



# PERENNIAL PASTURE SYSTEMS

MAKING PASTURE GO THE DISTANCE

## PPS NEWS

**PPS Annual Conference 2024;** the 15th Annual Conference & Dinner will be on Tuesday September 17th 2024. Pictures from 2023 conference are on pages 6-7. Lock in the 2024 date and you might get your photo in the n/l next year!

**Conference Prize Winners;** a prize draw was held for conference attendees who completed a post conference evaluation. A voucher from Ararat/Stawell Ag Horse & Pet went to Kate Stevens from Elmhurst; her brother Adam, Willaura North & Stefan Spyker, Hamilton received copies of Kate Burke's book "Crops, People, Money & You" which were kindly donated by Dr Kate who was one of the conference presenters. A competition was also held on the AGF Seeds sponsor stand & Dennis Harrington received a Yeti insulated drink bottle.



**More Winners;** The prize draw for members who completed the annual pasture survey was held at the End of Year event & the winner of the road making rocks supplied and delivered by Western Quarries was won by Tom Brady (Jallukar) Kate Burke books were won by David Dowie (Cotswold), Ray Zippel (Wonwondah), Russell Hartwich (Ballyrogan), Tony Roberts (Glenlofty), Rob Cooper (Moyston), Gerard Ryan (St Arnaud), Craig Altmann (Horsham) & Tricia Sweeney (Paradise). Thanks to Western Quarries & Kate Burke from Think Agri for their support.

**End of Year;** Seventy members & guests attended the end of year event at PPS members' the Curtis Family farms. A pasture tour at "Newlands" Glenpatrick started the evening. Tim and Janine showed some pretty handy pastures established in the picturesque but tough Glenpatrick Creek valley. Floods & shading of pastures by the surrounding Pyrenees Mountain Range add to the more usual issues in pasture systems but it shows that good management can overcome most problems. It was then onto the part owned/part leased "Deer Park" farm on the Nowhere Creek where floods and kangaroos are the main production impediment but a nearly completed kangaroo fence is making things easier. Tim also gave the group a comprehensive history of the short gold rush in Glenpatrick which was started by Chinese miners in the early 1850's. There are still remnants of the mines including tunnels which can collapse and cause issues in paddocks. Tim told the story of rescuing one of their daughters in her younger years when she got caught in a subsiding tunnel when helping to drove sheep; a funny story now but rather stressful at the time.

The evening finished with a tour of the magnificent gardens at the "Deer Park" homestead and dinner where. A couple of the farm lambs completed their paddock to plate journey as part of the brilliant catering by the Elmhurst Landcare group. The End of Year event was again supported by Rabobank. A photo report will be in the March newsletter.

**Webinars;** PPS has recorded four webinars; links have been emailed to members & are on the PPS website. Interpreting soil probe readings with Craig Sharam (Elders, Bendigo), Heath McWhirter (Agrotek, Griffith) & PPS member, Tony Roberts. (2) Feed Quality, current status & seasonal direction with Jess Revell; Rumenate Livestock Services. RLEM Project, "Less Mites; More Feed with Adriana Arturi (Caser Aust.) & Matt Mahoney (Agridome). (4) Market Update December by Rob Herrmann from Mecardo. Rob's fee was donated to the Kasenda Project in Uganda. Presentations 2 & 3 are part of the MLA PDS Program.

**PPS Spring Field Day;** the field day was on Sunday 15th October started at "Windy Hill" Ararat with an inspection of a new pasture variety trial established by Stuart Kemp from Pasture Wise. The second site was a Multi Species pastures at Joel South where Ben McEvoy described his pasture system on the Six Mile Creek flats. The Crimson Clover in the mix created interest along with the tillage radish & vetch. Around 30 members attended the field day.

**Best Wishes;** Unfortunately, Stuart Kemp was unable to attend the first visit to the pasture trial as he had a mishap with a horse a few days prior. He received serious leg and foot injuries and was confined to a wheel chair for six weeks after major surgery to repair the damage. PPS wishes Stuart a continued and successful recovery.

