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Cowra Sustainable Wine Partnership

An initiative of the Cowra Region Vineyard Association Inc., aiming

*“To produce wine of regional character with the least
environmental impact of any region in Australia”.*

INTRODUCTION

The Cowra Wine Region covers an area of 1,250 sq km of the Lachlan Catchment, and includes Cowra, Billimari and Canowindra. Part of the Central Ranges Wine Zone (which includes Orange and Mudgee), the Cowra Wine Region is defined by its warm days, cool nights and dry late summers – perfect conditions for ripening wine grapes.

The Region is home to over 40 vineyards from small boutiques to big industry players. Eleven cellar doors are open for public wine tasting and over 20 wine labels now bear the Cowra name. In 2005, the Region crushed a record of 25,000 tonnes of fruit.

The incorporated association of these vineyards, Cowra Region Vineyard Association (CRVA), is making environmental sustainability its priority task, and has developed the Cowra Sustainable Wine Partnership (“the Partnership”), with a simple mission:

“To produce wine of regional character with the least environmental impact of any region in Australia”.

In order to achieve this, the CRVA is partnering with the leading organisations who bring years of experience in sustainable viticulture, Total Catchment Management, Environmental Management Systems, and biological agriculture in Australia. By creating this partnership, CRVA members aim to share, build and apply their sustainable viticulture practices with benefits not only to their own business viability, but to the sustainability of the Cowra Region and Lachlan Catchment.

The Partnership brings the work already begun by many CRVA members together into a framework which encompasses the Eight National Environmental Outcomes of the Natural Heritage Trust, the Winemakers Federation of Australia's Australian Wine Industry Stewardship Program (AWIS) and the priorities of the Lachlan Catchment Management Authority.

The Partnership is more than a statement of lofty goals without real change in the vineyard. It documents the CRVA's existing and new projects including education and training, the expansion of research, the implementation of sustainable practices, and the certification of members to nationally recognised standards and Environment Management Systems.

The Partnership is being launched at the Cork ‘n’ Fork food and wine festival, on November 3, 2007.

THE TEAM

To develop and implement the Partnership, the CRVA has initially developed partnerships with the following:

- The Winemakers Federation of Australia (WFA),
- The Lachlan Catchment Management Authority (LCMA),
- The NSW Department of Primary Industries (NSWDPI),
- Charles Sturt University, Orange (CSU)
- The Biological Farmers of Australia (BFA) and
- Cowra Shire Council
- Cabonne Shire Council

From the planting of the vines to the responsible enjoyment of wine, the input of these organisations is central to the success of the Partnership.

GUIDING PRINCIPLES

The Partnership is guided by the Eight National Environmental Outcomes of the Natural Heritage Trust, which are also the guiding principles of the WFA's Australian Wine Industry Stewardship Program. They are that:

1. The impact of salinity on land and water resources is avoided or reduced.
2. Biodiversity and the extent, diversity and condition of native ecosystems are maintained or rehabilitated.
3. Populations of significant species and ecological communities are maintained or rehabilitated.
4. Ecosystem services and functions are maintained or rehabilitated.
5. Surface and groundwater quality is maintained or enhanced.
6. The impact of threatening processes on locations and systems which are critical for conservation of biodiversity, agricultural production, towns, infrastructure and cultural and social values, is avoided or minimised.
7. Surface water and groundwater is securely allocated for sustainable production purposes and to support human uses and the environment, within the sustainable capacity of the water resource.
8. Sustainable production systems are developed and management practices are in place which maintain or rehabilitate biodiversity and ecosystem services, maintain or enhance resource quality, maintain productive capacity and prevent and manage degradation.

STRATEGIES

In order to achieve the above outcomes the WFA and the LCMA developed a set of initial Strategies, which are published as part of the AWIS. These strategies are listed in **Attachment 1**, and are used as a starting point and reference for the Current, Immediate and Medium Term Actions outlined below.

BENCHMARKS

The Partnership recognises that wherever practical, the progress towards achievement of its mission must be measured and shared, to allow the ongoing improvement of the Partnership, its Strategies and Actions.

Measurement has begun with CRVA members completing the standard AWIS growers survey, as their first contribution to the Partnership (see **Attachment 2**). The results of the first survey will be released with this document. They and future surveys results will be provided to the WFA to help measure the success of the AWIS.

The initial AWIS survey will be followed by a series of more specific surveys, beginning after the coming vintage (April-May 2008). They will collect project-specific information and will allow CRVA members to measure and benchmark their progress as individuals and as a group, and to identify areas for improvement. The results will allow the strategies and actions of the Partnership to be continuously improved.

