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**SUSTAINABLE AUSTRALIA WINEGROWING
2016 - 2017 GROWING SEASON RESULTS
MCLAREN VALE GRAPE WINE & TOURISM ASSOCIATION**



*Wine, Food, Beaches
Markets, Trails, Art*



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ABOUT THE PROGRAM

The Sustainable Australia Winegrowing (SAW) program is the result of a series of initiatives developed by the McLaren Vale Grape Wine and Tourism Association (MVGWTA) since the early 2000's. These initiatives were developed with the objective to improve viticultural practices, fruit quality and financial viability in the region. Among others, the initiatives included seminars and workshops, a growers' bulletin (CropWatch) providing information and pest and disease alerts for the region from weather monitoring stations, field days and research trials.¹

In 2005, the Association also released a series of materials and codes to support growers' development, including the financial benchmark for McLaren Vale growers, and a Pest and Disease Code of Conduct in 2006. The growers voluntarily endorsed both documents in 2007. In this same year the Soil Management, Water Management and Preservation of Biodiversity Codes were also released.¹

While the investments in grower education made by MVGWTA yielded dramatic on-farm results for many growers, the Association was unable to measure and discuss the outputs of these investments because a process for systematically measuring on-farm results had not been developed.

In 2009, MVGWTA launched the Generational Farming pilot program and compiled the most relevant tools and information available to develop a self-assessment tool for growers to improve their sustainability.

In 2010, the Association was fortunate enough to hire Dr Irina Santiago-Brown while she assessed all major global viticultural sustainability systems for her PhD research. The learnings from the research were applied to improve the assessment methodology and revamped into the current SAW program.

Since its conception, the Sustainable Australia Winegrowing Program has been meeting the objectives of the program by maximising the overall sustainability of the region and the region's growers and minimising environmental harm. The data capture and reporting components of the Program have provided growers with a best management tool that demonstrates their performance against their regional peers and recognised best practice.

Sustainable Australia Winegrowing is now available to any grower across Australia and has been taken on by five other regions, and is an Entwine-approved certification program.

In order to encourage growers to continuously improve the sustainability of their operations it is important that the Program itself continuously improves. This year, the Program underwent a thorough review to incorporate changes to best practice, industry recommendations and legislation, to ensure all questions can be audited and to ensure the content is applicable to all regions, not just specific to McLaren Vale.

For more information on Sustainable Australia Winegrowing visit: <http://mclarenvale.info/industry-development/sustainable-australia-winegrowing>

¹ Dr Irina Santiago-Brown, Implementation Manual Sustainable Australia Winegrowing – SAW, 2015

NOTE FROM PROGRAM COORDINATOR

The McLaren Vale region recognises the importance of sustainable winegrowing practices which safeguard the health of our land, our community and our industry for generations to come.

Although the Sustainable Australia Winegrowing (SAW) program was officially launched in 2011, the McLaren Vale region has had a long-term commitment to sustainability.

It is this commitment to sustainability, along with the tight knit nature of the McLaren Vale wine industry community, that has led in the success of the SAW Program.

This year the entire content of the Program was peer reviewed by 27 wine industry representatives, the majority of who were from our region, and 20 independent subject matter experts. The result is a best practice sustainability program based on current industry best practice recommendations and government regulations and legislation. The changes have set the bar even higher to encourage continuous improvement but have meant that scores achieved this year cannot be compared with scores from previous years – a new line in the sand has been drawn.

We would like to thank everyone involved in the review who generously contributed their time, knowledge and expertise. Without your contribution and the continued support of the McLaren Vale SAW community, the SAW program would not be where it is today.

Every member of SAW should be incredibly proud of their efforts again this year. You have continued to strive towards improving the sustainability of your practices as well as providing a positive and inspiring example to winegrowers in our region and across Australia.

Your continued support and effort in the program is serving to build the reputation of the McLaren Vale region as a leader in sustainability and to ensure the continued success and health of our industry, community and environment for many generations to come.

It is with great pleasure that we share the results of the 2016-17 McLaren Vale Sustainable Australia Winegrowing season with you.

I look forward to working with you all to make the up-coming 2017-18 season an even greater success.

Robyn Groffen

Grower Engagement and Development Officer
McLaren Vale Grape Wine & Tourism Association
October 2017



WHERE AND HOW TO READ THE GRAPHS

WHERE TO FIND THE GRAPHS

The graphs for each individual Member and region can be found in the online system as soon as the results are released. The graphs are located in the “Reports” section of the system. Users can select to view reports in up to three columns to facilitate the comparison between years and keep track of their individual and regional performances. Regional results published in this report reflect the date of its publication. The online system automatically updates the regional reports as individual data is changed. A slight variation between the data published in this report and the online system may occur after the individual growers auditing process by independent third party auditors.

HOW TO INTERPRET THE RESULTS AND COLOURS

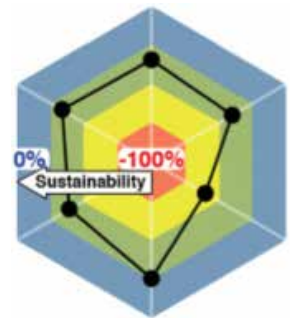
Each colour represents a category of the workbook, varying from grey (non-applicable) through 0 to 4. The aim is to move from the right to the left as shown in the image below.



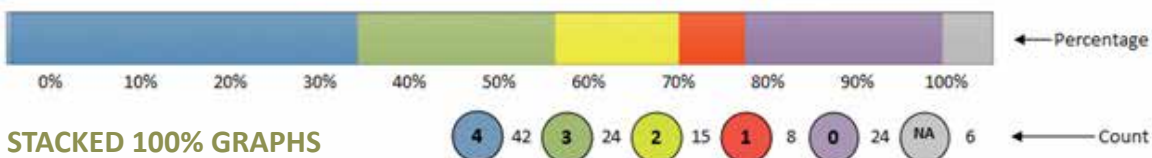
SPIDER GRAPHS

The spider graphs show values relative to the maximum ‘perfect score’ that can be achieved. The attributed weight (importance) for each item is taken into consideration and is displayed on the table below the graphs.

Results are shown as percentage change between maximum possible points (best practice) and the score for the specific member or region. The centre of the graph represents -100% (minus one hundred percent), the worst possible result or least sustainable situation. The outer edge of the graph represents 0% (zero percent), the best possible result, i.e. ‘perfect score’ or most sustainable situation. The closer to zero (the outer edge), the better the result.



The sustainability journey is about moving from the centre to the edge of the spider graph.



STACKED 100% GRAPHS

The stacked 100% bar graphs show the number and percentage of members in each category for each topic. The attributed weight (importance) for each item is not taken into consideration.





206

VINEYARD SITES USED THE SAW PROGRAM TO MEASURE SUSTAINABILITY AND IMPROVE PRACTICES.

The 2016-2017 Sustainable Australia Winegrowing season has proven to be another successful year. Despite the bar being set a little higher as a result of the program review, the region on average has continued to perform in the green category with a 38.1% gap to reach best practice compared to a 33% gap last season.

Six new members joined the program in 2017 to take the total number of members to 130 - a 4% increase from last season and a 51% increase from when the program first started in the 2011-2012 season. SAW represents 206 distinct sites in McLaren Vale, covering 4,732 hectares of farm area. For area under vine, the program represents 3,227 hectares, accounting for 44% of the whole region's area under vine.

The total crush for SAW members was 28,667 tonnes, with 26,326 tonnes of red grapes and 2,341 tonnes of white grapes. SAW members achieved a 17.7% average yield increase from last season compared to the 8% average yield increase for the region.

SEASON SNAPSHOT	15/16	16/17	VARIANCE
Members / Vineyards (Ha)	125	130	+4.0%
Distinct Vineyard Sites / Sites (Ha)	194	206	+6.2%
Total Farm Area (Ha)	4,455	4,732	+6.2%
Total Area Under Vine (Ha)	2,906	3,227	+11.0%
Area Under RED Grapes (Ha)	2,629	2,903	+10.0%
Area Under WHITE Grapes (Ha)	206	252	+22.0%
RED Grape Production (t)	21,844	26,326	+20.5%
WHITE Grape Production (t)	2,518	2,341	-7.0%
Average RED Grape Productivity (t/Ha)	8.3	9.1	+9.6%
Average WHITE Grape Productivity (t/Ha)	12.2	9.3	-23.8%

By variety, Shiraz continues to be the most widely grown grape variety at 1,751.8 hectares and accounting for 55.5% of total vineyard area within the program. Cabernet Sauvignon was the second most widely planted variety for SAW members with 546 hectares planted, representing 16.9% of total vineyard area within the program. Similar to last year, plantings of Shiraz, Cabernet Sauvignon, Grenache, and Mataro accounted for the majority of the area under vine (82.6%) within the program.



65%

OF MCLAREN VALE'S WINEGRAPES ARE GROWN ON VINEYARDS WHICH USE THE SAW PROGRAM TO ASSESS AND IMPROVE PRACTICES.

The table below highlights the key wine industry statistics for Sustainable Australia Winegrowing, McLaren Vale and South Australia.

SAW represents over half of McLaren Vale's total crush at nearly 65%, and accounts for 3.3% of South Australia's crush.

