



PERENNIALPASTURESYSTEMS
MAKING PASTURE GO THE DISTANCE

14th Annual Conference

8.30am - Tuesday, September 5, 2023
Ararat Town Hall - Barkly Street, Ararat

Rolling with Extremes



“Are you ready or just going steady?”



PERENNIAL PASTURE SYSTEMS

MAKING PASTURE GO THE DISTANCE

PPS 14th Annual Conference is supported by



The PPS group would like to acknowledge the financial support received for this conference from the Glenelg Hopkins CMA and Wimmera CMA through funding from the Australian Government's National Landcare Program.

14th Annual Conference – 5th September 2023

CONFERENCE TIMETABLE

<i>Time</i>	<i>Minutes</i>	<i>Topic</i>	<i>Speaker(s)</i>
8.15 AM		Registration	
8.50	10	Introduction to conference; PPS Presidents report	Matt Kindred ; PPS President
9.00	30	Greenfields pasture economic project; revisited with 2023 costs & returns	Lisa Warn ; Lisa Warn Ag Consulting
9.30	45	Pasture Profitability; What you can do inside the fence	Cam Morris ; Ag Diagnostics
10.15	25	Smoko	
10.40	40	What else you can do – leasing/buying/investing	Prof. Bill Malcolm ; Melbourne University – School of Agriculture, Food and Ecosystem Sciences.
11.20	70	Staffing; good employees & employers	Carlyn Sherriff ; Team Leader People & Succession, Pinion Advisory & Stuart Robinson , Manager Terrinallum Estate.
PM			
12.30	70	Lunch	
1.40	50	Shock proofing your farming system by befriending risk	Kate Burke ; Think Agri
2.30	40	Shock proofing our farm systems	Dan Jess : “Illoura” Ballyr
3.10	25	Speakers Q & A session	Facilitator ; Tess McDou Agriculture Victoria
3.35	15	Conference Evaluation	Tess McDougall
3.50	40	Travel to Jallukar Park	
4.30	50	Farm Visit; the beginning of the investment journey.	Tom Brady with Bill Malcolm, Kate Burke, Lisa Warn, Cam Morris
5.20	30	Travel to Ararat	
6.00		PPS annual dinner	
6.30	20	Annual meeting, Financial Report & Management Committee Appointments Girls & Grass Report	Matt Kindred & Hayden Price AG member ; Bianca Kilpatrick
7.00		Dinner	
8.00		Dinner Speaker;	Peter Jess
8.45		Thank you	Ben Greene & Simon Brady
8.55		Close	Matt Kindred

WCMA SUPPORT

PPS acknowledges the continued support of the Wimmera CMA in providing funding for the PPS Project Manager position.



This project is supported by Wimmera CMA and funding through The Australian Government National Landcare Programme

AGRICULTURE VICTORIA SUPPORT

Agriculture Victoria is assisting with Carlyn Sheriff's conference presentation and the workshop on the 6th September.

This activity is funded by Agriculture Victoria and Meat & Livestock Australia – supporting Victorian producers to measuring, monitoring, and managing key profit drivers and risks to improve their business performance.



PPS thanks Tess McDougall from Agriculture Victoria for her help and expertise with the IT management for the conference.



DISCLAIMER

This publication has been prepared in good faith on the basis of information available at the date of publication.

Readers are responsible for assessing the relevance and accuracy of the content of this publication. PPS 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 included in this publication.

Cover Photos

Front: Left

Dry Dam; photo Dennis Harrington
 Hay Feeding; Photo, Dennis Harrington
 Mt William 2014; photo, Rosie Nater & Jan Ibs von Sett

Right

Flood; photo Sam Crawford
 Hay; Mooneys Gap, Ararat
 Grampians fire 2006; Ashley van Raaphorst Photography

Back: PPS member investment in future proofing the farm. Clockwise from top right.

Seeder; Millbanks, Elmhurst	ATV; Tirranna, Mt Cole Creek
Stock Containment; Rockbank South, Hensley Park	Auto Weather Station & Soil Probe; Mooneys Gap, Ararat
Pasture; Glengarry; Langi Logan	Arrowleaf Clover; Cresswell; Beazleys Bridge
Sheep Handling Centre; Overdale, Concongella	Covered Sheep Complex; Tirranna, Mt Cole Creek
Sheep Feeder; Mooneys Gap, Ararat	Sheep Genetics & Nutrition; Overdale, Concongella
PPS Problem Paddock Now Planted to Kikuyu & Serradella; Lonsdale Farm, Pomonal	

PPS Presidents Report: 2023

Matt Kindred



Matt Kindred is in his final year as PPS President; he joined the Management Committee in 2009. He manages the two Kindred Family properties at Lake Lonsdale, near Stawell and Pomonal. Matt conducts a Merino wool & lamb operation with some cropping along with some contract pasture sowing. Matt is the host of the PPS “Problem Paddock” project focusing on the use of Kikuyu and Serradella on sandy soil types.

Welcome to the 2023 PPS Annual Conference. We have a great line up of Speakers and topics to be covered today, with the theme of Rolling with the Extremes, are you ready or just going steady? The agenda is full of relevant info for current farming situations covering economics and staffing as well as in paddock topics. The always popular farm tour is sure to be a highlight, with input from the Conference speakers to bring it all together. Following the Conference is the Dinner and AGM with another great speaker to entertain and inform us and wrap up the day.

With what was for many a record breaking wet spring for 2022, many of the PPS events needed to be cancelled or postponed. The End of Year BBQ and Farm tour was able to be held with sunshine breaking through for what felt like the first time in months! Barton Station hosted the day and manager Rob Cooper lead a great tour showing excellent pasture utilisation with some late silage being made to use the excess growth.

Project Manager, Rob Shea, was busy with pasture cuts and feed tests towards the end of the year and Jess Revell from Rumenate Livestock Services discussed the results in a webinar. This a great example of a project providing timely information that members can use to make decisions. Jess followed up with an update in May telling us the bulk of feed from spring in many cases wasn't meeting stock needs. Webinars are a great way to reach our members with Jess, Matt Dagleish (markets) and Robert Herrmann (Kasenda) all presenting to us this year.

Girls and Grass, with support from Grampians Health FarmWell team, got the year going with a Farm Succession workshop that was well attended. Alexandra Gartmann finished the day speaking of her experiences in rural and regional Australia and her passion for these areas shone through.

February also is the month that both PPS Management Committee and Girls and Grass hold Annual Planning meetings to lay out a program for the year. It is here that ideas, projects and social activities are thrown around the table to create the PPS program for the months ahead and beyond. These are great days with lots of thoughts put up for consideration by the Committee and I consider myself lucky to be able to join in.

PPS was fortunate to receive support from Agriculture Victoria and Agrifutures to form the basis of a range of events across the year focussing on the use of technology in Ag. In March a tour of local meat processor, Frew Foods International, was held and then the Holden family hosted us and discussed their use of tech on farm. The latest best practice sheep tech used by Frews and also vaccination programs were also discussed.

By April most Members farms had received an excellent break to the season with the soil probe network showing good moisture levels across the area. This has continued into winter and caused some disruption to farming programs but the pasture growth generally has been outstanding. I haven't seen many bogged vehicle photos going around this year so most people must have remembered the soft spots that trapped them last year!

The Study Tour was held a little earlier, in June, this year around Naracoorte in SA. It was also focused on the use of tech in Ag. We started by visiting PPS Members, the Rokebrand family, at Edenhope before crossing into SA. It is always good to get on Members farms and a great strength of this group that you are so welcoming. The SA farms we visited could not have been more open and happy to show us around their patch as well. From onions, lamb feedlots, wineries and chooks we saw many different approaches to farming with a common passion for what they did.

After a great social night with many of the host farmers joining us for dinner, the tour was completed with a visit to the Struan Research Farm. Host Robyn gave a great tour of the property with many types of on farm monitors in use. A common frustration of the group being the inability of these different systems to “talk” to each other. Maybe one day!

A big thanks to Tess McDougall, Kate McCue & Chris Blore from AgVic, Debbie Shea and Jen Lilliecrap and also AgriFutures for organising and supporting this trip.

At tonight's Dinner/AGM the 2 year term of the current PPS Management Committee will be complete and an election will be held. I highly recommend PPS Members consider putting their name forward to join the Committee, now or in the future, as I have found it to be a very rewarding experience.

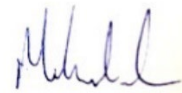
As my term as President comes to an end I would like to thank the current Committee for the time, knowledge and enthusiasm put in by all to create the projects and activities that keep our Members engaged. Going forward I am sure this will continue.

The Girls and Grass group always come up with activities that add to your PPS membership and I thank them for their input throughout the year.

The funding from industry, CMA's and government for projects, activities and management of PPS is essential for the group to continue and very much appreciated by all involved. Many of these Funders and Sponsors are advertised in this book so please support them back when you can.

The daily running of our groups by Rob and Debbie Shea has again been outstanding. Both are always willing to promote, organise and just get things done for PPS and should be proud of what is achieved each year, thank you both.

Hopefully the Conference today will have enjoyable and informative sessions that provide you with ways to make your business better and the 2023 season finishes well for everyone.



Matt Kindred
PPS President

Below; PPS members at “Struan” S.A. on the Winter Farm Tour.

The tour was supported by AgriFutures with assistance from Agriculture Victoria.





PPS Girls & Grass Advisory Group Report: 2023 Chair - Susan Maconachie



Susan (Sue) Maconachie was elected to the role of Chair in 2021 after being a member of the Advisory Group since 2017. Sue has farming blood in her veins. She grew up on her family's farm in the Willaura district before working in the banking industry for eight years. She retired from banking to join her husband, Ian, on the farm at Ballyrogan. Together they manage a sustainable enterprise including cropping, self-breeding merino & crossbred sheep and sell prime lambs. Sue and Ian have three children and four grandchildren. *Photo; Sue and her fourth grandchild, Eva.*

For my report I have taken into consideration this years' conference theme "**Rolling with extremes, Are you ready or just going steady**". My family certainly learnt about *Rolling with extremes* early this year when a fire suddenly emerged over the Challicum Hills. 220 Ha of our farm was burnt.

Much of this country was steep hills and not easily accessible. Luckily the only stock we lost was one ram that must have been off by himself when I hurriedly mustered the mob into a safer paddock out of the path of the fire. This was a very emotional and devastating day for our family which we are indebted to everyone that responded to the fire call out. We received a lot of support from the community, and it was fairly quickly brought under control. Once again, I offer my sincere gratitude to everyone who helped.

Were we ready for a fire or just going steady?

Reflecting on that thought I would say we were ready and prepared by making sure we had appropriate insurance and like the majority of farmers we enact a fire plan each year. Preparing safe areas around the house and buildings, barer paddocks to move stock too and knowing how to do so safely. When the fire and smoke had died down, we then had to deal with insurance accessors. I cannot stress enough how important it was for us to have suitable insurance cover in place.

However, I am really here to report on the Girls & Grass Advisory Group and the activities since August 2022.

August the 9th saw us host a **Coffee & Conversation** morning at the Ararat Café Bistro, five of us enjoyed a catch up.

Saturday 29th October another **Coffee & Conversation** morning took place at Seppelt Winery, Great Western. Fourteen PPS members experienced a lovely morning tea of hot and cold foods served with coffee and tea. The staff at Seppelts had gone to a

great deal of trouble in setting up and catering for our group. Following morning tea we were joined by our guide who led us through the underground drives. He gave us a history lesson not only on Seppelts but also the growth of the wine industry in the region.

Did you know the railway line was purposely built through Seppelts to enable stock to be loaded and supplied unloaded direct onto trains. On completion of the tour, quite a few of us took advantage of the cellar door tasting and purchased wine to enjoy at home.

The Planning Meeting on the 7th February 2023 saw three of the five members of the committee attend. Due to family, business, and work commitments both Rita Bikins and Malinda Hall indicated their retirement from the committee. The committee has been functioning well with Bianca Kilpatrick, Ticia Sweeney, myself and support from our facilitator Debbie Shea.

In 2023 the committee renewed its working partnership with the FARMwell Reference Group as part of the Resilient Farmer Project, run through Grampians Public Health Unit, Grampians Health. Both Bianca and Debbie are representing PPS on this committee.

This partnership resulted in **the Succession Planning Workshop and luncheon** held on Sunday 26th February. Mike Stephens from Meridian Ag gave an excellent and thought-provoking presentation and discussion on the people side of succession planning. Lunch was then enjoyed by the twenty-nine people participating. Alexandra Gartmann then addressed the gathering speaking on the importance of planning and being adaptable in our ever-changing world of agriculture. A follow on from this event was that approximately half the people that attended accepted Meridian Ags' offer of a one-hour individual face to face meeting to delve a bit deeper into their personal succession plans.

The Girls & Grass AG facilitator worked closely with Tess McDougall from Agriculture Victoria putting together a funding bid to AgriFutures. This resulted in PPS being awarded \$22,000.00 as part of AgriFutures Australia's Producer Technology Uptake Program. The aim of the program is to increase technology adoption onfarm. PPS value added to the **Ag Tech Road Trip And Showcase Tour Of Technology On-Farm Project** by expanding it to include the 2023 annual study tour. The project included.

- a tour of Frew Foods International, Stawell and workshop at 'Overdale' on the 28th March,
- AgriFutures Australia Farm Tech Planning workshop, 31st May,
- the study tour to the Naracoorte area in South Australia, 4th – 6th June,
- and finally, a second tour of FREWS, 27th June.

I am sure the project surpassed the initial concept resulting in AgriFutures Australia being very pleased with the outcomes.

Girls & Grass hosted an intimate **Coffee & Conversation** at The Vines Café in Ararat during May. Although only six PPS members attended the conversation continued with lunch being ordered as well.

We had a wonderful opportunity via Zoom to chat with **Wilson from the village of Kasenda in Uganda**. Rob Herrmann and his wife Lyn were visiting the village and with the technical assistance of Tess McDougall we had a very constructive conversation. PPS President Matt also joined in along with Rob Herrmann. Wilson gave an update on the improvements that the villagers have been able to make. Their next venture is to purchase a Tuk Tuk, to transport goods to and from the village, enabling more income to be made. The villagers are now focusing on increasing the chook herd. Eggs are a cheap source of protein for the school, and any surplus will be used to pay the staff growing vegetables, bananas and tending the goats. Each hen (pullets on the point of laying) will cost about Au\$20 each, which includes vaccination against Newcastle disease and the first month's feed. If you would like to support the purchase of more hens, you can make your payment to:

Account: Ballarat West Rotary – Bendigo Bank
BSB: 633-000
Account number: 110299500

Note on your deposit, Kasenda Uganda Project, and email Rob Herrmann robert.herrmann@nutrien.com.au so he can follow-up the receipt.

Our committee had hoped to host a dinner on the 26th July with guest speaker Emma Germano, Victorian Farmers Federation President. Unfortunately, due to several issues this has been postponed. We look forward to having Emma spending some time with us at a date yet to be confirmed.

The Girls & Grass Advisory Group has reached a crossroad. Firstly, with Rural Bank not renewing their sponsorship of the group for 2023. The resignation of

two committee members and the advance notice from our facilitator, Debbie, that she wishes to take a step back at the end of 2023. Resulting in the committee reviewing future options, which have been discussed with the PPS Management Committee.

Under consideration is to: -

- a) recruit new members to the committee.
- b) source a replacement facilitator
- c) reforming the group with a different structure under the PPS management committee.

The positive aspect is that Rabobank has shown interest in supporting PPS and G&G for 2024. If you would like to comment or get involved, please contact our facilitator, Debbie on 0418 205353 or myself 0419 544555.

Girls and Grass still have a few activities from now till the end of the year, so please support us.

I am enjoying my involvement with the Advisory Group and would like to give thanks to a few people. Firstly, to my fellow Girls & Grass committee members, Bianca and Tricia for their input and friendship during the year. Secondly to our facilitator Debbie, who works tirelessly to support not only our committee but all PPS members. Thirdly to the PPS Management Committee for their foresight in supporting the formation of Girls & Grass and the activities that we have so far undertaken.

I look forward to seeing you not just at the G&G events but PPS activities in general.



Sue Maconachie
G&G Chair



Above: A section of our farm showing the burnt area. Taken from a helicopter in April.

Below: Coffee & Conversation at Seppelts, October 2022.



Below: Kasenda Zoom link, computer screen showing the photo of the water storage and reticulation system along side the school house, July 2023.



Below: Alexandra Gartmann and Mike Stephens, Meridian Ag at the Succession Planning Workshop, and luncheon in February 2023.



Below: Kasenda Zoom link, computer screen showing the photo of the students outside the schoolhouse with their two teachers and Lyn Herrmann.



Below: Coffee & Conversation, May 2023.



Below: Kasenda villager with Wilson after purchasing the Tuk Tuk.



Below: PPS Study Tour participants at Struan House the final day of the tour, June 2023..





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Economic analysis of the “Greenfields” project – A 2023 update

Lisa Warn; Lisa Warn Ag Consulting Pty Ltd



Lisa Warn is an Agricultural consultant who has been running her own business (Lisa Warn Ag Consulting) since April 2016. Prior to that she was the Senior Agricultural Consultant and Senior Research Fellow with the Mackinnon Project (a whole farm consultancy service for sheep and beef producers) based at the University of Melbourne, Werribee. Lisa has over 25 years experience in the grazing industries and specialises in farm management economics, farm systems analysis, pasture agronomy and grazing management. She has a Bachelor of Agricultural Science (University of Melbourne) & a Masters of Agricultural Science (Latrobe University).

As well as working with producer groups and delivering training programs (e.g. Prograze, TRIPLE P, BeefCheque, Better Beef, Bestwool/Bestlamb, Lifetime Ewe Management, Improved Grazing Management, Better Pasture Management, MLA Healthy soil groups, Landcare) throughout her career, she has also run numerous research projects on Victorian farms focussing on pasture improvement, pasture species evaluation, soil fertility and grazing management.

Lisa has roles in various industry organisations such as: Vice President of the mid-Goulburn branch of the Grassland Society of Southern Australia, member of MLA's Southern Livestock Research Council (Northern Vic), member of the Livestock Productivity Partnership advisory panel, member of AWI's producer advisory panel for Bestwool/Bestlamb.

Lisa and her husband run a self-replacing flock of ultra-fine Merinos and a vineyard on their small property in central Victoria.

Perennial Pasture Systems: Economic analysis of the “Greenfields” project – A 2023 update

By Lisa Warn; Lisa Warn Ag Consulting Pty Ltd Email: l.warn@inet.net.au

Background

Back in 2017, using a case study farm, I conducted an analysis on behalf of the Perennial Pastures Systems group to determine the pay-back period and rate of return on capital invested in new farmland (and the associated development) so that it could be compared with alternative uses of the capital (either on existing farm or off-farm).

