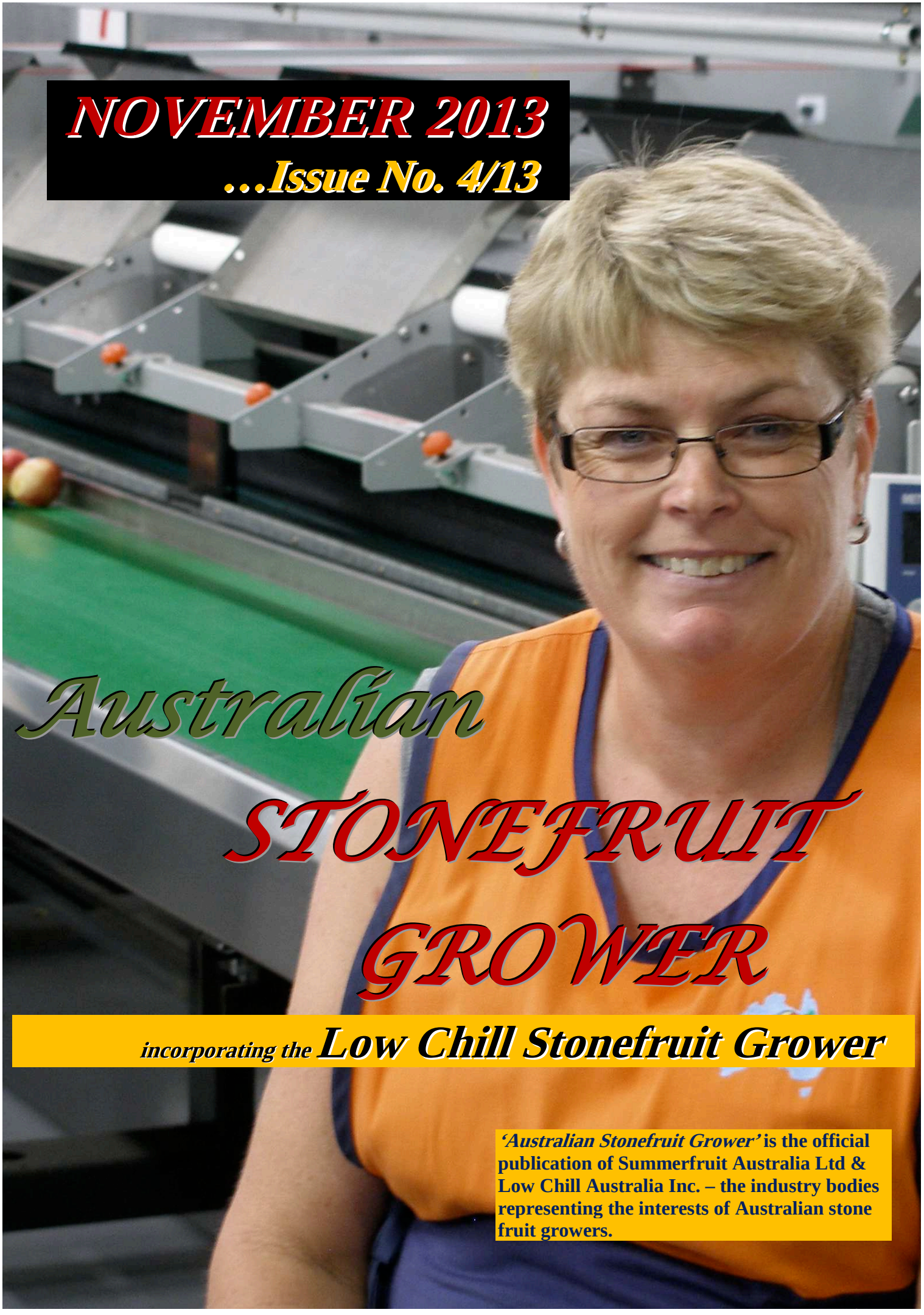

NOVEMBER 2013
…Issue No. 4/13

Australian STONEFRUIT GROWER

incorporating the **Low Chill Stonefruit Grower**

'Australian Stonefruit Grower' **is the official publication of Summerfruit Australia Ltd & Low Chill Australia Inc. – the industry bodies representing the interests of Australian stone fruit growers.**

"This project (LCA Communications including this publication) has been funded by HAL using levy contributions with matching funds from the Australian Government."

IN THIS ISSUE –

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Summerfruit Conference

The link to all the Combined Fruit Industry conference presentations –
http://apal.org.au/events/biennial-conference-innovate-or-real-estate/conference-presentations/

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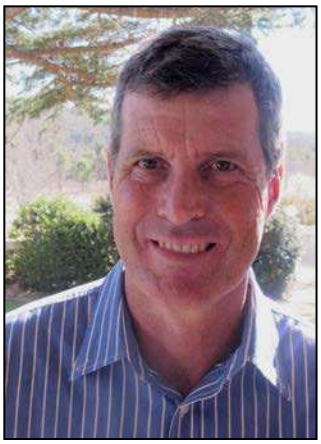

From the Summerfruit Chairman -

The 2013/2014 harvest season for Australian Summer Fruit is well and truly underway, with high quality early season fruit delivering an excellent eating experience to Australian consumers. The earliest production areas in Northern NSW and QLD experienced a spring that was significantly warmer and dryer than normal, resulting in a very early start to the season with fruit of high colour and great flavour.

The first of the Californian stone fruit was on Australian shelves in August and then off by early October. It appears to have been very well received by both consumers and retailers. Despite some initial industry concerns that pricings of this fruit may have had a negative impact on prices received at the start of our domestic season, this has not been the case and in fact the Californian fruit has provided a positive lead into the start of our domestic production.

October saw a revision of the permit issued in October 2012 by the APVMA for the use of *Fenthion* in stonefruit. As a result of the residue work funded by Summer Fruit Australia and HAL, for nectarines and plums *Fenthion* was able to be retained with a maximum of three sprays per season with a fourteen day with-holding period – the same protocol as the old ICA-21 for medium and high chill regions.

Initially APVMA had declined to reissue a permit for peaches and apricots, but following a submission by SAL, using data generated from trial work conducted during the past 12 months, APVMA has subsequently issued a permit for *Fenthion* use in Peaches and Apricots for a single spray, twenty one day WHP. While we recognize that this single application will not give stand-alone control for fruit flies, it is one spray option that we would not have otherwise had.

It is important that growers do spray in accordance with the permit conditions as APVMA has indicated that there will be increased monitoring of chemical residues in peaches and apricots this season.

As much as funds will allow, the search for long term alternative controls for both QFF and Medfly continues.

The quest to develop new markets for Australian stone fruit continues and China is a key for us. On the back of work done by previous SAL Boards and the follow up that continues through SALS CEO John Moore and by Biosecurity Australia, we are making steady progress towards achieving that goal. When direct access does occur it is important that we are able to differentiate ourselves from the fruit from other countries going into China through conventional channels, and carve a niche for Australia as a reliable supplier of high quality fruit.

With the whole summer of stonefruit production this season still to come, good quality fruit will again be a major driver for retail sales. Although sets of fruit in some varieties are down on 2012/2013, there are still going to be large volumes of fruit to move through the retail chain. One important way to maximize the movement is to ensure that when consumers buy stone fruit they get an eating experience that sends them back into the shops to buy more.

The 100% Dribbilicious Marketing Campaign can lead people to make a purchase but ultimately it will be the satisfaction that they get from that purchase that brings them back for more. With a tight economy and competition for the consumer spend, as tough as it has ever been, it is up to us a growers and packers to ensure that we make ourselves as competitive as possible by delivering a quality product every time.

