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for
VITICULTURE



Growers sharing information with other growers

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Use of mulch in the Grampians

*By Andrea Hart,
Grampians Winemakers*

Since 1999 composted green organics as mulch had been trialed by several vineyards in the Grampians region. Many benefits were observed such as reduced water use, increased root volume, presence of earthworms in soil and improved water holding capacity of soils. However, there was no machine readily available to efficiently spread the mulch.

The Grampians Regional Waste Management Group approached the Grampians Winemakers to discuss how the groups could work together to find a solution to this problem. Bob Milne of the Waste Management Group secured an EcoRecycle grant to fund half the cost of the spreader, and 6 individual vineyards contributed the other half. Investigation and evaluation of different spreaders



Applying the mulch to vines using the side delivery spreader

was undertaken by the steering committee and the most suitable machine was purchased in June 2001.

A demonstration day was held at Bests Wines on 7th September, to allow shareholders and interested growers to become familiar with the machine and see it in action. It was a very successful day and we look forward to making good use of the spreader from now on. Several growers are looking at implementing On Farm Trials to evaluate the effects of using the mulch in their vineyards.

A positive outcome of this process is the working relationship which has developed between the Grampians Winemakers and the Regional Waste Management Group, which may provide opportunities to investigate and trial other “waste products” in the future.

The spreader is available for hire within the region, contact Bob Milne on 0418 312 096 for bookings, or Andrea Hart (03) 5356 2544 for further information.

Impacts of PRD

By Adam Jacobs,
McLaren Vale

While not normally associated with significant changes in wine quality, PRD was examined at the winery. In terms of wine quality, normally irrigated vines produced wines were soft fruitful aromatic wines with an anticipated two year life. In comparison wine from PRD vines were big structured complex wines with a 10-12 year life.

There seems to be some reluctance in using sub-surface application with PRD due to a desire to see

what's going on and actually see dripper working, the possibility of root extrusion, the problems of animals that eat holes in dripline and the complexity of distribution due to soil compaction zones.

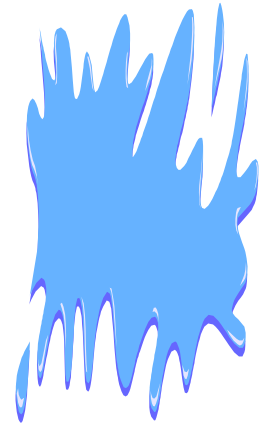
This of course must be considered against the benefits to weed control.

There is a lesser impact of PRD where there is higher rainfall, duplex or heavier soils and it is unlikely to be economic benefit if growers are only applying 0.5ML/ha.

There is also a limitation of using PRD depending

on vine age. It cannot be used in years 1 or 2 after planting. You should run both lines in first two years or switch each irrigation to establish even and effective root systems.

On cracking clays, you need definition between wet and dry which has enhanced spread of horizontal and vertical movement of moisture. You need to water schedule to enhance your capacity to separate this. Pulsing irrigation can help this.

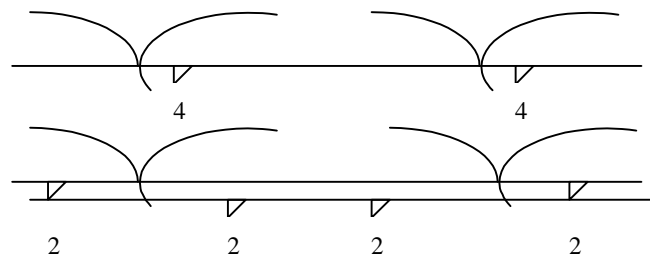


PRD – the costs and practical application

By Toby Bekkers,
McLaren Vale

Partial Rootzone Drying is an irrigation technology of interest to growers in the McLaren Vale area due to the new water restrictions in the region. The aim of investigating PRD is to reduce water use and stretch existing water allocations. The case study reported here is on machine pruned Cabernet Sauvignon which had one 4L/hr dripper per vine.

It was converted as illustrated between 1999 season and the 2000 season.



Note that there was no “control” put in place for comparison. As a result of the installation the following water use and yield records were maintained.

