



veski
sustainable agriculture fellow

Professor Luca Corelli-Grappadelli

Inspiring
Innovation



research project

Meeting the demand of fresh fruit in asia utilising new and emerging sensor technologies

project summary



Professor Luca Corelli-Grappadelli is a Professor of Tree Physiology at the University of Bologna, Italy with an extensive research and teaching career spanning over 20 years.

He has developed a number of new and innovative technologies, algorithms and methodologies that can be used to manage and predict fruit size, yield and quality. Since 2004, Professor Corelli-Grappadelli has been a member of the Italian Academy of Agriculture, and since 2006 has secured EU projects funding ca 25 million euro.

In October 2016 he commenced his **veski** sustainable agriculture fellowship working with the Department of Economic Development, Jobs, Transport & Resources (DEDJTR) to determine if the Deliza and PIQA pear varieties are suited to Asian consumer preferences.

A pear to match the taste and visual preferences of local and international consumers is needed to revitalise the declining Australian pear industry.

Based at the six hectare pear field laboratory in Tatura, Professor Corelli-Grappadelli worked with the local horticulture industry to conduct pre and post harvest studies on both pear varieties.

His research focused on determining best practice for handling, storage and transportation of the pears, and the use of new sensor technologies to improve practices and monitoring in the production and handling chain to ensure maximum yield and quality.

The local horticulture industry has further benefited from Luca's expertise and experience in clarifying the patterns of carbon movement within shoots, spurs and fruit as a function of the light environment in apple and peach crops.

An advisory team comprising industry leaders, researchers and government continues to support the work of the **veski** sustainable agriculture fellow providing advice, direction and feedback to guide the project to its completion.

Analysis of the project data is still underway. A significant outcome was the development of the inflorescence technique for estimating damage to fruit varieties from heat stress with plans underway to use the technique to explore better tree architectures in temperate fruit crops.

Dissemination activities have included orchard visits, grower's meetings as well as coverage in the press. A number of videos are available online through Agriculture Victoria, illustrating the project details and sensor technologies.