

Final Report

Increased Stone Fruit Profitability by Consistently Meeting Market Expectations

Project leader:

Dr Mark O'Connell

Delivery partner:

Department of Economic Development, Jobs, Transport and Resources

Project code:

SF12003

Project:

Increased Stone Fruit Profitability by Consistently Meeting Market Expectations – SF12003

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Summary

Sales growth of summerfruit in Victoria is impeded by low consumer satisfaction with fruit quality, leading to low prices and static consumption which is threatening the survival of many producers. Agriculture Victoria Research (AVR), with the support of the Australian stonefruit industry and Hort Innovation, undertook to investigate and develop management practices that will increase productivity and grower returns through improved eating quality and consumer satisfaction. High quality fruit meets consumer expectations by achieving criteria for fruit size, maturity, firmness, sweetness and acidity, blemish, skin colour and flavour.

The project team conducted a comprehensive literature review on the effects of orchard management practices on fruit quality and taste. Using the knowledge gained from the review and in consultation with industry, research questions were identified to address those questions. The project established and maintained an experimental research orchard at Tatura (Victoria) under the guidance of an industry advisory committee. Experiments were designed to elucidate the effect of agronomic management practices such as crop load, rootstock, irrigation management and canopy architecture in reducing variability, and improving consistency in fruit quality of peach, nectarine, apricot and plum.

The orchard comprised a suite of designed field experiments, complemented with fruit sensor technologies such as the DA meter and a state-of-the-art postharvest facility including a fruit grader equipped with near infrared spectroscopy (NIR) and optical sensors for rapid, non-destructive measurement of fruit quality and cool rooms equipped with controlled atmosphere storage units. Partnerships were developed with the Agriculture Services (Horticulture) team to inform growers and other industry stakeholders of project findings and updates on research activities. The project conducted numerous industry engagements, including regional roadshows, orchard tours, presentations, YouTube videos and factsheets.

Improvements in fruit size, maturity and sweetness were observed by manipulating fruiting levels by crop load management, applying strategic crop water stress through irrigation management, reducing tree vigour using dwarfing rootstocks and optimizing fruit position in the tree by manipulating canopy architecture. Results suggest that careful manipulation of these agronomic practices in the correct combination has the potential to improve yield, pack-out and to reduce variability in fruit quality.

Trees in the experimental orchard are now approaching full production, offering a unique opportunity for on-going research studies into agronomic management practices such as crop load, canopy architecture, irrigation strategies/tactics, rootstock/scion combinations on fruit quality and tree performance over time. In addition, the orchard can be used for a range of other experimentation and demonstration including the effects of novel 'smart farm' management factors (e.g. 2-D canopies for mechanisation) on production and fruit quality outcomes. Furthermore, the experimental orchard provides a platform for informing and training growers, students and service providers, a facility for orchard walks and tours, showcasing modern high-density orchard management and tree training systems, and demonstrating IPM, irrigation and fertigation management.

Keywords

Peach, nectarine, apricot, plum, experimental orchard, agronomic management practices, crop load, irrigation management, canopy architecture, rootstocks

Introduction

Summerfruit production in Australia is a major horticultural industry worth over \$380 million, with Victorian production accounting for over 80% (HIA 2017). Sales growth of summerfruit is impeded by low consumer satisfaction with fruit quality, leading to low prices and static consumption which is threatening the survival of many producers. Agriculture Victoria Research (AVR), with the support of the stonefruit industry and Hort Innovation, undertook to investigate management practices that will dramatically increase productivity and grower returns through improved eating quality and consumer satisfaction. The objectives of this project align with the Australian Summerfruit Industry Strategic Investment Plan 2015-2020 and Victorian Government Initiatives (Growing Food & Fibre, Food to Asia Action Plan) by developing knowledge that results in new management practices that dramatically increase productivity through improved quality and grower returns.

Research has shown that fruit quality variability is high both within and between trees and fruit quality can be manipulated via innovative orchard management (Lopresti et al. 2014). This project sort to develop a deeper understanding of the science behind variability in key fruit quality parameters and their manipulation during orchard production in order to maximise uniformity of fruit quality at harvest, and that quality meets or exceeds market expectations.

The project formed the basis of the Profitable Stonefruit program, consisting of a literature review to provide the knowledge required to establish an experimental orchard at Tatura (Victoria) under the guidance of an industry advisory committee. The orchard is comprised of a series of designed field experiments to examine the effect of selected agronomic management practices: crop load, rootstock, irrigation management and canopy architecture, with the aim to reduce the variability and improve consistency in fruit quality of summerfruit (peach, nectarine, apricot, plum). The research program offers a unique combination of designed field experimentation linked with a new state-of-the-art postharvest research facility including NIR and optical sensor equipped fruit grader, cool rooms and dynamic controlled atmosphere storage facilities.

An independent cost benefit analysis by Horticulture Australia Limited estimated that this project will support the growth of the stonefruit industry by 14% over the life of the project with an average price increase of 43%. Beneficiaries are the summerfruit, allied industries and AVR.

Methodology

Project SF12003 published a scientific review of the effect of orchard management factors on fruit quality and taste (see Outputs section). This review guided the strategic research themes and research questions for the establishment of the experimental orchard at DEDJTR - Tatura.

The project established an advisory committee and terms of reference for the committee membership in 2013. Table 1 shows committee membership for the period 2013 - 2017. Appendix 1 outlines the advisory committee terms of reference. The committee comprised grower and industry representatives, project and senior AVR staff. The committee was fundamental in selecting cultivars, rootstocks/scions combinations, tree density, trellis systems, irrigation systems and steered decisions on experimental factors: agronomic management practices (canopy architecture, irrigation strategies, crop load management) and tree management (nutrition, tree training, pest/disease/weed management). Advisory committee meetings were held bi-annually to update on project progress, discuss future research and communication directions and seek feedback on findings from the field research program. Appendix 2 provides minutes of meetings held during the 2012 – 2017 period.

Table 1. Membership of Stonefruit Field Laboratory Advisory Committee.

Name	Position	Affiliation
Mark O'Connell	Project Leader	Department of Economic Development, Jobs, Transport and Resources
Mark Downey & Ian Goodwin	Research Manager, Horticulture	Department of Economic Development, Jobs, Transport and Resources
Bruce Tomkins	Senior Technical Specialist, Horticulture	Department of Economic Development, Jobs, Transport and Resources, Member Summerfruit Australia IAC
Martin Bluml	Key Project Manager, Horticulture	Department of Economic Development, Jobs, Transport and Resources
John Moore	CEO	Summerfruit Australia Limited
Kathryn Young & Byron de Kock	Program Manager	Hort Innovation Limited
Rowan Little	General Manager	Montague Fresh, Member Summerfruit Australia IAC
Nick Paris	Summerfruit Orchardist	Local stonefruit grower representative
Jason Size	Summerfruit Orchardist	Member Summerfruit Australia Ltd, Board Manager Bookpurnong Fruits
Adrian Conti	Summerfruit Orchardist	Deputy Chair Summerfruit Australia Ltd, Board Member Summerfruit Australia IAC

Project methods were developed and scrutinised through DEDJTR's scientific peer review process for new research in 2013. The research pre-schedule (see Appendix 3) details project objectives and aims, research questions, experimental design, methods and equipment to undertake the agronomic and physiological studies to reduce the variability and improve consistency in fruit quality of summerfruit (peach, nectarine, apricot, plum). Appendix 4 summarises field experiments and demonstration blocks at the experimental orchard including: cultivar, experimental treatments, orchard design, planting density, planting date, tree architecture and tree training.