With the purchase of a new, undeveloped block of land at Glenlofty, by group members Michael and Tony Roberts, the opportunity arose to set up the “Greenfields” project. The original project analysis was supported by a Community Landcare Grant through the Australian Government's Caring for our Country program.

The original analysis started with the purchase of land in 2010, and results were reported at the PPS Annual Conference by Tony Roberts in 2018.

The full report can be found on the PPS website:

www.perennialpasturesystems.com.au/post/greenfields-project

Investing in the land plus improvements, and running a prime lamb enterprise, gave an Internal Rate of Return (IRR) of 14% and the pay-back period was 11 years. Allowing for the 2017-2018 scenario when there was a lift in wool prices and lamb prices, the IRR lifted to 16% and the pay-back period was 10 years.

Since 2010, the land price has risen from \$2075/ha to \$8750/ha in 2023. Enterprise costs have increased – shearing/crutching in particular – and the price of crossbred wool has fallen.

The PPS group posed the question:

“What impact would the 2023 price/cost scenario have on the economics of purchasing and developing farmland”?

Summary of Greenfields development:

- The 37 ha block was purchased in 2010 and was grazed for 2 years with Merino wethers. The stocking rate was around 6 DSE/ha. Pastures on the “Greenfields” block was unimproved and had not been fertilised much in the past.
- A 24 ha (60 acre) section of the block was cropped to triticale for two years (2012 & 2013) to generate some cash flow and to reduce weed burden to prepare the paddock for sowing the perennial pasture. Crops were sown with 80 kg/ha DAP.
- Lime was applied at 2 t/ha prior to pasture establishment.
- The area that had been cropped was then sub-divided into 4 x 7.5 Ha paddocks. The 12 ha (30 acre) Hill paddock with mainly native pasture/unimproved species is used to make up a 5th paddock for short term rotational grazing.
- Water supply – a large dam was built, and poly pipe was installed to be able to gravity feed water into troughs into 3 of the new paddocks. The existing dam in the 4th paddock is used as a watering point.
- Pasture mix (Holdfast GT Phalaris/Trikkala and Mintaro sub clover) was sown in May 2014. Phalaris establishment counts taken in October 2014, averaged 31 plants/ m².
- Grazing commenced in 2015 with crossbred ewes. Stocking rate stabilized at around 14 DSE/ha by 2018.

Figure 1. PPS group members inspect phalaris and sub clover establishing on the higher part of the sown Greenfields site. Gullies were fenced and trees planted (Sept 2014).



Figure 2. Pastures were stocked in autumn 2015 and rotational grazing commenced (July 2015).





Figure 3. Greenfields site in late June 2018.

Method used for the Economic Analysis

“What is the economic merit and pay-back period of purchasing a block of undeveloped farmland and developing it compared with alternative uses of the capital (either on existing farm or off-farm)”?

To answer this question, a cash flow/development budget was prepared over a 20 -year period for the new block on its own. All costs (capital, operating, overheads) and income associated with the new block, were recorded by Tony.

An inflation rate of 2% was used in the cash flow budget. The cash flow figures reported are before borrowings/interest.

Although, for the first 6 years of the budget, Tony had the records for actual prices received for wool and lamb, 6-year average (2011-2017) prices were used for the whole 20-year period (Table 1). A second analysis was conducted, to study the impact of higher wool and lamb prices, using the average sheep and wool prices for 2017-18. A third analysis has now been conducted to study the impact of 2022-23 average prices and costs.

The **Payback period** was the time it took for the project to return a positive cash flow.

The **Net Present Value (NPV)** and the **Internal Rate of Return (IRR)** were the measures used to be able to compare how the project might stack up against other potential uses of the capital.

NPV is used to determine the present value of an investment by the discounted sum of all cash flows received from the project. The NPV is an indicator of the value or magnitude an investment. A discount rate is used to adjust future cash flows to the present value. The discount rate chosen is meant to reflect the rate of return that could be expected in the market place if this capital was invested (opportunity cost). The general rule is that you can accept a project only if its NPV is positive and reject it if its NPV is negative.

A discount rate of 6% was used in this analysis.

The **IRR** on an investment or project is the "annualized effective compounded return rate" or rate of return that makes the NPV of all cash flows (both positive and negative) from an investment equal to zero. It can also be defined as the discount rate at which the present value of all future cash flow is equal to the initial investment or, in other words, the rate at which an investment breaks even.

An investment is considered acceptable if its internal rate of return is greater than an established minimum acceptable rate of return or cost of capital. The higher a project's IRR, the more desirable it is to undertake the project. Assuming all projects require the same amount of up-front investment, the project with the highest IRR would be considered the best and undertaken first.

Table 1. Assumptions used in the cash flow budgets

Parameter	Average prices & costs 2011-17		Average prices 2017-18	Average prices & costs 2022-23	
Wool cut - ewes	4.5 kg/head greasy				
Fibre diameter -ewes	28 µm				
Wool price -1st X ewes	650 c/kg clean (AWEX)		850 c/kg clean	370 c/kg clean	
@ 75% yield	500 c/kg greasy		640 c/kg greasy	285 c/kg greasy	
Wool value (90% fleece price)	\$ 20.25/head		\$ 25.82/head	\$ 12.82/head	
Wool cut -Merino wethers	6.5 kg/head				
Fibre diameter - wethers	19 µm				
Wool price -wethers	1,300 c/kg clean (AWEX)		2,000 c/kg clean	1,600 c/kg clean	
2nd X lambs (18 kg DWT)	550 c/kg cwt or \$108/head (MLA)		600 c/kg cwt	728 c/kg cwt	
Lamb skins	\$5.00/skin		\$5.00/skin	\$2.00/skin	
CFA ewes	300 c/kg cwt or \$80/head (MLA)		350 c/kg cwt	411 c/kg cwt	
1st X ewe purchase price	\$150/head		\$180/head	\$180/head	
Wether purchase price	\$60/head		\$80/head	\$100/head	
Animal health	<i>Ewes</i>	<i>Lambs</i>	<i>Same as 2011-2017</i>	<i>Ewes</i>	<i>Lambs</i>
Shearing /crutching	\$2.00/head	\$2.00/hd (incl. mark)		\$2.50/hd	\$2.50/hd
	\$5.00/head	\$1.00/hd (crutch only)		\$9.00/hd	\$2.00/hd
Marking percentage	150 -160 %		<i>Same as 2011-2017</i>	<i>Same as 2011-2017</i>	
Annual DSE rating (ewe + lamb/s)	2.2 DSE/ewe				
Ewe -standard reference weight	60 kg				
Land price	\$ 2,075/ha		\$ 2,075/ha	\$ 8,750/ha	

Results

2011-17 scenario

Capital invested for the purchase of the 24-ha block, associated development and purchase of livestock totalled \$128,000.

- The Net Present Value of the investment was \$57,713, after allowing for the salvage value of the land and the crossbred ewes in year 20 (Table 2).
- The rate of return (IRR) on capital invested was 14.2%.
- The payback period (time to return a positive cash flow) was 11 years (Figure 4).

Table 2. Results of analysis, including all costs, at 3 commodity price & cost scenarios

Parameter	Average prices & costs 2011-17	Average prices 2017-18	Average prices & costs 2022-23
Total capital invested (land, fencing, water, stock, pasture)	\$128,000	\$135,000	\$309,000
Salvage value (if sell land, stock)	\$92,000	\$94,000	\$334,000
Net Present Value	\$57,713	\$79,106	\$ 4,457
Internal Rate of Return	14.2%	16.6%	8.2%
Payback period	11 years	10 years	15 years
Peak debt	-\$73,000	-\$66,208	-\$231,000
Wether gross margin @ 6/ha (6.5 DSE/ha)	\$210/ha	\$350/ha	\$246/ha
Ewe gross margin @ 5.5/ha (14 DSE/ha)	\$683/ha	\$784/ha	\$987/ha

2017-18 scenario

Using slightly higher average prices for lamb (\$6.00/kg CWT) and crossbred wool (\$8.50/kg clean) for the 20-year analysis (to reflect the 2-year average prices for 2017 and 2018):

- Increased the Net Present Value to \$79,106.
- Increased the rate of return (IRR) to 16.6 %.
- Reduced the payback period to 10 years.

2022-23 scenario

Total capital invested rose to \$309,000 with most of this increase due to a quadrupling of land prices. Variable costs were higher, crossbred wool prices were very low but lamb prices were higher than for the 2011-2017 period. The impact was:

- Reduced the Net Present Value to \$4,457.
- Reduced the rate of return (IRR) to 8.2 %.
- Increased the payback period to 15 years.
- Higher salvage value – so if sell up at end of 20 year get a much greater lump sum (which would most likely have an additional capital gain above inflation -not shown in this analysis).

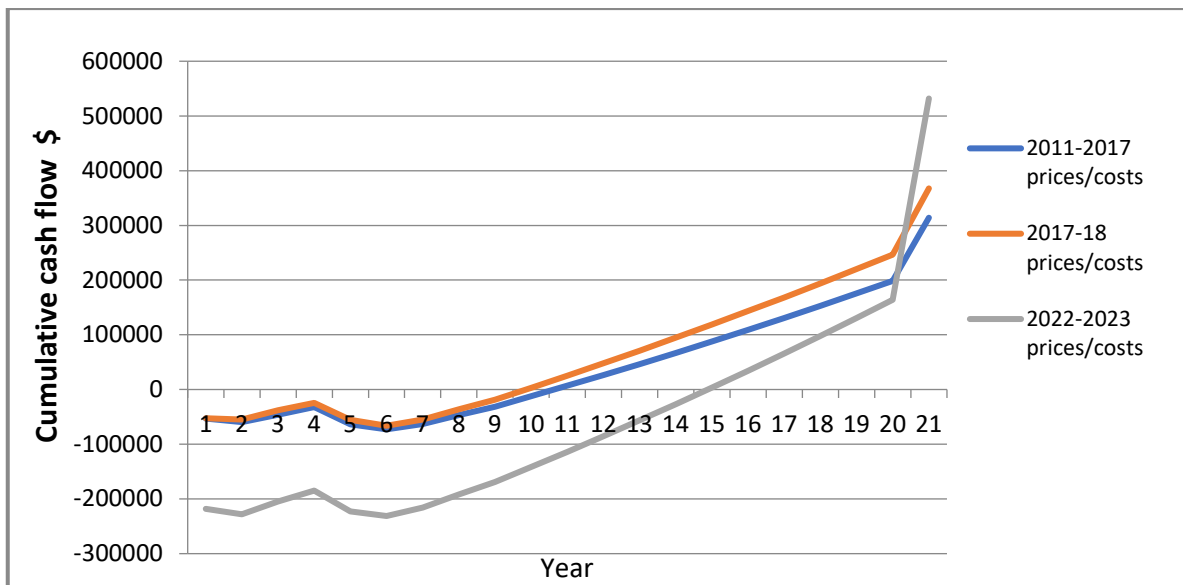


Figure 4. Cumulative cash flow for the Greenfields project, for 3 price/cost scenarios, over a 20-year period. (CCF includes inflation but is before borrowings/interest).

Conclusions

- Buying an un-improved block and investing in its development provided a sound return on capital compared with other investment options.
 - For the capital invested for the purchase of the “Greenfields” block, associated development and purchase of livestock (in the original analysis), the payback period was 11 years and the rate of return (IRR) was 14.2%.
 - Slightly higher lamb and crossbred wool prices had a minor effect on the payback period, NPV and IRR.
- Higher land prices meant the investment took longer to payback (15 years) and had a lower, but still acceptable, IRR (8.2%). However, as more capital is invested up front, there is more capital to salvage at the end if the land and stock are sold.
- Buying an un-improved block and investing in pasture improvement allowed a large increase in stocking rate and a change to a more profitable enterprise to occur. Prior to pasture improvement the Greenfields block ran wethers at a stocking rate of 6.5 DSE/ha. The carrying capacity of the block stabilised at around 14 DSE/ha (5.5 cross-bred ewes/ha) in 2018, 4 years after pastures were established (year 8 of budget).



PERENNIALPASTURESYSTEMS
MAKING PASTURE GO THE DISTANCE

Pasture Profitability: what you can do inside the fence.

Cameron Morris; Ag Diagnostics



Cameron grew up on King Island, Tasmania where his family operate a beef farm and rural contracting business. The contracting activities from fertiliser and lime spreading to hay and silage conservation. Cameron completed a bachelor of Agricultural Science and Business with a major in financial management at Latrobe University, Bundoora. After passing with Honors his Agronomy career began with Landmark Hamilton in 2012 where he specialised in primarily pasture Agronomy before joining AgDiagnostics in January 2022.

Introduction:

Improving productivity of pastures is a common goal of many producers I have worked with over the past 11 years in agronomy. How I've advised on this has changed over time as I became more familiar with the business systems. As a "green" retail agronomist, often you'd work through the fixation of a client wanting to renovate a specific paddock, sometimes for a significant period and capital. Frustration in not seeing the rest of the pasture base would arise because often larger opportunities would be awaiting. Common teachings and promotion would quote "maximum production/profit per hectare" at the end of the renovation but fail to mention what can be practically covered within budget constraints. Often if there are fertiliser responsive species present there can be

gains in manipulation to carry you to a time that the more challenging paddocks can be renovated.

Economic Considerations

Capital Constraints – Generally with a new property purchase there won't be unlimited funds for development, so we'd generally look to what is going to provide the quickest response or upside in carrying capacity. This is basically assessing the marginal return vs marginal cost of different ways to spend money such as fertiliser, fencing, water and stock. Often the commitment to the farm is already made up or the property is already owned or leased. Nowadays we are usually going for the drive around before purchase or lease with clients.

What are the goals/targets?

It is important to understanding what the goals of the property are, often if we are already called, we'd be looking to at least maintain or improve pasture productivity. Questions asked:

Investment term

- Short - Property turn over or lease.
- Medium - May sell if something close to other blocks comes up.
- Long – The property will never leave the family!

Planned livestock enterprise/s.

- Match feed supply with demand and vice versa
- What are the suitable pastures to do this?

Other Goals

- Is the farm development purely based on economics?
- Emotional satisfaction
- Environmental Improvement
- Sense of accomplishment "Tony Roberts – PPS Greenfields Project report 2020"

Pasture/Paddock Assessment:

A common practice is to assess the existing pasture base for desirable species and weeds. Is there enough to be manipulated for the time being? Options include

winter cleaning, spray topping, spray grazing, over sowing, improving grazing management and infrastructure/water improvement.

Example Pasture Assessment:

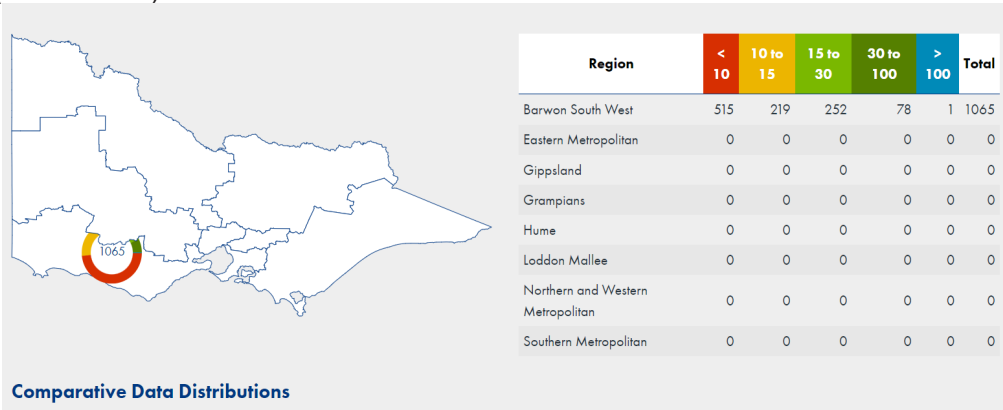
Location	Pasture Score	Comments	Estimated Dry Matter (kg)	Perennial Ryegrass	Phalaris	Sub Clover	Strawberry Clover	Barley Grass	Scotch Thistle	Silvergrass	Slender Thistle
Bottom Cave	Average	Slender barrier to cl	1750	7	0	6	3	2	0	3	6
Top Cave	Average	Potential of fern issi	1750	7	0	4	0	3	0	4	5
West Bullock	Average	Slender barrier.	1250	7	1	5	1	0	0	4	5
Eden	Above Average	Thistles are still goir	1500	8	0	8		3	1	3	4
Horse	Above Average	Really good respons	1750	8	0	7		4		2	4
North Springs	Above Average	Lower cover in the li	1500	8	0	4	8	0	0	2	4
South Springs	Average	Good strawberry on	1250	8	0	4	6	2		3	4
East Moyne	Above Average		1250	8	7	4	7			4	4
Olles	Average	Reasonable base. Ke	1250	7	4	6	3			5	3
East Stonefield	Below Average	Silver grass domina	1000	5	3	4	3		0		3
West Stonefield	Average	Grazed out pretty lc	1250	6	7	6	2			3	3
West Moyne	Average		1250	8	6	6	4		3	3	3
South Flats	Above Average	Good phalaris clove	1250	7	8	6	5		2	5	3
Bradys Dam	Average	Silver grass is heavy	1250	7	5	5	3		2	6	3
Bottom Cave	Above Average	Potential weaning p	2000	8	0	6	4				1
East Bullock	Average	Some Slenders, phal	1250	7	7	5	6				1
West Langulac	Average										1
East Langulac	Below Average	Need to have a look	1500	6	5	2	5				1
Bradys South	Average	Sub clover improvin	1250	7	6	6	5				1
West Flats	Above Average	Really good phalaris	1250	4	10	6	6		1	5	1

Soil Fertility:

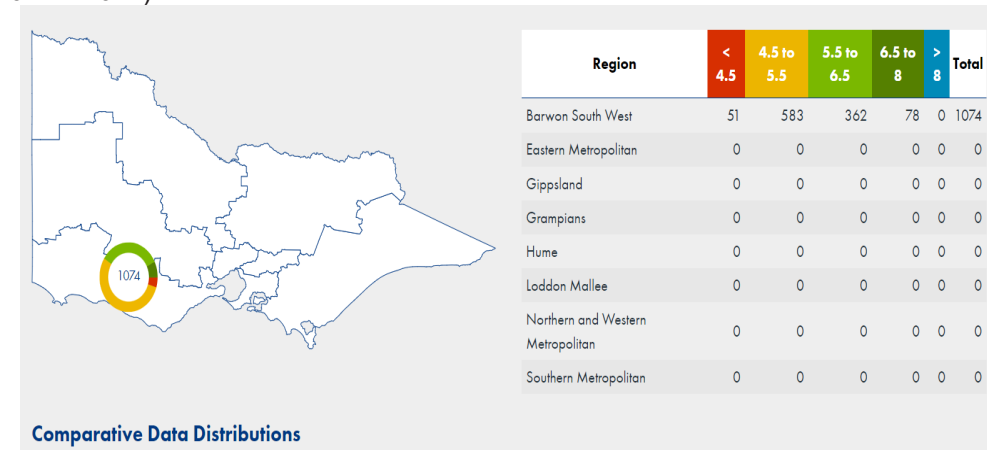
The subject of soil fertility has been well covered within this group with many years of research in pasture systems. The science is still evolving but the take up of the fundamentals is still quite poor when looking back at the 1000's of soil tests taken over the past 10 years. A soil testing program is important in assessing what's most limiting to pasture production. This information can be overlaid with the pasture assessment to get a

better understanding of what pastures are worth fertilising and what's not. Soil fertility can be improved in line with stocking rate if you have a good understanding of both. Stocking too heavily before improving soil fertility and pastures can quickly deteriorate the feed base while not stocking enough leaves potential economic gains on the table.

