



veski
sustainable agricultural
fellowships

announcement of the inaugural sustainable agricultural fellows

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inaugural fellows' profiles & projects

With the support of funding from John T Reid Charitable Trusts, **veski** has awarded three inaugural sustainable agricultural fellowships to support national and international researchers.

Peppery flavour, climate and an app are key to selling Victorian Shiraz

Dr Pangzhen Zhang from the University of Melbourne will work closely with the Victorian viticulture industry to develop a 'pepper' map with information on how to maximise the 'peppery' flavour, known as Rotundone, found in high quality Victorian Shiraz to increase sustainability and profits for an industry experiencing difficult economic times with increased labour and raw materials costs.

The **veski** sustainable agricultural fellowship will support the development of a method to define, quantify and differentiate regional Victorian agricultural products like Shiraz, and develop an app to provide industry with access to relevant data and information including a Victorian-wide rotundone map to help Victorian grape growers estimate their rotundone concentration at each vintage based on climate data in their region.

The project will also provide information for future production by combining the climate-rotundone model and Australian Bureau of Meteorology climate projection to estimate rotundone production over the coming 50 years. Based on this modelling, they will design a specific vineyard management protocol to maximise rotundone production under different climate scenarios.



The inaugural **veski** sustainable agricultural fellow is a promising scientist in the field of horticultural and viticulture studies with expertise in climate modelling. Pangzhen has established an excellent working relationship with the Australian Wine Research Institute, CSIRO, Australian Grape and Wine Authority, Wine Victoria, Rathbone Wine Group and Mount Langi Ghiran Winery.

He also has practical experience in the wine industry, and has worked for the Yering Station Winery as a vintage wine chemist.

American to help Victoria challenge for World Record Maize Grain Yields

Australia currently produces approximately 600,000 tonnes of non-GM maize per year, which attracts a premium of \$80-\$100 per tonne over the GM product from the USA and Brazil in the export market. Maize production in Northern Victoria is currently undergoing considerable expansion due to on-farm irrigation efficiency upgrades that have resulted in growers moving from traditional winter cropping programs to summer cropping, with higher possible gross margins.

Increasing grain yield is important to the continued competitiveness of the Victorian industry, and Victorian maize farmers have their eyes set on beating the world record currently held by an American farmer.

While Australia's highest maize grain yield sits at 20.5 tonnes per hectare obtained by a grower in Northern Victoria in 2004, increasing on farm efficiencies could allow Victorians to challenge for the current world record maize grain yields of 28 tonnes per hectare.

The **veski** sustainable agricultural fellowship will support a collaboration between America's maize grain yield record breaker with farmers and the wider industry on making this ambition a reality.

inaugural fellows' profiles & projects

The fellowships range from full scale projects to short term activations of visits by international specialists to educate, inform and disperse knowledge and expertise to specific industry and related industries who would benefit from this knowledge transfer along with the broader rural & regional community stakeholders.

Researchers and farmers paired to determine perfect pear for Asian markets



The record-breaking farmer will present at grower meetings across Northern Victoria and give local growers the information and inspiration they need to work with agronomists to design and conduct on-farm trials.

It is anticipated the inaugural **veski** sustainable agricultural fellow will present at the Australian Summer Grains conference in Queensland in March 2016, contributing to the Australian knowledge base.

With this influx of knowledge, it is possible a grower in Northern Victoria could achieve a World Record yield.

A pear to match the taste and visual preferences of local and international consumers are needed to revitalise the declining Australian pear industry. The decline, also linked to high production costs, has resulted in over supply and price reductions and poses a significant threat to the survival of many growers, particularly in the Goulburn Valley with impacts for the regional economy, community health and wellbeing.

Using emerging sensor technologies and knowledge from the University of Bologna, Professor Luca Corelli Grappadelli will work with industry to determine if the Deliza and PIQA pear varieties are suited to Asian consumer expectations.

Research will include pre and post harvest studies on both of the pears with a focus on determining best practice for handling, storage and transportation of the pears.

New sensor technologies will be used to improve practices and monitoring in the production and handling chain to ensure maximum yield and quality.

Professor Corelli 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; some not tested outside University of Bologna in Italy. Professor Corelli also brings his experience from playing a major role in clarifying the patterns of carbon movement within



shoots, spurs and fruit as a function of the light environment in apple and peach crops.

The research and development will use the six hectare pear field laboratory at DEDJTR in Tatura that has long-term experiments in place to test the response of new varieties to a range of practices. The re-vamped experimental orchard will provide a valuable resource for this project to research the application of sensor technologies and the right conditions for handling, storage and transportation of these pears.

An advisory team will provide advice, direction and feedback for the project research activities with industry leaders, researchers and government working alongside the **veski** sustainable agricultural fellow.



veski

sustainable agricultural fellowships program

The **veski** sustainable agricultural fellowships draw on **veski's** experience to bring world leading scientists and researchers to Australia to work in collaboration with farmers, industry, government and the community. The fellowships will encourage collaboration between community stakeholders, philanthropic organisations, industry and government to address critical issues in the agricultural sector across Australia to achieve prosperity and sustainability.

Three fellowships are being funded in 2015 with the support of a one-off generous philanthropic gift from the John T Reid Charitable Trusts.

The first round of fellowships have been industry driven where **veski** sought expressions of interest from a range of industries and sought their input into the identification of a specific problem or issue and their assistance in the design of the fellowship to develop a solutions driven outcome, identifying key requirements of the fellowship candidate along with international best practice examples.

The fellowships rely on industry and community collaboration from the early stages with a key role in defining industry needs and funding fellowships to clearly address them. For the inaugural fellowship round, engagement has occurred with three key industries: viticulture, grains and horticulture.

The development of new and enhanced products remains a priority; however **veski's** sustainable agricultural fellowships also support innovation in the areas of marketing and product development.

The aim is to provide a transformational approach to support Australian industries as they transition for future markets and growth economies.

Recipients

The inaugural **veski** sustainable agricultural fellowships, which address key challenges identified with input from industry, farmers, community groups, government and academics to determine the key challenges for regional Australia and what problems need to be tackled, will support national and international researchers including:

- Victorian **Dr Pangzhen Zhang** from The University of Melbourne who is developing a 'pepper' map to define the distinctiveness of Victorian wine;
- An American maize farmer with a world record grain yield who will visit Australia in 2016 and work with the Maize Association of Australia to help Northern Victoria attempt a World Record Maize Grain Yield; and
- Università di Bologna's **Professor Luca Corelli Grappadelli** who will be paired with the Department of Economic Development, Jobs, Transport & Resources (DEDJTR) and industry collaborators to determine the viability of pear varieties for Asian markets.