The School of Agriculture, Food and Wine provides a world class concentration of scientific research, education and infrastructure at the Waite Campus.

The School has an outstanding research environment and offers stimulating projects that will excite all students who wish to develop a career in agricultural or food sciences, grape and wine production and other areas of applied biology. The research activities range from field experiments to detailed molecular investigations that seek to solve important questions relating to food security, crop improvement, crop protection, food quality, human health, soil health, plant nutrition, grape-growing, and wine-making. Collaborations and facilities provided by an extensive network of partner organisations on the Waite Campus add considerably to the research opportunities available.

The School also has important national and international research activities and infrastructure including:

- The Waite Research Institute, one of five Research Institutes established by the University. It uses its funding to grow new collaborative research activities on the Waite Campus with the aim of improving food security.
- The headquarters of the ARC Centre of Excellence in Plant Cell Walls, which seeks to advance fundamental scientific understanding of plant cell wall biology for application in food security, human health, and energy biomass conversion.
- The Adelaide node of the ARC Centre of Excellence in Plant Energy Biology, a world-leading centre for the study of membrane transport processes in plants. Its focus is on water and fixed carbon transport, salinity tolerance and phosphate use.
- The main node of the Australian Centre for Plant Functional Genomics which has internationally linked projects combining genetic, physiological and developmental information with functional genomics to identify and characterise plant genes, particularly those controlling adaptation to abiotic stresses in cereals.
- The ARC Research Hub for Genetic Diversity and Molecular Breeding for Wheat in a Hot Dry Climate.
- The University of Adelaide Shanghai Jiao Tong University Joint Laboratory for Plant Science and Breeding.
- Nationally important breeding programs for barley, durum wheat, faba bean, almond and ornamental eucalypts. Postgraduate students can gain experience in plant breeding while conducting research projects relevant to crop improvement.
- The Mosaic Fertiliser Technology Research Centre, a partnership between the University of Adelaide and the USA-based fertiliser producer, The Mosaic Company, designed to develop new approaches to formulating and evaluating fertilisers.
- The Plant Accelerator is the Adelaide branch of the Australian Plant Phenomics Facility. It houses the latest digital imaging technologies combined with high capacity computing and robotics to allow the automated, high throughput, continuous and non-destructive measurement of plant physical attributes (phenotypes).
- The FOODplus Research Centre, established in partnership with the Women’s and Children’s Health Research Institute, aims to improve human health through research that links food, nutrition and sustainable agriculture. FOODplus is home to the NHMRC Centre for Research Excellence in Food for Future Australians.
- The main node of the ARC Industrial Transformation Centre for Innovative Wine Production.
- Membership of the Wine Innovation Cluster, which brings together all wine-related research across the Waite Campus.

The School provides a rich collaborative environment for agricultural research that is unrivalled in the Southern Hemisphere and encourages its students to “catch the vision” and aspire to undertake cutting-edge research.
Farming Systems
agwine.adelaide.edu.au/research/farming/
Crop and Pasture Agronomy
A/Prof Gurjeet Gill, A/Prof Glenn McDonald,
Dr Matthew Denton
Weed Ecology and Management
A/Prof Gurjeet Gill, A/Prof Chris Preston
Management of Herbicide
Resistance in Weeds
A/Prof Chris Preston
International Agroforestry and Extension
Dr Ian Nuberg
Managing Legumes and Nitrogen
Fixation in Farming Systems
Dr Matthew Denton
Crop Physiology and Plant Nutrition
A/Prof Glenn McDonald

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Managing Legumes and Nitrogen
Fixation in Farming Systems
Dr Matthew Denton
Crop Physiology and Plant Nutrition
A/Prof Glenn McDonald

Wine Science
agwine.adelaide.edu.au/research/wine/
Sensory Science, Grape Berry and
Wine Quality Measurements, Wine
Consumer Behaviour, Wine and Health,
Wine and Food Interactions
A/Prof Sue Bastian
Wine Making Technology and
Process Engineering
Mr Stephen Clark, A/Prof Chris Ford,
A/Prof Paul Grbin, Prof Vladimir Jiranek,
Prof Dennis Taylor, Dr Richard Muhlack
Wine Microbiology, Yeast and Bacterial
Functional Genetics
A/Prof Paul Grbin, Prof Vladimir Jiranek
Wine Chemistry
Prof Dennis Taylor, A/Prof Kerry Wilkinson,
Dr David Jeffrey

