

STRIKING THE RIGHT BALANCE BETWEEN FERTILIZERS & BIODIVERSITY

Sustainable best fertilizer practices can protect biodiversity below and above ground, supporting long-term productivity.

UNDERUSE

Insufficient nutrients deplete soils, suppress microbial activity and reduce yields, driving deforestation, biomass burning and farmland expansion.

5. Biodiversity Loss
Habitat conversion reduces plant, animal and soil life diversity.

4. Land Pressure
Low yields drive farmland expansion and deforestation.

3. Soil Decline
Weak fertility leads to erosion, compaction and poor structure.

1. Low Input
Too little fertilizer directly limits plant growth and yield.

2. Nutrient Mining
Soils are depleted over time without replenishment.

SUSTAINABLE USE

Optimized fertilizer use enhances nutrient uptake, supports microbial and soil biodiversity, strengthens structure and sustains long-term productivity both below and above ground.

5. Biodiversity Thrives
Resilient ecosystems support plants, insects and soil life.

4. Stable Yields
Reliable productivity with less environmental pressure.

3. Soil Support
Healthy soil biology and structure improve resilience.

2. Efficient Uptake
Nutrients are absorbed with minimal leaching or runoff.

1. Balanced Input
Optimal nutrients meet plant needs and reduce waste.

OVERUSE

Excessive fertilizer disrupts soil and microbial balance, pollutes water, degrades structure and emits harmful gases that threaten biodiversity and air quality.

5. Air & Climate Impact
Emissions like NH_3 , NO_x and N_2O degrade air quality and contribute to climate change.

4. Aquatic Degradation
Eutrophication harms both rivers and coastal waters, threatening aquatic life.

3. Biodiversity Disruption
Habitat simplification and nutrient excess reduce plant, insect and microbial diversity.

1. Overapplication
Excess nutrients exceed crop demand and disturb balance.

2. Nutrient Pollution
Leached nitrogen and phosphorus contaminate freshwater and soil ecosystems.

