

fruitgrower

A U S T R A L I A N

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New apple rootstocks coming soon



APAL grower needs survey
Pruning lays the foundation for next year's crop

THE OFFICIAL MAGAZINE FOR APPLE, PEAR AND SUMMERFRUIT GROWERS IN AUSTRALIA

Australian Fruitgrower

Australian Apple and Pear Ltd (APAL) and Summerfruit Australia Ltd (SAL) are the peak industry bodies representing the interests of commercial apple, pear and Summerfruit growers in Australia in matters of national importance including regulation, legislation, marketing, research and development.

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Editorial

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Editorial

APAL recently conducted the third major survey of apple and pear growers and, for the first time, asked what proportion of grower income was sourced from the orchard itself. On average, growers were found to earn more than one third of their income off-farm. Clearly more than half of growers have 31 years or more experience in the industry. More results and comment on this survey are in this issue of *Australian Fruitgrower*.

This information provides important pointers toward the future needs of the industry for R&D, marketing and business support in the coming years – especially against the background of the arrival of imported apples, the water debate, and the Productivity Commission's investigation into current industry R&D structures and frameworks.

While at least half of the growers surveyed still had plantings of 1500 trees/hectare or less, more than 70 per cent of new plantings (most of which had been made in the last two years) were above 1500 trees/ha and more than half were 2500 trees/ha or above. About 40 per cent of growers signalled intentions to replant more orchard area over the next two years. These trends are positive, influenced heavily by the Future Orchards programs and supported by technical information carried to growers via *Australian Fruitgrower*. Nevertheless the 'foundations' must be right and most growers (as surveyed) will obviously find interest in Dr Gordon Brown's report on new rootstocks in this issue.

We were pleased to find the survey revealed that the overall quality of APAL communications are consistently well regarded by growers, and that *Australian Fruitgrower* is the publication most commonly mentioned and recalled by growers. Some 97 per cent of growers regard *Australian Fruitgrower* as "good", "very good", or "excellent". For growers and for us, information, support and feedback are powerful fuels.

Cheers

John Fitzsimmons



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table of contents

Editorial	2
Summerfruit CEO's report	4
APAL Chair's report	5

NEWS

APAL news.....	6
State roundup	8
Pink Lady® wins marketing award	26
Weather, industry information and Greg's Quiz	27
Summerfruit Australia elections	28

IN THE ORCHARD

New apple rootstocks coming soon to your nursery	12
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SPECIAL REPORT

Growing for your market:	
Pruning lays the foundation for next year's crop ..	16
APAL grower needs survey	20

RESEARCH NOTES

International summerfruit R&D	23
International apple and pear R&D	24

Our cover:

One of the new rootstocks growing at Tahune Fields Nursery, Tasmania, (a member of the ANFIC group).
Photograph: Dr Gordon Brown.

Apples and pears capture a new generation of taste buds at 'Family Foodies Day' Melbourne Food and Wine Festival

FEDERATION SQUARE SUNDAY 6 MARCH 2011

Report by Kath Boast, Fruit Growers Victoria

Melbourne Food and Wine Festival organisers were delighted with the success of their latest innovation - Family Foodies Day – held last month. When planning the family day, they could not think of a better partner to invite, than Fruit Growers Victoria (FGV).

FGV has a long and successful record of promoting apples and pears to school children and their families. FGV joined with other horticulture industries that included strawberries, mushrooms and potatoes to form a 'tastings market' that involved product tastings and sales, fruit for kids cooking and interactive activities for children.

Apples and pears won the day as the most popular fruit with more than 4000 apples and pears being sampled, bought or used for kids in the kitchen. Many people just could not believe how good the new season's fruit is this year.

Apples and pears were also a hit in the art area, with many children stencilling fruit bags and drawing apple trees.

A crowd of more than 10,000 came to the free event which attracted many families who enjoyed the healthy eating, kids cooking classes and produce awareness demonstrations.

Stephanie Alexander schools, foodie movies and food art were the other main attractions of the day.

While we thought the pear promotion the previous weekend at The Age Harvest Picnic at Hanging Rock (see page 26 this issue) was very busy, it did not compare to the hectic bedlam at the Family Foodies Day.

It was exhausting for the FGV staff who gave up their weekend, but they were extremely satisfied with the positive consumer comments as they battled to keep up with the demand for fruit tastings.

Williams Pears sold out very early in the day.

They were in perfect condition and "ripe and ready" and almost everyone who tasted them commented that they did not realise that pears could be so fantastic!

All varieties of apples and pears that were available sold extremely well. Some boxes of 'Honey Crisp' apples that were supplied by Witchells Orchards were put out to test consumer response to this variety which is uncommon in Australia. There was instant interest as soon as

Food Celebrity Stephanie Alexander was a major attraction.



tastings were offered, all of the Honey Crisps sold in less than 30 minutes.

The children's imaginations were kept actively engaged in the FGV new 'interactive orchard' which was launched at Family Foodies Day.

This new innovation involves the littlies in role play whilst educating about orchards and the growth cycle of fruit. They were able to have a hands-on approach to pollination, IPM, thinning, picking, packing and marketing as they dressed as bees, lacewings, ladybirds and pickers and were guided through seasonal role play.

The interactive orchard received many enquiries for visits to libraries, schools, and agricultural societies. Whilst it is beyond current resources to fill all these requests the enquiries suggest educating at grass roots levels will be fundamental to securing the market share of Australian fruit against imports.

The undoubted stars of the day and the main attraction of the FGV display was the high quality fruit, the different varieties on offer and exciting recipe options. No event can be this successful without top notch planning and execution FGV is thankful for the staff, volunteers and growers who helped make the event a huge success. ■





Industry roundup

A workshop will be held on 13 April through the Dimethoate and Fenthion Response Coordination Committee (DFRCC) to achieve industry consensus on uses that can be removed or modified due to the availability and efficacy of alternatives. Key intended outcomes are to:

1. Review current registered uses of dimethoate and fenthion and identify which are no longer used in crop production and what is being used instead;
2. Document the actual rates of dimethoate and fenthion used in pest control i.e. rates of active ingredient applied per hectare.

Outcome 1 may help to identify alternative chemicals for pest control and will also potentially allow the APVMA to focus its activity on uses that are still necessary.

Outcome 2 will allow the industry to quantify the amount of each chemical that is used in practice. This information will be sought by the APVMA as part of its review processes. The labels for both actives often have a rate per 100 litres and no instructions as to the rate per hectare. Actual usage may not reflect Occupational Health and Safety, and Environment assumptions.

All parties will review the "consumption plate of residue attributable to current recommended usage" and one outcome may be a reduced "average daily intake". Crucial to this is also the "acute reference dosage" which will ultimately be the formula that the APVMA uses when reviewing to ensure that all registered agricultural chemicals are safe for humans (users and consumers).

Other APVMA considerations cover wildlife and the environment.

Summerfruit will have Low Chill, High Chill and West Australian representatives present to participate and monitor the ongoing progress. Throughout this review, the industry DFRCC has been pushing for a wider participation by industries not as affected by the outcome of the APVMA review as the summerfruit industry. Those of you who produce pome fruit, for example, have access to alternatives and superseded chemicals. I expect the same to be the case for certain vegetables. So the workshop should bring everyone up to date with what is really the current practise.

Asian honeybees

Recently it was announced by Sen. Joe Ludwig, Minister for Agriculture, Fisheries and Forestry, that the Asian Honey Bee Management Group (AHBMG) had recommended to him that the eradication of the Asian honeybee, discovered in Cairns, North Queensland in 2007, is no longer technically feasible. The eradication program officially ends 31 March 2011. A working group will be established to determine what further action could be undertaken to mitigate the impact of the Asian honeybee on the honey industry and other industries reliant on pollination.

Unfortunately all of the preliminary details are under high level classification and this prevents giving any more detail to those who need to know – you. This is probably clearer to those of you who have read George Orwell's famous novel 1984 where totalitarianism is 'Big Brother'. I did hear in a teleconference that the AHB will not travel further south than Brisbane but in one sharp response from an eminent expert, expect to see the AHB well past Brisbane, in the wider temperate regions. What is most alarming is that the AHB will bring new viruses – most comforting!

Industry IAC

The Industry IAC met recently and approved two key projects (along with some others) including SF11000 – 'Improving consistency of soluble solids concentrations (SSC) in summerfruit'. The project will run over three years and, under the guidance of Project Leader Dr. Barry McGlasson, University of Western Sydney, Mr John Lopresti (DPI Victoria) =will make this his PhD topic.

This project will provide growers with improved knowledge of the factors that cause the large fruit-to-fruit variation in SSC. This applied knowledge will lead to improvements in tree training and management that will improve fruit quality and ultimately increase consumption of peaches and nectarines.

Establishing collaboration with Institut National de la Recherche Agronomique (INRA) scientists in France will facilitate exchange of information that will assist our summerfruit industry in the longer term. French scientists are at the world's

forefront of advanced research on the genetic regulation of fruit quality and collaboration with these scientists will assist the Australian summerfruit industry. Another much sort after project to be undertaken is SF10021 – 'Technical specification for optimising consumer preferences in summerfruit'. The Australian stonefruit industry is facing static domestic and export sales, and increasing competition from imported fruit on local markets. The trends are a major threat to the growth and viability of the industry. Variable fruit quality, particularly in taste and texture, has been identified as the major impediment to increased sales on both domestic and export markets.

Action is required to identify what consumers want with respect to stonefruit quality. The key desired attributes need to be measured objectively so industry can provide fruit that meets consumer preference criteria. Results will give a firm indication on Australian consumer preferences for a range of summerfruit and facilitate improved marketing programs and better selection of new varieties. The objective measurements of sweetness, firmness and acidity will be correlated to the consumer preferences. This will enable objective assessment and selection of fruit that meets consumer expectations.

Export roundup

Summerfruit exports were 4,500 tonnes to January 2011 – 3.6 per cent below this time last year.

- there were 9,944t shipped in last 12 months.
- Value to January \$14.47m is 7% ahead of last year.
- Taiwan is back on the charts again with 282t recorded YTD January – all peaches and nectarines.
- Hong Kong, Middle East and Singapore are the early volume drivers accounting for 83% of exports to date.
- UK volumes lift later in the season with a March program for plums – this should be around 800t.
- Mid-season exports by type show nectarines lower by around 17%, plums are up 15%, and apricots up 35%.

John Moore

CEO - Summerfruit Australia
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APAL Chair's Report

Fruit Logistica and all that goes with it

In the last issue of Australian Fruitgrower Jon Durham commented that the recent Fruit Logistica held in Berlin during early February was the best that he had seen. I can only agree with Jon's comments, as the displays exceeded any previous Fruit Logistica in both number and quality.

It was also pleasing to see the Australian fruit and vegetable well represented by not only the Australia Fresh stand and display, but also the number of industry participants who were visiting the event. Once again Ausveg co-ordinated their industry growers' tour to allow participants to visit the northern hemisphere's largest fruit and vegetable trade show. Along with representatives from Horticulture Australia Limited (HAL), a number of individual large Australian horticultural businesses also were in attendance. Compared to the PMA expo held in the USA each October, Fruit Logistica highlights the European way of doing business that is all about developing relationships, not just selling a product.

World Apple & Pear Association

To co-ordinate with Fruit Logistica, the World Apple and Pear Association (WAPA) also has its annual general meeting at the same time and at the same venue to allow as many apple and pear producing countries as possible to participate. This year's AGM was extremely well attended with almost every apple and pear producing country attending to discuss issues that are common to us all.

The issues of healthy eating and the attributes of apples have been on the agenda for a number of years and there has been great interest in the domestic promotional campaign that the Australian industry has been running for the past three years. As a result of that interest APAL arranged for Michelle Toft, who worked on the Australian campaign for a number of years, to make a presentation highlighting the activity that has taken place. Michelle's presentation was very thorough and very well received with discussion then taking place about the feasibility of a global apple campaign to encourage greater consumption worldwide.

It was interesting that for the first time at WAPA, a presentation was made by a Chinese representative outlining the Chinese apple industry, and highlighting the fact that almost half of the apples grown in the world are grown

in China. It was also mentioned during that presentation that China now has access to Australia and that the Australian industry had mounted an effective consumer awareness campaign.

