

# INDUSTRY NOTICE

16 SEPTEMBER 2022

## GRAPEVINE RED BLOTCH VIRUS DETECTIONS: YOUR QUESTIONS ANSWERED

Yesterday, industry was notified by [Australian Grape & Wine](#) that Grapevine Red Blotch Virus (GRBV) has been detected in Western Australian and Victorian germplasms.

In the past week, GRBV has also been confirmed in South Australian vines.

These detections occurred as the result of routine screening for a range of viruses and follow up tracing, not as a result of visual symptoms. It appears GRBV has been present in Australia for at least 30 years, meaning that this is not a new incursion, rather detections of a long-standing infection.

We understand growers and winemakers in the South Australian industry will want to know what this detection means for them.

Together with the South Australian Vine Improvement Association (SAVIA), Wine Grape Growers Council SA (WGCSA) and South Australian Wine Industry Association (SAWIA), we have developed a set of Q&As to help you better understand the current situation.

We are grateful for the assistance of grapevine virus experts in Australia who have reviewed this set of Q&As.

We will continue to provide updates as further information comes to hand.

### What does this detection mean for me?

#### Q1. What do I need to do?

At this time:

- Be aware that GRBV has been detected in Australia and SA
- Maintain good general virus preventative management programs, including regular vineyard monitoring for virus-like symptoms and potential vectors
- If you are a SA grower and have questions about potential symptoms, or symptoms you may have seen last season in your vines that are similar to those described in the [AWRI fact sheet for GRBV](#), call the AWRI Help Desk (08 8313 6600) or Vinehealth (0412 859 882 or 0418 818 543)
- If you are about to receive or have just received propagation material, or have material in cold storage, please contact your supplier to discuss the virus status of this material, and the diagnostic laboratories listed in the [AWRI fact sheet](#) for advice on testing, including cost

## **Q2. Given these detections in Australia, should I test my grapevines immediately for GRBV?**

This is a decision for individual businesses. At this stage no symptoms or adverse impacts have been reported in association with infected vines, but you may still want to establish the health status of your own vines. It is important to note that with the current official status of GRBV as exotic to Australia, any positive detections are required to be reported by diagnostic laboratories to state governments. Updates on this will be advised as this requirement changes.

Ahead of further advice to SA industry regarding GRBV, SA growers who believe they may need to test for the presence of GRBV are advised to contact their diagnostic laboratory, the AWRI Help Desk or Vinehealth to discuss.

## **Q3. I noticed red leaves in my vineyard last season, is this GRBV?**

There are many causes of red leaves in vineyards, including mechanical damage, nutrient deficiency (potassium, magnesium, phosphorus), variety specific autumnal colours, physical restrictions (string or ties), and other viruses such as leaf roll, which we already have in Australia. It is noted from overseas experience that GRBV is often reported in the presence of other viruses that we have in Australia.

Following consideration of each of these potential causes of red leaves, there is always the option for you to confirm the presence of GRBV in your vines by sending off a sample for diagnostic testing (noting the answer to question 2).

## **Q4. Can I test my grapevines for GRBV?**

Yes, you can send a sample from your vineyard to one of four laboratories to test for GRBV:

1. Agriculture Victoria – Crop Health Services (Vic)
2. Affinity Labs (AWRI SA)
3. Department of Primary Industries and Regional Development (DPIRD) Laboratory (WA)
4. Biosecurity Tasmania – Plant Diagnostic Services (Tas)

If you are going to send a sample for testing, it is important that you contact the laboratory first to confirm sampling requirements (timing and method), packaging (including any paperwork to ship samples across state and existing quarantine boundaries) and cost. [Click here](#) for contact information for each laboratory.

## **Q5. Is there a treatment for GRBV infected vines?**

There is no treatment for GRBV infected vines. The only way to eliminate GRBV from a vineyard is to remove infected vines.

Given this, a decision on how best to manage GRBV will depend on the individual grower and vineyard. Factors you need to consider include the nature of your business (e.g., is your vineyard used for propagation), the number of vines infected, whether there is any impact on vine health and grape quality, and how this is changing over time.

You can call the AWRI Help Desk (08 8313 6600) or Vinehealth (0412 859 882 or 0418 818 543) if you need assistance to determine action required.

## **About GRBV**

### **Q6. Does GRBV kill vines?**

GRBV has not been reported to kill grapevines but it can decrease the lifespan of a vineyard given lower yield and vine vigour, and can negatively impact grape and wine quality, as reported in the USA.

### **Q7. How does GRBV affect grape and wine quality?**

GRBV significantly reduces an infected vine's capacity to move sugar from the vine leaves into the grapes. This sugar remains trapped in the leaves, consequently causing delayed fruit maturity, lower sugar and compounds responsible for wine colour, flavour and aroma.

To date, we are unaware of any reports of visual symptoms in past years for vines in which GRBV has recently been detected in Australia. This may be due to a range of factors including presence of other viruses, which may mask GRBV specific symptoms.

### **Q8. What symptoms do I look out for in my vineyard?**

In red varieties, foliar symptoms consist of crimson to purple blotches first appearing on older leaves at the base of the canopy in late spring to early summer. These red blotches then expand and merge and become progressively evident towards the top of the canopy later into autumn.

In white varieties, leaf symptoms appear as irregular chlorotic (yellow) areas that become necrotic (dead) later in the season. See images of symptoms in the [AWRI GRBV fact sheet](#).

Some varieties infected with GRBV have been reported to show no visual symptoms.

Visual diagnosis alone is often unreliable due to symptom similarity with other factors noted in question 3, and therefore diagnostic testing must be completed for a definitive result.