And so on that note, for me it is back to work and making sure that everything that goes into a box this season on this farm is **100% Dribbilicious**.

Andrew Finlay - Chairman

EXPORT …

Plant Exports Management System - PEMS

A new IT system to streamline plant exports

Do you export plants or plant products from Australia? Are you a plant exports Authorised Officer? Do you work at a company that exports plants from Australia?

If so, then the Plant Exports Management System (PEMS) is a new IT system that will help make your job easier.

PEMS is designed to reduce the average documentation time for commodity inspections—saving you time and money.

PEMS will coordinate a range of processes to make the work of exporting plants and plant products from Australia more efficient. These processes include the management of plant export inspection and documentation services.

PEMS is scheduled for its first release in November 2013.

For more information visit
www.daff.gov.au/plantexports

Australian Government
Department of Agriculture, Fisheries and Forestry

LOW CHILL AUSTRALIA INC.

ABN 283 812 712 44

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CHECK OUT THE LOW CHILL AUSTRALIA INC. WEBSITE www.lowchillaustralia.com.au

From the LCA President –
Mark Napper

At the time of writing, the east coast low chill growers are at the end or nearing the end of what has been another testing year which can be broken into two halves – *"the big wet"* and *"the big dry"*. Having experienced the big wet up until July, the rain tap was dramatically turned off with little to no rain for the next four months.

Managing our orchards during these extremes was difficult. The wet saw incidences of blossom blight, brown rot and fruit set issues. Fruit drop was significant across most orchards seeing production reduced by up to 40%. The dry also was a major factor in the predominance of small fruit. Production was also reduced due to growers sadly exiting the industry. However the reduced production did lead to the maintaining of consistent pricing throughout the greater part of the season.

Apart from the challenging weather this season, growers also had to cope with two other imposed challenges of **1)** a reduced protocol for *fenthion* and **2)** the arrival of the first shipment of USA fruit. As if we don't have enough issues to contend with without having to worry about factors imposed by others!!

Reduced protocol for *fenthion*

Whilst there are post-harvest treatments available, fruit fly management requires an effective in orchard system. Area wide management of traps, baits and lures was used by many growers in conjunction with a chemical program. Results were promising but varied with some growers experiencing significant fruit damage. The hardy, persevering and innovative growers remaining in the industry are actively seeking a sustainable alternative to *fenthion*.

Therefore it was with great disquiet and concern that we heard of the APVMA decision to ban *fenthion* for peaches and apricots effective 16 October! Due to the quick response by SAL, the APVMA agreed to extend the current protocol until April 2014. However that timeline is not sufficient. We need more time to find a proven effective replacement for *fenthion*. **Your committee is pursuing this with the Western Australian Hills Orchard Improvement Group.**

The arrival of the first shipment of USA fruit

The arrival of USA fruit again signals another permanent change to the Australian stone fruit market. Quality of their fruit will only improve as they work on supply chain issues and decide on what varieties can survive the protocol and the long journey. We should be working with the USA program to ensure returns are maintained for all growers, whether USA or Australian, by delivering to the consumer a memorable eating experience every time.

Our fruit can match it against any other country. Let's tell the consumer that and promote and deliver on the promise.

With these big changes growers need to consider:

- **the varieties grown and concentrate on those that deliver the greater returns**;
- **to Work collaboratively to find growing and supply chain problems**; as well as
- **marketing of our fruit**.

Hard decisions will need to be made and our innovation put to the test.

Regards

Mark Napper – *President* –

Notice …

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NOTICE OF ANNUAL GENERAL MEETING

Notice is hereby given that the **Annual General Meeting** of **Low Chill Australia Inc.** will be held on **Tuesday, 10th December 2013** at the Bangalow Bowling Club, Bangalow, northern NSW, **commencing at 11am** (Eastern Summer Time). The Meeting will break for Lunch and is expected to finish at 3.30pm.

A Full Meeting Agenda will be forwarded by email to members and those associated with the Low Chill Stonefruit Industry preceding the Meeting and will be available on the Low Chill Australia Inc. website: www.lowchillaustralia.com.au.

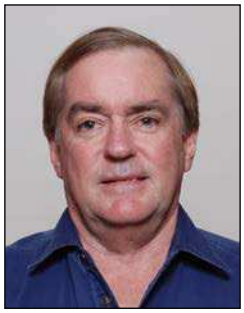
Please NOTE that only Financial Members will be allowed to vote at the Annual General Meeting.

Mark Napper
LCA President

Phillip Wilk
LCA Secretary

11 November 2013

Summerfruit CEO Round Up …



There is light in the tunnel for market access to mainland China

Coming off a relatively good 2012/13 season the commencement to this year is apparently a mixed bag of fruit through-out the main production regions. Anecdotal comment varies across Australia but generally reports of good fruit quality within each category however there is a shortage of apricots.

Stonefruit lovers have for the first time been able to consume imported fruit in the lead up to our marketing season. The Californian fruit appeared well received by the 'Chains' and well-priced. The quality varied in some consignments and what was visible, was the pre–delivery treatments undertaken prior to export from the USA. All Australian growers would welcome the strict bio security protocol issued by our Department of Agriculture, for the protection from Spotted Winged Drosophila – Suzukii.

The SAL Board and IAC have set strategic KPI's for increased exports and are working very closely with the Department of Agriculture, Canberra and the Victorian Department of Agriculture. I mention this because if we are to expect to export, Industry needs to embrace imports in accordance to concurrent trade. Uniquely, the Australian stonefruit industry is well positioned to receive imports in our winter months and to the cusp of our season commencing, unlike say perhaps for Apples for example. They have a longer cool store life span and may place pressure on domestic marketing programs.

However, whilst saying this, consumers have the choice and it is healthy for international trade as long as reciprocity is in place.

Our access to China is closer than it has been for years. By offering nectarines as our most preferred category for entry, rather than the four categories, China has seen this as a favourable negotiation position to now progress. Until Industry has completed work on acceptable science to be presented for an airfreight protocol to be negotiated, it was sensible to hold back on peaches. Plums hopefully will follow shortly after legal access is granted for nectarines. Coupled to this is a collaborative offer to work with Chinese authorities and their Industry across education and training exercises, research and development and marketing.

Last year the PRC Minister for Agriculture Han Changfu met with our previous Prime Minister Gillard. Both agreed that they would like to develop collaboration in agriculture between the two countries.

On 22nd October a delegation comprising of officials from Federal and State Departments of Agriculture and Australian Industries met with the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ). Victorian Agriculture Minister **Peter Walsh** provided Director General **Huang Guansheng** of AQSIQ with a paper that outlined a number of these broad concepts for collaboration with China. Minister Walsh asked Director General Huang Guansheng to give some consideration to these concepts for commencement of joint programs and further discussions.

Following this milestone meeting, APAL's **Annie Farrow** and I took the opportunity to singly meet with the Chinese Academy of Agricultural Sciences (CAAS); Northwest Agriculture & Forestry University and the Shaanxi Fruit Bureau. At each meeting the message of collaboration was delivered and well received with very keen engagement of the concepts across areas of education and training, research and development and marketing aspects.

In late November, Australian Industries will participate in a *China-Australia Workshop* on Horticultural Cooperation prior to the *China Fruit & Vegetable Expo* and it is anticipated that these collaborative initiatives will be advanced. Similarly, the Department of Agriculture (Federal) specialists will engage with AQSIQ technical staff to work through cold treatment issues for fruit flies. Both workshops are very important advances towards mainland access being granted for nectarines. I urge members to make more use of the website www.summerfruit.com.au for valuable information posted on a regular basis.