The SAW Program represents 64% of McLaren Vale's total red grape crush, and 75% of the region's white grape crush.

As a region, McLaren Vale makes up 5.1% of South Australia's total crush, 7.5% of the red grape crush, and 1.0% of the white grape crush.

McLaren Vale accounts for 9.7% of South Australia's total area under vine, with SAW members accounting for 44% of McLaren Vale's area under vine.

	South Australia	McLaren Vale	SAW	COMPARISONS		
				SAW VS McLaren Vale	SAW VS South Australia	McLaren Vale VS South Australia
TOTAL grapes (t)	863,789	44,287	28,667	64.7%	3.3%	5.1%
Total RED (t)	549,233	41,177	26,326	63.9%	4.8%	7.5%
Total WHITE (t)	314,556	3,110	2,341	75.3%	0.7%	1.0%
TOTAL under vine area (ha)	75,624	7,317	3,227	44.1%	4.3%	9.7%
RED area (ha)	54,848	6,435	2,903	45.1%	5.3%	11.7%
WHITE area (ha)	19,598	676	252	37.3%	1.3%	3.5%
Others (unknown, rootstocks, etc.)	1,177	206	73	35.3%	6.2%	17.5%

Note: South Australian and McLaren Vale data from the SA Winegrape Crush Survey—2017.



78%



OF SAW MEMBERS PERFORMED IN THE “VERY GOOD” CATEGORY OR ABOVE (15% PERFORMED IN THE “EXCELLENT” CATEGORY).

45%



OF VINEYARDS IN THE SAW PROGRAM ARE LESS THAN 10 HECTARES IN SIZE.

15%



OF SAW MEMBERS GROW THEIR WINE GRAPES ORGANICALLY OR BIODYNAMICALLY.

10%



OF SAW MEMBER’S WINE GRAPES ARE CERTIFIED ORGANIC OR BIODYNAMIC.

68%



OF SAW MEMBER’S FRUIT IS USED BY MCLAREN VALE WINERIES.

56%

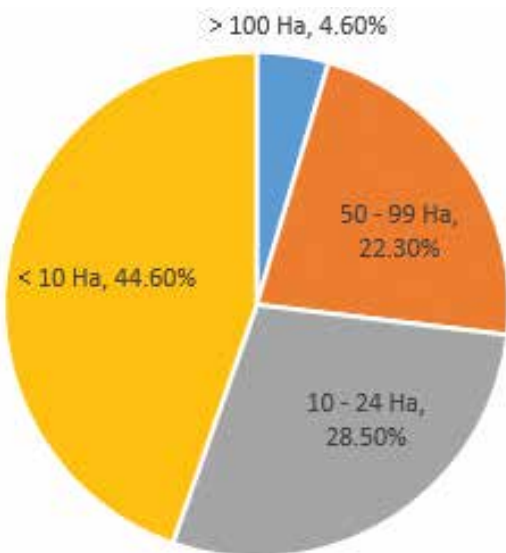
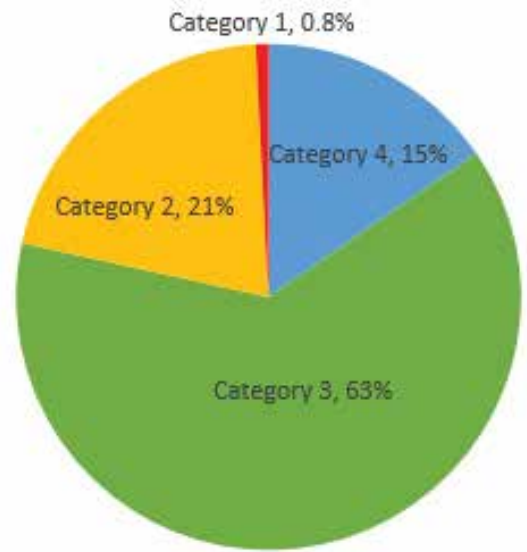


OF SAW VINEYARD AREA IS PLANTED TO SHIRAZ.



MEMBERS BY SUSTAINABILITY CATEGORY

Despite the changes made to the SAW program this year, and the bar being set higher, McLaren Vale SAW members continued to perform well this year with 15% of members performing in the blue category (score of 4, excellent), 63% performing in the green category (score of 3, very good), 21% performing in the yellow category (score 2, good) and only 0.8% performing in the red category (score of 1, needs attention).



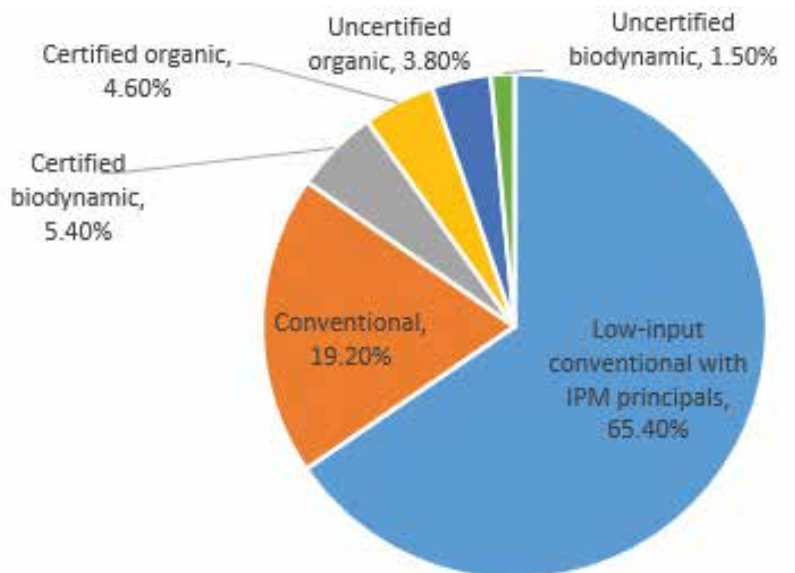
MEMBERS BY VINEYARD SIZE

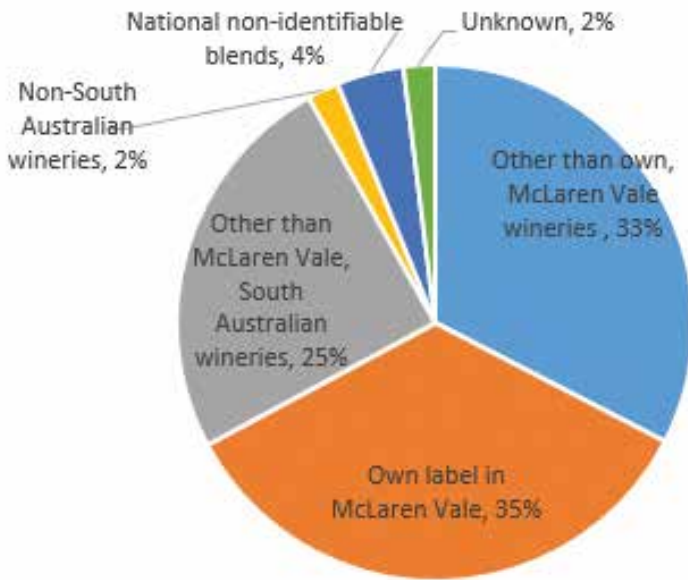
Consistent with previous years, the vineyard area of individual SAW members is primarily under 10 hectares in size (44.6%). Only six SAW members (4.6%) have a vineyard area over 100 hectares – up from 5 last year. 28.5% of SAW members have a vineyard area between 10 – 24 hectares while 22.3% have a vineyard area between 50 – 99 hectares.

MEMBERS BY FARMING SYSTEM

The majority of SAW members use low-input conventional practices with IPM principals (65.4%) while 19.2% used conventional practices.

The number of members that used either organic or biodynamic practices decreased from 23 last year to 20 this year and the number of members certified organic or biodynamic remained the same as last year (13).





MEMBERS BY GRAPE DESTINATION

The majority of SAW member’s grapes (35%) went into their own McLaren Vale label while 33% of the grapes were sold to a McLaren Vale winery.

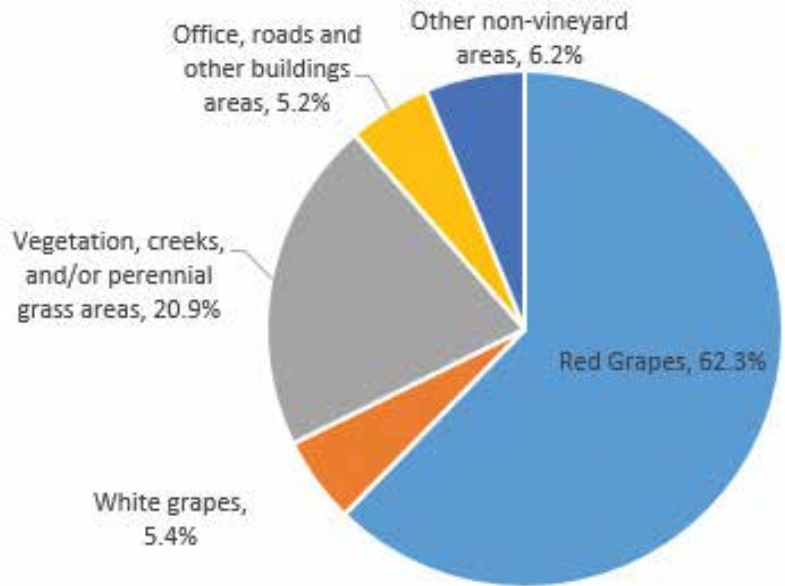
25% of member’s grapes were sold to South Australian wineries outside of McLaren Vale while 2% of were sold to non-South Australian wineries. 4% of SAW member’s grapes were used in National non-identifiable blends.

