Victoria
The Place To Be

Australian Government
Grape and Wine Research and Development Corporation

Smoke Taint- Past, Current and Future Research. Building a better relationship between Natural Resource Management Agencies and the Wine Industry.



FINAL REPORT to

GRAPE AND WINE RESEARCH & DEVELOPMENT CORPORATION

Project Number: **RT 08/01-2**

Principal Investigator: **Ricky James/Kieran Murphy**

Research Organisation: **DPI Victoria**

Date: **22/08/2009**

Final Report - RT 08/01-2 – Smoke Taint- Past, Current and Future Research. Building a better relationship between Natural Resource Management Agencies and the Wine Industry.

Department of Primary Industries- Victoria
Farm Services Victoria Grapes Team in conjunction with King Valley Vignerons, Alpine Valley Vignerons, Yarra Valley Winegrowers Association, Grampian/Pyrenees' Association, Upper Goulburn Winegrowers Association.

1- Abstract

This project aimed to build awareness of the latest smoke taint research with regard to viticultural and winemaking within the general wine industry. It was determined by the project team that the most efficient method of communicating this knowledge to the broader industry was through the creation of a DVD. DPI Victoria filmed the GWRDC Smoke Taint Technical Workshop and also conducted brief interviews with the keynote speakers. The Smoke Taint Technical Workshop was then condensed and formatted into a 1 to 2 hour DVD which communicated the main research learning's and future research priorities to growers, wineries and government agencies

2- Executive Summary

Smoke from bushfires and prescribed burns of forests have negatively impacted on grape and wine quality in Australia. Recent large bushfires caused downgrading of fruit and the resultant wine. Unharvested fruit from North East Victoria in 2006/07 led to an estimated loss in value of wine of $75-90m. (Whiting and Krstic, 2007.) Other wine producing areas in Victoria that have been affected by smoke in recent years include Gippsland, Grampians/Pyrenees and Central Victoria.

In keeping with an innovation and technology theme, DPI Victoria filmed the GWRDC Smoke Taint Technical Workshop and also conducted brief interviews with the keynote speakers. DPI Victoria then condensed and formatted a version of the Smoke Taint Technical Workshop into a 1-2 hour information DVD for growers, wineries and government agencies. The final production was applicable to the wine industry throughout Australian wine regions that have been and will be affected by bushfires and fuel reduction burning in the future. The areas in Victoria alone cover such wine regions as the King/Ovens Valley, Upper Goulburn, Yarra Valley, Gippsland, Central Victoria and Grampians/Pyrenees in Western Victoria.

The main aim of the DVD was to inform growers and other interested parties who were not a part of the Smoke Taint Technical Conference of the current and future technical work that is being carried out in the area of smoke taint and the results of preliminary trials done on the effect of smoke reduction burns near vineyards during the 2008 harvest period. The Smoke Taint Technical

Conference was also a follow up to a seminar held in Oxley in 2007 by Mark Krstic and the King Valley Vignerons that gave results of work done in the area of smoke taint from the previous year.

A five minute pod cast was produced from excerpts from the main production and was used as an advertising tool for the DVD and was be displayed on the DPI Victoria- Horticulture website. This web video was made available to be linked to other related websites such as GWRDC, VWIA and regional associations and the final DVD product was also made available via these industry avenues.

The research, updates and discussion that will took place at the technical workshop was of great importance and relevance to the greater wine industry and especially to the regional wine growing areas mentioned that have had issues with smoke in previous years. The production was considered as an update on past, current and future research and will be a work in progress as results become available. These results can then be passed to growers by various media including the suggested five minute pod casts.

The web video and DVD format was used to ensure that this information was available for those interested from the greater wine industry throughout Australia and for those who were unable to attend on the day.

3- Background

Smoke from bushfires and prescribed burns of forests have negatively impacted on grape and wine quality in Australia. Recent large bushfires caused downgrading of fruit and the resultant wine. Unharvested fruit from North East Victoria in 2006/07 led to an estimated loss in value of wine of $75-90m. (Whiting and Krstic, 2007.) Other wine producing areas that have been affected by smoke in recent years include Gippsland, Grampians/Pyrenees and Central Victoria.

