



LOCAL FOOD ECONOMIES AND FOOD SECURITY IN MVOMERO DISTRICT TANZANIA

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Overall:

- To identify the main factors within agricultural systems above the household level which influence local food and nutrition security

Specific:

- i. To identify the main functions in the maize and rice value chains in Mvomero District
- ii. To identify the main actors at each stage of the value chain
- iii. To identify the price levels and margins that exist at various stages of the value chain
- iv. To determine how the functioning of the value chain affects the food security and nutritional status of households





Mvomero (Morogoro)

Land: 7325sq. Km

People: 312,109 (2012)

Rain: 700-2300mm/year

Household size: 5.3



MVOMERO DISTRICT

- ❑ District has three agro-ecological zones – Highland and mountain zone; Miombo woodland zone and Savannah river basin zone - which allows the production of a wide range of food and cash crops but only 45% of the agricultural land is effectively used
- ❑ Has many rivers and river valleys with high potential for large scale production of rice, sugarcane and vegetables under irrigation but only 25% of the potential used
- ❑ District is generally food self-sufficient and supplies to major urban centers including Dar es Salaam city, Morogoro and Dodoma municipalities
- ❑ Major challenge is low agricultural productivity due to continued reliance on traditional practices

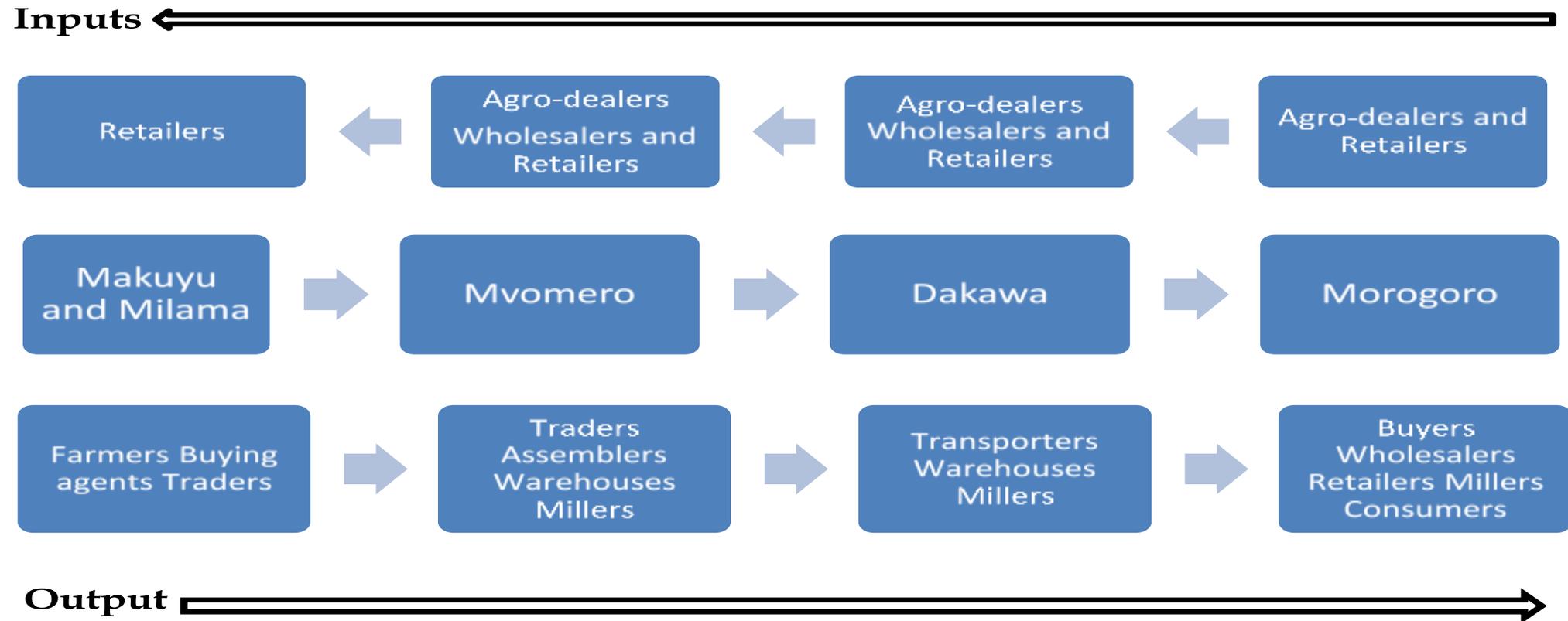


METHODOLOGY

- ❑ Maize and rice were identified as the most important food crops in Mvomero District which have a direct impact on the food security and nutrition status of households
- ❑ Study mapped the commodity and inputs chains for maize and rice, from production to consumption, through the various nodes:
 - from Makuyu village (primary market), Mvomero town (secondary market) to Morogoro town (tertiary markets) for maize, and
 - from Milama village (primary market), Dakawa (secondary markets) to Morogoro town (tertiary market) for rice.
- ❑ Data collection involved interviews with key informants: farmers/consumers, inputs and food retailers, crop buyers, inputs and food wholesalers, transporters and millers



METHODOLOGY....cont'd



MAIN FINDINGS

- ❑ Small scale farmers are main producers and consumers of maize and rice, selling about 42% and 34% of the maize and rice respectively to agents who buy from house to house as there is no central selling point
- ❑ The commodities are immediately transported to Mvomero (for maize) and Dakawa (for rice) where it is bulked by big buyers, stored pending transportation to Morogoro and other urban centers
- ❑ Makuyu and Milama have a few shop keepers who sell consumer products, and millers where the crop is milled for home consumption
