



Bundesministerium
für Ernährung
und Landwirtschaft

NUTRITION

Nutrition – Diversified Agriculture for a balanced nutrition in Sub-Saharan Africa

Scale-N: Scaling-Up Nutrition: Implementing Potentials of nutrition-sensitive and diversified agriculture to increase food security

Country	Tanzania
Funding Agency	Bundesministerium für Ernährung und Landwirtschaft – BMEL
Project executing Agency	Bundesanstalt für Landwirtschaft und Ernährung – BLE
Coordinator	Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF) e.V.
Partners	Universität Hohenheim, Sokoine University of Agriculture, , Tanzanian Ministry of Agriculture, Food Security and Cooperatives, FAO (advisory board)
Project Budget	1 381 825,81€
Project Duration	01.07.2015–31.12.2018
Key Words	Food Security, kitchen gardens, school gardens, nutrition-

	sensitive agriculture, nutrition education
Background	<p>Food and nutrition security is still one of the most pressing challenges to a rapidly growing population in Sub-Saharan Africa. Key drivers include poverty, population pressures, degradation of natural resources (e.g. decreased soil fertility), land-use changes (smallholder crop production vs. agro-industries), climate stressors (e.g. droughts and flooding), urbanization, social & political unrest, national & global policies or fluctuating markets.</p> <p>The nutritional situation in the East African country has only slightly improved in the last decade despite high rates of economic growth. The Tanzanian demographic and health survey 2010 (URT 2011) reported a stunting prevalence of 40% in children <5 years, which is an indicator of poor nutrition over a long period. Moreover, stunting rates in rural areas were 13% higher compared to urban settings. In children <5 years, prevalence of vitamin A and iron deficiency was 34% and 35%, respectively, and 59% of children were anaemic. For women (15–49 years), the prevalence of vitamin and iron deficiency was 37% and 30%, respectively, and 41% of women were anaemic (URT 2011).</p> <p>Scale-N will target the problem of malnourishment in rural Tanzania by a holistic participatory approach. The project will therefore focus on nutrition-sensitive and diversified agriculture to improve availability of nutrient-dense plant foods. Furthermore a tailored nutrition education program will be implemented to improve nutritional knowledge, which is important to achieve behavioural changes in dietary food intake.</p>
Objectives	<p>The main objective of our collaborative research project is to safeguard food and nutrition security for the local population in rural Tanzania (Morogoro and Dodoma region) by supporting the development of diversified and sustainable agriculture and nutrition education.</p>
Results	<p>Five nutrition sensitive innovations were successfully identified and implemented: Kitchen/school/community gardens, composting and soil enrichment education/trainings, mobile</p>

phone integrated market access system (i-MAS), the nutrition up-scaling centre and a tailored nutrition education program.

In total, 79% of the study population practiced kitchen gardening after introduction and therefore improved availability of green leafy vegetables on household level. The tailored nutrition education program also showed a significant improvement in nutrition knowledge, attitude and practices scores in the study population.

The comparison of the baseline and endpoint blood analyses showed the following results: In women increased haemoglobin levels were observed in the overall study population after intervention of nutrition sensitive innovations. The vitamin A status significantly improved in women in the Morogoro region, but decreased in Dodoma region (most probably due to droughts). In school children increased hemoglobin levels could be observed after intervention in the overall study population. Furthermore, vitamin A status significantly improved in all children (2016 prevalence of low vitamin A status 86% and in 2018 11%) and prevalence of vitamin A deficiency could be reduced to <0.5% compared to 25% at baseline.

The zinc status of children in the Morogoro region improved, whereas no changes in Dodoma could be observed.

Photos



Nutrition Training Manual for Community Trainers at a Village Level

An approach to Improve and Scale Up- Nutrition in Rural Communities of Dodoma and Morogoro Tanzania





Recommendations

Implementation of kitchen/school/community gardens have the potential to improve the nutritional status by increasing the availability of nutrient-dense green leafy vegetables. Nutrition education is a key element to foster behavioural changes on dietary intake patterns in rural communities.