

# Position Description

<b>Position title</b>	Remote Sensing Scientist (Plant Phenotyping)
<b>Reports to</b>	Breeding Technology Lead
<b>Business unit</b>	Variety Development
<b>Location</b>	The position is located primarily in Meringa
<b>Direct reports</b>	N/A

## Position details

<b>SRA purpose</b>	<p>Sugar Research Australia invests in and manages a portfolio of research, development and adoption projects that drive productivity, profitability and sustainability for the Australian sugarcane industry.</p> <p>We have highly dedicated and passionate people working on industry-critical projects to deliver tangible value outcomes and impact for our industry stakeholders.</p>
<b>Business unit purpose</b>	<p>The Variety Development business unit leads the development of world-class varieties to maximise a whole-of-industry profitability for sugar production, from the creation of new germplasm through to supply of new varieties to productivity service organisations for distribution to growers.</p> <p>The business unit continuously seeks to innovate variety production methods to improve efficiency for the industry and identify bio-security threats to protect the Sugar Industry. It incorporates novel traits into elite new varieties to improve profitability in current and future markets and identifies industry trends and issues impacting commercial variety performance. Long-term perspectives and plans are required to support future product diversification opportunities and potential changes to the production environment.</p>
<b>Position purpose</b>	<p>The Remote Sensing Scientist is responsible for developing and applying remote sensing techniques to measure and analyse sugarcane crop traits. This role will contribute to projects in plant phenomics and provide opportunities to work across multiple scientific disciplines, such as remote sensing, data science, and plant physiology.</p>
<b>Key responsibilities</b>	<ul style="list-style-type: none"> <li>Engage in innovative and impactful research on the application of remote sensing technologies for high throughput plant phenotyping.</li> <li>Plan and execute remote sensing data collection using drone and satellite platforms, and sensor systems including multispectral, hyperspectral, thermal and LiDAR.</li> <li>Develop and implement image processing pipelines to extract plant phenotypic data from remotely sensed data.</li> <li>Design and conduct experiments for the evaluation and validation of phenotyping technologies.</li> <li>Apply statistical methods and high-dimensional data analysis (machine learning, deep learning) to derive strong scientific outcomes and conclusions.</li> <li>Publish research findings in relevant scientific and industry journals, and in other media appropriate to the sugar industry.</li> <li>Support the development of research project proposals and funding applications with guidance from Breeding Technology Lead.</li> <li>Work constructively with the Variety Development team to ensure research is structured and conducted to maximise the benefits to plant breeding.</li> <li>Maintain strict confidentiality of intellectual property and all commercially sensitive information.</li> <li>Demonstrates commitment to fostering the continuous development of a safer, healthier and more sustainable workplace at SRA, in a way that would be expected for this position.</li> </ul>

	<ul style="list-style-type: none"> <li>• Adhere to SRA's policies, procedures, and Code of Conduct for Staff.</li> <li>• Ensure compliance obligations are upheld, and risks are managed.</li> <li>• Own your professional growth by engaging in development opportunities which enhance your skills and career.</li> <li>• Any other duties as required from time to time.</li> </ul>
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## Key success factors

<b>Experience, knowledge and capabilities</b>	<p><b>Essential</b></p> <ul style="list-style-type: none"> <li>• Experience collecting agricultural remote sensing data using a range of platforms including multispectral, and hyperspectral sensor systems.</li> <li>• Experience with processing different types of remote sensing data (multispectral, hyperspectral) and proficiency in GIS and photogrammetry software (e.g., QGIS, Pix4d, ENVI).</li> <li>• Strong programming skills in languages such as Python or R and relevant experience in image analysis, machine learning, and statistical methods.</li> <li>• Experience with field data collection for validation of phenomics methodologies.</li> <li>• Strong track record of scientific publications in peer-reviewed journals.</li> <li>• Ability and willingness to carry out field activities in hot and humid conditions.</li> </ul> <p><b>Desirable</b></p> <ul style="list-style-type: none"> <li>• Experience in the development and deployment of remote sensing workflows.</li> <li>• Knowledge of plant physiology, agronomy, plant breeding.</li> <li>• Relevant research experience in sugarcane.</li> </ul>
<b>Qualifications, licences and training</b>	<p><b>Essential</b></p> <ul style="list-style-type: none"> <li>• A Masters/PhD degree and/or equivalent research experience in a relevant discipline area, such as agricultural remote sensing, precision agriculture, plant phenomics, or plant physiology.</li> <li>• A current driver's licence is required to drive SRA vehicles.</li> </ul> <p><b>Desirable</b></p> <ul style="list-style-type: none"> <li>• Remote Pilot Licence (RePL)</li> </ul>