



Bundesministerium
für Ernährung
und Landwirtschaft

NUTRITION

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

NutriHAF - Diversifying agriculture for balanced nutrition through fruits and vegetables in multi-storey cropping systems

Country	Ethiopia, Madagascar
Funding Agency	German Ministry for Food and Agriculture – BMEL
Project executing Agency	German Federal Office for Food and Agriculture – BLE
Coordinator	Center for Development Research – ZEF, University of Bonn
Partners	AVRDC – The World Vegetable Center FOFIFA – Centre National de la Recherche Appliquée au Développement Rural, Madagascar KoGa – Kompetenzzentrum Gartenbau, Universität Bonn IZNE – Internationales Zentrum für Nachhaltige Entwicklung, Hochschule Bonn-Rhein Sieg UoA – University of Antananarivo, Madagascar ASARECA – Association for Strengthening Agricultural Research in Eastern and Central Africa FANRPAN – Food, Agriculture and Natural Resources Policy Analysis Network ECCCCFF – Environment, Climate Change and Coffee Forest Forum, Äthiopien Horticulture Innovation Lab, USA

Project Budget	1.170.266,63 Euro
Project Duration	16.03.2015-31.12.2018
Key Words	Nutrition sensitive agriculture, Food and nutrition security, Agroforestry, Horticulture, Agricultural innovation, Leafy vegetables, Vegetable value chains, Biosphere reserve, Agrobiodiversity, Dietary Diversity, Gender, Extension services
Background	The NutriHAF project - "Diversifying agriculture for balanced nutrition through fruits and vegetables in multi-storey cropping systems" was conducted under the direction of the Center for Development Research together with scientific institutes and non-governmental organizations in Ethiopia, Madagascar and Germany. In total, 10 postdocs and 35 Master students investigated the introduction of vegetables in existing production systems and their nutritional outcomes for the local population. In Ethiopia, the project was conducted in the southwest of the country, in the Yayu Biosphere Reserve, one of the last forest areas where wild coffee can be found. In Madagascar, the project worked in one of the poorest areas of the country, the Southwest, nearby Farafangana.
Objectives	<ol style="list-style-type: none"> 1. Increase (micro-) nutrition security of the population 2. Diversify and intensify agriculture in these regions 3. Reduce pressure on natural habitats in biodiversity hotspots
Results	<ul style="list-style-type: none"> • Suitable vegetables for under-storey cultivation identified, demonstrated and tested. • Research carried out on farming systems, farm and non-farm livelihoods, dietary consumption patterns, gender roles, agrobiodiversity, value chains, agricultural extension services. • Nutrition-sensitive agriculture training modules for both extension workers and farmers implemented. • Participatory cooking demonstration with the local population carried out which showed the processing, tastefulness, and usefulness of the newly introduced vegetables. • Perceptions and knowledge on cultivation and consumption of leafy vegetables in the intervention areas changed positively and seed demand increased. • Vegetable booklets and training materials published in English, Afaan Oromo, French and Malgassy including both information on nutritional and production issues. • Policy advocacy workshops undertaken and eight Policy Briefs published which stimulated the discussion about nutrition-sensitive agriculture and leafy vegetables.

Photos



Cooking demonstration and workshop on food safety and nutrition in Yayu, Ethiopia. © J. Dürr/ NutriHAF



Vegetable fields nearby Farafangana, Madagascar. © J. Dürr/ NutriHAF

Recommendations

- The potential of the research results being taken over by the local population can be increased by:
1. Generating knowledge and building capacities on vegetable production and processing by demonstrations and training programs.
 2. Selecting and planting vegetables in a participatory and a non-participatory way to be able demonstrate also new species.

	<ol style="list-style-type: none">3. Convincing farmers not only by nutritious values, but by good taste, developing locally adapted recipes.4. Convincing extension services of the importance of horticulture and nutrition issues by offering trainings and training materials.5. Introducing simple but effective food processing practices by using locally available materials.6. Establishing a functional seed distribution system by working with local farmer groups.7. Inviting important stakeholders such as research centers, universities, and agriculture and health offices to collaborate and to take over the responsibilities of scaling-up the activities after end of project.
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