The project delivered updates and research findings to industry via presentations, industry articles and publications such as grower magazine articles, fact sheets, newsletters, website content (Horticulture Industry Network, HIN: www.hin.com.au) and YouTube videos. Numerous industry adoption activities were conducted during the 2012 – 2017 period including: orchard walks/tours, workshops and industry (local and regional) roadshow events.

Outputs

Project Outputs

Appendix 5 summaries project SF12003 outputs, including a literature review, scientific publications, research pre-schedule, industry presentations, industry magazine articles, factsheets, newsletters and web site content (e.g. YouTube videos). Appendix 6 provides electronic copies of scientific publications, grower articles and media articles.

Appendix 7 shows industry adoption activities including: orchard walks/tours, workshops and industry roadshow events.

To reduce the variability and improve consistency in fruit quality of summerfruit (peach, nectarine, apricot, plum), numerous demonstration and instructional videos were published on the HIN (www.hin.com.au), aligned with the following themes:

1. fruit maturity monitoring using the DA meter;
2. orchard establishment including: soil testing, plant selection, trellis and irrigation infrastructure for high-density plantings;
3. introduction and objectives to field experiments examining the effect of agronomic management practices (crop load, rootstock/scion, irrigation management, canopy architecture) on fruit quality;
4. time series of crop growth and canopy development for experiments on canopy architecture (vase, open Tatura, Tatura Trellis, vertical leader), rootstocks and irrigation management;
5. time series of crop growth and canopy development of demonstration blocks of novel tree design (e.g. 2-D canopy, cordon, palmette and central leader planting systems);
6. innovation technologies (e.g. UAV sensing, crop water stress index, fruit gauges, eddy covariance system); and
7. research updates on field experiments (crop load, rootstock/scion combinations, irrigation management, canopy architecture).

Key Research Findings

Results from the literature review on variability in fruit quality of peach/nectarine were:

1. Environmental, tree management and anatomical factors are major determinates of source - sink relationships for consistent fruit quality (size, sweetness).
2. Significant physiological knowledge gaps exist on the factors that affect variation (within tree, between tree) in fruit sweetness.
3. Sink strength (cell number) of individual fruits is important in sugar (sweetness) accumulation and composition.
4. Fruiting levels (crop load) impact utilisation of carbohydrates and shift the timing of fruit maturity.
5. Canopy light interception/distribution (canopy architecture, tree size, fruit position) governs fruit proximity to carbohydrate sources and shift the timing of fruit maturity.

Growing season 2016/17 represented the final year in project SF12003, and the first occasion all eleven-field experiments (rootstock x crop load, irrigation, crop load x canopy architecture) were conducted as young trees approach maturity. To date, one season's of experimental data has been collected in the experimental research orchard from crop load x rootstock experiments (peach, nectarine), crop load x canopy architecture experiments (plum, apricot)

and irrigation level x timing experiment (nectarine). Two seasons of experimental data from crop load x canopy architecture experiments (peach, nectarine) has been achieved.

Key research findings from field studies on crop load showed:

1. Low fruit number (low crop load) decreased yield and reduced the variability (improved uniformity) of fruit size and sweetness.
2. For peach and nectarine, a target cropping level of 1 fruit per 12 – 15 cm of fruiting lateral maximised fruit size and sweetness.

Key research findings from field studies on irrigation (timing x level) management showed:

1. Deficit irrigation during stage 1 of fruit growth reduced yield and fruit size and increased fruit sweetness.
2. Deficit irrigation during stage 2 of fruit growth (known as regulated deficit irrigation, RDI) maintained yield and fruit quality (size, sweetness, firmness and maturity).
3. Deficit irrigation during late periods of stage 3 of fruit growth reduced yield, decreased fruit size and increased fruit sweetness.
4. Severe deficit irrigation during stage 1 and stage 2 reduced vegetative growth (pruning wood) and lowered leaf area (light interception).

Key research findings from field studies on rootstock x crop load management showed:

1. Vegetative vigour and tree size (light interception) was lowest under dwarfing rootstock Krymsk 1, followed by Krymsk 86 compared to industry standard (Nemaguard) and other high vigour rootstocks (Cadaman, Cornerstone, Elberta).
2. High vigour rootstocks produce large trees (light interception), greater fruit wood (fruit bearing capacity), more vegetative growth (pruning wood) and high yields.
3. Low fruit number (low crop load) produced larger fruit size, reduced yield and delayed fruit maturity.

Outcomes

The research contributed to improved productivity and export potential of summerfruit by providing production systems and agronomic practices that will guide growers to produce consistent, high quality stonefruit to meet the expectations of export and domestic markets. Benefits to the key industries (peach, nectarine, apricot and plum), are predicted to be: improved production practices and reduced costs, increased exports, higher prices received from fruit sales and sustainable industry growth and profitability.

Research outcomes of improved fruit quality uniformity (e.g. size, sweetness, maturity) were demonstrated under orchard agronomic management practices (i.e. fruiting levels, deficit irrigation) for peach, plum, nectarine and apricot.

Delivery of project findings to the industry involved a suite of approaches, including regional roadshows, YouTube videos, conference presentations and orchard tours. The previous 29th International Horticultural Congress (IHC2014, Brisbane) led to increased national and international exposure of the research program at Tatura, resulting in research collaborations and several visiting scientists and tours of experimental orchard/harvest facilities.

The project established a world class experimental orchard. Trees are now at commercial production, offering a unique opportunity for on-going research studies into agronomic management practices (crop load, canopy architecture, irrigation strategies/tactics, rootstocks) and novel 'smart farm' management factors (e.g. 2-D canopies for mechanisation, role of fruit position) on production and fruit quality outcomes in peach, nectarine, plum and apricot cultivars. Furthermore, the experimental orchard and associated on-site harvest facility (fruit grader, cool rooms, CA rooms, fumigation chambers) provides a platform for training growers and service providers, a hub for orchard walks and tours, showcasing modern high-density orchard management including: tree training systems, pruning, blossom thinning, IPM, irrigation and fertigation management and post-harvest storage and handling systems.

Unintended project outcomes during the 2012 – 2017 period included research collaborations and subsequent scientific presentations and publications with:

1. University of Bologna (Mr A Ceccarelli, Masters student) on: fruit maturity and quality of nectarine;
2. University of Melbourne (Dr D Ryu, Dr S Fuentes, Ms S Park, PhD student) on UAV sensing crop water stress of peach and nectarine;
3. University of Bologna (Prof L Corelli) on fruit growth dynamics of plum;
4. University of Melbourne (Dr D Ryu,) on measuring crop evapotranspiration of peach and nectarine; and
5. University of Palermo (Mr A Scalisi, PhD student) on fruit quality and water stress physiology of nectarine.

