FARM TO PROFIT
FARM BUSINESS UPDATE

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

Kadina
Tuesday 2nd July 2024
Kadina Football Club

Freeling
Wednesday 3rd July 2024
Freeling Institute

#GRDCUpdates

2024 Kadina & Freeling GRDC Farm Business Update planning contributors:

Courtney Ramsey	*GRDC*	**Nick Davis**	*Davis Grain*
Leanne Pridham	*Dalmadean Farm Trust*	**Royce Pitchford**	*Pinion Advisory*
Richard Konzag	*Konzag Grains*	**Jane Foster**	*ORM*
Craig Davis	*Craig Davis Agronomy*	**Belinda Cowburn**	*ORM*
Peter Hayes	*Peter Hayes & Associates*		

GRDC™
GRAINS RESEARCH & DEVELOPMENT CORPORATION

GRDC Farm Business Update
proudly convened by ORM Pty Ltd.

ORM
46 Edward Street
PO Box 189
Bendigo VIC 3552

T 03 5441 6176
E admin@orm.com.au
W orm.com.au

CAUTION: RESEARCH ON UNREGISTERED PESTICIDE USE

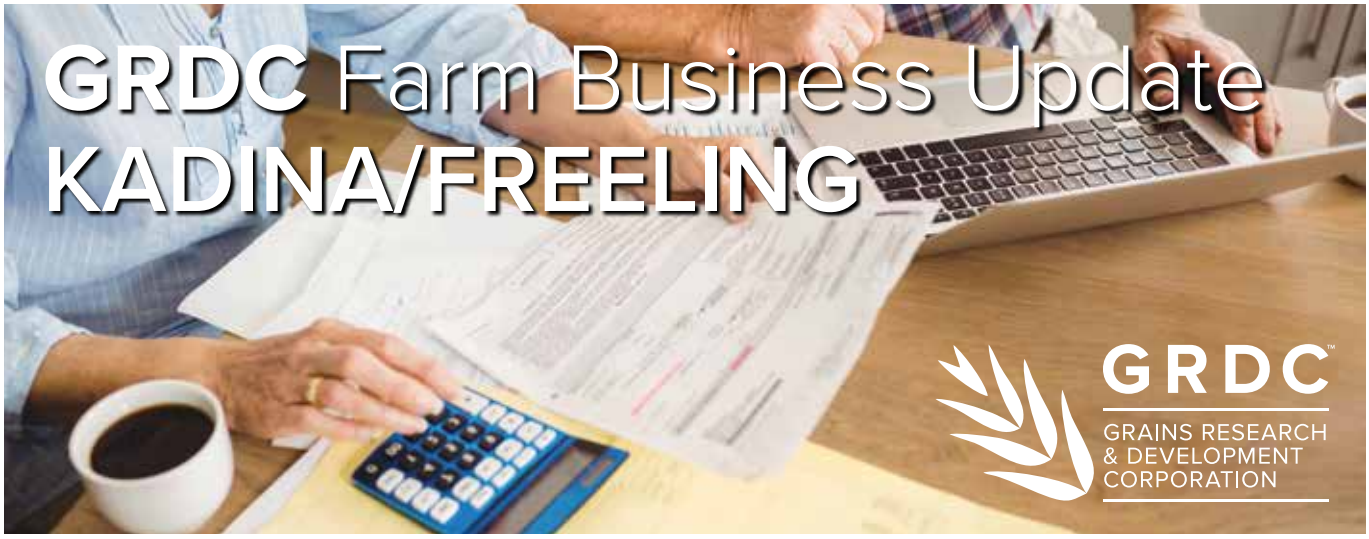
Any research with unregistered pesticides or of unregistered products reported in this document does not constitute a recommendation for that particular use by the authors, the authors' organisations or the management committee. All pesticide applications must accord with the currently registered label for that particular pesticide, crop, pest and region.

DISCLAIMER - TECHNICAL

This publication has been prepared in good faith on the basis of information available at the date of publication without any independent verification. The Grains Research and Development Corporation does not guarantee or warrant the accuracy, reliability, completeness of currency of the information in this publication nor its usefulness in achieving any purpose.

Readers are responsible for assessing the relevance and accuracy of the content of this publication. The Grains Research and Development Corporation will not be liable for any loss, damage, cost or expense incurred or arising by reason of any person using or relying on the information in this publication.

Products may be identified by proprietary or trade names to help readers identify particular types of products but this is not, and is not intended to be, an endorsement or recommendation of any product or manufacturer referred to. Other products may perform as well or better than those specifically referred to.



Contents

TOP 10 TIPS

FOR REDUCING SPRAY DRIFT

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

01 **Choose all products in the tank mix carefully**, which includes the choice of active ingredient, the formulation type and the adjuvant used.

02 **Understand** how product uptake and translocation may impact on coverage requirements for the target. Read the label and technical literature for guidance on spray quality, buffer (no-spray) zones and wind speed requirements.

03 **Select the coarsest** spray quality that will provide an acceptable level of control. Be prepared to increase application volumes when coarser spray qualities are used, or when the delta T value approaches 10 to 12. Use water-sensitive paper and the Snapcard app to assess the impact of coarser spray qualities on coverage at the target.

04 **Always expect** that surface temperature inversions will form later in the day, as sunset approaches, and that they are likely to persist overnight and beyond sunrise on many occasions. If the spray operator cannot determine that an inversion is not present, spraying should NOT occur.

05 **Use weather forecasting** information to plan the application. BoM meteograms and forecasting websites can provide information on likely wind speed and direction for 5 to 7 days in advance of the intended day of spraying. Indications of the likely presence of a hazardous surface inversion include: variation between maximum and minimum daily temperatures are greater than 5°C, delta T values are below 2 and low overnight wind speeds (less than 11km/h).

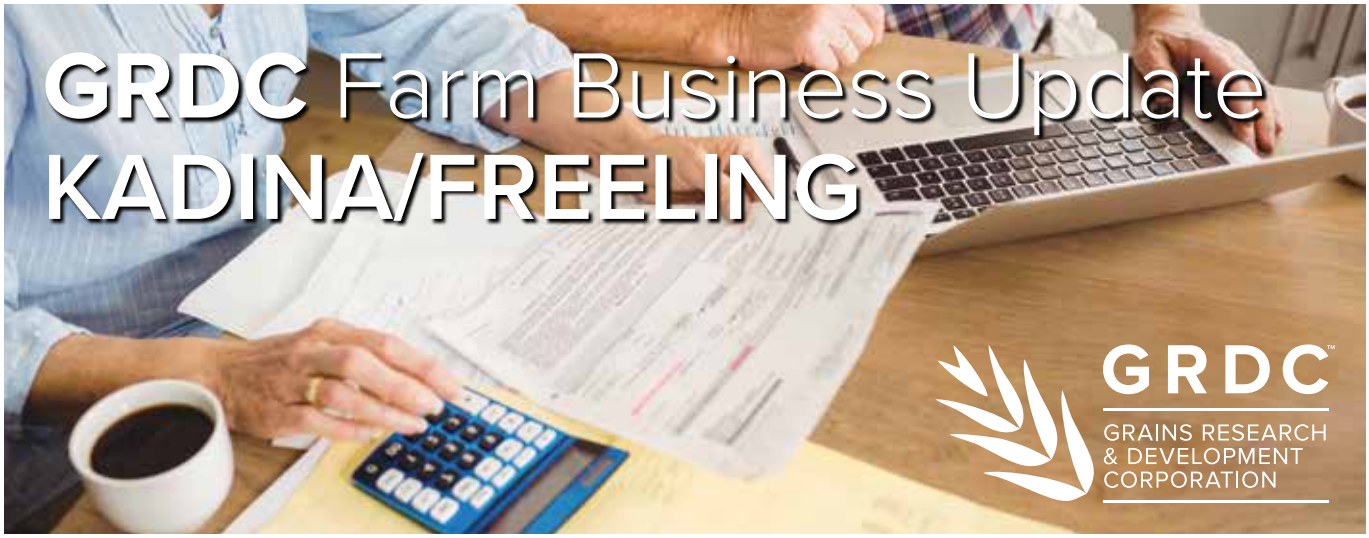
06 **Only start spraying** after the sun has risen more than 20 degrees above the horizon and the wind speed has been above 4 to 5km/h for more than 20 to 30 minutes, with a clear direction that is away from adjacent sensitive areas.

07 **Higher booms increase drift**. Set the boom height to achieve double overlap of the spray pattern, with a 110-degree nozzle using a 50cm nozzle spacing (this is 50cm above the top of the stubble or crop canopy). Boom height and stability are critical. Use height control systems for wider booms or reduce the spraying speed to maintain boom height. An increase in boom height from 50 to 70cm above the target can increase drift fourfold.

08 **Avoid high spraying speeds**, particularly when ground cover is minimal. Spraying speeds more than 16 to 18km/h with trailing rigs and more than 20 to 22km/h with self-propelled sprayers greatly increase losses due to effects at the nozzle and the aerodynamics of the machine.

09 **Be prepared** to leave unsprayed buffers when the label requires, or when the wind direction is towards sensitive areas. Always refer to the spray drift restraints on the product label.

10 **Continually monitor** the conditions at the site of application. Where wind direction is a concern move operations to another paddock. Always stop spraying if the weather conditions become unfavourable.
Always record the date, start and finish times, wind direction and speed, temperature and relative humidity, product(s) and rate(s), nozzle details and spray system pressure for every tank load. Plus any additional record keeping requirements according to the label.



Program

9.30 am	**Announcements**	
9.32 am	**GRDC welcome**	
9.40 am	**Performing under pressure**	***Natalee Johnston,*** *Skilful Decisions*
10.20 am	**Farm for profit – high performing farms**	***James Hillcoat,*** *Pinion Advisory*
11.00 am	***Morning tea***	
11.30 am	**Focus on farm business transition**	***Judy Wilkinson***
12:10 pm	**Farm machinery strategy & the impact of temporary full expensing**	***Jo Gilbert,*** *RSM Australia*
12:50 pm	***Lunch***	
1:50 pm	**Controlled Traffic Farming (CTF) - the risk/reward**	***Luke Clark,*** *Forest View, Jamestown*
2:30 pm	**Machinery efficiency - balancing machinery with labour**	***Peter Glover,*** *Westbrooke Ag, Yeelanna*
3:10 pm	**Wrap up and feedback**	
3.15 pm	**Event close**	

The WeedSmart Big 6

Weeding out herbicide resistance in winter & summer cropping systems.

The WeedSmart Big 6 provides practical ways for farmers to fight herbicide resistance.

How many of the Big 6 are you doing on your farm?

We've weeded out the science into 6 simple messages which will help arm you in the war against weeds. By farming with diverse tactics, you can keep your herbicides working.

Rotate Crops & Pastures

Crop and pasture rotation is the recipe for diversity

- Use break crops and double break crops, fallow & pasture phases to drive the weed seed bank down,
- In summer cropping systems use diverse rotations of crops including cereals, pulses, cotton, oilseed crops, millets & fallows.

Mix & Rotate Herbicides

Rotating buys you time, mixing buys you shots.

- Rotate between herbicide groups,
- Mix different modes of action within the same herbicide mix or in consecutive applications,
- Always use full rates,
- In cotton systems, aim to target both grasses & broadleaf weeds using 2 non-glyphosate tactics in crop & 2 non-glyphosate tactics during the summer fallow & always remove any survivors (2 + 2 & 0).

Increase Crop Competition

Stay ahead of the pack

Adopt at least one competitive strategy (but two is better), including reduced row spacing, higher seeding rates, east-west sowing, early sowing, improving soil fertility & structure, precision seed placement, and competitive varieties.

Double Knock

Preserve glyphosate and paraquat

- Incorporate multiple modes of action in the double knock, e.g. paraquat or glyphosate followed by paraquat + Group 14 (G) + pre-emergent herbicide
- Use two different weed control tactics (herbicide or non-herbicide) to control survivors.

Stop Weed Seed Set

Take no prisoners

- Aim for 100% control of weeds and diligently monitor for survivors in all post weed control inspections,
- Crop top or pre-harvest spray in crops to manage weedy paddocks,
- Consider hay or silage production, brown manure or long fallow in high-pressure situations,
- Spray top/spray fallow pasture prior to cropping phases to ensure a clean start to any seeding operation,
- Consider shielded spraying, optical spot spraying technology (OSST), targeted tillage, inter-row cultivation, chipping or spot spraying,
- Windrow (swath) to collect early shedding weed seed.

