



2 oxen pull the groundnut lifter at harvest

# Groundnut Post-harvest 2010-2017

## Utilization of project-developed technologies, practices and knowledge

2017: Farmer-level demand functions were examined by eliciting willingness-to-pay, which was fed into the community-level return on investment (ROI). In the base scenario, when the farmer group size ranges 200-400, the single-season ROI ranges 1.66-4.32, 8.24-17.47, and 0.55-2.10 for the lifter, stripper, and sheller, respectively, indicating that purchasing and renting these tools to fellow farmers is a **profitable business**.

2017: 41 % of the non-seed producer groups (7 out of 17) placed cash purchase orders for at least 1 of the 3 tools.



Groundnut stripper



Mechanical sheller

### Promoting equity through investments that favor the disadvantages and vulnerable

A survey of male and female farmers from 210 households in Malawi was performed in both 2014 and 2016 to assess perceptions of control in farmer decisions by gender. Results show that women perceive a higher level of control for groundnut than for other crops, although in general men perceive that women have less control than women perceive, and men also think that they have more control over groundnut than women. **Increased commercialization** of groundnut over the 2 year period did not negatively impact the **women's empowerment or workload**. The **use of the mechanized sheller** in Zambia, however, showed that it **reduced the status of groundnut as a women's crop**, although the net gain of **less drudgery** and **more income** benefits the **entire household**, it is important to make sure **women are included** in mechanization training and activities.

Avoid doing harm, gender

### Southern Africa Community of Practice



### Informing practice and policy with evidence and analysis

Final performance data was submitted to the Malawi government as part of the registration process, which was finalized in 2016.

Integrate local and global research; Phased and emergent design & implementation

### Iterative cycles of adaptive action

2013-2015: Prototypes were developed, tested and refined with farmers in 32 villages:

- **Ox-drawn lifter** harvests an average of 0.4 ha/day compared with 0.1 ha/day using a hand-held hoe;
- **Table-top stripper** that removes 38 kh/hour of pods from groundnut plants compared with 12 kg/hr with hand stripping
- **Hand-cranked disc sheller** is 24 times more efficient than hand shelling and lower amount of undamaged kernels. It is also expected to lead to lower aflatoxin incidence since it allows for shelling without soaking.

Include multi-dimensional outcomes

### Increased collective action

2013: CARENTH Investments bought 9,690 kg of groundnut from farmers in Malawi who **organized collectively**. The **price** of MK 275 per kg was **higher** by MK 35 as compared to the price outside this **linkage**.

### Understand and respond to local contexts, knowledge & preferences

2010: A scoping survey of groundnut farmers in 2 districts in Malawi (n=248) and Tanzania reveals:

- Farmers' perceive **post-harvest** of groundnut as highly **labor demanding**, being the major obstacle to production expansion for the lucrative and nutritious crop.
- In particular, **shelling, lifting, and stripping** were the top three processes of remarkable labor intensity and lifting also leads to yield losses due to quality problems.
- 85% of the interviewed households sell some groundnuts but mostly **market individually**

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