- ❑ There are no storage facilities at the villages so all produce bought is immediately transported out of the village
- ❑ There are no input dealers so inputs have to be sourced from Mvomero (10kms away from Makuyu) or Dakawa (5kms from Milama).



MAIN FINDINGS.....cont'd

In Morogoro municipality there are:

- Large scale buyers who collect produce from various Districts, store and transport to distant markets like Dar es Salaam and Dodoma
- Large millers who mill, pack and sell to local wholesalers and retailers for on-selling to consumers
- Small scale millers who provide service to individual households
- Wholesale and retail agro-dealers who stock and sell inputs either to individual producers or to other agro-dealers from surrounding Districts
- Transporters who provide services between Morogoro to other centers for agricultural produce as well as for inputs.



MAIN FINDINGS.....cont'd

Price differential: the case of maize

- ❑ Farmer sells maize to a buying agent for Tshs 335 per kg at household level
- ❑ Agent sells maize to buyer for Tshs 350 per kg at secondary market
- ❑ Main buyer sells to millers for Tshs 550 per kg at tertiary market
- ❑ Miller sells (flour) to food retailers for Tshs 750 per kg
- ❑ Food retailer sells to consumer for Tshs1,000 per kg



MAIN FINDINGS...cont'd

The price differential at the various nodes is influenced by a number of factors:

- ❑ Lack of collective marketing leading to farmers being price takers leading to low farm-gate prices
- ❑ Poor road infrastructure leading to high transport charges
- ❑ Imposition of various levies and taxes at all nodes which lead to high operational costs most of which are ultimately borne by the rural household as producers and consumers
- ❑ Lack of local storage facilities causes fluctuations and unpredictability in supplies and prices of both agricultural produce and inputs
- ❑ Information asymmetry leads to only few actors controlling the price for the entire chain



MAIN FINDINGS...cont'd

- ❑ To a large extent the characteristics of the District allow for household food security though not necessarily nutrition security
- ❑ For the majority, farming is the only source of income, however, it does not yield enough income to meet all the dietary and other household needs like family clothing, education, health and modern housing.
- ❑ As result there is low investment in agriculture, which leads to low productivity and continued low incomes which do not allow improvement in the nutritive quality of food
- ❑ Furthermore, the market can not be relied upon as a source of food since most farmers can not afford the prices charged for maize flour or milled rice
- ❑ Millers give very little consideration to nutritional quality when milling maize into flour or paddy into rice



CONCLUSIONS

The nutritional status of household members is a factor of the agricultural system of the area, among others.

