NutriHAF Policy Brief No. 1

Enhance vegetable value chain to improve nutrition security in Ethiopia

Executive Summary

In Ethiopia, vegetable crops offer a strong pathway to nutrition security. However, leveraging this potential requires a shift from a mono-cropping system to a more diversified production system. Integrating vegetable crops into farming systems appears to be increasing nutrition security, diversifying and intensifying agriculture and reducing pressure on natural habitats in biodiversity hotspots. The study identified that vegetable crops have a comparative nutrition security advantage over the production of other crops and can offer alternatives to the coffee-based economy. However, vegetable crop development is constrained by a multitude of technological, socio-economic and institutional challenges. Thus, there is a need to reshape the current production system into a more nutrition-diversified system by mainstreaming nutrition issues in the agricultural extension system. In addition, changing traditional production practices and beliefs about vegetables through intensive social behavioral change strategies are of paramount importance. Moreover, there is a need to strengthen vertical and horizontal linkages between vegetable value chain actors in the study area.

Introduction

Vegetables are the most important source of micronutrients and are essential for a balanced and healthy diet. Diversifying and increasing vegetable production can help to overcome malnutrition and poverty by augmenting household consumption and creating new market opportunities for smallholders. Moreover, vegetable value chains can offer new income and employment opportunities in trading and processing sectors (Ganry et al., 2011; Parrot et al., 2011; Virchow, 2014).

Vegetables play a central role in meeting food and nutrition security in Ethiopia. However, the production level of vegetables is still well below their potential (Haji, 2007). Vegetables cover about 1.2% of the area of all crops at a national level (CSA, 2014). Public extension service on vegetable technologies is negligible and major public policies and the attention of extension system is mainly focused on cereal crop production to bring food security (MoFED, 2010). To improve the nutritional status of the population, policies and strategies for sustainable intensification need to be identified for vegetable value chains in Ethiopia.

Approach

The study was undertaken in Yayu and Hurumu districts (woredas). The two woredas are located in the south-western part of the northwestern Ethiopian highlands in the Illubabor zone of Oromia State. These districts are part of the Yayu biosphere reserve area. The significant parts of the population in this biosphere are affected by micro-nutrient deficiencies.

In our study, we apply a nutrition-sensitive value chain approach which focuses on the production, marketing and consumption of nutritious food; in this case, vegetables. Data were collected from both primary and secondary sources. The primary data for this study were collected in April 2016 from vegetables value chain actors: i.e., 4 farmer groups, 13 traders, 3 input suppliers, 11 consumers (including restaurants) and 7 experts and 2 development agents using a semi-structured questionnaire. Secondary data were collected from both published and unpublished sources.

Results

The study identified that well-functioning value chains are essential for the (stable) availability of and access to nutritious food over time. For the study area, these value chains provide better nutrition through two ways: (1) by providing the local consumers with vegetables from other regions in times of (seasonal) shortages; and (2) by channeling the surplus production of local vegetable farmers to local consumers, thereby providing an income to farmers (and other value chain agents) to support better nutrition.

Input suppliers: lack of specialized input suppliers

The majority of producers buy vegetable seeds from private traders. Private traders supply the seeds of onion, cabbage, carrot, beetroot and tomato. They buy the seed from Jimma, Metu and other cities in the vicinity. They sell the vegetable seeds together with other consumer goods. There is no specialized seed supplier in the study area. Due to the seasonal nature of the improved seed business, input suppliers do not want to specialize in the seed business.

Producers: diversified, but low production due to diseases and lack of inputs

Vegetables are part of an agricultural production system which includes coffee as the main cash crop, which is predominantly grown in the forest. Vegetable production in Yayu region is relatively diverse. The major vegetable crops grown in the study area are Ethiopian kale, cabbage, beetroot, carrot, tomato, shallot, onion, and garlic. Vegetables are mainly grown in home gardens, often by female farmers, rather than in the fields. Production is mainly rain fed, but there are also some irrigated areas.

