

# FARM TO PROFIT FARM BUSINESS UPDATE



# Sale

Wednesday 6th March

9.00am to 1.00pm

Sale & Districts Greyhound Racing Club,  
Sale-Maffra Road, Sale

**#GRDCUpdates**





**Sale GRDC Farm Business Update  
convened by ORM Pty Ltd.**

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#### Potential high-risk paddocks:

- Bare patches, uneven growth, white heads in previous crop
- Paddocks with unexplained poor yield from the previous year
- High frequency of root lesion nematode-susceptible crops, such as chickpeas
- Intolerant cereal varieties grown on stored moisture
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- Cereals on cereals
- Cereal following grassy pastures
- Durum crops (crown rot)

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- Cereal cyst nematode
- Stem nematode
- Blackspot (field peas)
- Yellow leaf spot
- Common root rot
- Pythium clade f
- Charcoal rot
- Ascochyta blight of chickpea
- White grain disorder
- Sclerotinia stem rot



## Program

9.00 am	<b>Announcements</b>	<b>ORM</b>
9.05 am	<b>GRDC welcome and update</b>	<b>GRDC</b>
9.20 am	<b>Dual purpose crops – maximising the economic outcomes of grazing crops</b>	<b>Cam Nicholson,</b> <i>Nicon Rural Services</i>
10.05 am	<b>Hyperyielding cereals – are extra inputs needed and if so do they pay?</b>	<b>Darcy Warren,</b> <i>FAR Australia</i>
10.50 am	<b>Morning tea</b>	
11.20 am	<b>Self-managed super funds – when and where can they be of benefit</b>	<b>Ben Lancaster and Wayne Dowd,</b> <i>DMG Financial</i>
12.05 pm	<b>Creating a prosperous farming future – building resilience</b>	<b>Matt Harms,</b> <i>Onfarm Consulting</i>
12.50 pm	<b>Close and evaluation</b>	
12.55 pm	<b>Lunch</b>	





Southern Farming Systems

# Sustainable farming systems for the high rainfall zone

## THE BEGINNINGS

Southern Farming Systems was founded in 1995 by a group of farmers who came together to find ways of making cropping in the high rainfall zone (HRZ) of Victoria more profitable by introducing raised bedding to minimise waterlogging.

SFS now has over 500 members in five branches; Geelong, Streatham, Hamilton, Gippsland and Tasmania.

## WHO WE ARE

SFS is one of the largest farming system groups in Victoria, recognised as a premier source of grower driven independent research, centered on the high rainfall zones of southern Victoria.

Our objectives are to research, develop and communicate the best use of resources, new techniques and technologies for more profitable agriculture; with a specific mission to increase farm profitability and sustainability.

SFS maintains strong partnerships with research and extension agencies and with agribusiness. The information provided to members is highly valued for it's quality and independence.

## WHAT WE DO

Our extensive trials research program across the HRZ is accompanied by seasonal crop walks, technical workshops and field days throughout the season. The major field day; AgriFocus is considered a 'must attend' technical event for the HRZ cropping region. Held annually in October, SFS showcases a range of research trials, technical tours and demonstrations. SFS holds annual trial results meetings in March, including the release of the much acclaimed SFS annual trial results book made available to SFS members. We run a technical workshop for Agronomists annually and work collaboratively with other organisations to bring you an array of workshops throughout the year, all relevant to your farming enterprise.



SFS Branch Regions

## VALUE FOR YOU

SFS Membership packages are flexible and offer great value; including biannual newsletters, fortnightly e-updates, copies of our Annual Trial Results book, Free entry to all SFS field days, local crop walks and workshops, as well as access to our Members Only area of SFS website, previous trial report data, SFS weather station data and much more.

### GROWER MEMBERSHIP

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### COMMERCIAL MEMBERSHIP

Companies and organisations who produce commercial goods

### SPONSORSHIP

Partnership opportunity with marketing and promotional advertising included



*"Innovative, relevant and profitable cropping research for HRZ farmers"*

# Current SFS and Collaborative Research Topics



**CONTRACT TRIALS PROGRAM**



**TECHNICAL WORKSHOPS**



**MLA INTERN PROGRAM**



**NEW VARIETY EVALUATION TRIALS**



**MANAGING HEAVY STUBBLES IN HRZ CROPPING SYSTEMS**



**PROBETRAX, SOIL MOISTURE PROBE NETWORK**



**INTEGRATED WEED MANAGEMENT**



**RURAL BANK CROP CHALLENGE**



**SOIL ACIDITY AND LIMING**

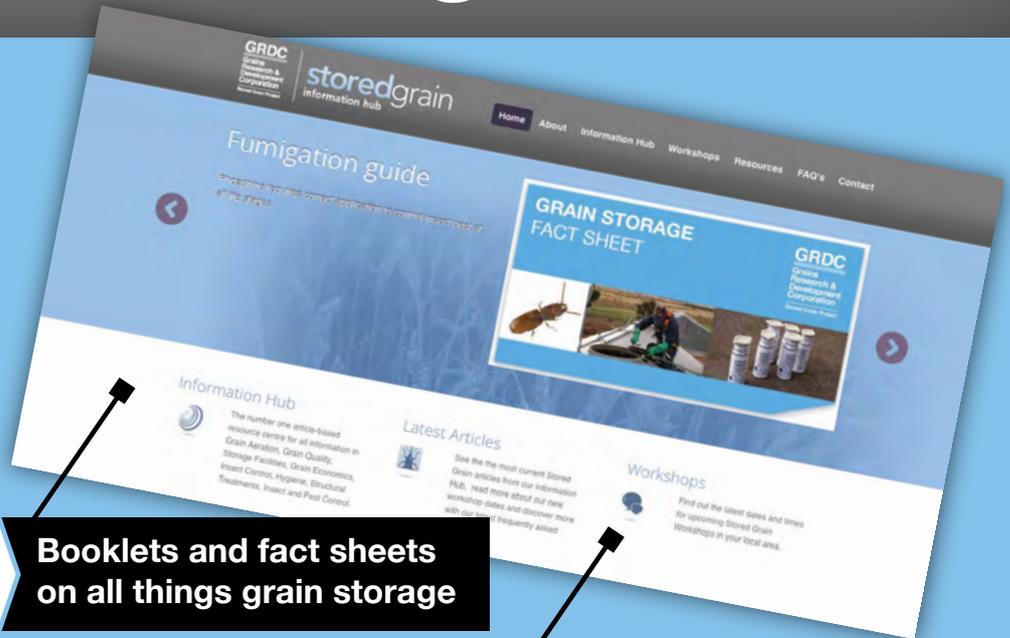
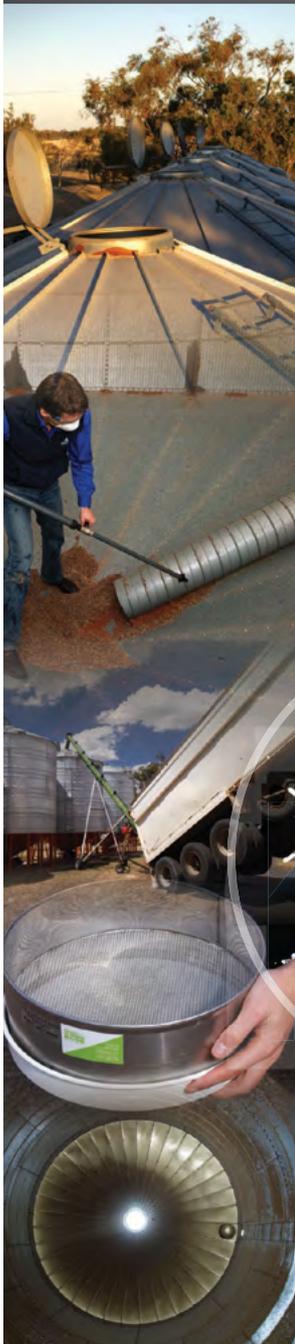


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# How much economic value can the grazing of dual purpose crops contribute to a mixed enterprise farming system

*Cam Nicholson.*

*Nicon Rural Services, Geelong.*

**GRDC project code:** SFS00028

## Keywords

- Grain and Graze, mixed farming, grazing crops, economics.

## Take home messages

- Successful grazing of crops requires planning from the outset of the season to reduce crop yield losses (e.g. sow earlier) and maximise livestock productivity (e.g. change operation timings to suit, increase number of twin bearing animals).
- Adequate cropped area was important for significant change to farm profit. The rule of thumb is >60% cropped to ensure adequate feed for meaningful change to livestock production.
- Sowing crops earlier saw yield increases that often outweighed the marginal yield declines from grazing and provided feed earlier in the season.
- Increasing livestock production by moving to twin bearing ewes to capitalise on the additional feed available, increased farm profitability. The increased fecundity of ewes and number of lambs increased the dry sheep equivalent (DSE) carried, providing an alternative strategy to buying more stock to match feed availability.

## Introduction

The opportunities, risks and 'rules' around grazing dual purpose winter crops are reasonably well understood (Creelman et al, 2015; Dove and Kirkegaard, 2014; Nicholson et al, 2016). However economic information on grazing dual-purpose winter crops is often simplistic or lacks rigorous economic analysis that captures the farming systems implications or trade-offs.

The most common economics analysis around grazing crops are simple at best, such as valuing the number of grazing days when on the crop and multiplying this by an agistment rate. Another common approach is to calculate the total energy consumed and then equating this to the equivalent amount and cost if a supplement feed source was

used. Both approaches will tend to overvalue the benefits from grazing.

Growers and advisers have also observed other possible effects when grazing a winter crop, such as:

- Changes in grain yield after grazing (often a decline but also sometimes an increase).
- An increase in pasture biomass because pastures are being 'spelled' when animals are on the crop.
- Higher animal condition after grazing the crop which flows through into benefits such as greater wool cut, slightly higher lambing percentage and improved growth of young animals.



Growers and advisers also realise that a year when large amounts of crop biomass is available for grazing is commonly a year when there is also ample pasture feed, usually because of a favourable autumn break. Conversely a year with poor autumn pasture growth means that the crop biomass available, albeit less than in a good year, is more 'valuable' than in a year of abundance. If livestock prices are poor and grain prices are high, the risk to the overall farm profit, say from a reduction in grain yield, may be greater than in years when livestock are worth a lot and grain prices are low. This complexity makes valuing grazing winter crops difficult.

## Method

The Grain and Graze 3 program (principally Zoe Creelman) conducted whole farm modelling on three farms in Western Australia (Moora, Katanning and Esperance), two farms in south west Victoria (Inverleigh and Penshurst) and two farms in South Australia (Kapunda and Minnipa) to appreciate the dynamics of these interactions and the effect on the business 'bottom line' (Creelman, 2017). Model farms were based on typical farms for those regions and developed using a combination of APSIM, GrassGro, GrazFeed and @Risk. Farm structure and outputs were verified by local consultants and researchers.

Summary information for the South Australian and Victorian farms are presented (Table 1), with a detailed example from Inverleigh used in this paper. Reports on each location and an executive summary are available from [www.grainandgraze3.com.au](http://www.grainandgraze3.com.au)

Three management scenarios were compared against a baseline of no grazing of any winter crop (the control). The management scenarios chosen were informed from previous investigations (e.g.