Implement Harvest Weed Seed Control

Capture weed seed survivors

Capture weed seed survivors at harvest using chaff lining, chaff tramlining/decking, chaff carts, narrow windrow burning, bale direct or weed seed impact mills.

WeedSmart Wisdom

Never cut the herbicide rate – always follow label directions
Spray well – choose correct nozzles, adjuvants, water rates and use reputable products,
Clean seed – don't seed resistant weeds,
Clean borders – avoid evolving resistance on fence lines,
Test – know your resistance levels,
'Come clean. Go clean' – don't let weeds hitch a ride with visitors & ensure good biosecurity.

www.weedsmart.org.au

Understanding human performance and risk to improve resilience

Natalee Johnston

Skilful Decisions

Key messages

- Defining human performance, risk and resilience.
- Outline what limits or impacts our ability to mentally and physically perform at our best.
- Understanding human performance limits for both you and your workforce, can enhance outcomes and reduce risk.
- The importance of managing risks to future resilience.

Introduction

Our behaviours (actions and decisions) are driven by the interactions we have with the world around us. How well we perform and can recover are a result of those behaviours. It is important to understand which interactions influence us and what risks they contribute to. Without understanding, our ability to recover and improve post adversity is significantly impacted.

So much energy and money is invested into ensuring your equipment is operating at peak performance and into purchasing the right products for your farm, whether that be seed, livestock, fertiliser, machinery etc. But how often do you take the time to look at what makes you operate at peak performance, what risks the humans in the system can add and importantly successfully manage and overcome.

Resilience

Understanding your own ability to perform, what are the key drivers impacting your performance and the resulting risks of suboptimal performance, creates an opportunity to improve resilience. If we expand the definition of resilience beyond the ability to quickly recovery from adversity, we should look to learn from the experience – for example, what happened, what decisions were well handled, what decisions added to stress or were not well made. Resilience includes not just the ability to bounce back but to also planning to reduce the likelihood of it happening again.

What is Human Performance?

Human performance can be defined as

"the human contribution to systems performance with respect to how people perform their work."

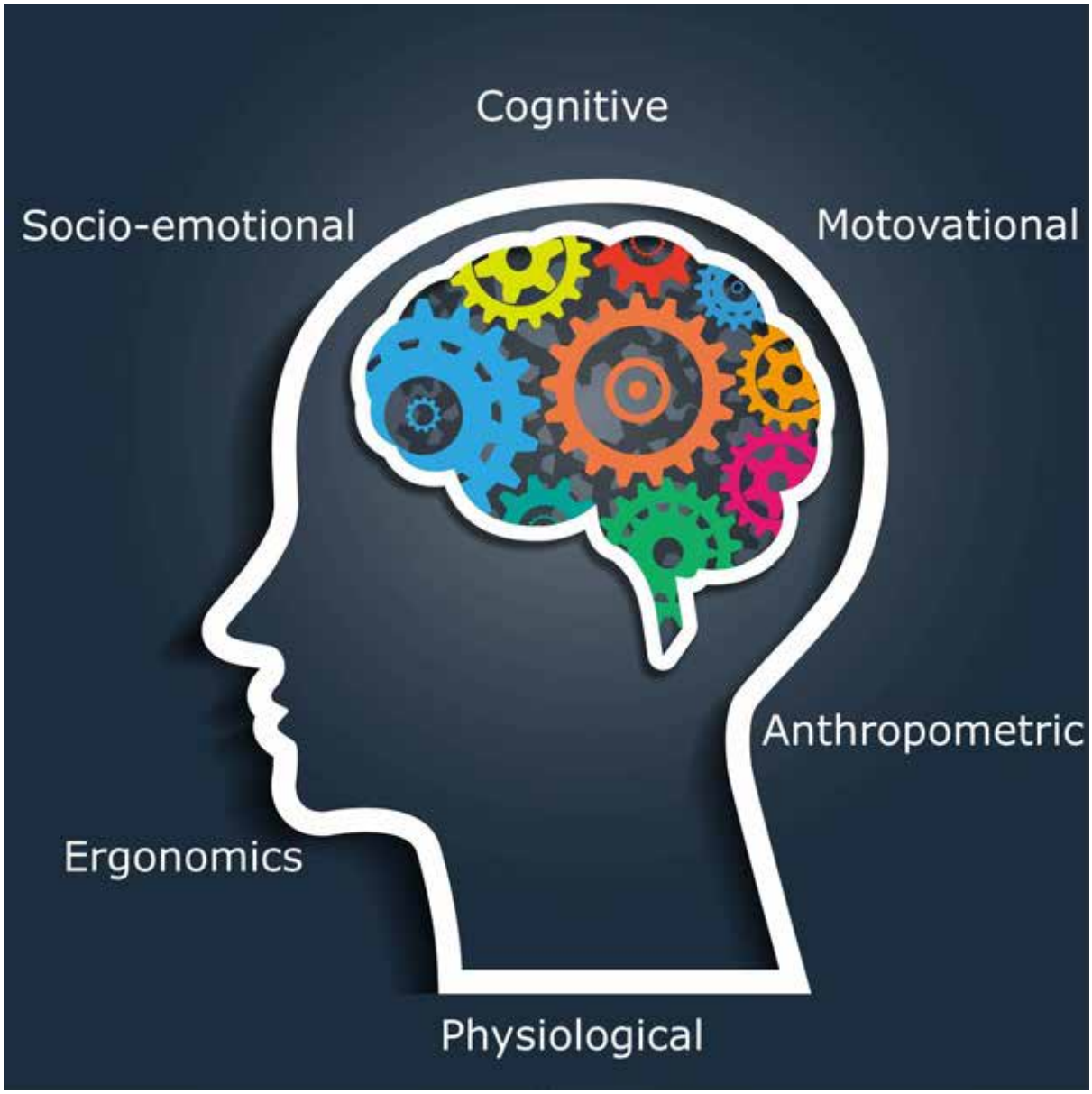


Figure 1. Mental and physical performance can be impacted by factors classified in distinct categories.

Human performance describes the potential of any person using their skills, knowledge, capability and capacity minus the anything that interferes with that potential being applied. To help understand how interferences impact your mental and physical performance, it is important to understand that interferences can be either constructive or destructive. It can help to consider interferences broken into the following categories:

Cognition: Your ability to think or process information is impacted by fatigue, drugs, alcohol and illness as well as emotions, biases and mental shortcuts (heuristics). The process is linear and at the first step our brains filter out "unnecessary" information so it only processes what it perceives as important. This can have benefits in speeding up decision making in emergencies, but also can create decisions based on bias formed through previous experiences, and inadequate or false information.

Motivation: Understanding what motivates you can help you to improve your performance. You can be motivated by external or internal influences, and how you behave for any given task or decision will differ based on these influences.

Socio-emotional: Awareness of your own emotions and how they impact your behaviours (and particularly decisions) can enhance outcomes. Once you are aware of your own emotions, you can then progress your ability to see your emotional impact on others.

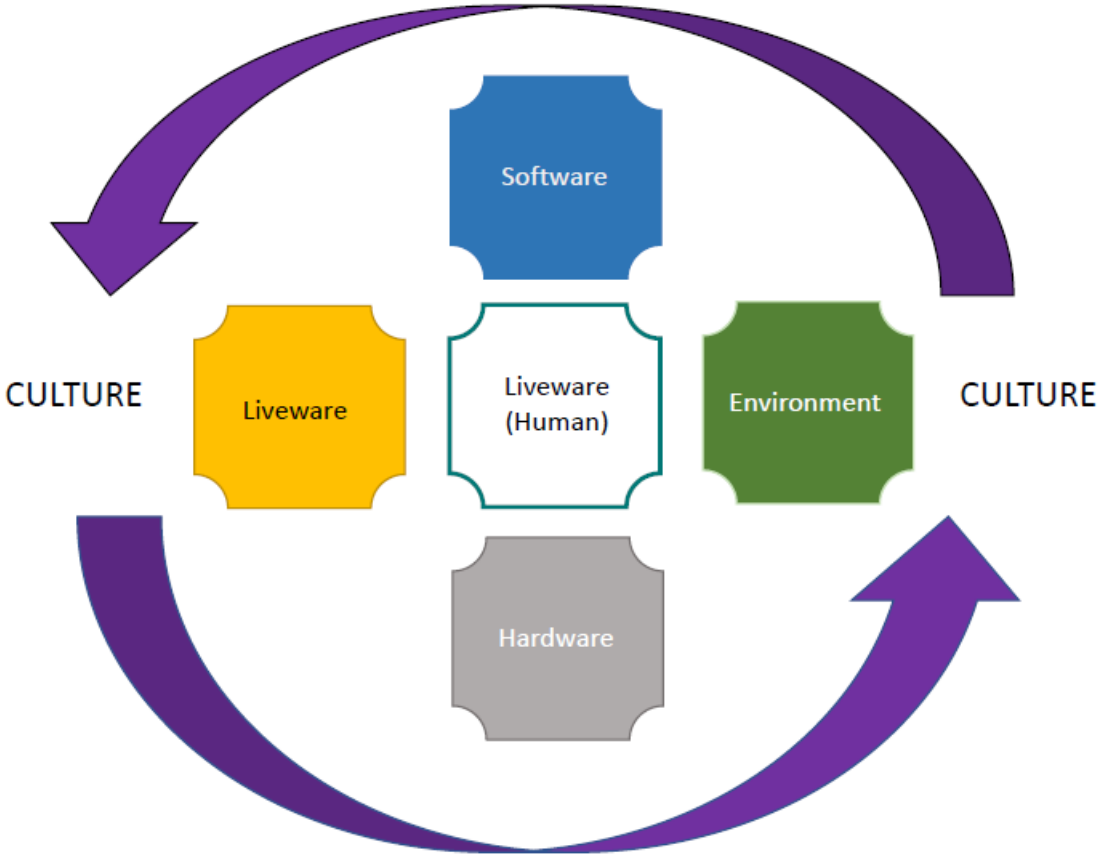
Physiological: Limitations of the human body impact our ability to be successful. Consider the impact of lack of sleep (fatigue), stress, drugs, alcohol, illness or poor diet on our physical body to perform the tasks we are asking of it.

Ergonomics: Ergonomics is the interaction between you and the hardware and software you use. It describes how well your tools enable you to carry out your task and whether they are fit for purpose or create risk.

Anthropometric: Anthropometric interference goes hand in hand with ergonomics - it describes how well you fit into a space and includes consideration of your proportions. Are you physically suited to the task? Do you recognise limitations? Do you have tools to overcome limitations (e.g. hardware)? Poor anthropometric fit can lead to physical injury.

Human Interactions

You can also consider interference(s) as how we interact with the world around us, and how it impacts our behaviours. Some factors you will be able to influence or change, others you will not.



Liveware = Humans (in farming you may put livestock here or into Hardware),

Software = process, procedure, rules, regulation,

Hardware = the tools we need to achieve the activity that is being undertaken,

Environment = both in the immediate physical sense and the broader climate/weather sense,

Culture = how it has always been done, what is accepted/expected and what is not.

Figure 2. Factors affecting us, humans, with the potential to impact our behaviours.

These interactions (Figure 2) significantly impact and influence our behaviours, which defines our ability to perform both physically and mentally.

Understanding Risk

Being able to understand the interactions and interferences can help you recognise the risk they can present around your ability to perform. We, as humans, are often both the cause and the solution to overcoming errors, adversity and managing risk.

What is Risk? To define risk we must start with defining a **Hazard,** which is simply a source of potential harm. **Risk** describes the probability of exposure to that hazard. The hazard does not have to be physical but could be related to anything that can result in a loss or reduction in performance (financial, mental health, stress). Risk provides an understanding of how **likely** you are to be exposed to the hazard and its **consequence**.

Looking at the interactions and interferences above can help you identify risks both to yourself and your team. Using those headings can also aid in finding the tools to mitigate and control risk. For example during harvest and seeding, fatigue might be a hazard, which can result in either poor task completion or damage to hardware and injury to liveware. Making change, adjustments to work patterns can then reduce the risk, improve outcomes and therefore in the event of something else adverse happening, you are better placed to adapt and recover i.e., it enhances resilience.

Questions to consider:

- Of those things you interact with, what do you have influence over?
- How can you improve the interactions to reduce interference? Perspective
- How does your emotional state change your behaviours?
- How does your physical health impact your ability to perform tasks and make decisions?
- Have you identified your main risks and have you managed them?
- What can you learn from the past year? Is there anything you can change to reduce impact if it happens again?