1. Low productivity and production of the system leads to low incomes which make it difficult for farmers to improve their diets through purchased food
2. Low productivity and production is a result of lack of support services like extension and credit which makes it difficult for farmers to improve their agricultural practices and diversify production toward more nutritional foods



CONCLUSIONS..cont'd

3. Producers obtain low prices and incomes due to a marketing system that is plagued by poor infrastructure, lack of organized marketing and market information as well as multiple taxes and levies
4. To improve household incomes (and hence household diets) can only be through improving productivity and production as well as the marketing system that will ensure adequate returns from their agricultural activities and services to support a more diversified and more nutritious local food system

THANK YOU FOR YOUR ATTENTION



The Impact of Local Food Economies on Nutrition Status at Meso-level: The Case of Kishapu District in Tanzania

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Agricultural Systems and Land Use

A. General Climate: a dry tropical climate with temperature ranging from 22°C to 30°C, with two main distinguished rainy and dry seasons. Rain distribution is unequal and unpredictable, with average annual rainfall of 600-900mm. Rainfall as a source of water for various usages is unsustainable.

B. Total population: 272,990 and 35,500 households, with average household of 7.7 persons. 89.5 percent of the population are in rural areas and 10.5 are in urban areas. 75% own livestock and 39% practice mixed crop and livestock farming system.

C. Main Farming Systems: *Shifting cultivation* - maize, legumes, beans and groundnuts are produced. *Low soil fertility farming system* - sorghum, millet, cotton and oilseeds. *Intensive cultivation* - sweet potatoes, sorghum, groundnuts and cotton. *Alluvial soil farming system* - suitable for rice (Mnenwa and Maliti, 2010).



Agricultural Systems and Land Use cont.

D. Land use systems: extensive livestock production, but production is limited due to increased pressure on fragile grazing lands caused by increased crop production and unpredictable rainfall (Selemani et al., 2012).

□ **Ngitili Practice:** retaining an area of standing vegetation from the beginning of rainy season and opening it up for grazing at the peak of dry season.

□ Ngitili is useful in preserving the environment from land degradation and is a way of securing firewood, getting building materials, timber and charcoal making (Seleman et al., 2012).

□ Rangeland degradation due to extensive grazing in Kishapu threatens livelihood in the district, in terms of shortage of forage during dry seasons, deforestation, wood fuel scarcity, food insecurity and severe soil erosion (Kamwenda, 2002).



