

## **SIXTH INTERNATIONAL COOL CLIMATE SYMPOSIUM FOR VITICULTURE & OENOLOGY**

Held in Christchurch, New Zealand from 6 – 10 February, 2006

To locate the paper on the CD:

- click on the Search button
- either click on the PAPER# button and enter the code in bold found below (examples **KnCC**, **FSCC** or **1WG**) or
- click on AUTHOR button and enter the last name of the author.

### **KEYNOTE PAPERS, MONDAY 6TH FEBRUARY**

Keynote Paper **KnCC** (Cool climate 1)

Living on the edge: the opportunities and challenges of cool climate winegrowing in New Zealand

M.C.T. Trought

Keynote Paper **KnCC** (Cool climate 2)

Determining the key aromas of New Zealand Sauvignon blanc wines: the example a Sauvignon blanc

Dr. Laura Nicolau

Keynote Paper **WG1**

Running hot and cold: grapegrowing and winemaking in contrasting climates

Brian Croser

Keynote Paper **WG2**

Grape to wine flavour management for cool climate wine styles

D. Dubourdieu

Keynote Paper **WB1**

The global market niche for cool climate wine styles

Robert M. Nicholson

### **CONCURRENT FOCUS SESSIONS: MONDAY 6TH FEBRUARY**

#### **FSCC**

No two seasons are alike: understanding and managing the impacts of seasonal variation in cool climates M.C.T. Trought, P. Dry, G. Dunn, J.E. Heazlewood, A.M. Watt and P. Petrie

#### **FSWB1**

Managing the market: international case studies

Robert Nicholson, Nick Goldschmidt and Paul Dolan

**FSWG1**

Clones and cultivars for cool climates  
R. Smithyman, E. Weber, G.S. Howell and M. Redford

**FSWG2a**

Deconstructing aromas of cool climate Sauvignon blanc  
P.A. Kilmartin, Richard Gardner, Cynthia Lund, Leigh Francis, Malcolm Allen, Denis Dubourdieu and Laura Nicolau

**FSWG2b**

Chemical and microbial wine flavour defects. Identification, prevention and recovery  
Thomas Henick-Kling, Oliver Schmidt and Tim Martinson

**POSTERS: MONDAY 6TH FEBRUARY**Poster: **1WG**

A test for carbohydrate reserves as an additional tool to bud-fruitfulness for regulating vine yield  
LE Quirk, J. Smith J. Gray, M.A. Meunier, S. Rogiers and B. Holzapfel

Poster: **5WG**

The effects of molybdenum on fruitset and yield of *Vitis vinifera* cv. Merlot  
M.L Longbottom, P.R. Dry and M. Sedgley

Poster: **6WG**

Temperature effects on flowering and fruit set in cool climate vineyards  
C. Collins and P. R. Dry (presented by M. Longbottom)

Poster: **10WG**

Variation in Shiraz berry size originates before fruit set but berry shrinkage is a point of resynchronization for berry growth after flowering.  
J.D. Gray and B.G. Coombe

Poster: **13WG**

Falcons for grapes  
N.C. Fox, V.P. Saxton, M.C.T. Trought, J. Holland

Poster: **14WG**

More to grapes than you think - a bird's eye view  
V.P. Saxton, G.L Creasy, A.M. Paterson and M.C.T. Trought

Poster: **16WG**

Relations among geology, soil type and Sauvignon blanc vineyard variation in Marlborough, New Zealand

T. Mills, J. Mauk, M. Greven and M.C.T. Trought

Poster: **21WG**

Response of three Nebbiolo clones (*Vitis vinifera* L) to four different environments of North-West Italy

F. Mannini, A Ferrandino and S. Guidoni

Poster: **25WG**

The impact of site selection and vine management on Sauvignon blanc fruit and vine development within Marlborough

R. Agnew, M.C.T. Trought, M. Greven and J. Brady

Poster: **41WG**

Impact on Australian viticulture from greenhouse induced climate change

Leanne Webb, Penny Whetton and Snow Barlow

Poster: **43WG**

The trend to warmer climate - problems with a new phytoplasma pathogen in Southern Germany

Y.K. Kast and M. Stark-Urnau

Poster: **48WG**

Evaluation of the Grapecheque extension program - demonstrating impact

P.B. Blackshaw

Poster: **53WG**

Precision viticulture is DoT for everyone

V. Hood, M. Hill and C. Linehan

Poster: **56WG**

Towards integrated and sustainable management of grapevine powdery mildew in Tasmania

