

Native species trials

In 2006 we began planting trials of a range of tree species, including 15 native species. We are interested in the long-term timber potential of these native species; also how well they establish in different habitats. As a rule, native species are slower growing than exotic plantation species, but in the right conditions can produce timber of far higher value.

Our trials will demonstrate how well the various species perform on different microsites at Rewanui. We have planted the trials on a range of sites. Some are on open ex-pasture, some are amongst regenerating scrub and are shadey, and some are under the canopy of existing, taller, native species. Each plot has an average of 50 trees. We plan to monitor the trees over several decades, and will pass on what we learn to farmers and others.

Species planted at Rewanui

Common name <i>Botanical name</i>	What you can see at Rewanui (<i>Observations to mid 2011</i>)
Black beech <i>Nothofagus solandri</i>	Two plots, both open sites. Good survival but slow early growth.
Black maire <i>Nestegis cunninghami</i>	Three plots, two part open, part shadey sites; one mainly under canopy. Good survival on all sites; slower growth under canopy.
Kahikatea (White pine) <i>Dacrycarpus dacrydiodes</i>	Two plots. One mainly open plot shows very good survival; moderate/slow growth. Plot under canopy – trees do not appear to be thriving.
Kauri <i>Agathis australis</i>	Three plots. Poor survival on one open site (<20%) Moderate survival and growth on second open site and a shadey site. Slow growth.
Kowhai <i>Sophora tertaptera</i>	Two plots. One small plot, open site. Trees do not appear to be thriving. Second plot – part open, part shadey. Good survival to date, variable growth.
Matai <i>Prumnopitys taxifolia</i>	Three plots. One open, one mainly shadey, one under canopy. All have excellent survival and good growth. Faster growth on open site.
Miro <i>Prumnopitys ferruginea</i>	Two plots. One open, showing good survival, good growth. One part shadey, showing poor survival (~50%); poor growth.
Puriri <i>Vitex lucens</i>	One plot, part open, part shadey, part under canopy. Good survival; variable/moderate growth but with no clear distinction between the different microsites.
Red beech <i>Nothofagus fusca</i>	Two plots, both open. Very good survival and growth on one site; very poor on the second.
Rewarewa (NZ honeysuckle) <i>Knightia excelsa</i>	One plot, part open, part shadey. Reasonable survival; slow growth.
Rimu <i>Dacrydium cupressinum</i>	Three plots, one open showing reasonable survival (~80%); slow growth. One plot - part shadey/canopy with good survival, moderate growth. Third, part canopy, part open – trees in open showing poor survival; trees under canopy good survival and growth.
Silver beech <i>Nothofagus menziesii</i>	One large open plot, with 100+ trees. Reasonable survival (~70%); surviving trees generally growing well.
Tawa <i>Beilschmiedia tawa</i>	Two plots; one open, one part shadey. Poor survival in open areas; better in shadey sites. Poor growth throughout.
Totara <i>Podocarpus totara</i>	Three plots; two open, one part shadey/canopy. Excellent survival throughout. Very good growth on open sites.



Rewarewa



Red beech



Rata



Black maire



Rimu

Planting and early management

All the native tree species were planted in August 2006. Planting stock was obtained from a range of nurseries. Not all of the species planted would be found naturally at Rewanui.

Trees have been spot-sprayed, or 'released' at least three times since planting, to reduce competition from surrounding vegetation. Dead trees were replaced one year after planting, ('blanking'), but since then there has been no further blanking. We have found that native species respond well to continued releasing. As they are slow growing early on, there is a risk they will be swamped by surrounding vegetation if releasing is not done at least annually for the first few years.

Monitoring the trials

Every tree is individually labeled, and measured once a year. Data is recorded using the 'Trees' software tool developed by Ian Campbell. The monitoring results are on display at the trial site, and will be made available on our website, along with individual tree records.

Where to find our species trials

The trials are located on the eastern side of the farm. Maps are available in the carpark, or can be downloaded from our website. There are good walking tracks around the trials, and the different species are clearly labeled. You are welcome to visit at any time.

More information

1. About the work at Rewanui

Montfort Trimble Foundation:
www.trimblefoundation.org.nz

Tree species trials: Stuart Orme, Woodnet
stuart@woodnet.co.nz

2. Establishing and managing trees on farms

The NZ Farm Forestry Association:
www.nzffa.org.nz

Tanes Tree Trust (native tree specialists):
www.tanestrees.org.nz

Acknowledgements

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Rewanui is a typical hill-country sheep and beef farm in eastern Wairarapa. The 344-hectare farm belongs to the Montfort Trimble Foundation, a trust dedicated to growing trees for the benefit of local people. The farm is being developed as a trial and demonstration property, with the focus on new approaches to adding trees to the farming mix.

Photos: Ian Campbell, Harriet Palmer

