King Valley Vignerons Inc

Optimising Winegrape Quality in Cool Climates



FINAL REPORT to
GRAPE AND WINE RESEARCH & DEVELOPMENT CORPORATION

Project Number: **RT 02/47-5**

Principal Investigator: **Otto Dal Zotto**

Research Organisation: **King Valley Vignerons**

Date: **19th December 2003**

2 Executive Summary

The "Quality Fruit That's Cool" seminar, conducted in the King Valley on the 27 & 28 of November 2003, was a collaborative effort, with many partners providing assistance to pull together a workshop exploring variability in the vineyard and wine making.

The funding bodies GWRDC and CRCV contributed to what turned out to be a high class seminar with some 120 participants. The King Valley Vignerons, the key organizers, had the motivation to put together the workshop in the regio, and it attracted participants from as far afield as the Hunter Valley and Barossa Valley. The program attracted not only industry participants but also research, university, and extension staff. The program highlighted the interest in the topic and some of the unanswered questions about variation.

The seminar set out to explore the issues around variation, and some of the research and observations that have been made into the topic and the different angles researchers viticulturists and wineries are taking in order to get a better feel for the topic and applying management solutions to achieve a desired result. The presenters represented the most recent thinking around the topic and explored their areas in their respective papers and general discussion between individuals during seminar breaks.

The keynote speaker, Steve Price from Oregon USA, provided the highlight of the workshop, discussing in detail his extensive research and findings into tannin production and other issues of berry development. Much of this research, not having been presented in Australia previously, has left many questions unanswered, highlighting the need to work together in order to explore berry development in conjunction with researchers from overseas. Steve's approach to presenting the data and explaining his findings was world class. The investment in getting him here was worth every cent.

The South East of Australia has benefited greatly from the gathering of minds on the topic of grape variation that occurs in the Wine Industry across Australia. Some of the costs and benefits were explored in depth and some of the practical solutions offered. Peter Hayes and Michael Cope-Williams put some of the problems to delegates and explored how they, as practitioners, were influencing their grape intake and winery management .

Andrew O'Brien exposed the issues which retailers face and the potential effects on consumers with vintage variation in the market place. This was a very interesting discussion and alluded to some of the other issues which affect consumer demand for wine. Dejan Tesic and Ken Wetherby both discussed the effects which soil have on variability, and how regions can utilise site location as a key to creating specialized marketing opportunities and regional identification. Some research indicates that soil is a major determinant in grape quality, and that understanding what you have is critical in managing your vines and for the wine maker getting the best wine possible.

Luke Rolley, Steve Price and Russell Johnstone all promoted the Idea of using modern technology to get a better understanding of the quality of the berries and wines to then drive the management of vineyards. The technology that is now available to the industry must be utilised as it becomes more economic and accessible; the resultant information must be utilised to ensure management on the ground is better directed. Sampling is a key to obtaining the correct information and thus participants in any research must have a good understanding of the techniques available.

Steve Lowe, Prue Henschke, Kim Ludvigsen and Alan Hoey all spoke of some of the practical aspects of variation at various locations. They also spoke of some of the practical factors affecting wine making and viticulture in different regions. Of particular interest was the range in specifications that single varieties received by one winery in one vintage and the effects this had on winery activities and customers' demand for wine styles.

Finally the funding received made it very possible to bring together a world class group of presenters to the King Valley in North East Victoria to discuss one of the factors effecting the whole industry. Special thanks goes to the GWRDC, for their assistance in getting the program off the ground, and to Mr John Harvey for his continual effort in assisting with getting Steve Price here to Australia, which all participants would agree was well worth the effort.

3. BACKGROUND

The King Valley is a highly productive region for wine grapes, with 1300 hectares producing approximately 14,000 tonnes per annum. While much excellent quality fruit is grown, results are not always up to the expectations of the growers or the recipient wineries. The topography of the valley is very variable - deep alluvial river flats, well-drained red clay slopes, plateau lands and high exposed ridge tops.
This variability leads to marked differences in:

1. Exposure of fruit to morning and afternoon sunlight
2. Nutrient and moisture availability to the vines
3. Soil permeability to oxygen and consequent marked differences in soil microflora

Some areas of the region are of high vine vigour, and measures to control crop loads and leaf cover are often necessary. The soils are often somewhat acid in contrast to the higher pH conditions prevailing in other successful vine growing areas in Australia.

