

Direct seeding of shelterbelts

Damian Moore, Yarram South Gippsland

This Case Study has been developed as part of the *Profitable Dairying in a Carbon Constrained Future* project.

It is one in a series of resources developed to profile practices that profitably reduce greenhouse gas emissions from dairy farm systems, embedded in the context of every-day farm management decisions.

The Australian dairy industry has committed to reducing greenhouse gas emissions intensity.

Shelterbelts can enhance productivity on farm by keeping cows comfortable and allowing them to put their energy into milk production. They also provide opportunity for sequestration of carbon on farm and consequently contribute to the efforts of reducing emissions on dairy farms.

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Whole farm planning approach

After purchasing land adjoining the family dairy farm at Yarram in South Gippsland in 2002, Damian Moore used a whole farm plan to layout fencing, water troughs and shelterbelts on what was a treeless plain.

Following on from the first winter which saw the plains battered by south westerly winds coming in from Bass Strait, Damian knew it was time to make plans for sheltering his stock.

Inspired by the layout of the nearby dairy farm, and having visited The Potter Farms at Hamilton in western Victoria as part of his university course, Damian used a whole farm map to work through paddock design and sub division, servicing all paddocks with water and locating adequate tree belts to offer both winter shelter and summer shade.

Shelterbelts were located along fence lines running north-south ensuring that prevailing winds hit them on a right angle and offered stock protection.

Direct seeding of shelterbelts

With some of the shelterbelts over two kilometres in length and having planted trees on the farm previously, Damian was rightly daunted by the large job ahead.

Timing is everything and in the Yarram region in 2006 an opportunity arose for Damian to trial direct seeding for establishment of his shelterbelts.

As a member of the Yarram Yarram Landcare Network some funds and technical advice became available allowing the Moore's to quickly establish extensive shelterbelts and trial various methods of direct seeding.

Shelterbelt areas of thirteen metres wide were sprayed to remove weeds, local tree and shrub seed was collected and two different seeding machines – The Hamilton Seeder and The Ripper Seeder were put to work planting three rows of trees and shrubs in each shelterbelt.

With the aim of keeping taller trees to the middle row and lower shrubs to the outer rows, several shelterbelts were planted between 2006 and 2008.

"I was a bit unsure of the direct seeding method when we first started as none of it had been done around here before." Damian explained.





Ten years on, the tallest trees stand approximately fifteen metres in height and offer shade on warm days. The shrubs ensure there is density lower in the planting to offer wind protection to stock.

Damian appreciates the protection that the pastures receive as moisture is conserved into the warmer months extending pasture growth in the zones protected by the shelterbelts.

“Aesthetically the farm has improved tremendously. We appreciate the birdlife but there is give and take as we need to control blackberries that grow amongst the shelterbelts,” commented Damian.

The Black Saturday fires of 2010 impacted on the Moore’s property and some of the shelterbelts were burnt. Damian observed that the fire activity slowed down close to the shelterbelts as the areas were protected from the high winds. Where burnt, the vegetation has regenerated.

Photo (above left): Damian Moore trialed direct seeding as an efficient and cost effective way of establishing shelterbelts

Photo (bottom left): The direct seeded shelterbelts are well established and now offer protection to cattle in winter and summer

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Acknowledgments

*Photos – supplied by Gillian Hayman



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