	1999 (without PRD)	2000 (with PRD, poor season)	2001 (with PRD)
Water Use (mm/ha)	123.0	68.0	61.0
Yield (t/ha)	16.18	10.03*	16.19

*Yield in 2000 more likely due to the poor year, rather than due to PRD. The intent now on this property is to increase the area under trial.

PRD – the costs and practical application continued

Conversion to PRD involved removing existing drippers and plugging holes, running new dripline and securing this, reinstalling drippers in new positions, fitting a 2-way tap to existing riser on each row, and manually alternating between lines during the season. The cost of the PRD retrofitting for a 3ha block was \$9860. This works out to \$2714/ha or \$1099/acre. Goof plugging the holes was a big cost, so maybe replacing the line is in fact a cheaper option.

	Normal	PRD
Materials	3124	3310
Trenching	140	140
Install underground filters	531	850
Install dripline	70	140
Hang and install drippers	242	325
Total	4107	4765

The breakdown of these costs for the 3ha vineyard included; labour (\$3136), dripline (\$1560), Clamps (\$411), joiners (\$55), vineclips (\$180), goof-plugs (\$388), drippers (\$3770), nut/tail (\$180) and 2-way taps (\$120).

If installing new system, it became obvious that there

would be a need to duplicate the sub-mains, valves and laterals, and involve extra installation costs. However the cost of materials would not be as high due to smaller pipe sizes. A per hectare comparison of installation costs is useful in the context of examining the savings in ongo-

ing water costs.

Conclusions reached support a good potential water savings, it is easier to operate and install from scratch, but retro-fitting is viable. The final question is; can we afford not to stretch our water?

McLaren Vale growers survey Shiraz

By Lucy Gee and Melissa Buttery, McLaren Vale Best Practice Viticulture Group

The McLaren Vale Best Management Practice Group has been formed through PIRSA pilot program Navigator. Personnel in the group range from company viticulturists, vineyard managers, grower liaison officers, research and development officers, winemakers and viticultural and horticultural consultants. This article is taken from the presentation at the McLaren Vale growers day in May and the group's report for the 2000/01 season.

The groups initial focus is to benchmark irrigation practices in the region and to evaluate and interpret their influence on the production of quality winegrapes in McLaren Vale.

The work is supported by the Onkaparinga Water Catchment Board, Netafim Australia, PIRSA and Wesfarmers Landmark and involves 170 Shiraz blocks.

Acknowledging that these are only preliminary findings based on one year of data, the following are some practices undertaken by growers supplying premium quality fruit in vintage 2000:

- Irrigation using less than 1ML/ha/yr
- Vineyards are greater than 20 years old and on own roots of old clonal material
- Practices such as RDI or PRD are being adopted and majority of growers are applying some stress to the vines
- Yields were less than 3t/acre (80%, with the other 20% of growers yielding 3-5t/acre
- Vineyards are predominantly not tipped with shoot lengths less than 120cm and low lateral growth
- Vineyards started irrigation in November with only one application that month
- Have low watering frequency of reasonable duration (10-15hrs)
- Did not apply irrigation in March or April

These practices also featured in premium and commercial categories, as no one practice will determine the overall quality.

Taking positive steps in environmental stewardship

By Noel Ainsworth, CRCV
 From contact with viticulturists across Australia, it is clear that many growers are taking the issue of sustainability seriously. In most cases the actions which reflect this commitment involve steps to minimise impact of grape production on the site and surrounding environment. This however, need not be the limit of growers' environmental management efforts as the potential exists for growers to contribute to environmental improvement by playing a significant stewardship role in regional and catchment issues. Some of these issues may at first seem relatively minor and outside the responsibility of the viticulture industry. However grower participation can make a difference and at the same time demonstrate their commit-

ment to the sustainability of the region.

One such example of this is the opportunity that growers in the Adelaide Hills and southern Fleurieu have to help save the critically endangered bird species, the Mt Lofty Ranges Southern Emu-wren.

In this instance, it is by conserving all remaining native vegetation, and in particular, the swamp habitat. A rough guide is that retention of 25 to 30% native vegetation, can help increase the overall productivity and ecology required for long term land sustainability. In this case, the Emu-wren is only capable of short flights and needs not only swamp habitat, but continuity of swamp habitat between and across properties to ensure its survival. With only rem-



A male Mt Lofty Ranges Southern Emu-wren

nants of the swamps remaining, pockets of the bird's populations become isolated and more susceptible to inbreeding and local events that put them at risk.

