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# Assessment of the potential of orange-fleshed sweetpotato for food security and nutrition in the pastoral communities of Karamoja, Uganda

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**Abstract**

As the frequency of droughts and floods increase due to climate change, there is need for communities to build resilience through adoption of crops and varieties that are not only adapted to these stressors but are also nutritious. Orange-fleshed sweetpotato (OFSP) is a rich source of provitamin A beta-carotene and has been shown to thrive in harsh climatic conditions. The crop is therefore potentially important for food and nutrition security in fragile environments where climatic shocks and hidden hunger are prevalent. This study assesses the early adoption of OFSP among the pastoral communities in Karamoja sub-region, and its potential as a home-grown solution for use in humanitarian interventions on food security and nutrition. Mixed methods approach was used, where 138 randomly sampled respondents from project areas in Moroto and Kotido were surveyed, and additional yield data collected from 39 sweetpotato plots in these districts. Descriptive statistics were generated from this data. Qualitative methods used were field observations during monitoring of field activities and stakeholder interviews of staff implementing activities in the districts. Findings from the baseline indicate that before introduction of OFSP, less than 10 % of the farmers were growing sweetpotato in the districts. There was willingness to adopt OFSP as a food security crop in the districts because of its quick maturity (3–4 months), high yields and for complementing sorghum, the main food crop in the area. Vine survival of OFSP was very high despite the prolonged dry seasons that the crop underwent after its introduction in the area. A yield of 6 t/ha was obtained, significantly above the national average of 4.2 t/ha. Households, in addition to consuming fresh OFSP roots, consumed sweetpotato leaves, an observation that was unique in Karamoja than other project areas in Uganda. The results therefore show that there are high adoption rates of OFSP in fragile environments and several options of utilising the crop. The various ways of utilisation make OFSP a very important food security and nutritious crop for fragile environments and integrating it in communities living in these environments is an efficient and cost-effective way of addressing food insecurity and malnutrition therein.

**Keywords:** adoption, cost-effectiveness, fragile environments, nutrition security, resilience

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