Lately there have been updates re *Lebaycid* and changed usage conditions until 30th April 2014. As complex as it is, Industry has kept the chemical on the shelf and in your toolbox. The most recent change was the 21-day WHP one spray permit for apricots & peaches. This came about by personal contact with the APVMA to reconsider usage patterns and SAL was subsequently asked by the APVMA to lodge a submission, which in turn was followed by a permit application held by SAL.

Whilst this latest development may not be ideal, the chemical can be used with strategic management practices.

The Summerfruit domestic marketing campaign is about to commence in late November nationally, again with our ambassador *Rachel Finch*. You will notice a lot of social media via Facebook and twitter along with in store sampling in key capital cities.

Finally, SAL-IAC has commissioned *Fresh Logic* to undertake the next strategic plan. It has been proposed that *Fresh Logic* make direct contact with growers, supply chain operatives and others to capture the important ingredients for a true living document that can be implemented for the Industries benefit.

Good luck for the hectic season ahead.

John Moore CEO – *Summerfruit Australia Ltd*

For any further assistance, please contact
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Email: ceo@summerfruit.com.au – **Address:** 8/452 Swift St., Albury NSW 2640

NOTICE TO NSW GROWERS –

The *Orchard Plant Protection Guide* for deciduous fruits in NSW is the annual flagship publication used by growers. The 2013-14 edition is now available and includes a feature article on **Managing Queensland Fruit Fly without Fenthion**, written by **Dr Andrew Jessup**.

For logistical purposes and delivery could you please **contact Kevin Dodds** if you wish to receive a copy.

Kevin Dodds | Development Officer – Temperate Fruits, NSW Department of Primary Industries, 64 Fitzroy Street, Tumut NSW 2720 | PO Box 3 Tumut NSW 2720
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Industry Information …

ANFIC: PICO's New Master Licensee for Australia

The Australian Nurserymen's Fruit Improvement Company (ANFIC) Ltd and Okanagan Plant Improvement Corporation (PICO) are pleased to announce that ANFIC is the new Master Licensee in Australia, making ANFIC the sole representative of PICO's varieties in Australia. Apples, berries and cherries, born from Canada's Agri-Food Research breeding programs, imported into Australia will now be made available through the licensed ANFIC nurseries.

ANFIC is a not-for-profit Intellectual Property Management and Commercialization Company for new fruit varieties and rootstocks with access to a network of twelve progressive nursery members. The company has worked with new fruit varieties for Australian fruit industries since 1983. ANFIC's goal is to undertake, promote and further the improvement, import and export of fruit varieties and rootstocks to the horticultural industry.

PICO is a Canadian variety rights management company that licenses new varieties of tree fruits and berries domestically and internationally. PICO has exclusive evaluation, distribution, propagation and commercialization rights from the Minister of Agriculture and Agri-Food Canada (AAFC) for plant material developed in the apple, cherry, berry and soft fruits breeding programs PARC at both Summerland and Agassiz, British Columbia Canada.

The best know PICO fruit varieties in Australia would be the PICO cherry varieties including Samba and Skeena. Other PICO fruit varieties to be developed in future through other marketing arrangements include the Ambrosia apple variety.

Growers wishing to order PICO varieties can now place orders with their preferred ANFIC Nursery.

For further information –
Contact ANFIC Head Office (Dr Gavin Porter, ANFIC CEO) on 07 3491 9905
or email: info@anfic.com.au or website www.anfic.com.au

Members of Nursery & Garden Industry, Australia (NGIA)
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Research …

Evaluation of Four New Low-Chill Nectarine Selections

The Horticulture Australia Ltd funded breeding program at Nambour is producing a range of low-chill peach and nectarine selections that are adapted to subtropical growing regions of Australia but may also be trialled in cooler regions where freezing temperatures do not cause flower damage. Seedling populations are grown and evaluated at the Maroochy Research Station at Nambour, Queensland and then elite selections are sent for grower test. Several selections performed well in 2013 and four of the nectarine selections are described in this article.

Q223-45

Q223-45 is a non-melting white flesh nectarine that has very good sweet-acid balanced flavour. It ripened in early October at Coopers Shoot, NSW in 2013 and in mid-October at Nambour in 2011 and 2012. Fruit are medium-large, round to oblong, bright red blush that covers 80% of skin, flesh is white, non-melting, firm, juicy and has a sweet balanced flavour. The tree is moderately vigorous and requires 150 chill units to break dormancy.

Q223-45 white, non-melting flesh nectarine with good flavour

Q223-20

Q223-20 is another non-melting, white flesh nectarine with similar traits to Q223-45 but ripening about one week earlier. It ripened in the second week of October at Nambour in 2011 and in early October at Coopers Shoot in 2013. Fruit are medium size, round to oblong, with 80% red skin, white non-melting flesh that is firm, sweet and balanced with acid. The tree is moderately vigorous and requires 250 chill units to break dormancy.

Q223-20 white, non-melting flesh nectarine with good flavour, ripening in early October at Nambour

Q223-31

Q223-31 is another non-melting white flesh nectarine with good flavour. It ripens about 10-14 days later than Q223-45. In 2013 it ripened in mid-October at Coopers Shoot and in mid to late October at Nambour in 2010 and 2011. Fruit are medium-large, round to ovate, 70-80% bright red blush, flesh is white and non-melting and can have red streaks in some years. Flesh is balanced with sugar and acid and has good juice levels. Tree is moderately vigorous and requires 150 chill units to break dormancy.

Q223-31 white, non-melting flesh nectarine with bright red skin, ripening in mid to late October at Nambour

Q58-70

Q58-70 is a yellow non-melting flesh nectarine that ripens in early October at Nambour and Coopers Shoot. Fruit are medium size, round, moderate to dark red blush over 80% of skin, flesh that is yellow and non-melting with balanced flavour. The chilling requirement is 250 chill units.

Q58-70 yellow, non-melting flesh nectarine ripening in early October at Coopers Shoot

A large-scale testing scheme is available to all growers in Australia. It requires a testing fee of $6 per tree, a minimum planting of 100 trees and selection evaluation. Growers who are interested in testing any of these selections should contact Dr Bruce Topp at the Maroochy Research Station for details on the testing scheme on phone 07 54535973 or email b.topp@uq.edu.au.

HAL
Know-how for Horticulture™

This project is facilitated by Horticulture Australia Limited. It is part funded by voluntary contributions from Low Chill Australia. The Australian Government provides matched funding for all HAL's R&D activities.

Low Chill Australia Inc.
The Taste of Spring

Industry Information …

AustSafe Super is MySuper approved!

The industry super fund for rural and regional Australia, *AustSafe Super* has received its *MySuper* authorisation from the Australian Prudential Regulation Authority (APRA).

From 1 January 2014, only those superannuation funds with an approved *MySuper* offering will be able to receive Superannuation Guarantee (SG) contributions for employees who have not chosen a fund.

AustSafe Super Chief Executive Officer, **Mr Craig Stevens** says *MySuper* is a welcome development and will result in a simpler set of product features and allow members to compare funds more easily.

"We're pleased to offer members a simple and cost effective option similar to our current default offering to help achieve their retirement goals".

"This approval means for our employers, its business as usual and they can continue paying their SG contributions to us with the complete confidence that we are able to help them meet their super obligations," Mr Stevens said.

AustSafe Super has a dedicated team of Regional Managers on hand in rural and regional areas to assist both members and employers.

"We appreciate that regulatory changes can be confusing, so we're committed to helping members and employers make sense of these changes and work with them every step of the way," Mr Stevens said.

Product Information …

Acramite is a *miticide* with unique chemistry that gives reliable, effective mite control and works fast on target mites.