Other considerations relevant to this bird species is the proximity of the vineyard to the swamp habitat, run-off, herbicide use and management of the swamp. For more information about the Emu-

wren, contact Denise May on (08) 8223 7437 or e-mail on emuwren2@ccsa.asn.au

For more information on other districts species and issues, consult the following web-sites as a starting point; World Wide Fund For Nature www.wwf.org.au and Greening Australia www.greeningaustralia.org.au/tech_advice/tech_sustain.html

Useful viticultural web sites workshop at the AWITC

By Noel Ainsworth, CRCV
 On Sunday 6th October, I will be running a workshop as part of the Wine Industry Technical conference. Its focus will be to identify useful viticultural web sites and what is valuable about them. There will also be training

in web searching and updates from the Bureau of Meteorology on what data is available to assist growers in disease management and prediction. Other staff in the Viticare program are running workshops on pest and disease identification on

the Monday and environmental management systems on the Thursday.

Viticare group contacts are also being invited to a CRCV drinks get together in the event that they may be in Adelaide for the conference.

If you want more infor-

mation, are interested in attending either the workshops or the conference or both, contact Rae Blair at Australian Wine Research Institute on (08) 8303 6821 or on www.awitc.com.au

Cyber Library

By Andrew Bengler, Langhorne Creek

The Sonoma County Wine Library in Healdsburg, California has recently launched winefiles.

org, a one-stop source for business and technical wine information. Located at <http://www.winefiles.org> the site offers access to 20,000 current items

from around the globe. Once you've read that lot you can have a crack at their collection of 30,000 historical articles.



Keeping up with it all.....

By Andrew Bengler, Langhorne Creek

It might be helpful, it might be enlightening, or it might just be downright frightening. On Wednesday 26 September 2001

rush out and buy a copy of the Australian Financial Review. Nestled in the pages you'll find the Winebiz - special report. In their own words 'a look at the multi-faceted wine

industry, its key players and future opportunities.' They have a website, www.afr.com/specialreports

'a look at the multi-faceted wine industry, its key players and future opportunities'

Pinot Noir – Tasmania.....

By Graham Wiltshire, Tasmanian Pinot Noir Group.

The third annual Pinot Noir Workshop is to be held from the 3rd – 6th February 2002.

The format closely follows that of the Oregon and New Zealand SPN workshops were participants bring for group discussion wines from the previous vintage- brilliant wines – experimental wines - mono-clonal wines – problem wines.

Wines from the previous vintage are also reviewed. Pinot from around the world are also sniffed and consumed.

The moderating panel for 2002 is drawn from the USA, New Zealand and South Australia – Stephen Cary – Oregon, Prue Henschke – Adelaide Hills, Larry McKenna – Martinborough. A great team.

Discussion panels, with participation from the floor include such subjects as:

'Harvesting Pinot Noir for optimum flavour ripeness' – 'Organic/ biodynamic vineyard management, and its growth in Oregon' – 'Crushers, crushing – Presses - pressing, Pumps, pumping for Pinot Noir'

'Blending & timing' – Controlled crop yield and bunch exposure for Super PN's' along with a host of other pinot noir related subjects.

It all happens in a relaxed workshop style with lots of discussion, suggestions and comment.

Three days of pinot noir with lots of free time to enjoy the venue: Freycinet Lodge – Freycinet National Park – Coles Bay on the East Coast of Tasmania (about a 90 minute drive from either Launceston or Hobart Airports).

Numbers are limited to a maximum of forty partici-

pants; partners/ guests are welcome but do not participate in the workshop sessions. It is a condition that each participant must be in a management position in viticulture/ winemaking with pinot noir and have some runs on the board. It is also essential that participants bring at least one wine for group discussion.

A limited number of places have been reserved for mainland pinot noir producers. For more details email: pinot-noir@tassie.net.au or phone: 03 6331 4585

Voluntary conservation management, the key to restoring the agricultural landscape

World Wildlife Fund media release of July 23, 2001.

