

POSITION DESCRIPTION



Postdoctoral Research Fellow in Plant Photosynthesis and Phenotyping



POSITION DETAILS

Position Title	Postdoctoral Research Fellow in Plant Photosynthesis and Phenotyping
Classification	Academic Level A
Position Number	7016369
School/Office	Hawkesbury Institute for the Environment
Division	Provost

POSITION PURPOSE

The Industrial Training Centre for Smart and Sustainable Horticulture (SaSH) aims to generate and adapt new high-value crops to thrive in protected settings. The project will ultimately develop and commercialise novel germplasm that is of high value to the industry and provide new knowledge to enable rapid transition of selected germplasm into protected settings and improve profitability of horticultural enterprises. The postdoctoral fellow will integrate across the four research and training programs within SaSH to focus on horticultural crops to be productive in high- and medium-tech growth facilities. The Postdoctoral Research Fellow will utilise latest physiology and phenotyping platforms to build a recognised program of research and deep collaborations with industry partners. Overall, the project will provide deep insight into production of tomato and snacking capsicums in protected facilities that will ultimately be deployed to growers.

The Postdoctoral Research Fellow will join an international project team of researchers and commercial partners. The Postdoctoral Research Fellow will communicate findings at scientific meetings and publish research in high-impact international journals and will closely interact with industry partners.

Subject to the University's operational requirements, the incumbent may have an opportunity to express interest in working overseas, either with a strategic partner or at an overseas campus for a fixed period of time.

KEY ACCOUNTABILITIES

1. Conduct original research with national collaborators to adapt crops to protected settings

- from medium to high technology levels.
2. Develop phenotyping methods for adapting new crops to protected settings and to deliver grower guidelines for high yielding germplasm to industry stakeholders.
 3. Integrate plant phenotyping platforms for accurate monitoring of growth, yield and disease resilience.
 4. Perform physiological and biochemical screening to validate phenotyping technologies to identify important traits critical for crop productivity in protected environments.
 5. Contribute to the day-to-day execution of research-related tasks as part of an interdisciplinary and multi-institutional team, including preparation of reports and manuscripts for publication in referred journals and preparing and presenting research findings at national and international seminars, conferences and industry workshops.
 6. Participate in the development of research grants for future funding opportunities.
 7. Ensure that project research data management conforms to the Australian Code for the Responsible Conduct of Research, and University policies.
 8. Participate in administration and attend meetings associated with research or the work of the organisational unit to which research is connected.
 9. Occasionally contribute to the design and delivery of undergraduate and postgraduate teaching programs as required.
 10. Provide advice/mentoring to Undergraduate, Masters Research students, and/or Higher Degree Research students where projects align to horticulture research and training.

QUALIFICATIONS, EXPERIENCE AND SKILLS

1. A PhD degree or equivalent professional experience in plant biology related to plant photosynthesis and phenotyping that is closely aligned with biochemistry of horticultural crops.
2. Demonstrated knowledge and experience in measurement and analysis of plant photosynthesis using the latest technologies including but not limited to gas-exchange using portable Licor photosynthesis machines, chlorophyll fluorescence and hyperspectral reflectance.
3. Experience in using plant phenotyping platforms for screening plant growth and yield performance for selecting elite germplasm.
4. Experience in plant biochemistry including analysis of enzymes, metabolites and gene expression.
5. Demonstrated ability to publish articles in peer reviewed scientific journals, deliver high quality oral presentations and develop technical reports for industry stakeholders.
6. A strong track record in connecting with industry stakeholders and representatives to deliver outcomes that are important to horticulture production systems.
7. Demonstrated experience in providing advice to and or mentoring of research students.
8. Demonstrated organisational skills and excellent communication and interpersonal skills, including the ability to be self-directed, but also to work effectively and harmoniously as part of a research team.

KEY RELATIONSHIPS

- **This position reports to:** Professor (7004288)
- **This position supervises:** N/A
- **Key internal relationships:**
 - Institute Director
 - Institute Manager
 - Academic Staff within HIE
 - HDR students who are embedded with the new training centre

- Colleagues in the theme, HIE and across the University
- **Key external relationships:**
 - Industry Partners
 - Named project team members

CHALLENGES

- Balancing research independence and collaborative expectations.
- Managing funding and resource constraints.
- Adapting to diverse institutional cultures.

UNIVERSITY EXPECTATIONS

The University expects that all employees are aware of, and comply with legislation and Western's policies and procedures relevant to the position, including but not limited to:

- Code of Conduct
- Work Health and Safety and Wellbeing Management System
- Enterprise Agreement or Award
- Anti-discrimination principles, Equal Employment Opportunity and staff and student equity

Approved by: Lead People and Culture Partner (Provost)

Date: 25/05/2026