Decentralised Vine Multipliers: Practice after Project?

Experiences from Marando Bora, Lake Zone Tanzania

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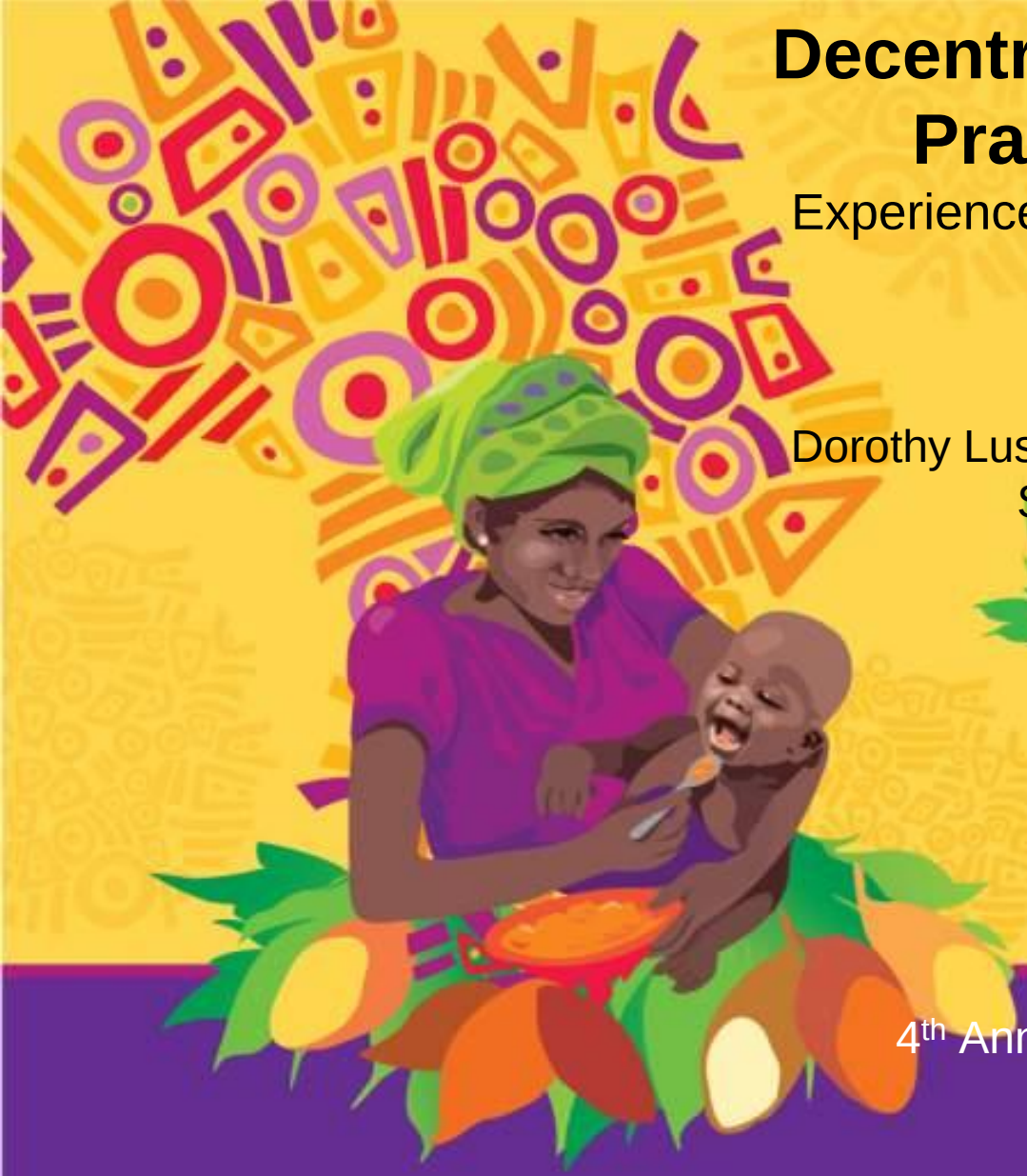

SASHA
Sweetpotato Action for Security and Health in Africa

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Marando Bora: context

Lake Zone, Tanzania

- 15m inhabitants (1/3 of Tz. Population)
- Sweetpotato 2nd or 3rd staple after: maize, rice, cassava, banana
- Livestock, fishing
- Climatic unpredictability affecting maize & rice production
- CBSD and BBW affecting cassava and banana

Dissemination Models

Two Models:

- Trained Decentralized Vine Multipliers (DVMs):
  - 88 DVMs multiplied & distributed vines to neigbouring farmers (~10-12km) targeted through a voucher system. DVMs source of knowledge for farmers (12 districts)
- Mass multiplication of planting material at centralised sites:
  - where vines were then harvested & transported to central points for mass dissemination. (4 districts)
- Reached 110,000 farmers
  - 74% women, between December 2010 – June 2012
- Research to compare cost-effectiveness of models & initial adoption (endline survey)

