

Developing and Disseminating Biofortified Crops Project

Update on Scaling Up in Uganda

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Acknowledgements



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Centre

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Science, Food Science)

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Sweet Potato Program

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Caritas

CEDO

VEDCO

Samaritan's Purse

Africa 2000 Network UG

Millennium Village Project

Healthy Child Uganda

Farm Radio International



Nutrition-led Agriculture "From Lab to Plate"

- Scaling up with lighter integrated intervention, greater focus on crop diffusion
- 225,000 farming households with OSP and high iron beans (reaching over 1.3 million)

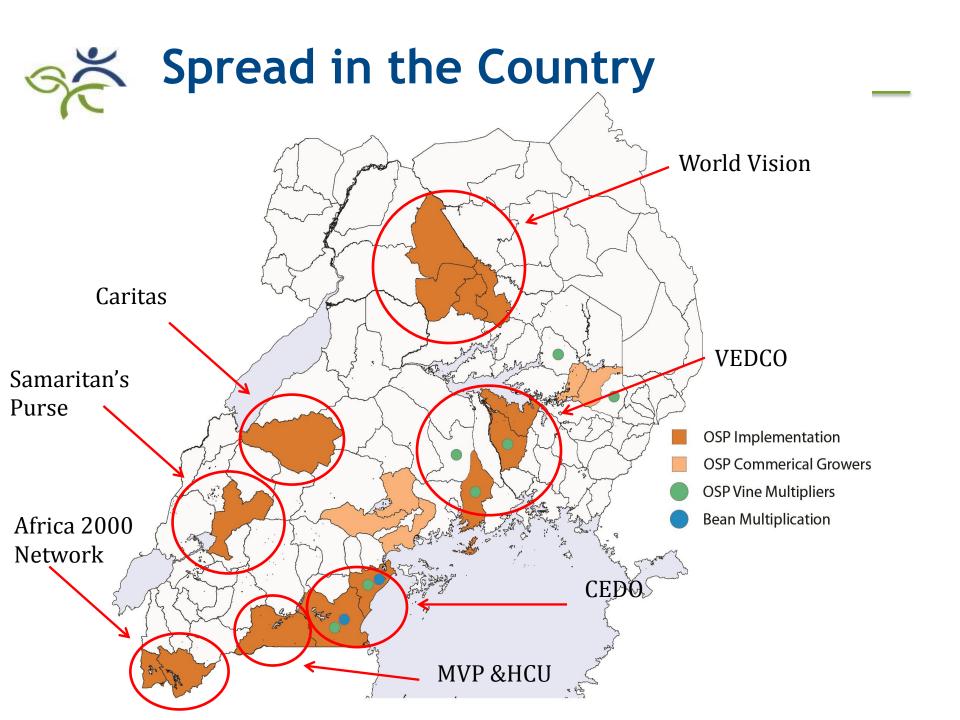


Better Crops, Better Nutrition





Adding iron through beans – more micronutrients ...





Updates



Radio Mini Drama and Poll Questions

Commercialised Farmers

Clean Vines



My Children - Radio Mini Drama

(Farm Radio International)



"a heady mix of love, domestic strife and... orange sweet potato..."

30 episodes6 languages13 radio stations

*PRC campaign in 2 stations under Gates funding

TracFM

- Poll question attached to each Drama episode
- General interest questions and real time consumer feedback questions





Commercial Growers - John Ekanya





Support through

- Clean Materials
- Deliberate linking to traders and marketing
- Doing promotions
- Helping smooth bottlenecks

Aiming for Urban Markets ...







