

**Association for Farmers
Rights Defense, AFRD**



**On Farm Plants Genetic
Conservation and Sustainable
Pastoralism in Georgia**

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AFRD Georgia was established in 1999 and is dedicated to stimulating agricultural economic growth and policy reform advocating its Member and Non-Member farmers' Rights, Interests providing training courses and educational seminars in different regions of Georgia on different issues like Organic Farming, Biodiversity Conservation, Climate Change, Farmers Markets and Renewable energy projects. AFRD Georgia is actively involved in the Agrobiodiversity Conservation development of the National Genes Bank.



Global Genome Biodiversity Network

We work to solve the existing problems of local farmers and their needs. Our activities mean holding Training courses and Educational seminars in different regions of Georgia, connected with Agroecology, Organic Farming and farm management, the members of the AFRD are about 1450 small and big farmers. We are the Founder of the World Farmers Market Coalition, WFMC assisting local Farmers to enter well-organized Farmer's Markets in Georgia to preserve fair trade in Georgia.

AFRD is a Member of the Agroecology Coalition and International Year of Rangelands and Pastoralists (IYRP)

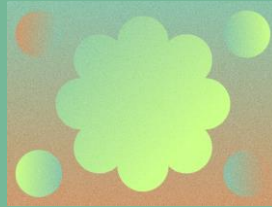


How to Conserve the Plant's Genetic Resources



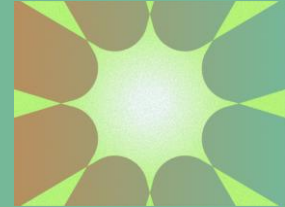
On Farm Gene Banking

We are committed to Agrobiodiversity Conservation and Farmers Centered and will actively participate in the on-farm Gene Banking Conservation and knowledge transfer, skills development activities, implementing multidisciplinary approaches in Agroecological Philosophy



Germplasm

Collection
Introduction
Exchange
Evaluation
Documentation
Safe conservation
Sustainable management of germplasm



Regenerative and Restoration

Measurements

Habitats Restoration
Regenerative Agriculture
Permaculture
Agroecology
Agroforestry
Restoration Ecology
Soil Micro biodiversity
Conservation

Development of plant genetic Resources Conservation in Georgia also may valorize the Antic varieties and value chains and explore viable ways for soil fertility improvement



Exploration of valuable resources, services, and products for advancing a sustainable food system at our education and training programs, as Vocational Education

Minimizing physical and chemical disturbance to the soil prevents damage to the micro-flora and fauna that form the soil ecosystem. Although cultivations such as plowing result in a short-term release of nutrients, they also cause a decline in underground life, with microorganisms killed as a direct result of the top few inches of soil being inverted, or rendered homeless and eaten by predators or scavenging arthropods.

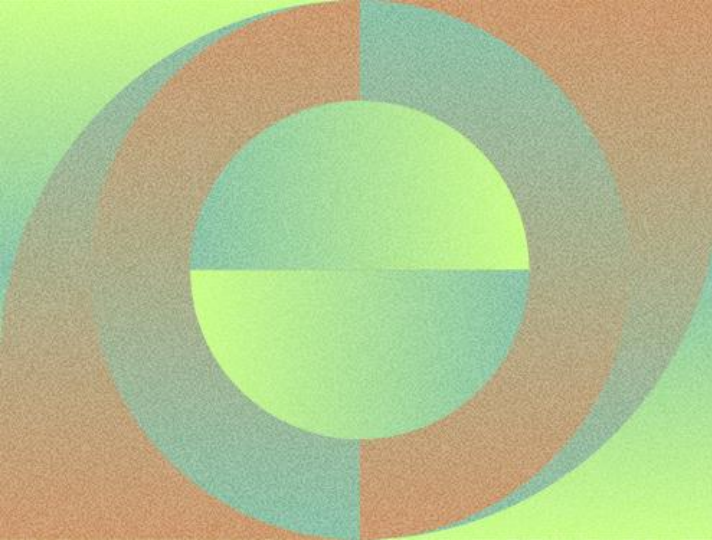
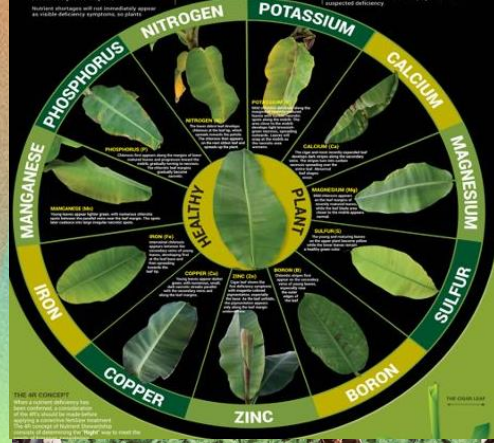
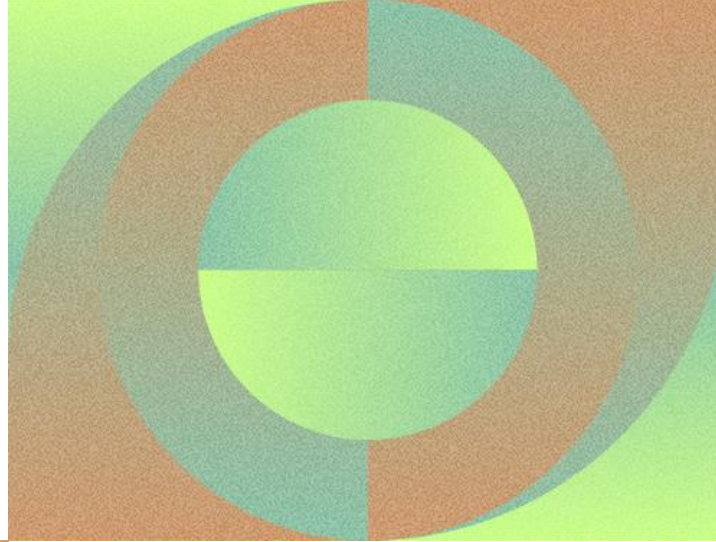
Similarly, heavy fertilizer or pesticide use will upset the delicate balance of a healthy soil ecosystem.