K.J. Evans and AM. Smith

Poster: **57WG**

Preliminary studies towards management of grapevine diseases by application of compost extract

A.K. Palmer, K.J. Evans, D.A. Metcalf, D.K. Duggan and P.A Scherer

Poster: **62WG**

Influence of soil factors on within-vineyard variation of Shiraz grape and wine composition

B.C. Collins, S. Needs and E.WR. (Snow) Barlow

Poster: **63WG**

Winegrape assessment in the vineyards of a Spanish cool climate region  
J. Tardaguila and F. Martinez de Toda

Poster: **66WG**

Latitudinal limit of commercial viticulture in New Zealand  
C.W.J. Douglas and B.B. Fitzharris

Poster: **70WG**

The influence of *Phaeomoniella chlamydosporum* and other fungi on young grapevines

AB. Reed, LD. Melton, B.G. Smith and P. Johnston

Poster: **75WT**

New approach to restarting stuck fermentations

KA. Sütterlin, H.K. Gut and J. Gafner

Poster: **76WT**

New system for qualitative and quantitative direct detection of spoilage organisms in wine

N.A. Porret, A.M. Frei, K. Schneider, F. Hesford and J. Gafner

Poster: **79WT**

Concentration effect of Riesling Icewine juice on yeast performance and wine acidity increase

D.L. Inglis, G. Pigeau and E. Bozza

Poster: **80WT**

Chemical composition of Vidal Icewine juice and nitrogen usage during fermentation

D.L. Inglis, G. Pigeau, J. Quai, M. Pistor and K. Kaiser

Poster: **83WT**

The eucalypt aroma of southern Australian Pinot noir wines

M.A. Robertson and S. Wilson

**KEYNOTE PAPERS - TUESDAY 7TH FEBRUARY**

Keynote Paper **WG3**

Management options for cool climate vineyards: present and future perspectives

Richard Smart

Keynote Paper **WB2**  
Future of business  
Paul Dolan

Keynote Paper **WG4**  
Getting the sparkle into grapes: growing for sparkling wine  
Michael Mackenzie

Keynote Paper **WG5**  
Some secrets revealed on fizz and foam in sparkling wines  
Bertrand Robillard

## **CONCURRENT FOCUS SESSIONS - TUESDAY 7TH FEBRUARY**

**FSWB2**  
Growing your business into the next generation  
David Granger, Poh Tiong Ch'ng, Andrew Bashford and Karen Silk

**FSWG3**  
Selecting cool climate sites: more important than choosing your spouse  
Richard Smart, Peter Dry, Paul Read and Glen Creasy

**FSWG4**  
International experiences in sparkling wine grape production  
Michael Mackenzie, Brian Croser, Rudi Bauer and Bart Arnst

**FSWG5**  
Breakdown : factors affecting autolysis in sparkling wine  
Bertrand Robillard, Julia O'Connell and Thomas Henick-Kling

## **POSTERS : TUESDAY 7TH FEBRUARY**

Poster: **2WG**  
Effect of pruning and cluster thinning on cropload, periderm browning, cold hardiness and fruit composition of 'Chambourcin' in the continental climate  
S. Kaan Kurtural and Imed E. Dami

Poster: **7WG**  
Early detection of grapevine phylloxera by linking leaf pigment composition with reflectance spectra  
KS. Powell, A. L Blanchfield, L.J. Renzullo and S.A. Robinson

Poster: **8WG**  
Influence of composted green waste on grapevine phylloxera (*Daktulosphaira vitifoliae* Fitch) management  
K S. Powell, A. Burns, J. Granett and G. McGourty

Poster: **9WG**

Chemical fingerprinting of grapevine phylloxera infestation using nuclear magnetic resonance

KS. Powell, D.J. Tucker, D.W. Lamb, RD. Murison, A.L Blanchfield and LM. Brereton

Poster: **22WG**

Improving the quality of pesticide application in vineyards - part 1: research - reducing losses

A.J Landers

Poster: **23WG**

Improving the quality of pesticide application in vineyards - part 2: extension - seeing is believing

A.J. Landers

Poster: **26WG**

The influence of training and pruning on the performance of cool-climate Marlborough Sauvignon blanc grapevines

