The Adelaide & Mt Lofty Northern Region Producer Group's Winter Pasture NRM Project

Government of South Australia
Adelaide and Mount Lofty Ranges Natural Resources Management Board

Angaston

sheep connect south australia

Barossa- Fleurieu 'Pasture Walk' Bus Trip

Producer Booklet

Friday 19th April 2013

Sharing knowledge, innovative ideas and forming networks across the Barossa Ranges and Fleurieu Peninsula

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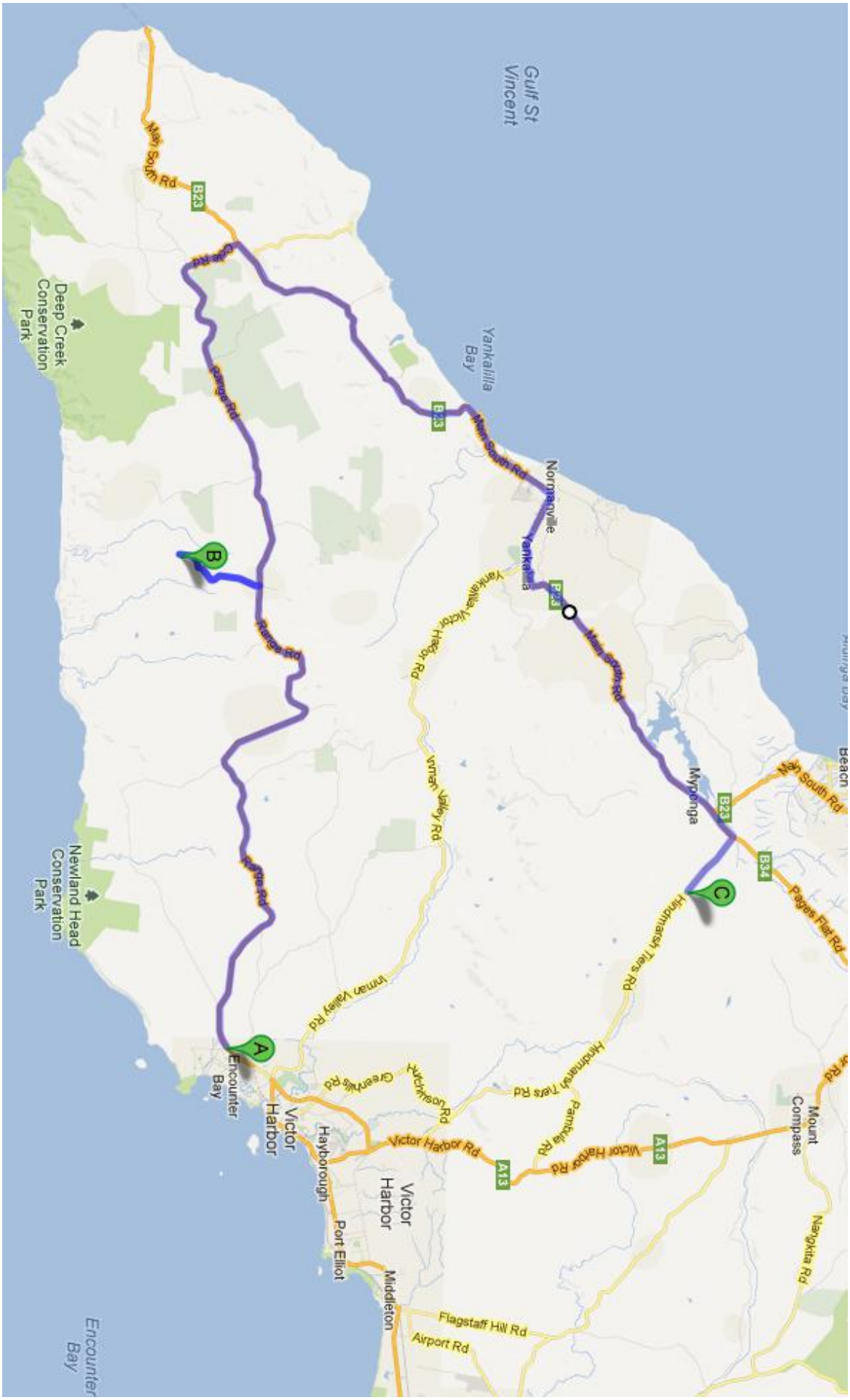
Supporting Partners:

mla morebeef FROM PASTURES

Farmer Johns

LANDMARK

Mt Pleasant Beef Group, North Rhine Sheep Group, Angaston Agriculture Bureau and Barossa Mid North Dairy Discussion Group


