

AGRA

knowledge series



Reducing post-harvest losses key to ensuring food security

BY CORRESPONDENT

The Alliance for Green Revolution in Africa (AGRA) has been the lead implementing partner in Tanzania for the maize component of the YieldWise Food Loss Reduction Initiative (YWS) supported by the Rockefeller Foundation between 2016 and 2019. The initiative was focused on fruits, vegetables, and staple crops in Kenya, Nigeria and Tanzania.

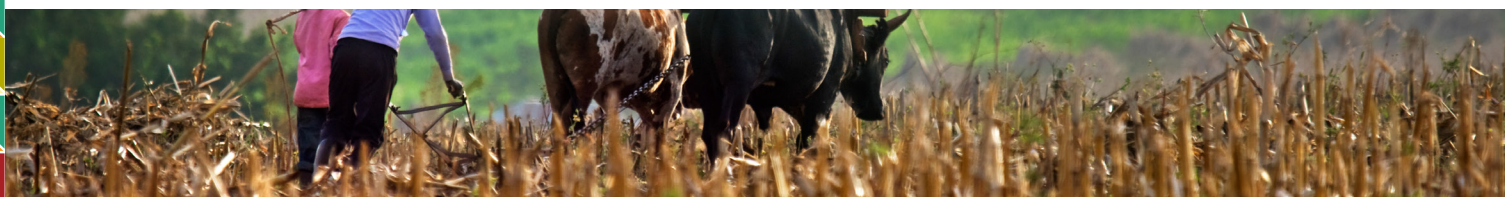
Addressing post-harvest losses is key to unlocking the tremendous promise for enhancing inclusive economic growth, food security, and nutrition. With support, farming families can easily transit to commercial agriculture. Interventions in Tanzania showed farmers maize

productivity more than tripled in most areas from an average of 500 kg per acre to 2,200 kg per acre. The more progressive farmers achieved 3,000 kg per acre.

Some of the issues that have exacerbated post-harvest losses include lack of market access, financing and use of outdated technology to store the grains. But all is not lost. There is evidence that multilevel interventions in the production supply chain can increase the amount of food on the table and money in the pocket for the farmers.

The YieldWise project integrated five components - Market demand and linkages, farmer aggregation and training, access to finance, increasing access to post-harvest loss technologies and practices, prioritization of loss prevention and knowledge management.

The project came to an end last year and there are valuable lessons that can be replicated elsewhere. Post-harvest loss management should be holistic and address the whole value chain and its actors. This includes production and improvement in productivity to make farmers competitive in the market.



Where market demand is assured and within an enabling policy environment, farmers are ready to adopt and invest in post-harvest technologies. Off-takers or buyers must lead in Farmer Organization mobilization of any market-led aggregation model, participate in the design of contracts with the farmers and share information on market quality and volumes required.

The project tested a host of post-harvest technologies including hermetic bags, metal silos, plastic silos, tarpaulins and threshers and established that the highest adoption was on hermetic bags but only for the maize for home consumption. The farmers preferred pesticides for maize destined for the market mainly for three reasons; relatively higher price of the bags, buyers' preference of regular propylene bags for ease of transportation and the fact that the market did not pay a premium for pesticide free maize.

A key learning from the project was that technology manufacturers need a good distribution system in the country. In spite of high investments by various organisations, metal silos were still not widely adopted because they are relatively pricier, quality of the aluminum sheet is low and the can only be stored inside the house.

The maize value chain in Tanzania and many countries in Africa is highly competitive and characterized by the unpredictability of markets and prices, government policies on maize trade and generally lacking in produce quality premiums. The role of AGRA and other implementing partners should be to act as facilitators and provide a platform for the private sector to promote more sustainable good agriculture practices, Post-Harvest Loss management technologies, farmer aggregation models that respond to the needs of the market and supporting agro-dealers for input supply.

Financial products should be designed with full engagement of the stakeholders, be articulated and transparent. Financial products should cover agricultural inputs beyond Post-Harvest Handling technologies - include threshers, grain cleaners, dryers, processing machinery, tractors, ploughs and tillers. All these contribute to post-harvest loss management and outcome.

Technical assistance to financial institutions, SMEs and microprocessors should be included in any fund targeting these to speed up access and outreach. Capacity strengthening is critical.

To improve efficiency in agricultural value chains, the whole value chain must be considered holistically for sustainability; and not just focus on one link in the system. All stakeholders must be involved through a

participatory, inter-disciplinary and gender-sensitive approach in the activities from seed variety selection and cultivation, post-harvest, value addition, and marketing. Farmers should be given a choice to select crop varieties that work for them.

Engagement of appropriate national apex institutions (research institutions, non-state actors, civil society, government and private sector) is essential to promote scaling up and replication of success. The involvement of these stakeholders has the potential to pull together public-private partnerships, develop value chains, coordinate public and private sector financing and achieve a critical mass of commercial agriculture and agribusiness.

The Yieldwise results should show that reduction of food loss, at harvest, during on-farm handling and in local trading, in SSA, requires emphasis and investment that enhances the central role of SMEs. At the farm level, this requires alignment of investment of the public and private sectors with respect to enhancing the capacity of smallholder farmers by building of capacity, knowledge and deployment of the extension service.

However, it is very important that the extension service is focused on technical and business demonstrations, and is led by the SMEs who supply PHH technologies, for sale and for hire. This is because the YWS initiative in Tanzania proved that, training and extension which are integrated with demonstrations of technologies by the suppliers (for sale and/or hire), were the most effective in driving adoption by farmers. To enable this, public funded initiatives should invest to enable the SMEs to leapfrog and commercialize modern high-performance technologies and associated practices for primary PHH.

Another key factor driving adoption is ability to measure and quantify the value of the loss. More priority should be given to digital technologies that enable farmers to measure and establish metrics and the economic loss associated with food loss at the farm level. At the post-farm-level handling, processing, transportation and trading up to the retailing stage, SMEs-led reduction of food loss requires agri-food policies and incentives that catalyze investment in modern technologies, by those SMEs themselves. The focus should be at reducing the cost of investment, especially in high-tech systems for handling, processing and transportation of food.

As populations rise and demand for food increases, lessons from projects like YieldWise will be invaluable in preventing post-harvest losses and boosting food