My follow up questions for the speaker.

Why working on this could be great for your farming business

- Understanding interactions and interferences can help you identify risks both to yourself and your team.
- In turn, making change, or adjustments to work patterns can reduce the risk and improve outcomes. Resilience is enhanced in the event something else adverse happens - you are better placed to adapt, and recover.

Our First Action _____

Our Second Action _____

More about Natalee . . .

Natalee Johnston has 24 years of military experience as a qualified helicopter instructor, operations and safety leader. Natalee is passionate about safety and how an organisation's culture and resilience can positively contribute to the welfare of all employees, their families and the community as a whole.

Natalee has been part of the Royal Australian Navy's and the wider defence forces' cultural transition from an operational and a personnel perspective. As the first female naval helicopter pilot she understands the challenges of trying to break into an established organisational culture. Being part of a minority for her entire career, she has a personal insight into how people change to fit in and the difficulties in trying to break this evolution.

As the first woman in the RAN to return to flying duties post having children, she understands the stressors of modern life, the challenges and strain on managing time and responsibilities between work, family, friends and yourself and the guilt that can accompany it. Having sacrificed time with her children to continue on her career and gain qualifications in accident investigation and piloting the MRH90 Maritime Support helicopter she knows the importance of support networks and developing resilience, understanding and a sense of what can be achieved in her children.

Natalee grew up in the Western Australian wheatbelt and is the second daughter to a farming family. Her parents struggled through with little to start with and high interest rates, moving around the locality to save before they could buy their own. They taught Natalee a key lesson that has stayed with her throughout her extensive career that is persistence and a good work ethic. The ability to not give up in the face of adversity, to use the deifier's words to spur you on was something that she needed from the start of her career with her own extended family expressing negativity towards her joining the military and trying to become a pilot.

Contact details

wwww.skilfuldecisions.com
0450 738 375
natalee@skilfuldecisions.com
Twitter: @JohnstonNatalee

Notes

GRDC

GROUNDCOVER™

New GroundCover stories are available daily at GroundCover online.

Stories include seasonally and regionally relevant information on topics ranging from advances in plant breeding and biotechnology, new varieties and agronomic best practice, through to harvest and on-farm grain storage.

Visit groundcover.grdc.com.au for the latest stories.

To subscribe to receive the bi-monthly printed magazine, electronic communications and keep your details up-to-date visit the GRDC subscription centre:
grdc.com.au/subscribe

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

P Level 4 | 4 National Circuit, Barton ACT 2600 | PO Box 5367, Kingston ACT 2604 | **T** +61 2 6166 4500
F +61 2 6166 4599 | **E** grdc@grdc.com.au | @theGRDC

Farm for profit - High performing farms

James Hillcoat

Pinion Advisory

Key messages

- Farming has never been more expensive per hectare.
- The Top 20% continue to demonstrate that lower risk, higher margin agriculture is possible through strong productivity, implementation skill and cost efficiency.
- The Top 20% are no larger in scale or dependant on a particular crop type to create this difference.
- Knowing and understanding what makes your own business and management 'tick' is a key requirement.

Introduction

Pinion Advisory's research for the GRDCs Opportunity for Profit program (2014-2017) identified four key profit drivers among Australia's top 20% grain businesses. The analysis revealed that gross margin optimisation, a low-cost business model, strong management skills, and effective risk management are pivotal for high performance, regardless of the business's scale.

Fast forward to today, Pinion Advisory has explored how these metrics stack up using locally relevant data and what that means for grain production businesses in the Yorke Peninsula and Lower North South Australia subregions. Despite variable seasons and rising costs, the top 20% maintained profitability through efficient income generation and cost management, reinforcing the relevance of the established profit drivers. The analysis suggests that while some metrics have evolved—such as the recalibration of income per hectare per mm of water from $2.50 to $3.50—core principles like water use efficiency and machinery & labour investment ratios remain valid. As costs per hectare soar, these insights encourage growers to scrutinise their business strategies, from lease performance to machinery replacement, emphasising management over "magic" solutions for sustained success.

How has cost of production changed in the last 5 years?

To establish what was driving profit in top 20% businesses across Australia's grain growing regions over a 5-year period, in 2015/16 Pinion Advisory (as Rural Directions) led GRDC's Opportunities for Profit project, analysing grower data. This work highlighted significant differences in the levels of performance and identified 4 primary profit drivers explaining this difference in outcome, despite scale not being a defining factor. Subsequent benchmarking analysis has continued to reinforce this message.

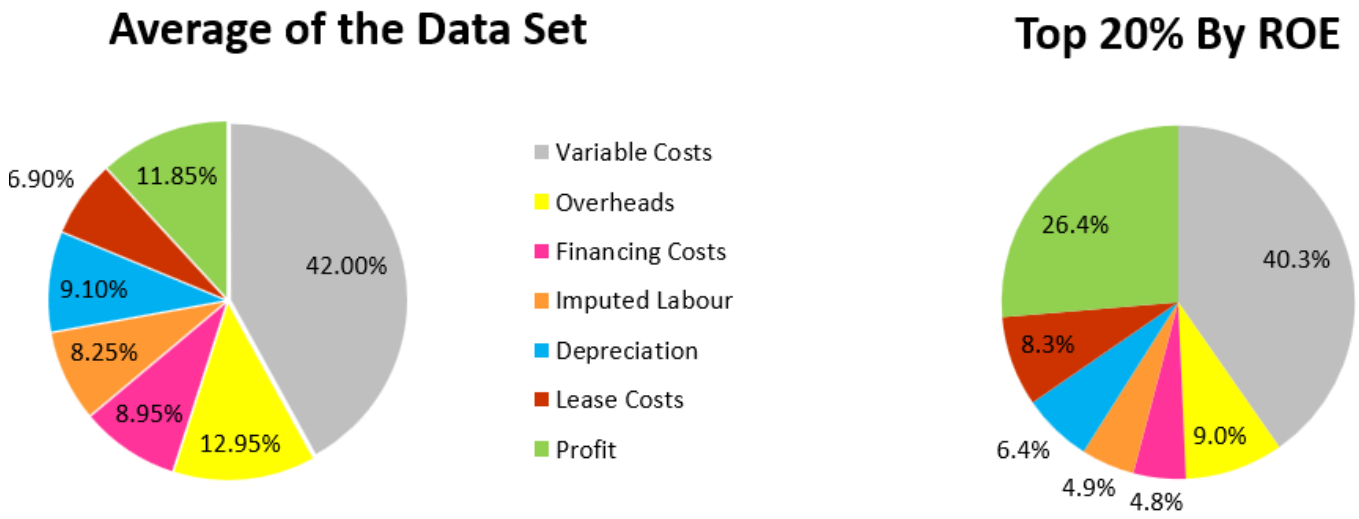


Figure 1. Proportion of costs and profit in 2016 for the average of the data set and for the top 20% by return on equity (ROE) in the same region.

The key profit drivers identified are:

- **Gross margin optimisation** – Generating strong levels of income cost effectively, to optimise margin.
- **Low-cost business model** – Utilising investment in machinery and labour efficiently and making strong choices on scale expansion strategies (such as buying or leasing).
- **People and management** – Having strong management skill and a good team around you is crucial to achieving top 20% performance.
- **Risk management** – businesses need to actively manage and mitigate both production, and business risks to create a resilient, low risk, high margin business.

These profit drivers are timeless in terms of running a successful business, but fast forward to today, have the metrics changed the way we view good business performance? To delve into this deeper, we have used SnapShot Premium™ benchmarking information to aggregate business data and establish what has defined top 20% performance (as measured by profitability) in the past 5 years at a subregion level across the lower Eyre Peninsula, Yorke Peninsula, Mid North and South East of South Australia. These insights focus on areas indicative of higher rainfall and a slightly heavier soil type to align with the locations of these GRDC updates (Kadina & Freeling), however, the key takeouts are applicable across the state.

The period analysed from 2018/19 to 2022/23 (noting 23/24 data is still being gathered) shows an extraordinary run for many grain businesses in these sub regions of SA. Despite some dry years, an exceptional year in 2022/23, strong pricing throughout this period for a range of commodities as well as low interest rates, has created a highly profitable period for many businesses. Conversely, the costs of doing business today have skyrocketed with cost of key inputs, machinery and capital, leaving many wondering what levers are left to pull to stay profitable should seasons and prices change adversely.

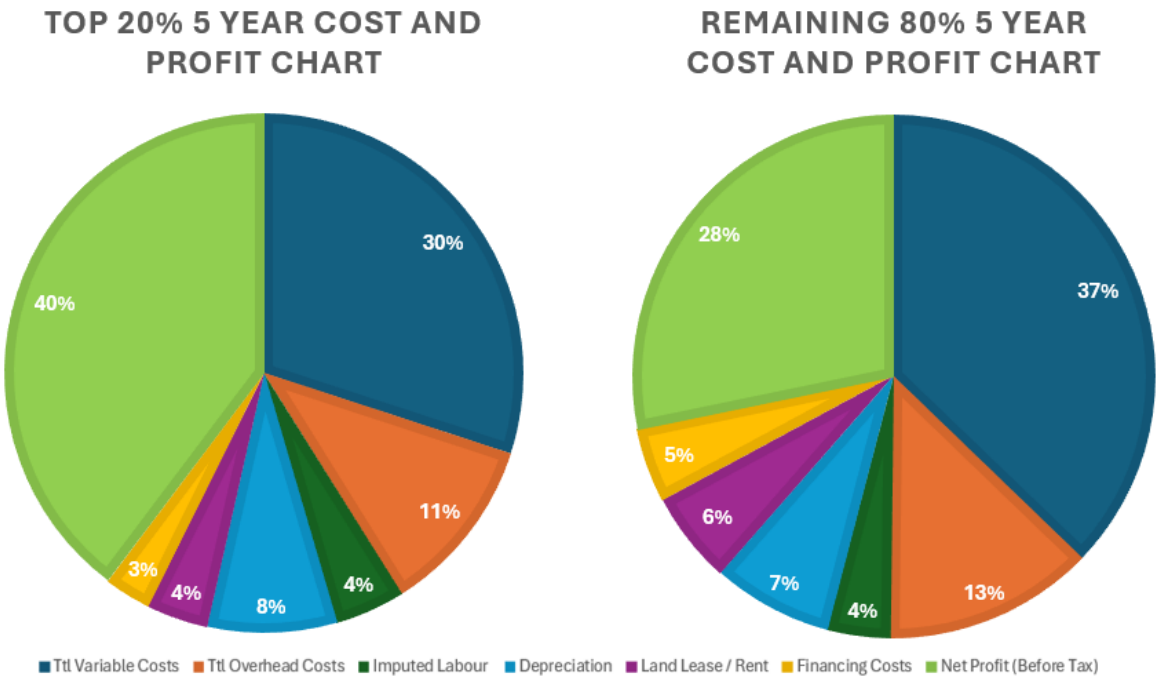


Figure 2 Proportion of costs and profit, 2018/19 to 2022/23, for the Top 20% and the remaining 80%.

Figure 2 shows strong levels of profit in the period 2018/19 to 2022/23 for both the Top 20% and the remaining 80%, but a gap still remains.

Whilst these results are pleasing to see, a call to action exists. Indeed, the 2023/24 season has so far shown us what happens in an 'average' result with an elevated cost structure. If we strip out the seasonal impact of income and look at the pure costs of running businesses over the last 5 years, it paints a starker picture. Many businesses now require over $300/mt for wheat to cover current costs. Top 20% businesses however are able to maintain profitability at $250/mt, despite them being no larger in scale than the remaining 80%. This is consistent with previous findings. We have used wheat as a common base point noting that higher margin crop types can assist with contributing to strong profit outcomes.

