



Stories from the Field

Alessandra Grasso, a US Borlaug Fellow, has spent the past 5 months in Busia County, Kenya working with local farmer groups to raise awareness of the value of biodiversity for food and nutrition.

Here, in the first of a series of stories from the field, Alessandra shares her experience of the hands-on, practical learning instruments included in the shamba (vegetable garden), and the impact they have had on the livelihoods of local communities.



Photo: Alessandra Grasso

Busia County in the Western region of Kenya is home to an array of highly nutritious food resources, yet food and nutrition insecurity persists. The Biodiversity for Food and Nutrition (BFN) Project is working with the local community-based organization Sustainable Income Generating Investment (SINGI) and Departments of Agriculture, Education and Health to combat food and nutrition insecurity by providing capacity building trainings with farmer groups.

SINGI extension workers and BFN personnel are leading Training of Trainers (ToTs) workshops to demonstrate the various organic agricultural technologies and methods within demonstration plots. These plots are areas of land allocated for testing and validating various agricultural techniques and products, and are used to show new technologies and methods of sustainable home-gardening (regardless of literacy level) through observation and discussion.

The impact has been substantial; effectively disseminating agricultural information and technologies to over 4,000 small-scale farmers within a short period of two years, engaging farmers in evaluating improved practices, and sharing lessons and successes among farming communities in Matayos Sub-County of Busia County.

Building on the leadership provided by SINGI, the BFN Project is creating synergy to scale out best practices for mobilizing biodiversity for food and nutrition by promoting kitchen garden technology in all seven Sub-counties of Busia.

Demonstration plots provide an opportunity for farmers to:

- Test and validate improved cultural methods such as organic farming
- Handle and manage different kinds of soils, and learn the adaptability of soils and crops
- Allow the community to observe how various crops are grown, i.e. the different treatment on varieties of various crops and yields under prevailing circumstances
- Test new and improved varieties of agricultural crops and animal breeds
- Stimulate interest in agricultural technologies and methods for home gardens among schools, churches, groups, small-scale farmers, and individuals

Kitchen or home gardens have gained traction globally as a best practice to combat malnutrition and encourage the conservation and utilization of local biodiversity. They allow households to grow various nutrient-rich food crops with local resources such as:

- manure (for compost, a natural fertilizer)
- indigenous seeds
- dried plant matter for compost or fencing
- wild plants that serve as soil enricher, such as nitrogen-rich Tithonia
- ash from households that serve as pesticides in compost and soils
- stones or rocks
- metal scraps to make jembes (garden hoes) and other gardening tools.

These gardens also allow access to healthy foods close to the kitchen, make use of any available space, and maintain plant growth and food supply even under challenging circumstances (drought, contaminated areas, little space, etc.). Through demonstrations, the BFN Project Local Site Implementing Committee is creating awareness of biodiversity for dietary diversity, building capacity of households to grow, process, and preserve various highly nutritious foods, and motivating farmers and individuals to use organic ecological methods for environmental resilience and food security.

This season, *Esikoma Ushirika* farmers planted a variety of local vegetables, cereals, legumes, and medicinal plants using various kitchen gardening technologies. The demonstration plot features multi-storey gardens, raised garden beds, tumbukiza (hole or pit) gardens, stick sack gardens, key-hole gardens, hanging gardens and sunken gardens, all of which possess distinct advantages and adaptive abilities to improve food and nutrition security.



Our BFN "Training of Trainers: A Guide to Gardening Technologies" outlines strategies for successful garden construction according to location and available resources and materials.

Esikoma Ushirika



Photo: Alessandra Grasso

The work of the BFN Project is exemplified by the hard work and accomplishments of Esikoma Ushirika Self Help Group, a group of thirty farmers in Matayos Sub-County who united to learn, share, and practice new agricultural techniques and methods on a 30m x 30m demonstration plot.

This group was registered with the government in 2004, and since then has joined forces to bring experts from organizations such as SINGI to teach them about new methods and technologies for enhanced agricultural productivity, household income, and community health.

Due to acidic soils, drought, and erratic rainfall, Esikoma Ushirika Self Help Group has embraced organic ecological agriculture. This is a production management system that considers biological diversity, healthy use of soils, air, and water, and relying on renewable resources in locally organized and managed agricultural systems.

The group is working to improve soil fertility and water conservation by practicing many crop management technologies such as multi-cropping, companion planting, agro-forestry, ecological pest management, animal husbandry, and kitchen gardening technologies.

From The Source



Photo: Alessandra Grasso

William Buluma (right), chairperson of SINGI CBO and Lorna Wanyama (centre), Agricultural Officer for the Burumba Ward, share in an interview with Alessandra how they are collaborating with the *Esikoma Ushirika* Self Help Group and the BFN Project to successfully grow traditional vegetables and medicinal plants for improving nutrition, health and household incomes in Busia County.

“Our garden demonstration plot contains several crops including finger millet, sorghum and soya beans. We really thought of the farmers needs in terms of nutrition and a balanced diet, so we have tried to mix energy-giving food, protein, carbohydrates, and others.

The sorghum is a cereal that helps as a staple food for food security. Finger millet is a staple food with nutritional value, and gives us food and local brew, rich in iron and vitamin A. Soya beans contain 40% protein, and can be planted as a cover crop to balanced diet in our houses. We also have sesame seed (simsim), which is one of Busia’s traditional crops. We were losing it, but are now looking back and planting it again, and it is doing very well.

We also have Mandala garden technology, which allows us to plant different types of indigenous vegetables such as crotalaria, jute mallow (murere), and spider plant and also to save water. We have planted a Sudanese traditional vegetable. It is drought resistant, and when it is cooked with sour milk it is very nutritional. We want to grow it here because we’re talking food and nutrition and biodiversity.

During our BFN training, we learned about environmental conservation. We looked and saw banana stalks and thought, we don’t want to waste anything. So we decided to save the banana stalks and now we use them to grow onions, kales, dania and cowpeas.

The cost of medicine is very high at the sub-county and ward level, so planting medicinal crops can help farmers in their own homes to treat mild illnesses. We are trying to focus on growing bambara nut because according to a study, it is a medicine in our bodies and can prevent diseases. It’s a good food; if you mix it with maize you get a very good meal for the family. Halulu is a traditional medicine that treats malaria. Tethonia is a nitrogen fertilizer, and a medicine for stomach ache.

According to BFN, we need to up-scale this programme to other farmers, so this is what we are focusing on now. SINGI is appreciative of this programme, it can increase farmers’ knowledge and income and improve food security in farmer households. This garden is a success.”

-William Buluma & Lorna Wanyama