Acramite should be applied at the first sign of mites. Being a contact *miticide*, thorough spray coverage to run off is essential. Applying early will give longer residual control which will control late hatches. ***Acramite*** controls all motile mite stages, where eggs are controlled once nymphs are hatched. **For resistance management there should only be one *Acramite* application per season.**

Acramite is suitable for use in **Integrated Pest Management (IPM)** situations, where due to its high selectivity it is very safe on beneficial insects and predatory mite species.

Acramite targets *Two Spotted Mite*, *European Red Mite* and *Bryobia Mite* in pome fruit, stone fruit and almonds.
There are various minor use permits for the control of *Two Spotted Mite* in crops including: Strawberries; Tomatoes; Cucumber; Peppers; Egg Plant; Zucchini; Nursery stock; Rubus; Hops; and Lettuce (hydroponic and glasshouse systems).

Acramite has a short with holding period. For pome fruit there is a 7 days withholding period, for stone fruit there is a 3 day withholding period and for almonds the withholding period is 14 days. For minor use permits, at ***Chemtura Agrosolutions*** we can now announce that the withholding period has been reduced from 7 days to 1 day in most minor use permits (please check the APVMA website for full details). **So don't let mites take advantage for your crop. Apply *Acramite* at the first sign of mites for reliable and effective mite control.**

For more information contact customer service on 1800 635 743 or visit www.chemturaagrosolutions.com.au

Development of molecular diagnostic tools to detect endemic and exotic pathogens of *Prunus* species for Australia

Fiona Constable[1], Wycliff Kinoti[1,2,] Narelle Nancarrow[1] and Brendan Rodoni[1,2]
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The biosecurity of the Australian summerfruit and almond industries are maintained at the border by the Department of Agriculture Fisheries and Forestry (DAFF; formerly Australian Quarantine Inspection Service, AQIS) in post entry quarantine (PEQ) facilities and internally through nurseries or schemes that supply high-health planting material throughout Australia.

Over the last 5 years approximately 250 accessions of *Prunus* species, including summerfruit varieties, have been screened for quarantine pests and pathogens and released from Australian PEQ stations. Currently DAFF recognises two bacteria, six phytoplasmas or phytoplasma-like diseases, 13 viruses, one viroid and 70 fungi, to be of quarantine significance for *Prunus* species. DAFF also recognises that there are many diseases of *Prunus* species of unknown aetiology.

On arrival into Australian PEQ, imported *Prunus* propagation material, including summerfruit, is inspected for insect pests and disease symptoms. If there are no obvious disease symptoms, the bud wood is fumigated with methyl bromide (32gms/m2 for 2.5hrs) and then dipped in 1% sodium hypochlorite for 2 minutes to kill any epiphytic organisms. If disease symptoms are detected, the bud wood is stored until the causal agent is identified.

The fumigation and dipping procedures kill most fungal pathogens on the propagation material. However, all *Prunus* viruses, viroids, phytoplasmas and bacteria and some fungi can be transmitted internally in propagation material and fumigation and dipping will not kill these pathogens. Consequently, *Prunus* germplasm imported into Australia requires a minimum of two years post entry quarantine testing using a range of diagnostic techniques for detection of diseases and pathogens of quarantine significance.

Plants grown in PEQ are visually inspected for disease symptoms associated with pathogens that might be transmitted through propagation material. Light microscopy and culturing are used for confirmation if fungal or bacterial pathogens are suspected. Biological indexing is mandatory and is specifically used for the detection of viruses, viroids and graft transmissible diseases of unknown aetiology.

The imported variety is inoculated by grafting onto sensitive *Prunus* varieties and by rubbing a plant extract onto the leaves of sensitive herbaceous plants such as cucumber or *Nicotiana* species. These plants are observed for characteristic symptom development. Enzyme linked immunosorbent assay (ELISA) is mandatory for *Plum pox virus* ***(Figure 1)*** detection and may be used for confirmation of the presence of other viruses. Molecular testing using polymerase chain reaction (PCR) can be used to detect the genetic material of various pathogens. PCR testing is required for material originating from host countries (Taiwan, Turkey, North America, Central America and South America) of *Xylella fastidiosa*, which causes phony peach disease, plum leaf scald and leaf scorch and phytoplasmas which are associated with European stone fruit yellows disease ***(Figure 2)***. For all other pathogens this method is optional and dependent on the availability of a validated diagnostic test.

Figure 1: *A Plum tree (cv. Katinka) leaf chlorosis caused by Plum pox virus*

Recent advances in molecular and diagnostic technology have allowed characterisation of new and emerging pathogens, new strains of known pathogens of *Prunus* species and clarification of pathogens associated with diseases of *Prunus* species which have an unknown aetiology. As a consequence there is a requirement to review and update the list of pathogens and pathogens significant at the quarantine and certification levels for *Prunus* species in Australia. New and/or improved

molecular tools for the rapid and sensitive detection of many of these pathogens have also been developed, which can be used to better support pathogen detection during PEQ, certification programs and to improve stone fruit biosecurity in Australia.

***Figure 2**. A peach tree affected by European stone fruit yellows disease exhibiting decline, sparse foliation, chlorosis and smaller leaves*

Although there is no formal certification program, the biosecurity of the summerfruit industry is also supported at the local level via nurseries that produce of high health budwood. Nurseries may test this material for several endemic viruses that can significantly affect quality and yield, including *Prunus necrotic ringspot virus* (PNRSV), *Prune dwarf virus* (PDV), *Apple chlorotic leafspot virus* (ACLSV) and *Apple mosaic virus* (ApMV).

A Department of Environment and Primary Industries and Horticulture Australia Ltd. funded project is underway to develop new tools to detect both endemic and exotic pathogens of summerfruit and almonds for Australia. The research activities of this three year project will centre around five objectives:

1. Update the PEQ list for *Prunus* species to include recently reported pathogens and review the latest information of known pathogens

2. Identify, develop and validate molecular diagnostic tools for the detection of endemic and exotic pathogens of stone fruit under Australian conditions

3. Develop a post entry quarantine diagnostic manual that is specific for *Prunus* species, including almonds

4. Investigate strain variation of major endemic viruses of *Prunus* species in Australia

5. Identify optimal pest and disease management strategies for maintaining *Prunus* budwood repository blocks.

The exotic bacteria, phytoplasmas, viruses and viroids that are currently known to infect summerfruit and which are significant to quarantine have been identified ***(Table 1).*** The quarantine list includes several pathogens that have not been listed previously, some of which are associated with diseases for which the cause was previously unknown. This information will be used to update the current list of pathogens that may require testing for in summerfruit during PEQ. Although some pathogens may not be associated with disease or are associated with mild symptoms in summerfruit, infected plants could act as a reservoir for other susceptible plant hosts.

In addition to PNRSV, PDV, ACLSV and ApMV, the endemic pathogens of summerfruit that may be significant to Australian certification programs include *Cucumber mosaic virus (*CMV), *Peach latent mosaic viroid* (PLMVd) and *Hop stunt viroid* (HSVd) (Table 2). The incidence of CMV, PLMVd, and HSVd in Australian *Prunus* species is not known. CMV is associated with pseudopox disease of plum and chlorotic mottle of cherry, and might also have significant impact on quality and yield. PLMVd and HSVd can also be associated with diseases and loss in quality and yield in some *Prunus* species.

Molecular tools to detect exotic and endemic bacteria, phytoplasmas, viruses and viroids have been identified and their development and validation under Australian conditions is underway. To complete the validation of the diagnostic test, an Australia-wide survey will be conducted in the final two years of the project. Approximately 200 trees of different commercial and ornamental *Prunus* species will be collected from major growing districts throughout Australia and sampled and the tested using the protocols selected and developed in this project.

