APPROACHES ENHANCING DISSEMINATION OF OFSP TECHNOLOGIES IN WESTERN KENYA

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1. INTRODUCTION

- Sweetpotato (*Ipomoea batatas*) is grown in many parts of Kenya with minimum inputs
- The Lake Victoria Basin is the main sweetpotato growing area accounting for over 75% of the national production.
- Kenya Agriculture and Livestock Research Organization (KALRO) in collaboration with International Potato Center (CIP) have developed various varieties including white, yellow and orange fleshed (Ndolo et al. 2014).
- Orange Fleshed Sweetpotato (OFSP) is important for both food security and good health because of its provision of vitamin A hence important for combating Vitamin A deficiency in young children under five and expectant mothers.
- Production of OFSP is constrained by inadequate quality seed, poor agronomic practices and general lack of information on the OFSP value chain, among other factors.

Objective

- To disseminate OFSP technologies which will contribute to improved livelihoods and increased economic growth of resource poor smallholder farmers in western Kenya.

2. METHODOLOGY

Project area:

This work was conducted in Kakamega, Bungoma, Busia, Siaya, Kisumu and Migori counties between 2014 and 2016.

Approaches used

- KALRO and CIP collaborated with Anglican Development Services (ADS) in Kakamega, Community Research in Environment and Development Initiatives (CREADIS) in Bungoma, Rural Energy and Food Security Organization (REFSO) in Busia and Siaya, Community Action for Rural Development (CARD) in Migori, Community Rehabilitation and Environmental Protection Programme (CREPP) in Kisumu and Ugunja Community Resource Centre (UCRC) in Siaya.
- These organizations disseminated OFSP technologies in the respective counties.

a) Seed System

Four OFSP varieties; Ejumula, SPK 004, Vitaa and Kabode were used in the project where *three* tier seed multiplication system was adopted. The arrangement put clean seed closer to communities.

- Basic seed of the four varieties was multiplied by research at KALRO-Kakamega.
- Seed sourced from research was multiplied by trained seed growers under secondary seed multiplication
- Seed from secondary seed multipliers went to tertiary level for both seed and root production. .

Figure 1: Basic seed at KALRO Kakamega

b) Dissemination of OFSP technologies in the communities

Through the Innovation Platforms for Technology Adoption (IPTAs), organizations and other members shared information regarding seed and other issues.

> Capacity building of ToTs and farmers in seed, agronomy, crop healthy, and post harvest handling.

> Seed multipliers and root producers got more organized

>Traders, processors and investors came on board as need arose.

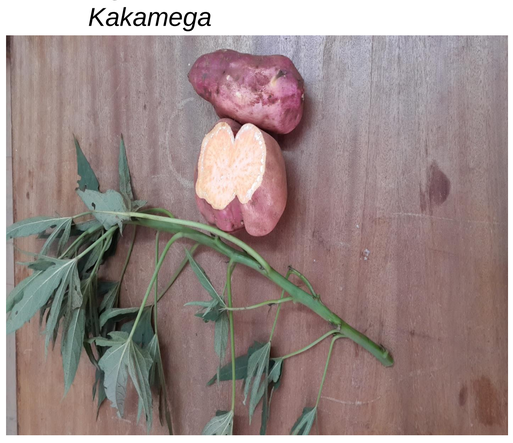

Figure 2: OFSP roots and vine

c) Demonstrations, Field Days and Shows

- Demonstration plots of OFSP varieties were planted at strategic locations
- These acted as training centres
- When the crop matured, field days were held at selected sites.
- Farmers participated in harvesting and evaluated the varieties looking at number of roots, weight and dry matter
- Participants tasted boiled roots and made their preferences on varieties.
- OFSP value added products were exhibited.
- OFSP technologies were also exhibited in agricultural shows and trade fairs.

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Figure 3: OFSP value added products promoted in various fora

METHODOLOGY CONTINUED…

d) Promotion of OFSP through schools

- Sensitization on the importance of OFSP was done in schools
- Demonstration plots established in selected schools to act as learning centres and also provide seed to students, teachers, workers and the community
- Roots used for food
- Schools that had feeding programmes could introduce OFSP as a source of Vitamin A in their feeding programmes

• Figure 4: School children planting vines on ridges in t he demonstration plots.

Figure 5: Nyando School boys after harvesting OFSP roots

3. RESULTS AND DISCUSSIONS

i) Quality seed dissemination

- Six million vines disseminated for seed and root production in Kakamega, Bungoma, Busia , Siaya , Kisumu and Migori Counties.
- Over 1,780,000 clean seed from primary and secondary multiplication were sold to various stakeholders for seed and root production. Buyers included One Acre Fund,, Kenya Horticulture Competitive Project, Climate Change Project, County Governments e.g. Siaya and individual farmers across the counties.

ii) Capacity building

- 575 ToTs from the Ministry of Agriculture, partner NGOs and farmer based organizations were trained in seed multiplication, root production and value addition.
- The ToTs trained over 5,000 individuals in seed and root production and value addition
- After training in value addition, 15 small scale processors were involved in post harvest processing of OFSP roots.
- There were two farmers exchange visits first from Mumias IPTA to Kabondo, and the second one from Mumias, Bungoma and Siaya to Kabondo and Migori.

iii) Root production

- 505 farmer groups were involved in OFSP root production and 3100 ha were realized.
- Kholera Kick Hunger Farmer Group constructed pit storage for storing OFSP roots during glut period.

iV) Demonstrations, field days and shows

- Three hundred (300) demonstration plots established
- One hundred and thirty five (135) major field days held in the six counties. 2,130 men and 1,270 women attended
- Participated in Kakamega, Bungoma, Migori and Kisumu shows from 2014 to 2016, where over 15,000 men and women attended.
- Over 300,000 stakeholders were reached with OFSP technologies in the six counties.

v) OFSP promotion through schools

- Twenty seven (27) schools planted on their farms Kabode and Vitaa varieties
- Students took seed to their parents, teachers and workers also benefited. E.g. Sihanikha and Nang'anda primary schools in Kakamega gave seed to 30 individuals who planted an average of 0.05 ha. Ebenezer schools in Nyando adopted OFSP in the school feeding programme

4. CONCLUSIONS

- Access to information helped farmers acquire clean seed for both seed and root production. Two varieties Kabode and Vitaa most preferred.
- At least one seed growers association was formed
- 15 small scale processors and two processing facilities were born
- Income was generated from seed, roots and value added products.
- Six schools introduced OFSP in their school feeding programmes.
- Lives of hundreds of thousand households improved through introduction of OFSP

5. ACKNOWLEDGEMENTS

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6. REFERENCES

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