Cropping Interventions for Better Nutrition and Food Security in Central Tanzania

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TANZANIA VETERINARY LABORATORY AGENCY TVLA

Australian Government
Australian Centre for International Agricultural Research

Tanzania Farming Systems Analysis

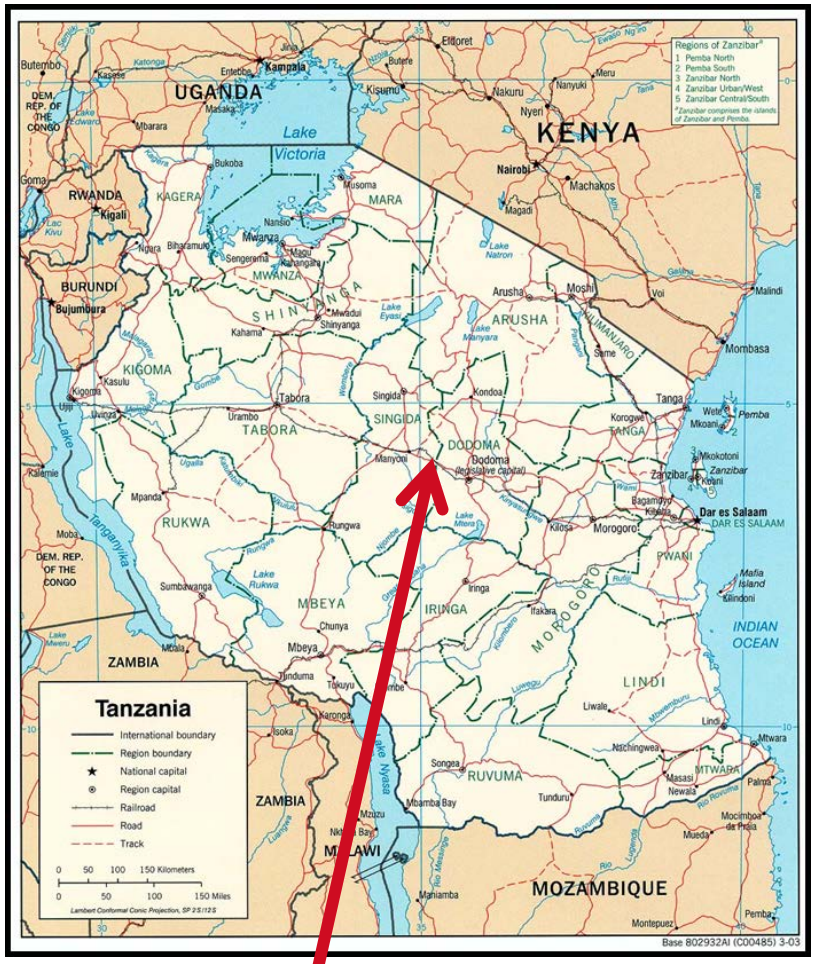
ACIAR Project FSC/2012/023

"Strengthening food and nutrition security through family poultry and crop integration in Tanzania and Zambia"

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
- Requires a systems/multidisciplinary approach
- Focused on production systems under the control of women

