

## Holbrook Landcare Network (HLN) Rotational Grazing Project Report



### Background

Farmers in the mixed farming high rainfall zone were aware of the benefits of rotational grazing but research had shown they weren't applying it on the farm because of the complexities of incorporating structural, livestock, pasture and crop requirements. EverGraze research has identified this slow uptake of rotational grazing, despite awareness of the benefits, as an extensive industry issue.

Scientific studies at Broadford and elsewhere have shown that rotational grazing systems:

- Increase stocking rate capacity by 20%
- Reduce recharge
- Improve soil health
- Increase ground cover resulting in increased soil biomass and decreased wind erosion
- Reduce fertiliser requirements dramatically -- nutrients are distributed more evenly, and there is less stock camp effect
- Result in better utilisation of feed on offer
- Create a marked improvement in perennial pasture persistence. This is highly significant for a number of reasons
  - It takes 7 years to recoup the cost of establishing perennial pasture
  - Perennial pastures have struggled under drier seasons
  - Perennial pastures add a month either side of the growing season compared to annual grasses.



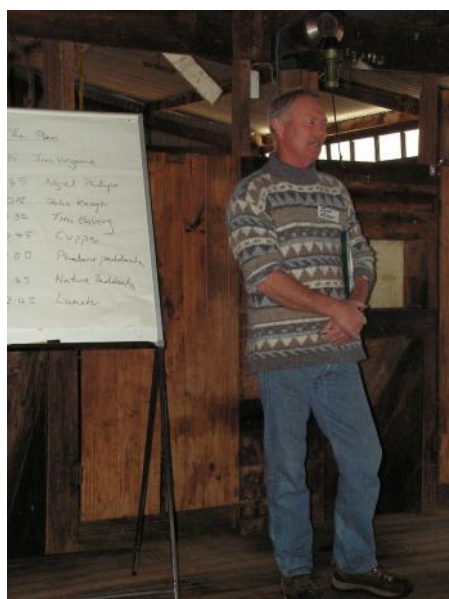
With the input of its members, Holbrook Landcare Network designed a project to help farmers adapt their management to incorporate a grazing management system that captures the known benefits of rotational grazing.

The aim of this project was to:

- Bridge the gap between knowledge and broad farmer uptake
- Develop ways of implementing pasture systems research in real farm situations, including
  - A core discussion group of farmers learning from each other, supported by training
  - Case studies
  - A focus farm, as an EverGraze supporting site with field days, speakers etc.

## Issue Identification

The group were concerned about loss of production caused by reduced density of perennial species and an increase in weeds. There was recognition that issues arise when implementing a rotational grazing system when there are many enterprises and different livestock production targets, as well as the different needs of different pasture crop and land classes. Consultation with farming members of HLN identified a need to look at the whole farm system and how to tie everything together. This project addressed that need in some ways by giving producers tools and skills to adapt their individual farms to suit their various enterprises and farming systems.



## Planning the Project

At Holbrook Landcare Network, producer engagement is a fundamental part of all project development. On 2 March 2010, 40 farmers, scientists and extension experts were involved in a planning meeting at the start of the project. A Grazing Group of scientists, extension staff and producers was formed to drive the project forward. This included representatives from Charles Sturt University, Vic DPI, NSW DPI and Holbrook Landcare. There were 3 more planning meetings in 2010. In September 2011 a focus group meeting was held to discuss feedback on the training course.

## The project

The project, to support producers to implement changes to their grazing management system, included a number of components.

1. Training Component; 25 farmer where supported to complete the Whole Farm Grazing Strategies Course. The course was delivered by Victorian DPI as part of an Evergraze pilot. The course included a farm planning component to support farmers to manage to landscape capability
2. A 3 year discussion group and support process to implement the farm plans and address issues and knowledge gaps as they arose
3. A focus farm to provide practical demonstrations
4. Case studies to document the 3 year process, the challenges and successes to support other farmers to consider practice change
5. Field days to engage and deliver key messages to a broad audience

## Training

In 2010, 25 farmers signed up to complete the training component of the project and participate in the discussion groups. Groups were formed and the participants completed the pilot of the Whole Farm Grazing Strategies Course. Assessment feedback forms were included at the end of the 6 day training session.

The course co-ordinator reported that the course was challenging to deliver and challenging for the participants. It involved the use of computers for mapping and rotational grazing decision support. The course achieved its aim of increasing farmer knowledge skills and adoption of improved grazing strategies, as most participants will use rotational grazing more strategically. The added and unexpected outcome was that it forced most participants to examine the value of their different farming enterprises to the whole business. A number of participants looked at reducing the number of enterprises they were running.

Feedback from participants was positive, especially about planning and other computer tools.

In 2011, nine group members did a Multi Enterprise Cost of Production course to determine the value of each enterprise to their business. Session 1 was on 9 July, session 2 on 11 August. This training facilitated discussion and feedback at the grazing group meetings about financial issues in enterprise mix.



