



**PERENNIALPASTURESYSTEMS**  
MAKING PASTURE GO THE DISTANCE

## Perennial Pasture Systems 9<sup>th</sup> Annual Study Tour; Kangaroo Island; August 2017



PPS Study Tour supported by



*Report compiled by PPS Project Manager Rob Shea from information supplied by PPS study tour members and K.I. host farmers. Photos; Rob Shea, Debbie Shea*

PPS is supported by





## 9th Annual Study Tour August 27 – 30<sup>th</sup> 2017 Kangaroo Island

### ***Introduction***

Since the group's inception in 2007, PPS has recognised the value in members visiting leading farms in other regions as well as being informed of research projects with tours of research facilities. In 2009, PPS implemented an annual study tour as part of the group's extension activities and since then has held single and multiple day tours within Victoria, South Australia, Tasmania and New Zealand.

At the planning meeting in February, it was decided that the 2017 study tour would be to Kangaroo Island in S.A. Twenty seven members participated in the study tour which, in addition to farmers, included 2 agribusiness bankers; two agronomists, a seed company representative & PIRSA staff from S.A. The mix of people in the group made for interesting conversations both on farm and socially.



*Waiting for the ferry to K.I.*



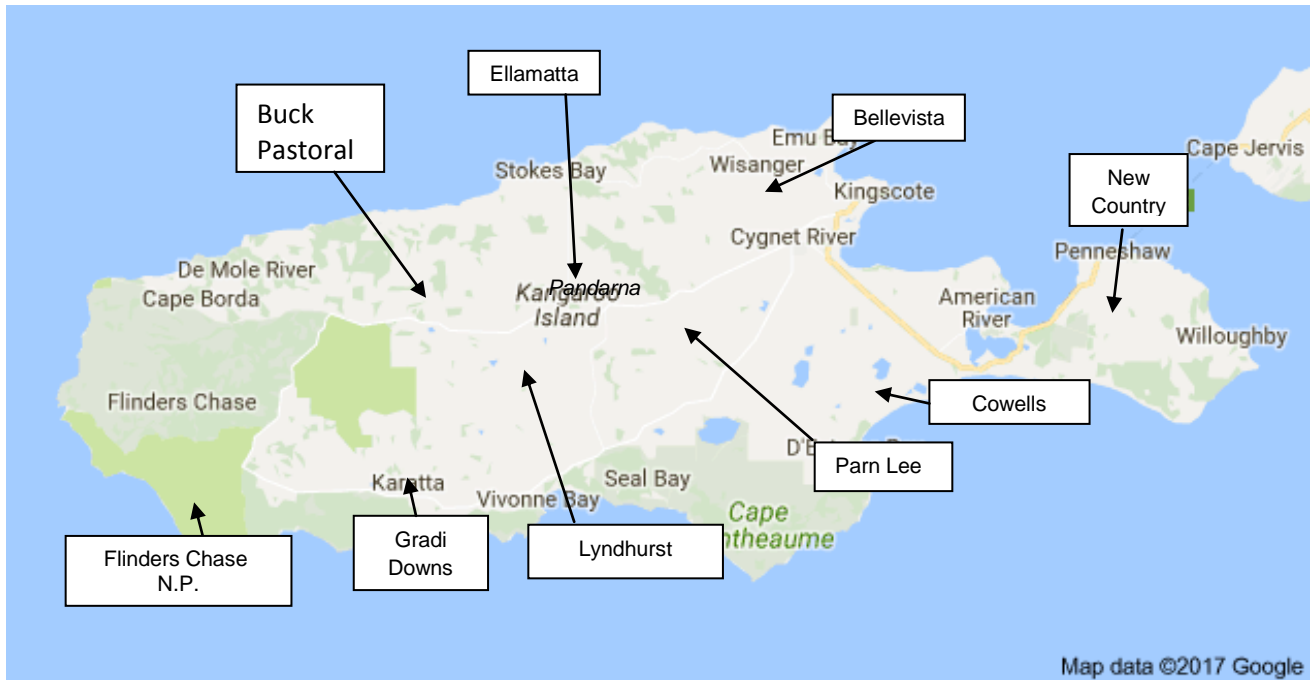
*Lyn Dohle; PIRSA, Kangaroo Island.  
Lyn organised the farm visits*

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## 9th Annual Study Tour August 27 – 30<sup>th</sup> 2017 Kangaroo Island

### Farm Visit Locations



### **Sunday 27th August: Penneshaw**

The group car pooled to Cape Jervis in S.A. to board the Sealink ferry to Kangaroo Island which landed in early evening at Penneshaw, the overnight stop.

