October 2001
Volume 2, Issue 10

COOPERATIVE RESEARCH CENTRE for VITICULTURE

Viticare News

Growers sharing information with other growers

Cooperative Research Centre for Viticulture

Inside this issue:

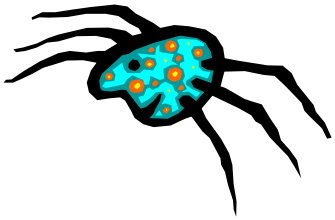
Mite trial in the cool climate capital

By Steve Mitchell, Tumbarumba

A group of five vignerons in the Tumbarumba and Tooma Valley townships are conducting a mite damage assessment trial. This is similar to the Hunter Valley OFT. Supported by David Braybrook and Chris Haywood, we have set up test beds within the vineyards, applying sulphur/vegoil (high water rate/ha) sprays at woolly bud to compare potential mite damage with areas treated with a budburst spray application only.

We have yet to reach our assessment timing of 5 leaf separation, however we expect that the first results will filter through for next month's update. We will also be surveying for rust mite damage.

Differentiating between mite & other leaf damage causes, such as cold damage, has been difficult in the past. However with a reasonably mild spring, it is hoped that cold damage will not be a factor this season.



Sorting out whether mites are the main culprits responsible for damage

For more information contact Steve as the contact for the Tumbarumba group on phone: 02 6948 4016, or e-mail roaring@today.com.au

Fathoming Merlot fruit set

Requesting help on fruit set

By Maarea Karetai, Adelaide Hills

During the past year, the Adelaide Hills On-Farm Trials group have been looking into an issue with bad fruit set in Merlot vines. As such, they are interested to hear from any other regions who have experienced similar problems or have done any research into the effects of molybdenum or lime application on fruit set in Merlot. They are continuing their trials of molybdenum spray this season and will be setting up a trial to look at outcomes following pH adjustment of their acidic soils. If you have any information or comments please contact David Handyside at bingfield@chariot.net.au.

New staff in On Farm Trials project team

Natalie Laukart has recently taken over the job as Regional Coordinator for Participatory On-farm Trials Port Phillip Region (start August 2001) as well as added responsibilities assisting the National Coordinator, Daryl Joyce (start October 2001).

Natalie has an honours degree in Agricultural Science. She majored in Plant Pathology, specifically working on the effects of essential oils on different strains of *Botrytis cinerea*. She was then employed by Agriculture Victoria as a research assistant working on management issues of Botrytis bunch rot and lightbrown apple moth on grapevines. She next worked in entomology focusing on "Concentrate spraying in pome fruit: preserving the beneficials".

Before moving on to on-farm trials, she was again involved in a National project as a pathologist looking at Grapevine Trunk Diseases. Her strong points lie in pests and diseases, but she also has a strong interest in soil and canopy management of vineyards. Natalie is looking forward to working closely with the growers in her region as well as the Coordinators around the country and enjoys the diversity of the trials that this project has to offer.

The National Coordinator for Participatory On Farm Trials, Dr. Daryl Joyce, has recently joined the project team after a 3 year stint at Cranfield University in the UK. There, he worked on natural disease resistance in fruit and flower crops such as strawberries and Geraldton wax flowers.

His qualifications include a Bachelor of Applied Science in Horticulture (Queensland Agricultural College), a Masters in Agricultural Science in water stress physiology (Adelaide University), a PhD in controlled release fertiliser technology (Qld. University) and a Postdoc. in Postharvest Horticulture (University of California, Davis). Subsequently, his employers were AgWest, Murdoch University, CSIRO Division of Horticulture, QLD University and Cranfield University.

Daryl anticipates Participatory On-farm Trials to be an exciting project, with enormous potential benefit for both the industry and researchers alike. He believes it important that information flow between researchers and growers continues freely in both directions.

Viticare wishes to acknowledge the tremendous contributions that previous staff have made to the On farm Trials project including DeAnn Glenn, Martin Mebalds, David Shearer, Shayne Hackett and Vanessa Hood. I am certain that they will be missed.