**Farm Business Workshop:** Session 3; Leasing & Other options was held in October. See page 4 for review.

**Gra\$\$ to Dollars;** PPS is aiming to get a course going in early 2024; cost will be around \$800 per person.

Numbers are limited so contact Rob if interested.



**PPS Spring Field Day**  
*Left; Bronwyn Bant multi skilling at McEvoy Farms; inspecting the multi species sowing & collecting a posey for her daughter.*

*Centre; Ben McEvoy & the tillage radish at the multi species site.*

*Right; Project management dogs, Mogwai & Stevie inspecting the pasture variety site at Windy Hill.*



## Federation University Agribusiness Project.

The PPS Management Committee met with Dr Harpinder Sandhu in November to gain an insight into projects at the Ararat Campus of Federation University. There are several projects that align with PPS aims and cooperation was offered wherever possible to assist the PhD candidates involved in various research. PPS members will have met with some of the PhD candidates on the Winter Farm Tour & at the Annual Conference & look forward to further contact in the future. Dr Sandhu has provided a summary of projects & some are listed on the next two pages. Further projects will be summarised in the March 2024 newsletter.

### Agribusiness Research Excellence at the Ararat Jobs and Technology Precinct - Professor Harpinder Sandhu, Ararat Jobs and Technology Precinct, Federation University Australia [Harpinder.sandhu@federation.edu.au](mailto:Harpinder.sandhu@federation.edu.au)

Federation University is committed to transforming lives and enhancing communities to become Australia's leading regional university. To address one of the priority areas, Society and Environment, Federation University established the Ararat Jobs and Technology Precinct (AJTP) in 2021 as a strategic research initiative. This is a unique partnership between Federation University and Ararat Rural City for regional economic development.

The precinct creates a huge opportunity for Ararat to host Australia's premier advanced research facility to achieve research excellence that will deliver economic opportunity for the region. AJTP is focused on 1) engaging tomorrow's researchers, 2) transforming the economy, and 3) the health, safety and well-being of the community.

AJTP researchers are a mix of early and mid-career researchers led by a senior academic. AJTP has expertise in conducting multidisciplinary research targeting local and global issues in agri-business sustainability, energy, environment, land use, data science, advanced manufacturing, smart specialisation, circular economy and health. A key focus of AJTP is to nurture the next generation of researchers who create evidence-based, industry-relevant knowledge to empower industry to achieve social, environmental and economic sustainability and contribute to sustainable economic development in the region. The key aim of AJTP is to transform the agri-business-based economy by applying research in partnership with industry, Ararat Rural City Council and Federation University.

Some of the research projects at AJTP are described below.

### Research projects

#### 1. Carbon farming: role and implications for broadacre agriculture

As the world moves towards a carbon-neutral future, farming can add considerable value by reducing carbon intensity and exploring opportunities to participate in carbon markets. This can generate wealth in rural Victoria and enhance environmental outcomes. This PhD project explores theoretical and applied understandings of carbon farming. The project examines carbon farming in the context of broadacre agriculture in rural Victoria. It will focus on carbon accounting at the farm level by reviewing various tools and frameworks, understanding farmers' perceptions towards carbon accounting, understanding barriers and challenges, analysing the policy environment, and exploring opportunities to participate in carbon markets.

#### Industry problem to be solved

Understanding barriers and opportunities to estimate farm-level carbon budget to gain an advantage in the market and to become compliance-ready for international trading.

#### PhD candidate: Kashif Khaqan

#### 2. Drivers and inhibitors of value addition to agricultural products in rural Victoria

Recent studies indicate that of all regional agricultural production, only one per cent of value-adding occurs within the Ararat region. There is a perception that there is a range of economic impediments to this occurring, including access to labour, labour cost, logistics, technology and professional capacity. This PhD project will help identify barriers in the current models of agricultural value addition. It will then explore opportunities for localized value addition in collaboration with the local industry. This can potentially increase local wealth for farmers and the community and contribute to regional economic development.

#### Industry problem to be solved

Understand opportunities for value addition in the region.