### **Penneshaw**

Penneshaw is home to around three hundred people and colony of little penguins; it is located on the Dudley Peninsula on Kangaroo Island and is 107 km south of Adelaide. Originally known as Hogs Bay due to pigs being released there by French Commander Nicholas Baudin, it changed to Penneshaw some years later.



*Sealink Ferry*



*Penneshaw*

**Monday 28th August**

**Farm Visit 1**

**Property: New Country**

**Owner: Tom Willson**

**Location: Penneshaw**

**Farm Size: 518 ha**

**Enterprise(s): Merino wool and sheep meat**

The first farm visit gave the PPS group a good insight into farming issues on Kangaroo Island. Situated not far from Penneshaw, "New Country" carries 17 dse/Ha lambing down 2,750 merino ewes on the pastured areas of the farm. Over 100 Ha is fenced off as natural vegetation providing shelter and natural habitat. Paddocks have been fenced down to 10 – 12 Ha in size and pastures consist of kikuyu, ryegrass or cocksfoot with sub clover. Plantain has also been used in a couple of pasture mixes.

Owner Tom Willson outlined some of the issues that he dealt with in improving the farm's productivity including low pH and phosphorus levels. Some areas of the farm have received 5 tonnes/Ha of lime and the 16 units of P are applied annually. Urea is used on kikuyu pastures during spring to allow them to produce green feed well into summer. The farm is situated 100 metres above sea level which means it has few frosts and a relatively mild winter.

PPS members were informed of the high costs of getting farm products on and off the island with fertiliser costing \$70/tonne in cartage while lambs cost \$11 in freight to send to processors and wool is \$15/bale to get to storage in Adelaide.

Tom also told the group his deeply personal story of leaving the island after the family property was sold and progressively buying back a large portion of it while working in the transport industry. Tom still lives on the mainland, in Adelaide and has a very focused approach to his management systems on "New Country". This is aided by a part time manager and very timely planning of farm operations; these are sometimes made difficult by ferry cancellations due to rough weather. Tom told the group of a few hairy light plane flights and landings when the weather made ferry crossings impossible.



Tom Willson and PPS members on "New Country"



## ***New Country***



*Young ewes coming out of a tough winter in good condition*



*Cocksfoot and Plantain pasture*

### ***Farm Visit 2***

**Property:** Redlands    **Owners:** Bolto Family

**Location:** Macgillivray

**Farm Size:** 1,800 Ha

**Enterprise(s):** Merino wool & sheep meat

Cowells is part of the Bolto family amalgamation and is managed by Colin Bolto and his partner Jess in conjunction with his parents and two brothers. They run merinos and farming on the lighter soils on KI, they have made the most of kikuyu pastures plus clay spreading on non wetting sands. The Bolto's have dealt with salinity issues on their farm and now carry 13 dse/Ha; 13 units of phosphorus are applied annually to maintain production. The farm adjoins a large wilderness area and the property is also home to a multitude of wallabies. The growing season in the area is fairly short and the Bolto's run around a third of their flock as wethers to help manage their grazing system.

A total of 17,000 fine wool Merinos are run in the family business and an extensive A.I. program is conducted annually. The Bolto's have been using E.ID. technology for seven years to improve flock recording and performance. They are part of a Kangaroo Island marketing scheme (KI Wool) which is supplying wool to be blended with New Zealand possum fur to produce premium knitwear.

The high Oestrogenic Yarloop clover is still present on Cowells and clover levels are managed to ensure that it doesn't become prolific and affect lambing percentages. After an introduction to the enterprise, PPS members were taken on an inspection of pastures including a high production ryegrass stand being aimed at a hay crop. Lunch was then provided by Jess in the Cowells woolshed and the gourmet pies were met with great reviews from the PPS members.