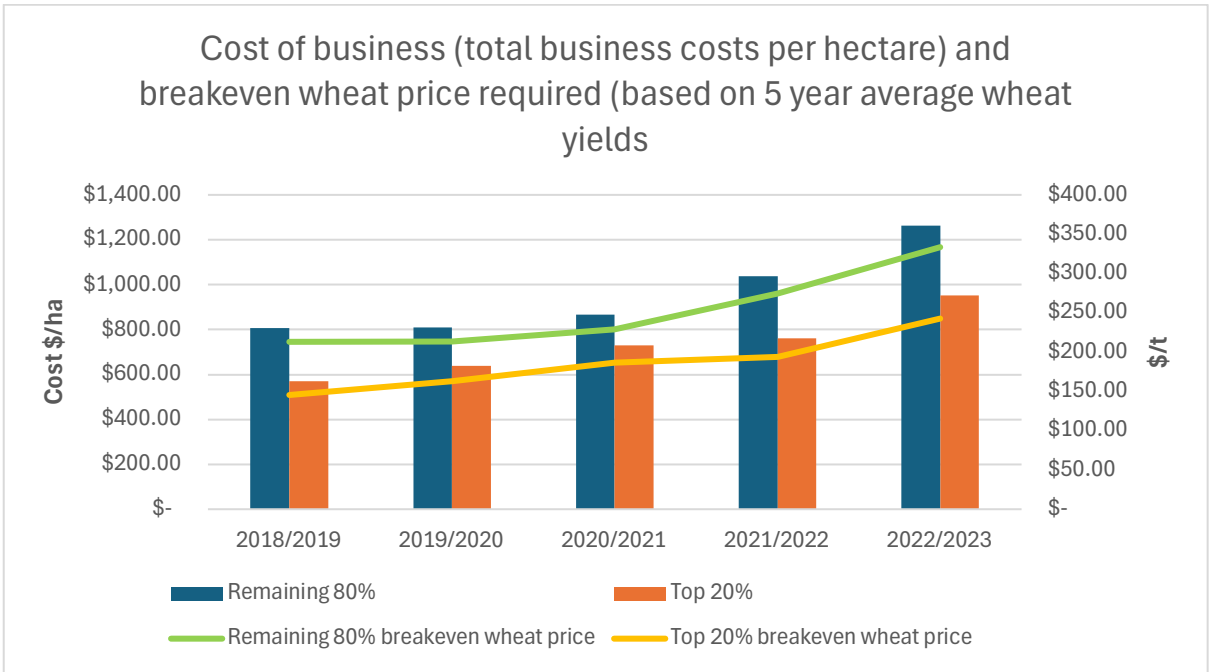


Figure 3. Cost of business over 5 years ($ total business costs/ha) with relative breakeven wheat prices for Top 20% and remaining 80% of businesses, 2018/19 – 2022/23.

The Top 20% have been able to maximise profit through higher levels of income generation driven by 10% stronger water use efficiency and reflected in higher income per ha per mm. They also demonstrate stronger cost accountability and efficiency in their input expenditure as well as labour and machinery. The Top 20% have been able to leverage stronger income generation whilst being 30% more cost effective with fertiliser and chemical. This is despite legume areas being almost identical, indicating a robust approach to cost effective decision-making. It is fair to suggest though that a greater adoption of lentils as a high margin pulse crop by many in this period has contributed to a closing of the profit gap in this area.

Machinery is certainly an item that has shot up in value over this period and is a pain point for all. Perhaps surprisingly, there was limited difference in machinery capital per hectare. However, when we consider total plant, machinery and labour costs, the Top 20% invested less per hectare in these costs than the remaining 80%. Fuel costs and repairs and maintenance are marginal factors in this but the top 20% are also managing more area per FTE pointing towards a system that supports greater labour and machinery use efficiency. This, combined with stronger income generation, is helping to offset the increased cost of production.

Despite the cost of business biting for all, the Top 20% have continued to demonstrate that strong implementation of the 4 primary profit drivers and seeking a low cost of production is helping to minimise the risk of market pressure.

Do the old metrics still hold?

In short, yes. Many key metrics and targets such as water use efficiency, variable costs as a percentage of income, total plant, machinery and labour, machinery investment to income ratio do still calibrate well. Others such as income per ha per mm (used to assess seasonally adjusted total income generation) have increased sharply with the adoption of high margin crop types (lentils particularly) and a strong pricing cycle. What was a good target of $2.50/ha/mm is now not going to cut it, with a newly calibrated target of $3.50/ha/mm a good gauge of strong income generation.

Great! What opportunities are there to create greater resilience?

The challenge is laid bare. Farming has never been more expensive per hectare and a need to maintain margin is crucial. Decision making in the past 5 years has been somewhat masked when we consider seasonal outcomes and pricing. There is a need to ensure we optimise decisions, implement strongly and look at our business for what it is.

- What creates the highest and best margin for our own business?
- Are our lease blocks performing?
- What does our machinery replacement plan look like?
- Do we know our own KPI's?

These are all questions we should be looking at to help create a strategy that works for your business.

My follow up questions for the speaker.

Why working on this could be great for your farming business

- Knowing and understanding what's possible, provides a great opportunity to address items in your own business to increase business performance, profit and clarity of direction.
- With cost structures increasing, focusing on maintaining low cost of production is vital. This requires optimising decision-making and focusing on the fundamentals of what creates real value in the business. Timeliness, organisation and strategic spending are key.
- Poor financial performance and a lack of clarity can increase stress and impact rational decision-making. Having a clear plan of action driven by robust data creates actionable steps which can alleviate the stress of relying on 'gut feel'.

Self-evaluation

- How does the information provided align with your current business strategies?

- How would you measure the success of applying these strategies or ideas in your business?

- How does this information challenge your existing assumptions or processes, and are you prepared to make adjustments if necessary?

We want to work on this in our business, what should we do next?

- Benchmark and conduct a business review. The outcomes for an individual business can be life changing (literally!).
- Think and reflect on some opportunities you may have to lift productivity and/or create greater cost efficiencies.

Our First Action _____

Our Second Action _____

Want to learn more, here are some suggestions;

- GRDC Opportunity for Profit Management Guideline
- www.grdc.com.au/__data/assets/pdf_file/0030/294294/Opportunity-for-Profit-SA-Mid-North-Lower-Yorke-Eyre.pdf
- Burke, K (2020) Crops, People, Money and you: The Art of Excellent Farming and Better Returns www.thinkagri.com.au/kates-book/

Acknowledgements:

Data used in this analysis is from SnapShot Premium™, Pinion Advisory's benchmarking system for the purpose of providing trend and performance insights. All data used has been aggregated to maintain confidentiality and anonymity of individual businesses.

More about James . . .

James Hillcoat is the manager of Farm Business Management services within Pinion Advisory. James graduated from Marcus Oldham in 2014 with a Bachelor of Business (Agriculture). James has worked with Pinion Advisory for 11 years, initially in the grain marketing space to bring business thinking to grain marketing decisions. It is through this that James has been heavily involved in helping businesses understand their performance and KPIs to assist them in implementing strategic and operational change.

James now specialises in the farm business management space chairing advisory boards and remains heavily committed to helping align businesses to known profit drivers through robust benchmarking and farm performance insights.

Contact details

Business address: 13 Hanson Street, Freeling, SA, 5372
Website: www.pinionadvisory.com
Phone: 1300 746 466
Email: jhillcoat@pinionadvisory.com

Notes

Focus on farm business transition

Judy Wilkinson

Key messages

- Plan – treat succession like it is urgent, it is a process not an event.
- Be business-like – agreements, formal meetings, discussion. Keep people informed.
- Clarity – be clear to be kind.
- Communicate – educate your family, manage discontent and differing opinion, seek to understand.

Introduction

Many Australian Family Farms have come from pioneers, hard work and a tradition of inheritance.

70% of Family businesses fail or sell before the second generation takes over and 90% fail or sell before the third generation takes over. It is not a numbers game, it is a Planning Game.

The University of Adelaide's Family Business survey (Graves et al, 2018) results indicated significant family business transition functions slated for the subsequent 12 months and 5 year time periods including:

- leadership transition to a younger family member in the next 12 month is 47% and in 5 years' time 71%.
- ownership from current to next generation in next 12 months is 67% and in 5 years' 71%.

There will be an exit of 40% of owners in the next 5-10 years, and a disturbing factor is that 15% of these 40% do not have a retirement or exit plan.

Research seems to be telling us that there needs to be some sort of plan for the future of these business to successful go from one generation to another.

This plan could include strategies detailing transfer of:

- responsibilities
- management control
- ownership of the farm business
- ownership of land or assets.

Plan

A plan can help family and business to prepare for the transfer of responsibility, management and control, and the ownership of business and land and assets. It is important to recognise this needs to be flexible and revisited regularly. The trigger for revisiting can be anytime there is a change in business (growth, structure) or Family (new members, or exits).

The process is easier if there is a strong and healthy communication pattern within the family and business. Starting early provides option to respond to the needs of family members and their changing involvement in the farm business. If started early, it also gives families the opportunity to refine their communication skills. Clarifying expectations of family members is an important part of the planning process and it can help bring understanding and balance to family and work life.

There are several professionals who can support this process, they can include legal, accounting, financial planners, farm consultants, facilitators. It is best to use a mix of all of them for their areas of expertise, to think one can do it all is not necessarily the strongest option.

Business – like

Let your business look like a business so that your family can look and act like a family.

It is important for the well-being of both family and business, to put some boundaries between the two. In the past this has often not been the case. Farming has operated like a Mum and Dad bank account. The separation of finance and responsibilities can be a healthy way to ensure that one entity (Business) does not infect the other (Family).

Know the Business structures and understand them, why they were chosen and do they suit the present situation.

Formalising arrangements can be done by:

- Meetings – formal times to discuss what is happening in the business, an agreed time, agenda, recording process.
- Agreements – employment, financial, machinery purchase, land ownership.
- Reporting – so all stakeholders are included in information sharing and as a form of educating everyone in the business and family.

Clarity

Clarity is essential in communication - it allows the sharing of thoughts and intentions effectively. Clear communication reduces the chances of misunderstandings and misinterpretations which in turn helps to build trust and foster better relationships.

Being clear shows respect for the person you're communicating with, it shows you value their time and attention. Ambiguity or vagueness can lead to confusion and frustration. Clarity brings transparency and understanding. Clarity is particularly important in conversations when conveying critical Information. By being clear, you ensure the message is received as intended.

Clarity is not just about the words we use, it is also the tone, the body language and overall delivery of our message.

Be clear to be kind

Being kind in communication shows consideration and respect of other people's feelings and perspective. Combining clarity with kindness, creates a space for open, honest communication. Empathy and understanding are powerful tools in building strong relationships. It can also help to defuse tense situations and promote a sense of cooperation.

Being clear and kind in conversation can create a happier environment where people feel valued, respected and included.

Communication

This is a skill that we learn and the more we do it, the better we get at it.

Many factors influence how we communicate.

- Family history.
- Communication styles. All individuals have their own style, and styles may not always compatible.
- Self-esteem of individuals is important.
- Generational difference.

The foundation for good ongoing communication needs to be reinforced at each of the stages in family business cycle.

The stages are;

- communication between husband and wife or partners,
- communication with the children, their partners, especially as they reach adulthood,
- communication with new family members (in-laws).

As families progress through these stages, additional skills are required. Just as significant change in business enterprise mix needs to be researched, thought about and planned for. Apply those skills to the people component of a business to ensure the best outcomes for everyone. Failure to take the time necessary to do this may lead to damaged relationships and poor business outcomes. Often the real impact of this neglect may not be experienced at the point of change, but smolder away for years and re-appear at some other point of stress.

A good communication strategy will encourage family business to have open discussions, make consensus decisions and deal with conflict while it's minor and manageable. This environment discourages discontent to thrive and avoids the tragic division seen in some family businesses.

If you reach a stalemate or cannot move forward, bring someone in to mediate/facilitate.

Why can it be so hard?

We often refer to crucial conversations as those where:

- opinions differ,
- everyone has something at stake - potential gains or losses are high,
- high levels of emotion,
- resolutions need to be found.

Deal with crucial conversations early – they tend not to go away and can get more difficult if left.

If an individual has a strong desire for effective communication and it's not shared by other family members, consider is it how it is? and what opportunities are there to meet your needs? A desire for effective communication shared by family members can be an indicator of effective working communication and business relationships.

My follow up questions for the speaker.

Why working on this could be great for your farming business

- A plan provides a starting point for discussion.
- Look like a business and act like a family.
- Enhances communication and strengthens relationships.

Self-evaluation

	Not well	**Very well**
How well do you;		
• understand the structures that your business and land are kept in?	.....	
• know the finances of the business and how funds are distributed?	.....	
• communicate effectively as a business group / family group?	.....	
Does the business have the capacity and capability of supporting the next generation?	.....	

We want to work on this in our business, what should we do next?

- develop a Succession Plan with the help of advisors if required.
- determine what financial requirements are needed by those exiting.
- ascertain what the retiring partners need as far as housing/ something to do.
- assess what is required for management succession.
- who will take over, what do they require?
- look at Will and Estate Planning.
- how to deal with off farm siblings.