It is vitally important that these surveys are conducted prior to the use of these protocols for certification in a quarantine or commercial situation. The purpose of the survey is two-fold: **(i)** to update the disease status for each pathogen in Australia and **(ii)** to test protocols under "local" conditions and identify any potential "false positives" or organisms that can make interpretation of results difficult.

Table 1. A list of bacteria, phytoplasmas viruses and viroids that are not known to infect summerfruit, which do not occur in Australia and may be significant at the quarantine level.

Pathogen group	Pathogen
Bacteria	*Xylella fastidiosa*
	Erwinia amylovora
	Pseudomonas syringae pv persicae
	Pseudomonas syringae pv avii
Phytoplasmas and phytoplasma groups	*Candidatus* Phytoplasma prunorum
	X-Disease phytoplasma
	Candidatus Phytoplasma pyri
	Candidatus Phytoplasma phoenicium
	Peanut witches' broom group phytoplasmas *(*16SrII - *Candidatus* Phytoplasma aurantifolia related strains)
	Clover proliferation group phytoplasmas (16SrVI - *Candidatus* P. trifolii related strains)
	Stolbur (16SrXII-A) group phytoplasmas
	Candidatus Phytoplasma mali
	Elm yellows (16SrV) group phytoplasmas
	Aster yellows group (I-B, I-F, I-Q) phytoplasmas
Viruses	*American plum line pattern ilarvirus* (APLPV)
	Apricot latent ringspot nepovirus (APRSV)*
	Apricot latent virus foveavirus (ApLV)
	Asian Prunus virus 1 foveavirus (APruV-1)
	Asian Prunus virus 2 foveavirus (APruV-2)
	Asian Prunus virus 3 foveavirus (APruV-3)
	Arabis mosaic nepovirus (ArMV)
	Cherry A capillovirus (CVA)
	*Cherry green ring mottle foveavirus (*syn. Sour cherry green ring mottle virus, CGRMV)
	Cherry leaf roll nepovirus (CLRV)
	Cherry mottle leaf trichovirus (CMLV)
	Cherry necrotic rusty mottle foveavirus (CNRMV)
	Cherry rasp leaf cheravirus (CRLV)
	Cherry twisted leaf virus – tentative Foveavirus
	Little cherry virus 1 (unassigned genus, LChV-1)
	Little cherry virus 2 ampleovirus (LChV-2)
	Myrobalan latent ringspot nepovirus (MLRSV)*
	Peach chlorotic mottle foveavirus (PCMV)
	Peach enation nepovirus (PEV)*
	Peach mosaic virus trichovirus (PcMV)
	Peach rosette mosaic nepovirus (PRMV)
	Petunia asteroid mosaic tombusvirus (PeAMV)
	Plum bark necrosis stem pitting-associated ampleovirus (PBNSPaV)
	Plum pox potyvirus (PPV)
	Raspberry ringspot nepovirus (RpRSV)
	Strawberry latent ringspot virus (SLRSV)
	Stocky prune cheravirus (StPV)*
	Tobacco ringspot nepovirus (TRSV)
	Tomato black ring nepovirus (TBRV)
	Tomato ringspot nepovirus (ToRSV)
	Tomato bushy stunt tombusvirus (TBSV)
Viroids	*Apple scar skin viroid* (ASSVd)
	Hop stunt viroid (HSVd)†

** Pathogens may be minor reports, of no economic impact or have a very limited distribution.*

†HSVd is noted in the PEQ conditions for Prunus as being present in crops in Australia and therefore not of quarantine significance. However hop strains are not reported on hops in Australia and are considered quarantine pathogens.

Table 2. A list of bacteria, phytoplasmas viruses and viroids that are known to infect summerfruit, which occur in Australia and may be significant at the certification level.

Pathogen group	Pathogens known to infect other *Prunus* species
Bacteria	*Agrobacterium tumefaciens*
	Pseudomonas syringae pv mors-prunorum
	Pseudomonas syringae pv syringae
	Xanthomonas arboricola pv. *pruni*
Viruses	*Apple stem pitting associated foveavirus** (ASPV)- not known on *Prunus* in Australia
	Apricot pseudochlorotic leaf spot trichovirus (APCLSV)
	Apple stem grooving virus capillovirus (ASGV)
	Apple chlorotic leaf spot trichovirus (ACLSV)
	Apple mosaic virus ilarvirus (ApMV)
	Prune dwarf ilarvirus (PDV)
	Prunus necrotic ringspot ilarvirus (PNRSV)
	Cucumber mosaic cucumovirus (CMV) – not known on *Prunus* in Australia
	*Carnation ringspot dianthovirus** – not known on *Prunus* in Australia
	Citrus enation - woody gall virus*
	*Sowbane mosaic sobemovirus** – not known on *Prunus* in Australia
	*Tobacco necrosis necrovirus** – not known on *Prunus* in Australia
	*Tobacco mosaic tobamovirus** – not known on *Prunus* in Australia
Viroids	*Hop stunt viroid* (HSVd; Australian strains)
	Peach latent mosaic viroid (PLMVd)

** Pathogens may be minor reports or not economically important and may not need to be included into pathogen testing programs.*

Research …

SF11000 – Improving the consistency of soluble solids concentrations in summerfruit

Milestone Report 105 – 15 September 2013

Summary

Consistently high eating quality will raise consumer satisfaction and increase per capita consumption of summerfruit yet soluble solids concentration (SSC), a measure of eating quality, can vary by up to 10% among fruit within a single tree. Research to date has not addressed the causes of large variation in SSC among fruit within individual trees. This project is investigating factors that influence the ability of fruit to accumulate SSC, known as sink strength, during fruit growth, including cell number and size, fruit shading, and differences in the rate of fruit ripening on the tree.

Four experiments were conducted and tree, and fruit quality, data collected between January and May 2013 using orchards and fruit from the Cobram district in northern Victoria. The methodology for each experiment was briefly described in **Milestone report 104**. Between June and August 2013 all fruit flesh samples for cell enumeration and sugar analysis were fixed and stored in ethanol for embedding in resin and microscopy. Microscopy was delayed for several months as a result of the closure of DEPI Knoxfield and concurrent move to Agribio Centre at La Trobe University. Thus cell enumeration for these experiments will be conducted in the next five months.

Relationships between SSC and fruit quality parameters from 2012/13 experiments are being analyzed with preliminary findings suggesting that although mean SSC trends higher with increasing fruit fresh weight variability in SSC remains relatively constant within each fresh weight class, indicating that other factors such as fruit shading and flesh anatomy may be influencing soluble solids accumulation within fruit of similar size. In a second experiment using September Bright

nectarine from a single tree little variation in physiological maturity (ripeness) as measured by DA value was found due to fruit position, size or fruit shading whereas SSC varied between fruit by up to 4%. Larger fruit across all shading and position categories were generally higher in SSC although this trend did not hold for small, exposed fruit at the top of the tree. Position effects seemed to be more important in smaller fruit with an increase in SSC with height in both exposed and shaded fruit, while position played less of a role in large, exposed fruit. This may indicate that larger, exposed fruit are stronger sinks for carbohydrates within all heights in a tree.