As in previous years, no SAW members categorised their grapes as being used for international wineries or labels.

MEMBERS BY LAND USE

Land use for SAW members continues to be dominated by red grapes at 62% of the area, while 6% of SAW land area is planted to white varieties.

On average, vegetation, creeks and/or perennial grassed areas make up 21% of the land area of SAW members.



MEMBERS BY GRAPES HARVESTED

99.95% 

OF SAW MEMBER’S GRAPES WERE HARVESTED THIS YEAR. 

99.70% 

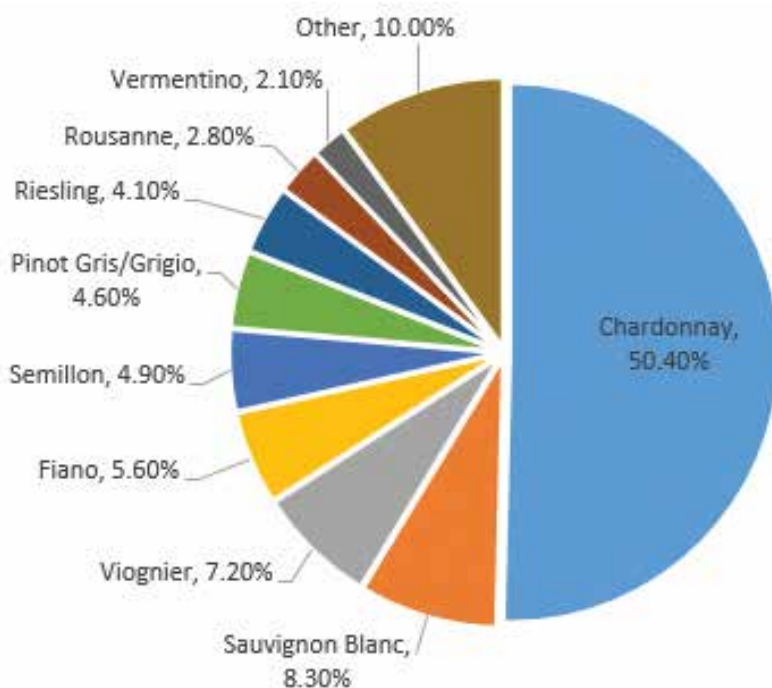
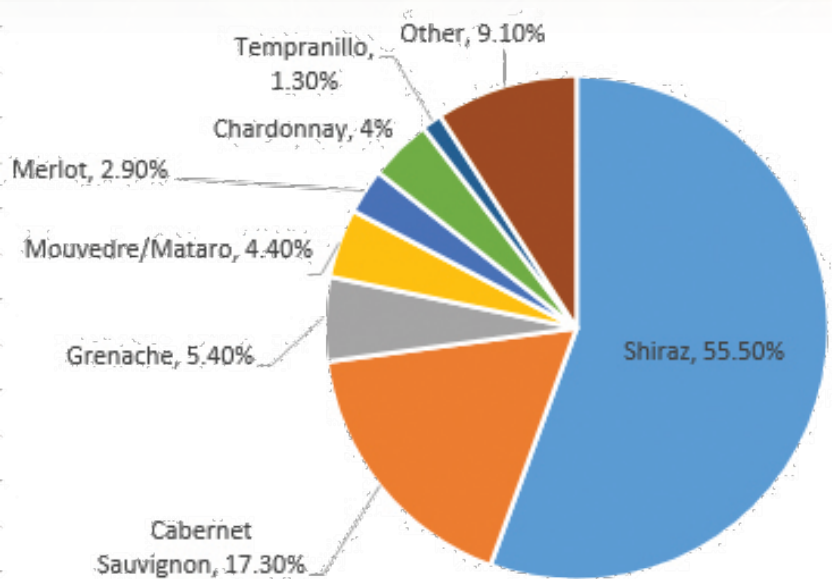
OF SAW MEMBER’S GRAPES WERE SOLD OR USED TO MAKE THEIR OWN WINE. 



MEMBERS BY VARIETY

Shiraz represents the largest area under vine in the SAW program at 55.5%, while Cabernet Sauvignon accounts for 17.3% and Grenache 5.4%.

While Grenache represents a small percentage of area under vine, it is an important variety for the region as the third most planted grape for the last five years.



MEMBERS BY WHITE VARIETIES

A combination of 16 different white varieties are grown over 206.1 hectares of SAW Member's land, producing 2,341 tonnes and averaging 9.3 tonnes per hectare.

Of these white varieties, Chardonnay was the most widely grown (50.4%), followed by Sauvignon Blanc (8.3%) and Viognier (7.2%) and smaller amounts of Fiano (5.6%), Semillon (4.9%), Pinot Gris/Grigio (4.6%), Riesling (4.1%), Rousanne (2.8%) and Vermentino (2.1%).

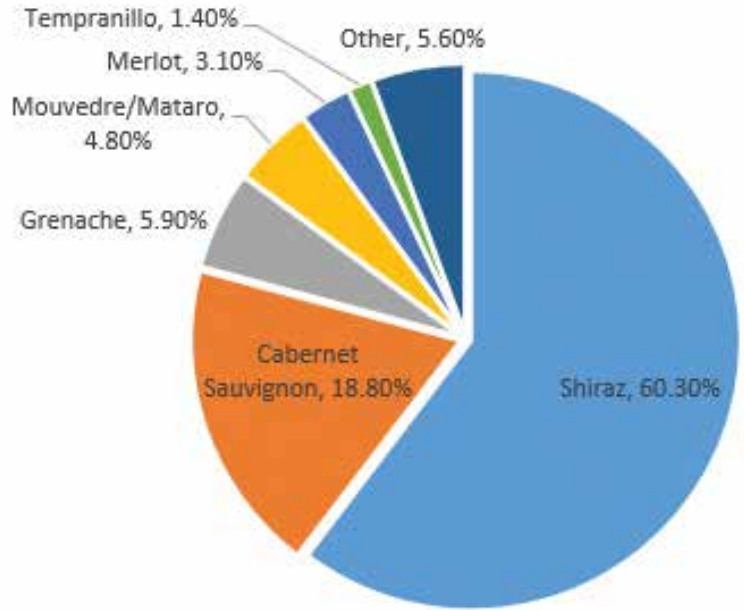
The 'Other White' category is made up of small amounts of Verdelho (1.7%), Chenin Blanc (1.6%) and White Frontignac (1.5%).

MEMBERS BY RED VARIETIES

A combination of 26 different red varieties are grown over 2,903 hectares of SAW Member's land, producing 26,326 tonnes and averaging 9.1 tonnes per hectare.

Of these red varieties, Shiraz was the most widely grown (1,751.8 Ha) followed by Cabernet Sauvignon (546.0 Ha), Grenache (171.1 Ha), Mouvedre (141.0 Ha) and Merlot (90.9 Ha).

In the "Other Red" category, the majority of the area is made up of Tempranillo (40.7 Ha), Pinot Noir (22.2 Ha), Sangiovese (20.4 Ha), Petit Verdot (17.5 Ha) and smaller amounts of Touriga (15.2 Ha), Cabernet Franc (8.3 Ha), Graciano (7.3 Ha), D'Avola Nero (6.4 Ha), Malbec (6 Ha), Barbera (5 Ha), Aglianico (4.5 Ha) and Red Frontignac (4.4 Ha) and very small amounts of other red varieties such as Caringnan, and Primitivo/Zinfadel, Cinsaut, Nebbiolo, Durif, Tannat, Souzao and Tinta Cao.



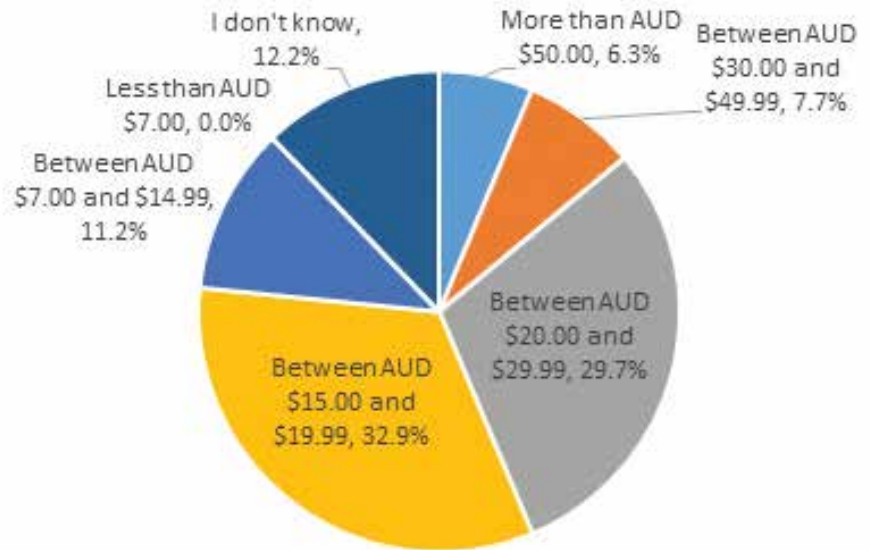
MEMBERS BY WINE RETAIL PRICES

White Wine

Of the SAW members who reported on white wine price, 32.9% of respondents sold their white wine in the \$15- \$19.99 price range and 29.7% sold their wine in the \$20-\$29.99 price range.