Evaluation and discussion

Feedback on project activities was sought primarily through regular (bi-annual) advisory committee meetings and via industry adoption activities (grower presentations, roadshows, orchard walks and tours and industry and conference presentations). Project advisory committee meeting minutes, recommendations and associated actions for the period 2012 – 2017 are shown in Appendix 2.

Feedback from grower/industry presentations and orchard tours (verbal, email) and regional roadshows (survey method) were positive and are summarised in Appendix 8. Repeat visits and tours by delegations to the experimental orchard during the course of the project (see Appendix 7) and national and international collaboration (see above) was also testament to the level of interest and progress with the research program. Furthermore, the project team was awarded with DEDJTRs Farm Services and Agriculture Research Award 2015/16 for Science in November 2016.

The strategies for adoption of project information included collaboration with Summerfruit Australia and DEDJTRs Agriculture Services (Horticulture) team to establish an extension program within the Victorian Government's Food to Asia program. The project engaged growers, consultants, extension staff, service providers (irrigation companies, chemical resellers, engineering companies) through open access to the site for field visits and demonstration of field experiments, novel planting systems (e.g. cordon, 2-D, palmette), innovative technologies (e.g. DA meter, NIR sensors) and farm equipment (e.g. mechanical blossom thinning machinery). Project communication activities included regional roadshows, orchard tours, advisory committee meetings, presentations of YouTube videos and project research updates on the HIN (www.hin.com.au) web site.

The likely adopters of this research program include stonefruit growers, exporters, fruit logistics companies, research scientists, agricultural policy advisers, industry service providers, consultants, fruit retailers, fruit marketing agencies. Adoption of the management systems is anticipated to be high and rapid because of close association with steering committee and industry stakeholders, linkage between production, harvest, handling, storage and distribution components in the value chain, and methods of communication of outputs.

Recommendations

This project supports the stonefruit sector to become more globally competitive by improved orchard management practices geared to producing consistent high fruit quality.

Key recommendations for growing consistent high quality fruit are:

1. for new plantings of modern high-density orchards, select rootstock/scion and trellis design for early bearing;
2. adjust crop load (fruiting level) to maximise fruit size and fruit sweetness to target market requirements
 - a. for peach and nectarine, a target cropping level of 1 fruit per 12 – 15 cm of fruiting lateral and,
 - b. thin fruit (fruit < 15 mm diameter) early in the season to maximise cell number and final fruit size;
3. in cases where tree canopies have poor light distribution in lower parts of the tree, maximise fruit number higher in the tree and reduce fruit number at the base to improve fruit size and quality uniformity;
4. apply regulated deficit irrigation (RDI) during stage 2 of fruit growth;
5. monitor fruit size (using digital calipers) and maturity development (using DA meter) *in situ* ('on the tree') starting 4 – 6 weeks prior to harvest to determine optimal harvest date(s) and;

6. regularly review orchard performance (e.g. irrigation, fertiliser strategies, IPM, yield, pack-out).

The forthcoming 30th International Horticultural Congress (IHC2018, Turkey) will provide the opportunity to showcase and present research findings on: rootstock/scion, crop load, irrigation and canopy architecture factors on the consistency of fruit size and sweetness in apricot, peach, nectarine and plum.

Funding is sought to continue each field experiment (see Appendix 3 & 4), following the recommendation by Hort Innovation project review, as trees reach maximum productivity and to undertake RD&E to meet the following project objectives:

1. Examine the role of fruit position and light interception on fruit quality, particularly the uniformity of harvest sweetness and maturity under different canopy training systems.
2. Investigate novel tree architecture to enhance fruit yield, uniformity and quality and to reduce labour inputs.
3. Test and validate non-destructive fruit maturity and fruit quality technologies, such as the handheld DA meter and various NIR technologies (e.g. Felix).
4. Develop production protocols to provide fruit that meet consumer expectations on domestic and export markets.
5. Provide a resource for training and education of growers, service providers, extension staff and students.

A project concept 'Phase 2: Experimental Summerfruit Orchard - Tatura' was submitted (September 2016) to Hort Innovation seeking co-investment with AVR.

Continued funding of the experimental orchard will provide a unique resource for studies into crop water use, crop water stress, nutrition, canopy light dynamics and IPM. Furthermore, the research orchard provides a world-class research and training facility to test many aspects of whole-of-supply chain RD&E for temperate fruit industries incorporating pre- and post-harvest, crop physiology and agronomy, consumer preference, marketing and IPM disciplines.

Scientific refereed publications

Journal article

Lopresti J, Goodwin I, McGlasson B, Holford P and Golding, J. (2014). Variability in size and soluble solids concentration in peaches and nectarines. *Horticultural Reviews* **42**, 253–311.

Ceccarelli A, Costa G, Stefanelli D, Lopresti J and Tomkins B. (2016). Influence of crop load and canopy position on fruit maturity and quality in nectarine. *Acta Horticulturae* **1119**, 235–242.

Stefanelli D, Lopresti J, Hale G, Jones R, Tomkins B, O'Connell M and Flett S. (2016). Stone fruit value chain: a systems approach for improved consumer satisfaction. *Acta Horticulturae* **1120**, 527–534.

Whitfield D, O'Connell M and Goodwin I. (2016). Effects of fruit number on yield, fruit weight and soluble solids of peach. *Acta Horticulturae* **1130**, 323–328.

Park S, Ryu D, Fuentes S, Chung H, Hernández-Montes E and O'Connell M. (2017). Adaptive estimation of crop water stress in nectarine and peach orchards using high-resolution imagery from an unmanned aerial vehicle (UAV). *Remote*

Sensing **9**, 828–843.

Conference proceedings

Park S, Nolan A, Ryu D, Fuentes S, Hernández E, Chung H and O'Connell M. (2015). Estimation of crop water stress in a nectarine orchard using high-resolution imagery from unmanned aerial vehicle (UAV). 21st International Congress on Modelling and Simulation, Gold Coast, Australia, 29 Nov to 4 Dec 2015, 1413–1419. www.mssanz.org.au/modsim2015

Intellectual property/commercialisation

No commercial IP generated.

References

Kneebone M. (2014) Australian Summerfruit Industry Strategic Investment Plan 2015-2020.

Horticulture Australia Ltd. (HIA). (2017). Summerfruit Industry Strategic Investment Plan 2017-2021. Horticulture Innovation Australia Ltd.

Lopresti J, Goodwin I, McGlasson B, Holford P and Golding, J. (2014). Variability in size and soluble solids concentration in peaches and nectarines. *Horticultural Reviews* **42**, 253–311.

