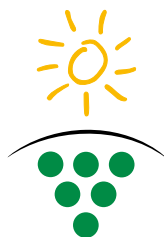


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September-October 2006



COOPERATIVE
RESEARCH CENTRE
for
VITICULTURE

Inside

CEO's Report	2
CRCV farewells Ian Atkinson	2
Lasting benefits of Hands On workshops	3
Retrospective – Philip Laffer and Hugh Armstrong	4&5
VineLOGIC Virtual Vineyard™	6
Heathcote growers adopt mulching trial	7
In Brief & Events	8

Cooperative Research Centre for Viticulture

The University of Adelaide
The National Wine and Grape Industry Centre
(Charles Sturt University, NSW Agriculture)
The Australian Wine Research Institute
CSIRO
Department of Primary Industries, Victoria
Primary Industries & Resources, SA
The Australian Dried Fruits Association Inc.
Winemakers' Federation of Australia Inc.
Grape and Wine Research and Development Corporation
Horticulture Australia Limited
Wine Grape Growers' Australia

Newsletter

Hands On workshops keep growers on the cutting edge of viticulture

The CRCV Research to Practice Hands On workshops have been offered for less than two years, but are arguably one of the most effective in promoting improved vineyard management practices nationally. Beginning in 2004, the workshops were established as a variant of the mainstream CRCV Research to Practice series.

Leah Clearwater, a Viticultural and Oenological Consultant for AHA Viticulture and a Western Australian Hands On facilitator, says that although the initial Research to Practice workshops were valuable, feedback from growers indicated that they wanted a more practical method of gaining knowledge.

“Growers said they would prefer a workshop format that actively engaged them in discussion and learning within the vineyard,” Leah says.

Guided by this information, the CRCV piloted the Hands On workshops in the 2004–05 growing season, holding one day workshops in vineyards at bud burst, flowering, veraison and post harvest.

“Information delivered in the workshops is targeted, intense and relevant to that particular time of the growing season so can be immediately applied to a growers’ own vineyard,” Leah says.

“All facilitators are trained consultants and instructors who are passionate about aligning research with the day to day management of vineyards.”

Leah says the benefits of the Hands On workshops extend to the entire Australian wine industry.

“As a result of these workshops our industry gains a more educated and equipped group of growers who feel



From L to R Mount Barker Trial – Leah Clearwater, Colin McDonald (WA Ag Dept), Andrew Murray (Manager, Powderbark Vineyard, Frankland).

confident about applying technical principles in achieving the quality goals set before them. This makes the Australian wine industry more competitive on the international stage.”

Mark Sims, Manager of Kiola Vineyard Services and the central-west New South Wales Hands On facilitator, says the workshops have helped growers understand that benchmarking is a long-term, viable tool that will help them make decisions on winegrape quality.

“The format of the workshops enables us to demonstrate vineyard systems for benchmarking. This is the first time some growers have learnt about quality assessment of fruit,” Mark says.

Mark looks after groups in regions including Bathurst, Cowra, Young and Canberra and says that the workshops have provided growers with the knowledge and skills to produce fruit to winery specifications.

“With the increasing demand from wineries for growers to meet quality parameters, these tools are really important for them.”

(Continued on page 3)

CEO's Report

CEO column



Jim Hardie

As we enter the final year of the Cooperative Research Centre for Viticulture, demonstrating the value of a cooperative approach to research and development for the Australian wine industry has come sharply into focus.

We have been actively reviewing final project reports and developing an Evaluation Impact Statement that will clearly demonstrate the impact the CRCV has had on the industry and the CRCV's other stakeholders.

Bridget Ransome, with assistance from our Program Managers and independent analysts, has been compiling the information, which will identify the value of the CRCV's achievements in economic, environmental and community terms.

The Impact Statement will focus on the key areas of CRCV research and development. The evaluation draws on a retrospective view of inputs, achievements to date and projections of future impact.

Each of the key research areas will face a number of key questions that examine the amount of resources for the project, the return on the investment and identify how the scientific and technological outputs of the CRCV's programs have contributed to significant economic, social, and environmental outcomes for the Australian viticultural industry. A feature of the study will be an identification of benefits in each of the major grapegrowing regions.

