



HOUSE OF REPRESENTATIVES

Standing Committee on Industry, Science and
Resources

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About Us

Australian Grape and Wine Incorporated (Australian Grape & Wine) is Australia's national association of grape and wine producers, recognised as the representative organisation for the sector under the *Wine Australia Act 2013* and incorporated under the *SA Associations Incorporation Act 1985*. Our role is to help forge a political, social and regulatory environment - in Australia and overseas - that enables profitable and sustainable Australian grape and wine businesses. To do this, our activities focus upon the objective of providing leadership, strategy, advocacy, and practical support. We represent small, medium and large winemakers and winegrape growers, with policy decisions taken by the Australian Grape & Wine Board requiring 80 per cent support, ensuring no single category can dominate the decision-making process and guaranteeing policy is only determined if it provides significant industry benefit.

Wine is grown and processed in every state of Australia. There are over two thousand wine producers and approximately six thousand grape growers, a vast majority based in regional Australia; for some their businesses are also their family homes. The sector has traditionally been a leader amongst agricultural industries in promoting locally grown and value-added production. Its businesses support employment of over 160,000 people in winegrape growing and production, regional exports and food and wine tourism, making a significant contribution to growing Australia's rural and regional economies. Our strong connection to and reliance on the land makes us unique in beverage manufacturing.

Value adding post-farm gate is a well-recognised strategy across agriculture for businesses to optimise returns. It will contribute to agriculture sectors reaching their respective economic growth targets. As many businesses rely on debt financing for capital and growth, a combination of direct public investment and low-cost finance options will contribute significantly to achieving the growth ambitions of Australian value-added food and beverage products. Australia competes in a global environment where we experience competition with heavily subsidised nations. Other challenges include access to and cost of labour and that fact that we are a small and in some cases distant market for businesses looking to bring in or establish new technologies on our soils.

The challenge ahead

Australian Grape & Wine commends the House of Representatives for recognising the need to advance manufacturing in Australia and specifically in post-farmgate food and beverage manufacturing and packaging.

Success factors for manufacturing will require a strategic approach to innovation with due emphasis on quality and workforce skills and a supportive public policy and investment environment. Australia is a small economy so developing perceived value through superior quality and exclusivity (premiumisation) should preside over strategies that target low cost of operations. Although this inquiry focusses on value-adding post farm gate, our ability to produce high quality raw inputs remains crucial to meeting this important objective of premiumisation.

Australian farmers are some of the least subsidised in the world – second only to New Zealand in terms of countries where comparable information is available. As measured by the OECD, just over 2 per cent of Australian farmer revenues in 2016-18 were derived from government support. ¹ Australia is lagging behind similar countries in public funding of basic research. ² According to a Productivity 2021 report, we have also ranked last in the OECD on research collaboration between businesses and public or academic institutions since at least 2013. ³

Despite this, Australia's innovation inputs ran high Among OECD countries, but output indicators are less

¹ <https://www.agriculture.gov.au/abares/research-topics/trade/analysis-of-government-support-agricultural-producers>

² [A slippery slope - basic research underfunded in Australia - UQ News - The University of Queensland, Australia](#)

³ [Australian Manufacturing Industry - PC Submission](#)

impressive.⁴ This could be due to lack of access to the right incentives for driving commercialisation of research. Climate mitigation and adaptation actions are also considered to lag behind those of other OECD countries, especially those in Europe.⁵ A recent discussion paper for the Agriculture and Land Sectoral Plan acknowledged that investment into developing innovative new technologies is also needed if we are to respond to the market drivers related to climate change.⁶ Many of the same pressures facing farmers apply downstream of the supply chain impacting if and how we value-add to our agricultural produce.

The global environment is evolving quickly. As the pace of change continues to escalate, so must our ability to innovate and adapt. It is clear that an improvement in innovation requires improved focus on research investments that lead to commercial outcomes.

We expect that the following mega-trends will shape our industry into the future:

- A more health-conscious society;
- Pressures due to climate change and biodiversity loss;
- Digital, data and tech transformation;
- Growing protectionism impacting trade and competition; and
- A younger generation with different perceptions of value.

Our ability to develop and access new technologies will be an important influence on how we evolve as an industry as new opportunities arise, consumption patterns change and as the world continues to demand more from businesses. Australia could set itself up to become a global leader in the following:

- No and low alcohol wines;
- Circular solutions, particularly for packaging waste;
- Technologies for lowering emissions;
- Digital and data technologies along the supply chain; and
- Understanding changing value drivers.

Our sector and our supporting supply chain businesses have a proven ability to be global leaders in wine production, known for wine quality, consistency and advances in sustainable packaging. Our hey days in the 90's coincided with the beginning of a globalisation trend that has continued until recently. Our growth, and our superior reputation for wine, was fuelled by the application of scientific methodologies, identification and elimination of wine faults, investments in modern equipment and storage and consumer research driven advances in winemaking, packaging and marketing. This all may seem simple now compared to the technological opportunities and challenges of today, but these past achievements demonstrate our ability to lead. Wine, and the wine value chain has strong potential to play a significant role in contributing to Australia's advanced manufacturing sector.