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Appendices

Appendix 1 Stonefruit Advisory Committee - Terms of Reference



Terms of Reference -
Advisory Committee.1

Appendix 2 Stonefruit Advisory Committee - Meeting minutes



Minutes - Advisory
Committee - Jun 2011



Minutes - Advisory
Committee - Apr 2011



Minutes - Advisory
Committee - May 2011



Minutes - Advisory
Committee - Aug 2011



Minutes - Advisory
Committee - May 2011



Minutes - Advisory
Committee - Oct 2011



Minutes - Advisory
Committee - May 2011



Minutes - Advisory
Committee - Oct 2011



Minutes - Advisory
Committee - May 2011

Appendix 3 Stonefruit Field Laboratory Experimental Pre-schedule



Preschedule -
Stonefruit.pdf

Appendix 4 Summary of field experiments and demonstration blocks of the Stonefruit Field Laboratory, Tatura



Experiments.pdf

Appendix 5 Project outputs

Output	Title
Literature review	Lopresti J, Goodwin I, McGlasson B, Holford P and Golding, J. (2014). Variability in size and soluble solids concentration in peaches and nectarines. <i>Hortic. Rev.</i> 42, 253–311.
Scientific paper	Ceccarelli A, Costa G, Stefanelli D, Lopresti J and Tomkins B. (2016) Influence of crop load and canopy position on fruit maturity and quality in nectarine. <i>Acta Hort.</i> 1119. 235-242.
Scientific paper	Stefanelli D, Lopresti J, Hale G, Jones R, Tomkins B, O'Connell M and Flett S. (2016). Stone fruit value chain: a systems approach for improved consumer satisfaction. <i>Acta Hort.</i> 1120. 527-534.
Scientific paper	Whitfield D, O'Connell M and Goodwin I. (2016). Effects of fruit number on yield, fruit weight and soluble solids of peach. <i>Acta Hort.</i> 1130. 323-328.
Scientific paper	Park S, Ryu D, Fuentes S, Chung H, Hernández-Montes E and O'Connell M. (2017). Adaptive estimation of crop water stress in nectarine and peach orchards using high-resolution imagery from an unmanned aerial vehicle (UAV). <i>Remote Sens.</i> 9, (submitted).
Conference paper	Park S, Nolan A, Ryu D, Fuentes S, Hernández E, Chung H and O'Connell M. (2015). Estimation of crop water stress in a nectarine orchard using high-resolution imagery from unmanned aerial vehicle (UAV). 21st International Congress on Modelling and Simulation, Gold Coast, Australia, 29 Nov to 4 Dec 2015, 1413-1419. www.mssanz.org.au/modsim2015
Industry article	Stefanelli D and O'Connell M. (2012). HAL Project SF12003: Establishing a summerfruit production management trial orchard. <i>Australian Stonefruit Grower</i> . No 3/12 – August 2012, 21.
Industry article	Lopresti J, Stefanelli D and Ceccarelli A. (2014). How does crop load and fruit position influence variability in Rose Bright nectarine quality? <i>Australian Stonefruit Grower</i> . No 3/14 – August 2014, 29-34.
Industry article	Jaeger J, Stefanelli D and O'Connell M. (2015). Life and growth of the stone fruit canopy experiment – the first two years. <i>Australian Stonefruit Grower</i> . No 3/15 – August 2015, 17-19.
Industry article	O'Connell M, Stefanelli D, Tomkins B and Haberfield D. (2015). Research aimed at improving stonefruit quality. Part 1. <i>Tree Fruit</i> , 7-9. www.treefruit.com.au
Industry article	O'Connell M, Stefanelli D, Tomkins B and Haberfield D. (2015). Research aimed at improving stonefruit quality. Part 2. <i>Tree Fruit</i> , 6-8. www.treefruit.com.au
Industry article	Proving profitable produce. <i>Country News, AgFocus Magazine</i> . 2016, p. 44.
Newspaper article	New research centre to boost fruit's future. <i>Country News</i> , 7 October 2014.
Industry newsletter	HIN: Profitable Stonefruit Network August 2016 - Newsletter Update: Virtual Orchard Tour January 2016
Industry newsletter	HIN: Profitable Stonefruit Network August 2016 - Newsletter Update: Profitable Stonefruit project.
Industry newsletter	HIN: Profitable Stonefruit Network August 2016 - Newsletter Update: Stonefruit Field Laboratory.
Industry newsletter	HIN: Profitable Stonefruit Network August 2016 - Newsletter Update: Dr Dario Stefanelli & Dr Mark O'Connell introduce the latest Stonefruit experiments developing the future of the Stonefruit Industry.
Industry newsletter	HIN: Profitable Stonefruit Network December 2016 - Newsletter Update: Canopy Management Experiments.
Industry newsletter	HIN: Profitable Stonefruit Network December 2016 - Newsletter Update: Introduction to experiments on Peach, Nectarine, Apricot and Plum varieties with different tree training systems.
Industry newsletter	HIN: Profitable Stonefruit Network January 2017 - Newsletter Update: Pruning Principles (Summer pruning).
Industry newsletter	HIN: Profitable Stonefruit Network February 2017 - Newsletter Update: Canopy experiments.

Industry newsletter	HIN: Profitable Stonefruit Network March 2017 - Newsletter Update: New research harvest facility at Tatura.
Industry newsletter	HIN: Profitable Stonefruit Network March 2017 - Newsletter Update: INNOVATION - Developing Growth Models for Irrigation management systems for plums.
Industry newsletter	HIN: Profitable Stonefruit Network April 2017 - Newsletter Update: Irrigation experiments.
Media release	New Horticulture Centre now open at Tatura. The Hon Peter Walsh MP, Minister for Agriculture and Food Security, Minister for Water. Media release. Thursday 2 October 2014. www.premier.vic.gov.au
Website	HortLink 2017 Edition 2, Faces of horticulture: Dr Mark O'Connell, researcher – DEDJTR, VIC. http://horticulture.com.au/hortlink-2017-edition-2/summerfruit/#summerfruit-spring
DEDJTR newsletter	Agriculture Research Division Story, Profitable summerfruit production systems. 19 August 2015.
DEDJTR newsletter	Agriculture Research & Farm Services News, Profitable summerfruit production systems. 16 September 2015.
Television	WINTV Shepparton - News, 22 October 2014, Interview: Dr Mark O'Connell (Department of Environment and Primary Industries - Tatura). The latest in stone fruit research and development is the focus of a forum at the Horticulture Centre of Excellence in Tatura today.
Television	Southern Cross NineTV - Weekly News, 29 January 2014, Interview: Dr Mark O'Connell and John Lopresti (Department of Environment and Primary Industries - Tatura). Testing for fruit maturity (DA meter).
Roadshow	Stonefruit Field Laboratory. Dr Mark O'Connell (Agriculture Victoria), Renmark, 26 July 2016. www.hin.com.au/associations/horticulture-centre-of-excellence/stonefruit-research-roadshow
Roadshow	Dr Dario Stefanelli, Agriculture Research (Agriculture Victoria), talked about Ethylene Sampling Protocols to calibrate for fruit maturity using the DA meter. Renmark, 26 July 2016. www.hin.com.au/associations/horticulture-centre-of-excellence/stonefruit-research-roadshow
Roadshow	Stonefruit Field Laboratory. Dr Mark O'Connell (Agriculture Victoria), Swan Hill, 27 July 2016. www.hin.com.au/associations/horticulture-centre-of-excellence/stonefruit-research-roadshow
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Roadshow	Stonefruit Field Laboratory - Second year of Production. Dr Mark O'Connell (Agriculture Victoria), Renmark, 29 August 2017. www.hin.com.au/associations/horticulture-centre-of-excellence/stonefruit-research-roadshow
Roadshow	DA meter protocols in the field - observations and results. Dr Dario Stefanelli (Agriculture Victoria), Renmark, 29 August 2017. www.hin.com.au/associations/horticulture-centre-of-excellence/stonefruit-research-roadshow
Roadshow	Stonefruit Field Laboratory - Second year of Production. Dr Mark O'Connell (Agriculture Victoria), Swan Hill, 30 August 2017. www.hin.com.au/associations/horticulture-centre-of-excellence/stonefruit-research-roadshow
Roadshow	DA meter protocols in the field - observations and results. Dr Dario Stefanelli (Agriculture Victoria), Swan Hill, 30 August 2017. www.hin.com.au/associations/horticulture-centre-of-excellence/stonefruit-research-roadshow
Roadshow	Stonefruit Field Laboratory - Second year of Production. Dr Mark O'Connell (Agriculture Victoria), Cobram, 31 August 2017. www.hin.com.au/associations/horticulture-centre-of-excellence/stonefruit-research-roadshow

