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| **JOB DESCRIPTION** |
| **SPECIFIC JOB TITLE** | Ecologist with experience in insect behaviour and/or molecular biology |
| **GENERIC ROLE TITLE** | SCIENTIFIC TECHNICIAN |
| **LEVEL/GRADE** | C |
| **JOB FAMILY** | SCIENCE CAPABILITIES  |
| **CONTRACT TYPE** | Permanent |
| **HOURS** | 37 |
| **REPORTS TO** | Principal Research Scientist - Ecology |
| **DEPARTMENT** | Biointeractions and Crop Protection |
| **LOCATION** | Harpenden: Bawden |
| **DATE**  | 12.8.24 |
| **OVERVIEW OF ROLE/JOB PURPOSE** |
| We have an exciting opportunity for an ecologist with experience in insect behaviour and/or molecular biology to support work within the Protecting Crops & Environment Department on (1) understanding the impacts of plant diversification on plant-pest-natural enemy and plant-pest vector-virus interactions and (2) monitoring the impact of regenerative farming practices (including plant diversification) on arthropod communities (with a focus on pest herbivores and their natural enemies). The post is for 3 years initially with excellent prospects to extend to an indefinite contract.The post holder will have **a background in agricultural entomology** and/or **molecular ecology** ideally with **experience in field working** including **arthropod sampling methodologies**. For Project 1, the postholder will help sample replicated field experiments investigating the effect of plant diversity on (i) cabbage stem flea beetle and aphid pest infestation and subsequent parasitization and (ii) Turnips Yellows virus incidence and spread. Collected samples will be analysed using **molecular methods** **(PCR, LAMP)** in the laboratory. Field experiments will be supported by **behavioural bioassays** in controlled **laboratory conditions** using continuous cultures of insects so any experience in **working with or rearing live insects** would be an advantage. For Project 2, The post holder will travel to commercial farms to help **field-sample plants and insects** to assess the impacts of key regenerative agricultural practices on pest abundance, biodiversity and biocontrol. Sampling will take place throughout the growing season – this is physically demanding – and the postholder will help to process samples once they have been returned to the laboratory. **Taxonomical identification skills** would be highly advantageous for this role – but full training will be given.It is expected that the post holder will also have a range of computer skills that illustrate a **competency in PowerPoint, Excel and Word** to help others write reports, prepare presentations, graphs and to perform calculations etc. As the work will involve travel to field sites **a driving licence is essential**.The role holder is expected to carry out the duties listed below, and any other duties reasonably required by the line manager or Institute, commensurate with the grade and level of responsibility for this post. |
| **MAIN DUTIES OF ROLE** |
| **Generic Outputs** | **Weighting**  | **Description of Outputs**  | **Description of Job Specific Duties**  |
| **SCIENTIFIC SUPPORT TO PROJECTS/ RESEARCH GROUPS OR SERVICE USERS** | 70% | Design of methods/software/ models/experiments and preparation and testing of data | * Sample insects and plants in field experiments and on commercial farms using a variety of methods.
* Help to process (identify) samples via a combination of taxonomic and molecular approaches.
* Take responsibility for rearing insects in continuous culture
* Help design and carry out behavioural bioassays (using cabbage stem flea beetle and its parasitoid, aphids and their parasitoids and
* To work with other insect protocols as they arise
* Compile data in Excel and draft reports and presentations in Word / PowerPoint
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| **FINANCE AND RESOURCE MANAGEMENT** | 5% | Stock control and ordering within predetermined budgetary constraints | * To order consumables as the need arises – this will involve becoming familiar with procurement system (Business World)
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| **WORKING WITH OTHERS** | 10% | Customer relations and interactions with others | * To work as part of a team to deliver Project objectives;
* To liaise with Horticulture & Controlled Environment staff (Insectary staff, glasshouse staff), Farm staff, Engineers
* To attend and contribute to project and group meetings
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| **LEADERSHIP AND MANAGEMENT OF STAFF AND/OR OF A SCIENTIFIC SERVICE OR FACILITY**  | 5% | Developing more junior staff; taking responsibility for quality of work within the work environment | * Supervise on a day-to-day basic casual workers / students as the need arises
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| **KNOWLEDGE EXCHANGE, COMMERCIALISATION AND OUTREACH ACTIVITIES**  | 5% | Promoting the work of the Institute and/or that of the role-holder | * To represent the Tam at conferences, meetings, seminars and agricultural events (Cereals/Groundswell) present results, as required.
* To help visitors to the lab with techniques, samples, data interpretation etc, as required
* To engage in knowledge transfer as required (e.g. demonstrations for schools, open days etc).
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| **CONTINUING PROFESSIONAL DEVELOPMENT** | 5% | Identification and actioning of learning objectives and the opportunities and resources available to achieve these | * Training in insect taxonomy, molecular biology, insect rearing, bioassays will be done on the job.
* To seek additional training as the need arises
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| **PERSON SPECIFICATION AND SHORTLISTING CRITERIA\*** |
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| **LEVEL/GRADE** | C |
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| **DEPARTMENT** | Biointeractions and Crop Protection |
| **LOCATION** | Harpenden: Bawden |
| **EDUCATION/QUALIFICATIONS** | Essential | Desirable | How Tested?\*\* |
| 1. | Technical or scientific education to NVQ Level 3 or AS/A-Level (or equivalent) with at least 5 years relevant experience (e.g. in insect behaviour/ IPM/molecular biology / agroecology/ecological survey methodology).  | 🗸 |  | AF |
| 2. | A degree or equivalent professional qualification in a relevant academic/research area would be advantageous. |  | 🗸 | AF |
| 3. |  |  |  |  |
| 4. |  |  |  |  |
| **EXPERIENCE/KNOWLEDGE/SKILLS** | Essential | Desirable | How Tested?\*\* |
| 1. | Invertebrate behavioural ecology – bioassay techniques e.g. olfactometry and/OR molecular biology | 🗸 |  | AF/IV |
| 2. | Experience of surveying and sampling plants and / or invertebrates in the field.  |  | 🗸 | IV |
| 3. | Taxonomical identification skills for plants and / or invertebrates and experience of processing vegetation or invertebrate trap samples. |  | 🗸 | AF/IV |
| 4. | Knowledge of good data management practice and attention to detail. Experience of data entry and management in Excel.  | 🗸 |  | AF/IV |
| 5. | Ability to follow clearly prescribed protocols and relevant health and safety procedures.  | 🗸 |  | AF/IV |
| **BEHAVIOURS/COMPETENCIES** | How Tested?\*\* |
| 1. | **Drive for Quality**: Is motivated and committed to doing their job to the best of their ability | IV |
| 2. | **Strategic Thinking**: Aligns actions with wider goals and models | IV |
| 3. | **Creativity and Innovation**: Accepts and adapts to change; makes connections and encourages a creative environment | IV |
| 4. | **Developing Self and Others**: Identifies learning and development needs | IV |
| 5. | **Professional Conduct**: Demonstrates honesty, integrity and respect | IV |
| 6. | **Productive Relationships**: Cooperates with and supports colleagues | IV |
| 7. | **Effective Communication**: Listens and communicates clearly to others | IV |
| **GENUINE OCCUPATIONAL REQUIREMENTS** | Essential | Desirable | How Tested?\*\* |
| 1. | Full UK Driving license | 🗸 |  | AF |
| 2. | Willingness and ability to work in the field, possibly in inclement weather, with occasional overnight stays. | 🗸 |  | IV |