*PPS members Ann Howell & Janine Curtis with Lyn Dohle; PIRSA Kingscote*



*Mal Nicholson presenting Colin Bolto with some gifts of Bests Wine & Red Rock olive oil*

## **Cowells**



*Pastures on “Cowells”*



*Mal Nicholson assessing DM in the ryegrass hay paddock*

### **Farm Visit 3**

**Property: Ella Matta      Owners: Heinrich family**

**Location: Duncan**

**Farm Size: 1,800 Ha**

**Enterprise(s): Lamb, wool, White Suffolk & Poll Merino studs**

The visit to Ella Matta showed the large variation in annual rainfall on Kangaroo Island with this area north of Parndana receiving 700mm. The property carries 16 dse/Ha with the best kikuyu pastures carrying 26 dse/Ha using a high input system, although the Heinrich's think that this may be a bit high in the longer term. Ella Matta is managed by Andrew, better known to all on K.I as Aphid, and his son Jamie. Both are Nuffield Scholars with Jamie currently studying the retention of young people in the sheep industry. Ella Matta was Australia's (and the world's) first registered White Suffolk stud and conducts an annual on property sale of 200 rams. A Poll Merino stud and a maternal composite ram operation are also conducted on the farm.

The soil type is a sandy loam, gravel overlying clay. A water management plan and stock containment areas are utilised to ensure that soil quality is maintained. Phosphorus fertiliser is applied at 1 unit of P per dse and lime is applied every five years. Large areas of the farm have remanent vegetation fenced off including the Cygnet River, the island's longest, which flows through the property. After an inspection of the sheep handling complex and some White Suffolk and Poll Merino rams, an extensive tour of the farm showed the high conservation values combined with high quality pastures. A short presentation from Jamie on his Nuffield Scholarship studies completed the farm visit.



*Andrew (Aphid) & Jamie Heinrich*



*Ella Matta White Suffolks*



## ***Ella Matta***



## ***Ella Matta***



*Conservation values were high priority on all the K.I. farms visited. The addition of the Cygnet River flowing through Ella Matta made for a memorable farm tour.*



#### **Farm Visit 4**

**Property: Bellevista Owners: Bell Family**

**Location: Kingscote**

**Farm Size: 4,000 Ha including leased land**

**Enterprise(s): Wool, Prime Lamb and Cropping**

The Bell family are long time KI farmers and for a long period conducted a wool growing enterprise, reducing micron and increasing wool cut through the use of ASBV's and improved management. In recent years the business has diversified and now incorporates prime lambs as well as a cropping program producing canola, wheat and broad beans. In addition to the home farm, they own and lease approximately 4,000 ha. The farm management is split between Lachie who conducts the livestock operation and his brother who manages the cropping enterprise. After an introduction from Lachie and a bit of time rounding up group members in the machinery shed and dragging them away from a new self propelled spray unit, it was time for an inspection of a high input pasture trial.

The 60 Ha demonstration is looking at the optimum stocking rate on high quality kikuyu pastures. Very high stocking rates have been achieved but the profitable level for long term management is still being assessed. Daniel Pledge from Landmark at Kingscote gave some additional information on the trial site and agronomy on K.I.

Lachie discussed the sheep flock, now numbering 15,000 as well as the lamb operation which aims to sell 70% of lambs as stores while finishing the remainder, which is fairly standard for K.I. lamb enterprises. He also discussed the cropping operation which is conducted on a continuous basis on the best land. Produce is marketed under the Kangaroo Island Pure Grain label and premiums are obtained from buyers on the mainland.

Darkness was falling at the end of a big day visiting farms, so the group headed for the overnight stay at Parndana.



*Bellevista*



*Kikuyu trial site*



*Lachie Bell & Daniel Pledge; Landmark, Kingscote.*



## Parndana

Parndana means “the place of little gums” and currently has a population of 150 people.

