May/June 2008

vegetables australia





18 2008 Awards finalists announced

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Educating the
next generation
of workers

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A word from the **AUSVEG Chairman**

Drought, world hunger for bio-fuels, increasing imports, labour shortages and cost of production are only some of the challenges that the vegetable industry faces.

he issue of bio-fuels issue is causing increasing concern. The drive by many countries to increase bio-fuel use has put pressure on the availability of crop inputs such as sprays and fertilisers. Where there is shortage, there are price increases; this coupled with the drought has contributed significantly to the recent jump in vegetable prices.

As the new AUSVEG Chairman, I want to reassure the industry and growers we represent that although we have undergone rapid change with the departure of former Chairman, Michael Badcock, and CEO, John Roach,

we are as dedicated as ever to delivering outcomes that the industry needs most.

Michael and John's exceptional contribution to the vegetable industry must be acknowledged and on behalf of AUSVEG I wish them well in their future endeavours

AUSVEG will continue to work closely with its state members to change the company constitution for greater inclusiveness. This process has not stalled, but progress is slow as there are many differing views that must be negotiated for a solid outcome that will stand the test of time.

It isn't just about changing a company structure; it is sending a signal for a bold, whole-ofindustry transformation.

I look forward to working for a secure and profitable future for Australian vegetable growers. I currently operate a small family operation in Baldivis, Western Australia, growing vegetables and potatoes. I understand, from the coal face, how important it is for industry organisations to make sure the collective voice of growers is heard and fight for the real issues.

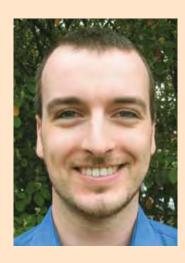
See you all in Western Australia for the biggest vegetable industry



David Anderson Chairman **AUSVEG Ltd**

event on the calendar—the vegetablesWA 60th Anniversary Dinner and Australian Vegetable Industry Awards 2008 presenta-

From the editor



s it that time of year already? The winners of the Australian Vegetable Industry Awards 2008 will be announced at the end of this month at a gala dinner in Perth, which doubles as the 60th anniversary celebration for vegetablesWA.

This is the third year the awards have been run; all short-listed nominations (page 18) are industry leaders, recognised by peers and colleagues for their outstanding achievements. We'll report on the winners in the July issue of Vegetables Australia.

Workforce shortages are of increasing concern to growers, but South Australia's Urrbrae High School has found a unique way to educate the next generation of workers about the agriculture industry. The school's compulsory agricultural curriculum helps students understand the industry and how their career path (whatever that may be) is connected to primary industries. Read about this initiative on page 28.

Research and development in Australia is an ongoing practice, a constant effort to refine and improve technology and technique. While R&D projects are often reported on in isolation, they have strong ties to preceding projects, working together to form part of a greater whole. On page 42, we follow the R&D trail of an IPM stocktake to see what other projects were approved as a result of recommendations made, and what the next stage in the R&D process

We'll see you in July with a recap of the 2008 Awards announcements and an overview of what the Federal Budget means for growers, but until then, enjoy this issue of the magazine.

Jim Thomson

Editor, Vegetables Australia



Urrbrae High School: out in the paddock

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vegetables australia



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Cabbage family may ward off cancer

Research funded through the Vital Vegetables program has shown that consumption of plants from the cabbage family may prevent bladder cancer.

An international team of researchers has discovered that an extract of broccoli sprouts can decrease the incidence of bladder cancer in an animal model by more than 50 per cent.

More than 300,000 people every year worldwide are diagnosed with bladder cancer. It is the fourth most common cancer in men, and the eighth most common in women.

New Zealand scientists Carolyn Lister, from Crop & Food Research, and Rex Munday, from AgResearch, collaborated with researchers from the United States and New Zealand to arrive at these findings.

"We were interested in the results of the study from the perspective of developing vegetables with elite characteristics," Carolyn said.

"The fact that we've shown this extract can cut the development of bladder cancer in rats is great news for our broccoli and Vital Vegetables programs since the compounds, known as glucosinolates, are also present in the mature broccoli plant. One of the aims of our research is to produce conventionally-bred broccoli with naturally high levels of them."

"We're currently working toward the commercial release of the first Vital Vegetables product,



which will be broccoli. This means consumers can look forward to reaping the benefits of our research before the end of the year," said Dr Philip Roeth, IP & Commercialisation Manager at Horticulture Australia Limited (HAL).

Consistent results

US scientists had shown that the glucosinolates present in broccoli are effective at stimulating the body's defence mechanisms against cancer.

Rex said the results are

Consumers
can look
forward to
reaping the
benefits of the
research before
the end of
the year.

consistent with studies showing that people who have a high dietary intake of plants of the cabbage family are less likely to develop bladder cancer than those who eat only small amounts of these vegetables.

Vital Vegetables is a trans-Tasman collaborative program to produce fresh, flavoursome and high-health vegetables. The program is a partnership that includes AUSVEG, HAL, Horticulture New Zealand, Crop & Food Research, and Department of Primary Industries Victoria.

Industry mourns water expert

Wentworth scientist and well known water expert, Professor Peter Cullen, died in March at the age of 65.

A renowned scientist who had a reputation for telling difficult truths, Professor Peter Cullen's passing was met with sadness and regret by scientists, politicians and industry leaders across the nation.

As Commissioner of the National Water Commission, Peter played a leading role in the areas of policy development, implementation and sustainability in relation to water and natural resource management. Earlier this year Peter made headlines by suggesting that the Australian Government essentially compulsorily acquire water from irrigators to speed up water reforms in the Murray-Darling Basin by returning more water

more promptly to the system.

In addition to speaking to growers and industry personnel about Australia's water crisis at the Vegetable Industry Conference in Sydney in June last year, Peter traveled the country to inform and educate the nation about its water usage.

One of Peter's better known feats was convincing then Prime Minister John Howard that a comprehensive plan was required to deal with the nation's water crisis.

"With \$10 billion to invest,"
Peter said, "we have great
opportunities to build irrigation
communities that are economically, environmentally and socially
sustainable. Is this possible in a
Western democracy, or will we

Professor
Peter Cullen
had a rare
talent for
explaining
problems and
the solutions
offered by
science.

spend this money pandering to special interests?"

In 2001, Peter was awarded the Prime Minister's Prize as Environmentalist of the Year. In 2004, he received the International Limnology Society's Naumann-Thienemann medal for his work on inland waters, and he was awarded an Australian Order for services to freshwater ecology.

Federal Water Minister Penny Wong said Peter was an accessible public voice for the water crisis in Australia.

"Whether it was in the media, in public debates, or in country halls, Professor Cullen had a rare talent for explaining problems and the solutions offered by science," she said.



Construction of SunWater's 300,000 megalitre Paradise Dam and the 20,000 megalitre Kirar Weir in Bundaberg, Queensland, has provided local growers with another option for sourcing water. Paradise Dam has reached record levels of 45 per cent capacity and Kirar Weir was almost full, said SunWater's Garry Grant. The water supply is to be used for agricultural, industrial and urban sectors.

AUSVEG appoints new Chairman

David Anderson was appointed as Chairman of AUSVEG following the resignation of Michael Badcock as Chairman and Director in April.

Your sprayer specialist

am very enthusiastic about the positive work AUSVEG does and have a vision for making the vegetable industry more profitable and cohesive," David said.

David has been a Director of AUSVEG since November 2005 and was elected Vice-Chairman this year.

"Michael Badcock has been an exceptional contributor to the vegetable industry for decades, both in the operations of a very successful business in Tasmania and in developing AUSVEG and industry leadership," David said.

Michael has been on the AUSVEG Board since the company's inception and has been Chairman for four years.

"I would also like to acknowledge the efforts and enthusiasm of John Roach who resigned from his position as CEO on Monday 31 March. John made

an outstanding contribution to AUSVEG and raising the profile of the vegetable industry," David said.

Acting CEO announced

Robert Lawler has been appointed as Acting CEO for AUSVEG.
Robert has been with AUSVEG for three months in the role of interim Chief Financial Officer.

AUSVEG will advertise for a permanent CEO shortly.

"Robert has experience across a number of industries and organisations and will continue the operations of AUSVEG to meet the needs of the vegetable industry," David said.

Robert joined AUSVEG from a recent role in the shipping industry and has an extensive background in financial manage-

"I am looking forward to working with David and the Board of



Directors and meeting the new challenges facing AUSVEG as the peak industry body," Robert said.

David, a fourth-generation potato and vegetable grower from Baldivis in Western Australia, is the Chairman of vegetablesWA and an executive of the Potato Growers Association WA.



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NEWS IN BRIEF

Effective, efficient Tassie value chain

A globally adopted Value Chain Analysis tool has been used for the Tasmanian processed vegetable industry.

A study into the Tasmanian vegetable processing industry has identified projects that, if implemented, would improve the efficiency and effectiveness of existing processes along the value chain.

The study produced a methodology that can be transferred to other primary industry value chains so they can assess the strengths and weaknesses in the chain's material flows, information flows and relationships where value can be added and improvements made.

The methodology, called Value Chain Analysis (VCA), is used globally in the manufacturing sector. It is a diagnostic tool that aims to systematically and objectively look at a value chain's capacity to undertake collaborative innovation, particularly by introducing new products and services that will be valued by consumers.

The VCA identified that for any improvements to be made, a collaborative approach would be needed. Multiple stakeholders in the chain have to recognise that change is needed and

agree on how that change can be undertaken.

Key issues for consideration included the relationships and flow of information between different stakeholders along the chain, and the creation and flow of value in the eyes of the consumer at each stage in the value chain.

The VCA determined that collaborative innovation (where partners have a shared vision and there are compatible structures), processes and open communication, are the best way for implementing continuous improvement along the value chain.

The study, which was funded by the Australian Vegetable Industry Development Group (AVIDG) and the Tasmanian Institute of Agricultural Research (TIAR), involved Horticulture Australia Limited, TIAR and chain partners in the Tasmanian vegetable processing industry.





McGauran retires

After 25 years as Member for Gippsland, Peter McGauran has retired from politics.

n the wake of the Coalition's federal election loss last year, Peter McGauran is the first former Howard government minister to quit parliament. He announced his retirement in April.

"It has been the greatest privilege to have represented Gippsland in the Federal Parliament and I will always be grateful for the confidence and support vested in me. However, there comes a point in time when a handover has to take place even though it may be politically difficult," said Peter.

"This is not a decision I have taken lightly. I leave knowing that I have given everything to my role in public office. It has been a full and satisfying political career."

Peter entered Federal Parliament at the age of 27 and was re-elected at nine subsequent federal elections. First sworn in as Minister in 1996, Peter was promoted to the Howard Government Cabinet as Minister for Agriculture, Fisheries and Forestry in July 2005 and remained in that position until the November 2007 election.

The leader of The Nationals, Warren Truss, said he will miss Peter's energy, determination and wise counsel.

"I would like to acknowledge the strong representation and dedicated service of Peter McGauran as Member for Gippsland and a Federal Minister," Warren said. He added that Gippsland needed a fighter to build on the work done by Peter.



Nuffield Scholar paves way for greenhouse advances

After a world tour of greenhouse enterprises and educational facilities, Tasmanian grower Anthony Brandesema has returned home with an eye to the future.

Anthony Brandesema, 2005 Nuffield Farming Scholar, has released the final report for his scholarship—Controlled environment management and plant physiology in a closed production system.

Nuffield scholarships are offered annually; scholars are awarded \$25,000 in travel costs to aid them in researching an issue pertinent to their industry. Anthony travelled to the Netherlands, Belgium, the United Kingdom, Canada, Mexico and the United States to complete his research. He participated in study tours and visited greenhouse growers around the globe.

The chosen topic, *Controlled environment management and plant physiology in a closed production system*, provided Anthony with ample scope for an international investigation of the greenhouse industry.

"The Nuffield experience has drawn me to places I would have not considered travelling to and introduced me to a world of issues and challenges that will relate to our own operations in time," he said.

Technology, training, testing

The fresh vegetable industry is a vibrant and dynamic one, with changing trends and seasonal fluctuations, said Anthony.

"The volatility in the market can be a positive, as those who produce consistently will become relied upon, at times even commanding a price for their product that is not a reflection of the market price, because of their reliability in supply."

Much of his travels were devoted to researching the technology used by greenhouse growers overseas. He found that while technological advances are important, they must be partnered with a grower's experience to be of significant value. Training was paramount.

It was also made clear to Anthony that innovation was a result of methodical testing. "Those who test innovation are usually determined enough to successfully adopt the innovation into their operations," he said.

For more information visit:

www.nuffield.com.au/report_f/
report2.html to download
Anthony Brandesema's report,
Controlled environment
management and plant
physiology in a closed
production system.

Controlled environment management recommendations

- Protected cropping is the fastest growing food producing sector in Australia at 6 per cent per annum.
- Generically labelled packaging has been an uncomfortable strategy from a grower/packer perspective. The newest trends in the United Kingdom have growers reverting to a more company-specific label.
- If the industry is serious about stretching its water resource to its full potential, the use of closed hydroponic systems should be looked at for many vegetable crops.
- Protective cropping systems assure security, quality and safety at profitable levels, and suit supermarkets' identified growth in innovative quality products.
- Location of new greenhouses should be advised at an industry strategic level. The concept of clusters around shared water treatment facilities, packing sheds and boilers should be embraced as a logical way of gaining greater efficiency.
- Carbon credit trading will present an opportunity for the greenhouse grower.

Apply for a Nuffield Scholarship



Young vegetable growers are the industry's future and they have the opportunity to expand their horizons with a Nuffield Farming Scholarship.

Applications for the 2008 industry-sponsored scholarships, valued at \$25,000 each, are now open to all Australian National Vegetable Levy

payers. The winner will be selected on his/her farming and leadership capabilities, and his/her potential to make a strong contribution to the vegetable industry.

The scholarship is partly sponsored by the National Vegetable Levy.