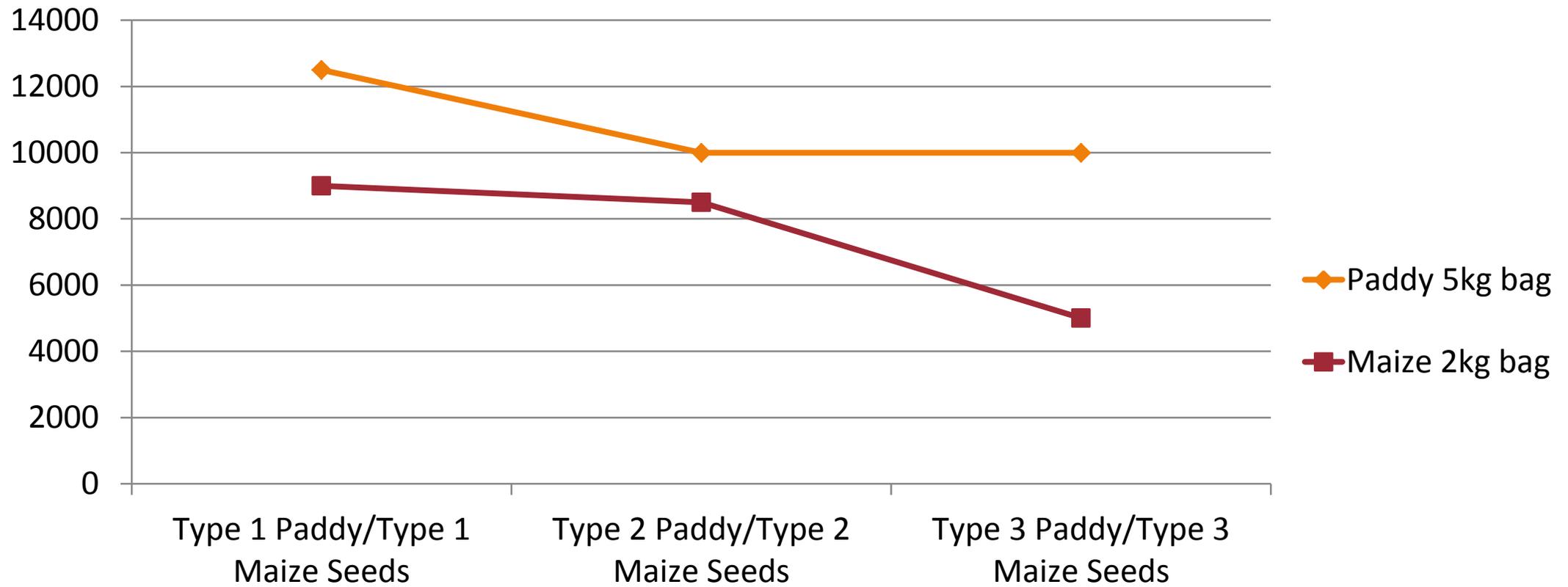
Local Market Analysis

Objective: assess the retail and wholesale market structures and main actors involved

- A. Input suppliers:** affordability of goods was determined by variation in buying and selling terms i.e., the source of the products, the quality of the products, the seasons in which the products are highly needed, the ability of the seller to give discounts, negotiations and bargains, and the purchasing power of the farmers.
- B. Food producers (farmers):** cultivation and tillage practices - most farmers use local techniques, such as the use of knives, hand-hoes and other hand-equipment, during pre-harvest and post harvest periods. These farming practices lack agricultural technical knowhow and thus limit crop yields which make the farmers continue the vicious circle of poor farming methods, poor yields, poor income and consequently poor nutrition.
- C. Small scale traders:** sourcing out and supplying agricultural production outputs to farmers. They act as middlemen and intermediaries.
- D. Large scale traders and agro-processors:** production for market rather than production for consumption, thus less concentration on nutrition goals.



