

# **Wine Industry Newsletter**

**Issue number:** WIN vol 153 **Date:** December 2024

#### Contents

- Provenance project approaches final stage
- Weather station upgrades
- Digital solution to winery power monitoring
- Review of pest status of Grapewine Pinot Gris Virus (GPGV) in Western Australia
- Wine industry businesses engage strongly with round 6 of the voucher program
- Viticulture specialist celebrates 50 years of service
- CSIRO's Innovate to Grow WA
  program returns for 2025
- Advancing sustainability in WA's wine industry
- Future events

## Provenance project approaches final stage

WA Understanding what makes a wine region unique is important to both producers and consumers, particularly those regions producing iconic wines. DPIRD's publication <u>'Geology, soils</u> <u>and climate of WA's wine regions'</u> describes the climatic and geophysical elements of all of WA's wine regions in great detail, however it does not explore how these characteristics impact wine composition and sensory attributes.

In 2021, the research project 'Understanding the intricacies of provenance in Western Australian wine regions' was launched. Led by the department in partnership with Future Foods Systems CRC and Wines of WA (through the Wine Industry Export Growth Partnership), the project comprises of multiple Chardonnay and Cabernet Sauvignon sites across Margaret River and Riesling and Shiraz sites across the Great Southern.

Each of the sites were selected based on being representative of a locale and vines consistent by clone and age where possible. Two panels of vines at each site were identified and 20 kg of fruit

#### OFFICIAL

harvested during the 2022, 2023 and 2024 vintages. Small-lot wines were made under a standardized procedure at the department's wine laboratory in Bunbury. Chemical profiling of the wines and sensory analysis of the 2022 and 2023 has been completed with the 2024 wines expected to be finalised by February 2025.



Margaret River sensory panel assessing the 2024 wines

Another data gathering activity recently completed was the soil characterisation directly under the vines at each of the sample sites. This work involved the department's soil scientists extracting an 80 cm deep sample, describing the soil types at the various horizons and measuring the respective pH's across the profiles.



DPIRD's Yu-Yi Lao and Justin Laycock characterising a soil sample at a Great Southern vineyard site

The research team is nearing the completion of a dataset of 59 vineyard sites detailing specific climate, soil type, wine chemical composition and wine sensory attributes to enable a statistical interpretation to extrapolate potential relationships.

Key outcomes of the project include:

- 1. Understand the chemical profile of wines produced from unique geophysical and climatic locales within 2 of Western Australia's largest producing wine regions
- 2. Understand the sensory attributes of wines produced from unique geophysical and climatic locales within 2 of Western Australia's largest producing wine regions
- 3. Identify relationships between metabolome and sensory profile within region/locality and variety
- 4. Provide WA's wine industry with scientific rigour when communicating uniqueness across 2 of the state's largest producing wine regions.

Results and findings will be extended via various industry events and communications in the second half of 2025.

The project is supported by the Margaret River Wine Association, Great Southern Wine Producers Association and Wine Show of WA.



### Weather station upgrades

DPIRD's Richard Fennessy installing the new 4G motherboards at one of the Great Southern weather stations

The December 2022 edition of the Wine Industry Newsletter featured an article describing the 4 newly installed weather stations across the Margaret River and Great Southern wine regions.

These stations were installed as part of a project investigating the link between weather parameters and disease incidence. The weather stations (iMETOS 3.3) record a range of weather variables, including leaf wetness, which is currently not recorded from weather stations connected to the DPIRD and BOM networks.

The impact of the recent shut down of the 3G network across the south-west, resulted in the weather stations no longer able to transmit data. With the supply of upgraded motherboards, the department's team have been replacing the superseded motherboards so to return these stations online for local producers to access important real-time and historic weather data.

Access to the weather data is accessible via the Field Climate website <u>https://ng.fieldclimate.com/</u> using the following login details.

User: DPIRDHORT

Password: DPIRDweather22

The field climate app is also available from app stores which allows access to the weather data from your smart phone.



### Digital solution to winery power monitoring

Many WA wineries seek to optimize energy efficiency across operations and equipment but most are unable to measure specific power use that can show where efficiencies can be made.

Howard Park Wines has achieved recent success in this area by partnering with the Shoestring team including experts from Cambridge University and DPIRD to develop a tailored and cost effective power monitoring solution.

The system developed utilises simple clamps attached to large machinery, such as the chiller units, to monitor power consumption during peak operational periods.

The solution was affordable, with costs under \$1,000, making it accessible even for a medium-sized operation.

