

Dear colleague,

Here at SLU Uppsala, we are seeking a highly motivated postdoc to work on modelling of plant-plant and plant-environment interactions to establish predictive understanding of ideal plant mixtures in agriculture for high and stable crop yields, efficient resource use, reduction of losses due to biotic and abiotic stresses, and provision of ecosystem service. This position will be associated with the H2020 project “DIVERSify – Designing InnoVative plant teams for Ecosystem Resilience and agricultural Sustainability” ([www.plant-teams.eu](http://www.plant-teams.eu)).

More information and application instructions can be found below and at <http://www.slu.se/en/about-slu/jobs-vacancies/read-more/?eng=1&Pid=5246>

Deadline for applications: June 20th, 2017.

Contact person: Giulia Vico [giulia.vico@slu.se](mailto:giulia.vico@slu.se)

Best regards,  
Giulia Vico

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#### Full description of the opening

Postdoc position in process-based modelling of plant-plant and plant-environment interactions

Food security and sustainable use of resources are central to the United Nations Sustainable Developmental Goals by 2030. Improved management of agroecosystems and available resources will be necessary to meet these challenging goals. Among management practices, increasing the diversity of crop systems has been suggested as a way to enhance productivity, increase resource use efficiency and resilience to environmental fluctuations, and decrease the frequency of pests and disease outbreaks. To exploit in full this possibility, it is necessary to determine the mechanisms promoting positive plant-plant and plant-environment interactions, as well as identify the most suitable plant mixtures for specific pedo-climatic conditions and potential breeding targets.

We seek a highly motivated postdoc to work with process-based models, to establish predictive understanding of ideal plant mixtures in agriculture for high and stable crop yields, efficient resource use, reduction of losses due to biotic and abiotic stresses, and provision of ecosystem service. This position will be associated with the project “DIVERSify – Designing InnoVative plant teams for Ecosystem Resilience and agricultural Sustainability”, funded within the EU Horizon 2020 framework ([www.plant-teams.eu](http://www.plant-teams.eu)).

The postdoc will be based at the Department of Crop Production Ecology in Uppsala. The research conducted within the Department generally aims at improving crop productivity and sustainability. The Department is part of the Ecology Center, which offers a stimulating research environment. The location in Uppsala facilitates further collaborations with researchers at Uppsala University, Stockholm University and KTH.

#### Duties:

The project will focus on developing, evaluating, and applying mathematical and stochastic methods for the assessment of plant-plant and plant-environment interactions, in arable systems and grasslands. The work will include the use of existing crop models and the development of novel process-based mathematical models, as well as analyses of eco-physiological, environmental and climatic (e.g. time series analyses and meta-analyses).

#### Qualifications:

Applicants shall hold a PhD in ecology, earth and environmental sciences, agronomy, biology, mathematics, or related fields. Applicants shall also have research experience and interest in eco-hydrological or crop models (coupling plants, ecosystems, and environmental conditions). Previous experience with crop models like APSIM and Daisy is a merit. The applicant should have a demonstrated ability to independently initiate, conduct, and complete research projects and to generate and publish the findings in international peer-reviewed journals. The candidate must have strong written and oral communication skills in English, as evidenced by peer-reviewed publications and presentations at professional meetings. A working knowledge of MatLab, R, or other computational environments is a merit.

Place of work: Uppsala

Form of employment: Temporary employment as postdoc for two years.

Extent: 100%

Starting date: By agreement

Application: We welcome your application marked with Ref no. SLU ua 2017.2.5.1-2105.

Please submit your application to the Registrar of SLU, P.O. Box 7070, SE-750 07 Uppsala, Sweden or [registrator@slu.se](mailto:registrator@slu.se) no later than June 20, 2017.

Specific documents to be attached:

The application package shall include i) a short letter of motivation, highlighting current research interests and other activities of relevance for the position; ii) curriculum vitae; iii) publication list; iv) a two-page research statement and vision; v) the names and contact information of at least two professional references familiar with the applicant's qualifications; and vi) copies of degrees and transcripts of academic records. It is preferable that the documents i)-iv) are submitted in English.

SLU is an equal opportunity employer.

University salaries are set on an individual basis.

The Swedish University of Agricultural Sciences (SLU) develops the understanding and sustainable use and management of biological natural resources. The university ranks well internationally within its subject areas. SLU is a research-intensive university that also offers unique degree programmes in for example rural development and natural resource management, environmental economics, animal science and landscape architecture.

SLU has just over 3,000 employees, 5,000 students and a turnover of SEK 3 billion. The university has invested heavily in a modern, attractive environment on its campuses in Alnarp, Umeå and Uppsala ([www.slu.se](http://www.slu.se)).

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Giulia Vico

Associate Professor

Department of Crop Production Ecology

Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden

Email: [giulia.vico@slu.se](mailto:giulia.vico@slu.se)

Webpage: <http://www.slu.se/vico>

Researcher ID: A-6296-2010; ORCID: 0000-0002-7849-2653