We now operate in an environment of increasing protectionism. To regain the position as a leader in wine innovation we need to ensure we are not at a competitive disadvantage to other wine producing nations. Research and innovation needs to occur across governments, industry and academia. This will require greater public and private investment and easily accessible incentives. Government can further assist by creating a business enabling

⁴ https://www.oecd-ilibrary.org/sites/eco_surveys-aus-2017-7-en/index.html?itemId=/content/component/eco_surveys-aus-2017-7-en

⁵ Iyer-Raniga, U. and A. Gajanayake (2023), 'Australia', in Fauziah Zen and Usha Iyer-Raniga (eds.), Financing Infrastructure for Climate-Change Adaptation in Developing East Asia. ERIA Research Project Report FY2023 No. 05, Jakarta: ERIA, pp.128-150. https://www.eria.org/uploads/media/Research-Project-Report/RPR-2023-05/11_Chapter-7-Australia..pdf

⁶ Department of Agriculture Fisheries and Forestry (2023) Agriculture, Land and Emissions Discussion paper

environment through evidence based public policies and avoidance of undue regulatory pressures or increases in taxes and levies.

There are global examples of where investment aimed at innovation and commercialisation of new technologies has been most successful. With such support from Government, the wine sector can advance its capabilities in manufacturing and value-add to the economy through strategies such as:

- Seeking ways to attract additional external investment into the sector by exploring partnerships and co-investment opportunities;
- Enhanced utilisation of data for informing businesses, customers and stakeholders;
- Ensuring businesses have access to timely information and educational resources;
- Fostering collaborative networks among producers, suppliers, distributors, and logistics partners to streamline supply chain processes and share best practices;
- Ensuring products and processes align with global standards required for market access; and
- Capacity building, particularly in the next generation of winemakers;

Potential barriers to uptake of new technologies and new product development

- In **Australia** the scale of the obtainable market for innovative businesses is perceived to be small;
- **Poorly aligned R&D investment** as a result of sub-optimal project design and/or lack of networks to ensure translation of R&D into commercial outcomes;
- **A resource constrained environment** due to lack of access to capital, particularly for small and medium sized wine businesses – funding to meet our objectives is unlikely to be available from within the industry alone;
- **Market power** issues have risen over the last two decades due to the liquor retail oligopoly, adding pressure to producers and hampering business confidence;
- **Socio-technical factors** exist because Australians are risk averse - there is undue scepticism about the value of new technologies, lack of trust and understanding in digital technologies, data transparency and distribution and data ownership.
- **Poor value proposition** is especially prevalent in the context of tackling negative externalities where there is significant public benefit but, in many cases, very little private benefit and/or extended pay back periods associated with the new technologies required.

Innovation trends and new technologies, both locally and internationally

The grape and wine sector hosts some of the most innovative new technologies available and remains a receptive testing ground to develop solutions that can then be used globally and in other sectors, including sophisticated manufacturing and environmental management. Several emerging trends and technology opportunities are highlighted below.

eLabels

A key part of an efficient packaging future for Australian wine is the “e-label”. With digital labels we have the ability to better inform consumers about the products they purchase and how to enjoy them responsibly. QR Codes can be used to direct consumers to a digital label where they can find real time information on ingredients, nutrition, alcohol and health and local responsible drinking guidelines. Such labels have the ability to use geo-location technology so that information can be provided in the local language and tailored to the specific requirements of

that market. Since Covid-19, consumers have more experience using QR codes which are an efficient way to provide them with the information they require about the products they purchase.

Without acceptance of modern labelling alternatives such as QR Codes for delivering mandatory label requirements, Australia will be left behind our competitors incurring the high cost of multiple label runs. Other markets such as the European Union already permit QR codes as a tool to provide consumers with mandatory nutrition information. As a product that ages, wine is different from many other food and beverage products. In the non-vintage category such as sparkling wines and fortified, if optimising quality is the prevailing objective, there can be slight variations in sugar (and potentially also alcohol) content between successive bottlings of the same blend, putting the energy content of the wines outside the acceptable tolerances. The recent labelling proposals consulted on by FSANZ such as Proposal P1059 Energy Labelling on Alcoholic Beverages which do not include QR codes as an option are an example of an undue regulatory burden Australian winemakers might face.

Environmental Social Governance

Environmental Social Governance (ESG) considerations are increasingly impacting trade and market access policy positions, including Free Trade Agreements (FTAs), as well as procurement policies of major retailers. ESG regulations nearly doubled in the 5 years to 2021.⁷ The EU and UK are seeking to apply ESG-related obligations in FTA negotiations.⁸⁹ Globally, several retailers have introduced baseline ESG standards for wine products. This enforces minimum ESG credentials for suppliers as a condition of trade.