Olsen P mg/kg (2021 – 2022)



Soil pH CaCl2 (2021 – 2022)



Potassium Response in balansa clover, the plot next to this had 50kg/Ha P applied with no response. Is potassium really too dear?



BASIC PASTURE INVESTMENT CALCULATOR					
Total allocation of capital can be placed on one option to calculate NPV if there is only renovation option.					
Added fert and chem is to a paddock with existing responsive species (sub clover, barley grass etc.) and weeds that can be removed (capeweed, silvergrass etc.).					
Residual value (Salvage value) is not added to the NPV.					
Discount rate (without inflation)		7.00%			
Return on cash surplus's		3.00%			
Farm size (Ha)		1000			
Total \$ allocation		\$ 50,000			
INITIAL INPUTS (YEAR 0)					
		Option 1	Option 2	Option 3	Option 4
		Full Reno	Quick - oversow	Added fert & chem	Custom
Capital Allocation		100%	100%	100%	
		\$ 50,000	\$ 50,000	\$ 50,000	\$ -
Marginal Costs / Ha					
Seed Costs	\$ 250	\$ 125	\$ -	\$ -	
Chemical Costs	\$ 60	\$ 40	\$ 40	\$ -	
Fertiliser Costs	\$ 200	\$ 150	\$ 150	\$ -	
Management	\$ 100	\$ 50	\$ 20	\$ -	
Additional Stock to utilise feed	\$ 200	\$ 150	\$ 100	\$ -	
Total MC	\$ 810	\$ 515	\$ 310	\$ -	
Marginal Return / Ha					
Est. added DM Grown/annum (kg/Ha)	4000.00	3000.00	2000.00	0.00	
Value of feed grown	\$ 150	\$ 150	\$ 150	\$ -	
Total MR	\$ 600	\$ 450	\$ 300	\$ -	
Ha covered with allocated budget	62	97	161	#DIV/0!	
First year MR minus MC	-\$ 210	-\$ 65	-\$ 10	\$ -	
MR - MC x Ha Covered	-\$ 12,963	-\$ 6,311	1,613	#DIV/0!	
Years to get around farm	16.20	10.30	6.20	#DIV/0!	

Future Maintenance (Fert, Chem etc)	
Option 1 Cost after improvement	\$ 80.00
Option 2 Cost after improvement	\$ 70.00
Option 3 Cost after improvement	\$ 60.00
Option 4 Cost after improvements	\$ 40.00

What else you can do – leasing/buying/investing

**Professor Bill Malcolm;
 School of Agriculture, Food and Ecosystems; Melbourne University.**



Bill Malcolm is originally from Hopetoun in the Victorian Mallee. He researches and teaches agricultural economics at the University of Melbourne and has done so since 1980.

This Too Will Pass: Farmland and the Animal Spirits that Bedevil It

By Bill Malcolm, Alex Sinnett and Paul Deane; University of Melbourne

Paper presented to Perennial Pasture Systems 14th Annual Conference, Ararat, September 2023.

(Abridged Version; the full version will be available on the PPS website www.perennialpasturesystems.com.au after the conference).

The main influences behind the marked increase in land values and some thoughts on whether land values are likely to keep rising.

Things change. Agricultural land, an asset long held in high regard by the knowing, has in the past three decades found even stronger favour and wider recognition in the agricultural, and wider, economy. Farmers now have a farming business and a farm-land owning business. In the past three decades farmland in Australia has, with some ups and downs, grown annually in real value at a much higher rate than it did in the latter

half century of the 20th century (see Figure 1). Yet, owning farm-land is not the only game in town: more useful to think instead in terms ‘land has good value when used for farming’ and, so, thinking in terms of ‘acquiring the services of farm-land’, one way or another. The main ‘other way’ of acquiring the services of land to use for farming is, instead of owning it, leasing it.

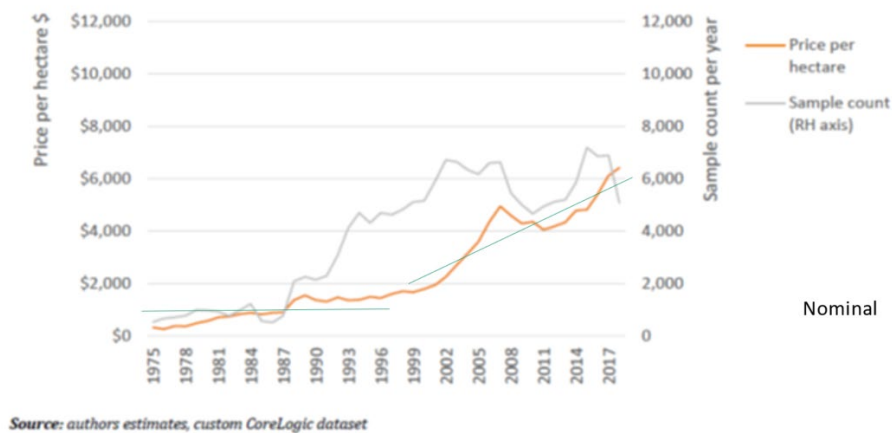


Figure 1. Average nominal price per hectare versus sample size (From ABARES – a constructed series of estimated land prices)

There are many phenomena that combine to influence the prices farm buyers are willing to pay and not all, such as optimism, are amenable to inclusion in the economic models that are used to analyze the investment decision. Below is a list of real phenomena that influence the prices farmers pay to obtain the services of land to farm and which have been in play in recent years. Noting; that the most optimistic bidder wins.

- Rain, Soil, Yields, Prices, Costs
- Exchange rate
- Finance-interest rates, access to capital, debt servicing capacity
- Agricultural land holding value world-wide (post-GFC) leading to significant international capital inflows (e.g. overseas Pension Funds and such-like)
- New business arrangements – capital aggregators, owning and leasing, owning and managing etc
- Size of the ‘parcel’ of land in a sale
- Multi-sales (aggregations)
- Land availability
- Climate, rain, temperature
- Location, distance, infrastructure
- Houses, buildings
- New technology-new activities, new crop and livestock systems,
- Inflation
- Recent sales
- Past and expected growth in real asset values
- Macro-economic cycle, GDP growth, Inflation, Monetary policy, Fiscal Policy
- Markets and Policies, export access, exchange rates, trade policy, carbon policy
- Non-monetary (land add-on to existing land: extra gross margin = addition to profit, convenience, economies of scale, avoiding a problem, ...)

Looking at how these factors have changed over the past few years helps to explain why land prices have increased. Recent runs of exceptionally good seasons and extra-ordinary (in the literal sense) commodity prices (see Figure 2), accompanied by historically low levels of real and nominal interest rates explain much about the ‘perfect storm’ that has resulted in the almost unprecedented increases in the prices being paid for land for all types of farming, in Australia and internationally.

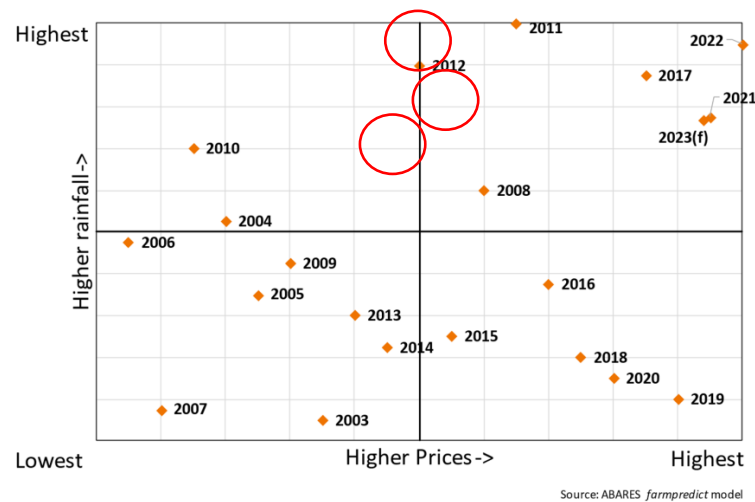


Figure 2. Comparison of level of rainfall and range of prices (note combination of high prices and good conditions) (Source: ABARES)

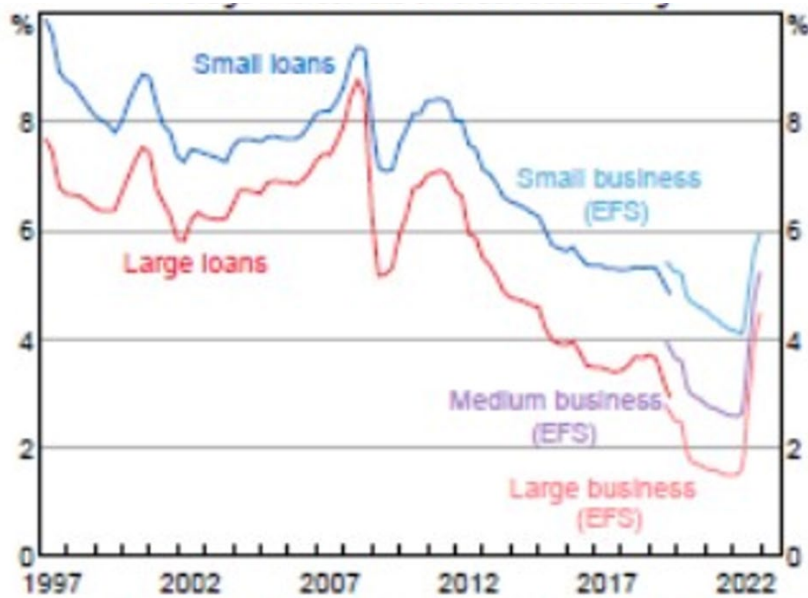


Figure 3. Australian Business Lending Rates

The effects of the activity of buyers of farm land on the prices in recent years brings readily to mind John Maynard Keynes evocative description ‘Animal Spirits’. While Keynes was trying to explain cycles in economic activity, the phrase ‘animal spirits’ in economics has come to mean ways human emotions and instincts and urge to act inform and ‘group think’ all influence decision-making about the always uncertain future which will always have volatile times. Today the term animal spirits is used in behavioural economics and study of the psychology of markets. ‘Animal Spirits’ can refer to pessimistic-panic or excessive optimism – exuberance even – influencing financial decisions and actions, most famously culminating in ‘Asset or Speculative Bubbles’, or ‘Busts’. In the 1990s during the dot-com asset bubble, Nobel Prize winner in economics Robert Schiller with the then Chair of the US Federal Reserve Board Alan Greenspan coined an equally evocative term, ‘Irrational Exuberance’ to describe the behaviours of participants in the infamous ‘dot-com bubble’,

later describing the Bitcoin phenomenon as a text-book example of a ‘Speculative Bubble’.

Exuberance can include the extrapolation of past events and trends with positive outcomes as continuing into the future. The strong tailwind of falling real interest rates across the longer term has buoyed asset valuations throughout the economy (see Figure 4). Agricultural businesses owning land have equally benefited from the global trend in interest rates. All boats float on a rising tide. But financial markets are now in the midst of a ‘re-calibration’, taking into account the view that future risk-free rates of returns are sustainably higher and will likely be closer to the medium term trend than the last decade. This is the equivalent of the tide starting to go back out. The cautionary tale with the reversal of the tide is those taking greater risk are in the deepest water, but eventually are exposed - being found to be swimming naked with the reversal of the tide!

Returns % per annum		1 Year	5 Years	10 Years	20 Years	30 Years
		— U.S. Shares ²	23.5	14.7	16.5	10.1
	— Australian Shares ³	14.8	7.3	8.8	9.0	9.2
	— International Shares ⁴	22.6	11.5	13.2	8.4	7.5
	— Australian Listed Property ⁵	8.1	3.5	7.7	5.2	7.3
	— Australian Bonds ⁶	1.2	0.5	2.4	4.2	5.5
As at	-- Cash ⁷	2.9	1.2	1.7	3.5	4.2
30 June 2023 ¹	... CPI ⁸	6.0	3.4	2.7	2.7	2.7

Figure 4. Australian Investment returns by Asset Class (Source: Vanguard)

As yet there appears to be little suggestion by analysts, statistics and the rural press that the rises in Australian agricultural land values of recent times are easing, let alone falling. Time will tell, but down the track, undoubtedly some decisions to purchase farm land in recent years could warrant the explanation as being part of the 'Asset Bubble, Speculative Bubble, Irrational Exuberance' of the times. If things are good, can they only get better? No! Booms bust. Regression to the mean is a handy concept in many life activities; this is the tendency for phenomena, or combinations of phenomena, when they are way above a level of the medium-term recent past, or way below it, will, unless fundamental change has occurred, see a series of economic forces set in train that will culminate in dragging the phenomena back to the more common levels closer to the medium-term mean.

It is hard to argue that the circumstances of agriculture have fundamentally changed for the future forever; the alternative conclusion is that exceptionally good circumstances are unlikely to last. When we look back at the past several years and the prices being paid for

agricultural land, whether whole farms or individual blocks being added to existing holdings, the 'perfect storm' nature of what has happened is likely to be obvious. Buyers of agricultural land at current valuations can ask 'how much of the recent good times is now capitalised into land values, and what are the chances of a repeat of the enticing combination of high prices, good seasons and cheap capital over the next 10, 15 or 20 years?' The answer to this question will determine where an investor will sit regarding the next phase of valuations of farm land. If their subjective assessment is for a low probability that the recent past will continue (and the recent good times are priced in), then the flipside is a future with a high probability that plateauing agricultural land prices and even falling prices for the coming decade could loom large.

The combination of the recent past pattern of runs of rising commodity prices, underpinned by low discount rates for economic analysis and interest rates for financial analysis, accompanied by exceptionally good seasons is a trifecta of uncommon rarity. This too will pass.

Working out how much to pay to acquire the services of farm land

The first, most obvious question, and most difficult question to answer, is 'What are services of farm land worth?' which can then help us answer are current land prices cheap or expensive? What land is worth is a question which has long been a worry to economists,

investors and not to mention the farmers who use it! The answer to this question determines the value of the land to the user of it. How do we determine the value of agricultural land? How much should we pay for this parcel of farmland, given our circumstances?

In essence ways to identify some numbers that inform us about what farm land is worth to us comes down to the following ways of tackling the question:

- i. Comparable Sales in the Market: how much we have seen **others pay for similar land** in similar circumstances to yourself and therefore we might have to pay in the market for the land in question.
- ii. How much we **should pay** according to strictly economic criteria. This is the price that gives a good chance of earning a return on the capital invested that is comparable to the earnings from alternative uses of the capital involved, after taking account of the different risk that might be involved. The answer is also highly contingent on the user's subjective views of future profit drivers – output per hectare (climate, productivity gains) and future commodity prices.
- iii. How much we **could pay** according to the capacity of the land plus our existing resources ability to service the debt we will have to take on to acquire the land. This is the most important criteria in that if we get this wrong we can lose possession of the purchased land as well as some other assets we had before we bought the land; and the ultimate criteria.
- iv. How much we **are prepared to pay** for the land, given the whole situation, the family goals and circumstances, with all things considered, including the economic, finance, risk and the all-important non-pecuniary factors involved in the decision.

Lastly, for brevity in conference proceedings, we set out to answer some common questions asked about buying versus leasing farmland.

Buying or leasing assets?

There are two main forms of acquiring the services of farm land: either buy it and own it using your own or borrowed capital, or obtain the services off a landowner using leasing or share-farming or an outside-equity capital arrangement. Both buying and leasing are ways of obtaining the services of an asset. With leasing the lessor has to compensate the owner of the asset for the net return to the land from farming as this is what is being foregone by leasing the land to someone else to farm. This 'net return to land foregone' figure has to be

adjusted for other costs that may be involved and which may be paid by either the owner or the tenant.

In the question of whether to buy or lease, the lease cost is a cost of financing the acquisition of the services of the land and can be thought of as akin to the interest cost of financing the purchase of land via purchase using an interest only loan. A reason why owning has been the preferred model in Australia is that real capital gains from owning farm land are lightly taxed, if at all.

Is it better to look at run down land and improve it or look to invest in productive country?

Shrewd farm buyers identify unrealized potential. Then using their skills and capital and willingness to bear risk they buy underdeveloped land and invest to lift the carrying capacity. While the capital to develop the land has an opportunity cost – the improved carrying capacity and extra livestock still have to be 'bought' – they can

earn a reward above this opportunity cost for their entrepreneurial and farm development skills in this way. The development costs are tax deductions and down the track the capital gains from owning the higher producing farm are taxed lightly or not at all.

Do purchase or lease prices reflect prior pasture investment (fertility, pasture species)?

Well informed purchase and lease prices should reflect the expected profits to be made from farming the land (and from owning it in the case of purchase). The expected profit from farming the land reflects the current

state of the resources involved and their potential from improvement. Well informed offers to buy or lease should encapsulate well the current and potential future state of the land involved.

What are the consequences of economies of scale?

The economies of scale effect of leasing extra land or buying extra land can be highly significant. This effect comes into play when the extra land can be farmed without incurring extra overheads in the form of extra permanent labour or extra depreciation from having to invest in extra machinery and plant. The ideal is when

extra gross margin (Extra income minus extra variable/direct costs) becomes nearly extra operating profit as few extra overheads are incurred. There will still be some extra fixed charges which are unavoidable such as the lease cost, and or with purchase, extra land rates.

What are consequences of diversifying away from the main farm?

There is much to be said for adding the services of land, whether by leasing or purchase, in close proximity to the main farming operation. The benefits of convenience in time saved and in management oversight and control are obvious and complementary effects from using the additional land in close conjunction with how the home farm is used are manifold.