### **Q9. When was GRBV first discovered in the world?**

GRBV symptoms were first noticed in 2008 in Cabernet Sauvignon in the Napa Valley in California. It took another four years, in 2012, for GRBV to be discovered as the cause of these symptoms.

It is thought that GRBV originated in North America.

### **Q10. When did Australia start testing for GRBV at our national border?**

Given the discovery of GRBV in the USA, testing was introduced for imported grapevine material at the Australian border in 2013 to ensure that no material imported from this time forward was infected with GRBV.

### **Q11. What varieties and vines has GRBV been found in overseas?**

GRBV has been found in a large range of table and wine grape varieties, as well as in some rootstocks, hybrids and in the USA, in wild vines.

### **Q12. Where has GRBV been found overseas?**

GRBV has been found broadly across commercial vineyards in the USA. It has also been detected in commercial vineyards in Canada and Argentina with low incidence, and in India, Mexico and South Korea, with unknown incidence. GRBV has only been detected in non-commercial collections in Switzerland, France and Italy.

### **Q13. How is GRBV spread?**

We know that long-distance spread of GRBV occurs through infected planting material.

GRBV has not been found overseas to be spread by vineyard machinery or pruning tools.

Where GRBV is widespread and causing economic damage in California, the three-cornered alfalfa hopper has been found to efficiently spread the virus between vines within a property and between adjacent properties. This hopper is not known to be present in Australia. Little

work has been undertaken overseas to review the potential of scale or mealybug to vector GRBV.

We are yet to understand the ability of sap sucking insects in Australia, including scale, mealybug and hoppers, to spread GRBV between vines.

Work continues overseas on insect transmission of GRBV.

#### **Q14. What is the economic impact of GRBV overseas?**

Despite GRBV being relatively new to science, its economic impact has been felt significantly in North America where regionally-based insects continue to spread the virus. In such cases, the impact is reported to range from \$2,213(USD)/ha in eastern Washington to \$68,548(USD)/ha in Napa County over a 25-year production period.

#### **About the current detections in Australia**

#### **Q15. Where has the virus been detected in Australia?**

The first detection of the virus in Australia was in a germplasm in WA in a table grape variety and a number of winegrape varieties (many of which are lesser-known varieties). Since then, the virus has been detected in another germplasm vineyard in Victoria.

In the past week, there have been detections of GRBV in SA.

At this point given confidentiality requirements, details of location(s) with positive detections in SA cannot be provided. Vinehealth and PIRSA are actively working with these SA property owners.

#### **Q16. In Australia, what varieties has GRBV been found in?**

In WA, DPIRD has reported GRBV in vines on the Manjimup germplasm and agriculture college in Harvey:

- A white table grape Perle de Csaba
- Several winegrape varieties

In Victoria, GRBV has been detected in the table grape Perle de Csaba to date.

It is envisaged that a list of varieties/clones in which GRBV has been detected in Australia, will be made available to industry in due course.

We know this varietal information is important for growers and winemakers to help inform your vineyard management, and we will share this information as soon as it can be made available.

#### **Q17. When was the virus first detected in Australia?**

In June 2022, DPIRD confirmed that GRBV had been detected in its grapevine germplasm collection, at the Manjimup Horticulture Research Facility. It was detected as part of annual routine vine health testing by DPIRD.

#### **Q18. How long has GRBV been in Australia?**

It appears that GRBV was introduced unknowingly into Australia through infected grapevine material as early as 1985. At this time, GRBV had not been discovered, and therefore was not known to exist anywhere in the world.

#### **Q19. What do we know about the amount of GRBV in South Australia?**

Current information suggests that GRBV has been in Australia and SA for many decades. The level of infection will depend on the number of vines infected and the movement of the

virus from these infected vines to other vines, via propagation material and potentially insects.

Given the very recent detection of GRBV in SA, work continues over coming months to quantify its potential distribution. Timely updates will be provided to industry as information is interpreted.

#### **Q20. What is being done to manage this virus in Australia?**

The national Consultative Committee for Emergency Plant Pests (CCEPP) is Australia's key technical body for coordinating national responses to emergency plant pest incursions, and assessing the technical feasibility for their eradication. Australian Grape & Wine is the winegrape industry's representative on this committee. The CCEPP is currently assessing the GRBV detection.

#### **Q21. What activities has Vinehealth undertaken in SA since the detection of GRBV interstate?**

1. Reviewed overseas research papers and maintained contact with virus experts to gather the latest information on GRBV
2. Undertaken tracing activities of positive detections interstate to determine possible links to SA vines
3. Searched the SA Vineyard Register to identify vineyards with varieties of interest
4. Held discussions with vine improvement and nursery organisations for tracing purposes
5. Undertaken sampling for GRBV testing on several properties in SA
6. Worked with the AWRI to update their fact sheet on GRBV so industry has the latest information at its fingertips
7. Briefed AWRI Help Desk staff on the detection of GRBV so that they can support industry queries
8. Collected samples to allow comparative diagnostic testing for GRBV between laboratories
9. Provided confidential briefings to SAWIA, WGCSA and SAVIA to keep them abreast of SA's position
10. Met with some interstate biosecurity departments to gather further information on detections

Vinehealth will continue activities to support SA growers, winemakers and the propagation sector, including:

- Working alongside properties with detections of GRBV to support individuals, decisions and next steps
- Working alongside PIRSA to manage SA's response
- Working closely with Australian Grape & Wine to provide technical biosecurity expertise

#### **Further information**

For those in SA who would like to discuss the current situation or require support please contact Vinehealth on 0412 859 882 or 0418 818 543.