J.S. Bennett, M.C.T. Trought and J. Brady

Poster: **30WG**

Effect of shoot and bunch position on juice composition of Sauvignon blanc (*Vitis vinifera* L)

A.P. Navlor, M.C.T. Trought and C. Frampton

Poster: **37WG**

Performance of Shiraz clones in the Grampians region of Victoria, Australia

JR Whiting

Poster: **38WG**

Beating Botrytis - Grower reactions to regional workshops

JR Whiting

Poster: **42WG**

Pruning and training system effects on yield and vegetative growth of Concord grapevines in Michigan

W,R Nail and G.S. Howell

Poster: **45WG**

Interactive effects of soil water and mineral-N on grapevine vigour and juice quality in a cool climate vineyard in southeastern Australia

L Balachandra, R.E. White, R Edis and D. Chen

Poster: **46WG**

The depth of mineral-N uptake of mature, field-grown grapevines as affected by irrigation and determined using  $C^{14}NH_4)_2SO_4$  as a tracer  
L Balachandra, RE. White, D. Chen and R. Edis

Poster: **50WG**

Evaluation of Viognier grapes and wines in response to VSP, Smart-Dyson, or Geneva Double Curtain training in northern Virginia, USA  
B.W. Zoecklein, T.K Wolf, L Pélanne, M.K Miller and S. Birkenmaier

Poster: **52WG**

Temporal, physical and cultural factors affect the initiation, activation and spread of Botrytis  
S.M. Zitter and WF. Wilcox

Poster: **54WG**

Grapevine Leafroll-associated Virus Type 2 can cause graft incompatibility syndromes on specific rootstocks  
Roderick Bonfiglioli, Nick Hoskins and Fran Edwards

Poster: **58WG**

Seasonal growth, dry matter and carbohydrate development in mature 'Concord' grapevines  
Alan N. Lakso, Martin C. Goffinet, Terry L Bates, Lailiang Cheng and Richard Dunst

Poster: **59WG**

Root production and lifespan in mature 'Concord' grapes related to pruning severity and soil moisture  
A.N. Lakso, D.M. Eissenstat, LH.Comas, LJ. Anderson and RM. Dunst

Poster: **71WG**

When a good bug goes bad! Dealing with a new vineyard pest *Harmonia axyridis* {Pallas}  
K. Ker, G.I. Pickering and R.R Brewster

Poster: **72WT**

'Ladybug! Ladybug! Ay away home!'- a new wine taint associated with *Harmonia axyridis*  
G.J. Pickering, Y. Lin, G. Soleas , K. Ker, A. Reynolds and R. Riesen

## **KEYNOTE PAPERS - WEDNESDAY 8TH FEBRUARY**

### Keynote Paper **WG6**

Development and incorporation of mechanisation into intensely managed grape vineyards  
Justin Morris

### Keynote Paper **WG7**

Icewine - the frozen truth  
Gary Pickering

### Keynote Paper **WB3**

Crafting *terroir*: people in cool climates, soils and markets  
Warren Moran

### Keynote Paper **WB4**

What makes cool climate wines cool climate wines? A wine writer's perspective  
Poh Tiang Ch'ng

## **KEYNOTE PAPERS - THURSDAY 9TH FEBRUARY**

### Keynote Paper **WG8**

Grapevine trunk diseases in California  
W. D. Gubler, P. E. Roishausen, F. P. Trouillas, G. M. Leavitt and E. A. Weber

### Keynote Paper **WG9**

Integrated production systems  
Andries Tromp, Elleunorah Allsopp and Lourens van Schoor

### Keynote Paper **WG10**

Green compounds from grapes  
Malcolm S. Allen

### Keynote Paper **WG11**

The right tools for the job: dealing with cool climate wine styles  
D.P. Wollan

## **CONCURRENT FOCUS SESSIONS: THURSDAY 9TH FEBRUARY**

### **FSWB3**

Cool climate claims: making meanings *from* vineyard to table  
W. Moran, N. Lewis, J. Fanet, D. Martin and D. McGregor

**FSWG6**

Taking mechanisation research into the vineyard  
J.R Morris, C. Intrieri, T. Bates, H. Ashby, G. Berg, N. Dokoozlian, P.P. Hayes and R Smart