I expect the Impact Statement to provide the users of CRCV-generated knowledge and technologies – Australia's grapegrowers and winemakers and the CRCV's other stakeholders, the research and education organisations and the industry's service and supply businesses – with firm evidence of the benefits of the CRC-approach to industry R&D.

Of course the Australian Government's CRC Program will have a keen eye on the analysis. The CRCV is also assisting with a whole-of-CRC Program evaluation of the economic benefits of CRCs in the Agricultural and Rural Manufacturing-based sector.

One of the most widely recognised initiatives of the CRCV is the Research to Practice workshop series. In this edition of the newsletter you can read about the impact the Research to Practice Hands On program has had on grapegrowers and read their accounts of why that program is such an effective model for promoting the application of scientific research findings.

Farewell to Ian Atkinson



We have recently farewelled **Ian Atkinson**, our Technical Applications Manager, who has taken up the position of CEO with the CRC for Irrigation Futures.

During his three-and-a-half years with the CRCV Ian focussed effectively on promoting the practical application of the CRCV's research. He contributed significantly to the development of national and regional extension projects to the wine grape industry and some of his major achievements included the development of the Vitinote series and regional Viticare On Farm Trials program.

Ian was also instrumental in extending the CRCV's reach into grape growing regions by helping deliver national initiatives, such as improved irrigation management and the adoption of Environmental Management Systems, at a local level.

We wish Ian great success in his new role and thank him for his contribution and support during his time with us.

Jim Hardie
CEO

Newsletter

The Cooperative Research Centre for Viticulture Newsletter is produced bi-monthly. All contributions are welcome, especially reports from conferences, seminars and international trips.

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Hands On workshops keep growers on the cutting edge of viticulture

(Continued from page 1)

Leah says there are many examples of how the workshops have influenced growers to make management changes that have had a positive impact on fruit quality.

“Quite a few of the participants had never dug soil pits in their vineyards to gain an understanding of root zone management and irrigation scheduling,” Leah says.

“Following the soil assessment workshop, I received a number of calls from growers who were excited about the things they had discovered from their soil profiles, and the resulting management changes they had implemented.”

Leah added that the majority of growers in her groups felt that their timing for canopy management activities was improved due to their understanding of the seasonal course of berry growth.

“This included more informed decisions on when to leaf pluck and fruit thin in order to gain the greatest benefits on fruit quality,” Leah says.

“Many participants have given feedback that significant improvements in fruit quality were related to an obvious improvement in vine balance as well as timing of canopy management decisions.”

Mark Sims says it is unfortunate that CRCV funding is winding up this year as it takes at least three years to measure quality improvements in vineyards in a program like Hands On.

“I would like to see these workshops carried on in one form or another to ensure we keep lifting the overall quality of Australia’s grape and wine industry – which all starts in a grower’s vineyard.”

Leah agrees, saying she believes that the Australian wine industry will be less competitive with other wine regions internationally if the Research to Practice Hands On program is discontinued.”

Growers prefer to learn best practice management in the vineyard

Growers who have been involved with the Hands On workshops say that the interactive, practical focus of the workshops and having access to expert viticultural knowledge is invaluable.

Richard Martin, a grower from Young who has been growing grapes for six years on his 23ha Bandicoot Hill vineyard, says the most interesting thing about the workshops for him is the aspect of visiting other vineyards in the region.

“Every time I attend a workshop I learn something new. I’ve found it particularly useful to see how other people are managing their growth and fruit load,” Richard says.

“The workshops have not only taught me why it is important to benchmark for quality, they have taught me how to do it.”

Richard has been able to put his theory into practice and says he feels much more prepared now when discussing grape quality with a winery.

“A real benefit is being able to show the wineries all the management practices they request for quality grapes,” Richard says.

“I can show them that my fruit has had the right amount of light, the right amount of bunches and leaves, and that my shoot spacing is good. I kept very thorough paperwork before but this has taken me that step further.