Voluntary initiatives such as product certification, conservation covenants and auction schemes that encourage farmers to adopt sustainable agricultural and land management practices are the key to balancing environmental restoration and farm income targets said WWF Australia CEO, Dr David Butcher in a speech today at the New South Wales Farmers Association Conference in Sydney.

"WWF believes voluntary initiatives have the potential to provide the link between landscape level priorities and property level action," he said.

"However, these initiatives must be able to demonstrate that all major en-

vironmental issues relevant to the property are being addressed, as are management practices that are impacting on the environment."

Dr Butcher told the conference that agriculture was considered a threatening process for biodiversity in 35% of Australia's bio-geographic regions. Furthermore, 20% of bio-geographic regions were now largely modified, with agriculture and pastoralism being major contributing factors. Natural ecosystems occupied only a very small proportion of these regions, he said.

"For producers to tap into the growing international and local demand for clean and green agricultural produce, voluntary initiatives must be able to credibly demonstrate to markets and the community that environmental

claims are backed by broadly supported standards of agricultural and natural resource management," he said.

Dr Butcher said some supermarkets chains were now seeking information about the environmental practices associated with the agricultural commodities they purchased for retail. Sainsbury's, the UK supermarket chain had produced a guide, "Raising the Standard: A Supplier's Guide to Reducing Environmental Impacts in which it identifies how it will work with agricultural suppliers to improve environmental practices.

Dr Butcher said that WWF had identified a number of initiatives that were critical if Australia was to meet the challenge of protecting and restoring Australia's agricultural

landscape. These included adding vegetation clearing as a Matter of National Environmental Significance under the Environment Protection and Biodiversity Conservation Act (1999) and the introduction of an immediate and permanent moratorium on clearing in the Murray Darling Basin, the Great Barrier Reef catchment and other vulnerable catchments throughout Australia.

"However, the Federal government must make funds available in a transition period to assist landholders who would be adversely affected by this new legislation," he said.

Media inquiries: Rosslyn Beeby WWF Australia
Media 02 8202 1218 Mobile 0419 520 960

New Rust Mite Control Strategy Tested in On Farm Trials in the Hunter Valley

*By Chris Haywood,
Hunter Valley*

In the Hunter Valley of NSW, symptoms of rust mite infestation including late season leaf bronzing and early leaf degeneration have been perceived to be worsening over recent years. This has been

most noticeable with the varieties Chardonnay and Cabernet Sauvignon.

Normal vineyard practice in the Hunter Valley has been to apply wettable sulphur for both mite and powdery mildew control when the new canes are approximately 20cm in

length. However recent research in rust mite biology has found that the mites are at their most vulnerable when they are migrating from their overwintering positions in the bark and in the buds on to the newly developing leaves. While this migra-

tion generally occurs at about woolly bud stage more precise timing can be achieved by examining rings of adhesive tape on the new canes with a suitable microscope for evidence of mites.

Hunter Valley rust mite trials continued

Growers were interested in testing whether sulphur applications at woolly bud were as successful in controlling rust mites in the Hunter Valley as they had been shown to have been in Victorian trials.

The On farm Trials team developed a trial layout that was both simple to set up, apply and sample, as well as being statistically valid. The trials were conducted at Arrowfield Wines at Jerrys Plains by vineyard manager Ruth Sutherland and at Geoff

Oldman’s “Norlana” vineyard at Denman in the Upper Hunter. Two treatments, those being normal commercial application and a woolly bud spray, were compared.

Correct targeting and coverage of the spray application was critical to the success of the trials. Volumes of 800 L/ha were necessary with the spray directed so as to drench the cordons of the vine. This required some recalibration to spray equipment and redirection of

nozzles.

The sampling technique involved checking new shoots at about the 20cm stage for distortion and stunting which are symptomatic of early season rust mite damage. These were scored on a scale of

0-3 with 0 being undamaged and 3 being severe damage.

The results are shown in the following tables and give the numbers of shoots in the various categories out of 120 shoots sampled:

Arrowfield Vineyard

Treatment/Score	0	1	2
T1 – Woolly Bud	118	2	0
T2 – Commercial	110	9	1

“Norlana”

Treatment/Score	0	1	2
T1 – Woolly Bud	99	16	5
T2 – Commercial	73	37	10



Ruth Sutherland, in the field

Rust mite numbers were down in the Hunter this year but the trial still picked up differences in the treatments with the woolly bud spray showing reduced levels rust mite damage.

