

Spot and blotch diseases of Rubus in Australia

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In early 2020, the Victorian Blackberry Task Force, in conjunction with Berries Australia and Australian Rubus growers, participated in a survey to better understand the spot and blotch diseases of Australian commercial Rubus crops.

Surveys were undertaken to sample spot and blotch disease symptoms which will be used for a DNA testing protocol designed for key diseases and related species.

Most spot and blotch diseases of Blackberry and Raspberry in Australia are difficult to distinguish based on visual symptoms. Molecular sampling is required to confirm the identification of most known diseases. The Victorian Blackberry Task Force in conjunction with RMIT University has developed a molecular diagnostic tool for key pathogens of Rubus.

The sampling protocol involves removing a 5mm x 5mm piece of leaf or stem tissue with a sterile scalpel blade. The tissue is stored with silica gel until it is ground and digested in preparation for analysis using PCR (polymerase chain reaction) techniques. All material is destroyed in the process. Organic farms were of particular interest for sampling due to their higher disease biodiversity, but larger commercial operations that deploy intensive pest control programs were also of importance due to their production capacity.



Figure 1. Example of a Rubus leaf spot disease

Photo credit: Dr Robin Adair



Figure 2. Example of Rubus stem lesions

Photo credit: Dr Robin Adair

The results will confirm the absence or presence of described spot and blotch diseases with DNA signatures available from international gene bank libraries.

The field surveys were completed in February 2020 with 30 commercial establishments in Victoria and Tasmania participating. Properties in NSW were not sampled due to the severe bushfire situation in the State at the time of sampling. The outbreak of COVID-19 and restrictions on movement led to the temporary closure of RMIT University and all samples remain in deep storage until the laboratory becomes accessible again. This may occur in July 2020.

The results of the survey will be provided to all survey participants as soon as we have completed the analysis.

The Victorian Blackberry Task Force is focussed on sustainable management of naturalised European Blackberry and is evaluating potential for biological control of weedy European species. Understanding the disease complex in Australian Rubus crops will help expand our knowledge of diseases present in Australia and help develop effective and sustainable control of weedy blackberry.

The Victorian Blackberry Task Force sincerely thanks all Rubus growers who participated in the survey, your interest and hospitality were very much appreciated.

The Victorian Blackberry Task Force is an independent community-based organisation committed to protecting the resource base of commercial Rubus industries in its endeavours to develop effective biological control of weedy blackberry in Australia.



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