

Triple S method: assuring availability of sweetpotato planting material in Northern Uganda

Namanda S.¹, Mwanga R.¹, Kyalo G.¹, Low J.², Musoke, C.¹, Ball A.³ & Magezi, S.³



Introduction

Lack of sweetpotato planting material at the on-set of rains greatly compromises early plantings potential food security strategy. Normally, northern Uganda experiences about 4 months (mid-Nov – mid-March) of dry period during which sweetpotato planting material completely desiccates (Namanda et al., 2012). 53 percent of households in northern Uganda experience serious food shortage during the months of April – July months every year (MAAIF 2011). Although many would prefer planting sweetpotato, an early maturing crop for an early food supply within the food gap period, many fail because of lack of planting material (Namanda and Gibson 2015).

International Potato Center (CIP) in collaboration with Natural Resources Institute (NRI) together with farmers and researchers in Uganda and Tanzania developed the Storage in Sand and Sprouting (Triple “S”) method between 2007 – 2011 for conserving and multiplying sweetpotato planting material. Instead of farmers struggling to keep vines alive during the prolonged dry season, small or medium but healthy roots are stored in dry, cool, sand in a container for sprouting. Sprouted roots are then planted in root beds with minimal irrigation. To date the method is being scaled-up and further validated in different countries in Africa

Objective

Promote the use of the Triple S technology at scale through building a cadre of trained extension personnel and monitor adoption.

Method

- Community-based extension cadres trained
- Farmer groups identified, sensitised and trained
- Triple S demonstrations conducted
- Data collected and analysed
- Participatory reviews on method held



Photo 1: Storing roots in Sand.



Photo 2: Sprouted roots for planting in root bed



Photo 3: Opaya Farmer Group discussing the results from their Triple S trial. Credit: S. Namanda

Results

On average each seed root produced more than 60 accumulated cuttings at the second serial harvesting. Thus, a household growing 0.1 Ha with a total vine demand of 3,000 cuttings or 3 bags needs to store 40 - 60 seed roots only. Whereas, the 3,000 cuttings would cost only UGX 23,000, most the farmers fail to plant because they cannot afford the cost of planting material (Namanda et al., 2012). NB: Exchange rate (2014) was 1US\$ = 2,500

Factors to consider:

Roots: variety, size, age, dry matter influence the success of Triple S.

Storage containers: sacks, basins can be used

Storage environment: grass thatched roofs are cooler than iron sheets

Handling practices: stalk removal, and curing influence longevity of storage period

Conclusions

The “3S” seed system approach is simple to use, saves labour and requires limited resources which are locally available. Farmers are easily able to adopt it to produce timely sweetpotato planting material for early planting. Promotion of this method contributes to enhanced food security especially in pro-longed dry areas. The simplicity of the method and enthusiasm by both farmers and researchers has generated ideas for further research and improvement.

References

Namanda, S., Amour, R., Gibson, R.W. 2012. The Triple S Method of Producing Sweet Potato Planting Material for Areas in Africa with Long Dry Seasons. In: Journal of Crop Improvement, 00:1–18.