To future-proof the Australian wine sector and realise our goal to position ourselves as a world leader in ESG, the sector will need to invest. Many of the costs involved in building the frameworks and infrastructure for sustainability reporting cannot easily be justified by single businesses on their own. As an advanced manufacturing sector, our sustainability program 'Sustainable Winegrowing Australia' is a sophisticated program developed over fifteen years. As a result of this robust program, we are advanced as a sector and as a nation in our approach and in our ability to measure, manage and report, but less so in uptake and market penetration and in reputation compared to countries such as New Zealand. As pressures mount, there remain opportunities to leverage this world class program and to enhance our reporting efficiency and in turn our performance and reputation as a sector.

Packaging and transport are responsible for almost three quarters of the Australian wine sector's emissions comprising 44 per cent and 29 per cent respectively.¹⁰ Packaging in particular is one of the largest contributors to the environmental and carbon footprint of our sector. Proposed EU regulation sets requirements for recycled glass content at 70 per cent in 2025 and 75 per cent in 2030. This will apply to all imported products.¹¹ The Australian Packaging Covenant sets requirements for 100 per cent reusable, recyclable or compostable packaging. By 2025.¹² Lower footprint packaging and circular solutions are therefore central to the sector's ambitions. At present, many alternative packaging formats are not viable, because they are either uneconomical, impractical or perceived as a quality risk.¹³ Our ESG Investment plan provides further details about collective sectoral investment opportunities

⁷ EY, The future of sustainability reporting standards, 2021.

⁸ UK Govt, UK-Australia FTA: sustainability and inclusion explainer, n.d

⁹ Department of Foreign Affairs and Trade, Australian-European Union Free Trade Agreement, n.d.

¹⁰ Wine Australia, Emissions Reduction Roadmap, 2023

¹¹ European Commission, Proposal for a Regulation of the European Parliament and the Council on Packaging and Packaging Waste, 2022

¹² Australian Packaging Covenant Organisation, National Packaging Targets 2025

¹³ Wine Australia, ESG Investment Plan Consultation Insight, 2023

in ESG including packaging and sustainability certification.¹⁴ Many of these investments could potentially be leveraged by others in advanced manufacturing sectors.

Evolving wine for the future

No and Low Alcohol (NOLO) Wines, as well as precision fermentation techniques for enhancing flavour are set to change, if not revolutionise, tomorrow's wine product offering. We see this as another area where Australia must position itself ahead of the game.

Health and wellness is arguably the most influential trend impacting wine consumption. This has seen alcohol consumption fall, including for wine. Some people are abstaining from drinking wine, others are drinking less but paying more while some are seeking no and lower alcohol options. The ever-growing focus on health and wellbeing, including drinking in moderation is having a profound impact on consumer purchasing decisions, driving them for quality over quantity and wines of lower alcohol content.

NOLO wines and other grape based products provide an avenue through which we can drive positive trends in moderation, while continuing to drive economic growth. The pace of growth of the NOLO alcohol category is expected to surpass that of the last 4 years, with forecast volume CAGR of +7per cent, 2022-26 with recruitment at its highest in the Gen Z age group.¹⁵ But unfortunately the NOLO wine product category is falling behind other NOLO liquor categories. Wine industries around the world have been unable to deliver quality and mouthfeel in line with customer expectations that beer and spirits have. The biggest opportunity appears to be in the mid-strength category at 7-9 per cent alcohol content.

Our world leading wine science, led by institutions such as the Australian Wine Research Institute (AWRI), drove Australia's export success in the 80s and 90s, enabling a competitive edge in reputation for quality, consistency and value. There is a clear opportunity for Australia to lead the world in research and innovation with a particular focus on NOLO wines and other grape products. Fermentation technologies can allow for enhanced quality in all wines through production of certain flavour compounds. This can be achieved with advances in fermentation equipment and microbiology; albeit that some of these technological opportunities may require acceptance of new breeding technologies currently under question by FSANZ Proposal 1055 regarding modernising gene technology definitions.

Through advances in flavour chemistry and development of new technologies relating to volatile and non-volatile compound production we can create improve quality whilst reducing input costs. Importantly, we can potentially create great tasting NOLO wines before our international competitors and have first-mover advantage. This will drive job creation in higher-value employment categories in rural and regional areas where such opportunities are currently limited, while also helping to rebalance the supply-demand situation in Australia's grape and wine sector. However no one business alone has the resources to invest in the research required to find cost effective solutions for NOLO wines that are competitive with other NOLO categories. Without affordable technologies, this significant growth opportunity could be lost with small and medium producers in particular, liable to be left behind.

