



THESE RECOMMENDATIONS ARE FOR GROWERS OF MYRTACEAE NURSERY STOCK AND NOT FOR HOME GARDENERS, OPEN AREAS OR CROPS.



nzppi
NEW ZEALAND PLANT PRODUCERS INCORPORATED

Myrtle Rust (*Austropuccinia psidii*)

Prevention with Fungicides

Symptoms on *Syzygium australe* leaves and stem. Credit: Department of Conservation, Te Papa Atawhai.

New Zealand scientists are undertaking trials with fungicides for myrtle rust control during summer 2021/22. NZPPI will update this protocol following the completion of the trials.

At the time of printing no fungicides have New Zealand registered label claims for the control of myrtle rust.

The ACVM regulations permit off-label use provided there are no restrictions on the product label limiting use to label claims only.

In developing the current spray programme NZPPI has drawn on the Australian Nursery Industry Myrtle Rust Management Plan 2012 (<https://www.ngia.com.au/>).

Preventative fungicide programme

The information presented here is for individuals who have completed training in the safe and responsible use of agrichemicals, through GROWSAFE certification. Refer to growsafe.co.nz for general resources on fungicide good practice.

Spring to late autumn (October to May)

During this high-risk period it may be necessary to apply myrtle rust fungicide treatments at regular intervals to protect vulnerable young growth of susceptible species. Use the **NZPPI Myrtle Rust Climate Model** to see the accumulated risk index for your local area and forecast when you need to start your fungicide spray programme. Always follow the label recommendations for mixing and application.

Winter (June to September)

There is a lower risk of myrtle rust spores in the environment and you may not need to spray. Use the **NZPPI Myrtle Rust Climate Model** through these months to check the accumulated risk for your local area.

Record keeping

Plant protection applications, including fungicides, should be recorded in a spray diary or similar recording system.



Symptoms on ramarama immature fruit

Credit: Department of Conservation, Te Papa Atawhai.

Re-entry periods after spraying

There are no official re-entry period guidelines for these plant protection products in New Zealand.

As guidance:

- personnel wearing suitable PPE (personal protection equipment) including gloves, overalls, etc., can enter treated areas once the spray has dried (approx. 4 hours)
- non-contact re-entry - 4 hours
- contact re-entry - 48 hours

Fungicide rates for the control of myrtle rust:

- Use label rates

Spray Application

- Prior to opening a plant protection product container or using the product read the product label carefully, note and strictly comply with the label directions.
- Application should be via a properly calibrated powered (as opposed to a hand pumped) sprayer fitted with hollow or solid cone nozzles.
- Application should aim to achieve thorough coverage of foliage, both upper and lower leaf surfaces, to the point of run-off.
- Withhold overhead irrigation for a minimum of 12 hours after spray application.

Resistance Management

Among the billions of spores produced from plants with a fungal disease, some may contain genetic mutations that make them less sensitive to certain fungicides. If the same fungicide is repeatedly applied, then the more sensitive part of the fungal population will be killed, leaving only the part that is more resistant. Over time, the resistant part may predominate and the fungicide becomes ineffective. The fungicide groups at risk from resistance are generally modern synthetic types where the mode of action targets a specific biochemical pathway within the fungal pathogen.

To minimise the risk of resistance developing, fungicides from groups with different modes of action should be used in a rotation programme. Table 1 contains brief information on the key fungicides used for myrtle rust control. The product mode of action group number is a guide for designing a rotation programme. For more information on pesticide resistance and modes of action see the New Zealand Committee on Pesticide Resistance website: www.nzpps.org/resistance/index.php.

Table 1 Suggested Fungicides for Control of Myrtle Rust

DO NOT APPLY FUNGICIDES TO PLANTS IN FLOWER.

Product Name	Active Ingredient*	Type of Activity	Mode of Action Group***	Minimum Interval Between Applications (days)
Cereous + 6 other brands	250 g/l triadimenol	Systemic, curative, protectant	3	14-21
Tilt® + 4 other brands	250 g/l propiconazole	Systemic, curative, protectant	3	7
Scorpio®	200 g/l tebuconazole + 100 g/l trifloxystrobin	Systemic, curative, protectant	3/11	14
Dithane™ Rainshield™ Neo Tec™ + 15 other brands	750 g/kg mancozeb	Non-systemic protectant	M3	7
Amistar® + 13 other brands	250 g/l azoxystrobin	Systemic, translaminar, protectant	11	14-21
Kocide® Opti™ + 8 other brands	300 g/kg copper hydroxide	Non-systemic protectant	M1	7-14
Bravo® Weatherstick + 13 other brands	720 g/l chlorothalonil	Non-systemic protectant	M5	7-14
Elatus® Plus	100 g/l benzovindiflupyr	Xylem systemic, translaminar, protectant	7	14-21
Sercadis®	300 g/l fluxapyroxad	Xylem systemic, translaminar, protectant	7	14-21
Opus + 13 other brands	Epoxiconazole	Systemic, curative, protectant	3	14-21 days

*Active ingredient concentration stated for the brand name product only. Active ingredient content of other products may differ from brand name products and thus rate of application may need to be adjusted. ** See product label for Certified Handler / Qualified Person requirements. ***From the NZCPR website (www.nzpps.org/resistance/index.php). Dithane™ Rainshield™ Neo Tec™ are trademarks of The Dow Chemical Company ("Dow") or an affiliated company of Dow. Elatus™ Plus is a trademark of a Syngenta Group Company. Kocide® is a registered trademark of Kocide LLC. Tilt®, Amistar®, Bravo® are registered trademarks of a Syngenta Group Company. Sercadis® is a registered trademark of BASF. Scorpio® is a registered trademark of the Bayer Group.

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