GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY
VICTORIA State Government Department of Economic Development, Jobs, Transport & Resources
Australian Government
National Landcare Programme

EROSION TO PRODUCTION
WITH LAND CLASS FENCING

- **Location**
  Bonnie Doon, near Brankeet arm of Lake Eildon
- **Property size**
  2630 ha (6500 acres) plus leased land
- **Landscape**
  Steep hills and broad valley flats
- **Soils**
  Dermosols mostly, with some Chromosols associated with drainage areas
- **Rainfall**
  550-600 mm av/yr
- **Enterprise**
  Merino and Cross-bred prime lambs and ewes, Black Angus bulls and beef cattle
- **Owners**
  Evans family
  (John Evans pictured)

Since his grandfather's time John Evans' family has farmed the steep hills around Bonnie Doon.

The property's 175ha 'back paddock', comprising steep hills forming a natural amphitheatre around flats, had been used for many years by John, brother David and his parents to run 400 Merino and Cross-bred ewes and rams; yet it was an area that was causing problems.

"Being unable to take the sheep off the hills at certain times meant the ground bared out, and only grew capeweed," John said. "Large rain events would wash soils from the exposed hills, turn gullies into deep ditches and fill the dam on the flats with more gravel than water."

Added to this, John found the joining rate in this area was very low.

"The rams preferred to stay near the dam while the ewes spent most of their time up on the steep hills," John said. "Lamb survival rates were also down, influenced by feed value for the pregnant ewes as well as lamb exposure and mismothering".

"With help from a land class fencing grant, we were able to change the back paddock and the farming enterprise. We ran a fenceline along the base of the hills where the native hillside grasses met the introduced pastures on the flats. We then separated the north, south and west aspects on the hills."

To reduce labour costs John, his family and fit friends, constructed the hill fencing with materials carried from the top down as it was too steep for vehicles.

Accompanying the cost-share funding was a detailed management plan to improve soil health and increase grass cover. Aiming to boost the perennial native grass cover meant knowing more about the type and requirements of existing species. Weeping grass (*Microlaena stipoides*) was the main species on the southern slopes and gullies, with kangaroo grass (*Themeda triandra*) and wallaby grasses (*Rytidosperma* spp., formerly *Austrodanthonia* spp.) on the northern faces. Stock camps with their high nutrient levels were dominated by annual weeds such as capeweed and some Paterson's curse.

The plan was to adjust grazing of the hills to increase ground cover, protect the soil and reduce nutrient runoff. Initially in late spring and early summer sheep grazing was deferred so perennial grasses could set seed.

Resting the grasses allows for increased seed production and replenishes the plants' root energy reserves. Once the native grasses had re-established, a complete rest during seed set may be needed only one year in three.

Deferred or reduced grazing was to continue through mid to late summer and early autumn to ensure the grass height remained above 6cm with a high proportion of ground cover. Following an autumn or winter break rotational grazing could occur, aiming for a minimum of 70% ground cover through grasses and plant litter.

With the fencing completed by mid-2011, the benefit of the hillside grazing plan to the native grass cover soon became evident, especially following the 2014 autumn break.

"It's the best break I've ever seen – an unbelievable season – bringing quality feed to the hills and flats," John said. "Such a season can bring feet problems to sheep on the lower introduced pastures so being able to put them on the drier hills at this time is critical. And for young lambs, the hills are nice and warm with trees and tussocks for shelter."

The Evans family are also better able to target fertiliser and lime inputs to the lower pastures for the best response. The flats, originally part of the back paddock, had an Olsen P of 7, and are now Olsen P 10-11.

John applies single super phosphate each year, which he finds gives better wool results than high analysis types. The soil pH was 5.5 (in water) but is now 6.2 from lime applied at 10-year intervals.

John has nothing but praise for land class fencing, with more completed on the steep hills in 2013.

"[People] should come out here and look at what's happened – less erosion and weeds, more native grass pasture, and we've doubled the production of our old 'back paddock'."

- **For more information about improving soil health and the Goulburn Broken Catchment Management Authority's Australian Government funded SoilCare program visit the Land Health page at www.gbcma.vic.gov.au**
- **For more information on sustainable farm management visit the Agriculture page of the Department of Economic Development, Jobs, Transport and Resources at www.economicdevelopment.vic.gov.au**

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