There can also be significant benefits in spatial diversification of farm activities, particularly now and in the future when much increased climatic volatility will be the norm. Investments that reap benefits of being spatially diversified though have to be large enough for

the gains from facing different seasonal conditions to make a difference to then overall business performance. As well, the not insignificant costs usually arising from the challenges of distance have to be overcome or at least reduced. That is, a lesser standard of performance has to be acceptable as this is likely once the management focus and skills of the home farm are diluted, or delegated. Losses of the critically important timeliness of operations, or of daily observation and attention to detail can quickly bring spatial diversified operations undone unless effective steps are taken to overcome these potential problems.

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Notes

Staffing; good employees & employers
Carlyn Sherriff; Team Leader, People & Succession
Pinion Advisory; Clare S.A.



Carlyn is the Team Leader of the People and Succession area for Pinion Advisory. Carlyn provides key skills in people management systems, succession and developing workplace culture and efficiency. She is motivated by building and developing relationships for long-term outcomes. Carlyn also has skills in business planning, strategic planning and benchmarking for agribusiness. She has extensive experience managing national projects ranging from leadership skill development to program management. Carlyn is committed to working with people in agribusiness to develop their skills and capabilities.

Attracting and retaining staff

BACKGROUND

Working with people is an essential part of running a profitable farming business. There are many challenges facing farm owners and managers including attracting, leading and managing your team. With a proactive and professional approach, your business can improve success in attracting employees and then maintaining positive ongoing relationships. This approach positions your business as an employer of choice.

KEY POINTS

To assist your business in becoming an employer of choice, consider these aspects:

1. Culture

Culture is defined as the demonstrable values that are lived by the business owner. Culture is directly influenced by the leaders of an organisation. It can be enhanced or eroded at any time. Cultural alignment between owner and employees is essential for a strong business, as alignment of values and culture leads to improved performance.

- You may have a robust business strategy but without the right culture, the strategy will fail.
- Recruit for the right attitude that reflects your culture. You can train and develop the skills required if your team has the right attitude.

2. Professional operation

Set yourself up for success by operating as a professional business.

This includes:

- Thorough recruitment process.
- Clarity in your employment expectations (job descriptions).
- Systems and procedures that support your workplace culture (lead by example).
- A culture of accountability including record keeping.
- Induct and train all staff members to support their capacity development.
- Regularly undertake performance reviews that provide two way feedback.
- Preserve confidentiality at all times.

3. Communication

Communication is an essential trait of successful teams. On-farm this looks like:

- Developing 'game plans' for key operations such as seeding or harvest.
- Undertaking weekly toolbox meetings to ensure the team is clear on the tasks for the week.
- Clear roles and responsibilities that provide an outline of expectations and tasks.
- Use of messaging apps to keep in touch during the day (whatsapp or messenger).
- Effective delegation ensures clarity on task expectations, facilitates skill development and frees up time. Effective delegation includes – what I need done, by when, what does success look like, what happens when something goes wrong, check-ins along the way.
- Dealing proactively with any team issues as they arise

4. Know the standards

Ensure your professional business understands the workplace standards and ensures compliance. Employees are motivated by security, structure and clarity.

These workplace standards include:

- FairWork
- Modern Pastoral Award
- Workplace health and safety

5. Leadership

To attract and retain your team, focus on yourself and developing your leadership skills. One foundational framework is to ensure you 'work above the line'. This is operating with ownership, accountability and responsibility. The opposite is blaming, making excuses and being in denial (below the line).

'Working above the line' is a choice you make as a leader, it will create trust and enhance your team function.

FOLLOW-UP

Contact Carlyn Sherriff or Dee Heinjus at Pinion Advisory, 1300 746 466.
csherriff@pinionadvisory.com deheinjus@pinionadvisory.com



USEFUL REFERENCES

FairWork <https://www.fairwork.gov.au/>

Modern Pastoral Award 2020 <https://library.fairwork.gov.au/award/?krm=MA000035>

Smarter, Safer Farms <https://agriculture.vic.gov.au/about/agriculture-in-victoria/smarter-safer-farms>



Staffing; good employees and employers

Stuart Robinson



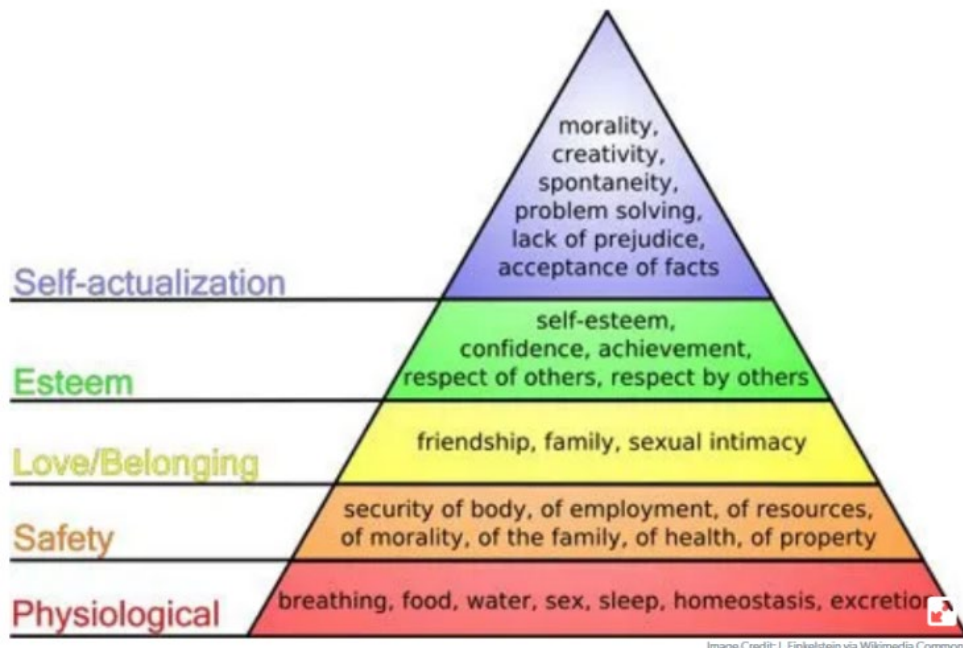
Stuart combined a qualification in Ag Management with a Business Degree to have the best of both worlds. He started out managing the family enterprise, then about 15 years ago, Stuart moved into professional management whilst maintaining my own enterprise. Today, he is the General Manager of Terinallum Partnership which operates Terinallum, a 3,800ha mixed farming operation at Pura Pura. He is supported by the ownership family and 6 staff that allow Stuart to really enjoy his place in Ag.

The Art of Becoming an Employer of Choice

Basically, all of us have a set of needs to allow us to live happy fulfilling lives. There are a series of needs that humans require scaling from the basics of life to the complex motivational and psychological that need to be met so that we feel sustained, valued and part of community.

In 1943, a theory of needs was proposed by Abraham Maslow and this has become the most taught theory of how to motivate and inspire people.

It is known as Maslows Hierarchy of Needs.



I will not dwell on the theory. However, it is the basis of my approach to recruitment, retention, and reward of staff. I try to focus on the top three tiers of the pyramid.

This means-

- Having a culture of teamwork and support.
- Encouraging staff to show, teach and lead at all levels recognising that everyone is an individual and will have differing styles and speeds of learning.
- Ensuring that we have an environment of constant improvement and that mistakes lead to learnings and development of knowledge and skills.
- Trying to create an inclusive culture, not them and us.
- Giving all levels of the team the opportunity to have input and contribute to decision making.
- Creating the atmosphere where individuals have ownership of ideas and outcomes such that they can identify with successes and that if those ideas have not worked, they understand why and won't be diminished.
- That the team can make decisions and change plans because the collective input is valued and considered often as more significant than that of the single Manager.
- There is the ability from the most menial tasks to the most complex, for individuals to decide how and when within the framework of the days or week's objectives, to approach the required objectives.
- That all achievements are recognised and that all goals achieved are noticed and acknowledged when achieved.
- Creating opportunity for progression and growth within the workplace.

Notes



PERENNIALPASTURESYSTEMS
MAKING PASTURE GO THE DISTANCE

Shock proofing your farming system by befriending risk

Dr Kate Burke; Think Agri; Echuca

0418 188565 kateburke@thinkagri.com.au



Think Agri
Agri Expertise



Kate Burke founded Think Agri Pty Ltd after identifying a need for corporate and institutional investors to have access to astute experience based advice when considering key agri-investment decisions. Knowing the right questions to ask is fundamental to sound decision making. Kate's 26 years of experience forms a library of critical questions to ask about any agricultural investment.

Kate also recognised that leading farm families could further improve their performance by taking the lead from corporate business practices when it comes to business planning and reporting. This is especially the case for any farm business considering intergenerational succession or contemplating accessing external capital from sources other than traditional debt funding via lending institutions.

Kate is a highly experienced independent farm consultant with a PhD in agronomy. Kate spent time in the corporate sector as commercial manager of one of the largest grain producers in Australia and knows what it takes to run a profitable farm business.

Introduction

I don't need to tell you that farming, by its very nature, is exposed to risk. You live that every day. It's also very robust though. Otherwise, fourth and fifth and six -generation family farms would not exist.

Every era has its own trials and tribulations. Now in 2023, there are new risks and new worries. You'd be forgiven as a livestock producer and for feeling underappreciated and under siege from the universe. There is a smorgasbord of threats, risk and worry:

- Wool and meat and animal price per head tanking,
- the threat of government regulation restricting markets and practices.
- energy infrastructure encroaching on the landscape
- biosecurity and foot and mouth disease.
- Increased costs of inputs, machinery, infrastructure materials, land
- fear of debt especially with the sharp rise in interest rates
- staff shortages with record low unemployment rates
- ***and of course too much rain or not enough, too cold or too hot.***

The good news is, the fundamentals of profitable dryland mixed farming over the long haul that is, being good with livestock crops, people and money is also good risk management (Table 1).

Shock proofing the business doesn't need to be complex or over complicated. It starts with knowing your financial position and the consequence of any action you take. Leading a regret free rewarding farming life courtesy of a robust farm business is entirely possible with common sense, cost effective production practices and having regard for humans, the law and your financial position.

In this paper I propose two strategies for building a shock proof farming business:

- i) Making friends with risk as unpleasant as that may sound as an essential step to shock proofing the business
- ii) Qualitative and quantitative examination of farm performance

Part A.

Making Friends with Risk Manage not minimise.

Farm management economist Professor Bill Malcolm of the University of Melbourne says

“Above average returns on capital are only possible if the capital is exposed to above average risk. The emphasis in farm management on risk and volatility as something to be minimised is misplaced”

In other words, it makes economic sense to become familiar with risk and manage the consequences rather than to avoid altogether or focus only on minimising risk.

Crunch the numbers and befriend risk to manage bias

Numbers are your friend.

Consider the case study of the risk of flooding in a low lying paddock on a property called “Damp Downs”. Damp downs is a mixed cropping and sheep meat production business.

Damp Downs lost considerable income to flood damage in one particular year. Since then, flood damage is top of mind and influences every decision. Unknowingly, some opportunities are missed due to that fear of flood.

Business analysis revealed that moderate flooding years are actually the most profitable years. This is despite the angst caused by flooding and the severe losses in some paddocks. This surprised the owners because the story they'd told themselves was different.

Armed with that knowledge, floods now become the friend of Damp Downs, not the detested enemy. Some drainage work is planned in the paddock that gets flooded 9 years out of 10. There is less angst about the paddocks that only get flooded 1 in 20 years.

Risks are knowable but often feared

The economics definition of risk is that the probability of occurrence is knowable. The good thing about risk is statistical techniques can be used to frame the odds. That said, even though production risk is largely quantifiable, it's very tempting not to go through that process because of fear.

Unpleasant memories from floods, droughts, a frost event or a grain marketing disaster create fear and then judgement becomes clouded. Fear invokes a fight or flight response from the brain. One of the responses to fear is avoidance. So even though it makes sense to do the numbers, they don't get done. Take end of season frost events on cropping paddocks. It makes perfect sense to assess each paddock for frost damage to plan for harvest but each year when frost is an issue, there are plenty of paddocks that won't be looked at before the header goes in.

Understand Uncertainty

Uncertainty is different from risk. Uncertain future events have no known probabilities and this messes with the brain. When faced with uncertainty the brain invokes the fight or flight response and is less likely to draw on the reasoning and logical parts of the brain.

When fear and uncertainty are combined it's very difficult to make sensible logical decisions based on reasoning. If we don't quantify the risks even though that information is knowable, the brain assumes we are dealing with uncertainty. Doing the sums on frost damage for example, takes the brain back to the logical side rather than the flight or fight side.

Take the frost example, we can chance our luck and wait until the header gets in or we can go to known frost prone areas and make an assessment of frost damage. Without the assessment process, fear can hijack the seeming logical tactic that some analysis may reveal. For example harvesting the low parts of the paddock last and segregating the damaged grain from the rest would be a logical path of action. Doing some numbers to quantify the risks can alleviate the fear and result in better decision making.

Part B

Demystify understanding farm business performance with these questions

The evidence-based logic joining the dots between production, people and money is this

- Returns are driven by profit
- Profit is driven by maximising revenue and minimising cost of production at the business level and the enterprise level
- Revenue is driven by productivity and price contributes but does not drive it
- Cost of production consists of a business existence cost (fixed costs) and business running costs (variable or operating costs)
- Capable people in the driver's seat with hands on the steering wheel make decisions that contribute towards or take away from profit
- The individual and collective wellbeing of the farm business team influences the quality of decisions and the ability to perform under pressure.

Just as critical is what isn't important. Commodity price, farm size, enterprise mix and cropping intensity, rainfall variation within a district and hours worked were all far less critical than astute decision making and organisation, understanding and managing both fixed and variable costs and optimising production.

Rather than prescribe a recipe of benchmarks, the questions and thinking process outlined below help you work through your farm performance. My suggestion is to gather your headline financial data (revenue, variable costs, fixed costs, profit, finance costs, debt and equity) and review it in light of the annual farm production performance and the human dynamic on the farm as well as the financial indicators.

In other words - production, people and money

1. Production

Start with production and production drivers, because each farm has a potential earning capacity based on the season. Retrospective analysis can indicate how close one is getting to that potential and in which type of years the business thrives. These numbers can be calculated for livestock as well as cropping.

- How much rain was there?
- Were there any weather events (cold, snap, frost, heat, drought, flood) that may have reduced production?

Profits are generally hard to achieve if annual rainfall is below 60%, so in drought; farming to potential simply means trying to break even.

If weather was not a limiting factor, how close was production relative to the potential based on rainfall received?

In bumper years, farming to potential means cost-effectively producing as much as possible. There is a limit to what's exploitable each year, to ensure the land resource is sustainable in the long term.

2. People

Production and money issues don't appear by themselves. People make the choices and the decisions.

- What's the underlying cause of the production or money issue you've identified?
- Is it a preference for a particular type of farming system?
- Is it a communication and teamwork issue that causes delayed decision making?
- Is it poor planning and organisation?
- Is it just simply not enough people to get the job done on time?
- Is it a spending issue? Either not spending enough or being a liberal spender?
- Maybe it's tension due to unresolved succession issues that disrupt the function of the farm?

3. Money

- Was your program cost effective?
- If production was okay, how do the variable costs look?
- Did you make money from the production before overheads were accounted for?
 - If the answer is yes, then it's time to look at fixed or overhead costs.
 - Are these proportional to the scale of your business?
- What does the investment in plant and equipment and infrastructure look like?
- Is depreciation and machinery finance payments taking the cream off the top?
- What state is the business in overall?
- How are the debt levels?
- Is debt increasing or decreasing over time, is net worth increasing over time?
- Is the operating business funded by cash flow from the business or from borrowed working capital year in year out?

When money has been cheap to borrow, it's easy to lose sight of the fact that you may not actually be making any.

4. Final questions from your analysis

- Is your business performance explainable and reasonable for the conditions experienced?
- Is your business strong enough to handle the threats you are concerned about?

If you've answered yes, fantastic, keep up the good work.

If you've answered no, the next question is what would you like to do about that?

Discussions with business partners, family members, trusted peers and advisors can help sort through this final question. There are always solutions to be found.

Conclusion

Risk taking is an essential part of money making and building a robust farming system.

Risks are quantifiable. Facts and figures help access reasoning and logic.

Befriending risk reduces fear and enables stronger decision making amidst uncertainty.

Robust farming businesses do the fundamentals of profitable farming well. The people involved have a pragmatic view of risk that helps manage uncertainty.

Asking questions that integrate the production and people aspects of the business with the financial reality truly help you understand the drivers behind profit and the degree of robustness in your business in its current form.

Table 1
Broadacre farming profit drivers

Most important (Obsess about these)	Less important (Agonise less about these)
CROPS AND LIVESTOCK	
Agronomically sound land use	Farming system or enterprise mix*
Production Efficiency – kg per ha per mm of rainfall	Rainfall differences between farms in the same season
Unique characteristics of farm and business (The Farm Effect)	Cropping intensity (% of farmland under crop)
Timely operations	
PEOPLE	
Astute, timely and flexible decision-making and action despite uncertainty	Hours worked
Spend more time on strategy, planning, management and research	
Motivated and accept responsibility for decisions	
Relationship managers and socially apt	
Keen formal and informal learners	
MONEY	
Use people, machinery and capital efficiently	Scale; Farm size
Fixed and variable cost awareness and management	Commodity price *
Liquidity (cash reserves)	
Robust business that can handle shocks – drought, price crash, frost events	
*Rainfall received and commodity price influenced returns between years, but do not explain the differences in returns between farms. No subscript indicates all studies made this attribution	
<p>A Voght S)http://grainproducerssa.com.au/uploads/media/SESSION_2_-_Grains_-_Simon_Voght_Rural_Directions.pdf</p> <p>B Kingwell, et al., 2013 https://nccarf.edu.au/broadacre-farmers-adapting-changing-climate/</p> <p>C Graetz et al 2018 S https://www.mla.com.au/contentassets/49579f2874944d76b3fa8b74022f3aef/l.mxf.0001_final_report.pdf</p> <p>D Doule S, et al 2009 Farmer's capacity to adapt to climate change—SA case studies. <i>Agricultural Science</i> 21 , 13–19</p> <p>E Bryant, 2016; https://grdc.com.au/resources-and-publications/grdc-update-papers/tab-content/grdc-update-papers/2016/09/what-is-driving-my-profitability</p> <p>F Beever and McCarthy 2004 <i>Business health indicators for professional farmers Farm 500</i></p> <p>G Malcolm, 2010 <i>Pursuing growth without regret in risky crop farming</i></p>	



Shock Proofing Our Farm System; Dan Jess; “Illoura” Ballyrogan



Dan Jess is the manager of the family property “Illoua” near Buangor. After growing up on the farm & finishing his schooling, Dan attended Marcus Oldham College from 1999 – 2001. He worked on a large scale sheep farm at Kojunup in WA as part of his Marcus Oldham prac year in 2000. In 2002, Dan travelled to England and spent time working on an arable farm in Essex. On his return he started working on “illoura” and is now the manager.