Food and Nutrition
agwine.adelaide.edu.au/research/nutrition/
Nutrition and Functional Food Science
Prof Bob Gibson, Dr Colin Jenner,
Dr John Carragher
Metabolic Health
Dr Bev Muhlhausler
Early Life Nutrition
Prof Bob Gibson, Dr Bev Muhlhausler,
Dr Jo Zhou, Dr Tina Bianco-Miotto

Plant Protection
agwine.adelaide.edu.au/research/plant-protection/
Plant Pathogen Interactions and
Postharvest Physiology
Prof Amanda Able
Insect Biological Control; Natural-Enemy
Foraging Behaviour; Integrated Pest
Management (IPM)
Prof Mike Keller, Dr Michael Nash
Pollination and pollinators
Dr Katja Hogendoorn
Insect Collective Behaviour, Locust
Management; and Complex Systems
Modelling
Dr Jerome Buhl
Fungal and Bacterial Plant Pathology
Prof Ellieen Scott, Dr Jenny Davidson,
Dr Mark Sosnowski
Cereal pathology
A/Prof Hugh Wallwork
Evolution and Genetics of resistance to
Herbicides
A/Prof Chris Preston
Epigenetics of Disease
Dr Carlos Rodriguez Lopez

Plant Physiology, Viticulture
and Horticulture
agwine.adelaide.edu.au/research/plant-physiology/
Vineyard Management and
Grapevine Reproductive Biology
Dr Cassandra Collins
Transport of Nutrients and Water
Prof Steve Tyerman
Plant Cell Physiology
Prof Roger Leigh, A/Prof Matthew Gillham,
Prof Steve Tyerman, Dr Megan Sheldon
Plant Protein Structural Analysis
Prof Maria Hrmova
Plant Cell Surface Interactions
and Mycorrhizas
Dr Carolyn Schultz
Grapevine Physiology, Vine Performance
and Climate Change
Prof Steve Tyerman, A/Prof Matthew Gillham
Horticultural Plant Improvement
Dr Michelle Wirthsnohn, Dr Kate Delaporte
Salt Tolerance of Grapevines
A/Prof Matthew Gillham
Organic Acid Metabolism in Grapevines
A/Prof Chris Ford

Plant Breeding and Genetics
agwine.adelaide.edu.au/research/plant-genetics/
Barley Breeding, Genetics and Grain Quality
Prof Jason Eglinton, Dr Tim March,
Mr Stewart Coventry, Ms Amanda Box
Durum Breeding
Dr Jason Able
Faba Bean Breeding
Dr Jeff Paufl
Wheat Breeding
Dr Steve Jeffariss, Dr Haydn Kuchel
Grain Biochemistry and Genetics
A/Prof Daryl Mares
Molecular Genetics and Molecular
Breeding
Prof Diane Mather, A/Prof Ken Chalmers
Epigenetic Profiling
Dr Carlos Rodriguez Lopez
Epigenetics and Endosperm Development
Dr Iain Searle
Cereal Genomics including Recombination
and Chromosome Pairing Control
Prof Peter Langridge
Genetics of Meiosis
Dr Jason Able
Cereal Reproductive Biology
and Genome Analysis
Prof Dabing Zhang
Cereal Cytogenetics
Dr Ian Dundas
Pulse Molecular Genetics
Dr Tim Sutton

Biometry
agwine.adelaide.edu.au/biometry-hub/
Applied Statistics and Design of
Experiments in application to Agriculture,
Plant, Food and Wine Sciences
Dr Olena Kravchuk, A/Prof Ari Verbyla,
Dr Beverley Gogel, Dr Julian Taylor
Statistical Genetics
Dr Julian Taylor, A/Prof Ari Verbyla
Nonparametric Inference
Dr Olena Kravchuk
Sensometrics
Dr Olena Kravchuk, Dr Andreas Kiermeier

Faculty of Sciences
With my academic background in biochemistry and prior work experience in South Australian wineries, undertaking a PhD at the University of Adelaide Waite Campus was a perfect fit for me. It is exciting to be part of a hub that is such an innovative leader in wine research, and my PhD is an opportunity for me to combine my academic experience with my passion for wine.
Institutions with Affiliated Researchers

- South Australian Research Development Institute (SARDI)
- The Australian Wine Research Institute
- CSIRO Agriculture
- CSIRO Land and Water
- Australian Grain Technologies Pty Ltd

Research Opportunities
If you are interested in studying an Honours, Masters or PhD by research program in this area, please visit: agwine.adelaide.edu.au/research/

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