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| **JOB DESCRIPTION** | | | |
| **SPECIFIC JOB TITLE** | Postdoctoral Researcher – Crop Physiology and Genetics | | |
| **GENERIC ROLE TITLE** | POSTDOCTORAL RESEARCH SCIENTIST | | |
| **LEVEL/GRADE** | D | | |
| **JOB FAMILY** | SCIENCE | | |
| **CONTRACT TYPE** | Fixed term contract – 18 months | | |
| **HOURS** | Full time | | |
| **REPORTS TO** | Research Scientist- Molecular Biology | | |
| **DEPARTMENT** | Sustainable Soil and Crops | | |
| **LOCATION** | Harpenden | | |
| **DATE** | April 2024 | | |
| **OVERVIEW OF ROLE/JOB PURPOSE** | | | |
| Postdoctoral Researcher- Crop Physiology and Genetics conduct cutting-edge research aimed at optimising nitrogen utilisation and improving crop yield and quality through the application of a T6P based biostimulant in a project funded by Innovate UK.  The post holder will be expected to carry about a large analysis on how combinations of fertiliser and T6P biostimulant affects the yield and quality of wheat grain across a diverse genotype population.  The job holder will need to carry out large glasshouse-based experiments, as well as collecting, analysing and modelling both physiological and biochemical data generated by the work. This role presents a great opportunity for the holder to work on improvement the sustainability of agriculture, and will be expected to communicate results with our project partner company SugaROx Ltd. | | | |
| **MAIN DUTIES OF ROLE** | | | |
| **Generic Outputs** | **Weighting** | **Description of Outputs** | **Description of Job Specific Duties** |
| **UNDERTAKING THE RESEARCH** | 40% | Conducting research experiments within predetermined scope including the collation, preparation and testing of data using existing or new approaches | * Prepare, plan and conduct experiments to understand the mechanistic basis of T6P regulation of wheat yields and NUE * Sample for molecular and biochemical measurements in leaf and grain. * Perform photosynthesis measurements as necessary * Measure yield parameters. * Assist other projects as necessary as part of team in research investigating both and downstream of T6P |
| **ANALYSIS, PRESENTATION AND PUBLICATION** | 30% | Interpreting research findings and contributing to the writing and publication of findings in scientific journals and/or via presentations | * Organise, analyse and maintain collected data using appropriate statistical tools, methods and packages * Interpret the outcome of data analyses and research findings based on objectives of the study and related literature drawing appropriate conclusions * Disseminate research findings and establish a national reputation through participation in national conferences, exhibitions etc. * Write, or contribute to manuscripts/write-ups for annual reports, web-based content and publications in good-quality, peer reviewed journals * Develop standard operating procedures where applicable |
| **FUNDING AND FINANCIAL MANAGEMENT** | 5% | Contributing to research proposals and writing of bids, winning fellowship funding etc. | * Identify sources of funding and contribute to proposals to BBSRC and other bodies, by providing information or as a researcher co-investigator * Where applicable, locate and target appropriate fellowship opportunities * Ensure efficient use of available resources |
| **WORKING WITH OTHERS** | 10% | Participating in internal networks and developing entrepreneurial links with external organisations | * Build rapport with team members and interact and support with other projects as necessary and in developing ideas for new projects * Develop links with external collaborators, organisations and stakeholders within own research area to identify potential sources of funds or opportunities for collaboration |
| **LEADERSHIP AND MANAGEMENT** | 5% | Supporting peers and overseeing work of more junior staff | * Take responsibility for managing projects and outcomes * Be involved in the day-to-day guidance and development of Scientific Technicians, PhD and summer students, visiting workers as necessary * Support the learning of others when involved in teaching activities or demonstrating other research activities * Adhere to health and safety procedures affecting self and others at all times |