At the end of the WAPA AGM Mr Kevin Moffitt from the North West Pear Bureau in the USA was elected President and Mr Peter Beaven from Pipfruit NZ was elected Vice President. In his closing remarks Mr Moffitt made some unfortunate comments regarding the Australian industry and our fire blight campaign. However, since then, Mr Moffitt and I have had a discussion and I would hope that we will not see those remarks repeated.

International competitiveness

I am sure that the Americans are looking forward to the day that they gain access to Australia and, with the USA being the home of fire blight, it will be another fight that we will have to have.

Not only does the American industry enjoy a number of export enhancement subsidies, but their cost of production is also considerably lower than ours. The internet has given us a great tool to be able to search the conditions that industries in other countries have to comply with.

One interesting email that I came across recently was an exchange between a number of American apple growers complaining about the recent wage increases granted by the federal American government. These increases were of the magnitude of 10 per cent...from (now get this!) US\$9.74 to US\$10.60 an hour!! With the exchange rate now around parity that would be a similar amount in Australian dollars per hour but then we have to pay nine per cent superannuation plus workers' compensation etc.

So when next a politician or an economist starts banging the drum about us not being internationally competitive there is a ready answer for us to use and that is our labour costs per hour are much higher than anywhere

else in the world. It is well recognised that the issue of award modernisation, introduced by our current Prime Minister in 2009, has added around 15 per cent to the average growers' wage bill.

A global initiative

Fruit Logistica also saw the announcement of a commercial initiative between five major players from across the globe. This event saw the formation of the International Pome Fruit Alliance. The aim of the alliance is "primarily to provide pome fruit variety managers from around the world with a means of both assessing their new selections and commercialising them globally via dealing with one entity"

This new entity is a registered alliance based in the UK and is owned by five major players within the global pome fruit industry. They are:

- **Fruitways, South Africa (represented by Alistair Moodie)**
- **Heartland, New Zealand (represented by John McCliskie who is the acting Chair)**
- **Montague Fresh, Australia (represented by Ray Montague)**
- **San Clemente, Chile (represented by Andrew Wallace)**
- **VOG/VIP, Italy (represented by Gerhard Dichgans)**

Collectively, this group has more than 20,000 hectares of pome fruit production and their aim is to "provide variety owners around the world with the ability to fast track the testing of their varieties and to work with one entity to achieve global reach at a production level".

The formation of this group highlights the ongoing consolidation taking place in our industry as the benefits of working together continue to be recognised.

Resignation of Ken Bell

It was with deep regret that Ken Bell from Tasmania informed me that he would be stepping down as a Director of APAL. Those who know Ken are aware that he has been unwell for some time and needs to step back from some of his activities to recuperate. On behalf of the Board of APAL I wish him a speedy recovery and look forward to seeing him around and about in the near future. ■



Marketing committee meetings

With imported apples now available in Australia, and with the prospect of volumes of imported apples from New Zealand increasing next year, the industry is focusing strongly on marketing issues, both on the domestic and export fronts. In March, both the Domestic and Export Marketing Committees met.

The Export Marketing Committee:

- Finalised the 2011 export promotion activities for both apples and pears. There will be pear promotions conducted in the Canada and New Zealand markets and apple promotions in diverse markets through SE Asia, Japan and the United Kingdom.
- Developed export marketing plans for the next three years and put a priority on which markets should be targeted.

The Domestic Marketing Committee

meeting finalised the rollout details for the new Aussie Apples campaign, which will be launched mid-year. The new logo will make it easy for consumers to identify Australian grown apples. ■

Outlook Conference

Industry Services Manager Annie Farrow attended the Australian Bureau of Agricultural and Resource Economics and Science (ABARES) Outlook Conference in early March.

In his opening address, Agriculture Minister Joe Ludwig stressed the need for an increased focus on improving productivity.

This issue, together with the Government's response to the Productivity Commission report into funding of the RDCs, will be covered in a National Food Plan. This plan aims to identify the opportunities and risks facing the long term sustainability of food production in Australia, with removing excessive government red tape one of its primary targets.

Conference speakers painted a buoyant outlook for Australia's horticultural industries, with world demand for fresh fruit, nuts and vegetables growing, and the value of production in Australia also forecast to rise by an average of one per cent for the next five years.

The Bureau reported that a strong Australian dollar (forecast to remain around 95 cents (US) for the next few years), shortages of skilled labour and water market reforms were the key challenges to further growth in horticulture output and value.

Greg Williamson (DAFF) reported on developments on agricultural chemical reforms. The COAG Single National Regulatory Framework for Consultation Paper (now available at http://www.daff.gov.au/_data/assets/pdf_file/0007/1893130/Consultation_RIS_A_National_Scheme_for_Assessment_Registration_and_COU_of_Agvet_Chemicals.pdf) canvasses options in relation to national versus state control of control - of- use functions, access to chemicals (eg minor use), training and licensing of chemical users, use control systems (eg monitoring, auditing, record keeping), management of risk and the efficiency and effectiveness of chemical registration and review.

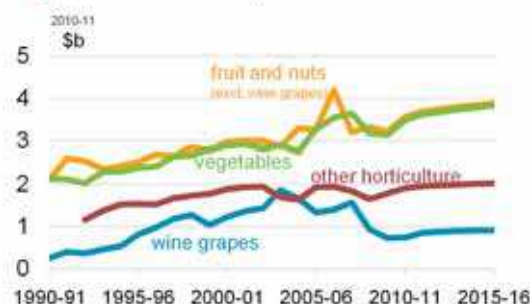
A number of DAFF officials reported on progress in relation to biosecurity and quarantine, with Dean Merrilees suggesting that a package to reform Australia's Export Certification System would be out by June 2011.

The conference also addressed topics such as rebuilding agriculture, sustaining productivity growth, socio-economic outcomes under the Murray-Darling Basin Plan, food security and trade, climate change, the innovation to adoption pipeline, sustaining the professional capacity for agriculture, and the future of farming.

All of the papers can be downloaded at: <http://www.abares.gov.au/outlook/program>.

All of the sessions were videoed and these will be available through YouTube from late next week. ■

Gross value of horticultural production, Australia





Asian Honeybee Working Group meeting

APAL was part of a phone conference call at which the Biosecurity Services Group at DAFF updated pollination dependent industries on what is happening with the Asian honeybee. The Asian honeybee has become established in north Queensland and a decision has been made not to try and eradicate it. The Asian honeybee:–

- is the natural host for Varroa mite, a major threat to Australia's honeybee industry
- is a vector for other bee diseases and pests
- competes with managed honeybees for floral resources
- robs honey from managed bee hives, which may cause hives to die from starvation
- aggressively protects nests and will sting people. A sting from an Asian honeybee could cause an anaphylactic reaction in allergy-prone people
- multiplies rapidly and may take over nesting sites for native bees, birds and native mammals, threatening biodiversity
- is not suitable for managed pollination of crops themselves. Increased numbers of managed European honeybee hives are likely to be required for pollination due to their strength being reduced by the presence of Asian honeybees in the area. Inadequate pollination of crops affects the quality and quantity of agricultural and horticultural food production.

While eradication has not been attempted, many actions are taking place to contain the pest. Queensland Department of Employment, Economic Development and Innovation, (DEEDI) has enforced a control of movement of bees, has engaged in industry and community awareness programs, is monitoring movement and remotely poisoning the bees and responding to public notification of the bees. A plan to restrict the movement and spread of the Asian honeybee is being devised to be implemented from April. ■



Chinese apple import update

By the third week of March, Chinese apple imports appeared to have slowed with only five containers landed in the four weeks to 23 March.

The total number of containers of Chinese apples stands at 29. Each container holds about 22 tonnes of fruit giving approximately 640 tonnes of apples from China since imports began.



Pink Lady® stand at Fruit Logistica, Berlin
(Ref APAL Chair's report Page 5).

Nominations Sought for APAL Company Director - NSW

Apple & Pear Australia Limited (APAL) in co-operation with NSW Farmers Association is seeking nominations from Class A Members of APAL who are interested in being a Director on the Board of APAL representing the State of NSW.

In addition to serving as a Company Director of APAL the successful candidate would also be put forward to Horticulture Australia Ltd to be accepted as a member of its Apple and Pear Industry Advisory Committee.

Director Nomination Forms can be obtained from NSW Farmers Association by phoning [02] 8251 1700.

Nominations must be submitted by no later than Friday 27 May 2011. Enquiries -

NSW Farmers Association [02] 8251 1700
Apple & Pear Australia Ltd [03] 9329 3511

Growing the Business of Farming
NSW Farmers Association



Nominations Sought for APAL Company Director - Victoria

Apple & Pear Australia Limited (APAL) in co-operation with Fruit Growers Victoria is seeking nominations from Class A Members of APAL who are interested in being a Director on the Board of APAL representing the State of Victoria.

In addition to serving as a Company Director of APAL the successful candidate would also be put forward to Horticulture Australia Ltd to be accepted as a member of its Apple and Pear Industry Advisory Committee.

Director Nomination Forms can be obtained from Fruit Growers Victoria by phoning [03] 5825 3700.

Nominations must be submitted by no later than Friday 27 May 2011. Enquiries -

Fruit Growers Victoria [03] 5825 3700
Apple & Pear Australia Ltd [03] 9329 3511



Western Australia

Apples are enjoying the brief break between the end of the 'Gala' season and the beginning of the 'Granny Smith' and 'Fuji' season. Picking dates for these varieties are looking to again be earlier than last year.

Some smaller 'Granny Smith' have been picked for the Asian market but this is not typical and presented a slight problem, as the count size of the fruit this year is fantastic for the domestic market but mainly too large for the Asian 'market's preference for smaller fruit.

Pink Lady® fruit size is also looking fantastic for the domestic market and picking is expected to begin mid-April, again, earlier than the typical start between the last week of April and the first week of May.

Tasting sessions held for the Department of Agriculture and Food WA's plum breeding program went extremely well

The only summerfruit left on the trees is the 'October Sun' plum that is being picked as we speak. Most of the late season stone fruit varieties, such as the 'Angelino' plum, are now off the trees thanks to picking dates still being around ten days earlier than last year due to the continued lack of rain and extreme heat earlier in the season.

Tasting sessions held for the Department of Agriculture and Food WA's plum breeding program went extremely well and industry is excited by some of the prospects this program may hold for its future.

In contrast, the size of stone fruit this season seemed to be slightly down on last season, which was disappointing for local growers who were forced to leave premium quality fruit on the trees for the birds.

Perhaps through export market development within the ASEAN region, the national stone fruit industry can work together and look to capitalise on the Asian market's preference for smaller counts, finding a market for our high quality, slightly smaller fruit.

Amy Green
FruitWest

Victoria

The 'Gala' apple harvest has been completed with excellent colour, quality and size. The cooler and wet season helped with colour and size this has impacted 'Red Delicious' apples which are presenting with large fruit and good colour.

The William's pear crop was heavy but of sound quality and the Packham harvest is in full swing with growers having to source additional bins for the bumper crop and extra storage space for pears in general. The Beurre Bosc crop is heavy with good russet attributed to the wetter than normal summer.

Most crops are harvesting 7-14 days later than recent drought seasons.

The increasing number of Queensland fruit fly outbreaks is causing considerable inconvenience to Victorian fruit growers who must now fumigate or cold treat shipments if they are in the 15 kilometre restriction zone.

The heavy William's and Packham's crops have meant that Fruit Growers Victoria staff, volunteers and growers have been out and about promoting pears where they can. During March the promotions have focused on Melbourne consumers with smaller events happening in the Goulburn Valley.

Celebrity chef Janelle Bloom was once again a highlight, first with her Ready Steady Cook-off

The additional benefit of this promotion was the add-on marketing from the Queen Victoria Market

in Shepparton, with Lucy from Junior MasterChef as her assistant, then the next day cooking up pears at the Queen Victoria Market. The Queen Victoria Market was treated to a week of pear promotions, which included cooking with pears, grower info and pear variety sampling. This event was very successful with the premium quality pears doing the promotion for us.

