

Lessons learned from scaling the Triple S technology In Uganda

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POTENTIAL: WHAT IS TRIPLE S METHOD

Refers to: **S**toring sweetpotato roots in **S**and and **S**prouting

Objective: Initiate development and growth of healthy shoots for timely production of clean planting material

Why Roots? Sweetpotato Plant part Able to Survive desiccation, develop shoots that grow into vines after period of dormancy during long dry season



Factors contributing to successful introduction of the technology

Working Partnerships

E.g. Strong HarvestPlus-CIP-World Vision-Farmer-NARO

- HarvestPlus provided overall coordination and implementation of the project
- CIP led implementation of seed systems research, technical backstopping and training of partners staff and development of protocols (Source of immediate reliable information for use)
- World vision led dissemination and organised beneficiaries and trained farmers
- NARO continued to assess and develop of new vars

Participation and capacity building of partners for ownership of the technology

- Beneficiaries should have the expectation outlined
- What is the problem? Do the beneficiaries know that it is their problem? Etc.

Thus, the initial meetings are very crucial:

- Get key people to this meeting. partner staff, extensionists and farmer group leaders
- The meetings should allow the beneficiaries to conceptualise the research and development idea, create participatory interest to demonstrate

SENSITISE, DEMONSTRATE, SHARE RESULTS, AND PROVIDE TECHNICAL BACKSTOPPING, DEMAND ACCOUNTABILITY, SHOWCASE THE PRACTICES

SENSITISATION AND ORIENTATION MEETINGS

Sensitisation and orientation should build on their identified technological gaps:

- Tactfully Expose their fragile food and nutrition security status based on facts e.g. working from Jan to Dec and you do not have enough to eat! WHY?
- Not only Appreciate their crop choices But show how the new approach would strengthen the entire food production and nutrition
- Through the interactions identify key positive concept in line with the technology being promoted e.g. Information on The Triple S calendar existed but lacked useful interpretation EVEN the Triple S method existed but lacked improvement
- This was important cornerstone
- THE CALENDAR IS A GOOD PROMOTIONAL MATERIAL BUT INVOLVE THEM

DEMONSTRATIONS

I do not think you need several seasons of demonstrations to convince the farmer (1-2 demonstrations should be enough)

However, subsequent trials should be geared towards addressing the emerging issues that should further improve the technology

Involve them to collect the key data e.g. number of vines harvested and quickly share the results



SHARE RESULTS



SHARE RESULTS





How do we improve on this commercial ventures using Triple S approach?



% total number of respondents on suitability of Triple S method under different production constraints

Response	Different production constraints		
	Drought areas	Roaming animals	Many thieves
Very poor	0	6	10
Poor	0	10	20
Fair	3	27	20
Good	40	47	47
Excellent	57	10	3
Total (N= 30)	100	100	100

Source: Early adoption of Triple S study in Uganda 2017 (unpublished)

Triple S highly appreciated for producing planting material in areas with long dry season

Number of cuttings harvested during different harvest lots in different implementation areas

District	Number of 30-cm long cuttings per root			
	Harvest Lot 1	Harvest Lot 2	Harvest Lot 3	Harvest Lot 4
Oyam	24	33	30	11
Gulu	36	73	88	33
Omoro	16	38	26	16
Lira	24	33	30	11
Kole	31	56	84	18
Average	26	47	52	18

Source: Early adoption of Triple S study in Uganda 2017 (unpublished)

Generally the results show that after third harvestlot the number of cuttings significantly drop

Farmers responses on suitability of different containers for storage

Response	Percent response		
	Basin	Boxes	Bags
Very poor	0	0	26.7
Poor	0	3.3	53.3
Fair	3.3	33.3	20
Good	50	46.7	0
Excellent	46.7	16.7	0
Total (N= 30)	100	100	100

Source: Early adoption of Triple S study in Uganda 2017 (unpublished)

Storing using basins highly appreciated compared to other options

Recommendations for adaptive research

Maintain the happiness and hope we need to do continue with the investigation into the efficiency and applicability of the 3S method



a) More work on recommended root size. Although Ray 2011 indicated there is no difference in number of cuttings produced by different root sizes, (Agili 2017 unpublished) reported that bigger roots produce more material. The key reason for 80 % of farmer preferred small sized roots is because they keep many. No farmer mentioned the effect of root size on numbers of roots produced.

b) Other Issues raised by farmers include e.g. Although 30% indicated they have never kept roots under Mabati houses, and 100% reported that grass thatched is the best for storing roots: There are farmers in long dry areas who cannot grass for construction also method is viable for urban gardening where there are no grass thatched house.

Thus method, need to precisely describe these storage conditions including actual temperature and RH. Findings may guide on building storage structures without grass e.g. timber.

c) How do we build on the growing commercialisation drive of both vines and roots - Psychologically raises the Hope for food and incomes.

Recommendations (Scaling up)

Strengthen technical messages applied

Notably farmers answers on different aspects were not specific and complete

e.g. wrapping paper absorbs water

SASHA II has supported development of simple technical communication tools including manuals, posters, handouts, calendars

Besides printing, there is need for demonstrations and training partners' staff and emerging farmer trainers on application

Recommendations

Strengthen agronomic skills and record keeping

- Farmers spacing
- After how seasons should the farmers come back to the same place? Note that pockets of these potential areas are limited? Any soil amendments? How should early sprouting be inhibited rather than de-sprouting? What is the effect of de-sprouting on vines produced? Define the duration between de-sprouting and re-sprouting for different varieties?
- What is the appropriate spacing for producing seed roots? Currently all farmers selected from aware crop? Cant a small plot at high density planting work
- The range of average numbers of cuttings per was very variable! What should we fix?

Recommendations

Cross-crop-cross technical approaches

- Sweetpotato farmers think the Potato Ambient stores might work for them
- Even potato farmer have discovered that extended storage in ambient stores produces influences good sprouting for seed
- May be after 4 lots of harvest the remaining materials could be harvested for silage making
- How do we convince the environmentalists that Triple S complements efficient wetland management and does not significantly interfere with wetland ecology. Need to bring on board policy makers
- After how lots of cuttings harvested removed existing growth which is normally discarded. This should go for silage?
Improves on efficiency

Emerging opportunities

- Climate change: Dry periods becoming longer and rain increasingly becoming unreliable. We need to improve on availability of planting material for early planting
- Resilience and yield comparative advantage: Yields of other crops especially cereals and even cassava collapsing very fast
- Increasing appreciation of OFSP varieties as a nutritional strategy
- Increasing commercialisation of both vines and roots - Psychologically raises the hope for food and incomes
- Potential for scale out by partners
 - Mercy corps and FAO
 - Recommended for other areas with similar dry periods including Kamwenge and Dokolo
- Increasing availability of training and reference materials, and farmer trainers

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