

# Regenerative Agriculture

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## Regenerative Agriculture

**Context :** The Government of Odisha, in collaboration with the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), unveiled a *Compendium of Regenerative Agriculture* to promote sustainable farming practices.

### What is Regenerative Agriculture?

Regenerative agriculture is an innovative, ecosystem-focused approach to farming that aims to restore soil health, enhance biodiversity, and combat climate change while ensuring economic viability for farmers.

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### Key Principles of Regenerative Agriculture

#### 1. Minimising Soil Disturbance

- Emphasis on no-till farming to protect soil structure and prevent erosion.
- Reduced dependency on heavy machinery and intensive ploughing.

#### 2. Maximising Crop Diversity

- Encouraging crop rotation and the integration of multiple plant species to boost soil fertility and control pests naturally.

#### 3. Maintaining Soil Cover

- Using cover crops or mulches to protect soil from erosion and maintain moisture levels.

#### 4. Keeping Living Roots Year-Round

- Ensuring continuous plant growth to support soil microorganisms and improve nutrient

cycling.

## 5. Integrating Livestock

- Including livestock in farming systems to recycle nutrients through grazing and manure.
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### Key Practices

- **Cover Cropping:** Planting cover crops during off-seasons to enrich soil and prevent erosion.
  - **Composting:** Adding organic matter to improve soil fertility and structure.
  - **Agroforestry:** Growing trees and shrubs alongside crops to promote biodiversity and provide additional income streams.
  - **Holistic Management:** Treating farms as interconnected ecosystems, focusing on soil, plants, animals, and humans collectively.
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### Benefits of Regenerative Agriculture

#### 1. Improved Soil Health

- Enhances crop productivity and resilience to extreme weather.
- Reduces the need for chemical fertilizers and pesticides.

#### 2. Enhanced Biodiversity

- Supports beneficial insects, pollinators, and wildlife, creating a robust and self-sustaining ecosystem.

#### 3. Climate Mitigation

- Increases carbon sequestration in soils, reducing greenhouse gas emissions and helping combat climate change.

#### 4. Economic Gains

- Cuts input costs for farmers and boosts profitability through sustainable methods.
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#### Conclusion

The *Compendium of Regenerative Agriculture* serves as a roadmap for adopting sustainable agricultural practices in Odisha. By focusing on soil health, biodiversity, and carbon sequestration, it empowers farmers to increase productivity while addressing critical environmental challenges.



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