Since 2003, much research has been undertaken in the area of smoke taint as a direct result of bushfires and continues today to include the effect of prescribed fuel reduction burns by government departments during the burning season. On Tuesday July 29th 2008, GWRDC will be holding a Technical workshop for industry experts with a number of technical research updates and expert guest speakers presenting information on past, current and future work in relation to smoke taint and experiences about relationships between natural resource management agencies and the wine industry. It is important for there to be the extension of this information out to a wider regional and national audience.

During to 2008 vintage, many growers in the King and Ovens Valley's, Upper Goulburn, Strathbogie and Yarra Valley areas were very concerned about the possible impacts on their fruit quality due to the possibility of fuel reduction burns in the area and the 'zero tolerance' approach by wineries to accept fruit that could have been affected by smoke from prescribed burns. A number of meetings where held in these areas that allowed growers to put forward their issues to Department of Sustainability and Environment (DSE) officers and also to allow DSE officers to advertise their fuel reduction program. A recent report released by the Environment and Natural Resources Committee claims that Victoria needs to increase its prescribed burning plan by up to three times to avoid repeats of wild fires experienced in recent years.

Seasonal conditions all but eliminated DSE's opportunity to burn in grape-growing areas prior or during harvest which allowed growers to harvest without concerns however, given to right conditions earlier in the season, DSE would have wanted to begin their program before growers had harvested their fruit and therefore possibly subjecting their fruit to smoke and possible downgrading and rejection of their product.

Correspondence with Mark Krstic, Program and Innovation Manager with GWRDC prior to the technical conference indicated that the extension of the information out to a regional and national audience would be highly valued. As it would be very impractical and costly to get researchers to travel to a number of regional areas to engage with growers, the use of a high quality, professionally produced DVD and web video was thought may fill the void.

4- Project Aims and Performance Targets

- Extension of relevant information from GWRDC Smoke Taint Technical Workshop to growers and relevant industry.
- Extension of relevant information from GWRDC Smoke Taint Technical Workshop to relevant government agencies.
- Building of relationship between growers, grower associations, industry bodies and relevant government agencies.
- Building of level of knowledge of growers, wineries and government agencies.
- Engaging growers and wine industry personal in the planning process for DSE's prescribed burns.

Commencement date:	July 2008
Completion date:	September 2008
Final report to be submitted:	October 2008

July 2008
- Preparation of questions for interviews
- Organisation of production company
- Selection of Presenter

29/7/2008
- Filming at GWRDC Smoke Taint Technical Workshop
- Interviews with key note speakers

August 2008
- Editing and production of Pod Cast and DVD

September 2008
- Launch of Pod Cast live on DPI and associated websites.
- Advertise pod cast and availability of DVD via DPI /People Logic database so that responses and traffic can be monitored and level of interest measured.
- Distribution of DVD to regional associations and appropriate government agencies.

October 2008
- Review the success/failure and take up of information.
- Revise
- Survey industry for response and mode of transmission.
- Report.

5- Method

With the assistance from a professional video and production company, the Victorian DPI Horticulture Grapes Team filmed the entire GWRDC Smoke Taint Technical Seminar and conducted interviews with key note speakers. This footage was then edited and produced into chapters with the 4 most relevant and informative lectures collated into a DVD format.

A promotional short video/web-cast was also produced and housed on the DPI Horticulture web page along with a selection of other short videos known as the FARMVIEW series. This short video had excerpts of the GWRDC Smoke Taint Seminar and the interviews conducted and were the promotional vehicle for the DVD. Contact information was provided for those who wanted further information and/or a full length copy of the DVD.

Both mediums for the information were advertised and editorialised in the Victorian DPI Grapes team newsletter (Appendix 1) which was sent to an extensive mailing list and also nationally on the wine industries daily e-newsletter, Daily Wine News.

6- Results and Discussion

The FSV Horticulture Grapes Team Newsletter (Appendix 1) was distributed to regional associations, service providers and approximately 1000 growers throughout the state of Victoria. It was also advertised on the national industry E-newsletter Daily Wine News.

As highlighted in appendix 1, the introductory/short video that was produced can be seen via the DPI Victoria website at www.dpi.vic.gov.au/horticulture

The main aim of the proposed DVD was to inform growers and other interested parties in affected areas of the current and future technical work that is being done in the area of smoke taint and the results of preliminary trials done on the effect of smoke reduction burns near vineyards during the 2008 harvest period.

The combination of the five minute web video as well as the DPI Victoria Grapes Team newsletter and the Daily Wine News e-newsletter saw a good response from industry from within the state, nationally and internationally.

