

Control of Myrtle Rust (*Austropuccinia psidii*) with Fungicides



THE RECOMMENDATIONS ARE FOR ORNAMENTAL AND NON-FRUIT BEARING MYRTACEAE SPP ONLY

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 N.Z. myrtle rust was first identified in May, 2017, with the result that there has been insufficient time to conduct trials with fungicides for its control and to check the plant tolerance of the fungicides. However, myrtle rust was first detected in Australia in 2010 and thus their industry has had sufficient time to test fungicides and obtain permits for their use (most of which are registered for other disease/crop complexes in N.Z.), and to develop spray programmes.

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

Table 1 contains brief information on the key fungicides used for the control of myrtle rust. The Type of Activity will assist in selecting an appropriate product. The Certified Handler / Qualified Person – “Yes” signals the requirement for the fungicide to be under the control of a Certified Handler or Qualified Person at some stage in its handling/use. Specific requirements relating to individual products can be found on the product label.

Mode of Action Group will assist in developing an effective rotation programme should those suggested in **Tables 2** and **3** for high risk and low - medium risk scenarios, respectively, not be adopted. **Table 4** contains suggested rates of the brand name products for control of myrtle rust.

Re-entry Periods

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.
 - non-contact re-entry - 24 hours
 - contact re-entry - 48 hours

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 carried out by GROWSAFE certified personnel wearing appropriate PPE.
- 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.

Trial Applications

The products mentioned in this publication have not been tested on the Myrtaceae family in New Zealand. As it is a large and varied family you are advised to undertake small batch test applications on a few plants of each species you grow to check plant safety prior to large scale treatment. Please note: use of these products off-label is at the user's risk.

TABLE 1: Suggested Fungicides for Control of Myrtle Rust



DO NOT APPLY FUNGICIDES TO PLANTS IN FLOWER

PRODUCT NAME	ACTIVE INGREDIENT*	TYPE OF ACTIVITY	CERTIFIED HANDLER / QUALIFIED PERSON**	MODE OF ACTION GROUP***	MINIMUM INTERVAL BETWEEN APPLICATIONS (DAYS)
Cereous + 6 other brands	250 g/l triadimenol	Systemic, curative, protectant	No	3	14-21
Tilt® + 4 other brands	250 g/l propiconazole	Systemic, curative, protectant	Yes	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	Yes	M3	7
Amistar® + 13 other brands	250 g/l azoxystrobin	Systemic, translaminar, protectant	No	11	14-21
Kocide® Opti™ + 8 other brands	300 g/kg copper hydroxide	Non-systemic protectant	Yes	M1	7-14
Bravo® Weatherstick + 13 other brands	720 g/l chlorothalonil	Non-systemic protectant	Yes	M5	7-14
Elatus® Plus	100 g/l benzovindiflupyr	Xylem systemic, translaminar, protectant	Yes	7	14-21
Sercadis®	300 g/l fluxapyroxad	Xylem systemic, translaminar, protectant	No	7	14-21

*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)

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Resistance Management

Among the billions of individual fungi that constitute a fungal infection, there may exist some that are less susceptible to a fungicide than others. If the same fungicide is repeatedly applied, then the more susceptible individuals will be killed, leaving only resistant individuals to breed and multiply to the extent that eventually a large proportion of the population may be resistant to the fungicide or fungicide group. This may result loss of control and unacceptable damage to crops.



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To minimise the risk of this occurring fungicides with alternate modes of action should be used in the spray programme. The tables below suggest fungicide programmes utilising fungicides with five different modes of action.

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 2: Myrtle Rust Fungicide Management Rotation Programme (Production/Propagation) - 2 weekly

FOR APPLICATION TO ORNAMENTAL AND NON-FRUIT BEARING PLANTS OF THE MYRTACEAE FAMILY ONLY

Two-week spray interval for a high risk/pressure season – conditions favourable for spore production.				
SITUATION	FUNGICIDE (FORTNIGHT 1)	FUNGICIDE (FORTNIGHT 2)	FUNGICIDE (FORTNIGHT 3)	FUNGICIDE (FORTNIGHT 4)
Stock Receipt	Cereous	Elatus Plus/Sercadis	Scorpio	Elatus Plus/Sercadis
Propagation	Cereous/Tilt	Dithane Rainshield Neo Tec	Scorpio/ Elatus Plus / Sercadis	Amistar
Growing on (Low risk)	Cereous/Tilt/Elatus Plus/Sercadis	Dithane Rainshield Neo Tec/Bravo	Scorpio/Kocide Opti	Bravo/Amistar
Growing on (Medium risk)	Cereous/Tilt	Dithane Rainshield Neo Tec/Scorpio	Elatus Plus /Sercadis/ Kocide Opti	Bravo/Amistar
Growing on (High risk)	Cereous+Dithane Rainshield Neo Tec	Scorpio+Dithane Rainshield Neo Tec	Elatus Plus/Sercadis+ Dithane Rainshield Neo Tec	Amistar+Dithane Rainshield Neo Tec

TABLE 3**Myrtle Rust Fungicide Management Rotation Programme (Production/Propagation) - Monthly**

FOR APPLICATION TO ORNAMENTAL AND NON-FRUIT BEARING PLANTS OF THE MYRTACEAE FAMILY ONLY

One month spray interval for a low to medium risk/pressure season – conditions unfavourable for spore production

SITUATION	FUNGICIDE (MONTH 1)	FUNGICIDE (MONTH 2)	FUNGICIDE (MONTH 3)	FUNGICIDE (MONTH 4)
Stock Receipt	Cereous	Elatus Plus/Sercadis	Scorpio	Amistar
Propagation	Cereous/Tilt	Dithane Rainshield Neo Tec/Kocide Opti	Scorpio/Elatus Plus/Sercadis	Amistar/Bravo
Growing on (Low risk)	Cereous/Tilt/ Elatus Plus/Sercadis	Dithane Rainshield Neo Tec/Bravo	Amistar	Scorpio/Kocide Opti
Growing on (Medium risk)	Cereous/Tilt	Dithane Rainshield Neo Tec/Scorpio	Elatus Plus /Sercadis/ Kocide Opti	Amistar/Bravo
Growing on (High risk)	Cereous+Dithane Rainshield Neo Tec	Scorpio+Dithane Rainshield Neo Tec	Elatus Plus/Sercadis+ Dithane Rainshield Neo Tec	Amistar+Dithane Rainshield Neo Tec

TABLE 4**Suggested Fungicide Rates for the Control of Myrtle Rust**

PRODUCT NAME	PRODUCT RATE/15 LITRES	PRODUCT RATE/100 LITRES
Cereous	7.5 ml	50 ml
Tilt	4.8 ml	32 ml
Scorpio	11.25 ml	75 ml
Dithane Rainshield Neo Tec Fungicide	31.5 ml	210 ml
Amistar	6.0ml	40ml
Kocide Opti	30 g	200 g
Bravo Weatherstick	26.26 ml	175 ml
Elatus Plus	30 ml	200 ml
Sercadis	3.0 ml	20 ml