

Full time scientist position in the field of « Ecosystem approaches to agricultural production » at Gembloux Agro-Bio Tech, Liège University

Call for candidates

A full-time position (first assistant, i.e. research scientist) in the field of « Ecosystem approaches to agricultural production » within Gembloux Agro-Bio Tech – University of Liège (GxABT-ULiège) is open. The successful candidate will be hired for a period of 2 years after which a definitive appointment could be proposed (tenure-track).

The first assistant will contribute to research and community service activities and will be attached to the CARE (Research and Teaching Support Unit - Cellule d'Appui à la Recherche et l'Enseignement in French) *AgricultureIsLife*.

1. Research activities

Agronomy and agricultural production, across a gradient from rural to (peri-)urban areas, is one of the scientific disciplines for which GxABT is recognized as a reference within Liege University.

Within GxABT, the CARE *AgricultureIsLife*, included within TERRA (Institutional Research Unit), manages the provision of human (technicians) and material resources (agricultural and experimental equipment, crop land at the Experimental Farm located in Gembloux) to the scientific community of ULiège. The CARE *AgricultureIsLife* offers areas for crop and livestock production experiments, mainly in agricultural plots but also along a continuous gradient from the urban environment, through the peri-urban, to the rural environment.

The proposed theme (Ecosystem approaches to agricultural production) deals with the interface between the different components present within agricultural production systems, both in fields and in (peri-)urban environments, with a view to developing sustainable and integrated production methods. Starting from the plant, the proposed theme aims more specifically to study the interactions at work within agricultural production systems, focusing on the flows existing between its various components and linked to production (nutrient cycle, inputs, water, energy, etc.). Therefore, through the study of these flows, the position will more specifically cover the implementation of research activities on the development of innovative agricultural systems that improve the sustainability and stability (resistance and resilience) of production.

To this end, the first assistant will promote the experimental platforms present or being installed within the CARE *AgricultureIsLife* in close collaboration with the research teams and users. These platforms include, among other things, infrastructures for teaching, research activities and demonstration of the different forms of agriculture in the urban - peri-urban - rural continuum, above-ground experiments, long-term experiments relating to tillage, organic matter management and intercrop management, permanent grasslands, a market gardening plot and an agroforestry plot.

These platforms also offer users the opportunity to develop a wide range of annual experiments as well as other long-term experiments. To this end, the first assistant will provide scientific, technical and/or logistical support to the users of the CARE, contributing to the design, implementation and monitoring of – current and future – experiments of the CARE AgricultureLife. These experiments will focus on plant crops and their phytotechnics, developing through a systemic approach cultivation techniques that aim to reduce or even abandon the use of synthetic chemical plant protection products and take advantage of other biological actors placed voluntarily or not in the ecosystem (animals, plants, micro-organisms, etc.).

Given the length of cycles in agriculture, and considering that a large number of emerging properties with complex innovative agricultural systems only appear after a number of years, it is essential for the CARE AgricultureLife to host long-term experiments making sense in the future, while allowing it to answer today's research questions. In this context, the first assistant will be in charge of coordinating the design and implementation, as well as facilitating long-term experiences based on an ecosystem approach, of production systems to maximize positive externalities and optimize internal flows within the components of the agro-ecosystem, while minimizing negative externalities.

2. Teaching activities

During the first two years, no teaching services will be requested. Then, the mission might include about 150 h per year of face-to-face teaching activities (ex-cathedra courses, seminars, field visits, tutorials and practical work, excursions). Also, the first assistant will have the opportunity to co-supervise students during their masters or PhD thesis.

3. Services to the Community

Under the supervision of the Director of the CARE AgricultureLife, the first assistant will be in charge of developing a protocol for the technical monitoring of cropland, in particular long-term experiments, as well as the areas dedicated to research on agriculture in (peri-)urban environments. He/she will be in charge of organizing the data storage and access of the CARE. Such a system will allow the structured acquisition of data to feed colleagues active in modelling and allow the development of decision support tools in crop and livestock production. This work will be carried out through close collaboration with the managers of the other CAREs within TERRA, in particular with the remote sensing technical platform or the mechatronics platform that develops proxy-detection techniques.

The first assistant will provide scientific, technical and/or logistical support on the determination and execution of the most appropriate cultivation operations to be carried out within the various experiments. He/she will ensure their follow-up and proper implementation. He/she will be able to coordinate the technical teams that will ensure the implementation of cultivation operations and the effective collection of data.

The first assistant will contribute to the valorization of the integration potential of experimental platforms for collective and transdisciplinary research activities carried out by researchers from different Faculties of ULiège. He/she will actively collaborate on the integration of the CARE AgricultureLife into international networks.

4. Eligibility criteria

Candidates must :

- Hold a university MSc degree in bioengineering or equivalent and hold a PhD in agricultural sciences ;
- Show significant experience in the field of the call ;
- Demonstrate scientific experience recognized by international publications in a field related to agroecology, agronomy, plant and/or livestock sciences ;
- Be able to conduct experimental crops in fields and manage technical itineraries of crop production, market gardening and/or fodder crops ;
- Demonstrate ability to work on interdisciplinary themes, in a team with shared human and material resources ;
- Demonstrate ability to contribute to teaching activity in the long term ;
- Be ready to contribute to various community service and extension activities.

The candidate will show the ability to manage technical staff and have a good knowledge of English.

The candidate will be available for missions abroad. If he/she has no significant scientific experience outside Liège University, he/she will be ready to acquire some, preferably abroad, for a continuous period of at least six months.

If the candidate is not fluent in French, he/she will commit him/herself to develop sufficient fluency within two years.

Finally, the candidate will adhere to the general objectives of the quality management and continuous improvement system developed within the Institution.

Upon appointment, the candidate will have to sign an agreement relating to the ownership of the research results.

5. Salary

Salary is commensurate with those of public universities in the Wallonia-Brussels Federation of Belgium.

6. More information

For further information, you can contact Gembloux Agro-Bio Tech :

Professor J. Bindelle, Director of the CARE AgricultureIsLife (jerome.bindelle@uliege.be)

7. How to apply ?

Applicants are requested to submit their applications to :

Professor Frédéric FRANCIS, Dean
Gembloux Agro-Bio Tech – University of Liège
Passage des Déportés n° 2

B-5030 Gembloux

before December 14th, 2018, with reference « GxABT/Approches_éco-systémiques_prod_agricole ».

Complete file will include :

- A complete resume ;
- An application letter developing the personal aspirations of the candidate in relation to the call ;
- A summary of their research project related to the field of the call (maximum of 4 pages).

A copy of the complete application file will also have to be sent by email at :
doyen.gembloux@uliege.be