



# A balancing act: Farming to improve biodiversity and production.

Developing a strategy that retains and enhances biodiversity, while also balancing production and profit, can be a challenge for producers. Angus and Lucy Maurice are no strangers to that juggling act. By using both conventional and regenerative farming practices side-by-side, they operate a productive and profitable farm, while improving the health of their special woodland areas.

Angus and Lucy Maurice operate Gillinghall, a mixed enterprise farm of Merino sheep, crops, and pasture-raised chicken eggs. The property comprises a diverse mosaic of soil types intersected by two creeks. Amongst the paddocks of improved pastures are open grassy woodlands carpeted with native grasses, and hill-top patches of White Box and Yellow Box woodland.



Angus Maurice. Photo: Gillinghall Farmer Brown's Pastured eggs

Twenty years ago, inspired by a holistic management training course, the family set a goal: to increase the biodiversity on their property. After experimenting with a range of different approaches, they settled on dividing the property into two management zones. About one quarter of the property is managed regeneratively, with an emphasis on improving biodiversity in harmony with livestock production. For the remainder of the farm, the focus is on production, with a rotation of improved pastures and crops.

Farming for the Future is a research and change program initiated by the Macdoch Foundation.

Macdoch Foundation 25 Challis Avenue, Potts Point NSW 2011 ABN 67 636 513 089



## Healthy soils, healthy country

In the regenerative areas, there is no cropping or use of fertiliser. "The aim is to let nature take its course", says Angus. These paddocks are typically grazed for a short period, with longer periods of rest. Angus and Lucy believe this promotes the regeneration of native perennial grasses and forbs, retains ground cover, and ultimately promotes softer soil with high levels of organic matter. They believe that a large, diverse community of plants improves soil health. "The more diverse the plant base, the more groundcover and root systems you have – which support good soil structure and soil biology".



During dry times, Angus and Lucy have noticed the regenerative areas have more ground cover than the improved pastures. They believe a diversity of grasses improves the resilience of the land. "After three very dry years, we were amazed at how well the native perennials bounced back. It was so dry you could barely see the grass butts - but they were there, waiting for rain".

A tree at Gillinghall in October 2019, February 2020 and March 2020. Photo: Gillinghall Farmer Brown's Pastured eggs.

The chickens roam freely in the paddocks on Gillinghall. Rather than fences, they are guarded from foxes by Maremma dogs. They are housed in mobile sheds which are moved weekly, providing continuous access to pasture for the chickens – while having a fertiliser effect on the paddocks. "That's an advantage for the chooks as well as the soil. They like to have a fresh patch to move on to – it's good for their health, it's good for their diet, and it's good for the paddock."



Chickens range free on Gillinghall, guarded by Maremma dogs. Photo: Gillinghall Farmer Brown's Pastured eggs.

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#### Environmental stewards

Gillinghall is home to a 44-hectare paddock of a threatened Box Gum Grassy Woodland ecological community. This area is under an agreement as part of the Australian Federal Government's "Environmental Stewardship" program. Angus and Lucy were contracted, over a 15-year period, to protect and enhance the condition of the threatened ecological community.

In this paddock, grazing is excluded over spring and summer. The woodlands are grazed once or twice for a maximum 5 days in winter. This prevents overgrazing of small trees and shrubs, seeding herbs and flowers, but is enough to open up the biomass to promote the growth of new plants. To attract smaller birds, they have planted acacia shrubs.

The program is paying off. The ground layer boasts a diverse array of small native herbs and flowers, such as the Chocolate Lily, and provides a home to an assemblage of native woodland birds, including the White-throated Gerygone, Apostlebird and the nationally threatened Superb Parrot.







Apostlebirds (left), White-throated Gerygone (middle) and Superb Parrot (right). Photos: Chris Tzaros.

# A balancing act

By using two strategies concurrently, one that aims to improve biodiversity, and one that aims to improve production, Angus and Lucy are well-versed at balancing the health of their land with the need to operate a profitable farm. While they believe that regenerative farming improves soil health, Angus also says "our production and profitability is higher on our improved pastures and cropping area. But, these are often our better paddocks, so it's not always a fair comparison."

Explicitly quantifying the production benefits of a biodiversity-focused farming strategy remains a key question for Angus and Lucy. That's why they're part of *Farming for the Future*, a multi-year study – the biggest of its kind in the world – that aims to quantify the contribution of different types of natural resources ('natural capital') to profitability across thousands of Australian farms. With this new insight, Angus and Lucy will be able to make more informed decisions about how to best manage their land for both its health and farm profit.

In the meantime, Angus and Lucy enjoy the benefits of supporting biodiversity on their land. They enjoy living and working amongst the native vegetation, and particularly appreciate the aesthetics of the tree-lined creeks. And of course, there are marketing benefits: "hens that lay eggs in native grasses make extraordinarily good eggs".

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## Post-script

While producers have long known that a farm's natural capital will influence productivity and profitability, that relationship has yet to be properly quantified at scale. Farming for the Future is looking to change that, through research and the development of tools that will enable producers to bring their natural capital onto their farm balance sheets. AWI has signed up as a partner of Farming for the Future, ensuring that the interests of wool growers are well-represented in the research.

Name of Farmers: Angus and Lucy Maurice, and Angus' parents Rick and Brenda Maurice

Name of Property: Gillinghall

Location and size: 30 km north-east of Wellington, central west NSW. 2520 ha.

Type of farm: Mixed enterprise: Crops, Merino, Eggs (Gillinghall Farmer Browns Happy Hens)

Size of flock and break down of breeds/types: Glenwood merino 2,800 ewes to Glenwood rams. 3600 lambs. Dual purpose – wool and meat producers.

Type of wool grown: Merino 18 micron