

Job Description

Job title	Plant Pathologist	Location - base	Park Farm, Histon, Cambridge
Team	Field Crop Research	Job group	Senior Technical
Department	Plant Pathology	Post ref.	T431
Reports to	Head of Department	Line manages	N/A

1. Team overview

Our Plant Pathology team is a dynamic group of over 20 staff members, PhD students, and visiting researchers. We are dedicated to advancing the understanding of plant pathogens, their interactions with host plants, and their relationships within rhizosphere and phyllosphere microbial communities. By applying this knowledge, we develop innovative tools to help growers protect their crops and sustain or enhance yield. This role will contribute to research activities supporting the plant pathology component of the newly established NNF Wheat Alliance, a multinational, interdisciplinary project focused on identifying genetic factors that enhance wheat's ability to benefit from soil microbes. Additionally, the role will provide molecular biology support across our other ongoing plant pathology research and commercial projects.

2. Role purpose

This role will support both laboratory- and field-based research to achieve the plant pathology objectives of the NNF Wheat Alliance project, with a primary focus on evaluating how host selection for beneficial microbial associations influences susceptibility to root pathogens, including take-all and *Fusarium* spp. Responsibilities will include establishing and conducting glasshouse, laboratory, and field-based experiments to assess the resistance of wheat genetic diversity panels to soilborne fungal pathogens, using both classical plant pathology techniques and molecular methodologies such as qPCR. The tasks will involve pathogen isolation and culturing, raising plants from seed and performing inoculations, visual disease phenotyping and scoring, including microscopy-based assessments, DNA extraction, and quantitative PCR (qPCR). In addition to supporting the NNF Wheat Alliance, the role will contribute to other ongoing plant pathology projects by extracting high-quality genomic DNA for sequencing from plant-pathogenic fungal and oomycete species, as well as from plants, conducting PCR/qPCR and genotyping for various plant and microbial organisms, assisting with data analysis, collation, and interpretation, and collaborating with colleagues in the Plant Pathology team and external research partners.

3. Financial authority/responsibility

No financial responsibility. The role is expected to manage repairs of the equipment utilised in their projects in liaison with the Niab facilities team.

4. Key relationships

Internal Niab Plant Pathology team members

External: UK and international project partners

5. Key tasks/responsibilities

	Approx. % of time
Supporting research activities, including collating and summarising the disease phenotyping data	90%
Attending project meetings, liaising with the project partners (if/when required), assisting with outreach and translational activities	7%
Manage repairs of the equipment utilised in the project in liaison with the facilities team (if/when required)	3%

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6. Working conditions

The post-holder will be based in the new purpose-built research laboratories at Niab Park Farm, Histon, Cambridge, with additional work conducted in the specialist glasshouse and growth room facilities at Park Farm. The role will also require assisting with fieldwork in Cambridgeshire and Suffolk. As a result, this role necessitates in-person working, although occasional data analysis tasks may be completed remotely. The job will involve regular use of a Visual Display Unit, laboratory equipment including microscopy and pipetting, and manual handling of items weighing up to 2 kg, such as loading autoclaves and restocking consumables. The post-holder will be required to work in Containment Level 1 laboratory conditions and will have regular exposure to plant and fungal material, occasional exposure to dust such as soil particles, and exposure to environmental conditions including sunlight, rain, plant pathogens, pollen, bees, and other insects while working in the field. Lone working may be required in growth rooms, glasshouses, and field locations, with possible occasional exposure to chemicals such as fertilisers and plant treatments. It may not be possible to take holidays during peak times of the field season unless pre-arranged with the line manager with sufficient notice.

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Person Specification

Criteria	Essential	Desirable
Qualifications		
Undergraduate degree in a relevant discipline, such as plant pathology, plant science, genetics, molecular biology or equivalent qualifications/experience	x	
MSc, MPhil, MRes, or PhD in a discipline relevant to agriculture, biological/plant sciences or phytopathology		x
Knowledge and skills		
Knowledge of plant pathogens and diseases	x	
Knowledge of general microbiology and molecular biology methods	x	
Good organisational skills with the ability to prioritise work		x
Good problem-solving skills	x	
Good IT skills – email, word processing, spreadsheets, document sharing	x	
Basic data processing in Microsoft Excel; basic statistical analyses	x	
Good verbal and written communication skills		x
Good interpersonal skills		x
Experience		
Aseptic technique (e.g. microbiology or tissue culture)	x	
Isolating and culturing fungi and/or other plant pathogens	x	
Working with fungal and oomycete pathogens of cereal and legume crops e.g. take-all, Fusarium spp., downy mildew		x
Working with cereal and legume plants in glasshouse or growth rooms	x	
Scoring plant diseases in the field		x
Basic molecular biology: DNA extraction, PCR, qPCR, genotyping	x	
DNA library preparation, next-generation sequencing		x
Data analysis, basic bioinformatics		x
Attributes		
Accuracy and attention to detail in following experimental protocols	x	
Collaborative, with excellent communication skills to work across different groups within Niab and interact with UK and international project partners	x	
Proactive and self-motivated; can plan own day-to-day work, and uses initiative in dealing with laboratory matters such as consumables stock levels and equipment repairs	x	
Flexibility – able to work alone and as part of a small team	x	
Evidence of commitment to own personal development and willing to learn new skills		x
Other		
Driving licence or access to independent means of travelling, enabling travel to work as well as to the field sites in Cambridge and Suffolk. Departmental car fleet could be available for the latter.	x	