



**Pomewest**  
Serving WA Pome Growers



## Pomewest Committee Members

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## APC-Pomewest major projects 2016–17 and their funding allocation

Project	\$
<b>Commercialisation for WA (FW Co-operative Ltd)</b>	120,000
<small>Note less 50% salary reimbursed for professional services of Nardia Stacy as executive officer as in 15–16 financial year.</small>	
<b>Dormancy and New Technology Project (Susie Murphy White)</b>	68,500
<b>Medfly Surveillance Trapping Network (Ashmere Consulting)</b>	52,750
<b>Codling Moth (DAFWA)</b>	35,000
<b>Maturity Standards legislation and compliance (Ashmere Consulting)</b>	25,000
<b>Natural Mite control Project (shared with the Stone Fruit Subcommittee) (Stewart Learmonth DAFWA)</b>	25,000
<b>Natural Mite control Project (shared with the Stone Fruit Subcommittee) (Stewart Learmonth DAFWA)</b>	18,300
<b>Promotion &amp; Publicity Local Project (Fresh Finesse)</b>	16,000
<b>Biosecurity fund balance</b>	65,000
<small>Note after deducting \$28,500 contribution to Q Fly eradication</small>	

## APC Fee for Service

POME Fruit effective from 1 January 2015

Type of fruit	\$/kg
<b>Fresh fruit — Apples, Pears, Nashi, other</b>	0.015
<b>Processing fruit</b>	0.005
<b>Biosecurity FFS for fresh fruit</b>	0.002
<b>Biosecurity FFS for processing fruit</b>	0.001

# From the Executive Officer



BY NARDIA STACY  
EXECUTIVE OFFICER,  
POMEWEST

After a robust 2015–16 season with good supply and well coloured fruit, we have started the new season with a cold winter making chill accumulation better than average and tracking along just below the coolest 10% of years.

APC FFS data indicates a season of sales and production is line with previous years with no major growing incidents to report.

Whilst growers enjoy some respite after harvest, we look to the future and the pursuit of excellence in our quality to continue to increase demand for our product.

### Sam Licciardello

We welcome Sam to the Pomewest Committee, we are very fortunate to have third generation Donnybrook orchardist on board.

Sam's family has been growing on the Golden Mile site since 1950. Sam and his father Cirino run 45 hectares of orchard which is now known as Orchard 1 Sixty. The orchard comprises of mainly apples and pears with plums, nectarines, peaches and cherries.

Sam is passionate about growing fruit and he has joined with the vision encourage the growth of the WA industry and to offer assistance to growers. He believes in pursuing excellence and growing the best fruit possible, and believes working harder to improve each year is the key to progression.



SAM Licciardello.

### Horticulture Conference Gold Coast 22–25 June

WA growers, Committee members and staff had a great time at the Horticultural Conference in June and it was great to see so much buzz about the new Bravo™ apple which performed admirably in the sensory tastings of new varieties. The conference as always was a great way to network with other growers and researchers, gather information, fresh ideas and innovations. Committee representative Mark Scott will report on the conference in this edition.

### Hort Innovation/APAL roadshow July 25–27 July

Pomewest have supported Hort Innovation and APAL by organising various lunch and dinner meetings with John Dollison APAL and Mark Spees Hort Innovation in the three major growing areas. Discussion surrounded APAL' current work around backpacker tax, work place relations, waxing were discussed along with Hort Innovation plans for marketing and strategic planning for research and development. More details on these Roadshow will be available in the APAL publication the Australian fruitgrower.



## Online registration for apple, pear exporters

### Fumigation Workshop 28 July

Pomewest organised for an information session from DAFWA Manager of Border Biosecurity — Grant Jackson to explain the processes and protocols of fumigation of Eastern States imports at the borders. This workshop clarified the roles biosecurity responsibilities, processes and audits undertaken. Assurances were given that the current biosecurity practices undertaken by DAFWA pre and post border (cold storage and fumigation) will remain stringent underpinned by good science and fruit imported into WA from the Eastern States via sea container is subject to the same level of inspection and fumigation harbours and airports. Growers also were present from the DAFWA regional office in Manjimup.

Opportunities for growers to ask questions rounded off the session. A future article for this publication is planned.

### This edition

We present articles on the Horticulture Conference, promotions, Medfly glasshouse trials, online registration for apple, pear exporters and Netting Orchard Update.

I hope that you are continuing to find the subscription to the *WA Grower* magazine beneficial, I welcome any feedback or suggestions for future editions. 

