

TUESDAY 8TH, WEDNESDAY 9TH,
THURSDAY 10TH, TUESDAY 22ND,
WEDNESDAY 23RD AND
THURSDAY 24TH FEBRUARY 2022

GRAINS RESEARCH UPDATE - LIVESTREAM



GRDC[™]

GRAINS RESEARCH
& DEVELOPMENT
CORPORATION

Due to the current COVID situation the GRDC Grains Research Update in the southern region will be delivered as livestream events.

What won't change is the the usual GRDC endorsed 'farm ready' research outcomes and the opportunity to hear timely advice and opinion from the experts. Be sure to drop a question or comment in to drive the discussion.

GRDC Updates Team (South).

DAY 1 PROGRAM

Tuesday 8th February
9.00 am start – 2:40 pm

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 that 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. **Maartje Sevenster, CSIRO**

A realistic guide to soil carbon farming

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**

Adaptive 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**

Farm level implications of the IPCC report

Peter will cover off on the practical implications and key take aways from the most recent Intergovernmental Panel on Climate Change report. **Peter Hayman, SARDI**

'Forewarned is forearmed'

Dale will discuss the key features of the latest upgrade to seasonal forecasting through the 'Forewarned is forearmed' project. Weather forecasting will always be of importance to agriculture - find out the latest advances to help your seasonal decision making. **Dale Grey, Agriculture Victoria**

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**

Long coleoptile wheats - a new tool for drier sowings

Greg will present the latest developments in breeding wheat varieties with longer coleoptiles allowing growers to confidently sow deeper into stored moisture. **Greg Rebetzke, CSIRO**

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**

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 perform against varieties such as Suntop[®], Livingston[®] and EGA Gregory[®] in the results from a 5-year trial. **Daniel Tan, University of Sydney**

DAY 2 PROGRAM

Wednesday 9th February
9.00 am – 1:00 pm

Legume update – what we need to know for 2022

With nitrogen prices likely to remain high, the role of legumes is in the spotlight. Jason identifies key varieties, herbicide traits and disease management strategies likely to influence the success of pulse crops in the 2022 season. *Jason Brand, Agriculture Victoria*

Increasing Nitrogen fixation - key factors impacting upon 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 – Judy Rathjen, University of Adelaide

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. *Jordan Bruce, Trengove Consulting – Navneet Aggarwal, SARDI*

Optimising canola establishment

Identifying key factors limiting establishment and the return on investment of canola seed. Hear Matt discuss how this key research can be used to help shape decision making in 2022.

Matthew Nelson, CSIRO

Best practice for high yielding canola crops

Learn how to level up your canola yields this season with strategic varietal selection & agronomics. Rohan touches on the strengths of winter & hybrid spring varieties within medium rainfall zones.

Rohan Brill, Brill Ag

Optimising canola phenology

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*

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 Allan, Hart Field Site Group

DAY 3 PROGRAM

Thursday 10th February
9.00 am – 1:00 pm

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

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*

Herbicide tolerant traits for pulses and chemical regulation

New herbicide tolerant pulses and green on green spray application tech are two very exciting developments that are likely to have a 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*

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*

Putting pre-emergents 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*

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 Southern cropping regions. Peter will also discuss strategies to ensure effective glyphosate management on farm. *Peter Boutsalis, Plant Science Consulting*

DAY 4 PROGRAM

Tuesday 22nd February
9.00 am – 1:30 pm

Powdery mildew in wheat - how to best manage

Powdery mildew has been a key disease for 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 affects your fungicide management strategy. Tara arms you with the key information needed to keep cereal fungicide resistance in check this season.

Tara Garrard, *SARDI*

Canola diseases - key considerations for this season

Don't let canola disease hit your back pocket. Join Steve as he covers off on the key considerations for effective canola disease management this season. **Steve Marcroft**, *Marcroft Grains Pathology*

Rust resistance - new pathotypes to be aware of

Robert explains the implications of two emerging exotic stripe rust pathotypes. Explore the variety of options available for effective control. **Robert Park**, *University of Sydney*

Regionally based control measures for Septoria

Septoria has become a disease of concern for a growing area throughout Australia. Explore the practicality of Septoria control methods based on epidemiology and varietal selection.