## Grazing Discussion Group Meetings

There were 5 meetings of the grazing group in 2011, with 16 farmers involved in each. In 2012, there were 4 meetings with between 3 and 14 attendees. In 2013 there were 4 meetings with 4, 7, 7 and 6 attendees.

A blog site was set up for discussions, feedback and sharing of results, notes from the meetings etc. The group selected and regularly inspected the demonstration farm (John Keogh's) and case study farms. Grazing plans for the demonstration site and individual grazing plans were discussed, developed and implemented.

Essentially the group chose the topics to explore. Members took turns hosting the meetings, inspected paddocks, talked about current seasonal issues and rotation plans.

The group also worked with the Multi Enterprise Cost of Production Calculator. Individuals presented their production and financial data and, within the group, discussed options for improvement.

Date	Host farmer	Topic
6/04/11	John Keogh	Other things to consider when setting up a rotational grazing plan Is sub clover decline real? Nigel Philips
04/05/11	John Keogh	Grazing plans for the focus farm Development of individual grazing plans
01/06/11	John Keogh	Pasture measuring and site setup for, high P, silver grass and moly test strips
6/07/11	RS Club	Multi enterprise cost of production calculator 2010 -2011 Group exercise Sandy McEachern
11/08/11	RS Club	Multi enterprise cost of production calculator 2010 -2011 Group exercise Sandy McEachern
8/02/12	John Keogh	Meeting at focus farm. Evaluation of grazing plan for 2012
4/04/12	Ian Locke	Managing native hill pastures cost effectively to increase stocking rates
6/06/12	Philip Locke	Managing poor quality feed set stock or rotate
12/09/12	Vicky Geddes	Pasture utilisation
12/02/13	John Keogh	Multi enterprise cost of production calculator 2011 -2012 Group exercise Tim Ekberg
09/04/13	Craig Rowe	Planning session. Sowing and fertiliser strategies
13/08/13	Andrew and Tom Hicks	Managing phalaris Jim Virgona
10/09/13	Marcus Richardson	Do you buy more land or improve what you have? Tim Ekberg

Dates and Topics for Holbrook Grazing group

## Demonstration Site and case studies

The focus farm was at John Keogh's "Yarra Glen" (EverGraze Supporting Site). The objective of the supporting site was to investigate:

- Management to land capability
- Production, costs, and profits of the whole farming system
- Grazing days (on all paddocks in the rotation)
- Pasture composition, perennial persistence and feed quality on three different pasture types and land classes.
- Native grass management as part of the whole farm system

Specific questions were:

- Will land class fencing improve utilisation and increase stocking rates and pasture composition?
- Will strategic grazing management reduce silver grass?



The land classes monitored were:

- Moderate density phalaris (land class 2) – objective to increase phalaris density
- Low density phalaris (land class 3) – objective to strategically graze barley grass and increase phalaris density
- Native pasture (land class 4) – objective to reduce the capeweed component and increase the native component. To develop a knowledge base in relation to sustainable and productive inclusion of native based pastures in a rotational grazing system including identifying critical rest and grazing times, grazing length, leaf stage triggers and the impacts of growth, persistence and recruitment.

Measurements were:

- Pasture composition changes to rotational grazing or improved grazing strategies (native and phalaris)
- Productivity/Farm Surplus Changes – eg using multi-enterprise calculator, kg/100 mm rainfall
- Stocking rate on each paddock.

Tests were:

- Soil tests – taken from each land class in 2010 and 2013
- Feed quality test – conducted each spring for all plots to track changes and compare differences in pasture quality
- Botanical composition tests – conducted each autumn, winter and spring for each treatment.

#### CASE STUDIES

In addition, there are 3 case study sites at:

- Andrew and Tom Hicks', "Annandayle South";
- Phillip Locke's, "Fairview";
- Peter Trescowthick's, "Koombahla"

These case study farmers answered the following questions:

- What have you changed with your grazing management (since the course)?
- What have been the difficulties?
- How were they addressed?
- What have been the benefits?

The case studies will document the farmers':

- Current rotational grazing system
- Reasons/need for change
- Management challenges in changing existing systems
- Mixed farm issues around incorporating crop, pasture, sheep and beef enterprises.
- Processes, thoughts and feelings as a result of being involved in the producer demonstration site (PDS)

The case studies are not confined to investigating rotational grazing, but also how landowners use grazing management as part of the whole farm system. This will capture a range of environmental, economic and social considerations that impact on management decisions.



## Field Days

The field days have provided the opportunity to address a range of associated issues as well as report on the project.

### Field day 1 - Wednesday 31<sup>st</sup> August, 2011

#### Speakers and Topics

- Tim Ekberg, Project coordinator  
*What is happening on the property – implementing a new grazing regime.  
How some farmers use rotational grazing.  
Land class fencing to improve pasture utilisation.  
Managing native pastures to improve pasture composition and reduce weeds incl. silver grass*
- Jim Virgona, School of Agriculture and Wine Sciences CSU  
*'Integrating native pastures into profitable production systems'*
- Nigel Phillips, NSW DPI Technical Specialist – Pastures  
*'Oestrogenic Clovers, Do I worry or not?'*  
*'What is the potential of new alternative legumes in the Holbrook area?'*

This field day was attended by 18 producers.

