November 2014 – Report

The National Wine and Grape Industry Centre have 30 staff members including 6 Post doctoral fellows who have been recruited in 2013 and 2014. The Centre proudly trains 13 High Degree by research students at the PhD level.

The Centre is involved in education, research and extension.

The extension is performed in collaboration with AGWA (Australian Grape and Wine Authority) and AWRI (Australian Wine Research Institute)

**Latest news**

**New App released:**

Fit Vine helps you assess the quality of vines before you plant them. Avoid planting sub-standard or diseased vines that will impact your bottom line with Fit Vine.

Developed by a world leader in grapevine propagation, Fit Vine is quick and simple to use, requires no special training or knowledge and can be used outdoors in the vineyard. A pair of Secateurs (pruning clippers) is all you need.

Features are: accurately assess the quality of the vine, Identify common physical vine defects, learn to dissect sample vines, create a permanent record of your evaluation, shows pictures of diseased and healthy vines.

**Canberra Riesling Challenge**

NWGIC ran a successful seminar on Riesling Excellence at the Canberra International Riesling Challenge on Friday 17th October. Topics of interest were; cold stabilisation (Dr John Blackman), wine faults (Dr Leigh Schmidtke), Canberra Riesling (Ken Helms-Helm Wines and Bryan Martin-Clonakilla Wines) and a demonstration of the new Fit Vine app (Helen Waite – creator)

**CRUSH 2014**

NWGIC had 9 members of the centre, both staff and student, presenting a variety of topics at the Crush conference.

**Paper of the Year nomination**

Jason Smith has been selected as a finalist for the ASVO 2014 Viticultural Paper of the Year, for his paper titled “Measurement of the concentration of nutrients in grapevine petioles by attenuated total reflectance Fourier transform infrared spectroscopy and chemometrics”

**The research performed** by the Centre is across 14 projects funded mainly by AGWA, which are linked to Australian Wine Industry priorities. The main research projects are on the following topics:

**Vine health and biosecurity**

- Practical Management of grapevine trunk diseases - Dr Sandra Savocchia, email ssavocchia@csu.edu.au. (this project is in collaboration with SARDI)

- Understanding fungicide resistance in powdery and downy mildew - Dr Sandra Savocchia, email ssavocchia@csu.edu.au. (this project is in collaboration with SARDI)

- Determination of thresholds for bunch rot contamination of grapes and techniques to ameliorate associated fungal taints - Prof Chris Steel, email csteel@csu.edu.au
• Brassica biofumigation of black foot fungi in vineyard soil - Dr Melanie Weckert, email melanie.weckert@dpi.nsw.gov.au

• Entomopathogenic Fungi as Potential Biocontrol Agents of Grape Phylloxera - Dr Sandra Savocchia, email ssavocchia@csu.edu.au

**Vine quality and yield**

• The project will develop three mobile, spatially aware systems based on a high precision sensor suite, a low cost sensor suite and smart devices to acquire data and forecast yield in real time. This project will tackle the three major barriers to adoption of more accurate yield forecasting in the wine industry - Ass Prof Greg Dunn, email gregory.dunn@dpi.nsw.gov.au

• Improving industry capacity to manage yield and wine quality relationship through understanding the influence of vine carbon balance and berry composition - Jason Smith, email jasmith@csu.edu.au

• The first part of the project addresses the role of potassium in sugar unloading into grape berries with the objective to manage berry sugar accumulation from a viticultural perspective. The second part aims to identify the instigators of cell death in the berry mesocarp cells and understand the implications on berry composition- Dr Suzy Rogiers, email suzy.rogiers@dpi.nsw.gov.au (this project is in collaboration with Adelaide University)

• Evaluating and demonstrating new disease resistant varieties for the Riverina - Dr Bruno Holzapfel email Bruno.holzapfel@dpi.nsw.gov.au (this project is in collaboration with CSIRO)

**Vine and wine composition and style**

• Fruit and wine composition and sensory profile: sequential harvest, searching for the sweet spot in Australian regions - Dr Leigh Schmidtke email lschmidtke@csu.edu.au and Prof Alain Deloire, email adeloire@csu.edu.au

• Metal ion speciation, understanding its role in wine development and generating a tool to minimise wine spoilage - Dr Andrew Clark, email aclark@csu.edu.au (this project is in collaboration with AWRI)

• Low alcohol wine and sequential harvest - Dr Peter Torley, email ptorley@csu.edu.au, (this is in collaboration with Adelaide University)

**Wine and consumers**

• Objective measures of Australian sparkling wine style and quality - Prof Anthony Saliba, email asaliba@csu.edu.au

• Characterisation of wine avoiders and how to transition avoiders to consumers - Prof Anthony Saliba, email asaliba@csu.edu.au

**NWGIC** (Charles Sturt University) is now full partner of two international consortia:
EMAVE - VINIFERA ([http://vinifera-euromaster.eu/pages/?page=1&id=26](http://vinifera-euromaster.eu/pages/?page=1&id=26))