Parndana was established after WWII to support the soldier settlement scheme on Kangaroo Island, 174 families came to live in the area almost doubling the island’s population by 1954. The soldier settlements were established on crown land, which had to be cleared of heavy, native vegetation before being allocated to returned soldiers who had been involved in the clearing work.

Dinner was taken at the Parndana Hotel which features the K.I. shearing hall of fame.



*Parndana*



## Parndana Evening Presentation

PPS invited Greg Johnsson to do a presentation on the history of the sheep industry on Kangaroo Island.

Greg and his wife Debbie own and run the only Veterinary Practice on KI. In addition to providing the usual veterinary service they also sell rural merchandise and provide an on farm consultancy service. Greg was a leader in developing Kangaroo Island Wool (working with the Australian Wool Network to produce woollen garments). In conjunction with Andrew Roberts he has also formed the Sheep Owners Academy – developing a blue print for running a successful sheep enterprise.

Greg gave a comprehensive history of sheep on the island starting with the first importation in 1836. This led to an expansion of farming all over the island and large sheep losses caused by “coast disease”, due to cobalt deficiency in the soils, which led to the bankruptcy of some early entrepreneurs.

The disease was not properly identified until the 1930’s when an experimental agricultural station was opened on the island. The soldier settler scheme following WWII brought many new farmers to the island and large areas of scrub were cleared for farmland. Unfortunately much of this was initially sown to Yarloop sub clover on the recommendation of the Ag Dept. Later it was discovered that Yarloop was highly oestrogenic and causes large reductions in ewe fertility; it is still an ongoing issue on some farms.

Greg spoke about the use of non union shearing labour on K.I. in 1971 when the KI wool industry became the battle ground in a union struggle that would be the fore runner of the wide comb dispute in the shearing industry. Sheep numbers dropped by over one million in the 1990's after the wool reserve price scheme collapsed and the industry had a further decline with the outbreak of OJD in the 2000's.

Many of these issues have now been dealt with and Greg spoke of the farming marketing schemes which promote K.I. produce as well as the diversification seen on farms in recent years. PPS members were very impressed with Greg's knowledge and passion for his work in promoting K.I. agriculture.



*Greg Johnsonn addressing PPS members in Parndana.*

***Tuesday 29th August:***

***Farm Visit 5***

***Property: Parn Lee      Owners: Cooper Family***

***Location: Parndana***

***Farm Size: 940 Ha + 200 Ha leased***

***Enterprise(s): wool, lamb, cropping and an irrigated seed potato enterprise***

Peter Cooper and his parents run a diversified wool, lamb and cropping property. Peter also conducts an irrigated seed potato enterprise. Phil Cooper purchased the property in 2000 after a career in the transport industry; his son Peter joined the business in 2009 and added the seed potato enterprise to increase cash flow. K.I. is a designated, quarantined disease free area for growing seed potatoes, seed is planted in early November and harvested in autumn for sale to commercial growers on the mainland. 130 Ha of the property can be irrigated, including 25 Ha under centre pivots, producing 1000 tonnes of potato seed annually. Another 60 Ha is to be developed for irrigation which will allow 30 Ha annually to be planted to seed potatoes on a six year rotation; seed potatoes need a six year gap before replanting in the same paddock.

The property also produces canola, barley and oats but the cropping area is being reduced to increase the sheep and potato operations.

The sheep flock of 2,400 ewes is split fairly evenly between Merinos and Composites with a winter stocking rate of 22 dse/Ha. Kikuyu and ryegrass form the base of productive pastures to allow the high stocking rates and provide winter feed for the Composite ewes which Peter described as "turning into little cows during lactation".

Peter aims for a 7% return on assets for the sheep enterprise and 15% for the seed potatoes, which he describes as "high risk- "high return".

A farm tour showed the pasture systems and the water storage for the irrigation system. K.I. had a lower than average winter rainfall and the water availability was lower than optimum for the potato seed establishment.



### ***Parn Lee***

Peter plans to plant the potatoes earlier than usual if the water storages don't fill which will reduce the amount of water needed but will reduce yields.

Peter was asked if he was worried about the drier conditions heading into spring. "There's always plenty to worry about; so don't worry about it" was his reply. A good message but Peter was down playing the good planning that goes into running the multiple enterprises on Parn Lee.



