

Improving Nutrition through Agriculture in Tanzania



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Tanzania has some of the highest rates of undernutrition in the world with 42 per cent of children under five years old suffering from chronic undernutrition (stunting). Stunting in the first two years of life leads to irreversible damage, including reduced brain and intellectual development, increased susceptibility to infectious and non-infectious diseases and death. The human and economic costs are enormous, falling hardest on the very poor and on women and children.

Agriculture has been highlighted as an area with great potential to improve nutrition and there have been many studies researching the linkages between the two sectors and the pathways through which agriculture may improve nutritional outcomes. Various policies and programmes have been formulated and implemented over the past two decades in order to address the problem of undernutrition, particularly amongst women and children. While there is growing recognition of nutrition as a multidimensional issue, policies to date have tended to address specific sectors and sub-sectors, such as health, agriculture, education, food security or poverty reduction, with only a limited degree of integration across sectors.

A malnourished child is 10 times more likely to die from preventable diseases than a healthy child and Tanzania has some of the highest levels of chronic malnutrition in the world

This brief outlines the main nutrition issues in Tanzania and provides an overview of recent trends in the agriculture sector. The main pathways through which agriculture is hypothesised to improve nutrition are outlined, along with recommendations for policymakers and programme managers. Next a critical assessment is made of the extent to which agricultural and related policies and strategies in Tanzania address nutritional goals, and the extent to which such policies are integrated with each other. Finally key recommendations are outlined for further policy and programme development.

Overconsumption of ugali and under consumption of vegetables, beans and fruits contributes to under nutrition

Nutritional issues in Tanzania

Tanzania has achieved significant results in terms of economic growth in recent years. Income poverty and extreme food poverty have declined, as have child and infant mortality rates. Despite these positive trends, stunting rates have stayed high, indicating that economic growth alone is not enough to improve early childhood nutrition. Micronutrient deficiencies are also a major problem in Tanzania, contributing significantly to the burden of malnutrition. Anaemia contributes to 20 per cent of all maternal deaths and iron deficiency (a

common cause of anaemia) poses major health consequences, including impaired physical and mental development, increased risk of morbidity and disability in children and reduced work productivity in adults. Vitamin A deficiency is the leading cause of preventable blindness in children and increases the risk of disease and death from severe infections. In pregnant women it also causes night blindness and may increase the risk of maternal death.

How can agriculture improve nutrition?

Simply growing more food is not the answer. For example, regions with high maize production generally have the highest stunting rates, indicating that food availability by itself does not necessarily lead to adequate nutrition. This may be because of poor levels of care and support for children, due to the heavy workload of women in the fields, seasonal variations in food and income availability, and the prevalence of poverty in rural areas.

There are no safety nets in Tanzania which might help to fill this seasonal gap, so how can agriculture provide for a more stable food supply and workload throughout the year? Box 1 outlines the pathways through which agriculture may affect nutrition. This highlights the importance of agriculture not only as a source of food and income, but also its impact on women's time, which often creates a dilemma in terms of caring for children against the need to produce food and earn income.

Improving diversity

Diet diversity, where a wider variety of foods are consumed, is an important factor in improving nutrition. Tanzania produces enough maize, pulses, bananas and potatoes but not enough of many other crops. These food crops provide the bulk of the energy in the diet but are very limited in essential vitamins, minerals and protein. Food security in Tanzania is often equated to maize availability (ugali), but crops which provide other nutrients, such as animal sources of foods (meat, eggs, dairy), pulses, vegetables and fruits are not considered. These foods provide essential nutrients which are crucial for growth, brain development and health. Over-consumption of maize or cereals and under consumption of animal sources, vegetables, beans and fruits contributes to undernutrition.

A high proportion (14 per cent) of the fruits and vegetables produced are lost or damaged due to inadequate processing and storage, and an inefficient market infrastructure for transporting fruits and vegetables from production to consumption areas.

This means that a great amount of nutrients are lost, which could have been used to improve the micronutrient status of the population.



The goal of agriculture should be to grow food for nutrition. Planning for food production ought to include the nutrient requirements of the population

Food and cash crop production

The goal of agriculture should be to grow food for nutrition, or “high nutrition agriculture”. Planning for food production ought to include the nutrient requirements of the population. Currently there is little consideration given to nutrition when planning for agricultural (crop/livestock) production. Efforts to improve agriculture have basically focused on yield and efficiency of crop production, but very little on the nutritional quality of crops.

Food sufficiency In Tanzania is mainly thought of in terms of maize sufficiency/availability and not diversified foods. A diet which consists mostly of maize is likely to lead to undernutrition, therefore other foods that provide protein, minerals and vitamins must be produced to provide the nutrient balance necessary for health.

Production of all cash crops has been increasing over the past 14 years and rates of malnutrition are generally lower in areas with both a cash crop and a different staple food crop. Malnutrition rates are higher in areas where the food crop is also the cash crop (maize) as families are driven to sell their crops in lean times to generate income. There is a need to establish a system of crop production whereby farmers are able to produce both cash and food crops. The danger, however, is that most of the food may end up being sold without leaving enough stocks to last until the next harvest and the income may not be used to access other foods so as to improve diets.