7.7% of respondents sold their white wine in the \$30- \$49.99 price range while only 11.2% sold their white wine in the \$7- \$14.99 price range.

6.3% of respondents sold their white wine for more than \$50 while no respondents sold their white wine for less than \$7.

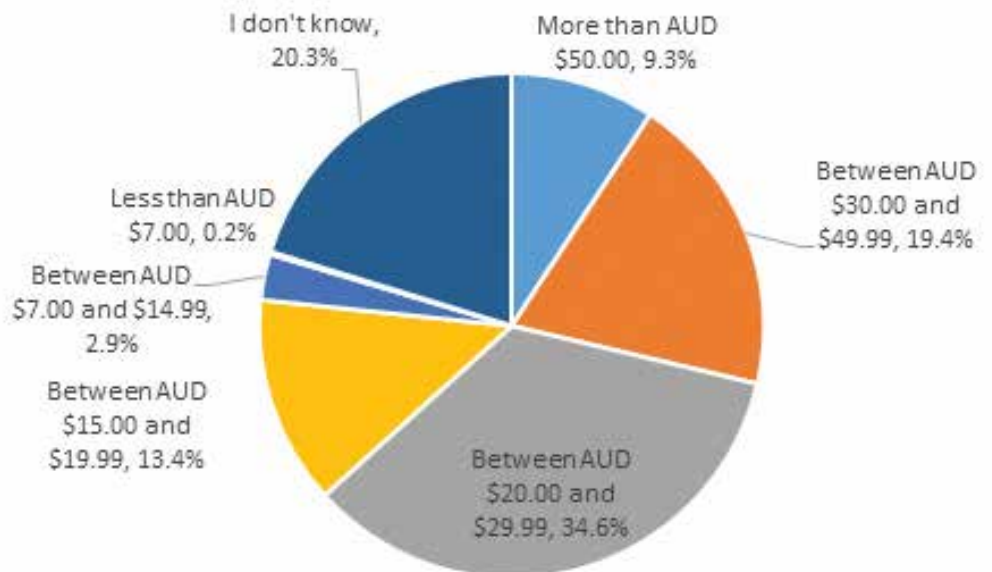


Red Wine

Of the SAW members who reported on red wine price, 34.6% sold their red wine in the \$20- \$29.99 price range and 19.4% of respondents sold their red wine in the \$30- \$49.99 price range.

13.4% of respondents sold their red wine in the \$15-\$19.99 price range while 9.3% sold their wine for more than \$50.

2.9% sold their red wine in the \$7- \$14.99 price range while only 0.2% of respondents sold their red wine for less than \$7.

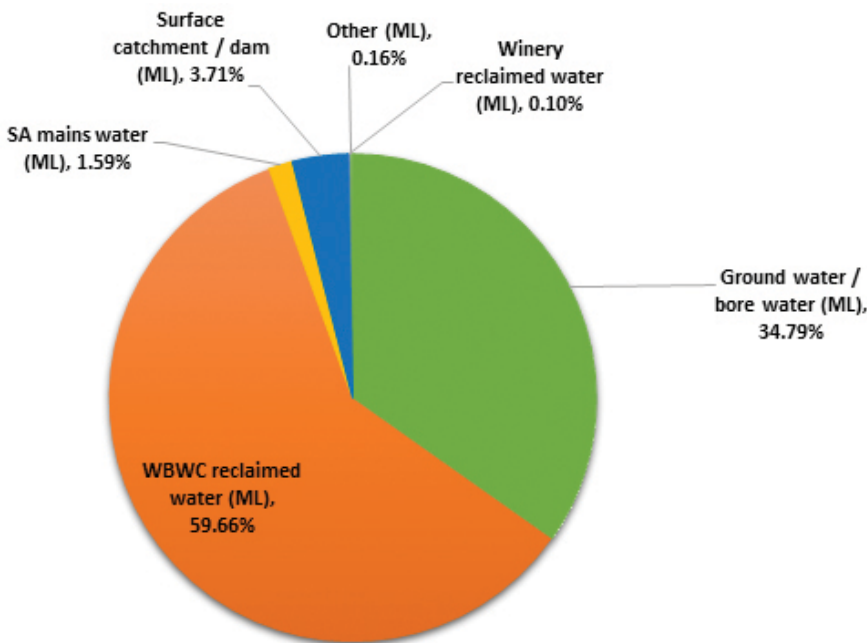
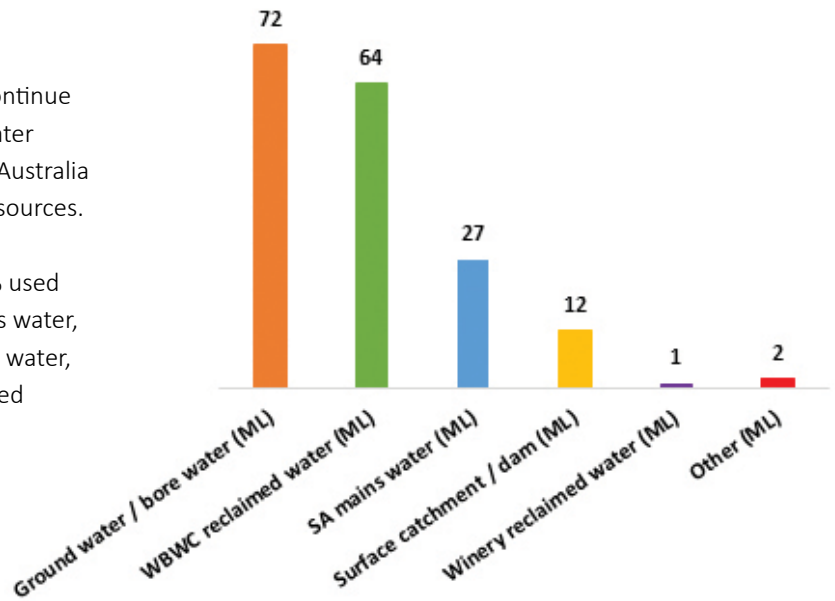


MEMBERS BY WATER SOURCE AND USAGE

Sustainable Australia Winegrowing members continue to utilise ground/bore water, Willunga Basin Water Company (WBWC) reclaimed water, and South Australia mains water as the three main irrigation water sources.

53% of members used Ground/bore water, 49% used WBWC reclaimed water and 21% used SA mains water, 9.2% of members used surface catchment/dam water, 0.8% used winery reclaimed water and 1.5% used 'other' water sources.

Note: Members were able to select more than one option for irrigation sources and water usage, leading to a higher total response rate than total number of SAW members.



When comparing the actual amount of each water source used by SAW members, the largest amount of irrigation water came from WBWC reclaimed water (60%) followed by ground water/bore water (35%). The remaining 6% of water used by SAW members was sourced from surface catchment/dam (3.7%), SA mains (1.6%), winery reclaimed water (0.1%) and 'other' (0.2%).

REMEMBER!

WHEN INPUTTING YOUR IRRIGATION SOURCES AND WATER USAGE, BE SURE TO USE MEGA LITRES (ML)! IF APPLICABLE, BE SURE TO CONVERT YOUR KILO LITRES (KL) TO ML BEFORE YOU INPUT YOUR DATA NEXT SEASON. 1,000 KL = 1 ML.



0.95ML



OF IRRIGATION WATER PER HECTARE OF VINEYARD WAS USED BY SAW MEMBERS COMPARED TO 1.43ML LAST SEASON.





OVERVIEW

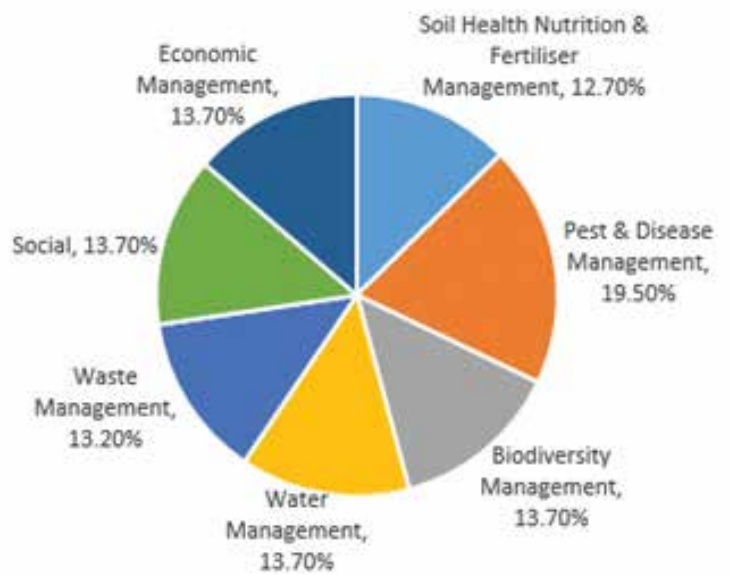
The Sustainable Australia Winegrowing Workbook consists of 7 chapters (excluding the Main Survey) and 125 questions. The chapters cover Soil Health, Nutrition & Fertiliser Management, Pest & Disease Management, Biodiversity Management, Water Management, Waste Management, Social, and Economic Sustainability.

