Entwine Australia

June 2018

For the past 18 months a national steering committee, comprised of representatives from the AWRI, Australian Vignerons, McLaren Vale Grape Wine and Tourism Association, Wine Australia and the Winemakers' Federation of Australia, has been working to improve the way sustainability programs are delivered to the Australian grape and wine sector. The AWRI, on behalf of the steering committee, acknowledges the support and contribution of many Entwine members towards what has been the most significant review of Australian wine's sustainability performance to date.

In August last year, the steering committee commissioned an independent, holistic independent review of the current global sustainability landscape. The review sought to understand:

- What are the global drivers for sustainability?
- What are the current drivers of international demand for demonstrating sustainability credentials?
- What should an Australian grape and wine sector sustainability program look like?
- What are the barriers to adoption of sustainability systems by either grapegrowers or wine producers and how can such impediments be overcome?
- How should Australian wine's sustainability credentials be communicated to the market?

The review included 65 interviews with a diverse selection of industry personnel – both in Australia and overseas – including independent growers, regional associations, international buying managers (trade customers), national bodies and marketing and finance executives. The final report is highly detailed and includes 31 recommendations for future research, development, member engagement and marketing.

In brief, the report recommends that:

1. The Australian wine sector should proceed with implementation of a single National Sustainability Program (NSP) based on the existing Sustainable Australia Winegrowing and Entwine resources, supported by robust verification services.
2. The NSP should be established under formal joint ownership of all the national industry bodies.
3. Sustainability should be integrated into all global marketing activity undertaken by the Australian wine sector. In particular, Wine Australia should increase the profile of sustainability in its promotional activities.

The report recommendations have been included in a business plan which is expected to be implemented in the next 12 months.

What does this mean for Entwine members now?

- Currently it is **business as usual for Entwine at the AWRI.** Membership renewals will commence in July and all members are encouraged to continue their membership to ensure a smooth transition into the new program in the next year.
- Transition arrangements to the National Sustainability Program will be planned over the next few months and communicated to Entwine members with plenty of time to adapt to any changes.

2018/19 Entwine membership opens in July

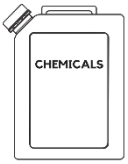
Certified members: Continue certification with Freshcare, SAW or ISO14001.

Members: Complete the practices survey.

Associate members: If you have been at this level for two years, it's time to move up to 'Member'.

If you have any queries about the Entwine membership arrangements, please contact the AWRI helpdesk on 08 8313 6600 or helpdesk@awri.com.au.

Highlights from Entwine members in 2016/17



96% of members 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.

95% of Entwine members make informed decisions regarding irrigation scheduling, reporting 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.
97% of irrigated vineyards are using drip irrigation

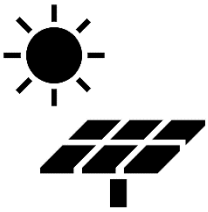
86% of vineyard members actively manage feral pests and environmental weeds to minimise their impact on the environment.

59% of vineyard and wineries reported that they maintain an area of their property for the enhancement of biodiversity.

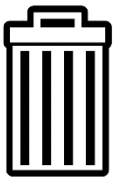
17% of members are either not aware of regional biodiversity priorities or are not actively managing riparian and other native vegetation. This is an area for improvement.

96% of members reported that they ensure the health and pest-free status of grapevine propagation material and reported sourcing material from accredited nurseries and Vine Improvement suppliers.

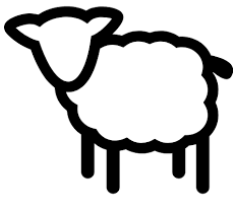
43% percent of members require improvement in on-farm biosecurity systems, especially restricting, inspecting and controlling visitor and vehicle access to ensure the risk of biosecurity incursions is minimised.



42% of wineries and **11%** of vineyards are using solar energy to replace or supplement electricity from the grid.



100% of wineries are recycling winery waste



38% of vineyard members graze sheep to decrease fuel and chemical inputs.

Vineyard sustainability linked to energy use

The AWRI has been working with growers across a number of regions on a project to identify and describe the unique features of sustainable Australian wine-grape vineyard businesses. Thanks to all of the Entwine members who were interviewed and provided their data to the study.

