

Analysis of smallholder farmer postharvest pest management systems in Uganda - challenges and opportunities

Talwana, H.L.*¹, Muyinza, H.², Otim, M.H.², Kyamanywa, S.¹, Agona, A.²

¹College of Agricultural and Environmental Sciences, Makerere University. P.O. Box 7062 Kampala, Uganda

²National Agricultural Research Organization (NARO). P. O. Box 295, Entebbe, Uganda

*Corresponding author, Email: haltalwana@caes.mak.ac.ug

#Presenting author, Email: haltalwana@caes.mak.ac.ug

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Abstract

Crop postharvest losses in Uganda have been estimated at 5 – 15% for cereals and legumes, 20-25% for roots and tubers and over 35% for fruits and vegetables, and these losses are frustrating efforts to achieving food security, reduction in poverty and creation of wealth. The losses are due to arthropod pests (insects and mites) – 30%, micro flora (fungi and bacteria) – 5%, vertebrates (rodents and birds) – 32% and man (action or inactivity) – 7%. Farmers rely on an array of techniques and practices in managing pests including use of botanicals (i.e. tobacco, *Tephrosia*, *Tagetes*); physical methods (i.e. solarisation, parboiling, salting); solar and hybrid dryers for fruit and vegetables; drying structures (i.e. biomass-heated, racks/platform, cribs, mats); storage structures (e.g. brick silos, improved traditional granaries); pit and clamp for fresh sweet potato; moistened media (sawdust) for fresh cassava; shellers and threshers, graters and chippers (root and tubers); and local baking ovens. However, these have changed along the overall agricultural system; with changes driven by population growth, climate change, and socio-economic (including agricultural) policy changes. The changes in postharvest storage and pest management strategies as influenced by changes in agricultural systems in Uganda are discussed, and the research for development (R4D) opportunities for improvement and collaboration identified.

Keywords: postharvest losses and management, research for development opportunities, Uganda