Natalie Laukart

Daryl Joyce

Useful viticultural web sites

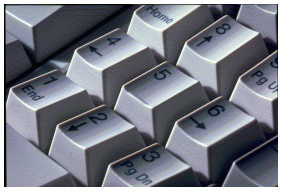
By Noel Ainsworth, CRCV

As part of the Australian Wine Industry Technical Conference last week I ran a workshop on useful web sites that could support viticulturists.

The workshop contains sessions on effective web searching, making the most out of the Bureau of Meteorology site and time to surf and practice the skills taught. As part of the workshop a list of sites was put together. The workshop focused on developing skills to find information efficiently and effectively.

Managing and accessing information has become a big business. A recent article suggested that companies spend $40 in labour to file a document, $240 in labour to find a misfiled document and $440 in labour to reproduce a lost document.

If anyone is interested in getting a copy of this list of sites, you can contact me on phone 0408 924544 or e-mail ainsworth.noel@saugov.sa.gov.au



Getting ready access to information

Environmental perceptions in the UK

By Noel Ainsworth, CRCV

One presentation that was delivered at the Australian Wine Industry Technical Conference in Adelaide last week that should be of general interest was that delivered by Phil Reedman of Tesco Stores Ltd.

While based in Adelaide, Phil is the Product Development Manager for Australian and New Zealand wines for the company. With profit of 1 billion in 00/01 with 700 licensed stores in the UK as well as presence in Thailand, South Korea, Taiwan, Ireland, Chech Republic and others, Tesco Stores represent a powerful world force in wine retailing.

Phil was quick to explain that consumers are not currently asking about the environmental credentials of the wine with other purchasing decisions playing a larger role such as taste, price and how well the wine will go with the microwaveable lasagna that they have just purchased for dinner.

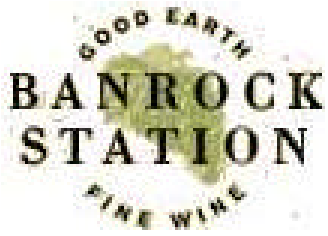
However there are four issues from the retailers perspective that need addressing urgently. The first of these is the problem of an oversupply of green glass in the UK which is threatening to bankrupt the existing recycling system. This means that either a 10% shift to flint glass or the instigation of a punitive tax on green glass would have to be introduced soon.

The second issue is that of Genetically Modified Organisms (GMO's) as an issue that needs to be promoted to the public to build up the benefits in peoples minds before that are introduced.

The third issue is the maintenance of Australia's Clean and Green image. This image needs support because of a number of negative messages that have emerged over the past year. This includes emerging problems of salinity in Australian ecosystems including the possibility of damage posed by opening up new irrigation (eg the new Barossa Valley pipeline). Australia's position on the Kyoto protocol, and the news stories of Australian viticulturists shooting birds caused some harm and resulted in Tesco's receiving letters on the subject from their customers.

The fourth issue was the environmental sustainability of producing wine. By no means simple but still important, Tesco's wants to be able to convey to its customers that this extends to the vineyard. Examples that were suggested included groups auditing against Integrated Wine Production protocols and multifaceted approaches such as is used at BRL's Banrock Station. Banrock's approach to demonstrating its environmental management credentials is successful and is due in part to its use of to a combination of slogans, packaging, links with environmental groups, donations to environmental causes, rehabilitation of wetlands and anecdotal support. Phil discussed the opportunities associated with the organic market and the growth in that sector but was not definitive about how Australian producers should demonstrate environmental sustainability.

Phil did however finish by saying that while there had been plenty of food scares in the UK, wine was a natural product and had escaped much of that attention until now. The Australian Wine Industry however would be asked to demonstrate its environmental credentials or risk market exclusion in the near future.