The team at Howard Park wines can now access insights into real-time power usage of chilling equipment enabling them to adjust operations where possible so to help them make progress toward their carbon emission reduction targets.

Howard Park Wines winemaker Giacomo Polvara said that the main benefit to the business was the flexibility and affordability of the solution.

"We are already seeing the results, and I'm sure many businesses in the region will have an area where they would benefit from Shoestring,", Mr Polvara said.

Further details on the Howard Park Wines Shoestring experience can be found at <u>Case</u> <u>study: Howard Park Wines - Shoestring</u>.

To learn more about the program contact Shoestring Digital's senior development consultant Felipe Barria-Reyes directly: <u>felipe.barriareyes@dpird.wa.gov.au</u>.

# Review of pest status of Grapevine Pinot Gris Virus (GPGV) in Western Australia

Grapevine Pinot gris virus (GPGV) is a plant virus that infects many grapevine varieties and is primarily spread through grafting and the distribution of infected propagation material. It may also be spread by the grapevine leaf blister mite.

GPGV is known to be present in New South Wales, South Australia and Victoria, most likely introduced through the importation of infected propagation material from overseas. In 2018, it was nationally agreed that the virus was not technically feasible to eradicate from Australia. Further detections of GPGV are no longer managed or funded under national cost-sharing arrangements and regulation at the national border has ceased.

In January 2024, GPGV was detected in Western Australia (WA) in the Swan Valley. The material used to propagate the infected grapevine was sourced from a second property in the Swan Valley and further samples from that property submitted to the DDLS government laboratories tested positive for the virus. Tracing information indicates that material from this source block is likely to have been distributed to other parts of WA.

Recent surveillance in south-eastern Australia has indicated that there is no specific association of GPGV and disease in grapevines and GPGV does not appear to have an impact under Australian conditions.

The department has assessed the biology and potential spread of GPGV and believes that it is not technically feasible or cost beneficial to eradicate the virus from WA given:

- GPGV is likely to be more widely distributed due to the asymptomatic nature of the virus
- it is not shown to cause economic damage under Australian conditions
- the presence of mite vectors
- an open pathway of entry
- method for control and eradicating GPGV is through complete removal and destruction of vines followed by a fallow period
- there is no industry funding mechanism in place to finance vine destruction.

The department considers that the detection of GPGV represents an extension of geographical range of the virus within Australia.

### Legislative amendment

Under WA's *Biosecurity and Agriculture Management Act 2007*, GPGV is declared a prohibited organism. Prohibited organisms are subject to mandatory reporting and control treatments to destroy, prevent or eradicate the pest. Infected plant material is subject to movement restrictions.

Where GPGV is present and not under eradication or official control, it is no longer considered a quarantine pest and not suitable to be declared a prohibited organism. In accordance with state legislation and national biosecurity agreements, DPIRD has reviewed the declared status of GPGV and intends to amend it to permitted organism. Control, reporting and movement restrictions will no longer apply.

If you require further information relating to the department's intention to amend the status in WA of GPGV, please contact the Plant biosecurity policy team on <u>plantbiosecuritypolicy@dpird.wa.gov.au</u>.

# Wine industry businesses engage strongly with round 6 of the voucher program

Sixty-four Western Australian Food and Beverage manufacturing businesses have shared 81 Vouchers worth a total of \$540,000 in Round 6 of the WA Agrifood and Beverage Voucher Program.

The Western Australian wine industry was successful with 11 vouchers to 10 businesses, to a total of \$74,617, with a co-contribution of \$92,653. Recipients were spread across the Geographe, Margaret River and Great Southern wine regions.

The vouchers will be used to support access to business planning, succession planning, ecommerce, market expansion, development approval and carbon auditing expertise.

Congratulations to the recipients!

Wine industry recipients - WA Agrifood and Beverage voucher program round 6

Organisation	Primary region	Voucher type	Voucher value
Burch Family Wines T/A Howard Park Wines Pty Ltd	South West	Environmental sustainability and social responsibility	\$8270
Cullen Wines	South West	Sales and marketing	\$7,500
Frankland Estate Wines Pty Ltd ATF The Rocky Ridge Trust	Great Southern	Sales and marketing	\$9,800
Churchview Estate	South West	Sales and marketing	\$10,000
Cumbers WA Pty Ltd for Cumbers Family Trust T/A Vineyard 28	South West	Sales and marketing	\$997
EVOI Wines Pty Ltd	South West	Business planning	\$5,000
Duke's Vineyard	South West	Sales and marketing	\$5,350
Cullen Wines	South West	Financial health	\$10,000
AE & HB Christidis T/A Chalari Wines	Great Southern	Sales and marketing	\$5,000
GB Dewar & P Dewar & The Trustee for the Dewar Wine Trust & the	South West	Sales and marketing	\$9,700

