AUSTRALIAN SOCIETY OF VITICULTURE AND OENOLOGY | ASVO

Australian Government
Australian Grape and Wine Authority

2014 Mildura Seminar



FINAL REPORT to

AUSTRALIAN GRAPE AND WINE AUTHORITY

Project Number: **GWT 1329**
Principal Investigator: **Dr Paul Petrie**

Research Organisation: **Australian Society of Viticulture and Oenology (ASVO)**

Date: **Thursday, 28 August 2014**

Contents

Contents....2
Abstract....3
Executive summary....3
Background....3
Project objectives and performance targets....4
Conclusion....5
Acknowledgements....5
Visiting Scholar abstracts....6



Abstract

The ASVO organises and conducts seminars on specialised topics to promote education in viticulture and oenology and help ensure and maintain the highest standards of quality for such educational objectives.

The purpose of inviting international scholars to Australia was to allow them to interact with researchers and industry and to present at the seminar in Mildura. Their visit was intended to give an international perspective and compliment a local programme of science and application in process efficiency and vineyard profitability.

The aim of the Mildura seminar was to present some of the latest viticultural and winemaking research findings, as well as some new and existing techniques and management options that could help growers to improve fruit quality and vineyard profitability at all production price points. This is a key component in improving the profitability of winegrape production in Australia.

This report summarises the activities and key out comes arising from the visit by the two international scholars, in particular it summarises the conference presentations given to the Australian wine Industry at the Mildura seminar.

Executive summary

- 187 Delegates attended the Mildura seminar titled: 'Searching for the sweet spot – the quest for optimal yield and quality', which was held on July 24 and 25, 2014 in Mildura.
- AGWA supported the ASVO to fund travel costs for two international speakers; Dr Martin Mendez-Costabel, Manager Wine and Grape Supply / GIS E&J Gallo Winery, Modesto, CA, USA & Stefano Poni, Professor, Istituto di Frutti-Viticoltura, Università Cattolica del Sacro Cuore, Piacenza, Italy
- A diverse group of conference speakers presented mostly published work about methods and strategies to improve fruit quality and profitability.
- By attending, conferees gained valuable insight from leading researchers and practitioners in the field.
- The ASVO would like to thank the AGWA for supporting this project.

Background

The Australian Society of Viticulture and Oenology (ASVO) serves the interests of practising winemakers and viticulturists by encouraging the exchange of technical information. One of the ways the ASVO achieves this is by holding seminars. These seminars are open to both members and non-members and cover areas that are topical to the Australian industry and include both domestic and international speakers. They are one of the few events to regularly bring international speakers to present to the Australian industry. The inclusion of an international perspective is critical to the profile of these seminars and their ability to attract a viable audience. It is also an important opportunity for the Australian industry to access topical information from overseas.

Project objectives and performance targets

Output	Performance Targets	Date
S. Poni present at ASVO Seminar	S. Poni present a relevant and informative paper at ASVO Seminar	24/7/2014
M. Mendez present at ASVO seminar	M. Mendez present a relevant and informative paper at ASVO Seminar	24/7/2014
S. Poni meet with Australian based researchers	S. Poni meet with industry personnel and researchers from the WIC and NWGIC	26/7/2014
M Mendez meet with Australian based researchers	M. Mendez meet with industry personnel and researchers from the WIC and NWGIC and DEPI	26/7/2014
ASVO Proceedings	Publication of seminar proceedings	30/6/2015

Activities associated with all objectives were carried out with the exception of publication of seminar proceedings (due June 2015).

1. **Meetings for Stefano and Martin with the viticulture groups based at the Waite**

Tuesday the 22nd of July

Visiting Wine Innovation Cluster (WIC) Waite:

- 10.00am Adelaide University, Plant Research Centre, Waite Campus (Roberta De Bei)
- 12.00pm AWRI, WIC Central Building, Waite Campus (Mardi Longbottom)
- 2.00pm SARDI, WIC Central Building, Waite Campus (Mike McCarthy)
- 3.30pm, CSIRO Boardroom, WIC West Building, Waite Campus (Peter Clingeleffer)

2. **Meetings for Stefano and Martin with Industry and NWGIC**

Wednesday the 23nd of July

- 9.30am Barossa Grape & Wine Association (Nicki Robins)
- 11.30am Penfolds Kalimna Vineyards (George Taylor)
- 2.45pm CCW Co-operative (Andrew Weeks)

Thursday the 24th of July

- 9.00am National Wine and Grape Industry Centre (Alain Deloire & Greg Dunn)
- 11.00am TWE Viticulturists (Suzanne Mcloughlin)

Friday the 25th of July

- Martin Mendez-Costabel Meeting – Vic DEPI (Mark O'Connell & Des. Whitfield)

3. **Stefano and Martin present a relevant and informative paper at ASVO Seminar**

Thursday the 24th of July

Session 2 – Growing and capturing quality in the premium/ultra-premium vineyard regions

- 15:30-16:15 The impact of leaf removal and the management of crop load on fruit quality. A European insight.
  Prof. Stefano Poni, Università Cattolica del Sacro Cuore of Piacenza

Friday the 25th of July

Session 3 – Managing the challenges of growing commercial grade fruit

- 9:00-9:40 Understanding the impact of cultural practices on fruit quality in California.
  Dr Martin Mendez-Costabel, E&J Gallo Winery

4. **Publication of seminar proceedings**

This manuscript is currently in the initial stage of preparation. A copy of the completed publication will be provided prior to 30 June 2015. The publication will be made available to the public through the ASVO website (some charges apply).