Nuffield Scholarship applications close on June 30, 2008. Applications are available on the AUSVEG website at www.ausveg.com.au or through the Nuffield Australia office on 02 6964 6600, enquiries@nuffield.com.au or on the website: www.nuffield.com.au

NEWS IN BRIEF

Recent minor use permits

Permit number	Permit description (pesticide / crop / pest)	Date issued	Expiry date	States covered
ALLIUM VEGETABLES				
PER10427	Regent (fipronil) / Swede, Turnip / Diamondback moth	24-Jan-08	31-Jan-10	All states except Vic
CUCURBITS				
PER10184	Natrasoap (potassium salts) / Capsicum, Lettuce, Cucumber (GH & hydro) / Greenhouse and Silver- leaf whitefly	20-Feb-08	31-Mar-13	All states except Vic
PER10265	Methidathion / Peppers, Ornamentals, Eggplant, Tomatoes / Western flower thrips	18-Mar-08	30-Sep-12	All states except Vic
PER10279	Abamectin / Cucumber, Zucchini, Squash / Two- spotted mites	22-Feb-08	30-Sep-13	All states except Vic
HERBS				
PER10147	Methomyl / Parsley, Coriander / Thrips, Western flower thrips	1-Jul-08	30-Jun-10	All states except Vic
LEAFY VEGETABLES				
PER9932	Methomyl / Lettuce / Western flower thrips, Helicoverpa, Cluster caterpillar	23-Mar-07	28-Feb-09	All states except Vic
PER10335*	Petroleum oil / Lettuce (GH & hydro) / Leafhoppers, Green vegetable bug, Grey cluster bug, Rutherglen bug, Green mirid	18-Mar-08	31-Mar-11	All states except Vic
PER10416**	Methamidophos / Lettuce (head) / Western flower thrips	25-Mar-08	31-Mar-13	All states except Vic
18-S25A2b-2007-2	Methomyl (various trade names) / Lettuce (leafy and head - outdoors only) / Western flower thrips	3-Mar-08	28-Feb-09	Vic only
LEGUME VEGETABLES				
PER10149	Abamectin / Snow peas, Sugar snap peas / Two-spotted mite	16-Nov-04	30-Sep-10	All states except Vic
PER10691	Diflufenican / Peas / Broadleaf weeds	28-Apr-08	30-Apr-13	All states except Vic
ROOT VEGETABLES				
PER10197	Amistar (azoxystrobin) / Carrots / Powdery mildew	31-Aug-07	30-Sep-09	NSW, SA & Tas
PER10198	Folicur (tebuconazole) / Carrots / Powdery mildew	31-Aug-07	30-Sep-09	NSW, SA & Tas
PER10273	Talstar (bifenthrin) / Sweet potato / Sweet potato weevil, Bean spider mite	22-Feb-08	30-Sep-13	NSW, NT, Qld & WA
PER10301	Ridomil (metalaxyl + mancozeb) / Carrots, Parsnips / Pythium spp., Phytophthora spp.	1-Apr-08	31-Mar-13	All states except Vic
STEM AND STALK VE	GETABLES			
PER9839	Ambush (permethrin) / Celery / Heliothis, Looper	22-Feb-08	30-Sep-13	NSW, NT, Qld & WA
PER10316	Avatar (indoxacarb) / Celery / Heliothis, Lightbrown apple moth, Lucerne leaf roller, Vegetable weevil	3-Mar-08	30-Sep-12	All states except Vic

^{*}NOTE: APVMA required crop safety data on leafy lettuce varieties

- 2. This permit may be subject to change depending on the outcomes of the methamidophos review
- 3. Additional residue data needs to be generated for this permit to be renewed

^{**}NOTE: 1. Use of methamidophos may result in detectable residues in lettuce which may not be acceptable in export markets

Victorians encouraged to "Just Add Fruit & Veg"

A four-stage campaign will provide tips to help people increase their vegetable consumption.

A campaign launched in March by the Parliamentary Secretary for Human Services, Telmo Languiller, encourages Victorians to "just add" fruit and vegetables to their meals to increase fruit and vegetables consumption in line with recommended daily amounts.

Telmo launched the breakfast stage of the campaign at La Manna Fresh fruit and vegetable retailer in Brunswick with the help of singer Kate Ceberano.

Funded by the Victorian Government's 'Go for your life' strategy, the project is a collaboration between the fruit and vegetable industries and the health sector. The campaign has four stages—breakfast, lunch, dinner and snacks—and offers simple ideas and tips for meal or snack preparation.

Peter McLennan, Chief Executive Officer of Melbourne



[From left] David Fussell from Melbourne Market Authority; Kathy Bell, CEO of the Heart Foundation; Kate Ceberano and Peter McLennan, CEO of Melbourne Market Authority at the launch of the "Just Add Fruit & Veg" campaign.

Wholesale Fruit, Vegetable & Flower Market (Melbourne Market Authority), said that retailers were excited about the campaign.

"Tip cards with the 'Just Add Fruit & Veg' messages will be available in all fruit and vegetable retailers and independent supermarkets across Victoria," he said.

Lunch, dinner and snacks launches will be held throughout 2008 at various locations in Victoria to promote the "Just Add Fruit & Veg" message.

For more information:
Find out about other 'Go for your life' initiatives at www.goforyourlife.vic.gov.au



NEWS IN BRIEF

PMA keeps industry connected

The PMA Australian-New Zealand Country Council has plans for 2008.

To provide opportunities for international members to network and learn, the Produce Marketing Association (PMA) held meetings of volunteer-led member councils in Australia and Mexico in 2007.

The Australia-New Zealand Country Council—led by council chairman Michael Simonetta, CEO of Perfection Fresh—met twice last year. Future meetings are planned to provide ongoing opportunities for members to network, discuss local issues and learn from industry experts.

PMA also hosted several international "Fresh Connections" events in 2007. These events are an opportunity for members to network and be educated about topics relevant to local industry. The third annual Australian Fresh Connections was held in August, along with a similar event in Chile. This year's Fresh Connections

Conference will be held on 14 and 15 August in Sydney, with more than 250 delegates from Australia and New Zealand expected to attend.

Commenting on the value of the 2007 Fresh Connections conference, event chairman Michael Simonetta said, "This event set new standards in networking and information exchange for all of us in the fresh produce industry in Australia and New Zealand. This

is the first time I have seen all the main Australian retail groups together at one event."

Founded in 1949, the Produce Marketing Association is a leading trade association that serves more than 2,100 companies that represent every segment of the global produce supply chain.



Applicants sought for ARLP

The prestigious rural leadership program is calling for applications for next year's scholarship.

The vegetable industry will again sponsor a National Vegetable Levy payer to complete the Australian Rural Leadership Program (ARLP). The objective of the ARLP is to identify, develop and support committed rural and regional leaders to become highly effective at regional, state, national and international levels.

Each course is made up of 30 to 35 participants. Course 16 will be conducted from May 2009 to November 2010. Participants attend development sessions held in a number of locations including most Australian states and territories. There is also an overseas study tour. Sessions, totalling 60 contact days over 18 months, involve discussions, presentations, workshops, debates and visits.

The ARLP is for people, generally aged from 30 to 45 years, already active in leadership roles in community and/or industry affairs, who:

- want to help shape the future of rural and regional Australia
- have the capacity, prospects and commitment to lead at regional, state or national levels
- are committed to developing and sharing a vision for rural and regional Australia.

The vegetable industry scholarship covers the course costs of \$46,000 (plus GST). The scholarship winner will be required to contribute \$4,000 (plus GST).

Apply now

Applications for Course 16 close 31 July 2008 and completed application forms must be submitted to the Australian Rural Leadership Foundation by this date. However, if applicants wish to be eligible for National Vegetable Levy sponsorship (should their application be

successful), they must forward a copy of their ARLP application form to AUSVEG, together with a covering letter.

The covering letter is to confirm that the applicant is a current National Vegetable Levy payer, or is employed by a company that is, and state:

- how the participant and the industry will benefit from the program (this could include future roles for the participant, possible projects to be undertaken as part of the program, or dissemination of project outcomes)
- how the participant's leadership attributes and potential have already been demonstrated.

The applicant must confirm that, if successful, he/she understands that a voluntary contribution of \$4,000 will be required.

Applicants applying for the ARLP scholarship to be sponsored by the National Vegetable Levy must forward their application and covering letter to AUSVEG by 15 August 2008 to:

ARLP Application

AUSVEG (attention Industry Development Manager)

PO Box 563

Mulgrave Vic 3170

Applications can be emailed to <admin@ausveg.com.au> or faxed to 03 9558 6199.



To download an ARLP application form, visit the Australian Rural Leadership Foundation website at www.rural-leaders.com.au, email <info@arlp.net.au>, or phone 02 6281 0680.

Details about supplementary information required by AUSVEG can be found at www.ausveg.com.au

Cooperative EMS partnerships catch on

National workshops have been another step forward for grower adoption of Environmental Management Systems (EMS).

ast year, through its environmental program, AUSVEG successfully obtained funding under the Australian Government's EMS Pathways to Sustainable Agriculture Programme to run a series of workshops aimed at building cooperative partnerships between Regional Natural

said Helena Whitman, Environmental Manager AUSVEG.

"There has been a concern that these targets may adversely affect vegetable production and we wanted to ensure that the decision makers understood how the vegetable industry operates."

Five regions were selected

We wanted to ensure that the decision makers understood how the vegetable industry operates.

Resource Management (NRM) bodies and the vegetable industry.

"We were trying to get a better understanding of how the NRM or Catchment Action Targets were going to impact on our growers," nationally and growers in those regions were invited to participate in the project. Through this involvement, growers were able to form closer relationships with their catchment representatives.

It gave growers access to information about funding opportunities for implementing on-farm environmental works that could lead to increased savings and securing the long-term viability of their farms.

Grower assistance

The workshops were run by Alison Anderson and Helena Whitman from AUSVEG. Alison explained to growers the role and targets of their catchment and outlined any impact this could have on their production methods. Growers met with their local catchment representatives, who are well positioned to assist with applications for grants and incentives.

During the workshops there was discussion about how the catchment could assist growers. As a

result of this, some catchments have applied for funding through the National Landcare Program for projects that will directly benefit vegetable growers. Others are assisting growers to apply for funding for on-farm works.

"The most rewarding aspect of the project was seeing growers being made aware of what these NRM bodies had to offer and getting the assistance to apply for individual grants and funding for local industry," said Helena.

Key findings from the project were that the majority of growers have little or no idea about NRMs and Catchment Management Authorities (CMAs), regional strategies were available at various levels nationally, and that this project should be viewed as a pilot to be rolled out to other catchments.

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MEDIA MATTERS

From the ACCC's inquiry into grocery prices, to a potential market for second-grade produce, to the effects of a record-breaking heatwave, vegetables are big news in the nation's leading newspapers. Here are five headlines from the past two months.

"Threat to trueblue produce"

Adelaide Advertiser, Adelaide Monday 10 March, page 17

Concerns have been raised about the future of Australian horticulture as imports become more of a threat. *Future Focus*, a report about Australia's horticulture industry, said rising population numbers and demand for produce, low production growths and increasing horticultural prices will put pressure on imports.

However, Managing Director of Horticulture Australia Limited, John Webster, said the report found an increase in exports would be of great benefit to industry.

"There is a clear opportunity to increase Australia's exports, particularly to northern hemisphere markets, and improve profitability," he said.

"Farmers pay for heatwave"

The Age, Melbourne Tuesday 18 March, page 3

Following a record-breaking heatwave, south-eastern Australian growers counted the costs after temperatures reached more than 35 degrees for 15 consecutive days. The heatwave devastated South Australia's agriculture industry and left serious doubts about the sustainability of irrigation in the lower Murray River.

Many crops suffered as a result of the heat, and growers were unsure whether to harvest

"It's costing many millions of dollars a day, and the damage bill will get higher," said South Australian Farmers Federation President, Wayne Cornish

"Who's to blame?"

The Age, Melbourne Saturday 8 March, page 1 (Insight)

Vegetable and potato growers are concerned about the prices they receive for produce, compared with the prices consumers pay. Worldwide, food prices have jumped, and Australia is feeling the impact of this.

Coles spokesman Jim Cooper said that international factors did have an effect on the prices seen on our supermarket shelves.

Prices in Australian supermarkets were influenced by global factors as suppliers struggle to meet demand. Through its inquiry, the ACCC hopes to unravel any anti-competitive structures in the grocery industry. Calls for more competition against retail giants Coles and Woolworths were welcomed by Christopher Zinn from the Australian Consumer Association.

"Inferior foods plan: Health fears over high prices"

Herald Sun, Melbourne Tuesday 8 March, page 8

Calls for supermarkets to sell inferior fruit and vegetables have been made in a bid to help fight disease and obesity. In an effort to help struggling families afford fresh fruit and vegetables, and tackle Australia's obesity crisis, VicHealth wants a grading system implemented for fresh fruit and vegetables.

However, Vegetable Growers Association of Victoria President, Luis Gazzola, said the idea would not be worthwhile as the returns would not offset the cost and effort of transporting the lower-quality produce to supermarkets.

He added that it would make more financial sense to churn second-grade vegetables back into the ground to enrich it for the next crop.

"Farmers to ACCC: Watch supply chain"

The Age, Melbourne Tuesday 18 March, page 4

Australian growers urge the competition watchdog not to push down grocery prices once it completes its national grocery prices inquiry.

The National Farmers' Federation has urged the Australian Competition and Consumer Commission (ACCC) to shift its focus on the whole food supply chain, which aims to boost transparency, fairness and competition across the board.

The Victorian Farmers Federation (VFF) said reports of 100 per cent mark-ups on supermarket shelves were common and more needs to be done to clarify who receives these profits and absorbs costs along the supply chain.

Growing Business has arrived

A new business management program designed for vegetable growers will be launched in July.

A USVEG has partnered with Response Learning to build a first-of-its-kind business skills program to help businesses maximise their potential. The program, called Growing Business, has been designed specifically for vegetable growers to ensure practical learning within the unique landscape of the industry.

The course will focus on developing business, finance and marketing knowledge and skill through the use of practical projects. There are three Melbourne-based, two-day workshops, followed by a distance-learning

component, that will start in July and conclude in August 2008. Workshop facilitators are experienced professionals with a wealth of knowledge to guide participants.

Growers who attend the workshops will learn how to:

- write and implement a business plan
- better plan and manage business finances
- market their business for better growth.

This program can lead to the Certificate IV in Small Business Management. Assessments are purposely work-related to ensure that the workshops have direct benefits for growers involved.

The program will be held on 4 and 5 July, 18 and 19 July, and 22 and 23 August 2008. Accommodation for these Friday and Saturday workshops can be arranged in Melbourne city. The cost is yet to be finalised but a funding subsidy is being sought.



For more information contact: Dianne Fullelove, People Development Coordinator AUSVEG, on 0400 960 695, or Wendy Hall, Response Learning, on 07 3357 4400 or 0418 491 595

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Vegetable Industry Awards 2008 Finalists announced

The Australian Vegetable Industry Awards identify and recognise excellence across the vegetable industry. Following an extensive nomination and short-listing process, the industry has identified the following finalists as contenders for the awards.



Winners of the Australian Vegetable Industry Awards 2008 will be announced at the vegetablesWA 60th Anniversary Dinner, held on 31 May at the Burswood Grand Ballroom in Perth.

Landini Grower of the Year Award

Sponsored by PFG Australia - Landini Tractors

Park Town

The Landini Grower of the Year Award recognises outstanding practices across many aspects of vegetable production, including growing, environmental management, staff management and product quality. Growers short-listed for this award have shown to be innovators in their field and active contributors to the broader industry.



Geoff and Bev Buckley

Geoff and Bev Buckley demonstrate their passion for high-quality, chemical-free food by using organic production methods on their farm at Mount Tamborine, Queensland. Seven years ago they established the not-for-profit "Green Shed", which provides a market for local growers. They are also heavily involved with the Local Producers' Association.

