

# Organic Agriculture's Role in Countering Climate Change

*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.*



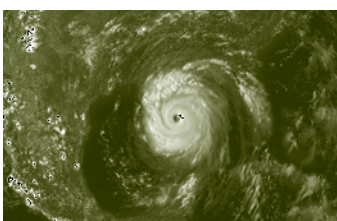
## Organic Agriculture mitigates climate change because it:

- **Reduces greenhouse gases**, especially nitrous oxide, as no chemical nitrogen fertilizers are used and nutrient losses are minimized.
- **Stores carbon** in soil and plant biomass by building organic matter, encouraging agro-forestry and forbidding the clearance of primary ecosystems.
- **Minimizes energy consumption** by 30-70% per unit of land by eliminating the energy required to manufacture synthetic fertilizers, and by using internal farm inputs, thus reducing fuel used for transportation.



## Organic Agriculture helps farmers adapt to climate change because it:

- **Prevents nutrient and water loss** through high organic matter content and soil covers, thus making soils more resilient to floods, droughts and land degradation processes.
- **Preserves seed and crop diversity**, which increases crop resistance to pests and disease. Maintenance of diversity also helps farmers evolve new cropping systems to adapt to climatic changes.
- **Minimizes risk** as a result of stable agro-ecosystems and yields, and lower production costs.





### Conventional agriculture contributes to climate change because it:

- Uses synthetic fertilizers and pesticides that require significant amounts of energy to manufacture.
- Applies excessive amounts of nitrogen fertilizer that is released as nitrous oxide.
- Operates intensive livestock holdings that overproduce manure and methane.
- Relies on external, soy-based animal feed that requires large amounts of fuel to travel thousands of kilometers to reach the farm.
- Mines the earth of the nutrients needed to sustain production, thereby leading to the clearing of rainforest and “slash and burn” techniques that reduce carbon storage and release huge amounts of carbon dioxide from burning vegetation.



### Supporting Organic Agriculture means supporting climate change mitigation and adaptation

- **Governments** should acknowledge Organic Agriculture as an effective strategy to reduce greenhouse gases and sequester carbon. They should help farmers adapt to climate change by promoting Organic Agriculture through research and extension services.
- **UNFCCC** should include Organic Agriculture as an adaptation strategy in its 5 year-plan. They should recognize Organic Agriculture in Kyoto Protocol carbon credit mechanisms.
- **Donor and development agencies**, such as the FAO, UNEP, and IFAD, should develop Organic Agriculture programs based on outreach, awareness and best practices, especially in regions sensitive to climate change.
- **Researchers** should study and quantify the role of Organic Agriculture in mitigating and adapting to climate change in order to improve farming techniques and disseminate findings.
- **Farmers** should grow organically to increase their farm’s resilience to the effects of climate change.
- **Consumers** should choose locally-grown, organic products to reduce their climate change impact.

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