Conclusion

The Australian Society of Viticulture & Oenology's (ASVO) annual two-day Mildura seminar was an opportunity to showcase the latest research and development in the area of optimising yield and quality, from both overseas and within the Australian wine sector.

These seminars provide an ideal opportunity for scientists and practitioners to exchange the latest information on research, to promote adoption of reliable and consistent techniques and ideas.

The work presented by Professor Stefano Poni generated much discussion and interest from industry proponents, as he spoke about some dramatic improvements in quality through the use of mechanical leaf removal to manage yield and quality – particularly in the Italian variety Sangiovese.

Martin Mendez-Costabel, shared his work on the development of new technologies allowing wine companies to employ 'precision viticulture' techniques, such as remote sensing and geographical information systems, to techniques to help influence the final quality of wine. These included assessing vineyard variability to assist with sampling and quality assessments, site selection and vineyard and irrigation design. They also use remote sensing to estimate irrigation requirements or use, which is especially relevant given the very drought conditions. Even areas where the land has subsided due to over extraction of water could be highlighted.

Acknowledgements

The activities detailed in this report were supported financially by Australia's grape growers and wine makers through their investment body the Australian Grape and Wine Association with matching funds from the Australian Government.
The ASVO wishes to thank the AGWA for supporting this project.

Visiting Scholar abstracts

Stefano Poni, Professor, Istituto di Frutti-Viticoltura, Università Cattolica del Sacro Cuore, Piacenza, Italy

The impact of leaf removal and the management of crop load and fruit quality – A European insight

Specific applications of leaf removal have recently shown to be especially effective at controlling yield and/or improving o piloting grape ripening in several Vitis vinifera L cultivars under an array of different locations. Pre-flowering leaf removal applied to remove at least six basal primary leaves has been proven a reliable and consistent technique to reduce crop via either a lower fruit-set and/or berry size mechanism, while enhancing ripening primarily as a result of improved seasonal carbon assimilation per unit of crop. Further desirable features of the technique are looser bunches, hence less susceptible to rot, and higher relative skin growth playing a positive role at limiting sunburn damage.

More recently a late season (i.e. pre- or post-veraison) mechanical leaf removal applied apically to the bunches to open a 40-50 cm tall window in the upper two-thirds of the canopy has been assessed as a tool to delay sugar accumulation in cv. Sangiovese. Potted and field studies have shown that, provided at least 35-40% of pending leaf area is removed, sugar accumulation can be considerably delayed without compromising grape phenolics and wine flavor and typicity. Whole-canopy gas-exchange monitoring carried out on late defoliated vs. non defoliated vines has shown that removal of lower than 30% leaf area is likely not to induce any significant effect due to the high photosynthetic compensation capacity of the retained leaves.

Martin Mendez-Costabel, Manager Wine and Grape Supply / GIS E&J Gallo Winery, Modesto, CA, USA

Understanding the impact of cultural practices on fruit quality in California.

Cultural practices are widely known to affect grape and wine yield and quality. Although many studies have looked at the effects of these practices in primary and secondary metabolites, as well as their influence in vine yield components, growers usually have few options to manage them in the vineyard. Among these are irrigation and canopy management, both proven to affect fruit quality and yield. The development of new technologies involving remote sensing and geographical information systems (GIS) represents a new opportunity to implement management practices at a large(r) scale, bringing at the same time a new meaning to the term ‘precision’ viticulture. The application of them to specific situations will be discussed in order to gain a broader understanding on how cultural practices are impacting fruit quality in commercial vineyards across California. The challenges associated with these new technologies will be covered as well, especially focusing in the links between research and practical outcomes that are directly relevant to industry.

END OF PROJECT
FINANCIAL STATEMENT
Statement of Receipts and Expenditure

At the conclusion of each Project, AGWA requires a Statement of Receipts and Expenditure of AGWA funds received in relation to the Project.

Project Title:	ASVO Mildura Seminar: Searching for the Sweet Spot - the quest for optimal yield and quality

AGWA/GWRDC Project Number	**Project Start Date**	**Project End Date**
GWT 1329	**1 July 2014**	**1 August 2014**

Financial Year (e.g. 2010-11)	**(a)** ***Funds brought forward from previous year***	**(b)** **#Approved GWRDC Budget (full year)**	**(c)** **Total budget available** **(a)+(b)**	**(d)** **Actual expenditure ($)**	**(e)** **Difference ($)** **(c)-(d)**
Year 1: 20__/__	**n/a**		0.00		0.00
Year 2: 2014/15	0.00	4,241.00	4,241.00	4,799.95	-558.95
TOTAL		4,241.00		4,799.95	**-558.95**

* "Funds brought forward" refers to any unspent AGWA funds from the previous year and approved by AGWA/GWRDC to be spent the following year (i.e. column *(e)* from previous year).
# "Approved GWRDC Budget" (now administered by AGWA) is the funding amount specified in the Project Agreement, including any approved Variations after Project commencement.

Was funding expended as approved in the Project Agreement? Yes ✓ No ☐

*If **NO**, please provide reasons:*

Has the cash and/or in-kind funding from Contributing Agencies been received and applied to the Project as approved in the Project Agreement? Yes ✓ No ☐

*If **NO,** please provide reasons:*

I hereby certify that this statement is true and accurate.

Paul Petrie

Signature of duly authorised representative

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Name: Dr Paul Petrie *Title:* President ASVO *Date: 28/08/2014*