Grant Hollaway, *Agriculture Victoria*

Is your blue green aphid strategy on target?

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

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

Reduce the level of friendly fire when spraying insecticides this season. Robert 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*

Managing what is bugging you this season

Tap into the wealth of knowledge that CESAR has to offer on common insect pests. Gain insight into the key pests that are likely to be an issue for the 2022 season. **Lizzy Lowe**, *CESAR*

DAY 5 PROGRAM

Wednesday 23rd February
9.00 am – 12:40 pm

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.

Edward Scott, Field Systems

Long term N management strategies: implications for productivity, profit and sustainability

Keep on top of your nitrogen management by exploring the most effective ways to feed your crop this season. How does the N Bank approach stack up compared to current practice?

James Murray, Birchip Cropping Group

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*

Mental health and well being feature

Clearing your headspace and the lockdown blues

Do you feel you need a reboot for 2022? The last 24 months have proved difficult for many in various ways. Don Elgin will help us clear our head and move forward. Born without the lower half of his left leg, Don was raised in Tocumwal in country NSW and developed a passion for sport in his childhood. Having spent twenty years in elite sport, Don now travels the world as a motivational speaker and through his business, StarAmp Global, manages some of Australia's most talented amputees. Don is a high-performance facilitator and has a true glass half full outlook on life.

He is a boy from the bush, a larrikin at heart and will focus us on what's possible with the right attitude.

Don Elgin, Australian athlete

Liming & acidity -the economics of 'rule of thumb' applications

How do the economics of 'rule of thumb' applications stack up? Lisa explores lime application trends within the region and the long-term impacts on soil health. *Lisa Miller, Southern Farming Systems*

New knowledge & practices to address subsoil acidity

Subsoil acidity is a problem for growers throughout Australia. Hear Ruby discuss some new practices being explored to tackle this problem. Ruby will also share some of the key learnings from her PhD project.

Ruby Hume, University of Adelaide

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*

DAY 6 PROGRAM

Thursday 24th February
9.00 am – 12:30 pm

Canopy management for better yields

Discover the underlying challenges of that lush looking early season canopy because of front-loading nitrogen for the season. Learn how to best manage your crops canopy within ideal growing conditions.

Kenton Parker, FAR Australia

Reducing the effects of waterlogging on yield

Take a tactical approach this season to minimise the negative impacts of waterlogging on crop yields. Malcolm reveals the spacial, nutritional & crop selection implications for waterlogged soils.

Malcolm McCaskill, Agriculture Victoria

Emerging research on water logging tolerance in barley varieties

Waterlogged soils have the potential to devastate barley yields. New research by the University of Tasmania showcases waterlogging tolerance work being conducted on the RGT variety, Planet^{4D}.

S M Nuruzzaman Manik, University of Tasmania

An integrated approach to ryegrass control in higher rainfall environments

Developing an integrated weed management strategy for ryegrass in high rainfall environments. Chris will cover weed seed mills and the impacts of weed seed destructors.

Chris Preston, University of Adelaide

Hyperspectral remote sensing & rapid assessing for wheat crops

Andrew unveils the new tools within the remote sensing space. Discover how hyperspectral remote sensing & machine learning AI can be leveraged to drive productivity this season.

Andrew Longmire, University of Melbourne

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

Brett takes you on a journey from precision to decision under the Future Farm project. Explore emerging technologies that drive value and support decision making on farm.

Brett Whelan, University of Sydney

Use of remote and proximal sensing to guide yield predictions

Ian covers the key opportunities that proximal sensing provides for APSIM model wheat yield predictions. Learn how proximal sensing can be leveraged to provide accurate estimates of mid-season crop conditions.

Ian Marang, University of Sydney

New technology - whats on the horizon?

Jacob provides an overview of current and emerging technologies that can facilitate the adoption of automation and autonomous systems on farm.

Jacob Humpal, University of Southern Queensland

EVENT DETAILS



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IMPORTANT INFORMATION

Cost: Free

Registration instructions

For more information, and to register free of charge visit

<https://www.eventbrite.com.au/e/169910834881>

Program

Program available on the GRDC website:

https://grdc.com.au/__data/assets/pdf_file/0028/571807/GRDC-Southern-Update-Series-program-Final.pdf

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