

Pro-Nutrition Agricultural Project Interventions in Tanzania



An AgriDiet Research Brief

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Malnutrition is a serious problem in Tanzania resulting from food insecurity amongst other causes. It is manifested by the high prevalence of chronic malnutrition whereby some 42 percent of the under five children in the country are stunted. Government's efforts at addressing malnutrition have traditionally focused on increasing food production and most interventions aim at increasing agricultural productivity as a way of ensuring household and national food security. However, it is now recognized that any agricultural intervention must have nutritional improvement as an explicit objective and must include in its implementation strategy activities that are directed at addressing nutritional outcomes. An analysis of selected agricultural interventions was therefore conducted to identify their impact on the nutritional status of targeted households, with a view to drawing lessons on how such interventions should be designed in order to have a positive impact not only on agriculture but also on the nutritional status of the beneficiaries.

The specific objectives of the study were to:

1. identify a range of agricultural and other food-related interventions that impact positively on the nutritional status of women and children;
2. distinguish between direct and indirect impacts of the interventions; and
3. identify factors that could promote the scaling up of interventions that are likely to have a positive impact on nutrition

Methodology

The study involved an analysis of selected agricultural interventions in three regions, Morogoro, Mwanza and Shinyanga. Five Districts from Morogoro Region were covered by the mapping exercise: Mvomero, Morogoro Rural, Kilosa, Kilombero and Ulanga. In Shinyanga Region, the mapping exercise concentrated on projects found in Kishapu District, while only Misungwi District was included from Mwanza Region.

A multi-stage sampling of interventions was done, involving three stages:

1. An initial mapping and profiling of all the interventions undertaken by the government, NGOs and donors that had any reference to agriculture or nutrition.
2. The second stage involved a detailed examination of the project objectives to select for a more detailed analysis. The criteria for short-listing the projects included: being an agricultural project with an explicit objective of improving household food security and/or nutrition status; having indicators for measuring nutritional impact; and having the possibility of obtaining relevant information about the impact of the project. Based on these criteria, a total of six projects were selected for detailed examination.
3. For the selected interventions, a combination of data collection techniques was used: first, direct one-to-one interview with project staff; second, a review of documents provided by the project staff; and thirdly, interviews of project beneficiaries, where available information from project staff or documents was not adequate to assess impact.

Key Findings and Lessons Learned

The assessment of the impact of agricultural interventions on nutrition was based on how they influenced nutrition using the following pathways: increasing the sources of food; increasing household income; reducing food prices; increasing non-food spending; increasing women's control over resources; allowing more time to women and caring practice; and improving women's health and nutrition. The findings are summarized over the page.

Project	Pathway to nutrition	Impact on nutrition
Mlali ADP	<ul style="list-style-type: none"> • Food source – increasing agricultural productivity through improved practices and increased access to inputs; crop diversification; and promoting cereal banks • Income source – farm and non-farm income through IGAs; improving access to credit; access to markets • Non-food spending- school fees, health, housing • Women’s resource control through women’s IGAs • Women’s health and nutrition through attention to malaria, HIV/AIDS prevention, pre- and ante-natal care, breastfeeding, weaning foods 	<ul style="list-style-type: none"> • Reduced stunting to 33.1% compared to the national average of 42% • 51.8% of households improved their dietary diversity (DD) • Increased micronutrient intake • Meal frequency- 76% able to have three meals a day • Reduced duration of food shortage – 47% have food all the year round compared to 32% before • Increased HH income to above national basic poverty line • Increased women’s income
NAFAKA	<ul style="list-style-type: none"> • Food source through increased agricultural productivity by improving agricultural practices and use of inputs; • Income source through linkage to markets, strengthening cereals value chains and warehousing; promoting rural microfinance institutions • Non-food spending on education, improved houses, health care, investment in agriculture machinery • Women’s time and caring through promoting appropriate technologies to reduce women’s workload • Women’s resource control through training on land rights and women’s empowerment 	<ul style="list-style-type: none"> • Increased DD by incorporating vegetables • Increased micronutrient intake through QPM, vegetables and legumes • Reduced period of food shortage through increased paddy productivity from 640kgs to 1600kgs per acre • Increased HH income through market linkages • Increased women’s income through involvement in value chains
TASAF projects. (Dairy cattle/ goats, local chicken, layers and vegetable gardens)	<ul style="list-style-type: none"> • Food source through increased productivity and production and diversification • Income source through engagement in income generating activities and improved marketing • Women’s resource control through specific women income generation activities 	<ul style="list-style-type: none"> • Increased DD including vegetables • Increased animal protein intake including chicken, eggs and milk • Increased HH income • Increased women’s income
Chickpea promotion for household income and food security	<ul style="list-style-type: none"> • Food source through increased productivity and production of chick peas • Increased income through market linkages • Women’s resource control through involvement in chick pea production 	<ul style="list-style-type: none"> • Increased DD through increased consumption of chick peas • Increased intake of protein • Increased HH income from average of Tshs35,000 to Tshs100,000
Orange-fleshed Sweet Potato (OFSP)	<ul style="list-style-type: none"> • Food source through increased production of OFSP • Income source • Women’s health and nutrition through training on processing and preparation of OFSP for consumption 	<ul style="list-style-type: none"> • Increased DD by incorporating OFSP in the diet • Increased consumption of Vitamin A and other vitamins • Increased women’s income from selling OFSP products
Rice production	<ul style="list-style-type: none"> • Food source through increased productivity and production of rice • Income source through market linkages • Women’s resource control through involvement in market gardening 	<ul style="list-style-type: none"> • Increased DD through more consumption of vegetables • Increased women’s income