Targeting women

A significant proportion of women are undernourished in both energy and micronutrients, mainly attributed to high physical work intensity, inadequate diet and poor gender relations. Therefore, improvement of nutrition can be seen as a key component of also raising agricultural production. Interventions which target women and include women's empowerment activities, such as improvement in their knowledge and skills, or promotion of increased control over income, are more effective in raising agricultural productivity, improving child health and nutrition, and increasing expenditure on education. The burden on women both of agricultural work and of care is a major factor influencing their own, and their children's, nutritional status, so policies which address undernutrition need to consider these factors.

Policies and planning

Malnutrition is a multifaceted issue that requires the integration of various sectors in addressing the problem. Traditionally, the agriculture and health sectors have been considered the most important for addressing nutrition. However, many other sectors are important in addressing specific issues related to nutrition. Sectors that are considered to be most pertinent include agriculture, health, water and sanitation, livestock and fisheries, community development, finance and education. Other sectors that may make a contribution are energy, transport, infrastructure, trade and marketing, communication and the media. All these sectors should be interlinked to ensure adequate nutrition outcomes. However, these sectors need to be well coordinated in their planning and approach. Policies and programmes in areas like agriculture, social protection, women's empowerment, health and sanitation and the health system are vital if stunting rates are to decline.

The Government of Tanzania has developed a range of strategies and policies in relation to overall economic growth, agricultural development, and nutrition. Although these acknowledge the importance of nutrition, the specific targets are more narrowly focused on food availability through increased agricultural production, particularly of maize. Conversely, in the National Nutrition Strategy (NNS), eight priority areas are identified, none of which directly focus on agriculture. Agricultural aspects are included in the implementation plan of the NNS, but to date few of these actions have been implemented. In general, the resources allocated for nutrition activities under the NNS have been limited. Nutrition is a cross-cutting issue; therefore it is important that every sector should address it in one way or another. Nutritionists in key ministries and local government as well as agricultural extension officers ought to understand agriculture and nutrition linkages so as to be able to provide leadership or guidance in aspects related to nutrition.

Nutrition is currently only considered to a minimum extent in agricultural planning. Capacity strengthening at all levels is needed to empower key actors to implement nutrition-focused agricultural activities.

Conclusion

Agriculture has the potential to contribute to improving nutrition in Tanzania; however, agricultural production planning must be guided by a nutrition lens. Food security should not be focused only on maize or cereal production, but should encompass supply and availability of a diverse range of nutrients to meet the nutritional requirements of the people.

To achieve this, an integrated and holistic approach in addressing agriculture and nutrition issues is required. There is also a need for more information and education about the links between agriculture and nutrition, as well as work to further develop skills towards sustainable agriculture for improved nutrition and health. It is essential to raise awareness or facilitate new forms of production for farmers to be able to integrate nutrition considerations in their agricultural practices.

The policies in place are currently not contributing positively towards improving nutrition. Most of the existing policies have minimal incorporation of nutrition issues. There is a need to incorporate issues of nutrition and their importance in relation to the core nature of the policy and how it affects availability, accessibility and utilisation of food, and therefore influence nutrition outcomes of the entire population of Tanzania.

Box 2. Guiding principles for agricultural policymakers and programme managers to achieve greater nutrition impact

1. Incorporate explicit nutrition objectives and indicators into programme design, and track and mitigate potential harms
2. Assess the context
3. Target the vulnerable and improve equity
4. Empower women
5. Maintain or improve the natural resource base
6. Facilitate production diversification, and increase production of protein foods, vegetables and fruits
7. Promote consumption of diversified foods
8. Improve processing, storage and preservation
9. Expand markets and market access for vulnerable groups, particularly for marketing nutrient-rich foods
10. Incorporate nutrition promotion and education
11. Collaborate and coordinate with other sectors

Recommendations

- Incorporate issues of nutrition and their importance in all policies in relation to the core nature of the policy and how it affects availability, accessibility and utilisation of food.
- Target programmes at women, improve their skills and knowledge and promote increased control over household income. Consider the impact of women's time allocation to agriculture and child care when planning programmes.
- Develop a food basket for various regions or agro-ecological zones of Tanzania and ensure that all the food items in the food basket are produced in sufficient amounts to meet daily nutrient requirements.
- Improve processing and storage capacity and transport, with particular attention on fruits and vegetables.
- Develop indicators, such as the contribution of a hectare yield of a particular crop to nutrient supply, to understand the contribution of agriculture to nutrition.
- Develop indicators for assessing sectoral contributions to undernutrition or improved nutrition.
- Strengthen capacity at all levels to empower key actors to implement nutrition-focused agricultural activities
 - Provide more support to the Nutrition Officers now placed at District and Regional level.
 - Include agriculture-nutrition actions in the training programmes of agriculture extension, nutrition and health workers.

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