Mark Renzaglia who is the vineyard manager at Winuendale Wines and the President of the Bathurst Regional Vignerons Association has also been an enthusiastic participant in the Hands On workshops.

He says they are particularly important for an emerging region such as Bathurst, where there is very little existing viticultural knowledge to draw from.

“This is a fairly new region so growers are really keen to get as much information about growing quality grapes as we can. This series of workshops are excellent for our needs,” Mark says.

“Getting into the vineyard, looking at the vines and talking about the things that are going on at that time with an expert leading the discussion is really valuable.”

Mark says he has made management adjustments to his own vineyard as a result of information learnt at the workshops.

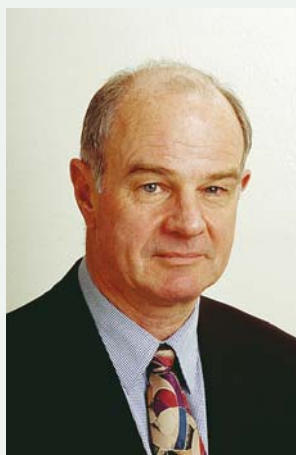
“I wasn’t aware of how quickly the shoots grow during the grand period of growth and therefore how critical it is to control disease at that stage of development,” Mark says. “For example, if you don’t spray regularly during that period, new growth will appear between sprays and won’t be protected. As a result I changed my monitoring management practices and now keep a closer eye on the vines during that period.”

Retrospective with Philip Laffer and Hugh Armstrong

As the Australian viticultural industry looks to a successor of the CRCV to maintain a collaborative approach to grape and wine R&D in Australia, industry leaders take a moment to reflect on the achievements of the CRCV and discuss opportunities to continue its functions into the future.

This month in *Retrospective* we pass on the thoughts of **Philip Laffer**, Group Chief Winemaker, Pernod Ricard Pacific, and **Hugh Armstrong**, Business Development Manager – Viticulture, Bayer CropScience.

Philip Laffer



What was your role with the CRCV and what are the dates you commenced and completed your position?

Co-convener of CRCV1 and Convener of CRCV2. I have also been a Board Member from the CRCV's early inception to finalisation (1996 to 2006).

How would you describe the role the CRCV has played in improving viticulture in Australia during its 12-year term?

The CRCV has played a major role in improving viticulture in Australia by successfully encouraging and creating research cooperation that has delivered significant academic and practical outcomes.

Given that a key goal of the CRCV is to improve grape quality through innovative viticultural practices, how do you rate its success?

I believe the results have been very good. CRCV2 has successfully built on the outcomes of CRCV1 and has taken new approaches to R&D work which has ultimately delivered improved and new knowledge, resulting in a better bottle of wine.

What do you think are the three most important practical outcomes the CRCV has achieved for the Australian grape and wine industry?

1. *New Technical Knowledge*

We now have greater knowledge of the vine genome giving us, potentially, the ability to manipulate the vine through cultural practices.

2. *Introducing New Technology*

We now understand the initial stages in rapid measurement of grape quality parameters, which has led to smarter viticultural decisions and smarter winemaking decisions.

3. *Establishing an Effective Collaborative Structure*

The creation of an ongoing cooperative grape and wine research environment via a formal, and industry supported structure has laid the essential foundations for ongoing collaboration and cooperation within our industry.

How do you see the way forward for Australian viticultural research and development?

The way forward is clearly about continuing the proven success of cooperative research. We have discovered, through 14 years of collaboration, the value of working together without losing the equal value of research competition.

Having the benefit of 14 years of Commonwealth CRC funding, it now rests upon us to use the resources available to us to maintain the cooperative impetus.

Why not exploit the great strength of the industry owned Australian Wine Research Institute to achieve this desire?

To me, the objective is clear and simple, no doubt the achievement will be a little, but not much, more complicated.

The results will be spectacular.

Hugh Armstrong



What was your role with the CRCV and what are the dates you commenced and completed your position?

Industry Communications and Extension Coordinator (1995–99). This was a joint position with the Grape and Wine R&D Corporation.