¹⁴ Wine Australia (2022) ESG Investment Plan [PowerPoint Presentation \(wineaustralia.com\)](#)

¹⁵ <https://www.theiwsr.com/key-statistics-the-no-alcohol-and-low-alcohol-market/#:~:text=Theper cent20paceper cent20ofper cent20growthper cent20of,5per cent25per cent2Cper cent202018per cent2D22.>

Digitisation, data and technology

Digitisation, data, and technology will revolutionise operations, from the vineyard to the point of sale. The future will demand that we have robust systems and protocols to ensure compliance with regulatory standards, including labelling requirements, environmental regulations, and quality control. We have the potential to reshape production methodologies through the integration of reliable data informed decision-making. Wine processing will also be increasingly dominated by equipment automation and precision fermentation technologies. Digital solutions and automated systems can be leveraged to minimise costs, reduce wastage, better target our wine styles to consumer preferences, enhance our sustainability credentials and improve traceability.

The opportunity comes coupled with challenges that need to be addressed. These include scepticism and lack of trust, lack of digital literacy, resourcing constraints and connectivity issues. Lack of public policies to protect data ownership rights of businesses and provide confidence in how data is used and benefitted from could mean that the cost to benefit of these new data technologies is sub-optimal.

To generate broader adoption we not only need the means such as standard data formats and efficient processes that facilitate exchange, but we need robust governance frameworks and standards to maintain trust of both the sector and its stakeholders. Success will come with better collaboration with suppliers, distributors, and logistics partners to streamline supply chain processes, across production, packaging and wine distribution.

Ways to support new and emerging products and industries, including premium and niche products, new proteins and Indigenous foods

Given the challenging economic environment, industry funding is a serious constraint to innovation in wine. Therefore, seeking additional financing is crucial for business to survive, revive and continue to thrive once we emerge from today's global wine glut.

Opportunity often stems from adversity. There are wine producers with strong potential to emerge from these difficult times with greater strength and resilience. Now is the perfect time for these businesses to invest in transforming vineyards, wineries and product offerings so that they are fit for the future. A reset of the industry to favour higher value and more sustainable production would go a long way towards driving the sector forward so that more businesses survive these difficult times. There are many wine regions and businesses across Australia that are excelling in the premium price categories but those that are struggling are threatening our ability to maintain the high value reputation we must uphold. Australian wine producers cannot operate sustainably as price takers. Our wines must command a premium on the global market. Additional resourcing will expediate our objective to become the global leader in wine we once were.

Australian wines will increase their penetration into the premium and niche product markets, if we can foster more collaborative networks both outside of the sector and across the value chain to share best practices, industry insights and technological solutions, facilitate knowledge exchange and accelerate innovation in wine. This should include international and cross-food-sector collaboration, whether it be through sharing of cutting-edge research or simply funding our future leaders to travel and learn. Such initiatives can be supported through:

- Government policies that improve collaboration between wine producers (particularly small and medium-sized enterprises) and research organisations, from initiation to product development and refinement.
- Retain existing Government support for research and innovation through both the R&D tax incentive and the Primary Industries Disbursement legislation, as well as additional funding pools for investments targeted

- at capitalising on new opportunities such as NOLO wine production;
- Incentives for private enterprise including direct rebates or tax breaks such as instant asset-write offs or accelerated depreciation to encourage investment in new product development;
- Supporting public private partnerships models such as the Cooperative Research Centres;
- Addressing legislative barriers, particularly those associated with labelling (eg. eLabels), acceptance of new technologies such as new breeding techniques and ensuring regulations keep pace with science;
- Investment in knowledge sharing; and
- Consumer research to better understand and predict shifting consumer trends.

Opportunities across both domestic and export markets for Australian manufactured products

Global wine consumption has been falling consistently over the last decade. Although some consumers are abstaining from drinking wine, others are drinking less but paying more, while some are seeking no or low alcohol wine options. Global trends have seen wine consumption at premium wine segments (US\$10 or more per bottle) grow, while consumption at the commercial end (less than US\$10 per bottle) has been declining. As consumers seek quality over quantity, wine is moving away from being an everyday drink to a speciality and occasion-driven drink. This highlights the case for advancing our processing techniques to target recognised quality attributes that afford a price premium.

Younger consumers are also driving the important premiumisation trend. However, gen-Z drink on average 20 per cent less than millennials, who also drink less than the previous generation.¹⁶ Their knowledge is lower, they tend to drink less wine on each occasion and have the highest levels of moderation. However, they will rise in number and as future trend setters they will be increasingly important. Anecdotal evidence suggests that people like to drink wine made by people their own age. So, recruitment of the next generation into careers in wine will be vitally important if we are to make wine that appeals to younger generations. Yet today we have 53 per cent of people in the 45 plus age bracket compared to 38 per cent in 2001.¹⁷ ¹⁸ Younger consumers are also driving the NOLO category, where wine is under-represented.

With global wine consumption in decline, driven by moderation trends, the growth opportunity for Australian wine is to recruit new consumers, rather than encouraging existing wine drinkers to drink more. There is a large cohort of people who have yet to discover Australian wine. Research from Wine Intelligence on seven key wine export markets (USA, Canada, UK, Japan, South Korea, India and Vietnam) showed there are almost 200 million regular wine drinkers across those markets. Of these, 100 million are aware of Australian wine but only 42 million drink it.¹⁹ This suggests that there is an untapped pool of almost 160 million people that currently drink wine but do not currently drink Australian wine. Extrapolate this across more markets, and the pool grows significantly.

