

PO Box 586 Moama 2731  
T +61 (0)3 5480 0755 F +61 (0)3 5480 0233  
E enquiries@nuffield.com.au W www.nuffield.com.au  
A.B.N. 33 092 327 396

2009 SCHOLARSHIP SUPPORTERS

Australian Wool Innovation	Impact Fertilisers
Fisheries Research and Development Corporation	Landmark
Estates of the late RC and EC Cappur Webb	Macquarie Agricultural Services
Geoffrey Gardiner Dairy Foundation	Meat & Livestock Australia
Grain Growers Association	Rabobank
Grains Research and Development Corporation	Rural Finance Corporation
Kondinin Group	Sidney Myer Fund

Page 1 of 3

Wednesday 13 May 2009

## Cattle offer cure for carbon and rangeland ills

*Nuffield Scholar Graham Finlayson believes livestock have been unfairly vilified in environmental and greenhouse gas debates. He says livestock have the potential to be one of the most ecologically and economically effective tools available in repairing degraded rangelands and restoring the world's carbon balance.*

By Catherine Norwood

Nuffield scholar Graham Finlayson watches with satisfaction as the cattle he is agisting on his Brewarrina property in north western NSW churn up the hard-capped soil surface with their hooves.

He says what many view as degradation is actually an essential first step in restoring health to the semi-arid rangelands he calls home. It is a process he has seen producing dramatic rangeland restorations during visits last year to the US, Mexico, South Africa and Zimbabwe as part of his Nuffield scholarship, sponsored by Landmark.

"I am a supporter of the holistic management approach developed by scientist Allan Savory, who was originally from Zimbabwe, to address desertification of arid environments," Mr Finlayson says. "I have been introducing the system on my property for the past six to seven years, but the Nuffield Scholarship offered me the opportunity to investigate the long-term effectiveness of the system in drier regions, and what I saw totally surpassed my expectations."

Holistic management to regenerate grasslands uses intensive planned grazing for short periods of time, followed by long rest periods. Mr Finlayson says when he returned from his Nuffield travels last year he put in an additional 60 kilometres of fencing to increase the number of paddocks on his property so that he could more intensively graze each paddock and extend the rest periods.

In one instance he split four paddocks sharing a single watering point into 16 paddocks, following the example of a South African property he visited which had a similar operation to his own. Some of Mr Finlayson's new paddocks are up to 2.8 kilometres long, and he had thought cattle would not travel to the end of the paddock, away from the water, to graze evenly, but he says it has not been a problem.

The number of cattle he takes on agistment – he doesn't own any cattle himself – varies according to season. However he expects to have 850 head on his 6880-hectare property at the end of May, after good rainfall in April. The cattle stay one to three days in each paddock, which is then rested for up to seven months.

He says the cattle's hooves cut up the soil surface, making it easier for seeds and nutrients in their manure, as well as subsequent rain, to enter the soil. The plant matter they don't consume is also broken down, adding more organic material and nutrients to the soil and, importantly, building soil carbon. The rest period gives seeds the opportunity to germinate and establish strong root systems, further sequestering carbon below ground.

Mr Finlayson says he has already seen positive results from the process on his property, particularly on some of the light 'scalded' soils. Soil fertility has improved, grasses have established more effectively and have also become more resilient after grazing, he says.

“The ability of livestock to help restore our rangelands and to increase carbon sequestration in soils gives us one of the best tools we could have to manage these issues. Through holistic management farmers worldwide have been able to increase their soil carbon levels one to three per cent.

“Livestock and the contribution of agriculture have been demonised in the greenhouse gas emissions debate based largely on emissions figures calculated for livestock in feedlots. This doesn’t reflect the natural and synergistic relationship within the carbon cycle of pasture and grazing animals.”

Mr Finlayson says Allan Savory has calculated that if soil carbon could be increased across the world’s 4.9 million hectares of dry rangelands by only *half of* one per cent it would sequester 720 gigatonnes of carbon\*.

“To give some perspective, in 2000 the total world emissions was 44 gigatonnes, so the potential contribution of agriculture and livestock is enormous, dwarfing any other current technology.”

Mr Finlayson says the holistic management approach has dramatically changed his thinking over the past few years, encouraging him to focus on the cause of problems, rather than fighting the symptoms, such as weeds, and on drought proofing his business, rather than his property.

He says some of the farmers he visited overseas had been using holistic management for more than 30 years, and the differences in the health and productivity of these properties, compared with those under conventional management, was inspiring.

Many of them were small operators who focused on creating profitable and resilient businesses, using their energy to focus on solutions, rather than battling problems. In Mexico he saw one farmer productively working with mesquite (a leguminous shrub), rather than battling the plant, which farmers across the US border in Texas spend millions of dollars trying to eradicate as a ‘woody weed’.

He says the Mexican farmer creates charcoal products from the mesquite trimmings while twigs and leaves are spread across the ground where grazing cattle break them up and incorporate the organic matter into the soil. The mesquite leaves are harvested as a high-protein fodder for stock, the seedpods are ground for flour and a high-quality timber is harvested from the trees.

Mesquite helps to fix nitrogen in the soil and, rather than competing with grasses, as is the popular belief, appears to complement them, Mr Finlayson says. The grasslands on the property he visited had established so successfully between the mesquite that stocking rates, in conjunction with managed grazing, were more than double those of neighbouring properties.

“I think problems like weeds are often nature’s way of trying to heal a problem, to restore water-nutrient cycles that we have broken down with European-style farming practices,” he says. “We need to restore the balance with management styles that better mimic natural processes – like the migration of herds across rangelands, where large numbers of animals are making a big impact for a short time.”

Mr Finlayson says he has a much greater appreciation of the diversity of views and flexibility of agricultural systems around the world following his Nuffield Scholarship. “The program gives you a rounded view of agriculture globally, as well as the chance to pursue your own research, and it has been an extremely valuable experience.”

“This scholarship, and Landmark’s involvement as a sponsor, have given me an opportunity to make a real contribution to the industry. I think it’s great that a company like Landmark, which promotes farming excellence, gets involved to help people like me, and the Nuffield program, bring knowledge home to Australia,” he says.

---

**Further information:**  
Jim Geltch  
CEO, Nuffield Australia  
T +61 (0)3 5480 0755

Applications for the 2010 Scholarships are now open, with 20 scholarships valued at \$27,000 each, sponsored by a range of leading agribusiness and primary producer organisations.

Scholars take part in a compulsory six-week Global Focus Program that includes Canada, the US and UK and may also include the Philippines, Brazil, China, France and Ireland. This is followed by a further 10 weeks of international travel as part of each scholar's individual study tour.

Scholars are selected for their farming and leadership capabilities, and potential to make a valuable contribution to Australian agriculture.

Applications close on 30 June 2009. Application forms are available from Nuffield Australia on 03 5480 0755, via email, [enquiries@nuffield.com.au](mailto:enquiries@nuffield.com.au), or from the website [www.nuffield.com.au](http://www.nuffield.com.au). Successful scholars will be announced in October 2009.

\* Allan Savory, *A Global Strategy for Addressing Climate Change*, January 2009

ENDS

For more information: Graham Finlayson (02) 6874 4921 / 0400755584 or email [grahamfinlayson@nuffield.com.au](mailto:grahamfinlayson@nuffield.com.au)

High-resolution photographs of Mr Finlayson can be downloaded from [www.coretext.com.au/communications\\_images.php](http://www.coretext.com.au/communications_images.php)

Please contact Catherine Norwood at Coretext Communications (03) 9670 1168, [cnorwood@coretext.com.au](mailto:cnorwood@coretext.com.au) if you have any problems accessing images.