The weighting of each chapter has been reviewed by working groups of industry representatives and external subject matter experts.

The majority of questions within the SAW program have been given equal weighting. This means that the chapters with more questions, such as Pest & Disease Management, have a higher overall weighting.

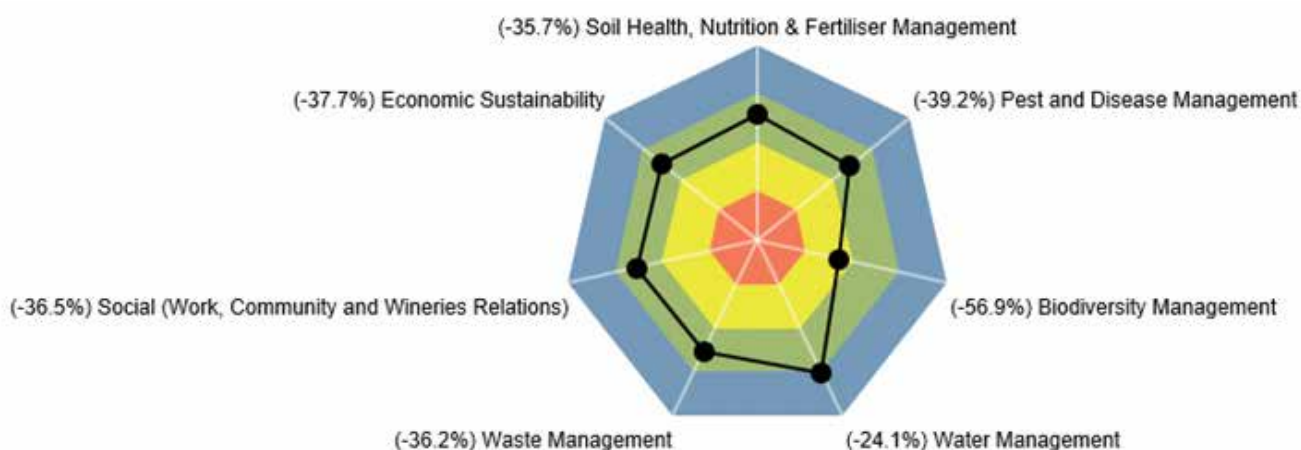
However, the Biodiversity chapter only consists of 7 questions compared to 13-14 for the majority of the other chapters, so the questions within the Biodiversity Management have been given a slightly higher weighting.

The final weightings for the chapters is as follows: 13.7% weighting for the Biodiversity Management, Water Management, Social and Economic Sustainability chapters, a 13.2% weighting for the Waste Management chapter, a 12.7% weighting for the Soil Health, Nutrition & Fertiliser Management chapter and a 19.5% weighting for the Pest & Disease Management chapter.



Overall, the McLaren Vale region has performed in the green (“very good”) category with a 38.1% gap to reach best practice.

Water Management continues to be a strong chapter for the region, with only 24.1% to reach best practice. Biodiversity Management continues to be the weakest chapter for this region, with a 56.9% gap to reach best practice.



COMPARISON WITH LAST SEASON

This year the SAW program went through an extensive review to ensure the content of the program reflects best practices and the latest research findings. As a result, it is difficult to compare the sustainability scores achieved by the region and individual members this season with the scores from last season.

The results below show that the region didn’t perform as well this year as last year, however, the bar has been set higher this year so a drop in score is expected. It is hoped that by setting the bar higher, the region will continue to improve the sustainability of practices.

CHAPTER	GAP TO REACH THE ‘PERFECT SCORE’		% CHANGE FROM PREVIOUS SEASON VS CURRENT SEASON
	2015-16	2016-17	
Soil, Health, Nutrition and Fertiliser Management	-28.4%	-35.7%	7.3%
Pest & Disease Management	-32.8%	-39.2%	6.4%
Biodiversity Management	-51.9%	-56.9%	5.0%
Water Management	-22.3%	-24.1%	1.8%
Waste Management	-34.8%	-36.2%	1.4%
Social Relations	-29.4%	-36.5%	7.1%
Economic Sustainability	-29.2%	-37.7%	8.5%
Overall Workbook	-33.0%	-38.1%	5.1%





OVERVIEW

AS A REGION, MCLAREN VALE IS PERFORMING IN THE GREEN SUSTAINABILITY CATEGORY AND IS 38.1% AWAY FROM REACHING BEST PRACTICE IN SAW.



PEST & DISEASE MANAGEMENT

98%
OF SAW MEMBERS USE INTEGRATED PEST MANAGEMENT PRACTICES TO CONTROL PESTS AND DISEASES.



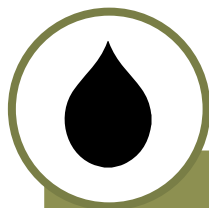
SOIL MANAGEMENT

95%
OF SAW MEMBERS HAVE IDENTIFIED AREAS AT RISK OF COMPACTION AND HAVE TAKEN MEASURES TO REDUCE THE RISK.



BIODIVERSITY MANAGEMENT

88%
OF SAW MEMBERS ACTIVELY CONSERVE THE BIODIVERSITY OF THEIR PROPERTY.



WATER MANAGEMENT

36%
OF SAW MEMBERS USE RECLAIMED WATER AS AN IRRIGATION SOURCE.



WASTE MANAGEMENT

98%
OF SAW MEMBERS HAVE A PAPER AND CARDBOARD RECYCLE PROGRAM.

SOIL HEALTH, NUTRITION AND FERTILISER MANAGEMENT

Soil Health, Nutrition and Fertiliser Management is weighted 12.6% for the overall workbook. Each of the questions in the chapter have the same weighting (10%) since they are all considered equally important.

The spider graph below shows each sub-topic and the percentage gap to reach the 'perfect score.'

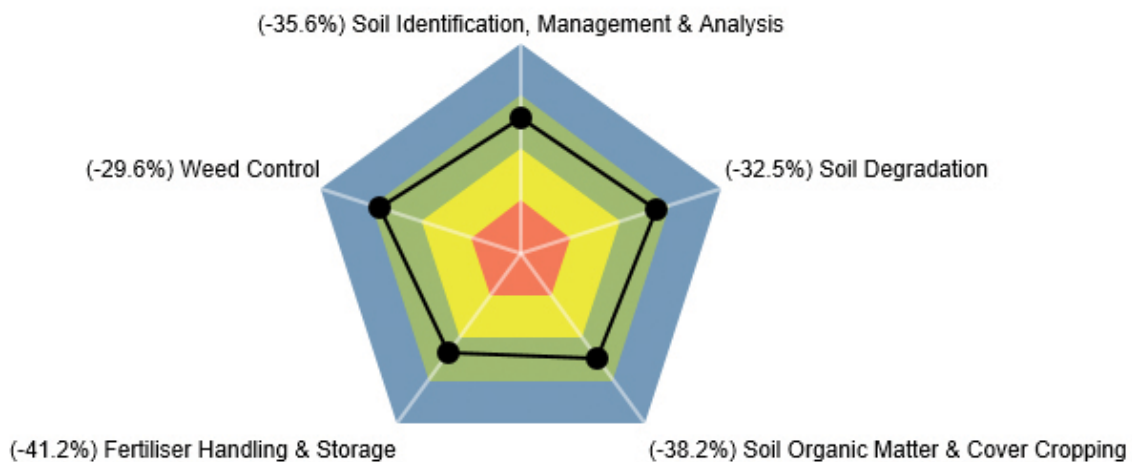
Weed Control was closest to the best practice with a 29.6% gap followed closely behind by Soil Degradation at 32.5% away from best practice. Fertiliser Handling & Storage continues to require the most improvement with a 41.2% gap to best practice.

McLaren Vale as a region scored green in this chapter, with a 35.7% gap to reach best practice.



Unsustainable practices like excessive cultivation, driving tractors on waterlogged soils and excessive use of herbicides and synthetic fertilisers can degrade our soils.

The practices we employ in our vineyards can significantly affect the long term health of our soils.



'Soil plays a vital role in the earth's ecosystem. Without soil human life would be very difficult. Soil provides plants with foothold for their roots and holds the necessary nutrients for plants to grow; it filters the rainwater and regulates the discharge of excess rainwater, preventing flooding; it is capable of storing large amounts of organic carbon; it buffers against pollutants, thus protecting groundwater quality.'¹

¹ www.isric.org/about-soils

65%



of SAW members reduced their reliance on herbicides by integrating cultural weed control practices.