The biggest opportunities are in the more mature markets where commercial sales are declining but premium wine sales are growing. Thus, premiumisation of the Australian wine offering will be a key aspect of growing these markets. Australia's share of premium sales is well below its share of the commercial segment. For example, Australia

¹⁶ <https://www.forbes.com/sites/claraludmir/2023/06/27/why-genz-is-drinking-less-and-what-this-means-for-the-alcohol-industry/?sh=1386cd4e48d1>

¹⁷ <https://labourmarketinsights.gov.au/>

¹⁸ ABS (2001) <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1329.0Main+Features12002?OpenDocument>

¹⁹ Wine Intelligence (2023) sourced from <https://www.wineaustralia.com/news/market-bulletin/issue-296>

holds an 11 share of the imported premium wine market in the UK and 9 per cent in the US. Growing (and protecting) the domestic market will remain a key objective especially in the premium wine category.

There are opportunities in markets in Asia such as South Korea, Japan, Singapore and Thailand – markets where Australia already has a premium wine presence. Emerging markets for Australian wine exist in the Americas such as Brazil and in smaller markets in Europe such as Sweden, Belgium and Ireland. New Zealand is also a small but growing market and Australia is by far the number one imported wine in that market.

India continues to be an important future emerging market for Australian wine and a significant long term growth prospect. To unlock its full potential requires ongoing investment. The benefits of recent tariff reductions under the Australia-India Economic Cooperation and Trade Agreement (ECTA), have improved the prospects for Australian wine in India however it is critical that Australia continues to build on this in the next stages of FTA negotiations. Albeit that we appreciate the improvements, the current import tariff rate at 150% restricts the volume of wine that can reach this market at a competitive price. Therefore, ongoing Government support will be integral to securing a prosperous trading relationship and the future potential of this market for both Australian wine and agriculture. Australian Grape & Wine has undertaken a long term strategy for working with the Indian Government authorities and their wine industry towards greater technical and regulatory cooperation, scientific information exchange and harmonisation of standards. This work links to and supports joint dialogue engagement under ECTA.

Consumers are more diverse than ever before driven by global migration. This is shaping the global economic and consumer landscape. Although migration is a global trend, it is concentrated in a relatively small number of countries, with the US being the top destination for immigration and India for emigration. By 2040, the global population is expected to reach nine billion and the demographics of the population will continue to evolve. While the advanced and developed countries have a greater capacity to spend now, economic power is shifting to emerging and developing countries, particularly in Asia and this translates to a growing purchasing power in these countries in the future. There has been tremendous value in initiatives such as the Agricultural Trade and Market Access Cooperation (ATMAC) program and the various traceability grants.

The ability to move into new markets and increase revenue is critical to longevity. Entering new markets and developing new products requires investment in market research, providing wine businesses with valuable insights to make informed decisions about their products, marketing strategies, and overall business direction. This includes consumer research and insights. To unlock these 160 million consumers that drink wine, but not Australian wine, requires a greater depth of understanding of the needs and motivations of consumers, both in mature and emerging markets, especially in the growing Asian region. To tailor products for each market, each market segment and the different demographic groups requires deeper understanding of consumer preferences, behaviours, and buying patterns. We also need to consider innovations in packaging and look outside the traditional 750ml bottle.

Environmental, social and governance (or ESG) is an area that the Australian wine sector cannot ignore. Consumers are more worried about the state of the planet and making more sustainable choices than ever before. To meet the increasing demand for environmentally-friendly products, companies and retailers are growing their product portfolio with sustainability claims that attract consumers and influence purchases. From the perspective of the wine sector, embracing sustainable practices helps create a purposeful brand story. In addition, retailers and distributors are increasingly demanding compliance with sustainability policies, and this has impacted on how wine is shipped to export markets. Working closely together with Australian Grape & Wine, Wine Australia supports the sector to respond quickly to market access changes and regulatory requirements to ensure products and processes align with standards required of international trade partners.

Consumers motivated by sustainability in their purchase habits are more likely to be younger, higher-income and more engaged with alternative wines. This is supported by some recent research which showed that in the USA, 28 per cent of wine drinkers aged in their 20s cited sustainable practices as being “very important” in their wine purchase decisions, compared to 23 per cent of those in their 30s, 12 per cent in their 40s and 8 per cent of the over 50s. The wine sector is already responding to the demands of consumers and retailers with sustainability related product innovations. Meeting such demands has also seen the development of alternative wine styles such as natural wines, preservative free wines, organic wines, and biodynamic wines.

