

# Impact on climate

Outdoor pig farming can impact climate through greenhouse gas emissions and soil degradation.

## Key concerns

**Greenhouse gas emissions:** Nitrous oxide and methane are two of the key pollutants associated with outdoor pig farming. They are powerful greenhouse gases that trap heat in the atmosphere, driving global warming.

**Carbon balance and sequestration:** Healthy soils store carbon, helping to offset greenhouse gas emissions. Outdoor pig farming can reduce soil health by repeated disturbance, compaction, and erosion, breaking down soil organic matter.

## Why It Matters

Greenhouse gases like nitrous oxide and methane are far more potent than carbon dioxide, meaning even small emissions from outdoor pig farming can have a big impact on global warming. At the same time, losing the soil's ability to store carbon makes farms less resilient and increases overall emissions.

## Direct risks from outdoor pig farming to climate

- **High-protein diets** can lead to excess nitrogen excretion, increasing nitrous oxide emissions.
- **Manure accumulation in nutrient hotspots** can promote methane production during decomposition.
- **Soil compaction and waterlogging** create anaerobic conditions, boosting methane and nitrous oxide release.
- **Repeated soil disturbance and erosion** reduce organic matter, weakening carbon sequestration and releasing carbon dioxide.
- **Bare ground and poor vegetation cover** can limit carbon inputs and accelerate organic matter breakdown.

Check out the guidance documents below to see which measures can improve the impact on the climate.

## Actions

- Site selection
- On-farm infrastructure
- Diet
- Equipment and machinery
- Green cover and buffer strips
- Stocking rate and grazing management
- Soil health and structure
- Manure management

