



Celebrating the International Year of Biodiversity with Success Stories from the Field - Forgotten crop varieties and landraces make a comeback in Georgia

9 FEBRUARY 2010 | The direct-use value of biodiversity often goes overlooked when evaluating the importance of biodiversity. However, farmers in Georgia know better. With support from the GEF project, “Recovery, Conservation and Sustainable Use of Georgia’s Agrobiodiversity”, implemented by UNDP and executed by a local biological farming association, Elkana, Georgian farmers are reclaiming forgotten crop varieties and landraces while they diversify their agricultural production



[Learn more about Georgia’s agrobiodiversity](#)

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What is agrobiodiversity?

Agro-biodiversity includes all components of biological diversity relevant to food and agriculture. It occupies a unique place within biological diversity given that it is essential to satisfy basic human needs for food and livelihood security.

Agro-biodiversity is actively managed by farmers, and its conservation is impossible without active engagement of local farmer communities.

Georgia lies on the southeastern boundary of Europe, between the Greater and Lesser Caucasus and the Black Sea, an area defined by Conservation International as one of the world’s biological hotspots. The country’s agriculture can be traced back seven thousand years, when the first Georgian tribes began to domesticate crops such as wheat, barley, oat, rye, grain, legumes and fruit species. While covering a relatively small area of 69,700 square kilometers, Georgia is home to more than 350 local species of grain crops; more than 100 species of seed and stone fruit-trees, nuts and wild berries; and 500 local varieties of grapes. Before the early 20th century Georgia’s agricultural production was diversified. During the Soviet times most families and collective farms grew introduced varieties (thus decreasing on-farm diversity) while agricultural research centers cultivated local landraces (the repository of agrobiodiversity). When financial support from the Soviet Union ceased, the loss of agrobiodiversity intensified as valuable collections and

stocks of landraces began to deteriorate as the agricultural research centers and extension services that promoted these landraces collapsed and agricultural production was marked by an increased use of introduced varieties and the application of agrochemicals. By the mid-1990s the local varieties were simply not available for planting and the research centers lacked the capacity to assist farmers to reintroduce them.

The project which aims to revive the country's agro-biodiversity by promoting the re-introduction and sustainable use of the country's agro-biodiversity through improving access to seed stock and planting material, providing extension services to farmers, and facilitating experience-sharing among farmers, research stations, and other stakeholders.

Prior to the project, the seed material of the local landraces seemed to be completely forgotten. The project has established a seed multiplication system to encourage local farmers to use and sow local landraces and by 2009, 28 land-races and varieties (52% of all known for Georgia) were being used for subsistence production, and seven land races (13% of all landraces) were in commercial use. At this point, 189 households are cultivating land-races and local varieties and more than 80% of these households are reporting higher pulse diversity on-farm, diversification of the family diet, and higher nutrition levels. The revived landraces and local varieties have demonstrated a much higher resistance to droughts, pests, and harsh winters. Eleven farmers and three farmer cooperatives confirmed higher incomes from trading of their harvests and seeds. The six revived native legume crops are now being sold to retailers on the local market with a 10% premium compared to the imported common beans widely available in Georgia. For the last three years the volume of sales has been growing at almost 100% every year. While the sales revenue for the farmers has been on the rise, further financial returns are gained through almost zero application of chemical fertilizers.



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Farmer's Voices

"I have been receiving the project's help since 2004, when Elkana invited me to the farmer association for native crops. Ever since then, my harvests have been good, I make better profits, and every year I try to sow more and have greater yields."

"Everyone has become interested. All my neighbors are cultivating crops promoted by this project."

"It seems, Georgia has a market for it, and it makes



sense to sow more. Products from native crops are wholesome, natural, and delicious. We advise everyone to grow these crops and to cook different and wholesome dishes with them.”

Murad Gogoladze, Head of Samtskhe-Javakheti Farmers’ Association Farezi

“Look at my new crops: the native horse bean is a productive ancient leguminous crop. Before the dissemination of haricot beans, this and other pulses constituted the usual diet of Georgians. Look at the roots of these pulses, they are bigger than the usual ones, and we now know they host nitrogen-fixing legume bacteria that fertilize the soil”.

Replication of the achieved results speaks of the project success. Over and above the envisaged activities, the project-nurtured seed material is now requested by farmers from outside the demonstration area supported by the GEF project. In 2009, four regions (Kakheti, Kvemo Kartli, Imereti and Racha) bought seed material from Elkana. Kakhetian farmers grow the crops mainly for their own consumption while farmers from Kvemo Kartli are selling their harvests locally and in markets of the neighboring country of Azerbaijan.

The trust in native land-races and crop varieties, and the ever-evolving capacity of farmers to innovate and adapt, once seemingly lost, is making a comeback in Georgia and farmers there are demonstrating a new maxim to be applied in the management of agricultural species diversity: “sustainably use it or lose it”.

Project facts: Duration: 2004-2010, GEF grant: \$ 0.98 million. Co-financing: \$ 1.72 million.

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Editor's note: To celebrate the International Year of Biodiversity, every two weeks we will highlight a GEF project that is creatively addressing the challenges to conserve and sustainably use biodiversity. These examples of good practice in conservation and sustainable use will demonstrate the contributions that biodiversity makes to local and national economies and that halting the loss of biodiversity is indeed possible.