RIVERINA WINEMAKERS ASSOCIATION

Australian Government
Grape and Wine Research and Development Corporation

DEVELOP OF A WASTE STREAM STRATEGY (FOR SOLID WASTE) FOR THE RIVERINA WINE INDUSTRY AS A MODEL FOR SUSTAINABLE PRACTICES IN ALL REGIONS



FINAL REPORT to
GRAPE AND WINE RESEARCH & DEVELOPMENT CORPORATION

Project Number: RT 05/04 – 04 – 05 – R5

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Research Organisation: **Riverina Winemakers' Association**

Date: **12TH December 2006**

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GWRDC Final Report
RITA Project Number: RT05/04-04-05-R5

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December 2006

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1. ABSTRACT

In August 2005 work commenced on a joint-funded project between the GWRDC and Riverina Winemakers' Association (RWA) to audit and review winery solid waste streams management in the Riverina wine industry. This project was completed in December 2006.

The aims of this study which supported the Australian Wine Industry's Environment Strategy entitled *'Sustaining Success' '* were for the Riverina wineries to work collectively to ensure the long-term sustainability and viability of the local wine industry through improved waste management practices. With an emphasis on the '*triple bottom line'* the project worked through a number of components including auditing, communication and awareness and training and education to achieve this outcome.

The project also spearheaded the formation of the RWA's ***One Vision*** Environment Program and the establishment of the Riverina wine industry's Environment Policy and inaugural Environmental Compliance and Awareness Seminar.

2. EXECUTIVE SUMMARY

During consultation with the winemakers of the Riverina, it was established the industry wanted to examine ways of improving the day-to-day challenge of managing inorganic solid waste. In a local industry that produces nearly 5,000 tonnes of solid waste (as at November 2005) that can be directly sent to landfill, improved environmental management recommendations were considered essential and achievable goals for the industry. This also complemented the objectives in the Australian Wine Industry's Environment Strategy entitled *'Sustaining Success'* which was published in 2002 and which had come to the attention of the Riverina winemakers through their employment of an Environmental Project Officer in 2005.

The Solid Waste Management project was broken up into a timetable covering 18-months with the ultimate goal of developing group strategies for sustainable environmental practices. Working through the action plan (see Appendix 3a), an audit/survey (see Appendix 3b) of mass balances of inorganic solid waste was completed (see Appendix 3c). The total figures gave us a number of 2130 tonnes, or the equivalent of 106 semi trailers, of solid waste which could be diverted from landfill at a cost of $150,000. By using these figures alternative solutions for the management of the waste were sought.

It was established during the project that environmental management would be improved if the Riverina wine industry committed to three things:

- *Training and Education and a 'Do the Right Thing' mentality*

- *Consciously aiming to support the national environment strategy 'Sustaining Success' and 'Green the Supply Chain' with improved purchasing policies and service supply*

- *Diverting waste from landfill by working closely with recycling companies*

To that end, the Riverina Winemakers' Association's RITA committee looked at ways of targeting these areas. In consultation with the TAFE NSW Riverina Institute, Food and Wine Technology Centre, Griffith and the TAFE National Environment Centre in Albury, State-funded training courses were developed. In November 2006, these courses were attended by 100 participants from local wineries at the Operation and Supervisory levels. The two levels, II and IV, were designed to give a 'big picture' of the environment with an emphasis on providing specific practical information on managing solid waste. The course, Resource Material (Waste) Management (See Appendix 3d) also formed part of the Food Processing courses undertaken by winery personnel and credits from the courses could be added to a number of diploma courses as well as forming part of the 'induction' program currently in operation at TAFE Griffith. It is hoped that by attending the courses personnel on all levels would be able to implement a *'Do the Right Thing'* ethos among colleagues as well as be able to implement practical waste management systems.

To assist wineries to review their purchasing policies and begin to look at 'greening the supply chain' as an in-house environmental management project, *The Sustainable Procurement Guide* with the message of '*Aim for environmentally preferred purchasing - one that has a reduced impact on human health and the environment' (See Appendix 3e)* was produced. This guide helps purchasing departments establish the environmental credentials of a supplier and enables them to match suppliers with the environmental policies of an individual winery. This guide is cognisant of information supplied in the Winemakers' Federation of Australia's report *'Oiling the Chain', 2006* which details the drivers coming from the European Union and United Kingdom in terms of policy and purchasing. This guide has been distributed among senior personnel at RWA wineries.