As part of their dedication to educating growers about reducing chemical reliance, Geoff and Bev run a training program called Growing Healthy, which teaches soil, plant and human health. Keen contributors to the industry, Geoff and Bev plan to open an organic training centre and farm-stay facility as well as write a book about healthy, sustainable growing.

Matt Hood

Matt Hood manages more than 7,000 acres of sweet corn, beans, lettuce and broccoli crops across New South Wales and Queensland. His company, Rugby Farm, has been pre-packing vegetables for more than 10 years and recently introduced pre-packaged green beans to the Australian market. As part of his research, Matt explored packaging and packing equipment internationally. He continues to search for better technology and methodology worldwide.

Matt is committed to the environment and uses cover crops and crop rotation to ensure that soil is protected as part of Rugby Farm's good environmental practices. In August 2006, Matt conducted a study tour to Europe with a number of vegetable suppliers, where he learned about the latest European trends in marketing, production, post harvest and new-product development.





David and Yvonne Pike

David and Yvonne Pike's company, Neerim Hi-Plains Growers, produces approximately 1,360 tonnes of certified seed potatoes every year. In order to maintain these high yields, David and Yvonne continually invest in the infrastructure and development of their property. High levels of hygiene and crop management strategies are also implemented on-farm.

Staff members are valued contributors to the company and are kept actively involved in all aspects of the farm. David and Yvonne delegate important roles to well-trained staff and have a quality manual in place for each aspect of the production chain, including staff training and conducting final quality control checks.

Peter Schreurs

Victorian grower Peter Schreurs has been in the vegetable industry for more than 20 years; his company, Royston Park Vegetable Farm, is one of the largest leek producers in Australia. He has adopted an Environmental and Sustainability Policy that includes nature-friendly initiatives through soil biology, water conservation, integrated pest management (IPM), biodiversity and energy conservation.

Peter strongly encourages the use of recycled water in agriculture and was a key organiser of the South East Growers Network, which successfully lobbied State Government to support the recycled water project at Cranbourne, Victoria. He also established an efficient water conservation practice on-farm, plants substantial numbers of trees to offset carbon emissions and has a policy to reduce electricity and fuel use on-farm.



Landmark Young Grower of the Year Award

Sponsored by Landmark



The Landmark Young Grower of the Year Award recognises a vegetable grower under the age of 35 who has shown excellent business acumen and innovation in his/her chosen area of vegetable production. Short-listed finalists have shown a high level of initiative in their approach to business and are recognised for their commitment to industry.



Rick Butler

A water-conscious outlook spurred Victorian grower Rick Butler to help design, construct and implement a water-saving commercial washing process for soft vegetables. The washer received a grant from the Victorian State Government and Rick has since been invited to discuss the washer at an international conference of Salanova growers in Spain.

Rick is committed to fostering industry development and is a member of Vegetable IAC Production Advisory Group.

Additionally, Rick has undertaken a project to introduce new workers to the horticulture industry, where he educates selected Melbourne students, who have completed their secondary studies, about the horticulture system via a summer work program.



Chris Millis

With the protected cropping industry increasingly driven by technology, it pays to be an early adopter. Chris Millis, Project Manager at Flavorite Tomatoes in Victoria, has helped guide the industry by leading by example.

Chris's business advances include a carbon dioxide enrichment program, hanging gutters for vine-tomato production, specialist management trolleys for high-wire crops, and a commitment to developing an IPM system on-site.

A member of the Greenhouse Advisory Board, Chris regularly commits to further education. In addition to his Bachelor of Agriculture Science, Chris has attended a course at the PTC+ in the Netherlands and Monash University's Produce Executive Program. He hosts industry open days, allowing growers to see his initiatives first-hand, and he communicates the benefits of best practice by organising grower meetings around the state.

Tally Matthews

Tally Matthews runs a successful vegetable and turf production business in NSW. A leader in globe artichoke production for the fresh market in the Sydney basin area, Tally has also worked on a project to develop and locally produce value-added marinated artichokes.

Tally organises local, national and overseas study opportunities for other growers, and has also spent time establishing the Sydney Vegetable Demonstration Farm. Tally's enthusiasm for on-farm training has seen him coordinate chemical user training, on-farm demonstrations, and IPM workshops.

Ensuring his own professional development, Tally has taken part in young grower tours and actively participates in a number of associations including NSW Farmers' Association and the Western Districts Royal Agricultural Society of NSW.

Tally is dedicated to promoting local produce, exhibiting and sourcing produce for a number of local shows, and judging the vegetable category at the Royal Agricultural Society of NSW Camden Show.



Bayer CropScience Researcher of the Year Award

Sponsored by Bayer CropScience



Bayer CropScience

The Bayer CropScience Researcher of the Year Award acknowledges scientists with extensive portfolios in research and development (R&D), their dedication to promoting knowledge and understanding in the vegetable industry, and their contribution to the international status of Australian science. Short-listed finalists have a demonstrated track record of research or extension work that has contributed to long-term industry benefit.



Dr Sandra McDougall

Dr Sandra McDougall has worked on vegetable industry-related research projects for more than 10 years and is committed to helping growers integrate R&D outcomes in their production operations.

Sandra's focus has been in IPM systems and she has been involved with National Vegetable Levy funded projects since 1997. Her research outcomes in IPM have been widely used by growers, especially in the sweet corn and lettuce industries.

Her commitment to the on-farm uptake of R&D results has been exemplified in the personal assistance she has extended to growers, her high standing among the grower community, and the demand for her knowledge at conferences nationally and internationally.

Dr Bruce Tomkins & Dr Ross Lill

Dr Bruce Tomkins (below left) is based at DPI Victoria, while Dr Ross Lill works out of CFR, North Palmerston in New Zealand. Together they have achieved significant milestones for the Australian and New Zealand vegetable industries. In particular, the collaboration has spawned the Vital Vegetables program, a value-added initiative that brought the benefits of high-health vegetables into focus.

The team also developed Modified Atmosphere Packaging technologies and pioneered a number of other complementary projects. Additionally, their work has successfully been integrated in the areas of food safety, production and post-harvest practices.

Their work has attracted widespread support from the industry and has resulted in extended industry interest for the Vital Vegetables project, which is planned to be available commercially later this year.







Dr Nigel Crump

Plant Pathologist Dr Nigel Crump has a large and successful record of research projects. Integration of project outcomes by the grower community has been similarly successful. Nigel's track record is testament to his dogged determination to make a difference to the vegetable industry.

A passion for communicating the benefits of R&D in optimising crop performance are evident in the extensive papers Nigel has written, and the number of industry conferences, national and international tours, discussion groups, and expos in which he participates and initiates.

His extensive network of contacts across all levels of industry in Australia and overseas are indicative of his enthusiasm for his work and of his ambassadorship of Australian science globally.



Matilda Fresh

In 2006, Matilda Fresh released a new product aimed at the gourmet niche market—consumers seeking quality and convenience. 'Matilda Tops', pre-cut, fresh-packed broccoli and cauliflower heads, was launched with the 'Grab a Pack' campaign.

The product helped the parent company, Matilda Farms, expand its export business. As Australian vegetables cannot compete in overseas markets on price, Matilda Farms focuses on producing quality through best practice. Now, 60 per cent of Matilda Farms' produce is exported.

Matilda Farms implements marketing research, extensive training and consumer studies to ensure products meet or exceed customer needs. The farm is expanding from Queensland into New South Wales to extend its growing season.

Web: www.matildafresh.com.au

Brisbane Produce Market Innovative Marketing Award

Sponsored by Brisbane Markets Limited



The Brisbane Produce Market Innovative Marketing Award recognises individuals or businesses who, in the past three years, have created new market opportunities for vegetables or vegetable products through innovative marketing concepts. Short-listed finalists have challenged traditional perceptions of marketing and had a significant impact on the broader industry.

Odeum Produce

Odeum Produce has worked closely with growers and major retail organisations over the past seven years to develop innovative marketing solutions. Odeum Produce sets benchmarks for future market trends that have been followed nationwide.

In 2001, Odeum Produce introduced the peeled onion to help boost consumer confidence in a falling market. Since then, many other businesses have incorporated this processing technique into their operations.

In 2004, Odeum Produce introduced Western Australia to pre-cut pumpkins, allowing the vibrant pumpkin flesh to be displayed on-shelf. Specially developed shrink-wrap film provided sufficient breathability to extend the shelf life of the finished product to more than seven days.

Web: www.odeum.com.au



AUSVEG Chairman's Award

Sponsored by AUSVEG Ltd



The AUSVEG Chairman's Award recognises consistent individual contributions and commitment to the greater good of the industry. Short-listed finalists have exemplified the qualities that make them champions of their field in the vegetable industry.





Jeff McSpedden

Jeff McSpedden has more than 35 years experience in the vegetable industry. He lives south of Bathurst, New South Wales, where he grows brassica vegetables and sweet corn for both fresh and processed markets.

As an AUSVEG Board Director, AUSVEG National Environmental Committee Chair and a NSW Farmers Association Horticultural Committee Western Rivers representative, Jeff is involved in several agripolitical roles.

He is passionate about R&D and environmental issues. Jeff also hosts regular field days on his property to promote the EnviroVeg program and believes all growers should be involved in implementing R&D project outcomes.



Peter Cochrane

An Executive Member of the Vegetable Growers Association of Victoria and President of the VFF Horticulture Group, Peter Cochrane has grown vegetables for more than 30 years in Devon Meadows, Victoria, in partnership with his wife.

Peter has given many years of continued service to the vegetable and horticulture sectors and has been very active in a wide range of issues in order to help maintain a viable industry.

He is deeply interested in the impact of chemicals in the industry and environment and regularly attends information sessions about chemical use.



Yvonne Fahl

Yvonne Fahl has been in the industry since 1965 and lives with her husband in Carnarvon, Western Australia.

Many years of voluntary work led to her appointment as Executive Officer of the Carnarvon Growers Association in 2001. She is highly respected in the Vietnamese community and is committed to helping disadvantaged growers achieve acceptable standards of good management practices and quality control.

Despite retiring in late 2007, Yvonne continues to assist with grower education development and, as an APC commissioner, also runs the fruit fly baiting programme in Carnarvon. As vegetablesWA celebrates its 60th anniversary, AUSVEG's Mel Ward chronicles the evolution of a committed grower association.

Local representation, global impact

he vegetable industry in Western Australia has developed into a prosperous and dynamic food supplier both in Australia and overseas. This success can be traced back to the early 1930s, when a group of cauliflower growers, led by the Anderson. Arbuckle and Stevens families, established an exporting business out of the Fremantle docks. Vegetables, including cauliflower, carrots and lettuce, were shipped to Singapore, Malaysia and Hong Kong, until World War II put a halt to these ventures. However, as soon as the war ended, the business was restored. It has since developed

into a \$90 million export industry that has helped shape Western Australian vegetable growing.

Unified voice

As far back as 60 years ago, agriculture families in Western Australia recognised the importance of their work and the need for a unified voice to represent vegetable growers. In 1948, the Western Australia Vegetable Growers Association (WA VGA) was formed to ensure the future success and prosperity of the industry. Its new trade name, vegetablesWA, was established four years ago.

Initially, the association focused

mainly on the Perth metropolitan area; it did not have much contact with growers outside this region. Current vegetablesWA President, David Anderson, said that the original members of the group struggled with who they represented and missed out on valuable input from the larger vegetable production areas.

"The association needed to shift its focus from the metropolitan hub to a broader area in order to increase its potential," he said. The expansion of the association meant that vegetablesWA became the main representative body for the vegetable industry in Western Australia; it was growers' first call

for assistance in issues such as lack of labour, water shortages and pest problems.

A huge contributor to the vegetable growing community of Western Australia was W.R. (Bill) Stevens, who dedicated more than 60 years to progressing the vegetable industry. Bill, an inaugural member of WA VGA, is credited for challenging all levels of government to support the vegetable industry. He was a great advocate of the WA export industry, especially with cauliflower, and led the way in seed variety development.

Bill's son and former vegetablesWA President, Clive Stevens,



Growers at Arbuckle farm in Balcatta area, WA, prune a tomato crop. This picture was taken in 1936.

remembers his father's innovation and clear vision for success. "Bill pioneered a returnable crate system and the Western Australian Vegetable Growers Association was the first in Australia to use this method," he said.

The Bill Stevens Award of Excellence honours Bill's remarkable and committed involvement in the Western Australian vegetable industry and will be presented at the association's 60th anniversary dinner in May.

R&D rewards

The introduction of research and development (R&D) forced the vegetable industry to become more proactive and respond to issues in a progressive manner. Clive said that this was a catalyst for changing the structure of the association, a move driven by himself, Sam Calameri and Figaro Natoli.

"In the past, all work was volunteer-based and members paid their own way. Funding was very poor until the R&D process was implemented and gave the vegetable industry an opportunity to progress," he said. The association now operates from a managed and funded office structure as a result of the members' determination to build a secure foundation for vegetable growers.

In recent years, vegetablesWA has realised the importance of engaging younger growers and developing their skills to ensure future industry prosperity. David believes that this is a key factor for a successful association and has endeavoured to ensure the association fosters and encourages young growers.

"Hopefully, now that the association is more forward-thinking and contemporary, these growers want to join in and play a part in its progress," said David.

Outstanding progress

VegetablesWA has made remarkable progress on a number of issues over the years, including power, water and energy reform, increasing political awareness of the vegetable industry, innovation in grower and

Bill Stevens was a great advocate of the WA export industry and led the way in seed variety development.



farm technology and encouraging industry development. The association also highly regards its valuable connections with organisations and government departments.

"VegetablesWA has built strong relationships with governments as well as an excellent rapport with agriculture groups and other industry members. The association has always enjoyed our involvement with these groups and benefited from the shared knowledge and increased communication with the whole of Australia," Clive said.

The quarterly magazine *WA Grower*, another accomplishment for vegetablesWA, is credited with expanding the scope of the association. "The magazine has played a big part in shaping the association and bringing together the entire vegetable growing community in Western Australia," David said.



The association shifted its focus from the metropolitan hub to a broader area to increase its potential.

Forward thinking

Former vegetablesWA President, Sam Calameri, identifies future challenges for the entire vegetable industry but believes that there is also a huge potential for growth, especially in Western Australia. "The association has a high profile and will be able to achieve many more valuable outcomes through strong vision and forward thinking," he said.

"The vegetable industry needs to recognise all participants in the industry and if it can achieve this, then it will progress further and achieve even greater success," said Clive.

The first female vegetablesWA President may not be too far away either, with current Vice President, Maureen Dobra, a possibility to be elected President at the Annual General Meeting in September.

Most importantly, the association is still focused on providing the service and strong reputation its founders established. "The people that began vegetablesWA had a vision and positioned the association to have credibility across all areas of the industry. Hopefully the association can continue this confirmed success in representing vegetable growers in Western Australia," David said.



