

# Organic Agriculture & Biodiversity

**ORGANIC AGRICULTURE** is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.

**BIODIVERSITY**, the variety of life found on earth, is the foundation of all agriculture. It supports our food supply from the soil to the delivery of vital ecosystem services such as pollination.



## **AGRICULTURE IS NOT ALWAYS BENEFICIAL TO BIODIVERSITY:**

- Agriculture has reduced habitat for wild species due to a 500% expansion in the extent of cropland and pasture worldwide in the last 300 years.
- Agriculture has expanded into sensitive ecosystems and had far-reaching effects on biodiversity, carbon storage and important environmental services.
- Clearing tropical forests for agriculture results in the loss of about 5–10 million hectares of forest annually.
- Habitat loss is now identified as the main threat to 85 - 90% of all species described by IUCN as 'threatened' or 'endangered' and is the most commonly recorded reason for species extinction during the last 20 years.

## **RESEARCH HAS SHOWN THAT ORGANIC SYSTEMS CAN SUSTAIN BIODIVERSITY BY:**

- Providing food and shelter for wild species found on farms and thus increasing them in number and variety.
- Supporting high levels of agro-biodiversity.
- Maintaining healthy soils and soil fauna, such as earthworms.
- Reducing the risk of water pollution.
- Cutting the demand for synthetic inputs, thereby reducing the need to generate energy to produce them, which can involve destroying wildlife habitat.
- Nourishing ecosystems and ensuring that they are not cleared to further extend the agricultural frontier.





## CONVENTIONAL AGRICULTURAL PRACTICES HAVE MAJOR ENVIRONMENTAL IMPACTS:

- Irrigation systems are pumping water from reservoirs faster than they are being recharged.
- Toxic herbicides and insecticides are accumulating in ground and surface waters.
- Chemical fertilizers are running off fields into water systems where they generate damaging blooms of oxygen-depleting microorganisms that disrupt ecosystems and kill fish.
- Nitrogen compounds from intensively managed farms create large dead zones in the ocean where aquatic life cannot survive.
- High-yielding, uniform cultivars are reducing the number of genetically viable species used in agriculture.
- 75% of agricultural crop diversity (agrobiodiversity) has been lost in the last 100 years.
- Native animal breeds are also declining with estimations that every week at least one breed of domestic animal becomes extinct, and over 25% of listed breeds are at risk.
- It has been estimated that both the environmental cost i.e. impacts on wildlife, pollinators, natural enemies, fisheries, water, development of resistance and social costs i.e. human poisonings and illnesses, of pesticide use reach about 8 billion USD each year.

## TO BOOST AWARENESS & USE OF SUSTAINABLE TECHNIQUES TO CONSERVE BIODIVERSITY, WE CALL FOR:

- Support from governments and donors for truly sustainable agricultural techniques including organic as a policy for biodiversity conservation.
- Introduction of the polluter-pays-principle for agriculture and ending perverse subsidies that promote agricultural practices harmful to biodiversity,
- Research and extension to further develop long-term examples of biodiversity friendly farming techniques including organic and the promotion and exchange of successful techniques amongst farmers and technicians.
- Food companies to prioritize and incentivize producers who use methods that conserve biodiversity.
- Protection of farmers' rights to develop, exchange, sell and save seeds.