



Podocarpus totara infected with tōtara blight.

Tōtara blight

Tōtara blight is caused by a fungus-like organism *Phytophthora podocarpi*. It was first reported in 2011 from Gisborne and has since been found around much of the North Island. To date it has not been recorded in the South Island.





Needle symptoms, including retained dead needles.

Disease symptoms and development

- Needles begin turning a khaki colour, often blackening and then casting.
- Shoot infection also occurs which causes the shoot and needles to die above the point of infection. Dead, brown needles can be retained which results in parts of the canopy turning brown and gives the tree a fire-scorched appearance.
- Twigs and branches over 10 mm diameter remain healthy.
- Symptoms appear to be most prevalent in the winter and spring.
- Trees of all ages are affected.
- Tōtara blight is most often, but not exclusively, found in old bush remnants.

Distribution

Northland, Auckland, Waikato, Bay of Plenty, Taupō, Hawkes Bay, Gisborne, Taranaki and Wairarapa.

Hosts

Podocarpus totara, and a single report from *Podocarpus laetus*, commonly known as Hall's tōtara.

Contact information

Telephone +64 7 343 5513
Email fhdiagnostics@scionresearch.com
www.scionresearch.com/forest-health-diagnostics



Identification and testing

The presence or absence of a *Phytophthora* species can be determined by using a *Phytophthora* ImmunoStrip® (Agdia, Inc., Elkhart, Indiana, USA, Cat.# 92601). If the result is positive the DNA can then be sequenced to identify *P. podocarpi*. Isolations can also be made from symptomatic tissues where *P. podocarpi* can be identified via morphological and molecular techniques.

Reporting tōtara blight

Any symptomatic material should be sent to Scion's Forest Health Reference Laboratory. Tōtara blight can also be reported via the Find-A-Pest app. It can be downloaded free from the Apple or Android app stores. Open the app, join the forestry sector from the settings menu and choose forestry on the front page of the app. You can then take a photograph to report any suspected sightings, this will automatically notify Scion pathologists.



Symptomatic needles and shoots.

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 bio-material 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.

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