Location Tanzania Farming Systems Analysis

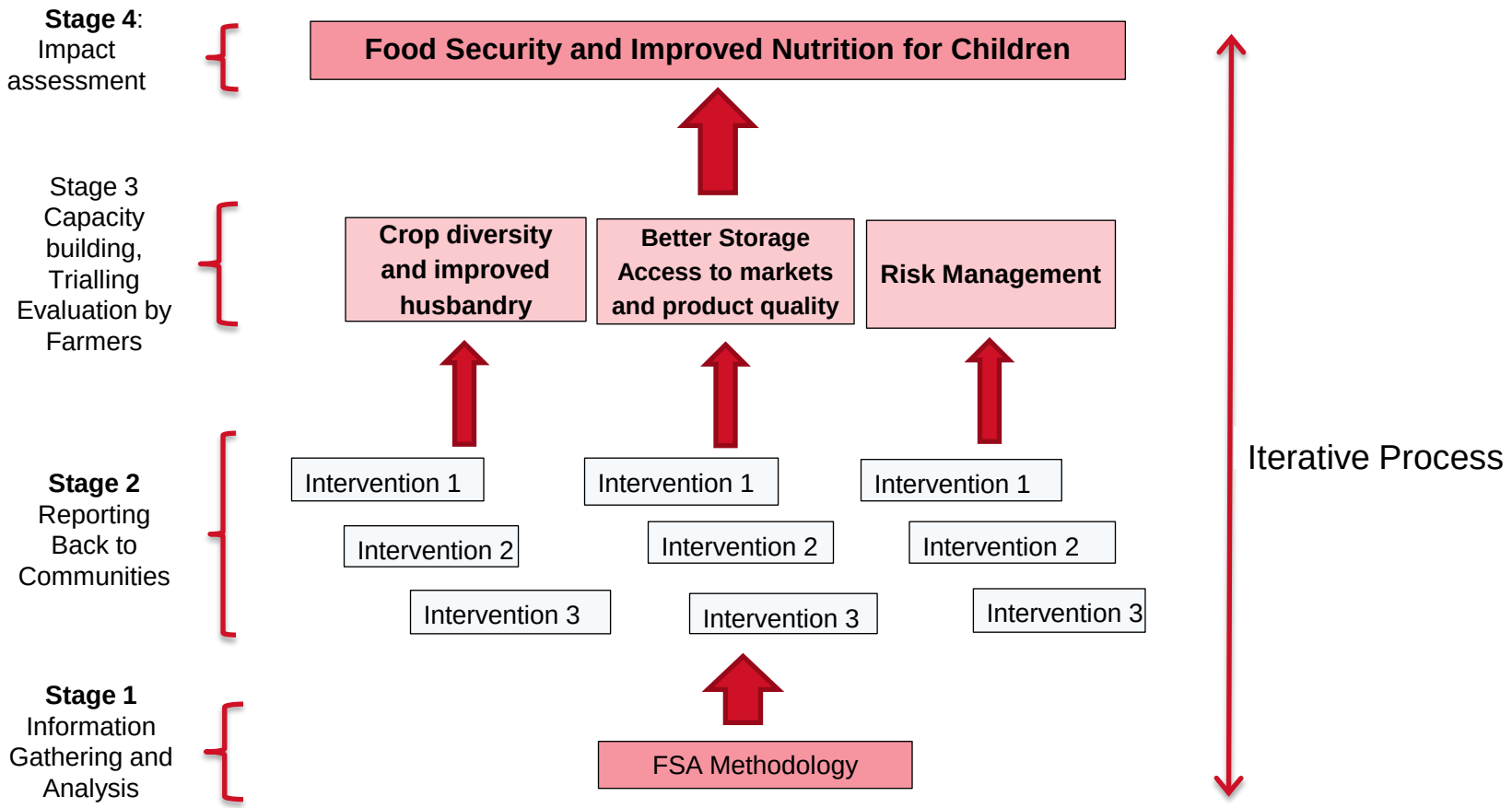


Study Sites Sanza and Majiri Wards

- Rain-fed cropping with some animal husbandry
- Total rainfall < 600 mm - February being the wettest month
- Rainfall highly variable = high risk of crop failure
- Well water available during dry season by bucket