Major progress was made regarding publications and communication of project research findings. A comprehensive industry article was prepared and published to inform Australian industry on the latest research presented at the 8th International Peach Symposium in June 2013 where **John Lopresti** also presented a paper 'Studies on the relationship between sugar concentration and cell number and size distribution in mesocarp of nectarine fruit'. This paper has been submitted for publication in *Acta Horticulturae*. John was also invited to present his research findings at the Riverland Stone Fruit Growers AGM in July 2013. Over the next five months cell number and size analysis will continue on flesh samples obtained from trials from both this season and previous seasons. A journal paper, *'Effect of fruit position and fruit shading on variability in ripening and soluble solids concentration in nectarines'* will be completed for peer review by December 2013 using fruit quality data collected over two seasons for Summer Flare 34 yellow nectarine.

Progress since last milestone report

Achievement criteria: Progress report on the results of trials in Victoria 2012/13 and outcomes of work with INRA Avignon, France.

2012/13 Experiments and analysis

Four experiments were conducted with tree, and fruit quality, data collected between January and May 2013 using orchards and fruit from the Cobram district in northern Victoria. The methodology for each experiment was briefly described in Milestone report 104. Between June and August 2013 all fruit flesh samples for cell enumeration and sugar analysis have been fixed and stored in ethanol for embedding in resin and microscopy. Cell enumeration for these experiments will be conducted in the next five months. Relationships between SSC and fruit quality parameters are being determined with some preliminary findings highlighted below excluding the effect of cell size and number.

Within and between-fruit variability (Figure 1)

Three commercially-thinned 'Summer Flare 29' nectarine trees were harvested five days after commercial harvest and fruit quality measured at four equidistant points around the equator of each fruit. Fruit quality measurements included fresh weight, skin colour (hue angle), physiological maturity (DA value), percentage dry matter and SSC. In Fig. 1 fruit from the top and bottom of trees have been combined and then categorized into fresh weight classes. The coefficient of variation (CV) was calculated within individual fruit and between fruit for some important quality parameters. The CV (%) = standard deviation ÷ sample mean, and is a useful dimensionless measure of the variability in a parameter, with a larger CV indicating a higher variability.

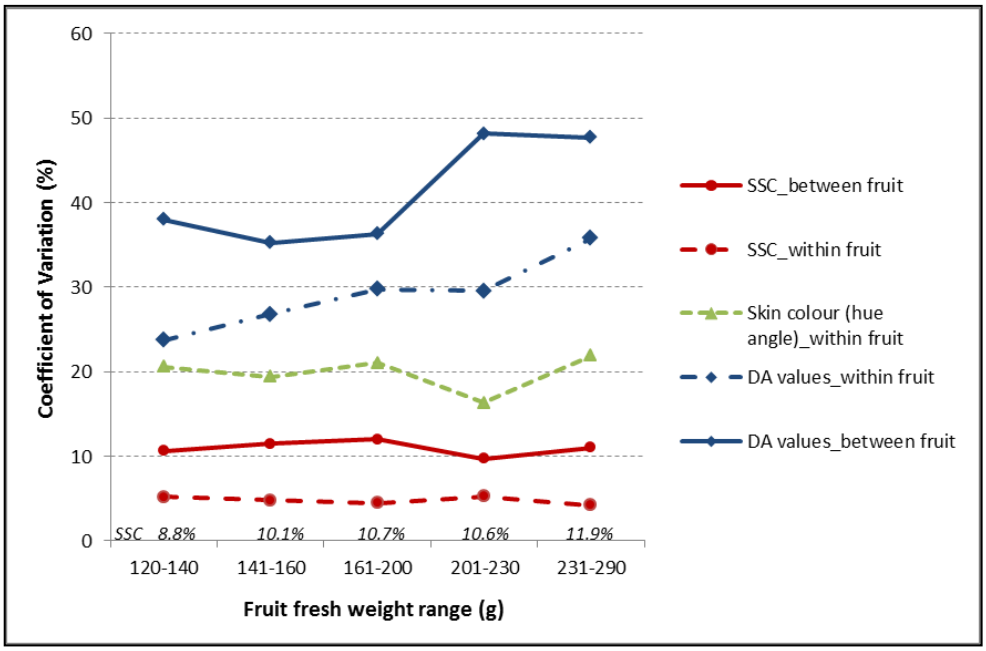

***Figure 1**. Effect of fruit fresh weight on the coefficient of variation for SSC, skin colour and ripeness in 'Summer Flame 29' nectarine based on four measurements per fruit. All fruit picked at a single harvest one week after commercial harvest. Values above the x-axis are the mean SSC of fruit within each fresh weight class (n=15).*

Preliminary results from this trial indicate that:

- Variability in SSC and skin colour (hue angle) is relatively constant across a range of fruit weight classes both within and between fruit, while variation in physiological maturity seems to increase with increasing fruit weight both within and between fruit in a tree.
- Although variability in DA values within and between fruit is relatively high the majority of fruit measurements ranged between 0.1 and 0.5 indicating that most fruit were post-climacteric and thus there was little difference in physiological maturity.
- Though SSC variability across all fresh weight classes was relatively low, a CV of 10% implies a potential difference in SSC between fruit of 3-4% which can have a significant impact on fruit eating quality.
- Interestingly although mean SSC trends higher with increasing fruit fresh weight the variability in SSC remains relatively constant within each fresh weight class indicating that other factors such as fruit shading and flesh anatomy may be influencing SSC within fruit of similar size.

We hypothesize that differences in SSC within individual fruit are likely to be correlated to differences in cell size and number in the fruit flesh. This will be explored in future cell enumeration studies of flesh samples prepared for microscopy.

Between-fruit variability within a tree (Figure 2)

Tree-ripened nectarines from within a single tree were classified into position/size/shading categories based on fruit quality measurements. Fruit classed as small (144±18 g) had a significantly lower fresh weight than large fruit (198±16 g) as determined by a two-tailed t-test (P<0.05). Exposed fruit had significantly less green colour (38±7°) than shaded fruit (55±13°) measured by CIELAB hue angle.

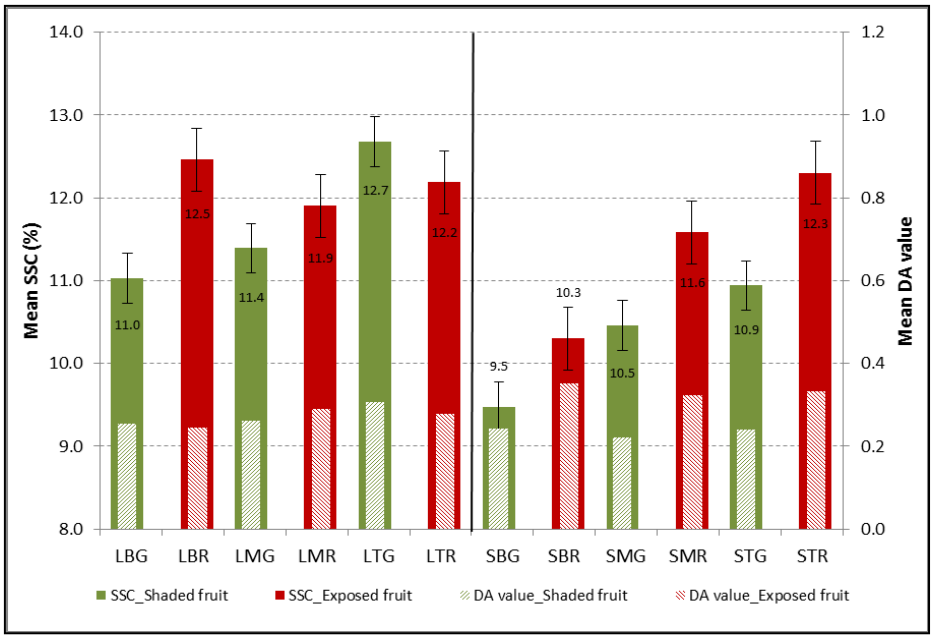

Figure 2. *Effect of fruit size, fruit position and fruit shading on soluble solids concentration within a single 'September Bright' nectarine tree. All fruit picked at a single harvest one week after commercial harvest and categorized as large (L) or small (S); top (T), middle (M) or bottom (B); and exposed (R) or shaded (G). Patterned bars represent fruit ripeness as measured by DA value while error bars represent the standard error of each SSC mean (n=8).*

Preliminary results from this trial indicate that:

- There was very little variation in physiological maturity (ripeness) as measured by DA values due to fruit position, size or shading whereas SSC varied by up to 4%.
- Larger fruit across all shading and position categories were generally higher in SSC although this trend did not hold for small, exposed fruit at the top of the tree.
- SSC was generally higher in exposed fruit within each size/position category (eg. STG vs STR) but this trend was not as apparent in large fruit from the middle and top of trees.
- Position effects seemed to be more important in smaller fruit with an increasing trend in SSC with height in both exposed and shaded fruit, while position played less of a role in large, exposed fruit, possibly indicating that these fruit are stronger sinks for carbohydrates within all tree positions.

