Schweizerische Eidgenossenschaft
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Eidgenössisches Departement für Wirtschaft, Bildung und Forschung WBF

Agroscope
Institut für Nachhaltigkeitswissenschaften

Arbeiten für Studierende am Institut für Nachhaltigkeitswissenschaften INH

Titel	Strigolactones as regulators of the rhizosphere microbiome
Umfang	Master thesis
Beschreibung	Strigolactones are newly discovered plant hormones that regulate plant morphology. In addition, they act as signaling compounds and initiate colonization by arbuscular mycorrhizal fungi (AMF), beneficial soil fungi that form symbiotic associations with plant roots and enhance plant growth. However, plant roots not only associate with AMF, but interact with a wide range of other microbes, some of them beneficial for plant growth and health. These other microbes may also use SLs as chemical cues to colonize roots. In this project, we will use next generation sequencing to unravel the effects of strigolactones on the assembly of the rhizosphere microbiome in a range of plant species and using plant lines varying in strigolactone exudation. This master involves the following tasks: plant growth, molecular work (DNA extraction, PCR, preparation of sequencing library) and sequence data analysis with state-of-the-art bioinformatics and statistics. Working languages in our group: English, German and French.
Spezielles	Root microbiome, Strigolactones, rhizosphere, arbuscular mycorrhizal fungi
Umfang	6 – 12 months
Zeitraum	Flexible
Arbeitsort	Agroscope Institute for Sustainability Science (ISS), 8046 Zürich-Affoltern
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Dozent/-in und Ausbildungsinstitution	Marcel van der Heijden (IEU, University of Zurich; Agroscope ISS)