



GRANITE BORDERS LANDCARE TREES PROJECT INFORMATION NOTE

GROUND PREPARATION AND WEED CONTROL

Trees can be put to many uses on the farm. For example they can be used for:

- protection for pastures, crops and stock
- erosion control
- woodlots for timber and firewood
- amenity planting
- forage for stock
- pollen and nectar sources for bees
- lessening a salt problem
- habitat for birds and animals which prey on pasture pest insects



You might think that devoting land to trees reduces overall production. But it doesn't. Trees occupying 5 per cent of a farm, for example, can increase production by 20 per cent. This is because trees, properly located, protect stock, and reduce soil moisture loss caused by drying winds, thereby increasing growth of crops and pastures.

ESTABLISH THE BEST SPECIES

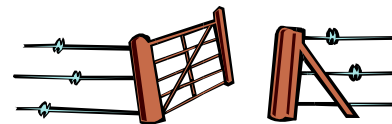
When planting or sowing trees, incorrect species choice can lead to failure.

Choose species which will meet your needs and which will grow successfully on the site. Most uses on the farm can be met by local native species, and local natives can be found that will grow on most sites. They are usually the most reliable species if you have no prior experience of what will grow at a site.

Understorey species, such as wattles, grevilles and bottlebrush, are an important component of any tree planting exercise. Generally these species grow more quickly and provide shelter for eucalypts. An effective windbreak needs a range of heights of trees and shrubs. Flowering shrubs can attract birds which prey on pest insects and also contribute significantly to improving biodiversity of an area.

FENCING

Regardless of the purpose of your tree block the site must be fenced off from grazing stock, until trees are large enough to handle contact with large livestock. Design a fence that will do the job. Consider mesh if rabbits or hares are an ongoing problem. Electric fencing is a good alternative, as long as it is well maintained. Remember that the fence will be a long-term fixture so always install at least one gate for vehicle access.



ROW SPACING

This is one design aspect that needs a lot of thought. Generally speaking to make a good windbreak 3metres x 3 metres is the recommended spacing, that is 3m between rows and 3m between trees in the rows. It is important to think about what follow up maintenance will need to be done - do you need to run a tractor down the middle? Can you spray with a 4 wheel bike? How wide do you want your tree lot? Consider these things before fencing your tree lot.

RIPPING



Ripping the soil prior to planting allows moisture to penetrate and to be stored within the soil profile. This gives the seedlings a good start and can reduce the frequency of follow up watering. Breaking soil compaction also contributes to faster root development and hence better growth rates.

- Deep rip (to 60cm if possible) in lines where trees are to be planted. Preferably use a winged or booted tine, as this will shatter the subsoil allowing for a wider spread of moisture and tree roots.
- Rip when the soil is damp, not wet, to prevent lines closing back together.
- Rip in Autumn or early Winter and again in late Winter or early Spring. Rip lines may be closed with a tractor wheel to help maintain moisture in lighter soils.
- A close set of harrows or a narrow chisel plough can be used to provide a workable tilth (top 20cm) to make planting easier and reduce air pocketing. This should be done after the second rip just prior to planting.

WEED CONTROL

Pre-planting

Vigorous introduced grasses and other weeds have a greater demand for soil moisture than native species and must therefore be effectively controlled for successful tree establishment.

- 3 - 5 L/ha of glyphosate 360 (Roundup®) should be applied across the entire width of the tree lot during Autumn when pasture is still actively growing. A second application in Spring, up to one week before planting is essential to remove new growth.
- Residual herbicides have provided mixed success. Simazine and Atrazine rely on rain to move active constituents into the soil profile and have been known to affect planted tree seedlings.
- Goal CT has been used with some success, however the ground must be prepared to a fine tilth for best results. Any disturbance to the surface following Goal applications will impact on the effectiveness of the herbicide. Rates of 4 - 6 L/ha have been used in eucalypt plantings.
- If planting along or near waterways, glyphosate formulations such as “Roundup Biactive” are less harmful to non-target organisms. Residuals should be avoided especially Atrazine and Simazine as they are particularly persistent in water.

Post-planting

To increase tree survival and growth rates weed and pasture competition should be controlled for one to two years after planting. Where grasses are the main competitor, selective herbicides such as Verdict and Fusilade will give good results as an overspray. Fusilade can be applied at a rate of 3 - 4 L/ha (check the label) and Verdict 520 can be applied at rates between 120 - 200 mL/ha depending on the growth stage of the grasses.

To control broadleaf species there are no reliable overspray options. Shielded sprays can be constructed to prevent spray contacting with planted seedlings, using glyphosate at low rates 1 - 2 L/ha. The other more time consuming option is using a knapsack and applying herbicide to the area around each seedling.

Slashing between the rows is another option to keep weeds short and reduce competition for light and moisture. This requires setting up row spacing to fit tractor and slasher between them, or alternatively using a robust ride-on mower or garden tractor and slasher.



For further information please contact the Granite Borders Landcare Office on 02 67363500.

This note has been prepared by Granite Borders Landcare Committee using information sourced from:

- ❖ A Farmer's Guide to Trees and Bushland on the North West Slopes & Plains of NSW (NWCMA 1997)
- ❖ Re-leafing New England: A Farmer's Guide to Trees on Farms (New England Trees on Farms 1994)
- ❖ Trees benefit the whole farm (Department of Agriculture NSW, Ag Fact P1.1.1, R. Kent 1984)
- ❖ Ground Preparation for Tree Planting on the Northern Tablelands (Richard Morsley 2000)

Border Rivers-Gwydir



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