when the next harvest starts. [Read more....](#)
- **Chardust-Briquettes: Marketing, and extruder-machine:** Harvest residues and waste wood are charred to a dust and then briquetted. The briquettes are an alternative to the regular charcoal that is made by cutting down trees. Now the challenge is to come to grips with the briquetting technology and to get the marketing of the briquettes started. [Read more...](#)
- **Package beans:** Beans shall no longer be sold uncleaned to itinerant small traders coming to the villages. Adelina wants to clean and package them in small bags for selling directly to small shops in the big towns. The challenge now is to test the technology for making this value addition in the village. [Read more...](#)
- **Whole grain maize flour:** The farmers with metal silos in Msowero no longer just want to sell grains to traders. They want to mill it in the village to “dona”, package it in small packages and directly sell to small shops in the towns. That is how they intend to make an additional coin from the added value. The step now is to test the technology for doing that. [Read more...](#)
- **Pressure irrigation:** Two engineers of RAPP company in Basel have successfully demonstrated that pressure irrigation with fire-hoses technically works during the dry season. Now the challenge is to further develop the system and to work out a business model for a local “irrigation company”. [Read more...](#)
- **The Scouting:** *farip* early on identifies and explores ideas villagers might have for new ventures, in order to give these ideas a chance to prove their worth. [Read more...](#)
- **New challenges and questions:** We must learn how best to manage the return of loans in European currencies with loans made in African currencies. And we need to learn more how to efficiently manage crowdfunding. [Read more...](#)
- **Exchange and debate:** We are considering setting up an exchange platform for people interested in *farip* to discuss and explore upcoming questions and challenges. [Read more...](#)

Metal Silos



The pilot venture with 20 silos during the harvest 2016 generated a high demand for more silos. This year Bahat Tweve of Tanzania Biashara Mapema Company (TBM) was very busy with the 100 silos we could make available this year: Distribute the silos to households, get the loan contracts with each family signed, stay in touch with local authorities and keep explaining everything, and finally pay to each family the advance for the stored maize in their silo, etc. The last silos have been filled by end September. We now have 104 silos filled with maize, ie. about 100 tons, all in Msowero and neighbouring villages. The whole campaign worked well. Bahat could show that his company could manage this reliably.

TBM is now challenged to make many more silos available by July 2018 when the next harvest starts. The present demand is estimated to reach up to 1'000 silos, and TBM wants to reach as near as possible to that number by July. Everything is now clear about how the technology works, how it must be operated to be successful, and that this is profitable for both farmers and TBM. What remains to be shown is that TBM knows how to expand and grow. For this purpose TBM requires loans both for purchasing the silos and providing them on a 2-year loan with interests to farming families, as well as for making the advance payments for the maize that will be stored in them. The advance payments will be recovered – again with interest – when making the final accounting after selling the maize.

We reckon with 400 USD per silo for having it manufactured in the village from metal sheets, along with making the advance payment for the maize in it. TBM will also depend on further coaching from *farip* during this critical phase of figuring out how to reliably scale up. So an additional 50 USD grants for *farip*. Together 450 USD for each additional silo. Bahat is presently negotiating with Tanzanian Banks, but their interest rates of 20-24% per annum are a problem. *farip* has agreed to help search for loans for TBM from abroad.

Who has ideas or contacts for how *farip* can organize loans for TBM?

Read up on the website for more details: <http://www.farip.ch/metalcontainers/>

Char dust Briquettes: Marketing, and extruder-machine



Charcoal is one of the big unsolved problems in Tanzania. Almost all cooking in the towns and cities is with charcoal that is produced from cutting down trees, resulting in fast forest depletion. The accelerating growth of cities will increase the already high pressure on forests. The government tries to counter this with strict regulations and prohibitions on the use of charcoal, etc. But as long as there is no viable alternative to charcoal for the large mass of users, these efforts have no chance. In fact they open new opportunities for corruption.

A quasi-company in Daressalaam (ie. a company that is subsidized with aid-money) has successfully marketed briquettes made from chardust. Chardust is made by charring harvest residues (mais stalks and cobs, straw, rubbish from cleaning fields, dry grass, etc), ie. without cutting a single tree. Now the people in the Mgololo area in the southern highlands of Tanzania came up with the idea to attempt this also with waste wood from their forestry operations. All farmers in that area plant pine and eucalypts for timber as an important source of income. These are “plantation forests” that are harvested after 15-25 years and then cut up on the spot for timber, before then replanting again. So this type of forestry does not put a burden on the natural forests. During harvesting a lot of waste is produced, ie. more than half of the total biomass, ie. branches, tips, offcuts, sawdust, etc. So far this waste had to be burned under tight control in order to avoid it becoming a fire-hazard for the replanted young trees and surrounding forests. Their idea now was to make briquettes out of this stuff and sell them, instead of wasting all that biomass.