Energy use is a major source of greenhouse gas (GHG) emissions in vineyards. The primary use of energy in vineyards is in vineyard tractors used for spraying, slashing, pruning and harvesting and in pumps used to pressurise and deliver irrigation. Energy is also one of the highest costs in the production of wine-grapes and, as such, there are significant economic benefits to be gained by reducing energy use. In vineyards, this is primarily achieved in two ways: by reducing tractor use and by reducing irrigation. While it can be difficult to quantify, businesses that gain efficiencies in these activities can also profit from flow-on benefits to natural capital including decreased agrochemical inputs, improved soil structure, reduced soil compaction and reduced pressure on water resources. From a social and community perspective, reduced production inputs and more favourable economic outcomes for vineyard businesses are also beneficial.

In this study, Entwine member vineyards that used less energy also demonstrated a number of other positive attributes related to their environmental impact, economic performance and social awareness.

The AWRI will be continuing this work through the Food Agility Cooperative Research Centre. More information will be coming soon.

Entwine vineyards that use the lowest energy:

- **Use less irrigation per hectare**
- **Produce lower yields**
- **Use irrigation more efficiently (i.e. they grow more grapes per megalitre of irrigation)**
- **Have a significantly lower greenhouse gas (GHG) emissions intensity (i.e. less energy used per tonne of grapes grown)**
- **Are more likely to graze sheep in the vineyard**
- **Are more likely to have an area of their property dedicated to the enhancement of biodiversity.**

Member profile:

Katnook Estate Vineyard and Winery, Coonawarra

Entwine member since: 2012
Membership status: Certified
Winery category: 500-2000 tonnes
Vineyard area: 149 ha

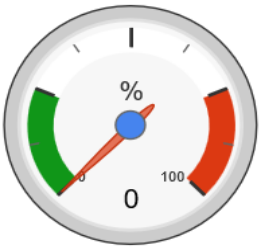
Katnook Estate Vineyard and Winery started its sustainability journey with Entwine in 2012 being prompted by a desire to demonstrate its commitment to the environment and local community. Chris Brodie is the General Manager, Viticulture and he manages sustainability projects for Katnook's vineyard and winery.

In 2014 the Katnook Estate winery installed a 94 kW solar system. In 2015/16 the solar system captured more energy than was used in the winery, allowing the export of additional energy back into the grid. Winery waste is minimised by ensuring that containers are recyclable and the majority of the organic waste is exported off-site to a neighbour who feeds grape marc to their cattle.

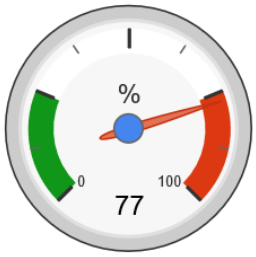
In 2015/16 Katnook Estate Winery was ranked the lowest emitter of greenhouse gas (GHG) emissions compared to all other Entwine members in the 500-2000 tonne size category. Major contributors to this exemplary ranking were the lowest electricity use (per t and per kL) and waste (per t and per kL) compared to other wineries in the size category.

In the vineyard, the focus has been on increasing the biodiversity area on the property. Last year Chris' team planted seeds and seedlings of many local species of flowering shrubs. While the main aim of the biodiversity planting is to attract birds and insects, Chris is hoping that they will also enhance the small populations of lizards and fairy wrens that already frequent the area.

The Katnook Estate vineyard was ranked in the lowest third of Entwine vineyards for their biodiversity area as a proportion of their total vineyard area in 2015/16. Chris hopes that over the next few years, he will improve this by increasing the size and scope of his native species planting.



Total greenhouse gas emissions (CO_2-e/ha)



Biodiversity (ha/ha)

Entwine case studies

For more case studies to assist vineyards and wineries improve operational efficiency, visit the AWRI website. If you have a good story, contact the team at the AWRI helpdesk.

Contact the AWRI for support

The Australian Wine Research Institute provides technical support for Australia's grapegrowers and winemakers. This service is free and confidential. Contact the AWRI helpdesk on 08 8313 6600 or helpdesk@awri.com.au.

The Australian Wine Research Institute