Party time

Celebrating past achievements and awarding the best the industry has to offer are the order of the day at vegetablesWA's 60th Anniversary Dinner, writes AUSVEG's Hannah Burns.

stablished in 1948, the Western Australia Vegetable Growers
Association celebrates its 60th anniversary this year, with celebrations organised by vegetablesWA.

A gala evening is set to take place on Saturday 31 May at the Burswood Entertainment Complex, Perth. The dinner, sponsored by Landmark, will attract more than 500 growers, past and present, and industry personnel to commemorate the past 60 years of a prosperous industry.

Enter the ballroom and take a walk through history, enjoy a pictorial display of Western Australia's vegetable farming industry in times gone by and celebrate a progressive grower association. Pip O'Connell, well-known *Postcards WA* presenter, will MC the evening while guests enjoy some of Western Australia's finest fresh produce and dance the night away to music from a live band.

Bill Stevens Award

Another reason to celebrate will be the announcement of the winners of the Australian Vegetable Industry Awards 2008 and the Bill Stevens Award of Excellence.

The Bill Stevens Award of Excellence (BSA), sponsored by WA Crates, is awarded biennially to an individual, or company, who has made a significant contribution to the industry, as well as excelling at their field. This year's award focuses on outstanding performance in vegetable production.

Clive Stevens, son of Bill Stevens, said "the award recognises someone who is outstanding and innovative in their growing practices, continually implements new technology, has immaculate farm presentation and management skills, and is always looking for new and better ways of doing business. The winner must be at the forefront of our industry".

Finalists for the 2008 BSA are Baldavis growers Sam Calameri and Paul Humble, and Gingin grower Maureen Dobra. The winner of the BSA will be announced at the vegetables WA 60th birthday dinner.

To tie in with the 60th anniversary celebrations, Western Australia's Industry Development Officer (IDO), David Ellement, is organising a field tour of the Perth central markets, a major retail distribution centre and retail stores on Friday 30 May. The tour will provide insight about the supply chain and how it affects your business, and consumer behaviour and buying habits.



For more information contact:

Jim Turley, vegetablesWA Executive Officer, for details about the vegetablesWA 60th Anniversary Birthday Dinner or to purchase tickets

Phone: 08 9481 0834

Email: <pga-vga@vegetableswa.com.au>

or David Ellement, WA IDO, for details about the field tour

Phone: 0408 941 318

Email: <ellement@vegetableswa.com.au>

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Or simply have some questions you would like to ask?

Join AUSVEG and HAL at the Annual Levy Payers meeting in Perth.

Where: Broadwater Pagoda Resort Hotel, Como WA When: Friday 30 May (Vegetables 5.00 to 6.00pm and Potatoes 4.00 to 5.00pm) followed by drinks sponsored by AUSVEG.

For more information contact AUSVEG on 03 9544 8098.

R&D overview

Build capacity of greenhouse growers to reduce crop loss through adoption of preventative disease management practices

Project number: VG07118

Start date: 1 October 2007

End date: 30 September 2009

Project leader: Jeremy Badgery-Parker, Extension Horticulturist (Greenhouse Horticulture), NSW DPI Email: Jeremy.badgery-parker@dpi.nsw.gov.au Phone: (02) 4348 1900 or 0412 819 465.



Plant diseases in a typical greenhouse enterprise may be costing growers as much as 15 per cent of their potential income. In some greenhouse crops, the average loss from disease can be as high as 30 per cent. Add in a couple of pests and it's no wonder growers can feel their "hip-pocket nerve" twitching.

The key to cost-effective pest and disease management is through preventative and integrated strategies. There are three important rules:

- Sanitation—clean everything and keep it clean
- Quarantine—stop pests and diseases getting in
- Monitoring—know which and how many pests or diseases are present before you act.

Keeping greenhouses clean can help growers reduce the costs and crop losses in the management of pests and diseases. It sounds simple, but most growers would agree that putting it into practice can be quite a challenge.

NSW DPI extension and greenhouse industry specialist, Jeremy Badgery-Parker in collaboration with Tony Burfield (Extension Officer, SARDI), participating growers and Virginia Brunton (Education Officer, NSW DPI) are working to build the capacity of Australian greenhouse growers to adopt preventative pest and disease management practices.

The two-year project will provide growers with a comprehensive and accessible guide to the basic economics of preventative pest and disease management, reducing key problem sources on-farm, and limiting the spread of pests and diseases in the greenhouse.

The project also aims to provide hands-on practical advice and assistance for greenhouse growers to adopt cost-effective preventative practices and make changes on-farm. This will help growers implement greenhouse management practices that have a real, ongoing benefit.



It is with pleasure that Lefroy Valley Australia announces the distribution of the De Ruiter seeds brand from the 1st of July. De Ruiter has an excellent research and development team which is very focused on their product groups of capsicum, cucumber, eggplant, melon and tomato.

This year is the 25th anniversary of Lefroy Valley being active in the horticultural seed business. We are a company whose mission is "Grower Solutions" and we remain strongly focused on customer service in the field.

The demand for food and niche products under increasingly tough climatic conditions has resulted in a world wide trend towards more protected culture crops. The addition of the De Ruiter brand to our product range, means that Lefroy Valley will be ideally placed to service this market

We look forward to continuing the strong development of De Ruiter products in Australia, with the resultant win-win for growers!

For further information contact:

VIC/NSW/TAS: Ph: 03 8770 6666
WA/NT/SA: Ph: 08 9409 5400
OUFFNSLAND: Ph: 07 4690 1333





School's out!

Educating the next generation of workers could be the key to tackling the industry's workforce shortages, writes Angela Brennan. Photography by Kelly Barnes.



"G od hasn't been making any new land recently," reads the centennial message from Urrbrae Agricultural High School's Principal of 2000, Terry Tierney. "We have to manage what we have. If we don't manage it properly, we will starve."

Year 8 students at Urrbrae High School, in suburban Adelaide, won't starve. They are growing broccoli, buk choy, beetroot, cauliflower and many other varieties in plots set aside for compulsory horticultural studies.

While other high schools around the nation knuckle down to several years of regular academic study, Urrbrae has integrated its normal secondary curriculum with specialised studies in agriculture, environment and technology. In doing so, it has achieved national and international recognition.

The 75-year-old school is situated in the leafy suburb of Netherby, about six kilometres from the CBD. Considered one of South Australia's top public high schools, it is part of an educational, research and industry complex that includes TAFE SA Regional Campus for Horticulture. The Nursery & Garden Industry of South Australia is also located at the site.

The school, with TAFE, comprises a 25-hectare mixed farm, with further land given over to orchards, vineyards, aquaculture,

apiculture and a four-hectare flood mitigation, wetlands and land management project. It boasts the most comprehensive range of agricultural, horticultural, environmental and technological buildings and equipment of any school in Australia.

The site was donated by the early-20th Century pastoralist Peter Waite to the South Australian government as part of a bequest to promote educational advancement in agriculture and related studies. Included in the bequest was land across the road that has since become a leading agricultural research and education complex, the Waite precinct, based around Adelaide University's Waite campus.

Understand the industry

"Vocational studies in agriculture/ horticulture are a very important component within our senior school curriculum, but not all our students go down this track," said Assistant Principal, Dean Cresswell.

"In the production-horticulture sections of the school there are kids who have grown up on vegetable farms, and expect to take over the family business. But most of our students are urban."

Of these urbanites, some might end up with vegetable pots on their patio, while others could go

continued page 30

(in the paddock)



Voices from the veggie plot

After talking to a group of 13-year-old year 8 students at Urrbrae, it was clear they felt that horticulture studies were a good thing, but responses were varied when *Vegetables Australia* asked them if they'd consider a career in horticulture.

Sara Thompson

I'd like to take over my auntie's vegetable farm. It would be good to start up a business and make other stuff to sell at growers' markets.

Jesse Chapman

I want to work around different farms, casual work. I expect I want to do it as a career. I'd like to have a business connected with horticulture.

James Filsell

I expect to take over my father's orchard. We are fourthgeneration apple orchardists. If I get good at maths, I'll do the farm's accounting.

Emily Mathews

It's great to dig into the ground and get a bit dirty. I love watching our veggies grow, but I want to do Law; I don't know what Law has to do with horticulture.

Louis Pitt

At the moment I simply don't know enough to know what I find interesting in horticulture, but learning about it is handy. I wouldn't mind studying more to find new and better ways to keep pests away.

Lewis Boase

I reckon it could be really interesting work; it would take you places. But it's not for me. What is horticulture exactly?

Kate Robb

I love working on my nanna's veggie farm in New South Wales. I'd like to have a job there but I'd want to do more study.

Anika Gardner

I hadn't even heard the word horticulture before I came to Urrbrae. I've never considered a career in it but learning about it opens our minds to what's out there. Now I understand what to do in my garden and why.

on to study agriculture science at university.

"We give students every encouragement and opportunity to join the industry, but at their age, our concern is not so much to turn out a new batch of commercial growers as to ignite an interest and appreciation in these subject areas so they better understand rural communities and food production—particularly in light of current changes in climate and a competitive global market," said Dean.

"If they do law, or health sciences, or get into international trade, they will have a sense of how agriculture works and its relevance to their chosen field."

With a school motto of Science with Practice, students at Urrbrae High School are taught the important scientific, managerial and economic principles underlying agricultural and horticultural production, and how to apply

them in practical terms.

"For example, younger students work on organic plots, with emphasis placed on soil composition, the benefits of mulching and composting, and an introduction to natural pest management.

By year 12, the curriculum has intensified to include chemical use, plant physiology, biosecurity and integrated pest and disease management systems," said

Application of new technologies such as sustainable energy alternatives, soil and water conservation and integrated waste management polyculture systems, including aquaponics, are also emphasised.

In recent years, the school has extended its horticultural curriculum to include Asian vegetables, native vegetables, and new technologies in hydroponics and greenhouse growing. It also assists primary schools

with establishing vegetable gardens, composting and landcare activities.

Funds needed to halt decline

Students at Urrbrae are given opportunities to value-add beyond the farm-gate by selling their produce to the public at the school's 'Old Barn Market' and the school canteen. They also learn how to supplement farm income through farm and eco-tourism and farm hospitality. Outside alliances include the Royal Agricultural and Horticultural Society (RAHS) Farmers' Market and the Rundle Street Traders Association.

With a 30 per cent decline in South Australia's long-term work-force in production-horticulture the state government is beginning to listen to industry and is looking for ways to promote horticulture as a long-term career.

Recently, the SA Industry

Development Board (Horticulture) surveyed agriculture teachers throughout the state to determine what horticulture subjects are being taught and the number of senior students likely to pursue horticultural related careers.

Some of the issues raised by the board included declining wages and numbers in the industry, the view that horticulture is sometimes viewed as a short-term job rather than a long-term career, and the career preference to amenity-horticulture (such as landscape gardening) over production-horticulture.

"Government puts a lot into research and development, which is a good thing, but very little is put into education and training," said Dean. "There is limited industry sponsorship in this area, and we need it, urgently, if we want people to pursue careers in production horticulture at all levels."

By year 12, the curriculum includes chemical use, plant physiology, biosecurity and integrated pest and disease management systems.





Stake a claim

Health claims on food labels may be better suited to processed rather than fresh products, but consumers read them with a grain of salt, writes Youna Angevin-Castro.

n 2003, the Australian Government initiated policy changes that made it possible for food manufacturers to include health claims on food labels. The new standard, developed by statutory agency Food Standards Australia New Zealand (FSANZ), allowed for statements relating to the potential health benefits of food products, and in some cases their relationship to specific diseases, to be provided to consumers at point of sale.

Though any claims included on individual product labels are strictly regulated by FSANZ, not everyone is convinced that the introduction of health claims on food labels is a positive move. Consumer group CHOICE has expressed its concern about the changes, believing manufacturers will use the health claims as a marketing tool, and that it may mislead the consumer into buying a product based on its potential health benefits.

CHOICE also points to other countries, such as the United States, where health claims have been used, but appear to make little difference to the buying choices and health of consumers. This begs the question: Are health claims useful to consumers, and are they likely to affect consumers' buying behaviours?

Fresh advantage

According to Dr Peter Williams of the National Centre of Excellence in Functional Foods, these questions are relevant, as little is known about how consumers use health claims, and whether they are valuable in determining consumer behaviours.

"What we do know is that while consumers find that health claims on packaging are useful, they are also sceptical of manufacturers' claims and believe that health claims should be regulated by the government," he said.

"Many consumers already

What is a health claim?

According to food standards regulator Food Standards Australian New Zealand (FSANZ), a health claim is a claim "that describes a relationship between the consumption of a food or constituent of a food and particular benefits of the food in relation to health." FSANZ divides health claims into two categories: general or high level health claims. A third type of claim—nutrition content claim—describes the nutrient content of a food and can include statements such as "low fat", "97% fat free", and "no added sugar".

High level health claims refer to a serious disease or condition, or a biomarker of a serious disease or condition. They include claims that refer to the potential for a food or component to assist in controlling a serious disease or condition by reducing risk factors or improving health, or reducing the risk of a serious disease or condition.

The use of health and nutritional claims are regulated by FSANZ, and require scientific evidence to substantiate the claims to ensure they do not mislead consumers.

(Source: Food Standards Australia New Zealand. www.foodstandards.gov.au)

Consumers like having information that health claim labelling might offer but they are wary of how much they can believe. >>

know that certain foods are good for them, but they like having additional information that health claim labelling might offer. But in a market where health claims are traditionally associated with processed foods, consumers are also wary of how much they can believe."

Peter acknowledges that fresh fruit and vegetables may have a natural advantage over processed foods when it comes to credibility: however, he questions the real value of health-claim labelling.

"Labels can provide a reminder at the point of sale, but you get far greater impact by sending the message through multiple channels, such as educational programs and PR campaigns. You won't get the same results by just sticking a label on an avocado," he said.

Category management

Under the new FSANZ framework, health claims can either be categorised as either 'general level' or 'high level' health claims. General level health claims allow for statements to be made about the contribution of a certain food to general well-being, in the context of a balanced, health diet. For example, "Calcium is good for strong bones and teeth, when consumed as part of a healthy diet".

High level health claims involve statements referencing a particular serious disease or condition, such as cancer, heart disease or osteoporosis. These claims are far more specific, and require enormous scientific substantiation to ensure that they are both valid, and not misleading to consumers. To date, FSANZ has already investigated and reviewed seven diet-disease relationships, of which five have been substantiated and for which claims will be allowed on food products. One of these high level claims includes a relationship between the consumption of fruit and vegetables and coronary heart disease.

However, Peter warns that claims associated with any specific, individual whole foodsregardless of the scientific data to substantiate it-may have limited benefits to consumers in the context of a whole diet.

"High level health claims are inherently difficult for whole foods. Studies are hard to do, as they would require people to add large amounts of specific foods to their diet in order to change the balance. Realistically, this approach is very unlikely to achieve levels of active ingredients that will offer therapeutic effects."

