Contribution of Organic Farming to Georgia's Agro Biodiversity

Prepared by : Mariam Jorjadze

Biodiversity Conference

Tsarskoe Selo, Bulgaria, 30 September 2009

About the Presentation

This is a real story about several crops known in Georgia from the time immemorial, but endangered due to Soviet Planned Economy and the difficulties happened upon Collapse of Soviet Union

And

About Organic Farmers, their Association, international Support, etc.

And

About problems, successes and challenges

For BIOtiful Life!
Organic product. Rural diversity.

Shortly about Elkana

- The Biological Farming Association "Elkana", a non-governmental Georgian organization, was founded in August 1994.
- Since 1996 Elkana has been a member of the International Federation of Organic Agriculture Movements (IFOAM).
- The association membership is open to any citizen of Georgia interested in the development of organic farming in the country, as well as the protection of the environment. Elkana encourages participation without distinction of gender, age, disability or ethnicity.
- In 2009 the association's membership is more than 600 of which 344 are individual farmers and their families, 12 farmer groups, 8 farmer associations/unions and 11 business units.

Shortly about Elkana

Mission Statement

We aim to improve the socio-economic conditions of the population of Georgia and to ensure environmental protection through fostering the development of sustainable & organic farming and increasing the self-reliance of the rural population.

www.elkana.org.ge

For BIOtiful Life!
Organic product. Rural diversity.

Why Organic?

- Georgia is a small mountainous country.
- It is a country of old agricultural traditions, where many of today's crops were domesticated through the centuries.
- Its diverse environment is suitable for the production of many different crops. Georgia is well-known producer of high quality wines, fruits and vegetables.
- However, complex mountainous landscape and land fragmentation often do not allow Georgian farmers to benefit from economies of scale or compete in global commodity markets.
- Elkana has a vision of Georgian agriculture - which traditionally employs more than half of the total labor force of the country - as producing high value, organic products.

Why Organic?

- Conversion to organic can be easier because many farms are operated under low- or no-input systems.
- Organic agriculture offers opportunities to increase agricultural production in a more self-reliant way without need of expensive inputs.
- Hand labor in agriculture is very common and the labor force is relatively cheap therefore production costs of organic products are not high.

Agricultural biodiversity significance in Georgia

- Georgia / Caucasus belong to the Western Asian Centre of Origin of cultivated plants.
- This area is defined by Conservation International as one of 25 biological “hotspots” on earth.
- Georgia, with its 23 soil-climatic zones in only 69,700 km2, possesses unique plant diversity and species composition.

Agricultural biodiversity significance in Georgia

- Georgian agriculture can be traced back to the 5th or 6th millennium BC, when Kartvelian tribes began to domesticate basic crops such as wheat, barley, oat, rye and legumes such as pea, chickpea, lentil and faba beans. They cultivated plum, cherry, quince and the common grape, etc.

Agricultural biodiversity significance in Georgia

- Georgia has a rich flora, both in terms of wild species (more than 4,200) and crop species
- About 100 families and 350 local species of grain crops
- The rich diversity of fruit trees is composed of more than 100 species of seed and stone fruit-trees, nuts and wild berries.
- There are about 500 local varieties of grape recorded, but only 300 still exist in live collections in scientific-research institutes and local farms.

Root causes of agrobiodiversity loss in Georgia

- The Georgian agricultural sector was well developed during the communist period when products were exported to other Soviet republics and countries of the world.

- Within the Soviet inter-republic distribution of responsibilities, Georgia was mainly a producer of fruits, wine and tea.

- This specialization had a negative impact on indigenous crop varieties.

Root causes of agrobiodiversity loss in Georgia

- Within a period of 70 years varieties introduced from outside of Georgia predominated in family plots and collective farms

- The endemic varieties were restricted mainly to research and agricultural extension centers.

- Consequently, information about local varieties became restricted to the technical staff of research and extension centers and the few families that kept indigenous crop varieties.

Root causes of agrobiodiversity loss in Georgia

- After the collapse of the former USSR the state breeding stations that had kept indigenous crop varieties for experimentation and selection fell into ruin and the valuable collections and stocks of endemic varieties quickly began to disappear.

- Simultaneously, farmers found themselves with formerly marketable varieties for which they suddenly were unable to purchase necessary agrochemicals or to irrigate.

- Research and state breeding stations had not considered the option of assisting farmers to adopt local varieties for *in-situ* preservation.

Local initiatives to preserve indigenous crop varieties

- The first activities for the preservation of indigenous crop varieties in Georgia started in 1996 as a joint effort of scientists from the Institute of Botany (Department of Cultivated Flora) and Elkana to maintain the seed collections of the Institute of Botany through reproduction on plots of Elkana member farmers.

- This cooperation of farmers, scientists and extension workers has been successful not only in maintaining seed collections but also in making local farmers interested in the crops of their ancestors.

Local initiatives to preserve indigenous crop varieties

- The experiences of the cooperation triggered the creation of a farmer-based programme for the preservation of indigenous crop varieties in Georgia.

- The project - Recovery, Conservation, and Sustainable Use of Georgia's Agrobiodiversity has been implemented since 2004 with the financial support of GEF/UNDP and co-financing partners from Germany (EED and Misereor) and, from the Netherlands (OxfamNovib, Cordaid, and Avalon) and from Switzerland (SDC and HEKS/EPER).

Methodology

- The project approach: to develop a replicable model of agricultural biodiversity protection for selected local varieties in one region of Georgia.

- The project focused on conservation and sustainable use of threatened crop landraces that had a potential market and/or high adaptation to local soil and climatic conditions.

- These landraces included local varieties of wheat, flax, lentil, grass pea, chickpea, cow pea, and faba beans as well as local fruit and grape varieties.