Kirkegaard 2013, Hunt et al, 2016) and grower observations. The three scenarios were:

1. A 'typical' time of sowing and grazing crops only if pasture feed on offer (FOO) was < 750 kg/ha.
2. 'Early' sowing, grazing all ewes on crops, with grazing rules as per scenario 1.
3. 'Early' sowing, increased stocking rate, grazing all ewes on crops, with grazing rules as per scenario 1.

Key outputs presented are for net farm profit and then components of:

- Crop gross margin
- Livestock gross margin
- Lambing %
- Sale weight
- Wool cut
- Supplementary feeding

### The model for Inverleigh

The Inverleigh farm was a total of 1,140ha arable area - 240ha cropped (100ha wheat, 70ha barley, 70ha canola). The remaining 900ha was improved pasture with prime lamb and first cross operations. The prime lamb flock contained 2350 breeding ewes (Dorset). The first cross flock contained 1975 breeding ewes (Merino), with half of them used to breed replacement Merino ewes and the other half crossed with a Suffolk sire for first cross lambs. The soil was a clayey sand with a plant available water capacity of 138mm.

Crops were generally sown between late April and late May, with varieties changed to suit the sowing time. Grazing period was July (Table 2).

**Table 1:** Enterprise mix and area of cropping and grazing for each model farm.

	Crops			Livestock	
South Australia	Kapunda	Wheat (milling & durum) ,Barley, Canola	650 ha	Self-replacing Merinos First cross Merino x Suffolk	1850 ha
	Minnipa	Wheat, Field peas, Canola	1300 ha	Self-replacing Merinos	440 ha
Victoria	Inverleigh	Wheat, Barley, Canola	240 ha	Prime lambs Self replacing Merinos First cross Merino x Suffolk	900 ha
	Penshurst	Wheat, Barley, Canola	110 ha	Vealers Prime lambs Self replacing Merinos First cross Merino x Suffolk	935 ha

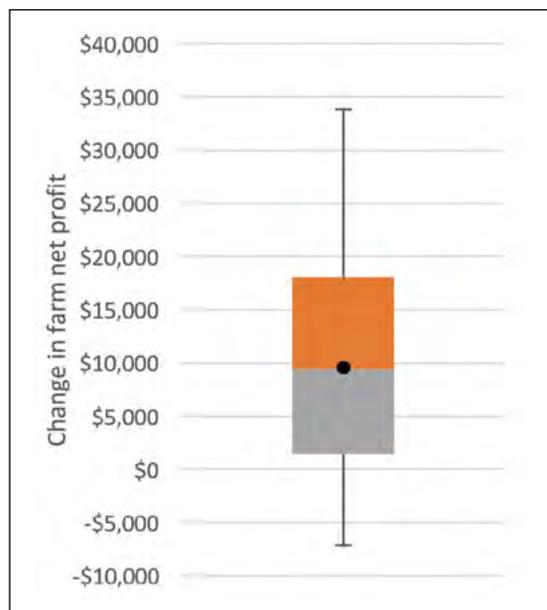
**Table 2:** Crop variety, sowing window and grazing period.

Crop	'Typical' sowing date and variety		'Early' sowing date and variety		Grazing period
Canola	Hyola 650 TT	April 25 – May 5	Taurus	April 11 – April 18	Not grazed
Wheat	Bolac <sup>d</sup>	May 8-15	Revenue <sup>d</sup>	April 1 – 10	1-21 July
Barley	Commander <sup>d</sup>	May 20-27	Capstan <sup>d</sup>	May 7-14	10 July – 31 July



## Results (for Inverleigh)

Grazing crops and stubbles at Inverleigh with 'typical' sowing dates and grazing resulted in 2.3% increase in average net farm profit of \$9,600, although the range was between approximately +\$34,000 (9.8%) and -\$7,200 (-2%) (Figure 1).



**Figure 1.** Change in net farm profit with grazing crops compared to a baseline of not grazing.

There was a greater increase in net farm profit during the low rainfall years than the good years,

while the top 25% of years only increased 1.2% with grazing crops, the bottom 25% of years increased 4.0%.

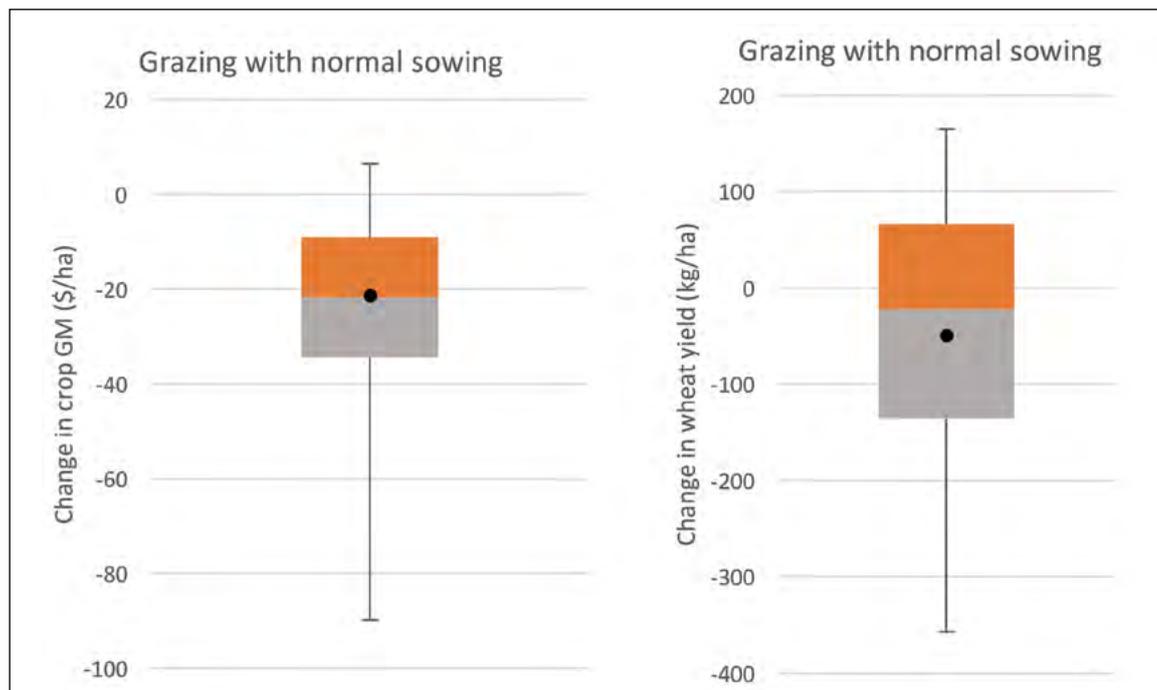
### Crop gross margin

Grazing crops that were sown on a 'typical' date resulted in a decline in crop gross margin (GM) 86% of the time. On average the change in crop GM with grazing was -\$21/ha due to yield decline with grazing (Figure 2).

Wheat yield decline with grazing was the main cause of decreased crop GM. The larger area of wheat planted than barley (100ha wheat versus 70ha barley) and higher prices of wheat meant the yield declines in wheat had a greater effect on crop margins than barley. Barley yields changed the same proportions from grazing as wheat (n.b. APSIM does not allow defoliation (grazing) of barley so grazed barley was modelled by using the same proportional decline in wheat yields from grazing). Autumn sown canola was not grazed in the model because winter was considered too cold for adequate recovery prior to flowering.

### Livestock gross margin

Crops were only grazed when the extra fodder was needed (when green pasture FOO was <750 kg DM/ha animals were put on crop). This resulted in crops not being grazed in most years (Table 3).

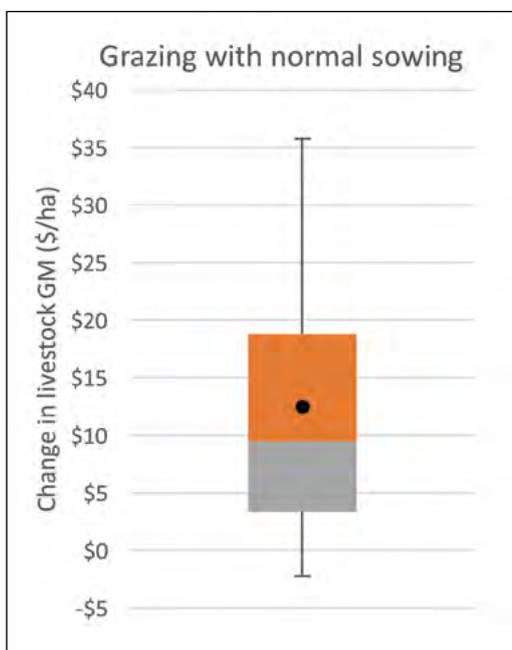


**Figure 2.** Change in crop GM (left) and wheat yield (kg/ha) with grazing compared to the baseline of not grazing.



**Table 3:** Frequency of crops grazed.

Prime lambs		Merino x Suffolk (terminal ewes)	
Frequency of years	Crops grazed	Frequency of years	Crops grazed
27%	Barley (2-23 July)	18%	Wheat (9-23 July)



**Figure 3.** Change in livestock GM with grazing crops compared to a baseline of not grazing crops.

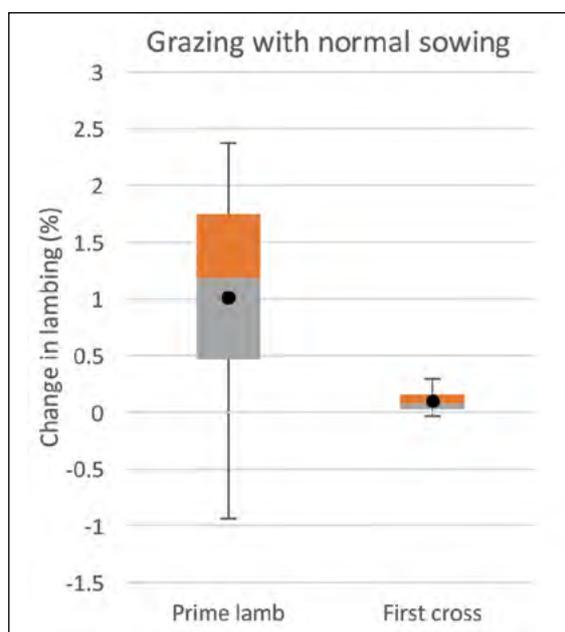
**Lambing %**

Grazing crops marginally increased lambing percentage for the prime lamb mob (average increase of 1%). Grazing crops did not affect the first cross (Merino x Suffolk) lambing percentage because the ‘typical’ lambing time meant ewes could only start grazing the crops an average of two days before lambing. This resulted in minimal change in lambing (Figure 4). Prime lamb ewes grazed crop July 2-23 and lambed on August 11. This meant they were 0.1 condition score (CS) higher at point of lambing, contributing to an increase in lambing percentage.