Illoura P/L is situated at Ballyrogan 30 km South East of Ararat. The farm is split over three locations – Ballyrogan Middle Creek and Lake Goldsmith.

General Information

Rainfall: 600mm / 24inches

Size: 2,200 Ha (350 Ha leased)

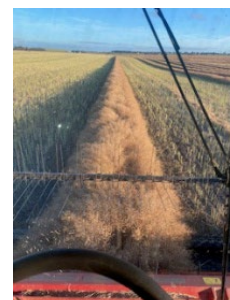
Location: Ballyrogan, Middle Creek & Lake Goldsmith.

Soil types: Majority Brown and Grey Clay Loam soil

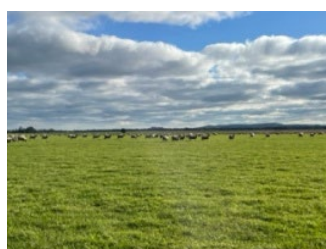
Topography: Mainly flat open plains with some undulation around creeks and Lake Goldsmith



Cropping: 2023 – 950 Ha canola, wheat and Faba beans plus sowed a further 350ha of pasture and fodder crops



Sheep: 2023 – 7,000 composite ewes; lambing down 6,500 after scanning.





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Survey Forms

PPS is requesting that conference participants assist by completing 2 surveys

(1) Conference feedback

A conference evaluation is available via mobile phone; conference attendees are invited to participate. It can be completed after the conference sessions.

Use your phone to view the Q code & access the survey.

Alternatively; copy the link into your web browser to access the survey.

Please enter your names if you wish to go in the prize voucher draw.

A prize of a voucher from Stawell & Ararat ag, horse & pet will be awarded to one of the evaluation participants.

The draw will be held on the PPS Spring Tour on October 17th.

Perennial Pasture Systems - Conference 2023



<https://forms.office.com/Pages/ResponsePage.aspx?id=vqAuchw-EUutb5QB1oVuJI9952cR7thMr0iQZQ6ZM4FUQzFBQ0Q1T0xGTDVLVThEOExPWU0zNEI5SS4u>



Ararat & Stawell ag, horse & pet.
(Formerly Ararat & Stawell Farm Supplies)



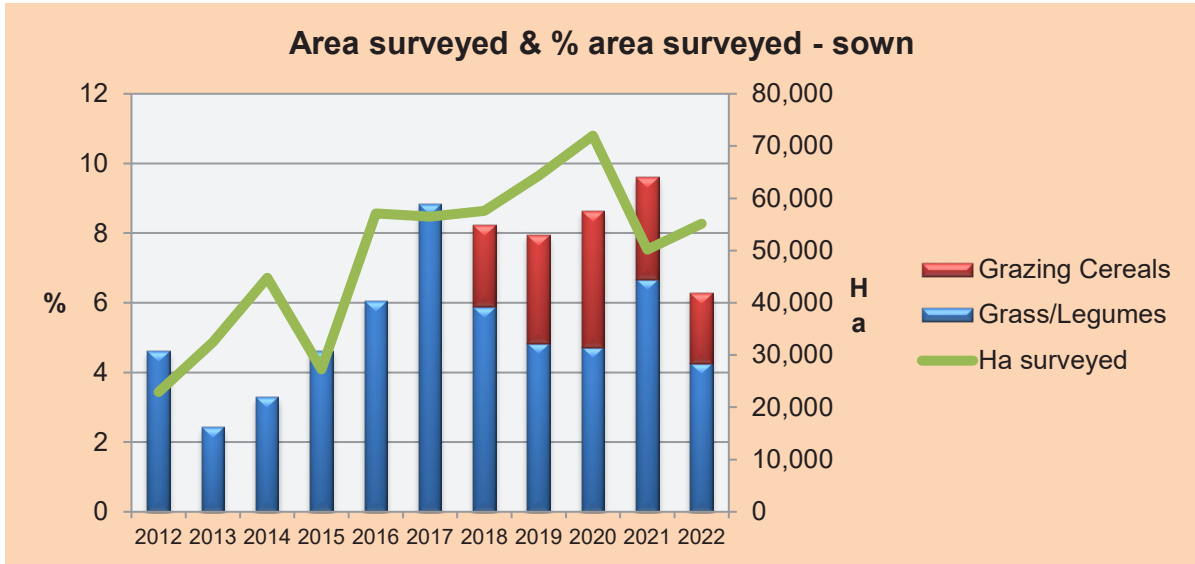
PERENNIAL PASTURE SYSTEMS

MAKING PASTURE GO THE DISTANCE

PPS Pasture Survey Form

Since 2012 PPS has been collecting information on pasture establishment from members; this information is combined to establish pasture establishment trends in the region.

The information assists PPS in its reporting to funders and provides the basis for research funding applications. An example of the collated data is shown in the graph below.



Survey forms can be completed on Survey Monkey which will be forwarded to members. Paper forms are available at conference desk.

PPS will conduct a prize draw from the completed survey forms and the winner will receive a trailer and dog load of crushed rock, suitable for road building purposes, free delivery for up to 100 km from the Pyrenees Hwy quarry; compliments of conference sponsor Western Quarries.

For more information on Western Quarries products contact 5352 2660 or info@westernquarries.com

The winner will be announced at the at the PPS End of Year Event on November 24th

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About our Conference Sponsors



AGF Seeds is a family owned seed production and marketing business. We aim to provide seed and independent knowledgeable advice to resellers and growers throughout Australia. We are located in Smeaton, Central Victoria.

AGF Seeds offer quality seed for cropping and pasture farming systems. Our extensive trial program aims to identify the best performing varieties.

Farmer feedback also provides us with performance of varieties and gives us the opportunity to share experience and advice on varieties that will best suit your farming system.

We strive to increase farm profitability by providing quality seed and proper variety selection that fits your conditions.

Advantages of using AGF Seeds are that we provide seed with quality assurances, which cannot be guaranteed with farm gate seed. We provide in-house seed cleaning and treating services that assures resellers and farmers are purchasing superior products. All certified seed has been checked by independent certification agencies. Please contact us for quotes or any enquiries on varieties that may suit your farm system.



DLF Seeds represents the coming together of PGG Wrightson Seeds, AusWest and Stephen Pasture Seeds. These three respected Australian forage seed brands joined forces to provide the market with the ease and convenience of accessing all the quality products you have come to know in one place.

As DLF Seeds, we proudly bring you a complete range of high-performance products developed specifically for Australian farmers. Every product is backed by innovative research and development combined with the on-ground, local knowledge of our team of sales agronomists.

DLF Seeds is now the largest forage seed company in Australia, with over 80 years' experience supplying Australian farmers with the widest range of forage seed varieties.

DLF Seeds offers a complete range of quality seeds backed by the latest innovations investing over 15 million dollars per annum into Research and Development across Australia and New Zealand. DLF Seeds delivers market-leading technologies, advice and systems tailored to suit your farming operations and climatic conditions.

DLF Seeds works closely with local and international partners, breeding programmes and retailers to improve productivity.

DLF Seeds has experienced Sales Agronomists across all Australian states and territories, providing local support and expertise & purpose built cold storage facilities to ensure endophyte percentages are maintained.



Under license from AVS

FeedTest, is operated by Agrifood Technology, a division of AWTA Ltd, under licence from Agriculture Services Victoria (AVS). The laboratory is located at Agrifood Technology, Werribee, Victoria.

The FeedTest began in 1988 as a commercial operation of the Victorian Department of Agriculture, Hamilton, Victoria. In October 2009 Agrifood Technology, a division of AWTA Ltd, acquired FeedTest.

Its objectives are to provide a commercial feed analysis service.

FeedTest has steadily grown in the last four years to be the largest fodder/feed/grain testing laboratory of its type in Australia.

FeedTest provides independent, reliable and rapid fodder/feed analysis using state-of-the-art Near Infrared (NIR) Technology, that allows you to determine the nutritional value of your stockfeed products.

FeedTest has the capability to test all types of Fodder. FeedTest are experts in the use of NIR Technology for feed testing in Australia.



'Future Fibres is a new and exciting wool trading company established in late 2021. Unique in the fact that both directors, Bill White & Xavier Vearing, were raised on wool growing properties and both manage their own flock today.

Future Fibres specialises in greasy, scoured & carbonised wool exports.

Sourcing wool all over Australia, from the three main auction centres Melbourne, Sydney & Fremantle each week, private tenders and also direct from farm.

We are dedicated to finding new markets and ideas to ensure growers receive a price they deserve for their wool.'



Gorst Rural is a rural retail and service business based at Lake Bolac in Western Victoria. The company has been in operation since 1986, and remains a family-owned and operated business.

As a leading retailer of agricultural supplies and services in Western Victoria for decades, Gorst Rural gives you peace of mind that you're dealing with dedicated, passionate experts. Today, the company is known as a trusted supplier of all seed, chemical,

fertiliser and animal production requirements as well as general merchandise, fencing, and grain storage/handling equipment.

With locations in Willaura, Tatyoon, Skipton and Derrinallum, Gorst Rural is well positioned to service the entire Western Victorian region. For reliable advice, agricultural know-how, and the right products for your needs, Gorst Rural is your number one choice.



For over 80 years Hewitt & Whitty have been supplying the Ballarat and surrounding regions with everything needed for life on the land. From tough outdoor maintenance equipment, fencing and fire defence products to stock feed, horse feed, supplements, drenches and apparel.

Our commitment to the support of our primary producers and communities is second to none. We

pride ourselves on providing the right products, services and advice to help our customers raise the best crops, the healthiest livestock and generally improve the quality of their primary production. We are your one stop Farm, Home and Garden Supplier in Ballarat, Avoca, Skipton, Geelong and Lismore.

There's always better value at your local CRT store.

Nutrien Ag Solutions Stawell services the southern Wimmera region, providing industry leading agronomic support to our valued customers.

Our experienced team can provide your business with a wide range of support to maximise profitability and sustainability.

15 Horsham Rd, Stawell Contact 5358 5500

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Pinion Advisory is an Australian owned business that unlocks latent potential in agribusiness, water and the environment to create profitable, sustainable and enterprising clients. The business was formed in July 2020 following the merger of three leading Australian consultancies, Rural Directions, Macquarie Franklin and Sunraysia Environmental. It is also the first step towards creating global agriculture, water and environmental consulting business, through a strategic partnership with United States food and agriculture advisory firm, Pinion Global. The strong organic growth

from synergies has been bolstered recently with leading irrigation and water engineering consultants HydroPlan merging into the Australian business. Sustainability underpins everything we do – in our business and in yours. Our large team of independent advisors have wide geographic spread and diverse skills including family agribusiness, commodity risk management, food & ag production, environmental sustainability and all aspects of water – from feasibility, compliance, reuse, pumping, irrigation, audits, operations and water resource management.

Our skills and experience are complemented by the way we operate. We deliver services on time, within budget, to a high standard and with a professional approach. For your business or industry this means that:

- Solutions work technically and that management implications are explored
- You are at the forefront of available technology and approaches
- You can trust us to be ethical, honest and maintain confidentiality
- You receive value for money products and services



PJA Accountants is one of the largest independent accounting and business consulting firms in Melbourne.

We provide accounting, taxation and compliance services to a broad range of enterprises across a diverse range of industry sectors. Whether you run a publicly-listed company, a small to medium private enterprise, a family-owned business, or an individual with personal wealth, PJA Accountants can guide you through an ever-changing business and investment landscape.

We've been looking after our clients best interests for decades. Many of them second and third generation businesses that have formed long-term relationships with our principal, partners and staff.



Paraway currently operates 27 pastoral enterprises across a number of diversified climatic zones and a range of country types. The company divides its operations into three regions: Northern (consisting of properties in Queensland), Central (with properties in Western NSW and the New England) and Southern (including Southern NSW and Victoria).

Collectively the properties have the capacity to carry over 200,000 cattle and 240,000 sheep. Dryland and irrigated cropping exists in each of the regions for the production of hay, silage and grain crops for external sales & feeding livestock.



At Precision Agriculture, we are all about powering agricultural performance through technology. At its heart, that means improving our customers' productivity and profitability through better, more informed management decisions. As a leading provider of precision agriculture services, Precision Agriculture's whole focus is on data, insight and action. We firmly believe that collecting the highest quality data is essential, but it only becomes truly valuable when combined with the experience and expertise to turn that data into actions and tools that match the client's goals.

Whether it's on-farm, for industry or government we collect, measure and interpret data to find opportunities for technology to deliver savings and unlock potential. We provide practical assistance and support to apply our findings to the real world.

Our substantial expertise and experience assist clients with core services (such as tax returns or financial statements) through to more complex requirements such as international tax planning, audits, restructuring, philanthropy or achieving long-term wealth creation through sound business planning encompassing income tax planning, succession planning, exit planning and retirement planning. As a valued client, you benefit from our independent, specialist advisory expertise in business and financial services backed by our core audit and assurance, accounting and taxation practices. At PJA Accountants, we strive to meet your specific needs in an ever-changing financial and regulatory environment.

Barton Station is part of the Paraway group; Barton, an aggregation of 5 properties is located 7km south of Moyston in the southern Wimmera region of Western Victoria. The country is relatively flat to undulating with mixed soil types ranging from low lying relic lake beds to sandy rises with rock outcrops limited to the northern section of the property. Barton will be utilised for breeding both sheep and cattle with the capacity to finish a portion of its own stock. The acquisition of Barton is representative of Paraway's commitment to be a consistent, reliable supplier of quality livestock to our customers.

We foster partnerships with leading suppliers in order to bring the latest in technology to our customers with products and services from around the globe. With offices around the country and a team dedicated to advancing excellence in agricultural production and land management, we have the knowledge, technology and skills to deliver leading precision agriculture services tailored to our customers' needs.

Our people are what sets Precision Agriculture apart. The highly qualified, experienced team has a wealth of experience across all spheres of agriculture so they can transform data into valuable decision making tools tailored to each client. Diversity of experience gives us a depth of knowledge and capacity to understand the issues faced by many kinds of agribusiness. From small farming enterprises to the highest levels of suited to our customers' individual needs.



The History of Pyrenees Hay, Avoca, Victoria

Pyrenees Hay Australia are delighted to be part of the Perennial Pastures System conference for 2023. Pyrenees Hay processors Co-operative Avoca, started back in 2001 with a group of farmers wanting to get an Export Oaten Hay business up and going as another way of providing farm income.

In 2011 Pyrenees Hay processors achieved the "Outstanding Agribusiness award" and was seen as recognition for the dedication, hard work and success of the entity.

Farmers within a 100 k plus radius of Avoca were encouraged to produce a quality product that could generate a value-added return to the growers. The past few decades the business has grown its export footprint for Oaten hay and as well, developed handling, storage and packing enterprises for the containerised grain segment of Australia's main export markets.



Quality Wool was established in South Australia in 1991, Quality Wool is distinctive not only because we are independent and Australian-owned, but, thanks to increasing support from growers and in contrast to others in the industry, we are also growing rapidly. We now support farming families throughout South Australia, Victoria, New South Wales and across to Western Australia.

In addition to our Adelaide receival centre and head offices, we have developed our Victorian operations in Geelong, Melbourne, Ballarat, Bendigo, Benalla, Ararat and Edenhope, we have added wool stores in New South Wales at Wagga Wagga, Orange and Parkes, while we are also located at Naracoorte, Jamestown and Dublin in South Australia.



***Ararat & Stawell ag, horse & pet.
(Formerly Ararat & Stawell Farm
Supplies)***

Stawell & Ararat ag, horse & pet operate farm merchandise stores on the Western Hwy in both Ararat and Stawell.

In more recent times, since 2016, the successful transition from a co-operative to a company (Pyrenees Hay Australia Pty Ltd) has been under the operational and investment management of Standard Commodities Australia Pty Ltd (established in 1989) a leading Export Agri business.

Standard Commodities has been invested, involved and supportive of the Pyrenees processor since inception of the Co-op.

Pyrenees Hay Australia has grown considerably in this recent period to be a leading processor and exporter of Hay and Fibre from Australia.

The acquisition of two new Hunterwood state of the art, highly efficient, Processing & Pressing plants has heralded a new era for company and we look forward to continual engagement with the rural community in Victoria and NSW

Our simple focus is to assist growers with their sheep and wool production and to devise a selling strategy that delivers maximum profitability.

Our strong relationships across the sheep and wool industry go right through to the processing lines of international woollen mills, particularly in China. We have established trusted relationships with Chinese textile leaders over many years that have assisted vital marketing opportunities for our clients.

The Ararat Store is located at 159 Moore St Ph 03 5352 4322

They have been supplying a voucher as a prize drawn from PPS conference attendees, (as Ararat & Stawell Farm Supplies), who complete the conference feedback for many years.



RAGT Australia is an Australian seed wholesaler, screening and supplying premium cultivars across Australia. The business is 100% focused on assisting grower/producers and processors increase productivity and profitability – and ensuring their outcomes proudly play a part in cultivating the good times in life.

Prior to today, RAGT Australia was known as Seed Force. In 2023 Seed Force changed its name to RAGT Australia, to reflect the businesses ownership and as part of a global branding change. (Read more below). Seed Force was established in 2006 by a dedicated and passionate group of real-world farm experienced agri-experts and insider seed industry connections. From inception they quickly got to work planting local trials across Australia and attracting like-minded people with serious on-farm experience to join them. To make sure this new Australian seed company could be at the forefront of plant breeding and technology, Seed Force joined forces with one of Europe's most respected seed businesses – RAGT.

With the backing of an international seed powerhouse, they could focus on drawing on the latest R&D and global class leading genetics to help agriculturalists get the best results from their broadacre crops, forage crops and pastures. Focusing on yield, quality, disease resistance and persistence, Seed Force changed the game and led the way – taking many on this great journey with them.

From humble beginnings to offering premium cultivars across a wide range of species, Seed Force were constantly growing, testing, finetuning and expanding their range – every year adding new cultivars to a proven system that gave farmers the power to grow. Today, RAGT Australia sits as a new force in seed supply, ready to improve on the ground-breaking work Seed Force pioneered. Based in Shepparton, Victoria and with RAGT Seedsmiths located in all corners of the country, new world global genetics and local knowhow are set to proudly 'Cultivate Life' for all Australians no matter where RAGT's seed solutions and expert advice is sown.



Southern Soils develops and manufactures its own leading range of nutrient-rich biologically enhanced fertiliser drawing on the best conventional and sustainable principles of farm management. During our Bio-enhancement process, our fertiliser is remediated with selected stimulants and NPK's, humic, fulvic, kelp, fish, molasses and trace elements, for up to six weeks, producing carbon rich, chelated fertiliser teaming with bacterial and fungal activity before the product even leaves our manufacturing plant.

