# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Research Scientist – Tropical farming systems |
| Job Reference | 90395 |
| Tenure | Specified Term of 4 years Full-time |
| Salary Range | AU$105,806 - AU$114,500 per annum (pro-rata for part-time)plus up to 15.4% superannuation |
| Location(s) | Townsville, Queensland or Darwin, NT |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * All Candidates
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| Position reports to the | Team Leader |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Drs Peter Thorburn (via email at Peter.Thorburn@csiro.au or phone +61 417 073 173) or Ian Watson (Ian.Watson@csiro.au, +61 438 122 512). |
| 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 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

The role of a Research Scientist is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. The Research Scientist may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community challenges.

The Research Scientist will have the opportunity to build and maintain networks, play an important role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts. The specific focus of this position is sustainable development of farming systems in northern Australia, much of which will be ‘greenfield’ development.

The sustainable development of farming in northern Australia is complex, requiring the solution of problems ranging from basic agronomy of crops to issues of economic, social and environmental impact and licence. This position will work with others in the organisation to bring expert knowledge of farming systems science, together with digital approaches to agricultural research (e.g. application of simulation modelling, earth observation, land systems data) to provide more in-depth information on the sustainability of existing and, importantly, potential future farming systems. The successful candidate will need to be comfortable engaging with the research community inside and outside CSIRO, agri-industry, non-agricultural and other stakeholders.

### Duties and Key Result Areas

* Engage with external stakeholders to understand and help shape the vision for sustainable farming systems in northern Australia.
* Identify potential benefits and disbenefits arising from the different systems, at scales from farm to catchment.
* Develop a suite of research activities to quantify and manage these benefits and disbenefits, with outputs relevant to a range of stakeholders.
* Explore and then communicate the spatial and temporal variability of impacts and outputs of different farming systems.
* Enlist collaborators to broaden the scope of these research activities and communication with stakeholders.
* Communicate results to scientific peers and stakeholders through publications, workshops, demonstrations, etc.
* Publish papers in high quality scientific journals, and present research at relevant industry and academic conferences.
* Make a contribution to the effective functioning of the research team and help deliver CSIRO’s organisational objectives and plans.
* Work collaboratively with colleagues within your team, the business unit, across CSIRO and other organisations.
* Adhere to the spirit and practice of CSIRO’s 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 discipline area, such as agriculture and/or environmental science, using simulation modelling or other agri- or environmental-informatics techniques to better understand and scale results.
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. Possession of (or ability to obtain) an Australian C class (motor car) license.
7. Ability to travel to field sites and other locations for short time periods (e.g. 2-10 days), including overnight stays in relatively remote locations.

## **Desirable**

1. Demonstrated theoretical and/or practical knowledge of the multifaceted performance of farming systems, such as production, farm economic, environmental (greenhouse gasses, water quality) outputs.
2. Understanding of cultural and social impacts and investor needs of sustainable agricultural development in the tropics.
3. The application and development of simulation models together with extensive data sets (land systems data, earth observation, etc) to quantify and scale through space and time farming systems outcomes.
4. Demonstrated knowledge and application of contemporary data management and analysis approaches (such as using R, python, javascript, etc.), and programming (e.g. C#).

## **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:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others’ reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate responses by adapting/creating and testing alternative solutions.
* **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of change.

Other special requirements:

Appointment to this role may be subject to conditions including 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