Roadshow	DA meter protocols in the field - observations and results. Dr Dario Stefanelli (Agriculture Victoria), Cobram, 31 August 2017. www.hin.com.au/associations/horticulture-centre-of-excellence/stonefruit-research-roadshow
YouTube video	Introduction to Apricot Training Experiment Feb 2015. Dr Mark O'Connell introduces the apricot tree training experiment at the Field Laboratory in Tatura, Victoria. https://www.youtube.com/edit?o=U&video_id=Ltj0Tx6DW8o
YouTube video	Introduction to Peach Crop Load Canopy Experiment Central Leader Feb 2015. Dr Mark O'Connell introduces the peach crop load canopy experiment at the Field Laboratory in Tatura, Victoria. https://www.youtube.com/edit?o=U&video_id=eSeQl7ahkko
YouTube video	Introduction to Plum Tree Training Experiment Feb 2015. Dr Mark O'Connell introduces the plum tree training experiment at the Field Laboratory in Tatura, Victoria. https://www.youtube.com/edit?o=U&video_id=hDMIGX3JxDM
YouTube video	Introduction to Stonefruit Laboratory & Peach and Nectarine Rootstock Experiment Feb 2015. Dr Mark O'Connell introduces the peach and nectarine root stock experiment at the Field Laboratory in Tatura, Victoria. https://www.youtube.com/edit?o=U&video_id=lyy1tddf8Gc
YouTube video	Stonefruit Field Lab Irrigation headworks shed Feb 2015. Dr Mark O'Connell introduces the irrigation headworks shed for the Field Laboratory in Tatura, Victoria. https://www.youtube.com/edit?o=U&video_id=uWuzM9Tm9-g
YouTube video	Peach tree trellising experiment for mechanical pruning Feb 2015. Dr Dario Stefanelli introduces the concept of training peach trees for mechanical pruning at the Stonefruit Field Laboratory at Tatura, Victoria. https://www.youtube.com/edit?o=U&video_id=5fQqqIMYnU8
YouTube video	Introduction to Nectarine Crop Load Field Laboratory Experiment (Central Leader) Feb 2015. Dr Mark O'Connell introduces the nectarine crop load experiment (central leader) at the Field Laboratory in Tatura, Victoria. https://www.youtube.com/edit?o=U&video_id=05xp2W_ej5A
YouTube video	Introduction to Nectarine Crop Load Field Laboratory Experiment Tatura Trellis Feb 2015. Dr Mark O'Connell introduces a nectarine crop load experiment using Tatura Trellis, at the Stonefruit Field Laboratory, Tatura. https://www.youtube.com/edit?o=U&video_id=HYGDNO9KN9U
YouTube video	Introduction to Peach Crop Load Canopy Experiment Tatura Trellis Feb 2015. Dr Mark O'Connell introduces the peach crop load canopy experiment at the Field Laboratory in Tatura, Victoria. https://www.youtube.com/edit?o=U&video_id=2SdGsxm6Rzc
YouTube video	Nectarine Irrigation Field Experiments Open Tatura Feb 2015. Dr Mark O'Connell introduce the Nectarine, Open Tatura trellis, irrigation experiments. https://www.youtube.com/edit?o=U&video_id=YwE3VZCGtkA
YouTube video	Peach Tree Specialty Pruning Cut Tatura Trellis Feb 2015. Dr Dario Stefanelli discusses a pruning cut for peach and nectarine trees on a Tatura Trellis tree training system. https://www.youtube.com/edit?o=U&video_id=dXMIFNTBgfk
YouTube video	Summer Pruning for Peach and Nectarine Feb 2015. https://www.youtube.com/edit?o=U&video_id=d3KTYZWKRqQ
YouTube video	Virtual Orchard Tour Stonefruit Field Laboratory Tatura (Part 1), March 2016. Virtual Stonefruit Field Laboratory Tour 2016. Dr Mark O'Connell and Dr Dario Stefanelli, from Ag Vic (DEDJTR), discuss what's happening in the Stonefruit field laboratory this year (Early 2016). Part 1 Rootstock & crop load experiments – an update on what is happening. https://www.youtube.com/edit?o=U&video_id=iKxNqUfyG04