Biologically enhanced fertiliser can be used as a stand alone product, or it can be combined in our purpose built plant with other market leading brands for more targeted performance.

Our broad selection of high quality liquid, granular and spreader-ready fertilisers is safe and easy to use, and can be custom blended in multiple grades and formulations to exact specifications so that it's right for your farm.



Western Quarries commenced production at Dunneworthy, near Ararat in 2015. Western Quarries crushed rock products are supplied to a range of companies across south-western, western and Northern Victoria.

Western Quarries is also the supplier of aggregate for use in asphalt and concrete production. Companies belonging to the Victorian Surfacing Alliance (VSA) also use aggregates for bituminous surfacing activities.



In 2021, AAG Investment Management facilitated a significant investment to introduce a new major shareholder, creating a new management structure and an injection of capital to turn the extensive research and development phase into the commercial phase. This exciting new chapter in Valley Seeds' history brings with it a new management structure, a new CEO, an expanded distribution network, and revitalised branding.

CEO, Paul Twine, in launching the new Valley Seeds brand and the associated re-engineering of the company explained:



The Victorian Chemical Company (Vicchem) was incorporated in 1933 and is a specialist manufacturer and global marketer of agricultural and industrial chemical products that is based in Melbourne, Australia.

We provide our customers with friendly, professional service and reliable, high performance products that have been manufactured according to an accredited quality management system ISO 9001:2015. Vegetable oils are used widely in our manufacture, with the resulting products being typically non-hazardous to both end user and the environment. Vicchem has a well-equipped laboratory that is used in formulation development and quality control testing.



Western AG is a successful independent supplier of agronomic advice and farm production inputs operating from seven locations across the Western District and the Wimmera region

The Western AG Head Office is located at Derrinallum, 90kms South West of Ballarat. Our branches include Bannockburn near Geelong, Willaura, South of Ararat, Hamilton, Goroke, Nhill, Horsham, Kaniva in the Wimmera and Bordertown and Naracoorte in SE SA.

Western AG began operations in April 2005 with a primary aim of supplying high quality agronomic advice with seed, fertiliser and crop protection products to clientele within the Western District region of Victoria.

“three years on with Valley Seeds, I have seen the potential of the company’s plant breeding investment, a process that takes ten plus more years for each new variety. It is clear to me that our new and emerging varieties will deliver clear benefits to Australian growers and the network of agronomists that service them.

We introduced Amplify phalaris last autumn with increased volumes available for the next planting season. This coming season we will be introducing several new varieties that are proving to be high-performing ryegrasses, as well as other perennial grasses.”

Our agricultural products include spray adjuvants, wetting agents, soil adjuvants, an organic insecticide, a growth regulator and bloat control products.

Applications include broadacre cropping, horticulture, cotton and pastoral.

Vicchem has strong business relationships with all key Australian distributors of agricultural products and works with industry partners and customers in North and South America, Europe, Asia, The Middle East and Africa. Our Industrial product range includes concrete mould release agents, truck slip products, asphalt adhesion agents, various esters of canola oil for use as formulating intermediates, and degreasers.

The company has now grown to provide services to over 800 farming clients that manage approximately 360,000 ha of various crops and pastures. All the branches have an additional focus on the supply of animal health and general merchandise products across the entire Western AG network.

The company employs 25 agronomists, 11 animal health & general merchandise specialists, and a similar size team of personnel in logistics and administration who all share a common focus on meeting the farm production needs of our clients.

Western AG is a member of the AgLink group of independent rural businesses, which provides \$1.35 billion of inputs to Australian farmers annually, and is the largest group employer of agronomists in Australia.



The Australian Institute of Agricultural Science (now The Australian Institute of Agricultural Science and Technology (AIAST)) established the trust in 1964. The trust commemorates Amos Howard's contribution to the use of subterranean clover as a pasture plant in Australia.

Amos William Howard, (1848–1930) by [L. A. Gilbert](#)

This article was published in [Australian Dictionary of Biography](#), Volume 9, (MUP), 1983

Amos William Howard (1848-1930), nurseryman and pasture improvement pioneer, was born on 31 May 1848 at Silk Mills, Watford, Hertfordshire, England, son of William Howard, gardener, and his wife Ann, née Hester. On 23 July 1871 at the Wesleyan Chapel, Tendring, Essex, he married Eliza Rowe. Arriving in South Australia in 1876, Howard established a nursery in the Adelaide hills between Nairne and Littlehampton. He became clerk of the local district council, but resigned to contest a council seat which he won and held for ten years. About 1880 he joined the Glen Osmond chapter of the Oddfellows' Lodge.

In 1889, intending to purchase a cow, Howard visited Michael Daley's property adjoining the Mount Barker Springs and Nairne roads. As Daley was away, Howard 'strolled along one of the valleys ... to fill in time until the owner returned' and was attracted by the growth of a kind of clover. It was later identified as subterranean clover, *Trifolium subterraneum* Linn. A widely variable species probably inadvertently introduced to Australia from Britain or Europe fifty or sixty years earlier and known in the Adelaide hills since about 1880. Sir Ferdinand Mueller recorded the plant as naturalized in Victoria by 1887, and it was reported from the Riverina as 'a vigorous grower' in 1896 when J. H. Maiden made his guarded comment: 'I know nothing against its character, except a certain aggressiveness ... It is not an introduction which need render us uncomfortable'

On 3 February 1906 Howard began his correspondence with the Adelaide *Advertiser*, enthusiastically extolling the virtues of the plant for improving pastures. Overcoming technical problems, he harvested the seed and offered samples to the South Australian Agriculture Bureau. By January 1907

he was able to sell 30 lb. (13.6 kg) to E. & W. Hackett, Adelaide nurserymen. Further experience with the clover prompted Howard to write to the press in 1907-09 vigorously promoting its use. By this time he and his sons were selling up to a ton (tonne) of seed annually.

State agriculture authorities made experimental sowings of the clover before 1920 and tentative recommendations concerning its use, but when superphosphate was advocated for pastures as well as for crops clover sowings responded remarkably, and the formula of 'sub and super' was widely followed. In 1923 the importation of a clover huller from the United States of America by Howard's son Cecil lifted annual seed production to over eight tons and in 1930 it was claimed that annual production of clover seed was responsible for about £50,000 coming into the Mount Barker district. By 1961 some 20 million acres (8.1 million ha) of southern Australia had been sown with subterranean clover, notwithstanding the discovery that some strains had oestrogenic properties injurious to sheep. The clover not only improved pastures but upgraded soil fertility through its nitrogen-fixing qualities.

Howard died at Beau Vale, Blakiston, on 2 March 1930, predeceased by his wife, a son and a daughter; he was buried in Blakiston cemetery, survived by three daughters and seven sons. A memorial to Howard's work on 'the most important pasture plant in Australia' was unveiled on 3 October 1963 on the Mount Barker road near the sites of his original observations and of his home. An appeal launched at the ceremony by the Australian Institute of Agricultural Science led to the establishment of the Howard memorial research fellowship in 1967. Two of the several cultivars of subterranean clover are named 'Howard' and 'Mt Barker'.



Amos William Howard (1848-1930), by unknown photographer, c1920



The PPS group would like to acknowledge the financial support received for this conference from the Glenelg Hopkins CMA & Wimmera CMA through funding from the Australian Government's National Landcare Program.



PPS acknowledges the support of the Ararat Rural City for support for the 14th Annual PPS Conference



PPS acknowledges the assistance of the Ararat RSL with the 14th Annual PPS Dinner.



PPS would like to express their appreciation to Deb's Diner & the Colonial Lodge Motel; Ararat for their assistance with the PPS 2023 Conference.



PERENNIALPASTURESYSTEMS
MAKING PASTURE GO THE DISTANCE

Perennial Pasture Systems 14th Annual Conference Tour

Jallukar Range Cnr. Pentlands Creek Rd & Joyces Rd, Rhymney



The beginning of the investment journey

Tom Brady is part of the team on the family farm, the 2,188 Ha, Jallukar Park. After time farming in Canada & running a contracting business, he purchased his own property, a 196 Ha block adjoining the main farm in late 2021.

Thomas promptly set about improvements after naming the new enterprise; Jallukar Range.

Jallukar Range is run as a separate business to Jallukar Park but is managed on a similar basis to maximise production and efficiency.

Tom will talk about the decision to expand into his own farm business and his current & future plans for Jallukar Range.





PERENNIALPASTURESYSTEMS
MAKING PASTURE GO THE DISTANCE



PPS 14th Annual Dinner
Ararat RSL; High St, Ararat; 5th September 2023

PPS 14th Annual Dinner Speaker; Peter Jess



Peter Jess, as an accountant, he has been one of the most influential people in Australian Rules Football, managing the affairs of many top AFL players.

But it was as a player on the field that Peter left his mark on Avoca in the early 1970's.

Although he was born in Melbourne, Peter had a yearning to play with the club where his father, Bill Jess, had started out. When Peter arrived for the first match of the 1971 season, the town was shocked. No one was expecting a short, super-confident upstart with a funny squeaky voice. Furthermore, his shoulder length hair did nothing to endear him to the suspicious locals. But looks can be deceptive.

Although this 19 year old stood just 5 feet 4 inches, he was not unlike Lethal Leigh Matthews. He walked, talked and above all, played football like Matthews. Peter was also quite a character. In his first game, played against Moonambel at Avoca on 17 April 1971, he kicked four goals and had an incredible 42 possessions. He was defeated in the Lexton League Best & Fairest award by just one vote, beaten by Howard 'Plugger' Lockett, regarded as one of the best country footballers ever.

Peter kicked an incredible 54 goals for the season, and provided many opportunities for the team's full forward, future sports commentator Rob Astbury, who booted 84 goals to win the League and Club award. Peter Jess was the life blood of the team, but his career on the field suffered a tragic blow at the end of the 1971 season. After losing twice during the year to arch rivals Lexton, Avoca was revved up for their Second Semi final clash.

The match ended in a thrilling draw, and Avoca were jubilant with the knowledge that they could match it with Lexton. Camaraderie had been high throughout the year, and the players celebrated together that night at the home of their President, John Field. Although he enjoyed a drink, Peter realised the importance of the match the following week and was the first to leave. Taking the hint, his team mates followed closely behind the Jess car, which contained Peter, his brother Russell, cousin Jimmy and Dale Gothard.

No one could have imagined what a horrific nightmare that 10 kilometre trip would be, with the car crashing into a creek. Both Peter and Russell received severe lacerations to the face, neck, and body. Dale escaped unhurt, whilst Jim suffered a broken finger. Peter had taken the full impact of the windscreen on his face, and was in a horrible mess. As he lay in a pool of blood waiting for the ambulance, he must have been in excruciating pain, but, typically, he could not resist making a remark. *'Listen you blokes'* he said. *'You haven't got a bloody hope of beating Lexton without me, so you better get me to hospital quick smart.'* Peter lost the sight of an eye, and his prediction proved to be right, and wrong. Although Avoca defeated Lexton in the replay of the Second Semi final, they lost the Grand Final by 12 points.

Peter persevered, but the trauma of losing an eye was a big handicap. In 1980, Jess began acting for his first footballer client. It was his cousin, Richmond premiership player Jim Jess. These were relatively primitive days, but word got around of the job Peter had done for Jim, and soon Peter started acting for a host of top players in the 1980s and '90s, dealing with Warwick Capper and famously taking care of Nicky Winmar, leading to a heated television exchange with Molly Meldrum in 1993 over Winmar's contract dispute with St Kilda.

Standing up for causes is nothing new for Jess. In 1966, as a 15-year-old schoolboy at Highbury High, he organised a 500-student sit-down to protest the Vietnam War. Having studied at Caulfield Tech, Jess turned his hand to accounting. His primary occupation remains as an accountant, with the walls of his Essendon office adorned with personalised sporting paraphernalia from greats including Usain Bolt, Pele and Azumah Nelson.

Having once acted as agent to around one-third of the then-VFL's players, you are unlikely to see his head bob up these days when it comes to trades or free agency, but he remains a key player in the AFL management scene. He has instead chosen to focus on taking care of past players, not all of whom he managed during their respective playing days. Peter has assumed a role as the public face of a quest for what he sees as justice for the legions of past players who he claims have been let down by the AFL's handling of concussion.

Peter's loyalty to clients, past clients, family, Avoca & mates was apparent when approached by the PPS Project Manager to speak. "Hi, I am calling to see if you would be the guest presenter at the PPS farmer group conference dinner; PPS member, Lloyd Gollop gave me your number and"; "if it's for Lloyd, I am there" was the reply. PPS thanks Lloyd's mate, Peter and welcomes him to PPS.



PERENNIAL PASTURE SYSTEMS

PPS Current Projects

Fescue; a low rainfall pasture tool? *Completed project update on page 47.*



PPS Problem Paddock Project; Kikuyu & Serradella in sandy soils, *report on page 48.*



Productive grazing with feed quality management

Sustainable pasture grazing management through feed quality measurement; Stage 2 reports on pages 49 – 53.



Informed decisions for managing climate variability in grazing systems

The project aims to employ current, available technologies and combine their use to provide pasture growth predictors to assist farmers in the decision making process required to deal with climate change and its potential environmental impact.

The project has analysis of predicted pasture growth conducted for the region using the available tools and getting it formatted into an easily understood visual format to assist farmer decision making in grazing systems in the variable climate conditions that are now part of the region's farming systems.



Regional Pasture Quantity Assessment

The collection of seasonal pasture yields with GPS & timestamps for satellite imaging calibration of existing remote sensing pasture quantity systems to allow for improved grazing management strategies. This project will allow accurate calibration of existing remote sensing of pasture quantity to allow for improved grazing strategies across southern Australian pastures. Livestock farmers will have a more accurate planning tool to adjust stock numbers proactively with climatic variability.

PPS will use their on farm knowledge to monitor and measure actively growing pastures in terms of dry matter in kilograms per hectare. This information, with pin point accuracy using GPS locations, will be then available for calibration for remote sensing systems. PPS is commencing a demonstration of the pasture imaging on four member farms using the Cibolabs imaging system.



Aim: to demonstrate that winter active fescue can be a valuable pasture systems tool in the <550mm rainfall zone in Victoria.

The project commenced in 2020 and completed in 2023. The full report can be found on the PPS website under projects – fescue. www.perennialpasturesystems.com.au

Background

Approximately 40% of PPS member farms are located north of the Great Dividing Range in Central Western Victoria. The area, south of the Wimmera and Central plains, consists of light soils and the region typically has a short growing season due to low spring rainfall and high evaporation.

From demonstrations previously conducted, PPS concluded that winter active fescue (WAF) could be a productive and persistent perennial grass option for use in the below 550 mm rainfall zone.

WAF has been demonstrated to fulfil a role in perennial systems in Southern Victoria but its early heading trait and potential earlier loss of feed quality has meant that management issues have arisen.

PPS conducted a demonstration on five member farms from 2019 - 2022 with support from the MLA PDS program with positive results.

WAF made good growth in the favourable autumn and winter conditions during the demonstration and made a valuable contribution to the pasture production. The Avoca site where it was sown with Uplands Cocksfoot and clovers carried 25 dse/Ha in its first full year of production, it should be noted that this was after a late summer break.

Previous PPS pasture trials at Paradise & Crowlands have shown that WAF is very persistent in these drier environments and PPS expects that this will also be the case on a paddock scale with targeted rotational grazing.

Payback period for a fescue based pasture establishment was calculated to be 5 – 7 years at 2023 prices and costs.

The use of Winter Active Fescue in <550 mm rainfall zone grazing systems adds another dimension to grazing management. The growth habit of the fescue appears to change from areas south of the divide by commencing its growth phase earlier.

Results/key findings

- Winter Active Fescue appears to fit well into perennial grazing systems in the <550mm zone.
- The growth pattern of winter active fescue appears to increase earlier in the <550mm rainfall zone in the Wimmera & Central regions of Victoria due to warmer soil temperatures & longer sunlight hours than in the higher rainfall regions in SW Victoria.
- Fescue did not hold its critical feed values as long as phalaris but the differences were minor and would have little effect on overall farm production.
- Results from the current and previous PPS demonstrations shows that total dry matter production of the winter-active fescue cultivars compares favourably with winter-active phalaris cultivars. Previous PPS trials highlight that production is higher than Australian phalaris and Uplands cocksfoot.



*Left; Fescue establishment;
Roshill, Paradise 2020.*

*Right; Overdale fescue
at Concongella, Sept 2nd 2021*



PPS Problem Paddock Project

The PPS Problem Paddock Project looking at paddocks which have severe constraints for perennial pasture establishment and are trialing possible solutions. The first project is at the Kindred family's Pomonal block which has the sandy, low fertility soil typical of the soils surrounding the Grampians.

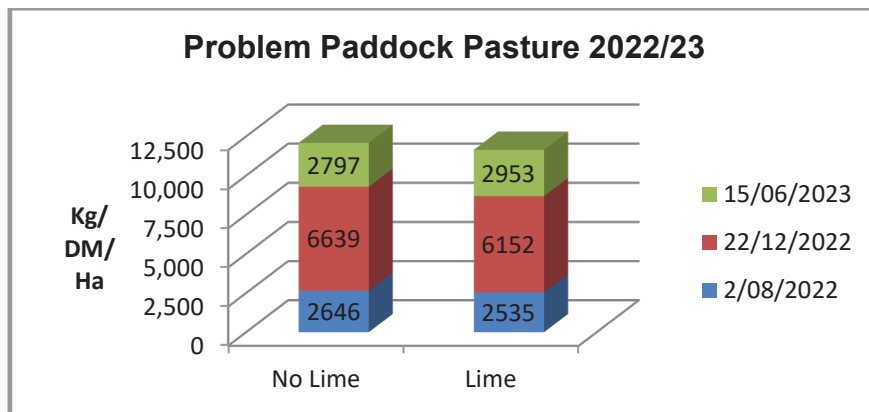
PPS is trialling Kikuyu and Serradella, adapting practices seen on study tours to NSW, Kangaroo Island & East Gippsland. Kikuyu was sown on September 9th 2021 at a rate of 3 kg/Ha, the legume, Serradella was oversown in Autumn 2022.

The summer rainfall in early 2022 was very favourable for the Kikuyu & it grew well in its first year. The kikuyu was grazed in autumn before the Serradella was oversown.

The serradella established well and grew prolifically during spring last year, fortunately it didn't smother the kikuyu which responded well to the wet spring and is producing large amounts of green feed during summer.

PPS are measuring feed quality and production to assess the pasture mix but it is already showing its value in providing exceptional ground cover compared to the annual grasses it replaced.