Wine industry recipients - WA Agrifood and Beverage voucher program round 6

Organisation	Primary region	Voucher type	Voucher value
Trustee for the Peter Dewar Family Trust & the Trustee for the Woodyarrup Trust T/A Willow Bridge Estate Wines			
Frankland Estate Wines Pty Ltd ATF the Rocky Ridge Trust	Great Southern	Business planning	\$3,000

Pippa Nielsen, Director at Vineyard 28 reflected on the impacts of receiving a previous voucher, which was the start of a much bigger project - now almost at completion.

"In 2021 we identified a major issue constraining the ability for our business to expand and grow. This limitation was access to power.

"The Voucher Program enabled us to engage Norman Disney & Young to provide a feasibility report on how to upgrade the power to meet our future winery requirements. The report then formed the basis of an application to Western Power in 2022, to upgrade the existing power supply to the property from 25kVA to 50Kva. This initial work was completed in June 2023," she said.

Vineyard 28 was also successful in applying for a Round 6 REDS Grant to assist with production expansion, enabled by the power upgrades.

The winery now has an inverter system and upgraded refrigeration system installed, with a new pneumatic press being brought into operation for Vintage 2025.

Ms Nielsen said that these improvements will enable Vineyard 28 to process wine grapes not only more efficiently but with the best practices into the future.

"It has resulted in our ability to increase our wine production resulting in an increase to not only our domestic sales but also expansion into export in Singapore and Malaysia," she said. OFFICIAL



Mark Cumbers, Winemaker at Vineyard 28, has opportunities to increase production volumes due to improvements in power supply

More information on the WA Agrifood and Beverage voucher program can be found on the <u>department's website</u> or by contacting Tilwin Westrup on 0467 787 133.

### Viticulture specialist celebrates 50 years of service



Colin Gordon

DPIRD's Senior Technical Officer Colin Gordon recently celebrated 50 years with the department. Colin's career has focused on table grape production since 1996, but activities in the early years has also seen him work with wine grapes and the dried grape industry.

We sit down with Colin to reflect on the highlights and achievements of a 50-year career in WA viticulture.

### What was the first wine grape related activity you worked on?

When I started in 1974, there was already a large, 3 ha wine grape trial, planted in 1972, at the department's Swan Research Station in the Swan Valley. The trial was investigating the suitability of the varieties Cabernet Sauvignon, Shiraz, Zinfandel and Chenin Blanc as back in the 70s there was a heavy focus on red varieties. In the 1980s this changed and white varieties were becoming increasingly popular, so we developed techniques to rework these mature vines to white varieties including Chardonnay and Semillon. The reworking also provided an opportunity to assess and demonstrate different techniques of chip budding, 'T' budding and cleft grafting. Other treatments being assessed in this trial were rootstocks Ramsey, Schwartzmann, Dog Ridge and 34-EM and various trellis designs which consisted of variations of height and width of a t-trellis system.

### How has viticulture changed in the last 50 years?

General management has changed enormously, when I started in the 1970s the industry was just really starting to take off. Cultivation by discing and rotary hoeing was standard practice in the Swan Valley. This practice was phased out during the 1980s in favour of sod culture for the mid row and the use of herbicides to control weeds under the vines.

Science and technology have changed several practices such as spray equipment and agrochemicals. I recall people sitting on the back of trailers applying sprays by hand and then the development of hydraulic nozzle boom sprayers and later air blast type sprayers. The development of synthetic fungicides and insecticides for pest and disease control gained momentum and had a major impact on the industry during this period. Now growers are modifying their practices to reduce the use of pesticides in their management programs.

Growers, particularly in the Swan Valley, have become more specialised over the years, rather than having mixed crops of dried fruits, table and wine grapes they now tend to focus on just the one crop type. For wine grape production I've seen an advancement of clones especially with Cabernet Sauvignon, investigating better clones for improved wine production has been great to see.

Expansion of the WA wine industry outside of the Swan Valley was particularly exciting to be a part of. In those first few years of development, I did on multiple occasions travel down from Perth to the Forest Hill trial block near Mount Barker to harvest fruit. In those days I think the fruit from the trial block was initially brought up to Conti Wines and later Sandalford in the Swan Valley to have the wines made. This made for very long but enjoyable days.

