

MAFEN MASTER

Academic Year 2025 - 2026

Proposal of M1 tutored project

PROJECT TITLE AND SUMMARY:

Soil chemical ecology in an agricultural context.

The field of plant chemical ecology, which consists of the molecular dialogue between plants and other living organisms (such as other plants, herbivores and microbes), has been well studied at the aerial level and has led to novel agroecological practices. However, the chemical ecology of the soil compartment remains poorly understood, due to the complexity of this matrix and the associated analytical difficulties. Using existing literature on soil chemical ecology in an agricultural context, you will write a review on this topic. Focus your review on the effect of biostimulant products and extreme climatic events (such as droughts) on the molecular dialogue that occurs in the rhizosphere between plant roots and soil microorganisms. The final part of this review will explore the analytical methods that could be employed to expand our knowledge of this topic.

HOST UNIT:

University of Avignon, UR PSH (Plante et Systèmes de culture Horticoles)

<https://psh.paca.hub.inrae.fr/>

MAIN ACTIVITIES:

Writing a scientific review

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