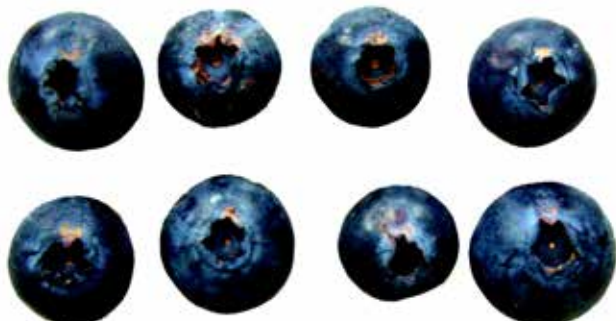


# Expanding crop protection options for control of blueberry rust

Melinda Simpson, Berry Development Officer, NSW Department of Primary Industries  
Michele Buntain, Horticulturist, Tasmanian Institute of Agriculture

The project specifically addresses issues of current concern for the Blueberry organic sector, but findings will also be relevant to conventional growers and blueberry growers in all states of Australia.

The key project output will be a minor use permit for a product which has been demonstrated as effective to control the rust and is safe to the crop. This will provide growers with additional options to reduce biosecurity risk and maintain crop productivity and market access.



**Rust on leaves (left) and Rust lesions on a green blueberry (right) rust on ripe blueberries (bottom)**

Photo Credit: Rosalie Daniel

## Objective and aims

The main objective is to improve industry access to crop protectants that will control blueberry rust effectively, especially products that are acceptable to organically-accredited growers.

### To achieve this objective, the aims are to:

1. Review relevant crop protectants and select potential chemical and biological materials for trials
2. Obtain data about the efficacy of crop protectants in preventing development of blueberry rust under controlled conditions after inoculation with an isolate of *T. minima* from Tasmania
3. Obtain data about the efficacy of crop protectants under commercial production conditions in NSW in which blueberry rust develops according to seasonal conditions
4. Obtain crop safety and residue data for one of the non-biological crop protectants, if trials identify a product with high efficacy and suitable for organic blueberry production
5. Apply for minor use permits for the selected non-biological crop protectant and up to three biological materials with demonstrated efficacy
6. Engage with Biosecurity Tasmania to review containment protocols based on new information, to ensure organic producers have a range of options.

## Research activities

### A. Selection of crop protectants for trials

A thorough review will be conducted on all conventional and organic crop protection options for rust diseases. The review will include published studies and reports which include credible scientific data. Those products with most suitability, which are already registered for use in Australia on other crops, will be selected for trials.

### B. Controlled-environment trials in Tasmania

Controlled trials will be conducted within the current regulations of disease containment required in Tasmania. All trial-related activities will take place within the Approved Quarantine Premises owned by Peracto Pty Ltd. Spore suspensions will be prepared within the laboratory in the facility, and fungicide trials in the approved plant growth room. The first trial will be designed with at least six replications applied fortnightly. Plants will be inoculated with *T. minima* spores at a suitable concentration and coverage to ensure disease development in the control plants. Plants will be assessed for efficacy of disease control by recording disease symptom development to obtain “area under disease progress curves” and rust pustule counts.

### C. Trials in NSW

Pot trials under field conditions will be conducted at the NSW DPI Wollongbar Primary Industries Institute, where the rust pathogen occurs in the region. Each trial will require 3 months of fortnightly product application and disease assessment under conditions of natural infection. Trials will be assessed for efficacy of disease control by recording disease symptom development at regular intervals, to obtain “area under disease progress curves” and pustule counts. The trial design will be based on findings from the controlled conditions trial (part B) and is likely to include treatments applied fortnightly.

### D. Obtain crop safety and residue data for one chemical crop protectant which is prioritised for permit application

Field trials will be conducted in Tasmania (in the absence of the pathogen) to obtain crop safety and residue data for one chemical product identified in part B and C as the most efficacious. This project is due to start shortly and will run until October 2021.

For further information, please contact Michele Buntain

[michele.buntain@utas.edu.au](mailto:michele.buntain@utas.edu.au)

+61 3 6226 6353 | 0429 957 975

The Tasmanian Institute of Agriculture via the Tasmanian Government “Agricultural Innovation Fund” has received funding to evaluate a range of crop protectants to provide control of blueberry rust disease (caused by *Thekopsora minima*).



## PLANTS AVAILABLE NOW!

Excess stock in some commercial varieties ready to plant out.



## MOONDARRA BLUEBERRIES

Contact Joel at [plants@moonblue.com.au](mailto:plants@moonblue.com.au)  
or on 0427 578 813 to discuss  
your requirements.

Download an order form from our  
website for quick and easy ordering.

Our website has full variety descriptions

**[moonblue.com.au](http://moonblue.com.au)**

HAVING SUPPLIED THE INDUSTRY WITH BLUEBERRY PLANTS FOR OVER THIRTY YEARS, WE CAN OFFER A LARGE NUMBER OF VARIETIES BOTH NEW AND OLD INCLUDING *Southern* AND *Northern Highbush* AND *Rabbiteye* TYPES.



Moondarra Blueberries – Victoria, Australia

**(03) 5165 3498**

[plants@moonblue.com.au](mailto:plants@moonblue.com.au)