Want to learn more, here are some suggestions;

- A Guide to Succession (GRDC) https://grdc.com.au/__data/assets/pdf_file/0026/68462/a-guide-to-successionpdf.pdf.pdf
- Exit and Succession Planning (Small and Family Business, govt SA) https://business.sa.gov.au/information/run-my-business/exit-and-succession-planning
- A Guide to Communication (GRDC) https://grdc.com.au/__data/assets/pdf_file/0021/142257/grdc-a-guide-to-communication-for-farming-families.pdf.pdf

Our First Action _____

Our Second Action _____

References

Graves, C., Barbera, F., Thomas, J. & KPMG Australia (2018), Family business - the balance for success https://assets.kpmg.com/content/dam/kpmg/au/pdf/2018/family-business-survey-2018-report.pdf

Acknowledgements

- Chris Graves - GrowStrong Program, Wine Grape Growers.
- Lyn Sykes - Farm Family Facilitator, Dubbo.

More about Judy...

Judy's experience in the business transition space for over 30 years has been both rewarding and challenging, particularly assisting farming families to;

- *navigate generation shift*
- *business transfers*
- *asset transition*
- *managing inclusion and exits.*

Family farming stands at the cornerstone of South Australia's agricultural strength and deserves to be (and it appears people want it to be) preserved. Successfully nurturing this legacy necessitates getting key aspects right in both family dynamics and business operations. While there is no universal recipe due to the uniqueness of individuals, families and farming enterprises, the diverse solutions required, make the journey interesting, exciting and profoundly significant.

Judy will share stories and observations, she has acquired over not only the Facilitation side of her life but also being a second generational farmer!

Contact details Business address: PO Box 543 CLARE SA 5453
Phone: 0401 122 049
Email: judyawilkinson@outlook.com

Notes

Useful NVT tools

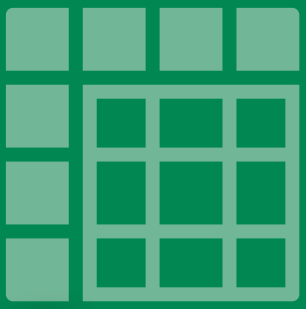
GRDC NATIONAL VARIETY TRIALS™

Visit the NVT website @ nvt.grdc.com.au

- Harvest Reports
- Sowing Guides

Trial results

Long Term Yield Reporter



NVT Disease Ratings

To receive email notifications the moment results for your local NVT trials are available, sign up to the NVT Trial Notification Service

SCAN QR CODE

To receive the latest NVT publications (Harvest Reports and Sowing Guides), subscribe to NVT communications

SCAN QR CODE

GRDC™
GRAINS RESEARCH & DEVELOPMENT CORPORATION

Follow us on Twitter @GRDC_NVT

P Level 4, 4 National Circuit, Barton ACT 2600 | PO Box 5367, Kingston ACT 2604
T 02 6166 4500 **F** 02 6166 4599 **E** grdc@grdc.com.au

Farm machinery strategy & the impact of temporary full expensing

Jo Gilbert

RSM Australia

Key points to consider when managing depreciating assets in a farming business now:

- Is your business classified as a small or medium business for tax purposes?
- How are new assets depreciated from 1 July 2023 (without trade in).
- Are you trading an existing asset on a new asset? If yes, how has the existing asset been treated for depreciation purposes since you acquired it?
- Trade-in values on machinery are now up for negotiation.
- What are the financing options for new purchases?
- What happens if a business is sold and assets are disposed in a clearing sale?

Introduction

From 1 July 2023 the Temporary Full Expensing measures and other COVID-19 response measures put in place by the Federal Government in March 2020 have ceased and there is a return to the depreciation and instant asset write-off rules that applied before March 2020.

More than ever before, farming businesses need to know how each asset was depreciated from purchase, as this will determine how any sale or trade of this asset is taxed on disposal.

What tax rules apply now?

Businesses with turnover in excess of $10m are no longer eligible for Instant Asset Write-Off (IAWO) deductions from 1 July 2023 and must depreciate their assets over their effective life according to the general depreciation rules in Division 40 of the Income Tax Assessment Act 1997 (ITAA 97).

For small businesses with a turnover of less than $10m the threshold for the IAWO is now $20,000. This applies only to assets installed and ready for use between 1 July 2023 and 30 June 2024.

For all other assets over $20,000 there is a return to the previous small business depreciation pool for small businesses with turnover less than $10m. Assets that are allocated to the small business pool are deducted at 15% in the first year, regardless of when they were acquired during the year, and 30% in subsequent years. The depreciation deduction is calculated on the diminishing value of the pool, which means that the amount of depreciation decreases over time as the pool balance reduces.

If the balance of the small business pool is less than or equal to the IAWO threshold at the end of the income year, the entire pool balance can be written off as a deduction.

When a small business disposes of an asset that is part of the small business pool, the disposal amount (usually the sale proceeds) is subtracted from the pool balance. This reduces the closing pool balance at the end of the income year and affects the amount of depreciation that can be claimed as a deduction. If the disposal amount exceeds the pool balance, the excess amount is included as assessable income.

Under the temporary full expensing measures introduced from 6 October 2020, businesses were required to deduct the balance of their small business pool at the end of the income year. This meant for many small businesses that all remaining depreciation deductions on existing assets were claimed as a deduction in the year ended 30 June 2021.

As of 1 July 2023, small businesses commenced the financial year with all of their depreciating assets such as farm machinery written down to nil, having claimed all available depreciation deductions in prior years.

The days of claiming a full tax deduction for the purchase of an asset are now over for most farm machinery purposes. Farmers may need to look more closely at the cost benefit analysis within their business of repairs being fully tax deductible to their business, versus replacement of an asset that will only be tax deductible over a longer period of time.

So, what are the key issues to consider when looking at managing depreciating assets in a farming business?

1. Is your business classified as a small or medium business for tax purposes?
2. How are new assets depreciated from 1 July 2023 (without trade in).
3. Are you trading an existing asset on a new asset? If yes, how has the existing asset been treated for depreciation purposes since you acquired it?
4. Trade-in values on machinery are now up for negotiation.
5. What are the financing options for new purchases?
6. What happens if a business is sold and assets are disposed in a clearing sale?

Small or Medium Business?

For depreciation purposes, the aggregated turnover of a business determines its eligibility for the small business concessions, including IAWO and small business pooling.

Aggregated turnover for small business is the total annual income of a business and its affiliated entities. An affiliated entity for small business purposes is an entity that controls or is controlled by another entity, either directly or indirectly. In a farming business, turnover would include the turnover of both the main entity in the business and also the turnover of any related trusts, companies or individuals.

A medium business is one with an aggregated turnover of over $10mill. As farm sizes increase, more and more farm businesses are reaching this $10mill threshold.

The majority of family run farming businesses however may not have turnover in excess of $10mill and therefore are classified as small businesses and are eligible for the simpler depreciation rules.

Purchase of new assets without trade-in

Small businesses have access to the Instant Asset Write Off for assets installed and ready for use by 30 June providing their total cost excluding GST is below $20,000. Breaking an asset purchase up into multiple parts, (each below $20,000), when all of these parts constitute the one asset, in order to access multiple IAWOs is not allowed.

New and used machinery that does not qualify for the IAWO is added to the small business pool. Regardless of when the asset is purchased during the year, 15% depreciation is allowed in the first year and then 30% depreciation is applied to the opening pool balance each year thereafter.

The small business pool balance is written off under the IAWO if it drops below $20,000 and a balancing adjustment in the form of assessable income occurs if the pool balance falls below nil on the disposal of an asset.

Trading existing assets

When trading in an existing asset on a new asset from 1 July 2023, the way in which the existing asset was depreciated up to 30 June 2023 will determine how much, if any, of the sale proceeds on this asset are taxable in the year of disposal. For example;

a. Asset held in the small business pool prior to 1 July 2023

- Whilst the balance of this pool was written off and claimed as a deduction in the year ended 30 June 2021, the assets within the pool remain in the pool until they are disposed of.
- When acquiring new assets from 1 July 2023 in a small business and trading in an asset that has been held in the small business pool, the sale proceeds on disposal of the pooled asset will be offset against the value of the new asset in the small business pool.
- Providing the pool balance is not below $20,000 at 30 June 2024 then there would be no assessable income on the disposal of the existing asset in the year of disposal.
- The new asset will be depreciated at 15% in the pool in the first year and the balance of the pool will be reduced by the value of the sale of the existing pooled asset.

b. Asset previously claimed in full under IAWO or Temporary Full Expensing

- These assets are not held within the small business pool.
- Any sale or trade in of these assets will be fully assessable in the year of disposal.
- Assessable sale proceeds from a trade-in may not be offset by a depreciation deduction on the new asset if 15% depreciation within the pool is the maximum depreciation that can be claimed as a deduction.

Trade-in Values up for negotiation

Because all assets held by a small business prior to 1 July 2023 have been written off in full for tax purposes - when negotiating trade-in values now, it is important to ensure that consideration has been given to how the sale proceeds on the trade-in machinery are assessed.

In many cases, a lower trade-in value, particularly for assets that have been claimed under Temporary Full Expensing, will be preferrable.

Financing options for new purchases

Most small businesses are not in a position to finance large machinery purchases from cash reserves and are looking at options to finance the purchase through their bank or other lenders.

a. Chattel Mortgage

- Business takes ownership of the asset immediately, can claim the GST and depreciates the asset from the date the asset is installed ready for us.
- Security for the borrowing is taken over the machine itself (not land or other assets).

- This provides an opportunity to fix a rate of borrowing over an extended period of time (usually up to 5 years) and provides certainty of cashflow for the business for the period of the loan.

a. Leasing

- Leases have been less popular in recent years due to the availability of immediate deductions under Temporary Full Expensing when purchasing machinery.
- Machinery leasing sees the small business lease or hire the machinery for a period of time and eventually own the asset once the residual or balloon payment is made.
- Lease payments are immediately tax deductible in the year of payment, however as the asset is not owned by the business at that time, there is no depreciation deduction.
- The residual at the end of a lease is usually well below the market value of the asset at that time, however this is the value that the business acquires and depreciates the asset.
- It is therefore likely that after the end of the lease a business may dispose of the asset and will need to consider the consequences of how the sale proceeds are assessed, including whether there is sufficient small business pool balance on hand.

What if a business is sold and assets disposed of in a clearing sale?

As all assets owned by the small business up to 30 June 2023 have been written down through Temporary Full Expensing and IAWO. Selling a number of assets in one year without replacing or trading in these assets are likely to lead to a large amount of the sale proceeds, such as from a clearing sale, assessable at the time of sale.

Assets that have been placed into the small business pool whilst held within the pool are depreciated at 30%. However, the balance of the small business pool is unable to end up with a negative balance so any amount received for the disposal of pool assets in excess of the pool balance will be assessable in the year of disposal.

Key Action Points for Small Business Owners:

➢ Ask your accountant or advisor for a full tax depreciation schedule for your business.
- this should show if the asset has been claimed in full or is in the small business pool.

➢ Check your numbers before negotiating any machinery sale or purchases.
- each business should have an asset replacement schedule.

➢ Repair v Replace
- cashflow and tax deduction considerations for each option are important.

➢ Consider all cashflow implications on machinery purchases including;
- any tax on disposal of an asset
- cost of financing from overdraft v chattel mortgage v leasing.

➢ Understand that IAWO was not a “handout” but was a “bring forward” of years of depreciation.
- there are limited options for reducing the gain on disposal when your tax book value is below market value.

My follow up questions for the speaker.

Why working on this could be great for your farming business

- Informed decision-making on machinery purchases and sales.
- Implementing an asset replacement schedule that incorporates expected tax consequences on disposal of assets.
- Cashflow budgeting for all large asset purchases is more important than ever before.

Self-evaluation

- Is your business still considered a small business for depreciation purposes?
  Y / N / Something to check
- Have you identified a break-even point for repairs v replacement of an asset?

Key assets to consider:

- Are machinery trade-in plans flagged for discussion with your advisors?
  Y / N / Something to do

We want to work on this in our business, what should we do next?

- Ask your accountant for your full tax depreciation schedule.
- If you have an asset replacement schedule, ensure this includes the tax impact of any trade or sale.
- Involve cashflow budgeting for all machinery purchases, it is now more important than ever.

Our First Action _____

Our Second Action _____

Want to learn more, here are some suggestions;

www.rsm.global/australia/insights/agribusiness

More about Jo . . .

