Access to Finance Model to Boost Investment in Improved On-farm Post-harvest Storage Technologies

Lessons from the Grain Post-Harvest Loss Prevention (GPLP) Project in Tanzania (2013 – 2020)

Key Messages

- *Many farmers as members of savings and credit groups are hesitant to take loans from their groups for investments in post-harvest technologies.*
- *Revolving funds to buy metal silos for on-farm storage of maize worked to some extent but did not prove to be sustainable.*
- *Agricultural input providers take working capital loans from commercial banks provided there is flexibility in using such loans also for other businesses.*

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1. Background

The Grain Post-Harvest Loss Prevention (GPLP) project of the Swiss Agency for Development and Cooperation (SDC) has been implemented between 2013 and 2020 by HELVETAS Swiss Intercooperation and its partners in four regions of the Central Corridor of Tanzania. GPLP aimed to increase food security and incomes of farming households by improving post-harvest management (PHM), i.e. mainly post-harvest practices (PHP) and technologies (PHT) for maize. The project applied a market systems development approach, working with public and private sector actors to create demand of PHM and ensure supply of PHT. Interventions such as awareness creation and promotion of on-farm storage of grain and PHM training have triggered demand for PHP and PHT and created a need for reliable supply of grain storage technologies.

Lack of access to finance is a major obstacle for the growth of Tanzania's agriculture sector, which also holds true for grain smallholder farmers and other market actors in the Central Corridor of Tanzania, who are resource constrained to make the needed investments, particularly in PHT. Driven by the fact that the PHT market is still *underdeveloped*, as many technologies like metal silos and hermetic bags for on-farm storage of maize have been new in the Tanzanian market, the GPLP project looked into different financing models to tackle the challenge of low investment in PHT caused by poor access to finance. These financing models had components which focused on both, demand and supply of PHT, with the aim to trigger investment by both, farmers on the demand side and agro-dealers and artisans on the supply side.

The models tested and appraised include:

- Informal micro-finance schemes such as saving and credit groups, Village Community Banks (VICOBA) and seed money systems run by community groups
- Loans in kind where (raw) material is advanced to small artisans by agro-dealers
- Formal micro-finance institutions, incl. banks, Agricultural Marketing Co-Operative Societies and Savings and Credit Co-Operative Societies

On the demand side, the GPLP project partnered with two local organizations CEVEDE[1] and SEDIT[2] to support existing and newly established VICOBA[3] groups to mobilise their savings and invest in income-generating activities, including investment in PHT. To trigger investment in PHT, particularly for metal silos, GPLP introduced a seed money system where newly trained artisans were given materials to produce 10 metal silos as start-up. These silos were then given to VICOBA groups who loaned them to group members who would repay the silo to the group. The money paid would then be used to order and procure further metal silos for other group members. The funds would revolve until all VICOBA members would own a metal silo. Once all group members have a silo, the money paid by the last member(s) becomes group capital, which the group would lend to its members for other economic activities. From a donor's point of view, this system starts with a grant in kind (metal silo).

To boost their business and increase demand, agro-dealers took metal silo orders from farmers and provided artisans with raw material for the fabrication of these silos.

On the supply side, the GPLP project linked local artisans and agro-dealers with financial institutions to access loan for investment in their PHT business. These linkages were facilitated through several PHT investment meetings between the market actors and interested financial institutions.

[1] CEVEDE is an independent institution which creates and utilizes knowledge to facilitate socio-economic development at the grassroots through informal microfinance and enterprise development.

[2] SEDIT (Social and Economic Development Initiatives of Tanzania) is a member based local organization committed on financial inclusion through mobilization of saving and lending groups.

[3] VICOBA (Village Community Bank) is a model allowing people to mobilize their own savings and lend it to their fellow members. It aims at facilitating credit to low-income people, mostly women, who need capital to start their own small businesses. The model brings together groups of 25 to 30 people and allows them to combine their savings to create a community-based bank. Members can access loans for investment in income-generating activities, including agriculture.

2. Key Lessons Learnt

1) **Low interest by farmers to use VICOBA loans for investment into PHT.** The GPLP project designed a seed money scheme to kickstart the adoption of metal silos through VICOBA groups because of their comparative advantage in terms of collective action in fund management.

While the VICOBA groups' main objective was to mobilize savings and lend funds to their members for income generation, PHM was not really seen as income generating activity, since investments in metal silos and hermetic bags had slow rates of return. Hence, there was limited interest for direct borrowing by VICOBA members for investment in PHT.

> *"I saw a metal silo for the first time through our VICOBA group. Our group was given three metal silos as seed money. I was not interested to take the metal silo with a loan from the group, but I was still interested in the silo. So, when the seed money silos were brought by the agro-dealer and artisan to the village during our VICOBA weekly meeting, I approached the artisan privately after the meeting and asked him if he can produce a separate metal silo for me, to which he agreed. So now, I have two metal silos."* **Kudra Hassan, member of Mnenia group, Kondoa district, Tanzania**

Where VICOBA members invested in metal silos, it was often by using income generated from other activities that had higher rates of return. In many cases, farmers also negotiated their own payment terms and conditions with the metal silo suppliers. Limited direct investment in PHT through the seed money by farmers has created low interest from agro-dealers and artisans to push the scheme. On the other hand, despite the limited uptake by VICOBA groups, the seed money scheme has helped to build the skills of artisans and introduce metal silos to farmers groups and created lasting individual market relations between farmers and input suppliers. Today, local artisans and agro-dealers continue getting orders for metal silos from individual farmers.