How would you describe the role the CRCV has played in improving viticulture in Australia during its 12-year term?

The CRCV has played an important role in improving research collaboration and cooperation in the viticulture industry, encouraging researchers from various agencies to work together.

The work of the CRCV has laid the foundations for a sustainable viticulture industry in Australia. Many of the research outcomes of CRCV projects have become ‘steps in longer ladders’ or pieces of information which will be used in the future.

The education and training program has played a significant role in improving knowledge and skills within the industry and has provided an impressive pool of qualified researchers (PhD’s) – over the years the CRCV has supported the training and professional development of many more PhD graduates than would have otherwise happened.

The process of peer reviews established by the CRCV have been very beneficial in ensuring that work is valid, accountable and relevant.

Importantly, the training and education programs have reached the end users in our industry and have had a very positive impact on growers across the country.

Given that a key goal of the CRCV is to improve grape quality through innovative viticultural practices, how do you rate its success?

Innovations such as Partial Rootzone Drying, remote sensing and NIR grape quality measurements all have the potential to significantly improve grape quality, however it is still too early to properly assess these techniques.

What do you think are the three most important practical outcomes the CRCV has achieved for the Australian grape and wine industry?

1. Research to Practice
2. Support for grape colour measures
3. Collaborative structures between agencies

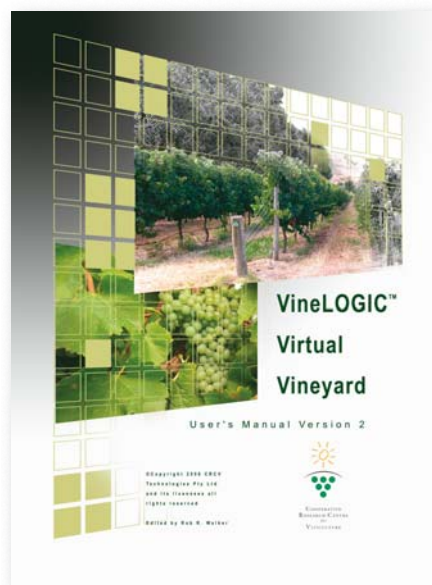
How do you see the way forward for Australian viticultural research and development?

Without a CRC, there is the potential for R&D to become fragmented. There is the potential for R&D to become fragmented. The industry needs to acknowledge the benefits of this structure and replicate it without Commonwealth funding.

Other comments?

The industry and the partners should take a great sense of achievement from the positive contributions of CRCV 1 & 2.

Virtual Vineyard helps students and viticulturists predict grape results



VineLOGIC™ Virtual Vineyard, a software program designed to simulate grapevine growth and development simply and easily on a personal computer, is now available through the Cooperative Research Centre for Viticulture (CRCV) in a new and improved Version 2.

The program is designed to show what might happen to a grape crop under different conditions and management practices, allowing users to explore the potential impact caused by manipulating the vineyard environment.

“The software program is built on real information from major Australian grapegrowing regions, and includes historical weather records, a range of vineyard soil types, water salinities and depth, and vine growth and development data,” said **Bridget Ransome**, Marketing and Commercial Consultant for the CRCV.

“The program is designed for education and training, but is also helpful for viticulturists who are exploring strategic planning options through use of ‘what-if?’ scenarios in the vineyard.

“The user is guided through a 10-step process to set up a particular vineyard scenario. The program then runs the simulation for that selected situation, and provides a detailed text and graph summary of the results you can expect. The user can then change any of the variables to run the simulation again, and compare the new results with those seen previously.”

Users can choose from hundreds of vineyard variables and factors in the categories of weather, soil type, pruning system, trellis type, grape variety, rootstock, irrigation water salinity, irrigation schedule, water-table depth and soil salinity.

The program can quickly and simply show outcomes in the vineyard such as time of end of dormancy, budburst, veraison, ripening, and potential berry yield, periods of stress, severity of stress and weather conditions.