CONSULTATION FOR CONTINUOUS IMPROVEMENT

To ensure the ongoing improvement of the Partnership, the CRVA also aims to receive input from Cowra Shire Council (CSC). CSC and other interested community groups are invited to comment at any time, to ensure consistency with Cowra's environmental plans such as those contained in Futures 30. The CRVA will consider all input received and will review and update the Partnership quarterly.

TRAINING AND EDUCATION

Participation in training and education from leading agencies and experts is an essential component of the Partnership. By invitation from CRVA members, the Biological Farmers of Australia will conduct a four day training at Cowra as part of its National Organic Roadshow program in 2008. This detailed training will provide any interested vignerons and farmers from the Central West with the latest tools to become profitable, sustainable managers. They will also understand how certification can help them gain access to the fastest growing sector of the food and beverage market. The BFA is Australia's largest association of certified organic producers and processors, with over 1700 certified operators. The training will take place in April 2008.

CURRENT ACTIONS (PHASE 1)

Many of the actions seen as necessary to put the AWIS strategies into motion are already taking place through the work of the CRVA and its members. They include:

1. RESEARCH TO PRACTICE WORKSHOPS: During the winter season 2007 CRVA growers took part in these workshops to improve their knowledge of overall sustainable vineyard management. The workshops combine the latest theory in sustainable viticulture with selected vineyard visits around the region, assisting in the sharing of experience.
2. DPI MULCH TRIAL: Three CRVA vineyards are currently taking part in a three year trial by NSW DPI looking at the benefits of urban waste mulch for reduced water use, reduced soil temperature, increased grape yield and improved wine quality. Final results are expected in 2008, depending on which it is expected that members of CRVA will set targets for the widespread adoption of mulching.
3. UNIVERSITY OF SYDNEY PHD RESEARCH ON BIOLOGICAL CONTROL: CRVA members recently participated in a thesis study by Mahmuda Begum of the University of Sydney Orange Campus into "Habitat Manipulation to enhance Biological Control of Lightbrown Apple Moth (*Epiphyas Postvittana*)". The published results have assisted growers in better understanding the management of this serious pest without the use of non-biological pesticides.
4. VITICARE ROOTSTOCK TRIAL: CRVA members are undertaking trials of different rootstocks, measuring the vigour and yield of the rootstocks under a single management system. Over the years, and in changing climatic conditions, this important trial is expected to show which rootstocks, if any, are best suited to the region in relation to yield, water use and chemical inputs.
5. LCMA COMMUNITY STREAM SAMPLING PROJECT: Members of the CRVA in the Belubula catchment are assisting in this project to measure the salinity of river and bore water on a regular basis (monthly). This will provide point data to LCMA in order to better understand the sources of salinity within the catchment.
6. CHEMICAL INPUTS SURVEY AND REDUCTION TARGET SETTING: **Attachment 3** is the generic AWIS Spray Diary template which all CRVA members are encouraged to use in order to standardize the recording of chemical usage. Several CRVA members are already using this diary. Growers aim to set targets and benchmarks to reduce chemical usage.
7. BIODIVERSITY ENHANCEMENT THROUGH TREE PLANTING TARGETS: CRVA members have set themselves a target to plant 1 tree per hectare for the next three years, beginning in the winter season 2008. Using local species and with particular emphasis on watercourses and existing remnant or "at risk" vegetation.
8. ORGANIC CERTIFICATION: Three CRVA vineyards and two wineries are currently certified organic, with the first of these certified in 1997. The

Standard with which they are compliant is the strongest single set of rules which give their customers a guarantee of sustainability. Some organic and biological farming methods are being adopted by other vineyards, who may in due course choose to transition to organic certification.

IMMEDIATE ACTIONS (PHASE 2)

The launch of this Partnership coincides with the initiation of a number of new actions by CRVA and its members. These will be developed and/or initiated in the current 2007-2008 growing season and include:

