

Organic Agriculture's Role in Combating Desertification

Organic Agriculture is a holistic production management system, which enhances agro-ecosystem health, utilizing both traditional and scientific knowledge. Organic agricultural systems rely on ecosystem management rather than external agricultural inputs.



Organic Agriculture increases the resilience of soils to both water stress and nutrient loss. It contributes to combating desertification by preventing soil erosion and land degradation as well as by helping rehabilitate degraded land.

Organic Agriculture helps:

- **Improve soil fertility** by maintaining and building a fertile living soil through frequent organic matter inputs, sustained soil cover, crop rotations and intercropping. Organic Agriculture farming systems integrate crops and animals and can therefore reduce overgrazing and facilitate nutrient recycling on the farm.
- **Prevent wind and water erosion of the soils** through a better, more stable soil structure and texture and through persistent and diversified soil cover and agro-forestry.
- **Improve water infiltration and retention capacity** through high levels of organic matter and permanent soil cover, such as cover crops or mulch, which substantially reduce the amount of water needed for irrigation.
- **Reduce surface and ground water consumption and subsequent soil salinization** through increased water retention capacity, reduction of water evaporation, and the creation of suitable micro-climates in dry areas through diversified organic agro-forestry systems that can attract and retain atmospheric humidity.
- **Reduce ground and surface water contamination** by refraining from the use of synthetic pesticides and fertilizers, thereby protecting the little water available in dry areas from pesticide contamination and nitrate and phosphate leaching.

Unsustainable agricultural practices: a major cause of desertification

Desertification refers to land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities like conventional agriculture. Desertification is caused mainly by overcultivation, overgrazing, deforestation and poor irrigation practices, which result in organic matter loss, soil contamination, erosion, soil compaction and sealing, salinization and long-term loss of natural vegetation.

Desertification is a worldwide problem that directly affects over 250 million people and a third of the earth's land surface. It is especially concentrated in developing countries. Since 1990, about 6 million hectares of productive land have been lost each year around the world.

Desertification causes food insecurity, famine, poverty, and human displacement that can give rise to social, economic and political tensions. Thus, the vicious circle of further poverty and further land degradation continues.

Farm practices that feed crops without feeding the soil and protecting its organic and living content undermine the very resource agriculture depends on – the land.



Promoting Organic Agriculture in land degradation-prone areas

Desertification requires an integrated approach. Organic Agriculture, including techniques such as windbreaks, shelterbelts and reforestation, should be promoted and strengthened with socio-economic measures that address insecure land tenure systems and promote sustainable human settlements.

Organic Agriculture should be a key component of programs aimed at stopping land degradation processes and bringing degraded lands back into production. Governments, development agencies and donors should promote Organic Agriculture in their agricultural development efforts to reverse desertification where it has occurred and to prevent it from expanding. The United Nations Convention to Combat Desertification (UNCCD) should encourage governments to adopt Organic Agriculture as a tool to combat desertification.

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