*Peter & Phil Cooper*



*Composite ewes & lambs on Parn Lee*



*PPS member & earth moving contractor Peter Howell getting some tips from the recent excavations on Parn Lee*



*Moving water into a recently expanded storage dam*



### **Farm Visit 6**

**Property: Lyndhurst    Owner: Carly & Adam Bussenschutt**

**Location: Parndana**

**Farm Size: 440 Ha**

**Enterprise(s): Prime lambs**

Lyndhurst has been recently acquired by Carly and Adam and they are currently in the process of turning from a cattle property to a prime lamb operation. They are currently carrying 13 des/Ha with a Merino flock but are aiming at 17 dse/Ha, possibly with a change to Composites in their 800 mm annual rainfall region of K.I.

Carly and Adam both have off farm work in addition to running the farm and raising two young children.

Soil fertility issues on Lyndhurst are being addressed with lime, P & K applications before a pasture improvement program is implemented. Carly questioned the PPS group on their thoughts of pasture types and the discussion turned to phalaris which is rarely used on the island. K.I. has a history of phalaris staggers issues and farmers seem reluctant to have phalaris in their pastures, despite the widespread use of cobalt bullets in sheep. The older varieties do not persist on the 'ironstone soils' due to low pH and aluminium toxicity issues. Kikuyu will form part of the pasture mix.

Carly is also a Nuffield Scholar, who in 2013 & 2014 studied world's best practice in the reproductive potential of sheep. Carly gave a presentation on her Nuffield investigations which included travels to New Zealand and South America. One of the points raised was the fairly low level of K.I. farmers who scan ewes as well as the issue of toxoplasmosis, spread by feral cats, which causes abortions in ewes. Carly also discussed ewe condition and her studies showed a \$30 advantage in ewe profit by keeping ewes in a condition score of 3 compared to a score of 2.5.

Carly is the outgoing chair of Ag K.I. which is a farmer group conducting research, providing social events and political representation for the island's farmers. A trip to the PPS region by the group was discussed with Carly, hopefully that comes to fruition.



*Carly discussing the Nuffield Scholarship*



*Discussions over lunch*



*Lyndhurst*

### **Farm Visit 7**

**Property: Buck Pastoral**

**Owner: Tim Buck**

**Location: Newland**

**Farm Size: 870 Ha**

**Enterprise(s): lamb, beef**

Buck Pastoral operate an earth moving business in addition to their beef and lamb enterprise in the 750 mm average rainfall area in the central west of the island. Tim currently runs a Red Angus herd of 200 cows but is planning to reduce cow numbers to 150. He also plans to increase the ewe flock from 2,300 to 3,000; these are currently Merinos joined to Border Leicester rams for lamb production. Tim is planning a change in the sheep flock using Highlander genetics from New Zealand aiming at the lighter lamb market; he anticipates issues with heavy carcass weights in the lamb processing industry. The Highlander sheep are a high fertility type with Finn, Romney and Texel genetics.

The property currently carries 15 dse/Ha but Tim is aiming to increase this to 16 with the enterprise changes and the addition of purchased wethers to the grazing system when seasonal conditions suit. The Red Angus cows are joined to Black Limousin bulls with the feedlot market targeted for yearling turn off at 9 – 10 months. All ewes are scanned and multiples separated for lambing into 15 – 20 Ha paddocks with cocksfoot, ryegrass and kikuyu pastures. Like most other K.I. farms, phalaris is not in the pasture mix; Tim commented that it got a bit too wet in their environment for phalaris production.

The farm had very low pH and required 3.5 tonnes/Ha to get the soil pH to productive levels and phosphorus is applied at 1 kg P per Ha annually. Although urea is used in the pasture system, it was at lower levels than other properties visited. Broad beans are being trialled on some newly purchased land to provide supplementary feed and build nitrogen levels.

Tim benchmarks his system and kg/lamb/Ha is the key profit driver. While Tim had plenty to focus on farm, he was a bit distracted by footy finals; PPS members were pleased to note that he was part of the Western Districts (Wonks) premiership team a couple of weeks after their visit.



