

tips & tools

NATURAL RESOURCE MANAGEMENT



Native vegetation 3: Revegetating the farm

Most of the land we now farm evolved with a cover of trees, shrubs and grasses. Their removal and replacement with grasslands has opened up the land to erosion, soil structure decline, dryland salinity and the loss of native fauna and flora. Planting trees and shrubs on your farm is something you can do to help arrest these problems and make your farm a more productive and pleasant place to live and work.

Tactics

Multiple benefits from tree planting

Determine what benefits you wish to achieve from planting trees and shrubs and their order of importance to your operation. This includes shelter and shade for livestock, nature conservation, preventing dryland salinity and soil erosion by wind or water, livestock fodder, commercial timber or general farm amenity.

Plan your planting to provide as many benefits as possible. While you may plant trees and shrubs primarily for one purpose – shade and shelter – with good planning, there can be many other benefits. Gain dual benefit from fences around tree plantings by incorporating them into additional paddock subdivisions that increase options for grazing management.

Where to plant

Use a physical plan of the farm (farm map or aerial photo) to help visualise where trees and shrubs will best complement your other farming objectives. If you don't have a physical plan then this might be a good time to obtain one, as trees are a long-term prospect.

To determine the most appropriate locations for trees, take into consideration landform, soil and climatic conditions across the farm, as well as how the trees will fit into existing farm operations and whether this is likely to change with time.

Concentrate revegetation in areas of the farm that are less productive for other farming enterprises, especially if commercial forestry is not part of the plan. This minimises reductions in farm productivity or carrying capacity and

Key benefits

- Make better planting decisions to increase your productivity
- Reduce the decline of soil structure
- Recognise the benefits of tree planting, such as shelter and shade for livestock, nature conservation, preventing dryland salinity and soil erosion

focuses efforts to improve grazing or cropping practices on the most productive areas of the farm.

Use new plantings to expand existing remnants on your property or along roads, creeks and reserves that will link remnant vegetation areas, but ensure trees and shrubs are not planted on native grassland (naturally treeless areas) as these are one of the most endangered plant communities in Australia.

Conserving native fauna and flora

Protecting and enhancing existing remnant vegetation on your property is top priority, before establishing new plantings.

Plant trees and shrubs grown from local seed sources where possible, or at least species native to the area. This is important for conserving the local ecotypes and for ensuring local fauna are provided with a consistent food source. Direct-sowing local seed has proved effective in many situations. Include a mix of trees and understorey shrubs (using local provenances) to maximise conservation values. Always establish understorey species as well as trees, unless the planting is for commercial forestry.

Maximise the size of tree and shrub plantings. Many native birds and animals require large areas of habitat and **all properties should aim to have at least one significant area (10 hectares or more) of native vegetation**. Areas of vegetation on the farm can be linked using corridor plantings that are several rows wide to provide 'safe passage' between isolated areas.

Shelter for soil, livestock and buildings

Design windbreak layout and orientation to provide the most shelter during critical periods, such as lambing and shearing. Maximise the area sheltered while minimising the area occupied by shelter trees. Windbreaks only need to be two or three rows wide, with minimal gaps unless they are doubling as corridor plantings. Trees can provide shelter to an area about 20 times their height, so shorter tree species can be used to shelter yards, while taller species protect paddocks.

Maintain foliage to ground level, either as low tree branches, or by including understorey species. When sheep are off-shears, or during lambing, use dense shelter near ground level from shrubs and tall tussocky grasses and sedges. At times of extreme weather, when livestock need a very high level of shelter, utilise the limited grazing available from areas of dense remnant vegetation, taking care not to overgraze.

Competition between trees and pastures

Plant blocks rather than long, narrow rows, to minimise competition between trees and pastures. Plant tree lines with a north-south orientation to minimise shading of crops and pasture and plant smaller trees and shrubs, as their root systems are less extensive.

Sever tree roots with a ripper. Rip at a distance of half the tree height from the tree base, and to a depth of at least 50cm. Ripping is most effective where roots are confined near the soil surface (common duplex soils) and less effective on deep soils where roots continue to grow under the rip line.

Trees for commercial products

To ensure that trees intended as commercial products meet specifications, an understanding of market and management needs is essential.

Improve the biodiversity and landcare values of commercial plantings by incorporating areas of non-commercial species to provide habitat, especially along waterways or corridors between other remnants. Investment-driven forestry

Further information

This publication is part of a series of *Tips & Tools* on biodiversity that can be ordered by calling MLA on 1800 675 717 or emailing publications@mla.com.au

Information on how to manage biodiversity and to enhance your longer-term profitability can also be obtained from rural facilities in Universities, Departments of Agriculture, Natural Resources and Land Management.

Further reading

A list of useful books on farm trees and forestry is given on the following websites:

www.rirdc.gov.au/fullreports/aft.html

www.ea.gov.au/land/bushcare/publications.index.html

plantations (such as blue gums) may have little biodiversity value, but with correct placement can enhance livestock protection and assist in the control of dryland salinity. Commercial trees can either integrate into the grazing enterprise as shelterbelts, wide-spaced agroforestry or alley farming, or be segregated from grazing as block-plantings.

Management tips

- Determine how much time, money and enthusiasm you have to invest in the whole operation, including establishment, fencing, on-going management, and changes to existing farming practices.
- Don't plant more trees than you can effectively manage or the trees, or perhaps the rest of your farm operation, will suffer.
- Budget carefully for commercial tree plantations. Be aware of the time and resources needed for weed and fertiliser management and for pruning and thinning trees to obtain desired products, as there is more to do than just planting trees.
- Many agroforestry enterprises have the potential for high returns, however the long rotation time means returns can be a very long time coming. This may have major debt or cash flow implications.
- Generally, higher-value products, such as sawlogs, have greater management requirements (fertiliser, weed control, insect control, pruning and thinning) and longer return times than lower-value products (eg chipwood), while conservation plantings have a lower management requirement.
- Plan ahead for renovation or replanting of short-lived trees, such as acacias, and for harvesting and replanting commercial tree crops.

Glossary

Local provenance plants – local varieties of native species

Duplex soils – soils with an obvious boundary between the topsoil and subsoil layers, and markedly different textures and colours

Acknowledgements

Jann Williams, Native Vegetation R&D program, RMIT Melbourne; Rod Bird, DNRE, Hamilton; and Kathy Junor, technical writer



Level 1, 165 Walker Street
North Sydney NSW 2060
Ph: 02 9463 9333
Fax: 02 9463 9393
www.mla.com.au