

Dietary diversity to deliver better nutrition

Jeremy Cherfas
Assistant to the Director General
IPGRI
Email: j.cherfas@cgiar.org



Stephen Kismodo, a grower of traditional African leafy vegetables in Tanzania.
Photo: S. Mann, IPGRI

The solution to many problems of nutrition, diet and health could be growing in peoples' fields and gardens.

That was the message of several presentations at the 18th International Nutrition Congress, which took place in Durban, South Africa from 19 to 23 September. Researchers from IPGRI reported on initiatives that seek to tackle the double burden of soaring rates of obesity, diabetes and heart disease – usually associated with over-eating – and malnutrition diseases caused by a lack of essential micronutrients. “Both have been linked to the consumption of simplified diets,” affirms Dr Francisca Smith, an IPGRI Honorary Fellow.

IPGRI's strategy is to mobilize indigenous and traditional crops to deliver a more diverse diet that is more nutritious and healthier. This is based on several pilot studies around the world, which showed the many positive impacts of boosting agricultural biodiversity.



IPGRI's display booth of indigenous/traditional food crops of sub-Saharan Africa.
Photo: P. Maundu, IPGRI

In East Africa, for example, Patrick Maundu at National Museums of Kenya has worked with several partners to study and promote traditional African leafy vegetables. “People in Kenya used to eat more than 200 different species of leafy greens,” Maundu said, “but now they seem to want only ‘exotic’ things like cabbage, which have much less vitamins and minerals.”

The East African effort made use of a diversity of approaches to foster diversity in the diet. Local NGOs worked with farmers, especially women, to help them

grow and process traditional species. “We see all sorts of benefits,” said Maundu. The women farmers feed traditional vegetables to their families, who become healthier and more productive. They sell the surplus and so also earn a better income, empowering them and giving them the ability to buy education, health care, better housing and so on. And in the cities, people have access to cheaper and more nutritious food. “Everybody wins,” Maundu said. Similar studies worldwide, each focusing on locally important crops that have thus far been neglected by researchers, have given similar results.

Professor Tim Johns of McGill University in Canada, also an IPGRI Honorary Fellow, is working closely with Maundu on a new project to survey households in Kenya, Uganda and Tanzania to ascertain which traditional foods they eat and how often and the factors that influence dietary choices.

A related study will look at how people use agricultural biodiversity in five countries – Cameroon, Kenya, Senegal, South Africa and Zambia – and connect that to nutritional analysis and genetic diversity. “We need to establish a clear link between agricultural biodiversity and the nutritional well-being of the poor,” said Francisca Smith.

Indeed, this remains a stumbling block for the wider deployment of dietary diversity to combat malnutrition, hunger and poverty.

Successful survey on *Beta nana*

L. Frese, Federal Centre for Breeding Research on Cultivated Plants (BAZ), Braunschweig, Germany. Email: lothar.frese@fal.de

The wild beet *Beta nana* is a rare, endemic and red listed species of Greece, only occurring at high elevations (1800 m to 2600 m). The notes of M.F.G. Dale collecting *Beta nana* on behalf of the IBPGR in 1980/81 suggested that the species is endangered by genetic erosion.

Almost exactly 25 years after Dale's first survey the distribution area was visited by Rich Hannan and Barbara Hellier (USDA/ARS), Stelios Samaras (GGB) and Lothar Frese (BAZ) from 22 August to 5 September 2005 to reassess the conservation status of the species. *Beta nana* was detected on the Taygetos, Vardoussia, Giona, Parnassos, Chelmos and Olympos mountains.

The number of plants per population ranged from a few on the Taygetos up to a thousand plants on the Olympos, where genetic erosion came to a halt owing to a sustainable management of the nature park area. The geographic coordinates of individual populations were GPS recorded to create a better data baseline for monitoring the species in future. With the collected material, urgently needed seed multiplication procedures can now be elaborated to rescue the germplasm once gathered by Dale and stored since then under long-term conditions in Greece and Germany. Using the same material the geographic structure of genetic diversity of *B. nana* will be analyzed by the US partner to provide *in situ* conservation projects with information if the need arises. Only at the end of the travel in the remote and rough areas, the members of the team admitted that they had worried about a possible failure of the mission. Good teamwork and preparation, and a share of good fortune, made the survey surprisingly successful. This is good news for *Beta nana*, a crop wild relative of the sugar beet!



Large *Beta nana* plant found in a sheltered depression close to an *Urtica* stand.
Photo: L. Frese, BAZ, Germany