*Tim (striped jumper) with PPS members*



*Some of the 750 annual rainfall accompanied the PPS visit*



*Yearlings and broad beans at Newland*



### **Farm Visit 8**

**Property: Gradi Downs**

**Owner: Rick Morris**

**Location: Vivonne Bay**

**Farm Size: 900 Ha**

**Enterprise(s): lamb**

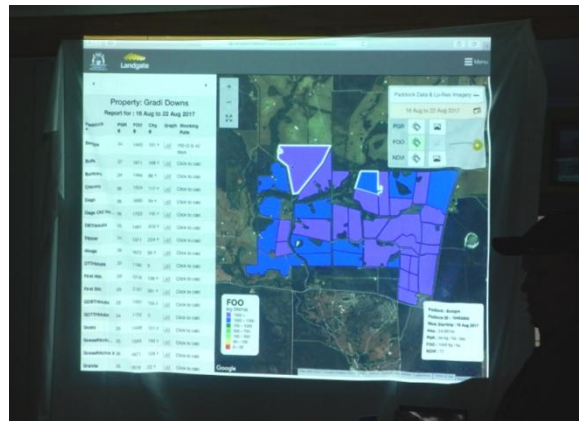
Although the drive between Buck Pastoral and Gradi Downs took only 20 minutes it coincided with a 200 mm drop in annual rainfall. Obviously there is a bit of light hearted discussion between K.I. farmers about rain. "Tell Rick, it's raining here" Tim instructed the PPS Project Manager as the group left Buck Pastoral, he didn't get the chance as Rick's first words on introduction were "spose it's raining at Tim's".

Rick left the family farm to go to university on the mainland and spent time as an agronomist in south west W.A., he returned to K.I. ten years ago. During his university time he studied with PPS President Wayne Burton (when social activities allowed) and they were able to renew acquaintances during the farm visit.

Rick runs 5,000 composite ewes on Gradi Downs with this years lambing coming in at 137%; he trialled cropping for a time but poor quality soil and water logging meant that this was not a profitable exercise. The property has shallow topsoils with a low pH as well as having non wetting sands in some places.

Now concentrating on pasture systems, Rick has taken his management to a high level, he took PPS members through a demonstration of his use of the "Pastures from Space" satellite imaging program. Rick uses the results to assess pasture growth and availability and he says that it correlates well with measurements that he has taken in paddocks to verify the results.

Rick has also been using variable pH, P & K soil mapping to fine tune his use of lime and fertiliser. The farm is currently carrying 13 dse/Ha; the medium term plan is to raise it to 15 dse/Ha. Kikuyu is in around 20% of the pastures, although it has declined due to the area receiving a lot of frosts. Discussion turned to Rick's plan to increase the area of perennial pastures and the issue of phalaris (or lack of it) on K.I., Rick expressed his concerns regarding its suitability but may be open to a trialling it on his place.



*Rick Morris outlining his use of "Pastures from Space"*



Paddock ready for new pasture on Gradi Downs



Old Uni friends Wayne Burton & Rick Morris



### **Flinders Chase National Park**

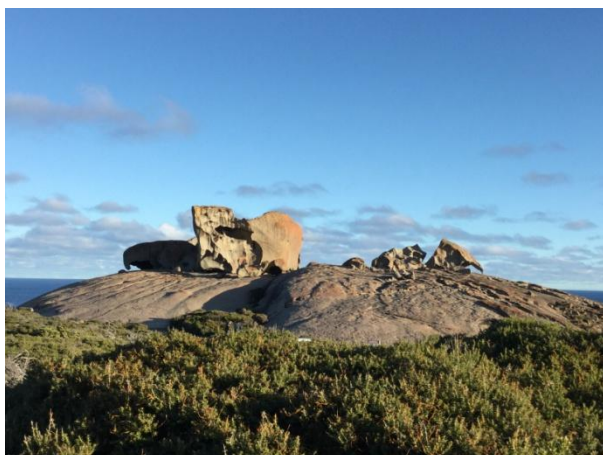
After the visit to Gradi Downs, the PPS group finished their tour with a visit to Flinders Chase National Park and the iconic Remarkable Rocks, which are quite remarkable. The walk to the rocks was in bright, winter sunshine in contrast to the rain earlier in day; another example of the constantly changing weather on K.I. After a walk around the rocks, it was a short drive to view the seal colony at Admiral's Arch before an hour long return journey to Parndana.

