

Agricultural Systems, Value Chains and Nutrition: case study of Enderta and Hintallo-Wajirat Districts of Tigray, Ethiopia



An AgriDiet Research Brief

July 2015

Background

Meso level factors such as markets and value chains play a significant role in achieving nutritional objectives. The global literature shows value chain approaches provide a useful framework to assess the role of food systems in achieving nutritional outcomes. In the study districts, there are recent developments in the production systems and value chains for important commodities which need to be assessed for their implications for the availability of nutritious food products for household consumption and marketing.

Objective

The objective of this study was to identify how markets impact, directly or indirectly, on income and on food and nutrition security of the communities in the case study districts.

Interventions in value chain development for nutrition

Two commodities, namely vegetables and fruits, and dairy, were selected for this case study to analyse implications of value chain development for nutritional status of households.

Vegetable and Fruit value chain

In Tigray, vegetable and fruit production has shown remarkable growth in the past two decades. The area coverage and volume of production for major vegetables and fruits has increased due to small-scale irrigation infrastructure development, extension support, and support from non-governmental organizations. The current interventions in value chain development focus on the first stages of the chain. The main areas of focus are training on production-enhancing technologies, input supply, production management and irrigation water management. Post-harvest management, market planning and value addition are not yet developed. Major roles of actors in vegetable and fruit production are focused on awareness creation about new varieties, seed and planting material supply, and organization of producers for collective activities in water management and marketing. Women are provided with training on home garden development and marketing of horticultural products and high-value spices. Contract

arrangements among vegetable and fruit producers and super-markets and other buyers are mainly informal. Producers sell their products on spot markets and on-farm to informal collectors. Contractual markets among producers and potential buyers are not developed and intervention in this area is also limited. The involvement of nutritionists in selection of nutritious varieties is not common and agricultural experts are more responsible for the varieties promoted. Farmers also receive training on post-harvest management and marketing. However, farmers have limitations in basic business skills and organization of marketing logistics. Producers mainly act individually for planning of marketing logistics and this limits their opportunity for benefiting from economies of scale. A high volume of produce is lost due to lack of proper storage and transportation facilities.

The developments in vegetable and fruit value chains are low and the nutrition dimension is not explicitly planned for. The current orientation of agricultural extension is towards high value crop production for the market. The vegetables and fruit consumption habit of producers is also not yet developed. However, health extension workers are now involved in educating households about the nutrition and health benefits of vegetables and fruits and about the necessary hygiene practices during preparation and consumption of horticultural products. Health extension workers provide training to women and household members on preparation of nutritious meals for children and pregnant women from locally produced vegetables and fruits. Women have a major role in the production and marketing of vegetables and fruits in the study districts, which may have a positive contribution for their control over resources.

Dairy value chain

Livestock are important components of the mixed crop-livestock system in the study districts. Cattle are kept as a source of draft power, milk, and meat products. In the case of dairy, milk production in rural areas is a major supplement to the diet of producer households. The level of milk marketing in the study districts is limited although showing some improvement. There are cultural and infrastructural constraints to the development of the dairy sector and there are recent interventions to alleviate these constraints. Interventions in the dairy value chain focus on promotion of improved-breed dairy cows and organization of milk producer and marketing groups. Marketing of dairy products is limited to traditional products such as butter. There is a new initiative in the Tigray region to establish three milk processing factories and one in Mekelle has just started. Thus far, in the dairy value chain, the effort to establish milk producer and marketing cooperatives has not been effective. The few cooperatives established in the two study districts are not functioning well. The major reason is the lack of reliable market.

Conclusions and Key messages

In conclusion, the interventions for value chain development may take different pathways in relation to demand creation, the supply system and value addition. In the case of the study districts, the production and supply of vegetables, fruits and fresh milk is improving although processing and value addition is low. The current interventions are also on rural households as producers and in promotion of nutrition-rich fresh agricultural produce. However, the majority of urban consumers should also be the focus of the value chain development interventions in agriculture to create sustainable demand for such produce. On the supply side, there is a need for interventions on the processing and value addition aspects of fresh produce with the involvement of business entrepreneurs. One specific issue is fluctuation in demand for fresh milk following the extended fasting periods for Christians as a result of which there is ample wastage which can be minimized through processing.

In the formation of milk producer groups, there are some differences in setting up bylaws on milk collection by different groups. Some groups allow retention of one litre of milk per day for family use by member households while other groups require all members' milk production to be submitted to their group. In the latter case, although

individual member households are allowed to buy milk from the group on cash basis, this may limit their direct access to milk.

Hygiene is another concern arising in relation to consumption of fresh products such as vegetables and milk. There is a need for involvement of nutritionists in the education of consumers on the hygiene-related risks of consuming unprocessed milk and vegetables prepared in an unclean environment.

Producers could benefit by organizing into effective groups and entering into formal contractual arrangements with buyers; this would create more reliable markets for and improved income from agricultural produce. In the case of vegetables, studies show that currently 80% of production in the region is marketed, 12% is wasted and only 8% of production is consumed by producers. It is important to assess the implications of this situation for consumption and for the nutrition status of producer households.

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Dr Nick Chisholm,
Department of Food Business and International Development,
University College Cork, College Road, Cork, Ireland.
Telephone +353 21 4903347
e-mail n.chisholm@ucc.ie
Web <http://agridiet.ucc.ie/>

Lead authors: **Dr. Girmay Tesfay and Dr Edward Lahiff**

This brief is based on on-going research under the AgriDiet project by Dr Girmay Tesfay, Mekelle University and Dr Edward Lahiff, University College Cork. The AgriDiet team would like to acknowledge the financial contribution from, and involvement of, Irish Aid and the HEA through the Programme of Strategic Cooperation. The ideas, opinions and comments within the report are entirely the responsibility of the authors and do not necessarily represent or reflect Irish Aid or HEA policy.



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