All of these factors indicate a pressing need for a close study of the practices necessary to produce high quality fruit in each particular location and microclimate of the valley. While much progress has been made in recent years, it is now considered that the grape growers and wineries in the valley would greatly benefit by bringing together in a workshop environment a group of people experienced and effective in:

1. Making high quality wine elsewhere in Australia and with a full knowledge of the characteristics required in the fruit.
2. Successful practical viticulture in a range of conditions similar to those in the King Valley.
3. Research workers who have made notable contributions in recent years to practical cool-climate viticulture and/or using the grapes to best advantage in making wine.

Two previous seminar-workshops proved the value of this approach. In 1995 an informal discussion was held to assess the performance of various management techniques. As a result many existing vineyards were modified and new plantings incorporated appropriate trellis architecture. In 2001 a follow-up workshop presented current research and trial results on cool climate canopy management to about 150 participants. While much information of value in the pursuit of growing quality fruit emerged from these meetings many questions remain to be answered. For example, ripening times and colour scores of Cabernet Sauvignon grapes in 36 blocks in the valley vary by about 120% - therefore impacting on the quality of the wine produced - indicating the intervention of some at least of the local factors mentioned above.

This application for funding is based on the evident need of the region for a forum in which current research and best practice is presented to the growers in a form, which they can follow and appreciate.

The region is fortunate in having a nearby laboratory (Myrrhee Consulting) which offers all grape growers a complete physical description of the grapes (berry weight, skin weight, seed weight) together with an analysis of the chemical composition (juice sugar, pH, acids, skin anthocyanins,

flavonols and total phenolics, seed phenolics). The results of this analysis are an essential tool for assessing the effects of climate variables, soil conditions and canopy management practices.

The differential quality based pricing structure now operating in the industry means that growers must meet strict quality specifications to attract sufficient income to remain in business. Equally, wine makers must offer quality, consistency and value in the market place.

4 OBJECTIVES

As outlined above the aim is to improve grower understanding of the general and locally specific factors which determine the physiology and chemistry of the grape ripening process and other quality related issues. Industry leaders from various quarters will be asked to present papers and to offer growers opportunity for free discussion of the presented material and any other relevant questions.

5. METHOD

A subcommittee of the King Valley Vignerons was formed to put together the issues effecting grape and wine variability in the cool climates. Once determined the relevant speakers were approached in order to access the most current Information on each topic.

It was considered a one-day seminar was the best approach in order for the information to be exchanged with a minimum disturbance but the maximum impact for both participants and presenters.

6 Result/ Discussions

Please find attached a copy of the proceedings from the Seminar.

7. Outcome / Conclusion

The seminar was heralded as a great success for the participants and speakers. It provided an opportunity to explore what is becoming an increasingly important topic for discussion, research and practical application. It is generally thought that the seminar was a rich source of information for all involved, and a great initiative by both the King Valley Vignerons and GWRDC and CRCV. Anecdotal evidence would suggest that the whole exercise was world class.

Practical application of the information will be utilised by Viticulturists and Winemakers over time and, as difficult it is to measure the changes and thoughts of the industry, this event went a long way to exploring the practical effects and management of variation in the wine industry.

Press releases and industry bulletins were released at the conclusion of the program and media in attendance reported on the discussion and presentations.

The GWRDC and CRCV funding was critical for the project to work successfully and allowed the region to pursue an issue which is costing the region large amounts of money, as they wish to be known as a reliable and consistent supplier of high quality wine grapes. The visiting scholarship funding (CRCV) and assistance from the GWRDC (John Harvey) were critical in accessing a world leader in berry analysis and physiology and to also attract the other world class Australian speakers. Regions are in control of their destiny.