

ADELAIDE  
SOUTH AUSTRALIA  
TUESDAY 8TH AND  
WEDNESDAY 9TH  
FEBRUARY 2022

# GRAINS RESEARCH UPDATE



**GRDC**<sup>™</sup>  
GRAINS RESEARCH  
& DEVELOPMENT  
CORPORATION

Adelaide Convention  
Centre, North Terrace

[grdc.com.au](http://grdc.com.au)

# Day 1 program

8.15 am registration for an 8.55 am start - 5.30 pm

## LIVESTREAM AVAILABLE

This year the main auditorium program only will be available via a free livestream. See back page for registration details.

## PLENARY PRESENTATIONS

### Greenhouse gas emissions of Australian grain production

With increasing demand from international grain markets to reduce carbon emissions, determining emissions that underlie production and forecasting trajectories will support Australian grain growers to implement profitable farming systems change. This recent CSIRO report commissioned by GRDC determined the baseline of emissions arising from grain production in Australia. Dr Maartje Sevenster, from CSIRO's Climate Smart Agriculture group has led the project.



**Maartje Sevenster,**  
CSIRO

### A realistic guide to soil carbon farming in Southern Australia

Carbon farming has been promoted as one of the key strategies for offsetting Australia's greenhouse gas emissions with the added benefit of improving soil health and farm productivity. Richard will unpack the procedures for a grower to participate in the Australian Government's Emissions Reduction Fund and the factors affecting the financial viability of farming carbon.



**Richard Eckard,**  
University of Melbourne

### Adaptative plant establishment strategies for overcoming a shifting seasonal break

The timing of the seasonal break has always been a critical factor in successfully growing crops in Australia. Bonnie will cover key points outlined in the recent study which looks at strategies to help manage a shift in the seasonal break. Sowing long coleoptile wheat varieties deeper into moisture and looking at alternative practices to successfully establish pastures with early autumn rainfall will be among the practices explored.



**Bonnie Flohr,**  
CSIRO

**Networking drinks and food in the trade display area courtesy of AGT**

## CONCURRENT PRESENTATIONS

### Protein mapping – getting more bang for your buck

The possible uses of protein data measured and mapped at harvest is being explored by growers throughout Australia. Ed Scott from Field Systems will present how this technology is being used successfully by growers to help shape decision making regarding nitrogen application. **Ed Scott, Field Systems**

### Advances in weed recognition

Advancements in weed detection technology are revolutionising the way weeds are controlled on farm. Mike provides a glimpse into the future of weed recognition systems by showcasing the power of weed recognition and how it can be retrofitted to existing machinery. **Michael Walsh, University of Sydney**

### Tackling barley and brome grass head on

Learn how a reliance on group B herbicides, Clearfield technology & the evolution of group A resistance is reshaping the resistance landscape. Tackle barley grass and brome grass head on this season by utilising an integrated weed management approach. **Ben Fleet, University of Adelaide**

### New regenerating pasture for the low rainfall zone - feed your livestock and future crops

Ross dives into the new regenerative pasture options for low rainfall zones by exploring the benefits of legume-based pastures. Discover how these benefits stack up in low rainfall environments in the face of rising fertiliser and livestock prices. **Ross Ballard, SARDI**

### Improving N nutrition outcomes - the 'N Bank' approach and other factors

With nitrogen prices likely to remain high throughout 2022 this timely presentation will outline how the 'N Bank' approach stacks up compared to current practices. James will also outline some of the key considerations when looking to manage nitrogen in the system. **James Murray, BCG**

### Turning up the heat on wheat varietal selection - progress on heat tolerance breeding

Discover the superior heat tolerance genetic adaptations on the horizon for the wheat industry. Learn how the new genetics stack up against popular varieties such as Suntop<sup>®</sup>, Livingston<sup>®</sup> and EGA Gregory<sup>®</sup> in the results from a 5-year trial. **Daniel Tan, University of Sydney**

### Minding the 'good guys' - impact of insecticides on key beneficial organisms

Reduce the level of friendly fire when spraying insecticides this season. CESAR outlines the key impacts that insecticides are having on beneficial organisms and how growers can minimise the negative impacts on beneficial populations. **Robert McDougall, CESAR**

### A review of GM canola's first year in SA

Following access to this technology for a season in SA, Andrew will look at how the varieties are performing in NVT trials. The discussion will expand on what key learnings growers and advisers have gained this year, and how this can be used in 2022. **Andrew Ware, EPAG Research** **Rebekah Allen, Hart Field Site**

### An informed approach to phosphorus management

With the price of phosphorus fertiliser causing growers and advisers to question their current replacement strategy, Sean will explore recent research into response trials across different soil types. He will also highlight some of the risks if phosphorus rates are reduced. Sean will touch on the stability of P and the appropriate time of soil sampling. **Sean Mason, Agronomy Solutions**

### Seed destruction when using a stripper front - does it work?

Explore the opportunities for managing annual weeds by utilising stripper fronts for weed seed destruction. Weigh up the benefits and challenges of stripper fronts vs conventional fronts when making informed decisions for weed seed control on your farm. **Michael Walsh, University of Sydney**

### Optimising canola production

Keep your canola sowing time on target by leveraging phenology modelling that predicts the optimal sowing time for any given variety. Learn about the latest phenology tools and their applicability for a variety of regions. **Chris Helliwell, CSIRO**

### Random weed survey and glyphosate management

Peter will present on the latest outcomes from the nationwide random weed survey, and importantly what this means for the trend of resistance across the key grain growing regions of SA. Peter will also discuss strategies to ensure effective glyphosate management on farm. **Peter Boutsalis, Plant Science Consulting**

### 'Forewarned is forearmed' and farm level implications of the IPCC climate report

Peter will cover off on the practical implications of the 'Forewarned is forearmed' project, and key take aways from the most recent IPCC climate report. Weather forecasts will always be of importance to agriculture - find out the latest advances in decision making surrounding weather. **Peter Hayman, SARDI**

# Day 2 program

9.00 am to 3.00 pm

## EARLY RISERS – 8.15 am start

### Precision to decision – have we explored all the options? Lessons learned from the Future Farm project

The Future Farm project has identified some exciting use of sensors and automation to help growers make nitrogen fertiliser decisions. André will discuss some key lessons from this project, and what it means for growers and advisers.

