

vegetables australia

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A word from the AUSVEG Chairman

For producers of fresh and processing vegetables, the cost squeeze has never been more evident. Every part of our businesses has to be constantly reviewed to ensure we are the best and most competitive at what we do.

As we all know, our share of the retail dollar is falling. How do we claw our way back? Price increases for farm inputs in the past 12 months have been some of the sharpest in living memory. The reasons behind these increases are the focus of this issue's feature article.

Grower numbers are falling, but the amount of produce is increasing. The answer is not just about volume. A competitive edge from direct supply, market agents, processors or pack houses is now paramount for all farm managers.

Buying produce and starting a meal from scratch is still the cheapest and most nutritional way to prepare a meal. We all talk about being time-poor; is the convenience of semi-prepared or prepared meals too appealing? The fresh potato industry is looking at marketing and promotion to lift falling demand. Is this the answer for all vegetables? Do growers think Australian consumers need more information about the health benefits of increased vegetable consumption?

Have a read about the travels of Nuffield Scholar Tim Harslett. He started his journey last year when I presented him with his scholarship. At the presentation dinner, the oldest scholar present was well into his 80s. To be a part of this network of scholars is a great achievement—congratulations, Tim

AUSVEG Ltd members will vote



David Anderson Chairman AUSVEG Ltd

on an amended constitution at a date to be advised. For more information about what the proposed changes will mean for growers, see the CEO's report on page 48.



From the editor

When I talk to growers, it's clear that regardless of commodities grown or regions farmed, they all share a common concern: increased fertiliser costs. It's an issue that's as complex and intertwined as the global marketplace in which we now operate. In this issue of *Vegetables Australia* we take an in-depth look at the reasons for these increases and what growers can expect in the future (page 26).

New data had been released about the protected copping industry, which has received some muchneeded attention in a bid to better understand this growing area of vegetable production (page 46). We also have an update about the organic industry, with the release of the first industry-sanctioned data in four years. With a retail value of more than \$0.5 billion, it's another industry sector that's on the rise (page 12). For growers and researchers who want to help the industry achieve the goals outlined in strategic plan VegVision 2020, the Industry Call for National Vegetable Levy-funded R&D projects slated to begin in 2009/10 is almost open. See page 16 for details.

Finally, it's time for our annual reader survey. Make sure you have your say about the future direction of *Vegetables Australia* by completing the enclosed survey. Do this by 10 October to enter the draw for some great prizes (page 9).

Enjoy this issue of the magazine.

Jim Thomson

Editor, Vegetables Australia



Frank Tedesco: When equipment pays for itself

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While fertiliser prices may settle, they certainly won't return to the good old days – the horse has bolted.

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vegetables australia



AUSVEG Ltd Chairman David Anderson

Editor

Jim Thomson Phone: 03 9544 8098 Fax: 03 9558 6199 Mob: 0407 242 788 Email: editor@ausveg.com.au

Editorial Committee

Anthony Brandsema Tasmanian vegetable grower John Mundy South Australian vegetable grower Figaro Natoli Western Australian vegetable grower Glenn Abbott Queensland vegetable grower Thérèse Schreurs

Victorian vegetable grower David Chung

New South Wales vegetable grower

Alison Anderson News South Wales Industry Development Officer

Toni Davies Communications Manager, AUSVEG

Advertising

Max Hyde Phone: 03 9870 4161 Email: max@hydemedia.com.au

Contributors

Alison Anderson, Youna Angevin-Castro, Angela Brennan, Steve Bruhn, Simon Drum, Jenny Ekman, Graham Gosper, Tim Harslett, Phil Hoult, Ian James, Lucy Jarman, David Jarwood, Lucy Keatinge, Jenan Taylor

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Industry Development Officers (IDOs)

New South Wales Alison Anderson Phone: 0409 383 003 Queensland Vacant Phone: 0408 135 042 South Australia Melissa Fraser Phone: 0407 773 369 Tasmania Roger Orr Phone: 0438 217 600 Victoria

Craig Murdoch Phone: 0429 990 553

Western Australia David Ellement Phone: 0408 941 318

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NEWS IN BRIEF

Boost to broccoli anti-cancer claims

Increased broccoli consumption may reduce the risk of prostate cancer, according to a recent British study.

Coach ac



The old adage of eating your greens to stay healthy has been given a further boost, with a British study finding that eating one or more portions of broccoli every week can reduce the risk of prostate cancer, and the risk of localised cancer becoming more aggressive. Prostate cancer is the most common non-skin cancer for males in western countries.

