# Position Details

## CSIRO Early Research Career (CERC) Postdoctoral Fellowship– CSOF4

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| The following information is for applicants | |
| Advertised Job Title | CSIRO Winanga-y Postdoctoral Fellowship in Agroecological Economics |
| Job Reference | 84561 |
| Tenure | Specified Term of 3 years full-time |
| Salary Range | AU$89,926 to AU$98,504 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Adelaide, SA |
| 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 | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Marta Monjardino via email at marta.monjardino@csiro.au or Rick Llewellyn at rick.llewellyn@csiro.au |
| 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 Early Research Career (CERC) Fellowships** provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant research experience. These Fellowships aim to develop the next generation of future leaders of the innovation system through:

* A differentiated career development program to deliver capability excellence and breadth across all facets of the national innovation system;
* Research training via strategic research and development projects with a clear focus that will deliver real impact through science and engineering excellence;
* An innovative culture supporting the development and demonstration of original thinking and expertise leading to peer-recognition; and
* Opportunities to develop skills and experience in collaborative research teams to effectively work within national and global multi/transdisciplinary and multi-stakeholder environments.

CERC Fellows **are appointed for three years or full-time equivalent.**

We are thrilled to be able to deliver on the commitment we made in our strategy to invest in frontier science with the CSIRO Agriculture & Food Winanga-y Postdoctoral Fellowship scheme. The word Winanga-y (pronounced win-na-gnay) is a cultural asset gifted by the Gomeroi Nation in Myall Vale to CSIRO's Agriculture and Food Business Unit to name the new Postdoctoral Fellowship Scheme. Winanga-y means to understand, know, remember, and think.

We are seeking a highly motivated CERC Fellow to work at the intersection between agroecology, socioeconomics, and data analytics. The successful candidate will lead and conduct original research to address the threat of resistance to agrichemicals that goes beyond existing plant and pesticide science. The research will harness spatial epidemiological and socioeconomic analytics, using new and existing national data sets. The project will deliver new data-driven approaches and insights to predict the future spatial extent of resistance and inform management at relevant and impactful scales for the agricultural sector.

The CERC Fellow will work within national and international collaboration settings and as part of a diverse multidisciplinary team. The project team includes leading national and international expertise, including the University of Western Australia, University of Copenhagen, and Rothamsted Research. While the initial focus will be on crop weed management, the research has the potential for future impact that reaches to other agricultural pests and disease management. The analytical approach will be developed and tested, mainly in a desktop setting, but with large real-world datasets and substantial industry-level engagement and impact potential. The CERC Fellow will also contribute to the collection of new data to complement existing databases, especially around farm-level weed management practice use and economic drivers. The CERC Fellow will have the opportunity to present the findings in top-tier journals and conferences of national and international standing.

### Duties and Key Result Areas

Under the direction of senior research scientists, this CERC Fellow will:

* + Develop a data-driven integrated modelling framework to pre-emptively identify resistance risks and effective integrated management solutions that industry stakeholders can adopt in various agroecological and socioeconomic contexts.
  + Develop comprehensive understanding of how predicting the emergence and management of resistance at relevant scales can inform adoption of sustainable strategies and industry innovation and increase resilience of agri-food systems.
* Publish results in relevant international scientific fora (high-level journals and conferences).
* Carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes.
  + Collaborate with members of a diverse project team and external partners to ensure research directions can lead to lasting impact in application domains.
  + Communicate effectively and respectfully with all staff, clients, and suppliers in the interests of good business practise collaboration and enhancement of CSIRO's reputation.
  + Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Making Safety Personal goals.
* Other duties as directed.

The CERC Fellow learning, development and training programis developed between the CERC Fellow and their CSIRO supervisor. The program will focus on enhancing the Fellow’s capabilities to the level expected of an independent researcher and will include on-the-job and course-based development encompassing:

* Discipline-specific techniques and protocols
* Professional growth
* Project management
* Communication and influencing skills
* Working and collaborating with others

## **Selection Criteria**

CSIRO is an Equal Opportunity employer working hard to recruit world-class talent that represents the diversity across our society. As part of our commitment to Aboriginal and Torres Strait Islander employment outcomes, preference will be given to Aboriginal and Torres Strait Islander candidates who meet the role criteria.

#### Essential

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

1. A doctorate (or will shortly satisfy the requirements of a PhD). The doctorate must be in a relevant discipline area, such as agricultural science, agricultural/resource economics or digital agriculture.

Please note: To be eligible for this role you must have **no more than 3 years** (or full-time equivalent) of relevant research experience.

1. Demonstrated understanding of the drivers of productivity and profitability in agri-food systems.
2. Demonstrated skills in data analytics, data management, experimental design and/or statistical/econometric analysis***,*** including proficiency in analysis of high-dimensional, spatio-temporal data (e.g., GIS, spatial processes, remote sensing).
3. A good understanding of modern data analytical approaches and application to agricultural or environmental problems.
4. High level written and oral communication skills with the ability to represent the research team effectively internally and externally, including the presentation of research outcomes at national and international conferences, and a proven track record of publishing research findings.
5. A record of science innovation and creativity, including the ability and willingness to incorporate novel ideas and approaches into scientific investigations.

## **Desirable**

1. Demonstrated experience designing and building economic or biological models.
2. Demonstrated experience in the analysis of agri-food systems and innovations (e.g., integrated weed/pest/disease management systems).
3. Understanding of epidemiological processes and their potential application to agri-environmental landscapes.
4. Understanding of weed and pest management in agriculture including agri-chemical resistance.

## **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 response by adapting/creating and testing alternative solutions.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **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 changes.

To be appointed as a CERC Fellow within CSIRO, candidates are required to have **submitted** their doctoral thesis at the time of commencement, as a minimum requirement, if PhD conferment has not been obtained. If a candidate has submitted, but their PhD has not yet been formally attained, the starting salary will be CSOF4-1 ($87,068). Upon CSIRO receiving written confirmation that the PhD has been awarded (within a six month period from commencement date), the salary will be increased to the negotiated level and the difference will be back-paid to the Officer’s start date.

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.

* The successful candidate will be asked to obtain and provide evidence of a National Police Clearance or equivalent. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test- https://ielts.com.au/)

**Our value proposition**

We want CERC Fellows to join our world class science, engineering and digital teams to solve big, complex problems that make a real difference to the future of Australia and the world.

You'll get to work with some of the most talented minds in their fields, not just in Australia, but in the world. At CSIRO, we spark off each other, learn from each other, trust each other and collaborate closely to achieve more than we could individually.

Find out more about our CSIRO Early Research Career (CERC) Fellow Experience Employee Value Proposition (EVP) [here](https://www.csiro.au/en/careers/postdoctoral-fellowships).

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and

Find out more about CSIRO [Agriculture and Food](https://www.csiro.au/en/Research/AF)

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