



**UNIVERSITY OF LINCOLN
JOB DESCRIPTION**

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|-------------------|--|--------------|---|-------------|----------|
| JOB TITLE | Post-Doctoral Research Associate in Plant/Crop Science | | | | |
| DEPARTMENT | Lincoln Institute for Agri-Food Technology (LIAT), College of Health and Science | | | | |
| LOCATION | Lincoln Campuses | | | | |
| JOB NUMBER | CHS112 | GRADE | 7 | DATE | May 2024 |
| REPORTS TO | Dr Ravi Valluru | | | | |

CONTEXT

Biological nitrogen fixation (BNF) is a natural process belonging to legumes that symbiosis with bacteria through root nodules to fix atmospheric nitrogen. BNF has been well regarded for contributing N to the soil N balance, providing additional residual N resources to the following crop in the crop rotation. Root nodules have a high demand for mineral nutrients, particularly micronutrients. The deficiency of these mineral nutrients results in poor nodule development and early cessation of BNF, leading to lower soil N balance. To address the mineral nutrient deficiency to improve BNF, yield and yield stability in faba bean, we are looking to recruit an enthusiastic Post-Doctoral Research Associate to work on the project recently funded by Innovate UK. This project focuses on managing nutritional stresses to enhance and prolong the duration of BNF to improve yield and yield stability in faba beans in the UK.

The potential candidate for this project will have the opportunity to delve into various aspects of plant/crop physiology, nitrogen metabolism in legumes, and BNF. Moreover, if you have experience working with isotopes in agriculture, this project will provide a perfect platform to further enhance your skills. This 3-year project, starting in June 2024, will not only equip you with a wide range of scientific and technical skills but also foster your critical thinking and scientific scrutiny. You will gain an in-depth understanding of experimental design, isotope and statistical analysis of the project data and contribute significantly to the project's success.

JOB PURPOSE

The Post-Doctoral Research Associate is responsible for conducting research on the project, as directed by the Principal Investigator, and is expected to operate with a significant degree of autonomy. They are not expected to operate as an independent researcher.

The post holder may be required to help supervise the work of more junior researchers.

KEY RESPONSIBILITIES

Literature Surveys

Undertake literature surveys and other investigations of the state-of-the-art, and prepare reports as required.

Programme of Research

Undertake a programme of research under the direction of the Principal Investigator, demonstrating a significant level of autonomy.

Lead in the production of high quality research outputs, including reports, papers and other publications of national/international standing.

Project Management

Perform project management activities, planning, scheduling, monitoring, and reporting on progress of research projects.

Liaison and Networking

Identify and liaise with internal and external collaborators, and with colleagues in the Department, maintaining positive and effective working relationships.

Internal Research Activities

Participate in and help to organise internal research activities, including seminars, research meetings and conferences.

Continuous Professional Development

Undertake continuous professional development activities.

Grant Applications

Contribute to the production of grant applications.

Teaching Support

Engage in teaching support activities, up to a maximum of six hours per week, possibly including leading a small number of units (no more than two per annum).

Aid in the supervision of postgraduate research students.

In addition to the above, undertake such duties as may reasonably be requested and that are commensurate with the nature and grade of the post.

ADDITIONAL INFORMATION

Scope and dimensions of the role

The candidate should be able to demonstrate experience and capability in field and greenhouse work, particularly with nutrient management (macro and micro-nutrients), crops (faba bean or legumes) and ^{15}N isotopes.

This post works with industry partners, therefore the candidate will ideally be able to demonstrate that they can work within multidisciplinary teams as well as the ability to develop and maintain relationships with a number of stakeholders in agricultural industry, academic collaborators and farming community. The candidate should also be able to work independently, manage their own time and set their own goals.

The successful candidate will have a proven track record in leading the generation and publication of quality peer-reviewed manuscripts and the dissemination of research at both specialist science conferences as well as events aimed at the general non-specialist public.

Key working relationships/networks

| Internal | External |
|---|---|
| <ul style="list-style-type: none">• Principal Investigator• Head of Research Centre• Head of School• Other research and academic staff within the school | <ul style="list-style-type: none">• Research collaborators• Sponsors and clients• Industry partners |

**UNIVERSITY OF LINCOLN
PERSON SPECIFICATION**



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| Selection Criteria | Essential (E) or Desirable (D) | Where Evidenced Application (A) Interview (I) Presentation (P) References (R) |
|---|---------------------------------------|--|
| Qualifications: | | |
| PhD or equivalent (good candidates may be accepted with a PhD pending, subject to publication record) | E | A |
| Extensive knowledge specific to project/area | E | A/I |
| Experience: | | |
| Extensive experience of relevant research methods | E | A/I |
| Authorship of research outputs of national/international standing | E | A/I |
| Experience of research in specific project area | E | A/I |
| Teaching support | D | A/I |
| Skills and Knowledge: | | |
| Ability to design, conduct and project manage original research in the subject area | E | A/I |
| Excellent written communication, including the ability to write reports and research outputs | E | A/I |
| Ability to prioritise own workload and work to specified deadlines under pressure | E | A/I |
| Ability to communicate complex subjects orally | E | A/I |
| Skills specific to project/area | E | A/I |
| Competencies and Personal Attributes: | | |
| Flexible approach to workload | E | I |
| Ability to work on own and as part of a team | E | I |
| Enthusiasm and commitment | E | I |
| Business Requirements: | | |
| Ability to travel to remote locations, such as fields | E | A/I |

Essential Requirements are those, without which, a candidate would not be able to do the job. **Desirable Requirements** are those which would be useful for the post holder to possess and will be considered when more than one applicant meets the essential requirements.

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| Author | RV | PBP | AH |
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