FIELD GUIDELINES FOR ARBORISTS

March 2022

PREVENTING THE SPREAD OF

Myrtle rust disease

Myrtle rust is a serious air borne fungal disease that affects plants in the myrtle family (Myrtaceae). Since its introduction in 2017, myrtle rust has become established in New Zealand and is unlikely to ever be eradicated. The primary focus is now on preventing further spread of the disease.

High humidity and warm night time temperatures during summer provide ideal conditions for fungal diseases to grow and spread. Mrytle rust has an optimal temperature range for its reproductive cycle of 19-28°C and large parts the North Island provide optimal conditions during summer for the disease to flourish.

Of New Zealand's 37 native myrtles, ramarama, rohutu, pōhutukawa, swamp maire and some of the climbing rātā species are proving to be highly susceptible to myrtle rust

1 PLANNING

If myrtle rust is found on a work site report it. More information on the following page.

Avoid heavy pruning during late winter early spring, as warm weather could encourage new growth which is very susceptible to infection. An alternative is to prune myrtles only in late autumn and through until mid winter.

Keep material movement from pruning works to a minimum where you may be likely to have contact with spores on infected plants and trees.

Make sure you have a sprayer to clean down equipment.

Plan your work so that you prune infected mrytles last. This reduces the need to clean equipment during a job.

2 DELIVERY

Use good hygiene practice, sterilise and disinfect tools and equipment with with alcohol, or methylated spirit diluted to 70% with water, before and after work.

Try to leave infected plant cuttings /chippings on property.

If possible use easy to clean equipment, and ideally have a piece of equipment used solely for work on Myrtles and keep clean and separate to other tools.

Inform your clients about alternatives to plant when trees and shrubs are dying.

Use a back sprayer with with alcohol, or methylated spirit diluted to 70% with water, to spray inside of truck following dumping of contaminate chip. Alcohol or diluted methylated spirit can be used to sterilise equipment, not for use on ropes or climbing equipment.

3 COMPLETION

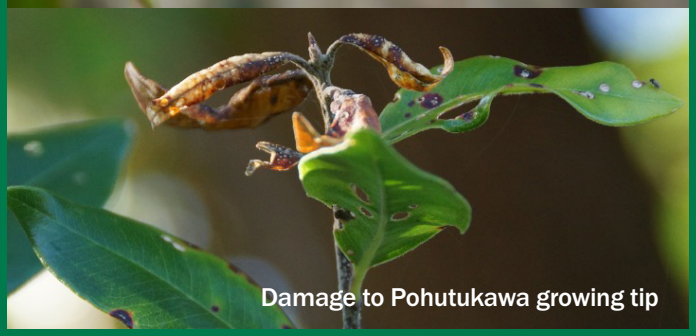
Cover chip when transporting. Ideally leave on site and advise customers to cover to help reduce spore spread.

If taking to landfill or a dump site lightly spray down inside of truck and hose off with water before travel.

If you've worked on an infected myrtle you should change work clothes once you are finished. It is good practice to carry spare work clothes. Store contaminated clothes in a plastic bag and then wash clothes separately. This kills and removes any spores.

Myrtle rust is a relatively new disease in New Zealand, and our understanding of it is continually evolving. For the most up to date advice around operating procedures, visit **biosense.co.nz/field-guidelines**

Symptoms of myrtle rust



Damage to Pohutukawa growing tip

IDENTIFICATION AND MANAGEMENT OF MYRTLE RUST

Symptoms of myrtle rust include:

- dark spots and sunken areas on leaf surface, growth tip die back and the damage having a blackened appearance
- bright yellow powdery eruptions appearing on the underside of the leaf (young infection)
- bright yellow powdery eruptions on both sides of the leaf (mature infection)
- brown/grey rust pustules (older spores) on older lesions
- grey, 'fuzzy' spore growth on undersides of leaves.

If you think you see symptoms of myrtle rust:

Take clear photos of the affected leaf or area, close-ups of spores, and the plant as a whole. Submit your photos via the iNaturalist app to the 'Myrtle Rust Project', where experts can confirm whether your identification is correct.

Contact Auckland Council BioSecurity for advice: biosecurity@aucklandcouncil.govt.nz

Avoid planting highly-susceptible non-native myrtles

Highly susceptible exotic species include the Australian natives *Syzygium australe* (brush cherry) and willow myrtle (*Agonis flexuosa*) and the South American guava (*Psidium cattleianum* and *P. guajava*. These susceptible plants can over time form a "reservoir" population in which the infection can over-winter and build up.

The build up of spores is an annual cycle and, in the longer term, it is likely in areas of higher infection that the disease's occurrence will become more frequent as the climate warms and the levels of the disease inoculum increase. Talk to your clients about native alternatives for their garden or visit the Auckland Council or myrtlerust.org.nz websites for more information and ideas.

Manage existing infections

If the infection is limited to a branch or portion of the tree, look at options to manage it. Research so far has shown that the better the overall health of the tree the more chance the tree will be able to live with myrtle rust. Good ongoing tree management can certainly help to retain higher amenity trees in the landscape.

Also, consider removing and replacing susceptible exotic myrtles currently present in North Island gardens. They are easier to remove when they are still healthy rather than after they have become infected.

FOR MORE INFORMATION

Mrytle Rust in New Zealand website
mrytlerust.org.nz

Auckland Council BioSecurity
biosecurity@aucklandcouncil.govt.nz

iNaturalist app
Visit iNaturalist.nz to download (Android, Apple)

BioSense
biosense.co.nz/field-guidelines

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BioSense ENVIRONMENTAL RESEARCH

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