Gulf St Vincent
Yankalilla Bay
Deep Creek Conservation Park
Newland Head Conservation Park
Encounter Bay
Victor Harbor
Hayborough
Port Elliot
Middleton
Normanville
Yankalilla
Myponga
Mount Compass
Main South Rd
Range Rd
Inman Valley Rd
Victor Harbor Rd
Hindmarsh Tiers Rd
Flagstaff Hill Rd
Airport Rd
Nangkita Rd
Pages Flat Rd
B23
B34
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Barossa- Fleurieu Bus Trip Schedule- Friday 19th April 2013

Time	Property	Location	Address	Paddock Demonstration
8.00am	Leave Keyneton Park			
8.15am	Pick up at Eden Valley Hotel			
9.00am	Pick up at Woodside Hall			
10.15-11.45	Bill Fraser's Dairy Partner Farm	Waitpinga	Range Road, Waitpinga (From Victor Harbor 10km on the LHS) near Fraser Road	Fleurieu partner farm project Alternative forage project Spring sowing perennials African Black Beetle pest Plasbak-recycling silage twine
12.00am	Lunch at Parawa Hall- Range Road, Parawa - Thanks to the Parawa/Inman Valley Uniting Church Demonstration- Perennial Grass Trial Plots			
1.00-2.30pm	Paul Bellamy, manager Maylands Property	Parawa	Ballaparudda Rd, Parawa (off Range Rd, then off Maylands Road)	Optimising lamb growth rates- paddock design, weather events, ration mgmt Direct marketing- pros and cons Plantain and chicory pasture trial
3.00pm	Alistair Just, St Vincent	Hindmarsh Tiers	Hammond Rd, Hindmarsh Tiers (6 kms on RHS from Pages Flat Rd)	Techno and rotational grazing Alternative forages- grape marc/ silage Perennial pasture trial
4.30-6.00pm	Travel back to Keyneton Park via stops at Woodside and Eden Valley			

Adelaide Mt Lofty Ranges Northern Region Producer Group's Winter Pasture NRM Project

AIM: get producers talking, learning and taking action to improve the productive capacity of winter pastures while enhancing the Natural Resource Management (NRM) outcomes.

- Working with local Producer Groups: Nth Rhine Sheep, Mt Pleasant Beef, Angaston Ag Bureau, Barossa and Mid North Dairy Groups, Koonunga Ag Bureau, Barossa Grape and Wine assn.

- Producer 'activity plans' to deliver improved winter pastures and NRM outcomes.

- Education events through spring and summer- collaborating within the group and between groups.

- Funded by the Adelaide and Mt Lofty Ranges NRM Boards Sustainable Industry Grants

- Supported by Angaston Ag Bureau, Sheep Connect, Landmark, Farmer Johns, Dairy SA, Tru-test, MLA Beef for Profit, Rural Solutions SA

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This Bus Trip is funded through:

- Adelaide and Mt Lofty Ranges Natural Resources Management Board's NRM Community Action Grant Scheme
- MLA More Beef for Profit Program.

The Project would like to thank all landholders who have provided their time and properties to make this trip and the project successful. We wouldn't be able to do it without you!

Contact List

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Barossa 'Pasture Walk' Bus Trip- 19 October 2012

Farmers were taken on a tour of the Barossa through Eden Valley, Keyneton and Moculta, visiting four different enterprises including, beef, sheep and dairy farms. The aim of this day was to observe and learn from pasture projects which were seen on pasture walks earlier in the season. The day allowed:

- Observation of Landmark's Pasture Demonstration site to look at how different varieties and mixes of these varieties respond to local conditions.

- Demonstration with the temporary electric fencing 'Rappa' machine which facilitates rotational grazing and fencing off 'stock-free' areas.

- Observed summer pasture trial which included varieties of turnip and millet.

- Observed the results of a trial increasing the pasture biomass using a mix containing a variety of species ranging from peas and beans, barley and wheat to chicory and sulla, to compete against annual ryegrass.

