# Research Scientist/Engineer – CSOF6

Role summary for potential applicants

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| Advertised Job Title**:** | Farming Systems Research Agronomist |
| Reference Number**:** | 12621 |
| Classification**:** | CSOF6 |
| Salary Range: | AU $106,285 to AU $124,546 plus up to 15.4% superannuation |
| Location**:** | Canberra, ACT |
| Tenure: | Indefinite |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | Australian Citizens Only  Australian Citizens and Permanent Residents Only  All candidates |
| Functional Area**:** | Research Scientist / Engineer |
| % Client Focus - Internal: | 20% |
| % Client Focus - External: | 80% |
| Reports to the: | Team Leader - Integrated Agriculture Systems, Canberra |

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| **Role Overview:** |
| CSIRO Agriculture seek an experienced Farming Systems 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. In particular, there is an opportunity in the Canberra-based group to integrate new technologies into research and extension activities as a means to modernise cropping systems research and delivery and to reflect developments in commercial agriculture. Opportunity also exists to develop research links between agronomy, germplasm and plant breeding, along with new technologies in plant phenomics. 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 Integrated Farming 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. |

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| **Duties and Key Result Areas:** |
| * 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 involving spatial dimensions of farms through enterprise mix, soil and climate variability and management parameters using novel and emerging technologies in precision agriculture, modelling, plant phenomics, informatics and digital agriculture. * Develop, negotiate and lead new research initiatives that bring together skills across CSIRO Agriculture, other CSIRO Business Units, external partners and funding organisations, both Nationally and Internationally. * Manage research 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. |

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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed*  ***Pre-Requisites:***   1. **Education/Qualifications:** A doctorate and or equivalent research experience in a relevant discipline area, such as farming systems agronomy, crop/pasture physiology, soil science, natural resource management or related discipline. 2. **Communication: 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.** 3. **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment.   ***Essential Criteria:***   1. Experience with field-based agronomic experimentation in cropping systems and application of innovative technologies for improved outcomes for the whole farm enterprise. 2. Experience and/or demonstrated knowledge of the application of digital agricultural principles and precision farming technologies directed at agronomic and/or farming systems research. 3. Experience with the use and application of simulation and decision support models applied to crops and farming systems. 4. Demonstrated success in gaining industry support for funded research projects and proven capacity to collaborate with growers, industry partners and research providers. 5. **The ability to work effectively as a member or leader of a multi-disciplinary, regionally dispersed research team, and carry out independent individual research.** 6. **A significant record of innovation and creativity in applying science to agricultural productivity improvements with demonstrated industry impact.** 7. Knowledge, understanding and commitment to principles of Equal Employment Opportunity, Occupational Health, Safety and Environment.   **Desirable Criteria:**   1. Direct experience with various aspects of digital agriculture, including application of sensor networks and plant phenomics technologies, big data handling and analysis or other computer/web-based informatics. 2. Willingness to travel regularly to regional and interstate meetings with collaborating scientists and industry partners as required. 3. An understanding of the main drivers of productivity and profitability of dryland mixed farming systems in South Australia.   **CSIRO is a values based organisation. You will need to demonstrate behaviours aligned to our values of:**   * Integrity of Excellent Science * Trust & Respect * Creative Spirit * Delivering on Commitments * Health, Safety & Sustainability   ***Other special requirements:***  *Appointment to this role may be subject to conditions including security/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents may be required to undergo additional security clearance processes; which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).-* [*http://www.ielts.org/default.aspx*](http://www.ielts.org/default.aspx) |

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| **Other Information:** |
| **How to Apply**  Please apply for this position online at [www.csiro.au/careers](http://www.csiro.au/careers).  To be considered for this role you must submit a resume with a one page cover letter addressing why you are suitable. If you are shortlisted you may be asked to provide additional information (online) relevant to the selection criteria. If so, then responding will enhance your application so please take the time to provide relevant succinct answers. Applicants who do not provide the information when requested may not be considered.  If you experience difficulties applying online call 1300 984 220 and someone will be able to assist you. Outside business hours please email: [csiro-careers@csiro.au](mailto:csiro-careers@csiro.au).  **Referees**: If you do not already have the names and contact details of two previous supervisors or academic/ professional referees included in your resume/CV please add these before uploading your CV.  **Contact:** If after reading the selection documentation you require further information please contact:  Dr John Kirkegaard via email: [john.kirkegaard@csiro.au](mailto:Alan.Richardson@csiro.au) or phone: +61 2 6246 5080  Please do not email your application directly to Dr Kirkegaard. Applications received via this method will not be considered.  **About CSIRO**  Australia is founding its future on science and innovation. Its national science agency, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.  Find out more! [www.csiro.au](http://www.csiro.au).  **CSIRO Agriculture**  Our Agriculture team is helping Australian farmers and industry improve productivity and sustainability across the agriculture sector. |