Further success will come from public investment towards global brand strengthening, capitalising on emerging markets, research to support a more customer-centric approach and product diversification. Priorities of the wine sector include:

- Re-establishing market presence, particularly in the re-opened China market, through targeted initiatives and strategic investments;
- Promotional campaigns, trade events, and support for exporters entering new markets and industry-led marketing initiatives;
- Marketing programs that embrace a customer-centric approach by better understanding and adapting to consumer preferences both domestically and in key international markets;
- Conducting market research. Eg. setting up of focus groups to develop marketing strategies tailored to specific consumer segments;
- Collaborative initiatives in export markets that prioritise customer preferences;
- Diversification of wine styles to cater to evolving consumer preferences and market demands. Eg. new varietals, wine styles, and packaging formats that enhance market competitiveness;
- Support for developing and promoting sustainable practices to align with market expectations;
- Favouring targeted programs to encourage responsible drinking such as NOLO wines rather than addressing alcohol harm through non-discriminatory, population-wide measures; and
- Support towards free-trade and in resolving potential non-tariff trade barriers including the protection of varietal names such as Prosecco.

Approaches to circular economy, waste reduction and decarbonising, including packaging and food waste;

At the 28th Conference of the Parties, sustainable agriculture was acknowledged as a key part of responding appropriately to climate change. Importantly, the signed commitment includes a pledge of support for agricultural sectors by ‘scaling-up adaptation and resilience activities and responses in order to reduce the vulnerability of all [these sectors] to the impacts of climate change, including through financial and technical support for solutions, capacity building, infrastructure, and innovations.

There is a commitment of signatories to orient policies and public support related to agriculture and food systems to promote activities which increase incomes, reduce greenhouse gas emissions, and bolster resilience, productivity, livelihoods, nutrition, water efficiency and human, animal and ecosystem health while reducing food loss and waste, and ecosystem loss and degradation; and to continue to scale-up and enhance access to all forms of finance from the public, philanthropic and private sectors. This included through blended instruments, public-private partnerships and other aligned efforts to adapt and transform agriculture and food systems to respond to climate change. Upholding this commitment will have flow on benefits to vertically integrated businesses involved in advanced manufacturing who rely on the supply of low emissions agricultural produce.

There is significant public benefit involved when it comes to tackling sustainability but, in many cases, very little private benefit and/or extended pay back periods. Without greater Government support, sectors such as wine who are reliant on agriculture will bear an inequitable burden. Therefore, greater levels of public investment in outcomes-based sustainability research and adoption is needed and justified and it is critical that this investment keeps pace with other developed jurisdictions.

The wine sector has recognised the growing need for sustainability from land management through to end product. This is fuelled by the burgeoning demands of consumers, retailers and governments. Product innovations include a move toward more sustainable packaging types such as lighter glass bottles, cans, sustainable seals, bag-in-box, and polyethylene terephthalate (PET) bottles. Wine Australia's ESG Investment plan highlights the need for regional support for businesses to build ESG capacity and for resources to assist business prioritise and implement practice improvement. The plan recognises the need for targeted adoption programs offering the latest information and advice. With production being particularly susceptible to climate change, Wine Australia has invested significant levy and Government funds on climate resilience for at least two decades. Participation in cross-sectoral programs such as Rural R&D for Profit, Climate Research Strategy for Primary Industries, the RDC's Climate Initiative, Agriculture Innovation Australia and the One Basin CRC have allowed leveraging of limited funding. Our commitment includes building resilience to climate change in parallel with driving climate change mitigation in line with our Emissions Reduction Roadmap, which provides a blueprint and practical tools along with advice for the Australian grape and wine sector to reduce its emissions. Australian Grape & Wine's recent submission to the Government's Agriculture and Land Sectoral Plan contains further details and recommendations related to emissions management.²⁰

How the research sector can help to grow this ecosystem;

Our sector's RDC, Wine Australia has made a commitment to assist wine businesses by various means such as identification of grants, unlocking opportunities for co-investment, and actively pursuing collaboration with other agriculture sectors and private business. This will include partnerships to improve digital literacy and enhance technical capabilities within the industry, to foster greater adoption of beneficial technologies. Further information regarding this commitment will be outlined in the One Grape and Wine Sector Plan, a final version of which is soon to be made available on the website.²¹

It will be essential that Australian universities start to improve their focus on research that generates innovation outputs, commercialisation of new technologies and delivering graduates with skills that are tailored to workforce needs. Incentives that favour publishing of papers over contribution to the innovation economy should be reigned in. There needs to be more collaborative networks between researchers and producers, suppliers, distributors, and logistics partners to streamline supply chain processes.

With many wine businesses based in regional areas they are at a disadvantaged when it comes to applying for and winning grants as distance tends to prevent the development of one-on-one relationships between grant makers and rural grant seekers. Furthermore, application and acquittal requirements that are familiar territory for experienced fundraisers can be extremely daunting for small businesses creating another barrier to business innovation.

