RPBC®
Radiata Pine Breeding Co

Securing our forestry future

RPBC breeds elite genetic material to continuously improve the profitability and performance of New Zealand and Australia's radiata pine forests.

We are New Zealand's leading science-driven tree breeding programme specialising in radiata pine. We have a central position in the forest industry breeding supply chain and represent a national science asset for New Zealand.

Our objective is to select the best trees with improved traits for growth rate, wood quality, and enhanced disease-resistant qualities to support the economic development of forestry.

RPBC can draw on 70 years of breeding, research and development, and significant technical advancement to achieve those aims. Our breeding programme contains both plant tissue and data that is very important to the future of New Zealand forestry.

In addition to our direct work with the industry, many research programmes run by other organisations rely heavily on access to RPBC's breeding programme databases and trial sites for their MBIE-funded research activities. While we provide this access free of charge this contribution is of significant value.

RPBC by the numbers

** Scion estimate ** NZFOA Facts & Figures 2022/23*

Radiata pine in New Zealand

Radiata pine was established as the most suitable species for commercial forestry in New Zealand after extensive trials which took place over many years from the early part of the 20th century.

RPBC grew out of a partnership between the forestry industry and the Government in 1988 and in 2002 RPBC was formed as a company.

RPBC's development programme helps future-proof New Zealand's radiata pine plantations against climate challenges and a rapidly changing economic environment.

Faster deployment of improved trees to the production forest translates to a larger percentage of logs at harvesting achieving higher grades.

These higher-grade logs have sequestered carbon during tree growth and are generally used in "long-term carbon locked" end products, usually in the construction sector.

RPBC has 16 shareholders throughout New Zealand and Australia, including iwi organisations, who have direct access to the improved gene stock developed by the company. The benefits of the breeding programme are also available to the wider forestry sector.

It's been conservatively estimated that the genetic gain in radiata pine by way of RPBC's tree breeding has added $8.5 Billion in income to the New Zealand national forest estate.

Powerful partnerships

In addition to its existing long-standing collaboration with Scion, RPBC is building its research partnerships with AgResearch, the University of Canterbury, and Lincoln University to develop projects that aim to build resilience in the forestry sector by focusing on research related to climate adaptation and mitigation.

Ministry of Business, Innovation & Employment

LINCOLN UNIVERSITY
TE WHARE WĀNAKA O AORAKI

UC UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha

SCION
FORESTS • PRODUCTS • INNOVATION

agresearch
āta mātai, mātai whetū

FURTHER INFORMATION:
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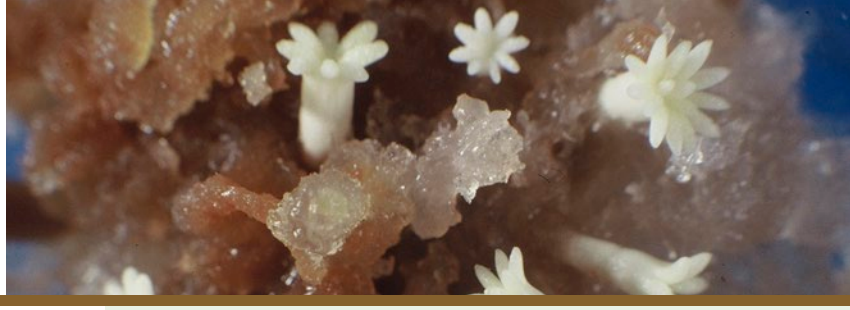

World-leading technology

RPBC and its partners have adapted and applied world-leading genomic selection techniques to shorten the time between germplasm selection and delivery to commercial forests.

The technology improves breeders' ability to make predictions in trees that haven't yet been measured, reducing the need for field testing and speeding up the delivery of gain into the next generation of trees.

Alongside this innovative technology, RPBC has also developed tools such as its TopTree app which helps forest owners make decisions about how to improve the performance and return from their trees.

Our 6ha breeding orchard is located in Amberley, Canterbury.

Management team

Darrell O'Brien	General Manager
Mark Paget	Tree Improvement Manager
Sai Arojju	Research and Innovation Manager
Will Stout	Field Trials Manager

Shareholders

Arborgen
City Forests
Ernslaw One
Forestry Corporation NSW
Juken New Zealand
Timberlands
Lake Taupō Forest Management
Rayonier Matariki Forests
OJI Fibre Solutions
OneFortyOne Limited
Pan Pac
PF Olsen
Ngāi Tahu Forestry
Taumata Plantations
The Trust Company
Wenita Forest Products Limited

Milestones

1859	First importations of radiata pine seed from California.
1950	First 'plus-trees' selected in existing NZ radiata pine plantations, with an emphasis on growth rate, stem form and uniform branching habit.
1958	First clonal seed orchard planted for production of seed from the cloned plus-trees.
1968	First seed orchard seed collected and used for plantation establishment.
1982	Dothistroma recognised as an important trait for selection.
1985	Seed orchard supply became sufficient to meet plantation demand.
1986	Control-pollinated seed orchard established at Amberley.
1986	Publication of the 'Development Plan for Radiata Pine Breeding' which first described an overall radiata pine breeding strategy.
1987	Initiation of the Seed Certification Scheme, which introduced the GF and subsequent GF Plus™ schemes to the forestry sector.
1988	NZ Radiata Pine Breeding Cooperative formed, with combined industry and government funding support.
1990	Recognition and inclusion of wood property improvement in the breeding programme.
2002	Radiata Pine Breeding Company formed, providing the benefits of being a legal entity, with grower and seed producer shareholders.
2005	Clonal forestry based on somatic embryogenesis and cryopreservation of tissue becomes a commercial option.
2013	First clonal tests of forward selections established.
2014	Genomic Selection R&D partnership commenced.
2018	Publication of the 'RPBC Genetic and Deployment Strategy', with implementation ongoing.
2019	RPBC and Scion successfully develop the first commercially viable SNPChip for radiata pine.
2022	Operational genomic selection begins.
2023	New Illumina SNPchip developed in collaboration with AgResearch.

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