The additional benefit of this promotion was the add-on marketing from the Queen Victoria Market which included 8,000 'Rediscover the Pear' email notifications, pear features in Marketlife magazine that is posted to 75,000

recipients, all recipes used were reproduced in the national campaign format and available on the QVM website as well as throughout the market, and also promotion posters were on display in the market which attracts an average of 25,000 people per day.

This extensive promotion was underpinned by the assistance of Impact Communications which succeeded in having pears consistently in media throughout Victoria during March.

The Aussi Apple costume was caught on film picking apples with two Irish backpackers at Warragul. This was part of a DVD that is being produced by Fruit Growers Victoria which tells the Australian apple story and will be used for Victorian schools that cannot be visited by Fruit Growers Victoria.

Fruit Growers Victoria would like to take this opportunity to congratulate Ian Armour of Warragul for being named the Jazz® apple grower of the year.

John Wilson
Fruit Growers
Victoria

Tasmania

► As the apple season gets underway, growers are undertaking their MRL testing which is provided through the FGT Office. The weather appears to have settled with moderate temperatures and the rain has eased off at last.

An apple growers' meeting was scheduled for Friday 25 March. Sophie Folder from Serve-Ag, who took a group of growers to New Zealand in February, agreed to provide a presentation on the trip and an insight into techniques being utilised successfully in New Zealand. Mark Duggan took advantage of the good weather and crowds at the recent Taste of the Huon event promoting his brand of apples.

Sophie Folder presented an insight into techniques being utilised successfully in New Zealand

Mark is working with other growers and FGT to set up a stand at the annual Agfest event to be held 5-7 May at Carrick in the north. This is a major event in Tasmania and attracts around 60,000 people every year.

FGT annual May conference (13-15 May) registrations are beginning to come in and the brochure and registration form can be found on FGT's website (www.fruitgrowerstas.com.au).

The conference will include the Tasmanian industry annual awards presentations at the dinner on the Saturday night and of course there will be the usual field day on the Sunday. This year the field day will include Cherries Tasmania, Old Beach and Cool Climate Apricots, Richmond, concluding at Frogmore Creek Vineyard, Richmond.

Expressions of interest have been called for a proposed grower study tour to Asia in July with a good response from growers.

Sally Tennant
Fruit Growers Tasmania

South Australia

As I write this most Adelaide Hills and South East growers have completed harvest of 'Gala' and are probably taking a brief pause before launching into other varieties. The growers of the Riverland have finished all but their late season apples. Pear growers are bringing in a large crop of pears in stark contrast to last year. It has been a year for exceptional quality with fruit from all regions having excellent colour and internally very sound. Primarily, a timely pattern of significant rain events and far cooler than average summer/autumn period are the reasons for such good quality fruit.

The overall good quality has resulted in strong demand and good prices, which is most encouraging. We hope it will all last and most of us touch wood when quoting these points. The State Minister for Agriculture and Fisheries, Michael O'Brien visited the Lenswood Cold Store's new packing facility on 15 March. He was very impressed by the level of investment in the industry and the adoption of leading edge technology in what is one of the State's "minor" agricultural industries.

It has been a year for exceptional quality

Following the guided tour the Minister met with representatives of the Apple and Pear Growers Association of SA, to discuss the various issues of concern to the industry. Those issues discussed were imports, water security, planning regulations around permanent netting structures, and State biosecurity.

Also of particular concern is the future of the Lenswood Horticulture Centre, a facility that has provided much support to growers for many years. The industry feels that this facility (and staff) is being "nickel and dimed" to irrelevance by cost cutting. On a visit to the Riverland region of South Australia and meeting with apple and pear growers it was pleasing to see lush growth in the countryside and a full river. It is a shame that with so much water now filling the main channel and every backwater, the controversy over the MDBA Basin Plan still remains the hot topic for growers. Growers feel that they, their livelihoods and their communities are being threatened. Concern particularly 'centred on whether the Water Act forces the MDBA to consider the water needs of the



environment first, before considering what is left for irrigators and regional communities. Now the water is back in the system again, and, flowing to the sea, it is perhaps time for everyone involved to take a deep breath... and pause before using a more pragmatic and inclusive process to get this water plan right for all water users.

Greg Cramond
APGA of SA

New South Wales

The harvest in all regions of NSW is well underway. Quality of fruit is excellent with many lines being picked and marketed straight away. The new season prices have kicked off on a high note but have trended back as supply has increased. The early indications are that there will be a good average crop picked from all regions.

Fruit quality must be good as the flying foxes have started to reappear

Fruit quality must be good as the flying foxes have started to reappear in both Batlow (colony is thought to be in Tumut) and Orange (colony not established in Orange as yet).

With the season running two to three weeks later this year they might just need their fur coats. That's about it for now, so all the best to everyone for an excellent harvest.

David Gartrell



Australian Fresh Fruit Company

Australia's leading fruit network

Promotion opportunity for apple and pear

Apple and pear growers can display their product at Fresh Connections 2011, which will take place in Brisbane from 8 to 10 June 2011.

"All growers are encouraged to display their fruit at this event," Sally Piper from Australian Fresh Fruit Company (AFFCO) said.

"This is a great opportunity to show Australia and the world why buyers should choose Australian-grown fruit as opposed to imports. It is also a great opportunity to showcase produce from the region that you come from." Event chair, Michael Worthington from PMA Australia-New Zealand, said major buyers will at the show.

"The major supermarkets and independents including Woolworths, Coles, IGA and Harris Farms will be attending the event. We are communicating with other independents such as SPAR and Franklins and smaller independent local retailers to encourage them, together with Asian buyers, to attend." Sally Piper said it's a good opportunity to make contact with buyers.

"Show Australia and the world why buyers should choose Australian-grown fruit"

"There is a variety of stands to choose from small individual stands to larger stands where you collaborate with businesses in your region to showcase your regional produce. This event is about bringing the industry together and we don't want apple and pears left out of the equation – it's as simple as that", she said.

Montague Fresh has already confirmed it will be displaying fruit with a number of other businesses

in the pipeline. If you would like to discuss options for showcasing your product at Fresh Connections 2011 please contact Sally Piper at AFFCO on (03) 5420 7444 (or email at sallyp@affco.com.au).

A full sponsorship and exhibitor prospectus can also be downloaded from the AFFCO website (www.affco.com.au). ■



Leadership Retreat

AFFCO has expanded its successful 2010 Young Leaders Retreat model to incorporate a young leaders course for ages 20 to 30 years plus a Graduate and Seniors Leaders course for ages 30 plus and for 2010 graduates of the program.

"One of the successful outcomes of the 2010 model was the networking that took place with the group and the strong friendships formed that are still thriving today," said Sally Piper, acting General Manager of AFFCO and coordinator of the event.

"It is this networking with like-minded, dynamic and enthusiastic individuals that can culminate in bringing about change and new directions in the industry and is something to be encouraged, especially in today's competitive market."

Sally said that offering leadership and business management skills to a 30-plus age bracket also recognises the fact that anyone in the industry with the passion to make a difference, take on greater responsibilities, think outside the square and lead by example should be given the opportunity to learn leadership skills and develop strong networks along the way.

The leadership component of the AFFCO Leadership Retreat is designed to help maximise performance by assisting participants to develop their communication skills with different personality types.

"The workshop provides the opportunity for participants to develop a greater understanding and appreciation of themselves and each other" said Glenn McDermott, Visy - Learning & Development Advisor and guest speaker at the AFFCO Retreat. "Participants will have the opportunity to identify diversity and learn how to use it effectively in communication, motivation and delegation".

The retreat also covers topics such as strategic thinking, public speaking, succession planning, horticulture law and a range of other important areas that help us to be better leaders in our workplaces and our lives.

"A drawback of the retreat is its focus on leadership in the horticultural industry together with its short timeframe which allows for those busy participants who can't afford to take more than three days out of their schedule in a given week.

The AFFCO Leadership Retreat will take place in Lancefield, Vic., 25-27 May 2011. Registrations are open and a full program is available to download online at www.affco.com.au.



Australian Government



Climate change adaptation – tools on farm

Following regional workshops in late 2010 and the identification of a key set of climate change adaptation practices, APAL's climate change adaptation project has turned to the development of a software tool for orchard managers.

The tool is being developed using AgDat, a system that captures data about the farm, block and crop based on an aerial photo of the property. The Lenswood Coldstores Co-op and the Batlow Co-op participated in a trial of the system during February and March 2011.

"We are enhancing an existing property management software tool to add some climate change adaptation functions and provide a ready reference to adaptation information," project leader Don Chambers said.

"Using the tool, growers will be able to keep climate records for their own property – even

for individual blocks if they choose – and access data from regional weather stations. Events like hail storms, frosts and heatwaves can be recorded, in addition to seasonal dates like budburst, flowering and harvest. As records build up, this information can be displayed in graph form to show year on year comparisons and identify emerging trends.

"The tool also has the potential to streamline communications between growers, packing sheds and APAL, with growers able to give permission to share some parts of their data with other parties. We also hope to use the system to undertake a short survey of growers to

assess the level of uptake of specific practices that improve climate change adaptability.

"This information is then available to APAL to report on climate change readiness and environmental performance of the Australian apple and pear industry as a whole."

"The tool...captures data about the farm, block and crop"

Following the Lenswood and Batlow trials, the tool will be demonstrated in other growing regions to gauge interest in a broader rollout. This project is supported by funding from the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) under FarmReady, part of Australia's Farming Future.

For more information, please contact Amy Russell; w: amy@naturallogic.com.au; m: 0400 160 442. ■



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New apple rootstocks coming soon to your nursery

By Dr Gordon Brown, Technical Editor – Apple and Pear

In the July 2010 issue of *Australian Fruitgrower* I wrote an article on the M and MM series of rootstocks that have supported our apple industry for the past 40 years. There are two fundamental collections.

The M series rootstocks do not have Woolly Apple Aphid resistance and were derived from centuries of selection of rootstocks in Europe which were brought together, catalogued and renamed at the Malling research station in the United Kingdom at the start of the 1900s. The second series is the MM series, bred for New Zealand and Australia and these trees have a degree of Woolly Apple Aphid resistance primarily derived from a Northern Spy parentage.

The July 2010 article produced a table of tree characteristics for trees in the heritage collection based at Grove Research Station and managed by OAK Tasmania through their Tahune Fields nursery. This table grouped the trees by final tree size as follows;

- **Vigorous rootstocks:** MM114, MM113, MM112, M12, M13, M2 and M1
- **Semi Vigorous rootstocks:** Merton 789, Merton 778, MM109, Merton 793, Merton 779, MM105, MM104, MM103, M15, M11, M16, MM111, MM107 and MM101.
- **Semi Dwarfing:** Northern Spy, MM110, MM106, MM102, M25, M4, and M7
- **Dwarfing:** M26, M9, M27, M3426

As the apple industry in recent years has moved into high density orchards to obtain early yields of high value fruit, there has been a movement from the use of semi-dwarfing rootstocks - such as Northern Spy and MM106 - to the dwarfing rootstocks. A problem for Australian and New Zealand industry is that, while the use of dwarfing rootstocks has been successful in Europe and Northern America, where winter temperatures are severe and cold enough to kill Woolly Apple Aphids on the roots, in the milder Australian climate most dwarfing rootstocks - being from the M series - are particularly susceptible to Woolly Apple Aphids and this affects productivity from these trees.

This Woolly Apple Aphid susceptibility, in combination with the higher orchard establishment costs for high density orchards, due to increased tree numbers, dripper outlets

and the trellising system needed to support the trees, can put the financial stability of an orchard at risk; this has been occasionally blamed for the demise of several large orchards both in Australia and New Zealand.

Of interest is that there is renewed interest by growers in both New Zealand and Europe for trees grafted onto MM106 rootstocks to avoid this risk. While there have been other dwarfing rootstocks available to Australian growers for more than a decade, such as Bud 9 and Ottawa 3, their use in industry has been limited due to other considerations.

In a trial conducted in South Australia by Paul James on rootstocks for high density orchards (reported in *Australian Fruitgrower*, March 2007 issue), it was concluded that "Careful rootstock selection for any particular site and orchard system is important: M9 and M26 were the best performing rootstocks in the project overall at this location, MM106 was too vigorous which affected its cropping potential and subsequent economic performance, Ottawa 3 has potential depending on the market opportunities of the variety grown on it. However, it has certain growth and cropping characteristics that need to be understood to get the best performance".