²⁰ <https://www.agw.org.au/wp-content/uploads/2024/03/Agriculture-and-Land-Sectoral-Plan-Submission.pdf>

²¹ <https://www.wineaustralia.com/whats-happening/one-sector-plan>

The Australian Government can further assist through:

- Raising awareness in regional areas about what public funding is available such as through events that educate and upskill rural groups in grant acquisition;
- Simplify application, monitoring and reporting requirements involved in grants;
- Mechanisms to support RDCs such as Wine Australia, individual businesses who undertake research as well as the highly valued CRCs that support various industry innovation opportunities; and
- Fostering collaborative networks between researchers and businesses.

Future workforce and skills needs;

Wine Australia's analysis of census data indicates that employment in wine manufacturing grew by 5 per cent from 14,387 people in 2011 to 15,054 people in 2021. This was largely driven by an increase in the number of female employees, which grew by 15 per cent over 10 years from 4992 people in 2011 to 5750 people in 2021.²² However as discussed previously, the workforce is aging.

The wine sector competes with many other industries for people who have expertise in artificial intelligence, machine learning and big data and other skills require to address the most pressing problems facing advanced manufacturing. These skills are important to the ongoing futureproofing of our sector but also provide a transferable base across many industries including defence, space, and engineering.

Innovation and education are critical to the sector's ongoing success. Taking a collaborative rather than competitive stance, aligned to a more agile whole-of-education pathways approach, will have wider impacts. This speaks to a Department of Agriculture and Water Resources report which concluded 'The effectiveness and efficiency of Australian innovation today is undermined by poor cross-industry and cross-sectoral collaboration, limited diversity of skills, difficulty in attracting new entrants and limited systematic approaches to innovation'.

Another approach is seeking out collaborative opportunities to address skill issues and to increase labour productivity. Some of the actions recommended in the EY report *Cultivating a shared vision for agricultural innovation*, and encouraged by the grape and wine sector, are:

- Greater cross-sector exchange and strategic collaboration;
- Leveraging of local and regional expertise to encourage adoption of research and development and value-adding; and
- Reliable connectivity infrastructure to enable adoption of high-impact technology;

Labour and skill challenges impact individual wine businesses and regions differently, although current key challenges impacting the Australian wine sector may be summarised as:

Technology

While workforce skills development is in no doubt important, this goal needs to be strived for in parallel to innovations that allow for increased productivity. This includes embracing the equipment automation and unlocking the potential productivity gains that autonomous labour affords so that Australian wine producers can continue to

²² <https://www.wineaustralia.com/news/market-bulletin/issue-283>

complete with economies who have access to much cheaper workers. Australian Grape & Wine were recently informed of a business that shut down one vineyard site due to lack of access to contractors. The Government can assist by avoiding poorly thought out reforms that lead to perverse outcomes in the labour market and/or drive up the cost of direct and indirect labour employment.

Data improvement

- There is a gap in availability of fit-for-purpose and timely data to demonstrate the challenges and opportunities relating to current, and future workforce skill needs and labour shortages;
- Lack of projections about the type of new skills and number of specialised employees required to drive growth and sustainability;

We welcome the current Food Supply Chain Workforce Capacity Study underway by Jobs and Skills Australia that will explore the challenges and opportunities that sit across food production, manufacturing, and distribution.²³ The food and beverage sector has much to gain from deeper understanding of workforce data and labour market dynamics of the food supply chain.

Solving the attraction problem

- There is a pressing need to address the attractiveness of employment and career pathways across wine and beverage manufacturing, to encourage more young people into the sector, as well as addressing growth and sustaining employment opportunities in the regions; and
- A contributing problem in lack of housing and accessibility to essential services.

Industry and education relationships

Educators seek to ensure course content meets the needs of industry, generally through establishing industry reference groups during formal course review periods. However evidence suggests that there remains a lack of alignment between industry and educator perceptions of skill development. We hear that much of the content of both VET courses and Bachelor degrees is out of step with current industry practice. In particular, Units of Competency in the VET system is considered as unsatisfactory and the cost to benefit of the substantial workload involved is unconvincing.

Upskilling strategies

There is a need to come up with more effective ways to upskill the workforce across formal, on-the-job, and alternative training models. Strategies need to recognise the different needs of large versus small businesses and commercial versus premium producers. Larger businesses have more resources for staff development whereas smaller businesses either need to rely on formal qualifications or look at alternative approaches. They often cannot compete on professional development, but all individuals in the industry need to have equal access to learning and development opportunities. Strategies to improve this situation include:

- Alternative upskilling approaches beyond what is provided by traditional education systems;
- Innovations emerging from within the education system. For example, micro credentials that are easier to fit in with existing work commitments;

²³ <https://www.jobsandskills.gov.au/consultations/food-supply-chain-discussion-paper>

- On-the-job training, particularly for developing core skills in vineyard and winery practices; and
- Government supported up-skilling programs.