YouTube video	Virtual Orchard Tour Stonefruit Field Laboratory Tatura (Part 2), March 2016. Virtual Stonefruit Field Laboratory Tour 2016. Dr Mark O'Connell and Dr Dario Stefanelli, from Ag Vic (DEDJTR), discuss what's happening in the Stonefruit field laboratory this year (Early 2016). Part 2 Measurements in the field – measurement trees for monitor tree, vegetative and fruit growth; canopy light interception; & DA Meter measurements. https://www.youtube.com/edit?o=U&video_id=uO6bldc3mng
YouTube video	Virtual Orchard Tour Stonefruit Field Laboratory Tatura (Part 3), March 2016. Virtual Stonefruit Field Laboratory Tour 2016. Dr Mark O'Connell and Dr Dario Stefanelli, from Ag Vic (DEDJTR), discuss what's happening in the Stonefruit field laboratory this year (Early 2016). Part 3 Tree training experiments, irrigation experiments, and tree demonstrations – an update on what is happening. https://www.youtube.com/edit?o=U&video_id=j512YYeDq2A
YouTube video	Low cost infrared thermography and UAV for rapid detection of plant water stress June 2016. Dr Mark O'Connell discusses the Seed Innovation Fund (for Horticulture Development) project - Low cost infrared thermography and UAV for rapid detection of plant water stress. Horticulture Centre of Excellence, Tatura 13 April 2016. https://www.youtube.com/edit?o=U&video_id=3AcCsNLjEPY
YouTube video	Cordon versus Palmette stonefruit demonstration with Dr Mark O'Connell Jan 2016. Dr Mark O'Connell, from Agriculture Victoria, discusses the Cordon versus Palmette stonefruit demonstration site, January 2016. https://www.youtube.com/edit?o=U&video_id=zH9kQYDK15o
YouTube video	Jason Size discusses the DA Meter at Renmark (26/7/16). Jason Size, manager of Bookpurnomg Fruits, and member of Summerfruits Australia Ltd board, discusses the DA meter use for Stonefruit at a Summerfruit SA meeting in Renmark. https://www.youtube.com/edit?o=U&video_id=TCRUSdul4yk
YouTube video	Peach August Flame Central Leader canopy experiment Nov 2016. Time series photos of canopy experiment from January 2015 to November 2016. https://www.youtube.com/edit?o=U&video_id=Lc3zc2ziZVo
YouTube video	Peach August Flame Tatura Trellis canopy experiment Nov 2016. Time series photos of canopy experiment from January 2015 to November 2016. https://www.youtube.com/edit?o=U&video_id=cJlqdc4K1Bk
YouTube video	Nectarine Autumn Bright Tatura trellis canopy experiment Nov 2016. Time series photos of canopy experiment from January 2015 to November 2016. https://www.youtube.com/edit?o=U&video_id=iChGDzv9P84
YouTube video	Nectarine Autumn Bright Vertical Leader canopy experiment Nov 2016. Time series photos of canopy experiment from January 2015 to November 2016. https://www.youtube.com/edit?o=U&video_id=M0TrA1268Xs
YouTube video	Apricot Golden May Tatura Trellis canopy experiment. Time series photos of canopy experiment from January 2015 to November 2016. https://www.youtube.com/edit?o=U&video_id=x541yx-kxDa
YouTube video	Apricot Golden May Vase canopy experiment. Time series photos of canopy experiment from January 2015 to November 2016. https://www.youtube.com/edit?o=U&video_id=PivXB28stJM
YouTube video	Plum Angeleno Tatura Trellis canopy experiment. Time series photos of canopy experiment from January 2015 to November 2016. https://www.youtube.com/edit?o=U&video_id=s7TFhbaAgMA
YouTube video	Plum Angeleno Vase canopy experiment. Time series photos of canopy experiment from January 2015 to November 2016. https://www.youtube.com/edit?o=U&video_id=67auhL1FxSc
YouTube video	Research Harvest Facility at Tatura (Agriculture Victoria) with Dr Mark O'Connell. New Harvest Facility with a commercial fruit grader equipped with sensors for scientific analysis. November 2016. https://www.youtube.com/edit?o=U&video_id=-OU3p3-xzIo

YouTube video	Developing Growth Models for Irrigation Management Systems – Plums April 2016. Professor Luca Corelli Grappadelli, from University of Bologna (Italy) with Dr Mark O'Connell from Agriculture Victoria (Tatura), discuss the development of growth models for irrigation management systems for plums. https://www.youtube.com/edit?o=U&video_id=7vxHbAbF6qM
YouTube video	Capitilising on the Importance of Fruit Maturity through Innovation Technology by Dr Dario Stefanelli July 2016. Lecture: Capitilising on the Importance of Fruit Maturity through Innovation Technology by Dr Dario Stefanelli (Agriculture Victoria, DEDJTR)
YouTube video	Orchard establishment for high quality fruit with Dr Mark O'Connell September 2017. Dr Mark O'Connell, from Agriculture Victoria, discusses site preparation and activities undertaken to established a modern high density orchard system, Stonefruit Field Laboratory - Tatura, September 2017. https://youtu.be/r_cmvCJd00U
YouTube video	Irrigation management for high quality fruit with Dr Mark O'Connell September 2017. Dr Mark O'Connell, from Agriculture Victoria, discusses irrigation management strategies and 2016/17 season results: Stonefruit Field Laboratory - Tatura, September 2017. https://youtu.be/HAb9TI8HPqE
YouTube video	Crop load management for high quality fruit with Dr Mark O'Connell September 2017. Dr Mark O'Connell, from Agriculture Victoria, discuss fruit number management strategies and 2016/17 season results: Stonefruit Field Laboratory - Tatura, September 2017. https://youtu.be/Peslvb5glY0

Appendix 6 Science publications, industry magazine articles, newsletters and media articles

Journal articles

Lopresti J, Goodwin I, McGlasson B, Holford P and Golding, J. (2014). Variability in size and soluble solids concentration in peaches and nectarines. *Horticultural Reviews* **42**, 253–311.



Lopresti et al
2014.pdf

Ceccarelli A, Costa G, Stefanelli D, Lopresti J and Tomkins B. (2016). Influence of crop load and canopy position on fruit maturity and quality in nectarine. *Acta Horticulturae* **1119**, 235–242.



Ceccarelli et
al_2016.pdf

Stefanelli D, Lopresti J, Hale G, Jones R, Tomkins B, O'Connell M and Flett S. (2016). Stone fruit value chain: a systems approach for improved consumer satisfaction. *Acta Horticulturae* **1120**, 527–534.



Stefanelli et
al_2016.pdf

Whitfield D, O'Connell M and Goodwin I. (2016). Effects of fruit number on yield, fruit weight and soluble solids of peach. *Acta Horticulturae* **1130**, 323–328.



Whitfield et
al_2016.pdf

Park S, Ryu D, Fuentes S, Chung H, Hernández-Montes E and O'Connell M. (2017). Adaptive estimation of crop water stress in nectarine and peach orchards using high-resolution imagery from an unmanned aerial vehicle (UAV). *Remote Sensing* **9**, 828–843.



Park etal_2017.pdf

Conference proceedings

Park S, Nolan A, Ryu D, Fuentes S, Hernández E, Chung H and O'Connell M. (2015). Estimation of crop water stress in a nectarine orchard using high-resolution imagery from unmanned aerial vehicle (UAV). 21st International Congress on Modelling and Simulation, Gold Coast, Australia, 29 Nov to 4 Dec 2015, 1413–1419. www.mssanz.org.au/modsim2015



Park et al_2015.pdf

Industry / Grower articles

Stefanelli D and O'Connell M. (2012). HAL Project SF12003: Establishing a summerfruit production management trial orchard. Australian Stonefruit Grower. No 3/12 – August 2012, 21.



Aust Summerfruit
Mag Aug 2012.pdf

Lopresti J, Stefanelli D and Ceccarelli A. (2014). How does crop load and fruit position influence variability in Rose Bright nectarine quality? Australian Stonefruit Grower. No 3/14 – August 2014, 29-34.



Aust Summerfruit -
AUG 2014.pdf

Jaeger J, Stefanelli D and O'Connell M. (2015). Life and growth of the stone fruit canopy experiment – the first two years. Australian Stonefruit Grower. No 3/15 – August 2015, 17-19.



Australian-Stonefruit
-Grower_August2015

O'Connell M, Stefanelli D, Tomkins B and Haberfield D. (2015). Research aimed at improving stonefruit quality. Part 1. Tree Fruit, 7-9. www.treefruit.com.au



Tree
Fruit_2015_part1.pdf

O'Connell M, Stefanelli D, Tomkins B and Haberfield D. (2015). Research aimed at improving stonefruit quality. Part 2. Tree Fruit, 6-8. www.treefruit.com.au



Tree
Fruit_2015_part2.pdf

Proving profitable produce. (2016). Country News. AgFocus Magazine, p 44.



Country
News_AgFocus_2016

Profitable Stonefruit Newsletters



August 2016.pdf



Oct 2016.pdf



Dec 2016.pdf



January 2017.pdf



Feb 2017.pdf



March 2017.pdf



April 2017.pdf

Media articles

Media release. The Hon Peter Walsh MP, Minister for Agriculture and Food Security. New Horticulture Centre now open at Tatura. 2 October 2014.



