

Farmers' adoption of improved storage technologies contribute to increased food security and income

With the support of the Swiss Agency for Development and Cooperation (SDC), the Food and Agriculture Organization of the United Nations (FAO) assists farmers in Ethiopia to adopt improved technologies to reduce postharvest losses of grain. Farmers received awareness training on postharvest handling of grain and on improved technology for grain storage – including metal silo and hermetic bags.

Articles and pictures by Tamiru Legesse¹

Smallholder farmers in Ethiopia play a huge and growing role in farming and food production. Yet they often have limited access to the resources and services they need. As an example, farmers are mostly using poor postharvest handling technologies and are losing up to 30% of their grain along the postharvest activities.

“The loss happening in the storage is painful for us taking into consideration the money and labor invested in agricultural production. Traditional storages do not last long, and I have to apply pesticide at least three time a year. It is sometimes ineffective in controlling pests. I used to sell most of my grain soon after the harvest when the price was at its lowest to avoid loss to weevil” said Amarech Heliso, a female farmer in Southern Regional state of Ethiopia.



“Wheat and maize stored in traditional storage does not last more than three months; they are eaten by weevil,” said Demeke Mishomu, a farmer in Sindus kebele in Soro Wereda. *“I had to buy wheat and maize seeds from a local*

market as my grain is not suitable for seed. Not only the grain but the traditional storage itself perishes gradually. The use of pesticides sometimes does not work.”

Increasing local access to improved storages

Over 10,000 farmers in 14 districts of Amhara, Oromia, SNNPR and Tigray regions benefited from a project aiming at reducing food losses through improved postharvest management. With the support of the Swiss Agency for Development Cooperation (SDC), the Food and Agriculture Organization of the United Nations (FAO) assists farmers in Ethiopia to adopt improved technologies to reduce postharvest losses of grain.

Farmers received awareness training on postharvest handling of grain. The project has also introduced improved technology for grain storage – including metal silo and hermetic bags. Farmers acquire a metal silo through locally organized youth artisan groups. Since the introduction of these technologies, farmers' demand for using these technologies has increased significantly. For instance, in Soro, Derashe and Loka Abaya districts alone, 118 metal silos were purchased by farmers.

Adopting of postharvest technology

“A metal silo and hermetic bags keep grain quality fresh for more than a year. I can sell the grain when the price is at its best. People from other neighboring districts come and buy our

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grain for seed and food as the quality remains good in the storages,” says Amarech, one of the beneficiary farmers who received one silo from the project and purchased three more by herself. She purchased through *iqub*, a social support system she established with her neighbors.

“Now I don’t have to buy seeds; I use clean grain from my metal silos,” Demeke said, adding that “we don’t use pesticide. We eat safe food free from pesticide and spoilage.” Demeke was also given one metal silo from the project and purchased two additional ones. He shares what he learned from the project to other non-project participants on the importance of using improved grain storage. He also brings hermetic bags from a farmers’ cooperative and sells to local farmers.

“I recently sold 32 quintals of maize for ETB 27200. But had it been during the best time, I would sell for 38400,” said Haileyesus Kuwitamo, 37 years old and a father of five who grows maize, sorghum and *teff* in Argoba community. He harvests about 60 quintals of maize per year in two seasons. Weevil is the main enemy of maize in his village. The project supported him with one metal silo three years ago. Looking into its benefit, he recently purchased a 10-quintal capacity metal silo. “I sell to local farmers for seed – the quality remains good. I need to buy more metal silos in the future to store most of my produce, so that I can sell when I can make the best price,” he added.



Tseganesh Mathewos, 30-year-old mother of six, grows wheat and *teff* in Wosheba Kebele in Soro *wereda*. She is not a direct project participant, she said, “I heard about the benefits of a metals silo and hermetic bags from a local agriculture extension worker. I now sell for a better price, eat clean food, make good income and use clean seed for planting.”

Metal silo as a business model

Postharvest experts at local Bureaus of Agriculture provide training on postharvest management and the required quality assurance inspection of the metal silo, as well as facilitate purchase of hermetic bag through a farmers cooperative. As part of the project, youth artisans were organized, trained and equipped with the required equipment to produce and sell metal silos to local farmers in 14 districts in the project area.



“Farmers are highly motivated to acquire improved storages,” said Mohamed, Head of Maira Artisans Youth group in Gedole town in Derashe *wereda*. His group has recently received orders of 65 metal silos from local farmers. He added, “The demand for big capacity metal silo is growing. Recently 18 farmers ordered from Argoba community alone.” A local government provided space for the workshop and FAO gave them the required training to make metal silos. The young artisans are energetic to grow as a business and committed to serving their communities.