3.3



is the average number of herbicide rounds used by conventional SAW members this year compared to 2.2 last year – the increase was most likely due to the wetter than average season causing more weed pressure.

Effective and appropriate applications of nutrients can reduce costs and improve vine health and soil microbial activity.



10.6



is the average number of heavy vehicle operations per SAW member this year compared to 10.9 last year.

Soil organic matter, measured as organic carbon, increases the cation exchange capacity (CEC) and water-holding capacity of soil, it improves soil structure and nutrient availability and buffers soil from changes in pH.



79%

have a designated fertiliser handling area which is located, constructed and maintained to minimise harm to off target and sensitive areas.

98%



of SAW members made site specific nutrient applications.

100%

of SAW members monitor heavy vehicle operations and take measures to limit heavy vehicle operations in areas at risk of compaction when conditions are wet.



69%



of SAW members use plant tissue analysis results to guide nutrient applications.



Poorly managed heavy vehicle operations can lead to soil compaction. Soil compaction can have an impact on vine performance by limiting root growth, nutrient uptake and water infiltration.

89%



of SAW members monitor soil organic carbon levels and have put measures in place to prevent the loss of organic matter in areas with declining organic matter levels.

95%



of SAW members have a good understanding of the different soil types on their property and have identified degraded, eroded and/or contaminated areas.

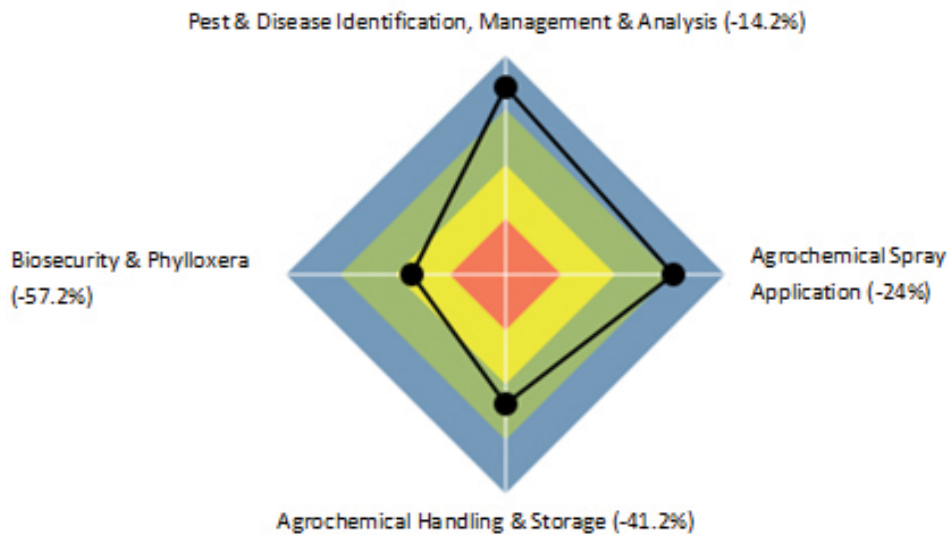
PEST & DISEASE MANAGEMENT

Pest & Disease Management contributes a weighting of 19.5% towards the overall workbook.

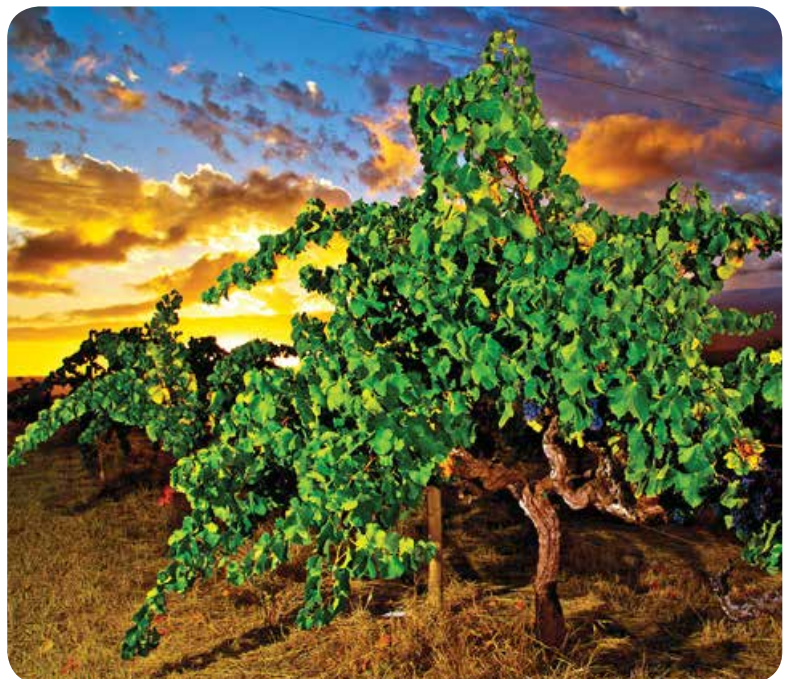
Four sub-topics make up the chapter: Pest & Disease Identification, Management & Analysis contributes 25% of the weighting of the chapter, while Agrochemical Spray Application contributes 15%, Agrochemical Handling & Storage 20%, and Biosecurity, Phylloxera and Grapevine Trunk Diseases contributes 40% of the chapter’s weighting.

Pest & Disease Identification, Management & Analysis produced the best results in the chapter with a 14.2% gap to reach best practice. Biosecurity & Phylloxera had the weakest result with 57.2% to reach the best practice. Agrochemical Spray Application was 24.0% from best practice.

The region scored green for Pest & Disease Management, with a 39.2% gap to reach best practice for the chapter.



‘Integrated pest management (IPM) is an environmentally sensitive way of managing pests. It uses a combination of practices and control methods to prevent problems from occurring rather than dealing with them after they have happened. IPM practices include forward planning, regular monitoring and timely decision-making.’¹



¹ www.epa.nsw.gov.au/pesticides/integratedpestmgmt.htm



Effective control of grapevine pests and diseases requires correct identification of the target, the right choice of agrochemical, and the right dose of agrochemical. It also requires equipment that is matched to the target and well set up and calibrated to ensure good coverage.

For more information, read the GWRDC Spray Application: Grapevines factsheet that can be found on the Wine Australia website www.research.wineaustralia.com/wp-content/uploads/2013/10/Spray-Application-grapevines-December-2013-Web.pdf

51% 

of SAW members employ contractors to spray their vineyards.

71% of SAW members who spray their own vineyard assess spray coverage during critical times of the season.



Timely vineyard monitoring for pests and diseases along with an understanding of pest and disease lifecycles and the influence of weather on pest and disease development is critical for good pest and disease control.

89% 

of SAW members monitor their vineyards for pests and diseases during the season.



CropWatch



Contact MVGWTA to sign up to regular CropWatch reports and updates and keep abreast of up-to-date pest and disease information for the McLaren Vale region.

Although South Australia is Phylloxera free, Phylloxera still poses a significant threat to our region. Phylloxera can easily be spread to our region by grapevine materials (rootlings, cutting, leaves and stems), soil from a vineyard, movement of machinery, equipment or vehicles, whole grapes, grape products (must and wine) and people and clothing. Preventing the spread of Phylloxera to our region is critical to our region's sustainability.

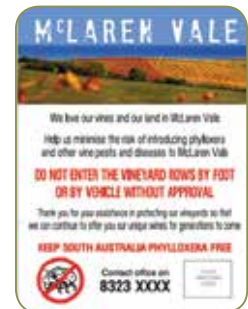
Best practice farm-gate hygiene can stop the spread of pests and diseases, including phylloxera and declared weeds to keep your own vines, as well as our industry, safe.

43%

of SAW members do not practice any farm-gate hygiene.

98%

of SAW members have an entrance sign that advises entrance conditions and restrictions.



SAW members can purchase a phylloxera sign at a discounted price by contacting MVGWTA (robyn@mclarenvale.info).

For best practice farm-gate hygiene guidelines please visit the Vinehealth Australia website www.vinehealth.com.au/biosecurity-in-practice/checklist-and-protocols/farmgate-hygiene/.

A Phylloxera sign at the entrance of your vineyard increases awareness of the risk of Phylloxera. The more awareness there is around Phylloxera, the stronger the fight to prevent it becomes. Spread the word – not the pest!

BIODIVERSITY MANAGEMENT

Biodiversity Management has a weighting of 13.7% for the SAW workbook. There are three sub-topics within the chapter which include Biodiversity Management with a 71.4% weighting, Biodiversity Survey with a 14.3% weighting, and Bushfire Management with a 14.3% weighting.