Ruth Sutherland was sufficiently convinced to adopt the new treatment for the whole vineyard. Geoff Oldman decided that the improvement didn’t justify an extra spray on his smaller vineyard but was likely to adopt the

strategy in future if a larger carryover rust mite population develops. Whatever their decision, they can be confident that

it is soundly based on evidence gained from a simple but effective On Farm Trial.



Geoff Oldman, studying the results of the trial

Yenda directions

By David Rossetto, Yenda

Lately down this way we have been swamped with surveys asking us what we would like to have done if we were in control of funding and organising of various bodies that are there or suppose to be there for us viticulturists. There is always a lot of talk on trials done in various areas on things that we have trouble with here but our growers here feel that no trials that are done here ever eventuate into anything. They believe that the trials for one reason or another are never completed. Growers try and conduct their own simple trials but that is what they are, simple trials.

We are tired of seemingly

always been put back as a 'not important' area or a 'bulk area' that has no problems because we supposedly don't grow or make quality wines. What is it going to take for us to get some fair recognition of our problems!!!

Some things that we are trying hard for here are more work on Phomopsis, botrytis and vine borers. Growers feel that there is not enough info on the chemicals and timing of spraying to control these diseases and pests. Nor is there enough info on the diseases and pests themselves.

We spent two hours one night at a meeting filling in one survey that seemed to have all funded bodies squabbling over who is

going to control who and who gets to distribute the funds. We don't really care as long as we see results that are relevant to our area and worthwhile. At the moment we see neither.

So this is where we are headed at the moment, trying desperately to change things around so we too can enjoy and experience the expertise that there is out there in some of the experts that are employed and funded one way or another by us and all other grapegrowers in Australia, so we can grow more, spend more, employ more and fund more and that way do our bit to keep Australia for evermore.



Getting bogged down talking and commenting on work

Robinvale District Wine Grape Growers

By Phillip Engelfield, Robinvale

Our local focus groups have been running for some time now and are proving to be a great success. So far we have had three days involving pruning, nutrition and water management.

David Botting from Davidson consulting has some strong views regarding bud numbers etc, to

achieve not only a reasonable yield but also good quality fruit. A good indication of the impact of a presentation is the response generated amongst growers and there was certainly some lively debate amongst those present.

Our nutrition day with Ben Robinson continued on with the good start. We organized pits at two sites

that allowed Ben to give us a good cross section of soil profiles, root penetration and potential vine nutritional requirements.

The water management day was mainly involved with reinforcing R.D.I. principals and the review of a local grower's experience. As with the previous days, lively interaction occurred with the presenter being asked to

quantify so bold statements.

We still have several days yet to run in this current program. The link through all the sessions being to achieve an improvement in fruit quality as a whole management package being conscious of all potential inputs.

Rust mite management

By Martina Bernard, La Trobe Uni/DNRE, Prof Ary Hoffmann, La Trobe Uni, Dr Paul Horne, IPM Technologies Pty Ltd and Dr DeAnn Glenn GWRDC.

Aspects of successful rust mite management were recently relayed to the Langhorne Creek growers. While wettable sulphur pre bud burst label rates are 500g/100L or 660g/100L. The higher rates do not apparently improve results. When temperature was considered, it was found that these should be 15°C at time of application.

High spray volume

around vine crown was found to be essential causing cordon run off at 900L/ha, (600L/ha very young vines).

Possibly the most important aspect was that the critical spray window is at the start of rust mite migration, before feeding and egg lay. This is at woolly bud stage for most varieties except Cabernet Sauvignon which should be sprayed between bud swell and woolly bud stage.

Canola oil added to the spray solution at 2% (10-12 L/ha minimum) may improve rust mite kill by 15-20%. Growers should

be aware that canola oil is phytotoxic to foliage if applied after budburst. Growers should however avoid sprays that are harmful to predators of rust mite including

- Lorsban® (chlorpyrifos),
- Mancozeb®, Dithane®

and all mancozeb mixtures (dithiocarbamates),

- Benlate®, Bavistin®, Spin® (benomyl - benzimidazoles),
- Lime sulphur,
- Synthetic miticides, and
- Synthetic pyrethroids.



