



Living in harmony with nature

Agricultural Biodiversity

Biodiversity is the foundation of agriculture. Agricultural biodiversity includes ecosystems, animals, plants and microorganisms related to food and agriculture. Today, most species of crops and domesticated livestock are the result of thousands of years of human intervention, such as selective breeding and other farm practices.

Agricultural biodiversity provides food and raw materials to produce goods. Moreover, every plant, animal and microorganism plays its part in the regulation of essential ecosystem services, such as water conservation, decomposition of waste and nutrient cycling, pollination, pest and disease control, climate regulation, erosion control and flood prevention, carbon sequestration and many more.

While modern agricultural practices have increased food production, contributing much to improving food security and reducing poverty, they have also been responsible for considerable damage to biodiversity, primarily through land-use conversion but also through overexploitation, intensification of agricultural production systems, excessive chemical and water use, nutrient loading, pollution and introduction of invasive alien species. Agriculture is part of the landscape and needs to be managed wisely and sustainably in this context.

Farmers' traditional knowledge is central to both sustaining biodiversity and ensuring global food security. Today this knowledge is being eroded, undermining the important contribution that farmers can make.

Agriculture faces considerable challenges of meeting the requirements of an ever growing population whilst simultaneously reducing its footprint on the earth's resources and biodiversity. Technically these challenges can be met but this requires significant shifts in policies and approaches. Central to this is the need for more effective partnerships between farmers, consumers, governments and other stakeholders which build upon the contribution that biodiversity can make towards the achievement of sustainable agriculture.



Convention on
Biological Diversity

www.cbd.int/agro



Fast Facts

- ▶ Close to a quarter of the world's population (1.3 billion people) work in agriculture
- ▶ Over 826 million people are chronically hungry and need 100–400 more calories per day
- ▶ 32% of pre-school children worldwide are underweight
- ▶ Agriculture accounts for 44% of methane emissions and about 70% of nitrous oxide gases
- ▶ Globally, agriculture accounts for about 70% of the water used by humans, and the sustainable limit of water withdrawal has already been reached or exceeded in many areas
- ▶ Deforestation in the tropics and sub-tropics, driven in many places by agriculture, can lead to a reduction in regional rainfall—undermining sustainable water supplies for agriculture
- ▶ 20% of the 6,500 breeds of domesticated animals face extinction
- ▶ 20% of CO₂ emissions in the 1990s originated from land use changes, much of this was through deforestation for agriculture
- ▶ There are over 25,000 bee species, but populations are declining. One-third of the world's crop production must be pollinated to produce seeds and fruits
- ▶ Soil worldwide is being lost 13 to 18 times faster than it is being formed

Learn More

Food and Agriculture Organization of the United Nations (FAO) ▶ www.fao.org/biodiversity

Land Resources, Management, Planning and Use (FAO) ▶ www.fao.org/nr/land/en

Commission on Genetic Resources for Food and Agriculture ▶ www.fao.org/nr/cgrfa/en

Bioversity International ▶ www.biodiversityinternational.org

World Agroforestry Centre ▶ www.worldagroforestry.org

Ecoagriculture Partners ▶ www.ecoagriculturepartners.org

The Global Crop Diversity Trust ▶ www.croptrust.org

International Center for Agricultural Research in the Dry Areas (ICARDA) ▶ www.icarda.org

International Livestock Research Institute (ILRI) ▶ www.ilri.org

Consultative Group on International Agricultural Research (CGIAR) ▶ www.cgiar.org

Living Modified Organisms (LMOs) ▶ www.cbd.int/biosafety

International Potato Center (CIP) ▶ www.cipotato.org

International Federation of Organic Agriculture Movements (IFOAM)

▶ www.ifoam.org/partners/advocacy/Biodiversity_Campaign.html

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