### Field day 2 - Wednesday 26th September, 2012

#### Speakers and Topics

- Jono Hassall, Local Farmer  
*Explained his farm management system, his experience with rotational grazing and how he has set up his infrastructure to suit his needs.  
We also looked at some fertiliser demonstration strips and discussed the various responses. The nutrients being evaluated are Phosphorous, Nitrogen, Sulphur and Moly.  
What are the implications for fertiliser and other management decisions?*
- Chris Mirams, (Chris Mirams & Associates Farming Management Consultancy)  
*Taking the leap with rotational grazing, managing large mobs, pasture management, water issues, shade, infrastructure, setting up a plan. How complex? How simple? Is it worth it?*
- Bill Wearn, Local Farmer  
*Demonstration of the kiwi tech electric fencing system.*

This field day was attended by 37 producers

### Field day 3 - September 25<sup>th</sup>, 2013

#### Speakers and Topics:

Topic: Improving farm outcomes through tracking paddock performance

- Jock Graham, Farm Apps  
*Discussion and demonstration of some smart phone apps including F-Track, an app for recording pasture, stock and reference information to more easily keep track of data.*
- Dr Jim Virgona  
*How paddocks measure up — using simple monitoring tools to achieve better paddock productivity, including some practical exercises.*
- Tim Ekberg  
*An overview of the rotational grazing project and what's been learned about paddock performance. He discussed how a better understanding of the performance of a paddock can lead to cost saving and knowing where you will find the best return on investment.*

This field day was attended by 27 producers.

## Partnerships and Funding

Holbrook Landcare Network has managed to source funding from a range of sources for the project. The project has been funded by MLA, EverGraze and a Caring for our Country Community Action Grant. The HLN Grazing Group made some contribution to the training costs.



## Publicity

The project has been promoted in the Border Mail and by EverGraze and MLA in their publications. In addition, the project has been regularly promoted through the HLN newsletter and local newspapers.

## Feedback

Participants in the grazing group were asked to complete a survey at the completion of the project. The survey was designed so that participants could help Holbrook Landcare Network share what they learned with others. Feedback given through the survey will also be used to inform and improve the design of future projects.

Eight surveys were completed and returned, which was an average number of participants in the grazing group meetings.

Respondents rated the Whole Farm Grazing Strategies course highly and were positive about the value and role of the focus farm to reinforce what they were learning through the discussion group.

The main value of the discussion group was identified as a supportive environment to learn from each other and this was instrumental in identifying, then addressing the barriers to change. The benefits of farm visits where current or relevant issues were discussed within the group was mentioned by the majority of respondents.

There was general agreement that the speakers at field days were good overall and field days were beneficial to learning within the project.

Those who were involved in the Cost of Production exercise reported it was beneficial, but most felt it was not worth doing again. Some found it difficult and time-consuming; others felt it only needed to be repeated if the system were to change.

As a result of being involved in the project, respondents made infrastructure changes; changed mob sizes; reported increased awareness of soil type, land type, stock needs, pasture needs; and increased carrying capacity. Benefits reported included pasture utilisation and pasture persistence, alongside improved stock handling, increased production, and more successful pasture sowing. Others reported more awareness of, and better budgeting of, both stock and pasture, and the fact that they found solutions to barriers that existed. One respondent mentioned acknowledging his farm enterprise was unsustainable and the support of the discussion group gave him the courage to change it.

When considering the barriers that were solved through the project, a common theme was the difficulties inherent in the existing farm infrastructure and the challenge of changing this. There was acceptance that there is a requirement to spend money upfront for long term benefit, but that

this was difficult to prioritise. Working out a rotation plan was another common difficulty, with monitoring, trial and error and support from others helping solve this.



Barriers that were not resolved, most commonly were about mob sizes, with infrastructure and different stock classes continuing to create difficulties around the size of mobs that can be created. One respondent continued struggling with a lack of flexibility to graze all the paddocks at the right time, balancing natives and improved pastures

Those with natives have incorporated them into the grazing cycle with the awareness that they are summer active. The key learning supporting this was grazing hard in spring to reduce competition, letting them go to seed in summer then graze after seed set.

As a result of undertaking the Whole Farm Grazing Strategies Course, half the respondents have fenced between 50 and 400 ha, and 2 others are planning to undertake land class fencing.

## Summary

The Rotational Grazing Project aimed to bridge the gap between knowledge and broad farmer uptake of rotational grazing, and to develop ways of implementing pasture systems research in real farm systems.

Some of the ways the project used to support producers to change included training, a discussion group, field days and a focus farm.

Results show that the project assisted producers, especially members of the grazing discussion group, to identify some of the barriers to change and supported them to find ways to address these barriers. This resulted in on-ground changes that allowed an increase in the uptake of rotational grazing on farms in the Holbrook district.