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# Position Details

## Research Scientist/Engineer- CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Senior Research Scientist – Sustainable farming systems |
| Job Reference | 87022 |
| Tenure | Indefinite Full-time |
| Salary Range | AU$121,455 - AU$142,321 per annum (pro-rata for part-time)  plus up to 15.4% superannuation |
| Location(s) | Brisbane/Toowoomba-Forrest Hill Research Station |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * All Candidates |
| Position reports to the | Team Leader |
| Client Focus – Internal | 40% |
| Client Focus – External | 60% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dr Peter Thorburn via email at Peter.Thorburn@csiro.au or phone +61 417 073 173 |
| How to apply | Apply online at <https://jobs.csiro.au/>  Internal applicants please apply via **Jobs Central**  If you experience difficulties when applying, please email [careers.online@csiro.au](mailto:careers.online@csiro.au) or call 1300 984 220. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

### Role Overview

CSIRO Agriculture and Food develops and delivers science and technology to increase the resilience and sustainability of Australian agricultural systems. Our approach is impact-focussed, working with industry and stakeholders to undertake research that builds resilient and sustainable farming systems that delivers into the Business Unit’s Impacts Areas including *Resilient Farming Systems*, *Improved Footprint* and *Trusted Supply Chains*. The core of the science underlying these impact areas is a better understanding of the parts, or components, of the farming system and how each component interacts, interconnects, interrelates, and in some cases influences each other.

CSIRO Agriculture and Food are seeking to appoint a Senior Research Scientist (SRS) to play leadership role in the area of environmental and economic sustainability of a range of farming systems, including tropical and temperate cropping systems, as well as mixed farming systems.

The Senior Research Scientist will focus on developing science and business development strategy, to create and lead a range of projects enhancing sustainability of these farming systems. Outcome areas include reducing greenhouse gas footprints and/or water quality impacts, and helping build market confidence in the sustainability of these farming systems. These impacts may be achieved either by directly influencing farmer’s management, or through contributing to market based instruments to incentivise changed farm management.

Farming systems simulation is an important tool in this research to capture, analyse and understand the interactions between the different components of the system. The Senior Research Scientist will be embedded in one of the world’s leading farming systems simulation groups, and will collaborate with other scientists and support staff across CSIRO Agriculture and Food.

### Duties and Key Result Areas

* Work with various CSIRO staff to develop and use simulation (e.g. APSIM) and other modelling tools to develop and help implement strategies to increase environmental and economic sustainability diverse farming systems.
* Lead and collaborate in multi-disciplinary research projects with other scientists and support staff across CSIRO and other institutions
* Engage closely with industry and/or community to identify their needs and market directions.
* Conceptualise, develop and test with farmers and other stakeholders novel information systems that can be deployed at broad scale.
* Generate new theoretical perspectives, new ideas and approaches to the above problems that integrate across disciplines to assess sustainability of agricultural systems.
* Publish papers suitable in high quality scientific journals, and present research at relevant industry and academic conferences.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. A PhD (or an equivalent combination of qualifications and research experience) in a relevant field relating to farming systems science that could include agronomy, crop physiology, soil science, natural resource management or related disciplines.
2. Demonstrated ability to undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems.
3. A demonstrated publication history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications.
4. A proven ability to work effectively as part of a multi-disciplinary team, plus the motivation and discipline to carry out autonomous activities
5. The demonstrated ability to effectively manage a number of competing priorities simultaneously and carry out non-routine tasks under general direction.
6. Proven ability to investigate routine problems by identifying and considering the implications of a range of available alternative solutions**.**
7. Possession of an Australian C class (motor car) license (or ability to obtain via an international license).

## **Desirable**

1. Experience and/or demonstrated knowledge of the application of digital agricultural principles and precision farming technologies to influence farmers’ decision making either directly or through market-based instruments.
2. Experience and/or demonstrated knowledge of the innovative application and/or development of farming systems simulation models (e.g. APSIM).
3. Success in gaining support to fund research projects and capacity to collaborate with key stakeholders including but not limited to farmers, industry partners and research providers.
4. Demonstrated knowledge and application of contemporary data management approaches, such as using R, python, javascript, etc.
5. Ability to travel to field sites and other locations for short time periods (e.g. 2-10 days).

## **Required Competencies**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goal and priorities.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [Agriculture and Food](https://www.csiro.au/en/Research/AF) for more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* People First
* Further Together
* Making it Real
* Trusted