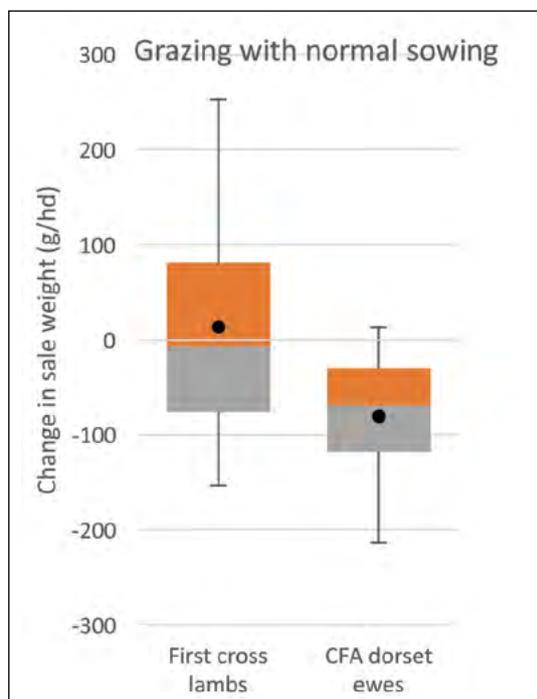
**Livestock sale weight**

The only animal class to change sale weight were the first cross lambs and cull for age (CFA) ewes from the prime lamb flock (Figure 5).

Prime lambs were sold when they reached 50kg live-weight (LWT). The first cross self-replacing flock rarely grazed crops so there was no change in the surplus ewe and wether sale weights.



**Figure 4.** Change in lambing percentage with grazing crops compared to a baseline of not grazing crops.



**Figure 5.** Change in sale weights of first cross lambs and culled for age (CFA) ewes from the prime lamb mob with grazing crops.

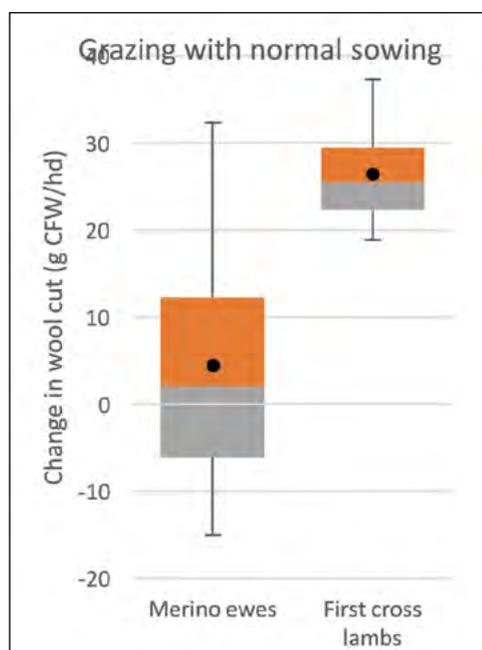


On average lambs were sold at about the same weight whether crops were grazed or not grazed. CFA ewes from the prime lamb mob sold on average 81g lighter (-\$0.10/hd).

### Wool cut

Wool cut increased marginally with grazing crops (Figure 6). Ewe wool cut increased on average 5g clean fleece weight (CFW)/hd. At a price of \$13.21/kg clean for 19µm wool that is an average increase of \$0.07/ewe.

There was a greater increase in cut from first cross lambs where they grazed stubble and the maternal ewes had been grazing crop at lambing. On average, first cross lamb wool cut increased by 26g CFW/hd. At a price of \$11.04/kg for 23µm wool that is an average increase of \$0.29/lamb.

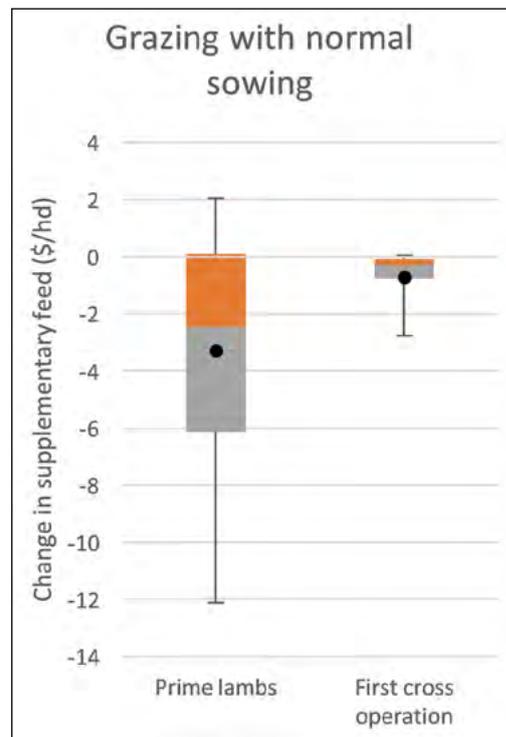


**Figure 6.** Change in wool cut from merino ewes and first cross lambs with grazing crops.

### Supplementary feed

Supplementary feed reductions with grazing crops was a key saving that increased the livestock GM. The change was more substantial in the supplementary feeding of the prime lamb mob than the first cross mob (Figure 7). This was because the self-replacing part of the first cross enterprise did not graze crops and thus did not have any substantial change in feeding.

The prime lamb operation saved on average 36.9t feed (barley) which equated to \$7,700 across the mob on average. The first cross mobs saved on average 6.7t of feed, or \$1,400.



**Figure 7.** Change in supplementary feeding costs for the whole flock divided by the number of ewes.

Occasionally feeding out increased with grazing crops, seen in the upper whisker in Figure 7 reaching \$2.10/hd. This was mainly driven by increased feeding out to finish lambs in a late autumn break because there were more lambs born during this period when crops were not grazed.

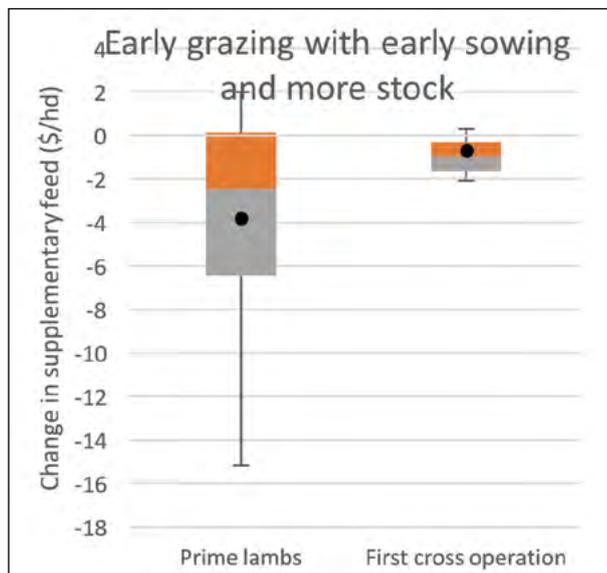
### Changing farm practice

Two additional scenarios were examined (earlier sowing and earlier sowing with increasing stocking rate to maintain the same stocking rate by utilising the extra feed). At Inverleigh, the area and grazing period was only substantial enough for the Merino x Suffolk part of the first replacing flock to increase stock number by about 2%. The key findings were:

- Net farm profit increased by 7.7% to an average of \$31,600 when early sowing occurred and higher stock number were implemented (range -\$5,000 to +\$70,500). There was a greater net farm profit increase in the poor years than the good years: the top 25% of years increased 6.3% with grazing crops, while the bottom 25% of years increased 8.6%.
- Sowing earlier also meant crops could be grazed in June rather than July, allowing more recovery time before flowering which reduced the impact on crop yields. Crops were now grazed 61% of the time for the prime lamb operation and 52% of the time for the first cross enterprise.



- Livestock gross margins increased 99.3% of the time. On average the GM increased by \$21/ha. The biggest driver on the gross margin increase was a substantial reduction in supplementary feeding (Figure 8). Lambing percentage, wool cut and sale weight all increased but only marginally.



**Figure 8.** Change in supplementary feeding for the whole mob divided by the number of ewes in the mob where early sown crops were grazed with more stock.

The prime lamb operation saved on average 43.0t feed (barley) which equated to about \$9,000 across the mob. The first cross mobs saved on average 5.3t of feed, or \$1,100.

The main conclusions from the change in sowing time and stocking rate were:

- Sowing crops earlier saw significant increases in grain yields (even when shifting to feed varieties from milling) that diluted the impact of grazing yield penalties.
- More condition at lambing led to more live lambs.
- Shifting flocks to twin bearers was less risky than increasing flock size to capitalise on extra feed in season. Increasing flock size to capitalise extra feed came with the downside risk of having to increase supplementary feeding to maintain animals in a bad year.
- Where possible the model was altered to maximise outputs and capitalise on opportunities, but a real system would be more responsive to seasons and prices (e.g. holding on to stock or selling early depending on feed availability).

## Differences in grazing crops across agro-ecological zones

The enterprise mix, rainfall and livestock classes were key drivers in how influential grazing winter crops made to the businesses' bottom line. Examination of all eight farms revealed the following:

- Farms with minimal crop area (e.g. Inverleigh and Peshurst) were restricted to short periods of grazing crops with select animal classes. This limited the potential for increases in farm profit from grazing crops. As a rule of thumb, if crop made up >60% of the farmed area, grazing crops had the potential to substantially change farm profits.
- Low rainfall areas typically had lower net farm profits, so the gains made through reducing supplementary feeding, increasing yield from sowing earlier and selling more animals slightly heavier saw significant proportional increases in farm profits (e.g. Minnipa compared to Peshurst).
- High value animals that made additional gains by grazing crops helped overcome the cost to crop yields of grazing crops e.g. grazing crop with twin bearing ewes rather than single and twin bearers saw greater returns.

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Nicholson C, Frischke A, Barrett–Lennard P (2016)  
Grazing cropped land - *A summary of the latest  
information on grazing winter crops from the Grain &  
Graze Program*: GRDC Canberra

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Notes



# Hyper Yielding Cereal project – is there relevance to the mainland high rainfall zone (HRZ)?

Nick Poole<sup>1</sup>, Tracey Wylie<sup>1</sup>, Darcy Warren<sup>1</sup>, Michael Straight<sup>1</sup>, Kat Fuhrmann<sup>1</sup>, Jon Midwood<sup>2</sup> and Ian Herbert<sup>2</sup>.

<sup>1</sup>FAR Australia; <sup>2</sup>Southern Farming Systems (SFS).

GRDC project code: FAR 00003

## Keywords

- feed wheat, feed barley, cultivars, early sowing (April), phenology, spring wheat, winter wheat, dry matter, soil fertility.

## Take home messages

- Research results from the GRDC Hyper Yielding Cereals (HYC) project have set new benchmarks for the yield performance of irrigated feed wheat with plot yields in excess of 15t/ha in 2016 and in excess of 12t/ha in 2017.
- Higher final harvest dry matter is essential for higher grain yields. Crop canopies producing 30t/ha-35t/ha dry matter at harvest have produced plot yields of 15t/ha – 17t/ha in research plots, using feed grain germplasm.
- Initial screening (50 wheat and 11 barley cultivars/lines) have shown that there are four cultivar characteristics essential for April sowing in the Tasmanian HRZ;
  - The right ‘time clock’ or phenology is important so that the key development period of stem elongation coincides with the best environmental conditions to maximise growth and yield potential.
  - For sowing prior to ANZAC day (April 25) the research has shown that winter wheat cultivars provide much safer options for maximising yield than spring wheat cultivars.
  - Disease resistance particularly to Septoria tritici blotch (STB), leaf rust and scald.
  - Good standing power is essential for achieving yields over 8t/ha.
- Research from 2018, with mid-April sowing in south-east (SE) South Australia (Millicent), has shown that results achieved in the HYC project are relevant to the longer season mainland HRZ in south-eastern Australia.
- HYC research on feed grain germplasm in Tasmania has shown that the same cultivars are outperforming the current commercial controls grown in mid-April in SE South Australia.
- These wheat cultivars were RGT Accroc<sup>Ⓛ</sup>, Annapurna<sup>Ⓛ</sup>, RGT Calabro<sup>Ⓛ</sup>, AGTW0002 and DS Bennett<sup>Ⓛ</sup>.
- With the barley research, despite three contrasting seasons, the same three cultivars topped the yield rankings these were RGT Planet<sup>Ⓛ</sup>, RGT Conquest and the faster developing cultivar Rosalind<sup>Ⓛ</sup>.