Tanzania Farming Systems

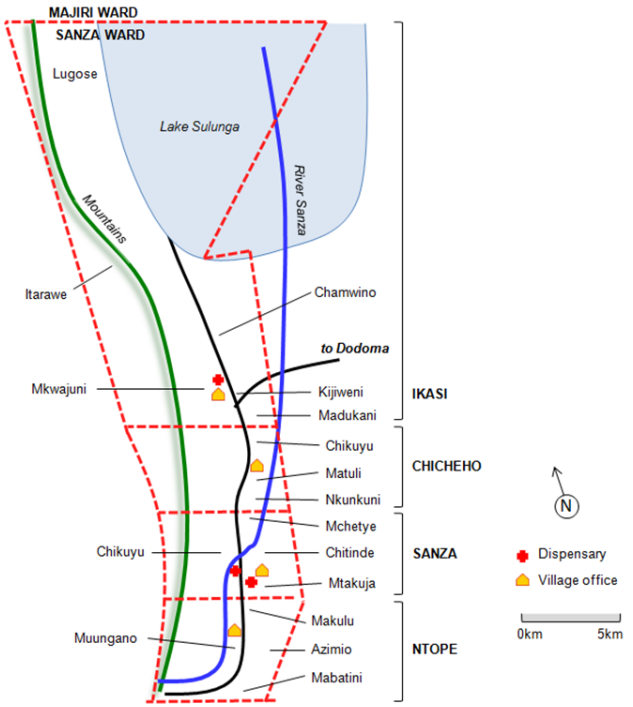
Flow Diagram of Crop Activities



Survey Sanza Ward November 2014

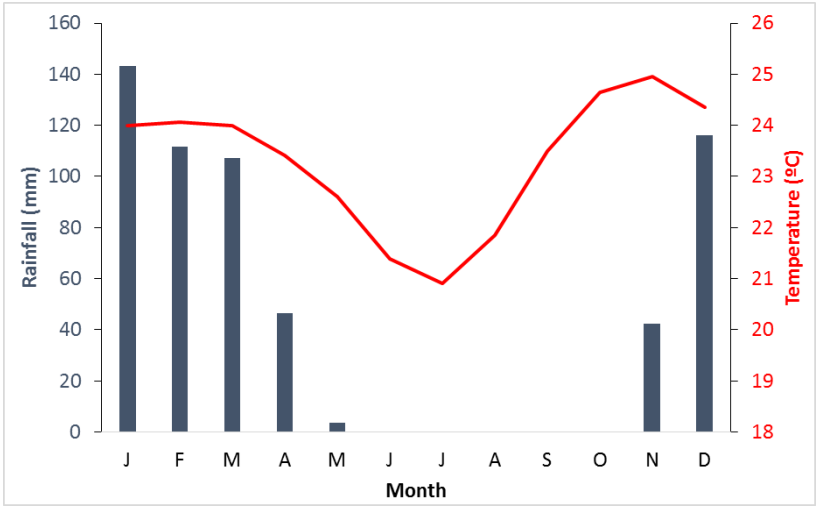
Sanza Ward

- 60 participants- randomly selected from baseline participants to enable cross checking of demograhics

