Managing blueberry rust in a cool climate

Blueberry rust in Tasmania is caused by the fungus *Thekopsora minima*. The disease is currently limited to 3 sites in Tasmania (September, 2017). Preventing blueberry rust infection is a key to limiting the spread of this disease. The key steps in preventing blueberry rust infection include good farm biosecurity and applying crop management practices that reduce the risk of infection.

Where does blueberry rust come from?

Blueberry rust can exist exclusively on blueberries from season to season, especially if blueberries retain their leaves over winter. Alternative hosts include members of the rhododendron family and *Gaylussacia* spp. (Huckleberry). Blueberry rust can also complete its lifecycle on the alternate host (*Tsuga* sp.) particularly in cool climates. *Tsuga* are a group of conifers common in the Northern United States and Canada, but less common in Australia. Infected *Tsuga* needles can go on to reinfect blueberries in the spring. It is not known whether the rust occurs on any alternate or alternative hosts in Tasmania so crop management is based around prevention of infection from spores produced on blueberry plants.

How is blueberry rust spread?

The disease is spread with spores carried by wind from infected plants, directly by people wearing contaminated clothing, equipment that has been in contact with infected blueberries or by introducing infected plants to the orchard.

Key Points

- **Blueberry rust is spread** by wind, carried on people, plants and equipment.
- **Prepare a farm biosecurity plan** to manage the movement of people, plants and equipment both onto and within your orchard.
- Become familiar with blueberry rust symptoms and **monitor your crop regularly**.
- Blueberry rust **spore production and infection** is favoured by humid conditions, temperatures between 19 and 25°C and may be triggered by rain.
- **Reduce humidity** within the orchard by pruning to create an open canopy, good alleyway and edge management.
- **Apply crop protectants** using a suitable product, timing and application technique to prevent infection.
- **Protect young leaves** as these are most susceptible to blueberry rust.
Blueberry rust symptoms

- Blueberry rust first appears as small yellow leaf spots on the upper surface of young leaves. A disease progresses these areas turn rust brown coloured and can be surrounded by a yellow halo. (Figure 1)
- Yellow-orange powdery rust pustules develop on the underside of leaves (Figure 2)
- The telial stage (not yet observed in Tasmania) may occur at the end of the growing season and appears as dark coloured crusts on undersides of leaves

**Images courtesy Tasmanian DPIPWE & NSW DPI**

**How can I prevent blueberry rust infection?**

The first step to prevention is to have a good farm biosecurity plan. Resources: [Farm biosecurity](#) and [National blueberry biosecurity plan](#). Blueberry Orchard Hygiene Guidelines published by the Tasmanian Department of Primary Industries (DPIPWE) provides a good starting point. Crop management practices that help prevent blueberry rust infection can include cultural, chemical and biological practices.

**Cultural management**

High humidity and leaf wetness favour blueberry rust infection. **Pruning to create an open canopy can help leaves dry faster and reduce the humidity** within the bush. Whilst good shelter is beneficial for blueberry productivity, some airflow through the canopy can help prevent disease. Keeping the inter-row alleyways mown and free of tall weeds is good practice for reducing humidity in the blueberry canopy. High density plantings may favour disease development.

**Prevention is better than cure**

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

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