A second easy-reference guide, *The Used Packaging and Recycling Guide* with the message *'Waste = Lost Productivity = Lost $$$s, (See Appendix 3f)* was produced to assist wineries and their staff with packaging management and again alert them to results from the *'Oiling the Chain', 2006* report by WFA. By clearly defining the item of packaging, its recommended handling within the Riverina region and offering a list of companies or organisations which may be of assistance, a winery has access to a hands-on resource to immediately establish the preferred handling of a solid waste or packaging item and who to contact. The use of the Waste Hierarchy (see Australian Wine Industry Eco-Efficiency series Fact Sheet 4, 'Cleaner Production') has also been promoted throughout this project and it is intended and highly likely this guide and the courses will ultimately create a reduction in waste to landfill (figures cannot be established until post-vintage 2007). This guide was distributed to all the participants in the Resource Material (Waste) Management course and to senior personnel at the Riverina wineries.

As part of the communication strategy for the project, in January 2006 the first ***One Vision*** newsletter (see Appendices 3g, 3h and 3i) was distributed to the wineries of the Riverina as well as to related organisations such as the Winemakers' Federation of Australia and have continued quarterly throughout the year. The newsletters contain an update of the RITA project, information on further funding opportunities, a column with practical tips on improving environmental performance, useful websites and updates on the progress being made by RWA members in their environmental performance. Newsletters, press releases, our Environment Policy and environmental updates are also published on the Riverina Winemakers' Association's website, www.riverina-winemakers.org.au.

During the process of the Solid Waste Management project and through consultation with the wineries, the Riverina Winemakers' Association's Environment Policy (See Appendix 3j) was drafted. This policy was put in place in April 2006. RWA members believe the policy demonstrates a clear indication to the wider community that members are committed to ensuring the long-term sustainability and viability of the region's wine industry, again complementing the objectives of the Australian Wine Industry's Environment Strategy.

Another initiative was instigated as a result of research carried out among the wineries during the course of the Solid Waste Management project. This was the formation of the inaugural Environmental Compliance and Awareness Seminar for the NSW Wine Industry which was held on 31st August 2006. It is hoped a similar seminar will be held again in 2007 and beyond. Separately funded, the seminar covered topics related to local council and national environmental compliance; a global picture of the wine industry and information on Australia's national environment program; how to complete an environmental health check, a large winery's struggles with becoming environmentally compliant and a demonstration of implementing an environmental management system. An environmental resource manual was given to each participant with the intention that it would be added to with the RWA's easy reference guides and other resources as they were gathered during the ***One Vision*** program***.*** These areas were considered as potential 'gaps' in wineries' knowledge and expertise and the seminar was held to address these issues. The seminar's key message was to ***"Help wineries to help themselves and ensure a sustainable future for the wine industry and wider community."*** The day was also the launchpad for the region's Australian Wine Industry Stewardship program of which RWA members are committed participants.

As a result of these initiatives, it has been acknowledged publicly that the Riverina wine industry is a national leader on environmental stewardship – *"No other wine region in Australia is able to claim such a proactive approach to environmental management,"* WFA, August 2006. It is the partnership between the GWRDC and the RWA joint funded Solid Waste Management program which has been the cornerstone to driving this progress. Our challenge now is to promote and support these changes.

To the future – in late December 2006 five of the RWA's wineries will be participating in a *Sustainability Management Diagnostic* with the Department of Environment and Conservation – it is hoped that a cluster of wineries from this region will participate in the DEC funded *Sustainability Advantage* program during 2007.

3. BACKGROUND AND BENEFITS

In November 2003 the results of a joint project between Griffith City Council, the EPA and Industry to examine ways of reducing food processing waste (in wineries and other food processing industries) to Griffith landfill were published. These results highlighted that alternative methods for the disposal of organic solid waste had been established (as stock feed due to the drought), but that the disposal of inorganic waste remained a challenging problem to industry. The wine industry is a major user of cardboard, glass, various plastics such as in drums, bags and containers, as well as wooden and other pallets. The results from the study highlighted the need for a waste project officer in the region to assist the food and wine industries, council and recyclers to "provide different industries with a centralised approach and up-to-date knowledge and technology in waste issues to facilitate resolutions and solutions". Unfortunately there was no funding for this outcome to go forward, however, the Riverina Winemakers' Association took the decision to employ their own environmental project officer to fulfil this role on a part-time basis.