Jo Gilbert is a Partner at RSM, based in Albany, Western Australia.

Jo is part of RSM's Business Advisory division with a specialist knowledge in the agribusiness sector including tax planning, digital advisory and succession planning. Jo works mainly with small to medium farm businesses in the southern part of regional WA. The RSM team includes over 1,800 professionals in 32 offices across Australia. Jo has the support of various specialist tax and advisory divisions as part of the firm.

Jo's parents both hail from regional South Australia, with their families leaving farms in SA to take up farming opportunities in Western Australia in the mid 1960's. Jo attributes much of her passion for agriculture and the success of farming businesses to the example her parents have set in running their own farm in Katanning, well documented and communicated succession and commitment to the industry. The family farm in Katanning has grown to over 6,000ha and is now a third-generation business in broadacre cropping and sheep.

Two years ago RSM celebrated it's 100-year anniversary. Jo is proud to have been part of the team for 24 years and seen many families succeed in their farm businesses over those years.

Contact details: Business address: PO Box 5677 Albany WA 6330;
61 Peels Place, Albany WA 6332

Website: RSM Albany website

Phone: 08 9841 2766

Email: joanne.gilbert@rsm.com.au

witter handle: @kezza_jo

Notes

Notes

LOOK AROUND YOU.

1 in 5 people in rural Australia are currently experiencing mental health issues.

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

The GRDC supports the mental wellbeing of Australian grain growers and their communities. Are you ok? If you or someone you know is experiencing mental health issues call *beyondblue* or Lifeline for 24/7 crisis support.

beyondblue
1300 22 46 36
www.beyondblue.org.au

beyondblue
Depression. Anxiety.

Lifeline
13 11 14
www.lifeline.org.au

Lifeline 13 11 14

Looking for information on mental wellbeing? Information and support resources are available through:

www.ifarmwell.com.au An online toolkit specifically tailored to help growers cope with challenges, particularly things beyond their control (such as weather), and get the most out of every day.

www.blackdoginstitute.org.au The Black Dog Institute is a medical research institute that focuses on the identification, prevention and treatment of mental illness. Its website aims to lead you through the logical steps in seeking help for mood disorders, such as depression and bipolar disorder, and to provide you with information, resources and assessment tools.

www.crrmh.com.au The Centre for Rural & Remote Mental Health (CRRMH) provides leadership in rural and remote mental-health research, working closely with rural communities and partners to provide evidence-based service design, delivery and education.

Glove Box Guide to Mental Health
The *Glove Box Guide to Mental Health* includes stories, tips, and information about services to help connect rural communities and encourage conversations about mental health. Available online from CRRMH.

www.rrmh.com.au Rural & Remote Mental Health run workshops and training through its Rural Minds program, which is designed to raise mental health awareness and confidence, grow understanding and ensure information is embedded into agricultural and farming communities.

www.cores.org.au CORES™ (Community Response to Eliminating Suicide) is a community-based program that educates members of a local community on how to intervene when they encounter a person they believe may be suicidal.

www.headsup.org.au Heads Up is all about giving individuals and businesses tools to create more mentally healthy workplaces. Heads Up provides a wide range of resources, information and advice for individuals and organisations – designed to offer simple, practical and, importantly, achievable guidance. You can also create an action plan that is tailored for your business.

www.farmerhealth.org.au The National Centre for Farmer Health provides leadership to improve the health, wellbeing and safety of farm workers, their families and communities across Australia and serves to increase knowledge transfer between farmers, medical professionals, academics and students.

www.ruralhealth.org.au The National Rural Health Alliance produces a range of communication materials, including fact sheets and infographics, media releases and its flagship magazine *Partyline*.

ifarmwell growing farmers' wellbeing
Black Dog Institute
Centre for Rural & Remote Mental Health
CORES™
Rural & Remote Mental Health
Heads up Better mental health in the workplace
NATIONAL CENTRE FOR FARMER HEALTH
NATIONAL RURAL HEALTH ALLIANCE LTD

P Level 4 | 4 National Circuit, Barton ACT 2600 | PO Box 5367, Kingston ACT 2604 **T** +61 2 6166 4500 **F** +61 2 6166 4599 **E** grdc@grdc.com.au

Controlled traffic farming – assessing the risk/ reward for your business

Luke Clark,

Clark Forest View, Jamestown

Grower perspective

Jamestown grower, Luke Clark, shares his perspective on the fit of Controlled traffic farming into South Australian farming systems, including;

- benefits and challenges,
- tools and strategies for assessing the risk/reward of investing in CTF for yourself,
- designing a transition plan or schedule for CTF enabled equipment.

Business snapshot

- 2,400 hectares around Jamestown in the Upper North.
- 100% cropping of 2,100ha: 33% cereals, 33% canola and 33% legumes.
- 300ha hill country dedicated to first cross ewe & lamb enterprise.
- 400 – 450mm annual rainfall.

More about Luke...

Clark Forest View involves brothers, Luke & Scott Clark, and their families. Mum & dad lend a hand to support the families during busy periods and around the sheep operation.

Since 2011, there has been some form of CTF on the farm - taking around three years to adapt and line up fully. Features include full cover year-round and a strip & disc system.

Frost is the biggest cost to the business.

Notes

CTF – benefits and resources

Bindi Isbister,

DPIRD WA & Chair of the Australian Controlled Traffic Farming Association

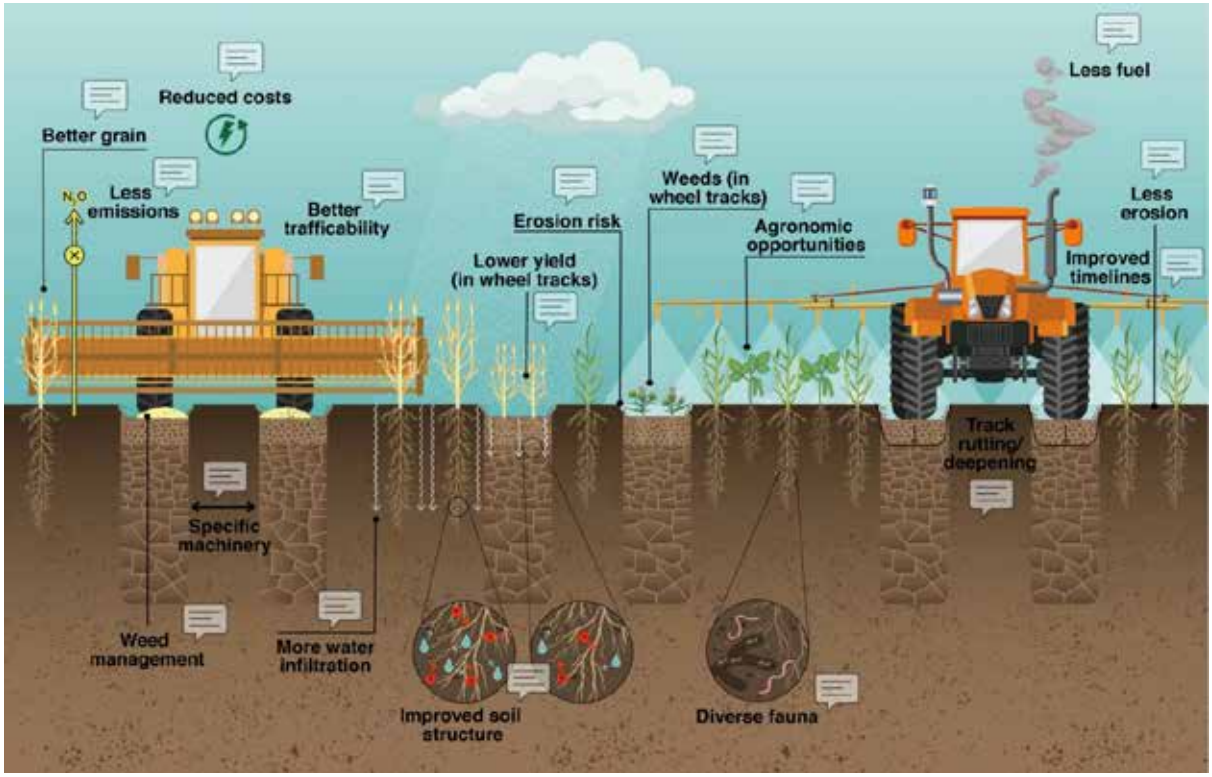


Figure 1. Benefits of controlled traffic farming system. Source: Soil Quality 6 ebook Soil Compaction.

Benefits of Controlled traffic farming

Controlled traffic farming (CTF) enables farm businesses to improve efficiency through better use of inputs to grow more grain of a better quality. CTF matches the operating width and wheel track spacing for all cropping machinery to confine compaction to permanent wheel tracks minimising the area of a paddock compacted. This allows plant roots better access to water, oxygen and nutrients which increases yield, quality and improves the efficiency of inputs. CTF also increases the longevity of the benefits from soil amelioration by reducing the area of the paddock recompacted. Other benefits of CTF include better in crop access in wet conditions, easier driving, more accurate placement of inputs, less fuel running firm wheel tracks and lower greenhouse gas emissions (nitrous oxide).

Development of a CTF system is not always simple with some farms needing to adapt machinery for nearly every operation on the farm. Adopting CTF in line with your machinery replacement strategy is a good approach: start by developing a plan then select machinery according to your plan. Many successful CTF farmers have taken 5-10 years to develop a fully matched CTF system.

Want to learn more, here are some suggestions;

- Australian Controlled traffic Farming Association www.actfa.net
- CTF calculator www.ctfcalculator.org
- Mitchell R, Wilhelm N, Fisher P, Tullberg J, Bluett C. Pearl D, Dimos N and Benjamin C (2019) On the right track – controlled traffic in the low rainfall zone of south-eastern Australia, GRDC
- GRDC Groundcover supplement: Controlled Traffic Farming (2020)

https://groundcover.grdc.com.au/grdc-groundcover-supplement?supp=controlled-traffic-farming-march-april-2020

References

Parker W, Isbister B, Hoyle F, Leopold M (2021) Soil Quality: 6 Soil Compaction, DPIRD

www.agric.wa.gov.au/soils/soil-quality-ebook-series?nopaging=1#:~:text=Soil%20Quality%3A%206%20Soil%20Compaction,case%20studies%20and%20farmer%20experiences

Contact details

Bindi Isbister

Department of Primary Industries and Regional Development WA
& Chair of the Australian Controlled Traffic Farming Association

Bindi.Isbister@dpird.wa.gov.au

Notes

Notes

Economics of controlled-traffic farming are undeniably clear

James Hagan,
DAF Queensland

Source: GRDC Groundcover (2020)

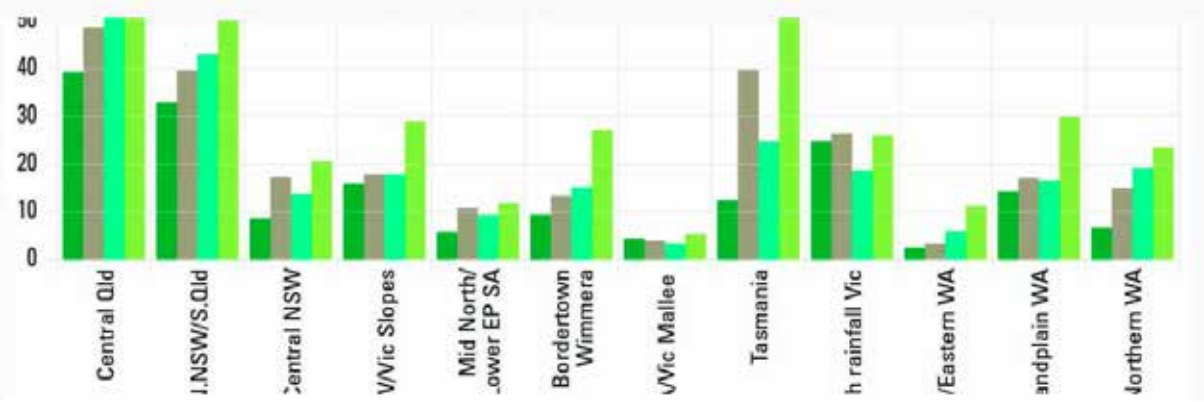


Figure 1: Controlled-traffic farming (CTF) adoption across Australia's cropping regions from 2008 to 2016.