## Background

Despite a more suitable climate for grain production than the mainland and much higher yield potential, the average (predominantly dryland) yield of red grain feed wheat in Tasmania is still approximately 5t/ha. While this has increased relatively more than other states in the last 20 years (Source: ABARES) it is still felt to be well below the potential. The HYC project supported by GRDC and led by FAR Australia in collaboration with Southern Farming Systems (SFS) aims to make Tasmania less reliant on grain supplied from mainland Australia through increased productivity of feed grain wheat and barley. Through the collaboration of international, national, local expertise and breeders, the five-year project is working to close the gap between actual and potential yields, as well as using links with end users to promote the value of trading quality feed grains

## Research

The irrigated Hyper Yielding Research Centre at Hagley in Tasmania has, over the last three years, used over 1000 experimental research plots each year to identify new cereal lines and agronomy strategies that could lift feed grain productivity in the Tasmanian HRZ. The concept of the research has been to explore whether the April sowing window can be used to maximise biomass and yield potential without giving rise to large increases to input costs.

In 2016, the first-year research results from the HYC project set new benchmarks for the yield performance of feed wheat with plot yields in excess of 15t/ha. The soft finish and high rainfall

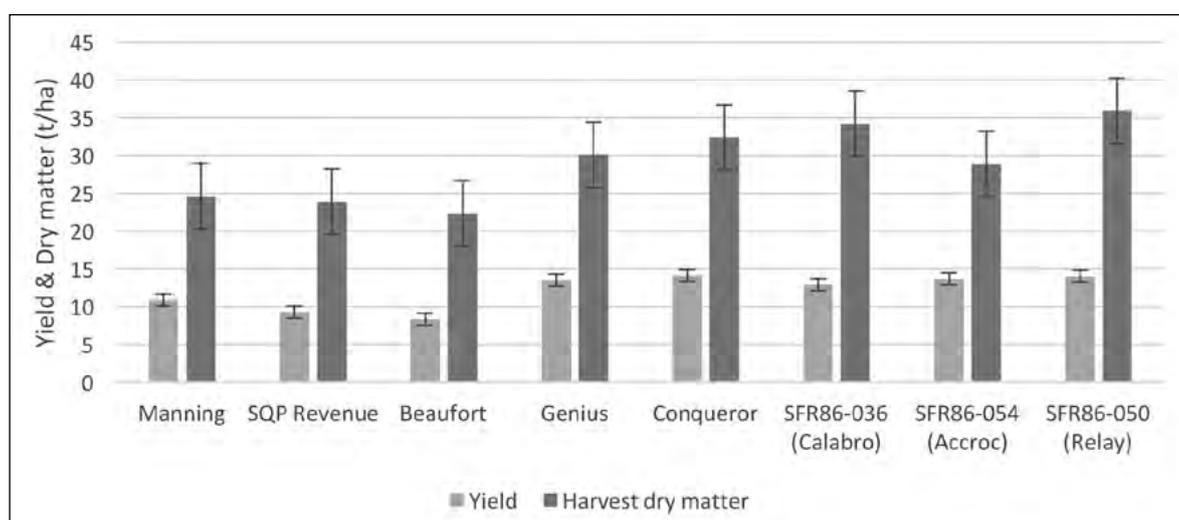
experienced were in stark contrast to 2017 when low rainfall, higher temperatures and late frosts affected the grain fill period and reduced maximum yields to 12t/ha – 13t/ha. In many ways the contrast of the 2016 and 2017 seasons has been useful in determining which new cultivars/lines perform well in both seasons. In 2018/19 at the time of going to press, wheat remained to be harvested but barley was producing yields in excess of 10t/ha for the third year in succession.

## High harvest dry matters essential for higher grain yields

In order to generate higher yielding cereals, it has been essential to generate high harvest dry matters. This has been clearly observed in HYC research with some of the more promising cultivars producing the higher dry matter contents. The final harvest dry matters in 2016 HYC research for the highest yielding cultivars/lines were approximately 30t/ha – 35t/ha dry matter and showed significantly higher grain yields than the control cultivars Manning<sup>®</sup>, SQP Revenue<sup>®</sup> and Beaufort<sup>®</sup> (Figure 1). In addition to higher dry matter the same cultivars had better standing power and exhibited better resistance to STB and leaf rust.

## High fertility essential for higher yields

High yield potential is strongly linked to higher fertility, where the extra nitrogen (N) required to realise higher potential is provided by the soil not by additional fertiliser. Analysis of HYC yields and grain proteins suggest that large quantities of N, exceeding applied N fertiliser, were removed from the soil to produce high yields. In 2016 yields of



**Figure 1.** Influence of cultivar/line on grain yield and dry matter (t/ha) at harvest versus commercial controls sown 6 April – HYC Research 2016/17 season.



14t/ha – 17t/ha were achieved with no more than 220kg N/ha fertiliser applied, yet N offtakes in the grain alone indicated the removal of approximately 258kg N/ha – 336kg N/ha for specific cultivars and sowing dates.

In the UK, recent analysis of independent NIAB TAG trials show similar findings to the HYC research over the last two years. Results from a large series of wheat trials indicated that high yield potential usually comes from higher fertility, where the extra N required to realise that potential is provided by the soil, such that the total applied N needn't be significantly higher than for crops with lower yield potential. The analysis of trials on wheat from the UK put forward 'that for every tonne of N fertilised grain/ha, two thirds of a tonne comes from the yield without N'. This was put forward to explain 'why the additional amounts of N required for very high yields in field trials is less than would logically be expected' (NIAB TAG 2018). Clearly the fertility of farming systems and soil organic matters are lower in Tasmania than the UK, however from the Tasmanian results the fertility of the whole farming system is a key component to achieving higher yields.

### Is there any relevance of the HYC research to the mainland HRZ?

With far less emphasis on breeding for yield in HRZ regions of Australia, does the research on germplasm and agronomic strategies in Tasmania

have any relevance to the mainland? 2018 results from the SA Crop Technology Centre at Millicent run by FAR Australia in collaboration with SARDI and funded by Landmark and the wider industry would suggest the answer is yes.

Mid-April sowing (18 April) suggested that winter wheat cultivars were more suitable to secure the yield potential of this sowing date than spring wheats which developed too quickly (Table 1). The sowing date was too early for the spring wheat cultivars resulting in significant frosting, particularly where cultivars were grown ungrazed (high and standard management).

There was a significant interaction between cultivar and management with spring wheat cultivars benefitting from simulated grazing and the winter wheats showing a yield penalty from grazing. With less frosting in spring the wheat cultivars, under simulated grazing, retarded the development resulting in a partial escape from some of the frosting effects with late flowering. In addition, cultivars identified as high yielding in Tasmanian HYC trials have topped the 2018 Crop Technology Centre results. These wheat cultivars were RGT Accroc, Annapurna, RGT Calabro, AGTW0002 and DS Bennett<sup>Ⓛ</sup>.

High input management (five fungicides (seed treatment and four foliar sprays) and 200kg N/ha of applied N) did not significantly increase grain yields over the standard management approach based

**Table 1.** Grain yield (t/ha) under three management levels, 2018 Crop Technology Centre, Millicent, SA.

Cultivar	Management Level			
	High Input Yield t/ha	Standard Input Yield t/ha	'Grazed' Input t/ha	Mean
Manning <sup>Ⓛ</sup> (Winter control)	9.23 efg	9.33 efg	8.36 h	8.97
Beaufort <sup>Ⓛ</sup> (Spring control)	7.83 hi	7.53 i	8.04 hi	7.80
DS Pascal <sup>Ⓛ</sup> (Spring)	5.27 l	6.02 jk	6.43 j	5.91
Annapurna (Winter)	10.61 a	10.61 a	9.12 fg	10.11
Conqueror (Winter)	9.13 fg	9.05 g	9.25 efg	9.14
RGT Accroc (Winter)	10.49 ab	10.52 ab	9.27 efg	10.09
RGT Calabro (Winter)	10.23 abc	10.05 a-d	8.36 h	9.55
AGTW0002 (Winter)	9.53 d-g	10.44 ab	9.67 c-f	9.88
Trojan <sup>Ⓛ</sup> (Spring)	5.49 kl	5.59 kl	6.23 j	5.77
DS Bennett <sup>Ⓛ</sup> (Winter)	10.01 bcd	9.81 cde	9.58 d-g	9.80
LSD Cultivar p = 0.05	0.33 t/ha P val	<0.001		
LSD Management p=0.05	0.88 t/ha P val	0.450		
LSD Cultivar x Man. P=0.05	0.57 t/ha P val	<0.001		

Winter – winter wheat, Spring – spring wheat, 'Grazed' Management – simulated grazing with mechanical defoliation.

Yield figures followed by different letters are considered to be statistically different (p=0.05), for example

a yield of 9.33 efg is considered statistically different to 8.36 h but not to a yield of 9.13 fg.

Plot yields: To compensate for edge effect a full row width (22.5cm) has been added to either side of the plot area (equal to plot centre to plot centre measurement).



**Table 2.** Approximate date of pseudo stem erect (GS30), mid flowering (GS65) under standard management, dry matter (DM) removed in simulated grazing (mechanical defoliation) management at GS30 and grain yield reduction associated with grazing, 2018 Crop Technology Centre, Millicent, SA

Phenology (GS30 and GS65), Dry matter removal (GS 30) and yield decrease with grazing				
Cultivar	Date GS30	Date GS65	DM * Kg/ha GS30	Yield reduction (t/ha)
Manning <sup>Ⓛ</sup> (Winter control)	21 Aug	7 Nov	2195	0.97
Beaufort <sup>Ⓛ</sup> (Spring control)	27 Jun	2 Oct	337	+0.51
DS Pascalv (Spring)	27 Jun	5 Oct	261	+0.41
Annapurna (Winter)	21 Aug	24 Oct	2054	1.49
Conqueror (Winter)	9 Aug	12 Nov	1200	+0.20
RGT Accroc (Winter)	13 Aug	24 Oct	1475	1.25
RGT Calabro (Winter)	28 Aug	30 Oct	2197	1.69
AGTW0002 (Winter)	1 Aug	18 Oct	954	0.77
Trojan <sup>Ⓛ</sup> (Spring)	27 Jun	25 Sep	322	+0.64
DS Bennett <sup>Ⓛ</sup> (Winter)	1 Aug	18 Oct	1045	0.23

\* Provisional data means presented with no statistical analysis in the express results

on three foliar fungicides and a 120N total. Higher yielding cultivars were associated with higher test weights and larger grain size (data not shown).

