Climate Impact of Fertilisation

Understanding the climate footprint of fertilisation is essential for developing low-impact, high-performance agricultural solutions. RITTMO provides scientific and technical expertise to evaluate how fertilisers, biostimulants, and innovative inputs influence **nitrogen losses, greenhouse gas emissions (GHG)** and the overall carbon balance of cropping systems.

We analyse the full chain of fertilisation impacts by measuring **ammonia volatilisation, nitrous oxide emissions, carbon storage dynamics**, and changes in soil biological activity linked to nutrient cycling. Our dedicated facilities — volatilisation chambers, lysimeters, controlled-environment units and field platforms — enable precise evaluation under laboratory, controlled and real-field conditions.

Our services support the development and market positioning of new products by:

- Quantifying **GHG emissions** and identifying emission-reduction levers
- Assessing **nitrogen-use efficiency** and nutrient losses
- Evaluating carbon sequestration potential and soil organic matter dynamics
- Providing comparative studies to benchmark products with conventional references
- Delivering **robust, regulatory-ready datasets** for environmental claims and European conformity

RITTMO supports manufacturers design fertilisation strategies that are not only agronomically effective but also aligned with climate-neutral and low-carbon goals — supporting the transition toward sustainable, resilient agricultural systems.