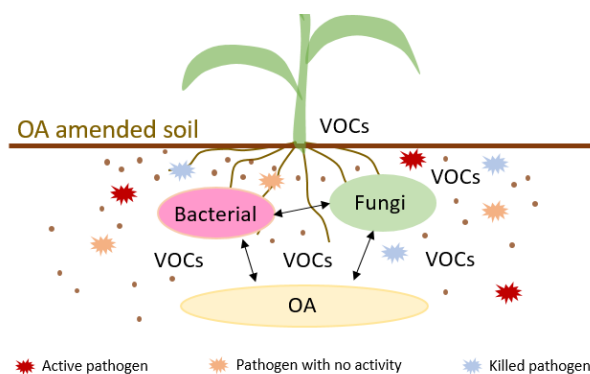


## Master Thesis / Internship Project

# Effects of organic-amendment-induced volatile organic compounds on soil pathogen

### Research Background

Volatile organic compounds (VOCs) are one of the most abundant secondary metabolites of soil bacteria. VOCs play an important role in communication and competition between soil microorganisms. VOCs have been proved to act as antibiotics and have great biotechnological potential for pathogen and soil-borne disease impression. Agricultural practices, organic amendments (OA) for instance, influence soil quality in multiple ways, which has been shown to be reflected by the microbial community structure. This in turn affects the production of VOCs qualitatively and quantitatively. Unfortunately, the application of OAs to maximize the production of effective microbial VOCs in agriculture is still in its infancy. In this project, environmental technology specialists from Wageningen University and soil ecologists from NIOO-KNAW (Netherlands Institute of Ecology) are going to cooperate and shed light on this complex context.



The objective of this research is to disentangle the relationship between organic amendments, soil microbial communities and soil pathogen (mechanistic understanding).

### Requirements

- Background in Environmental Science/Environmental Engineering/Microbiology/Plant Science/Soil Biology or equivalent;
- Great interests in soil microbiology and organic amendments;
- Good analytical and experimental skills;
- Experiences in microbial laboratory;
- Fluent in English and good English writing skills.

### Duration, salary and location

- 4-8 months at Wetsus, Centre of Excellence for Sustainable Water Technology in Leeuwarden, The Netherlands ([www.wetsus.nl](http://www.wetsus.nl)); or at Wageningen University
- Allowance: 350 € per month
- Start: 1<sup>st</sup> September, 2019

### Contact

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