Simulated grazing showed a considerable range of dry matter offtakes dependent on the date at which the cultivar reached growth stage (GS)30 (start of stem elongation). With later developing winter wheat cultivars that reached GS30 in late August, dry matter offtakes exceeded 2000kg/ha. However, these cultivars gave greater grain yield reductions as a result of simulated grazing (Table 2). With slightly faster developing winter wheat cultivars such DS Bennett<sup>Ⓛ</sup>, which reached GS30 in early August, the dry matter offtake associated with grazing gave only a slight yield reduction in grain yield but dry matter offtake closer to 1000 kg/ha.

In conclusion, the HYC research trials have identified new cultivars and techniques that have set new benchmarks for yield performance in feed wheat with plot yields in excess of 15t/ha and barley yields over 11t/ha. In addition, 2018 research at the SA Crop Technology Centre in Millicent has found that the same lines identified as high fliers in Tasmania have been performing well in the South Australian HRZ.

Come and view the HYC research at the main Hyper Yielding Cereal Project Field Day in Tasmania on Thursday November 14 2019!

## Acknowledgement

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# Hyper-yielding cereals – are extra inputs needed and if so do they pay?

*Darcy Warren.*

*FAR Australia.*

This paper was under review at the time of publication of proceedings and can be found in full at <https://grdc.com.au/resources-and-publications/grdc-update-papers>

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# How to borrow using a self-managed superannuation fund to acquire farmland

## Key points

- A self-managed super fund (SMSF) can use a limited recourse borrowing arrangement (LRBA) to acquire farmland.
- Problems may arise if buying land which is spread across multiple titles.
- Funding can come from a related party.

## Background

The superannuation system provides several benefits when it comes to a self-managed superannuation fund (SMSF) owning farmland. These include asset protection and the management of estate planning risk. However, the overriding advantage is that it provides a tax-effective environment to help build wealth. In most circumstances a superannuation fund will be taxed at a maximum rate of 15% and in certain instances its income will be tax free.

In circumstances where a SMSF has borrowed to acquire an asset, theoretically there could be 85%–100% of income (after tax) available to pay back the debt. This potentially allows debt to be paid off faster when compared to a ‘non-superannuation’ environment, thereby generating wealth at a superior rate. The downside of such tax-effective conditions are the strict regulations and compliance rules a SMSF faces. The ‘sole purpose test’ is the fundamental doctrine that all superannuation fund trustees must legally comply with.

The sole purpose test imposes a requirement on the trustee to maintain the fund for the primary purpose of providing its members with retirement benefits. The test is the underlying rationale behind the four key SMSF investment restrictions that relate to how the investment is transacted and with whom, rather than the type of asset being acquired. The restriction relating to the ability of a SMSF to borrow money has had several significant changes since 2007.

Prior to September 2007 a SMSF basically had no capacity to borrow money to acquire an asset

(e.g. real property), due to the strict adherence to the sole purpose test. However, in September 2007, amendments to the superannuation legislation enabled SMSF trustees to borrow or gear their investment acquisitions, initially using instalment warrants (up until July 2010) and currently via a limited recourse borrowing arrangement (LRBA – from July 2010). This fact sheet focuses on a SMSF using a LRBA to acquire farmland.

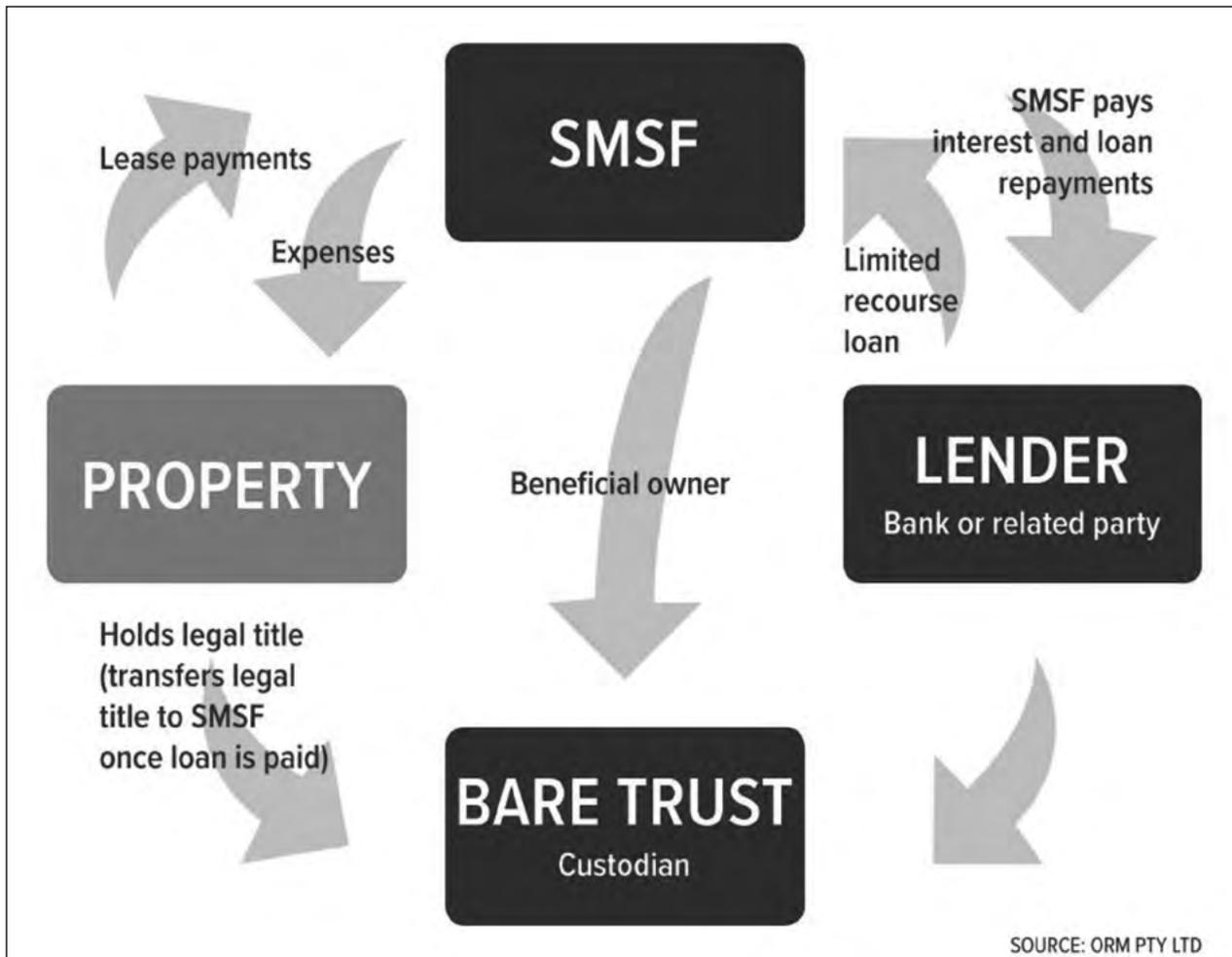
## What is a LRBA and how does it work?

A LRBA involves a SMSF taking out a loan from a third-party lender or from a related party (e.g. fund member). The SMSF then uses the borrowed money and any of its own available funds (e.g. a deposit) to purchase a single asset (real property) that is to be held in a separate custodian or ‘bare’ trust.

The trustee of the bare trust is the legal owner of the asset, whilst the SMSF has only a beneficial interest in the asset, up until the loan has been extinguished. During the LRBA any income received from the asset, such as a farm lease, is paid directly to the SMSF. The loan repayments, including interest, are to be made by the SMSF. Once the loan is paid out the SMSF’s trustee has a right to acquire legal ownership of the asset.

If the SMSF defaults on the loan, under a LRBA, the lender’s right to recourse is limited to the asset (under finance) held in the related bare trust. All other fund assets are not exposed to any claim from that lender. Therefore, the retirement benefits of the fund’s members are protected, and the sole purpose test is met.





**Figure 1.** The structure of a limited recourse borrowing arrangement.

## Benefits of utilising a LRBA

**Growing fund assets through borrowing** – A LRBA provides the ability to acquire farmland in the superannuation system when a SMSF has not enough cash to purchase it outright. Initially the fund only has a beneficial interest in the property, however it is entitled to receive all derived lease income and/or any capital gain proceeds from the sale of the land. Legal ownership of the land will pass to the SMSF on loan payout.

**Concessional tax rates** – Lease income derived from farmland owned by a SMSF will only be subject to a maximum tax rate of 15% during ‘accumulation’ phase. This rate would also apply to any capital gain realised on the disposal of the land. When compared to the marginal (individual) and company tax rates applicable outside the superannuation environment, there is potential for any income received from farmland to be taxed substantially less when owned by a SMSF.

Furthermore, if the SMSF is in the ‘retirement’ phase, and the farmland forms part of the asset base supporting the payment of a pension stream, any income (including capital gains) derived from the land will be tax free.

**Asset protection** – By the SMSF owning farmland separate from the farming business operations, the land is basically shielded from exposure to financial and legal risk. Also, assets in a SMSF are usually treated as non-divisible property and protected against creditor claims in the event of bankruptcy.

**Estate planning** – Assets held in superannuation will not form part of a deceased individual’s estate. By having in place, a superannuation binding death benefit nomination, a member(s) of a SMSF can ensure farmland (inside the fund) is transferred on their death to a specified individual. This can be used to provide certainty and security to the next farming generation as the listed land will not form part of the estate or any contested Will action.



## Disadvantages of a LRBA

**A SMSF cannot acquire an asset from a related party** – One exception to this rule is business real property acquired at market value. Business real property generally means land and buildings used wholly and exclusively in a business.

**‘Single acquirable asset’ (SAA)** – This concept is relevant where a LRBA is used to acquire farmland comprising multiple titles. Refer to the case study opposite for a detailed example.

**Property improvement costs cannot be funded** – Alterations or improvements to the farmland, such as new sheds, fencing, yards, bores etc. cannot be paid for by the LRBA loan funds. However, repairs and maintenance associated with purchased farmland (e.g. fence repairs) can be funded by the LRBA borrowings.

**Additional costs and complexity** – Extra costs relating to the set-up and administration of the bare trust, including potentially a corporate trustee, are a direct impost when acquiring an asset using a LRBA. Financial institutions may also charge for additional costs of vetting the SMSF’s deed to confirm the trustees are able to maintain a borrowing arrangement. A LRBA loan will attract a higher interest rate to compensate financiers for their limited recourse capabilities.

When new entities are added to a business structure, as is the case with a LRBA, it is inherent that administrative complexities also increase.

**Farmland security unavailable** – A major disadvantage of farmland being owned by a SMSF is that the asset cannot be used as security for further borrowing (e.g. to buy more land). Any such asset exposure is in direct contravention of the Superannuation Industry (Supervision) Act.

**The devil is in the detail** – If a LRBA has not been structured correctly, this may require the arrangement to be unwound, potentially requiring the farmland to be sold. The SMSF deed’s governing rules must also specifically permit entering a LRBA. The asset investment should also be consistent with the fund’s investment strategy. If not, there could be action to recover loss and damages by an aggrieved member.

## Single acquirable asset and implications for farmland acquisitions

The key concept of a ‘single acquirable asset’ (SAA) applies to LRBAs put in place on or after 7 July

2010 and only permits a SMSF trustee to borrow to acquire a single asset or a collection of identical assets (e.g. 1,000 BHP shares).

