Promoting the production and consumption of indigenous vegetables: Experiences from 'Recipes for Success' Project in Tanzania

Promotion of Fruit and Vegetables for Health

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Outline of the presentation

- *'Recipes for Success' Project set up*
- Project implementation
- Project achievements, constrains and challenges
- Lessons learned and Policy implications

Project set-up:

Actual title of the project:

"Enhancing productivity and consumption of indigenous horticultural food crops for better nutrition and health through enhanced communication of research results in community-run resource centres"

Title	**“Recipes for success”**	
Theme	**Theme 1: *Nutrition and Human Health***	
Country *(or region)*	Benin, Kenya, Tanzania	
Project Leader	**Crops for the Future**	
Collaborating Project Investigators and Partners	CIRAD, France	International Research Institution
	KENRIK, Kenya	Research Institution
	ROP, Kenya	NGO
	SUA, Tanzania	Public University
	INRAB, Bénin	National Research Institute
	APRETECTRA, Bénin	NGO
Funds (GlobalHort)	**250,000 USD (initially 730,250 USD)**	
Matching Funds	In-kind contributions for staff time, use of office space, equipment, transport etc.	
Duration	12 months (initially 36 months)	

Sokoine University of Agriculture (SUA)

- a public university in Tanzania, so far the only one in the country that teaches agriculture and nutrition
- It has a long experience of conducting research and outreach programs with local communities
- Department of Food Science and Technology is involved in efforts to fight malnutrition and other food related problems in the country. With its expertise in nutrition and food science, researchers from this department have taken the lead in many nutrition activities to support the communities.

Project set-up:

- **Project goal:** To improve the nutritional status of underprivileged groups in Benin, Kenya and Tanzania through better production of and access to traditional fruits and vegetables

Project set-up:

- Basis of the Project:
  - One of the biggest hurdles in creating impact from research is lack of appropriate communication
  - Another big stumbling block to wider uptake of traditional crop production is lack of scientific knowledge of production practices and insufficient availability of seeds of good quality.
  - Establishment of community-run resource centres – to receive information and support on production, marketing, and quality seed of priority species of traditional vegetables and fruits.

Project set-up:

- **Objectives:**
  - To strengthen the capacity of community groups to organize themselves into business and production units through “Health Clubs”.
  - To facilitate the availability of sufficient quantity of quality seed for valuable indigenous vegetables and fruits.

Project set-up:

- Objectives: cont…
  - To produce new knowledge of the effect of processing on nutrient components / palatability of indigenous vegetables and fruits.
  - To put into place a communications strategy to address various issues related to the effect of indigenous vegetables and fruits on nutrition and health.

Project implementation - Tanzania:

Communications Strategy (CS):

- Components of the CS:
  - Who are the relevant stakeholder groups?
  - What is to be communicated?
  - How is the message communicated?
  - When is it communicated?
  - Relevance of the project to the different stakeholders (High, Medium, or Low)

Communications Strategy:

- Relevant stakeholder groups:
  - General public
  - Operators of popular eating places
  - Vegetable growers
  - Government & National Health Systems
  - Local Support Institutions
  - Entrepreneurs

What is to be communicated:

General public	Popular eating places	Government / National Health System	Vegetable growers for market	Local Support Institutions	Entrepreneurs
-Importance of IFV to nutrition & health -Processing methods -Production -Income generation -Importance of conservation	-Importance of recipes with IFV for customers -Best ways of handling and cooking vegetables for enhancement of nutrients and palatability	-Reduced morbidity & mortality -Effect on productivity -National identity / national heritage -Nutritive values of IV -Sustainable way of alleviating malnutrition	-Importance of being innovative in the production -Concerns for food safety -Opportunity to change their lives (poverty alleviation) -Need to network	-Compleme-ntarity of project to their efforts -Nutrition contributes to other objectives (such as AIDS mitigation, health, education…)	Income opportunity

Approach taken in Tanzania

- Promotion of vegetable production by empowering small 'commercial' vegetable growers in urban areas
- Promotion of vegetable consumption by empowering the operators of popular shanty eating places ('*Mama Lishes*') that are frequented by many poor people
- Analyzing and documenting the nutrients values (Fe, Zn, Se, Beta-Carotene) of different vegetable dishes commonly prepared in the country

Empowering small commercial vegetable growers in urban areas

- Three sites were identified (1 in Morogoro, 1 in Mlandizi, and 1 in DSM)
- Needs assessment and situation analysis were conducted:
  - Vegetable producers were highly fragmented
  - Majority of them don't own the land
  - There were many conflicting interests among themselves
  - DSM and Mlandizi sites were extremely vulnerable to weather conditions
- Eventually, DSM and Mlandizi sites were dropped out – to remain with Morogoro