| **KNOWLEDGE EXCHANGE, COMMERCIAL-ISATION 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 the delivery of policies, intellectual property or commercialisation * Present research to end-users (e.g. farmers, agronomists), at national meetings or occasional international conferences * Contribute to public engagement activities (e.g. open days, schools etc.) * Draft training material using readily available published information (e.g. protocols, methodology) and/or act as a training resource for the Section /research group |
| **CONTINUING PROFESSIONAL DEVELOPMENT** | 5% | Proactive planning of own development opportunities which serve to broaden existing knowledge base and skillset | * Formulate strategy for career development and undertake appropriate activities to acquire new skills beyond those of role-holder’s specialism * Seek advice, guidance, coaching or mentoring when necessary * Initiate and sustain networks and relationships that may present opportunities for development and/or future employment * Seek appropriate opportunities to enhance employability, including positions outside job family and/or the Institute, and seek to gain broader experience |

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| **PERSON SPECIFICATION AND SHORTLISTING CRITERIA\*** | | | | | |
| **SPECIFIC JOB TITLE** | | Postdoctoral Researcher – Crop Physiology and Genetics | | | |
| **GENERIC ROLE TITLE** | | POSTDOCTORAL RESEARCH SCIENTIST | | | |
| **LEVEL/GRADE** | | D | | | |
| **JOB FAMILY** | | SCIENCE | | | |
| **CONTRACT TYPE** | | Full Time | | | |
| **HOURS** | | 37 | | | |
| **REPORTS TO** | | Cara Griffiths | | | |
| **DEPARTMENT** | | Sustainable Soils and Crops | | | |
| **LOCATION** | | Harpenden | | | |
| **EDUCATION/QUALIFICATIONS** | | | Essential | Desirable | How Tested?\*\* |
| 1. | A PhD/doctoral degree in the appropriate field or discipline or foreign equivalent | | x |  | AF/I |
| 2. |  | |  |  |  |
| 3. |  | |  |  |  |
| **EXPERIENCE/KNOWLEDGE/SKILLS** | | | Essential | Desirable | How Tested?\*\* |
| 1. | Up-to-date knowledge and specialist understanding in plant and crop molecular physiology | | x |  | AF/I |
| 2. | Interest in resource use efficiency, source-sink, sugar signalling, genetic approaches and priorities of research group | | x |  | AF/I |
| 3. | Knowledge of association genetics including use of populations to characterise genetic basis of traits/ mechanisms | | x |  | AF/I |
| 4. | Ability to use molecular methods including RNA extraction, qPCR, coupled enzyme assays | | x |  | AF/I |
| 5. | Knowledge of physiological approaches such as measurements of photosynthesis | |  | x | AF/I |
| 6. | Knowledge of data analysis and use of statistics | | x |  | AF/I |
| 7. | Knowledge and appreciation of field-scale experiments | |  | x | AF/I |
| 8. | Ability to apply relevant models, techniques, methods and/or develop new ones | |  | x | AF/I |
| **BEHAVIOURS/COMPETENCIES** | | | | | How Tested?\*\* |
| 1. | **Drive for Quality**: Makes incremental improvements to processes | | | | AF/I |
| 2. | **Strategic Thinking**: Draws on experience when undertaking duties of role | | | | AF/I |
| 3. | **Creativity and Innovation**: Responds positively to change; identifies and tries out different approaches | | | | AF/I |
| 4. | **Developing Self and Others**: Formalises development needs for self and participates in learning activities to enhance performance | | | | AF/I |
| 5. | **Professional Conduct**: Demonstrates an understanding of others’ perspectives | | | | AF/I |
| 6. | **Productive Relationships**: Is a good team player | | | | AF/I |
| 7. | **Effective Communication**: Communicates to a wide audience, in an accurate and timely manner | | | | AF/I |
| **GENUINE OCCUPATIONAL REQUIREMENTS** | | | Essential | Desirable | How Tested?\*\* |
| 1. |  | |  |  |  |
| 2. |  | |  |  |  |