Itemised below are the considered benefits of this project:

The economic benefits:

- To ensure the long-term sustainability of the wine industry, a major contributor to the local economy
- Endeavour to seek productive solutions to waste management problems by working collectively to alter long-standing and unclean production methods. I.e. to improve delivery, supply and management of waste materials on a triple-bottom-line basis
- Possible synergies and business opportunities in the local region
- A reduction in landfill charges to industry and to councils in the development of landfill costs

The environmental benefits:

- The project aims to seek the most environmentally sustainable solutions to waste management problems and to increase and improve the avoidance, reduce, re-use, recycle pathway within wineries
- Assist and brief industry on the latest government policies, guidelines, legislation, funding and other initiatives related to environmental protection
- Implement best practices in waste management

The social benefits:

- By showing environmental stewardship the Riverina wine industry assists in ensuring the long-term sustainability and viability of the region thus providing social benefits
- The "Who Cares About the Environment" report (NSW DEC 2003) suggests that the broader community places a high value on the environment and this project goes some way to address these issues in the Riverina region

4. PROJECT AIM AND PERFORMANCE TARGETS

The GWRDC and Riverina Winemakers' Association's (RWA) aim was to provide a centralised approach through the RWA to develop and implement a sustainable solid waste stream strategy for the Riverina wine industry.

This was to be achieved through research (auditing) and development of cleaner production technologies and synergies in waste streaming. Using the database of information gathered during the audit process, strategies for working collectively to achieve positive and long-term sustainable environmental outcomes were to be established.

Secondly, through an audit of education and training requirements and working with local recyclers and councils, improved methods of managing waste and recycling habits would be established. It was anticipated that TAFE would be a partner in establishing accredited grass roots courses that could be used as a model in other regions.

Through the auditing process we hoped to establish whether an improved environmental, economic or social benefit could be made in the management of our used packaging and recycling methods and sustainable procurement practices in the Riverina region.

5. METHOD

The Solid Waste Management project was made possible through the RITA funding and in-kind commitment from the RWA. The method for managing the project was to employ a part-time project manager to drive the program. An action plan/timetable was developed (see below) with regular progress meetings held with the RITA committee.

2005 SOLID WASTE STREAM SURVEY FOR THE WINEMAKERS OF THE RIVERINA
ACTION PLAN/TIMETABLE

ITEM	WHAT	WHO	WHEN BY
1	Form and approve committee	Jo/RWA members	15/08/05
2	Design and approve survey to collect winery mass balances and other relevant data	Jo/ Committee	19/09/05
3	Complete audit of mass balances	Jo/RWA	18/11/05
4	Review of audit by committee and RWA members	Jo/RWA/ Committee	21/11/05
5	Priorities strategies for implementation	Jo/RWA/ Committee	19/12/05
6	Develop group strategy for sustainable environmental practices	Jo/ Committee	Jan-Marl 2006
7	Work with suppliers to 'Green the Supply Chain'/investigate markets for waste product	Jo	Mar-June 2006
8	Collect information from wineries for training and education requirements	Jo/ Committee	Jan-April 2006
9	Development and adoption of Riverina Winemakers Association's Environment Policy	Jo/RWA/ Committee	Feb-April 2006
10	Development and distribution of Riverina Winemakers' Association Environmental Manual as part of the Seminar	Jo/RWA/ Committee	Aug 2006
11	Distribute course outline and agree on training and education model	Jo/RWA/ Committee	April –June 2006
12	Develop training and education workshop programs	Jo/TAFE/ Committee	May-July '06
13	Implement training and education workshop programs	Jo/TAFE	Oct-Dec '06
14	Implement agreed strategies i.e. working with suppliers on 'greening the supply chain'/trials of alternative packaging/ handling. Develop guide for Sustainable Procurement.	Jo/RWA	June-Dec 2006
15	Develop guide for avoiding and reducing packaging waste from the supply chain – Used Packaging and Recycling	Jo/ Committee	Jan-Dec 2006
16	Final Report due	Jo	Dec 2006

* Environment Policy implemented April 2006
* Environmental Compliance and Awareness Seminar held in August 2006

6. OUTCOME AND CONCLUSION

Undoubtedly the chief benefit of the Solid Waste Management project is that all RWA members have a higher level of awareness of the environmental challenges in managing a winery. This is not just in terms of waste management, which directly relates to the RITA funding but also in regard to compliance, the Australian Wine Industry Stewardship program, environmental policies and training and education. Guides have been produced, training courses developed, environmental policies and seminars launched – *all creating an awareness of how important 'environment' is to the future of winemaking.* RWA members have also been introduced to Corporate Social Responsibility for the first time.

At the time of writing this report figures for a reduction in waste to landfill are not possible to obtain until post-vintage 2007. However, a further analysis by the RWA of waste management practices in the wineries would be welcomed in coming months.

