

Grower R&D Update



Agenda

13 November 2019

- 8.15am **Registration**
- 8.30am **Welcome**
- 8.35am **Transforming your orchard irrigation with sensors and monitoring**
Dr Mark O'Connell, Research Scientist - Water Management, Agriculture Victoria
- 9.00am **Understanding soils for improved water and nutrient use efficiency**
Dr Nigel Swarts, Research Fellow, TIA

Be better informed when developing irrigation and nutrition strategies. Dr Nigel Swarts will provide an update on the soil characterisation component of the fertigation project. With new data on soil water availability within each soil profile and knowing exactly how much water trees require. This data will underpin the user-friendly strategic support tool SINATA.
- 9.25am **Panel Discussion: Water efficiency – techniques for a sustainable future**
Matthew Pryor, Partner, AgThentic
Brent Reeve, General Orchard Manager, Jeftomson
Dr Nigel Swarts, Research Fellow, TIA
Dr Mark O'Connell, Research Scientist - Water Management, Agriculture Victoria
- 10.00am **Morning tea**
- 10.25am **Securing pollination through revegetation**
Dr Katja Hogendoorn, Senior Researcher, The University of Adelaide

In many areas of Australia, apple growers benefit substantially from a wealth of ecosystem services, such as free pollination by various insects, including native bees and feral honey bees. In this talk, Dr Katja Hogendoorn will discuss how growers can harness these free services using strategic floristic support.
- 10.45am **Biodiversity of pollinator in apple orchards**
Prof James Cook, Leader - Plants Animals and Interactions, Western Sydney University

Professor James Cook will explore how the different pollinator species perform and the efficiency of pollination and effect on fruit production.

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- 11.05am **Pollination in under netting - learnings from NZ**
Dr Lisa Evans, Scientist, Plant & Food Research Australia
- Honey bees are pollinators of many crops, but their behaviour can be affected by conditions under nets. Dr Lisa Evans will delve into the key findings of a study conducted in New Zealand kiwifruit orchards. She will outline what are the implications for apple production and explore several management strategies to mitigate the effects of netting.
- 11.25am **Panel Discussion: Building a resilient industry - what's on the agenda to optimise crop pollination?**
Ashley Zamek, R&D Manager, Hort Innovation,
Dr Katja Hogendoorn, Senior Researcher, The University of Adelaide
Prof James Cook, Leader - Plants Animals and Interactions, Western Sydney University
Dr Lisa Evans, Scientist, Plant & Food Research Australia
- What's all the buzz about pollination? This panel will discuss the key issues that apply to apple and pear growers and help you understand what is currently happening. Provide you with information on what you can do now to improve pollination and what you need to start thinking about to safeguard your business into the future.
- 11.50am **Tatura Smart Farm – introduction to the Sundial experimental orchard**
Dr Ian Goodwin, Research Leader, Agriculture Victoria
- Agriculture Victoria's Tatura Smart Farm has recently established a unique row orientation and tree size experiment to examine the effects of sunlight on fruit quality, production, water use and photosynthesis. The setup of the experiment and the proposed measurements will be presented.
- 12.15pm **Precision automation the new frontier for crop loading**
Angus Hogan, Project Lead, SwarmFarm Robotics
- One small step for automation, one giant leap for orchard management. SwarmFarm is undertaking a trial to use robotics to measure tree canopy and flower density to deliver a more precise variable spray solution for apple flower thinning.
- 12.35pm **Networking Lunch**
- 1.30pm **Making sense of AI, machine learning, and data science in the horticultural industry**
Roey Yaakobi, CEO, Tie Up Farming
- Horticulture industry is undergoing considerable digital transformation. Explore what role data science, AI, and machine learning play in practical day to day orchard management.

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- 1.40pm **Utilising agri-technology to improve labour efficiency and fruit quality**
Rob Blakey, R&D Manager, Stemilt Growers
- 2.10pm **Panel discussion: Is netting the best defence and worth the investment?**
Susie Green, CEO, Apple & Pear Growers Association South Australia
Jason Shields, Orchard Manager, Plunkett Orchards
Bernard Hall, Grower, Bonny Glen Fruit
Howard Hansen, Managing Director, Hansend Orchards
Bec Whittaker, Orchard Manager, Ladycroft Orchards
How effective is it in protecting crops, are growers seeing better packout rates, is it assisting with climate change i.e. reducing water usage, hail damage, flying foxes infestation and regulating heat stress? Our grower panel will discuss the pros and cons of placing your orchard under netting.
- 2.55pm **Preparing for biosecurity crisis Brown Marmorated Stink Bug (BMSB) – learnings from USA**
Bill Mackintosh, Grower, Mackintosh Fruit Farm
History of the BMSB in the mid-Atlantic US, damage, control and secondary pest problems after developing and applying chemical measures.
- 3.20pm **Afternoon Tea**
- 3.45pm **Combating codling moth with the mastrus wasp – trial update**
David Williams, Principal Research Scientist, Agriculture Victoria
The parasitoid wasp *Mastrus ridens* was introduced into Australia after rigorous testing and released in “nursery” sites throughout eastern Australia in an attempt to establish self-sustaining populations that would spread across districts and assist in control of codling moth. David will provide a summary of the project, which has now finished, and discuss the outcomes.
- 4.05pm **Cold chain disinfestation and quality management of pome fruit for market access**
Dr Francis De Lima, Managing Director, AgHort Solutions
Explore methods to achieve optimum apple quality through pre-harvest maturity management and temperature regulation in the cold chain to final consumer. Hear about developing static and in-transit cold treatments for fruit fly disinfestation for access to quarantine markets.
- 4.25pm Closing Remarks
- 4.30pm **MCG Tour and Networking Drinks**