Hardening and primary multiplication

1. Pre basic seeds: TC plantlets from KEPHIS & TC Lab

2. Hardening: Maruku

3. Primary multiplication: Maruku

Three Tier Multiplication

Primary sites (2): research managed

Secondary sites (2): NGO managed

Tertiary (DVM) sites (88): farmer (group or individual) managed

Challenges during implementation

Technical

- SPVD infection on susceptible varieties: Ejumula, Jewel, Ukewere
- Weevil and mite infestation at some sites
- Mataya (wrong identification) and Kiegea (insufficient quantities) not available for dissemination to implementing partners
- Kabode in release pipeline in Tanzania
- Multiplication rates varied by variety, agro-ecology & management

Institutional & coordination

- Timeliness of delivery of Information Education & Communication (IEC) materials
- Harmonizing demand creation activities with actual availability and supply of vines
- Engagement with district councilors for advocacy & support
- Capacity to manage & supervise large number of DVMs
- Coordination among different partners and across different levels
- Short project duration

Decentralised Vine Multipliers: survey

- **Follow up study in March 2013 visited all 88 DVMs:**
  - questionnaire & observation of current multiplication practices
- **Study objectives:**
  - Use of different technologies which had been promoted by the project
  - Feedback on varieties preferred by DVMs and their clients
  - Feedback on participation in the pilot QDPM scheme
  - Whether or not DVMs were continuing and reasons

Preliminary findings:
DVM composition & governance

- **72% of DVMs worked as a group & 28% were individual DVMs**
- **Individual DVMs (n=25): 28% women**
- 940 farmers were members of the group DVMs
  - 51% female; 39% male and 10% youth
- **Group DVMs (n=63): 68% had 50% or more women**
  - 43% groups established prior to project
  - 30% groups registered with Government
  - 87% kept records of vine multiplication & sales
  - **70%**/27% of group chairs were **male**/female
  - **57%**/40% of group secretaries were **male**/female
  - 40%/**55%** of group treasurers were male/**female**
- **Previous experience**
  - 23% of all DVMs were involved in cassava multiplication (GLCI)
  - 18% of all DVMs multiplied & sold sweetpotato vines prior to project

Technology use

- **March 2013: 61 (69%) DVMs multiplying vines for sale or for own use**
- **Multiplication technology:**
  - 34% using rapid multiplication technology (RMT)
  - 61% using conventional spacing for vines ***& roots***
  - 5% using combination
  - Higher % of female vs male majority groups practiced RMT
- **Irrigation use:**
  - 97% irrigated plots; majority with buckets and w/cans
  - 23% used motorized pumps; 12% treadle pumps
- **Fertilizer use:**
  - 87% used organic or inorganic fertilizer during project; 26% continued after project
  - Higher % of female vs male majority groups used fertilizer during & after project

Varietal preferences: DVMs & farmers

- **DVMs most productive variety:**
  - Polista (cleaned up popular local variety): 44%
  - Kabode (improved OFSP): 17%
  - Ukerewe (cleaned up popular local variety): 15%.
- **Farmer feed back:**
  - Polista: more roots & high production, drought tolerant, high DM content, disease resistant, resembles local varieties, palatable, healthy vines, early maturing
  - Kabode: more roots & high production; preferred by children; drought tolerant, attractive colour, high DM content, disease resistant, healthy vines
  - Ukerewe: more roots & high production, palatable, high DM content, early maturing, resembles local varieties hence acceptable,
  - Ejumula: attractive orange colour, palatable,
  - Jewel: more roots and high production, early maturity, attractive orange colour

Knowledge & learning

- **2012: 4-5 visits by extension agent**
- **Most useful advice:**
  - Weeding multiplication beds
  - Bed preparation
  - Rouging to remove diseased plants
- **QDPM inspection visits:** 12% of DVMs had participated in pilot. Reported advantages
  - Production of healthier planting material, free from pests & diseases;
  - Identification of pests & diseases; rouging of diseased plants;
  - Production of marketable vines
- **Interest in continuing inspection visits**
  - Production of healthier & marketable vines
  - Healthy vines produce quality roots

