

## Detection of Grapevine Pinot Gris Virus in dormant canes



### Background

Grapevine Pinot Gris Virus (GPGV) is a virus recently detected in grapevines in Australia. GPGV was originally detected in Italy in 2012 in the variety Pinot Gris. It is a member of the genus *Trichovirus* in the family *Betaflexiviridae*. There are both non-symptomatic and symptomatic strains of the virus and the full impact of GPGV on vine health is not currently understood.

GPGV has been reported in numerous different countries and has been confirmed in at least 28 wine and table grape varieties including Pinot Gris, Pinot Noir, Traminer, Chardonnay, Merlot, Cabernet Franc, Cabernet Sauvignon, Carmenere, Glera (Prosecco), Sauvignon Blanc and Shiraz. It appears that no grapevine variety is immune to GPGV. It has also been detected in a rootstock called 1616C in California.

### A more sensitive detection method

Concerns have been expressed that the method used to detect GPGV could only detect it in green shoots, but not in dormant canes. Recent work has improved the sensitivity of the grapevine virus detection method used by AWRI Commercial Services to ensure dormant canes can be reliably tested. This has been achieved by designing a new pair of virus-specific primers, aligning all the available nucleotide sequence data available in the National Center for Biotechnology database ([www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov)).

To test the new primers, one cane was selected from each of three of GPGV-infected vines in the Adelaide Hills, South Australia. Each cane was divided into three sections (top, middle and bottom, see Figure 1) and tested for GPGV by polymerase chain reaction (PCR). In this study the virus was detected reliably and uniformly along the cane length. This confirmed that it is possible to detect GPGV throughout all stages of growth, including fully dormant canes.



*Figure 1. Reliable detection of Grapevine Pinot Gris Virus in dormant canes. Under each set of the three PCR bands, the light blue bar on the left represents top of the cane, the mid-blue bar represents the middle of the cane and the dark blue bar on the right represents the bottom of the cane.*

For more information on sending dormant cane samples from all over Australia to AWRI Commercial Services for the diagnosis of GPGV or other viruses, please visit the virus testing page on the AWRI website ([https://www.awri.com.au/commercial\\_services/virus-testing/](https://www.awri.com.au/commercial_services/virus-testing/)).

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