A major issue arises where a SMSF acquires farmland on a single contract of sale, consisting of multiple separate titles. Put simply, where land can potentially be sold in separate lots, the collective will not be classed as a SAA. Each individual title will be deemed a separate SAA, requiring their own respective bare trust and LRBA, which in turn means extra administrative costs and complexities.

The Australian Taxation Office (ATO) has taken a hard line on this in their tax ruling (SMSFR 2010/1), specifically noting that crops, fencing or irrigation systems spanning more than one title, is not sufficient to gain a SAA classification. However, if the farm being acquired conducts an intensive industry such as a piggery enterprise that has shedding and infrastructure constructed over multiple land titles, this may achieve a SAA status. This is on the proviso that the intensive industry’s infrastructure value is a considerable component of the farm’s purchase price. If this was the case, the farm would obtain a SAA classification and could be purchased under a single LRBA.

## CASE STUDY

### Single Acquirable Asset

- Peter and Pauline are the only members of their SMSF
- Peter is interested in purchasing a parcel of land from a neighbour for \$800,000 (including ‘standing’ crops). The farmland is split across three separate titles.
- All their current farmland holdings have either been transferred to or purchased by the SMSF. For succession planning purposes, they want all future land acquisitions within the SMSF.
- Their farming operations utilise a discretionary trust structure.
- They both have fully utilised their non-concessional contribution caps.
- The SMSF has \$250,000 in cash available.

### What are the issues to be dealt with?

- The SMSF does not have the cash to buy the land outright and cannot be injected with additional funds via non-concessional contributions.



- With the parcel spread across three separate titles and if the sale is under one contract, the land will not be deemed a SAA, thus cannot be acquired using a LRBA.

## Possible options

1. Use the SMSF's cash (\$250,000 or part of) to purchase one or two titles under one contract of sale, and any remaining title/s are acquired with a separate contract of sale and LRBA.
2. Each respective title is acquired with its own separate contract of sale and LRBA.

### LRBA with a related-party lender

There are only a limited number of banks willing to lend to a SMSF. Those that do often place onerous obligations on the trustee and/or have an approval process that can be slow and expensive. An appealing alternative to using a third-party lending institution, is for the SMSF's trustee to arrange a LRBA with a related party (see definition in FAQs), provided arm's length terms are invoked. The ATO has issued new guidelines for a related-party loan to acquire real property, including farming land, as follows:

- An interest rate of 5.8% (2017-18). The interest rate must be updated every financial year (using May Reserve Bank of Australia (RBA) lending rates). The trustees may choose to fix the rate at the commencement of the arrangement for a specified period, up to a maximum of five years.
- The term of the loan can be no more than 15 years, which includes any refinancing arrangement.
- Maximum loan-to-value ratio (LVR) cannot exceed 70 per cent. The market value of the asset is established when the loan is entered into.
- There must be a registered charge or mortgage over the property.
- Repayments are to be both principal and interest and to be made monthly.
- A written and executed loan agreement is required.

In practical terms, it means that any funding from a related party to a SMSF needs to be under the kind of loan terms offered by the commercial lenders.

## Frequently asked questions

**Can a SMSF borrowing arrangement be refinanced?** Yes. The 2010 legislation clarifies that a SMSF trustee can refinance an existing LRBA. Refinancing may allow the SMSF trustee to minimise the risk of default on a borrowing resulting from a temporary inability to make a repayment, for example a SMSF facing solvency issues due to benefit payment obligations.

**Can farmland in a LRBA be replaced with another parcel of land?** No.

**Who signs the contract of sale for a property purchased under a LRBA?** The bare trust is the entity that holds the legal title to the property in trust for the SMSF. Therefore, the trustee of the bare trust should be noted as the purchaser of the property on the contract of sale. As each state or territory has different requirements regarding how the trustee (bare) is noted on the contract, it's recommended that you speak with your relevant revenue office or a property law expert to confirm contract notations.

**What is the definition of a related party?** Includes all members of the SMSF, their relatives, the business partners of each member, any spouse or child of those business partners, any trust or company controlled or influenced by a member, employers who contribute to the fund for a member and associates (business partners, companies and trusts controlled by the employer) of those employers.

## Useful resources

### GRDC Farm Business Fact Sheet – National

***The transfer of farmland into a self-managed superannuation fund*** (<https://grdc.com.au/the-transfer-of-farmland-into-a-self-managed-superannuation-fund>)

**GRDC Farm Business Fact Sheet – National Financing: Debt structuring and asset life cycles** (<https://grdc.com.au/debt-structuring-and-asset-life-cycles>)

**More information:** Contact your accountant or financial adviser

**Contact details:** ORM Pty Ltd

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# SPRAY APPLICATION GROWNOTES™ MANUAL



## SPRAY APPLICATION MANUAL FOR GRAIN GROWERS

The Spray Application GrowNotes™ Manual is a comprehensive digital publication containing all the information a spray operator needs to know when it comes to using spray application technology.

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It comprises 23 modules accompanied by a series of videos which deliver ‘how-to’ advice to growers and spray operators in a visual easy-to-digest manner. Lead author and editor is Bill Gordon and other contributors include key industry players from Australia and overseas.

Spray Application GrowNotes™ Manual – go to:  
<https://grdc.com.au/Resources/GrowNotes-technical>  
 Also go to <https://grdc.com.au/Resources/GrowNotes>  
 and check out the latest versions of the Regional Agronomy Crop GrowNotes™ titles.

# Creating a prosperous farming future

*Ken Solly.*

*Agribusiness Consultant, Naracoorte, South Australia.*

## Keywords

- farming future, profit drivers, people, resilience, emotional intelligence.

## Take home messages

- People are the number one profit driver in any business. Ensure 2% to 3% of gross farm income is invested in professional development each year and make sure some of it is in the interpersonal skill area.
- A 'measure to manage' approach is a must in all farm businesses. Develop your key performance indicators then identify and improve the skills and strategies to enable continuous improvement.
- Most farmers live in a cage of their own making. It is knowing what is going on outside that cage and how you adopt and implement the new ideas that usually decides your future.

## Introduction

Agriculture is one of the most challenging industries in the world, with the two most influential factors, climate and markets out of most farmers control. Prospering in farming requires five key attributes:

1. Mindset – attitude.
2. Structure – systems.
3. Plans – strategy and tactics.
4. Chemistry – how to gel/relationships.
5. Culture – values that guide decisions and behaviour.

A lack of profit most of the time is not a technical or production issue. More often, it is a people problem. Get the people right and the production and profit will follow. Profit is just as dependant on good communication, problem solving and negotiation as it is on using the right chemical and fertiliser. We must always be fertilising the top paddock; the one on top of your shoulders. A good starting point is to invest 2% to 3% of your gross income on professional development each year. As the leader of your farm business you need to ensure that you are staying abreast of the opportunities that are available to you. Change may not be compulsory but neither is survival.

## Main characteristics of the key profit driver

The number one profit driver in your farm business is not price or yield. You are the number one profit driver. To become a better operator it may be useful for you to critically analyse some of the best farmers in the district. Good operators understand and have strong focus on the key performance indicators and what drives them. They have a measure to manage approach, have great discipline and never make excuses. Resource allocation is well managed and they have a good support team around them. Good planning, monitoring and analysis skills are supported by an ability to synthesise information well. Behaviours such as remaining abreast of new technology and conducting one's own on-farm research are a given on prosperous farms. Most importantly good farmers have an ability to milk all the learning from every mistake and their time management is spot on.

## Management structures that matter

When you mention the words 'farm business structures', most farmers think of legal structures such as sole traders, partnerships, companies and trusts. Whilst it is very important to ensure you are using the right trading and ownership entity, there are many more structures that need to be put in place to ensure the smooth running of the farm



business. Management structures are also very important. Boards or advisory groups, support teams, regular meetings, job descriptions and dispute resolution processes are all part of good management structures.

Selecting the right business structures helps manage the expectation of the partners or investors in the business and reduces the risk exposure of the individuals within the entity. It should also bring about the most effective tax arrangements and keep the administration costs in line with the benefits derived. Selecting the right structures can also be a tremendous aid to succession planning. A failure in any one of these can be traced back to a lack of good processes, systems and discipline. It is like cooking a special cake, as you need a good recipe where ingredients are contributed in the right proportion. It always pays to work on the weakest link, and if you do this with the five core business ingredients then there is every chance you will be profitable and gaining job satisfaction.

When we analyse the very successful franchise businesses, the core of their success is built around, structures, systems and processes. Having good systems and structures in place ensures that the members of the business are playing “the ball not the man”. This should reduce disputation, ensure better and more timely decisions and make the job of farming a more profitable and pleasurable one.

I have long held the belief that you should never go into business with family or friends. With family farming being the predominant operational structure in Australian agriculture, it is critical to have good systems and structures in place, not only to make the best decisions but also to preserve the family relationships.

Every year I see farmers having a strong desire to improve production. They attend field days and seminars, invest in equipment and machinery, read farming magazines and pester their neighbours for knowledge yet they do not invest a cent in the development of their core interpersonal skills. In this fast-changing world communication, problem solving, negotiation, stress management, time management and leadership are the mortar between the bricks when it comes to running a successful business and ensuring that progression is made. Each year most farmers should be undertaking professional development in one or two of these areas. After all, you do not want to become the weak link in the business. Structuring a three-year professional development program for yourself is well worth the effort.

## How do you develop the best strategy?

Develop the Key Performance Indicators and the strategies that drive them. Strategy is the art of planning and directing the larger decisions in the business. Good strategy is everything when it comes to running a prosperous business and starts with having good data or facts on which to base your decision. It is like the foundations of a building; the rest of the structure depends on it. In making better decisions further information and research is usually required. Combine all that with your own experience and you are getting to a point of being wise enough to make a good decision. Wisdom can only be created by combining all these factors; it cannot sit on its own. Farmers must always remember that it is not how high you fly but how well you bounce. It is the decision's that you make in the good times that get you through the bad. If you are going to cope with drought, for instance, it is the good decisions that you make in good seasons that will get you through the drought.

## Developing your personal priority list

Your priorities in life and their order of importance should rarely change and are as follows:

- Your physical and mental health – determines how you perform
- Your family – you need them for love, support and responsibility
- Your business/occupation – for self-worth and livelihood
- Your personal priorities – relief valves
- Your friends – for fun
- Your community – takes the focus away from yourself

Many farmers place their business first and wonder why their physical and mental health is not what it should be. Good mental health is enhanced by a good annual holiday and, where possible, a few short breaks in-between. Some farmers doing it tough say they cannot afford a holiday, but I am convinced that the benefits outweigh the costs manyfold. Without your health the rest of your life (and the people around you) can suffer.

## What must be your non-negotiables

Every farming family should have a set of ‘non-negotiables’. This is an agreed list of ‘must-dos’ and things that you will not do. This sets a good environment in which the team can do things



confidently and well. If after a good apprenticeship you decide to return to the family farm for the long term it is critical that you develop some 20-year goals. For parents, it is critical that by the time they have reached 50 years of age they have well defined retirement, succession and estate plans. Most leave it far too late and the decisions made usually impacts significantly on the next generation. The younger generation need to have share farming, leasing and contracting as considerations for their individual growth strategies. A goal to own 1000 hectares at 40 years of age cannot happen overnight. Equity needs to be accumulated over time to enable this to happen. Timing and good advice in agriculture is not something; it is everything. The difference between good and average farmers is not in the amount of work done, but in the quality, timing and implementation of the decisions. Young farmers need to accept responsibility, take calculated risks and learn everything possible from their mistakes.