Results of future cell enumeration studies will be analyzed in the context of fruit quality results in an attempt to explain a significant proportion of the variation in SSC between fruit.

2013/14 Experiments

After discussions with several Riverland stone fruit growers an orchard experiment has been designed to understand the effect on fruit quality and variation within trees, of reflective sheeting with and without application of *ReTain*®. A further aim is to provide growers with relevant information on effectively utilizing current technologies to improve fruit quality and reduce variation in soluble solids concentration within trees. This experiment will be conducted during November 2013 on one nectarine cultivar grown on two rootstocks. Results will be published in *Australian Stonefruit Grower*, and will be presented at two grower meetings by September 2014.

Publications and Communication

Between April and August 2013 significant progress was made regarding publications and communication of project research findings. These are summarized in the section below with a highlight being the acceptance of a comprehensive literature review for publication in *Horticultural Reviews*. Three peer reviews of the paper have been received with positive feedback, and this paper will be published in the November 2014 edition of the journal. A comprehensive industry article was also prepared and published to inform Australian industry on the latest research presented at the *8th International Peach Symposium* in June 2013 where **John Lopresti** also presented a paper on his research.

Communication/ Extension Activities (April 2013 – August 2013)

Industry article

- 'Current direction of international peach and nectarine research - Is the Australian summerfruit industry up to speed?' *Australian Stonefruit Grower*, No 3/13 – August/September 2013, p.18-20.

Scientific papers (refereed)

- Lopresti J, Goodwin I, Holford P, McGlasson B & Golding J (2013). Studies on the relationship between sugar concentration and cell number and size distribution in mesocarp of nectarine fruit. 8th International Peach Symposium, Matera, Italy, June 17-20, Acta Horticulturae (*In press*)
- Lopresti J, Goodwin I, Holford P, McGlasson B & Golding J (2014). Factors affecting within tree variability in soluble solids concentrations in peaches and nectarines. Horticultural Reviews *(Submitted for peer review)*

Technical reports

- Lopresti J et al. (2013). An evaluation of non-destructive NIRS for use in peach and nectarine: A review. DEPI technical report, 39pp. *(Executive summary in Appendix)*

Conference abstracts

- Lopresti J, Goodwin I, Holford P, McGlasson B & Golding J (2013). Studies on the relationship between soluble solids concentration and cell number and size distribution in mesocarp of nectarine fruit. 2013 Research Futures Forum, School of Medicine and School of Health and Science, UWS.

Oral presentations

- 8th International Peach Symposium, Matera, Italy, June 17-20, 2013
- Riverland Stone Fruit Growers annual meeting, 29th July, 2013
- Research Futures Forum, School of Medicine and School of Health and Science, UWS, 8th July, 2013.

Travel

John Lopresti travelled to Matera, Italy to present a paper *'Studies on the relationship between sugar concentration and cell number and size distribution in mesocarp of nectarine fruit'* at the *8th International Peach Symposium*, June 17-20.

John's stay with **Dr Michel Genard**, INRA, Avignon, France has been deferred until May 2014 to enable completion of fruit measurements and analyses from all experiments to date. The objective will be to seek Dr Genard's experience and guidance in modelling John's findings. The data being generated by John's work are complex and Dr Genard's experience will be invaluable in interpreting these data and deducing practical outcomes.

Next steps

- Over the next 5 months **John Lopresti** will focus on analysing fruit flesh samples from completed experiments to establish the effect of cell size and number on SSC as mediated by fruit position on the tree, fruit size and maturity.
- A journal paper, *'Factors affecting within tree variability in soluble solids concentrations in peaches and nectarines'*, will be completed for submission to *Horticultural Reviews* for publication by December 2013.
- A journal paper, *'Effect of fruit position and fruit shading on variability in ripening and soluble solids concentration in nectarines'* will be completed for peer review by December 2013 using fruit quality data collected over two seasons for Summer Flare 34 nectarine. This paper will form the basis for the first experimental chapter in his PhD thesis.
- Statistical analysis of cell enumeration and fruit quality data will be conducted in preparation for a second experimental chapter in the PhD thesis to be drafted by February 2014.
- Two industry research articles will be prepared for publication in Australian Stone Fruit Grower by February 2014. The first will discuss the use of near-infrared spectroscopy for measurement of SSC in stone fruit orchards including fruit sampling. The second will present results from the journal paper considering the effect of fruit position and fruit shading on variability in SSC.

Research …

COMMERCIAL APPLICATION OF THE MAROOCHY V TRELLIS SYSTEM FOR PRODUCTION OF HIGH QUALITY STONEFRUIT

PROJECT OVERVIEW

Stonefruit is a labour intensive fruit to produce with the majority of available labour unskilled, low chill stonefruit even more so. This project evaluates the ability of the Maroochy V Trellis System (MVTS) to produce stonefruit at a lower cost per kilogram using a simple pruning regime that provides high-quality, consistent results and a low reject rate. Due to the simplicity of the system, it is able to be undertaken by unskilled labour, including backpackers, which allows growers to reduce labour costs.

By reducing the tree height to a level that allows all work to be performed from the ground, the efficiency of each work unit is increased. Working from the ground also significantly reduces the probability of a workplace accident. It is intended that the production per hectare will be at least maintained, if not increased.

PROJECT PROGRESS SUMMARY

The intention of this article is to follow-up from the corresponding article in the November 2012 issue of the *Australian Stonefruit Grower*, thus some information may seem disjointed.

The 2012 season was poor for the production of low-chill stonefruit. The weather was showery during flowering, leading to many growers struggling to keep blossom blight under control. This, combined with the warmest winter on record, provided an elongated and poor fruit set on many varieties. Unfortunately the MVTS was not any different to any other system in this regard; hence we were unable to provide a comprehensive analysis of the production comparison between the MVTS and other systems.

The final report for this project will be forwarded to Horticulture Australia Limited at the end of 2013, which will provide a complete review of the project. This will be available from the HAL website www.horticulture.com.au .

GENERAL OVERVIEW

There was a reinforcement of some aspects of the system that provide encouragement.

