

# Mary River Catchment Landholder Revegetation Guidelines

## Revegetation Recommendations

### Outline

Well-planned revegetation and gardens will enhance property values and provide numerous environmental benefits. The use of a range of local plants is recommended to enhance natural values on your property and to cater for local wildlife species. It is important for landholders to appreciate the value of natural habitat and to carry out planting to enhance the natural environment and avoid potential weeds that threaten the ecological balance.

### To plant or not to plant

As a general rule the priorities are to protect existing habitat first, encourage natural regrowth next, then as a last resort we may revegetate by planting. Protecting and enhancing natural regeneration is the most cost effective and efficient way to revegetate a site. Where natural regeneration is inadequate though, revegetation may be used to extend on existing forest, link forested areas, thicken edges or understorey, fill gaps and provide greater habitat diversity.



*Stenocarpus sinuatus* (Firewheel Tree)

## Spacing

For rainforest species maximum average spacing is usually 2m x 2m (at least 2500 plants/ha). Eucalypt or more open forest may be spaced at 3m x 3m (1111 plants/ha) or even wider for grassy woodland forest types. On creek banks or unstable sites, density may be increased to 1 – 1.5m. In areas where scattered natural regrowth is present spacing may be greater and planting may only be needed beyond the drip-line of existing native trees.

For best results with plant growth and to ensure easy maintenance, most planting should be carried out in mulched beds to form clumps. This makes it easy to mow / slash between beds and provides access paths in between. Feature trees may be planted individually (with a mulched circle) allowing plenty of space to maximise flowering, shape and vision.

Planting *Eucalyptus*, *Corymbia*, *Lophostemon* and other fire-associated or large species should be avoided near infrastructure to reduce fire risks and damage from roots or falling trees / limbs.

## Site preparation and weed control

Site preparation will be necessary to ensure good plant growth. Spraying weeds or grass as spots or beds will be required about 1 month before planting. “Frog and fish friendly” glyphosate is reputedly the safest available herbicide and is used for prep work and maintenance on most weeds. If you want to avoid chemicals, a layer of newspaper / cardboard under the mulch will stifle most weeds, just expect more manual input will be necessary. Areas sprayed will be best managed with a complete mulch cover to a minimum depth of depth of 100 mm. Another option is to let the grass grow up and then spray to provide mulch over the ground and then mulch around individual plants.

Gypsum / lime could be spread to add calcium, break up heavy soils and help with soil pH balance. Ripping of ground may help root development, but care should be taken around high water flow areas to avoid erosion. In these cases rip lines are best across the direction of flow.

## Fertiliser and watering

Plants will benefit from one application of fertiliser on planting and, for optimum growth, a second one in 6 months to 1 year. Organic pelletised fertilisers eg Dynamic Lifter or organic 5in1 are ideal. Manures, mushroom compost, etc are also good, but manure sometimes contain weed seeds and may burn plants if fresh. The use of nitrogen rich organic material and mulch contribute to building up the humus layer, essential for successful growing of many species, especially rainforest plants. Approximately 200g of pelletised fertiliser per dose will be adequate in most cases (about 1 cup). Banksias don't like high phosphorus fertilisers (eg chook manure or fish emulsion).

Try to plant during wet periods. An initial watering-in will be necessary to settle soil around roots and minimise stress even when soil moisture is high. The use of mulch and water crystals on planting will help to retain moisture. Follow-up watering will only be required in the event of a drought, however young plants should be monitored for signs of drying out especially in the earliest stages of growth. It is much better to water than to lose plants.

Irrigation systems tend to water weeds (with roots near the surface), rather than the natural species, which are quite drought tolerant (with deeper root systems), so irrigation is generally not recommended. If a watering system is to be established, it is best to use drippers.

***Backhousia citriodora***

(**Lemon Myrtle**) is a tough, bushy small tree with exquisite flowers and scented leaves used for cooking and medicinal purposes. It makes an ideal edge plant or garden specimen.



## **Mulch**

Mulching is important for all plants if they are to flourish. Mulch helps retain soil moisture, insulates the soil, improves structure and fertility of soil, increases soil biota and suppresses weeds. This means less maintenance and healthier plants. Ensure mulch source is weed free and avoid the use of mulch from too far away as it may contain new weeds.

Mulching hay, sugar cane or woodchip to a depth of at least 100mm and a diameter of at least 500mm from the base of the plant is a minimum requirement. Wood chip is more difficult to distribute and may reduce nitrogen available to plants in the early stages of decomposition. Using mulching hay under the woodchip and increased quantities of organic, nitrogen rich fertiliser in the first 12 months will help compensate for this, keeping in mind quick early growth is vital for successful establishment and canopy closure. Avoid mulch contact with stems or trunks as it may cause rot and plant losses.

## **On-going weed management**

On-going weed management will require mulching, manual control (mostly around seedlings), slashing / brush cutting and / or applying herbicides (spraying carefully or with a shield to protect young seedlings and regrowth). Regular maintenance will be essential, on a decreasing scale, for the first 3-5 years. In the first year, regular hand weeding close to the seedlings is crucial. In later stages establishing trees should shade out most weeds.

## **Plant selection**

A range of naturally occurring species is recommended for planting. These local plants need little or no maintenance once established, because they are adapted to local conditions. A large diversity of local native flora will cater for a wide variety of native fauna, while ensuring a stable and adaptable ecosystem. There are often limitations however ....

It is important to assess conditions before buying plants to allow for such things as frost, water logging, poor soil, power lines, etc. Even an occasional frost or water logging event could wipe out 90% of plant species, potentially devastating your revegetation plot. Bushy shrubs, small trees and vines make ideal edge species, creating a curtain effect to protect the forest from wind, sun, increased weed growth, etc.

Source plants from Gympie or Noosa Landcare Nurseries or Cooloola City Farm (coastal areas) to ensure local genetic stock is used. Air-pruned native tubes are the most appropriate pots for revegetation plants, especially fast growers. Slow growers should be minimized and may be better in more advanced sizes to reduce losses. Always select healthy specimens, even if discounts are offered on unhealthy stock. It only takes the odd gap in the canopy to extend management tasks by several years.

In conclusion, don't take on too much. It is much better to build on small successes (manageable and enjoyable chunks) than to set yourself up with a large failure (large projects can sometimes be stressful and overwhelming). Well planned revegetation projects are very rewarding, providing benefits for the both the environment and future generations. Good luck with your revegetation project! If you have any queries relating to this information or you require further advice, contact your local Healthy Habitats Field Officer.



***Dianella caerulea* (Flax Lily)** - An attractive ground cover with small blue and yellow flowers, followed by these stunning fruits. A multi layered forest provides much better habitat opportunities for a diversity of native fauna.