A multiple approach has helped BRL develop a strong wine and eco-tourism brand

Environmental management workshop

By David Baker, CRCV
Perhaps the most important element in any approach to environmental management is identifying how our activities may impact upon the environment. This is not always an easy task and therefore the EMS project of Viticare has been developing and refining an environmental risk identification tool for viticulture. This tool provided the basis for a workshop held as part of the Australian Wine Industry Technical Conference. The workshop participants included vineyard managers, winery managers and researchers including visitors from South Africa, New Zealand and China. The initial stage of the workshop involved the application of the tool by the participants, in order to assess for themselves, the environmental risk associated with a range of activities standard to most vineyards. The output of this exercise was then used as the basis for development of a range of preliminary action plans. The response to the workshop was very positive and we would welcome the opportunity to run similar workshops with interested groups of growers in the near future. If your group would like further information on this, please contact David Baker (08) 8340 0506 or e-mail dbaker@senet.com.au.

David Baker presenting at the workshop

David observing Niel Hayward (University of Stellenbosch) and Lexie McClymont (CRCV–Tatura) working through the environmental risk identification workshop.

Pest identification and monitoring

By David Braybrook, CRCV

The key to making improvements to pest control relies on the ability to identify and monitor pests in the field. Monitoring is not only about detecting a pest but provides information on whether to control, what to use and timing to optimise control. By monitoring over a number of seasons and relating pest levels with damage at harvest, thresholds can be developed. For pests such as the LBAM, monitoring has enabled vineyards to control and in a number of cases do nothing!

The pest and disease identification and monitoring workshop held at the technical conference provided participants with a comprehensive review of monitoring approaches for a number of pests and diseases. Despite having access to numerous pictures of pest and diseases and damage symptoms, there is no substitute for having a “first-hand” look at them. Participants were able to view a range of samples in the laboratory and benefited from the opportunity to discuss diagnostic and monitoring techniques with researchers. As growers who don’t have access to microscopes generally see symptoms of pest damage rather than the pest, there was a lot of interest from participants in seeing what pests such as rust mite look like under magnification.

The response by workshop participants was positive, with many feeling more confident in their ability to recognise the main pest and diseases that threaten viticultural production.

Identifying which disease is which is the first essential step

COOPERATIVE RESEARCH CENTRE for VITICULTURE

…..accelerating the uptake of new technologies

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.

COOPERATIVE RESEARCH CENTRE for VITICULTURE

For the latest on research results, annual reports, newsletters or project briefs, contact us on the web at www.crcv.com.au

Something in the air

By Andrew Benger, Langhorne Creek

No doubt everybody who grows grapes for someone else has by now received their latest spray diary and a plethora of instructions on how to calculate their application rates. Correct me if I'm wrong but I do not believe any of the current 'instructions' given to growers address the fundamental principle of air assisted chemical application, regardless of their recognition of 'canopy row volume'.

To my way of thinking the objective of air assisted chemical application requires the complete removal of air from the canopy and replacing it with chemically treated air. In order to accomplish this the critical factor must be a given spray units ability to achieve this. So why isn't the first calculation you do when calibrating a spray unit the working out of its air output? Part of the answer may be that it's not an easy calculation to do. Fortunately the manufacturer of your unit should be able to tell you this information.

So why is it so important to know the air output of your unit? Unless you know the air output you cannot calculate the correct spraying speed for a given volume of canopy. For example, according to the manufacturer of my spray unit, my unit's turbine delivers air at a rate of 5000m³/hour or 1.4m³/second at 540 PTO rpm, as it's a twin row sprayer I assume it delivers 0.7m³/second per side (or row). Presently my canopy is 0.8m wide by 0.5m high; therefore the row canopy volume is 0.4m³/ metre. To replace the canopy air I need to spend 0.6 of a second per metre of canopy (0.4m³/m ÷ 0.7m³/second = 0.6seconds/m).

My application speed in KPH should therefore be;

KPH = 1m/0.6seconds X 1Km/1000m X 3600seconds/Hour = 6 KPH

Now that I know my correct operating speed for this size canopy I can start calculating my chemical application rate.

To me the most important factor in using this method to calculate application speed is that as your canopy volume increases your application speed needs to decrease. By adhering to this simple principle growers should be able to achieve thorough coverage of their valuable crops and canopies thus ensuring optimum crop protection.

Reference: Paisnel, M., (1999) The Pellenc spraying system, Pellenc sa. France.

Getting the most out of that spray rig