Taro Flour Project

Platform NSA Workshop on:
Post-Harvest Losses and Processing of Nutritious Food

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Send a Cow is an international NGO founded in 1988. We started as a programme with strong focus on livestock development.

- We operate in seven countries across Africa, including Ethiopia;
- Our head office is in the UK; branch offices in Germany and the US.

Nowadays we focus on sustainable agriculture, improved animal management, value addition, integrated with gender & social development activities.

- We currently work with smallholder farmers, supporting them:
  - To explore the potential of their farms and agricultural produce
  - To make their available resources more productive
  - To integrate traditional knowledge with new skills and abilities
Everyone here knows Taro: a perennial tropical tuber, also known as cocoyam, widely grown and consumed in Southern Ethiopia, including Wolayita Zone.

In Ethiopia it is harvested in November-January.

Taro is rich in starch and fibres and can be easily digested. It is particularly indicated for children lactating women and elderly people’s diets.
A pre-project assessment in Wolayita Zone has shown that:

- Due to its high moisture content, fresh taro has a very short shelf life of just two months (high perishability)
- No taro value addition is practiced
- Farmers sell fresh taro after the harvest season and gain very little income
- Taro is only consumed boiled
- Farmer families suffer from food insecurity after the harvest season (March-June)
The project

Pilot project (July 2014 to September 2015):
- Funded by ICCO (on behalf of the Dutch Embassy in Addis Ababa) and by Send a Cow UK (SACUK)
- Implemented in two districts in Wolayita Zone (SNNRPS)

Targeted 226 farmers (30% female) organized in 15 processing & marketing groups growing to form 4 cooperatives

Scale-up project (July 2016 to date):
- Funded by ICCO & Dutch Embassy; matching fund by SACUK
- Implemented in 12 districts of Wolayita Zone

Targeted the 4 established cooperatives plus 60 cooperative leaders from the target districts, 48 government officials, 42 staff from organizations promoting agricultural activities and value chain development
Taro value addition

Collecting → sorting → washing → peeling → washing → chopping → drying → storing → grinding → packing → labelling → marketing
Key activities

1. Training:
   > group dynamics & Envisioning
   > improved taro production
   > taro processing
   > financial management
   > business & marketing
   > cooperative development

2. Experience sharing visits

3. Provision of simple inputs like: knives, gloves, plastic sheets for drying, water containers, weighing scales, labeled sacks, donkey carts
4. Renovation and construction of four storage facilities on land provided by local government

5. Marketing & promotion
- market assessment
- demonstration events
- radio programmes
- booklets & DVDs
- establishment of market links
- attendance of fairs & bazaars
- government forums
- promotion workshops
Project partners

- **ICCO & Agri Pro Focus**: funding, monitoring, technical support, dissemination

- **Local government**: material support (i.e. land & storage facilities) and project evaluation

- **Areka Agricultural Research Centre (AARC)**: provision of improved taro seed varieties and training on taro production

- **Research Institutions & Researchers** (Wolayita & Hawassa University, Ethiopian Nutrition & Food Research Centre, Mole Valley in UK, PhD student from Haromaya University): research, learning events, dissemination

- **Cooperatives in Wolayita zone**: experience sharing, dissemination and learning
OUTCOME: availability of taro

- Turning taro into flour extended its shelf life from 2 to 18 months
- Conserving taro helps farmers bridge food shortage months
- Taro value addition has triggered increment in taro production in the project area (by project farmers but also by the wider community)
- Taro is now available for consumption in many forms: boiled (traditional) but also through use of flour for bread, injera, porridge etc

Taro flour now available in the market for a competitive price (10 ETB/kg) when compared with cassava flour (13 ETB), maize flour (15 ETB), wheat flour (18 ETB) and teff flour (20 ETB)
Introduction of a new flour that can be mixed with other flours for production of local food: bread, injera, kita, porridge etc.

Initial resistance of families due to the colour and texture of the produced food. Families have however soon welcomed taro flour thanks to its taste, affordability and versatile use in the kitchen.

Women have taken the lead in experimenting new recipes, becoming active drivers of change. Families became able to produce injera more frequently with positive social effects (increase of guests and recognition within the community).
1. **Successful introduction of a new product to local markets**
   (1\textsuperscript{st} attempt to produce taro flour for markets in Ethiopia)

2. **Men and women have worked together on an equal basis, sharing workloads & benefits**

3. Farmer communities have developed an entrepreneurial mindset

4. **Farmers have worked hard to overcome initial concerns on marketability**

5. Taro flour has become culturally accepted in the two project districts with farmers appreciating its taste and affordability

6. Several families from the wider community have started taro flour production on their own initiative by copying the process
7. It has helped producer families bridge hunger months, diversifying their diets and generate additional family income.

8. Government extension workers have gained knowledge and skills from the process preparing the ground for replication across Wolayita zone.

9. The project has shown a very good potential for scalability across taro producing regions of Ethiopia, as well as in other countries.

10. The whole value chain is environmentally friendly and does not produce any sort of pollution. Taro peels have been used for composting and have been recycled as animal feed.

11. Project farmers have increased their household hygiene and sanitation.
Challenges & proposed solutions (I)

Challenges addressed during the project scale up phase:

1. **Open-air drying has risk of contamination**: locally produced solar dryers are introduced to increase hygiene

2. **Local mills have charged higher grinding fees to project farmers because it produces more dust**: project farmers are investing in purchase of cooperative mills

3. **Marketing in bulk was limited by farmers not being able to produce legal receipts**: establishment of 4 legally registered taro flour coops has supported market access
4. Renovation of local storage facilities not up to expected quality: during scale up phase new storage facilities are constructed in collaboration with the local government.

5. Taro flour is currently only marketed locally (Wolayita zone): project cooperatives have engaged in dialogue with flour and starch factories nationwide.

6. Production of taro flour is limited to Wolayita zone: experience sharing visits/events organized for dissemination & scale up
Thank you for your attention