

One Basin CRC PhD Opportunities



PhD Project ID

1B25-F

Date advertised

16 July 2025

University

Charles Sturt University

Primary supervisor(s)

Dr Nicola Thomas

Co-supervisors

Dr Nick Pawsey (Charles Sturt University), TBC

Industry Partner(s)

Griffith Regional Council, Hort Innovation (TBC)

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.

Key features

- 3.5-year scholarship, Flexible funding up to AU\$70,000 funding package (allocated between stipend and operating costs)
- Industry embedded through 6-month internship (or part-time equivalent) and opportunities for travel, networking, and engagement with local communities and partner organisations.
- Candidates will spend the majority of their time at One Basin CRC's Loxton, Mildura, Griffith, or Goondiwindi hubs.

Project working title

Burning Bright: Unlocking Biochar for Water-Wise, Waste-Smart Agriculture.

Description of PhD research topic

This project aims to explore how biochar can transform agricultural waste into valuable, climate-smart products that enhance irrigation efficiency and support regional economic growth. Based at the Griffith OneBasin CRC hub, the research will analyze the supply chain, market demand, and product innovations for biochar made from local inputs. The economic analysis will evaluate biochar's potential to improve water and fertilizer efficiency in high-value irrigated crops like citrus, grapes, and vegetables, while promoting circular waste reuse. Key outputs will include a literature review, stakeholder interviews, supply chain mapping, and a market opportunity analysis.

This research supports national sustainability goals and addresses water scarcity, organic waste management, and agricultural decarbonization. The successful candidate will work with industry, government, and research partners to achieve practical regional development outcomes, focusing on applied systems thinking and engagement with sustainable agriculture innovators.

Requisite qualifications and experience

This PhD opportunity is ideal for candidates passionate about sustainability, agricultural innovation, and regional development. We encourage expressions of interest from individuals with a background in one or more of the following fields: **Agricultural or Environmental Economics; Agronomy, Soil Science or Environmental Science; Sustainability or Resource Management; Business, Supply Chain, or Regional Development** (with a focus on agri-tech or green industries)

Applicants should possess strong analytical skills, the ability to work independently, and an interest in interdisciplinary research. Experience or interest in agricultural systems, water management, organic waste reuse, or climate policy is preferred.

We encourage applications from those with practical agricultural experience, previous research, or consulting backgrounds, as well as First Nations applicants and those from regional or rural areas. Strong communication skills and stakeholder engagement are essential. The successful candidate will join the OneBasin CRC network and contribute to meaningful change.

Mike Stewardson
One Basin CRC CEO



Apply via:
onebasin.com.au

"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."



Australian Government
Department of Industry, Science,
Energy and Resources

AusIndustry
Cooperative Research
Centres Program



**Charles Sturt
University**