The Emmental Forest Cooperation (EFCO) has good contacts to the Mgololo area and agreed to help work out this idea. EFCO has submitted a project to the REPIC-Program of the Swiss government, and it was accepted. Last year **farip** had contributed a small amount to this project for getting first experiments started while the project was still getting organized. By now teams of young people have figured out how they can most efficiently char the waste wood material in simple pits they dig themselves in the fields, and they have also started experimenting with harvest residues and grass. At present we have large amounts of chardust waiting to be briquetted for then testing the market.

So at present the bottleneck is the briquetting. The company in Daressalaam had provided a briquetting machine that turned out not to work for the conditions in Mgololo, particularly the volumes that need to be processed. For that reason some funds from the REPIC-financed project were used to contract a committed entrepreneur from the Emmental who runs an agriculture machinery workshop (Hüsler GmbH), to develop, build and test a more suitable machine. This machine is presently being tested in Magunguli. The costs for this innovation were not foreseen in the REPIC-project, which is why **farip** was asked whether we could take up these costs. Because the briquetting itself could become an entirely separate business in its own right within the value chain (toll-processing) we agree this could become an active **farip**-venture. So we have an opportunity here for anybody to engage in a technical investment that has a high chance of having widespread impact.

By November enough briquettes should be dry and ready for test-marketing in the nearest town Makambako, a main trading point in the area. For getting the marketing under way the people there suggested an innovative procedure: They would run a small local restaurant that would be cooking the meals with briquettes. That way many people will see how this works and it becomes a sustained public demonstration. The restaurant will then also double up as the outlet for briquettes for the whole town. **farip** has been asked whether we might consider this too to become a venture we could support through its first steps. Since this is an innovative business model, we are at present looking into this.

Read up on the website for more details: <http://www.farip.ch/chardust/>

Who has ideas, contributions, questions, contacts, comments on this somewhat complex effort? It increasingly looks like having the potential for a very widespread social/economic/environmental impact once it can show proof of what **farip** calls the “scaling up concept”.

Package Beans



Beans are an important food crop all over tropical Africa. Nowadays in Tanzania when beans are harvested farmers only roughly clean and dry them, without any grading, then sell them to the small itinerant traders coming to the villages. There is no incentive for cleaning and drying beans. Now Adelina with her team wants to tap the opportunities of the “Transaction Security Services” (TSS™) to clean, dry and grade beans, then pack them in small bags of transparent plastic (2kg-5kg). The bags shall have their

own brand, to be sold directly to the many small shops in town that cater to the large mass of low-income consumers.

This whole operation will be run through the mechanisms of TSS™ – similar to the maize in the silos, see above: Whoever operates the TSS™ deal will pay the farmers the advance when they bring the beans to the cleaning/packing operation. The beans are then handed over to Adelina for processing them into the packets ready for marketing. Adelina will be paid by the TSS™ deal operators on behalf of the owners of the beans, ie. the farmers. Then the deal continues with distribution to the small shops in town, etc. But that no longer concerns Adelina. Her business is a service to the whole value chain (ie. the TSS™ deal) that is paid for processing the beans from raw field material to packaged product.

The innovation here is the value addition in the village itself where both Adelinas team as well as farmers can tap in on the added value. At present Adelina is making first experiments to work out which technology will be most useful for packing and sealing those bags under village conditions.

Read up on the website for more details: <http://www.farip.ch/Active-ventures/Beans-packaging/>

Dona = Whole grain Maize flour

“Dona” is the Swahili word for whole-grain maize flour, ie. flour that is milled including the hard outer shell and the germ of the grain. This is the traditional flour that has been cooked in the villages ever since maize was ground into flour. But in cities the available flour is refined, ground without the germ and outer shell of the grain. Now the city population has become increasingly aware of the nutritional advantages of whole grain flour and therefore there is a fast growing demand for dona in the cities.

Recently the farmers in Msowero who had put maize in their silos (see above) came up with the idea that they would mill their maize to dona in the village itself, and package it there into small packages suitable for direct selling to small shops in the towns, who then cater to the large number of



low-income consumers in town. They would add their own brand to the packages and indicate that this is flour “made from maize stored and milled without any chemicals”. They believe they have a viable niche here to exploit. In fact it is true that the city population is increasingly concerned what they get to put into their pots for cooking. Given the still low reliability of controls in the country, their concern about pesticide residues in maize flour is quite justified.

So the farmers in Msowero hope to earn by adding value to their maize in the village itself. Tanzania Biashara Mapema company (see above metal silos) has agreed to tie this in with their TSS™ procedures, so that the farmers in Msowero no longer only sell maize grains to traders coming to their village, but sell dona packed into small packets to end-consumers in the cities, whereby the costs of adding that value are paid for from the proceeds of the sales of the packets of dona. In the end all of this is reconciled and all costs and proceeds transparently discussed with the farmers, just like the TSS™ procedure demands.

Here too the innovation is the adding of value in the village itself, and therefore income generation in the village. And it is also an improvement on nutritional safety for people with lower incomes in the cities. Also, each packet of dona can be traced back to its origins. **farip** has agreed to look for financing to conduct the first experiments that shall explore all the technical items that must be in place and mastered to process maize grains in the village to packets of branded good dona in the village, and to then test the market.