### MORE INFORMATION ►

Contact Nardia Stacy on (08) 9368 3869 or [nardia@pomewest.net.au](mailto:nardia@pomewest.net.au)



Apple and pear growers will soon be able to register online to export, thanks to the Australian Government who have granted APAL \$117,810 to deliver an online export registration process and prepare market access documentation.

The funding from the Package Assisting Smaller Exporters (PASE) will also be used to develop market access documentation that will assist the industry negotiate technical market access and respond quickly and effectively to any future market disruptions.

As it currently stands, the registration process for export accreditation for the apple and pear sector is a manual process. Growers/packhouses complete the paperwork and then scan and send it to APAL for checking. APAL then compiles the data and sends it to the Department of Agriculture and Water Resources (DoAWR) who complete the desk audit and issue the respective export registration numbers.

Not only is this current system very time consuming for all concerned, the quality of information received is of varying standard because it may include handwritten forms and unclear maps, or lack GPS indicators or complete block-identifying data. The system is labour intensive, unprofessional, and subject to human error.

Other industries, namely Citrus Australia and Australian Table Grapes Association, have developed online registration programs. Rather than re-invent the wheel, this project will allow APAL to review the two existing systems, select the most appropriate system and work with the chosen entity to adapt the software to incorporate apple and pear data. APAL will work with the service provider on the administration process and roll-out a training program to all current and potential apple and pear exporters on how to use the online export registration system.

The move to an online export registration program will deliver:

- process efficiencies
- consistency in data collection
- traceability and transparency
- professionalism

Work has commenced on this project and APAL aims to have the online registration system up and running for the 2017 export season.

The market access documentation project will deliver two outputs:

- **Standard Operating Practices (SOP)** — a description of management along the supply chain of major pests of concern to China, Vietnam and Taiwan, and;
- **Hierarchy of Preferred Treatments (HOPT)** — a description and ranking of preferred phytosanitary treatment schedules for apple and for pear exports.

The SOP document provides DoAWR a central 'go to' place that describes how the industry manages major pests of concern to trading partners (where we seek new access or improved access). The SOP will describe pest management along the export supply chain, from budwood, nursery, orchard, packing shed, cool store, and air or sea shipment. The comprehensive document can be used by DoAWR to help expedite trade negotiations.

The HOPT document will ascertain the cost of alternate treatment schedules, cost per container/pallet and the perceived impact of treatments on fruit quality and shelf life. This includes the primary apple and pear treatments and their schedules, including on-shore and in-transit cold disinfestation, methyl bromide fumigation, irradiation and T108a. The rankings will provide DoAWR and APAL a platform to negotiate, moving down 'the list' until a mutually satisfactory outcome can be resolved. 

### MORE INFORMATION ►

For more information contact Olivia Tait, APAL, (03) 9999 2702 or go to [apal.org.au](http://apal.org.au)

# 2016 National Horticulture Convention

BY MARK SCOTT  
POMEWEST COMMITTEE MEMBER

The 2016 Horticultural Convention in the Gold coast was vibrant affair of technical information, across industry topics and networking opportunities for the 1,500 people attending from the pome, persimmon and vegetable industries.

Thursday, for the pome fruit attendees, started with an industry breakfast with a presentation by John Dollisson, APAL CEO, who after discussing the current state of the industry went on to challenge the industry in two ways, the first by showing modelling showing that exporting only 5% of our crop at cost could add millions to the end returns to growers pockets and the second to challenge the industries perception of where we carry out our production — that maybe we could grow apples in glass houses in semi-arid areas, using the sunlight to power heating and cooling systems to grow our crop to exact environmental conditions.

A series of presentations from research and innovation partners continued through the morning and included topics such as robotics (the robot had been used to measure crop yield in an 80t/ha block and showed a variation per tree from 42t/ha to 140t/ha), future orchards, artificial bud extinction, winter chill and dormancy breakers. The PIPS 2 project including; tree structure, IPM, nutrition, pear production and biennial bearing. Nicola Dallabetta from San Michele all'Adige, Italy, gave an insightful presentation on the growing techniques used in his area of Italy and the reasoning behind how they prune apples. Garry Langford provided an update on the activities of Prevar.

The afternoon session started with a tasting lesson by wine writer for "The Age" Richard Cornish, followed by a tasting session of ten new varieties on offer including Kalei, Bravo, Honey Crisp, Modi, Rocket, Kanzi and Papple. Bravo was described as green, grassy Lucerne, cut hay with sweet aromas.