At present, health claims legislation covers issues of advertising and labelling on individual foods, but there are no restrictions on naturopaths or journalists making claims about particular foods.

"On this basis, there are certainly opportunities for industry to drive positive PR, provided they take a generic approach, and are not associated with a specific brand or entity," Peter said.

THE BOTTOM LINE

- Food Standards Australia New Zealand (FSANZ) allows for statements relating to the potential health benefits of food products to be provided to consumers at point of sale.
- FSANZ divides health claims into two categories: general level or high level. High level health claims must be substantiated with proven scientific evidence.
- While consumers find health claims on packaging to be useful, little is known about how consumers use health claims, and whether they affect buying behaviours





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ECONOMIC OUTLOOK

Resources needed to secure food-chain integrity

THE BOTTOM LINE

- Volumes and diversity of import trade in the past 25 years have increased enormously, but the resources for monitoring biosecurity risks in Australia have not followed suit
- Some progress has been made, though this has been slow.
 Biosecuity measures remain biased towards animals.
- A complete review of Australia's biosecurity arrangements, headed by Roger Beale, will report to Tony Burke, Minister for Agriculture, Fisheries and Forestry, in September this year.

Pests and diseases are a fact of life and continually pose a threat to the income of Australian vegetable growers. In the past, compared with other countries, Australia has been blessed by its relative isolation and spared the ravishes of some well known exotic diseases. Strict quarantine and active surveillance at the border contributed to preventing the incursion of major exotic diseases. This task was easier in the era of steamships and limited travel.

Over the past 25 years, lines of communication have narrowed. Volumes of trade have increased enormously as has the diversity of transport modes and packaging. At the same time, there has been an explosion in human and animal movement across Australia's borders. The risk factors associated with the transmission of pests and diseases have expanded exponentially.

As biosecurity risks grow, resources for monitoring them have not followed suit. Funding reductions and rationalisation of personnel in Departments of Agriculture at both the federal and state levels saw a bank of knowledge removed from Australian agriculture. Those that remained struggled with limited resources that prevented the development of easily accessible and well documented data to assist in assessing biosecurity risks.

Slow progress

There have been some positives. A comprehensive review of Australia's quarantine arrangements was ordered by the Keating Government. The 'Nairn Report', which made 109 recommendations, was delivered to the Howard government in late-1996, which responded in August 1997. Three themes emerged from this report that were important for the Australian vegetable industry:

- Addressing the bias in Australian quarantine towards animal rather than plant health
- Development of a partnership approach between industry, government and the public
- A holistic approach towards biosecurity with efforts maintaining pre-border, border and post-border controls.

As biosecurity risks grow, resources for monitoring them have not followed suit.

Some progress has been made on each of these although the speed of implementation has been slow. The Office of the Chief Plant Protection Officer was established in the Federal Department of Agriculture, Fisheries and Forestry, Plant Health Australia (PHA) was set up in 2000, the Plant Biosecurity Cooperative Research Centre in November 2005, and the Centre of Excellence for Risk Analysis in March 2006.

AUSVEG is a member of PHA and engages in regular dialogue.

After much industry input, PHA and AUSVEG launched the National Vegetable Industry Biosecurity Plan in May 2007, which outline a course of action in the event of a major pest incursion.

Plants versus animals

Despite this progress, the bias against plant industries remains. Look at the publicity that the outbreak of equine influenza received, not to mention the level of taxpayers' money thrown at the industry. When was the last time a headline appeared about diamondback moth or whitefly and the impact that these and other pests have on vegetable growers incomes?

Existing arrangements for border control are not adequate. Inspection rates for incoming containers are low. It is not just in the importation of food products where the biosecurity risk for Australian vegetable growers lies, as exotic pests can attach to containers of non-food items. Imported seed remains a huge risk as evidenced by the continuing outbreak of potato spindle tuber viroid in tomato plants in the Carnarvon area of Western Australia.

Trade barrier concerns

There are also concerns about the use of biosecurity issues as an effective trade barrier. Health and safety requirements are tending to replace import tariffs and quantitative restrictions on imports as the major barrier to agriculture trade. Australia's image has suffered in foreign markets because of a belief that Australia has been using phytosanitary issues as

Biosecurity looms as a major issue for the Australian vegetable industry, and faster action needs to be taken, writes Economist Ian James.



[From left] Dr Conall O'Connell, celebrity chef Georgina Damm, then AUSVEG Chairman Mike Badcock, Steve Rathjen and Andrew Inglis at the launch of the National Industry Biosecurity Plans for the vegetable, potato and onion industries at the Vegetable Industry Conference 2007 in Sydney last year.

an effective trade barrier. More formal complaints have been brought against Australia than any other member country of the World Trade Organization (WTO).

Under WTO rules, countries have a right to prohibit the import of certain foods to prevent the importing of exotic pests and diseases, provided the judgement is based on scientific grounds. Both the Nairn Report and a subsequent report, the Corish Report in 2006, headed by Peter Corish, a former president of the National Farmers' Federation, called for the establishment of an independent statutory authority to oversee Australia's biosecurity and establish integrity in international

circles as to the scientific basis of Australia's desire to protect the country from biosecurity risks.

The danger for Australian vegetable growers is that other countries may react in a tick for tack response to other products being excluded from Australia on rather spurious scientific grounds. At present a number of countries are reviewing their biosecurity arrangements. There have been some difficulties in respect to biosecurity matters on trade between Taiwan and Australia.

The Australian vegetable industry has been caught in this vortex with the Taiwanese proposing to prohibit imports of Australian carrots from Western Australia

on the grounds of evidence of burrowing nematode and the risk that the continued importation of Australian carrots imposes. Taiwan is a long-established market for Australian carrots and no evidence of burrowing nematode has been found in carrot growing areas of Australia.

Market realities

Whatever the outcome of the present deliberations, the case sends a powerful message of the need for a close look at Australia's biosecurity arrangements. For the vegetable industry, this means continual on-farm monitoring. Under WTO rules it is not sufficient to argue that a growing

area has never had a particular pest. Evidence of active testing for pests and diseases is required.

There is also a need for improved databases and records to provide the necessary evidence to prove that certain pests and diseases are not a risk. Although the potential for increased paperwork is daunting, it is a market reality. After climate change, food safety is the next big issue; Australia must ensure that it has in place systems that ensure the integrity of the food-chain.

As such, the announcement of a complete review of Australia's biosecurity arrangements by Tony Burke, the Minister for Agriculture, Fisheries and Forestry, in February was welcomed by the vegetable industry. The review, headed by Roger Beale, is gathering information and submissions from a range of interested parties. It will have wide terms of reference and look at a range of issues including the functions of the Australian Quarantine and Inspection Service (AQIS) and Biosecurity Australia, the scope and adequacy of current animal and plant quarantine systems, as well as the effectiveness of import and export inspection and certification procedures. The 'Beale Review' is due to report to Minister Burke by September 30, 2008.



In for the long haul

Twenty years ago, Rob Henry was getting \$135 per tonne for his onions in the processed vegetable industry. Now he gets \$110 per tonne. With record prices for fuel, fertiliser, labour and electricity, along with extreme drought conditions, growers like Rob are receiving minimal returns for their produce.

"It's just ludicrous when you look at what has happened to our costs," said Rob. "We struggle and struggle to get better yields, but the whole industry is driven by supermarkets and fast food outlets that disregard the production end of the supply chain. While things are this way, it's a waste of time thinking we're going to make any money."

In light of this, Rob decided to downsize his vegetable production.

"I run the farm as a business so the decision was dead easy. I have a very agile farming business and I do it that way deliberately. I can move to where the most profit is and focus on areas that are going to be best for the business," he said.

Committed to improvements

With his wife, Kathy, Rob runs a large mixed farming operation on 1,800 acres in the northern midlands of Tasmania. He also manages another 4,000 acres for a family nearby. Both properties encompass

the production of wool, prime lamb, beef, cereals, hybrid vegetable seeds, pasture seeds and lucerne. Rob also extracts essential oils onfarm from peppermint, fennel, dill, parsley and lavender. He continues to grow potatoes, onions, green peas and broccoli, on a reduced scale. By this time next year, he will have stopped growing potatoes altogether.

Rather than walk away from the problems within the vegetable industry, Rob's commitment to improving conditions for growers and promoting leadership within the industry has strengthened. He is the Tasmanian representative of the Vegetable Industry Advisory Committee (IAC), which makes recommendations for how the National Vegetable Levy is used. He is also a member of the Market Development Advisory Group and gives input to some of the proposals that go to the IAC. One of the models he is particularly interested in is VegVision 2020, which aims to double the value of fresh, processed and packaged vegetables, in real terms, by the year 2020.

"R&D in Australia has to go to a leadership position. Rather than be reactive we have to be proactive. The best chance have have is to look at areas such as marketing, consumers, people and leadership, as well as production," said Rob.

The industry has to look at areas such as marketing, consumers, people and leadership as well as production.

Family matters

One of the driving forces behind Rob's continued commitment to the vegetable industry is his son. At 20 years of age, Mike Henry wants to be a grower. Having recently completed a degree in Biotechnology at the University of Tasmania, he is home for six months before he goes overseas to work for two to three years to develop his skills further.

"He'll do whatever's possible. I'd like him to be involved in vegetable growing, because if this goes on and nobody grows vegetables, I don't know where the produce will come from," said Rob.

In 1991, Rob had his own opportunity to go overseas. He went for 10 weeks on a Nuffield Scholarship to study irrigated agriculture on loam soils in Brussels and the United Kingdom. Now, as National Vice Chairman of the Nuffield Board, he helps oversee



the selection of 16 scholars each year to China, Brazil and Europe.

"It was a fantastic experience for me. Because of my involvement in Nuffield Australia I have an interest in people and leadership in agriculture. We look for people who can prove they are going to continue with agriculture and have the ability to bring information back and disseminate it through the community," said Rob.

Follow the demand

The Australian Competition and Consumer Commission

(ACCC) recently commenced an inquiry into the competitiveness of retails prices for vegetables and other groceries.

Rob is cautiously optimistic about the inquiry, having seen others, such as the inquiry into petrol prices, come and go without making a difference. But rather than sit back and wait, he'd rather focus on solutions, such as more direct marketing between producers and consumers through farmers markets and greengrocers.

In his own business, he'll continue to seek out opportunities

for diversity and profitability.

"I have a canola pressing business and we're now pressing poppy seeds for biodiesel, producing 4 to 5 million litres a year. I'm also looking at making our own compost to try and stay away from artificial fertilisers," said Rob.

The ability to shift his operation in line with industry demand means that Rob's business looks secure, but rising overheads, decreasing profit margins and low returns predict an uncertain future for many Australian growers.



The secret history

Considered by many to be Australia's youngest vegetable industry, Asian vegetables have actually been horticulture's best kept secret for more than 100 years.

As consumers familiarise themselves with Asian vegetables by eating in Asian restaurants or expanding their meal-preparation repertoire at home, it's little wonder that between 1994 and 2001 the production of Asian vegetables in Australia doubled. Since then, the Asian vegetable industry has settled into a growth pattern of increasing 10 per cent per annum, and wholesale market operators expect this trend to continue for at least a few more years.

With an estimated Gross Value of Production (GVP) of \$150 million per annum, the Asian vegetable industry accounts for

six per cent of the horticulture industry's total GVP of \$2.4 billion. Quite a feat for what many would regard as a new, and small, industry.

However, Australia's Asian vegetable industry now encompasses more than 80 lines, including leafy (such as buk choy, gai lan and wombok) and non-leafy (such as taro, bitter melon and snake beans) varieties.

An estimated 16 per cent of Asian vegetable production is exported (mainly from Queensland and Western Australia) but export markets are fiercely contested by other nations. The good news for local growers is that Asian vegetable imports are negligible, so growers have the opportunity and responsibility of meeting Australia's increasing demand for these lines.

The industry supports almost 1,700 growers, many of whom are from China, Vietnam or Cambodia. More than half of these growers are located in New South Wales.

Market gardens set the scene

Apart from a few Asian convicts from England, the Chinese didn't arrive in Australia until the gold rush of the 1850s. Subsequent discoveries of gold brought



Asian Vegetable Profile



Also known as: Swatow mustard greens,
Chinese mustard, mustard cabbage, Indian mustard

Background

Gai choy is one member of the diverse mustard family. Mustards are thought to have originated around the Central Himalayas, but are now grown in all parts of Asia. The earliest cultivated varieties were used for their seeds, which could be used as a spice or pressed to extract oil. Around the 7th century varieties

were developed that could be used as fresh leafy vegetables.

Gai choy is variable in appearance—the leaves can be more or less crinkled, the thick ribs and veins more or less prominent, and the colour ranges from bright to dark green.

Where and how does it grow?

Gai choy prefers warm, humid conditions and can grow vigorously. Some researchers have suggested that seed producing varieties of Brassica juncea could be a useful source of biodiesel. Gai choy can also be grown as a green manure crop, as a soil fumigation treatment or to help remove heavy metals from soil (though these plants are not suitable for human consumption).

The compounds that give gai choy its distinctive flavour help to defend the plants against chewing insects. It can also be adapted to hydroponic production. Some varieties are harvested when large and mature while others are more suited to use as baby leaf vegetables.

Preparation and cooking

The flavour of gai choy is something most people will either love or hate. Large, mature gai choys can be extremely peppery and must be cooked before eating. Baby gai choy can be eaten fresh—its hot, mustardy bite adds spice to salads.

Gai choy is extremely nutritious. According to Purdue University, 140 grams can provide the daily recommended dietry intake (RDI) of Vitamin C, 60 per cent of the RDI of Vitamin A, and 20 per cent of the RDI of iron. It is also high in beta-carotene, calcium, potassium and the glucosinolate sinigrin.

Additionally, gai choy is often used in traditional Chinese remedies. Soup made from the vegetable is used to reduce inflammation and the effects of colds and flu.



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more migrants to Australia. The influx of Asian migrants led to the establishment of Chinese market gardens, which have been commonplace in Sydney since the 1850s.

At this time, the market gardens in Rockdale, an area of swamp by Botany Bay that was drained and used for vegetable growing, supplied many Sydney residents with fresh produce. Rockdale quickly developed a reputation for Chinese market gardens—many varieties grown there were consumed more widely, including cabbage and cauliflower, but Asian vegetables were also grown to feed the migrant community.

By the end of the 19th century, market gardens were predominantly manned by Chinese growers, who sold their wares at markets or by hawking. Invariably, market gardens attracted migrants, and Chinese communities often established themselves where gardens were located.

Chinese market gardens became so successful that they found themselves in competition with commercial growers in the 1920s. Ironically, this growth may have been partly due to trade barriers placed on imports from Asia in the 1890s, which would have increased the demand for locally supplied product.

Australia's
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non-leafy
varieties.

