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## Sustainability snapshot

Sustainability is an area of increasing importance for the Australian wine sector, with a number of external drivers at play. These include consumer and customer expectations, broadening definitions of sustainability, global climate and resource priorities and competition from other wine-producing countries. Demand for verifiable sustainability credentials is also likely to grow in a number of key markets. Drivers for sustainability are not just external – there is a strong internal motivation towards sustainable practices within the Australian grape and wine community. Many producers have a personal commitment to sustainability as part of their production philosophy, and also have a genuine desire to pass on resilient businesses to the next generation.

### 2017/18 sustainability data from Entwine Australia

Entwine Australia supports growers and winemakers in demonstrating and improving the sustainability of their businesses. It does this by annually aggregating sustainability metrics voluntarily supplied by its members and generating individual benchmarking reports which enable members to identify opportunities for improved performance. Vineyard members supply data including vineyard area, tonnes produced, energy sources and usage, water sources and usage, applied nitrogen, biodiversity area and vineyard floor management. Wineries report processing and packaging volumes, water use and reuse, wastewater generation and treatment, solid waste volume energy sources and usage, synthetic refrigerants and biodiversity area. In 2018, Entwine had more than 400 Entwine members who supplied data. This article outlines some of the highlights from the 2017/18 data and some comparisons with 2016/17.

In 2018, Entwine members from 374 vineyard and 33 wineries completed the annual reporting of sustainability metrics. A high proportion of members also attained third-party certification (28% of vineyards and 73% of wineries). Of the members, 140 also completed a survey of best management practices (BMPs) which covered land and soil, chemicals, fertilisers and additives, water, biodiversity, biosecurity, waste, air, energy and business management.

Entwine member vineyards accounted for 23% of Australia's vineyard area and Entwine membership covered approximately 30% of Australia's annual wine-grape crush (Wine Australia 2018). Members were located across 43 regions in five states. The majority of members were located in South Australia, with a high proportion also in the Murray Darling (Vic/NSW) and Margaret River (WA).

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## **Irrigation**

Of the Entwine member vineyards which used irrigation, 98% applied it using drip irrigation. Of those not using drip irrigation, most used undervine sprinklers. Of those who completed the BMP survey, 96% reported that they were making informed decisions regarding irrigation scheduling, including the use of soil moisture monitoring, weather data and predictions, visual assessment of vines and understanding the water-holding capacity of soil and vine water demand.

## **Chemicals**

Of the vineyard members who completed the BMP survey, 96% reported best practice across eight areas of chemical management including spray drift, maintenance and calibration of spray equipment, record-keeping, chemical storage, handling and application, chemical safety and disposal of chemicals. When planning a spray program, the relative effects of different products on the environment were considered and products which had the least negative impact on the environment were chosen whenever possible by 99% of the respondents.

## **Biodiversity**

In 2018, 86% of vineyard members reported active management of feral pests and environmental weeds to minimise their impact on the environment, compared to 82% in 2017. In 2018, 57% of vineyard members and 64% of wineries reported maintaining an area of their property that is dedicated to the enhancement of biodiversity. This represents a small (2%) decrease from 2017. In addition to on-farm biodiversity activities, 16% of members reported active participation in off-farm biodiversity projects in 2018. Of those who completed the BMP survey, 11% of members were not aware of regional biodiversity priorities. This is an improvement from 23% in 2017.

## **Biosecurity**

The results of the BMP survey showed that biosecurity is an area of management that continues to require improvement. In 2018, fewer members (78%) reported choosing accredited suppliers for their grapevine propagation material compared to 96% in 2017. Across areas of on-farm biosecurity systems, especially restricting, inspecting and controlling visitor access to minimise the risk of biosecurity incursions, 39% of members were operating at best practice, a similar number to 2017.

## **Energy**

In 2018, the proportions of winery and vineyard members using solar energy to replace or supplement electricity from the grid remained static at 42% and 11% respectively. Winery solar systems tended to generate more energy than the smaller vineyard systems.

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## Summary

Sustainability data is collected annually from vineyards and wineries across Australia. These highlights demonstrate a high level of awareness and adoption of sustainable practices across several key areas and identify areas for improvement, especially in biosecurity. Work is continuing to add value to the data gathered and work with producers and regions on areas recognised as opportunities for improvement.

## Future work

New work is currently underway, including a project that aims to establish an economic metric for sustainability. This project will identify and collect financial parameters which will be modelled with existing sustainability metrics to generate insights into links between environmental and economic performance. Once established, these will be used to develop grower case studies that demonstrate the improved economic returns achieved using sustainable practices and investments.

Mardi Longbottom, Senior Viticulturist – [mardi.longbottom@awri.com.au](mailto:mardi.longbottom@awri.com.au)

## References

Wine Australia. 2018. Australian wine sector 2017 at a glance. Available from: <https://www.wineaustralia.com/market-insights/australian-wine-sector-at-a-glance>