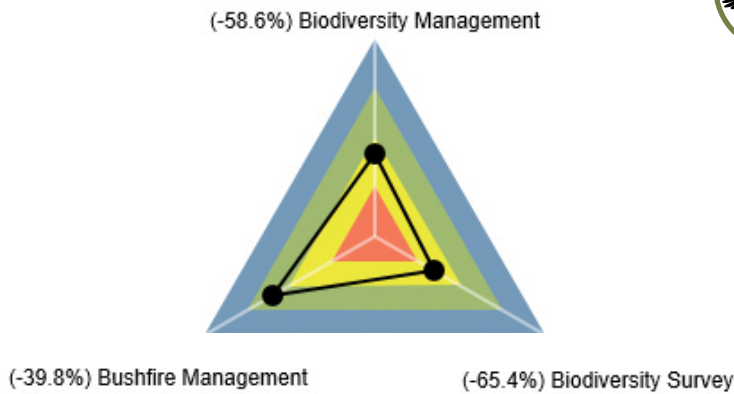
Biodiversity Management continues to be a challenge for SAW members in our region. The region scored

yellow for Biodiversity Management with a gap of 56.9% to achieve to reach the ‘perfect score’.

At 39.8%, Bushfire Management was the closest to reaching best practice within the chapter. The region was 58.6% away from best practice in the Biodiversity Management section and 65.4% away in the Biodiversity Survey section.



‘Biodiversity provides a range of ‘ecosystem services’ which have the potential to improve vineyard health and aesthetics.’¹



88%
Of SAW members have started conserving and enhancing the biodiversity of their property.

Biodiversity is the variety of all life forms on earth – the different plants, animals and microorganisms, their genes and the ecosystems of which they are a part. Australia is home to between 600,000 and 700,000 species, many of which are found nowhere else in the world. Changes to the landscape and native habitat as a result of human activity have put many of these unique species at risk.²

98% of SAW members have a preference toward using agrochemicals which are less hazardous to beneficial organisms.

89% of SAW members have started conserving the biodiversity of the non-producing areas on their property by starting to eliminate woody and declared weeds.

The McLaren Vale ID Booklets (available in printed or PDF format upon request at MVGWTA) highlight native and/

or pest trees, weeds and birds. These booklets can be used to assess your own property or the wider region to take appropriate action eradicating pests, or planting certain grasses or trees to encourage beneficial insects, birds and other wildlife.

Improvement in the biodiversity management requires hands-on effort, financial investment and planning guidance. The McLaren Vale Biodiversity Project is a joint venture between MVGWTA, the McLaren Vale Wine Industry, local community, NRM and the Onkaparinga Council which provides support and assistance to local landowners to improve biodiversity management on their property. You can get involved with the McLaren Vale Biodiversity Project by contacting the group via their Facebook page www.facebook.com/pages/Biodiversity-McLaren-Vale-Tree-Planting/681026865318172

¹ www.environment.gov.au/biodiversity/conservation

² www.research.wineaustralia.com/wp-content/uploads/2012/11/FS-Biodiversity-Workshop-Notes.pdf

WATER MANAGEMENT

Within the Sustainable Australia Winegrowing workbook, Water Management accounts for 13.7%. The three sub-topics that form the chapter are Water Source & Quality with a 21.4% weighting, Irrigation Management with a 50% weighting, and Irrigation System & Maintenance with a 28.6% weighting.

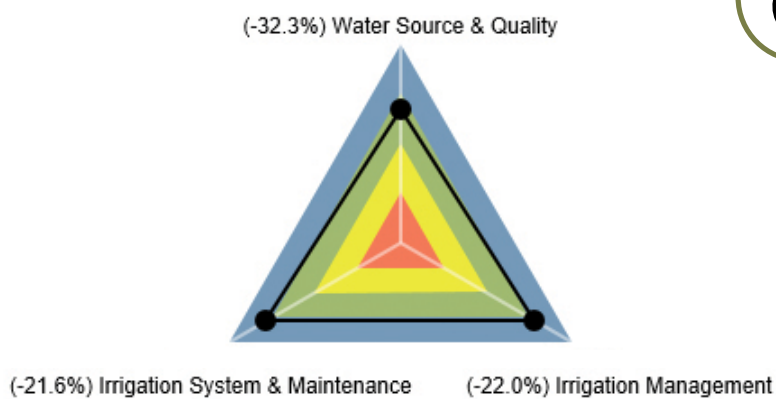
Irrigation System & Maintenance was the strongest sub-topic, with a 21.6% gap to best practice. Irrigation

Management scored similarly at 22% from best practice. Water Source & Quality has the most to improve, with 32.3% to best practice.

The region scored blue for Water Management with a gap of 24.1% to achieve best practice.



SAW members understand the importance of well managed irrigation on vine health and wine quality.



98%
Of SAW members have a water management strategy to achieve their grape growing goals.

Reclaimed water is waste water which is captured, treated and reused instead of flowing out to sea. In areas where it is available, reclaimed water is considered the most sustainable water source in McLaren Vale for vineyards where ground water volume or quality is limited.

5% of SAW member's vineyards are dry grown.

60% of the vineyard irrigation used in McLaren Vale is from reclaimed water, while 35% is from ground water/bore water and 3.7% is from surface catchment/dam water. Only 1.6% of the water used to irrigate vineyards in McLaren Vale is SA mains water.

98% of the SAW members who irrigate, review and adjust the volume and frequency of irrigation applications at least three times a week during the growing season based on soil moisture data, local weather forecasts and water availability, cost and quality.

The distribution uniformity of an irrigation system can have a big impact on vine health and yield. Checking the distribution uniformity of your irrigation system at the start of each growing season is important to ensure that every vine within your vineyard is receiving the correct amount of irrigation.

More information can be found on the CSIRO video on the Wine Australia R&D website: www.research.wineaustralia.com/resources/cut-1001-ao4-irrigation-distribution-uniformity/

99% of SAW members who irrigate clean their irrigation filters and flush their irrigation lines at the beginning of each season.

77% of SAW members who irrigate, check the distribution uniformity of their irrigation system at the beginning of the growing season by performing dripper output tests and make any necessary adjustments.

WASTE MANAGEMENT

Within the Sustainable Australia Winegrowing workbook, Waste Management has a weighting of 13.2%. The four sub-topics that form the chapter are Waste Management with a 14.8% weighting, Waste Management Training with a 7.4% weighting, Waste Collection & Recycling with a 51.9% weighting, and Disposal of Chemicals and Containers with a 25.9% weighting.

Disposal of Chemicals and Containers was the strongest sub-topic, with a 20.5% gap to best practice. Waste

Management requires the most improvement with a 50.6% gap to best practice. Waste Collection & Recycling Waste Management scored green at 34% away from best practice, and Waste Management Training also scored green at 46.9% away from best practice.

The region scored green for Waste Management with a 36.2% gap to best practice.



‘Close to **1 million tonnes** of waste are still deposited to landfill from metropolitan adelaide each year. Wasteful consumption and disposal habits are not sustainable because the earth’s natural resources are limited.’¹



100%
Of SAW members take action to divert waste away from landfill.

¹ www.epa.sa.gov.au/environmental_info/waste_management



The appropriate collection and disposal of unwanted chemicals and empty chemical containers minimises their impact on the environment.

The **ChemClear** Program, is a national chemical collection and disposal service for unwanted agrichemicals. Chemical are registered for collection on the ChemClear website www.chemclear.com.au/register-your-chemical/

72% of SAW members store unusable chemicals appropriately for disposal and keep an inventory of all unwanted chemicals.

DrumMUSTER is a national program for the collection and recycling of eligible, cleaned chemical containers.

80% of SAW members who handle chemicals delivered their empty, triple rinsed chemical containers to the nearest drumMUSTER/local council collection centre.

61% of SAW members who generated waste dripline recycled the dripline through the Sustaining Endeavour Recycle Scheme. For information on the polypipe recycling service that has started in McLaren Vale, visit the Sustaining Endeavour webpage www.sustainingendeavour.com.au

'Each year over half of our household garbage is made up of food and garden waste. Most of this organic waste can be recycled by composting it.' ¹

Composting food and garden waste has many benefits. Compost is a rich source of nutrients and organic matter for soil, improving nutrient availability, water holding capacity, water infiltration rate, buffering capacity and reducing water runoff, protecting waterways from erosion and pollution. Composting reduces the amount of organic waste going to landfill therefore reducing greenhouse gas emissions and leachate which can pollute land, groundwater and waterways.

53% of SAW members who crush grapes on their property, compost the grape marc for use on their property.

¹ www.compostweek.com.au/core/about-composting/composting/



'Compost requires far less energy to produce 1kg of nitrogen compared to synthetic nitrogen.' Glenn McGourty, University of California Winegrowing and Plant Science Advisor.

SOCIAL RELATIONS

The Social Relations chapter has a weighting of 13.7%. There are three sub-topics within the chapter which are weighted as follows: Employees & Contractor Relations at 57.1%, Community Relations at 14.3%, and Winery Relations at 28.6% of the chapter.

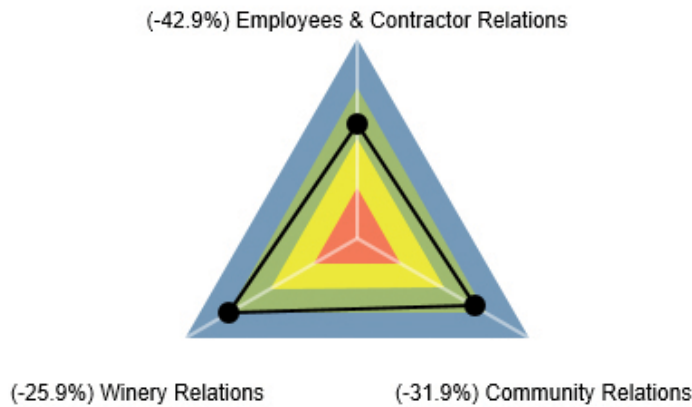
Winery Relations was the strongest section with a 25.9% gap to best practice while Employees & Contractor

Relations requires the most improvement at 42.9% away from best practice. The region is 31.9% away from best practice in the Community Relations section.