Walsh_Horticulture_
Centre.pdf

New research center to boost fruit's future. Country News. 7 October 2014. p.4.



Country News_7 Oct
2014_page 4.pdf

Profitable summerfruit production systems@Research. ARD Story Platform, 19 August 2015.



ARD
Story_Stonefruit.pdf

Profitable summerfruit production systems. Agriculture Research & Farm Services News 2015, 16 September 2015.



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Regional roadshows

2016 - Stonefruit Research Roadshows 'Updates for the Stonefruit Industry'



Stonefruit Research Roadshow Renmark_Roadshow
Stonefruit Research Roadshow Swan Hill_Roadshow
Stonefruit Research Roadshow Cobram_2

2017 - Stonefruit Research Roadshows



Stonefruit Research Roadshow Renmark_Roadshow
Stonefruit Research Roadshow Swanhill_2Roadshow
Stonefruit Research Roadshow Cobram_2

Appendix 7 Project activities

Activity	Audience	Attendance
Presentation: Overview of Stonefruit Field Laboratory, 23 November 2012, Melbourne.	Growing Food & fibre Update (Ron Prestidge, Director - Agriculture Research) delegation.	10
Stonefruit orchard (Murray Valley) tour: Stonefruit Field Laboratory experiment objectives, orchard tour and inspection of fruit grading facility, 25-26 January 2013, Cobram	Adrian Conti, Prof Ted de Jong (University of California), Russell Fox (IK Caldwell)	5
Site tour: Stonefruit Field Laboratory - experiment objectives, 12 March 2013, Tatura.	Research Director - AgriFood (Chris Korte)	1
Presentation: Stonefruit Field Laboratory, 20 March 2013, Knoxfield.	Kaiteki Institute delegation	8
Presentation: Stonefruit Field Laboratory, 11 April 2013, Tatura	Saudi Arabia delegation	10
Site tour: Stonefruit Field Laboratory - experiment objectives, 9 May 2013, Tatura.	KPM-Horticulture (Martin Bluml), Mark Imhof, Dave Monks	4
Presentation: Research pre-schedule, 27 May 2013, Tatura.	Departmental scientists, technical and extension staff	20
Site tour: Stonefruit Field Laboratory - experiment objectives, 28 May 2013, Tatura.	Deputy Secretary (James Flintoft) delegation	10
Site tour: Stonefruit Field Laboratory - experiment objectives, 12 June 2013, Tatura.	Executive Director, Future Farming Systems Research (Ron Prestidge)	1
Presentation: Stonefruit Field Laboratory, 17 July 2013, Sydney.	Summerfruit Industry Conference	33
Site tour: Stonefruit Field Laboratory - experiment objectives, 1 August 2013, Tatura.	DEPI-Hume Region Transition Team delegation	10
Presentation: Stonefruit Field Laboratory - experimental objectives, 28 August 2013, Tatura.	DEPI Senior Executive delegation	35
Site tour: Stonefruit Field Laboratory - experiment objectives, 3 September 2013, Tatura.	HAL Program managers (Kathryn Young, Alok Kumar, Peter Melville, Richard Bennett) delegation	6
Site tour: Stonefruit Field Laboratory - experiment objectives, 4 September 2013, Tatura.	Horticulture Industry Network delegation	10
Site tour: Stonefruit Field Laboratory - experiment objectives, 3 February 2014, Tatura.	Executive Director, Future Farming Systems Research (Ron Prestidge) and Research Manager- Horticulture (Ian Goodwin)	2
Presentation: Crop load experiment, 6 February 2014, Bundoora.	DEPI BRD and AR research staff	15
Presentation: Stonefruit Field Laboratory, 7 February 2014, Tatura.	DEPI Deputy Secretary (James Flintoft) delegation	23

Site tour: Stonefruit Field Laboratory - experiment objectives, 26 February 2014, Tatura.	Dr Erwin Engel (French National Institute for Agricultural Research) and Gavin Rose (DEPI-Chemist)	2
Site tour: Stonefruit Field Laboratory - experiment objectives, 17 March 2014, Tatura.	Prof Todd Einhorn (Colorado State University)	1
Site tour: Stonefruit Field Laboratory - experiment objectives, 7 May 2014, Tatura.	Project Advisory Committee delegation	7
Site tour: Stonefruit Field Laboratory - experiment objectives, 24 July 2014, Tatura.	DEPI (James Flintoft, Gregory Harper) delegation	7
Site tour: Stonefruit Field Laboratory - experiment objectives, 30 July 2014, Tatura.	Horticulture Center of Excellence (Sze Flett, Aimee McCutcheon, Peter Hansford) and Ian Goodwin	4
Site tour: Stonefruit Field Laboratory - experiment objectives, 6 August 2014, Tatura.	DEPI Group Leaders- Horticulture	6
Site tour: Stonefruit Field Laboratory - experiment objectives, 13 August 2014, Tatura.	Katherine Pope (UC Davis), Rebecca Darbyshire (The Uni of Melbourne)	2
Presentation: Stonefruit Field Laboratory, 20 August 2014, Brisbane.	29th International Horticultural Congress: horticultural service providers, scientists	20
Site tour: Stonefruit Field Laboratory - experiment objectives, 27 August 2014, Tatura.	Project Advisory Committee delegation	6
Site tour: Stonefruit Field Laboratory - experiment objectives, 28 August 2014, Tatura.	South African delegation & APAL (Kevin Sanders)	7
Site tour: Stonefruit Field Laboratory - experiment objectives, 2 October 2014, Tatura.	Launch of Horticulture Center of Excellence delegation	35
Site tour: Stonefruit Field Laboratory - experiment objectives, 14 October 2014, Tatura.	Thailand delegation	15
TV interview: Stonefruit Field Laboratory - experiment objectives, 22 October 2014, Tatura.	WINTV Shepparton - News	
Site tour: Stonefruit Field Laboratory - experiment objectives, 22 October 2014, Tatura.	Regional Stone & Pomefruit R&D Forum delegation	30
Site tour: Stonefruit Field Laboratory - experiment objectives, 14 January 2015, Tatura.	German fruit grower delegation	45
Site tour: Stonefruit Field Laboratory - experiment objectives, 4 February 2015, Tatura.	Prof Han Mingyu (Northwest A&F University, China)	1
Site tour: Stonefruit Field Laboratory - experiment objectives, 18 February 2015, Tatura.	Horticultural Group Leader delegation	4
Site tour: Stonefruit Field Laboratory - experiment objectives, 22 February 2015, Tatura.	The University of Melbourne delegation	6
Site tour: Stonefruit Field Laboratory - experiment objectives, 2 March 2015, Tatura.	Bill Montague & Charles Peters (Washington State)	3

