Food, Nutrition and Health Security Research to Improve Lives & Engage Markets

Farming Systems Analysis in Tanzania

Robyn McConchie
Faculty of Agriculture and Environment
University of Sydney
Aim: To reduce childhood under nutrition by improving food and nutrition security at the household level through strengthening crop and family poultry value chain integration

› This project unique in linking agricultural R&D with human health outcomes
› Uses a systems/multidisciplinary approach
› Focused on production systems under the control of women
Food, Nutrition and Health Security

- 80% of Tanzanians live in rural areas
- Agriculture is primary means of livelihood
- Agriculture accounts for 25% GDP, 24% exports and employs 75% of the population
- Total rainfall in this region is about 600 mm with February being the wettest month

Study Sites Sanza and Majiri Wards
Understanding the Farming System

A farming systems framework conveying a farm as a purposeful, systems approach managed system. Monitoring and adjustment of the system in the form of a farming systems intervention links the production and management systems (adapted from Sorrensen and Kristensen, 1992, sourced from Keating and McCown 2001).
Breakdown of the FSA Questionnaire - 12 sections

› Household data
› Housing, access to markets
› Access to agricultural information
› Household Assets
› Household Food Security
› Farm Characteristics e.g. land area, crops, yields etc, labour and other inputs, source of seed, problems
› Crop sales, what, how much where price, storage, what, how much, losses
› Perception of 2014 growing season
› Risks and how to deal with it

Hammer milled maize meal in village
Food Security and Improved Nutrition for Children

Crop diversity and improved husbandry

Better Storage. Access to markets and product quality

Risk Management

Intervention 1

Intervention 2

Intervention 3

FSA Methodology

Stage 1: Information Gathering and Analysis

Stage 2: Reporting Back to Communities

Stage 3: Capacity building, Trialling Evaluation by Farmers

Stage 4: Impact assessment
60 participants- all part of the baseline survey to enable cross checking of demographics
Key food groups for which there is a shortage

- 30% meat
- 40% dairy
- 43% grains
- 66% fruit
- 40% vegetables
- 35% groundnuts

**Subsistence crops**

- Maize
- Sorghum
- Millet
- Groundnuts
- Rice
- Bambara Nut
- Pumpkin

**Crops to Sell**

- Sesame
- Maize
- Sunflower
- Millet
- Sweet Potato
- Okra
1. FSA Feedback

2. Community Solutions

3. Priority Setting

4. Possible interventions
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Agreed Initial Interventions – Trials begin Dec 2015

Manure

Nutritious Vegetables

Pulses

Drying & Storage

Rotation
What are our desired outcomes?

› Increase household availability and access to nutritious food from own production
› Increase income from sale of product or paid work
› Empower women to make decisions in allocation of food, health and care within the household
› Improve women and children’s nutritional health by providing a range of nutrient food groups
› Improve efficiency of poultry and cropping value chains

› Ref: Ruel and Alderman 2013 Nutrition sensitive interventions and programmes. *The Lancet* (13)60843-0:
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