The overnight stay was again at Parndana and dinner was enjoyed with several of the host farmers who joined the PPS group for an enjoyable social evening.

The final day saw the group leave Parndana to catch the morning ferry back to the mainland and then start the drive back to Victoria.



*Flinders Chase National Park*



*Wednesday morning ferry;  
Rams headed to Adelaide Show*

*Semi headed for mainland*

## Key Messages from Study Tour

The importance of younger farmers on K.I. getting their opportunity to manage the farm at an earlier age than in most areas. The average age of farmers on Kangaroo Island is 44 years compared to the Australian average of 59 years.

The high level of management on all farms visited and their adaption to the variable annual rainfall variation on the island.

The importance of the Ag K.I. group for research, social and political purposes on the island.

The resistance to using phalaris as a pasture variety on Kangaroo Island. PPS members felt that if issues relating to phalaris staggers and sudden death syndrome could be managed that it would be a useful addition to the pasture systems.

The use of Kikuyu as a productive pasture species

The relatively high use of urea on pastures compared to our region, partly a reaction to the lack of legume produced N due to the need to keep oestrogenic clovers under control.

## Possible Further PPS Action

Conduct a trial of Kikuyu on light, sandy soils to test its possible use as a niche variety on some farms in our region.

Look at the strategic use of urea on N deficient pastures in our region where clover nodulation is sub optimal and grass pastures are nitrogen deficient. While acknowledging that this may be a useful tool, some PPS members are wary of over reliance on N fertiliser in pasture systems.

Host a study tour for Kangaroo Island farmers.

## PPS 9<sup>th</sup> Annual Study Tour Participants

Simon Brady	Rhymney	Wayne Burton	Mt Dryden
Greg Coburn	Ararat	Janine Curtis	Glenpatrick
Tim Curtis	Glenpatrick	Michael Greene	Elmhurst
Ken Hall	Joel Joel	Dennis Harrington	Mt Cole Creek
Paul Harrington	Mt Cole Creek	Wendy Harrington	Mt Cole Creek
Sue Holden	Concongella	Ann Howell	Amphitheatre
Peter Howell	Amphitheatre	Joe Kilpatrick	Great Western
Mal Nicholson	Concongella	Matt Kindred	Stawell
Graeme Price	Eversley	Hayden Price	Eversley
Luke Roberts	Pomonal	Michael Roberts	Elmhurst
Stuart Robinson	Ballarat	Angus Schmidt	Rural Bank Horsham
Debbie Shea	Ararat	Rob Shea	PPS Project Manager Ararat
Gavin Svanosio	Rural Bank Ballarat	Jane Thomas	Ararat
Rod Vearing	Ararat		

*All tour costs were met by the participant's contributions and the tour grant; no PPS funds were committed to the tour.*



## PPS Thanks

Host farmers and K.I. locals who made the PPS group welcome and freely gave information and farming and living on K.I.

Lyn Dohle; Senior Consultant – Soil and Land Management  
Rural Solutions SA Primary Industries and Regions SA – PIRSA for her assistance in organising the study tour.

Tim Prance - (T Prance Rural Consulting) Victor Harbour S.A. for his assistance in providing contacts on Kangaroo Island.

Evergreen Farming group in W.A. for permission to use background notes from their 2015 study tour to K.I.

Jim Meckiff from Allflex for providing the tour name tags.

Dion Borg from GHCMA for his assistance in the funding application to support the study tour.

Car pool drivers who took on their role in a safe and proficient manner.

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***PPS acknowledges the continued support of the Wimmera CMA in supporting the PPS Project Manager role.***







*Plenty of hospitality & discussion at lunchtimes*



*Remarkable Rocks*





*Ken Hall*



*Gradi Downs*



*Parn Lee*



*Returning to mainland*