1. **GROWER SURVEY OF CHEMICAL APPLICATION AND TIMING:** In conjunction with the return of Spray Diaries from participating members, CRVA will publish on www.winesofcowra.com.au a set of guidelines for the timing and rate of chemical application in order to assist its members in reducing chemical usage. The spray diaries will be completed in April-May 2007.
1. **GROWER SURVEY OF BENEFICIAL INSECT TYPES AND LIFE CYCLES:** As an adjunct to the Spray Diary and as standard Integrated Pest Management (IPM) practice growers will be asked to share their local knowledge of beneficial insects so that all growers can improve their knowledge of life cycles, impacts on pests, and the impacts of pesticides on beneficials.
2. **GROWER SURVEY OF PEST POPULATION ACTION THRESHOLDS:** As part of the above action, growers will be asked to share their experience on the need for action at certain thresholds of pest infestation.
3. **GROWER SURVEY OF WINTER GRAZING TECHNIQUES:** As more growers have been adopting this technique, data will be collected on the timing and density of livestock grazing in order to achieve the greatest possible benefit to soil health, weed and vigour management. The results of the survey will be published on www.winesofcowra.com.au in April-May 2008.
4. **GROWER SURVEY OF CULTIVATION AND COVER CROPPING:** Prior to the winter season a survey will be conducted of growers to ascertain the different methods for deciding the optimum timing and methods for soil cultivation with minimal impact on soil structure and biology. The survey will also collect the local knowledge of ideal cover crops for the area, and the methods and timing for successful sowing of them. The results will be published on www.winesofcowra.com.au in April 2008.
5. **GROWER SURVEY OF SOIL HEALTH:** In the 2008 winter season growers will be encouraged to supply soil samples for testing at a single laboratory for indicators of acidity, salinity, nutrient balance, biological activity and organic matter. It will be repeated every two to three years to build a record that is of value for all growers, in conjunction with other information provided in Grower Surveys.

6. GROWER SURVEY OF WATER USE: At the end of the 2007-2008 growing season and subsequent seasons CRVA members will complete a survey of total water use, rainfall records, irrigation techniques, soil moisture monitoring systems and return per megalitre. This will allow the benchmarking of water use within the region.
7. GROWER SURVEY OF ENERGY USE: A simple survey will be circulated among members to develop a benchmark for the average amount of energy (diesel, petrol, gas and electricity) used in Cowra vineyards. This data may be of use to the CRVA in the development of a carbon emission reduction target.
8. WATER MAGNET TRIAL: Some CRVA vineyards are commencing a 12 month trial of a rare earth magnetic treatment for irrigation water. It is hoped to mirror the results in other areas, such as the reduction of measurable soil salinity, the reduction of calcification of irrigation systems and the enhancement of water uptake by vines. The results of the trial will be published on www.winesofcowra.com.au in June 2008.
9. WASTE PAPER MULCHING TRIAL: Through negotiation with Cowra Shire Council, members of the CRVA are planning to trial the use of waste paper from the Cowra Waste Management Centre. The use of waste paper is seen as a good alternative in a drought where straw and urban green mulch are selling at a premium.
10. COMPOST FACILITY DEVELOPMENT PROJECT: Negotiations are already underway with Cowra Shire Council, local dairies, food processors and other potential suppliers and interested parties for the development of a local composting unit producing compost in economic volumes for use by CRVA growers.
11. LIASON WITH INDUSTRY AND GOVERNMENT AUTHORITIES for the development and implementation of a plan for the AVOIDANCE of and RESPONSE to the introduction of new exotic pests and diseases to the region.
12. BIOLOGICAL FARMERS OF AUSTRALIA ORGANIC ROADSHOW: The CRVA has negotiated with the largest association of biological and organic farmers in Australia for them to conduct a four day seminar in Cowra in April 2008 (see section "Training and Education").

MEDIUM TERM ACTIONS (PHASE 3)

Actions are already planned to occur over the next two growing seasons, 2007-2008 and 2008-2009. Much of this will be determined by CRVA members in the early stages of the Partnership. The most important outcome of this approach will be for CRVA members to demonstrating their ability to adapt to changing conditions, and to continuously improve this Partnership document. Actions which have been identified at this stage include:

1. COWRA REGION SUSTAINABLE VITICULTURE GUIDELINES to be developed on the basis of accumulated grower surveys and shared knowledge, in conjunction with grower workshops and assisted by leading experts in this field. It is hoped that sufficient data will be collated to attract a PHD or government funded researcher to develop guidelines.
2. PROPERTY MANAGEMENT PLANS to be written and followed by all CRVA members.
3. LCMA EMS PROJECT: The CRVA is highly supportive of LCMA's proposed Environment Management Systems (EMS) project, planned for launch in 2008. EMS are not tied to binding Standards, but are tools to help growers to clearly measure their environmental footprint and to improve their own sustainability.
4. INCREASE IN THE NUMBER OF CERTIFIED ORGANIC MEMBERS: It is hoped that as a result of Phase 1 and 2 actions, several more growers will feel ready to embark on organic certification.

CONCLUSION

It is expected that as this Partnership is supported and implemented with full CRVA membership involvement, the Cowra Wine Region will become a leader in the adoption of viticulture practices geared directly to growing profitability with improved environmental outcomes.

ATTACHMENTS

1. AWIS Lachlan Catchment Overview
2. AWIS Growers Survey
3. AWIS Spray Diary Template

CRVA ENVIRONMENT COMMITTEE AS AT 3/11/2007

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