



Broad focus on native vegetation will deliver

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in a nutshell

- Nuffield Scholar and Yenda rice grower, Helen Dalton is adamant that there will be economic and ecological benefits for rice growers with a stronger focus on native vegetation and biodiversity
- Exposure to English and American models convinced Ms Dalton that an environmental stewardship scheme that provided long-term financial security to farmers was “the way to go”
- Ms Dalton says that private net benefits must be positive if we want landholders to adopt environmental practices conducive to biodiversity, such as native vegetation establishment

The Australian Government’s new environmental stewardship scheme could drive enduring environmental outcomes on private land, but Nuffield Farming Scholar Helen Dalton warns the focus must be broad to have a strong impact.

A commitment to innovation has improved the Australian rice industry’s water use efficiency by 60% over the past decade, with the International Rice Research Institute confirming Australians use up to five times less water to produce a kilo of rice than overseas growers. Since Ms Dalton’s father-in-law first planted a rice crop in Yenda, near Griffith, more than 50 years ago, Australian growers have almost doubled the international yield average.

However, despite these impressive achievements, Murrumbidgee Valley rice grower Helen Dalton is adamant the economic and ecological benefits could be even greater with a stronger focus on native vegetation and biodiversity.

Global insight to nurturing biodiversity

Ms Dalton returned from her Nuffield tour of the United Kingdom, Europe, the United States, Canada and China, bringing with her strong views on how to encourage farmers to nurture biodiversity on their properties. She presented these views at Nuffield’s Innovative Farming Australia conference, held in Fremantle, WA, October 2007.

“Rice is a conditional crop – water availability dictates when we plant which means the drought can have a devastating impact,” she says.

In spite of this, rice farmers have adapted to Australia’s harsh climatic conditions, and the industry’s investment in research and development has helped to generate competitive advantage in areas such as irrigation technology, crop breeding and crop protection. But while heavy reliance on water has driven innovations to improve efficiency, Ms Dalton says the commodity’s high value has prompted

some farmers from smaller irrigation properties to remove vegetation in their desperation to “utilise every square inch of their land; to make every bit of water count”.

“Over time these farmers will lose biodiversity and the benefits that go with that, such as pest control,” she says.

Awareness of this mindset, together with growing concerns about water availability, inspired the mother-of-four’s interest in environmental management. She initiated a native plant propagation program on the family properties, which consist of more than 1130 hectares under irrigation and 2020 hectares of dryland farming, before establishing a native nursery and consultancy business. With the onset of drought, the venture has expanded to specialise in shelterbelts for operational farms, and buffer zones and windbreaks for rural residential properties.

Ms Dalton recognised the need for greater incentives to ensure education and adoption of sustainable farming practices after working on the Environmental Champions Program with the Rice Growers Association of Australia. Keen to explore the economic and ecological importance of native vegetation and biodiversity in farming systems, Ms Dalton’s husband encouraged her to apply for a Nuffield Scholarship when she expressed an interest in overseas developments.

Sponsored by the Rural Industries Research and Development Corporation (RIRDC) and the Rice Research Committee, the 2006 Scholar’s Nuffield tour reinforced her view that any incentive for farmers to plant native trees and nurture biodiversity should be monetary.

“The farm sector is responsible for managing more than three-quarters of Australia’s land with limited resources – a lack of labour and, with the drought, a lack of money,” she says.

“We are under increasing pressure, yet farmers must be educated to become environmental stewards because farming is not only about production – it is about sustainability.



"In the long term, rice growers will make money by working with the environment. No-till farming improves soil microbiology and moisture efficiency, and reduces erosion, weed and insect problems, while better crop rotation methods exploit subsoil moisture, reduce salinity problems and generate additional income.

"Similarly, the use of drought-tolerant native vegetation in shelterbelts increases crop productivity by reducing plant and soil moisture loss, preventing soil erosion and pollution, and providing a habitat for local fauna and flora which maintains biodiversity and aids natural pest control. Native vegetation also mitigates climate change through carbon sequestration.

"But enduring environmental improvements across the vast majority of the continent will deliver both public and private benefits, therefore farmers, who already spend more than \$3 billion annually on natural resource management, must be compensated for the investments necessary to achieve these outcomes."

Environmental stewardship "the way to go"

Exposure to English and American models convinced Ms Dalton that an environmental stewardship scheme that provided long-term financial security to farmers was "the way to go".

"To date, the Australian system has offered one-off 'carrot' grants for tree planting and fencing, but no ongoing remuneration for maintenance; whereas in Britain and America farmers are recognised as land caretakers and are paid an annual sum per acre for environmental management," she says.

Ironically, that situation has recently changed. Consistent with the Nuffield Scholar's study recommendations, the Australian Government has announced an unprecedented environmental management initiative that will see farmers rewarded for their input over a period of up to 15 years.

As private sector land managers control about 77% of Australia's land surface, the Government needs their involvement to achieve significant land-based environmental outcomes. The Australian Environmental Stewardship Program, a new Government initiative which will come into effect this financial year, aims to address that need and to fill what the Government acknowledges is "a critical gap" in the provision of incentives for land managers within a suitable timeframe to achieve restoration and protection of targeted environmental assets.

However, while Ms Dalton applauds the program, she questions its scope and capacity to motivate large numbers of farmers to practice environmental management, both within and outside the rice sector.

"Australia can learn valuable lessons from the international experience," she says.

"There are some serious flaws with environmental stewardship schemes overseas. In England and Ireland the programmes are voluntary but farmers are compelled to participate because average property sizes have made farming unviable. Stewardship or subsidy payments represent a significant component of farmers' incomes – up to 90% in Ireland. But the Government stronghold, while good for conservation and tourism, has depleted agricultural innovation and

stripped farmers of their independence. The situation is similar in several American states."

Ms Dalton says the overseas schemes also have notable strengths: they apply to a large number of farmers, which means a large number of growers are educated in environmental management and a significant amount of country is protected (more than 30% of eligible agricultural land in England); and rewards are greater for those who practice biological farming, which reduces the environmental footprint, helps to prevent disease, and is servicing burgeoning organic markets in Britain, Europe and America.

"The new Australian scheme is a major step in the right direction, but by targeting specific high public value environmental assets under a limited portfolio, it is not providing an incentive for the majority of farmers," Ms Dalton says.

"Private net benefits must be positive if we want landholders to adopt environmental practices conducive to biodiversity, such as native vegetation establishment.

"Further, the market-based selection process means that not all farmers who have targeted environmental assets on their land or who have submitted a proposal will receive payments, and those who do will be taxed. Overseas examples suggest that committing a portion of GST to farmer environmental management at a broader level could be a more effective solution."

Ms Dalton is determined to use her Nuffield research to step-up the focus on native shelterbelts and vegetation corridors, particularly in rice-growing areas spanning the Murray and Murrumbidgee valleys of New South Wales and northern Victoria. She would also welcome the opportunity to divert Government attention to this issue and its relevance to all farmers through the Environmental Stewardship Scheme. ☀

Further information

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Figure 1. Nuffield Scholar, Helen Dalton, believes there are economic and ecological benefits associated which biodiversity on farms.