Postharvest loss reduction in Africa

Preliminary lessons learnt from the SDC CAPEX workshop Arusha (Tanzania), 22-25 October 2019

Authors: Mélanie Surchat & Addis Teshome, SDC GPFS

Today, approximately 14 % of the grain produced across Sub-Saharan Africa is lost after harvest. This is equivalent to US$ 4 billion per year, or the annual caloric requirements of 48 million people. When we talk about achieving the Sustainable Development Goals, it is evident that this high figure needs to be addressed with solutions proven to reduce such losses. Since 2008, Switzerland through the Swiss Agency for Development and Cooperation (SDC) has been funding programs on postharvest management (PHM) on the African continent with a common goal "*to increase food security of smallholder farmers in Sub-Saharan Africa through reduced postharvest losses at farm and community level*".

Infected maize from the traditional storage facility (kihenge)

These 10 years of engagement have generated an enormous array of experiences on intervention strategies. Hence, a capitalization of experiences (CAPEX) workshop took place from 22–25 October 2019 in Arusha, Tanzania, bringing together a wide array of stakeholders from practitioners, government representatives, private sector representatives, NGOs and academia. The objective of the SDC workshop was to provide the international postharvest community with practical information on the experiences of SDC made during roughly 10 years promoting postharvest management in Africa through various projects implemented in Benin, Burkina Faso, DRC, Ethiopia, Kenya, Malawi, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe. The main lessons learned from the learning exercise were:

1. **Reduced food insecurity through PHM**: Successful postharvest loss reduction strategies are powerful poverty alleviators and highly relevant for food security. Empirical research of ETH Zürich in Tanzania shows that improved postharvest management practices reduced the proportion of *severely food insecure households* by 21% on average, in each of the observed harvest years. Apart from ensuring food security, recent emphasis from consumers for a safe and healthy food has also created demand for improved PHM technologies.

A display of how to position a metal silo

Importance of aluminium paint to avoid corrosion

2. **Self-sustaining market for PHM technologies as an objective:** In order to scale out the use of postharvest management technologies such as metal silos (pictures above) and hermetic bags, there is a need for a self-sustaining market system (business model), embedded in the local economy. Projects supported by donor agencies can allow the facilitation of a system change. Meanwhile, they should have a clear exit strategy that allows the change process to continue and mature on the long term.

3. **Need for training / awareness raising to create genuine demand for postharvest technologies:** Interestingly, even when available, postharvest technologies (hermetic bacs, metal silo) do not spread quickly among farmers as they have been used to accept considerable grain losses stored on their farms. This highlights the fact that prolonged and massive information campaigns are necessary to create a genuine demand and willingness to pay for postharvest technologies. Field experiences has shown that linking storage solutions with procurement channels increase PHM adoption and that "champions" can allow to spread out the use of postharvest technologies in a community in a cost-effective manner.

4. **Supply for postharvest technologies needs to be built up in most countries, in parallel with the growth in demand**: Hermetic bags, metal silos and other improved technologies and practices are not easily available in most African countries. The supply needs to be built up through support/training of agro-dealers, silo producers and artisans that can produce metal silos with minimal quality. A PHM market system approach is required to establish a self-sustaining supply for raw material and financial intermediation (access to credits for farmers and artisans, liquidity), that remain today the most significant constraints.

5. **Institutionalization and PHM polices required**: While a self-sustaining market system is a prerequisite for mass uptake of the postharvest technologies by smallholder farmers in the long run, the institutionalization of postharvest loss reduction at different government levels (national strategies, training/curricula, extension programs, framework conditions, taxing, information campaigns, etc.) remains key to create an *enabling environment* for such technologies. Hence, government ownership of the projects have proven to be a key success factor for postharvest loss reduction activities and their proper coordination.

6. **Postharvest loss (PHL) mapping**: Data around the extend of postharvest losses and the possible gains (business case, sustainability issue) of reducing these losses are key to enhance government commitment, attract the private sector, and raise farmers awareness. Building clear and strong business cases for producers to adopt and for the private sector to engage is essential.

These conclusions and lessons learnt from the learning workshop should be shared broadly to contribute to the attainment of the Sustainable Development Goals and to halve the levels of postharvest losses by the year 2025 in Africa. More details can be found on the **Postharvest loss Community of Practice (CoP)** that is managed by the FAO.