With the downsizing of State departments of agriculture, new importations of new rootstocks from breeding programs overseas have been slow. This being said, there are three nursery organisations that have imported new rootstocks

over the past 10 years and these have now passed through the three years in quarantine and are currently being bulked up and should be available to the Australian apple industry in the next couple of years. This article will now summarise (*Tables 1, 2 and 3*) some of the information available on these rootstocks as supplied by the nurseries. Some of the nurseries are also stocking M and MM rootstocks that are testing negative for viruses. These have not been considered in these tables.

As can be seen in *Tables 1, 2 and 3*, there is a large number of rootstocks destined to be released in the next couple of years. Without comparative field trials it is going to be difficult to compare these rootstocks for their performance



Table 1. New rootstocks available through APFIP

Rootstock Name	Available (Approx)	Virus tested	Size equivalence	Trellis needed	Resistant to
NAKB M9T337	2011	None detected	M9	Yes	Woolly Apple Aphid Woolly Apple Aphid
NAKB M26 selection	2011	None detected	M26	Yes	
NAKB M111	2011	None detected	MM106 to Seedling	No	
JM1	2014	None detected	M26	yes	
JM7	2014	None detected	M26	yes	

Table 2. New rootstocks available through Grahams Factree

Rootstock Name	Available (Approx)	Virus tested	Size equivalence	Trellis needed	Resistant to	Other
Lancep			Less than M9	yes	Phytophthora	Precocious, and has good yield efficiency
Cepiland			M9	yes	Phytophthora	Precocious

Table 3. New rootstocks available through ANFIC

Rootstock Name	Available (Approx)	Virus tested	Size equivalence	Trellis needed	Resistant to	Other
NIC29			Slightly larger than M9	Yes		
NIC 4 and 8			Slightly less than M9			
NIC 19			M9			
G16			Slightly larger than M9			
G41			Slightly less than M9	Yes		Various viruses will kill the trees
G202			Slightly larger than M26		Woolly Apple Aphid	Precocity and productivity have surpassed M9; Precocity and productivity similar to M26
G935			Larger than M26			
G210			M26		Woolly Apple Aphid	
Supporter 4 or PI80			M106 When young			Precocity and productivity similar to M26

- - an activity that has been traditionally performed by State departments of agriculture - so an informed decision as to which ones to use is going to be difficult until there is some industry experience with them.

I am currently developing a project to compare the ANFIC cultivars in Tasmania and Victoria with funds from a nursery and the Australian Government through HAL. If this request for funding is successful then a comparative assessment of the ANFIC cultivars for their performance will become available over the next five to 10 years.

The NSW apple rootstock breeding program

It should also be mentioned that the New South Wales government and the Australian apple industry, through HAL, has funded a rootstock breeding program in NSW for more than 15 years and, while the performance of these rootstocks is still being investigated, selections identified in this program so far are promising and fulfil a range of vigour requirements suitable for high density orchard plantings.

From the HAL final report for this project, submitted last year (Project AP04004), Lester Snare reports that this project was initiated in 1996. The initial phase of the breeding program included parental selection for resistance to Woolly Apple Aphid, a dwarf growth habit as well as disease resistance. Initial pollinations were completed over two years and in their first year young seedlings were subject to intense Woolly Apple Aphid pressure in a glasshouse by placing healthy aphids directly on the seedlings and those seedlings that succumbed to the pest were eliminated. The trees were then grafted with 'Jonagold' and planted in a scientific trial and their performance rated against M9, M26 and MM106 also incorporated into the field planting. This process identified an elite group of seedlings.

The final phase of the program included screening the elite trees for *Phytophthora cactorum* susceptibility and more recently samples have been sent overseas for assessment for fire blight resistance. From the trial the trees were studied for five seasons for fruit productivity although, to ensure correct

performance, eight years is usually considered necessary. The longer timeframe is needed to ensure the consistency of cropping as the trees become larger and fill their space in the orchard. The results to date show that there are a number of progeny from this program that will fit into size categories similar to M9, M26 and MM106. The new rootstocks compare favourably with these stocks in terms of yield and tree size and have remained free from Woolly Apple Aphid.

For the purposes of this project breeders classed elite productive stocks into three tree sizes.

1. Semi- dwarf – similar to MM106 (Group 1)
2. Dwarf -similar to M9 (Group 2)
3. Very dwarf – smaller than M9 (Group 3)

The results for superior lines in each size grouping are shown in *Figures 1, 2 and 3*. Here it can be seen that the yield efficiency of the M9, M26 and MM106 rootstocks was similar at about 2kg of fruit per cm² of trunk cross sectional area. The higher yield per tree for MM106 indicates that the new tree lines were all physically smaller than the MM106 reference.

Of interest is that the yield efficiency of several of the M9 sized trees (*Figure 2*) was greater than either M9 or M26, indicating a superior line of rootstocks that may outperform M9 and be resistant to Woolly Apple Aphid and *phytophthora*.

While it may seem that this breeding program has been running for a long time - for greater than 15 years - the next phase is to plant the potential new lines into statistically analysable trials around Australia and to assess their performance over the next eight to 10 years to determine the reliability and their long term performance and hence the most suitable lines to release. It would be a disaster to release a line prematurely only to find the trees fail to be productive after they are eight years old.

In addition once the lines to be released are identified the nurseries will take at least three years to bulk up the rootstocks to commercial quantities. In other words, don't expect to see these trees commercially available for another 10 to 15 years, about 30 years from the start of the breeding program which is a short period of time period for most breeding programs. ■

Continued over...►

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New apple rootstocks coming soon to your nursery

Figure 1. The performance of superior lines of semi dwarfing rootstocks from the NSW breeding program.

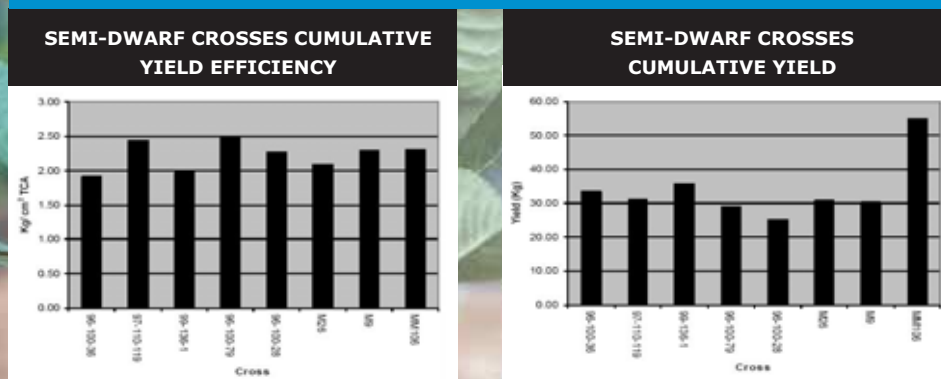


Figure 2. The performance of superior lines of dwarfing rootstocks from the NSW breeding program.

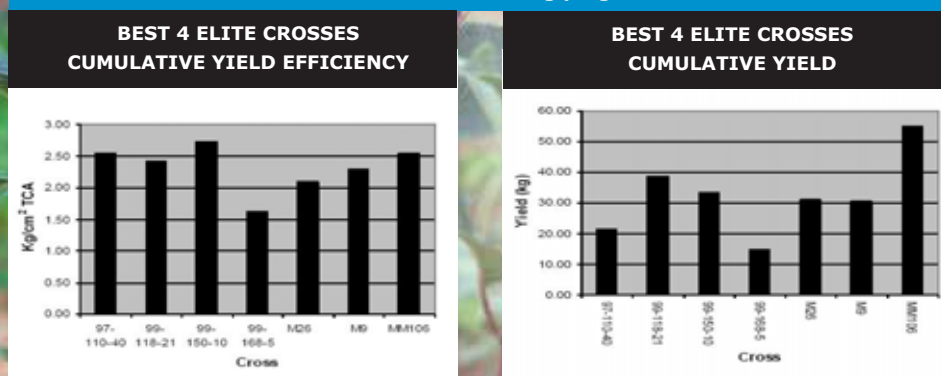
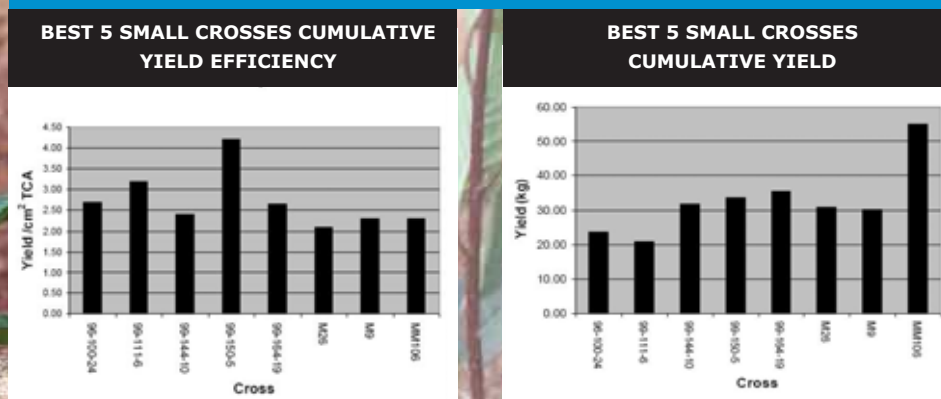


Figure 3. The performance of superior lines of very dwarfing rootstocks from the NSW breeding program.



Working with industry to combat Q-fly

South East Australia is experiencing one of the worst seasons on record for outbreaks of Queensland fruit fly (Q-fly) primarily due to the warm, wet and humid weather conditions experienced over summer and autumn.

The Victorian Department of Primary Industries (DPI Victoria) is working in collaboration with industry and the broader community to manage outbreaks, in areas including the Greater Sunraysia, Goulburn Valley, North East Victoria and Gippsland. Teams of DPI Victoria officers and authorised contractors are carrying out eradication, enhanced surveillance and general hygiene programs in each outbreak zone.

Growers in these areas need to be aware of their obligations – particularly restrictions when moving fruit from a declared fruit fly outbreak zone. DPI Victoria is continuing to work with growers and their representatives to make compliance with these obligations as simple and easy as possible.

For more details about the location of outbreak zones visit the website

www.dpi.vic.gov.au/qff

or telephone 1300 135 559.

Growers and other stakeholders can also subscribe to a DPI Victoria fruit fly newsletter by entering their email address on the above website.

As part of its efforts to combat fruit fly, DPI Victoria is targeting the travelling public with an awareness campaign aimed at stopping

the spread of the pest through the State by preventing the movement of uncertified fruit. This campaign includes weekly media releases, widespread coverage in the media, community service announcements, paid advertising and community engagement through local councils and other stakeholders. The key message in this campaign is that travelling with uncertified fruit can spread fruit fly, putting at risk the state's multi-million dollar fruit industry. Local communities in affected Q-fly outbreaks

zones are also being targeted. Primarily this includes visits to thousands of private properties in affected areas to apply bait, set surveillance traps and undertake general hygiene activities. It also includes getting the message across to the general public that they must maintain their fruit trees properly and dispose of unwanted fruit properly. DPI Victoria has in place an extensive campaign to minimise the impact of fruit fly on industry. The department thanks the industry, growers and the public for their support and cooperation so far. It is crucial this support continues to give the campaign the best chance of success.

More information: t: 1300 135 559;

w: www.dpi.vic.gov.au/qff. ■

DPI Victoria is also working with the industry to help minimise the impact on growers. This includes certifying locally produced fruit to allow it to move from outbreak suspension zones to Victorian and interstate markets. Growers should be aware of the following points:

- Movement of all host produce out of, or through, suspension zones is subject to conditions described within a DPI Victoria permit. Permit conditions include but are not limited to; chemical treatment or product security and certification requirements according to final destination and use. For further information, please call the DPI hotline on 1300 135 559. For movement of host fruits, the hotline can direct growers to the relevant DPI Victoria contact for their region
- Details about the location of current suspension zones are available on the website (www.dpi.vic.gov.au/qff) or by calling the hotline
- Also, DPI Victoria can accredit growers or packers to apply pre-harvest or postharvest treatments and issue certification required for fruit to leave a suspension zone. For further information, as above; and
- Growers and packers should ensure that seasonal workers comply with regional and on-farm hygiene and biosecurity.