A couple of different presentations in the afternoon included a company that works with inventors to further solutions

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**MARK and Catherine Scott investigating Trac Map precision agriculture at the trade show.**

to problems presented to them — they have a billion dollar back ground funding (including Bill Gates). They are working with Hort Innovation to come up with solutions to various industry problems.

The Food Revolution group presented on their innovative new smoothies, juices and dried products made using new technology that they market through Coles.

Stuart Burgess and Graeme Yardy from Hort Innovation presented on the Hort Innovation Research and Development Program and Marketing Program respectively. Whilst there was recognition of a slow start since its inception, shown by the level of reserves built up in industry funds, a more structured approach is now being taken. The marketing program has a new Manager who believes we will see a renewed vigour in their program in the near future.

The APAL annual general meeting was held. The motion to change the constitution in relation to the numbers of Directors needed for a quorum was defeated, due to concern that a there may not be a majority of growers, only professional Directors making a decision. The other motions were passed.

**APAL is in a strong financial position and is looking to drive the industry forward particularly with marketing and exports.**

Friday was a combined program for all areas of horticulture.

Martin Kneebone from Fresh Logic discussed the opportunities and challenges of marketing fruit and vegetables in the snack food market, which is worth \$9 billion separately from our usual markets. Jon Entine talked on GMO and the need for farmers of all types to tell their story to allow the rest of the world to understand what we do. Rachel Mackenzie from Growcom talk on the Queensland industry best practice program Hort360 and labour hire issues. The afternoon allowed delegates to attend a huge 103 stand trade display.



Photo: Good Fruit and Vegetables



Photo: Good Fruit and Vegetables

**CATHERINE** Scott (Nannup Fresh Fruit), Shemia Turbett (Erceg Holdings Donnybrook), Tania Chapman (Voice of Horticulture), Niki Wood (APAL) and Paul Good (APAL Director) at the Gala dinner.

Friday night was the night of the masquerade dinner, which provided a great chance to network in a social environment complete with jazz band for entertainment.

Saturday morning again was down to technical pome presentations. Ross Wilson from Agfirst talked on the 14 points of good growing, Marcel Veens talked on plant bio regulators and harvesting quality aids. Rachel Mackenzie talked on labour hire and the risk to the industry image of getting it wrong. Tienie Du Preez from South Africa talked on the South African industry and their techniques for making it work in difficult situations.

Scott Paterson talked about succession planning. Martine Kneebone talked on the change to marketing, including amazon installing refrigerated letter boxes so households can have perishables delivered. Nathan Bishop, Costco, gave a presentation of their retail model which sells anything from tyres to apples and even coffins in the one store. Denise Hamblin talked on marketing research work on pears in Indonesia.

Saturday afternoon's panel session was putting the technical into practice.

The first **"Disrupt your orchard"** — was about future design of orchards and the risk management about them.



The second was **Changing Varieties** — the opportunities and considerations in a changing varietal access world.

The third was **New Technologies** — from soil mapping, harvest platforms, bin traceability and robotic crop load monitoring what is the future and what do we have to consider.

The main outcome of all the sessions was **leave your farm and look what others are doing!**

The last night was the Gala dinner with awards for many categories including researcher of the year, young grower, women in horticulture, grower of the year and lifetime achievement awards to name a few. It would be good to see a few more nominations for WA growers in more categories.

**SUSIE** Murphy-White (Pomewest), Dan Kuzmich (vegetablesWA) & Nardia Stacy (Pomewest) at the masquerade dinner.

The Conference as always was a great way to network with other growers and researchers, gather information, fresh ideas and innovations.

**MORE INFORMATION ►**

Contact Mark Scott [markpscott@bigpond.com](mailto:markpscott@bigpond.com) or Nardia Stacy [nardia@pomewest.net.au](mailto:nardia@pomewest.net.au)



# Netted apple demonstration

## final summary



BY ROHAN PRINCE<sup>1</sup>, SUSIE MURPHY-WHITE<sup>2</sup> AND LISA STARKIE<sup>1</sup>

<sup>1</sup> DEPARTMENT OF AGRICULTURE AND FOOD WESTERN AUSTRALIA

<sup>2</sup> POME WEST

The final harvest of the netted apple demonstration site at the Lyster Orchard in Manjimup is complete. Established in October 2013, the demonstration aimed to show the value of netting to improve water use efficiency and productivity in high density orchard production systems.