Despite the challenge of a lack of robust baseline studies for most of the projects reviewed, it is clear that it is possible for agricultural and food-related interventions to result in improved nutritional status of community members, either as a planned or an unplanned outcome. Most projects focus on increasing agricultural productivity, production and income, for the purpose of ensuring household food security, which in itself does not necessarily lead to improved nutrition of household members. However, many of the projects were able to achieve nutritional impact through different pathways.

By focussing on improving household agricultural production the projects met at least one of the components of nutrition that is ensuring food availability. This was achieved through promoting the adoption of improved agronomic practices, the use of fertilizer and improved seed varieties: for example, the Mlali ADP, NAFKA and the Tanzania Scaling up projects. Other projects (Mlali ADP, NAFKA, OFSP, Chickpea project) aimed at increasing household income, by strengthening links to markets and by promoting non-farm income generating activities. This had an indirect impact on household food security in that part of the income would be used to purchase food items and therefore ensuring household food security.

Some of the projects (Mlali ADP, NAFKA, Chick pea project) went further in targeting women with farm and non-farm income generating activities which had a much more direct impact on household food security, since experience shows that women tend to prioritize household food security in their household budgets. The projects also improved women's access to productive resources including credit (Mlali ADP), water for irrigation (NAFKA), technologies (all projects) and livestock (TASAF), all of which led to their economic empowerment.

Both increased production and income have an indirect impact on nutritional status since, while these may increase the availability of food in the household, there is no guarantee that such food will necessarily be more nutritive, or that all household members will benefit unless there is a deliberate effort towards this. However, where such increase is under the control of women, there is a higher likelihood that all members of the household will benefit.

The projects that had promoted diversification of agricultural production, for example TASAF, OFSP, and the Chickpea projects, had a higher chance of having a more direct impact on household nutritional status since this led to a more diversified and a more nutritive diet (e.g. more vegetables and animal protein content) in the household. Likewise, projects that targeted women with specific skills of food preparation, processing, storage, preparation of weaning foods, and general women empowerment, such as NAFKA, Mlali ADP and the TASU projects, had a higher chance of impacting on nutritional status of household members, as these skills could be directly applied in the household, and they also led to women's economic empowerment. However, it is important to note that none of the projects reviewed addressed the issue of intra-household gender dynamics, including cultural norms, that usually have a major influence on gender roles and decision-making.

Conclusions

An integrated approach that includes the aspects of basic education, health and sanitation in addition to nutrition interventions, is perhaps the most effective in bringing about a sustainable impact on household nutritional status. For example, the Mlali ADP addressed a number of inter-related issues of increasing access to (primary) education, improving health status (malaria and HIV/AIDS prevention, maternal health and immunization of children), sanitation (use of improved toilets), increased agricultural production, enhanced farm and non-farm incomes and improved nutrition, all in one programme. Over a period of 15 years of the project intervention, stunting was reduced to 33% compared to the national average of 42%, while dietary diversity was improved for 52% of the households, and households with food throughout the year increased to 47% compared to 32% before. This is one of the most effective ways of ensuring nutritional impact, although the challenge is how to create the institutional linkages to facilitate scaling up.

Recommendations

In scaling up the interventions that are likely to have positive impacts on nutrition, it is necessary to focus on:

1. improving access to productive resources, particularly skills in production, processing, marketing, entrepreneurship, nutrition, credit and inputs;
2. targeting women, especially for economic empowerment so as to increase their discretionary income;
3. integrating with health and sanitation which have a big influence on nutritional status especially of women and children; and
4. influencing change in attitudes and behaviour regarding nutritional and related practices.

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