To be able to achieve 20-year business goals it is essential that farmers understand the relationship between cash, profit and wealth. Many farmers generate a lot of cash, but the level of profit is not as one would expect, thus limiting wealth creation. To create wealth, we need profit so that cash management is the key. It is investing in appreciating assets rather than depreciating assets that makes this journey more achievable. Every individual piece of machinery and or equipment on a farm must be a cost and profit centre in itself, so that wise decisions can be made when it comes to its replacement.

## How you build your personal resilience

Resilience is our ability to withstand or overcome adversity or unpleasant events and successfully adapt to change and adversity. Farmers that experience drought, floods and fire are always challenging their own resilience. It is commonly said that what matters most is not what happens to us, but how we deal with the adversity. Resilience is built around having strong purpose, mental toughness, physical endurance and emotional balance. Staying in control of one's thoughts is so important. Making sure that you are always dealing with reality and basing decisions on high probability rather than hope remains critically important.

Having a couple of personal and/or business mentors can help. Having someone with whom you can share your inner thoughts is invaluable, particularly in tough times. Asking your mentor 'how do you think I am going?', whilst knowing that the reply will be honest and valued, is critical.

Physical and mental fitness are strongly linked. Many farmers whilst doing some physical work remain physically unfit and this eventually impacts on mental well-being.

## Emotional intelligence is more important than you think

Emotional intelligence is about using your emotions to inform your thinking and then using your thinking to manage your emotions. Whether we like it or not, we experience an emotion every minute of the day. Right now, you are experiencing an emotion and when asked what it is, most people struggle to describe or identify it. Emotions are feelings you have about a situation and, believe it or not, they strongly influence the way you act and interact. Most of our relationships are built around emotional intelligence. The six basic emotions of joy, surprise, fear, disgust, anger and sadness can be expanded to hundreds of words that describe how we feel about a person or situation. A good starting point is to identify when you behave badly, and then work on improving your reaction to this situation when it happens again. If it involves another person, a good starting point is to make sure you frame your comments with the word 'I' rather than 'you', as this takes the blame out of the conversation. To use the 'I feel \_\_\_ because \_\_\_ and I would like \_\_\_' process has a high success rate in meeting the needs of both parties and rarely burns any bridges.

## Managing generational differences

When a young farmer is showing excellent signs, it is important that Mum, Dad or the boss harnesses this enthusiasm and ability. I see far too many farmers who become control freaks and remain so until they retire. The issues that need to be addressed in this process can be difficult and complex and a third-party consultant can be a good foil in making the decisions that accommodate for all parties. Whilst there is a huge knowledge, wealth and experience gap when the young farmer starts out, I still believe you need to develop a team approach from day one. There should be no power plays.

Regardless of whether it is your son or daughter that has joined the workforce, they should be treated as a professional employee from the beginning. This means sitting down and writing a job and person description, so that the new employee has a clear understanding of what their role and responsibilities are, as well as what expectations need to be developed and met. This should be supported by a well-documented



salary package. If a full salary is not to be paid the difference between what the young employee is worth and what they get paid should be shown as a trade creditor on the balance sheet at the end of each year. Giving sole responsibilities from the commencement of employment is essential, even if it is initially just caring for the dogs or tidying the workshop. Transferring responsibility from the older to the younger generation should be pursued at appropriate times from there on.

If the young family member continues to live in the family home, commercial rates of board should be paid. As an employer you become a very important teacher particularly in the earlier years. Learning the true cost of living is very important and therefore, if a parent is continuing to do the clothes washing, this should be valued. When an appropriate opportunity presents itself for the younger generation to live separately, this should be considered. Living and breathing the same air day after day can spell problems for many.

If, however, you continue to live under the same roof, an important consideration is to avoid giving the son or daughter a wakeup call each morning - that is what alarm clocks are for. If they don't present for work, drive away and leave them behind. In this instance, guilt should be the greatest teacher, but if you have to drive off to work without your employee repeatedly, then maybe it is time for them to find another job. Every job should provide the necessary motivation to get out of bed. However, we must remember that we have all been guilty of a sleep in.

The old saying is that if you have a problem at work then you will be a problem at home, and therefore it is critical to preserve family relationships. Setting good ground rules and processes at the start are the secret to maintaining a good relationship. If a problem has surfaced, don't sit on it, but get it out in the open, have a discussion, come up with a resolution and move on. In these situations, some give and take is usually required, and sometimes we need to agree to disagree. The requirement for regular formal business meetings goes without saying.

## Conclusion

People are the number one profit driver in any business. Ensure that 2% to 3% of gross farm income is invested in professional development each year and make sure that some of it is in the interpersonal skill area.

Develop your business's key performance indicators, then identify and improve the skills and strategies of your employees to enable continuous improvement.

Most farmers live in a cage of their own making, therefore it is knowing what is going on outside that cage, as well as how you adopt and implement new ideas, that usually decides your future.

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Notes

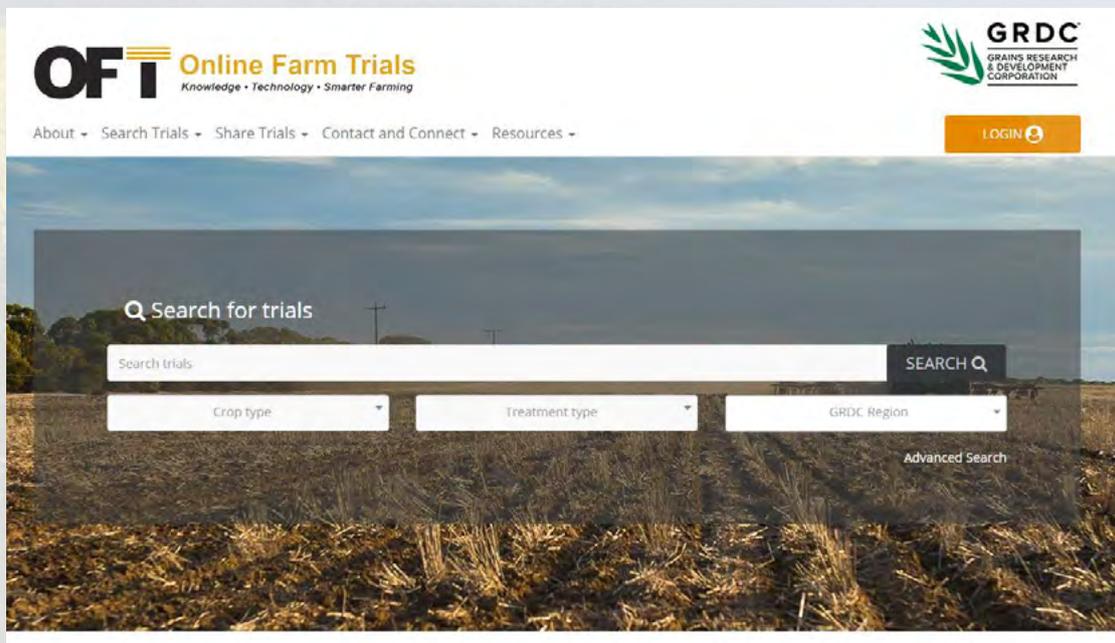


Notes



- **Access** trials data and reports from across Australia
- **Share** your grains research online
- **View** seasonally relevant collections of trials
- **Search** by GRDC programs
- **Refer** to location specific soil and climate data
- **Compare** results from multiple trials to identify trends

**Looking for relevant and freely accessible information on issues such as crop nutrition, disease control or stubble management in your region?** Online Farm Trials (OFT) contains more than 6000 trial projects, 80% of which are publically available, from across Australia on a wide variety of crop management issues and methods. Use OFT to discover relevant trial research information and result data, and to share your grains research online.



The screenshot shows the OFT website interface. At the top left is the OFT logo with the tagline 'Knowledge • Technology • Smarter Farming'. To the right is the GRDC logo. Below the logos is a navigation menu with links: 'About', 'Search Trials', 'Share Trials', 'Contact and Connect', and 'Resources'. A 'LOGIN' button is located in the top right corner. The main content area features a search bar with the placeholder text 'Search for trials' and a 'SEARCH' button. Below the search bar are three dropdown menus labeled 'Crop type', 'Treatment type', and 'GRDC Region'. An 'Advanced Search' link is positioned at the bottom right of the search area. The background of the website is a photograph of a field with stubble.

[www.farmtrials.com.au](http://www.farmtrials.com.au)

 [@onlinefarmtrial](https://twitter.com/onlinefarmtrial)

# THE 2017-2019 GRDC SOUTHERN REGIONAL PANEL

JANUARY 2019



## CHAIR - JOHN BENNETT



Based at Lawloit, between Nhill and Kaniva in Victoria's West Wimmera, John, his wife Allison and family run a mixed farming operation across diverse soil types. The farming system is 70 to 80 percent cropping, with cereals, oilseeds, legumes and hay grown. John believes in the science-based research, new technologies and opportunities that the GRDC delivers to graingrowers. He wants to see RD&E investments promote resilient and sustainable farming systems that deliver more profit to growers and ultimately make agriculture an exciting career path for young people.

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## DEPUTY CHAIR - MIKE MCLAUGHLIN



Mike is a researcher with the University of Adelaide, based at the Waite campus in South Australia. He specialises in soil fertility and crop nutrition, contaminants in fertilisers, wastes, soils and crops. Mike manages the Fertiliser Technology Research Centre at the University of Adelaide and has a wide network of contacts and collaborators nationally and internationally in the fertiliser industry and in soil fertility research.

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## PETER KUHLMANN



Peter is a farmer at Mudamuckla near Ceduna on South Australia's Western Eyre Peninsula. He uses liquid fertiliser, no-till and variable rate technology to assist in the challenge of dealing with low rainfall and subsoil constraints. Peter has been a board member of and chaired the Eyre Peninsula Agricultural Research Foundation and the South Australian Grain Industry Trust.

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## JON MIDWOOD



Jon has worked in agriculture for the past three decades, both in the UK and in Australia. In 2004 he moved to Geelong, Victoria, and managed Grainsearch, a grower-funded company evaluating European wheat and barley varieties for the high rainfall zone. In 2007, his consultancy managed the commercial contract trials for Southern Farming Systems (SFS). In 2010 he became Chief Executive of SFS, which has five branches covering southern Victoria and Tasmania. In 2012, Jon became a member of the GRDC's HRZ Regional Cropping Solutions Network.

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## FIONA MARSHALL



Fiona has been farming with her husband Craig for 21 years at Mulwala in the Southern Riverina. They are broadacre, dryland grain producers and also operate a sheep enterprise. Fiona has a background in applied science and education and is currently serving as a committee member of Riverine Plains Inc, an independent farming systems group. She is passionate about improving the profile and profitability of Australian grain growers.

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## ROHAN MOTT



A fourth generation grain grower at Turriff in the Victorian Mallee, Rohan has been farming for more than 25 years and is a director of Mott Ag. With significant on-farm storage investment, Mott Ag produces wheat, barley, lupins, field peas, lentils and vetch, including vetch hay. Rohan continually strives to improve productivity and profitability within Mott Ag through broadening his understanding and knowledge of agriculture. Rohan is passionate about agricultural sustainability, has a keen interest in new technology and is always seeking ways to improve on-farm practice.