An example of a successful program that is highly valued by industry is the EcoVineyards project where growers are supported to develop skills, with centralised industry developed online resources and a network of Regional Coordinators.²⁴ The Australian Government Women in STEM Cadetships and Advanced Apprenticeships Program provided women in the wine sector with the opportunity to complete the Diploma of Digital Technologies course with Flinders University.²⁵ This course covered how digital technologies can transform the wine sector through the application of robotics, sensor-based solutions, automation, and data analytics. Flinders University designed the course to meet the needs of industry, offering a hybrid approach, support for regional participants, and timetables that did not impact participants during the busy vintage period.

Diversity, Equality and Inclusion

The following statistics supports the need for more to be done to address participation and retention of historically underrepresented groups in the workforce.

- 86 per cent of winemaking manufacturing employees are from Oceania, followed by 6 per cent from North-West Europe;
- The ratios of employees from different continents remained largely static from 2011 – 2021; and
- Only 1 per cent of the workforce identify as Indigenous.²⁶

While female representation in the wine sector is increasing and women are making an increasingly important contribution, census data indicates the split remains at 38 per cent female and 62 per cent male.²⁷ Percentage in several key roles are outlined in the table below:

Role	2013		2023
Women CEOs	12.7%	↑	33.7%
Women winemakers	8.8%	↑	16.7%
Women viticulturists	10 %	↑	21.5%
Women marketers	53.5%	↑	58.4%

Galbreath, forthcoming, using Winetitles data

With respect to the gender pay gap, ATO data indicates that women in winemaking roles are earning \$14,000 on average less than their male counterparts. For women viticulturists and grape growers, women are earning \$18,500 on average less.^{28 29}

Initiatives that seek to address the participation and retention of women and other historically underrepresented groups are important drivers for expanding innovation. Australian Grape & Wine continues to drive advocacy for

²⁴ <https://ecovineyards.com.au/>

²⁵ See video here: <https://www.youtube.com/watch?v=88VNkaWbfNw>

²⁶ <https://www.wineaustralia.com/getmedia/b4ac586c-1b87-47f1-b48d-3fd6c8b5c452/Census-wine-data-2021.pdf>

²⁷ <https://www.wineaustralia.com/getmedia/b4ac586c-1b87-47f1-b48d-3fd6c8b5c452/Census-wine-data-2021.pdf>

²⁸ <https://winetitles.com.au/women-in-wine-to-push-for-action-on-gender-equality/>

²⁹ <https://www.wgea.gov.au/pay-and-gender/gender-pay-gap-data>

gender equality and operate under a Diversity and Equality in Wine Charter for the sector.³⁰ Wine Australia is currently investing in a scoping study, due for completion in early 2025, that will map the current state of gender equality in the sector and identify data gaps and opportunities for strategic intervention to improve diversity, equity and inclusion across the industry.

In summary, it is important that the technical support arms of the industry remain viable to protect our reputation for producing sound and sustainable wine that meets global compliance requirements as well as our consumer's evolving demands. Retaining access to a skilled workforce with advanced technical and analytical expertise ensures that we will have the capability and capacity to drive innovation, address sustainability measures and respond to acute and chronic industry challenges.

Mechanisms for the Australian Government to support further innovation and sustainable growth in the sector

The right solution for expanding innovation and value-adding in wine manufacturing, as outlined in the terms of reference, requires a multi-pronged approach as a one size fits all approach will not be the right solution for all stakeholders of this inquiry, nor for the diverse range of business models that exist within the wine sector. It must seek to get researchers better connected to the private sector drawing on international programs such as providing researchers time off to share their research. This submission has outlined a number of priorities that we believe will advance wine production. The overarching principles that the Government should consider include:

- Reducing impediments to domestic and foreign investment;
- Simplifying intellectual property (IP) access and regulation;
- Addressing legislative barriers, particularly those associated with acceptance of new technologies such as new breeding techniques;
- Working hand in hand with liquor sector to address alcohol related harm in a way that does not stifle business;
- Drawing on lessons learnt in other economies, re-evaluate funding criteria and incentives so that Australian universities heavily favour commercialisation over publishing papers
- Building agility into research projects such as stage gated project funding and mechanisms that support a 'fail fast' philosophy.
- Using direct rebates or tax breaks such as instant asset-write offs or accelerated depreciation to encourage investment in new technologies;
- Avoiding counterproductive and poorly targeted policies – this means remaining cognisant to the fact that while there is a lot to learn from how other economies stimulate innovation, not all regulations (namely those of certain Northern hemisphere jurisdictions) provide benefits nor make sense in the Australian environment;
- Addressing legislative barriers to advancement by ensuring regulations keep pace with science;
- Avoiding of punitive, administratively burdensome regulation such as container deposit schemes and (where possible) harmonisation of requirements across jurisdictions; and
- Building human capacity, particularly in regional areas.

³⁰ <https://www.agw.org.au/policy-and-issues/diversity-and-equality-in-wine/>

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We would be delighted to discuss this submission further should this be required.