

## *Project: Changing attitudes and practice for farming dry land in Marlborough*

### **Background**

The Starborough Flaxbourne Soil Conservation Group (SFSCG) is located in the Awatere/Seddon District of south Marlborough. This is predominantly a pastoral farming area, with an expanding viticulture industry on the river terraces, and some cropping on the better soils.

Since 1996 there has been lower-than-average rainfall most years. This has been exacerbated by westerly winds leading to regular drought and subsequent soil loss, particularly from the northerly faces. This may well be attributed to climate change, and farmers need to manage for climate change within farming systems.

Farmers in the district (66 properties covering 100,000ha) are concerned by ongoing erosion, resulting in degraded hillsides and loss of soil. Historically economic pastoral units have become uneconomic due to destocking. This has resulted in hardship and rural decline, and grazing pressure beyond land capability. Many now source income beyond their property.



The challenges now are to identify compatible, affordable and effective land use options to best manage fragile dry country in Marlborough, and to explore farmer's attitudes and behaviours, with a particular focus on understanding barriers to their uptake of information and knowledge.

The SFSCG's mandate is to establish trials and explore solutions to advance a way forward.

The objectives of this project, which will continue for a further two years, are:

- to build on the limited knowledge of soils in the district, to better understand the physical soil properties that constrain land use options and create erosion risk
- to support and assist farming families in the development of more sustainable land use options
- to improve understanding of present and future climate, and develop options that will support the development of long-term resilience
- to understand farmers' capacity to change, and the barriers to adoption of sustainable land management practices in a pastoral farming community
- to identify, describe, and model pastoral farming "themes" that have superior indications of long-term resilience in

both an ecological and economic sense

- to develop a partnership approach (farmers, researchers, agencies) to evaluate and on-farm trial a range of land management and land use options and alternatives that can be evaluated through whole farm enterprise and landscape modeling techniques and by farmers within current and future farming systems
- to develop a medium- to long-term communication strategy whereby the "keys to making transitions from the current state towards a superior and more sustainable state" are made available for uptake in nearby land

#### Key results from this year

Three properties were selected for analysis as a whole farm. This analysis has included soil taxonomy, physical, mechanical and nutrient characteristics, and their soil landscape relationships. These values provided linkages with pasture species, fertiliser inputs, soil moisture-holding capacity and stock-carrying capacity policies.

The climate change project, Adapting to Climate Change in Eastern New Zealand has, over the past two years, drawn together a detailed farmer perspective on climate change. Two key findings of relevance to the SFSCG are:

- the need to identify supports and effectively communicate the work of innovative farmers who are already proactively developing resilient farming systems with a 40-100 year vision
- the need for community-wide education and engagement in developing proactive measures that will help develop catchment, or region-wide, long-term resilience.

These findings prompted the organisation of a climate change workshop for the SFSCG and the use of questionnaires and interviews with key farmers to progress this project.

Crisis provides a valuable opportunity to learn and bring about long-term change that will benefit whole communities. Results to date have identified farmer's current attitudes to sustainable land management, and the barriers that prevent them adopting and implementing alternative sustainable land management practices. This information provides a benchmark from which to measure change.

Progress to define the "pathway" (costs, impacts, and production responses) that farms follow to make the transition from their current state towards a superior and more ecological and economic sustainable state is being measured. This has involved

a range of farming themes across the high input/low input and lifestyle continuum. Using a model, the economic outcomes of making these transitions were identified. This involved assessing the likelihood that they will improve farm net worth from making the choice to take up a transitional pathway. The development and testing of the model were undertaken on two properties.

Investigation of the potential use of native and exotic plants to improve landscape values on production, shade and soil conservation was completed. Plantings on the Wither Hills over previous decades are being used as the benchmark.

#### **Publications/communication**

- Communication via field days, focal areas/sites (eg salt bush trials), regular media articles, project meetings and individual contact.
- Annual project newsletter for local farmers, key stakeholder groups and interested parties.
- Project website being developed in conjunction with the New Zealand Landcare Trust.

#### **Key funding sources**

- MAF Sustainable Farming Fund
- Marlborough Research Centre
- New Zealand Landcare Trust
- Marlborough District Council
- Transpower Landcare Trust
- Starborough Flaxbourne Soil Conservation Group

#### **Key staff involved**

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