



managing native  
vegetation  
and biodiversity

improving farm profits  
through biodiversity

# LandWater & Wool

## Shaping the future



Australian Government  
Land & Water Australia

another australian wool innovation  
limited



### WOOL PRODUCTION & BIODIVERSITY

A holistic solution for fine wool and healthy profits at 'Lana'

Biodiversity is the diversity of life on your farm, including plants, animals, fungi and microbes. Biodiversity is essential for productive, resilient ecosystems. But how do you increase biodiversity on-farm while maintaining or improving productivity? One New England farm business is finding out how.

Tim and Karen Wright's success with grazing management shows how woolgrowers can produce quality fine wool and healthy profits while looking after their natural resource base.

The Wrights are one of 25 farms participating in the Northern Tablelands Project, under the *Native Vegetation and Biodiversity* Sub-Program of *Land, Water & Wool*. By working with woolgrowers, the project is showing that biodiversity has a range of values, can add wealth to a business and can be managed as part of a productive and profitable commercial wool enterprise.








Through application of Holistic Management and planned grazing, there has been an improvement in biodiversity and ecosystem function, along with wool and beef profits.



Photo courtesy of Karen Forge.

*Land, Water & Wool* (LWW) is a joint investment between the wool industry's peak research and development body, Australian Wool Innovation Limited, and the nation's premier investor in natural resource management research, Land & Water Australia.

*Native Vegetation and Biodiversity* is one of eight *Land, Water & Wool* sub-programs. The others include:

-  Benchmarking and Evaluation
-  Sustainable Grazing on Saline Land (SGSL)
-  River management and water quality
-  Managing climate variability
-  Managing pastoral country
-  Future woolscapes
-  Sustainable Grazing Systems Harvest Year

More detailed information is included in the full version of the *Wool Production & Biodiversity Case Study on the Wrights' property* (see back page for details).

Tim and Karen Wright live west of Uralla on the New England Tablelands, NSW. They own two properties: 'Lana' and 'Kasamanca', breeding easy-care, low-cost Merino sheep of good constitution based on fine to superfine Merryville and Lorelmo (poll) bloodlines. The Wrights also breed composite and cross-bred cattle for yearling production.

Tim and Karen believe in the importance to their business of a healthy natural resource base and of the native vegetation across 'Lana'. According to Tim: "Native vegetation is 100 per cent important—'Lana' is a rangeland. We manage for biodiversity because it gives us better balance – more is good. There are lots of indicators. Our groundcover has improved.

"The increase in abundance and diversity of native perennial grasses, in particular cool-season species, has given us more even feed production through the year. Clean water in the rivers and dams is valuable for stock, and we have a diversity of birds for pest control."

#### Planned grazing

The Wrights' management in the 1980s was based on pasture improvement and barely broke even. Having experimented with cell grazing between 1991 and 1993, Tim and Karen moved to planned grazing in 1995, by combining the principles of cell grazing and Holistic Management.

Planned grazing, based on Holistic Management guidelines, involves intensive grazing with a high stock density for short grazing periods followed by long rest periods. Through planned grazing, stock numbers have been increased, with only one-third the fertiliser inputs of the 1980s.



Photo courtesy of Nick Reid.

**A fencing and stock water plan**

The change to planned grazing on 'Lana' involved a new fencing and stock water plan with some major outlays. However, the cost of the re-fencing program was funded by reducing other costs, such as fertiliser and hay, and abandoning pasture sowing and renovation each year.

**Financial advantages**

Wool income for the Wrights has increased due largely to the reduction in vegetable matter in the fleece, and the costs of production have decreased when compared to costs in the 1980s and early 1990s.

"We operate a low-input system now. Our main inputs are fencing and the labour involved in general maintenance," says Tim.

**Benefits to the land**

"In 2002, we had 398 mm of rain, the lowest rainfall on record, yet the stock numbers we have been able to carry has been phenomenal. And the biggest winner has been the land. There's more groundcover and greater species diversity in these old sown paddocks than there was after sowing them," says Tim.

One-third of 'Lana' consists of belts of timber and forested hills. Tim and Karen value the extensive timber across

**"Native vegetation is 100 per cent important. We manage for biodiversity because it gives us a better balance – more is good."**

Tim and Karen Wright, 'Lana'.

'Lana'—it is valuable for winter stock shelter and is an important part of the carrying capacity of 'Lana'.

"Timber corridors also increase the value of the land, and help wildlife move to all parts of the property," Tim says. "By allowing corridors to develop using natural regeneration, the trees come up where they should be. Tree planting is obviously necessary where regeneration is limited."

The Wrights have maintained the Wildlife Refuge status of 'Lana' that Tim's father obtained in the 1960s. Important wildlife on 'Lana' includes platypus, abundant birdlife including several declining woodland bird species, koalas, wallabies, echidnas and straw-necked ibis.

**fast facts**

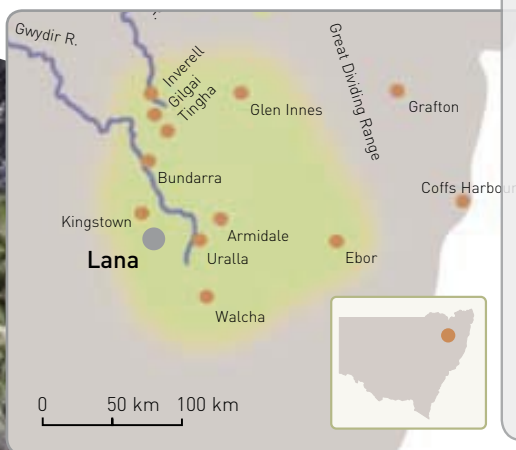
**Location:**  
Uralla, New England Tablelands NSW, Gwydir River Catchment

**Area:**  
'Lana' – 3350 ha;  
'Kasamanca' – 780 ha

**Mean annual rainfall:**  
769mm – ('Lana')

**Enterprises:**  
Fine wool Merinos (15.5-17.5 micron); beef cattle

**Soil types:**  
Coarse and fine granites



**Tim and Karen's 10 principles for improving the farm business and landscape on 'Lana':**

1. Develop a holistic goal which takes into consideration personal values, the resource base and available finances.
2. Match enterprises to the environment (not the other way around).
3. Match stocking rate to the assessed carrying capacity of the land, and revise assessments frequently.
4. Manage for the full range of plant species and the whole ecosystem.
5. Think of livestock as tools (e.g. stock density, the herd effect, and rest from grazing are as much tools as is a plough).
6. Design paddocks to suit the topography and the land.
7. Use a flexible grazing plan and monitor the water and mineral cycles, energy flow, and the plant sward to ensure the plan is on track.
8. Supplement stock with minerals but don't feed substitutes (e.g. hay).
9. Test all decisions against the holistic goal.
10. Believe that the highest return on capital comes from education, not regulation, and what looks good in the paddock is not necessarily good on the balance sheet.

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**Wool Production & Biodiversity Case Study**

PLEASE POST ME:

- One copy of the Wrights' 'Lana' Case Study
- Other fact sheets and case studies in the Land, Water & Wool Northern Tablelands Project series

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**project partners:**



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