Along with improved graphics, VineLOGIC™ Virtual Vineyard has an enhanced capability to predict salinity impacts on grapevines; expanded choices for grape varieties and rootstock; more wine regions to choose from; over 30 years of comprehensive weather data for each location; and an improved vineyard soils selection complete with colour profiles.

The new version also gives users the ability to simulate cover crop growth, and to run simulations seamlessly across three seasons while carrying forward fruitfulness estimates.

According to the University of Adelaide’s Lecturer in Viticulture, **Bob Barrett**, VineLOGIC™ Virtual Vineyard is an extremely useful tool for expanding the skills of students and those interested in viticulture, by encouraging them to think about managing vineyards in a holistic manner.

“While students have a lot of exposure to actual vineyards during their degree, this allows them to experiment with all kinds of management scenarios and compare the best practice for various regions in Australia, which react differently due to things like climate, soil and irrigation water salinity.”

VineLOGIC™ Virtual Vineyard was developed in partnership with the CSIRO Plant Industry, with input from a team including viticultural, modelling and programming experts.

VineLOGIC™ Virtual Vineyard is available on a CD with a comprehensive User’s Manual for \$250 including GST. Individual site licenses can also be purchased for \$60 per PC, including GST. A special discount is also available to VineLOGIC™ Version 1 customers for a limited time only.

For more information or to purchase a copy of VineLOGIC™ Virtual Vineyard, please contact: VineLOGIC™ Sales/Support, Bridget Ransome, CRCV, (08) 8303 9663, bridget.ransome@crcv.com.au

Viticare trial encourages Heathcote growers to adopt mulching



Mulching trial at Sanguine Estate.

A CRCV Viticare trial conducted in the Victorian wine region of Heathcote has found significant benefits in using under vine mulches in that region to reduce vine water stress. The trial was conducted in collaboration with the Department of Primary Industries (DPI) Victoria, and Sanguine Estate from 2004 to 2006 and assessed the impact of two mulch treatments on soil moisture, yield, grape quality, soil pH, vine nutrition and soil biodiversity.

Straw was applied at a depth of 60cm and a composted green organic material from suburban green waste was applied at a depth of 30cm. Both were compared to a control treatment of bare soil.

Viticare Trials Regional Coordinator for Greater Victoria **Natalie Tostovrsnik** said growers chose the trial topic because there was minimal water available in the region.

“While growers in the region were aware of the potential benefits of mulches in improving soil moisture, they were not confident enough to use mulches in their own vineyards,” Natalie said.

“Growers also expressed concerns regarding the application, cost, maintenance and other practicalities of mulch use. So we developed a trial that would teach them about those aspects.”

Six workshops were held in Heathcote to communicate the benefits of the trial to local growers and facilitate knowledge sharing. Natalie said the workshops attracted regular attendees and a consistent number of local growers.

“The workshop topics included environmental management, mulch trial and design, efficient water-use, cover crops and native grasses, trial updates, irrigation and a mulch field day,” she said.

The trial was conducted at Sanguine Estate vineyard, which produces premium quality low yield Shiraz, on a site typical of the Heathcote region.

“Overall, the straw treatment was found to be the most effective mulch when it comes to water efficiency in the vineyard,” Natalie said.

“The end results were that while the soil moisture monitoring did not demonstrate a significant difference in soil moisture between the three treatments, other indicators such as soil pH, vine nutrition, yield, quality (pH, TA, Brix) and defoliation at vintage time demonstrated that there was a benefit in using straw or compost mulch under vine to optimise water use efficiency.”

Trial grower and Sanguine Estate viticulturalist **Mark Hunter** said he benefited from being able to view the effects of the straw and compost mulches first hand.

“Observing first hand the impact of straw and compost mulches compared to the bare soil was of great benefit because I actually got to see the difference. I liked being able to keep my eye on the vines and see how they were reacting,” Mark said.

“The difference was quite dramatic when you compared the control, or not using a treatment, to using the straw – it was quite remarkable,” he said.

Natalie said Mark had become recognised within the region for his knowledge about mulches and other aspects of water use efficiency, and that several Heathcote growers were now using straw in their vineyards as a result of the trial.