**André Colaço, CSIRO**

## PLENARY PRESENTATIONS

### Chemical regulation – what we need to know with new technology and traits

New herbicide tolerant pulses and green on green spray application tech are two very exciting developments that are likely to have positive impact for Australian grain growers. Chemical regulation is an often-overlooked point when developments like this are being made available. Gordon will look to shed light on this important topic.



**Gordon Cumming,**  
*GRDC*

### Putting pre-emergent and new spike formulations through their paces

With several new pre-emergent products and spikes available to grain growers, Chris will explore what is the best fit. Chris will also provide some independent commentary on what has been observed in the field in 2021 and importantly what has been learned.



**Chris Preston,**  
*University of Adelaide*

## CONCURRENT PRESENTATIONS

### Robotics and automation – a progress update

Peek over the horizon at new emerging technologies within the robotics and automation space. Develop an understanding of the standards and regulations informing the commercial release of autonomous machine systems. **TBC**

### Herbicide residues - how do we know what's there?

Mick outlines the potential risks of residual herbicides for common winter crops and the factors influencing their bioavailability. Discover how soil type and climatic conditions influence herbicide residue levels. **Mick Rose, NSW DPI**

### Increasing N fixation - key factors impacting rhizobia health

Nitrogen fertiliser prices and availability will be a concern in 2022. Hear Liz discuss what can be done to ensure that rhizobia are healthy and in turn fixing as much nitrogen as possible for following crops. **Liz Farquharson, SARDI**

### Is your blue green aphid strategy on target?

Hear Paul discuss the status of resistance to a couple of commonly used insecticides on blue green aphids and what it means for control options going forward. **Paul Umina, CESAR**

### Powdery mildew in wheat - best management practice

Powdery mildew has been a key disease for SA wheat growers for many years. With an increase in fungicide resistance, the need to ensure you have the right management strategy in place is critical. Sam will discuss the latest results from this key research. **Sam Trengove, Trengove Consulting**

### Keeping fungicide resistance in check

Discover how some of the commonly grown wheat varieties with low varietal resistance have left the door open for many cereal diseases and how it effects your fungicide management strategy. Tara arms you with the key information needed to keep cereal fungicide resistance in check this season. **Tara Garrard, SARDI**

### Crop safety implications for new products in lentils

Develop an understanding of how new products perform regarding crop safety in lentils. Sam and Navneet identify the key factors impacting upon crop safety covering a variety of areas such as soil type, pH, tank mixing & rates. **Sam Trengove, Trengove Consulting Navneet Aggarwal, SARDI**

### Building carbon with regenerative farming - is it possible?

With regenerative farming being discussed widely in the farming community, one key question is 'can we build soil carbon levels by changing farming systems?' Mark will look to address this key question. **Mark Farrell, CSIRO**

### Amelioration strategies for sandy soils - selecting the best tool for your situation

Amelioration of sandy soils can deliver huge yield improvements that have lasting benefits. But the correct identification of constraints, and use of the right amelioration tool is essential for a positive result. Hear Therese discuss the outcomes from this important project. **Therese McBeath, CSIRO**

### Long coleoptile wheats - a new tool for drier sowings

Greg will present the latest developments in breeding wheat varieties with longer coleoptiles, which allow growers to sow deeper into stored moisture. Discover new opportunities for dryland wheat growers, with the key benefit being able to sow deeper with confidence. **Greg Rebetzke, CSIRO**

**Barista coffee cart courtesy of ADAMA**

# EVENT DETAILS



## IMPORTANT INFORMATION

### Registration options

**Cost:** \$130 one-day inc. GST | \$200 two-days inc. GST  
**Student:** \$80 student one-day inc. GST | \$120 student two-days inc. GST  
**Extra proceedings:** \$60 for pick up inc. GST | \$80 posted inc. GST  
**Main auditorium livestream - Free**

**Click here to register and pay online**

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### Cancellation

If individuals wish to cancel their own registration due to personal reasons, please contact ORM Pty Ltd with details. Cancellations prior to **4 February 2022** will receive a full refund. **There will be no refunds for cancellations received on or after 4 February 2022.** Registration is transferable at any time.

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### Covid Safe

The Adelaide Convention Centre has a double vaccination policy. Vaccination certificate will be required at registration.

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### Car parking

Parking is available at the North Terrace and Riverbank car parks.

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### Catering

Food and beverages are provided throughout the day.

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### Accommodation

A list of accommodation options is available via the [www.orm.com.au](http://www.orm.com.au) website.

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### Program

Topics and speakers are subject to change.

The final program will be provided to registered attendees and made available via the GRDC website in January 2022.

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### Industry supporters

Opportunities for industry supporters are still available.

For details contact Bev Wood at ORM Pty Ltd. [bev@orm.com.au](mailto:bev@orm.com.au)

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### Contact details

For enquiries, contact ORM Pty Ltd on **03 5441 6176** or email [admin@orm.com.au](mailto:admin@orm.com.au)

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