### What has been the most rewarding wine grape activity you have worked on?

Bearing in mind post 1996 I haven't had too much activity with wine grapes, but the work my colleague Barry Goldspink did at the Sandalford vineyard in the Swan Valley, looking at different sources and forms of nitrogen and the impact on soil pH was significant. We

spent months collecting 100s of soil samples and the results showed very dramatically how soil pH can change through the soil profile depending on which nitrogen source was applied and how it was applied. It was proven that in some instances pH could be as low as 4.00 at depth down the soil profile. One of the outputs from that work was the publication of the 'Fertilisers for wine grapes' manual and roadshow of workshops to help growers to have a better understanding of fertilisers, which was really satisfying and important work at the time. It brought a lot of information into a single resource and was a valuable reference for growers.

### In terms of pest and disease, how has management practices changed?

Now days growers are understanding more about the pests and diseases. Knowing the enemy and choosing the right tools will lead to more efficient and effective control. Back in the old days some growers would spray anything for everything. The awareness of natural solutions including bio stimulants and beneficial insects is a welcomed trend. I expect in the future, climate modelling and the use of tools like growing degree days, will be used to determine the likelihood of pests and diseases developing and will influence decision making to better apply control measures.

New actives that aren't synthetic pesticides are being developed, especially with pests such as long tailed mealybug (LTMB). Evaluation of chemistry to control LTMB was done in the 1970s and is still ongoing today. There needs to be better understanding in identifying the lifecycle stages of LTMB to ensure management techniques are applied most effectively.

Same with diseases. Climatic modelling is important to be able to understand the conditions that are conducive for disease development and then making sure effective control measures are in place. This will allow producers to better target their inputs to control diseases with reduced pesticide use which will reduce time and cost.

### How do you see viticulture changing in the next 50 years?

The use of AI is going to play a big part but also technology in general. The ability to identify disease, provide accurate crop monitoring, and predict conditions conducive of disease will play an enormous part in how grape vines are managed.

The next generation of wine grape varieties and rootstocks will emerge which will include proprietary varieties. These will feature more disease resistance and thus reduce inputs which will reduce costs and further enhance sustainable production which consumers are starting to demand. This may be a difficult shift for wine producers to accept this model of accessing plant material but from what I'm seeing in the table grape industry it will increase in momentum globally.

### What future challenges do you think viticulturists should be preparing themselves for?

The big one is changing climate, with all the modelling that has been done, the wine industry is quite well informed on this matter. My work with table grapes in Carnarvon (sub-tropical climatic zone) has demonstrated the challenges growing grape vines in those

types of climatic conditions, so it will require different practices and possibly different varieties and rootstocks in those types of climates.

Consumer expectations in terms of environmental credentials and the OH&S risk of using chemistry such as what we are seeing in Europe that is currently used to control insect pests, diseases and weeds could be lost. Evolution of varieties that are more disease resistant may partly or wholly address this issue in the future.

The skill set of modern viticulturists commonly includes a degree of some sort if not directly viticulture, but I think they will need to have a greater understanding of the environment and management of natural resources, all while understanding market and consumer expectations. It's a complex world especially for farmers and it will be just another aspect to work on and will be very challenging for small family-based businesses.

I have some concerns that there isn't enough research on rootstocks across both table and wine grape production, especially under WA growing conditions. Would be great to see some trials here in WA.

### What have you enjoyed about working at the department?

I've been fortunate to work at the department and in an industry that has passion and enthusiasm and willing to adopt new technologies and ways of doing things. The department has given me opportunity and responsibility, taken me all over the state and overseas on a few occasions with great flexibility. Working with generous growers around the state has provided much satisfaction. It's been a wonderful journey and it has been a pleasure to come to work every day, but the most satisfying aspect has been playing my small part in helping the WA viticulture industry to be successful.

### CSIRO's Innovate to Grow WA program returns for 2025

CSIRO's Innovate to Grow WA Program (I2G WA) is a free 8-week online program which helps small-medium sized enterprises (SMEs) build networks and develop skills to turn ideas into viable research and development (R&D) projects. In just over 4 years the national Innovate to Grow program has equipped over 600 SMEs with the knowledge and tools required to progress their R&D opportunities

I2G WA is open to WA based SMEs in the agrifood-tech, agribusiness and food and beverage sectors. As a participant you will utilise experienced facilitators and mentors to help you refine your innovation challenge. You'll also build an R&D business case and learn how to prepare strong funding cases.

The department is excited to support CSIRO with I2G 2025, giving WA SMEs the knowledge and tools to advance their innovations.



### Advancing sustainability in WA's wine industry

The Western Australian wine industry's Sustainability Program, co-funded by Wine Australia and Wines of Western Australia (WoWA) and led by Sustainability Program Manager Eloise Jarvis, is advancing sustainability across WA's wine regions.

