Are you a student looking for an outstanding PhD opportunity with strong industry links and career opportunities at an equivalent graduate level salary? Are you an industry professional who is open to undertaking a PhD project while retaining employment and salary benefits?

PhD project ID: 1BPhD25-03 **Date advertised:** 11 April 2025

PhD project title: **Determining varietal water and nutrient requirements in almond trees in the Murray-Darling Basin to optimise plant functioning and subsequently mitigate stress responses such as leafing failure.**

Description of the topic of PhD project:

The aim of the project will be to determine the physiological response of almond varieties to orchard management practices, and if varietial specific management can reduce the risk of the expression of leafing failure. The outcomes will be supported with plant physiological measurements, including carbohydrate levels as an indicator of plant function, to contribute to the identification of the contributing factors to leaving failure and to advise on approaches to mitigate this response for a number of varieties including Monterey.

The project will work with growers to establish best management practices in the management of individual almond varieties, which in turn will encourage sustainable farming systems and contribute to a healthy, resilient and sustainable river system and communities.

Primary university supervisor(s):
Dr Joanne Ashnest (Charles Sturt University, Wagga Wagga campus)

Co-supervisors:
Dr Bruno Holzapfel (Charles Sturt University), Dr Cassandra Collins (The University of Adelaide)

Requisite qualifications and experience:
Candidates with Masters or honours degrees in the following disciplines, or with equivalent research or work experience, will be favourably considered: *Agricultural science, Environmental science, Plant physiology, Horticulture.*

To determine your eligibility for studying at Charles Sturt University, see:
https://study.csu.edu.au/information-for/postgraduate-students

1BCRC industry partner(s) involved:
Hort Innovation, Almond Board of Australia.

ONE BASIN CRC PhD program

Are you looking at developing world-leading skills in helping communities tackle climate change, capitalise on the digital transformation and accelerate rural innovation? Are you interested in receiving training from internationally renowned experts, whilst working with industry partners in the iconic Murray-Darling Basin on real-world problems?

The One Basin Cooperative Research Centre (One Basin CRC) offers attractive PhD packages in a broad range of disciplinary fields and across multiple universities in Australia (Australian National University, Charles Sturt University, Flinders University, The University of Adelaide, The University of Melbourne, The University of Sydney). Our PhD graduates will be the future leaders in basin research and application. Our One Basin PhD program provides unprecedented leadership development opportunities, extensive industry networking, and the chance to establish a deep understanding of your chosen field. Key features of the One Basin CRC PhD Program are:

- A 3.5 year scholarship with the option of a 6 month-funded internship with an industry partner or equivalent part-time employment.
- A flexible funding package including a stipend as much as $56,000 pa* and generous travel and operational costs, with potential additional income from working part-time with industry partners and further scholarship funding.
- The PhD program seeks to achieve gender balance and attract candidates from all walks of life, with Australians of Indigenous and Torres Strait Islander heritage particularly encouraged to apply.
- Opportunities for travel (including the possibility of international conferences), development and engagement with a strong research network that is being developed through the 10-year CRC.
- Each candidate will spend the majority of their time in one of the following research hubs: Loxton (South Australia), Mildura (Victoria), Griffith (NSW) and Goondiwindi (Queensland) with associated node in Narrabri (NSW).

Our PhD program will give you the professional skills and networks to accelerate your career in research or practice across the water, agriculture or environmental sectors.

** This is dependent on the host university policies, other available co-funding, and candidature experience and background. Candidates will receive a minimum stipend of $36,705 pa and a further minimum $20,000 (total) in operational funding (2025-26 rate). The exact allocation of the funding package between the stipend and support activities (such as conferences, travel to and from regional hubs) will be agreed to by the host university, PhD student and the 1BCRC. Applicants must be intending to apply for, and be highly competitive for, a Research Training Program (RTP) Stipend (or an equivalent scholarship). The student will enter the PhD program in 2025 and enrol on a full-time basis.*

Apply via: onebasin.com.au