Approximately 100 copies were requested from all section of the grape and wine industry that include growers, regional associations, research organisations, multi national producers and government agencies. These requests came from all over Australia and also included growers from California and a distributor in the United Kingdom.

'I did view the promo. You guys are light years ahead of us, which, given the vintage we had this year, we are grateful for!'
Mavrik Cellars, Santa Rosa, CA 95401, United States

'The winemaking team here has had to deal with the horrible effects of smoke taint in 2003 and 2007 and would love to see all of the info available on the subject.'
Shayne Cunningham, Managing Director, Victorian Alps Winery.

'Could you please send me a copy of the smoke workshop DVD as this is a problem we have had to deal with in the past.' 'We experienced significant losses of fruit through smoke in the 2001 and 2004 vintages. We are assisting Kristen Kennison with her work through our experience of these vintages. Could you please send a copy of the DVD.'
Barwick Wines, Dunsborough, WA.

'I was hoping I could organise for a copy of the above DVD to be forward to me in the UK. ' Chris Unger, Regional Sales Manager, Negociants UK.

Results from an informal evaluation completed indicated that 50% of recipients found the content of the DVD extremely useful with the other 50% indicating that the information was somewhat useful. There were no negative results recorded.

Interviewed recipients also found the medium of DVD's for delivering information as good so long as they are produced and orientated to prompting change in on-farm practices and it was suggested that written information such as copies of the PowerPoint presentations should also be included as additional information with the DVD.

A number of copies were also requested by the Department of Sustainability and Environment in Victoria to be shown to internal staff and as a part of their yearly recruit induction to highlight the issues that smoke from bushfires and prescribed burns can cause for the grape and wine industry.

During the collaborative response to the 2009 Victorian Bushfires, DPI Victoria, GWRDC, VWIA, AWRI and other regional associations, Mark Krstic, Program and Innovation Manager with GWRDC, called for 100 copies to be produced and sent to the GWRDC for distribution to industry if required.

7- Outcomes/Conclusions

Although difficult to gauge the level of understanding of the viewers of the DVD production of the GWRDC Smoke Taint Technical Workshop, the desired outcome was obtained as industry personnel who were not involved in the real time conference were able to view and hear the information given on the day by the research specialists. Although there are no figures on 'how many people' watched the DVD of the GWRDC Smoke Taint Technical Workshop, the response for copies of it when it was launched and during the 2009 Victorian Bushfires, suggests that both the information and the medium delivered was of use to growers.

The use of the medium was a successful tool to enable the information to be sent when required and requested and also shows the potential cost savings that could be achieved instead of staging a number of extension events with great logistical requirements to get information out to industry.

8- Recommendations

N/A

9- Appendix 1: Communication

December 2008- FSV Horticulture Grapes Team Newsletter- www.dpi.vic.gov.au



Smoke Effect Technical Workshop

DVD Available

The Victorian Department of Primary Industries in conjunction with the Grape and Wine Research and Development Corporation are proud to announce the release of a DVD highlighting information presented at the Smoke Effect Technical Workshop which was held in Melbourne in July 2008.

The workshop brought together Australia's leading researchers who reported to industry and government agencies about past and current research into the smoke effect issues encountered by the wine industry and created discussion about the needs and priorities of future research.

Representatives from the Department of Sustainability and Environment also spoke at the conference, providing insight into the processes and importance behind their Prescribed Burning Programs. By improving the relationship between DSE and the wine sector, DSE management and staff will have a better understanding of the concerns facing growers and wineries and it provides the opportunity for important dialogue and planning to occur between the two identities.

An introductory video on Smoke Effect research is available and can be seen via the DPI Victoria website at www.dpi.vic.gov.au/horticulture

For your copy of the Smoke Effect Technical Workshop DVD, contact Kieran Murphy at kieran.murphy@dpi.vic.gov.au or Ricky James at ricky.james@dpi.vic.gov.au or 02 60304611

DPI Victoria would like to acknowledge the assistance given to this project by the GWRDC, Mark Krstic, King Valley Vignerons, Alpine Valley Vignerons, Yarra Valley Winegrowers Association, VWIA, Department of Sustainability and Environment and the speakers on the DVD.

10- Appendix 2: Intellectual Property

N/A

11- Appendix 3: References

Whiting, J. and Krstic, M. ***Impacts of bushfire smoke on grape and wine quality- A scoping study.*** Department of Primary Industries, Knoxfield, Victoria, 2007.