Site tour: Stonefruit Field Laboratory - experiment objectives, 4 March 2015, Tatura.	DEDJTR - Rural Development and Transition Policy delegation	27
Site tour: Stonefruit Field Laboratory - experiment objectives, 6 May 2015, Tatura.	Project Advisory Committee delegation	7
Presentation: Stonefruit Field Laboratory - Irrigation experiment, 17 June 2015, Mildura.	Horticulture Water Use Efficiency workshop	35
Presentation: Stonefruit Field Laboratory, 25 July 2015, China.	Chinese delegation	15
Site tour: Stonefruit Field Laboratory - experiment objectives, 28 October 2015, Tatura.	Project Advisory Committee delegation	6
Site tour: Stonefruit Field Laboratory - experiment objectives, 23 November 2015, Tatura.	Italian grower delegation	15
Site tour: Stonefruit Field Laboratory - experiment objectives, 4 January 2016, Tatura.	Prof David Connor (The University of Melbourne) and Dr Ines Minguez (University of Madrid)	2
Site tour: Stonefruit Field Laboratory - experiment objectives, 11 March 2016, Tatura.	The University of Third Age delegation	45
Site tour: Stonefruit Field Laboratory - experiment objectives, 23 March 2016, Tatura.	Irawan Budianto (Trade Director, Victorian Government Business Office, Jakarta) and Amelia Fyfield (Manager International Policy and Market Analysis)	2
Presentation: Stonefruit Field Laboratory - experiment objectives, 29 April 2016, Tatura.	DEDJTR Agriculture Services and Biosecurity Operations delegation	6
Site tour: Stonefruit Field Laboratory - experiment objectives, 4 May 2016, Tatura.	Project Advisory Committee delegation	6
Site tour: Stonefruit Field Laboratory - experiment objectives, 18 May 2016, Tatura.	Agricultural delegation from China including Mr Yang (CEO of Xinyangfeng Fertiliser) and Professor Deli Chen (UoM).	6
Site tour: Stonefruit Field Laboratory - experiment objectives, 19 May 2016, Tatura.	University of South Dakota students delegation	25
Site tour: Stonefruit Field Laboratory - experiment objectives, 23 June 2016, Tatura.	Delegation of GO-TAFE Horticultural students	5
Site tour: Stonefruit Field Laboratory - experiment objectives, 5 September 2016, Tatura.	Delegation of GO-TAFE Agricultural and rural students	5
Site tour: Stonefruit Field Laboratory - experiment objectives, 14 September 2016, Tatura.	Delegation of DEDJTR Agriculture Production leadership team	6
Site tour: Stonefruit Field Laboratory - experiment objectives, 28 September 2016, Tatura.	Delegation of summerfruit growers, horticultural industry personnel	7
Site tour: Stonefruit Field Laboratory - experiment objectives, 29 September 2016, Tatura.	Delegation of DEDJTR Agriculture AR-FS joint leadership team	8

Site tour: Stonefruit Field Laboratory - experiment objectives, 4 October 2016, Tatura.	Project Advisory Committee delegation	5
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 15 November 2016, Tatura.	Garry Godwill (Fruit Growers Victoria)	1
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 29 November 2016, Tatura.	Delegation of Chinese fruit research team, including Professor Jiang	10
Site tour: Stonefruit Field Laboratory - inspection of fruit grading facility, 6 December 2016, Tatura.	Deputy Secretary (Prof German Spangenberg) and Director (Dr Greg Harper) Agriculture Research - Department of Economic Development, Jobs, Transport and Resources delegation	4
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 10 January 2017, Tatura.	Prof David Connor (The University of Melbourne) and Dr Ines Minguez (University of Madrid)	2
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 17 January 2017, Tatura.	Horticulture Industry Network IDOs delegation	15
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 24 January 2017, Tatura.	Drs Stuart Tustin, Jason Johnson (New Zealand Plant & Food Research) and Prof Luca Corelli Grappadelli (University of Bologna)	3
Site tour: Stonefruit Field Laboratory - orchard management systems, plums, 9 February 2017, Tatura.	Gaethan Cutri (Grower, Trade Assessment Panel Member - Independent expert at Horticulture Innovation Australia)	1
Site tour: Stonefruit Field Laboratory - orchard management systems, plum fruit guage study, 27 February 2017, Tatura.	Julie Godwill (Fruit Growers Victoria) and Richelle Zealley (Communications and Events Officer, APAL) and Alison Barber (Engagement Officer, APAL) and visiting horticultural scientist (Switzerland)	4
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 7 March 2017, Tatura.	Delegation of Horticulturists from Rotary Vocational Training Team Ontario, New York State, USA	15
Site tour: Stonefruit Field Laboratory - experiment objectives and collaborative UoM water use/stress research (UAV remote sensing) study, 9 March 2017, Tatura.	Delegation of government and university (Sharif University) officials from Iranian (farmers, water managers and engineers) and University of Melbourne (Engineering Faculty)	20

Presentation: Stonefruit Field Laboratory - experiment objectives, 14 March 2017, Tatura.	Deputy Secretary (Agriculture Research - Department of Economic Development, Jobs, Transport and Resources) delegation	20
Site tour: Stonefruit Field Laboratory - experiment objectives, 14 March 2017, Tatura.	Deputy Secretary (Agriculture Research - Department of Economic Development, Jobs, Transport and Resources) delegation	20
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 22 March 2017, Tatura.	Marko Dorić (Montague Orchards)	1
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 4 April 2017, Tatura.	Noel Ainsworth (Supply Chain Horticulturist, DAF Qld)	1
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 5 May 2017, Tatura.	Dr David Ugalde (Department of Agriculture and Water Resources, ACT)	1
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 31 May 2017, Tatura.	Project Advisory Committee delegation	5
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 9 June 2017, Tatura.	Mallee community delegation	8
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 19 July 2017, Tatura.	Ress Moller (Cornell University, Agricultural Science student)	1
Site tour: Stonefruit Field Laboratory - experiment objectives and inspection of fruit grading facility, 10 August 2017, Tatura.	The University of Melbourne Agricultural Students delegation	39
Presentation: Stonefruit Field Laboratory - experiment objectives, 10 August 2017, Tatura.	The University of Melbourne Agricultural Students delegation	39
Orchard tour: Apricot Grove - Stonefruit Field Laboratory experiment objectives, orchard tour and inspection of fruit grading facility, 29 August 2017, Renmark	Charlie & Hilke Ppiros	2
Orchard tour: Cutri Fruit - Stonefruit Field Laboratory experiment objectives, 2-D orchard tour and inspection of fruit grading facility, 30 August 2017, Wood Wood & Woorinen	Gaethan Cutri (Grower, Trade Assessment Panel Member - Independent expert at Horticulture Innovation Australia), Marc Intervera (Cutri Fruit, Innovation manager)	6
Site tour: Stonefruit Field Laboratory - experiment objectives and discussion on irrigation management strategies, 6 September 2017, Tatura.	Prof Wiehann Steyn (HortGro, South Africa) and Dr Esme Louw (University of Stellenbosh)	2

Appendix 8 Industry feedback: regional roadshows (2016 and 2017)



Cobram Roadshow
Evaluation_2016.pdf



Renmark Roadshow
Evaluation_2016.pdf



Swan Hill Roadshow
Evaluation_2016.pdf



Cobram Roadshow
Evaluation_2017.pdf



Renmark Roadshow
Evaluation_2017.pdf



Swan Hill Roadshow
Evaluation_2017.pdf