**FSWG7**

Ice wine production practices  
Gary Pickering, Kevin Ker, Debbie Inglis, Rob Hay and Hermann Seifried

**FSWG8**

Grapevine Trunk Diseases  
W. Douglas Gubler, Jacqueline Edwards, Mark Sosnowski, Laura Mugnai, Marlene Jaspers and Dion Mundy

**FSWG10**

Perception of flavour in wine  
Andy Frost, Wendy V. Parr, Cynthia M. Lund and Leslie Norris

**POSTERS:THURSDAY 9TH FEBRUARY**Poster: **3WG**

The effect of phenological stage and leaf position on seasonal gas-exchange in grapevines  
M.J. Collins, E.W.R Barlow, R Wood and G. Kelley

Poster: **4WG**

Water movement in the soil-plant-atmosphere continuum in grapevines subject to drip and PRO irrigation  
M.J. Collins, S. Fuentes, R Wood and E.W.R Barlow

Poster: **15WG**

Assessing frost risk on new vineyard sites  
M.C.T. Trought

Poster: **19WG**

Flavonoid composition of Shiraz grapes in warm and cool climate vineyards in South Australia  
N.J. Cordon and S.P. Robinson

Poster: **20WG**

The influence of bunch light exposure on flavonols in Shiraz and Chardonnay grapes during berry development  
N.J. Cordon and S.P. Robinson

Poster: **28WG**

Lime tolerance of grapevine rootstocks  
L. Kocsis, Z. Varga and P. Podmaniczky

Poster: **29WG**

Vine decline in grapevine rootstock plantation  
L. Kocsis, G. Fischl, Z. Varga, G.M. Kocsisnel and B. Tâtrai

Poster: **31WG**

Grape phylloxera establishment under variable temperature regimes in the Pacific Northwest, USA  
J.R. Fisher

Poster: **33WG**

The use of Partial Rootzone Drying in Sauvignon blanc grapes in Marlborough  
M. Greven, S. Neal, S. Green and B. Clothier

Poster: **34WG**

The importance of berry size on the flavour and aroma profile of Sauvignon blanc wine  
M. Greven, M. Trought, J. Brady and R Agnew

Poster: **35WG**

The leaching of CCA from vineyard posts in Marlborough  
M. Greven, B. Robinson, S. Green, R. Agnew, S. Neal, B. Clothier and P. Davidson

Poster: **49WG**

Primary Bud Necrosis in Victorian Shiraz  
N.J.Scarlett and M.F. Cole

Poster: **51WG**

Use of the phenology of the vine as biological indicator of the climate evolution  
J. Rochard, J.R. Clemen, C. Herbin

Poster: **60WG**

Managing bunch number variability in cool climate viticulture  
J.E. Heazlewood, S. Wilson, R. Clark and A. Gracie

Poster: **64WG**

Chilling requirements for cool climate grape cultivars  
Imed E. Darni

Poster: **67WG**

A model to predict the distribution of retained buds after mechanical pruning

G.M. Dunn, S.R. Martin, P.R. Petrie, S.J. McLoughlin and W.M. Sessions

Poster: **68WG**

Managing fluctuating fertility through 'informed' mechanical pruning

G.M. Dunn, S.R. Martin, P.R. Petrie, S.J. McLoughlin, W.M. Sessions, M.P. Krstic and M.A. Welsh

Poster: **73WT**

Yeasts contribution to the flavour of Sauvignon blanc

N. Anfang and M.R. Goddard

Poster: **77WT**

Isolation of yeast genes involved in Sauvignon blanc aroma development

M. Harsch, R. Gardner and M. Goddard

Poster: **81WT**

Growing conditions and wine quality of *Vitis vinifera* L. Pinot noir

G.A. Logan, G.S. Howell and M.G. Nair

Poster: **85WG**

Potential use of infrared thermography for the early detection of leaf pathogens (*Plasmopara viticola*) in grapevines

M. Stoll, B. J. Loskill, B. Berkelmann-Lohnertz and H.R. Schultz

**KEY NOTE PAPERS - FRIDAY 10TH FEBRUARY**

Keynote Paper **WB5**

Will consumers learn to like cool climate wines, or will have to teach them?

