

Managing blueberry rust in a cool climate (2023)

utas.edu.au/tia

Authors: Michele Buntain and Kara Barry



Blueberry rust in Tasmania

Blueberry rust in Tasmania is caused by the fungus *Thekopsora minima*. It was declared endemic in Tasmania in 2022 due to widespread disease detections in the 2021/22 season. Preventing blueberry rust infection is key to limiting the impact of this disease on productivity and market access.

Reducing rust disease risk

A range of strategies can be used to reduce the risk of blueberry rust infection. Using more than one strategy will help lower the risk of blueberry rust.

- Farm biosecurity and farm hygiene
- Monitoring the crop for early signs of disease
- Crop cultural management practices
- Applying protective fungicides at the correct time

A new crop protectant for organic producers

Research led by the Tasmanian Institute of Agriculture has identified the new fungicide '**Intervene**' as an alternative crop protectant suitable for use in organic blueberry orchards for rust management. This research was funded by the Tasmanian Government Agriculture Development Fund. Research trials were conducted in Queensland and NSW prior to the disease being declared endemic in Tasmania.



Fungicide trials were conducted with glasshouse plants in Queensland (left – Charmila Lunuwilage) and a commercial orchard in NSW (right)

KEY POINTS

- **Use a range of strategies** to reduce the risk of blueberry rust infection
- **A Farm Biosecurity Action Plan** can help you manage disease risk.
- **Reduce humidity** in your crop by pruning and keeping alleyways mown.
- **High risk conditions** for blueberry rust conditions are when temperatures are mild, humidity is high and leaves are wet
- **Young leaves** are most susceptible to blueberry rust'
- **Prevent infection** by applying suitable fungicides when conditions favour blueberry rust infection.
- **Intervene** is a new organic fungicide for preventing and suppressing blueberry rust in organic orchards
- **Crop protectants** work best if applied at the correct time, with good coverage and good application technique.
- **Monitor your crop** regularly. Early detection and intervention will reduce disease pressure.
- **Keep informed** about upcoming research and new disease control recommendations.

Preventing infection

Farm Biosecurity – prevent the spread

Blueberry rust spores can be carried into your crop on air currents, farm machinery, plant material and on peoples clothing. Prepare a **farm biosecurity action plan** to manage what comes onto – and out of your farm and create your own **biosecurity kit**. Visit <https://www.farmbiosecurity.com.au/>

Crop monitoring

Even the best preventative measures are not failsafe and rust spores may still infect your crop. Detecting infection early will give you the best chance of managing the disease and limiting spread.

Monitor your crop weekly. Closely inspect the undersides of leaves for symptoms of orange- yellow rust pustules. Monitor areas that could be at higher risk, near entry gateways, on the side of the prevailing wind and in susceptible varieties.



Crop cultural management

High humidity and leaf wetness favour blueberry rust infection. Prune to create an open canopy to help leaves dry faster and reduce the humidity within the bush.

Keeping the inter-row alleyways mown and free of tall weeds is good practice for reducing humidity in the blueberry canopy.

Timing to prevent infection

Mild temperatures favour blueberry rust spore production and infection with temperatures in the range 19 to 25°C being highly favourable.

Infection occurs when there is moisture present on leaves. Rain events appear to trigger the release of spores and also favour infection by increasing the humidity.

Young leaves are most susceptible to rust infection.

Time the application of protection measures, such as fungicides, to protect young leaf material when the forecast conditions are suitable for infection. If conditions are very dry or cold then the risk is lower than if conditions are humid, wet and mild.

Market Access

Blueberry rust has been declared endemic in NSW, Qld, Vic, WA and Tas and therefore no trade protocols exist to prevent movement between these states. The disease is not known to be present in South Australia and the ICA-31 trade protocol applies for access to that market.

Protecting your crop

Preventing rust infection with crop protectants relies on good timing, using an effective product and thorough coverage using good application technique. Once blueberry rust symptoms are obvious, management is more difficult due to the rapid production of large numbers of spores.

Conventional fungicides

Fungicides permitted for use on blueberries are registered with [Australian Pesticides and Veterinary Medicines Authority](#) (APVMA). Contact [Berries Australia](#) for an up to date list.

Fungicides permitted for blueberry rust control in Tasmania in 2023 include:

- [PER13958](#) Mancozeb (Mancozeb)
- [PER91300](#) Bravo (Chlorothalonil)
- [PER14740](#) Tilt (Propiconazole)
- [PER89953](#) Asoxystrobin
- [PER82601](#) Dragon (Dithianon)
- [PER82986](#) Pristine (Boscalid /Pyraclostrobin) *suppression only*

Rotating fungicides with different chemical groupings helps prevent the development of fungicide resistance.

Organically-approved fungicides

- [PER84176](#) Copper
- [PER92997](#) Intervene *suppression only*

Intervene was approved as an allowed organic input by the ACO in November 2022 ([certification 11540](#)).

New research

TIA are conducting new research to increase knowledge of how the rust survives over winter. One management option is to defoliate plants over winter to remove the host tissue. Questions we are asking include:

- What are the temperature limits for rust survival? How cold, for how long, needs to be experienced to prevent survival?
- Which chemicals can defoliate blueberry in winter and how does it impact yield?



For more information please contact: Kara.Barry@utas.edu.au | utas.edu.au/tia

DISCLAIMER: While the Tasmanian Institute of Agriculture (TIA) takes reasonable steps to ensure that the information on its fact sheets is correct, it provides no warranty or guarantee that information is accurate, complete or up-to-date. TIA will not be liable for any loss, damage, cost or expense incurred or arising by reason of any person using or relying on the information contained in this publication. No person should act on the basis of the contents of this publication without first obtaining specific, independent, professional advice. TIA and contributors to this Fact Sheet may identify products by proprietary or trade names to help readers identify particular types of products. We do not endorse or recommend the products of any manufacturer referred to. Other products may perform as well or better than the products of the manufacturer referred to.