

Local biodiversity in production, market and consumption

African Leafy Vegetables in Kenya

PROJECT TITLE

African Leafy Vegetables programme in Kenya

INTERVENTION DOCUMENTED

Biodiversity conservation and utilization for better livelihoods, dietary diversity and health: triggering demand for and production of traditional leafy vegetables in Kenya

CONTEXT

Local green leafy vegetables are cheap and readily affordable to many low-income communities in rural, peri-urban and urban areas. They are also rich in many micro-nutrients and can be crucial for the food and nutrition security of poor families. Despite these beneficial attributes, leafy vegetables have generally been neglected by researchers and national agricultural programmes because of the large number of species involved, their very localized use, their wild, semi-wild or weedy nature. Leafy vegetables are also neglected by consumers because of their association with poor rural lifestyles, which means they are often regarded as a low-status food. This neglect is one of the reasons why the diversity of African leafy vegetables (ALV) became threatened in the 80s, thus putting at stake the dietary diversity, nutrition and health of local populations.

TARGET POPULATION

Small farmers (rural and peri-urban areas) and poor consumers (rural, peri-urban and urban areas).

STAKEHOLDERS

Research on, promotion of, and consumption of ALV occurred in Kenya over many years through, among others, the Rural Outreach Program, the Kenya Agricultural Research Institute, the Ministries of Agriculture and Health and Universities (more on: www.bioversityinternational.org/fileadmin/bioversityDocs/Impact_Assessments/Impact%20Discussion%20Paper_African_Leafy_Veg.pdf). Bioversity's activities coordinated and expanded scattered efforts of a slow and disorganized process, acting as leader of the programme. As a result, five local universities, one national agricultural research institute, several national organizations, nongovernmental organizations and community-based organizations remained active in ALV activities after the programme had ended. The total number of entities involved directly or indirectly is difficult to assess given the long duration of the programme and its impact in fostering independent action from other stakeholders, based on results and achievements of the programme.

THE INTERVENTION

The ALV Programme was implemented in several African countries to work with producers within existing production and consumption systems, to maintain local knowledge about the crop diversity and the variety of uses, to document the genetic diversity of key priority species and to demonstrate the potential for improvement and competitiveness *vis à vis* introduced commercial vegetable species.

In Kenya, the ALV Programme was carried out in two phases:



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Phase I: 1996 to 1999 Conservation through use	Phase II: 2001 to 2004 Utilization to improve food and nutrition security
<ul style="list-style-type: none"> Collection, prioritization and characterization of ALVs : identification of priority species ; analysis of their nutritional values, and of the variation of nutritional composition due to the effects of storage and processing techniques; promotion of ALV among target groups; improvement of on-farm practices and post harvest management of ALVs; research on the plant genetic resources and local use by rural communities; documentation of indigenous knowledge related to the ALVs and their use. 	<ul style="list-style-type: none"> Follow-up on findings from phase I to improve the nutrition and food security of vulnerable groups, namely women and children; collection, description, mapping and conservation of genetic material of priority species of ALVs; enhance genetic material of priority ALVs; improve horticultural practices, seed systems, on-farm management, handling, marketing and processing of ALVs; capacity-building of the national agricultural research programme to evaluate, conserve and promote ALVs.

CAPACITY BUILDING

At community level:

- Empowerment of women : recognize the role of women, work with them and continuously build their capacities as those driving the production process, especially in the rural areas
- Marketing / market development : link farmers with leading supermarkets as outlets
- Promotional campaigns : through the media, food and cultural fairs, health walks and cookery demonstrations

At district and national level:

national agricultural research programmes:

- 13 MSc and MA students and two PhDs were supported
- Staff of the universities and research institutes received technical training in plant genetic characterization, description and mapping
- Networking among national and international scientists was fostered through the planning meetings, regional workshops and international conferences.

CHALLENGES AND...

- Initial negative perception of ALVs, as "food of the poor".
- Lack of awareness in rural areas, problems in transportation and distance from Nairobi (epicentre of ALVs promotion campaigns)
- Access to information: awareness raising initiatives were concentrated in urban areas, and among medium socio-economic groups that have access to mass media channels of communication
- Interventions were multi-faceted, with a multitude of partners and difficult to monitor and coordinate.

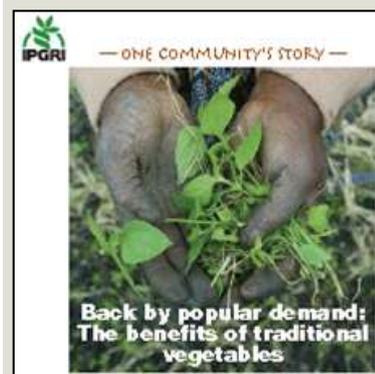
IMPACT ASSESSMENT

In 2007, the programme's impact was measured by analyzing production, consumption, marketing, and nutritional awareness of ALV among 211 randomly selected households. Results were:

- 86% of monitored households grew ALVs (up to 98% and 96% in Kisii and Tharaka districts), in small plots of usually less than an acre.
- About 12 additional traditional leafy vegetable species were introduced into the formal markets in Kenya., for a total of over 40 different species are consumed in the regions.
- Production, consumption, marketing and nutritional awareness increased. About 63% of households increased their income and 45% increased their consumption of ALV relative to 1997, mainly due to increased awareness of ALVs nutritive value.
- In almost 80% of the households, women had the exclusive responsibility of handling incomes from sales of ALVs.
- Traditional cooking methods were improved to preserve vitamins and other nutrients.

The role of Biodiversity International (Representatives from the major Kenyan partners in the ALV programme were interviewed on Bioversity's role)

- Bioversity played a coordinating role, built several partnerships and ensured the harmonisation of outputs of range of different actors in order to deliver a concrete result (www.bioversityinternational.org/impact/african_leafy_vegetables_programme_bioversity_impact_assessment.html).



REPORTS and PUBLICATIONS

www.bioversityinternational.org/research/nutrition_old_pages/dietary_diversity/back_by_popular_demand_a_bioversity_project_report.html

...OPPORTUNITIES

- Economic empowerment of women
- Technical experience for national scientists
- Networking among national and international scientists
- By improving dietary diversification, the project tackled nutrition-related health issues and improved sustainable diets



IMPACT

- Consumers' perception of ALV improved and market demand increased;
- Production, consumption and marketing of ALV increased;
- Increased sensitization of the scientific community to traditional crops.
- Increased national capacities, including training capacities in National Universities.

UPSCALING/REPLICABILITY OF THE INTERVENTION

The experience described here can be successfully up-scaled/replicated under the following conditions:

- Identify one institution that can coordinate and facilitate the joint efforts of all stakeholders
- Consider gender issues – in particular concerning management, sale and cash handling - and monitor them (the risk being that men will exclude women from the management and sale of traditional/local foods as these become/prove profitable)
- Increase awareness raising initiatives in rural areas, among vulnerable populations (community-based extension services and community theatres can be good conveyors, in collaboration with local associations).
- Work with the supply end of the market chain and build partnerships with the private sector, (e.g. supermarkets, shopping malls, etc.)
- Encourage research on nutritional values of traditional /local foods (as well as on best processing, packaging, transportation and storage methods and technologies to preserve nutritional values, market value and improve availability, accessibility and consumption) and impact of local dietary diversity on health.
- Monitor and evaluate the impact of activities on the marketing and consumption of traditional/local foods, to evaluate the success of promotion initiatives and therefore estimate the impact on dietary diversity and living standards.
- Leverage on the involvement of several stakeholders to adopt holistic, integrated approaches, from conservation to use.