

**Plant Production Biosecurity Scheme**

**DRAFT Myrtle Rust**

**Specific Module**

## Plant Production Biosecurity Scheme

[Address and contact details to follow]

### Updates

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The Plant Production Biosecurity Scheme (PPBS) has been set up to produce plant material that is practically free from high-risk biosecurity pests and pathogens. The scheme and standards are based on work undertaken early in 2018 in following experience early in the myrtle rust response that underscored the crucial role that plant producers play in early detection and slowing the spread following a pest incursion. Subsequent discussions identified the opportunity to develop a systematic approach to plant production industry biosecurity risk management.

Revisions will be ongoing with the most recent version of the standard being available from the PPBS website ([to follow](#)). Users should ensure that they are referring to the most recent version.

Those wishing to provide recommendations for change should send these in writing to PPBS or by email to [\[to follow\]](#)

### Acknowledgements

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The PPBS acknowledges and is appreciative of the support of many industry members and stakeholders who assisted in the development of the scheme. In particular for the Ministry for Primary Industry's funding of the design phase, the guidance of the project Steering and Working Groups and Kiwifruit Vine Health's generously allowing the PPBS to extract from and draw heavily upon their work and the Kiwifruit Plant Certification Scheme.

### Disclaimer

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While this standard's objective is to allow certification of plant producers and confidence that the plants they produce have been grown under conditions of high biosecurity risk and hazard management, there remains the possibility a proportion of plants may contain biosecurity pests. PPBS accepts no liability for claims regarding the presence of biosecurity pests in any plants produced by certified producers. While the objective of this standard and guidelines is to minimise the potential risk pest, no party can guarantee that adherence to these standard and guidelines will reduce such risk to zero.

## Plant Production Biosecurity Scheme

# Myrtle Rust Specific Module

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## 1 Purpose

This document is a Specific Module that pertains to plant producers who grow plants belonging to the plant family *Myrtaceae*. It supplements the Core Standard of the Plant Production Biosecurity Scheme (PPBS, the Scheme), and describes specific measures to manage the risk of a nursery becoming infested by or spreading the pathogen myrtle rust.

## 2 Introduction

Myrtle rust (*Austropuccinia psidii*) is a serious fungal disease that attacks plants of the family *Myrtaceae* (myrtle family). This family includes several important native New Zealand Genera<sup>1</sup>.

It was first detected on mainland New Zealand in May 2017 and since this time the disease has been found in several areas across the North Island and the top of the South Island. Myrtle rust spores are microscopic and can easily spread across large distances by wind, insects, birds, people, or on vehicles, machinery or nursery plant stock. Growth of the fungus prevails in spring and summer with the warm and humid conditions found though much of New Zealand.

Since April 2018 efforts to manage myrtle rust are focused on slowing the spread of the pathogen. This relies on the plant producers, the Ministry for Primary Industries (MPI), Department of Conservation (DOC) and the public to identify infestations, and to manage the pathogen when it is detected. Long term management of myrtle rust is supported by a science programme designed to lift understanding around the pathogen such as ways to treat myrtle rust, resistance and susceptibility, and to improve seed bank collection.

Plant producers play an important role in managing myrtle rust. Nurseries provide ideal conditions for the development of spores, inoculation and disease development. The pathogen infects young, actively growing, emerging leaves, buds, flowers, green stems, fruit and shoots of plants of the *Myrtaceae* family. An infestation adversely impacts nursery production and nursery stock distribution provides a ready means of spreading the pathogen.

**NOTE: The Biosecurity Act 1993 mandates actions which if they are instigated by MPI override this module.**

## 3 Scope

**Measures described in this Myrtle Rust Specific Module are designed to manage biosecurity risks for all plant producers who grow plants of the *Myrtaceae* family.**

The Module only applies to a plant producer if they grow myrtle species. Refer Appendix 1 for a list of *Myrtaceae* species. [\[or link to some other document/website\]](#)

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<sup>1</sup> *Metrosideros* (pōhutukawa and rātā), *Kunzea* (kānuka), *Leptospermum* (mānuka), *Lophomyrtus* (ramarama), *Neomyrtus* (Rōhutu), *Syzygium maire* (Swamp maire) – see Appendix 1 for a list of genera in the *Myrtaceae* family.

**This Module supplements the PPBS Core Standard and should be read in association with that standard. Certification to the Myrtle Rust Specific Module relies upon and can only be granted by the PPBS where a plant producer meets the requirements for certification to the Core Standard.**

This module focuses on plant production and nursery management measures to:

- Reduce the risk of nurseries becoming infested with myrtle rust.
- Ensure that should an infestation occur it is detected early.
- Reduce the likelihood of Myrtle rust being spread through the nursery stock distribution pathway.

Plant producer vigilance under a long-term management approach is critical as we continue to work to understand the dynamics of the pathogen across the New Zealand's host species range, and to slow and/or prevent further spread across the country.

In Australia, for example, despite the pathogen being wind-borne and easily spread, it has not spread across the country. Incursions in Victoria and Tasmania have been through movement of infected plant material. In Victoria the pathogen is established at low levels in several urban locations in Melbourne but has not established in the native bush. It is thought that if infected material hadn't been brought into the Melbourne, the pathogen mostly likely would not have established. The lack of establishment in the native bush but its prevalence in the Melbourne itself shows the importance of making sure it is not inadvertently spread to current pathogen-free areas in the South Island.<sup>2</sup>

## 4 Key Myrtle Rust Standard Measures

### Standard

Certified producers are to maintain a nursery free of myrtle rust. This shall be achieved with the adoption of biosecurity risk management processes and validated through crop monitoring protocols.