#### PhD candidate: Van Thuy Dao



## Federation University Agribusiness Project.

### 3. Circular economy: role of municipal waste to create value through local processing

Ararat Rural City Council has implemented the four-bin material collection for municipal waste since June 2022. In addition, it has committed to the local processing of materials streams. This study will examine the role of municipal waste in developing value through local processing using the principles of the circular economy.

#### Industry problem to be solved

Understand opportunities for glass recycling in the region.

**Masters by Research candidate: Karishma Don**

### 4. Economic impacts of the digital twin model on the agribusiness industry

A Digital Twin is a virtual representation of a system, which is updated by real-time data and uses machine learning to help decision-making. The Agribusiness industry intends to develop and use digital twin models to understand and better manage high-value production systems, including indoor production, fresh produce, grape growing, orchards, high-value live-stock, etc. These twin models can potentially improve production efficiency and financial and environmental sustainability. On the one hand, engineering fields focus on developing such twin models for different production systems and improving technology. On the other hand, there needs to be more focus on the social and economic impacts of the digital twin in the agribusiness industry. Therefore, this PhD project intends to examine the economic impacts of the digital twin model in the agribusiness industry.

#### Industry problem to be solved

Understand the socio-economic barriers and challenges of applying digital twins.

**PhD candidate: Jaipal Singh**

### 5. Social, environmental and economic impacts and opportunities for livestock farmers

The global meat industry, including subsistence and industrial scale production worldwide, generates \$1.3 trillion annually— 40 per cent of the global value—of agricultural output and supports the livelihood and food security of about 1.3 billion people. However, there are concerns in the public arena with the global footprint of the meat industry as it occupies 75 per cent of all agricultural land, uses more than 40 per cent of agricultural water, contributes to greenhouse gas emissions, it can pollute waterways & contribute to biodiversity loss etc.

The purpose of this PhD study is to explore the risks, challenges, and opportunities of innovations in the meat industry for livestock farmers by focusing on beef production in France and the USA. This study will contribute to bringing forward the way to include livestock farmers in the meat-based food supply chain transformation transition.

#### Industry problem to be solved

Develop business models for the beef industry's transition towards sustainability and uptake of innovative technology, such as cultivated beef by conventional livestock farmers.

**PhD candidate: Priyambada Joshi**

Further Projects with PhD candidates **David Reeves, Pramod Gautam & Bhola Paudel** will be included in the March PPS newsletter.

## Melbourne University Visit

The Melbourne University visit to PPS was an annual event until covid restrictions got in the way. It was back in place this year in September when 50 third year agriculture economics students visited PPS member farm "Millbanks" at Elmhurst. Dr Bill Malcolm & Dr Alexandra Sinnett set a pasture established payback exercise for



farm figures relayed to them by Ben & Jodie Greene and the PPS Project Manager. A lot of attention was also paid to Jodie's excellent scones which she baked for smoko.

Some pastures on "Millbanks" were then inspected before the group went to a newly purchased, unimproved block which formed the basis of the analysis. Bill had a big PPS week as he had been a presenter at the conference and attended the annual dinner on Tuesday & returned on Friday with the students. Plans are already underway for a 2024 visit.

*Left; Ben, centre of attention from the cold but enthusiastic students.*





Girls and Grass Advisory Group has reached a stage in its evolution that means it is appropriate to review the aims of the group and perhaps how it delivers to PPS members. This will be discussed early in 2024 at the Management Committee planning meeting.

Debbie Shea is finishing up as facilitator of the group at the end of 2023. If you have any comments/suggestions about G&G please feel free to contact either PPS President, Craig Altmann, 0448 863169 or G&G committee member Bianca Kilpatrick, 0447 912331.