Getting the most out of spraying means understanding the mite itself

What is quality wine in Italy?

By Andrew Benger, Langhorne Creek

Working from a “Five minute Italian Wine Guide” from Trembath Taylor Tucker, wine in Italy is divided into two categories, being quality wines and table wines. This has come about as a result of the national wine laws in the European Union.

The quality designation DOC (Denominazione di Origine Controllata) guarantees; the geographical provenance, varietal make up, yield of grapes per hectare, percentage of wine permitted per given weight of grapes, mini-

mum sugar (grape), minimum alcohol (wine), minimum acidity and length of aging. DOCG (the G stands for Garanzia). DOC does not necessarily guarantee quality yet the higher appellation DOCG does by tasting all wines to ensure that they meet the standard of the zone.

The table wine designation, Vino Da Tavola is the lowest quality level where wines can be labelled without any indication of provenance, grape variety or vintage.

As a result of the separation between these two,

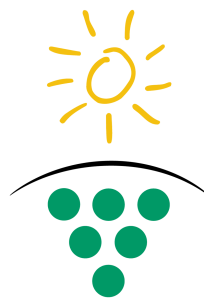
and the fact that producers didn't necessarily want to conform to the legal requirements of DOC, many growers have downgraded their wine to Vino Da Tavola, so that they could improve the quality through the application of modern techniques and superior varieties. This led to the term ‘Super Tuscan’. IGT (Indicazione Geographica Tipica) was established to pull these wines back into the fold, and by developing a higher grade of Vino Da Tavola, the producers are subject to a degree of control but nowhere near as

tight as under the DOC system.

Other quality indicators;

- Riserva: higher quality involving more aging at the winery
- Superiore: higher alcohol than normale for the same type
- Classica: wine is from the original or traditional area
- Imbottigliato all'origine or Imbottigliato dal viticoltore: estate bottled
- Producer's name: soundest guarantee of quality

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For further information,
contact the newsletter editor,
Noel Ainsworth, phone (08) 8303 9304,
Fax (08) 8303 9449, e-mail to
ainsworth.noel@saugov.sa.gov.au, or by writing
to PO Box 154 Glen Osmond SA 5064.

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ASVO Merlot seminar planned for November

*By Val Rechner, Australian Society
for Viticulture & Oenology*

Merlot is a grape variety that is proving to be a challenge to both viticulturists and winemakers.

This is ASVO's first varietal seminar for several years and the committee has created an exciting program of speakers and wine tasting. The seminar is to be held the day before the exhibitors' tasting for the National Wine Show, Canberra. There is an integrated program of speakers on the winegrowing and winemaking of Merlot, including

presentations on the behaviour of this variety in Pomerol and Australia, and a full discussion on the maladies that afflict Merlot planting material in Australia.

As a bonus, there will also be a talk on the challenges of marketing Merlot in the United States.

If you are interested in Merlot and were considering attending the National Wine Show, Canberra, this will make the trip essential.

For further information contact Val Rechner on ph (08) 8303 6607 or e-mail asvo@waite.adelaide.edu.au



A chance for a closer look at Merlot

Needing training, but unsure how to find it?

By Peter Mansfield, WINETAC

National training programs covering all aspects of viticulture have been developed and are available. As an example, do you know that the wine grape growing stream of the Wine Sector Training Package contains five units of training on Irrigation? They are;

- Install irrigation components
- Undertake irrigation systems maintenance activities
- Operate irrigation system
- Deliver injection requirements

-Implement an irrigation schedule
The difficulty sometimes is in finding out what specific training is available and who provides the training in the local area.

If you are needing some assistance to find out what training is available for either yourself or your personnel, help is available through CRCV Program 4, Education, training and professional development for a sustainable industry.

A comprehensive list of all nationally accredited courses and the

training providers who provide the training is available from the education and training section of the CRCV website, www.crcv.com.au, or phone Sue Brown or Sarah Pearson from CRCV Program 4 on (08) 83737090. Sue or Sarah can provide advice on what specific training has been developed and give you the contact details of local training organisations who can provide you with the training that you require.