- Provided the opportunity for farmers to network and share ideas on all aspects of farming.

Waitpinga
Bill Fraser- Dairy Partner Farm

Name: Bill Fraser
Locality: Waitpinga
Annual Rainfall: 700mm
Milking Herd: 340 milkers
Farm Area: 189Ha

Bill's dairy property was used as the Fleurieu partner farm which involved a three year project looking at cost effectively trying to provide year round pasture feed. The findings of this project have led onto a new Alternative Forage Project which is trialling alternative mixes and pasture varieties including spring sowing perennials. Bill also hosts one of the Dairy SA Plasbak recycling sites.

Fleurieu Partner Farm:

**Referencing the Fleurieu Partner Farm Final Report- found in Appendix 1:

A group of Fleurieu dairy farmers undertook a study tour of dairy farms in south-west Victoria in January 2007 (Connor *et al*, 2007). They visited two dryland dairy farms with seasonal-calving herds in ~650 mm rainfall area that had been able to contain costs of milk production (20 to 25 c/L) and generate very good profits ($1,100 to $1,300/ha). The physical management and profitability of these farm systems was largely mirrored in a small-scale farm system called the R-Max farmlet, being managed and monitored by Project 3030 at the nearby DemoDAIRY farm (Chapman *et al*, 2007).

Fleurieu farmers were particularly impressed by how this R-Max system allowed grazing cows to produce high levels of milksolids from grass-dominant diets, with lower feeding and production costs because of the emphasis on home-grown grass. They also noted how these herds seem to have fewer problems getting cows back in calf compared to Fleurieu herds.

Key elements of their dairying system are;

- Moderate stocking rates (between 1.6 and 2 cows/ha proposed for this project)
- Maintaining high pasture consumption (6 to 7 t DM/ha being achieved on SW Victorian farms)
- Optimizing the quality of home-grown forage at all times
- Maintaining a tight seasonal calving pattern that reasonably matches the pattern of grass growth
- Feeding a high level of forages in the herd diets (a balance of 70% forage 30% concentrates proposed each year)
- Containing purchased feed costs (relying as much as possible on home-grown grass to provide as much highly digestible, high protein feed as possible).

Fleurieu farmers have since speculated whether the very good performance of the R-Max farmlet and SW Victorian farms may be due to the longer growing seasons and cooler summers in that region. Maybe the differences in milksolids production and herd fertility are also associated with the different pedigree of cattle on many Victorian farms (compared to SA herds).

To try and work out what's going on, Fleurieu discussion group farmers decided the best way to answer these questions would be to try and replicate the R-Max farming system as best possible on a typical Fleurieu dairy farm. This is exactly what the Fleurieu Partner Farm (FPF) was all about.

WHAT WORKED?

- ✓ **Intensive Block Grazing:** The combination of intensive grazing with longer rest periods has worked to support good growth and utilization over most pasture types and paddocks. Pre-grazing DM cover targets were lifted from 2,500 to 3,000 kg/ha and Bill & Gary reckon this increased growth rates, and also milkfat levels through (perhaps) better fibre in winter pasture.
- ✓ **Properly Timed Nitrogen Fertiliser:** Bill uses high N inputs and he reckons that timing applications as pastures get grazed both improves pasture growth responses and minimizes the incidence of any associated metabolic disorders in his cows.
- ✓ **Pre-Topping:** Helped to better manage and utilize poorly grazed and barley grass-infested pastures in spring of 2009 and 2011. The better quality regrowth helps cows with higher pasture DM intakes in spring. Also prevents ryegrass clumping.
- ✓ **Sowing Italian + Perennial Ryegrass Mixes:** Where early-sown, these mixes were able to provide good growth rates (>30 kg/ha/day throughout winter), whilst allowing for perennial ryegrass stands to be established or thickened up. However, be mindful to check for the range of insect pests that could jeopardize new sowings.
- ✓ ***Banquet II* Ryegrass:** Regenerating *Banquet II* stands have produced really well in the 2010 and 2011 year, and demonstrated growth rates superior to *Victorian* ryegrass in November'10. However, two of these paddocks were damaged at least as badly by black beetle and cockchafer pests as *Victorian* ryegrass paddocks in autumn 2011.
- ✓ **Phalaris:** Well-established phalaris stands were able to cope with being used as stand-off paddocks through March/April, and still go on to grow well (>30 kg/ha/day) through winter in 2009. Indeed most phalaris-based pastures provided really good winter growth rates in all three study years, and ranked as some of the most productive paddocks overall in 2011.
- ✓ **Prairie Grass:** A single sowing of *Atom* prairie grass established well in 2010, with impressive growth after out-of-season rains in the '10/11. Has a reputation for very good winter growth, but yet to be assessed in this regard on the FPF.
- ✓ **Spring-Sown Pasture:** After disappointing initial growth (due to an early herbicide error), weedy paddocks that were spring-sown to phalaris in August 2009 grew away well in 2010 and 2011. Of note, these paddocks were almost completely devoid of barley grass in those 2nd and 3rd years.
- ✓ **Strip-Feeding Chopped Silage:** Carted out to milkers in paddocks, with two temporary hot-wires used to prevent cows from trampling and wasting the silage. Minimal incidence of mastitis in summer compared to using self-feeding silage stacks.
- ✓ **Reducing Costs of Production:** Down to 31.4 c/L and $4.42/kg MS in the 2010/11 financial year.

