ECONOMIC ANALYSIS IN GRAIN & GRAZE

- a national project of the Grain & Graze Program

Predicting the mix for sustainable profits

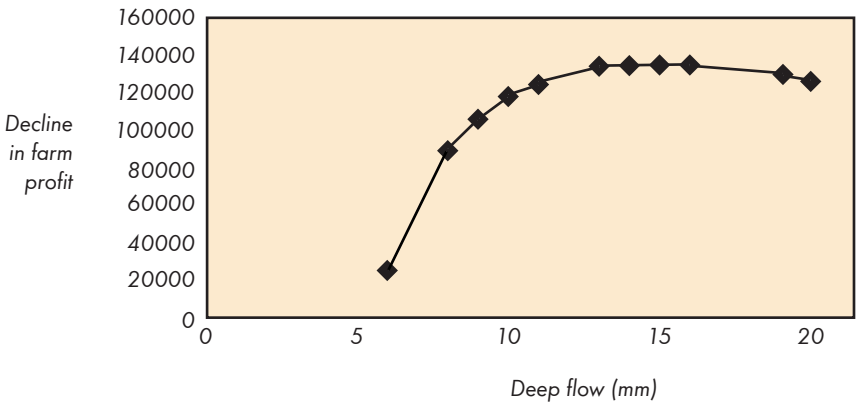
A new National Economics Project is underway to improve the profitability of farm businesses. A team of economists are working together to assess the financial impact of various production options for mixed farming systems in seven regions across Australia - Border Rivers (Qld/NSW), Central West/Lachlan (NSW), Murrumbidgee (NSW), Corangamite/Glenelg-Hopkins (Vic), Eyre Peninsula (SA) and the Avon and Northern Agricultural regions of WA.

New economic models will shed light on the trade-offs between profit, sustainability and enterprise mix of mixed farming systems. Photo: Arthur Mostead.

How this project will help farmers

Improved information on the financial impact of alternative enterprise mixes will help farmers better assess the role of new strategies to improve long term viability. It will build on farmers' understanding of the relationship between financial and environmental outcomes.

The project will determine how profit changes as the enterprise mix is altered to improve environmental outcomes.



In this case, on-farm recharge can be increased while maintaining profit to a point, after which profits start to decline, demonstrating the trade-off between profit and recharge.

Grain & Graze™
Profit through knowledge

Pasture and canola in neighbouring paddocks in a mixed system. Photo: Andrew Bathgate.

Achieving the best mix of enterprises

Farmers have a range of objectives that influence their selection of enterprises. Whilst profitability is an important objective, many farmers are conscious of the effect of their actions on the environment and the potential impacts on future production.

Applying economic analysis:

In the Eyre Peninsula region in South Australia, economists will work directly with 10-15 farmers to undertake individual assessments of the financial impact of different enterprise mixes.

Resistant weeds, water management and soil health are all examples of such impacts. Solutions may lay in achieving an appropriate balance of enterprises by improved integration of crop and livestock production. Better understanding the trade-offs that occur in mixed systems is a key element of achieving the best balance.

The National Economics Project is aimed at quantifying the financial aspects of these trade-offs, to determine how profit changes as the enterprise mix is altered to improve environmental outcomes.

The project economists are collaborating with other related Grain & Graze research, such as the national Feedbase Management Project, to evaluate alternatives for integrating cropping and livestock enterprises.

Planning the future for the whole farm

The National Economics Project will develop economic models to examine the relationship between profit, sustainability and enterprise mix of mixed farming systems in different regions. Unlike previous models, the new models will factor in different soil types; crop/pasture species; machinery capacity; crop sequence; allocation of feed to livestock; and environmental constraints.

Applying economic analysis:

In the Central West/Lachlan region in New South Wales, researchers will look at the biodiversity situation on farms and estimate each situation's ecological value. They will take into account the regional context of existing vegetation and potential changes to this vegetation.

The team of economists will then estimate the financial impact of these situations for individual farm businesses and the catchment. This will help determine the economic viability of alternative biodiversity outcomes. Specifically for this region, the estimate will include an assessment of the role of pasture cropping in improving profitability and biodiversity.

How the project will work

Two approaches will be taken to provide information to farmers and researchers on the financial impact of changes to enterprise mix.

In two regions economists will work directly with farmers and apply a whole farm budgeting model to individual farms. The best scientific data available will guide the assessment of changes to farm strategy, to determine its effect on farmers' cashflow and profit.

In four regions whole farm optimising models will be used to explore a range of alternative strategies to determine the trade-offs between environmental and financial objectives. These models account for the interactions between enterprises, meaning the financial value of the benefits of integration can be estimated. This work will focus on the role of perennial pastures, grazing cereals and the way perennial pastures might be combined with crops.

Some economic issues:

- *Cost and benefits of decisions*
- *Managing risk*
- *Valuing environmental outcomes*
- *Improving business skills*
- *Balancing enterprise mix*

How can I find out more?

As results and recommendations emerge, Grain & Graze will plan a range of activities which will enable researchers, farmers, advisers and regional groups to put relevant project findings into practice.

For regional contacts or to sign up for the bimonthly Grain & Graze electronic newsletter, please visit www.grainandgraze.com.au.

Or, you can contact the national economics project coordinator:

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Sheep grazing native pastures in a pasture cropping system. Photo: Warwick Badgery, NSW DPI.

Economists are working together to assess the impact of various production options for mixed farming systems in six regions.

THE GRAIN & GRAZE PROGRAM

Grain & Graze helps mixed farmers increase their profitability and social capital while better managing water, soils and biodiversity. The program works across nine regions in five states. Grain & Graze is a joint initiative of the Grains Research and Development Corporation, Meat and Livestock Australia, Australian Wool Innovation Ltd and Land & Water Australia.

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