



Transfer and Dissemination of Proven and Emerging Agricultural Technologies in Orange-fleshed Sweetpotato

Ndolo, P.J.. M. Akhwale, I. Ememwa,
M.Odongo and G. Nabiswa



Presented at the RAILS/DONATA Meeting,
KARI HQs, Nairobi, Kenya 16-17 September
2010





Overall Objective: Improved livelihoods and increased economic growth of resource poor farmers in Kenya

Purpose: Enhanced uptake and adoption of orange-fleshed sweetpotato (OFSP) technologies in Kenya

Outputs



- 1. OFSP technologies made available to uptake pathways in Kenya**
- 2. Best bet approaches for scaling up OFSP technologies generated and promoted**
- 3. Capacities for disseminating and scaling up OFSP technologies in the OFSP value chain strengthened**
- 4. Information on OFSP technologies and uptake approaches made available to end users**

Technologies promoted



- ◆ OFSP varieties Ejumula, Kabode, Vita
- ◆ Best agronomic practices (Planting methods, spacing, weeding, planting time)
- ◆ Multiplication of quality planting material (Primary, secondary, tertiary)
- ◆ Vine conservation and disease identification
- ◆ Postharvest processing
- ◆ Marketing



Achievements

Output 1: OFSP technologies made available

- ◆ DONATA project started in Kenya in Nov. 2008
- ◆ Project location-Larger Bungoma and Busia districts
- ◆ Formation of Innovation Platform for Technology Adoption (IPTA)
 - IPTA is a multi-stakeholder platform to access information & knowledge to adapt proven technologies to local settings
 - It is comprised of farmers, agriculture advisory service providers, agri-business actors and researchers
- Two IPTAs were formed-Busia and Bungoma IPTAs

Choice of partners was based on:-

- Previous involvement in sweetpotato activities
- Willingness to participate and adhere to project requirements
- Contribution to segments of the OFSP product value chain



Busia IPTA



Partners	Roles
REFSO	Coordinate activities & stakeholders, mobilize community groups, document activities and outcomes.
ARDAP	Postharvest processing & farmer trainings
Ministry of Agriculture	Assist in technology dissemination, & up-scaling, training
FCI	Marketing and formation of village commercial groups
KARI	Primary multiplication of quality planting material, training, quality control, M&E activities
Farmer representative	Represents interest of the farmers

Bungoma IPTA

Partners	Roles
CREADIS	Coordinate activities, organize and mobilize community groups, document activities and outcomes.
MAHUDE	Coordinate planting material multiplication and postharvest processing
Ministry of Agriculture	Technology dissemination & up-scaling
Sp trader	Marketing and market information
KARI	Fine tuning technologies, PMS & quality control
Farmer representative	Represents interest of the farmers

Multiplication of planting material



- ◆ PMS- established at 5 sites in 2009 and 5 in 2010
- ◆ A total of 20 SMS multiplication sites in 2009 and 21 sites in 2010
- ◆ Cuttings from SMS sites were used to establish TMS sites
- ◆ Area covered with material from SMS sites 105 ha
- ◆ 880 farmers directly participated in planting material multiplication.
- ◆ No of farmers who received cuttings from other farmers 2,600
- ◆ Yields of the new OFSP varieties higher than the check by 15% and has higher beta carotene content by over 50%

Planting material production

Levels	Area seed production (ha)			Number of cuttings(million)		
	2009	2010	Total	2009	2010	Total
PMS	4.8	3.6	8.4	1.44	1.06	2.50
SMS	6.2	9.2	15.4	1.40	2.07	3.50
TMS	45	60	105	10.12	13.50	23.63

Best bet approaches for scaling up of OFSP technologies

The two IPTAs developed approaches to use in upscaling OFSP technologies

Eg-Planting material

Bungoma IPTA

- ✦ PMS of planting material produced by KARI
- ✦ Farmer groups multiplied seed at SMS level
 - In 2009 there were 10 groups with 0.4 ha each of seed and in 2010 new 10 groups.
- ✦ Seeds from SMS distributed to TMS multipliers/producers who are mainly members of the group
- ✦ Each group member gave planting material to at least five people
- ✦ In 2010 Busia IPTA established a 0.6 ha bulking plot in wetlands as a backup.

Approaches-cont.

Busia IPTA

- ⑩ PMS sites under KARI and SMS managed by IPTA partners and paid for by project.
- ⑩ Each partner is assigned to a sub-district
- ⑩ Materials from SMS sites distributed to 5 commercial villages consisting of 25 farmer groups for TMS multiplication
- ⑩ Each farmer group gave cuttings to group members & other farmers



Information on OFSP technologies and uptake approaches made available

- ✦ IPTAs promoted OFSP technologies through agricultural shows, field days organized by the project, MOA and other institutions (4 field days attended by 7700 people)
- ✦ Production and distribution of promotional materials (Leaflets 3 (1500), calendars (500) and fliers (500))
- ✦ Busia IPTA promoted OFSP technologies in urban and rural centres and reached 360 men, 480 women and 160 children
- ✦ IPTA members use meetings organized by administration (chiefs, DOs and DCs) to promote OFSP technologies
- ✦ IPTAs hold meetings to review and plan their activities
- ✦ Baseline study conducted and draft report ready



Capacity strengthening

- ◆ Training of TOTs on production of quality planting material, agronomy, pests and diseases
- ◆ TOTs trained on postharvest processing
- ◆ TOTs in Bungoma trained farmers on postharvest processing
- ◆ Four KARI staff trained on GPS operations
- ◆ Two solar driers, 4 chippers, 4 washers and one baking oven purchased for demonstrations by IPTAs
- ◆ Construction of OFSP processing unit
- ◆ One MSC student being trained at University of Nairobi

Trainings in 2009 & 2010

Category	Number of trainings			Number of participants		
	2009	2010	Total	2009	2010	Total
TOT	4	3	7	53	76	129
Farmers	1	3	4	49	150	199



Lessons learned

- ◆ Cross learning from different partners enhances better understanding of the project and wider distribution the technologies
- ◆ There is improved sharing of information among partners in the value chain
- ◆ Promotion of OFSP technologies enhances uptake of technology
- ◆ Enhanced utilization of OFSP because of the nutritional benefits
- ◆ Prices of OFSP roots are now better than the other varieties in some markets
- ◆ Processed products are being more appreciated by the users
- ◆ Increased interest on OFSP by NGOs working with vulnerable households
- ◆ Provides opportunities for improved household income

Challenges

- Limited funds for M& E
- Narrative and financial reporting not submitted in time
- Some IPTA members not using reporting format & sometimes generalised statements
- Some IPTA members do not write reports
- Frequent transfers of extension staff
- Partners have varying institutional policies
- Competition of land with other food crops

Challenges *cont*

- ◆ Procurement procedures-Difficulty in three quotations for some equipments in the country.
- ◆ Insufficient funds for in-country training of extension staff, no funds allocated directly for training of farmers

THANK YOU