Trade barriers and increasing migrant populations are probably the two defining catalysts for the growth of the Asian vegetable industry—not changing European tastes. Thus, when the White Australia policy was relaxed in the 1950s and 1960s, and anti-racial legislation was introduced by the Australian Parliament in 1975, migration increased, as did demand for Asian vegetables.

Crossover is crucial

Since then, Asian vegetable success stories have been those products that most consumers

wouldn't consider to be 'Asian', products that have crossed over to become accepted mainstream varieties, such as spring onions and snow peas. Occasionally, these crossover products result in confusion about names, as is the case with shallots. Chinese growers, unfamiliar with the small brown bulbs from Europe, originally gave their bunching onions an English name of shallots.

Another market development has been the use of Asian vegetables in fresh cut salads. Asian salad mixes are available that include red and green mustards, pak choy, and Japanese Greens such as Mibuna, Mizuna and Tatsoi.

Last year, McCain launched its frozen retail Asian stir-fry mix, which includes a selection of Asian vegetables, such as buk choy.

As supermarkets now regularly stock Asian vegetables in their fresh and processed vegetable sections, it's only a matter of time before more Asian vegetables make the jump from exotic produce to mainstream varieties. This will continue to grow the industry, as consumers more frequently incorporate these lines into their daily vegetable consumption.

THE BOTTOM LINE

- With an estimated GVP of \$150 million per annum, the Asian vegetable industry accounts for six per cent of the horticulture industry's total GVP of \$2.4 billion.
- Growth of the Asian vegetable industry is expected to maintain its current rate of 10 per cent per annum for the next few years.
- Asian vegetable success stories are those varieties that have crossed over to mainstream consumption, such as snow peas and spring onions.

Natural remedy for diabetes

Bitter melon, also known as fu qua, may hold the key to a side-effect free treatment for Type 2 diabetes sufferers.

Scientists from the Garvan Institute of Medical Research in Sydney and the Shanghai Institute of Materia Medica have good news for Type 2 diabetes sufferers. The researchers pulped a tonne of fresh bitter melon, extracting four promising bioactive components, which appear to activate the enzyme AMPK, a protein known for regulating fuel metabolism and enabling glucose uptake.

"We can now understand at a molecular level why bitter melon works as a treatment for diabetes," said Professor David James, Director of the Diabetes and Obesity Program at Garvan. "By isolating the compounds we believe to be therapeutic, we can investigate how they work together in our cells."

People with Type 2 diabetes have an impaired ability to convert the sugar in their blood into energy in their muscles. This is partly because they don't produce enough insulin, and partly because their fat and muscle cells don't use insulin effectively. Type 2 diabetes is the most common form of the condition, affecting 85 to 90 per cent of people with diabetes.

Exercise activates AMPK in muscle, which mediates the movement of glucose transporters to the cell surface, an important step in the uptake of glucose into tissues in the body. The four compounds isolated in bitter melon perform a very similar action to that of exercise—they activate AMPK.

The advantage of bitter melon as a treatment for diabetes is that there are no known side effects.

Dr Jiming Ye, a Garvan scientist involved in the project, stressed that while there are well known diabetes drugs on the market that also activate AMPK, they can have side effects, including nausea or weight gain.

"The advantage of bitter melon is that there are no known side effects," said Jiming. Human trials are still at least one year away, but the researchers are so confident about the compounds found in the bitter melon that they've taken out a patent on the molecules.



R&D-what's important to you?

It's time for growers to nominate their priorities for the 2009/2010 R&D project industry call, writes Ross Ord, Industry Development Manager AUSVEG.

THE BOTTOM LINE

- Vegetable IAC Working Groups will meet in June to identify R&D priorities for the 2009/2010 industry call.
- Input from LOTE growers around the nation is being actively sought in the priority identification process.
- The priorities identified by the working groups will be used by the Production Advisory Group and Vegetable IAC to advise HAL about the industry's R&D priorities.

For more information contact:
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lanning for the Horticulture Australia Limited (HAL) Industry Call for 2009/2010 has commenced in earnest. On 11 June, members of the Vegetable IAC working groups will meet in Melbourne to identify priorities for research and development (R&D) projects for 2009/2010. The accurate identification of priorities is essential to ensure that the R&D projects included in the industry's 2009/2010 Investment Plan deliver maximum benefit to levy payers. R&D projects are funded jointly from the National Vegetable Levy and matching Australian Government funds.

The five working groups— Chemical, Environmental, Protected Cropping, Biosecurity and Integrated Pest Management—will have the views and recommendations from state and other vegetable grower organisations to assist them identify the key R&D priorities. Individual levy payers have also been invited to voice their views as to which R&D activities should be approved.

LOTE grower input

Recognising that 40 per cent of vegetable growers come from a Language Other Than English (LOTE) background, special attention has been directed in the current R&D cycle to engage LOTE growers in the process of identifying R&D priorities. To ensure that LOTE growers are aware of the R&D process and have an opportunity to nominate their priority areas, the related documents have been translated into four key LOTE grower languages—Vietnamese, Arabic, Cantonese and Cambodian.

State vegetable Industry Development Officers have distributed the letter of invitation and supporting template to LOTE 'gate-keepers' and growers in their respective states. This initiative has attracted wide support from LOTE growers who welcome the opportunity to have a greater say about the use of the National Vegetable Levy.

The priorities identified by the five working groups will be used by the Production Advisory Group and Vegetable IAC to advise HAL about the industry's R&D priorities. The IAC and its advisory groups meet in early July 2008 to finalise the list of priorities. The R&D priorities cover production, market development, consumers, people development, and information & technology development. The recommendations form the basis of HAL's Industry Call for 2009/2010.

Young Growers New Zealand tour

National Vegetable Levy payers under the age of 38 are invited to apply for the 2008 Young Growers Study Tour to New Zealand.

The eight-day tour will be held from 25 July to 2 August 2008, where 10 growers and a tour leader will visit vegetable operations in the Auckland region of the North Island. Tour attendees will learn about production, marketing and supply chain systems operating in a country recognised as setting the benchmark in many of these facets. Growers will also attend the Horticulture New Zealand conference.

The tour cost will be substantially subsidised by the National Vegetable Levy. Growers will be required to contribute a maximum of \$700 toward the cost of the tour. Applications close 13 June 2008.

Application forms are available from your state vegetable Industry Development Officer (IDO) or the AUSVEG website at www.ausveg.com.au

When one thing leads to another:

the nature of R&D in Australia

Research projects rarely stand alone—they are simply one piece in a much larger puzzle, writes Brea Acton.

ave you ever wondered how research and development (R&D) projects are devised and developed? Far from being one-off investigations, many projects go on to recommend further research—to look at an issue in greater detail, or investigate an unexpected result—with the long-term goal of providing growers with practical, on-farm solutions.

One example of this flow-on effect of R&D can be seen with a study, completed in 2007, that benchmarked vegetable integrated pest management (IPM) systems against other agricultural industries. The project was conducted by Dr Sandra McDougall, Vegetable Industry Leader at the New South Wales Department of Primary Industries.

"Over the past 10 years a small number of vegetables have had most of the IPM R&D budget. This project aimed to collate what IPM work has been done so far, review the approaches taken and make recommendations for a more strategic approach," said Sandra.

"IPM researchers, consultants

and growers were consulted by way of questionnaires, surveys, and a two-day workshop.
Esssentially, everyone agreed on the key areas of work and where the major knowledge gaps are."

A detailed report identified gaps in vegetable IPM, including 10 minor vegetable crops used as case studies, and made recommendations for 12 areas of further research.

The stocktake provided a collated view of how the industry is positioned for its IPM development and focus for the most effective aspects of IPM that growers can adopt on-farm.

Suck it up

One project to come out of this stocktake is a scoping study of IPM-compatible options for the management of sucking pests.

"This came up again and again as a high priority and major impediment to further adoption of IPM," said Sandra.

"Present 'soft' control methods for sap sucking insects, such as Rutherglen bugs, thrips and Silverleaf whitefly, have long-term detrimental impacts on IPM in vegetable crops."

Bronwyn Walsh, Senior Horticulturalist with the Queensland Department of Primary Industries and Fisheries, began work on the project in late-2007.

"We wanted to identify current and future options for better sucking pest management," said Bronwyn.

"After a literature review and nationwide consultation with scientists, consultants and growers, we now have a comprehensive understanding of sucking pest management in vegetable crops."

Although the project is not due for completion until later in the year, Bronwyn believes the benefits to growers will be substantial.

"The information we have gathered represents current 'world best practice' options for growers to manage these pests, whilst still achieving social, economic and environmental requirements," she said.



Technical Officer Andrew Creek (left) and Dr Sandra McDougall sample lettuce at Yanco Agriculture Institute, February 2000. Image supplied by Dr Sandra McDougall.

Go with the flow

R&D in Australia often has a flow-on effect; completed projects frequently make recommendations for further research.

Benchmarking vegetable IPM management systems against other agricultural industries

This project was completed in 2007, with 12 recommendations made. R&D projects that were approved as a result of these recommendations include:

Scoping study of IPM potential and requirement.

There are discrepancies between what IPM strategies involve, and what some growers think the strategies involve. Some growers believe they have implemented IPM practices when this is not the case.

IPM uptake by growers can be improved. Future projects might focus on helping growers make that transition by ensuring trained IPM consultants are available to assist them.

Pesticide effects on beneficial insects and mites in vegetables.

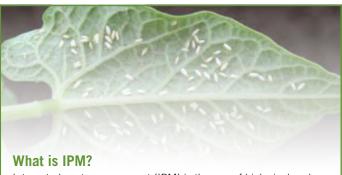
Beneficials react differently to pesticides. What is harmless to one beneficial might kill another. It's important to understand the effects a chemical will have on all species of beneficials.

Testing the effects pesticides have on beneficials is a slow process, so projects such as this one have the potential to be ongoing. "There's probably a never-ending matrix of tests that could be done," said Paul Horne.

Scoping study of IPM compatible options for the management of key vegetable sucking pests

Sucking pests can cause major damage to crops. Correct management of these pests is crucial.

Future projects will encourage growers to engage in best practice on-farm; projects may provide hands-on assistance for growers, or support the industry in a broader, more concept-based, context.



Integrated pest management (IPM) is the use of biological and cultural controls, such as beneficial insects, to reduce the impact of pests in crops. The controls are regularly assessed, to monitor their performance, and the aim is that growers use insecticides only as a support.

"IPM involves decision making based on the numbers and life stages of beneficial species as well as the number and life stages of the pests," said Dr Paul Horne, from IPM technologies.

Future projects are also likely to lead on from this one.

"Resultant projects will target the identified current best-bet and future management options, some being more defined and practical, and others being broader and more conceptbased," said Bronwyn.

Usually people adopt IPM when there is a crisis—either because pesticides are withdrawn or because of insecticide resistance.

Protect beneficials

Many pesticides claim to be harmless to beneficial insects, yet Dr Paul Horne, Managing Director of Melbourne-based IPM Technologies, says pesticide companies have completed little testing on beneficial species and until now there has been little accurate information about the effects of pesticides on the important biological control agents in

vegetable crops.

"Knowledge of the impact of pesticides on beneficial insects and mites is essential for IPM programs. Yet, because the companies haven't done this testing in Australia, it's very hard for a grower, agronomist or researcher to get the information," said Paul.

The objective of this three-year project, another to come out of Sandra's IPM stocktake, is to test pesticides for toxicity against various species of beneficial insects.

"What has been surprising is how difficult it is to extrapolate from one species to another. We tested one pesticide against four species of ladybirds. It appeared to be totally safe to three species and then killed almost 100 per cent of the fourth species," said Paul.

A comprehensive guide will soon be available for growers to select products suitable for their crops.

"We aim to provide the information to allow growers to make informed decisions on the compatibility of pesticides with biological control and IPM," said Paul.

With the number of pesticides on the market and the complexity involved in testing, this project has the potential to be ongoing.

"It's a very slow process. There's probably a never-ending matrix of tests that could be done," said Paul.

Clarification needed

A third project to develop from

the IPM stocktake assessed levels of IPM adoption and awareness within the vegetable industry. Jessica Page, also from IPM Technologies, was project leader of this scoping study.

"IPM is a priority area for many horticultural industries. Yet. despite strong funding support, in most horticultural industries there has not been great adoption or implementation of IPM. We need to know why this is," said Jessica.

One survey result showed that many growers believed they were using IPM systems when they were still using a conventional

"The level of adoption depended on the definition of IPM. In some cases a high percentage of growers said they were using IPM. When we analysed their other responses we saw that they weren't using IPM, but were using a different set of chemicals," said lessica

The report also found one of the major reasons for non-adoption of IPM was that if current pesticide approaches still worked there was little motivation to change.

"Usually people adopt IPM when there is a crisis—either because pesticides are withdrawn or because of insecticide resistance. In the absence of a

crisis you can see growers in a dilemma," said Jessica.

"If trained IPM consultants aren't present, it's very difficult for growers to implement change without any help."

Future projects might look at how to help growers make the transition to an IPM approach, with particular focus on ensuring there are enough trained IPM consultants available.

R&D in Australia is a complex process, with one project often leading to others. Getting the balance right and continuing to fund research relevant to growers is always going to be tricky, but the valuable information it provides can help growers tackle pests and disease, which is crucial for a healthy industry.

"R&D is essential for continued economic, social and environmental growth in Australia, even more so in the current environment where businesses must continually be achieving innovation in order to remain profitable," said Bronwyn.

To this end, considered, orchestrated planning structures and follow-through are essential for the continued success of R&D in improving growers' profitable and sustainable productivity.

THE BOTTOM LINE

- R&D projects are rarely isolated endeavours. They often follow a previous project or provide recommendations for further research to be conducted.
- A national stocktake of IPM R&D conducted for vegetable industry found gaps in IPM systems for a number of minor crops. Twelve recommendations were made for further study.
- This stocktake helped lay the foundation for projects that will provide more direct on-farm assistance to growers.

For more information visit: www.ausveg.com.au/levy-payers Project number: VG05043 Keywords: Benchmarking vegetable

or contact Dr Sandra McDougall, Vegetable Industry Leader, NSW DPI

Phone: 02 6951 2728 Email: <sandra.mcdougall@dpi. nsw.gov.au> Project number: VG06086 Keywords: Scoping study

or contact Jessica Page, IPM **Technologies**

Phone: 03 9710 1554 Email: < jpage.ipm@gmail.com> Project number: VG06087 Keywords: Pesticide effects or contact Dr Paul Horne, Managing Director, IPM Technologies Phone: 03 9710 1554

Email: <ipmtechnologies@bigpond.

Project number: VG06094 Keywords: Sucking pests or contact Bronwyn Walsh, Senior Horticulturalist, QDPI&F Phone: 07 3239 3053

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Profile:
Rockhampton
Fruit and
Vegetable Growers
Association

Rockhampton's vegetable growers are working together to keep abreast of current issues and overcome labour shortages, writes AUSVEG's Lucy Jarman.