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Growing for your market: Pruning lays the foundation for next year's crop

By John Wilton, Deciduous Fruit Specialist, AgFirst

In this series, we have reviewed and highlighted the key points that we made at Future Orchards 2012 walks and seminars. This month, we will discuss the role of pruning on orchard performance and fruit quality.

Dr Simon Middleton, in the paper he wrote for the Future Orchards 2012 program (February 2007 titled 'Maximising the Light Interception and Productivity of Australian Apple Orchards' pointed out that: "Low productivity in Australian apple orchards is due to either (a) insufficient canopy volume (tree row volume) or (b) excessive tree vigour and internal shading". He went on to state: "Capture 60 per cent of mid-summer light interception. Maintain good light distribution within the tree canopy for high fruit quality and packout (high marketable yield)."

Dr John Palmer went on to reinforce this message later in the Future Orchards 2012 program with this summary: "Light Interception: High yields cannot be achieved without high light interception. Light interception can be increased by closer planting, taller trees, closer row spacings. Use the light you have to your best advantage.

Light distribution

"High quality fruit cannot be achieved without good light penetration to the fruit. Excessive tree shading results in smaller fruit size, less fruit colour, lower soluble solids, delayed maturity, fewer flower buds."

Pruning is all about maintaining effective canopy volume, and more importantly avoiding excessive shading within the canopy.

Much of Australia has just been through an exceptional growing season with abundant and sometimes excessive soil moisture levels. With the limiting factor of water stress removed, large numbers of Australian apple and pear trees will have become excessively vigorous, which, if allowed to continue, will adversely impact on future yields and, particularly, fruit quality.

Our experience has been, even with dwarf rootstocks, that if vigour happens to get out of control, it is usually not just a one year event, but can carry on for several growing seasons into the future, unless pro-active measures are

taken to overcome it. Pruning, especially with older, established trees on standard rootstocks, is a key tool for managing excess vigour.

Leaf-to-fruit ratios

Leaf-to-fruit ratios determine fruit size and quality. Weak growing trees with heavy crops usually do not have enough leaves to support the crop. Conversely, higher vigour trees generally have surplus leaf and the excess leaves - once the crop load demand for the photosynthates they produce has been met - contribute photosynthates to root growth, further shoot growth and branch thickening.

Dr Terrence Robinson in his visit as part of the Future Orchards 2012 program pointed out that the key to managing higher density plantings is to furnish the tree with small, fruitful branches and laterals on which leaf numbers matched the crop load requirement,



Figure 2
This mature 'Royal Gala' has numerous weak pendant branches arranged for good transient light penetration throughout the canopy. Note the good colour development right through into the centre of the tree.

so that there was little surplus photosynthate available for export out of that fruiting unit to fuel unwanted growth elsewhere in the tree. Somewhere around 20 to 30 leaves per fruit is considered to be the optimum leaf to fruit ratio.

Leaf area index (LAI) is another way of expressing canopy efficiency. In their study of Australian apple orchard productivity, Dr Middleton and his team measured leaf area indexes in apple orchards and found it to range from 0.5 to over 3.5. In his paper he quotes that: "Despite the wide range of varieties, rootstocks and planting densities evaluated, the most productive systems (regular annual yields of 50 to 88 tonnes/ha) were characterized by:

- diurnal mid-season light interception of 55 to 62%.
- LAI of 2 to 3.
- yields increased as light interception increased from 55 to 62%.
- marketable yields increased as LAI reduced from 3 to 2.
- marketable yields improved as tree height reduced from 1.2 times to 1 times between row space.



Figure 1
This 4th leaf tree on M9 has lower branches around the 1m height, which are already to interfere with weed spraying and mowing. There are also numerous branches higher up the tree that will replace the lower branches in time.

- We have also observed that, as well as the importance of tree height relative to between row spacings, within-row light penetration into the lower canopy is important, so above about 2.0 to 2.5m height in the row, there needs to be gap between the trees to allow light into the lower canopy. These are important factors to consider when pruning.

Tree architecture

Because apple and pear trees generally show strong apical dominance, some form of conical or pyramid shape gives the most efficient tree form.

Vertical leader systems have become dominant around the world because, from an engineering standpoint, it is much easier to support crop loads as the leader itself is strong enough to support its crop.

Systems with sloping leaders require robust structural support systems because the leader is no longer able to support most of the crop load.

To establish your pyramid tree form, a branch hierarchy made up of largest branches in the lower tree with branches becoming progressively smaller higher up the tree so that in the upper tree branches become little more than fruiting spurs, and short, weak fruiting laterals.

There have been many studies done on branch numbers and form. Our experience indicates that for most orchard canopies 20 to 25 branches (with any lateral more than about 20cm coming



Figure 3
An example of a long, slim, pendant branch which because it is largely made up of well spaced strong fruiting buds will be very fruitful and make minimal shading annual shoot growth.

off the lateral being counted as a branch) per tree are sufficient. For tree spacing below about 2.0m along the row, simple branches with no significant sub-branches are all that is needed.

At wider spacings lower - and possibly middle - tree branches may need some sub-branching which should take the form of slightly pendant structures similar to the simple branches higher in the tree coming off at right angles to the main branches.

Branch strength is a key determinant of branch and tree vigour. Branch strength is determined by its gradient, and diameter at its base relative to length. Branches with positive gradients over the primary shoot growth period will have their strongest annual shoot growth from that terminal bud and the steeper the gradient the stronger their terminal shoot growth.

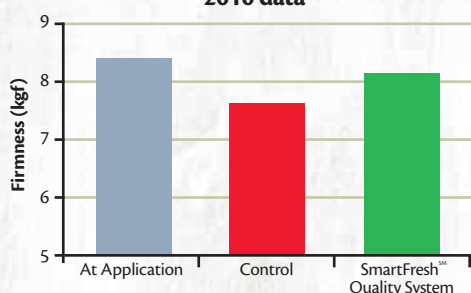
Horizontal or pendant branches will have their strongest annual lateral shoot growth coming from the highest point on the branch.

Branch thickening is determined by the amount of non-fruiting shoot growth foliage on the branch. In high vigour situations minimising this non-fruiting leafy shoot material on branches, by pruning it off as annual laterals, delays branch thickening and prolongs the useful branch life in the tree. Stacking the tree with slim, well-budded, simple branches is the key to a productive canopy.

Once branches begin to produce excess annual shoot growth, they lose their efficiency as cropping units and should be removed, irrespective of their position in the tree canopy.

Continued over...►

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Continued...

Growing for your market: Pruning lays the foundation for next year's crop

- This usually means taking out the biggest branches in the tree on a rotational basis. Do not be afraid of removing large lower tier branches with poor productivity, because they will readily be replaced by weaker, more productive branches nearby that receive better light exposure once the larger, shading branch is gone.

Tree containment

As orchard canopies mature, the trees tend to outgrow their allotted space, leading to shading problems and lowered production of high quality fruit. Training branches into pendant positions as they reach the desired length is the key to limiting further branch extension. In well-balanced cropping trees, crop load will usually do this for you for most varieties. The exceptions are varieties with a stiff, upright shoot growth habit such as 'Cripps Pink'. Branches in these varieties need to be tied or propped down before they thicken up.

Branches need to be high enough up the trunk to enable them to come down into pendant positions without interfering with orchard floor management practices such as herbicide application or mowing.

As canopies begin to mature, lower branch removal is a key pruning objective. Initially, lower branches below 1.0 to 1.25m are removed. Then, as the higher branches become longer and need more room, the lower ones among them are also pruned out. In mature canopies it is not unusual to have the lower branches somewhere between 1.5 and 2.0m up the trunk.

Try not to limit branch length by shortening or "lifting" cuts. If they are too large, cut them out. The exception to this rule is where vigour has become very weak and a little shortening is required to stimulate some active shoot growth.

Branch gradients need to be somewhere between 30 and 45 degrees below the horizontal. In this range, vigour is under control, and still enough light reaches their fruit for good colour development. Steeper pendant gradients tend to suffer too much fruit to fruit shading, resulting in poor colour development.

Excessively strong vegetative branches can be distributed throughout the canopy. These need to be removed irrespective of their position. The idea is to rotate branches out of the

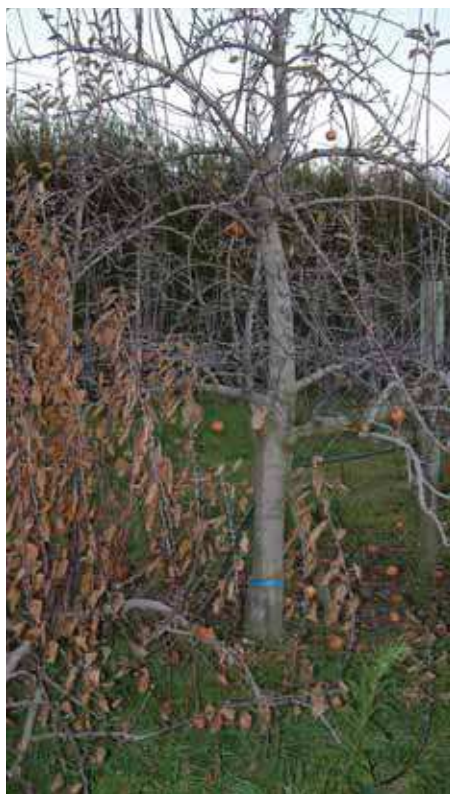


Figure 4
This excessively vigorous tree had an out of balance, unfruitful lower branch largely responsible for most of the excess vigour in the tree. Now that it has been cut out, its place will be taken by the weaker pendant more fruitful branches above it.

canopy as they outgrow their allotted space. This process begins while the trees are relatively young, so that the canopy is made up of mixed age branches, so that there is always a younger replacement branch nearby when stronger shading branches are removed.

The axis of a branch needs to be kept straight. This can be achieved by simply ruthless pruning out of any vertical laterals along the branch. Similarly, the branch can be kept slim by removing any significant side shoots at the end of their first growing season.

Where shortening is necessary, always shorten into a weak downward pointing lateral.

Minimising sunburn

In warmer climates with bright, high energy sunlight, sunburn is a serious and continual fruit quality problem. The key to minimising sunburn, while still maintaining adequate light exposure to fruiting sites, is to try and set up a fruiting

canopy in which there is dappled light and transient movement of sunlight across the fruit as the sun moves around, so that no fruit is exposed to direct sunlight for long periods of time. This is best achieved by having a canopy stacked with numerous slim, simple branches that move in and out of direct sunlight as the sun moves across the sky.

Also, remember that unless extreme heat occurs, fruit that has been consistently exposed to the sun throughout the growing season develops better tolerance to the sun than fruit that is suddenly exposed to bright sunlight in mid or late summer through either branch movement or summer pruning that suddenly lets the sun onto it.

Managing fruiting wood

For most varieties, the best fruit is grown on stronger spurs and terminal buds. Weak, shaded spurs and later flower of one year wood have lower quality, and in the case of the latter more russet-prone, fruit.

Now that orchard plantings are becoming more intensive there are huge advantages to developing a systemised approach to their tree management, including pruning to bud numbers.

In the ideal world, the best quality and easiest to harvest fruit is that which has been grown as single fruit per site, positioned on sites spread far enough apart so that adjacent fruit do not touch one another.

Setting up the tree to achieve this objective involves having sufficient length of fruit bearing lateral to achieve target crop loads with fruit hanging in singles. Depending on fruit size, crop loading in the range of 8 to 12 fruit per metre of lateral is about optimum. To minimise hand thinning, effort spacing spurs out by pruning is worth considering. This is mostly easily done at the 2nd year wood stage, when spur systems are single buds and easily flicked off by brushing the secateurs or a gloved hand along the underside of the shoot

Where spur systems become complex, it is time they were pruned out, or at least thinned down to one or two buds. ■

Parts of the Murray-Darling Basin experienced years of drought – then floods. But how often do wetlands need a flood to keep them happy and how much water is really needed?