Supporting seed systems: SPVD and decreased yields





Delivering Quality Declared Vines





In vitro culture virus elimination and multiplication



Mother stock multiplication in the screen house



Multiplication sites in isolated fields in districts



Multiplication sites in farmers fields at sub county level



Clean sweet potato vines in farmers fields



Lab Intervention: Tissue Culture





Makerere University – Crop Science



Virus Free Vine Production in a Protected environment







BioCrops Ltd – private company



Clean Vines to Secondary VMs



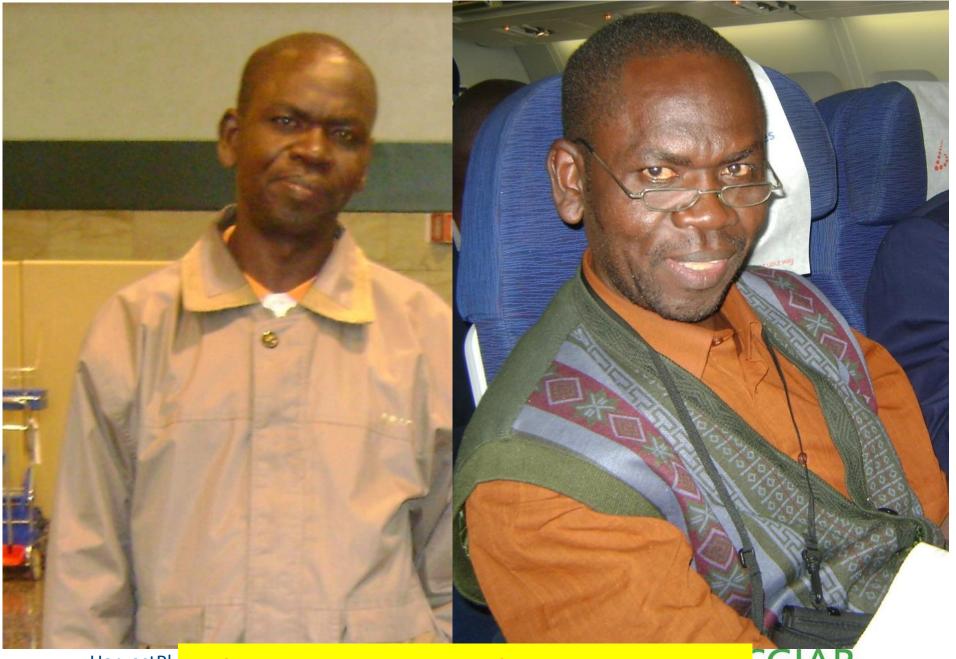




Tertiary Vine Multipliers



- Predominantly focused on sale of vines.
- Selling roots to local markets and schools



The Late Eugene Ekinyu, SOSPPA

Promoting application of the Triple S" method in northern Uganda

Namanda S., Mwanga R., Kyalo R., Low J. & Musoke C.





Objective

Promote the use of Triple S technology at scale and build a cadre of trained extension personal to monitor its adoption

Approach

- Identified, sensitised, trained community resource persons (CRPs) and extension workers in 4 selected districts in northern Uganda
- Conducted Triple S demonstrations



Positive selection of seed roots





Results:

Mean # of 30-cm long cuttings harvested

| District | Site | Triple S | Previous fields | Lsd _{0.05} |
|---------------------|----------|----------|-----------------|---------------------|
| Gulu | Acaye | 39.7 | 2.9 | |
| Gulu | Minakulu | 19.3 | 0.5 | |
| Oyam | Akello | 39.3 | 1.3 | 8.11 ^b |
| Oyam | Renge | 35.8 | 0.7 | |
| Lira/Kole | Akoi | 44.9 | 0.8 | |
| Lira/Kole | Petwa | 86.7 | 5.7 | |
| Lsd _{0.05} | | 4.68ª | | |

^a Separation of means between sites, and ^b separation of means between sources of planting material





Emerging issues

Planting a crop for seed root production

Curing roots before storage

Using roots coming from clean (tissue culture material)



Comparing yield performance of tissue culture and farmer own sources of vines

Namanda S., Mwanga R., Kyalo R., Low J. & Musoke C

Objectives

- ☐ Farmers to appreciate the use of clean planting material
- □ Determine how many seasons the clean material can be re-cycled on farmers fields



Demonstration design

| Season | Biocrops | Biocrops re-cycled | Farmer source | |
|--------|----------------|-------------------------|-----------------|--|
| 2012b | Biocrops lot 1 | - | Existing | |
| 2013a | Biocrops lot 2 | Biocrops lot 1: Cycle 1 | Farmer 2012b | |
| 2013b | Biocrops lot 3 | Biocrops lot 1: Cycle 2 | Farma ar 2040 a | |
| | | Biocrops lot 2: Cycle 1 | Farmer 2013a | |
| 2014a | - | Biocrops lot 1: Cycle 3 | | |
| | | Biocrops lot 2: Cycle 2 | Farmer 2013b | |
| | | Biocrops lot 3: Cycle 1 | | |

Ejumula and Kabode varieties

Mean SPVD infection levels & root yield (tons/Ha) using different source of vines for season 2013a

| | Source | Lsd _{0.05} | | |
|------------------|----------|---------------------|--------|-----|
| Attribute | Biocrops | B-cycle 1 | Farmer | |
| SPVD inf. score | 1.0 | 1.4 | 2.9 | 0.1 |
| Mkt root yield | 4.2 | 2.0 | 1.5 | 1.3 |
| Total root yield | 5.5 | 3.5 | 2.2 | 1.3 |

NB: SPVD score on a scale of 1 - 9: 1 = no symptoms

and 9 = severe

Effects of curing and storage options on the shelf life of harvested orange sweetpotato roots in Uganda

Kyalo, G., Mwanga, R., Namanda S. & Low, J.

Objective:

 Prolong the shelf life of stored roots without compromising the organoleptic characteristics

Progress:

Poster will be presented by Gerald at ACSS conference

...as simple as a sweet potato







