# Position Details

## Research Projects- CSOF3

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| The following information is for applicants |
| Advertised Job Title | Research Projects Officer in Pest Detection Technology  |
| Job Reference |  93249 |
| Tenure | Specified Term of 3 years Full-time  |
| Salary Range | AU$68,148 - AU$86,733 per annum (pro-rata for part-time)plus up to 15.4% superannuation |
| Location(s) | Dutton Park, Brisbane, OLD |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All candidates |
| Position reports to the | Research Scientist and Team Leader Pest Detection Technologies  |
| Client Focus – Internal | 30% |
| Client Focus – External | 70% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Maryam Yazdani via email at Maryam.Yazdani@csiro.au or phone +61 7 3833 5713 |
| 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).

**Child Safety**

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](https://www.csiro.au/en/about/policies/child-safe-policy).

### Role Overview

This position presents an exciting opportunity for a Research Projects Officer to join the "Pest Detection Technologies" team within the "Health and Biosecurity" Business Unit of CSIRO. The team is part of the program Managing Invasive Species and Diseases, which focuses on researching and managing national priority pests, weeds, and diseases in agriculture and the environment. Additionally, the role will contribute to CSIRO's Trusted Agrifood Exports Challenge, which aims to enhance global export earnings of Australian food products by providing tools and technologies to verify quality, safety, and environmentally friendly practices. The research conducted in this role will help overcome market access barriers caused by pests and diseases in international trade.

As a Research Projects Officer, your primary responsibility will be collaborating with other research personnel in scientific and technological activities. Specifically, we aim to evaluate the effectiveness of optical scanning technologies in detecting pest infestations in fresh produce, both in laboratory and commercial packhouse settings. This trial will assess the feasibility of incorporating optical scanning as part of a comprehensive systems approach. Your role will involve detailed planning, data collection, and analysis of information obtained from optical grading systems used in various packhouses across Australia.

Furthermore, within the Pest Detection Technology team, we have developed advanced imaging technologies integrated with AI capabilities. These state-of-the-art technologies enable the detection of pest infestations in fruits that are not visibly detectable by the human eye. Our current focus is on validating our imaging system and detection models in commercial settings.

As a Research Projects Officer, you will play a crucial role in experimental and observational work, as well as the development of new technologies. Your contribution will encompass practical aspects of the project, ensuring the smooth execution of research activities.

### Duties and Key Result Areas

* Collaborating with research staff to plan and execute scientific and technological activities related to pest detection and management.
* Under limited supervision develop and implement of experimental protocols and methodologies for assessing the effectiveness of optical scanning technologies in detecting pest infestations in fresh produce.
* Collecting data from optical grading systems used in various packhouses across Australia and conducting data analysis to evaluate the efficacy of the current grading systems in detecting and rejecting infested fruits.
* Assisting in the development and refinement of data packages and protocols to support proposed systems approaches for pest management in the agricultural industry.
* Collaborating with the Pest Detection Technology team to validate imaging systems and detection models within commercial settings.
* Contributing to the development and improvement of imaging technologies integrated with AI capabilities for enhanced pest detection in fruits.
* Collaborating with other team members to compile research findings, prepare reports, and contribute to scientific publications and presentations.
* Assisting in the organization and coordination of field trials and experiments, including data collection and management.
* Maintaining accurate and detailed records of research activities, experimental procedures, and results.
* Conduct literature reviews, investigations and inspections in the field or laboratory including associated analysis possibly involving statistical or graphics software.
* Independently test possible solutions to resolve identified experimental problems.
* Collaborating with industry partners, stakeholders, and external research institutions as required to facilitate research projects and achieve project objectives.
* Work with discretion to decide on the timing of operations within the work team’s plan and plan ahead to meet experimental and/or project demands.
* Independently test possible solutions to resolve identified problems.
* May have responsibility for maintaining laboratory or fieldwork consumables and scheduling and instructing staff in the use of shared equipment.
* Oversee the activities of less experienced staff and provide guidance on experimental/ technological techniques and protocols as required.
* Respond courteously and efficiently to client requests, maintaining clear communication regarding mutual expectations and monitoring client satisfaction.
* 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, regionally dispersed 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 and diversity initiatives.

## **Selection Criteria**

#### Essential

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

1. Qualifications: A degree in a relevant scientific discipline (e.g., Science, biology, agricultural science, or related fields).
2. Research Experience: Demonstrated experience in planning and conducting scientific research projects, including experimental design, data collection, analysis, and interpretation.
3. Technical Skills: Demonstrated interest in working with and applying technology and/or coding skills to solving problems
4. Field Experience: Experience in conducting field trials or working in agricultural settings.
5. Written Communication Skills: Ability to effectively collaborate on drafting and presenting presentations, as well as producing detailed written reports for clients, the scientific community, and the technology community.
6. Problem-Solving: Demonstrated ability to identify and resolve technical and practical issues encountered during research projects.
7. Time Management: Proven ability to manage multiple tasks, prioritize workloads, and meet project deadlines.
8. Collaboration and Communication: Strong interpersonal and communication skills, with the ability to effectively collaborate with multidisciplinary teams, stakeholders, and industry partners.
9. Demonstrated ability and willingness to travel within Australia. And possession of a current driver's license.

## **Desirable**

## Knowledge of Pest Management: Familiarity with concepts and approaches related to pest detection, management, and integrated pest management (IPM) strategies.

## Experience with Imaging Technologies: Experience in working with imaging technologies, such as computer vision, machine learning, or AI-based image analysis.

1. Demonstrate ability with coding language such as R or Python.

## **Required Competencies**

* **Teamwork and Collaboration:** Proactively seeks and considers the ideas and opinions of others from within and outside the team to help form decisions, plans or actions.
* **Influence and Communication:** Puts forward ideas by presenting factual information supported by data, definitions, examples, illustrations or other aids, which will assist in conveying meaning.
* **Resource Management/Leadership:** Provides instruction and assists other staff to complete allocated tasks and activities.
* **Judgement and Problem Solving:** Identifies and considers the implications of a range of available alternatives in order to select the most appropriate response to problems of a familiar or recurring nature.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Willingness to change ideas or perceptions based on new information, contrary evidence or other people's points of view. Prepared to try out different approaches.

Special Requirements

Appointment to this role is subject to provision of a pre-employment background check and may be subject to other security/medical/character clearance requirements.

Include if relevant:

* The successful candidate will undertake a pre-employment background check. 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 [Health and Biosecurity Business Unit](https://www.csiro.au/en/about/people/business-units/health-and-biosecurity) 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