The region scored green for Social Relations with a gap of 36.5% to achieve best practice.



Sustainability doesn't work in isolation. It relies not only on an individual effort but a community, regional and the nationwide effort.



94% of SAW members consider energy, materials and water usage as well as waste generation when comparing new equipment.

61% of SAW members currently support one or more community/wine industry initiatives that fosters good relations between growers and community and communicate with their neighbours regularly.

Look out for local seminars and workshops related to viticulture that are advertised in the MVGWTA Weekly Bulletin and the McLaren Vale CropWatch or in the McLaren Vale Grower Development and Engagement Calendar of Events.

While you are taking action by participating in SAW, it is equally important to talk to other growers about the program and the benefits of sustainable farming.

Work health and safety (WHS) is a key management responsibility for every business. A business owner is responsible for making their business safe and ensuring WHS is part of their business planning. Better WHS outcomes also improve the bottom line and help make the business more profitable.

85%

of SAW members with employees have Work Health and Safety policy...

while only

64%

of SAW members without employees have a Work Health and Safety policy.

ECONOMIC SUSTAINABILITY

The Economic Sustainability chapter was peer reviewed this year by a group of industry representatives and then reviewed by three independent subject matter experts. As a result, the weighting of this chapter has increased from 1% to 13.7%.

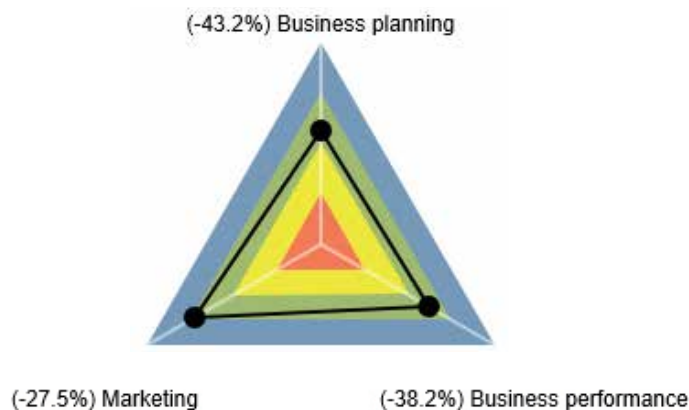
Within the Economic Sustainability chapter there are three sub-topics. These sub-topics and their weightings include Business Planning (35.7%), Business Performance (42.9%), and Marketing (21.4%).

The region performed strongest in the Marketing section with an average score of 27.5% away from best practice. Business Planning requires the most improvement at 43.2% away from best practice while Business Performance was 38.2% away from best practice.

Overall, Economic Sustainability was categorised as green with a 37.7% gap to achieve best practice.



Business continuity is key to the sustainability of a business.



91% of SAW members who responded have considered business continuity and have communicated plans and key information with key staff.

Fulfilling and maintaining legal responsibilities is crucial when operating a business.

100% of SAW members with employees understand and comply with all legal obligation regarding employees including employment terms and conditions, data privacy, employee safety and migration law.

Risk factors such as drought, bushfire, loss of water entitlements, equipment breakdowns and loss of skilled staff or contractors can impact on business continuity and should be considered, understood and planned for.

98%

98% of SAW members have insurance for issues that they consider a potential risk to the continuity of their business.

66%

66% of SAW members used block performance and profitability information to make vineyard management and capital investment decisions.



SPRAY DIARY RESULTS

The 2016/17 season was wetter than average for McLaren Vale with winter, spring and summer all receiving higher than average rainfall. This led to a delay in budburst, flowering, veraison and harvest, good canopy growth and higher than average yields. The wet weather and denser canopies meant that growers had to be vigilant and apply well timed fungicides to protect their vineyards from disease – particularly Powdery Mildew and Downy Mildew (James Hook, McLaren Vale CropWatch 2017 Vintage Report). This can be seen in the spray diary data collected for SAW.

The table below lists the spray targets, area (ha) sprayed, the percentage area for each spray target, and the average number of spray applications for the season.

Powdery Mildew continues to be the main target for the region, with 93.6% of the SAW vineyard area being sprayed an average of 9.4 times during the season compared to only 6.3 last year.

Downy Mildew is the next most common target, with 90.3% of the SAW vineyard area being sprayed an average of 6 times this season compared to 2.3 last season.

An average of 1.7 Botrytis Bunch Rot sprays were applied by SAW members over 28.9% of the SAW vineyard area this season compared to 1.7 sprays over 18.6% of the vineyard area last season.

The area of vineyard sprayed for Light Brown Apple Moth increased from 9% to 12.2% and the area of vineyard receiving a bud mite spray increased from 7.6% to 15.1%.

The vineyard area sprayed for garden weevil decreased from 1.4% last season to 0.3% this season. Similarly, the area sprayed for snails decreased from 1.9% last season to 1.4% this season and the area sprayed for scale decreased from 6.9% last season to 5.3% this season.

Spray Target	Area (Ha)	% Area of Members	Average Times
Biodynamic	136.8	4.2	12.6
Botrytis bunch rot	933.1	28.9	1.7
Bud mite	487.9	15.1	1.2
Bunch mite	4.8	0.1	1
Downy mildew	2916.5	90.4	6
Garden weevil	8.9	0.3	1.4
Grapeleaf rust mite	6.4	0.2	1.4
Grapevine scale	171	5.3	1.1
Herbicide	756	23.4	3.3
Herbicide Spot Spraying	28.5	0.9	1.5
Light brown apple moth	393.6	12.2	1.5
Mealybug	35.5	1.1	1.2
Nutrition	1702.8	52.8	4.5
Plant growth regulators	4.1	0.1	1
Powdery mildew	3019.9	93.6	9.4
Rust Mite	105.5	3.3	1.8
Snail	43.8	1.4	1.7
Wetting/Adjuvant Agent	1271.3	39.4	5.8
(Not matched)	764.7	23.7	6.1
(Unspecified)	273.5	8.5	1.3

IMPORTANT NOTES

* Because the data is captured retrospectively after vintage each year, many growers did not include all herbicide sprays in the SAW spray diary module. The table adjacent shows that only 23.4% of the area was sprayed with herbicides, however our data shows that 84.6% of SAW members are managed conventionally and have the option to use chemical herbicides.

** The system only allows the capture of nutrition through foliar sprays. Some growers might have used composts or liquid fertilisers through drip lines (fertigation).

*** In most situations, targets were placed automatically into the unmatched or unspecified categories because of misspellings in the importing process from other spray diaries maintained by growers. either certified or un-certified.

ACHIEVEMENTS

INCREASED MEMBERSHIP

The Program is now in use for the second year in Clare Valley, Barossa, Adelaide Hills, Langhorne Creek and the Granite Belt.

The membership in McLaren Vale has increased from 125 to 130 this year (+4%) and the vineyard area under vine represented in SAW increased from 2,906 hectares to 3,227 hectares (+11%).

CHAPTER AND SPRAY DIARY REVIEW

The success of the Sustainable Australia Winegrowing program relies on keeping the content up-to-date and scientifically sound. The entire content of the program has been reviewed this year in a six step review process that involved the contribution of 50 individuals.

SPRAY DIARY UPLOAD PLUG-IN

Sustainable Australia Winegrowing has developed a spray diary upload plug-in (upload function) for another two major spray diary programs used in Australian Viticulture (Grapeweb and Grapelink; a Growdata upload plug-in has already been developed). The plug-ins were used with some success this year but require fine-tuning to make the process more effective.

ENTWINE ACCREDITATION

We are pleased to announce that Sustainable Australia Winegrowing continues to be an approved 'pathway' program to Entwine membership.



GOALS

SUSTAINABLE AUSTRALIA WINEGROWING GOALS FOR 2017-18

INCREASE MEMBERSHIP

Sustainable Australia Winegrowing will continue to engage with growers in McLaren Vale and other regions in Australia to increase the support and uptake of the program at a regional, state and national level.

JOIN

Become a Sustainable Australia Winegrowing member and start working towards a more sustainable future.

ASSIST

Join a Sustainable Australia Winegrowing working group to review one or more of the saw chapters and/or spray diary

SHARE

Talk to other growers about the Sustainable Australia Winegrowing program and the benefits of sustainable farming.

VOLUNTEER

Help increase the biodiversity of the McLaren Vale region by joining the McLaren Vale Biodiversity Group and/or other community revegetation groups.

ATTEND

Attend Sustainable Australia Winegrowing events and workshops to keep up-to-date with the latest news and industry best practice developments. SAW events are advertised in the MVGWTA Weekly Bulletin and CropWatch.







WWW.MCLARENVALE.INFO

grower@mclarenvale.info



Wine, Food, Beaches
Markets, Trails, Art