For example, too much nitrogen will upset the carbon-nitrogen ratio and encourage microbes to eat organic matter, reversing any improvements that have occurred by increasing organic carbon in the soil.

Covering the soil with living plants or a mulch of crop residue, like chopped straw, protects the soil from rain impact. This reduces the damage that high-speed raindrops can do to the surface and allows water to percolate gently down. A good soil cover also prevents overheating during periods of hot sunshine or freezing in winter, both of which are antagonistic to healthy soil.

Conservation Planning

Activities: Identify the most endangered conservation objectives and assess and analyze natural resource concerns on Farm land related to the soil, water, animals, plants, air, energy, and human interaction



Design and Implementation, Action Plan:

Develop the specific practice designs and management plans to implement conservation practices.

Conservation Practices: Address Farm Land and neighbor Farmers' specific Plants Genetic resource concerns for joint actions




IMPLEMENTATION



- Increased awareness of the importance of the Nature-Based Solutions interface for On-Farm Plants Genetic resources collection
- Enhanced understanding and knowledge of Seed Banks Management based on traditional knowledge and digital technologies and open dialogue among multiple stakeholders from all levels;
- Improved identification of regional and global lessons learned and priorities in reinforcing the Nature-Based Solutions and Agroecological practices for pastoral Farmers
- Strengthened awareness of the importance of compatibility and synergies between Pastoral Farmers in the High Mountain Areas of Georgia and provided cover grass restoration recommendations

**PASTORALISM IS KEY FOR ALPINE
FARMING IN GEORGIA**



What is
in the food
we eat?

How does food
quality vary based
on how and where
food is grown?

What are
implications of
shifts in food
quality for people
and the planet?

*One answer: Agroecology without
borders*

How to Maximize Plant Diversity

Monocultures restrict the variety of soil creatures that can be supported.

A diverse population of plants can be grown in companion cropping systems, where two or more crops are grown simultaneously and are harvested together with the seeds being separated post-harvest.

More conventionally, robust crop rotations ensure healthier soil and reduced weed and disease pressure.

There is also potential for growing Cover grass and other crops collecting the seed and cultivating utilizing their potential to restore the soil under erosion, overgrazed lands, pastures and abandoned lands and for reforestation.



The Capacity Building of Farmers and Family Farmers

01.



*Trainings, F2F,
TVET*

*Collecting and
Aggregating the
Data*



02.

*Data sharing and
Management*

03.



*Restoration,
Regeneration and
Reforestation
Strategy*

04.

Transforming the Food Systems Through Agroecology and Climate Smart Agriculture

How can we transform food systems to make them biodiversity-positive?

This requires research into many aspects, including genetics, cultivation, harvest, processing, consumer demand and food safety.

Post-harvesting loss preventing measurements and new pathways for innovation and advanced technologies for Climate Smart Conservative Agriculture



Our Project

Agrobiodiversity

Agriculture

Variety of life
on Earth

How to grow good food for all
while protecting nature



- Overseeing the developments in the domain of biodiversity and food systems, within the IUCN CEM Framework were identified with high priority for biodiversity-positive food systems:
- **Collecting, Selecting, Conserving and Breeding for diversity to broaden the genetic base**
- **Scaling up promising Agrobiodiversity-positive practices**
- **Habitat Restoration implications for diversity and variation different Climate and Microclimatic zones**

Vegetables



*Cover
Grass*



Forest



Horticulture



Meadows



*Protected
Areas*



Endemics



Farm land



Climate-smart farming practices are gaining awareness and importance as potential solutions to these challenges.

Cover cropping

Reduced tillage

Crop rotation

Soil Water Nexus and Conservation

Technology for maintaining soil health, preventing erosion, and sequestering carbon.



Plant Health:

[plænt helθ] - *noun*

The physical health of plants for food production, including the presence, risk and control of diseases. Plant health is essential for all life and key for food security.



Food and Agriculture
Organization of the
United Nations

Why the on farm conservation so important?

Increase farm productivity and profitability through:

Reducing the off-site impact of nutrients and fertilizers on water quality;

Improve farm resiliency;

Reduce erosion, and overgrazing and combat desertification;

Increase wildlife and pollinator habitats;

Consider conservation planning;



Thank your for your attention!

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