Girls and Grass activities since the September newsletter have been:- Session 3. in the Farming Business Workshop and the social dinner with guest speakers Lynne and Rob Herrmann. The social research project with Professor Jenny Martin from Federation Uni is finally taking shape and we have the dates for the meetings in February 2024. Details follow:-

Farming Business Workshop, Session 3. To Lease or to Buy. This was held at the Alexandra Oval Community Centre on Sunday afternoon the 22nd October. Mike Stephens from Meridian Ag led a very productive and informative session on the topic with around fifteen members present. Mike has a very interactive style of presentation and the small group created great conversation. Starting with *Are you trying to grow or slow down? What is your view from the verandah? What is the capacity to expand? What will leasing mean financially? How to identify a suitable farm/land user? Assessing the farm/land user. Conditions of the agreement (lease/rent/share). And Commit to writing.*

Mike provided a report, a profit map and an 80 page booklet on Life After Farming which includes a bunch of case studies. If you would like a copy of any of this information please contact, Debbie mobile; 0418 205353 or email; debbiejshea@gmail.com

The workshop was funded by Glenelg Hopkins CMA through funding from the National Landcare Program.



Right; Mike Stephens leading the discussions.



Left; Rob & Lynne Herrmann talking about Kasenda.

The social dinner with guest speakers Rob and Lynne Herrmann was held on Tuesday the 7th November at the Ararat Hotel, Cafe & Bistro. This was a great evening with the Herrmann's sharing many insights into village life in Kasenda, Uganda. Lynne has also worked at another village, Bwindi which is further advanced than Kasenda and has close interactions with tourists on their way to get up close and personal with gorillas. The huge improvements to self respect and changes to a more positive attitude by the villages have come about through an increase in work and value. The increase in family income through agricultural improvements means they can afford to purchase essential medical items and send their children to school. Rob and Lynne stressed to us how the involvement from PPS members has encouraged them to continue improving their agriculture production. They feel that we are watching them and don't want to let us down. You can donate to the villagers through the Ballarat West Rotary BSB 633-000 and account # 110299500. Please email Rob Herrmann (robert.herrmann@nutrien.com.au) and he will issue a receipt to you.

The G&G social research project will be conducted over three meetings in February, Saturday 3rd, the 10th and finally the 24th commencing at 11 am.

So far we have five people committed to be involved and would love three more. The aim is to learn what PPS could do in the future to help teenage members through these difficult times.

The project methodology is called photovoice, it involves the use of photos to help express the thoughts of the participants and create discussion.

G&G are looking for people who lived through the millennium drought while still at secondary school. They may or may not have continued on with a career in agriculture. If you or someone you know is interested in participating or wanting more information please contact Debbie; 0418 205353.



**This quarterly newsletter profile is on the newly elected management committee member Emma Goodall. Emma was elected to the PPS committee at the annual meeting held as part of the 2023 conference proceedings.**

In Emma's words:-

Originally, I'm "technically" from a small beef property in the Adelaide Hills—albeit a good portion of my early life was spent on a yacht with my folks, sailing the northwest coast of Australia and then around the world for eight years. "Mirage V" was a 11.2m Duncanson 37, built to be ocean going by the folks, from hull and deck up to being our home. We went west from Darwin (across the Indian Ocean -> Red Sea, into the Med, across the Atlantic, two seasons in the Caribbean, back across the Pacific) and eventually hit Bundaberg before coming down the east coast. I was home schooled by mum, completing the same work as the Australian students on School of the Air, without the daily radio connection (School of the Air went online the year we got home—1998), before going to the local high school to finish off. Much to the folks relief...a side trip to the UK while we were on the boat changed my dream from being a figure skater to being an equestrian—the relief may have been short lived as we'd been home less than a week when we were gifted my first horse.

The stereotypical horse girl obsession continued into uni years—kicking off at Charles Sturt University, undertaking the Equine Science course mostly on the premise I could take my Horse(s) with me! Jim Virgona was instrumental in switching me across to becoming an Ag student at the end of 2nd year when it became apparent that the Equine degree was interesting..but unlikely to pay the bills! I didn't quite undertake the "linear" uni option—in the middle I opted to join the Australian Army, training as an officer at the Royal Military College Duntroon with intent to go to Army Aviation. Unfortunately, two shoulder reconstructions "playing infantry" weren't compatible with a long-term army career, but I did have a (couple of) degrees to fall back on! Whilst recuperating from Reco #3 (I had had one thanks to riding trackwork as a teenager) and undertaking work placement I was offered a graduate agronomist role with Landmark in Bairnsdale, which saw me pack my horses, my bags and move to a whole new area knowing very few people!