The productivity of some vegetables is decreasing due to diseases. Farmers do not use any chemicals to control diseases. Furthermore, farmers use few inputs for vegetable production. Improved seed is one of the major constraints for vegetable production. Farmers have difficulties in getting quality seed. The germination rate of improved seeds is very low as a result of using expired seeds. Few farmers use chemical fertilizers for vegetable production in irrigated areas, but the intensity of fertilizer use is very low due to the high price of fertilizer. Due to the unavailability of pesticides, farmers do not use them for vegetable production.

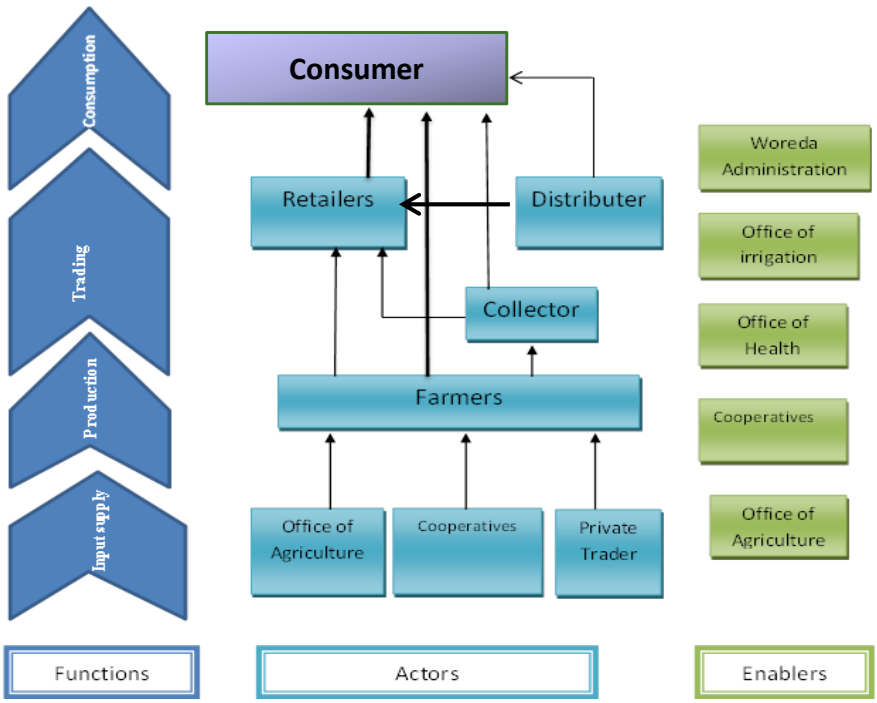

Figure 1: Value chain map of vegetables in Yayu area

Traders: channeling local and national supply to local consumers

At the moment, local farmers grow vegetables both for own consumption and the market. Nevertheless, local demand is increasing and local supply cannot always satisfy demand. Therefore, vegetables have to be bought from other regions of Ethiopia. The value chain for locally produced vegetables is short, as most production is marketed only locally. Vegetables "imported" from other areas need a longer marketing chain. Collectors, distributors/wholesalers and retailers are actively involved in vegetable trading.

Distributors or wholesalers are mainly involved in buying vegetables from traders in other areas in large volumes and selling it to retailers and consumers. They buy vegetables from traders (collector agents) in other areas. For example, onions come to Yayu from Naziret (658 km), Koka (642km), Woreta (1167 km), Ginche (630 km), and Shashehemen (811 km) throughout the year. Garlic comes from Naziret (658 km) and Woreta (1167km), tomato from Mekie (680km).

Gross marketing margin analyses indicate that marketing margins for onion (50%), tomato (55%), cabbage (50%), garlic (23%) and ginger (27%) are added by the traders before the product reaches the consumer. The marketing margin can be decreased by producing vegetables in the Yayu area. This would also enhance the consumption of vegetables and thereby improve nutrition security in Yayu area.

