

RESEARCH DIRECTIONS

Summerfruit quality

Adjunct Professor Barry McGlasson of the School of Natural Sciences will lead a team of researchers who will investigate orchard management techniques and the extent to which these practices may lead to variability in quality of summerfruit. The project is being funded by Horticulture Australia Limited, including contributions from Woolworths Limited and UWS.

'In some seasons up to half of the commercially harvested peaches and nectarines lack flavour and provide consumers with a poor eating experience,' says Professor Barry McGlasson. 'Providing summerfruit of consistently high eating quality will raise consumer satisfaction and increase consumption. However, in order to supply consistently high quality summerfruit to the market, we need to understand and manage the variability of those fruits. Soluble solids concentration (SSC) is a measure that can be used to determine the eating quality in fruit. Although our previous research has shown that SSC can vary by 6-10% among fruit from a single tree, to date no research has addressed the causes of this large variation among fruit on the same fruiting shoots.'

The research team will select mature nectarine trees - one mid-season and one late-season cultivar - on a commercial orchard in the Goulburn valley, Victoria. Using a near infrared (NIR) spectrometer to measure the accumulation of SSC, the team will investigate what may influence the ability of individual fruit to accumulate SSC as it grows. They will measure cell numbers, cell size, light distribution, fruit temperature and rates of transpiration. Interpretation of the data generated in these experiments will be assisted by mathematical modelling.



With increased knowledge of the factors that cause fruit variation, growers will be able to improve tree training, pruning and thinning leading to more consistent SSC levels in fruit. Improved management practices within the fruit industry will not only increase consumption of peaches and nectarines but also our enjoyment of these wonderful summerfruits.

Project Title: Improving consistency of soluble solids concentrations in summerfruit

Funding has been set at: \$70,747

Contact Details: b.mcglasson@uws.edu.au
http://www.uws.edu.au/natural_sciences

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Research team: Associate Professor Paul Holford (UWS), Dr John Golding (NSW Department of Primary Industries) and Dr Ian Goodwin (Victoria Department of Primary Industries). This project will also involve Mr John Lopresti from the Victoria DPI, who is undertaking his PhD at UWS. He will be supervised by a multi-disciplinary team which will include Dr Michel Génard from the French National Institute for Agricultural Research, INRA.