Nitrogen Enriched Organic fertilizer (NEO) and nitrification in agricultural soils

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Challenges in Agriculture

Population growth, rising food costs, limited arable land, and environmental degradation pose pressing challenges to modern agriculture.

Innovative Solution

NEO, an innovative fertilizer, is produced by capturing dinitrogen (N_2) from the air through a cutting-edge plasma process and combining it with organic slurries or digestates as nitrate (NO_3^-) and nitrite (NO_2^-).

Study Focus: Soil Nitrification

Our research investigates the soil nitrification process after fertilization, focusing on the impact of NEO and other conventional fertilizers.

Results: NEO's Impact

NEO significantly increased nitrification rates in agitated soil slurries and loosely placed samples in the Lab. However, differences in field-fertilized soil samples were minimal, suggesting a rapid but short-lived NEO-induced boost in nitrification. NEO shows promise as an environmentally benign fertilizer without harming soil nitrification.

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