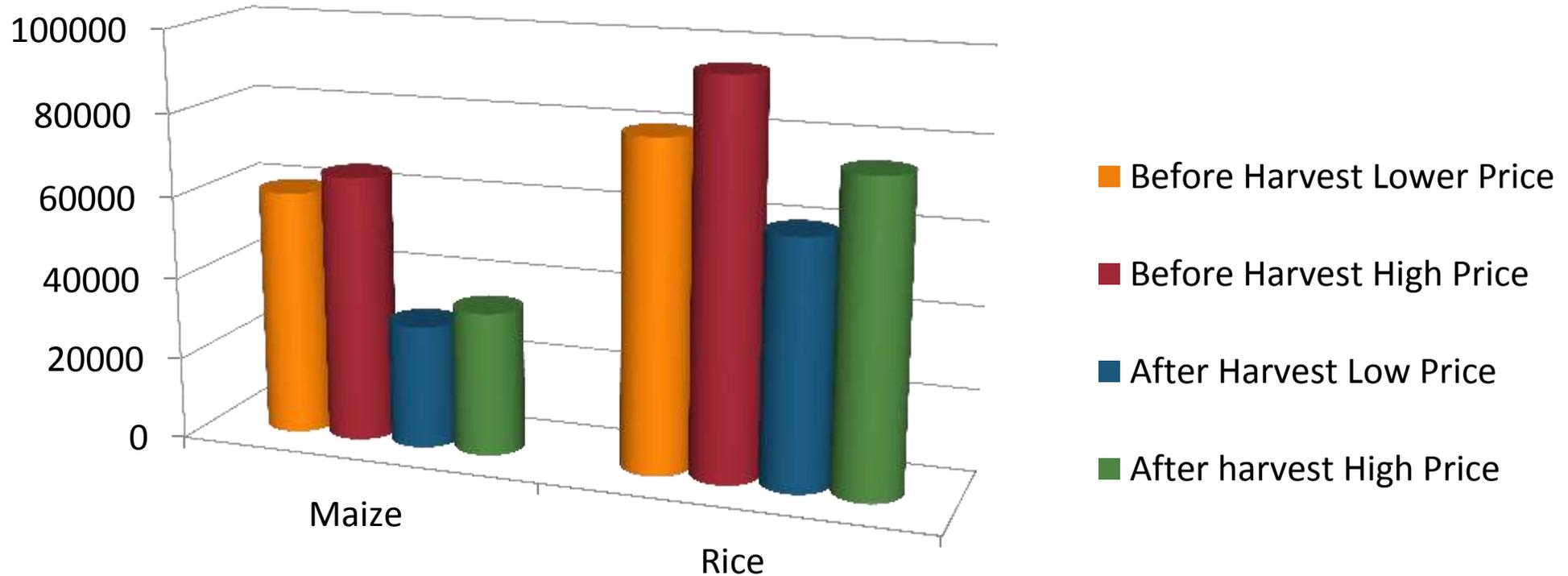
Local Market Analysis: Price Fluctuations for Different Types of Maize and Paddy Seeds



Simplified Marketing Chain of Maize and Rice



Differences in Price of Maize and Rice :Pre & Post Harvest (Prices are per 100 kg bag)



Findings on Price Fluctuations

- a) The cost of maize has sharp decline in post harvest due to poor storage facilities, lack of credit availability to discourage harvest sales, decline in prices due to increased supply, etc.
- b) The cost of rice has no significant changes due to its nature in the market. The production is always smaller than maize. It is always rare and thus prospects for higher sales are high.
- c) Overall, the cost of rice is above that of maize either in pre-harvest or post harvest periods.



Overall Findings

- a) Low accessibility of food (pre-harvest) is related to low productivity, poor transport infrastructure, poor input supply and credit services. Accessibility increases during harvest and post harvest period.
- b) Among traders there is very low concern on nutritional values when identifying food crops which are available and accessible in the district. The collection of maize and rice for sale both within and outside the district is focused on getting adequate stock of goods for sale and or for domestic use not to meet nutrition objectives.
- c) Most of the available foods are carbohydrates. Foods containing protein are available but do not constitute what the majority of the people consume. These include beans, meat, milk and eggs. Fruits are scarcely considered as part of the daily meals and are less consumed.



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- a) There is a need of increasing productivity and training the farmers on the importance of various nutritious local crops available in the district. Wild fruits would complement the use of maize and rice which are the main staple foods in the district, which production is however low.
 - b) Education on what constitutes a balance diet is highly needed.
 - c) Improved market information and credit availability will reduce seasonal variations in production and processing costs.
 - d) Improved storage facilities will enhance food accessibility. Unfortunately, the quality of maize and rice is only assessed during the buying and selling stages and not during the consumption stage.



Conclusions

- e) There is a nutrition committee in place in the district, however a multi-sector task force to address nutrition issues is needed for the growth of a healthy community.
- f) The government should mainstream nutrition and health education to primary and secondary schools in order to prepare the young generation as agents and ambassadors on health food, nutrition and health issues.
- g) The use of maize and rice is much diversified which enhances its nutritious objectives. However, some misuse of the crops leads into poor eating behaviours. For example, brew making out of maize, compromises food security and nutritious security in the district.