The 1.2 hectare site has 0.5ha of permanent net constructed over an established Cripps Pink and Fuji orchard. Sections of black and white 16mm quad netting were installed, each covering 0.25ha. The remaining area contained two comparison blocks, a DAFWA-managed

**NETTED** apple demo site at Lyster Orchard.

no netted area, and a grower practice no netted area as control treatments.

Particular attention was given to assessing the impact of netting on fruit quality parameters such as sunburn, blush and background colour development along with assessing bird and hail damage if recorded in the outside treatment. Water use was measured using water metres on individual lines within each treatment.

### Demonstration treatments

Initially there were four treatments comparing, black, white and no net areas. One no net area was the control demonstration while the other no net area was current grower practice. In response to high vigour and excessive sod culture in the first season a small test area using drip irrigation was installed either side of four rows of trees under the changeover from black and white net.

Significant reduction in water use in the second season and reduced vigour with no decrease in yield prompted the whole site to be converted to a single line of drip irrigation per row for the 2015–16 season.

All irrigation was managed using a separate pump and irrigation controller reducing the number of treatments to three being:

1. Black net, drip irrigation
2. White net, drip irrigation
3. No net, drip irrigation

The netted treatments consisted of four rows of Cripps Pink, separated by two rows of Fuji between the next treatments. The remainder of the area became one single outside net treatment in the final year.

All thinning, pruning and tree management was undertaken as per normal practice by the Lysters. Nutrition was applied via a Dosatron positive displacement fertiliser injection system, as advised by the Lysters and their agronomist.

Harvest was undertaken on a commercial basis starting the last week of April and continuing through mid-May. The last fruit diameter measurement was taken for each treatment on the 29th of April.

### Results 2015–16

Irrigation water applied to netted treatments was recorded at 1.7 mega litres (ML) per hectare (ha), while 2.0 ML/ha was applied outside the netted area. Rainfall from September to April was 378mm while evaporation for the same period was 1190mm.

Average fruit diameter measured was 71.9mm under the black net, 72.9mm under the white net and 72mm in the outside netted area.

While there was minor hail during the season, no hail damage, bird damage or significant sunburn was recorded in any of the treatments.

## Discussion and comparison between seasons

The difference in rainfall of the three growing seasons September to April was only 28mm (362mm, 390mm and 378mm for 2013–14, 14–15 and 15–16 respectively), while evaporation was measured at 1258mm, 1231mm and 1190mm.

To remove the difference between evaporation and rainfall between seasons, water applied to each treatment was compared to net evaporation (evaporation minus rainfall). A lower proportion of evaporation replacement indicates a lower application of water.

Between 2013–14 and 2015–16 seasons irrigation water applied to the site was reduced from 0.78 of net evaporation to 0.23 in the DAFWA managed outside net treatment and slightly less in the grower outside net area 0.64 to 0.23 (5.8 to 2.0ML/ha). Inside the netted area irrigation water applied was reduced from 0.63 of net evaporation to 0.21 (5.3 to 1.7ML/ha).

**Assuming all rainfall was effective within the growing period, the total water applied to the crop, irrigation plus rainfall was reduced from 9.42ML/ha to 5.78ML/ha, a reduction of 40% over the three year demonstration**

Fruit diameter during the demonstration was relatively constant in the DAFWA managed treatments, but an increase was seen in the grower section over the three seasons (68mm to 72mm). Results indicate that the 15–16 season using drip irrigation led to better fruit size in all but the black net treatment (see Figure 1).

Reduction in sod culture led to less mowing and maintenance in the orchard. While lower light and excess vigour in the first two seasons under the netted area required increased thinning and pruning during the season. In the 2015–16 season, increased pruning and earlier installation of Extenday reflective mat resulted in better colour development under the net than experienced in previous years. While pack-out data is not available, the Lysters have commented that using drip irrigation led to reduced vigour and will most likely result in the best harvest of the three-year demonstration under all treatments.

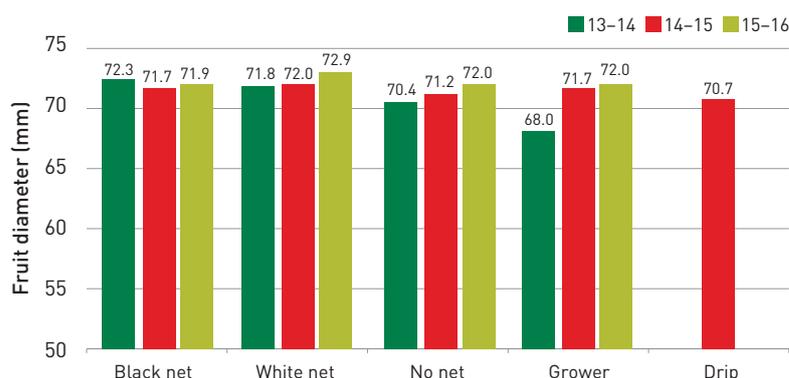


FIGURE 1 Fruit diameters prior to harvest at the netted apple demonstration site in Manjimup  
Source: DAFWA