WHAT DIDN'T WORK?

- ☒ **Maintaining Milk Protein Level:** Despite our best efforts at manipulating herd diets with better quality forages and using the Rumen8 software package, we were NOT able to achieve our 3.25% milk protein target before October in any of the study years. A delayed start to calving in 2010 and 2011 did not help in this regard.
- ☒ **Getting More Cows in Calf:** Implementing the R-Max (high forage) dairying system did NOT result in any consistent positive effect on herd fertility over the 3-year study period on this farm. Conception rates and not-in-calf rates did both improve in the 2nd year, but the reason(s) for this are not clear.
- ☒ **Standing cows off Pasture in Autumn:** Milkers were held on only 8% of the farm during May'09 to let other pastures buildup DM cover, but this resulted in a serious outbreak of mastitis. Consequently, we reverted to running an ultra-slow grazing rotation (not standing off) through autumn 2010, and again in 2011.
- ☒ **Self-Feeding Silage Stacks:** Led to unacceptable levels of mastitis when self-feeding from stacks over the '09/10 summer.
- ☒ **Low Rate Paraquat Spraying in Autumn:** Very early season spraying with paraquat herbicide (25% gai/L at 500 ml/ha) proved ineffective for barley grass control but seriously damaged established perennial ryegrass stands in March 2009.
- ☒ **Spraytopping Phalaris with Glyphosate:** Even at low spraytopping rates, glyphosate herbicide spraying in spring caused unacceptable damage to established phalaris pastures in spring. In contrast, glyphosate spraytopping appeared to be a useful tool for selectively controlling barley grass in established perennial ryegrass pastures.
- ☒ **Profitability:** Did NOT achieve the host farmer's original profit targets. Nevertheless, operating profits in the 2nd and 3rd study years were above average for the Fleurieu district, and achieving profits of $1115/ha (or $611/cow) by 2010/11.

Waitpinga
Bill Fraser- Dairy Partner Farm

FP-Ag, Dairy SA and Dairy Australia were partners in this project.

Key Points:

1. Very high input system for high returns.
2. Entire property is dry sown with an annual ryegrass- over sowing is an essential element of the system as it thickens pastures up.
3. Nitrogen applied after every grazing to ensure a maximum response time before being grazed again (achieved by a weekly application with a contractor)
4. 25-30% of pasture grown is harvested into silage pits to ensure maintaining pasture quality
5. Prairie grass has been found to be a beneficial perennial pasture plant within the system as provides very early feed however need to graze carefully

Waitpinga- Parawa
Jodie Pain- PLASBAK recycling system

Dairy SA in conjunction with the Adelaide and Mt Lofty Ranges NRM Board has teamed up with Plasbak which is a silage wrapper and twine recycling system.

Dairy farmers on the Fleurieu are provided with bins and bags in which to store the wrapper and twine. These are then collected at strategic times and taken to the Plasbak recycling plant in Adelaide. Here they are turned into recycled plastic agricultural products such as woolshed flooring.