I did make a bit of an entrance to Gippsland—a disagreement with a chestnut mare saw me airlifted off the footy oval at Briagolong (opposite the pub) on the Friday evening of my first week (6 days in town!). After the first 12 months I swapped over to work for MG Trading (Murray Goulburn) and then did four years as a dairy agronomist in the Macalister Irrigation District (MID) and up to Orbost. The learning curve was incredibly steep—I got to work with a senior Kiwi agro who was incredibly tough (but fair) - rarely answering a question directly but always asking more questions to make a young agro think, learn and really understand the system we were working with. Working with the dairy systems was eye opening—a direct measure twice a day, every day provides incredible feedback around decisions made—from grazing management to irrigation timing, to impact of fertiliser. The variability of Gippsland—both irrigated and dryland, drought and floods, dairy, hort and sheep & beef reinforced the idea that Ag systems have things they can learn from each sector and apply to their own and benefit production.

While in Gippsland, I had a couple of horses on the Victoria development squad for eventing, which saw me riding a borrowed horse in a Masterclass with 8 times Olympian Andrew Hoy. This in turn, saw me offered the chance to go and be a working student with him in the UK which I was lucky enough to take up. A winter in the UK and Europe, understanding the "not so fairytale" side of competing at that level saw me move back to Australia and all but give up riding. I moved back to SA, started working for CRT in my hometown and went headlong into triathlon—and in fairly typical "me" style—decided to "go long" and aim to race Ironman from the get-go.

Combining training and racing Ironman triathlon (3.8km swim, 180km bike and 42.2km run) with a reps life, working for PGG Wrightson (now DLF) seeds, I moved back to Victoria in 2018—not 100% sure why I picked Ballarat however! Barring the weather, it's a great spot for agriculture—from repping to consultancy back to being a commercial agro—there's lots of variability, lots of challenges and lots of farmers who are keen to push the boundaries of production which makes the job(s) exciting! I've bought a small block in Clunes, reueing the need for a landplane on 7Ac—I've decided to go with moats (no crocodiles yet!) to try and manage the water as I slowly get back into horses with homebred babies at the point of being started on their riding careers (and still training and racing long distance triathlon!)

I love the idea of what can be done with Pastures—feeding stock, the production of meat, wool and milk, managing weeds and pests with grazing and species etc. While the seasons and commodity prices are (always) challenging agriculture is still in a very exciting time with the developing technology and the uptake onto farm. I'm really looking forward to working with the PPS members in extensive systems and seeing what can be done in variable rainfall areas!



**PPS 14th Annual Conference  
5th Sept 2023**



*Clockwise from top;  
Outgoing PPS President Matt Kindred opening conference  
Presenters Dan Jess & Kate Burke  
Presenter Dr Bill Malcolm with Ben & Jodie Greene  
Presenters Stuart Robinson & Carlyn Sheriff*

*Right; Following instructions exercise during Carlyn Sheriff's presentation. All papers were meant to be identical but .....*

*Bottom; Presenter panel*





*Left; Annual dinner speaker; Peter Jess*

*Right; Conference farm tour. Host farmer Tom Brady on the left with Hayden Price & Simon Brady.*

*Big effort by Tom who drove from & contracting job at Balranald & returned the next day.*



**The 15th PPS Annual Conference will be on Tuesday September 17th 2024 at the Ararat Town Hall.**

*Left; 2023 Annual Conference dinner*

*Right; part of the super efficient admin team—Sue Machonachie & John Stevens. No picture of Bronwyn Bant & Kirstie Anderson but they were great as well.*

*Below; Tess McDougall working the Q&A session.*

*Thanks to Ag Vic & Ararat Rural City people who assisted on the day.*



**~ PPS DIARY DATES ~**

**PPS Annual Conference 2024;** the 15th Annual Conference & Dinner will be on September Tuesday September 17th 2024 at the Ararat Town Hall.