Voucher system

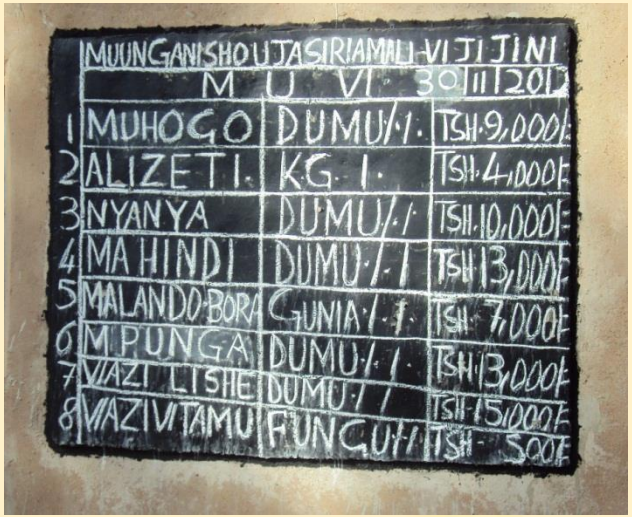
- **DVMs key actors in voucher system**
  - farmers paid 100 Tsh and DVMs reimbursed by project 500 Tsh for 200 cuttings
- **Advertising:**
  - 76% of DVMs had signboards
  - Village meetings, schools, leaflet distribution
  - Radio
- **60% DVMs reported no disadvantages to the voucher system**
  - *"….the system was good because every member was aware of the number of vouchers used so there was not cheating for members"*
- **Main disadvantages**
  - "Farmers not used to buying vines"
  - Late payment or reimbursement for the vouchers
  - Lack of sensitization on the voucher system

Continuation of vine multiplication

- **84% of DVMs stated *intention* to continue**
- **DVMs multiplying in July-December 2012 (post project)**
  - 46% group DVMs
  - 42% individual DVMs
  - 44% were multiplying for sale
- **March 2013: 69% were currently multiplying**
- ***Intention and practice depends on***
  - Season (short rains or long rains)
  - Objective: vines only or vines and roots
  - Individual circumstances: need to identify alternative site, family illness, group dynamics

Continuation of vine multiplication

- **Stated reasons for abandoning multiplication:**
  - Wildlife damage; flooding or lack of reliable water source
  - Group dynamics
  - Local tradition and culture not conducive to selling of vines
  - Community thinks that vines should continue to be subsidized or that there is not market for vines without vouchers
- **Stated reasons for continuing:**
  - The need for “marando bora” in the community was high
  - Income generation from roots and vines
    - Project: Tsh 600 for 200 cuttings
    - Post project: Tsh 1,166 for 200 cuttings



Discussion

- **Can DVMs act as link between research & farmers?**
  - Sourcing & *maintaining* clean planting material (net tunnels)
  - Good agricultural practices for vine & *root* production
  - Location for OFT & Demo plots
- **Selection criteria for DVMs?**
  - **Gender**
    - Group DVMs may be more appropriate for women
    - Moral economy – social enterprises
    - Additional funds required to address gender specific constraints
- **Strengthening capacity of DVMs?**
  - Supervision & mentoring
  - Demo plots
  - Labeling of PM important: traceability, DVM visibility, information to farmers
  - QDPM inspection

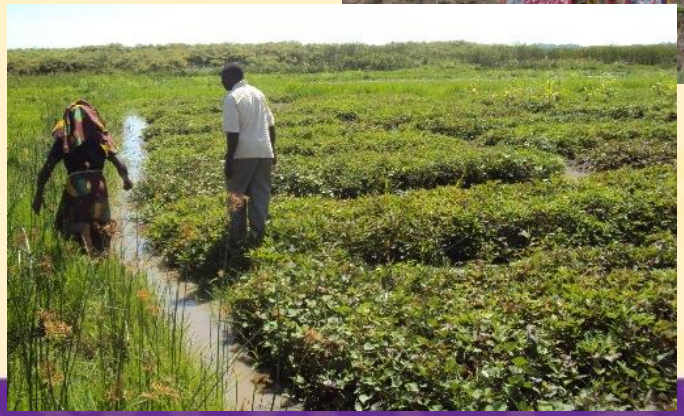
Discussion

- **Piggy backing sweetpotato onto another RTB e.g. cassava?**
  - SP & cassava agro-ecologies not the same
  - SP requires higher water & management requirement
  - Higher supervision from field staff needed
  - Organisation & project paradigm default: resulted in male cassava multipliers vs sweetpotato is a woman's crop

- **Disease identification and management:**
  - Differentiate between pathogen symptoms and nutrient deficiencies
  - Influence of agro-ecology and management levels
  - Identify optimal period to "flush through" clean material (Virus Degeneration Studies)

Discussion

- **Decentralizing & managing diversity**
  - Agro ecologies, market context, DVM objectives
- **Factors influencing sustainability**
  - Group/individual vine enterprises
  - Agro-ecology, seasonal conditions and timing
  - Pipeline of new varieties
  - Market integration (roots) and vine demand
  - Mixed enterprises: vines & roots; sweetpotato & other crops; profit & social objectives



Thank you!

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