



CASE STUDY

BACKGROUND



Acacia rhodoxylon, commonly known as inland Rosewood or Spear Wattle, is a member of the family Fabaceae, subfamily Mimosoideae. It's a small tree growing to a height of 10 to 15m with a stem diameter of 15 to 25cm. The stem and branches are often fluted and the bark is dark in colour and sheds in curly flakes.

Rosewood is found in coastal and subcoastal parts of Central Queensland, from near Eidsvold north to south-east of Mt Garnet. Under the Queensland Government's regional ecosystem framework, Rosewood is located within the Brigalow Belt bioregion and generally occurs on low fertility skeletal soils. It is a very hard timber and often considered the tree of choice for fencing timber due to its durability in the ground as a fence post. Rosewood posts and rails are currently harvested from State forests and private land in Queensland's Central Highlands for commercial sale.

FOCUS ON



- ▶ Potential alternative income stream
- ▶ Potential on-farm cost saving by being able to grow own fencing timber

KEY POINTS



- ▶ *Acacia rhodoxylon* (Rosewood) is the timber species of choice for fence posts and rails.
- ▶ Rosewood generally grows on dry low-fertile skeletal soils of Central Queensland.
- ▶ Soil type at the trial site has poor drainage and was specifically selected to test whether the rosewood could survive in such a wet environment.
- ▶ Current survival rate is 55%.



OUTCOMES TO DATE



A site visit was completed by Reef Catchment's and PCL's project officers in January 2017. A survival count found that there were 22 surviving *Acacia rhodoxylon* out of the original 40 that were planted at the site. The seedlings that have survived have grown into small shrubby saplings of variable sizes. Sapling heights range from 68cm to 3.4m with an average height of approximately 2m. The site has received little maintenance since its establishment so the *Acacia rhodoxylon* have had to compete with the surrounding guinea grass, which could explain the differences in tree heights throughout the plot. The first row of trees planted closest to a service infrastructure access track appeared to be growing the best. The improved growth is thought to be attributed to less competition from Guinea Grass, due to higher levels of control of this grass adjacent to the track. However, some of these trees have subsequently been lost due to herbicide drift from weed control activities. When planning farm forestry plots it is important to keep in mind their location in relation to competing vegetation, infrastructure, and farming and industrial activities.

Results show that it is possible for *Acacia rhodoxylon* to grow in wetter coastal environments. The trial currently has a 55% survival rate. However, if the first row of trees had not been lost to herbicide drift then the survival rate could have been as high as 70%. Results are still too preliminary though to predict how the *Acacia rhodoxylon* will persist over the long term. Some species that generally grow in drier regions (for example *Eucalyptus citriodora*) will grow well for the first few years in wet coastal areas and then die back before they reach maturity or a harvestable size. It is possible that this could happen to the *Acacia rhodoxylon* as they mature at this trial site – time will tell.



WHAT'S HAPPENING?

In 2014 an *Acacia rhodoxylon* trial site was established on a sugarcane property at Finch Hatton, Mackay. The purpose of this trial was to investigate whether it was possible to grow *Acacia rhodoxylon* in the wetter coastal parts of the Mackay Whitsunday Region. If successful, Rosewood plantations could provide local landholders with a commercial opportunity and the option of growing their own fencing timber.

The site selected for the trial was an old sugarcane paddock located close to the Mackay Eungella Road. The soil type is identified as "Gargett" under Holtz and Shields (1985) and is a texture contrast soil with sandy loam topsoil and clay subsoil. This particular location is not very well drained, meaning that the trees would have "wet feet" during the wet season.

The trial plot size is approximately 400m² with 40 *Acacia rhodoxylon* seedlings planted in rows at 2m spacings. Much of the surrounding area is overgrown with guinea grass and other broadleaf weeds and there is a very large *Acacia mangium* growing on the western side of the plot which is likely competing with the plantation for moisture and nutrients.

The seedlings were propagated by Pioneer Catchment & Landcare (PCL) at the Mackay Natural Environment Centre nursery. Propagation proved to be difficult with low germination rates and then many seedlings failing to grow. Observations made by the PCL officer was that many of the seedlings appeared to be stunted and rotting and were possibly receiving too much water. *Acacia rhodoxylon* generally grow in drier conditions so the remaining seedlings were moved to a separate sun hardening bench in the nursery to dry out and watering was reduced to once a day for five minutes. These changes proved favourable with the remaining seedlings with the majority growing into usable tube stock.

PCL's project officer and members of the Regional Forestry Working Group continue to work with Reef Catchments on this trial and provide ongoing advice and support.



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