

**Question for written answer E-001986/2024  
to the Commission**  
Rule 144  
**Pascal Arimont (PPE)**

**Subject:** Reducing emissions of nitrous oxide (N<sub>2</sub>O) through the action of specially cultivated *Cloacibacterium* bacteria

The third most important greenhouse gas – after carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>) – is nitrous oxide (N<sub>2</sub>O), which is also known as laughing gas. Nitrous oxide traps heat particularly effectively; as a result, the greenhouse effect it produces in the atmosphere is up to 300 times greater than that of carbon dioxide. The main sources of nitrous oxide emissions are nitrogenous fertilisers used in agriculture and livestock farming.

In an article entitled ‘Unlocking bacterial potential to reduce farmland N<sub>2</sub>O emissions’, published in the journal ‘Nature’ in May 2024, a research team from the Norwegian University of Life Sciences explained how *Cloacibacterium* bacteria (CB-01) specially cultivated from organic waste, which are capable of degrading N<sub>2</sub>O, reduced N<sub>2</sub>O emissions caused by fertilisation by 50 to 95% in field experiments, depending on soil type.

On the basis of modelling based on its findings, the research team then estimated potential reductions for the EU. According to the authors, this method would be relatively inexpensive and straightforward and, if extended to all types of mineral and natural fertilisers, could reduce N<sub>2</sub>O emissions within EU agriculture by up to 20%.

Is the Commission aware of this study and, if it is, what is its view of it?

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