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| **JOB DESCRIPTION** |

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| **SPECIFIC JOB TITLE** | Nitrogen specialist |
| **LEVEL/BAND** | D |
| **JOB FAMILY** | SCIENCE |
| **GENERIC ROLE TITLE** | Post-Doctoral Research Scientist |
| **CONTRACT TYPE** | 3 years fixed term contract to end |
| **HOURS** | Full time |
| **REPORTS TO** | Principal Research Scientist |
| **DEPARTMENT** | Net Zero and Resilient Farming |
| **LOCATION** | North Wyke |
| **DATE** | 1/12/2024 |

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| **OVERVIEW OF ROLE/JOB PURPOSE** |
| The UKRI-EPSRC funded project: Global Nitrogen Innovation Centre for Clean Energy and the Environment (NICCEE) at Rothamsted Research aims to respond to the challenges and opportunities surrounding green ammonia while enabling and accelerating transformative socioeconomic and technological innovation for sustainable and climate-smart N management in agriculture. The project focuses on assessing the use of this technology for climate change mitigation and clean energy need accompanied with socioeconomic innovation to accelerate adoption by users, maximize the social benefits, and build an inclusive world while minimizing unintended socio-environment consequences.  We seek to employ a postdoctoral scientist with a thorough understanding of cycling processes in soil, particularly for nitrogen, and, ideally, a person who is highly skilled in using a suite of analytical and field techniques and preferably with advanced data analysis skills (e.g., use of R or similar).  The postdoc will liaise with in-house statisticians to design the experiments, source materials and together with other project members including researchers highly recognised in this field, write experimental protocols and carry them out, analyse and present the data and produce peer reviewed papers. They will co-supervise project technicians and work with them to measure N and other nutrients losses. They will be based at our Devon campus but will be required to travel to our main campus at Harpenden occasionally. |
| **MAIN DUTIES OF ROLE** |

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| **Generic Outputs** | **Weighting** | **Description of Outputs** | **Description of Job Specific Outputs** |
| **UNDERTAKING THE RESEARCH** | 40% | Conducting research experiments within predetermined scope including the collation, preparation and testing of data using existing or new approaches | * Plan and design experiments at field scale * Carry out experiments as part of a team, alongside supervising PhD students and lab and field technicians * Liaise with statisticians to design experiments and analyse data |
| **ANALYSIS, PRESENTATION AND PUBLICATION** | 30% | Interpreting research findings and contributing to the writing and publication of findings in scientific journals and/or via presentations | * Interpret results and organise into presentation, to colleagues and wider audiences. * Present at national and international conferences * Lead publications and contribute to others as co-author |
| **FUNDING AND FINANCIAL MANAGEMENT** | 5% | Managing part of the budget allocated for experiments | * Liaise with suppliers to purchase material * Ensure efficient use of available resources |
| **WORKING WITH OTHERS** | 10% | Participating in internal networks and developing entrepreneurial links with external organisations | * Contribute to regular team meetings * Contribute to project meetings and wider Rothamsted networks * develop links within the organisation and external researchers |
| **LEADERSHIP AND MANAGEMENT** | 5% | Supporting peers and overseeing work of more junior staff | * Co-supervise students (masters and PhDs) and project technicians * Work with others as a team member at North Wyke and Harpenden sites |
| **KNOWLEDGE EXCHANGE, COMMERCIALISATION AND OUTREACH** | 5% | Contributing to discussions with stakeholders within own research area, the delivery of professional training, presentation of research to end-users, public engagement and commercialisation activities etc. | * Contribute to discussions with farmers and other industry representatives and present results as appropriate |
| **CONTINUING PROFESSIONAL DEVELOPMENT** | 5% | Proactive planning of own development opportunities which serve to broaden existing knowledge base and skillset | * Obtain training in analytical techniques and data analysis methods if required * Acquire experience in staff management via students and visiting researchers |

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| **PERSON SPECIFICATION AND SHORTLISTING CRITERIA\*** |

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| **LEVEL/BAND** | D |
| **JOB FAMILY** | SCIENCE |
| **CONTRACT TYPE** | Fixed term |
| **HOURS** | Full time |
| **REPORTS TO** | Principal Research Scientist |
| **DEPARTMENT** | Net Zero and Resilient Farming |
| **LOCATION** | North Wyke |

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| **EDUCATION/QUALIFICATIONS** | Essential | Desirable | How Tested?\*\* |

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| 1. | A PhD/doctoral degree in the appropriate field or discipline or foreign equivalent | ü |  | App |

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| **EXPERIENCE/KNOWLEDGE/SKILLS** | Essential | Desirable | How Tested?\*\* |

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| 1. | Up-to-date knowledge and specialist understanding in the field of nitrogen cycling to develop and progress individual or joint research projects | ü |  | IV |
| 2. | Ability to apply relevant models, techniques, methods to apply to nitrogen and links to other nutrients | ü |  | AF |
| 3. | Ability to clearly communicate, verbally to a variety of forum and in writing, material of a specialist or highly technical nature | ü |  | AF/IV |
| 4. | Experience of planning and progressing work activities within general, professional guidelines using initiative, and independent judgement that fits the aims of the project and project members | ü |  | AF/IV |
| 5. | Awareness of current and future priorities of the research group |  | ü |  |
| 6. | Basic understanding of data ownership rules as they apply to own research | ü |  | IV |
| 7. | Understanding of basic principles of financial management |  | ü |  |

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| **BEHAVIOURS/COMPETENCIES** | How Tested?\*\* |

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| 1. | **Drive for Quality**: Makes incremental improvements to processes | AF/IV |
| 2. | **Strategic Thinking**: Draws on experience when undertaking duties of role | AF/IV |
| 3. | **Creativity and Innovation**: Responds positively to change; identifies and tries out different approaches | IV |
| 4. | **Developing Self and Others**: Formalises development needs for self and participates in learning activities to enhance performance | AF/IV |
| 5. | **Professional Conduct**: Demonstrates an understanding of others’ perspectives | IV |
| 6. | **Productive Relationships**: Is a good team player | AF/IV |
| 7. | **Effective Communication**: Communicates to a wide audience, in an accurate and timely manner | AF/IV |

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| **GENUINE OCCUPATIONAL REQUIREMENTS** | Essential | Desirable | How Tested?\* |

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| 1. | Ability to travel overnight to Harpenden regularly. |  | ü | IV |