Considering the Murray-Darling Basin Plan

Comments by Prof. Barry McGlasson, Technical Editor - Summerfruit

In mid-February my wife and I drove from Sydney to Adelaide via the Mid-Western and Sturt highways, returning via Swan Reach and Loxton in South Australia, the Sturt and Hume highways. During my many trips over the years I have never seen the countryside west of the Great Dividing Range lusher with standing water in many places. In fact, the appearance of the landscape was more like spring than late summer.

The Murray, Darling and Murrumbidgee rivers were running bankers. The only time I have seen the Murray higher was in 1956. The appearance of the countryside called to mind the dire forebodings by some environmentalists that the MDB is dying. You would not think this was so when you see how the river gums and low shrubs have recovered! A typical example of this recovery can be seen near Balranald in the wetlands adjacent to the Murrumbidgee. Gum trees that had died back are now producing lush new growth. This cross-country trip set me thinking about the proposals for diverting water from irrigated agriculture (sustainable diversion limits - SDLs) for sustaining the ecosystems in the Murray-Darling Basin (MDB). How often do the wetlands need a flood to keep them happy and how much water is really needed?

There are thousands of gigalitres currently flowing into the Southern Ocean and high flows will continue for many months as more water makes its way down the Darling from the last round of floods in Southern Queensland. Is there a way that we can store more water from the big floods to even out the wet and dry cycles, perhaps by injecting water into the underground aquifers that have also been drawn down heavily during the recent drought?

It is with these thoughts in mind that I read the paper presented by Tim Goesch *et al.* ABARES to Outlook 2011 (www.abares.gov.au), 'The economic and social effects of the Murray-Darling Basin Plan: Recent research and next steps'. (ABARES project 43000).

Quoting from the abstract in this paper: "The Murray-Darling Basin Authority is responsible for identifying new environmentally SDLs for consumptive water in the Basin. In October 2010, the Authority released the *Guide to the Basin Plan* containing three SDL scenarios. These scenarios involved reducing irrigation diversions by 22, 26 and 29 per cent. ABARES has estimated that reducing irrigation diversions by 26 per cent could reduce the gross value of irrigated agricultural production (GVIAP) in the Basin by around 15 per cent, and gross regional product (GRP) by around 1.3 per cent. When mitigating policies are taken into account, however, the decline in GVIAP falls to around 10 per cent and the decline in GRP falls to around 0.7 per cent."

The mitigating policies being implemented by the Australian Government include purchasing water entitlements from irrigators and investing in water saving infrastructure. The authors concluded that while the numbers cited above indicate a relative small overall effect on economic activity in the Basin, the effects on smaller local areas could be significant. Their analysis showed that the reduction in GVIAP will be greater for irrigated broadacre activities such as rice, cotton and dairy than for horticulture. Towns that are highly dependent on irrigated broadacre crops could be significantly affected by reductions in water availability. Where these effects will occur will be largely determined by which irrigators decide to sell their water entitlements to the government. The investigators were

able to draw on sufficient data to do socio-economic modelling on the consequences of SDLs on irrigated agriculture but data that puts a value on water for environmental purposes is lacking. Information is needed on the costs and benefits of increased environmental flows.

It was pointed out that markets do not exist for valuing environmental benefits. Although it is hard to place a value on increasing environmental flows the costs are relatively easy to measure. These include the opportunity cost of diverting water from productive production agriculture and the costs of installing infrastructure. When viewed in this way, diverting water for environmental uses is much the same as directing water for irrigated agriculture except that it is much harder to measure and place a monetary value on the returns.

Other costs that should be included are the costs of administering the water for the environment program and raising money to fund the program. There could also be social costs if people are put out of work and populations decline in towns affected by reductions in irrigated agriculture. This last possibility could be quite significant because the effects on GVIAP are predicted to be large in some regions e.g. Murrumbidgee, Condamine, Murray NSW, Namoi, Murray Victoria, Qwydir and Goulburn-Broken. ■

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APAL grower needs survey

Report by Jennifer Brook, Senior Project Manager - Ipsos Australia

Last year APAL conducted the third survey of what has become a biennial apple and pear grower survey. APAL commissioned Ipsos, an independent research consultancy, to design and carry out the grower needs research, which included in-depth interviews with 21 growers from across Australia as well as a telephone survey with a further 140 growers. The research was conducted between September and December 2010.

Orchard characteristics

The tenure of respondents in 2010 was particularly notable, with more than half (55%) reporting they had 31 years or more in the industry with one in four having between 16-30 years experience. For the first time in the history of the grower survey, participants were asked what proportion of their income

This density represented the greatest proportion in previous surveys too (40% in 2006 and 46% in 2008). There has been a significant increase in the average orchard proportion planted at or greater than 1500 trees per hectares. The average proportion of orchard planted with 2500 trees or more per hectare was 21% of the orchard. This is a significantly greater

Q52: How many years have you been a grower in the apple and pear industry? by Year of survey (Base: all).



was sourced from the orchard. Overall, orchard income represented an average of two thirds (67%) of respondents' total income.

Orcharding income represented 20% or less of total income for 21% of respondents. There was no significant difference by location or orchard type regarding orcharding as a proportion of income. On average, the greatest proportion of a grower's orchard was planted at less than 1000 trees per hectare (38%).

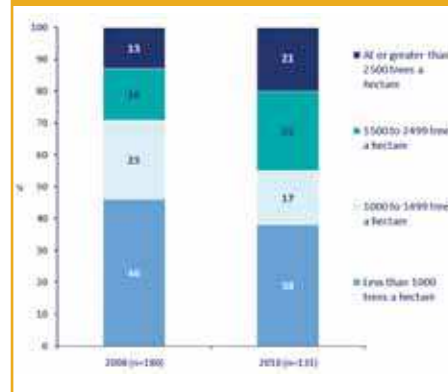
average than that recorded in the previous survey (on average, 13% of orchards were planted at this higher density in 2008. In 2006, 14%, on average, was planted at a density greater than 2500 trees per hectare, note there was a slightly difference in scale).

Slightly more than half (51%) of growers questioned in the 2010 survey had planted new orchard or replanted orchard within the last two years. The average proportion of new

Q53b: Approximately what percentage of your income does your orchard income represent? Base: all



Q14: Regarding your orchard, roughly what proportion of your orchard is planted at...? (Base: all, excluding 'don't know').



Q16: Regarding this new or replanted part of orchard, roughly, what proportion is planted at...? (Base: 69, those who have replanted or planted new orchard in the last two years) ▲ indicates significant difference at 95% confidence

Density of new or replanted orchard	Average %
Less than 1000 trees a hectare	19
1000 to 1499 trees a hectare	11
1500 to 2499 trees a hectare	20
At or greater than 2500 trees a hectare	51 ▲
TOTAL	100

Q7. Thinking about the various ways in which Apple and Pear Australia Limited communicates with growers such as yourself, how would you rate the overall quality of Apple and Pear Australia's communications – would you say that they are....? (Base=all)
Please note that the differences between years are not statistically significant.



Australian Fruitgrower is the most commonly mentioned industry publication by growers (46% unprompted mention and 38% prompted recall). Awareness has significantly increased since the 2008 survey, 84% were aware (prompted and unprompted) of *Australian Fruitgrower* in 2010 versus 73% in 2008.

In addition, *Australian Fruitgrower* is well read and well liked by most. More than two thirds (69%) of growers said they read all or most of the publication and 97% said that they think the overall quality to be *good, very good or excellent*. The level of detail, the technical information and the usefulness of information in the magazine similarly are considered to be of a high level (a minimum of 86% considered these aspects to be good, very good or excellent). Furthermore, the level of detail in the publication is considered to be *about the right amount* (73%), although 23% said that there is not enough.

More than a third (35%) have accessed the APAL website, and those who have consider the website content to be useful, 67% thought that the usefulness of the website was *excellent, very good or good*. Future Orchards 2012 is the main reason growers visit the website, either to access information about the program or to check on the monitoring block information.

Future Orchards 2012 and PIPS

More than half (52%) of respondents had been to at least one of the Future Orchards 2012 field days or orchard walks. The most commonly cited topics that were of value from the Future Orchards 2012 program were planting density and tree management (44%); tree training (29%); and pruning techniques (26%).

The Future Orchards 2012 program continues to have a real impact on participants' orcharding practices, 79% reported they had changed their practices as a result of participation (significantly

greater proportion than in 2008). With regards to recordkeeping, 60% reported they were keeping more records as a result of participating in Future Orchards 2012 (compared with 37% in 2008).

The Future Orchards 2012 consultants and presenters continue to be well regarded by participants, 83% of those who had attended at least one event, rated the presenters and consultants *very good or excellent*. Awareness of the Productivity, Irrigation, Pests and Soils research program (PIPS) was unsurprisingly moderate (given that the program was established in 2009), slightly more than a third (36%) had heard of the program.

Future intentions

Growers are uncertain about the future in terms of thinking about replanting. Around two-in-five (41%) respondents said they would be replanting part of their orchard in the next two years, a significant decrease compared with 2008 (60%).

Despite the less certain future of replanting, the average density of planned planting was 2178 trees per hectare- this is a significant increase on the 2008 figures (average of 1862 trees per hectare).

Ipsos would like to take this opportunity to thank all those who contributed to the research by taking the time out of their busy days to share their views and opinions with the research team. ■

Q18. What density do you intend to replant at? That is, how many trees per hectare? (Base: intend to replant in 2 years n=57).



► development planted at 2500 trees or more per hectare significantly increased since 2008. In 2008, on average, 26% of new or replanted orchard was planted at this higher density compared with 51% in 2010.

Orchard and industry perceptions

Perceptions of how the Australian apple and pear industry is performing in the international setting varied greatly amongst growers. More than a third (36%) rated the Australian apple and pear industry as above average globally (either agreeing with the statement *Highly competitive globally, that is we rank with the best producing countries*, 9%, or the statement *We are not quite the best globally, but we are not far from the best producing countries*, 27%). More than a quarter (27%) thought the industry was about average globally and just less than a third (31%) deemed it to be below average.

Growers are slightly more confident about their own orchard's performance. Almost half (45%) said that they consider their orchard to be above average in terms of development and production (12% consider themselves to be At the leading edge and 33% Not quite at the leading edge but above average). One third (33%) reported that they regard their orchard to be average, and 18% said they considered their orchard *Somewhat below average* (11%) or *Well below average* (6%).

The specific reasons for growers' perceptions of their own orchard varied greatly, although lack of investment was a commonly cited reason for explaining why an orchard was not performing better. There is a disconnect for growers between the state of the Australian apple and pear industry (in the global context) and the state of their own orchard which demonstrates very mixed perceptions. A greater tendency for optimism at an individual level than the Australian level may represent an opportunity for benchmarking to enable growers to accurately assess their own as well as Australia's performance.

Communications

The overall quality of APAL communications are well regarded by growers, 79% reported that they believe communications to be *excellent, very good or good*, similar proportions to the previous surveys.



Pink Lady wins UK marketing excellence award

Coregeo, the fresh produce marketing specialists behind the Pink Lady® apple brand and wholly owned subsidiary of Apple and Pear Australia Ltd, recently won the United Kingdom's Chartered Institute of Marketing's Food, Drink and Agriculture (FDA) Group Excellence in Marketing Award for its work on the leading apple brand.



L to R: Mark Price – Managing Director of Waitrose, Andy Macdonald – Managing Director of Coregeo, and John Giles – Chair of CIM Food Drink and Agriculture Group.

The award was made on behalf of the FDA Group by Mark Price, Managing Director of Waitrose, at a special event at the House of Commons in mid-March. Only one food, drink or agricultural company whom CIM believes has demonstrated outstanding marketing skills is presented with this award annually. The prestigious award was accepted on behalf of Pink Lady by Coregeo's Managing Director, Andy Macdonald, at the President's dinner of the FDA Group.

The Pink Lady apple brand was judged to be the clear winner, based on a number of criteria: strength and longevity of brand, having a fully international supply chain, its growth in international markets, its unique business model, success in multi-channels, a track record of change and innovation and, finally, its good CSR (corporate social responsibility) and environmental record.