In late January, the serradella had gone to seed and its feed value had dropped but the kikuyu was green and growing actively with 8.5% Crude Protein, and 8.9 mj/kg/DM energy which is above the critical levels for adult sheep. Digestibility was still 58.8%.



The growing conditions for a kikuyu/serradella pasture were highly favourable in late spring and early summer. Dry matter cuts showed over 10 tDM/Ha with little difference between limed & unlimed sections so far.



Sandy Soil Type



Kikuyu in summer 2022



Kikuyu sample late Jan 2023

The Problem Paddock Project is supported by GHGMA through funding from the National Landcare Program.



PERENNIALPASTURESYSTEMS
MAKING PASTURE GO THE DISTANCE



Productive grazing with feed quality management

Sustainable pasture grazing management through feed quality measurement; Stage 2

PPS had two feed quality projects running through 2022/23. The projects are providing evidence based science for producers to identify plant quality loss before it effects animal production. The increasing variability of rainfall and rapid decrease in pasture quality makes the timing of late spring grazing crucial in maintaining sustainable grazing systems. The aim of the project is to provide quantitative pasture quality information to farmers to assist in maintaining healthy, productive & sustainable grazing systems. This will have a positive outcome for animal, pasture & soil management by assisting farm managers to identify when pasture quality falls below animal requirements & allow better targeted supplementary feed programs and pasture rotations.

The project was commenced in 2021 through a Wimmera CMA Landcare Victoria grant and is being extended by three years through the MLA PDS Program. The wet spring of 2022, allowed for an additional project, testing feed quality through the summer period; this was funded through Wimmera CMA & Landcare Victoria.

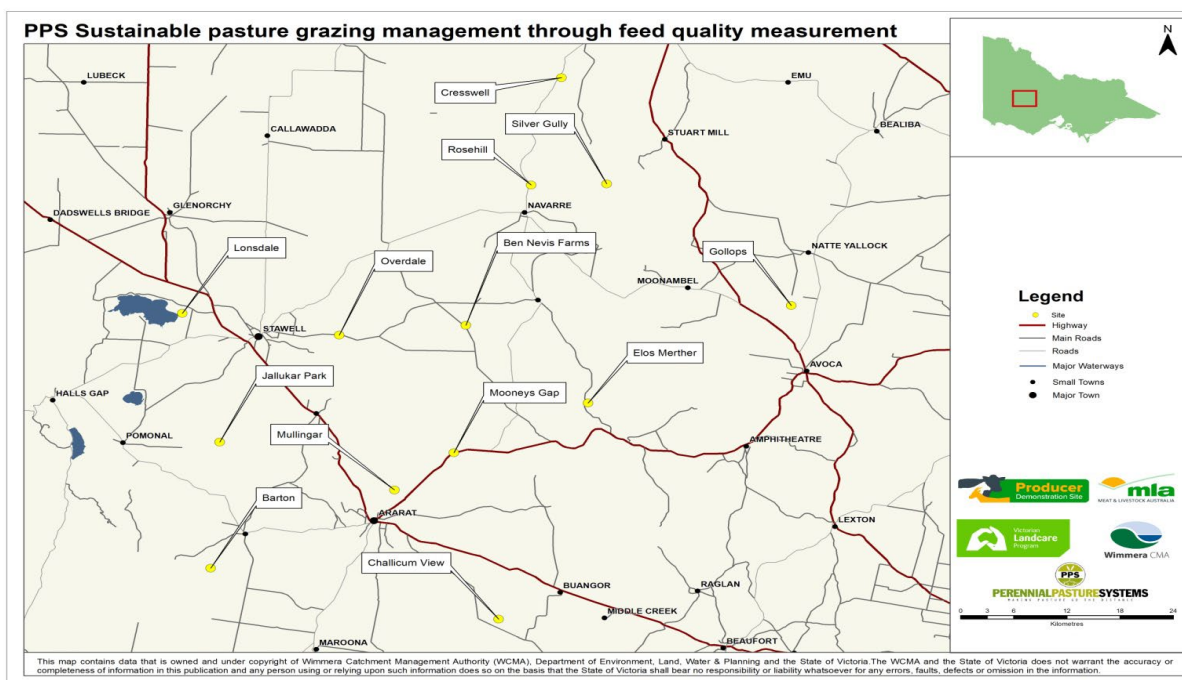
Methodology; Pasture types were selected for testing from PPS member farms representing the different climatic conditions & soil types within the region. Feed samples were taken from single varieties as well as mixed pasture swards and pasture composition was recorded. All samples were sent to FeedTest™; Werribee for feed quality analysis.

Feed quality results for crude protein, energy & digestibility were assessed against sheep requirements and approximate dates that the feed quality category declined below that required for the classes of sheep were recorded.

Some of the project results are below.

Project results and two webinars by project consultant, Jess Revell; Rumenate Livestock Services can be found on the projects page on the PPS website.

<https://www.perennialpasturesystems.com.au/projects>

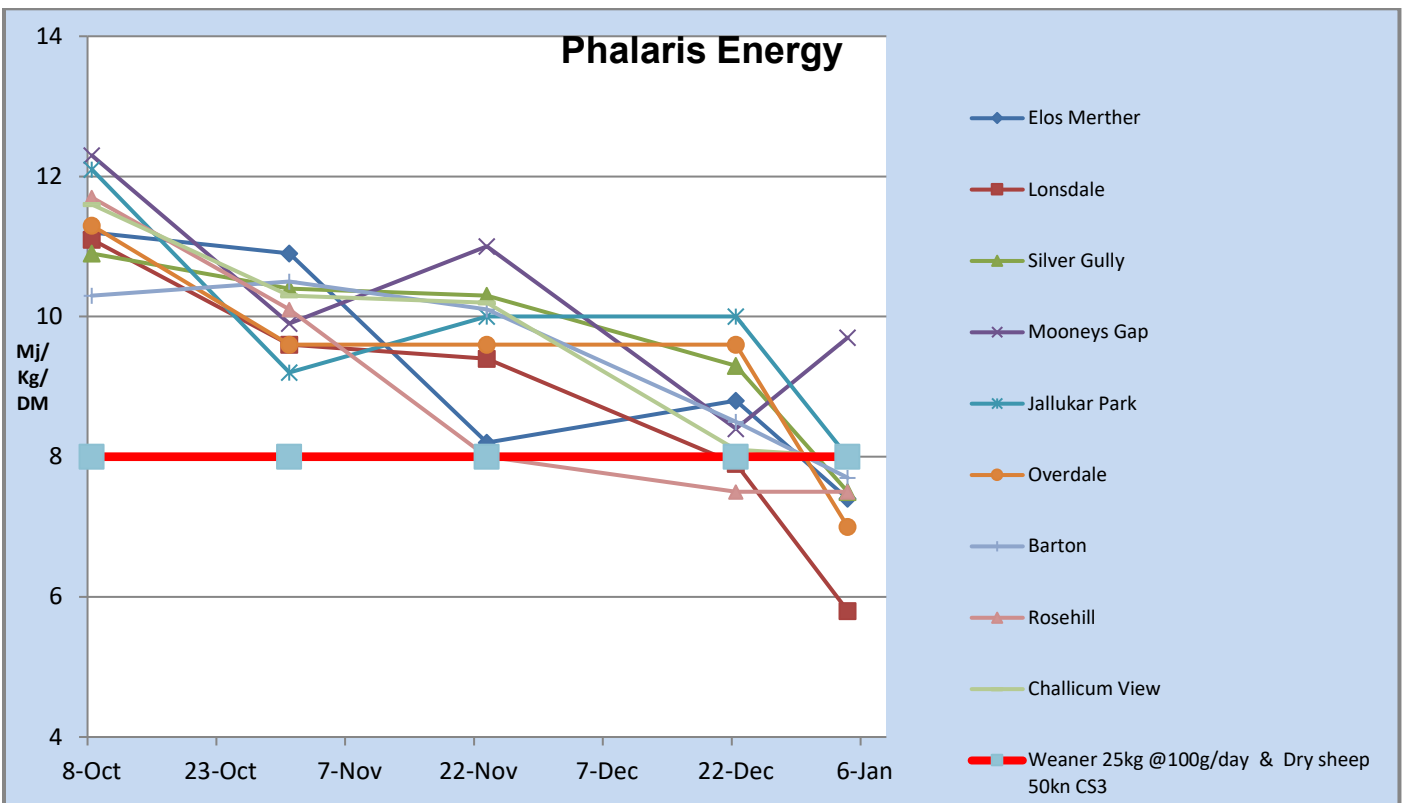
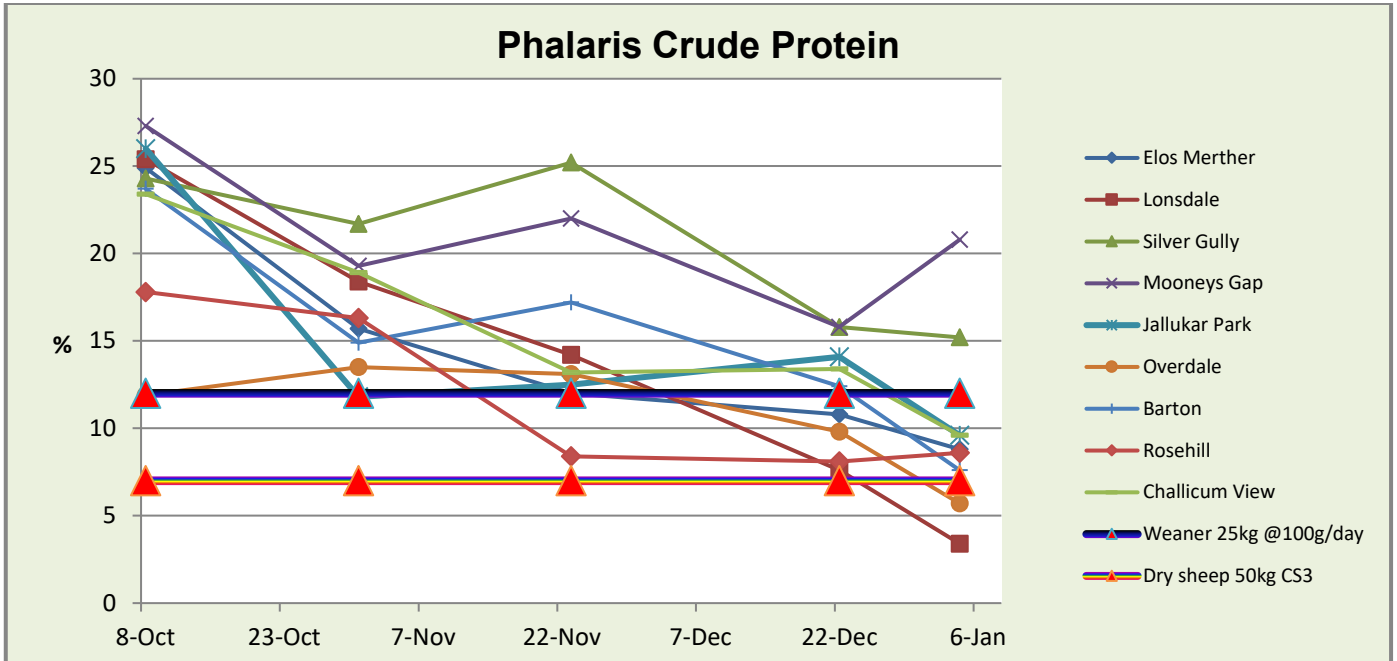


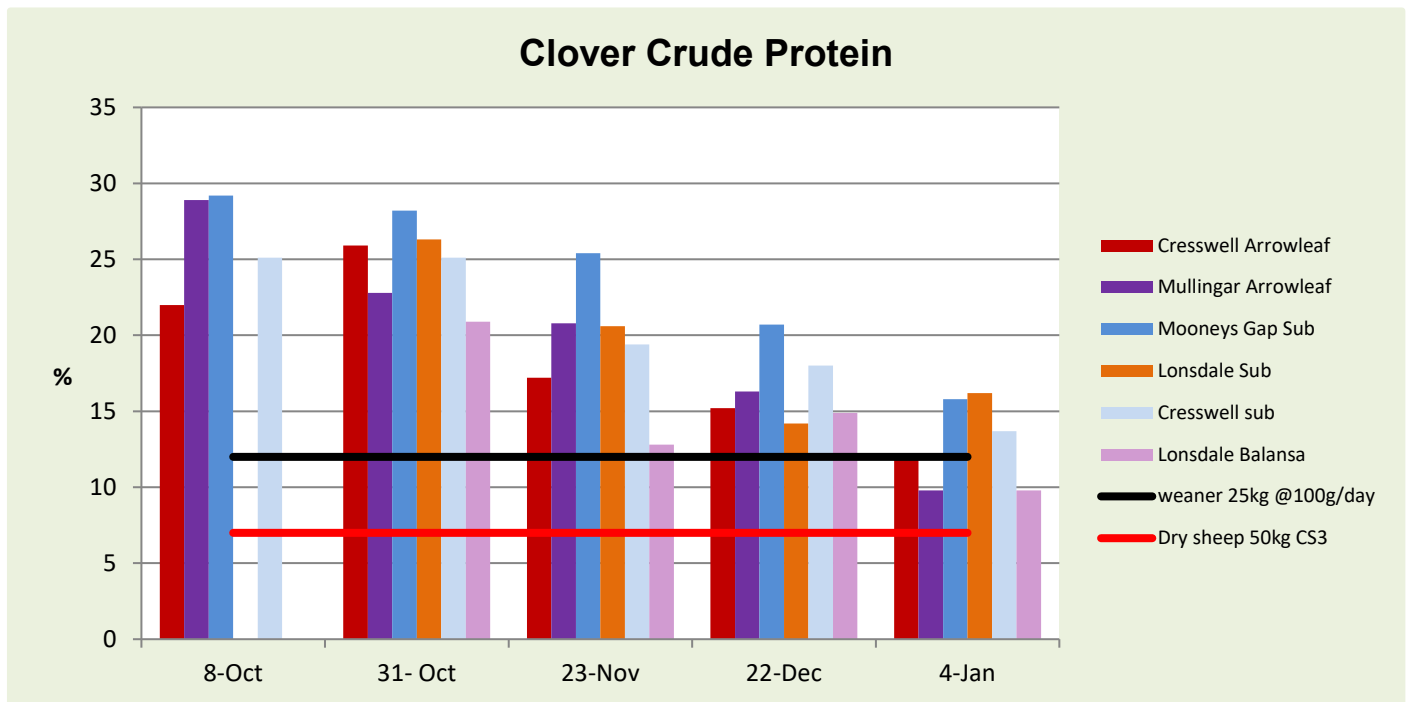
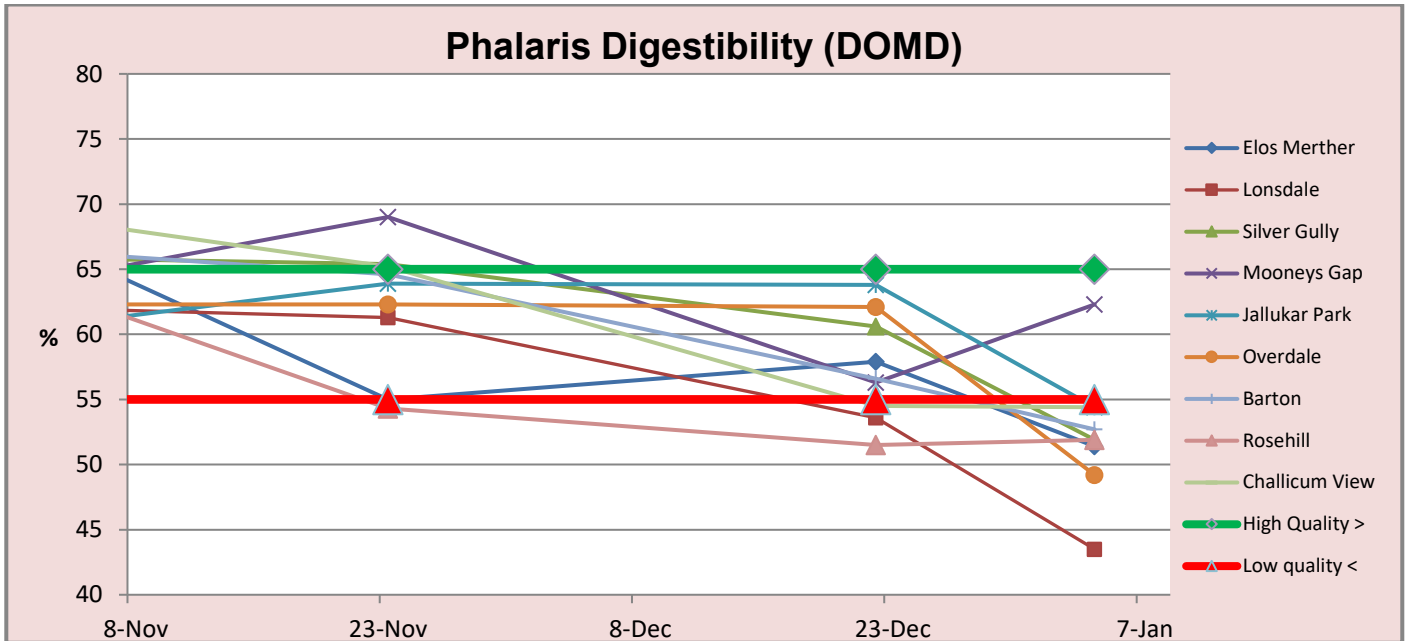
Indicative dates when perennial grasses were below the feed quality required for each category.