Key points

- Switching to controlled-traffic farming (CTF) can reduce the compacted area from 40 to 60 per cent to less than 20 per cent
- Nationally, almost 30 per cent of cropped hectares are managed under a CTF system
- The cost of converting to CTF can be very low if machinery is purchased as part of the standard replacement program

The idea of controlled-traffic farming (CTF) systems goes back to the 1850s - when early pioneers considered using permanent tramlines made with railway iron, to handle steam-engine traffic in the field.

However, it really took off with the adoption of no-till farming systems in the 1990s and subsequent increases in machinery scale.

Nationally, almost 30 per cent of cropped hectares are managed under a CTF system - ranging from more than 60 per cent in central Queensland to about five per cent in the South Australian and Victorian Mallee.

These differences reflect local farming systems, with central and southern Queensland and northern New South Wales historically relying on stored soil moisture for winter crops.

Southern systems, including in Western Australia, have traditionally relied on in-season rainfall. However, in recent years, rainfall variability has increased the importance of stored moisture here as well.

Calculating the cost of compaction

Calculations - based on common broadacre machinery sizes - suggest non-CTF systems will traffic and compact from 40 to 60 per cent of paddock area annually, while a good CTF system will traffic less than 20 per cent.

Research shows that any machinery with an axle weight of 10 tonnes or more can cause compaction below 300 millimetres, with most of this compaction occurring in a single pass.

Growers can use the CTF Calculator, developed by Precision Agriculture in conjunction with the WA Department of Primary Industries and Regional Development and GRDC, to determine their own trafficked percentage using current gear and future potential scenarios.

Yield benefits from removing traffic vary, but research from around Australia has shown compaction yield penalties average from 20 to 35 per cent.

While some soils that shrink and swell have the ability to self-repair, many require mechanical amelioration to remove compaction.

Finding uncompacted areas can be a challenge, but one good way of estimating yield penalties is to look at crop performance near non-living paddock obstacles - such as powerlines.

"The cost of converting to controlled-traffic farming can be very low if growers work new purchases into the standard machinery replacement program." - DAF Queensland economist James Hagan

Moving to CTF

Converting to CTF can be easy if current machinery is already at complementary widths and the only necessary changes are wheel-spacing modifications to create a fully matching system.

Other enterprises might need operators to replace all current machinery to create a system that works effectively.

Working CTF purchases into a standard machinery replacement program can minimise the cost of moving to CTF and some purchases can be brought forward once the business is close to reaching a full CTF match.

A survey of WA growers found it cost less than $20,000 to move to a CTF system - with changing wheel spacings representing the majority of this cost.

CTF pays

Growers who have converted to CTF almost universally report a reduction in fuel costs, with savings of 15 to 30 per cent not uncommon.

Additional benefits such as better paddock access, better drainage and easy trial layout all contribute to CTF's appeal.

Economic modelling by The University of Western Australia in 2011 estimated that CTF increased income by $31 per hectare through improved yield and quality (based on a wheat yield of 1.2 tonne per hectare and price of $265/t) and reduced input costs (mainly fuel) by about $15/ha.

Across a 1500ha property, the annual profit increase was about $73,000.

Previous research on the Darling Downs in Queensland found an expected profit increase of $87/ha from converting to a CTF system.

Between fuel savings and yield improvements, the economic benefits of CTF are clear.

More information: James Hagan, DAF Queensland, 07 4529 4273, james.hagan@daf.qld.gov.au

Notes

Notes

Balancing machinery with labour

Peter Glover

Westbrooke Ag, Yeelanna

Grower perspective

Can machinery investment be the solution to tight labour supply?

Yeelanna grower, Peter Glover, shares his approach to machinery investment, including;

- the impact on labour requirements,
- financial and practical considerations for the farming operation,
- and planning for machinery upgrades or replacement.

Business snapshot

- 9,200 hectares around Yeelanna on the Lower Eyre Peninsula, including owned, share-farmed and leased land.
- 100% cropping: 30% wheat, 30% canola, 25% legume and 15% barley.
- 400mm annual rainfall.
- 3 full time employees and 2 casuals.
- Complimentary business enterprises: Brooker Farm Supplies, MacDon sales and service.

More about Peter . . .

Since 1906, the Glover family have farmed in Yeelanna, starting with the first family farm in 1929 and the current branch of the family in 1959. Three generations of the family are involved in the business now – Mum, 2 brothers and wives, 3 sons and wives and one daughter and son-in-law.

Contact details: Website: www.Brookerfarmsupplies.com

Twitter handle: @westbrookeag, @BrookerFarm

Want to learn more, here are some suggestions;

Machinery investment and replacement for Australian grain growers (2022) GRDC www.grdc.com.au/__data/assets/pdf_file/0032/571397/GRDC-MachInvestReplacement-for-AGG-23.12.21-Updated-04072021-BW.pdf

PREDICTA® B
KNOW BEFORE YOU SOW

Cereal root diseases cost grain growers in excess of $200 million annually in lost production. Much of this loss can be prevented.

Using PREDICTA® B soil tests and advice from your local accredited agronomist, these diseases can be detected and managed before losses occur. PREDICTA® B is a DNA-based soil-testing service to assist growers in identifying soil borne diseases that pose a significant risk, before sowing the crop.

Enquire with your local agronomist or visit
http://pir.sa.gov.au/research/services/molecular_diagnostics/predicta_b

PREDICTA B
DNA Soilborne disease tests

CENTRAL NSW, SOUTHERN NSW, VICTORIA, TASMANIA, SOUTH AUSTRALIA, WESTERN AUSTRALIA*

*SOUTHERN/WESTERN REGION
CONTACT:
Matt Rowe
matthew.rowe2@sa.gov.au
0491 933 041

PREDICTA B
DNA Soilborne disease tests

NORTHERN REGION*

*NORTHERN NSW AND QUEENSLAND
CONTACT:
Rob Long
lab@crownanalytical.com.au
0437 996 678

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

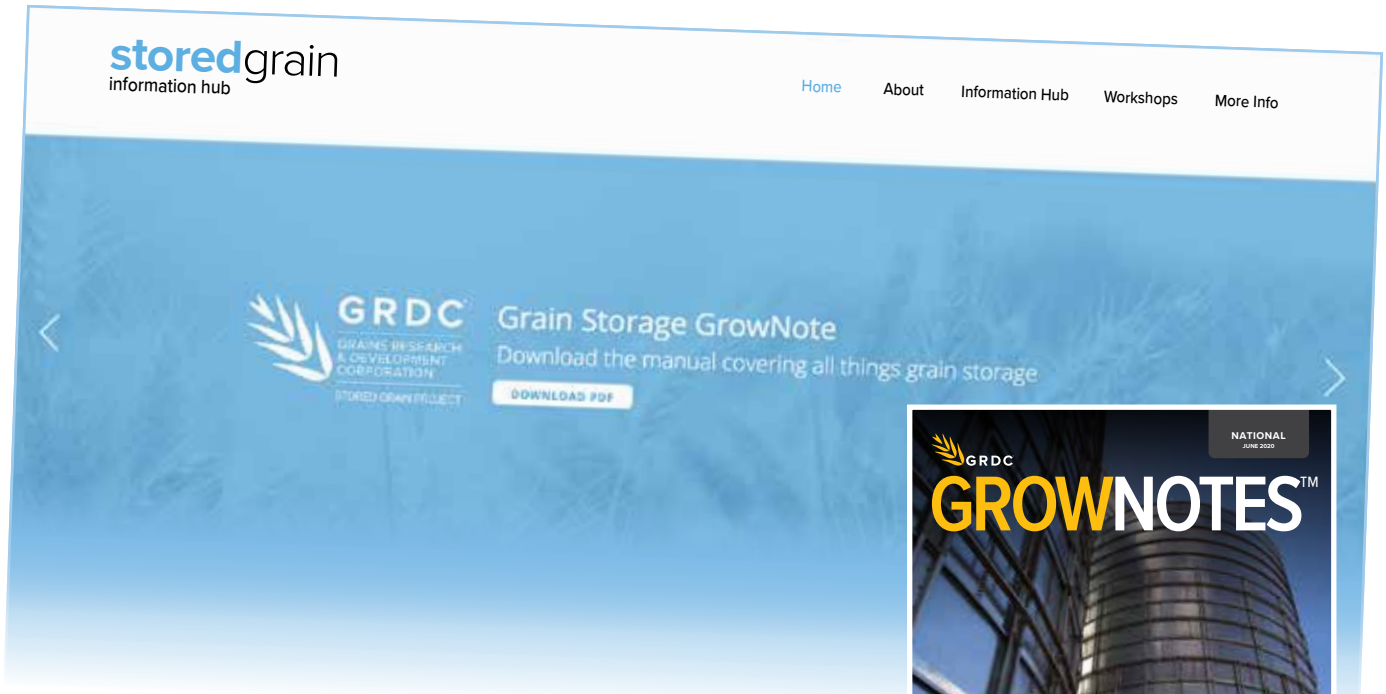
Government of South Australia
Primary Industries and Regions SA

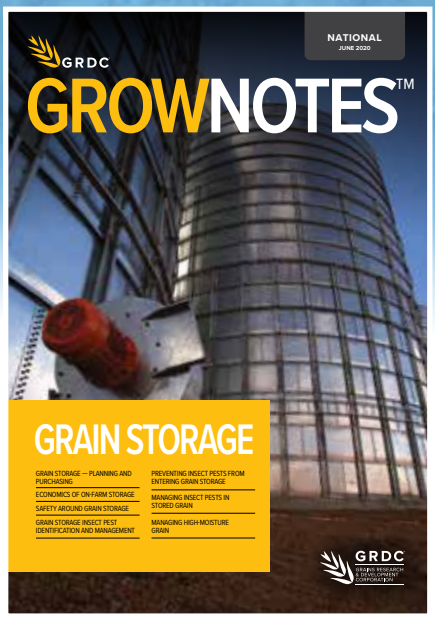
SARDI
RESEARCH AND DEVELOPMENT

crown
ANALYTICAL SERVICES

Get the latest stored grain information online

storedgrain.com.au





The complete manual for on-farm grain storage

Call the National Grain Storage Information Hotline **1800 WEEVIL** (1800 933 845) to speak to your local grain storage specialist for advice or to arrange a workshop.

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION
STORED GRAIN PROJECT

www.grdc.com.au | www.storedgrain.com.au | 02 6166 4500

2023–2025 GRDC SOUTHERN REGIONAL PANEL

December 2023

ANDREW RUSSELL, PANEL CHAIR

Rutherglen, Victoria

Andrew is the managing director and a shareholder of Lilliput Ag, and a director and shareholder of the affiliated Baker Seed Co, a family owned farming and seed-cleaning business. He has served on GRDC's medium rainfall zone Regional Cropping Solutions Network and has held leadership roles with Riverine Plains Inc, Victorian Farmers Federation and the Rutherglen Group of fire brigades.

PRU COOK, DEPUTY CHAIR

Dimboola, Victoria

Raised on a mixed farm in Victoria's Wimmera region, Pru has spent her professional career working in extension for the grains industry. Starting her career at the DPI, she has worked at GRDC and the Birchip Cropping Group, managing a number of extension projects. She has recently started her own business specialising in extension, project development and project management.

TIM MCCLELLAND

Birchip, Victoria

Tim farms with his wife, father and aunt on a 6500-hectare mixed property in the southern Mallee. After completing his Bachelor of Agriculture and Commerce at the University of Melbourne in 2006, he took on work at Advisor Edge, Birchip Cropping Group (BCG) and RMCG. In 2011, he moved back to Birchip to become formally involved in the family farm and continue his role with BCG.

RUTH SOMMERVILLE

Burra, South Australia

Ruth is an agroecologist who runs a consulting business. She has a Bachelor of Science in Ecology and Master of Applied Science in Wildlife Management from the University of Sydney, and has worked in sustainable agriculture research, development and extension and property management since 2002. Ruth has been the Upper North Farming Systems Group executive officer and project manager since 2013.

ANDREW WARE

Port Lincoln, South Australia

Andrew is a research agronomist who started his career with the South Australian Research and Development Institute (SARDI) and then spent time at CSIRO in Adelaide. This was followed by 10 years away from research, managing the family farm on the Lower Eyre Peninsula, before returning to SARDI. In 2019, he started his own research company, EPAG Research, delivering applied research across the Eyre Peninsula.

MICHAEL TRELOAR

Cummins, South Australia

Michael is a third-generation grain grower who produces wheat, barley, canola, beans, lupins and lentils on a range of soil types. He has been involved in a number of research organisations, including the South Australian Grain Industry Trust (of which he was chair for four years), the Lower Eyre Agricultural Development Association and the South Australian No-Till Farmers Association (both of which he has been a board member).

