Wildlife corridors and shelterbelts at "Coombiana"

Jacinta Christie, Murrumbidgee Landcare Inc

Tom Wilks and Skye Bellamy operate "Coombiana", a 404 ha mixed farm at Downside, about 15 km north of Wagga Wagga. "Coombiana" is a working farm, producing fodder for the beef cattle that are grazed on the property, with Skye intent on achieving a balance between sustainable agriculture and the natural environment.

Involvement with Landcare and the Cross Property Planning (CPP) project

Skye is a strong supporter of grassroots Landcare and been actively involved in natural resource management both professionally and personally for a long time. When Skye and her husband purchased 183 ha of their property in 2007, Skye immediately set about planting around 4,000 trees in 2008 with an additional 500 in 2009. These works were focused mainly around widening existing single row corridors that were already planted on the property.

In 2012, Skye joined the CPP project, coordinated by Murrumbidgee Landcare Inc. The funds allocated to her property have assisted Skye to protect a swamp area inhabited by frogs, toads, and toadlets; and to enhance and protect the native vegetation on the farm.

In January 2016, the property was increased to 404 ha with the purchase of a neighbouring block of land on Houlaghan's Creek. With the assistance of the CPP project, 8,360 trees and shrubs were planted on the new section of the farm in August 2016. This work included a 7 row shelterbelt and a number of wildlife corridors that provide valuable connectivity across the landscape.

Above: The wildlife corridor along Coolamon Road: (left) in April 2016, shortly after being ripped and sprayed, and (right) in August 2016, shortly after planting

The value and design of native shelterbelts

A shelterbelt works by filtering and breaking the force of the wind, while allowing slight air movement through the belt. They provide a multitude of production and biodiversity benefits including: shelter for livestock, and prevention of heat and cold stress; reduction in wind speeds to reduce chemical spray drift and reduce wind erosion; provision of habitat for wildlife; benefits associated with biological pest management through natural predation by insect species; control of groundwater recharge and salinity; and the provision of a physical barrier to stop the spread of weeds and pests.

MURRUMBIDGEE Landcare INCORPORATED
Australian Government
NSW GOVERNMENT
NSW Environmental TRUST

The shelterbelt on "Coombiana" consists of a mix of trees and shrubs including: White box (*Eucalyptus albens*), Blakely's red gum (*Eucalyptus blakelyii*), Yellow box (*Eucalyptus melliodora*), Grey Box (*Eucalyptus macrocarpa*), Deane's wattle (*Acacia deanii*), Sweet bursaria (*Bursaria spinosa*), Rosemary grevillea (*Grevillea rosmarinifolia*), Purple kunzea (*Kunzea parvifolia*), Spiny-headed mat rush (*Lomandra longifolia*) and Grey honey myrtle (*Melaleuca incana*).

In designing Skye's shelterbelt, the larger Eucalyptus trees were planted in the centre 2-3 rows, which the smaller trees and shrubs were placed in the rows on either side of this, to prevent shading out and to add greater density at varying heights.

Shelterbelts incorporating trees and shrubs in 3 to 6 rows are effective in most situations, but by widening the shelterbelt to 7 rows, Skye has effectively increased the number of species of woodland birds which the belt can support from 12 to 17 ('Bringing back the birds', Greening Australia, 2000). This is due primarily to a reduction in the 'edge effects' (and an increase in the safer internal area), and species predation.

The importance of wildlife and NRM on "Coombiana"

Skye estimates that around 12% of "Coombiana" is now planted to native vegetation and permanently protected, with around seven linked corridors. Rather than viewing this work as separate to the operation of the property, Skye sees these areas as an integral part of the farm. Gates have been included in her planting sites to allow stock access, and toughs will also be installed to incorporate controlled stock grazing once plantings are established.

Says Skye, "I am especially proud of the life we have encouraged and protected at "Coombiana". We have dung beetles, worms, spiders, moths, butterflies, frogs, toads, permanent and migratory birds (including Spoonbill Ibis, Cranes, Egrets, Flame Robins, White Faced Chats and Superb Parrots), lizards, one echidna, sheep, pigs, cattle and horses. Annually we are visited by a Superb Kingfisher, and we now have a small flock of Cockatiels".

Skye's tips for success when undertaking any natural resource management work include:

- Planting in to moisture
- Good preparation, including ripping and spraying
- Being an opportunist, so always ready to act when funding is available to assist with work
- Working in with grassroots groups and networks to achieve on-ground works.

Further information

The CPP project hopes to hold a field day at "Coombiana" in Autumn 2017 to view the great work that Skye has completed and discuss the role of shelterbelts in our farming environment. For more information please contact Jacinta Christie: jchristie@mli.org.au.

Left: The 7-row shelter belt post planting (August 2016)

MURRUMBIDGEE Landcare INCORPORATED
Australian Government
NSW GOVERNMENT
NSW Environmental TRUST