# Position Details

## Research Scientist/Engineer- CSOF7

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| The following information is for applicants | |
| Advertised Job Title | Principal Research Scientist – Farm of the Future |
| Job Reference | 85725 |
| Tenure | Specified Term of 3years  Full-time |
| Salary Range | AU$141,949 - AU$157,055 per annum (pro-rata for part-time)  plus up to 15.4% superannuation |
| Location(s) | Brisbane QLD, Armidale NSW or Perth WA preferred |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * All Candidates |
| Position reports to the | Research Director – Livestock and Aquaculture |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 0 |
| Enquire about this job | Sonja Dominik (Sonja.Dominik@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 is seeking a senior scientist to develop and lead a science portfolio that explores and addresses challenges of productive and sustainable farming systems of the future. We are looking for a creative scientist that can develop a vision for the opportunities and challenges that might be facing agricultural production in 2050. This role will develop the strategic roadmap and connect and build a portfolio of science across CSIRO that will begin to deliver scientific outcomes and industry impacts to enable different approaches productive landscapes. The Research Scientist/Engineer will lead scientific and translational activities ranging from fundamental research to the investigation of specific industry or community problems. This role will connect across CSIRO and with industry to build collaborative activities that develop new science and technology. The Research Scientist/Engineer will have the opportunity to build and maintain CSIRO and industry networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

A key pillar in the CSIRO Agriculture and Food’s strategy is to invest into frontier science to drive innovation and impact.

Farm of the future is an area of science and innovation in which Agriculture and Food wants to grow its capability. Climate and socioeconomic modelling are enable a view of the challenges that broad acre and extensive farming systems of 2050 are likely to be facing. At the same time, the next wave of science and technology in artificial intelligence, automation and genetics is maturing and providing exciting new opportunities for solutions. The Livestock and Aquaculture Program in CSIRO Agriculture and Food is commencing a portfolio of work to address solutions for 2050 with a view to impact delivery between now and 2050. An initial focus will be on nutrient circular economies on farm and how novel farming practices can drive these.

* Developing the science and go to market strategy for digital agricultural technologies
* Be a key contact point for external stakeholders and the wider innovation system
* Liaise internally and externally to garner the resources required to progress building resilient farming system
* Assemble appropriate multi-disciplinary capability across CSIRO to deliver the science required to create impact

### Duties and Key Result Areas

* Define and articulate the science strategy of farm of the future related to mixed crop and livestock systems at landscape scales.
* Catalyse science thinking by aligning a multi-disciplinary network to expand initial exploration of novel livestock farming systems and drive innovations in nutrient management that build farm profitability and sustainability.
* Build appropriate science capability within CSIRO and with key partners applicable to mixed livestock systems.
* Set project goals within the Business Unit’s research direction and manage the delivery of project outcomes.
* Progress complex, sensitive or contentious research matters to finality.
* Generate debate about unpopular issues and liaise with concerned parties to develop solutions and influence successful implementation.
* Be recognised as a national authority in an area of expertise and typically possess knowledge across a range of scientific disciplines.
* Within the relevant area of work, anticipate, plan (including long term/strategic planning) and implement change.
* Maintain active national and/or international research collaborations in order to access/share leading edge concepts and technology to advance projects.
* Identify trends in research and development to inform portfolio analysis and influence the Business Unit’s research directions.
* Conceive ideas for new projects based on industry/community and identify potential sources of funding.
* Liaise with the business manager and/or account managers to assess commercial opportunities and to protect intellectual property.
* Utilise knowledge and understanding of clients’ business and demonstrate creativity in anticipating client needs.
* Act as a trusted advisor to clients and promote an understanding of client needs amongst other employees.
* Communicate research results to clients and the scientific community through oral and written reports, which may include the preparation of documents for patent applications.
* Provide advice to policy makers and inform and transfer knowledge to non-scientific audiences.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, research team to carry out tasks in support of CSIRO’s scientific objectives.
* 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 agriculture.
2. Extensive skills or experience in animal science and the delivery of innovation in farm operations and decision making.
3. Evidence of experience in science and innovation in multi-disciplinary areas that could include animal nutrition, pasture science, nutrient circular economy, environmental impact monitoring, and life-cycle assessment (LCA) of animal farming.
4. Demonstrated ability to work with digital systems including sensors (abiotic and biotic) for information collection, analytics and farm management or simulation software models.
5. Demonstrated ability to undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems.
6. Established reputation and credibility in leading relevant science and/or impact domain with evidence of effective world-class science, research and/or innovation leadership.
7. Demonstrated ability to lead individual and groups of projects of scale and/or complexity and manage financial and project performance.

## **Desirable**

1. Direct experience in biodiversity monitoring and mosaic farming concepts
2. Direct experience in biosecurity management relevant to mixed crop and livestock farming systems.

## **Required Competencies**

* **Teamwork and Collaboration:** Creates and fosters an environment in which there is a high level of cooperation within and between teams. Facilitates positive team relationships to build interactions across Business Units and the organisation.
* **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:** Provides leadership that fosters an environment that encourages new ideas and provides support for the development of emerging skills. Creates trust by displaying consistency, understanding, integrity and patience. Plans, seeks, allocates and monitors resources to achieve outcomes.
* **Judgement and Problem Solving:** Resolves major conceptual scientific, technical, commercial or management problems, which have a significant impact upon the field of research, professional function, the Business Unit or the Organisation. Situations faced have little or no precedent and require original concepts and approaches.
* **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:**Is flexible in response to external change or when faced with external constraints. Identifies and promotes the opportunities arising as a result of change.

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.

Include if relevant:

* 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.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and <https://www.csiro.au/en/about/people/business-units/agriculture-and-food> 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