The research was led by Professor Richard Mithen, and conducted at the Institute of Food Research in Norwich, in eastern England. It is one of the first studies in this area that included humans in its sample group, rather than extrapolating the findings from animal models.

The study involved giving 22 men 400 grams of either broccoli

or peas a week, equal to one or two portions, in addition to their normal diet, for one year. The broccoli used was a highglucosinolate variety. "Other fruits and vegetables have been shown to also reduce the risk of prostate cancer and are likely to act through other mechanisms," said Richard.

Cruciferous vegetables can have a large effect on genes related to prostate cancer.

Tissue samples were taken from the prostate gland of the sample group before and during the trial; it was found that there were more changes in gene expression in men who were on the broccolirich diet compared with those on the pea diet. These changes may be associated with the reduction in the risk of developing cancer. "Once we understand these, we can provide much better dietary advice in which specific combinations of fruit and vegetable are likely to be particularly beneficial. Until then, eating two or three portions of cruciferous vegetable per week, and maybe a few more if you lack the GSTM1 gene, should be encouraged."

Larger studies needed

Previous studies have suggested that the 50 per cent of the population who have a GSTM1 gene gain more benefit from eating broccoli than those who lack this gene. The study showed that the presence of the GSTM1 gene had a profound effect on the changes in gene expression caused by eating broccoli.

The results of the study suggest that relatively low amounts of cruciferous vegetables in the diet, such as broccoli, Brussels sprouts, cauliflower, cabbage and kale, can have a large effect on genes that are related to prostate cancer. To support these results, the research team is planning a larger study with men who have localised prostate cancer. The aim will be to compare the activity of standard broccoli with the highglucosinolate variety used in the original study.

The findings of the British study are consistent with international research funded through the Vital Vegetables program, which found that the glucosinolates present in broccoli are effective at stimulating the body's defence mechanisms against cancer (see *Vegetables Australia 3.6*, page 7).

However, while Australian scientists were optimistic about the findings of the British study, they cautioned that these results were preliminary and more research needed to be completed. va

Leafminer identikit available

Growers' frontline defence against an exotic pest has been strengthened with the release of a new website and CD.

A new set of tools developed by scientists from the Victorian Department of Primary Industries will help protect Australia's horticulture industry from destructive leafminer flies.

DPI Research Scientist Dr Mali Malipatil said the exotic leafminer flies have devastated vegetable and ornamental crops around the world, causing millions of dollars damage.

"These leafminers have not yet been detected in Australia, but in recent years they have spread through south-east Asia, which is of particular concern to Australia given the close proximity," said Mali.

"The CD and website developed by Victorian DPI scientists will ensure Australian biosecurity specialists and scientists have the latest identification tools and information."

Exotic leafminers can be difficult to distinguish from native species, but quick detection of exotic pests in Australia is vital to containing this potential threat.

"A crucial element of the new toolkit is a pictorial key that allows



The leafminer identification website is available for use by growers nationally.

users to make a quick preliminary identification to distinguish potential exotic leafminer flies from local species. The CD includes species fact-sheets and extensive weblinks to other resources that help provide biosecurity experts with the knowledge necessary to deal with this potential threat," said Mali. Leafminer flies have been thought to infiltrate countries via the movement of infested plants, generally ornamental plants such as chrysanthemums.

 For more information visit:
 www.lucidcentral.org/keys/v3/ leafminers

Help guide Vegetables Australia

Complete the enclosed reader survey to influence Vegetables Australia's future direction.



The Australian vegetable industry is changing and *Vegetables Australia* is changing with it. To ensure that the magazine continues to deliver relevant, informative and useful editorial, we need to hear from you.

Funded by the National Vegetable Levy, *Vegetables Australia* is dedicated to communicating levy benefits to growers—research and development outcomes, training opportunities, projects beyond the farm-gate—it's about helping you become the most efficient, profitable and environmentally aware growers you can be.

Enclosed in this issue of the magazine is a reply-paid reader survey. By completing the survey and returning it to AUSVEG you can let us know what you like about the magazine, what you'd like to change, and what you want to read about in future issues.

Surveys received by Friday 10 October will go into the draw to win a \$500 Nufarm Gift Voucher (1st prize) or one of two Nufarm spraywisedecisions annual memberships, a new system launched in August this year. The memberships are valued at \$132 each.

Vegetables Australia thanks Nufarm for its support.