Key points:

- Beneficial system to reduce wastage
- Future options to run the same project in the Barossa area

Plasbak bins and bags for recycling waste

Parawa
Greg Mitchell- Alternative Forage Project

This project was developed as a result of the findings from the Fleurieu Partner Farm and involves spring sowing perennial pastures. Its aim was to test the economic viability, persistence of varieties and benefits of spring sowing perennial pastures.

The project trialled a range of perennial pastures including phalaris, perennial ryegrass, prairie grass and chicory.

Pastures were grazed through the late autumn and winter 2012 and then sprayed out and sown 19th September. They were producing 5.2 tonnes of dry matter/ha through November before the dry season.

This project is in its second year this year with reasonably pleasing results so far.

Key points included:

- Allows some production gains from pastures through the winter, prior to spring seeding
- Perennial plants will establish better during the best growing time of the year (spring)
- Helps to control barley grass by allowing winter control of any second or third germinations
- Timing is critical in ensuring good persistence
- Can have difficulties getting machinery into the paddocks during spring due to bogginess
- Provides the opportunity to plant late season perennials

Parawa
Phil Bellamy, Maylands Property-Optimising Lamb Growth Rates

Name: Phil Bellamy (manager)
Locality: Parawa
Annual Rainfall: 700mm
Total ewes: 4000 ewes
Farm Area: 600ha

Phil spent 7 years selling 50 lambs per month directly to butchers. This very demanding job meant meticulous attention to detail including optimum paddock design, perfect rationing and a long lambing period, to ensure lamb growth rates so he could meet the market specifications.

What worked:

- Weekly weighing gives very accurate information/ understanding of factors effecting growth rates
- Using a pelleted ration- ensuring very little variability within the product compared with hay and silage
- Paddock design played a very important factor
- Having an understanding of the factors effecting growth rates

What didn't work:

- Very demanding
- Seasonal variability including heat waves or thunderstorms caused huge variation in growth rates
- Year round lambing- more lamb marking, weaning, etc.

Key Points:

- Lamb growth rates were affected by inconsistent feeds, weather events, paddock geography.
- To optimise growth rates it's important to have paddocks with shelter belts against the prevailing wind and paddock trees. Also important to maintain water quality by fencing off watercourses/ dams and having a reticulated trough system.
- Very labour intensive and difficult to manage the system due to lambing all year round to supply markets.
- Needed to use temporary electric fencing to prevent lambs sitting in shade and not eating- also helps to prevent stock camps and soil degradation

Parawa
Phil Bellamy, Maylands Property-Optimising Lamb Growth Rates

Chicory and Plantain Demonstration:

- Phil planted a trial paddock with one half chicory and one half plantain in 2012.
- Found the sheep walked straight over the plantain due to its unpalatable nature and only ate it once all of the chicory had been grazed.

Key Points:

- These two mixes are difficult to manage together as chicory can't be grazed too hard in winter which restricts grazing time for the plantain when it thrives in winter.
- Due to the unpalatable nature of Plantain- can be important to 'imprint' the lambs onto the pasture by grazing with the ewes
- Broadleaf weed control can be very difficult in these pastures therefore important to ensure good control prior to sowing

Chicory and plantain pasture- April 2013

Hindmarsh Tiers
Alistair Just- Techno-Grazing Beef Cattle

Name: Alistair Just
Locality: Hindmarsh Tiers
Annual Rainfall: 900mm
Total ewes: 200 steers
Farm Area: 110ha (70ha utilised for grazing)

Alistair runs a meticulous techno grazing system with innovative fencing, watering points and a great attention to detail to ensure the cattle get the most out of the pastures whilst maintaining its productivity.

Property was previously a dairy property with a kikuyu base. The productivity is such that he can run stock through autumn, winter and spring.

During these months cattle are moved every second day with the use of a quad bike and temporary electric fencing system.

Utilised turkey manure as fertiliser.

Key Points:

- Low input system
- Once the system is established and understood it's a very easy way of managing stock and making the most of pasture production
- Stock are moved every second day and run at a DSE of 35/Ha
- Steers are 'held back' in the winter (100-200g/d growth rate) to then optimise the spring pasture growth (2kg/d growth rate). Sold as an 18mth old weaner at 450-500kg. Beneficial by reducing soil issues in the summer months.
- Labour unit works out to 1/4/ DSE or 1 day per month