Rocky times for local growers

In the late 1940s, a group of local vegetable and fruit growers banded together to form the Rockhampton Fruit and Vegetable Growers Association (RFVGA). Since then, two other local associations, The Caves and Bouldercombe, have merged with RFVGA. The association provides members with the chance to interact and learn about industry challenges, said Jeff Pershouse, RFVGA Secretary.

The association meets monthly to discuss local grower interests, both state-wide and nationwide, while giving members a chance to network and discuss similar challenges with peers and colleagues.

"What started off as a handful of growers slowly grew to a group of 32 members. We also have four lifelong members. It equates to about 15 farm enterprises, due to husbands and wives being separate members," said Jeff.

About 90 per cent of members are vegetable growers, though RFVGA's falling membership rate



is threatening the association's long-term survival. Jeff is looking to attract younger people to the industry, which he says is difficult. "There are so many better paid and easier work opportunities available today," he said.

Keep in touch

Growcom board member Rodney Wolfenden has been an active member for RFVGA for 20 years. A sweet potato grower, Rodney has detailed knowledge about many current agripolitical issues.

He said the association is a way for members to keep in touch with the rest of industry at a local level. It also exposes members to information about issues of which they might not be aware.

"All members bring a different perspective to the association; people bring stories and activities that are discussed around the district and contribute to the association as a whole. More members in the association means more ideas and knowledge are brought to the table," said Rodney.

Rodney feels it's important for people to have a gathering point to discuss industry issues and anything else relevant to growers.

"It's important to keep in touch with industry and the community, talking among one another and discussing problems. For members who have common interests, the association gives them a means to discuss each one," Rodney said.

In recent years, the association has participated in group activities, including a number of chemical accreditation workshops, a future profit course and a cucurbits field day.



For more information contact: Jeff Pershouse, Secretary of the Rockhampton Fruit and Vegetable Growers Association Phone: 07 4934 2996



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Dense crops are ahead of the pack

Brassica growers can receive increased returns by changing their planting arrangements and configurations, discovers Emily Webb.

THE BOTTOM LINE

- A project has found that modifying planting densities of brassica crops can increase returns for domestic and export markets.
- Planting configuration will depend on product line and soil type.
- When managed according to techniques devised by the project, high-density crops can be mechanically harvested, reducing labour costs.

For more information contact
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or visit www.ausveg.com.au/ levy-payers

Project number: VG04008 Keywords: Export cauliflower A four-year project investigating the affect planting density has on the uniformity of crop harvests has found that increased planting density for brassicas can result in higher yields.

Project leader Rachel Lancaster, Research Officer Vegetables for the Department of Agriculture and Food, Western Australia (DAFWA), said the project aimed to modify planting density to assess its influence on cauliflower and broccoli crop uniformity, and to determine alternative row configurations and planting densities that produce the maximum number of heads/curds that meet market specifications. The project also aimed to produce an economic assessment of the

impact of increasing planting density and potential benefits for producers.

"The project complemented another research project, which investigated methods to reduce the number of harvests required for cauliflower crops. Research for the planting density project was conducted by Dr Kristen Stirling, who investigated and conducted the field work and reported on the results,' said Rachel.

Cover your assets

The project investigated several planting densities (29,000 to 59,000 plants per hectare for cauliflower and 39,000 to 69,000 plants per hectare for broccoli) and spatial layouts (two, three or

four rows per bed).

Research on alternative covering methods for cauliflower crops was also conducted. "High-density planting made it difficult to walk through the plants to manually cover them. Covering is necessary to stop sunlight turning the white curds yellow," said Rachel.

Investigations found that white shade-cloth with a light transmission of 50 per cent could be used to prevent yellowing of curds. It also removed the need for crops to be manually covered.

Field trials for the study were conducted on a loam soil type at Manjimup Horticultural Research Institute, in south-west Western Australia, and on a sandy soil type at Medina Research Station, performing planting density for cauliflower grown on loam soil was 39,000 plants per hectare, in a four-row configuration.



[Above] Trial site in Manjimup for the planting density project. [Below] Investigations found that white shade-cloth with a light transmission of 50 per cent could be used to prevent yellowing of cauliflower curds. Images supplied by Rachel Lancaster.



40 kilometres south of Perth. Both locations are DAFWA research farms.

"The studies were conducted at research farms due to the need to radically alter crop layout and spacing, which would have been disruptive on a commercial property," said Rachel.

"The best performing planting density for cauliflower grown on loam soil was 39,000 plants per hectare, arranged in a four-row configuration. It achieved an increased enterprise margin of \$7,624 per hectare for product sold domestically."

Broccoli can be grown successfully at much higher planting densities; several different crop densities and spatial lay outs provided good yields on the loam soil.

On a sandy soil type, cauliflower planted at 39,000 plants per

hectare in a three-row configuration and broccoli grown at 47,000 plants per hectare in a two-row configuration produced the best yields.

"Increasing planting density or altering row configurations did not significantly improve maturation uniformity of cauliflower and broccoli crops. However, high-density crops managed, using techniques developed in the project for reducing the spread of harvest, would facilitate the development of an intensively managed system that could be mechanically harvested," said Rachel.

"Mechanical harvesting will assist in improving the competitiveness of the Australian vegetable brassica industry by reducing labour costs and the need to source labour, which is increasingly difficult and expensive."

Successfully increasing planting

density to improve yield requires changes to current management programs, including modifying irrigation and nutrition programs.

Reduce costs, increase profits

Craig Garratt, a grower from Manjimup, is president of the Warren Cauliflower Group, which voluntarily contributed funds to the project. The group, comprising local brassica growers, had previously been involved in projects investigating the management of diseases such as club root and white blister.

"Our decline in membership tells the story of the decline in the vegetable growing industy in Manjimup. The group has around 12 members; at its peak it had 75. This research is really important for us. The export market has all but disappeared due to labour costs and competition from China," said Craig.

"The research has helped us increase our plantings per hectare. We used to plant 400 millimetres apart and now we plant 350 millimetres apart. Anything that can drive down costs is appreciated."

Craig said Australia's domestic cauliflower industry must remain current. "We need to look at prices. Consumers don't realise the costs involved for growers. Our fertiliser costs alone have increased by 25 to 30 per cent in the past year."

Project findings have been communicated to growers through field walks, annual brassica seminars and the *Better Brassica* newsletter, as well as national publications such as *Vegetables Australia*, said Rachel.

"The findings can be applied to other growing areas, though growers would need to investigate the recommended plant density and spatial arrangements on their soil type to determine if this is suitable for their farming system. Modifications to crop density can result in an increased return for growers, even when the cost of seedlings is taken into account."



An increasingly mechanised vegetable industry still needs people on the ground to communicate technological advances to growers, discovers Youna Angevin-Castro as she speaks to four members of the Information and Technology Development and Dissemination Advisory Group.

s rising production costs, labour shortages, and threats of cheap imports continue to plague Australian growers, there is a growing need to identify ways for the Australian vegetable industry to find a competitive edge. Through its research and development program, the industry has an opportunity to explore ways to achieve this, and, under the guidance of the Information and Technology Development and Dissemination Advisory Group, find ways to provide growers with the necessary tools.

Robot nation

According to the advisory group Chair, Jeff McSpedden, the industry needs to support the development of efficient, user-friendly technologies for improved production. Jeff says the advisory group's philosophy is one that embraces new technologies that will give growers a competitive advantage in production quality and cost efficiencies.

"Industry should invest heavily

in mechanisation and technology to drive down costs of production, and potentially become competitive within overseas markets," he said.

Jeff uses the example of broad-acre farming to explain: "Consider the wheat industry—if it was harvested by hand, how much wheat do you think would be exported? By comparison, the lettuce industry is still doing everything by hand; if it had access to the technology allowing efficient mechanical harvesting, then it could become an exporter."

Jeff sees the potential benefits of investing in mechanisation and technology, such as precision agriculture, as enormous.

"Research into the applications such as spatial mapping, remote imagery and data capture not only has significant implications for the grower but also other members of the supply chain, including processors and retailers," he said. Like Jeff, South Australian

grower Danny De Ieso is a strong

supporter of mechanisation, and sees it as a way of warding off exports, as well as reducing the reliance of cheap imported labour, which brings with it the risk of educating overseas competitors.

"We need mechanisation. We need farms to be state-of-the-art, we need to be efficient in our practices. Once we become efficient producers, and we can knock out imported produce, then our export markets will open up," said Danny.

Face to face

Danny takes his role as a grower representative on the advisory group very seriously, and believes that it is his responsibility to voice the wants and needs of growers.

"It is important that grassroots growers determine where the levy is invested. At present, I believe that levy payers have limited ownership over their investment, and I see it as my responsibility to ensure that this changes," he said.

"There is a need for growers to know that their industry is effective and transparent, and that the real issues aren't clouded by politics. Growers need to have an open, democratic forum through which they can express their opinions."

For New South Wales grower Kim Vincent, one of the critical functions of the group is to support initiatives that provide

The Information and Technology Development and Dissemination Advisory Group is one of five groups established under the VegVision 2020 strategic pillars to support the deliberations of the Vegetable Industry Advisory Committee about the National Vegetable Levy investment in R&D. Members of this group are: Danny De Ieso, Jo Elbustani, Dijana Jevromov (non-voting), Jeff McSpedden, James Taylor (non-voting) and Kim Vincent.



Information transfer – a hands on process

growers with the capacity to learn about, and better understand, new technologies. She emphasises the need for useful, user-friendly information to be available to growers when they need it.

various areas of protected cropping to visit us, and share their knowledge through workshops and courses."

Kim recognises that the industry supports a number of initiatives to help disseminate valuable

We need to investigate what communication goes to growers and find ways to fill gaps in information transfer.

Kim describes early attempts to gather information for her own protective cropping operation was a difficult task, which led her to form a local hydroponic grower group.

"I found it very hard at the time, as an individual, to get anyone to come to talk to me. So I got together with a few other growers, and we formed the Hydroponic Association of the Mid-North Coast. As a group, we've been able to attract more experts in

research information, such as web-based information and various publications; however, she feels that growers respond best to personal contact.

"Having a point of contact for growers is very important. Whether it be one-on-one, or in a group forum, having someone to go to for information is really valuable for growers."

Fill the gaps

As the former IPM Adoption Coor-

dinator with the South Australian Department of Primary Industries and Resources (PIRSA), Dijana Jevremov also understands the value of effective communication of research outcomes. Dijana acknowledges that many researchers are out of touch with the needs of growers, and believes that providing stronger links between industry, researchers and growers is fundamental to the long-term success of the industry R&D program.

She sees her role in the group as identifying some of the gaps in technology transfer to growers, and helping to develop ways to improve information dissemination.

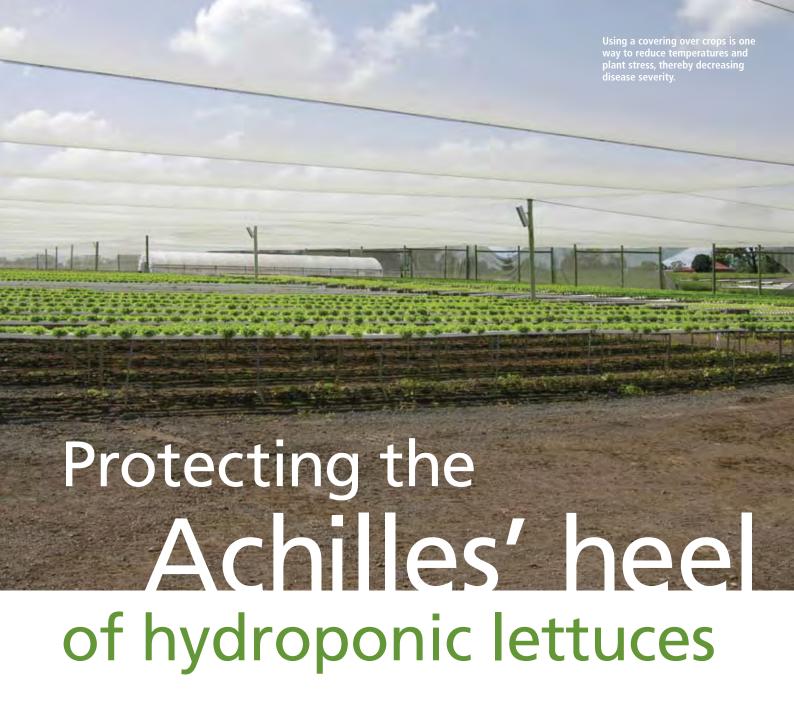
"We need to investigate what communication is going out to growers, identify what they might be missing out on, and find ways to fill those gaps in information transfer," she said.

Like Kim, she believes that there is enormous value in having someone on the ground, communicating face to face with growers, and commends the efforts of the vegetable industry development officers (IDOs) in each state in facilitating the dissemination of research outcomes.

"I have called on the local IDO many times to assist in bringing together local growers for workshops or information sessions. Having someone, locally, who can bring industry participants together within an appropriate forum is a great thing for growers and researchers alike."

THE BOTTOM LINE

- Members of the Information and Technology Development and Dissemination Advisory Group believe that an increasingly mechanised vegetable industry is crucial to the industry's future success.
- The development of new technologies is important, but growers must have access to information that helps them learn about, and better understand, these advances.
- Face to face communication is still the preferred method for transferring information.



For more than three years, Len Tesoriero has researched the management of crippling root rot diseases. It's slow work but guidelines will soon be available to growers, writes Angela Brennan.

ydroponic lettuces can mean two things to growers. On the upside, it can mean more lettuces, more often, using less water and fertiliser—as much as 15 times less than field crops. The downside is disease.

"Diseases are a downside of any production system, but they could well be the Achilles' heel of hydroponic systems," said Len Tesoriero, a researcher from New South Wales Department of Primary Industries.

"Unfortunately, hydroponic systems, especially those with recirculating nutrient solution, are an ideal environment for algal growth. If it goes belly-up, growers don't have much to fall back on," he said.

Since 2004, Len has led a study investigating improved manage-

ment of disease and production of hydroponic lettuces. "This project is set up to demonstrate the effectiveness and value of various products in the management of root diseases. Many growers have already tried some of these products, but there are few registered products available," said Len.

"Through this project we aim to help growers learn what is available and provide sound, science-based guidelines for good farm-practices against crop loss."

Sanitation over chemical control

Joseph Bonello, a grower in the Sydney region, has assisted Len with some of his work.

"My family has years of experience in both field and hydroponics, but it's hard. Chemicals

are losing registration at the same time as pest and disease levels are increasing. If we don't improve our on-farm practices and get effective chemicals, small growers will drop out of the industry," he said.

"It's a steep learning curve and different for every grower, because it is based on the conditions of each farm."

Recommendations listed in the final report include system hygiene and sanitation, close attention to temperature control and a focus on biological suppression, rather than greater use of chemicals.

