

**6 Months-Internship in the Sustainable Agroecosystem group,
February/March - June/July 2022, 100%, Zurich, fixed-term**

Looking for a intern to join our efforts in assessment of the crop microbiome and C cycle in the field and greenhouse.

The group: The Sustainable Agroecosystem Group is an international multidisciplinary group at ETH Zürich, with a research focus on how carbon and nitrogen cycling is affected by management and driven by the interactions between plants, soil structure, and soil biota.

Projects background: The internship would give insight into three different projects associated with drought, low-nutrient stress and carbon cycling.

- The *MICROSERVICES* project aims to assess the impact of climate change on the crop-soil-microbiome nexus under various agricultural management regimes, with the goal to increase our capacity to predict and mitigate future climate change impacts on soil biodiversity and its cascading effects on agroecosystem functioning.
- The project *MICROBENGINE* aims to identify potentially beneficial combinations of maize genotypes with their specific root traits and root microbiomes and to harness their synergism to improve plant tolerance to nitrogen limitation and drought in the context of sustainable agriculture.
- In *the numerical subsoil* project we try to increase our understanding of interactions between soil organic carbon stability, the soil microbiome and storage of microbial necromass along the soil profile as affect by agricultural nutrient management and land use changes. The ultimate aim of the project is to improve the representation of soil microbes in soil biogeochemical models.

Job description: You'll be part of the Sustainable Agroecosystem team and you would be responsible for the following tasks:

- ^{13}C -CO₂-labelling
- Mesocosm experiments in the greenhouse (starting March/April)
- Soil organic carbon fractionation
- Analyses of amino sugars in soil samples
- Preparing soil samples for microbial analyses
- Basic field, greenhouse and lab work

Your profile: You have a background in biology, agricultural or soil science, basic knowledge about safety in lab and English. Driver's license is required.

Interested? We look forward to receiving your application with the following documents until the end of December 2021 (Please send it to martin.hartmann@usys.ethz.ch):

- Cover letter
- CV

Further information about the intern position and the projects can be found on <https://sae.ethz.ch>. Questions regarding the position should be directed to Martin Hartmann, email martin.hartmann@usys.ethz.ch.