

Dr Michael McCarthy

Principal Scientist, Viticulture

SOUTH
AUSTRALIAN
RESEARCH &
DEVELOPMENT
INSTITUTE
PIRSA

Qualifications

B.AgSc University of Adelaide
M Ag Sc University of Adelaide
PhD University of Adelaide
Affiliate Senior Lecturer University of Adelaide

Role

Dr Michael McCarthy is SARDI Program Team Leader for viticulture. The team has specialist expertise in all aspects of viticultural science from soil science, irrigation, plant physiology, climate change impacts and wastewater re-use.

Research focus

His past research interests focussed on irrigation management, wine grape quality, vine improvement and soil management and was responsible for the research effort and widespread industry adoption of strategic irrigation management practises in wine grape vineyards.

More recently the focus has been on developing vineyard management practises increase resilience to climate change. These activities have been internationally recognised with the awarding of a Nelson Shaulis Travel Scholarship, an America Society of Enology and Viticulture Honorary Research Lecture, contributed chapters to the internationally recognised publication Australian Viticulture text, and author of a chapter for an FAO publication on Deficit Irrigation.

Major projects

Michael is currently the project team leader of a Wine Australia project investigating the interactions between germplasm and environment. With experimental sites in Victoria, South Australia and Western Australian winegrowing regions the project brings together a number of viticultural scientist, oenologists, wine sensory and genomics capability.

SARDI's other focus on climate adaptation for viticulture, with support from Wine Australia, is quantifying the impact of reduced winter-spring rainfall on vine performance and wine quality and utilises specifically designed large rain-out shelters over a planting of mature grapevines on the Nuriootpa Research Centre. The effectiveness of night-

time cooling of vineyards during heatwave events is being tested at night of sites in two major SA winegrowing regions and is showing positive impacts on yield and wine quality.

Key publications

McCarthy, M. G. (2000). Developmental variation in sensitivity of *Vitis vinifera* L. (Shiraz) berries to soil water deficit. *Australian Journal of Grape and Wine Research* 6(2): 136-140

Laurenson, S., Smith, E., Bolan, N.S. and McCarthy, M. (2011) Effect of K⁺ on Na-Ca exchange and the SAR-ESP relationship. *Soil Research*, 2011, 49, 538-546.

Effect of winter rainfall on yield components and fruit green aromas of *Vitis vinifera* L. cv. Merlot in California. M.P. Mendez-Costabel, K.L. Wilkinson, S.E.P. Bastian, C. Jordans, M. McCarthy, C.M. Ford and N. Dokoozlian. (2014). *Australian Journal of Grape and Wine Research* 100-110.

Boards/Committees

Member Wine Innovation Cluster Research Group

Professional member of the Australian Society of Viticulture and Oenology.

Member Grape Barossa

A founding member of the Barossa Viticulture Technical Group



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