For more information: See the enclosed reader survey or contact Jim Thomson, Editor Vegetables Australia Email: <editor@ausveg.com.au> Phone: 0407 242 788

NEWS IN BRIEF

Having a ball with NSW Hort

The 2008 NSW Horticultural Industries Dinner saw more than 400 growers and industry personnel gather at Darling Harbour on Saturday 26 July.

Organisers Frances Vella (NSW Farmers' Association), Alison Anderson (NSW Vegetable Industry Development Officer), Tally Matthews (Ace Ohlsson) and Leigh James (NSW DPI) were extremely happy with this year's event.

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"Without the generous support of our 17 sponsors the dinner would not have been the success it has been. We thank them for their strong ongoing support," said Alison. Attendees were treated to a three-course dinner and entertained by a 14-piece band. Platinum sponsors for the dinner were CHEP Australia, Ace Ohlsson and Syngenta. Gold sponsors were Elgas and Woolworths.

Frances, in her welcome speech, encouraged all growers and industry stakeholders to collaborate on issues important to industry and participate in the future of the horticultural industries.

Team effort

Peter Darley, NSW Farmers

Association Horticulture Committee Chair, said the social event brought together all horticultural commodities.

"Traditionally, growers had the opportunity to network in the Growers D Shed at Sydney Markets. In changing times, with the shift in trading directly between grower and the retailer/supplier, the traditional form of catching up with growers is largely nonexistent. This dinner presents a forum where all growers from various horticultural sectors have the opportunity to interact on a social level. Some of our growers commented that it was good to catch up with some producers they hadn't seen for about 10 years," said Peter.

"The dinner would not have

been possible without the efforts of our hard working, diligent, organising committee, and also the support of our sponsors." Paul McGlone, President CHEP Australia, said that CHEP was proud of its long-standing

was proud of its long-standing association with NSW horticultural industries and looked forward to continuing the relationship in years to come. va



Dinner ogranisers and platinum sponsors: [from left, back] Mark Blue and Paul McGlone of Chep Australia, Tally Matthews, Leigh James, [from left, front] Alison Anderson, Frances Vella, Kier Ferrie and Leith Plevey of Syngenta, and Stuart Merchant of Ace Ohlsson. Image supplied by Kylie Pitt.

No time to waste for award nominations

Nominations are now open for the Australian RIRDC Rural Women's Award and the 2008 HAL Awards.

The RIRDC Rural Women's Award was introduced in 2000 with the aim of increasing women's capacity to contribute to primary industries and rural Australia by providing them with support and resources to further develop their skills.

Nominations are invited from across primary industries and rural Australia.

Nominations must be received by 15 October 2008. Contact Edwina Clowes, RIRDC Rural Women's Award National Coordinator on 07 5442 1401 or 0417 727 544, or email <clowesedwina@bigpond.

com> for more information.

HAL Awards

Similarly, nominations are open for the 2008 Horticulture Australia Limited (HAL) Awards.

The nomination period for the Graham Gregory Award and Young Leader Award closes Monday 6 October 2008, so log on to the HAL website, www.horticulture.com.au, and nominate now to show the rest of horticulture what we're made of.

Winners of the HAL awards will be announced at the Future Focus Industry Summit to be held at the Sydney Convention Centre in Darling Harbour from 24 to 25 November. va

Job losses from Vic DPI restructure

New government priorities and reduced funding have resulted in some big changes at the Department of Primary Industries Victoria.

Del Secretary Richard Bolt said that DPI needed to restructure its workforce and facilities in response to the changing priorities of the farm sector and the Australian Government, which has resulted in reduced and redirected funding, as well as the new directions set by the Victorian Government's \$205 million Future Farming strategy.

"At a time when the farm sector and regional Victoria are being reshaped by climate change, global commodity markets and demographic trends, unfortunately, DPI must also change to maximise the value of our services," said Richard.

Some jobs will no longer be funded and staff will undergo redeployment.

Shifting staff

The net impact of the proposed restructure is expected to be a reduction of up to 50 agriculture, science and extension staff, and an estimated 20 administrative and corporate service staff, from across the state. "New funding is available for projects in areas of high priority, so there will be new jobs available. Regrettably, however, some jobs will no longer be funded and staff will undergo redeployment. All affected staff have been advised, and DPI is providing support and will endeavour to find alternative work during the redeployment period," said Richard.'

DPI will cease operating at five sites by mid-2009 (Toolangi, Kyabram, Walpeup, Stawell and Rainbow). Most affected staff at these sites will be relocated.

