Job Advertisement Agroscope

Title
Postdoc on microbiome biology, soil microbial ecology and agro-ecosystem functioning

Introduction
We are looking for a postdoc on microbiome biology, soil microbial ecology and agro-ecosystem functioning in the plant-soil-interactions group.

In recent years, we have pioneered research on the importance of underground biodiversity and plant microbiomes for ecosystem functioning and we discovered that microbial communities have a major impact on a range of ecosystem functions, including nutrient cycling and plant productivity. We also discovered that microbial network complexity depends on land use intensity and we found that soil and root microbiomes differ with agricultural management. The next frontier is now to understand whether these differences in microbiome characteristics influence ecosystem functioning.

Tasks
- In this project you will investigate which microbiome traits (e.g. richness, functional gene repertoires, network complexity, the presence of keystone taxa, inter-kingdom interactions) are most important for explaining plant growth and overall ecosystems performance (multifunctionality)
- This will be tested in model systems (where microbiome traits and microbial community composition will be manipulated) and in field soils that vary in microbiome complexity. The project builds upon earlier work of the research group (Wagg et al. 2019, Nature Communications; Banerjee et al. 2019; ISME Journal; Banerjee et al. 2018, Nature Reviews Microbiology; Bender et al. 2016, TREE)
- Opportunity to co-supervise a PhD student that will be employed in this project

Requirements
- Highly motivated Postdoc with a PhD in microbial ecology, microbiome biology, ecology or botany
- Applicants should have expertise in one or several of the following themes: microbial ecology, experimental plant science, isotope ecology (especially with 15N) molecular and microbiological methods
- Experience in microbial community analysis using high-throughput sequencing, related bioinformatics and statistics (R) in microbial ecology or biodiversity research is highly advantageous
- Achievement-oriented and open-minded personality with good capacity for teamwork
- Communication and IT skills
- Fluent in English, good knowledge of two official Swiss languages round out the requirements profile (working language is English)

Information on Agroscope
Agroscope is the Swiss federal center of excellence for research in the agriculture and food sector. Its researchers carry out their work at a number of sites in Switzerland. Headquartered in Bern-Liebefeld, Agroscope is attached to the Swiss Federal Department of Economic Affairs, Education and Research EAER.

The Department of Agroecology & Environment located in Zurich performs research for an environmentally friendly and competitive agriculture. A four year Postdoc is available in the project “microbiome complexity and microbial keystone taxa as drivers of agro-ecosystem functioning”. This project is funded by the Swiss National Science Foundation.
Research will take place in the Plant-Soil-Interactions group. This research group focuses on plant-soil-microbe-interactions, soil biodiversity, the development of sustainable/ecological farming systems, soil biology and soil ecological engineering. The plant-soil-interactions group is a dynamic group consisting of staff, technicians, PhDs, students & guests with app. 25 members. The lab language is German and English (www.agroscope.ch/soil-ecology).

We offer you varied work in a multidisciplinary research team as well as thorough initial training. Agroscope has excellent research facilities with well-equipped laboratories, greenhouses, climate chambers and agricultural fields. You will enjoy flexible working hours and good employee benefits.

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<th>Place of Work</th>
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<td>Salary Category</td>
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<td>Employment Level</td>
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**Application Address**

Please send your application to human.resources@agroscope.admin.ch (Ref.no. 41137). Online applications consist of a single PDF containing a complete academic record, CV, list of publications, a copy of your PhD certificate and names of 2 referees.

For further information: Please contact Prof. Dr. Marcel van der Heijden, Head of the Plant-Soil-Interactions Group. Phone: +41 58 468 72 78; Email: marcel.vanderheijden@agroscope.admin.ch (please do not send applications to this Email). Closing date for applications: February 28, 2020.

Start: April 1, 2020 (or upon agreement). This is a 4 year position (with option to prolong for another 2 years).