

Farmers' Decisions to Participate in Postharvest Training Programs and Impacts on Vegetable Crop Income in Tanzania:

Can we take Lessons for Orange Flesh Sweetpotato (OFSP)?

*Srinivasulu Rajendran^{*1}, Victor Afari-Sefa², Apurba Shee³, Ngoni Nenguwo²*

¹International Potato Center, Kenya; ²AVRDC-The World Vegetable Center, Eastern and Southern Africa, Tanzania; ³International Food Policy Research Institute, Washington DC, USA

Justification for the study



- High postharvest losses at farm-gate level: 30-80% in most sub-Saharan African countries due to highly perishable nature of vegetables and poor pre- and postharvest handling practices, resulting in reduced quality of produce and loss of net revenues for value chain actors.

Objectives of the study



- Identify the factors influencing farmers' decision to participate in postharvest training program for horticultural crop
- Measure the impact of farmers' participation on the revenue generated from vegetable sales in selected regions of Tanzania

Testable Hypotheses



- Improved farmers' awareness and knowledge of improved postharvest handling practices
- Improved pre- and postharvest handling practices
- Significant reduction in pre- and postharvest losses
- Increased quality of produce and revenue accrued from sale of vegetable produce

Survey Methods



- Stage 1 - Pre-pilot Key Informant Interview and Focus Group Discussion (FDGs): January 2013; testing questionnaire with horticultural officers, extension officers and progressive farmers
- Stage 2 - Pilot Survey: February 2013; 2nd round testing with all enumerators after enumerators' training program
- Stage 3 – Main Survey: February - May 2013

Data Sources

Type of Survey

Farm
Household
Survey

Study Regions

Arusha

Tanga

Morogoro

Stratified Random
Sampling

80
households

80
households

80
households

- **Survey period: March 2012-Feb 2013**
- **Focus crops: Tomato and amaranth**
- **Selection rationale: Regions selected are consistent with USAID Feed the Future Zones of Influence for Horticulture**

Econometric Approach



- Endogenous Treatment Effect Model
- Sensitivity of the Model: Instrumental Variable (IV) Model
- Heckman Selection Correction Model

Results



- Farmers' decisions to participate in training programs are positively influenced by (i) increased frequency of visits by public extensions agents; (ii) access to mobile phones, radio and printed materials for agricultural activities; (iii) farmers' attitudes towards adoption of new agricultural technologies (psychological constructs).
- Literate female farmers living with a household with large family size tend to significantly participate in postharvest training programs.
- Farmers' decisions to participate in postharvest training programs for horticultural crops significantly and positively impact their vegetable crop income by 1.6 times, along with other factors such as level of farmers' education, farm size, type of recommended postharvest handling practice, and various produce buyers at the farmgate level.

Way forward



- There is a robust and positive effect on household vegetable crop income from farmers' participation in postharvest training programs, which suggests considerable scope for improving the livelihood status of smallholder farmers through increased knowledge and skills acquired in recommended postharvest loss reduction practices for the farmers who produces tomato and amaranth in the study regions.

Asante Saana!!!