12- Appendix 4: Staff

Kieran Murphy- DPI Victoria
Ricky James- DPI Victoria

13- Appendix 5: Other

Tuesday, 29th July 2008

GWRDC Technical Workshop – Smoke Taint
9:00am – 4:00pm
Venue – Melbourne Airport Motel and Convention Centre, Airdle Street, Attwood, VIC

9:00 **Welcome, introductions and aims for the day** - *Mark Krstic, GWRDC*

9:05 **Setting the Scene – Overview of Impacts from 2006/07 Bushfires –** *Joanne Butterworth-Gray, CEO VWIA*

9:15 **Setting the Scene – Climate Change and Bushfires in Australia: Recent trends and future projections –** *Dr Chris Lucas, Bureau of Meteorology, Melbourne*

9:45 **Technical research update #1 – Winemaking implications for the management of smoke and bush fire taints -** *Con Simos, AWRI (30minute presentation & 10minutes questions)*

10:25 **Technical research update # 2 – Western Australian Smoke Taint Research Focuses on Enhancing Decision Making Capacity for the Wine Industry and Landscape Managers -** *Kristen Kennison, Department of Agriculture and Food Western Australia, Bunbury; Mark Gibberd, Curtin University, Margaret River; (30minute presentation & 10minutes questions)*

11:05 *Morning Tea*

11:20 **Technical research update #3 – Update on R&D activities undertaken in Victoria** *Dr Mark Downey, Vic DPI, Mildura; John Whiting Vic DPI, Bendigo; Mr Steve Lowe, King Valley Vignerons Association (30minute presentation & 10minutes questions)*

12:00 **Technical research update #4 – New approaches to smoke taint analysis -** *Kerry Wilkinson, University of Adelaide; (30minute presentation & 10minutes questions)*

12:40 *Lunch (Provided) – includes informal tasting of smoke affected wines*

1:30 **Technical research update #5 – Smoke from bushfires and prescribed burning: health and environmental issues -** *Tina Bell, University of Melbourne, Parkville Campus; (20minute presentation & 10minutes questions)*

2:00 **Building relationships between Natural Resource management Agencies and the Wine Industry**
a) Glynn Ward & Drew Haswell – Experiences in Western Australia *(15 minutes)*
b) Liam Fogarty & Joanne Butterworth-Gray – Experiences in Victoria *(15 minutes)*

2:30 **Reports of other industry activities and regional trials** *(open forum discussion)*

3:00 **Identifying opportunities for partnering and collaboration** *(facilitated by Mark Krstic)*

3:20 **Identifying future wine industry R&D gaps, needs and opportunities** *(facilitated by Mark Krstic)*

3:50 **Summing up and feedback**

4:00 **Meeting Close**

14- Appendix 6: Budget Reconciliation

GWRDC GRAPE AND WINE RESEARCH AND DEVELOPMENT CORPORATION

REGIONAL INNOVATION & TECHNOLOGY ADOPTION (RITA) RECONCILIATION

Project No. RT 08/01-2

Project Title

Smoke Taint- Past, Current and Future Research. Building a better relationship between Natural Resource Management Agencies and the Wine Industry.

- **Please ensure that all figures are inclusive of GST (if applicable).**
- The figures in the following table should reflect the approved GWRDC funding amount and any approved Variation after Project commencement.

Budget item	Approved Budget (current year)	Expenditure (current year)
Video Production and Filming	550.00	550.00
Edit Suite and Graphics	2200.00	2200.00
DVD Duplication	440.00	440.00
DVD Duplication Reprint	440.00	440.00
DVD Encoding and Approval	22.00	22.00
Postage	33.00	33.00
Translation of video for DPI website	110.00	110.00
Incidentals	55.00	55.00
TOTALS (incl. GST)	**(a) $ 3850.00**	**(b) $ 3850.00**
Balance* (a) minus (b)	**$ 0.00**	
Total GWRDC funding (whole project)	**$ 3850.00**	

***Notes:**

- Approval must be requested from GWRDC to carry over funds to the following year.
- A full financial Reconciliation is required at the end of the project (to accompany the Final Report). Any unspent funds must be returned to the Corporation

I hereby certify that this Statement of Expenditure is true and correct.

.....	.....	.....
Signature	Printed Name	Date