POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow (Plant Pathology)
Organisation Unit: Queensland Alliance for Agriculture and Food Innovation
Position Number: 2 positions TBA
Type of Employment: Part-time 0.5 FTE, Fixed Term
Classification: Level A

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world.

UQ ranks in the world’s top universities, as measured by several key independent ranking, including the Performance Ranking of Scientific Papers for World Universities (45), the US News Best Global Universities Rankings (52), QS World University Rankings (55), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (60). UQ again topped the nation in the prestigious Nature Index; and secured a greater share of Australian Research Council grants in 2016 ($24.5 million) than any other university nationally.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience – the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland’s highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia’s Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 50,000-plus strong student community includes more than 13,000 postgraduate scholars and more than 12,000 international students from 144 countries, adding to its proud 230,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.7 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built
scale and focus in research areas in neuroscience, biomolecular and biomedical sciences, sustainable minerals, bioengineering and nanotechnology, as well as social science research.

UQ has an outstanding track-record in commercialisation of our innovation with major technologies employed across the globe and integral to gross product sales of $11billion+ (see http://uniquest.com.au/our-track-record).

UQ has a rapidly growing record of attracting philanthropic support for its activities and will have further success in this area as an important strategic aim going forward.

Organisational Environment

The Queensland Alliance for Agriculture and Food Innovation (QAAFI) is a unique research institute in Australia as it is a jointly funded initiative of UQ and Agri-Science Queensland and Biosecurity Queensland, part of the Department of Agriculture and Fisheries (DAF). QAAFI conducts research and development to benefit the food and fibre sector both nationally and internationally.

The Institute’s strengths are reflected in its four research centres – the Centre for Plant Science, the Centre for Animal Science Centre for Nutrition and Food Sciences and the Centre for Horticultural Science. QAAFI brings together scientists from UQ and DAF to conduct high-end science that delivers higher impact outcomes for industry and the community.

Details of the research interests of the Institute may be accessed on the Institute’s web site at http://www.qaafi.uq.edu.au

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - http://www.uq.edu.au/current-staff/working-at-uq

The University of Queensland Enterprise Agreement outlines the position classification standards for Levels A to E.

DUTY STATEMENT

Primary Purpose of Position(s)

To engage, as a research fellow, in experimental and extension activities contributing to fulfilment of the milestones for the project ‘Improving Avocado Orchard Productivity Through Disease Management’, which has been awarded to QAAFI by Hort Innovation.

This project investigates aspects of the main diseases affecting avocado productivity in Australia, including their identification, distribution and optimized management strategies. The research includes a combination of laboratory, glasshouse and field experimentation. There is a significant industry support component, such as provision of expert advice to industry stakeholders and related projects, responding to specific disease outbreaks and participation in industry communication and extension activities. Dissemination of project outputs via a range of media will be required.
Duties

Duties and responsibilities include, but are not limited to:

Research

- Planning, designing and coordinating orchard field trials to assess effects of various treatments on tree health, yields and fruit quality. This will involve liaising with grower and packingshed collaborators, their farm staff and other research staff to ensure accurate treatment applications and data collection.
- Assess the genetic diversity of Botryosphaeriaceae fungi affecting the Australian avocado industry (fruit stem end rot, nursery graft dieback and branch dieback), and other woody horticultural and proximal native species and test the relative pathogenicity of a selection of these fungi.
- Assist with trials to elucidate epidemiology and evaluate efficacy of management practices of Botryosphaeriaceae pathogens.
- Deposit isolates into Biosecurity Queensland’s culture collection (BRIP) and describe and publish taxonomic reviews, new species etc. where appropriate.
- Undertake microbial community analyses on soil and leaf samples collected in related field trials.
- Provide taxonomic/diagnostic support and expert advice for other QAAFI or industry avocado plant health and biosecurity projects (eg. Avocado Industry Biosecurity Capacity Building).
- Support the avocado industry by responding to individual and industry-wide pathology/disease issues, which may include receiving specimens for inspection, diagnosis of disease or other disorder, assisting with best integrated disease management options, etc.
- Communicate outcomes of the project by: publishing scholarly papers in high quality scientific journals; preparing extension articles for industry magazines; presenting seminars at workshops and conferences; directly communicating with farmers at field days and at other venues that present.
- Assist the project leader with preparation of milestone and final reports for the funding body.

Teaching and Learning

- As a ‘Research focussed’ position there is no formal requirement for teaching. However it is encouraged that you actively seek postgraduate supervisory opportunities to enhance the outcomes of the project.

Service and Engagement

- Communicate with project collaborators and industry stakeholders as required.
- Deliver presentations at industry field days, R&D meetings, conferences, and prepare articles for publication in Industry periodicals.
- Foster the Institute’s relations with industry, government departments, professional bodies and the wider community.
- Perform a range of administrative functions in the Institute.
• Contribute to the processes that enable the academic team to manage the work of the Institute, including participation in Institute and Centre decision-making and serving on Institute committees.

• Any other duties as reasonably directed by your supervisor

**Other**

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including:

• the [University’s Code of Conduct](#)

• requirements of the Queensland occupational health and safety (OH&S) legislation and related [OH&S responsibilities and procedures](#) developed by the University or Institute/School

• the adoption sustainable practices in all work activities and compliance with associated legislation and related University [sustainability responsibilities and procedures](#)

• requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related [responsibilities and procedures](#) developed by the University

**Organisational Relationships**

The position reports to Dr Elizabeth Dann, Senior Research Fellow, and then to the Centre Director, or their delegate.
SELECTION CRITERIA

Essential

- PhD in the area of Plant Pathology or Plant Microbiology
- Demonstrated expert knowledge in theory and practical methods associated with plant pathology or plant microbiology, including the isolation and subculturing of micro-organisms from plant tissue, taxonomic identification and description of fungi through morphological and molecular techniques (DNA sequencing and phylogenetic analyses), pathogenicity testing and microbial community analyses
- High level organisational skills, willingness to lead orchard field trials, including ability to liaise with collaborators to direct accurate application of treatments and collection of data and crop agronomy information. Must be prepared to travel overnight.
- Advanced field and glasshouse experimental techniques, including design, practical treatment application, data collection and analyses
- Knowledge of isolate collection techniques and expertise in the preparation of isolates for deposition into reference collections, and other biosecurity resources
- An ability to establish effective relationships and to represent and promote plant pathology at a university and wider community level, including industry, government and professional bodies
- Demonstrated written and oral communication skills and an ability to tailor information according to the needs of the target audience (farmers, extension officers or scientists).
- Evidence of a contribution to research through completion of projects to the satisfaction of the funding body and a strong publication record
- Ability to work collaboratively with colleagues and a desire to learn new techniques

Desirable

- Experience in supervision of research assistants and/or Honours and Research Higher Degree students
- Knowledge of the avocado industry, including economically-important pests and diseases, and strategies for control

Qualification Verification

An appointment to this position is subject to the verification of the highest academic qualification from the conferring institution.

The University of Queensland values diversity and inclusion.

Applications are particularly encouraged from Aboriginal and Torres Strait Islander peoples.
Applications are also encouraged from women.