

Africa RISING Early Wins Project Proposal

CIMMYT, 16 April 2012

Improved postharvest technologies for promoting food storage, processing and household nutrition in Tanzania

A joint proposal by IITA and CIMMYT (CIMMYT is a lead center)

Section A: Justification

According to FtF-Tanzania, in addition to the low farm outputs in Tanzania, as much as 40% of each harvest is lost because of lack of good storage, processing and transport systems (<http://blog.usaid.gov/2011/04/feed-the-future-initiative-in-tanzania-%E2%80%93-a-sustainable-agricultural-and-food-security-approach/>).. Agricultural intensification projects aim at identifying best practices and innovative arrangements for increasing agricultural productivity in ways that improve income and nutrition of farm households.

However, an increase in land productivity without corresponding increases in storage, processing and preparation of nutritious foods from the excess harvest may heighten postharvest losses at a greater magnitude than 40%. Therefore, there is debate whether or not agricultural intensification will improve or worsen food insecurity and poverty of households who lack the capacity to preserve excess production; majority of smallholder are in this category. A possible higher cost of intensification and less revenue caused by higher postharvest losses may further aggravate poverty. Hence, improving the capacity of smallholders' to process and store farm outputs and also produce nutrient-dense foods for household consumption is a precondition for reducing poverty, hunger and malnutrition among intensifying farming communities.

This proposal focuses on adding value to Africa RISING through knowledge and institutional innovations that increase food and nutritional security of the poor and vulnerable groups in FTF sites. The approach will include developing the value chains for priority crops within a diverse farming system by enhancing the rural agro-processing sector and building the capacity of farmers, mostly women, to produce nutritious food for home consumption and for the market. Collaboration among the participating CG centers, U.S. universities, national nutrition agencies and agricultural research and training institutions in Tanzania, will promote future research and capacity building in postharvest loss prevention, food processing, storage, and household nutrition.

Section B: Objectives, Outputs and Activities

Objective 1. Improve scientific knowledge for developing strategies that will expand agro-processing sector

Outputs and Activities:

Output 1: Factors that contribute to high postharvest losses and general food insecurity in project areas understood and strategies for expanding agro-processing sector suggested.

Activity 1.1: Undertake extensive assessment of factors contributing to high postharvest losses and how to mitigate them;

Activity 1.2. Estimate and validate the economic profitability of improved postharvest technologies

Activity 1.3. Carry out on-farm evaluation of improved postharvest technologies including metal silos and super grain bags with men and women farmers for enhanced adoption of technologies

Objective 2. Improve post-harvest storage and food processing knowledge of households

Output 2: Appropriate post-harvest handling technologies and processing techniques demonstrated and promoted

Activity 2.1: Establish village-level pilot processing centers for processing, storage and preservation of grains, legumes and horticulture crops and livestock products;

Activity 2.2. Enhance local production capacity of the metal silos in order to reach more farmers through tailor made training and facilitating private sector in marketing

Objective 3. Create awareness on postharvest loss reducing technologies among stakeholders

Output 3: Awareness created and information on postharvest technologies generated and disseminated, networking among stakeholders created

Activity 3.1. Train farmers/households in novel processing and preservation of locally produced grains, legumes, horticulture crops

Activity 3.2. Prepare and disseminate relevant training and information using relevant avenues such as local radio, television and newsletters

Activity 3.3. Conduct national workshops to create policy awareness on improved postharvest technologies

Section C: Specific locations, intermediate and ultimate beneficiaries

The project will be implemented in Manyara, Dodoma and Arusha, Tanzania. The immediate beneficiaries include the national research programs who will evaluate tested options towards the identification of best-bet interventions and the governmental and non-governmental dissemination partners that will take those interventions to scale. The ultimate beneficiaries include about 5000 smallholder farmers and grain retailers that will be exposed to best interventions to implement these.

Section D: Timeline

Activity	Mar	Apr	May	Jun	Jul	Aug	Sept
1.1 Undertake assessment of factors contributing to high postharvest losses and how to mitigate them							
1.2 Estimate and validate the economic							

profitability of improved postharvest technologies							
1.3 On-farm evaluation of improved postharvest technologies including metal silos and super grain bags with men and women farmers for enhanced adoption of technologies							
2.1 Establish village-level pilot processing & community training centers for processing, storage and preservation of grains, legumes and horticulture crops and livestock products;							
2.2 Enhance local production capacity of the metal silos in order to reach more farmers through tailor made training and facilitating private sector in marketing							
3.1 Train farmers/households in novel processing and preservation of locally produced grains, legumes, horticulture crops							
3.2 Prepare and disseminate relevant training and information using relevant avenues such as local radio, television and newsletters							
3.3 Conduct national workshops to create policy awareness on improved postharvest technologies							

Section E: Partnership

CIMMYT and IITA will be the co-leaders, supported by other partners as detailed in below table:

Institute [name]	Role
CIMMYT [Tadele Tefera]	Lead project implementation, report to the Donor, design implementation plan, networking partners, and summarize all documentation into specific templates, accessible to partners
IITA (Abass Adebayo)	Lead project implementation, design implementation plan, networking partners, and summarize all documentation into specific templates, accessible to partners
NARS (Peter Matawo, Chaeles Makalanga, SARI) & Universities (Peter Mamiro SUA)	Assist in joint project site selection, collecting information related to the postharvest technologies demonstrated

Zonal Department of Agriculture	Assist in joint project site selection, selecting farmers for on-station demonstration and food processing training, collect the required information and dissemination tools specific using standard templates; organize meetings with partners
NGOs (World Vision International, Tanzania Office)	Assist in joint project site selection, in training local manufactures of silos and farm households on food processing, selecting farmers for on-station demonstration

Section F: Illustrative list of personnel

Dr Peter Mamiro, Food Scientist (SUA)

Dr Peter Matowo, Selian Agricultural Research Institute (SARI)

Dr Tadele Tefera, Postharvest Entomologist (CIMMYT)

Dr Abass Adebayo, Food Technologist (IITA)

Dr Hugo De Groote, Agricultural Economist (CIMMYT)

Mr. Bamidele Alenkhe Agro-processing Engineer (IITA)

Total	89,069	82,150	171,219	
2% CGIAR system cost	1,781	0	1,781	
Total Grant	90,850	82,150	173,000	