In the process of producing *The Used Packaging and Recycling Guide* it has been established that 21 core waste items such as plastics, cardboard, glass, labels and drums are possible to recycle in the region and, therefore, can be diverted from landfill or can be returned to selected suppliers for reuse, as in the case of bulker bags. Wineries can also work collectively in the disposal of wooden pallets if they choose or alternatively they can be sent to landfill for chipping and used as mulch. Oak chips can be sent to a local compost making company. The reduction of these 21 items of waste to landfill are all benefits to the community as well as to the wineries and could total some 2500 tonnes of waste over and above the 2500 tonnes already recycled in the region. Another success is the recycling of plastic such as 'shrinkwrap'. Recycling companies now purchase shrinkwrap at approximately 20-30 cents a kilo – this has the potential to reduce the amount of plastic to landfill by some 215,105 kilos. Similarly, plastic drums can be recycled through the DrumMuster program and this is a reduction to landfill of 5000 kilos. The Solid Waste Management project has promoted the use of DrumMuster and the services of our local recycling company part of its awareness campaign. We have supplied our wineries with over 400 Visy Recycling desk and floor paper accompanied by a Department of Environment and Conservation (NSW) WRAPP Office, Waste and Assessment Toolkit and fact sheets for improved paper waste management. Alternatively, where there are difficulties in diverting 'waste' from landfill, wineries are encouraged to insist their suppliers supply product in alternative recyclable or reusable packaging – this is supported by *The Sustainable Procurement Guide.* **The message that wineries are paying twice for their packaging – once for the delivery and once again for the disposal - has been endorsed during this project. 'WASTE = RESOURCES' (i.e. someone else's raw materials): Get Smart about Recycling and change the way we think'** has been the overriding message of this project.

Using the waste hierarchy as a reference (the use of which has been encouraged), the project has assisted in establishing the most environmentally sustainable solutions to waste management problems and promoted the avoidance, reduce, re-use, recyclable philosophy in the Riverina wineries. This has also been reiterated at the TAFE Resource Material (Waste) Management courses.

One of the major benefits of the funding was it enabled the RWA's Environmental Project Officer to spearhead other projects, separately funded, as part of an overall environment package for RWA members and assisted in creating the RWA's *One Vision* environment program. As mentioned previously it is hoped that wineries in this region will form a cluster to participate in the *Sustainability Advantage* program to tackle the next stage in their improved environmental management.

The most challenging part of the project has been to achieve ‘engagement’ from all the wineries. Time constraints and the pressures of day-to-day tasks has made it difficult to engage people and ensure the implementation of achievements made as a result of the work carried out by the project manager and key committee members. A recommendation to employ an ‘environmental officer’ or nominate a person who could include environmental management in their brief within each winery (and preferably one who has a passion for ‘doing the right thing’) is critical to the successful implementation of change.

The second challenge now is to promote and implement improved environmental practices using tools such as the Environment Policy and the Environmental Compliance and Awareness Seminars to communicate with the wider community and senior personnel (‘top down’ engagement) as a guideline and measure of what we can achieve as a region. The use of the easy-reference guides to assist in day-to-day waste management and the training and education courses (‘bottom up’ engagement) written specifically for the purposes of this project must be promoted. The newsletter also acts as a communication strategy within all levels of personnel in the region as well as to the national wine industry and associations.

A third challenge is to continue the work completed so far in building awareness and making available opportunities to the wineries to participate in and establish their own environmental management systems to integrate into an overall business plan.

7. RECOMMENDATIONS

It is the view of the RITA/RWA Solid Waste Management committee that similar funding be made available to other regions to assist in the implementation of improved environmental practices and management and to enable those regions to commence their own version of the Riverina Winemakers' Association's ***One Vision*** environment program. The continuation of these achievements would create enormous change in the awareness and day-to-day practices in the Australian wine industry. By giving resources and strategies to each of the major wine growing areas, many of whom no doubt already have a groundswell of support for 'doing the right thing', they can be engaged in improved environmental practices when driven by senior management and steered along a pathway of good practices.

However, the learnings from our experience is that to initiate and activate those activities does need huge support – how do we make this a sustainable program to support the national environment program and build on the initiatives started by the Australian Wine Industry Stewardship Program and the experiences of the Riverina Winemakers' Association?

Certainly a successful communication strategy – top down, bottom up, newsletters, policies, websites, regular meetings and contact with national and interstate associations is critical to the success of such a program. Also critical is the employment or commitment of a staff member within each winery with a dedication to improving environmental performance and preferably with a personal interest in 'environment' who has the support of senior management.

