





Resilient Forests Research Programme

The Resilient Forests Research Programme aims to design and manage forests that are more resilient to future uncertainty, including climate change, market disruption, disease, and public concerns.



Background

Building on the rich heritage of research undertaken in the 'Healthy Trees, Healthy Future' and 'Growing Confidence in Forestry's Future' research programmes the Resilient Forests programme was co-developed with our forest industry stakeholders with the goal of creating and managing forests that are more resilient to future uncertainty.

The Resilient Forests programme is structured around three research aims:

- Managing risk and uncertainty.
- Enhanced productivity and quality.
- Enhanced resilience to biotic disturbance.

Addressing key research questions will ensure the long-term economic, environmental and social sustainability of forestry by creating more resilient forests. The programme is funded through the Forest Growers Levy Trust and Scion's Strategic Science Investment Fund. The intent is for the programme to continue until 2026.

Key findings

The first three years of the research programme explored:

- Control options for pine needle diseases. Operational trials evaluated copper's effectiveness against Red Needle Cast (RNC).
- Modelling an intricate disease life cycle. Research to understand the life cycle and climatic drivers of RNC to develop a model to predict disease behaviour.
- Measuring tree growth and environment. Sensors gather data for the model including environmental factors and tree growth.
- Productivity gains and wood properties. How do productivity gains from site quality and genetics affect wood quality and product performance?

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Portfolio approaches to manage risks of climate change, markets, disease, and public concerns. Tools and frameworks for anticipating climate threats.



management. Integrating disease and biotic risk into growth models.

resilience to biotic Epidemiology of needle Tools for disease surveillance

and monitoring.

Quantifying

disease impact.

- Boron and wood quality. Boron's role in wood quality remains uncertain, though it's believed to strengthen cell walls. Further analysis is needed.
- Reporting social and environmental activities. How is corporate social responsibility implemented in New Zealand's forestry sector? There's growing acknowledgment of the need for unified reporting standards, with challenges ahead in engaging company managers in corporate social responsibility decision-making processes.

Key publications can be found on the FGR website fgr.nz

About Scion

Scion is the Crown research institute that specialises in research, science and technology development for forestry, wood and wood-derived materials, and other biomaterial sectors.

Scion's purpose is to create economic value across the entire forestry value chain, and contribute to beneficial environmental and social outcomes for New Zealand.

For more information visit www.scionresearch.com/resilientforests







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