

Assessment of genetic diversity, farmer participatory breeding, and sustainable conservation of Eastern African sweetpotato

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Abstract. Sweetpotato [*Ipomoea batatas* (L.) Lam] is one of the most important crops in densely populated East Africa. The crop is vital to small-scale farmers with limited land, labour and capital. A project funded by the Collaborative Crop Research Programme (CCRP) of the McKnight Foundation was initiated from July 2002 to run for four years. Project partners are the Kenya Agricultural Research Institute (KARI), Louisiana State University, The International Potato Center (CIP), Austrian Research Centers-Seibersdorf and the Root and Tuber crops programme of Tanzania. This project aims at improving East African sweetpotato productivity and sustainability through collaborative and participatory research on germplasm conservation, crop improvement, and development of technology for planting material production. So far a total of 679 sweetpotato germplasm accessions have been collected in eight regions of Kenya and Tanzania. Focussed Participatory Rural Appraisals to collect indigenous technical knowledge on sweetpotato germplasm have been conducted in 25 communities in six sweetpotato production regions. Twenty high dry matter and β -carotene rich sweetpotato clones were transferred from CIP-Lima to four SSA countries. A publicly accessible website www.viaitamum.org has been established to support the project, enable online access of germplasm records, as well as share information with the general public. A publicly available, license-and royalty-free, web based GIS viewer for use on the web site has been adapted. Six local orange and yellow fleshed varieties were virus-tested and are being cleaned and multiplied for dissemination to farmers. A number of partner NGOs and CBOs have established field seed multiplication nurseries for distribution as co-funded activities. KARI and LZARDI have also established basic seed nurseries.