2) **Loan products for input suppliers should allow a flexible use.** The market for PHT is a seasonal business; this should push financial institutions to design special loan products on PHT. On the other hand, since PHT form only a small part of their product range, agro-dealers were not really interested to borrow only for PHT. At the same time, given the fact that the demand for metal silos was still low, artisans with no well-established businesses were not ready to take loans for PHT.

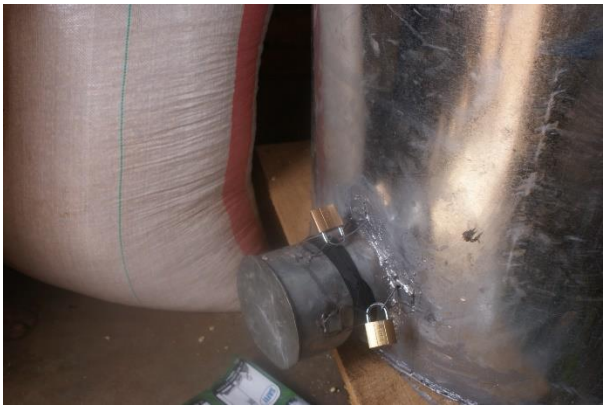
Available loan products with Equity Bank and Tanzania Postal Bank were supported by AGRA (*Alliance for a Green Revolution in Africa*). However, these products were only utilised when there was some flexibility, e.g. where agro-dealers could use 50% of the loan to stock PHT (mainly hermetic bags), while the other 50% could be spent/invested on other agricultural input products.

> *"In 2018 HELVETAS connected me to the Equity Bank to access loan to expand my PHT business. I applied for the loan in July 2018 after having been granted the flexibility that I can use part of the loan for other agricultural inputs."* **Bonifas Mariki, an agro-dealer in Kilosa district**

3) **Input suppliers develop special informal loan mechanisms based on trust.** Some agro-dealers had informal loan arrangements to supply metal silos, which allowed farmers to pay the cost of the metal silo in instalments, either in cash or in kind (grains). Once orders were received agro-dealers provided artisans with raw material (metal sheets) to fabricate the metal silos. Artisans retired the advance after having fabricated and supplied the metal silo. Such mechanisms were much more appreciated by artisans and farmers than the pre-structured loan schemes from commercial banks.

> *"In 2018 I received an order to produce a 2,000 kg metal silo for a farmer in our village who wanted to store maize for selling later. The farmer didn't trust me and hence did not want to make a down payment, so I had to find capital to purchase raw materials. As an artisan, I had an option to seek loan from Equity bank, but I preferred to approach my agro-dealer and asked if she can lend me material, for which I would pay later after having received money from the customer. Things went well and I managed to pay back the material cost and a small amount on top of the loan to the agro-dealer."* **Simon Mashala, an artisan in Kishapu district, Tanzania**.

4) **Transaction Security Services (TSS) model.** The adoption of metal silos was also promoted as a business case for maize trading. GPLP conducted a pilot in collaboration with FARIP[4] and TBM[5] to explore a commercial business model, under which farmers increase their income by keeping the maize in the metal silo for some time and sell only when the price goes up. In this setup, TBM makes a down payment to the farmer based on the current market price. The farmer stores the maize and gets additionally paid when s/he later sells at the higher price. However, the farmer benefits from this scheme only, if s/he is prepared to invest into a metal silo.



Double locked metal silo; one lock is for TBM and the other from the farmer.

3. Conclusion and Recommendation

A seed money scheme can boost promotion of a technology but is not sustainable. The seed money fund was developed as a supply driven scheme to support artisans' fabrication of metal silos. Although considerable numbers of metal silos were introduced at field level, sustainability of the scheme was not there. Some VICOBA groups capitalized the cost of silo and reinvested the funds generated as loans for income generating activities rather than supporting other members within the group to get their metal silo. Therefore, starting a seed money system must be carefully considered, as other schemes might be more sustainable.

VICOBA proves to be a successful model for smallholder farmer, but not necessarily for investments into post-harvest management. VICOBA is an excellent model for assisting the smallholder farmers in their economic recovery and support their small income generating activities. Hence, community-based savings and credit activities should be supported by any rural initiative. The model works best with short-term investments as borrowers have to pay back their loans within rather short periods and with often high interest rates. Investments in PHM and in on-farm grain storage are on the other hand more long-term and often do not create additional cash income.

Agro-dealers have the capacity to take loans from formal banks; but towards their clients they prefer their own informal loan and advance mechanisms. Agro-dealers have been lending materials to artisans to fabricate pre-ordered metal silos which are then sold to farmers. Such types of mechanisms are recommended as they create win-win situations. The farmer gets the metal silo with flexible payment modalities; the artisan gets the material advanced to fabricate the silo; and the agro-dealer arranges the entire business deal.

You may also be interested in the other GPLP CAPEX briefs: The Post-Harvest Management Business Model / Policy Advocacy in Post-Harvest Management / Introducing a New Grain Storage Technology in Tanzania - The Case of Metal Silos at Household Level / Adoption of Improved Post-Harvest Management Practices and Technologies in the Central Corridor of Tanzania. *They can be found under* https://www.helvetas.org/en/tanzania

[4] FARIP - Fund for African Rural Innovation, an international organization aims at giving Africans the chance that their enterpreneurial ideas have the potential to become commercially viable, thereby creating employment and income.

[5] TBM – Tanzania Biashara Mapema provides the Transaction Security Services (TSS™) to farmers and buyers.