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## RICHARD MURDOCH



Richard along with wife Lee-Anne, son Will and staff, grow wheat, canola, lentils and faba beans on some challenging soil types at Warooka on South Australia's Yorke Peninsula. They also operate a self-replacing Murray Grey cattle herd and Merino sheep flock. Sharing knowledge and strategies with the next generation is important to Richard whose passion for agriculture has extended beyond the farm to include involvement in the Agricultural Bureau of SA, Advisory Board of Agriculture SA, Agribusiness Council of Australia SA, the YP Alkaline Soils Group and grain marketing groups.

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## MICHAEL CHILVERS



Michael runs a collaborative family farming enterprise at Nile in the Northern Midlands of Tasmania (with property also in northern NSW) having transitioned the business from a dryland grazing enterprise to an intensive mixed farming enterprise. He has a broad range of experience from resource management, strategic planning and risk profiling to human resource management and operational logistics, and has served as a member of the the High Rainfall Zone Regional Cropping Solutions Network for the past six years.

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## KATE WILSON



Kate is a partner in a large grain producing operation in Victoria's Southern Mallee region. Kate and husband Grant are fourth generation farmers producing wheat, canola, lentils, lupins and field peas. Kate has been an agronomic consultant for more than 20 years, servicing clients throughout the Mallee and northern Wimmera. Having witnessed and implemented much change in farming practices over the past two decades, Kate is passionate about RD&E to bring about positive practice change to growers.

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## ANDREW RUSSELL



Andrew is a fourth generation grain grower and is currently the Managing Director and Shareholder of Lilliput AG and a Director and Shareholder of the affiliated Baker Seed Co - a family owned farming and seed cleaning business. He manages the family farm in the Rutherglen area, a 2,500 ha mixed cropping enterprise and also runs 2000 cross bred ewes. Lilliput AG consists of wheat, canola, lupin, faba bean, triticale and oats and clover for seed, along with hay cropping operations. Andrew has been a member of GRDC's Medium Rainfall Zone Regional Cropping Solutions Network and has a passion for rural communities, sustainable and profitable agriculture and small business resilience.

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## LUCY BROAD



Lucy Broad is the General Manager of the Grains Research and Development Corporation's (GRDC) Grower Communication and Extension business group. Lucy holds a Bachelor of Science in Agriculture, majoring in agronomy, and prior to working at the GRDC spent the last 13 years as Director and then Managing Director of Cox Inall Communications and Cox Inall Change, Australia's largest and leading public relations agency working in the Agribusiness and Natural Resource Management arena. Her entire career has been in communications, first with the Australian Broadcasting Corporation and then overseeing communications and behaviour change strategies for clients across the agriculture, natural resource management, government and not-for-profit sectors.

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# 2017–2019 SOUTHERN REGIONAL CROPPING SOLUTIONS NETWORK (RCSN)

JANUARY 2019

The RCSN initiative was established to identify priority grains industry issues and desired outcomes and assist the GRDC in the development, delivery and review of targeted RD&E activities, creating enduring profitability for Australian grain growers. The composition and leadership of the RCSNs ensures constraints and opportunities are promptly identified, captured and effectively addressed. The initiative provides a transparent process that will guide the development of targeted investments aimed at delivering the knowledge, tools or technology required by growers now and in the future. Membership of the RCSN network comprises growers, researchers, advisers and agribusiness professionals. The three networks are focused on farming systems within a particular zone – low rainfall, medium rainfall and high rainfall – and comprise 38 RCSN members in total across these zones.

## REGIONAL CROPPING SOLUTIONS NETWORK SUPPORT TEAM

### SOUTHERN RCSN CO-ORDINATOR:

#### JEN LILLECRAPP



Jen is an experienced extension consultant and partner in a diversified farm business, which includes sheep, cattle, cropping and viticultural enterprises. Based at Struan in South Australia, Jen has a comprehensive knowledge of farming systems and issues affecting the profitability of grains production, especially in the high rainfall zone. In her previous roles as a district agronomist and operations manager, she provided extension services and delivered a range of training programs for local growers. Jen was instrumental in establishing and building the MacKillop Farm Management Group and through validation trials and demonstrations extended the findings to support growers and advisers in adopting best management practices. She has provided facilitation and coordination services for the high and medium rainfall zone RCSNs since the initiative's inception.

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### LOW RAINFALL ZONE CO-LEAD:

#### BARRY MUDGE



Barry has been involved in the agricultural sector for more than 30 years. For 12 years he was a rural officer/regional manager in the Commonwealth Development Bank. He then managed a family farming property in the Upper North of SA for 15 years before becoming a consultant with Rural Solutions SA in 2007. He is now a private consultant and continues to run his family property at Port Germein. Barry has expert and applied knowledge and experience in agricultural economics. He believes variability in agriculture provides opportunities as well as challenges and should be harnessed as a driver of profitability within farming systems. Barry was a previous member of the Low Rainfall RCSN and is current chair of the Upper North Farming Systems group.

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### LOW RAINFALL ZONE AND MEDIUM RAINFALL ZONE LEAD:

#### JOHN STUCHBERY



John is a highly experienced, business-minded consultant with a track record of converting evidence based research into practical, profitable solutions for grain growers. Based at Donald in Victoria, John is well regarded as an applied researcher, project reviewer, strategic thinker and experienced facilitator. He is the founder and former owner of JSA Independent (formerly John Stuchbery and Associates) and is a member of the SA and Victorian Independent Consultants group, a former FM500 facilitator, a GRDC Weeds Investment Review Committee member, and technical consultant to BCG-GRDC funded 'Flexible Farming Systems and Water Use Efficiency' projects. He is currently a senior consultant with AGRvision Consultants.

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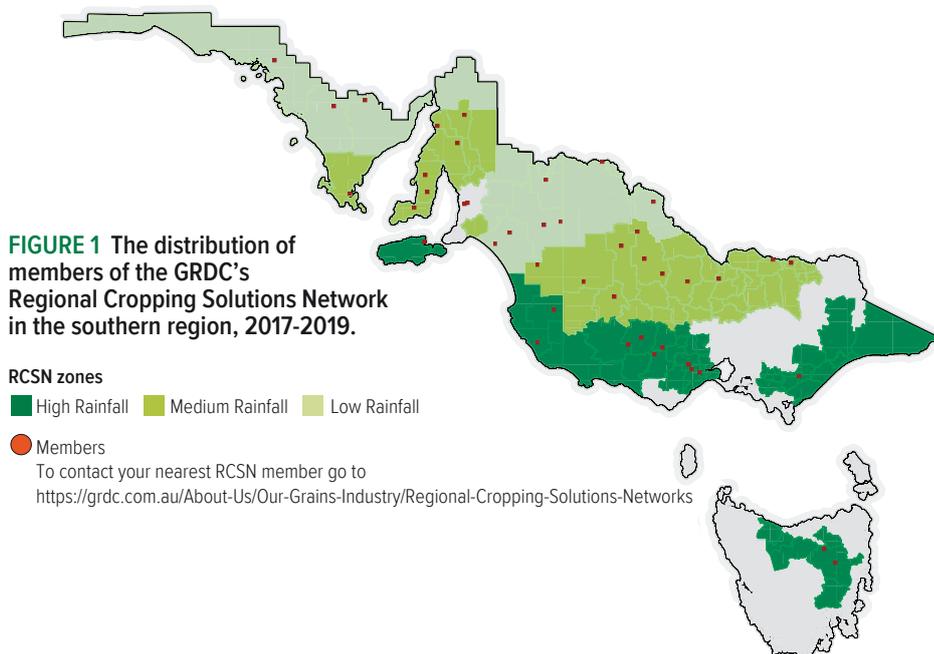
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#### CAM NICHOLSON



Cam is an agricultural consultant and livestock producer on Victoria's Bellarine Peninsula. A consultant for more than 30 years, he has managed several research, development and extension programs for organisations including the GRDC (leading the Grain and Graze Programs), Meat and Livestock Australia and Dairy Australia. Cam specialises in whole-farm analysis and risk management. He is passionate about up-skilling growers and advisers to develop strategies and make better-informed decisions to manage risk – critical to the success of a farm business. Cam is the program manager of the Woody Yaloak Catchment Group and was highly commended in the 2015 Bob Hawke Landcare Awards.

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## Acknowledgements

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The ORM team would like to thank those who have contributed to the successful staging of the Sale GRDC Farm Business Update:

- The local GRDC Farm Business Update planning committee that includes both government and private consultants and GRDC representatives.
- Partnering organisation: Southern Farming Systems (SFS).





Prefer to provide your feedback electronically or 'as you go'? The electronic evaluation form can be accessed by typing the URL address below into your internet browsers:

[www.surveymonkey.com/r/Sale-FBU](http://www.surveymonkey.com/r/Sale-FBU)

To make the process as easy as possible, please follow these points:

- Complete the survey on one device
- One person per device
- You can start and stop the survey whenever you choose, **just click 'Next' to save responses before exiting the survey.** For example, after a session you can complete the relevant questions and then re-access the survey following other sessions.



# 2018 Sale GRDC Farm Business Update Evaluation

1. Name

ORM has permission to follow me up in regards to post event outcomes.

2. How would you describe your **main** role? (choose one only)

- |                                                   |                                                      |                                                  |
|---------------------------------------------------|------------------------------------------------------|--------------------------------------------------|
| <input type="checkbox"/> Grower                   | <input type="checkbox"/> Grain marketing             | <input type="checkbox"/> Student                 |
| <input type="checkbox"/> Agronomic adviser        | <input type="checkbox"/> Farm input/service provider | <input type="checkbox"/> Other* (please specify) |
| <input type="checkbox"/> Farm business adviser    | <input type="checkbox"/> Banking                     | <input type="text"/>                             |
| <input type="checkbox"/> Financial adviser        | <input type="checkbox"/> Accountant                  |                                                  |
| <input type="checkbox"/> Communications/extension | <input type="checkbox"/> Researcher                  |                                                  |

## Your feedback on the presentations

For each presentation you attended, please rate the content relevance and presentation quality on a scale of 0 to 10 by placing a number in the box (**10 = totally satisfactory, 0 = totally unsatisfactory**).

3. **Dual purpose crops – maximising the economic outcomes of grazing crops: Cam Nicholson**

Content relevance  /10      Presentation quality  /10

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

4. **Hyperyielding cereals – are extra inputs needed and if so do they pay? Darcy Warren**

Content relevance  /10      Presentation quality  /10

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

5. **Self-managed super funds – when and where can they be of benefit: Ben Lancaster and Wayne Dowd**

Content relevance  /10      Presentation quality  /10

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



**6. Creating a prosperous farming future – building resilience: *Matt Harms***

Content relevance  /10

Presentation quality  /10

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

**Your next steps**

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

**8. 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**

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

Strongly agree

Agree

Neither agree  
nor Disagree

Disagree

Strongly disagree

**10. Overall, how did the Update event meet your expectations?**

Very much exceeded

Exceeded

Met

Partially met

Did not meet

Comments

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

**12. Are there any subjects you would like covered in the next Update?**

**Thank you for your feedback.**