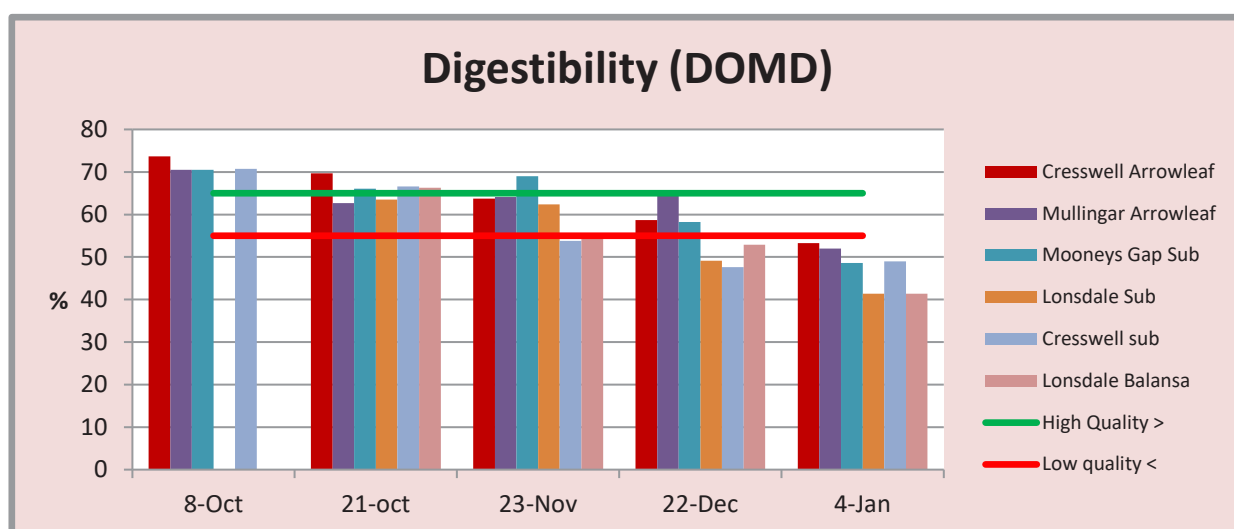
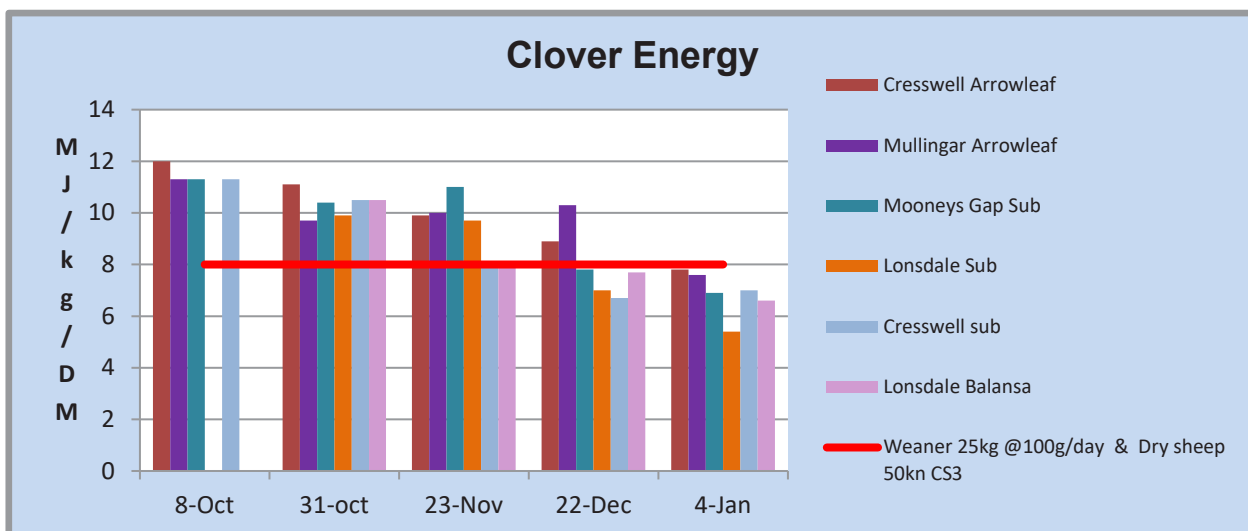
Sheep Requirements	Crude Protein Requirement Weaner 25kg @100g/day	Crude Protein Requirement Dry sheep 50kg CS3	Energy <8 Mj/kg/DM	Under High Quality Less than 65 %/DM	Low Quality Less than 55 %DM
Cocksfoot					
Gollops Uplands	26-Nov	NR CP still 8.7 on 4/1	NR Mj still 8.3 on 4/1	26-Nov	NR still > 55% on 4/1
Lonsdale Uplands	26-Nov	4-Jan	4-Jan	26-Nov	4-Jan
Mooneys Gap Uplands	26-Nov	4-Jan	4-Jan	10-Nov	4-Jan
Elos Merther Lazuly	10-Nov	4-Jan	NR Mj still 8.1 on 4/1	10-Nov	4-Jan
Fescue					
Gollops	26-Nov	18-Dec	18-Dec	10-Nov	18-Dec
Overdale	10-Nov	26-Nov	4-Jan	10-Nov	4-Jan
Rosehill	10-Nov	4-Jan	4-Jan	26-Nov	4-Jan
Prairie Grass					
Elos Merther Prairie	10-Nov	26-Nov	18-Dec	26-Nov	18-Dec
Phalaris					
Cresswell Australian	26-Nov	18-Dec	26-Nov	26-Nov	18-Dec
Rosehill Australian	26-Nov	4-Jan	4-Jan	26-Nov	4-Jan
Lonsdale Holdfast GT	26-Nov	18-Dec	18-Dec	26-Nov	18-Dec
Overdale Holdfast GT	26-Nov	18-Dec	4-Jan	26-Nov	18-Dec
Jallukar Park Australian	18-Dec	18-Dec	18-Dec	26-Nov	18-Dec
Elos Merther Holdfast GT	26-Nov	18-Dec	18-Dec	26-Nov	18-Dec
Mooneys Gap Holdfast GT	4-Jan	4-Jan	4-Jan	18-Dec	4-Jan
Barton Australian	26-Nov	18-Dec	18-Dec	26-Nov	18-Dec

It should be noted that other classes of sheep or those needing higher growth rates may have higher requirements. It should also be noted that grazing has an effect on feed quality and that pastures which are actively growing will have a higher feed quality than those which are running to seed.

Examples of the feed quality results







Lucerne –summer feed quality

	Tirranna Lucerne 25-Jan	Creswell Lucerne 25-Jan	Tirranna Lucerne 15-Feb	Creswell Lucerne 15-Feb
DM %	29.8	25.9	34.7	28
Met.Energy MJ/kg	8.5	8.8	8.2	10.9
CP %	16.3	19.1	16.4	26.1
NDF%	43.5	40.7	44.1	32
DMD%	58.5	60.3	57.2	72.6

Mar 24	Kirkella	Kirkella	Kirkella
Plant	Top	Base	Full
Dry Matter %	79.6	79.7	79.2
Met.Energy MJ/kg	6.3	5.9	6
Crude Protein %	11.9	10.1	8.8
NDF %	56.4	55.8	59.8
Digestibility (DMD) %	45.9	43.6	44

Project results and two webinars by project consultant, Jess Revell; Rumenate Livestock Services can be found on the projects page on the PPS website.

<https://www.perennialpasturesystems.com.au/projects>

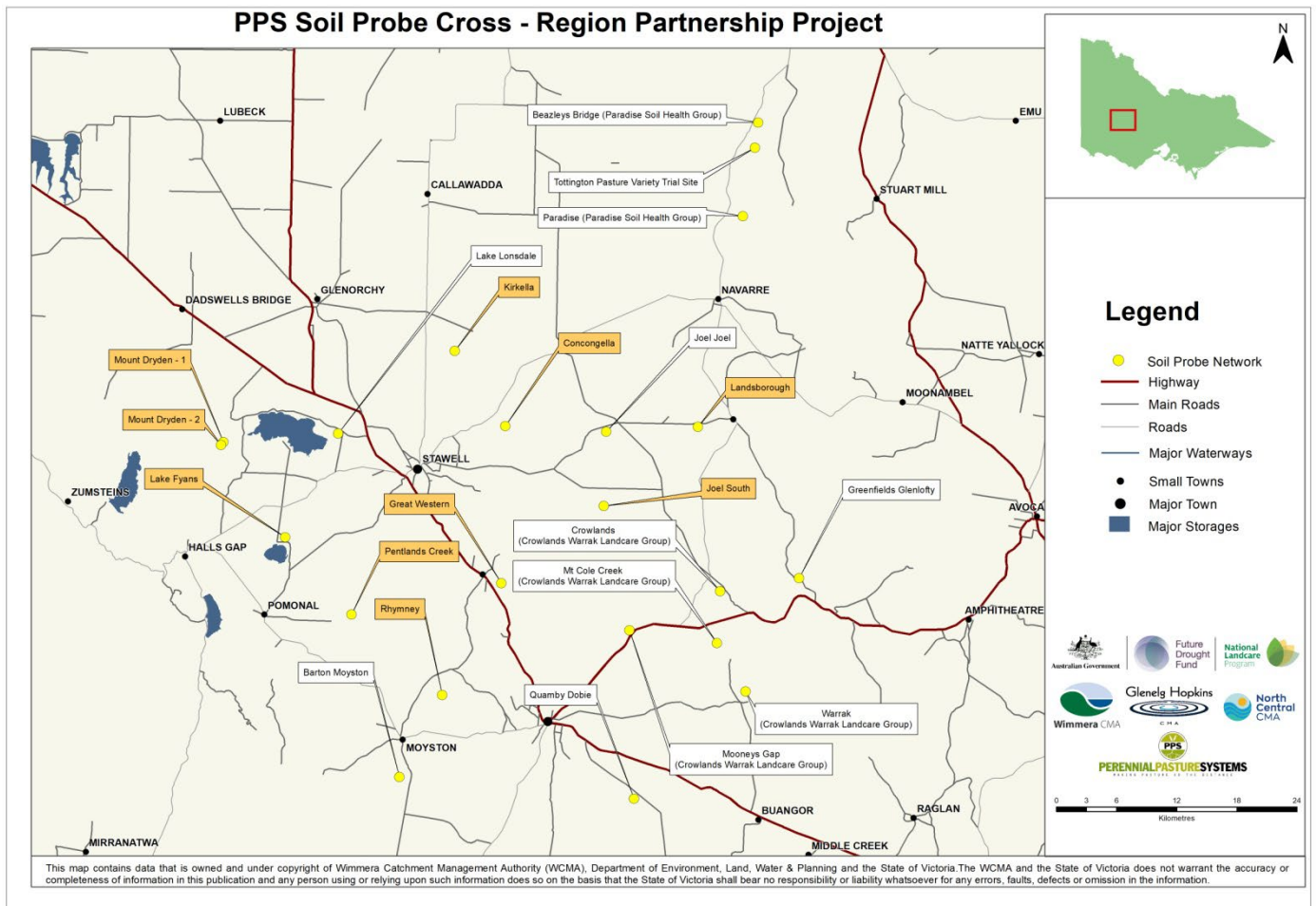




PERENNIALPASTURESYSTEMS
MAKING PASTURE GO THE DISTANCE

PPS Soil Probe Cross-Region Partnership Project
Supported by Glenelg Hopkins, North Central & Wimmera CMA's
through the National Landcare Program.

Partners – Crowlands Warrak Landcare Group & Paradise Soil Health Group (Winjallok Landcare).



A series of 11 new Soil Moisture Monitoring sites were added to the network in 2022. They are jointly funded by WCMA through the Australian Government Future Drought Fund, Host PPS member farm businesses & PPS.





PPS Completed Projects

Final reports available at www.perennialpasturesystems.com.au

Mooneys Gap & Tottington EverGraze Supporting Sites

Innovative use of Giberrellic Acid; MLA EDPS project (collaboration with Agriculture Victoria)

Phalaris Persistence Project; MLA PRS project (collaboration with Agriculture Victoria)

Variable Lime Project; funded by GHCMA & WCMA through the National Landcare Program

Pasture Comparison Trial; MLA PDS project

Sub Soil Amelioration Project; funded by A W Howard Memorial Trust

Greenfields; pasture improvement physical & economic analysis; Federal Govt community Landcare Grant

High Production Annuals in Perennial Systems Project; MLA PDS project.

Annual grass control strategies in a perennial pasture system; MLA EPDS Project in partnership with Agriculture Victoria.

Notes



PERENNIAL PASTURE SYSTEMS

MAKING PASTURE GO THE DISTANCE

PPS Funding 2007 - 2023

Project and Event Funding

Meat & Livestock Australia MLA
Wimmera Catchment Management Authority
Glenelg Hopkins Catchment Management Authority
Federal Government "Caring For Our Country" program & "Smart Farms" program
Federal Government "Sustainable Agriculture Stream" & "National Landcare Program"
Federal Government "Future Drought Fund"
Grampians Pyrenees Primary Care Partnership
A W Howard Memorial Trust
Rural Bank National Recovery and Resilience Agency
Agriculture Victoria EverGraze
Ararat Rural City Northern Grampians Shire Pyrenees Shire
Landcare Australia Landcare Victoria Project Platypus
Federation University Melbourne University
Woolworths Future Food Program North Central Catchment Management Authority
Central Highlands Agribusiness Forum (CHAF) Hewitt & Whitty
Rabobank Western Quarries Grampians Community Health FeedTest
Paraway Pastoral Co RES/ Ararat Wind Farm Crowlands Wind Farm Hassad Australia
AGF Seeds Frew Group Gorst Rural Stephen Pasture Seeds DLF Seeds
Bio Ag Quality Wool Seedforce Southern Soils Western Ag
Valley Seeds APAL Tylers Rural Nutrien Ag; Stawell Winjalok Landcare Group
RAGT Pyrenees Hay Precision Ag Vicchem Future Fibres P/L
Australian Wool Innovation More Money From Sheep Program
Better Beef Program/More Beef From Pastures program Ag, Horse & Pet (formerly Ararat & Stawell Farm Supplies)

Joint Event Funding

Go Tafe

Grasslands Society of Southern Australia
Grains Research and Development Corporation GRDC
Rural Industry Skill Training RIST

In Kind Support

AGF Seeds	Beaufort Rural	Chalambar Golf Club
Dellavedova Fertiliser Services	Elders	East Grampians Health Service
Hansen Print	Gill Fry Network SW	Gorst Rural
Harberger Farm Supplies St Arnaud	Heritage Seeds	Landmark Ararat
Langi Kal Kal & Ararat Landmate crews.	Lisa Warn Ag	Meridian Ag
Molloy Brothers Ararat	Nutrifert	PGG Wrightson
Plant Science Consulting	Precision Agriculture Ballarat	
Rippling Waters Fertilisers Stawell	Seedforce	Seed Distributors
Southern Farming Systems	Southern Soils	Stephen Pasture Seeds
Stawell and Ararat Farm Supplies	Stuart Kemp Pasturewise	A.F. Gason
Tasglobal Seeds	Tasmanian Institute of Agricultural Research	
Tatyoan Rural	Western Weed Control	Westlake Fertilisers
Geoff Peacock Grass 'n' Turf Rejuvenation Service	Lake Bolac Bush Nursing Centre	
PJA Accountants	Pinion Advisory	

PPS acknowledges the above businesses and organisations for their financial and in kind support



PERENNIALPASTURESYSTEMS

MAKING PASTURE GO THE DISTANCE

Perennial Pasture Systems Management Committee 2007-2023

Alan Green	Great Western	2007-2009	
Ben Greene	Elmhurst	2007-to date	President 2011-2013
Craig Altmann	Horsham	2019-to date	
Duncan Thomas	Dunneworthy	2015-to date	President 2019-2021
Ewan Letts	Ledcourt	2007-2012	
Hayden Price	Crowlands	2013-to date	
Ken Hall	Joel South	2007-2021	
Lachie Green	Lake Fyans	2021-to date	
Mal Nicholson	Concongella	2015-to date	
Mat Hall	Joel South	2019-to date	
Matt Kindred	Stawell	2009-to date	President 2021 to date
Michael Greene	Elmhurst	2007-2021	
Paul Harrington	Mt Cole Creek	2007-2019	President 2013-2015
Rebecca McKay	Ararat	2013-2015	
Rob Gee	Greens Creek	2007-2013	
Simon Brady	Jallukar	2007-to date	President 2007-2011
Tom Small	Tottington	20019-2013	
Tony Roberts	Glenlofty	20017-2019	President 2017-2019
Wayne Burton	Mt Dryden	2012-to date	President 2015-2017

Project Manager Rob Shea Ararat 2009 - to date

PPS Management Committee 2023



Craig Altmann



Simon Brady



Wayne Burton



Lachie Green



Ben Greene



Matt Kindred



Mat Hall



Mal Nicholson



Hayden Price



Duncan Thomas



Girls & Grass Advisory Group members 2016-2023

Bianca Kilpatrick	Great Western	2017-current
Bronwyn Bant	Joel South	2016-2017
Jane Coburn	Dunneworthy	2016-2021
Janine Curtis	Glenpatrick	2016-2021
Jodie Greene	Elmhurst	2016-2021
Leila McDougall	Tatyoan	2016-2017
Malinda Hall	Joel South	2021-2023
Rita Bikins	Pomonal	2021-2023
Sue Maconachie	Ballyrogan	2017-current (Chair)
Tricia Sweeney	Paradise	2021-current

PPS Girls & Grass Facilitator; Debbie Shea 2016 to date



(Left to right) Bianca Kilpatrick, Sue Maconachie (Chair), Tricia Sweeney,



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PPS Project Advisory Groups

Administration

President: Duncan Thomas
Secretary: Wayne Burton

Vice President: Matt Kindred
Treasurer: Hayden Price

Phalaris Persistence Project

Wayne Burton Mal Nicholson Duncan Thomas

Project Assistance: Lisa Miller: SFS Dr Kevin Smith: Melbourne University Neil James: Agriculture Victoria

High Production Annuals in Perennial Systems Project

Charlie de Fegely Lachie Green Duncan Thomas Project Assistance: Lisa Miller

Annual Grass Control in Perennial Pastures Project

Wayne Burton Ash de Clifford (Tylers Rural) Rich de Fegely Hayden Price

Project Assistance; Tess McDougall, Bindi Hunter; Agriculture Victoria

Fescue Project

Mat Hall Travis Fernandes Matt Kindred Mal Nicholson Tim Sweeney

Project Assistance; Lisa Warn; Warn Ag

Gibberellic Acid Demonstration

Simon Brady Jodie Greene Dennis Harrington

Project Assistance:

Rachael Campbell & Martin Dunstan; Agriculture Victoria, Andrew Speirs, Jade Chan; Meridian Agriculture

Greenfields Project

Ben Greene Paul Harrington Tony Roberts Project Assistance: Lisa Warn; Lisa Warn Ag

Soil Probe Network

Rob Cooper Tony Roberts Tom Small

Project Assistance; Craig Sharam, Josh McLeod; Elders Bendigo,

Heath McWhirter; Agrotek; Griffith NSW, Ben Taylor; Wildeye, Perth, Dale Boyd; Agriculture Victoria, Echuca

Kikuyu/Serradella Project

Simon Brady Wayne Burton Ash de Clifford (Tylers Rural) Matt Kindred

Informed decisions for managing climate variability in grazing systems

Consultants; Jane Court; Agriculture Victoria, Bendigo, Dale Boyd; Agriculture Victoria; Echuca.

Dr Nathan Robinson & Craig Briody; CeRDI, Federation University

Regional Pasture Quantity Assessment

Craig Altmann, Wayne Burton, Duncan Thomas

Project Assistance; Tahlia Ferguson; SFS, Dr Nathan Robinson; CeRDI, Federation University

Soil Test Project

Project Assistance; Dr Peter Dahlhaus, Dr Nathan Robinson & Craig Briody; CeRDI, Federation University



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Notes



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