

Position Description

Position title	Statistician and Data Scientist
Reports to	Breeding Technology Lead
Business unit	Variety Development
Location	The position is located primarily in Meringa
Direct reports	NA

Position details

SRA purpose	<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>
Business unit purpose	<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>
Position purpose	<p>The Statistician and Data Scientist provide quantitative and analytical support to the Variety Development program through the application of advanced statistical methods and data science techniques. The role focuses on delivering high-quality analyses of breeding trials, genomic data, and research experiments to inform selection decisions. It also contributes to the development of new analytical approaches and reporting tools.</p>
Key responsibilities	<ul style="list-style-type: none"> • Lead and deliver statistical analyses of plant breeding selection trials to provide reliable insights on candidate clones and key trial metrics to support variety selection decisions. • Analyse annual plant breeding disease screening trials and produce actionable outputs on trial performance and disease resistance metrics. • Develop and manage analytical pipelines to support genomic selection, GWAS, and other quantitative genetics analyses. • Provide support to the integration of high-throughput phenotypic data into routine analysis pipelines. • Provide statistical and scripting support to genomics laboratory activities, including DNA identity testing workflows. • Develop and deliver automated, reproducible reports and dashboards (Shiny, Dash) for analysis outputs and key reporting metrics. • Coordinate with Variety Officers and Pathology staff to ensure timely data upload, analysis, and reporting aligned with operational deadlines. • Collaborate on plant breeding research projects, providing advanced statistical expertise and analytical input. • 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. • Adhere to SRA's policies, procedures, and Code of Conduct for Staff.

	<ul style="list-style-type: none"> • Ensure compliance obligations are upheld, and risks are managed. • Own your professional growth by engaging in development opportunities which enhance your skills and career. • Any other duties as required from time to time.
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Key success factors

Experience, knowledge and capabilities	<p>Essential</p> <ul style="list-style-type: none"> • Demonstrated experience in advanced statistical analysis, including mixed models, multi-environment trial analysis, spatial modelling, and other quantitative genetics methods. • Strong capability in analysing high-dimensional or large-scale datasets using machine learning, and other advanced analytical methods. • Demonstrated advanced proficiency in data analysis programming languages such as R, SAS, or Python. • Experience using modern data reporting and visualisation tools, such as Shiny or Dash. • Proficiency in SQL and database systems for data extraction and management. <p>Desirable</p> <ul style="list-style-type: none"> • Experience with genomic analysis methods such as GWAS or genomic selection.
Qualifications, licences and training	<p>Essential</p> <ul style="list-style-type: none"> • Tertiary qualification in statistics, quantitative genetics, data science, or a related discipline. • A current manual driver’s licence is required to drive SRA vehicles. <p>Desirable</p> <ul style="list-style-type: none"> • Postgraduate qualification (Masters or PhD) in a relevant field such as quantitative genetics, biometrics, or computational biology.