There are two types of retailers in the study area: informal retailers (farmer retailers) and trader retailers. Informal retailers sell the vegetables in open markets and do not have permanent places to sell their vegetables. Retailers in Yayu area buy vegetables mainly from distributors, but also from farmers. Trader retailers reported that the supply of vegetables is not constant and very low. They get vegetables only one day per week, but would like to buy every day to sell throughout the week.

Consumers: willing to buy more, but lack of supply causes high prices

The consumption of vegetables is relatively diverse. Consumers have a long experience in consuming fresh vegetables. Consumption is especially high during the fasting period. Consumers buy vegetables directly from traders and farmers. Consumers purchase vegetables from local markets during market days and from permanent shops on other days. As the supply of vegetables is seasonal and sometimes very low, consumers cannot find the vegetables they want to consume at all times and thereby consumption patterns are determined by the seasonal availability of vegetables. Traders bring vegetables from other places, but the price is high. Also, the quality of vegetables is considered to be low. Vegetables from farmers are considered to be fresh and of high quality, in contrast to traders' produce. The price of farmer products is also lower than that of traders. In general, the price trend for vegetables is increasing due to the increasing demand and low supply of vegetables. The price of some vegetables has increased by more than 100% over the past two years.

Major constraints of production, marketing and consumption of vegetables

The study identified different constraints related to vegetable production. The major constraints are: lack of nutrition-sensitive farming systems; pest and disease problems; high cost of seed; lack of high quality seeds; non-availability of chemical inputs; seasonal constrained production systems; competition with cash crops; lack of research and extension support; low productivity; low prices after harvesting; and non-availability of improved technology. The major constraints related to vegetable marketing are: the low volume of supply; seasonal non-availability of vegetables; fluctuations in price; problems with storage, processing and packaging (lack of post-harvest handling); lack of adequate market place; and distance from market place. Lack of awareness of nutritional issues; low purchasing power; the high price of vegetables; and low supply of vegetables were identified as the major constraints related to vegetable consumption.

Policy Recommendations

1. Increase farmers' awareness about vegetable production, utilization, marketing and postharvest handling and storage infrastructure.
2. Increase the production and productivity of vegetables through diversification and intensification.
3. Promote nutrition-sensitive and value chain-based extension services.
4. Strengthen the supportive activities such as input supply system (e.g. established community based seed production schemes).
5. Build the capacity of the technical staff at various levels to provide vegetable sensitive value chain extension services.
6. Enhance capacity development of the vegetable value chain actors.
7. Introduce new and improved varieties, modern vegetable technologies and disease and pest controlling practices.
8. Strengthen market linkages (local market linkages).
9. Strengthen value chain-based linkage development (e.g. establishing platforms).
10. Strengthen vertical and horizontal linkages among value chain actors.

References/Further Reading

CSA (Central Statistical Agency). (2014). Agricultural sample survey for 2013/2014 cropping season. Report on Area and production of major crops.

Ganry, J., Egal, F. and Taylor, M. (2011). Fruits and Vegetables: a Neglected Wealth in Developing Countries. Acta Horticultura (921), 105–110.

Haji, J. (2007). Production Efficiency of Smallholders' Vegetable-dominated Mixed Farming System in Eastern Ethiopia: A Non-Parametric Approach. Journal of African Economies, 16(1), pp. 1–27.

Ministry of Finance and Economic Development (MoFED). (2010). Growth and Transformation Plan (GTP) 2010/11-2014/15. Addis Ababa: Ministry of Finance and Economic Development of the Federal Democratic Republic of Ethiopia.

Parrot, L., de Bon, H., Malézieux, E., Ganry, J. and Sotamenou, J. (2011). Peri-Urban Horticulture and the Agricultural Transformation in Africa: a Case Study in Cameroon. Acta Horticulturae 921, 181–186.

Virchow, D. (2014). Small-scale vegetable production and marketing systems for food and nutrition security: Challenges and prospects for Southeast Asia. Presented at the SEAVEG 2014 Symposium on vegetable production and marketing, Bangkok, Thailand.

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