1. **Winter pruning has shown, over the years, to be significantly quicker and easier.** As the structure is completed and the allotted canopy area filled, the pruning in future years is very easy and quick. Even with a double summer prune, pruning was cheaper.
2. **Thinning was shown to be easier and quicker**.
3. **The colour of the fruit has consistently been superior.**
4. **Earlier in the tree's life, it seems to fill the canopy with leaf and fruiting wood, but then struggles to size the fruit under a normal load expected of a canopy of that size**. Once the tree has reached an age of third leaf, the tree appears to be able to handle a normal cropping load.
5. **Harvesting was earlier for the various varieties.** With the introduction of USA fruit to the marketplace this year, being early is not as important as it was as American fruit is still available when low chill starts and often sort in preference to local fruit. The number of picks required was difficult to compare, as the season made flowering inconsistent, even within varieties.
6. **Orchard maintenance has continued to be at least as easy, if not easier, than other systems.** Spraying is noticeably easier, mainly due to the low height. It is also cheaper through the use of less chemical. Weed spraying is the only area of concern. We believe that we have conquered this by the use of a double jet system, using an Agrotop Red Airmix OC 04 jet and a Tee Jet XPB Boomjet Orange #10 left or right. With the XPB aiming to the centre of the row and the Airmix aimed at the first 1/3 of the spraying area, an effective coverage and kill is achieved. The droplet size of the XPB is very coarse and as such has almost no drift. The Airmix still has a medium to coarse droplet

spectrum and because we are not trying to throw it far, it has minimal drift as well. This has now allowed us to use glyphosate as well as knockdown herbicides.

7. **The use of paclobutrazol has worked very well in the areas we have trialled it.** It has helped with reduced shading to the lowest limbs and provided less wasted growth of potential fruiting wood.
8. **Shading of the lower limbs has shown to be a potentially significant issue.** Last summer, it appeared that we did not remove enough wood from the high two wires, creating too much shade for appropriate floral bud development. This was evidenced by reduced flowers, and in some cases no flowers, on the lowest limbs. We believe that this can be managed with a heavier summer prune in November. This prune does need to ensure that enough wood is removed from the top three wires to allow light to be intercepted by the bottom wire.

OTHER ISSUES

Flying Foxes again had a big detrimental impact on the crop. They damaged and consumed a significant percentage of the crop.

To potentially mitigate this pressure, the MVTS is far more conducive to using a throw-over net protection system than a hedgerow or vase system. The net is partly supported by the trellis posts, the top wire, and the growth along the top wire. This provides a small area under which one can still pick, due to the V shape and that the net hangs vertically from the top of the V to the ground. This also means that the net can stay in place until harvest is complete.

The throw-over system is far cheaper than a permanent full canopy cover while still providing acceptable protection. While it slows down the picking, thus increasing the cost per kg, it can be justified by calculating the quantity of fruit lost to the bats.

CONCLUSION

From our experience of using the MVT System, we regard it as suitable for growing low chill stonefruit. It appears to have the following benefits:

- **Reduced cost of labour to produce the fruit;**
- **Similar, if not exceeding, production of vase and hedgerow systems;**
- **Ease of use, especially once the tree structure is in place;**
- **No need for experienced or skilled workers, especially for pruning;**
- **Reduced spray drift due to the canopy be very close to the machine;**
- **Reduced chemical use, as the fruit is produced from a smaller canopy area;**
- **Increased fruit production from younger trees; and**
- **Reduced exposure to WH&S issues due to staff not having to use ladders or elevated work platforms.**

Some negatives are:

- **Control of weeds;**
- **If using throw over nets, the picking of fruit under the net;**
- **Cost of establishment;**
- **Rows should be prepared with a tractor set up with 2cm GPS capability. There is less tolerance for error in spacing as with other systems; and the**
- **Need for more summer pruning.**

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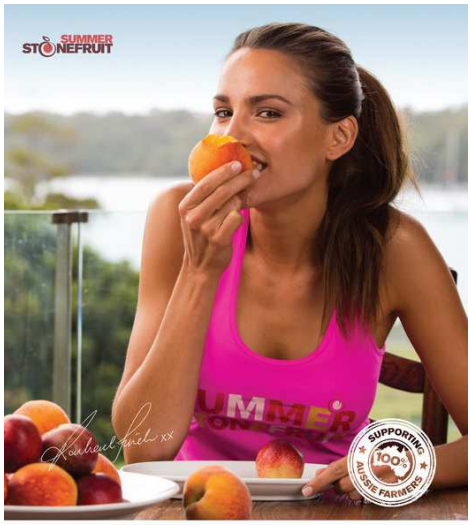
Email: bbr385@bigpond.com

PROMOTIONS in 2013 / 2014 …



Get stuck into summer stonefruit **100% DRIBBILICIOUS**

AussieSummerStonefruit

Tips on keeping summer stonefruit

100% DRIBBILICIOUS

The Summer Stonefruit season has arrived and to make it the best ever, we've prepared this simple retail guide.

Here are a few tips on what to look out for this season when selecting the best stonefruit for your customers and the best way to store it to keep it 100% dribbilicious!

Selection

Step 1: Look

The sweetest nectarines have small white spots (speckle) on the top half.

Plums and nectarines come in a range of colours and generally become dull just before they are ready to eat.

Apricots vary from yellow to orange with a red 'blush'. Wait until they lose any green background before consuming.

Stonefruit with a bright green background colour is immature and will NOT ripen to customer satisfaction.

Remember, stonefruit should have eye appeal and be free of bruises.

Step 2: Smell

Fruit should have a delicate sweet fragrance.

Step 3: Taste

Test the fruit daily to check its eating quality. If it's very firm and acidic to taste, the fruit is immature. If it's dry or mealy, it has been stored at the incorrect temperature.

Storage Temperatures

22 – 27°C	DANGER! Too hot.
15 – 22°C	Ripening fruit is best kept at room temperature.
8 – 15°C	Fruit ripens slowly.
2 – 8°C	DANGER! Never store fruit between 2° – 8°C – this causes the fruit to become dry and mealy.
2°C	Keep fruit between 0 – 2°C for longer storage to maintain quality.
0°C	DANGER! Never store below 0°C.

Step 4: Touch

Stonefruit is best just as it starts to soften and should 'give' slightly when squeezed.

Only keep enough fruit for 2-3 days sales to avoid the quality deteriorating.

Handle Fruit Carefully

- Stonefruit bruises easily – minimise handling by displaying in the original trays. Avoid stacking fruit more than 2 deep when loose.
- Fruit which has been bruised by squeezing or dropping should be discarded.
- Brown Rot is a fungal disease usually found around the stem. Discard fruit with brown rot as it can transfer to other fruit.

Problems

Report any quality problems to your supplier or distribution centre, especially if:

- The fruit looks immature.
- The fruit is sour and lacks aroma.
- The tray has more than a few pieces of bruised fruit.
- The tray has more than two pieces of fruit showing fungal decay.
- The fruit has no juice and is browning in the flesh.

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- reduce manual transcription
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- contain an Authorised Officer competency list
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- be available for Department of Agriculture and industry Authorised Officers.

PEMS is scheduled for its first release in November 2013.

Email PEMS@daff.gov.au

daff.gov.au/plantexports

DA1086_09.13

Publication Details …

Australian Stonefruit Grower

incorporating the Low Chill Stonefruit Grower

- 2014 Publication Timetable -

Contributions are invited for the next scheduled publication - **FEBRUARY 2014**.

FEBRUARY	MAY	AUGUST	NOVEMBER
Advertising Deadline **7 February**	*Advertising Deadline* **21 April**	*Advertising Deadline* **31 July**	*Advertising Deadline* **31 October**
Copy Deadline **10 February**	*Copy Deadline* **28 April**	*Copy Deadline* **7 August**	*Copy Deadline* **7 November**

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That's all from me for 2013. The very best to readers for a truly great festive season. Back in 2014.

Col Scotney - **Editor** – *Australian Stonefruit Grower*
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In prosperity, our friends know us; in adversity, we know our friends. - John Churton Collins