Methodology

- Targeted varieties of field crops were well adapted to organic techniques:

  - they give stable harvests without agrochemical inputs, and

  - are resistant to biotic and abiotic stresses such as disease, extreme temperatures, lack of moisture, etc.

- Therefore these plants have potential for contributing significantly to farmers' food security.

Methodology

The project has worked into 4 main directions:

1. Establishing sources of primary seed and planting material for the selected landraces

2. Strengthening the capacities of a local farmers' association as main producer and distributor of seed material and for sharing experience

3. Assisting farmers in accessing markets

4. Supporting cooperation between farmers, scientists, local authorities and State

Project outcomes

- Important landraces have been identified in cooperation with researchers, and a seed multiplication and demonstration plot has been established.

- The plot is used for research, education and extension purposes. Seeds maintained in collections are regularly renewed in the seed multiplication plot.

- Today up to 250 accessories are preserved in the Elkana seed depository. Seed material for 17 cereals and five legume crops have been exchanged with the National Seed Bank.

For BIOtiful Life!
Organic product. Rural diversity.

Project outcomes

- The following landraces have been reintroduced to farmers' fields:

  - Cereals: *Triticum carthlicum Nevsky, Triticum aestivum L.,* and *Hordeum vulgare var. nudum.;*

  - Legume crops: *Cicer arietinum L., Vicia faba L., Lens culinaris Medic., Vigna unguiculata L.Walp., Linum usitatissimum L.,* and *Lathyrus sativus L.*

- Having started with 12 farmers in 2004, today the project unites about 200 families directly involved in on-farm conservation program. These farmers are actively engaged in their regional farmers' association "Farezi".

Project outcomes

- Most farmers use local crops for their own consumption. By reintroducing these traditional landraces the nutritional intake of farmers has been improved, and the families have a greater range of pulses.

- Several groups of farmers have already emerged that sell their produce on local market.

- Elkana has developed an arrangement with a local company called “Begeli” to market the crops produced by participating farmers. Five products are being sold successfully in local supermarkets and the demand is growing gradually.

Project outcomes

- The project collected and documented traditional knowledge on indigenous crops.
- A recipe book was published and widely distributed to raise consumer awareness and dishes prepared from local varieties were promoted through food tasting events and media.
- A short promotional film about the project has been completed recently...

In Conclusion

- The project has developed a replicable model of agricultural biodiversity protection for a group of selected local varieties in one region of Georgia. The approaches and instruments developed by the project are presently being copied in two other regions of Georgia.

- Use of traditional varieties and traditional processing technologies became important component of Elkana marketing strategy.

- Fruit tree collections gave first fruits this year... and finally few photos in conclusion!

For BIOtiful Life!
Organic product. Rural diversity.

Seed Multiplication Plot in Tsnisi

For BIOtiful Life!
Organic product. Rural diversity.

Bread Baking

For BIOtiful Life!
Organic product. Rural diversity.

Farmers' Day at the Plot

For BIOtiful Life!
Organic product. Rural diversity.

Food Tasting Event

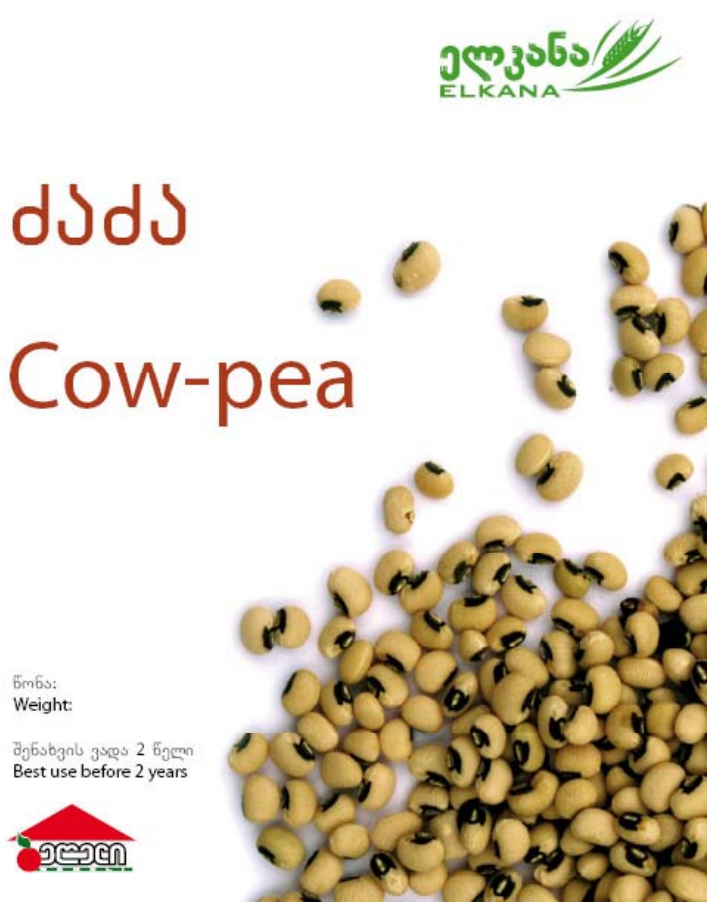
For BIOtiful Life!
Organic product. Rural diversity.

Promotion Material

For BIOtiful Life!
Organic product. Rural diversity.

Labels of Products

ელკანა
ELKANA



For BIOtiful Life!
Organic product. Rural diversity.

Shelves in Supermarkets

For BIOtiful Life!
Organic product. Rural diversity.

Fairs

For BIOtiful Life!
Organic product. Rural diversity.

Organic Food Blessed by Patriarch of Georgia

For BIOtiful Life!
Organic product. Rural diversity.

Thank you for Listening!

For BIOtiful Life!
Organic product. Rural diversity.