Larry Lockshin

Keynote Paper **WG12**

Managing cold, frost and other weather related grapevine damage - a review

G. Stanley Howell, Robert M. Pool and M.C.T. Trought

Keynote Paper **WG13**

Leading by a Dose: commercial realities and sensory evaluation of wine  
Isabelle Lesschaeve (presented by Cynthia Lund)

## CONCURRENT FOCUS SESSIONS: FRIDAY 10TH FEBRUARY

### FSWB5

Focus Session: terror or *terroir* - do consumers like cool climate wines, or will we have to teach them?

Larry Lockshin, Leigh Francis and Gary Pickering

### FSWG9

Problems and pitfalls of cool climate integrated production systems

Andries Tromp, Elleunorah Allsopp, Chris Savage, Olivier Viret and Sally van der Zijpp

### FSWG11

Microoxygenation for influencing wine character

Robert Paul, Stuart Dykes, Romain Reynard, Mark McGili and David Ramonteu

### FSWG12

Keeping out the cold: frost damage prevention and recovery

G.S. Howell, M.C.T. Trought, AP. Friend and 1. Dami

### FSWG13

Commercial experiences with incorporation of sensory data into business plans

L Norris and Mary Wagner

## POSTERS: FRIDAY 10TH FEBRUARY

### Poster: 11WG

Developing a grape and wine industry under challenging environmental conditions

Paul E. Read and Stephen Gamet

### Poster: 12WG

Effects of rootstock and winter protection on growth and development of Gewürztraminer in a continental climate

Paul E. Read, Sanjun Gu and Stephen Gamet

### Poster: 17WG

Yeast available nitrogen development over time for maturing Sauvignon blanc fruit of differing nitrogen treatments

D.C. Mundy, RM. Beresford and M. Trought

Poster: **18WG**

Investigation of fungi isolated from trunks of 23 year old Cabernet Sauvignon grape vines in Marlborough  
D.C. Mundy and M A Manning

Poster: **24WG**

Factors driving within-vineyard variability in grape yield and composition in a vineyard in the cool-climate region of the Yarra Valley, Australia  
A. M. Curl, N.J. Tapper and E.W.R (Snow) Barlow

Poster: **27WG**

Botrytis best practice management in cool climate Victoria, Australia  
M.F. Cole and J.Whiting

Poster: **32WG**

Impact of a spring frost event on the fruitfulness of Chardonnay grapevines  
A.P. Friend, M.C.T. Trought and G.L. Creasy

Poster: **36WG**

Effect of vineyard floor treatments on wine quality  
M. Meunier, R. Hutton, D. Tesic, A Loch, M. Weckert, L. Rahman, D. Lemerle, B. Orchard, L. Quirk, E. Rouse and R Smith

Poster: **39WG**

Promoting the adoption of precision viticulture  
T. Proffitt, R Bramley, D. Lamb, E. Winter, G. Dunn and S. Robinson

Poster: **40WG**

Effect of bunch temperatures on Shiraz flavour and aroma  
E. Winter, S. Lowe and N. Bulleid

Poster: **47WG**

Improving diagnostic capabilities for the detection of Grapevine Leafroll-associated Virus Type 3, using Polymerase Chain Reaction (PCR) techniques  
Mark Belton, Fran Edwards and Roderick Bonfiglioli

Poster: **55WG**

The performance of frost protection sprinklers: early results from a Hawkes Bay trial  
LM. Woodhead, P.A. Riding and A.P. Hayward

Poster: **61WG**

Comparison of inflorescence morphology and flower development in hot, warm and cool climates

A.M. Watt, P. May, G. Dunn and E.W.S. Barlow

Poster: **65WG**

The terroir of a Marlborough Sauvignon blanc vineyard: the influence of soil textural changes on vine development

R. Dixon, M.C.T. Trought, J. Brady, R. Agnew and M. Greven

Poster: **69WG**

Utilizing multi-spectral imagery to identify premium fruit in wine grapes

J. Smithyman, E.M. Perry, R. Sntithyman and K. Corliss

Poster: **74WT**

Timing of malolactic fermentation in white wine

S.A. Krieger

Poster: **78WT**

Role of antioxidants in stabilising Sauvignon blanc aromas in a model wine solution

M. Herbst, P.A. Kilmartin and L. Nicolau

Poster: **82WT**

Polysaccharides limit lysozyme interaction with pigmented polymer fractions from Pinot noir wine

Rob Jilbert, James A. Kennedy and Mark A. Daeschel