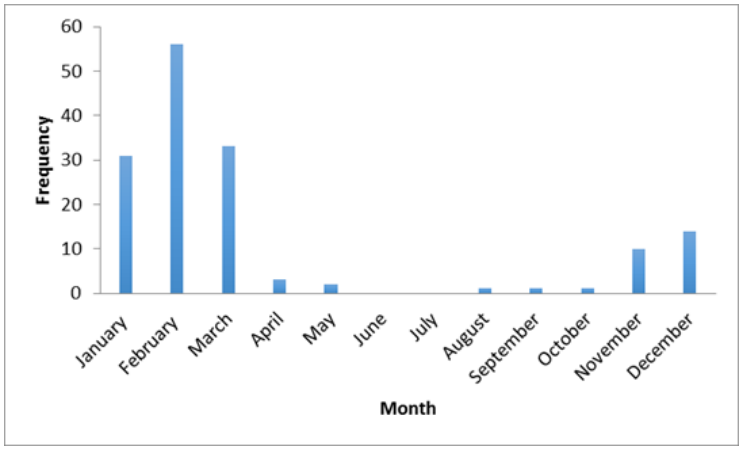


Survey Sanza Ward November 2014

Rainfall 2014



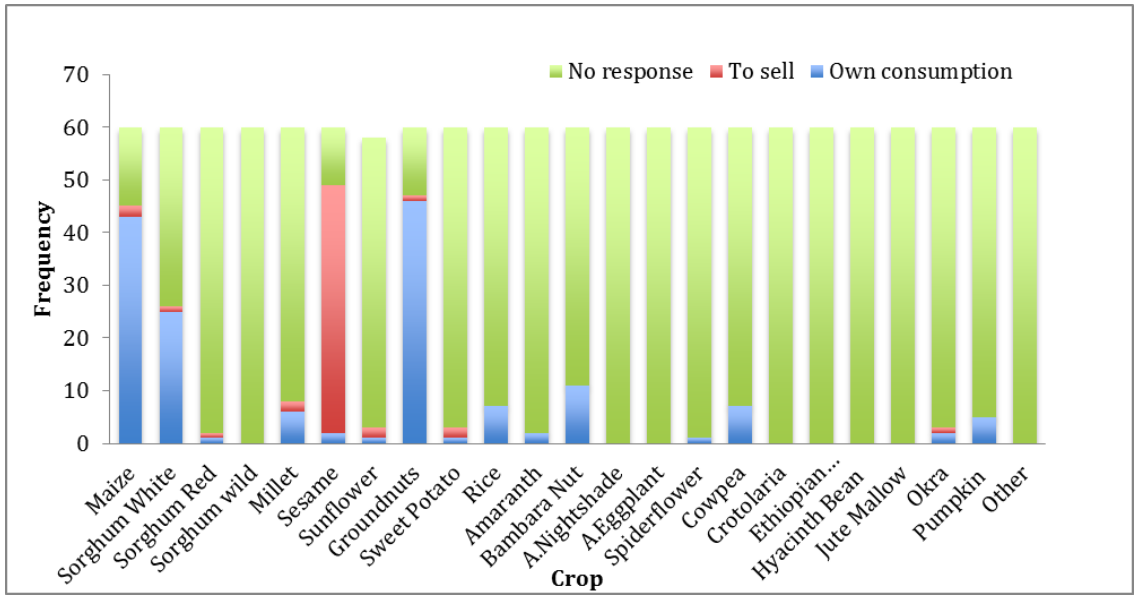
Months of Hunger 2014



- Rainfall < 600 mm p a
- Hunger coincides with wet months
- Hunger due to low production of subsistence crops and poor storage
- Key food groups for which there was a shortage 2014
  - 30% meat
  - 40% dairy
  - 43% grains
  - 66% fruit
  - 40% vegetables
  - 35% goundnuts

Sanza Ward Farming Systems Analysis

Crops grown



Farmers who have <u>animals</u> + <u>crops</u> have less incidence of hunger

Cash Crops

- Sesame
- Maize
- Sunflower
- Millet
- Sweet Potato
- Okra

Subsistence crops

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

Typical Sanza Ward Farming System

Understanding the Goals and Impacts

Environmental Impact

- Climate variability
- Salinity

Farm Impacts

- No Irrigation
- Access to markets
- Poor yields
- Pest and diseases
- Postharvest losses
- Lack of chemicals
- Poor cultivars
- Lack of implements (plough, sprayers, irrigation)
- Fragmented co operation
- Poor access to microfinance

Social Impacts

- Tradition limiting change
- Gender inequality
- Large families
- Knowledge of nutrition
- Access to health facilities
- Education