To assist growers, Len's team developed guidelines that can help them stop pathogens from entering the systems and prevent more crop loss. The list includes

the importance of managing the temperature of nutrient solution, system hygiene, appropriate disposal of diseased plants and managing pests that could spread diseases

The study found that some methods of control were either economically unviable or ineffective, such as filtering out the pathogens, UV-irradiation and

66 When the recirculating nutrient is above 30°C. infections can cause the lettuce roots to turn brown and rot.

sonification (using high frequency shockwaves in the nutrient).

"Some chemical disinfectants, such as iodine, can be toxic to plants when used at rates required to kill pathogens. Also, they are not registered for use with plants, although it is both useful and legal to use them for disinfecting hydroponic systems between crops," said Len.

"There are registered fungicides for leaf diseases, but not for root diseases on hydroponic lettuces, which is one reason we did this project."

Fine balance is high-risk

"Hydroponics is a risky business," said Joseph. "It can cost more than \$1 million to start up, and that's not including the land. Success is based on trial and error, and growers have to perfect their own practice. However, there are fewer tools to fight the diseases, and more diseases. Getting non-chemical alternatives is a very slow process. Many don't show a result, but you cannot risk a ban on your product from overuse of chemicals. It's a very fine balance."



Plants showing suppression of root disease symptoms with the microbial biocontrol bacterium, Pseudomonas putida. The middle lettuce has not been treated. Images supplied by NSW DPI.

"Biological control products are useful against certain species of Phytophthora and Pythium," said Len. "I've completed work on one product containing the beneficial bacterium Bacillus subtilis with good results. Hopefully this will get Australian registration."

Pythium and Phytophthora are the major causes of root diseases. They produce masses of spores that swim through liquids and are attracted to roots where they attach and infect, reducing the roots' ability to take in nutrients. When the nutrient is warmer (above 30°C) infections can cause the roots to turn brown and rot. "This is when growers can lose the entire crop," said Len.

At lower temperatures there may be no obvious symptoms but growth can be reduced in some varieties of lettuce. Another water mould, Olpidium, spreads a virus that causes Big Vein—a disease

where leaf veins become thickened and leaves are distorted.

Less common is the fungus Thielaviopsis that can causes Black Root Rot. This fungus has very resistant spores that spread with the moving nutrient solutions. "We haven't found any satisfactory control strategies for this one yet, other than shutting down the system and sanitising it with a disinfectant," said Len.

"We've a way to go. Hydroponic lettuce is not much more than an emerging industry in Australia. It is not a major crop anywhere in the world. But it's not all bad news-diseases occur under predisposing conditions, mostly in summer. Most of the year the crops are OK." \

THE BOTTOM LINE

- Hydroponic lettuce crops are susceptible to root rot, especially systems that recirculate nutrient solution.
- There are registered fungicides for leaf diseases, but not for root diseases on hydroponic lettuces, which makes treatment very difficult.
- It is recommended that growers focus on system hygiene and sanitation, pay close attention to temperature control and biological suppression, rather than increase chemical

For more information contact Len Tesoriero, Industry Leader Greenhouse & Ornamental Crops, NSW DPI

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or visit www.ausveg.com.au/ levy-payers Project number: VG04012

Keywords: Root diseases

Profile: Cambodian & **Khmer Krom Horticultural Association**

With the aim of improving the well-being of grower families, CAKHA takes the concept of community support incredibly seriously, discovers Graham Gosper.

Beyond the call of duty

n association formed less than a year ago to assist Cambodian and Khmer Krom grower families in South Australia is already achieving worthwhile results for its members. The Cambodian and Khmer Krom Horticultural Association (CAKHA) has met regularly in Adelaide since adopting its constitution on 1 July last year.

CAKHA Executive Director. Oukla Thach, said more than 80 grower families had already joined the association and this number was expected to soon reach 100. More than 60 per cent of the existing membership comprises Khmer Krom growers and their families; Cambodian families make up the remainder. The Khmer Krom are from an area in southern Vietnam, near the Cambodian border. They share a common language, ancestry, and Buddhist religious beliefs with Cambodians.

Oukla said CAKHA assists increasing numbers of immigrant families from urban areas in Adelaide, Sydney, and from Cambodia, to establish vegetable farms and glasshouse operations in South Australia's Virginia area.

"The aim of the association is to improve the well-being of the grower families," he said. "One way we achieve this is to identify land suitable for grower needs and help growers organise groups to buy the land."

Oukla said grower groups organised by CAKHA had already bought more than 200 acres of land. He estimates that Cambodian and Khmer Krom families now farm more than 400 acres in the Virginia area.

A host of benefits

CAKHA also helps improve the management and business skills of its growers by organising seminars and courses that cover a range of issues, including pest management, risk and crisis management and fertiliser application.

"We arrange for horticulture industry and SARDI (South Australian Research and Development Institute) experts to address growers and we sponsor visits by business leaders from Cambodia who advise our members," said

CAKHA identifies land suitable for grower needs and helps growers organise groups to buy the land. >>

"We are organising a program to assist with the translation of chemical and fertiliser labels for growers, which will promote better understanding and safer use of chemicals. We also plan to publish LOTE (Language Other Than English) newsletters and periodicals to assist growers. The association is building these links with the support of the Virginia Horticulture Centre and its local facilities to assist meetings, strategic planning and communications."



The social benefits of CAKHA are also important. "Our meetings provide a focus for friendship between the grower families and a basis for interaction and friendship with other South Australian grower communities," said Oukla. "The association organises edu-

cation programs to assist families to deal with the social problems faced by young people such as drugs and unemployment."

On 13 April, CAKHA members held their biggest ever social gathering to celebrate the Buddist New Year. The festivities took

place on a vegetable farm owned by one of the members on the outskirts of Adelaide and were attended by more than 100 families. With more Cambodian and Khmer Krom families settling in South Australia, Oukla expects a substantial increase in CAKHA membership in coming years.



For more information contact: Oukla Thach, Executive Director Cambodian and Khmer Krom Horticultural Association Phone: 0423 013 129

AUSVEG CEO Message

While I have been with AUSVEG only since January in the position of Chief Financial Officer, I see huge potential for the vegetable industry. The passionate and dedicated people I have met and worked with so far have shown that the industry will continue to prosper despite some trying times.

The AUSVEG Board has given its full support to continue our work with government from the solid platform we have created. Through AUSVEG, growers have a seat at the decision-making table in government on important issues such as chemicals of security concern and biosecurity. AUSVEG will ensure that the voice of vegetable growers is heard and will expand its capability in this area.

AUSVEG will continue to be involved in the administration of the process that manages the investment of the National Vegetable and Potato Levies. Research and development has delivered highly valuable results to industry in areas such as pest and disease management. The industry's strategic plan, VegVision 2020, has branched out to consider leadership, information and consumer research, and will continue to invest in solving production issues.

AUSVEG will also maintain the delivery of core services to industry such as communications, leadership and environmental programs.

Creating unity and pride in our industry is another area AUSVEG will progress. The Australian Vegetable Industry Conference—"Growing a Healthy Australia"— and Australian Vegetable Industry Awards 2009 will be held in Melbourne; a fantastic event not to be missed.

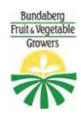
Increased vegetable consumption is another area AUSVEG will work hard to grow. Australian consumers, on average, eat two serves of vegetables per day—far below the five serves needed for optimal health. To that end, AUSVEG will investigate the viability of raising a marketing levy for industry to fund promotional activities to encourage increased consumption at every meal.



Robert Lawler Acting CEO AUSVEG Ltd



Queensland



Bundaberg is booming

Production in the Bundaberg region continues to increase in both diversity and size according to the latest figures released by the Queensland Department of Primary Industries and Fisheries (DPI&F). The 2006 horticultural crop production figures for the Bundaberg district reached an estimated gross value of \$352 million, a \$63 million increase on the figures for 2005.

DPI&F Senior Information
Extension Horticulturist Jerry
Lovatt said the production figures
are a valuable source of information to growers, agribusiness
and rural industries, along with
state and Australian Government.
They show the importance of
horticulture to the Bundaberg
region in providing income and
work for a wide range of people
and industries.

The figures show that, even in a drought year, horticulture is worth some \$350 million to the regional economy. This data is vital in lobbying government to continue supporting horticulture, as it is the major regional employer.

It also highlights how Bundaberg is becoming the salad bowl of Australia. From this primary production an estimated 2.5-fold injection into the economy occurs. Bundaberg horticulture could be contributing more than \$750 million into the regional economy.

While the figures vary from crop to crop, the overall trend is one of increased plantings and improved production yields. But for many growers the unit prices have either dropped, stagnated or risen only marginally. This is of concern to growers, who have experienced rising production costs for almost all inputs. It's important to note that the increased total regional production does not automatically translate into better returns for growers.

Matt Dagan

Executive Officer
Bundaberg Fruit and Vegetable
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The State Government's decision to relocate the Melbourne Produce Market from West Melbourne to Epping, an outer northern suburb, in 2011, has not pleased growers or buyers. Since the decision was confirmed, the current Melbourne Market Authority (MMA) introduced changes to the market trading hours, also to the displeasure of buyers and growers. The message to the board and operation management of MMA is to leave the market to run its course at Footscray Road and not make any changes until the market is relocated to Epping.

While some interstate central markets exclude grower sellers or separate the growers' selling floor from the main trading building, Victorian growers have valued being a part of the market community and selling their produce at Melbourne Markets. This

tradition will continue at Epping with a growers' section provided as part of the trading floor, allowing growers the opportunity to sell their produce.

Growing Business

The VGA has a strong relationship with training providers. Over the past 20 years it has assisted in the development of industry apprenticeship, certificate and diploma courses. Growers also provide services and donate equipment to several TAFE training centres and the VGA continues to support apprenticeship and training programs currently held at Gordon Institute of TAFE's Werribee Campus.

Needs analysis interviews conducted by Dianne Fullelove, People Development Coordinator AUSVEG, identified the need for growers to improve their business skills. These included business plans, financial, marketing, leadership and people management. As a result, the Growing Business training program will commence in Melbourne from June this year and vegetable growers are encouraged to participate.

Planning for the 2009 Werribee National Vegetable Expo has commenced in conjunction with the AUSVEG National Vegetable Conference to be held in Melbourne from 5 to 8 May 2009.

ACCC inquiry

There has been a great deal of discussion and submissions to the Australian Competition and Consumer Commission (ACCC) for its inquiry into grocery prices. Victorian growers have a choice of dealing from the farm gate with direct supplies to retailers, utilising the central markets wholesaler system or selling produce on the trading floor at Melbourne Markets.

Growers have been identified

as price-takers not price-makers, which results in the call for price equity at the farm gate. Consumers do not understand the supply chain from farm gate to retail check out, nor the fairness of competition to ensure that growers receive adequate financial return for the on-farm costs in production.

Fresh look

Meetings held in January 2008 of the VGA Victoria Executive Committee resulted in a plan of action to revitalise the image of the association. A strategic and business plan is currently being drafted and a new brand image for the quarterly newsletter was launched with the autumn publication of Vegetables Victoria and Vegie-Link. The website is receiving a facelift and will contain more industry information provided by Industry Development Officer (IDO) Craig Murdoch.

Tony Imeson

Executive Officer

VGA Address: Mail Box 111, Melbourne Markets 542 Footscray Rd, West Melbourne VIC 3003 Phone: 03 9687 4707

Fax: 03 9687 4723

CALENDAR OF EVENTS

May 2008

18 May

National Vegetable Levy R&D Priority Identification closes

For more information:

Contact AUSVEG Phone: 03 9544 8098

20-22 May

Melbourne. Vic

Irrigation Australia Exhibition and Conference 2008

For more information: Phone: 02 9556 7988

Email: irrigation@etf.com.au

Website: www.irrigationaustralia.com.au/conference/conference.aspx

26-28 May

restaurant Melbourne 08

Melbourne Exhibition Centre, Melbourne, Vic

For more information:

Website: www.restaurant08.com.au/default.asp

Phone: 02 9331 7507

29 May

Vegetable Soil Health Workshop

DPI Victoria, Knoxfield Centre, 621 Burwood Hwy, Knoxfield, Vic 9 am to 5 pm

For more information:

Website: www.ausveg.com.au

Phone: Robyn Brett, Ian Porter or Scott Mattner on 03 9210 9222 To register for the workshop, email robyn.brett@dpi.vic.gov.au

30 May

Official opening of the *Sydney Field Vegetable Demonstration Farm* by Minister Ian McDonald

Southee Rd, Richmond, NSW 10.30 am to 2.30 pm, free entry

For more information:

Contact Leigh James on 0412 429 418, Bill Yiasoumi on 02 4588 2107 or Tally Matthews on 0438 644 753.

30 May

Annual Levy Payers meeting

Broadwater Pagoda Resort Hotel, Como, WA

Potatoes 4 pm to 5 pm Vegetables 5 pm to 6 pm

For more information:

Contact AUSVEG Phone: 03 9544 8098

31 May

Australian Vegetable Industry Awards 2008 & West Australian Vegetable Growers Association 60th Anniversary Dinner

Burswood Grand Ballroom Perth, WA

For more information:

Website: www.vegetableindustryawards.com.au

Phone: Hannah Burns, AUSVEG, 03 9544 8098 (Awards enquiries) Phone: Jim Turley, vegetablesWA, 08 9481 0834 (Anniversary dinner

enquiries

June 2008

13 June

Applications due for Young Growers Tour to New Zealand

Tour to be held from 25 July to 2 August 2008.

For more information:

Website: www.ausveg.com.au

Application forms are available from state vegetable Industry

Development Officers (IDOs)

July 2008

26 July

NSW Horticultural Industries Dinner 2008

For more information:

Contact event organiser, Kirsty John

Phone: 0438 602 763

August 2008

14 - 15 August

PMA Fresh Connections Conference

For more information:

Email: john@producemarketing.com.au

Phone: 02 9744 6366

September 2008

20 September

Bundaberg Fruit and Vegetable Growers Gala Ball

For more information:

Email: info@bfvg.com.au Phone: 07 4153 3007

October 2008

24 - 27 October

PMA Fresh Summit International Convention & Exposition

Orlando, Florida, USA

For more information:

Website: www.pma.com/FreshSummit Email: john@producemarketing.com.au

Phone: 02 9744 6366



www.nufarm.com.au

Filan – Effective sclerotinia control in lettuce, carrots, brassicas and green beans.

*Filan is available for use by Australian lettuce, brassicas, green beans, carrot and vegetable bulb growers (excluding onions and chives) under the provisions of the APVMA Permit Numbers - PER8819 and PER8231 respectively. Users MUST obtain a copy of the appropriate permit prior to use. Do NOT use more than two sprays of Filan per crop. Copies of PER8819 and PER8231 may be obtained from the Australian Pesticides and Veterinary Medicines Authority website www.apvma.gov.au.

PERMIT PER8819 IS IN FORCE FROM 10 OCTOBER 2005 TO 31 OCTOBER 2009.

PERMIT PER8231 IS IN FORCE FROM 31 JULY 2006 TO 30 JUNE 2009.

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