NEIL FISHER

Adelaide, South Australia

Neil's family grain farming legacy dates back to 1889, giving him an extensive understanding of the challenges faced by grain growers in SA and Victoria across the Mallee, Wimmera and Riverina regions. With his wife Jenny, he retains a cropping/grazing property at Bordertown, producing wheat, canola, barley, beans and hay. He has held chief executive and board roles in organisations including Sugar Research Australia, Grains Council of Australia, Grape and Wine Research and Development Corporation and Plant Health Australia. Neil has previously worked for GRDC managing a large portfolio of research projects.

PETER DAMEN

Kindred, Tasmania

Peter is a grower from north-western Tasmania with more than 10 years' experience growing and processing commercial grain crops. He holds a degree in agricultural science from the University of Tasmania. Peter has production, research and development experience in quinoa, oats, buckwheat, spelt, hemp, adzuki beans, wheat, barley, ryegrass and more. He is working at Tas Stockfeed, focusing on technical support, sales and grain procurement and processing. In 2017, he was recognised as the Young Farmer of the Year.

DR KATHY OPHEL-KELLER

Adelaide, South Australia

Kathy is a strategic science leader with a strong track record in developing and leading national research programs with industry co-investment, including GRDC. Her own research background is in plant biosecurity and molecular detection of plant pathogens and she has a strong interest in capacity building and succession planning. Kathy is a former acting executive director of SARDI and a research director at Crop Sciences, covering applied research on plant biosecurity, crop improvement, climate risk management, water use efficiency and crop agronomy.

DR PATRICIA FLYNN

Douglas, Victoria

Patricia is a grower in the southern Wimmera, Vic. She holds a Bachelor of Science (Honours) from the University of Western Australia and a PhD from the Australian National University. Her expertise lies in farming systems research with a specific interest in soils management and farm business profitability. Patricia is the financial manager of a family mixed cropping and Merino sheep enterprise – Kwangaloo Pastoral. She held research and development positions at the WA Department of Agriculture, CSIRO, and what was the Department of Primary Industries in Victoria.

CRAIG BAILLIE

GRDC Executive Manager

Craig Baillie is GRDC's general manager of applied research, development and extension. He has oversight of research areas including sustainable cropping systems (agronomy and soils) and crop protection (pests, weeds and diseases). He also has responsibility for GRDC's grower and stakeholder engagement at a national level.

P Level 4 | 4 National Circuit, Barton ACT 2600 | PO Box 5367, Kingston ACT 2604 | T +61 2 6166 4500 | F +61 2 6166 4599 | E grdc@grdc.com.au

KEY CONTACTS

SOUTHERN REGION

ADELAIDE
187 Fullarton Road
DULWICH SA 5065

P: +61 8 8198 8401
southern@grdc.com.au

HORSHAM
Grains Innovation Park
110 Natimuk Road
HORSHAM VIC 3400

P: +61 428 274 018
southern@grdc.com.au

APPLIED RESEARCH, DEVELOPMENT AND EXTENSION

SENIOR REGIONAL MANAGER
Stephen Loss
Stephen.Loss@grdc.com.au
M: +61 408 412 453

GROWER RELATIONS MANAGER
Courtney Ramsey
Courtney.Ramsey@grdc.com.au
M: +61 428 274 018
Based in Horsham

GROWER RELATIONS MANAGER
Rebekah Starick
Rebekah.Starick@grdc.com.au
M: +61 458 441 278

GROWER RELATIONS MANAGER
Tim Bateman
Tim.Bateman@grdc.com.au
M: +61 447 526 191
Based in Melbourne

MANAGER DISEASES (NATIONAL)
Alan Little
Alan.Little@grdc.com.au
M: +61 439 321 392

MANAGER WEEDS (NATIONAL)
Sarah Morran
Sarah.Morran@grdc.com.au
M: +61 447 158 908

MANAGER SUSTAINABLE CROPPING SYSTEMS
Courtney Peirce
Courtney.Peirce@grdc.com.au
P: +61 8 8198 8401

MANAGER SUSTAINABLE CROPPING SYSTEMS
Giacomo Betti
Giacomo.Betti@grdc.com.au
M: +61 499 976 242

CROP PROTECTION MANAGER
Ruth Peek
Ruth.Peek@grdc.com.au
M: +61 455 534 040

GENETIC TECHNOLOGIES, BIOSECURITY AND REGULATION

SENIOR MANAGER NATIONAL VARIETY TRIALS (NATIONAL)
Sean Coffey
Sean.Coffey@grdc.com.au
M: +61 428 652 226

MANAGER NATIONAL VARIETY TRIALS SYSTEMS
Neale Sutton
Neale.Sutton@grdc.com.au
M: +61 438 579 992
Based in Melbourne

MANAGER NATIONAL VARIETY TRIALS
Trevor Garnett
Trevor.Garnett@grdc.com.au
M: +61 457 906 770

MANAGER OILSEEDS (NATIONAL)
Allison Pearson
Allison.Pearson@grdc.com.au
M: +61 418 874 748

MANAGER BIOSECURITY (NATIONAL)
Amy Koschella
Amy.Koschella@grdc.com.au
P: +61 8 8198 8433

INVESTMENT OFFICER
Shiwangni Rao
Shiwangni.Rao@grdc.com.au
M: +61 476 304 976
Based in Horsham

STRATEGY AND BUSINESS DEVELOPMENT

GENERAL MANAGER STRATEGY AND BUSINESS DEVELOPMENT
Ron Osmond
Ron.Osmond@grdc.com.au
M: +61 400 002 640

HEAD OF BUSINESS DEVELOPMENT AND COMMERCIALISATION
Fernando Felquer
Fernando.Felquer@grdc.com.au
M: +61 407 974 404

HEAD OF STRATEGY, INSIGHTS AND PLANNING
Craig Ruchs
Craig.Ruchs@grdc.com.au
M: +61 477 710 813

SENIOR MANAGER ENABLING TECHNOLOGIES (NATIONAL)
Tom Giles
Tom.Giles@grdc.com.au
M: +61 417 889 860

COMMUNICATIONS

COMMUNICATIONS MANAGER
Sophie Clayton
Sophie.Clayton@grdc.com.au
M: +61 478 029 040
Based in Canberra

ENQUIRIES
Comms@grdc.com.au

Connect with us

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

GRDC
GROUNDCOVER™

Read about the latest research, R&D trials, new grain varieties and other developments.
groundcover.grdc.com.au

GRDC's podcast series features some of the grain sector's most pre-eminent researchers, growers, advisers and industry stakeholders sharing everything from the latest seasonal issues to ground-breaking research and trial results with on-farm application.
grdc.com.au/podcasts

Join the conversation

To subscribe to our newsletters and publications and keep your details up to date visit the GRDC subscription centre:
grdc.com.au/subscribe

Instagram	LinkedIn	X	Facebook	YouTube
thegrdc	thegrdc	@theGRDC	theGRDC	theGRDC

Grains Research and Development Corporation – Southern Office
P Level 1, 187 Fullarton Road, Dulwich SA 5065 **T** +61 8 8198 8401 **E** southern@grdc.com.au

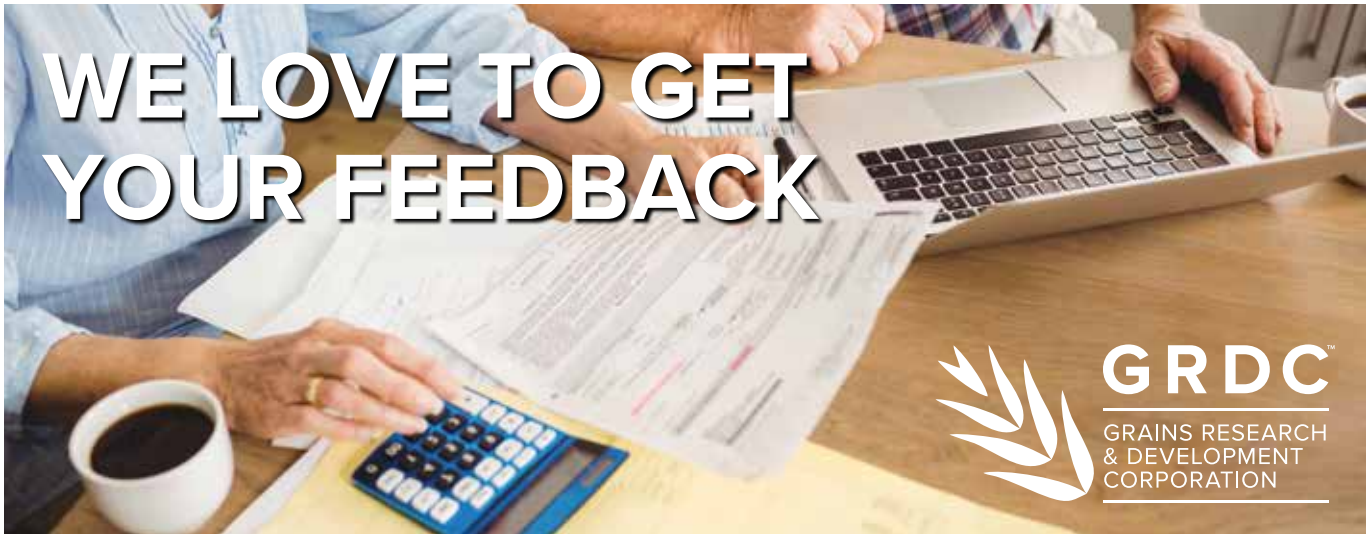
Grains Research and Development Corporation – Canberra Office
P Level 4 | 4 National Circuit, Barton ACT 2600 | PO Box 5367, Kingston ACT 2604 **T** +61 2 6166 4500 **E** grdc@grdc.com.au

Acknowledgements

The ORM team would like to thank those who have contributed to the successful staging of the Kadina & Freeling GRDC Farm Business Updates, including:

- the local GRDC Farm Business Update planning contributors
- - YP AG

GRDC
GRAINS RESEARCH
& DEVELOPMENT
CORPORATION



Leave your feedback online - scan the QR with your phone camera

OR use the form on the next page – tear it out and drop at the registration desk as you leave. Thank you!

2024 Kadina/Freeling SA Farm Business Updates feedback

1. Name:

ORM and/or GRDC have permission to follow me up in regards to post event outcomes.

2. Location of Update

- ❑ Kadina
- ❑ Freeling

3. Industry role? *(choose one only)*

- ❑ Grower
- ❑ Agronomic adviser
- ❑ Farm business adviser
- ❑ Financial adviser
- ❑ Communications/extension
- ❑ Grain marketing
- ❑ Farm input/service provider
- ❑ Banking
- ❑ Accountant
- ❑ Researcher
- ❑ Student
- ❑ Other* (please specify)

Your feedback

Please rate each presentation you attended in terms of relevance and quality
(10 = totally satisfactory, 0 = totally unsatisfactory).

4. Performing under pressure. ***Natalee Johnston***

Content relevance /10 Presentation quality /10

Have you got any comments on the content or quality of the presentation?

5. Farm for profit. ***James Hillcoat***

Content relevance /10 Presentation quality /10

Have you got any comments on the content or quality of the presentation?

6. Farm business transition. ***Judy Wilkinson***

Content relevance /10 Presentation quality /10

Have you got any comments on the content or quality of the presentation?

7. Machinery efficiency - balancing machinery with labour. ***Peter Glover***

Content relevance /10 Presentation quality /10

Have you got any comments on the content or quality of the presentation?

8. Controlled Traffic Farming (CTF). ***Luke Clark***

Content relevance /10 Presentation quality /10

Have you got any comments on the content or quality of the presentation?

9. Farm machinery strategy & the impact of temporary full expensing. *Jo Gilbert*

Content relevance ☐ /10 Presentation quality ☐ /10

Have you got any comments on the content or quality of the presentation?

Your next steps

10. Please describe at least one new strategy you will undertake as a result of attending this Update event

11. What are the first steps you will take?
e.g. seek further information from a presenter, consider a new resource, talk to my network, start a trial in my business

Your feedback on the Update

12. This Update has increased my awareness and knowledge of farm business decision-making

Strongly agree	Agree	Neither agree nor Disagree	Disagree	Strongly disagree
❑	❑	❑	❑	❑

13. Do you have any comments or suggestions to improve the GRDC Update events?