# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Digital Agronomist |
| Job Reference | 90934 |
| Tenure | Specified Term of up to 36 months / Full-time |
| Salary Range | Band 5: AU$105k to AU$114k pa (pro-rata for part-time) + up to 15.4% superannuationBand 6: AU$121k – AU$142k pa plus up to 15.4% superannuation*(The preferred candidate will be appointed at Band 5 or Band 6 based on their skills and experience)* |
| Location(s) | Canberra, ACT |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates (visa sponsorship may be provided to the successful candidate if required) |
| Position reports to the | Team Leader – Resilient Systems, Canberra |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact John via email at john.kirkegaard@csiro.au or phone +61 2 6246 5080 |
| 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 area 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 Research Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of a specific industry or community problems. You will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

CSIRO Agriculture seeks a Digital Agronomist to join the Canberra-based group. The position will involve on-farm agronomic experimentation in southern Australia to investigate the impacts of a range of innovative crop management strategies to improve productivity and input-use efficiency. A specific role for the new appointment will be to develop and apply digital agriculture principles within the portfolio of relevant CSIRO activities at both experimental and farm scales, including at Boorowa Agricultural Research Station (BARS) in southern NSW. Emerging technologies in soil and crop sensing, and farming systems simulation will be linked to industry needs, along with developments in precision agriculture, zone management and digital platforms that are now being widely promoted for industry application. The appointment will complement existing CSIRO skills in soil-plant-animal systems research and drive new collaborative opportunities both within CSIRO and with external collaborators and investors. The position offers a unique opportunity to develop a national profile and reputation and to become a future leader of R&D in the area of modern, digitally enabled farming systems agronomy.

The CSIRO Systems Program works in partnership with rural industries, communities, and governments to deliver improvements in agricultural productivity and profitability whilst minimising environmental damage. The core of the Program’s science lies in better understanding and managing soil-plant-animal interactions that underpin productive, profitable and sustainable farm businesses. Processes that operate within and across a range of scales in cereal cropping and mixed farm systems are considered; from plants to paddocks and integration of whole farm systems for sustainable production and landscape management. A key challenge is to identify and invest in novel approaches to improve Australia’s mixed farming systems. Using combinations of experimentation, modelling and monitoring of plot- and farm-level experiments we seek to address farm productivity by developing novel approaches and interventions to the sustainable intensification of agriculture.

### Duties and Key Result Areas do you want to take some text from the duties in the advertisement?

* Develop novel scientific approaches to investigate original concepts and innovations for new and current agronomic research as applied to cropping and mixed dryland farming systems in Australia.
* Design, conduct and analyse field-based experiments enterprise mix, soil and climate variability and management parameters using novel and emerging technologies.
* Develop strategies to integrate and apply digital agriculture principles to inform crop and farm productivity in both a research and commercial farming context.
* Develop, negotiate and lead new research projects that bring together skills across CSIRO, external partners and funding organisations.
* Manage research projects or significant components of projects, including responsibility for project planning, effective communication of research outcomes to partners and clients to facilitate implementation of findings and delivery of impact to Industry and publication of scientific papers in leading international journals.
* Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Work effectively as an integral member or leader of a multi-disciplinary, often regionally dispersed research team, with recognition and implementation of workplace Inclusion and Diversity.
* Work collaboratively with internal and external colleagues and partners, including growers and grower groups, to develop and progress challenging but realistic research plans for a range of research projects.
* Lead, coach and supervise staff to ensure experiments are established in accordance with research design, within agreed timelines and budget.

## **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 such as farming systems agronomy, crop/pasture physiology, soil science, natural resource management or related discipline.
2. Experience with field-based agronomic experiments in cropping systems investigating soil-plant interactions underpinning productivity and resource use efficiency.
3. Experience and/or demonstrated knowledge of the application of digital agricultural principles and practices directed at agronomic and/or farming systems research.
4. Demonstrated success in gaining support for funded research projects and proven capacity to collaborate with growers, industry partners and research providers.
5. A current Class C drivers’ licence and a willingness to travel regularly to regional and interstate meetings with collaborating scientists and industry partners.
6. A significant record of innovation and creativity in applying science to agricultural productivity improvements with demonstrated industry impact.
7. Excellent written and oral communication skills, evidenced by high-level reporting, presentation and negotiation abilities, scientific publication and the capacity to identify and influence critical stakeholders to gain support for innovative project ideas.

## **Desirable**

1. Experience with the use and application of simulation and decision support models applied to crops and farming systems.
2. Direct experience with various aspects of digital agriculture, including the application of sensors, drones, big data acquisition, machine-learning, systems modelling and analysis or other computer/web-based informatics.
3. An understanding of the main drivers of productivity and profitability of dryland mixed farming systems in Southern Australia.

## **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.

Special Requirements

Appointment to this role may be subject to conditions including the 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 Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* May be required to undertake a pre-employment medical prior to commencement.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

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

* 1. People First
	2. Further Together
	3. Making it Real
	4. Trusted

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