Process of empowering the vegetable growers

- Project held several sensitization meetings for the growers to identify their problems and what can be done
- Need to form a cooperative group to have 'bigger voice' was aired
- Project provided training on group formation

Process of empowering the vegetable growers

- Facilitated writing of a constitution for the cooperative group (with involvement of the Local Government in the area)
- The Cooperative Group was formed and launched (Nguvu Kazi Vegetable Growers), leadership put in place and 27 founding members registered (20 Male and 7 Female)
- The group has been supported with 'seed money' to start a revolving fund for members to improve their working capitals

Empowering the operators of popular shanty eating places (Mama Lishes)

- Two places were identified in DSM (Magomeni Market and Tandale Market)
- Needs assessment and situation analysis were conducted:
  - Vegetable Amaranth and Chinese cabbage were the most used vegetables
  - However, customers were fond of other indigenous vegetables such as cassava leaves, night shade
  - The operators were already organized in cooperatives in the two market places
  - Knowledge on ` nutrition best practices' of handling vegetables was highly lacking

Process of empowering the operators of popular shanty eating places

- Project provided training on 'nutrition best practices' of handling vegetables for maximum nutrient retention as well as enhancing palatability for 55 Females and 5 Males
- Have followed up on the operators and their customers through collaborations with Local Government

Analyzing and documenting the nutrients values of vegetable dishes

Assistants at work

Recipes preparations

Table 1: β-carotene content of cooked vegetable samples

S/No	Sample code	sample wt (mg)	Moisture (mg)	dry wt (mg)	Vol. used (ml)	Abs 436 (nm) 1	Abs 436 (nm) 2	Abs 436 (nm)	β-carotene (% m/m)	β-carotene (µg/100g)
Blank								0.0681		
1	K 5	1032.2	268.2	746.0	50	0.2531	0.1663	0.1416	4.92578E-06	**4.9258**
2	K 26	1118.9	345.6	773.3	25	0.1488	0.2097	0.11115	1.72046E-06	**1.7205**
3	K 33	1029.6	358.3	671.3	25	0.1738	0.1169	0.07725	1.49688E-06	**1.4969**
4	K 8	1000.9	386.4	614.5	50	0.3143	0.3143	0.2462	1.07221E-05	**10.7221**
5	K 11	1782.3	1474	308.7	50	0.3811	0.4255	0.3352	1.63189E-05	**16.3189**
Blank								0.0356		
6	KM 5	1009.7	903.4	106.3	50	0.4063	0.4063	0.3707	9.25125E-05	**92.5125**
7	K 6	1005.6	310.2	695.4	25	0.1859	0.2000	0.15735	3.01356E-06	**3.0136**
8	K 18	1027.0	817.7	209.3	25	0.1642	0.2444	0.1687	1.05111E-05	**10.5111**
9	K 20	1081.0	908.6	172.4	25	0.1668	0.263	0.1793	1.28852E-05	**12.8852**
10	K 22	1079.3	807.5	271.8	50	0.4149	0.4455	0.3946	3.60304E-05	**36.0304**
Blank								0.0457		

Challenges: Vegetable Growers

- Lack of entrepreneurial self-driven attitudes among the members
- Conflicting interests among stakeholders
  - Access to land plots and market outlets
  - Benefits of possessing key production tools
- Vulnerability to weather-related hazards (impact of Climate Change??)
- Government not recognizing them for agric. input supports (e.g. subsidies)

Challenges: Operators of shanty eating places

- Lack of entrepreneurship self-driven attitudes among the members
- High rate of illiteracy (not being able to read or write) among the members
- Lack of 'proper' working facilities
- Frequent conflicts with authorities

Challenges: Analyzing and documenting the nutrients values of vegetable dishes

- Lack of 'standard' recipes
  - different preparation procedures
  - different ratios of ingredients for similar dishes
  - different ingredients used for similar dishes
- Lack of equipment for analyzing nutrients

Some promising outcomes

- 'Nguvu Kazi' Vegetable Growers Group have been able to acquire 80 acres of land outside Morogoro Town for diversifying their production
- Operators of the shanty eating places are actively seeking information on how to improve the dishes they are selling – to impress their customers

Lessons learned

- As much as material support is needed by “Health Clubs”, organizational support is equally (or even more) important
- Need to establish ‘link-ups’ with other key players to be able to address and overcome the “endless” needs and problems of the targeted beneficiaries – e.g. lacking access to financial services; supportive institutions (e.g.TAHA);