Schweizerische Eidgenossenschaft
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Eidgenössisches Departement für
Wirtschaft, Bildung und Forschung WBF

Agroscope

Job advertisement Agroscope

Position

PhD Project - Resilient wheat production: options to mitigate water and nitrogen limitations under a changing climate

Introduction

Agroscope's team of Varieties and Production Techniques is searching a PhD student to work in the project "Solutions for improving Agroecosystem and Crop Efficiency for water and nutrient use" (SolACE). SolACE (https://www.solace-eu.net/) is a European project (Horizon 2020) that addresses current and future challenges for wheat production: increased rainfall variability and reduced use of nitrogen fertilizers. SolACE aims at designing solutions (strategies and tools) that combine novel crop genotypes and innovations in agroecosystem management to improve water and nutrient use efficiency under conventional and organic farming systems. The PhD student is expected to conduct field and glasshouse experiments, collate, and analyze long-term data to identify promising cropping strategies and assess their applicability by farmers.

Tasks

You will :

- Carry out field experiments under conventional and organic management with different preceding crops, genotypes, N supplies and rainfall (imposed with rain-out shelters).
- Collate and analyze historical datasets relevant to the questions of the project.
- Carry out glasshouse experiments using ^{15}N enrichment methods.
- Operate Unmanned Aerial Vehicles (UAVs) and crop and soil sensors.
- Collect and organize data in databases and analyze results.
- Coordinate the analysis of soil and plant samples in collaboration with the European partners of the SolACE project and represent Agroscope in the official meetings of the project.
- Publish the outcomes of this research in peer-reviewed journals and present it at scientific conferences.

Requirements

We are seeking a results-oriented, dynamic and self-motivated candidate with the capacity to work independently and accurately and with the following qualifications and skills:

- Master degree in agronomy, environmental sciences, biology or a related field.
- Interest for agricultural applied research and fieldwork.
- Good knowledge about wheat, crop science, soil science, and statistics.
- Written and oral proficiency in English.
- Experience in collation and analysis of data with R, MatLab, or Phyton. Knowledge on image analysis is also desirable.

Organisation

Agroscope is a federal center for agriculture research run according to the principles of New Public Management. Agroscope is part of the federal administration and is attached to the Federal Department of Economic Affairs, Education and Research EAER. It has research stations at a number of sites around Switzerland.
This position is based at the group of Varieties and Production Techniques of Agroscope. The work will be carried out in close collaboration with the group of Plant Nutrition of the Swiss Federal institute of Technology (ETHZ). We offer a stimulating work environment in a multidisciplinary research consortium as well as a close support throughout the project. Agroscope has excellent research facilities with well-equipped laboratories, greenhouses, climate chambers and sites for field experiments.

Place of Work	Agroscope Changins, 1260 Nyon (Switzerland)
Salary Category	According to the guidelines of the Swiss National Science Foundation
Employment Level	100%
Starting Date	February 2020 (negotiable)
Duration	3 years
Addional information	Varieties and Production Techniques (Agroscope): https://www.agroscope.admin.ch/agroscope/en/home/about-us/organization/competence-divisions-strategic-research-divisions/pflanzen-pflanzliche-produkte/varieties-production-techniques.html Plant Nutrition (ETHZ): https://plantnutrition.ethz.ch/

Application

We welcome your application no later than October 31, 2019 to human.ressources@agroscope.admin.ch , Ref.nr. 39819. The application must be written in English and must consist of a single PDF containing: i) a statement of your scientific interests and motivation for applying to this position; ii) Curriculum Vitae including a complete publication list; iii) contact information of at least two references; iv) copy of certificates (MSc &BSc) and transcripts of completed courses.

For further information, please write to Juan Herrera: juan.herrera@agroscope.admin.ch