Digging a soil pit for the mulching trial at Sanguine Estate.

Brief News

On Farm Trials Series 2 manuals available

As announced in the last newsletter, the CRCV is in the process of posting a comprehensive series of On Farm Trials manuals online, in an effort to pass on the knowledge gained through the extremely successful On Farm Trials project.

Series 1 and 2 of the manuals are currently available on the CRCV website with series 3 coming soon. The easy to use manuals cover information about how to trial soil improvements, vine nutrition, pest and disease management, canopy management, and how to measure aspects such as fruit quality, soil profiling and vine health.

For more information

<http://www.crcv.com.au/viticare/trials/>

New CRCV Vitinotes now available online

Five new Vitinotes are now available to download from the CRCV website.

New topics include:

- Measuring soil porosity
- Measuring soil strength
- Measuring infiltration rate of water into soil
- Examining grapevine root systems
- Monitoring soil moisture.

For more information

www.crcv.com.au/viticare/vitinotes/

Australia's first rootstock literature online database

The CRCV and the Phylloxera and Grape Industry Board of South Australia have developed a searchable online database of Australian information on grapevine rootstocks. This online catalogue of rootstock literature contains 65 Australian research papers and enables users to source information on rootstock performance that is specific to the region, variety and/or research interest.

For more information <http://www.phylloxera.com.au/viticulture/>

[rootstocks/publications/index.asp](http://www.phylloxera.com.au/viticulture/rootstocks/publications/index.asp)

Australian wine's future leaders named

Fifteen wine industry representatives from around the nation have been chosen to represent the Australian Wine Industry as part of the new Future Leader's program, which is being supported by the Winemakers' Federation of Australia, the Australian Wine and Brandy Corporation, the Grape and Wine Research and Development Corporation and Wine Grape Growers' Australia.

The inaugural "Future Leaders – Succession for the Australian Wine Sector" program aims to capture and transfer decades of invaluable industry wisdom from successful industry veterans to the next generation of leaders.

For more information contact

Peter Mansfield at the Winemakers' Federation of Australia on (08) 8222 9255.

Diary Dates

13 & 14 September 2006

Riverland Field Days

The 49th Riverland Field Days is to be held on 13 & 14 September 2006, at the Field Days site on the Monash/Barmera by-pass road 4km from Barmera.

<http://www.fielddays.riverland.net.au/>

12 October 2006

ASVO oenology seminar

The Australian Society of Viticulture and Oenology (ASVO) will host a comprehensive program of speakers at a seminar entitled "Maximising the Value – Maximise returns through quality and process efficiency" on Thursday 12 October 2006. This seminar will address the immediate knowledge gaps of oenologists and focus on ways to boost the efficiency of winery operations. The event will be held in Adelaide, and will be broadcast

via videoconference to regional centres in Western Australia and Queensland. Registrations are now open.

<http://www.asvo.com.au/news/registration>

20–22 October 2006

Australian Inland Wine Show

Set in the modern surrounds of the city of Swan Hill, the success of Australia's inland wines has been celebrated for over two decades with this year being the 26th Annual Australian Inland Wine Show.

The weekend will showcase wines from four distinct regions, South Australia's Riverland, Northern Victoria's Murray Darling and Swan Hill regions, as well as the Riverina region in New South Wales. With over 60 different wineries represented it's certainly a great chance to taste the many quality wines the producers have to offer.

<http://www.inlandwine.com/>

Your CRCV

The Cooperative Research Centre for Viticulture is a joint venture between Australia's viticulture industry and leading research and education organisations.



It promotes cooperative scientific research to accelerate quality viticultural management from vine to palate.

Australian grapegrowers and winemakers are key stakeholders in the CRCV, contributing levies matched by the Australian Government and invested by the Grape and Wine Research and Development Corporation in the Centre.

Newsletter Disclaimer

While every effort has been made to ensure the accuracy of the information in this newsletter, the Cooperative Research Centre for Viticulture cannot accept responsibility for the consequences of the use of this information. The document provides you with an explanation of research in progress and is a guide only.