



An innovative way to store onions to reduce storage losses

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OUTLINES

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ABOUT HELVETAS & KIBOWAVI

- HELVETAS Swiss Intercooperation (HELVETAS) is an INGO engaged in development cooperation. With its Head Office in Switzerland, the programme of Helvetas is built around the three thematic areas of Helvetas: **Water Food & Climate; Skills Jobs & Income;** and **Voice, Inclusion** and **Cohesion**.
- In 2020 HELVETAS Tanzania secured funds from the European Union to implement a four-year project titled “Empowering Women and Youth in Horticulture Production and Marketing (**KIBOWAVI**)” in the regions of Mbeya, Songwe and Katavi with 10 districts councils.
- **The project’s overall objective** was to contribute to inclusive economic growth, promote private sector development and job creation in the horticulture sector, and to increase food and nutrition security in the Southern Highlands of Tanzania.
- The implemented initiative was part of the European Union (EU)-funded AGRI-CONNECT program.



BACKGROUND OF THE ONION STORAGE

- In 2021/2022 HELVETAS supported the design and construction of an innovative onion storage facility in Mabrali-Mbeya that significantly reduced crop losses during storage, improved onion quality and enhanced marketing.
- **Previously, farmers and traders stored onions in poor storage facilities which caused high losses due to rotting and sprouting.**
- The onion losses went up to more than 50% which affected the people's income.

Storage of onion in a local storage facility of the Igomelo farmer cooperative in Mbarali February 2021



APPROACH

- **HELVETAS KIBOWAVI conducted a study, which revealed that post-harvest losses are a major challenge in the onion sub-sector with over 45% of the harvest lost, mainly due to poor storage.**
- Most onion warehouses in Tanzania are ineffective causing high losses, and some are even abandoned.
- Therefore, HELVETAS with the Igomelo Producer Cooperative (Coop) and the Mbarali District Council-Mbeya region ventured into the establishment of an innovative onion warehouse (WH).
- The WH was designed to allow air ventilation from all sides, by setting up customized cages of metal and wood and to avoid excess temperature and humidity which cause onion rotting and sprouting through limited height and width.
- Trained the WH Mgt committee and farmers on handling, transportation, curing, storing and grading of onions, guided with an operational guide.

Photos



Igomele Onion Warehouse				
	Quantity (Bags/100kg)	Storage cost	For Three Month	For Six Month
Group members	3500	3,000.00	10,500,000.00	21,000,000.00
Non group member	3000	3,500.00	10,500,000.00	21,000,000.00
Grand total			21,000,000.00	42,000,000.00
Investment=230 mil (TZS) ROI=I/AC 5.4 years				

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FINDINGS/OBSERVATIONS

- **Keeping factors constant like bulb moisture, physical damage, seed variety, etc. during the storage, the new WH proved to be an effective facility to significantly reduce PHL from a previously, estimated 50% to below 5%.**
- **The WH constructed at Igomelo has the capacity of storing about 650 metric tons of onions at once. Also, the facility serves as an aggregation and marketing center, whereby traders from nearby countries such as DR Congo, Zambia, Kenya, Uganda and Comoros come to buy onions in bulk from the coop.**
- **The WH increased onion farmers' income after the harvest. July to September, the price is low (between TZS 40,000 – 70,000 per bag), hence farmers store their onions and sell them later from December to March for TZS 120,000 – 400,000 per bag.**
- **The WH created a great demand from other farmers who saw that proper, joint storage ensured better quality, safety and marketing.**
- **Replication of the model by stakeholders incl MoA and 20 private farmers/traders in the project area adopted the design and invested in warehouses.**

KEY LESSONS & RECOMMENDATIONS

- **Involvement of key stakeholders (farmers/producers, traders, coop and DC) in the planning and implementation of the WH as well as co-financing for the facility created ownership and ensured sustainable mgt.**
- **All services rendered to the cooperative and the farmer members were demand-driven.**
- **Farmers are eager to adopt simple innovative technologies which ultimately increase their income.**
- **Governments and actors can easily replicate the model in areas which face similar challenges.**
- **Financial institutions should come up with better lending products for farmers, whereby crops stored in warehouses could be used as collateral.**

CONCLUSION

It is possible to adopt the model! Let us promote it!





Thank You



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