Who wants to look into this? Read up on the website for more details:

<http://www.farip.ch/Active-ventures/Dona-maize-flour-to-BOP-shops/>

Pressure Irrigation



In the Mgololo area streams run down off the hills also during the dry season. This is a typical situation all over East Africa, which is why traditionally farming happens on the hills and adjoining plains. The water is usually used for irrigation in a very rudimentary fashion through small irrigation channels. Now the innovation is to put it into pipes for much higher efficiency with sprinklers and water cannons. In a small way many farmers have already done this with small cheap pipes and sprinklers. But this soon hits technical and operational limits.

The company RAPP Infra AG from Basel in Switzerland has over the past couple of years financed attempts at making this work. Today there is a first line of fixed underground pipes in operation that has hydrants (water tapping points), from where movable pipes can take pressurized water to sprinklers. Based on first experiences the idea emerged to attach fire-hoses to the hydrants and thereby take the water much farther into outlying fields. Also, the idea was to increase operational flexibility by reducing the need for complicated agreements to allow fixed underground pipes to pass through fields. Now, in September, two engineers from RAPP managed to successfully demonstrate fire-hoses work fine to achieve this. The idea works, technically!



The innovation here is obvious. However, it must be seen in the bigger picture, where the successful marketing of the increased production must also be taken into account to justify these high investments, eg. through TSS™ operated by Tanzania Biashara Mapemas (see above). The development of the marketing channels seems to evolve alongside this innovation, so there are good chances that this technology will prove to be economically viable and therefore sustainable. The next steps now are to first learn to operate this technology effectively, and then to work out a business model that will allow operating this technology efficiently and at acceptable costs to farmers.

We can continue to rely on RAPP to help out on the technical challenges. Who now wants to commit to supporting the emergence of a business model up to the point where a viable “irrigation company” can guarantee to farmers that their crops will get the water they need, when they need it, and at acceptable costs? Read up on the website for more details: <http://www.farip.ch/irrigation/>

Scouting of new ideas

The unique thing about *farip* is that rural Africans do not have to first figure out and present well thought through and well formulated ideas before approaching us. Rather, *farip* interests itself in interesting ideas very early on in their still vague inception phase. We pick up an idea and work it out further with the initiators until it becomes clear what could be tried out concretely to test whether there is something to it. Of course this often takes some time until it becomes clear what this could be. And of course many ideas fail to reach the point of concrete action, or they are are put into a waiting loop until

they may become very relevant in another setting. Toward the end of a successful scouting process it usually becomes possible to define and formulate what an idea is and what it might result in. This then becomes the basis for designing and organizing first experiments and trials for checking out whether that might be true. As soon as we decide together with the initiators to go ahead and concretely implement a trial, the scouting is over and the idea becomes what we call an “active venture” with its own budget and specific fund raising.

On the “Scouting” part of the website you will find ideas listed and shortly explained that are still in the conceptual exploratory phase but where it already becomes clear what they could be. See here: <http://www.farip.ch/Scouting/>

Is anybody interested in one or the other such idea, or maybe somebody has technical or other expertise to contribute to one of them, or knows of contacts that may give us valuable input? Or maybe somebody is even interested to see an idea go active so they could finance it? Or can we find sponsors who will generally finance the scouting itself because they are interested in this process? Please do not hesitate to contact us.

Challenges and questions

1. Like any foundation that doesn't draw on proceeds of a large capital base, **farip** is challenged to find the financing for its efforts. Recently we have tried our hand with **crowdfunding** and made our first experiences. In case anybody can contribute their own expertise in crowdfunding, please take up contact (see the footer). This is not only for grants but also for loans.
2. A new challenge we now face is how to manage loans across currency gaps, ie. when having funds in European currencies to provide loans in Tanzanian Shilling in Tanzania, but then having to **return the loans again with interest in the European currency**. The problems here are the deterioration of the exchange rates, the high banking fees, the inflation and high local interest rates (presently at 20-24%pa). How can **farip** operate here in a smart way? Who is interested in this question or can maybe even contribute some expertise? Please take up contact with us.
3. And finally we have the ongoing challenge of **getting the scouting financed**. Whoever knows of sources of funding for this crucial piece of work for tickling out often deeply hidden but great ideas, where it isn't yet clear what the result of the investment will be, please take up contact.

Exchange among people interested in **farip**

Already a first exchange meeting took place at the Impact Hub in Bern, where 9 people attended to discuss the developments around the metal silos and TSS™. We intend to regularly organize such events, with the next one being end October or beginning of November. At that meeting we intend to discuss the evolving ventures as above, but then also concentrate on the above mentioned challenges and questions. Whoever gets this newsletter will be notified.

We are also considering setting up an online exchange platform for people interested to discuss and debate the upcoming challenges and ventures. The platform will allow us to track the evolution and status of the generated insights. Whoever is interested in this kind of exchange, please let us know.

(For possibilities of contacting us, see the footer)

