

Local Ideation project changes global lives: A case of the Farmers' Enterprise Center (FEC) in Uganda

Where it all started

In 2016, Ecolife Foods developed a post-harvest scale out strategy; "The Farmers Enterprise Centre" for rural smallholder farmers and agri-entrepreneurs as illustrated in the concept ([Link to PEF paper](#)). These centres originally combined together EcoLife's energy-efficient low-cost cold store *INSERT LINK FOR LOW COST COLD STORE*, clean drying, storage and processing technologies plus facilitated marketing. The centers were intended to drive innovations for solving local challenges in communities.



Figure 1: Eng. Derrick demonstrating the ecolife cold room prototype as a postharvest technology, Dec, 2018

Upgrading and redesigning the strategy

Based on feedback from farmers in the communities (Baseline study report), we upgraded the Ecolife strategy in 2020.

Priority was made to use local materials found in communities in the construction of the cold store and developing the Farmers enterprise center (FEC). Many other international organisations like Post harvest foundation were consulted. Together with Kiima foods (scaling local partner in Kasese) and Smart Village Research Group (UK R&D partner) we included a farmers



Figure 2 consortium members

training and information centre, a seed distribution point, wood and metal workshop, retail shop and a more cooperative marketing arrangement. To be able to build a more comprehensive model as a team, we were supported by Innovate UK under the project titled “integrated mingrid and anchor load model for rural communities in Uganda”. This project involved the use of the human centered design approach, that highly involves community members in the design and implementation of project activities. The involvement of the community increased their curiosity in the FEC plus their active participation in all the activities and events.

Different tools were used to redesign the strategy:

1. Community baseline study



2. Rapid Rural Appraisal



3. Service Value Test

4. Multicriteria Decision Making

5. Cardboard prototyping

6. Literature review



Figure 3: constructing the FEC (left: producing the first environmentally friendly block: Right; constructing FEC)

Farmer enterprise centers: changing lives in rural Uganda

Today, there are four farmers' enterprise centers (FEC) in Wakiso, Kasese and Luwero districts. Thanks to funding from innovate UK! The farmers' enterprise center is a scalable, innovative business model using renewable energy to bring services and technologies close to unelectrified rural farm communities. FEC is a community business hub that fosters improved production, proper post-harvest handling and fosters livelihoods of smallholder farmers in rural communities. Each FEC hosts a solar powered walk-in cold store for use by horticultural entrepreneurs, a planned milk collection center for use by the dairy entrepreneurs and an organised milling unit. Other services at the center include solar powered irrigation pumps, an agro-input shop, cassava milling machine, coffee hauling, an innovation center and a skills center. The services are aggregated in one place that is accessible to all in the community. The center is run as a business in the community by community members, to provide productive use of energy (PUE) services as was identified from needs assessment studies in the



*Figure 4: 10*15*6m space cold storage facility. Cooling capacity 2-16 degrees Celsius*



community. Ecolife is running the service centers in Kitula – Wakiso and Kayonza: Lukowe – Luwero using farmer-entrepreneur model to grow and store their produce for the market. Whilst in Kasese, a farmer cooperative model is being explored. All the center activities are aimed at improving the agricultural production, proper post-harvest handling and productivity for smallholder farmers in rural communities.



Figure 5: Farmer training at FEC in Kitula, Wakiso district.



Figure 6: After farm business activities for women in the community



Figure 7: Building a third prototype of the cold storage



Opportunity to learn, discover and work on real life technology challenges

The FEC is powered by a 45KW minigrid with the walk in cold storage facility as the anchor load. Engineers, scientists, students, agriculturalists learned and participated in the built-it stage and gathering community feedback. This has presented more opportunities for our partners (SVRG) in the UK to push forward the minigrid with an anchor load for efficient energy use. SVRG has merged their minigrid concept with the Ecolife low cost walk in cold storage as potential post-harvest technology and anchor load ([link to E4A report](#)).

Accessibility and utilisation of the FEC

FEC is creating access to market, access to education, access to electrified technologies and empowering the community at large, thereby improving livelihoods. It is situated within walkable distance for all community members to access. Being a one stop center for many community services, women, children and youth find it very convenient to

get most of their services from the FEC. Women and young girls of child bearing age come to the center to get skills in tailoring and hair dressing. Children buy house supplies from the center instead of walking 3km to the next trading center. Old men ride their bicycles to have their maize and cassava milled at the center instead of taking it 6km to the next town. The FEC has thus increased access to services by all in the community.



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