Should cause for concern arise in the nursery with or one of its crops being affected infested with visual signs of myrtle rust the producers must report to MPI and follow instructions from MPI. Upon a positive visual diagnosis, laboratory tests using PCR diagnostics will be undertaken for verification purposes.

The Nursery Manual or a body of evidence collated by the producer shall describe and demonstrate measures to ensure:

1. That Myrtaceae species are managed within the nursery to prevent further infestation on the nursery and in its surrounds by myrtle rust spores.
2. That staff are aware of what to look for and what to do if they find anything suspicious.
3. That the risk associated with plants and plant material sourced off-site is adequately managed.
4. That the risk associated with potentially contaminated vehicles, equipment, visitors and staff is adequately managed.

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<sup>2</sup> Ganley B, personal communication.

5. That nursery monitoring for myrtle rust is implemented and supported by an appropriate fungicide programme.
6. That myrtle rust specific plant dispatch procedures are implemented and that plants are visually free (confirmed by inspection of an authorised nursery person) of myrtle rust.

Crop monitoring procedures should critically note any change in the behaviour of the disease, for example a new host that didn't usually get infected is now infected or a variation on the level of infection. Changes in the host species and severity of infection may indicate the pathogen has changed locally, or that a new strain of myrtle rust may have been detected. Any such observation must be reported promptly on discovery to MPI.

## 5 Myrtle Rust Hazard Management Checklist

	Y	N	NA	Reference	Level
<b>5.1 Management and staff</b>					
Are staff aware of any MPI mandated or other regulatory requirements?					Critical
Are staff aware of what signs and symptoms of myrtle rust and what to do if they find anything suspicious?					Critical
Is this document and NZPPI’s Myrtle Rust identification guide made available to staff?				NZPPI ID guide	Major
Does the staff training programme adequately cover myrtle rust risk management?					Major
Has the nursery got a documented myrtle rust corrective action and response protocol?					Major
Is the nursery registered with NZPPI’s Biosecurity Register?					Minor
<b>5.2 Site management</b>					
Are myrtaceous species aggregated within a defined area of the nursery and ideally away from other locally growing native Myrtaceous species?					Minor
Are growing areas treated with an appropriate disinfectant upon the completion of the crop growing cycle and before placing a new crop down on growing beds or benches?					Minor
If it is practicable, have myrtle rust host species been removed from boundary and nearby plantings?					Minor
<b>5.3 Hygiene</b>					
Are staff aware that spores can be carried on clothing. Hence contaminated clothing is a considerable risk and therefore are measures in place to manage this?					Minor
Is machinery moved into the nursery production area from off-site inspected and cleaned to sterilise it?					Minor
Is all nursery waste, including sweepings from trucks, disposed of an appropriate manner – example, bag and dispose of via bulk waste, (thorough) composting or deep burial?					Minor

<b>5.4 Sourcing plants and plant materials</b>					
Are stock plants rigorously inspected for the presence of myrtle rust before cuttings are taken or seed collected?				NZPPI plant survey protocol	Critical
Is all myrtaceous plant stock sourced from off-site isolated upon arrival and inspected before transferring it into the nursery production area?					Critical
Is all myrtaceous plant stock sourced from other nurseries accompanied by a Myrtle Rust Biosecurity Declaration provided by the supplier?				NZPPI Biosecurity Declaration	Major
Are stringent hygiene measures applied by staff, and to machinery, vehicles and packaging when they return from collecting myrtaceous plant material (cuttings or seed) from off-site?					Major
<b>5.5 Monitoring and Crop Protection</b>					
Are surveys conducted (at no more than 14-day intervals) of all myrtaceous species on-site - this includes production stock and plants along boundaries and roadways.				NZPPI plant survey protocol	Critical
Are appropriate myrtle rust fungicide treatments undertaken in the high rust risk period from spring to late autumn?				NZPPI MR fungicide guidance	Critical
<b>5.6 Plant dispatch</b>					
Is a Myrtle Rust Biosecurity Declaration provided to the customer?				NZPPI Biosecurity Declaration	Major
Have you (or your third-party transporter) adopted the NZPPI Myrtle Rust Plant Transport Protocols to manage the risk of your spreading myrtle rust?				NZPPI Plant Transport Protocols	Minor

## 6 Audit

- Refer Core Standard

### 6.1 Internal audits

- Refer Core Standard

### 6.2 External audits

- Refer Core Standard

### 6.3 Compliance criteria

- Refer Core Standard

### 6.4 Non-compliance processes

- Refer Core Standard

### 6.5 Costs

- Refer Core Standard

## 7 Appendices

### 7.1 List of Myrtle species

- To follow

### 7.2 Guidance

#### 7.2.1 Action upon suspicion of Myrtle Rust infestation

- Do not remove the plants from the site or vehicle.
- Take photos of the suspected myrtle rust and the whole plant.
- Do not attempt to touch or collect samples as this may increase the spread of the pathogen.
- If possible, isolate the plants with a plastic cover.

Call MPI's exotic pests and diseases hotline 0800 80 99 66.

#### 7.2.2 Disposal of infected material – options include

- Bag it, add water, tie it, keep it moist, leave it for three weeks. This will compost the plant material and kill the myrtle rust pathogen. Dispose of bagged material via landfill.
- Double bag material and deep bury on site.
- Do not burn any material.

7.2.3 For retailers and landscapers – refer NZPPI website

7.3 Records requirements

- Refer Core Standard

7.4 Templates for record keeping

- Refer Core Standard

7.5 References

- NZPPI Myrtle Rust Protocols - <https://nzppi.org.nz/biosecurity>
- Australian Nursery Industry Myrtle Rust Management Plan 2013  
<http://nzppi.co.nz/documents/pests/NGIA-Myrtle-Rust-Management-Plan-2013.pdf>