It is the experience of the Solid Waste Management project officer that projects in isolation or one-off funded programs generally do not work. They need ongoing support which in our case has been by the RWA and must be included as part of the business process to work. Environmental management must be seen as a business tool in much the way as OH & S and Quality Assurance and senior personnel through to operations level need to be engaged for environmental management to be successful. It is one extra dimension to managing a business which has many benefits and is so much easier and less costly if implemented as part of a stewardship program before becoming part of an expensive legal compliance concern.

Through the lifespan of the Solid Waste Management project it has been clearly demonstrated that the uptake of initiatives such as the Solid Waste Management project and Environment Policy have extremes in 'take up'. Generally, though not necessarily guaranteed, is the uptake from the large organisations who have staff specifically for the purposes of managing environmental issues. The middle and small sized wineries struggle to devote the personnel and time it requires to implement change. An environmental project officer dedicated to the role of supporting the whole region's wineries is much more likely to have success on a broader scale in implementing environmental management systems and practices.

In the words of a senior manager in the Riverina wine industry, the key message to promote is:

"Good environmental practice is just good business practice. 'Doing the right thing' ultimately costs you less, from experience, having to re-design and re-build escalates costs by a ratio of 10 to 1."

For completeness, the RITA/RWA Solid Waste Management project requires a further audit post-vintage 2007 to see if the expectations for waste volume savings were achieved. Continued funding, possibly from the GWRDC, would allow the RWA to drive **One Vision** further to highlight areas where work is required, to continue promoting environmental awareness in the Riverina and New South Wales and to assist in improving environmental performance for the sustainability and viability of the region.

For the record, it should be noted that our leading wineries are regularly being requested to present their environmental credentials to purchasers, both national and international. This supports the information supplied by the Winemakers' Federation of Australia in their report *'Oiling the Chain', 2006* which details the drivers coming from the European Union and United Kingdom in terms of policy and purchasing. In this regard, the Solid Waste Management project, along with our region's Environment Policy, the Environmental Compliance and Awareness Seminar manual and the bespoke TAFE training and education programs have been communicated at this level. Even organisations such as Greenpeace are asking, informally, for information on our region's wineries' approach to environmental management.

8. APPENDIX 1: Communication

Attached are three newsletters which form part of the communication strategy for the Solid Waste Management project (see Appendices 3g, 3h and 3i) and a press release (Appendix 3k).

Communication has also been driven from the top down at Riverina Winemakers' Association's monthly meetings where an environmental report has been presented. Members have indicated their support of the project and the overarching *One Vision* program by committing to a regional Environment Policy (see Appendix 3j). The Environmental Compliance and Awareness Seminar also communicated to the New South Wales wine industry the importance of the 'environment' to the business of winemaking. Quarterly reports have also been sent to the Wine Industry Association's Environmental Committee (WINEC).

Communication has been conveyed from the bottom up through the training courses written by TAFE Food and Wine Centre, Griffith and the TAFE National Environment Centre, Albury. Companies are now committing to reviewing their waste management procedures as a result of these courses and a '*do the right thing'* ethos is being subtly communicated across the Riverina winemaking region.

Information has also been placed on the Riverina Winemakers' Association's website www.riverina-winemakers.org.au.

10. APPENDIX 3: Other relevant material

3a. Action Plan/Timetable

3b. Waste Stream Survey

3c. Audit of mass balances

3d. TAFE Resource Material (Waste) Management course

3e. Easy-reference guide

Sustainable Procurement Guide for the Riverina Wine Industry

"Aim for environmentally preferred purchasing - one that has a reduced impact on human health and the environment", RWA, November 2006

3f. Easy-reference guide

Used Packaging and Recycling Guide for the Riverina Wine Industry

"Waste = Lost Productivity = Lost $$$s", RWA, November 2006

3g. RWA *One Vision newsletter – January 2006*

3h. RWA *One Vision newsletter – April 2006*

3i. RWA *One Vision* newsletter – September 2006

3j. Riverina Winemakers' Association's *Environment Policy, April 2006*

3k. GWRDC/RWA press release announcing the RITA grant

11. APPENDIX 4: References

Sustaining Success 2002, The Australian Wine Industry's Environment Strategy, 2002, SA Wine and Brandy
Tel: 08 8222 9277
Winemakers' Federation of Australia
Tel: 08 8222 9255

The Australian Wine Industry Stewardship Program
Winemakers' Federation of Australia
Amy Russell, WFA, 08 8222 9255

Oiling the Chain
Winemakers' Federation of Australia
Amy Russell, WFA, 08 8222 9255

Australian Wine Industry Eco-Efficiency series Fact Sheet 4, 'Cleaner Production'
www.winesa.asn.au/environment/eco_pub_fact.php'

12. APPENDIX 5: Budget Reconciliation

Attached.