**Girls & Grass photo voice project;** three meetings all on Saturday mornings of the 3rd, 10th and 24th February. Other diary dates will be set at the Management Committee planning day in February & members will be informed by email, text, facebook page, website and upcoming newsletters.

**PPS Feed Quality PDS Project**

PPS is in the third year of a spring feed quality project, funded initially by a Wimmera CMA/Landcare Victoria grant. In 2022, the project was extended by a successful application to the MLA PDS program for a new three year project. The first two springs had above average rainfall (especially 2022) produced some interesting results which can be found on the PPS website.

2023 has seen a different scenario with one of the best autumn/winter growing seasons on record; albeit with the media driven threat of a disastrous spring weighing on farmers minds as did the dramatic downturn in sheep & cattle prices. As predicted, the early spring rainfall was below average & a “bob tail” spring resulted with feed drying off quickly in mid spring. Minor variations in spring rainfall made a big difference to pasture growth with the Paradise, Beaufort & Ararat areas growing reasonable spring feed.

**Some early observations from this years feed quality testing.**

**Annual grasses** - Annual grasses were tested as paddock mix and included brome grass, barley grass, silver grass & a small amount of ryegrass. All pastures (except Mooneys Gap) in the 10th —13th Nov measurements had insufficient protein for 50 kg dry sheep (8%) & all had well below the level for 25 kg weaners (12%). Energy was sufficient and digestibility was still above the low rating. The feed values will continue to fall during late spring/early summer. Grazing the paddocks with a protein supplement such as lupins, beans or vetch hay would have provided adequate nutrition at the early November stage but the December feed quality results will show when the paddock feed becomes too low in quality for stock without supplementation for all quality parameters.

The results from the samples taken on Nov 10th—13 Nov are shown below are shown below.

		Crude Protein %	Digestibility (DOM)	MJ/kg DM	NDF%	Intake 50kg (kg)
Rosevale Ridge	Maroona	<b>4.6</b>	59.3	8.6	64.1	0.94
Overdale	Concongella	<b>6.2</b>	59.9	8.7	63.3	0.95
Lonsdale	Stawell	<b>4.8</b>	56.9	8.2	64.7	0.93
Mooneys Gap	Ararat	<b>9.5</b>	63.7	9.3	58.9	1.02
Eurambien East	Beaufort	<b>6.9</b>	65.8	9.9	56.2	1.07

**Fibre %** even when the feed quality looks ok, high fibre (NDF%) can result in the animal not being able to consume enough feed to get sufficient nutrients.. This is shown in the slides prepared by project consultant Jess Revell & used in a PPS presentation for a Grasslands Society workshop in Hamilton in October. *The example is using the Nov 23 results*

**NDF – What about Weaners**



Photo supplied; sheep not in PPS Project area.

**NDF% affects feed intake**

50kg dry sheep - BCS 3 - 8MJ/day

Phalaris Oct-31		Phalaris 23-Nov	
Nutrient	Feedtest	Nutrient	Feedtest
NDF %	48.5	NDF %	67.5
Intake kg DM/day	1.23	Intake kg DM/day	0.88
ME (mj/kg)	9.5	ME (mj/kg)	8.2
Total MJ	11.75	Total MJ	7.28

**Need 8 MJ/kg/DM Only getting 4.48**

The NDF intake calculation (Mertens equation) is:  
 $(120/NDF)/100 \times \text{Liveweight} = \text{max intake kg of dry matter intake}$

$(120/67.5)/100 \times \text{Wnr LW (25kg)} - \text{Max intake 0.44 kg}$

**Energy in feed 8.2 Mj/kg/DM**  
**Energy required 8 mj/day**  
**Max feed intake 0.44 kg**  
**Energy intake 3.6 mj/day**

The information in the presentation is regional & measurements are site specific.

Pasture management affects the feed quality results.

Productive grazing with feed quality management  
 MLA PDS Project L2301

