

RESEARCH IMPACT

EverGraze

Improving livestock farm profits and sustainability



Charles Sturt
University



“EverGraze has helped with understanding how sustainability and productivity can go together”.

David Strong, Sheep Producer

Challenge

A profitable farming business and a farm managed for environmental sustainability? Most farmers will tell you that the best way to have a profitable farming business over the long-term means looking after your land. However, making the best decisions for individual farm systems requires good information.

Discovery

EverGraze was a national program of research. It looked at how perennial plants could be used in different livestock enterprises to increase farm profitability whilst also improving the environment by reducing groundwater discharge and soil loss in high rainfall zones of southern Australia.

Impact

The EverGraze program has helped livestock producers to evaluate their use of perennials by making good information and tools accessible. This resulted in real changes to practices and decisions, improving both farm profitability and the environment.



As a key partner in EverGraze from 2003 to 2014, Charles Sturt University research looked at the ‘systems’ of livestock farms, which are made up of many components, including type of livestock, breeding times, pasture type selection, management strategies, weather patterns and market prices. Charles Sturt University’s Professor Michael Friend and Dr Jim Virgona led teams designing, testing and implementing farming systems around Wagga Wagga and Holbrook. They investigated what changes could be made on farm to improve profits and the environment by using different combinations of perennial plants with different livestock and grazing management practices. Modelling allowed the researchers to examine the consequences of different combinations over the long and short term.

Results

The research showed how livestock enterprises could make management decisions about when, where and how to use perennial plants to increase productivity and profitability, while also looking after the sustainability and resilience of their property.

Farmers and consultants were involved at every stage, through a national advisory committee and regional advisory groups. Regulatory advisory groups were critical in determining what the research results meant for farmers and in designing fact sheets to communicate to farmers.

Farm Management Practices

The messages about farm management coming out of EverGraze are different from the recommendations that usually come from agricultural research. The emphasis is not on encouraging widespread adoption of best practice recommendations. Instead, the main message is that every livestock farm business is unique and complex, and primary producers need to be able to make on-farm decisions for their circumstances. A major benefit of EverGraze, according to David Strong, Sheep Producer, is that it encourages farmers to engage in “whole farming system thinking”. In 2014 more than 4,400 farmers covering over 900,000 hectares made changes on- farm, with demonstrated increases to productivity and profitability, whilst also managing for sustainability, as a result of the EverGraze program.

There are a number of on-farm practices which farmers have adopted coming out of Charles Sturt University’s work. Some farmers are making changes to their stocking rates.

By making changes to practices such as stocking rates and times of the year when ewes lamb, farmers change the dynamic of their whole system. If you lamb in July, you produce less lambs, but can finish their growing on pasture before selling. Whereas lambing in September means you may be able to produce more lambs, but likely means having to sell the lambs on to finish growing or supplementary feed them – which can be costly.

The latter strategy was commonly recommended as a result of benchmarking analyses, but experimental and long-term modelling results show this can be a riskier strategy, which is dependent on good spring rainfall. The strategic use of “flushing” using pastures

rather than supplementary feeding (such as feeding lupin grain) can increase lambs conceived by up to 20% and has been a widely adopted practice.

Information and decision-making tools for producers

One of the main goals of EverGraze was to make the information generated by the research relevant and accessible to farmers. Regular communication and engagement were a feature of the program.

Throughout the research program, annual field days, workshops and other events were run so that the latest results could be shared with interested farmers, as well as Natural Resource Management (NRM) staff and agribusiness consultants.

A range of factsheets, calculators and tools for producers were developed out of the research. They focus on helping farmers to assess their farm context, evaluate their options, understand the consequences of different practices, both over the long and short term and make decisions.

Changes to consultancy practices and agriculture-related agencies

EverGraze provided data to support advisers and consultants as they help producers to make on-farm decisions looking at their farm systems. The research provides good evidence to identify alternative practices to reduce risk by making system-based decisions. Agricultural consultants and NRM authorities who have seen the results from the EverGraze research are incorporating some of the findings into their recommendations.

Program Highlights

- A national program of research bringing together over 250 experts, including scientists and researchers, agricultural consultants and farmers.
- Looking at real livestock farming systems from high rainfall areas of southern Australia to understand what changes to a system could increase profits and improve the environment.
- Farmers and agricultural consultants were partners in the program, helping to make findings realistic and relevant.
- Offering a new approach to pasture and livestock management through a 'whole farm system' approach.

Funding and Collaborators

The partners in the national program included Charles Sturt University, New South Wales Department of Primary Industries, Victorian Department of Economic Development, Jobs, Transport and Resources and Western Australia Department of Agriculture and Food, with funding from the Future Farm Industries Co-Operative Research Centre (CRC), Meat and Livestock Australia and Australian Wool Innovation Limited.



"... if you want to get people to adopt perennials to achieve environmental outcomes, then we had to demonstrate that those systems could be more profitable."

Professor Michael Friend

External Recognition

The research carried out in EverGraze was nominated as one of three finalists in the 2014 Department of Agriculture Landcare Eureka Prize for Sustainable Agriculture. This prize was awarded for "exciting scientific research, development or an innovative application that promotes agricultural productivity while protecting or enhancing our natural resource base". The criteria for nomination included originality and scientific rigor of the work, as well as demonstrated or anticipated impact.

"The EverGraze system considered how to integrate different parts of the landscape into the one farming system. We found that integrating the native pastures with the improved pastures in grazing management increased our stocking rate considerably. We know that in our environment, stocking rate is one of the biggest drivers of profit".

Chris Mirams, former manager, Woomargama Station

Information about EverGraze, including tools and fact sheets, funding and project collaborations, can be found at:

www.evergraze.com.au

For more information or enquiries email:
innovate@csu.edu.au



**Charles Sturt
University**