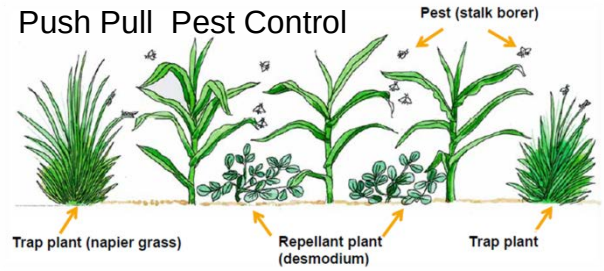
Tanzania Farming Systems Analysis

1. FSA Feedback

2. Community Solutions

3. Priority Setting

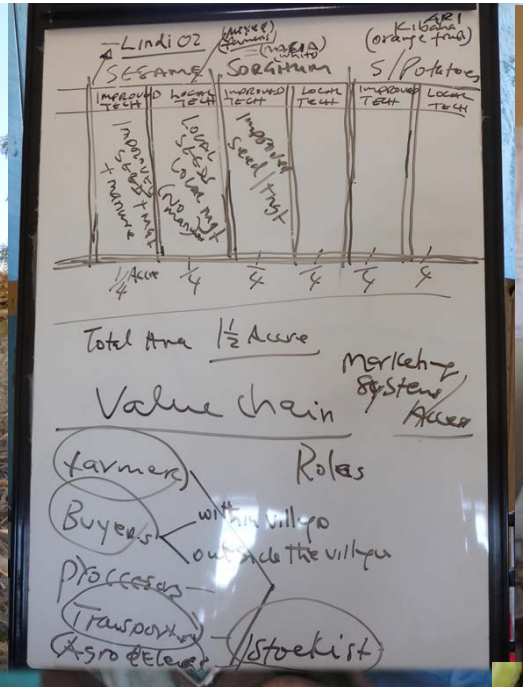
4. Possible interventions

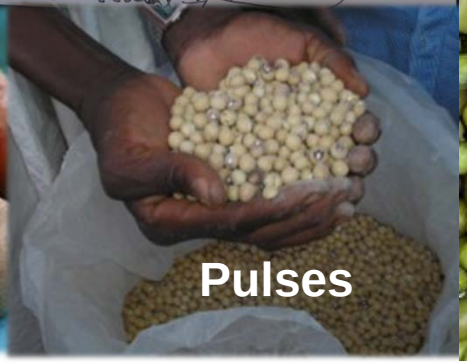


Hermetic Storage of Grain

Sanza Ward Farming Systems Analysis

Interventions for Better Nutrition Implemented this Season





Wild Source of Nutrition During the Dry Season

Mlende growing wild in September in Majiri

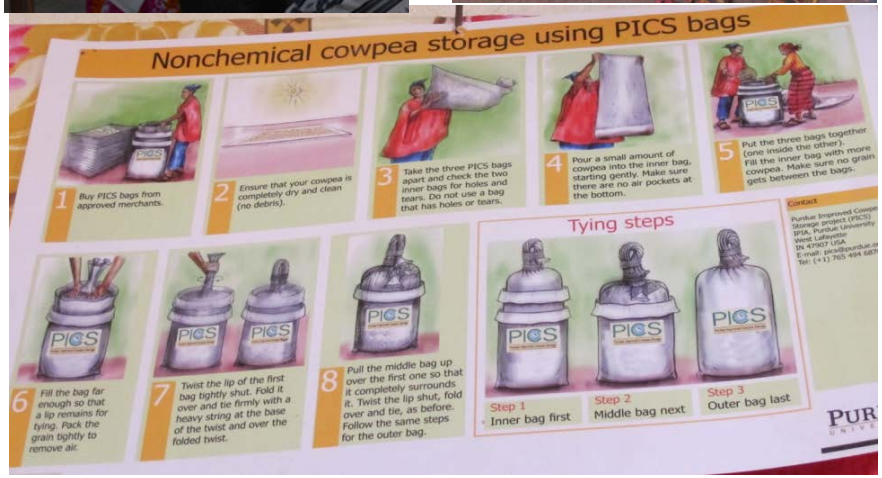
High in protein, β-carotene, Fe, Zn, Ca

Young boy grinding dried Mlende

Improved Postharvest Storage

Exposed to pests

Improved storage



What are our desired outcomes?

Importance of sorghum in diet of children to supplement breastfeeding

- 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

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Workshop in Sanza in July 2015

Asante Sana

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