Aligned with the Western Australian Wine Industry Strategic Plan 2024–2034, the program promotes best-practice Environment, Social, Governance (ESG) principles and sustainability certification to position WA's fine wine regions among the world's top 10 for sustainable wine production. A cornerstone of the program is the recently established Industry Reference Group (IRG) who represent all regions, large, medium and small wine producers and government. The IRG will provide strategic guidance and ensure the program addresses the unique needs of WA's diverse wine regions while fostering industry-wide collaboration.

The program's development began with the launch of WoWA's Sustainability Survey, inviting input from wine producers, growers, and businesses across the state. This was followed by the first round of sustainability workshops, Driving Sustainability in Wine – Collaborative Pathways to Certification and Growth, held in the Great Southern, Swan Valley, and Southern Forests during November and December. These workshops brought industry together to explore ESG frameworks and practical strategies for integrating sustainability into operations. Key topics touched on water conservation, biodiversity, carbon management, sustainable packaging, and biosecurity, with a focus on how aligning with ESG principles can enhance market access, build customer trust, and ensure long-term business resilience.



Eloise Jarvis presenting at the Swan Valley sustainability workshop

Sustainability certification was a central theme, showcasing how membership in Sustainable Winegrowing Australia can validate a winery's commitment to sustainability while boosting market competitiveness. By adopting practices such as efficient irrigation, renewable energy, and waste management, wineries can reduce costs, lower carbon footprints, and enhance their global reputation. Case studies from Xanadu Wines and Voyager Estate in Margaret River, Raidis Estate in Coonawarra, and Yarra Yering in the Yarra Valley highlighted the program's tangible impact as a management tool, demonstrating measurable improvements in energy savings, operational efficiency, and water use.

The workshops were interactive, aimed at capturing participant's sustainability activities, their ESG priority areas, barriers to certification adoption and how to navigate the Sustainable Winegrowing Australia member website. The information gathered will contribute towards development of a practical toolkit designed to assist industry with adoption of sustainable practices and certification. A preliminary review of the data collected shows that Western Australian wine producers consider biosecurity, water scarcity and management, and climate resilience and adaptation to temperature changes as top priorities. By contributing their insights and sharing challenges, participants are helping to shape resources tailored to the needs of WA wineries. These workshops underscored the importance of collective action in driving sustainability, emphasising that proactive steps today will not only safeguard the environment but also position Western Australia's wine industry as a global leader in sustainable wine production.

Thank you to Great Southern Wine Industry Association, Nikola Estate in the Swan Valley and Dept. Biodiversity, Conservation and Attractions, Warren Region Headquarters,

Manjimup, in the Southern Forests for hosting the workshops. The workshop presentation, video and slides, will be uploaded to Wines of WA's dedicated sustainability page – <u>Driving</u> <u>Sustainability in Wine</u> – in the New Year.

For further information on WoWA's sustainability program, contact Eloise Jarvis at <u>ProjectManager@winewa.asn.au</u>

### **Future events**

### **IoT Sensor Solutions to Monitor Your Winery**

Curious about how digital automation can benefit your food and beverage business?

Join this free webinar to discover simple, low-cost digital solutions that can help you generate valuable data from your everyday processes. We'll introduce you to a proven model adopted from Cambridge University, designed to build digital capabilities within businesses. By collecting and owning your own data, you'll gain insights that can drive improvements, and we'll provide support through educational partnerships to help you take the next steps.

If you're unsure where to start, this webinar will introduce practical starter solutions and show you how to begin your digital journey.

Date: 12 February 2025 Time: 10am Duration: 60 to 75 minutes

<u>Register</u> now to learn how to monitor winery operations, improve logistics, and empower your team with easy-to-deploy digital tools.

### **Australian Wine Industry Technical Conference**

Held every 3 years since 1970, the Australian Wine Industry Technical Conference (AWITC) combines an extensive program of plenary sessions, workshops, posters, student forum and social events with the industry's most respected and extensive trade exhibition.

The 19th AWITC will be held in Adelaide 20-23 July 2025. This event will incorporate the Outlook Conference in partnership with Australian Grape & Wine and feature the WineTech trade exhibition in collaboration with the Wine Industry Suppliers Australia Inc. and Expertise Events.

Further details can be found at on the <u>Australian Wine Industry Technical Conference</u> <u>website</u>.

The Chief Executive Officer of the Department of Primary Industries and Regional Development and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it. Copyright © State of Western Australia (Department of Primary Industries and Regional Development), 2004.