Agricultural Systems, Value chains and Nutrition in Ethiopia

Case study in Tigray and Oromia



Background

- ❑ The achievement of nutritional objectives in a country is affected by meso-level factors such as markets
- ❑ Agricultural interventions aim to enhance access to food and income from production and improve access to diverse produce
- ❑ Value chains contribute in bridging seasonal variations in supply and improve quality through processing
- ❑ Hence, it is important to study the linkages between agriculture and nutrition along the value chain



Objective

- ❑ To conduct meso-level study to identify and understand factors within agricultural systems, which influence local food and nutrition security
- ❑ To assess the nature of market for agricultural produce and identify how markets impact, directly or indirectly, on income and on food and nutrition security
- ❑ To study value chains for case commodities and implication for nutrition of households
 - ❑ Vegetable and fruit value chains in Enderta and Hintallo-Wajirat districts in Tigray
 - ❑ Dairy value chains in Enderta and Hintallo-Wajirat districts in Tigray
 - ❑ Ground nut value chain in Babile District in Oromiya Region



Findings

- ❑ The farming systems are dominantly mixed crop-livestock production systems and the developments in the last 20 years include
 - ❑ Expansion of irrigation
 - ❑ Introduction of new varieties and management systems
 - ❑ Expansion of vegetable and fruit production
 - ❑ introduction of improved dairy cow breeds
- ❑ Major developments are in the production stages of the case value chains
 - ❑ improvement in productivity and production
- ❑ There are also efforts to semi-commercialize the production systems
 - ❑ promotion of marketing opportunities for vegetables, fruits, ground nut and milk



Vegetable and fruit value chain

- ❑ Interventions in the value chain
 - ❑ Production stage:
 - Training on vegetable and fruit production and management
 - Input supply
 - Irrigation water management
 - Training to women on home garden development and marketing of horticultural products and high-value spices



Vegetable and fruit value chain

- ❑ Post-harvest and marketing- limited progress
 - Limited value addition on vegetable and fruit products; mainly sold as fresh
 - Informal contractual arrangements in marketing of produce;
 - high post-harvest loss
- ❑ Consideration of nutrition
 - Training to women on home management and food preparations
 - Diversification of the traditional cereal dominated system



Dairy value chain

- The interventions in the dairy value chain
 - Production stage:
 - Introduction of improved breeds
 - Credit provision to farmers
 - Improved feeding practices and feed production
 - Improved housing
 - Veterinary services and AI



Dairy value chain

➤ Marketing

- Organization of milk producer groups to promote milk marketing
- Marketing cooperatives not effective in milk collection and marketing
- High wastage of milk due to seasonality of demand

➤ Milk processing plants

- Newly established- not fully operational
- Improvement in supply of milk products to urban consumers
- High wastage of milk due to low capacity of processing



Groundnut value chain

- ❑ Interventions in the production stage
 - Improved varieties of groundnut
- ❑ Private initiatives in processing
- ❑ Constraints
 - market information is limited due to the traditional nature of the value chain
 - Lack of access to finance and limited business skill
 - co-ordination among smallholder farmers and rural-based traders
 - low quality produce and an absence of quality control at all market levels



Key messages

- ❑ Current interventions in value chain development are mainly on the first stage of the chain /production stage/ and collaborative efforts are needed between agricultural extension, health extension and home economics to promote nutrition
- ❑ There is some level of effort to promote demand and value addition although with limited success; promotion of nutrition-rich agricultural production is not supplemented with improvements in demand creation and value addition
- ❑ Current interventions are mainly focusing on rural households as producers and urban consumers
- ❑ The need for training of rural producers on business skills to organize marketing and achieve better income from the agricultural produces



Key messages

- ❑ Market orientation in production systems promoted through the extension systems should consider the possible trade-off with food and nutrition security of producers when markets are weakly performing
- ❑ Interventions to improve market opportunities should consider income enhancement and better nutrition as twin-objectives
- ❑ There is a need for improvement in quality of produce to meet market standards
- ❑ Reliable inputs markets are key for development of the production systems and diversification
- ❑ Unhealthy market linkages between farmers and traders need to be transformed

