

# Myrtle rust

## Information for specific groups

- Home gardeners
- Nursery owners
- Beekeepers
- Feijoa growers
- Orchardists
- Walkers / Trampers

### Home gardeners

#### Recommendations and information:

- Please check myrtle plants in your garden for symptoms of myrtle rust.
- If you believe you've seen the disease, don't touch it, take photos if possible, note the location and contact us on 0800 80 99 66.
- MPI needs to learn where the disease is to help build a picture of its distribution and to enable us to best plan for how we contain it.
- For this reason, please do not attempt to self-treat trees and plants with fungicide, either for a cure or to try to prevent myrtle rust infection. The use of preventative sprays could suppress any myrtle rust symptoms, stop us finding new disease, and prevent us from making the best decisions on managing this long-term.
- Contact your local garden centre for advice.
- Myrtle Rust affects *Myrtaceae* species plants such as Pōhutukawa, ramarama, mānuka, and bottlebrush.

### Nursery owners

#### Recommendations and information:

- Before moving any plants or equipment off your site, inspect any *Myrtaceae* plants on your property (including planted trees, not only nursery stock) for symptoms of myrtle rust.
- Before bringing *Myrtaceae* plants onto your site, check that the site plants are coming from has been inspected for symptoms of myrtle rust.
- When any *Myrtaceae* plants arrive, check them for symptoms of myrtle rust.
- If you suspect myrtle rust, please take a photo and report to MPI (0800 80 99 66) and don't move any plants, produce or machinery offsite until you hear back from MPI.

- Practice good hygiene – wash equipment, machinery, clothing and hands before moving between properties.
- NZPPI have a range of useful guidance documents on their website: <http://nzppi.co.nz/>

## Beekeepers

### Recommendations and information:

- The exact behaviour of myrtle rust in New Zealand conditions, and what impact it will have on Mānuka, is currently unknown.
- We do know that bees can transfer the myrtle rust spores from plant to plant.
- From overseas studies we know that bees can transfer spores into the hive. However, myrtle rust spores have not been observed in honey. Our best information from the Australian experience tells us that transmission of any viable spores out of the hive is considered unlikely.

We have determined that any risk of the disease being spread through the movement of beehives is low.

### Are there sprays for myrtle rust that are non-toxic to bees?

- The fungicide used in the current response is Triadimenol with the product label Vandia 250 EC or Agpro Jupiter. The MSDS from Agpro lists the LD50 (Contact) for bees as >100ug/bee and the LD50 (Oral) for bees as >100ug/bee. Note that this is the data for triadimenol, and not the diluted product when sprayed. The lowest HSNO Threshold for toxicity to invertebrates 9.4C is 25 µg/bee so this product is more than 4x times less toxic than the lowest threshold, so is considered "safe".

### Are myrtle rust spores dormant over winter and then re-activated over spring/summer when the temperature warms up?

- There is a possibility for the rust to produce spores and spread during autumn/winter in warmer areas. The optimal temperature for spore production is around 20°C, but it is reduced at cooler temperatures (<15°C) and inhibited at warmer (over 30°C) temperatures. Studies indicate that spores can still be produced during the winter time, however it takes longer (4-5 weeks) compared to summer time (10-14 days). Some *Myrtaceae* species undergo growth in the winter so myrtle rust may be able to proliferate on the new growth on these plants in the right conditions.

### What is MPI's advice regarding beehive movement?

- MPI has determined that due to the low risk of myrtle rust transmission through hives, there is no need to place restrictions on the movement of beehives.
- At this time there is no need for any destruction of hives.
- If you suspect myrtle rust, please take a photo and report to MPI (0800 80 99 66) and don't move any plants, produce or machinery offsite until you hear back from MPI.

## Feijoa Growers

### Recommendations and information:

- While there is some limited international evidence that feijoas can be a host plant for myrtle rust, there is no evidence of feijoa plants being affected since myrtle rust was found in New Zealand. We have not found a single feijoa plant with the infection.
- MPI has taken samples from feijoa plants in nurseries and home gardens with other myrtle rust-affected plants and none were infected.
- MPI has concluded that feijoas present a low risk of spreading myrtle rust to other uninfected myrtle plants.
- For this reason, there are no restrictions on the movement of feijoa plants within or out of the current Controlled Area in Taranaki.
- Feijoa growers, as with all nursery growers, need to maintain good hygiene and biosecurity practices on their property. NZPPI have useful guidance documents on their website: <http://nzppi.co.nz>
- Regularly inspect any myrtle species, including feijoas, for signs of infection. If you believe you have found the disease, don't touch it, take photos and contact MPI on 0800 80 99 66.
- At harvest time, we recommend washing fruit with water at some point in the post-harvest process – preferably before distribution. This is to reduce any risk of transferring spores.
- At this time we do not recommend using any preventative fungicide treatment. This is because we need to know where the disease is present and we do not want to suppress symptoms. The preferred treatment product is Triadimenol and this cannot be used on fruiting trees. If used, fruit cannot be eaten.
- See general information for orchardists below.

## Orchardists

### Recommendations and information:

- Before harvesting fruit or moving any plants, machinery or crops from your site, please inspect any myrtaceae plants on your property (both crop plants and border trees) for symptoms of myrtle rust. (link to host list)
- While feijoas and guavas have been considered susceptible to myrtle rust, there has been no incidence of myrtle rust being found on these plants. As a precaution, we recommend that feijoa and guava fruit should be washed thoroughly with water at some point in the post-harvest process, if possible before distribution.
- However there is no justification to restrict the movements of fruit and plants as it is considered they present a low risk of spread.
- Before bringing Myrtaceae plants or fruit onto your property, check that the site the plants are coming from has been searched for symptoms of myrtle rust.
- When any Myrtaceae plants arrive, check them for symptoms of myrtle rust. Check the plants again after 2 weeks (areas with average temperature above 20°C) to 4 weeks (areas below 15°C).
- If you suspect myrtle rust, please take a photo and report to MPI via the pest and disease hotline 0800 80 99 66 and don't move any plants, produce or machinery offsite until you hear back from MPI.

- MPI recommends good hygiene practices irrespective of whether you have Myrtaceae plants on your property or not. Wash equipment, machinery, clothing and hands before moving between properties.
- NZPPI have a range of useful guidance documents on their website: <http://nzppi.co.nz/>

## Walkers / Trampers

### Advice and information:

- Know your plants and those that are affected by myrtle rust. This serious fungal disease only affects plants in the myrtle family which includes pōhutukawa, mānuka, kanuka, and ramarama. Remain vigilant for signs of myrtle rust. Symptoms to look out for on myrtle plants are:
  - 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.
  - Some leaves may become buckled or twisted and die off.
- If you think you've seen the symptoms of myrtle rust, **do not touch it.** – Call the MPI Exotic Pest and Disease Hotline immediately (or as soon as practicable) on 0800 80 99 66.
  - If you have a camera or phone camera, take clear photos, including the whole plant, the whole affected leaf, and a close-up of the spores/affected area of the plant.
  - Note your location as accurately as possible, using GPS if available or reference against a landmark.
  - Don't touch it or try to collect samples as this may increase the spread of the disease.
  - For more information refer to MPI's website: [www.mpi.govt.nz](http://www.mpi.govt.nz).