The 66% reduction in water applied from 2013–14 to 15–16 resulted from the introduced drip irrigation on the site. Water was only applied in a narrow strip along the tree rows, reducing sod culture and therefore water use on the site. It is estimated the wetted area was reduced from full coverage of four metres between rows to a wetted area of 80cm diameter. The reduced storage capacity for the plant to extra water required frequent irrigation as many as three times a day during the peak of summer.

Confidence to reduce irrigation was gained from employing evaporation based scheduling as a reference to crop water requirements and fine-tuning applications using soil moisture sensors. Data from the soil moisture sensors allowed decisions to be made such as when to start the season’s irrigation, reduce irrigation prior to rainfall and re-commence irrigation after rainfall, with the confidence that the crop had available soil moisture and was not stressed.

An example using soil moisture monitoring to guide irrigation was following 100mm of rainfall in January. Irrigation was reduced from 9.6L per tree per day to 0.9L per tree per day for three weeks following the downpour. Irrigation was only being applied to replace nutrients lost to leaching until soil moisture had returned to levels prior to the rain.

### Summary

Using drip irrigation will significantly reduce irrigation requirements but requires a more rigorous method of scheduling and monitoring. Following evaporation

and using soil moisture monitoring should be part of any irrigation practice and is especially important when implementing a new practice to a business.

Netting reduced water requirement by approximately 20% more than a non-netted orchard. Change in practices, including summer pruning, pest control and time of colour enhancing was required to achieve fruit colour and quality of fruit inside the net

While there was little sunburn during the demonstration, netting did reduce the incidence of damage and resulted in lower fruit surface temperatures in extreme heat events. When bird damage occurred, there was none under netting compared with outside netting. Hail enough to damage fruit was not experienced at the demonstration site during the demonstration, but it is thought that small enough diameter netting would reduce the velocity and therefore the damage caused by large hail.

### MORE INFORMATION ►

A special thanks to Mauri, Ann, Tim and Michelle Lyster for hosting the demonstration site over the last three seasons, along with DAFWA and the funding partners, Department of Regional Development Royalties for Regions, Horticulture Innovation Australia, Department of Parks and Wildlife and the Australian Department of Agriculture without their support and assistance this work would not have been possible. Also thanks to staff at DAFWA’s Manjimup Horticultural Research Institute for assistance whenever it was required, this was much appreciated.



# An apple for the teacher? Well actually for the students



BY NOELENE SWAIN  
FRESH FINESSE

Contrary to the old adage “an apple for the teacher” apples were the highlight for the students at two Perth high schools in recent months.

Promoting apples to school canteen managers at the WA School Canteen Association training workshops fired up the enthusiasm of a high schools to improve school based apple consumption and led to prominent promotional activities in a number of schools.

Over 700 students at Cyril Jackson Senior Campus where delighted to grab an apple as part of their annual Health Festival on 11 May. Apples featured prominently amidst the 50 health related stalls when staff from Women’s Health & Family Services and Edith Cowan Uni Health Promotion students introduced new apple varieties and encouraged teenagers to eat well.

Kennedy Baptist College integrated a Grab a GREENSTAR promotion into their canteen menu in June. Whilst initially planned for a single day, the celebration’s success lead to the program being extended over two

weeks. The highly motivated canteen team went all out to create a fun and festive vibe with banners, costumes, and prominent signage to ensure all 1,200 high school students were included.

The GREENSTAR apple was extremely well received as the teams put Slinky machines into action to prove even ‘cool’ teenagers are over joyed by an apple spiral!

Students were heard to positively comment “those GREENSTAR apples are awesome, they are so fresh and juicy” and “I’m telling my friends to eat them too!” They loved the idea that they didn’t go brown when cut and those with braces on their teeth were impressed they could cut the fruit at home and eat it happily for lunch or a snack at school.

Supporting schools to run this style of healthy eating programs is an effective opportunity to ensure kids are enjoying apples as a regular part of their snack menu — both now and in their years ahead. 🍏

**MORE INFORMATION ►**

Thanks to Newton Bros Orchards for their support of these activities.