

What are genetic resources in **agriculture**?

Genetic resources are the resources that have been used over the centuries as parents of crop plants and farm animals.

Why do they need to be preserved?

Ever since agriculture began, first farmers, and then researchers have been selecting the best parents, crossing them together, and selecting the best offspring. What will we do if our stocks of parents have been eroded away? The reduction in the number of potential parents would be a loss to an invaluable (animal and plant) heritage. If we lose the diversity of our crops and animals, the future of agriculture could be threatened.

Preserving genetic resources in agriculture serves as a kind of insurance, providing the resources we will need to meet challenges presented by new and evolving diseases, pests and environmental change. Researchers use specific characters of animals, crops and wild species related to them for a wide range of purposes, such as salinity tolerance, resistance to diseases and adaptability to climate change. Preserving genetic resources also provides producers with the diversity needed to adapt with changing markets.

This unique heritage of living plant and animal organisms is part of biodiversity and ecosystems and shall be preserved and promoted inside and outside their natural habitats.

It is vital to preserve genetic resources in agriculture in order to being able to adapt to environmental changes, such as climate change and evolving diseases, as well as to ensure our food security and the quality of food products.

- ▶ The number of food crops and farm animals and their genetic diversity has seriously narrowed.
- ▶ Food from plant and animal origin is derived from a very few species.
- ▶ Food security becomes increasingly vulnerable because of high levels of genetic erosion caused by the abandonment of traditional genetically diverse plant varieties and animal breeds.
- ▶ Genetic resources are public goods and those conserving them should be considered as offering a service to society.
- ▶ Genetic resources are to be conserved by:
 - In situ conservation: in their ecosystems and natural habitats.
 - Ex situ conservation: outside their natural habitats by preservation of samples in gene banks, collections, etc...

The European Union (EU) is party to the United Nations Convention on Biological Diversity (CBD) of 1992, which seeks to ensure the conservation and sustainable use of the diversity of species, habitats and ecosystems on the planet. The EU is member of the Food and Agriculture Organization (FAO) and the FAO's Commission on Genetic Resources for Food and Agriculture. It is also contracting party to the International Treaty on Plant Genetic Resources for Food and Agriculture, as well as to a number of biodiversity-related international conventions (CITES, Bonn and Berne Conventions) that aim at protecting certain species, regions or ecosystems.

This brochure provides basic information on the Community programme 2006-2011 on the conservation, characterisation, collection and utilisation of genetic resources in agriculture, launched by the Commission within the framework of the Biodiversity Action Plan for Agriculture.

The main objectives of the Community Programme are to promote genetic diversity in Europe, to conserve genetic resources in Europe and to contribute to what is Europe's input at international level on genetic resources.

The brochure also gives information on the 17 plant and animal genetic resources actions supported by the Community programme.

For further information:

<http://ec.europa.eu/agriculture/genetic-resources/>

<http://www.cbd.int>

<http://www.fao.org>

<http://www.planttreaty.org>

European Commission

Directorate-General for Agriculture and Rural Development

<http://ec.europa.eu/agriculture/>

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Preserving **genetic resources** in **agriculture**

The 17 actions of the Community Programme 2006-2011



European Commission
Agriculture and
Rural Development



The Community Programme 2006-2011 for genetic resources

In the international context, the Biodiversity Action Plan for Agriculture is an important package of Community measures supporting the Community strategy to stop the loss of biodiversity. In this plan, the Commission has launched a Community programme on the conservation, characterisation, collection and utilisation of genetic resources in agriculture.

This **Community Programme is supporting 17 actions dedicated to plant and animal genetic resources**. These actions are implemented by around **180 partners located in 25 Member States and 12 non-EU countries**. The actions started during 2007 with durations of up to 4 years.

The main objectives of the Community Programme are:

- To promote genetic diversity in Europe,
- To conserve genetic resources in Europe,
- To contribute to what is Europe's input at international level on genetic resources.

In addition to the Community Programme, the Rural Development Policy offers at national and regional levels possibilities to fund activities for the conservation of genetic resources in agriculture.



The 17 EU actions for genetic resources

The 17 actions co-funded by the Community Programme 2006-2011 for the conservation, characterisation, collection and utilisation of genetic resources in agriculture were selected after international competitions.

Animal resources



012: Cattle

<http://www.regionalcattlebreeds.eu>



020: Farm animals

<http://efabis.tzv.fal.de/cgi-bin/index.cgi>



040: Sheep

<http://www.heritagesheep.eu>



066: Livestock breeds

<http://www.elbarn.net>



067: Livestock globalview

<http://www.globaldiv.eu>

Arable crop and cereal resources



049: Rice

<http://www.eurigen.net>



057: Crop biodiversity in situ

<http://aegro.bafz.de>



061: Oats

<http://eadb.bafz.de/aveq>

More information on the 17 actions is available at:

http://ec.europa.eu/agriculture/genetic-resources/actions/index_en.htm

For even more detailed information, contact the respective coordinator of the action.

Fruit, vegetable and spice resources



001: Leafy vegetables

<http://documents.plant.wur.nl/cgn/pgr/leafyveg/default.htm>



008: Grapevine

<http://www1.montpellier.inra.fr/grapegen06>



018: Saffron

<http://www.crocusbank.org>



036: Straw- and raspberries

<https://www.bordeaux.inra.fr/genberry>



050: Garlic and others

<http://euralliveg.ipk-gatersleben.de>



063: Artichokes

<http://www.cynares.com>



068: Hazelnuts and almonds

<http://safenut.casaccia.enea.it>



071: Currants and gooseberry

<http://www.mtt.fi/ribesco>

Forest resources



009: Forest

<http://www.eufgis.org>