John Giles, chair of the CIM FDA Group commented: "The Excellence in Marketing Award was created to celebrate brands that have stood the test of time and have had success in multi-channels, both in the face of

strong competition and without automatically having access to huge resources. When it came to judging this year's award, despite some tough competition, the Pink Lady apple brand was the clear winner, as it is one of the few products to have risen above commodity status and established a true brand in the primary agri-food sector. Thanks to Coregeo's persistence, hard work and expertise, we feel the Pink Lady apple business model (IP rights and supply chain management) has become the benchmark for branded agriculture and food."

Mark Price, managing director of Waitrose Ltd and keynote speaker at the President's dinner added: "No other apple variety has a level of recognition and customer awareness that comes close to Pink Lady and this, our fourth best selling variety, is a great favourite with Waitrose shoppers. A recent promotion supported by the Pink Lady Apples marketing agency broke all our previous records. We achieved 700 per cent growth on Pink Lady and sold almost a week's worth of stock every day for practically three weeks. Other varieties without the profile do not achieve these heights and it will always be an important apple for Waitrose."

Recent research* commissioned by Coregeo to establish the awareness levels of the Pink Lady apple brand in the UK revealed that total awareness (both spontaneous and prompted) of the brand in the UK population (including men) is 67 per cent - representing a 14 per cent increase on January 2010 and demonstrating that two thirds of the UK population is now conscious of the Pink Lady apple brand. In addition, top of mind awareness is 13 per cent - more than double what it was in January 2010, and awareness among the female target market is even higher - 89 per cent among females 45-54; 85 per cent among female AB demographic and 82 per cent among married women with children 11-15.

Andy Macdonald from Coregeo commented: "Fiona Williams and I are delighted that our efforts to promote the Pink Lady apple brand have been recognised by both CIM and also our recent awareness research. We have invested in building this apple's premium positioning in the market and raising the profile of the brand over the past year with activity including roadshows, direct and experiential marketing, which has doubled the number of these apples sampled year-on-year, a print advertising campaign in glossy women's magazines, engaging with retailers and running in store promotions, consumer engagement via our Pink Lady club online, promoting our partnership with the Great Ormond Street Hospital charity and achieving editorial coverage across a wide range of mediums through our dedicated PR program."

"We are also engaging with consumers through social media channels putting the brand at the forefront of fresh produce in this area. Our aim is to continue to build on the strength of the brand in 2011, maintaining Pink Lady apples' position in the market and eventually working towards Pink Lady apples being top of mind for all UK consumers."

*The research was conducted by Ipsos Mori in February 2011 with results based on a research group of just over 1,500 (over 1,000 women and over 500 men).



International summerfruit research abstracts

Compiled by Prof. Barry McGlasson, Technical Editor - Summerfruit

Agronomy

The use of trunk diameter sensors to manage regulated deficit irrigation scheduling was investigated in early maturing peach trees in Murcia, Spain. The authors concluded that MDS (maximum daily trunk shrinkage measurements) can be used exclusively and that seasonal water application could be reduced by 35-42% of the estimated crop evapotranspiration level.

Conejero et al. 2011, *Environmental and Experimental Botany* doi:10.1016/j.envexpbot.2011.02.014.

Germplasm

As the centre of origin of apricots, China has the richest apricot germplasm resources. A primary core collection of 1501 accessions from the various climatic regions of China has been established. The objective was to determine the number of accessions that should be included in subgroups from each growing region that would preserve the genetic diversity of the apricot population. The traits evaluated included fruit characteristics such as fruit shape, size, colour, juice content, pulp texture, soluble solids content, shelf life, fruit development period, self fertility, cold and salt tolerance and resistance to fruit scab disease. The authors, from the Beijing Academy of Agriculture and Forestry Science, were able to reduce the number of accessions to 150 that adequately preserved the genetic diversity of Chinese apricots. DNA analyses were used to construct a dendrogram showing the genetic relationships among this population and to ensure that the population was highly heterozygous.

Wang, Y. et al. 2011 *Scientia Horticulturae* 128, 311-319.

Food Processing

In *Recovery of nutritionally useful compounds from reject fruit* the authors studied the feasibility of recovering nutritionally valuable components from peaches and plums that did not meet fresh market standards. They showed that several useful compounds including anthocyanins and carotenoids could be recovered from overripe fruit. Further work is required to develop this idea.

Puerta-Gomez AF and Cisneros-Zevallos L 2011 *Postharvest Biology and Technology* 60, 220-224.

Micronutrient mineral folate content of Australian and imported dried fruit. This Australian study showed that micronutrients were concentrated by a factor of 3-5 in dried compared to fresh fruit of sultanas, currants, apricots and prunes and therefore these dried products are a rich source for meeting daily dietary requirements. Folate levels were affected by drying method with the highest levels maintained by non-ground drying methods.

Bennett L et al. 2011 *Critical Reviews in Food Science and Nutrition* 51, 38-49.

Postharvest

Cinnamon essential oil was coated on plastic trays or incorporated in a plastic label. Decay due to brown rot and blue mould in fruit exposed to the oil in these packages was significantly reduced fruit stored at room temperature and had no deleterious effects on flavour.

Montero-Prado P et al. 2011 *Postharvest Biology and Technology* 60, 211-219.

Resistance to Sharka

'Rafael' and 'Belgida' are new mid- to early season apricot cultivars characterised by good yields, excellent fruit quality, self compatibility and resistance to Sharka (Plum pox virus or PPV). These cultivars were derived from a cross made in 1993 at Valencia, Spain between Cvv 'Goldrich' and 'Ginasta'. 'Goldrich' is known to be resistant to Sharka. Mature fruit had soluble solids concentrations of about 14% and similar levels of acidity, and excellent taste, juiciness and apricot aroma.

Martinez-Calvo et al. 2010 *HortScience* 45, 1904-1905. ■








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International apple and pear research update

Compiled by Dr Gordon Brown, Technical Editor – Apple and Pear

Nursery and Cultivars

USA

In a study of Royal Gala with lines of apples that had been genetically modified for low ethylene production it has been found that pollen from these lines "had a significantly lower germination rate".

Japan

A set of 15 simple sequence repeat (SSR) markers were used to study the genetics of 95 apple cultivars and it was found this set of markers could accurately separate the varieties. Further the markers could be used to identify the parents of cultivars and for one cultivar - Hachine - a parent discrepancy was found.

China

A CAPS marker Mb2 has been developed to identify apple seedlings in breeding programs with the genetic code for red skinned fruit.

Japan

By infecting apple seedlings with the Apple Latent Spherical Virus (ALSIV) genetically modified to include a gene for flowering from *Arabidopsis* (*A. thaliana* is a small flowering plant that is widely used as a model organism in plant biology) it was possible to obtain flowers from apple seedlings within 2 months of germination and pollen from these flowers successfully pollinated Fuji flowers allowing for rapid breeding generations. ■

Harvest and Postharvest

China

In an effort to improve the effectiveness of robotic harvesting of apples a mathematical equation has been developed to correct for images of apples lost due to visual obstruction by leaves and branches.

China

In a study of superficial scald the dielectric properties of stored Fuji apples were studied and it was found that the capacitance of the fruit reflected the internal quality of the apples.

China

A portable NIR spectrometer was used on pears to explore the performance of this technique on developing a firmness model. The results highlight the potential of NIR instruments for assessing internal quality of European pear on the trees.

Turkey

In laboratory studies of apple bruising it has been found that the fruit bruising is dependent on flesh firmness and the impact height.

China

Pear callus tissue was infected with two fruit rot fungi (*Botryosphaeria berengiana* and *Monilinia fructigena*) and it was found that initially both cell membrane permeability and MDA content increased particularly for *Monilinia*. The peak of defensive enzyme activity appeared at different times, but were lower in callus infected by *Monilinia*. There was a positive relationship between the changes of the defence enzymes and the resistance of callus to rotting.

Japan

In studies of sugar accumulation in mature and

immature Tsugaru apples it was found that there was a loss of starch in immature fruit treated with ethylene but the total sugar content only changed slightly following storage. In addition mature fruit treatment with ethylene did not induce sugar accumulation during storage. Hence the level of sugars in the fruit after storage depends on fruit maturity at harvest and not on starch content.

USA

Three cultivars of apple were harvested at two maturities and sub samples from each harvest were exposed to SmartFresh® at different times for the following seven days and prior to storage for up to 160 days. Delaying SmartFresh for seven days had no impact on firmness of Gala apples after storage although the SmartFresh effect was reduced by 25 and 45% respectively for Golden Delicious and Law Rome.

Mexico

It has been identified that the use of Regalis® for growth control on Red Delicious apples increased the antioxidant content of ripening fruit.

Greece

A study was made of pears that were untreated, dipped in Retain®, dipped in a water soluble formulation of SmartFresh (probably Harvista®) or had SmartFresh applied in a sealed airtight chamber. After storage untreated fruit collapsed rapidly and both methods of applying SmartFresh delayed fruit softening to a greater extent than Retain.

USA

An improved system using both colour cameras and thermal cameras has been developed to increase recognition of apples within a canopy for machine harvesting.

Marketing

Chile

Sunburn damage of apples is one of the main reasons for rejection of apples for marketing and in this study it was found that the sunburnt area of apples has higher polyphenolics and antioxidant activity which are beneficial to human health and as such sunburnt apples present a commercial opportunity for marketing to health conscious consumers.

Poland

A survey of Polish consumers found that 90% of the Polish population like apples and more than 30% consume more than an apple a day. Most purchase apples from farm shops or farmers markets and the older population consider flavour and juiciness extremely important while younger consumers prefer sweet and red apples.

Production

Russia

In a 5 year study of apple tree performance with different soil treatments it was found that interrow spaces with bluegrass or legumes yielded 23 t/ha compared to 10 t/ha for the clean cultivated control orchards.

China

By transferring the genetic code in apples controlling anthocyanin production to *Arabidopsis* it was found that this gene helps plants survive water stressed situations.

Albania

Bending of apple tree branches to below horizontal has been found to stimulate fruit production and causes young trees to enter production in their second year with a higher and more reliable fruit production.

Postharvest, handling and processing

China

In a trial on nitrogen use efficiency it was found that bag-controlled release fertiliser application resulted in a superior nitrogen use efficiency than broadcast fertilisation and this resulted in trees that were healthier with increased numbers of quality fruiting spurs due to more constant nutrient concentration in the soil.

Turkey

A trial that studied the spraying apple trees that were deficient in iron (Fe), manganese (Mn), and zinc (Zn) with titanium (Ti) or the chelated forms of these elements found that titanium sprays had little impact on tree performance while the trees sprayed with all three elements had improved vigour and fruit yield.

Republic of Korea

In a study of apple fruit thinning it was found that ammonium thiosulfate (ATS) applied at full bloom reduced fruit set by 27%, 6-BA at 10mm fruit size reduced fruit set by 13% and the combination of the materials reduced fruit set by 40% which dramatically reduced the cost of hand thinning.

Republic of Korea

Using climatic data and date of full bloom prediction models it was found that increasing air temperatures due to global warming will advance flowering in northern regions of South Korea but delay flowering in southern regions and if global warming leads to a 4°C rise in temperature flowering will not occur in southern regions.

China

Studies on irrigation for maximum water use efficiency of Goldspur apples found that maintaining water in the range of 50 to 70% of field capacity maintained maximum water use efficiency and that photosynthesis could be maintained at reduced soil water levels down to 48% of field capacity. At lower levels of soil moisture photosynthesis was reduced by a means not related to stomatal closure.

Japan

A study was conducted on the effect of NAA sprays on apples against stem end cracking of fruit. It was found that NAA sprays at two weeks after full bloom reduced cracking but they also reduced fruit size. If applied three to four weeks after full bloom the material still reduced fruit cracking but did not have a detrimental effect on fruit quality.

Germany

In a trial studying the impact of calcium infiltration on harvested apples it was found that calcium infiltration reduced ethylene production, respiration rate of the fruit and fruit softening while it enhanced cell wall degradation enzymes. In general, the effect of calcium infiltration on the measured parameters was comparable to the effect of SmartFresh.

