

PROJECT DETAILS

Project Title:

Enhancing Climate Resilience and Biodiversity through Agroecological Planting Systems Featuring Quandong (*Santalum acuminatum*)

Project Summary:

This innovative agroecological research focuses on *Quandong* (*Santalum acuminatum*), a unique hemiparasitic native Australian plant species with substantial environmental, economic, cultural, and nutritional value. Despite its potential, *Quandong* faces significant challenges in crop establishment and food production, particularly under changing climatic conditions.

The proposed research aims to explore high-performing mixed-species plantations in natural and urban landscapes, with a particular interest in urban agriculture applications. It seeks to develop biodiversity-rich, drought-resilient, and sustainable agroecological planting systems. These systems will contribute to sustainable land management, biodiversity conservation, and food security, offering long-term benefits to diverse communities, including Aboriginal peoples, across Australian landscapes.

Preferred Applicant Skillset:

We are seeking a self-motivated PhD candidate with strong organisational and problem-solving skills. The ability to work collaboratively across disciplines is essential, as the project integrates knowledge from horticulture, environmental science, forestry, and sustainability. Strong communication and teamwork skills are vital for success in this interdisciplinary research. The ideal candidate will demonstrate proficiency in analytical skills, particularly in the collection, processing, and interpretation of data related to biodiversity and drought resilience. Prior experience with field and laboratory research involving wild fruits, biodiversity assessments, or abiotic stress studies will be highly regarded.

Internship opportunity:

We have connections with the Department of Primary Industries and Regional Development (DPIRD), native wild fruit farms, the Western Australian Government's State Natural Resource Management Program, and several local councils. These partnerships offer strong potential for industry-based internships; however, internships will be recommended only when they align with and contribute to the successful completion of the research project.

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