EverGraze
More livestock from perennials

More perennials
Better livestock
Healthier catchments

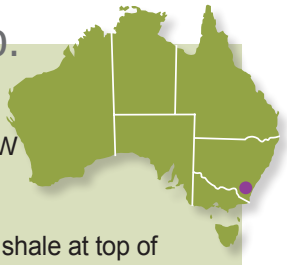
Case Study

Native pastures prove their value

Integrating native pastures into the overall rotation system is helping Chris Mirams, Manager of Woomargama Station and Chair of the EverGraze National Advisory Committee, to utilise pastures.

Chris recently shared his experiences with Gill Fry.

farm info.



Producer: Chris and Jacinta Mirams

Location: Woomargama Station, Woomargama NSW

Property size: 2,700ha

Soils: range from alluvial & heavy clay flats to steep shale at top of the valley

Enterprises: 10,000 fine wool Merinos and 1,000 beef cattle

Pastures: phalaris and subs, native grasses and lucerne

"At Woomargama Station we focus clearly on increasing productivity, health and ultimately the value of the land. The station is a substantial investment in agricultural real estate by the owners and our management ensures the property grows in value over the long term", Chris said.

"Approximately one third of the property is arable and maintains well fertilised improved perennial pasture species, mainly phalaris. Over half of the property is steep, with relatively infertile shallow soils, which maintains various amounts of native pasture and natural timber. Around ten percent of the property has been planted with interconnecting tree plantations.

In the past, we focussed mostly on the arable area, improving pastures and applying superphosphate at a rate of 130 to 180kg per hectare. Our carrying capacity ranged from 14 to 20 DSE/ha on this country which was set stocked.

Our native pasture areas were also set stocked, mainly with dry stock at 2 to 4 DSE/ha. The pastures were managed poorly with areas under and over grazed, the stock did not "do" particularly well and the area contributed little to the farm.

I realised that we needed to design a pasture system that grew grass all year round. Our immediate initiative was to sow hundreds of hectares to a wide range of species. Despite moving to a rotational grazing system many years ago, the recent years of low rainfall has highlighted the true survivors; phalaris, mature lucerne and native grasses.

It is interesting that while we were focussed on sowing the latest cultivar, we were completely distracted from utilising what we now understand to be one of our greatest resources, our native grasses.

Chris Mirams

I decided to learn how to manage this resource better so sought advice from Meredith Mitchell (DPI Rutherglen) and Jim Virgona (CSU Wagga) who are both involved with EverGraze. We identified the main beneficial grasses as wallaby grass (Austrodanthonia spp), weeping grass (Micolaena stipoides) and red grass (Bothriochloa macra). We applied 80 kg/ha of superphosphate and initially rotationally grazed the area with 4,000 wethers.

However, we found the stock did not do as well and wool quality suffered.

key points

- Recognise what perennials will realistically grow and persist on your property.
- Native pastures are a valuable resource in southern NSW hill pastures.
- Incorporating native pastures into the rotation with phalaris improves pasture management and animal performance.

"Integrating sown perennials with natives grass pastures in a rotational grazing system has lifted stock performance and improved ground cover"

Native pasture on the slopes of Woomargama Station

We tried all sorts of supplementary licks and blocks but they were expensive & unsatisfactory.

In the end, we came up with a very simple solution. We integrated both improved and native country into the same rotation. We now have three grazing blocks; one for ewes, one for wethers and one for cows.

Each block includes 15 to 20 existing paddocks, some with improved species and others with natives. Managing improved and native pasture species in the same rotational system works really well. For much of the year it is a continuous rotation. However, in the spring we graze the phalaris particularly heavily to maintain quality pasture, while the natives have a rest. During the summer, when phalaris is in senescence, the summer-active natives earn their keep. Our rotations are very flexible, as we focus very much on what is happening in the paddocks rather than adhering to strict rules.

Despite the continuing years of low rainfall, we are now able to maintain perennial pasture and therefore ground cover and grow enough grass to keep our breeding flock and herd. Our reliance on supplementary feeding and frequent resowing of pastures has diminished. We have also introduced a trading enterprise into our farming system to allow us to quickly respond to variations in season.

The EverGraze mantra of *'right plant, right place, right purpose'* has proved its worth in our situation. We are now managing to the best of our ability, a suite of drought tolerant, productive and permanent perennial grass pastures that respond to rainfall all year round."

science behind the story

There are three principles that Chris has relied on to produce the results at Woomargama.

Firstly, he replaced sheep in the grazing system dominated by native pastures with cattle.

Cattle have a superior ability to utilise feed of lower quality when compared to sheep.

The basis for this difference is that the rumen of cattle is larger, allowing more time for the chemical reactions that breakdown plant fibre to take place.

So with the long rest times there is a build up of low quality herbage which is less of a problem for cattle than sheep.

Secondly, longer rests between grazing favour perennial species over annual species partly due to competitive effects.

It is also possible that longer rest times favour the establishment of new native grass plants from seed (recruitment).

Experimentally it is difficult to demonstrate recruitment because events that trigger it may be rare.

Nonetheless by resting the native grasses for long periods, it is more likely that plants will produce more seed, making recruitment possible.

Finally, Chris is using superphosphate at modest rates to improve soil fertility.

The presence of annual legumes in the native pastures means that the benefits of better Phosphorus (P) nutrition will be direct (an immediate increase in pasture growth) and indirect (an improvement of soil nitrogen (N) status leading to improved growth).

Chris is ensuring the boost to soil N is not excessive by combining fertiliser and grazing management strategies - modest P and grazing to favour perennials.

As a result it is likely that invasions by nitrophilous (N loving) weeds will be less of a problem.

EverGraze is conducting further research into integrating native pastures into the production system.

A series of fact sheets identifying native grasses and their management is available at www.evergraze.com.au

contact

Jim Virgona

P: (02) 6933 4174

E: jvirgona@csu.edu.au

www.evergraze.com.au

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