Italy

In a study of storage method and SmartFresh application to Abbé Fétel pears it was found that the highest percentage of sound fruit was found in air stored SmartFresh treated pears, and the lowest in untreated fruit stored in dynamic controlled atmosphere.

Turkey

An experiment studying air versus controlled atmosphere storage of Braeburn apples found that the Braeburn apple variety, stored for up to 10 months in controlled atmosphere conditions, could provide for the demands of high quality products on European markets.

Turkey

Harvista (sprayable SmartFresh) was applied to Stark Spur Golden apples one week prior to optimal harvest date or at optimal harvest date with the fruit being harvested a week later. From this study the application (300 a.i.g/ha) made at optimum harvest date has been suggested as the most useful application.

Iran

Two genus of biocontrol yeasts were isolated from healthy apple fruit surfaces. There were three strains of *Candida membranifaciens* and two strains of *Rhodotorula mucilaginosa* which were evaluated for the control of the blue mould of apple caused by *Penicillium expansum*. All strains reduced the growth of penicillium on apples and the most efficacious strain was selected and the best conditions for the antagonistic yeast determined. ■

Pests and diseases

USA

In a study of biological control agents against fire blight it has been found that mixtures of different biological agents are not more effective than single strains of control agents and this is due to *Pseudomonas fluorescens*, the main biological agent used, producing a protein that degrades the antibiotics produced by the other biological control agents.

New Zealand

Using published data for European canker (*Neonectria galligena*) outbreaks and climatic data it has been identified that outbreaks commonly occur when it both rained on more than 30% of the days per month and there was an average of more than 8 h per day with temperature of 11 to 16°C. Hence, apple regions within Australia at risk can be identified.

New Zealand

A study of Woolly pple aphid (WAA), *Eriosoma lanigerum*, found that while numbers were low in a conventionally sprayed block and in an organic block there was a surge in WAA numbers and a slow colonisation by natural

enemies which took at least four years to reduce the aphid population to acceptable levels in a block in transition from conventional to integrated fruit production.

USA

Young colonies of spirea aphid (*Aphis spiraecola*) in an apple orchard were caged and an adult *Harmonia axyridis* beetle was added to a cage at five day intervals after caging. It was found that the beetles are capable of completely controlling individual spirea aphid colonies only if they are abundant enough to find the aphid colonies within one week of colony establishment.

China

In a study of plant genetic diversity and insects in an apple orchard it was found that orchards with *Amaranthus retroflexus* there were more insects although in orchards with *Cirsium segetum* or *Convolvulus arvensis* there were more beneficial insects. "It is concluded that keeping *Cirsium segetum* and *Convolvulus arvensis* are beneficial to protect the diversity of natural insect enemies and to control the pests in apple orchards".

Pear picnic at Hanging Rock

Report by Kath Boast, Fruit Growers Victoria

Fruit Growers Victoria (FGV) launched the 2011 Pear Season at the The Age Harvest Picnic at Hanging Rock, Vic, in February. The event was a celebration of Victorian food and wine and delicious, juicy, ready-to-eat pears formed a centerpiece of the festivities.

More than 100 small food and wine producers from all around Victoria gathered to provide samples as well as showcase and sell their magnificent wares. The spectacular backdrop of Hanging Rock was a fitting canvas for the array on display and for adventure of the day. An all-time record pre-ticket sales and an estimated attendance of more than 20,000 made the day a huge success and the slightly misty weather on the day only contributed to the mystic environment of Hanging Rock made famous in Joan Lindsay's novel, Picnic at Hanging Rock.

The FGVL promotion was unashamedly about pears, pears and more pears. It was hugely successful with the pear stall busy all day and extremely positive feedback from the consumers. Everyone loved the ripe and



ready-to-eat fruit. There were many comments about juiciness, flavour and sweetness. The consumers were not just the only ones to be impressed. An independent panel of judges awarded a prize for the quality of product, presentation, and display to FGV. They were particularly impressed with the product presentation, originality and inventiveness, the use of promotional information and the overall appeal of the stand.

"The promotion was unashamedly about pears, pears and more pears"

FGV utilised many of the promotional materials from the 'Rediscover the Pear' campaign but the big hit with the judges was the new FGVL 'interactive orchard'. The stand was decorated with the new fruit trees in the background that were bearing perfect 'Williams Bon Chretien' and 'Red Sensation' pears, there was also promotional posters, pears, recipe cards, brochures and lots of pear colours to help enhance the look of the stand. Activities included pear tastings, pear recipe tastings, pear sales, pear corer sales, pear juice tastings and sales, pear competitions and roving mascot Packy Pear.

Undoubtedly the best reward of the day was came the many comments from consumers at the tastings. Words and phrases like; "yum", "delicious" and "can I have some more of that", were the order of the day. The high quality pears were sourced for Goulburn Valley growers and were obviously the star attraction. Many growers helped to organise fruit and volunteered on the day. Their assistance and the FGV staff and their families who gave up their weekend made the launch such a success. ■

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Industry information & horticulture quiz APFIP Weather Station Roundup

HAL

Know-how for Horticulture™

This project was facilitated by HAL in partnership with Apple & Pear Australia Limited and is funded by the apple and pear levy. The Australian Government provides matching funding for HAL's R&D activities.

Weather Station – Region Report period: 17/2/2011 – 16/3/2011	Average Temp Min	Average Temp Max	Rainfall for Month	Rainfall to Date 1st Jan
Batlow NSW	9.5	22	127	349
Huon TAS	5	18	52.8	84.8
Lenswood SA	N/A	N/A	79	104
Manjimup WA	14.6	28.4	4	102
Goulburn VIC	11.6	25.5	42	180
Yarra Valley VIC	11.3	23.4	60.4	249.4
Orange NSW	11.5	22	79.8	158.9
Stanthorpe QLD	15.6	26.2	83	301

This data is from the APFIP evaluation sites and may not be representative of the total district. Further weather reports and comprehensive variety evaluation reports can be found at the APFIP Australia website: www.apfip.com

Greg's Quiz

Question 1:

True or False: A 1 metre x 3 metre planting distance in an orchard would give 2500 trees per hectare.

Question 2:

Which of these names has not been applied to the Williams Bon Creten pear? **A:** Duchess. **B:** Bartlett. **C:** Guillaume. **D:** Uvedale.

Question 3:

Prunus species susceptible to Verticillium Wilt disease should not be planted on ground previously planted with which crops? **A:** Potatoes. **B:** Tomatoes. **C:** Peppers. **D:** Grapes.

Question 4:

By what term in days past was the height of the packed fruit above the top of the case known?

A: The "spill". **B:** The "bulge". **C:** The "sweetener". **D:** The "loss".

Question 5:

Parasitic fungi can be divided into two sections: Ectophytic and...?

A: Soporific. **B:** Endophytic. **C:** Horrific. **D:** Magnifique.



Quiz supplied by Greg Cramond, SA

Answers:
Question 1 – Answer: False, that would make 3333 trees per hectare.
Question 2 – Answer: D: Uvedale.
Question 3 – Answer: A, B and C, but not D: Grapes.
Question 4 – Answer: B: The bulge.
Question 5 – Answer: B: Endophytic.

State Association Contacts

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SA	Greg Cramond	aplpear@ozemail.com.au	Apple & Pear Growers Association of SA PO Box 74, Basket Range, SA 5138	(08) 8389 8300
TAS	Sally Tennant	sally@fruitgrowerstas.com.au	Fruit Growers Tasmania Inc 262 Argyle Street Hobart, Tasmania, 7000	(03) 6231 1944
VIC	John Wilson	gm@fgv.com.au	Fruit Growers Victoria 2 Rumbalara Road, Mooroopna, VIC 3629	(03) 5825 3700

Summerfruit Australia Limited 2011 ELECTIONS

This will be the 9th election for directors for Summerfruit Australia Limited. The process will be similar to the previous elections and members should note that elections are an annual event. It is not a requirement to vote although directors encourage all members to exercise their democratic right.

The process

Summerfruit Australia Limited will follow a set process for the election of directors, as set out in the Constitution. Please have a read through (available on the website (www.summerfruit.com.au)) so that you are familiar with what will happen. The following is a diagram of the way in which this will occur:

Membership open

Nominations are called	Tuesday 16th Mar, 2011
Nominations closed	Monday 3rd May, 2011
Membership list closed	Tuesday 3rd May, 2011
Postal ballot commences	Monday 16th May, 2011
Postal ballot closes	Friday 3rd June, 2011
Ballot declared soon after ballot close.	

Membership open

Membership is now open and all members are invited to participate. Directors have set the 2011-12 membership fee \$110.00 (inc GST). A membership form is available on the Summerfruit Australia website (www.summerfruit.com.au)

A member of Summerfruit Australia Limited is a business entity with one vote per member irrespective of size. Each member will be represented by a single person (the business representative) and they will hold the vote for the member. All registered levy paying businesses who apply for membership will automatically become A class members unless they opt not to do so. Only A class members will be allowed to vote in this election. B class members are those who are not levy paying businesses. Note that each business has one representative as indicated by you when you joined. If you wish to change this representative it is possible up until the membership list is closed. Other businesses are also invited to join as B class members, and the initial membership for this category of membership is also set at nil. B class members may nominate as a director of Summerfruit Australia Limited, but do not have a vote.

Nominations are called (March 16th)

Nominations will open on 16 March for those wishing to become directors of Summerfruit Australia Limited. A person who wishes to nominate for the 2011 elections must be a representative of an A or B class member, and they also must have the support of at least two representatives of A class members. A nomination form will need to be completed before a nomination can be accepted. Note that retiring Directors are able to re-nominate. As well as the above, prospective directors will be required to complete a 'Consent to Act as a Director' Form. This is to ensure that we comply with the Corporations legislation.

Nominations close (3.00pm, May 3rd)

At least 45 days after the call for nominations they close. At the completion of this process the nominations are vetted to ensure they comply with the Constitution. If the number of nominations in any one state is equal to the vacancies then the poll for that state is declared and no vote is necessary.

If the number of nominations for any state is more than the vacancies (ie: one), then an election (by way of a confidential postal ballot) will be held in that state. If the number of nominations is less than the vacancies (ie nil) in that state then the vacancy may be filled by candidates selected by the directors.

8th March 2011



Dear Member,
Re: Summerfruit Australia Limited – Election of Directors

Summerfruit Australia Limited has commenced its Annual Directors' Election process and as a registered member, I welcome your participation.

Elections are held to ensure a fair and democratic system of governance.

The process starts with a call for nominations of candidates in March and ends with a declaration of the results of a ballot (if required) in June. The attached documents explain the key steps in some detail. I would ask you to please familiarise yourself with the election process.

The Board welcomes the call for nominations. The retiring directors are eligible to re-nominate for the following states Queensland, Tasmania and Victoria. South Australia is available for nomination.

I encourage all members to participate in the election process. All of the necessary forms are available on our web site.
www.summerfruit.com.au

Yours sincerely,

Ian McAlister

Ian McAlister – Chairman

Membership list closed (3.00pm, May 3rd)

Prior to any ballot the membership list for Summerfruit Australia Limited will be closed. Until the time indicated above, new members may join and alterations to the business representative and other details may be made. When the list is closed, no other alterations are possible until after the election process is completed. The membership list will be used to mail out ballot papers if required.

Postal ballot commences (May 16th)

Elections for Summerfruit Australia Limited will be by confidential postal ballot. A series of envelopes and voting papers will be sent to each A class member to complete and return.

The voting system is similar to government electoral voting and your preference is indicated by voting 1 for the most preferred candidate. Do not use ticks and crosses as a way to indicate your preference. You may only vote for the candidates in your state (as determined by the principal business address).

Postal ballot ends (3.00pm, June 3rd)

Three weeks after the ballot commences it will close. After this time no other votes will be allowed. The time above indicates the close of the ballot. An independent returning officer will examine each vote to ensure it has been properly undertaken and count the votes for each candidate.

Ballot declared

At the completion of the counting of the votes the returning officer will declare the vote.

Further information:

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e-mail: ceo@summerfruit.com.au website: summerfruit.com.au