Save the spuds

Meanwhile, a lobby group has approached Vic DPI to address the issue of relocating the potato research facility from Toolangi to Knoxfield. Victorian Potato Council Chairman and Fresh Potato Industry Advisory Committee (IAC) member, Des Jennings, headed the working group to lay a case for the continued use of Toolangi as a research station for the potato industry.

Des cited a number of attributes that deserve further consideration, including the station's unique altitude, isolation and accessibility, which has guaranteed a successful, problem-free operation for more than 60 years. va

Site closure and staff movement

- Most of the 11 staff from Toolangi will relocate to Knoxfield where similar research is undertaken. DPI's potato breeding program will be relocated to a lighter soils environment.
- The four staff at Stawell will be relocated to Ararat.
- Most of the 27 staff at Kyabram will relocate to Tatura. On-farm research trials will continue in the Northern Irrigation Region.
- In Charlton, two staff members based at the leased site will be relocated to St Arnaud.
- In Rainbow, one staff member will be relocated to Hopetoun.
- In Sea Lake, one staff member at the leased site will be relocated to Hopetoun.
- The Charlton, Rainbow and Sea Lake offices will be open by appointment for a period of three months.
- In Walpeup, most of the 14 staff will relocate to Irymple.
- In Rutherglen, DPI will retain its buildings, however, farm land will be divested.
- Scientific staff from Snobs Creek will be relocated to Queenscliff in order to create a critical mass and improve scientific leadership in the aquatic science area.



NEWS IN BRIEF

New head for MDB Authority

ssue close

Robert Freeman has been appointed the Chief Executive of the Murray-Darling Basin Authority.

M inister for Climate Change and Water, Senator Penny Wong, announced the appointment in July, adding that the role would commence on 8 September 2008.

Robert Freeman was previously Chief Executive of the South Australian Department of Water, Land and Biodiversity Conservation, and Deputy President of the Murray-Darling Basin Commission.

"Following our historic agreement with the states, for the first time we have established an independent authority to set a sustainable cap on water use in the Murray-Darling Basin," said Penny.

Robert will act as chief executive and chairman for a maximum of three months.

"Once the amendments to the Water Act 2007 come into effect, I expect to be able to confirm Mr Freeman in the role of chief executive of the new authority on an ongoing basis," said Penny.

The Basin Plan is a key part of the Australian Government's \$12.9 billion Water for the Future plan that has four priorities: tackling climate change, securing water supplies, supporting healthy rivers, and using water wisely. va

Easy access to 1080 baits

The farming sector has embraced the commercialisation of 1080 bait.

Department of Primary Industries 1080 Commercialisation Project Manager Michael Rosier said the increased number of retailers meant growers' access to 1080 pest animal bait had increased exponentially since it was commercialised on 1 January 2008. Soon, more than 100 accredited retailers and manufacturers will distribute the product across Victoria.

Previously, perishable bait was unavailable and shelf-stable bait was available only by making an appointment with a DPI officer.

As part of the improved safeguards under the new system, growers wanting to use 1080 pest baits must complete a half-day training course and gain a 1080 endorsement to their Agricultural Chemical User Permit (ACUP). va

For more information visit:
 www.dpi.vic.gov.au/1080
 or call 136 186
 For information about training

sessions visit www.chemcertvic. org.au

Organic industry grows up

New research shows that organic farm-gate sales have increased more than 80 per cent since 2004, despite widespread drought.



Dr Andrew Monk, BFA Director, launches the Australian Organic Market Report 2008 at Organic Expo Sydney in July.

The first official Australian organic data in four years was launched by Biological Farmers of Australia (BFA) in July, revealing that the organic industry now has a retail value of more than \$0.5 billion.

Independently researched by the University of New England's Organic Research Group, and commissioned by the BFA, the *Australian Organic Market Report 2008* is based on industry-wide survey data. It builds on research published by the Federal Department of Agriculture, Fisheries and Forestry (DAFF) in 2004.

Key findings include:

- Retail value reached \$578 million with reports of 30 per cent growth per annum for some sectors since 2004.
- 2007 farm-gate values were estimated to be more than \$231 million—an 80 per cent increase on DAFF's 2004 findings.
- Major retailers now carry more than 500 different organic lines in fresh and grocery categories.
- The number of certified

organic operators has increased by an average of 5.2 per cent over the past five years. Almost three quarters of all operators are producers, representing 1.5 to 1.8 per cent of farmers.

- Horticulture growers account for two-thirds of organic farmers, which represents almost half of Australia's organic farm-gate value. There are 147 organic vegetable growers, growing on 2,939 hectares.
- 40 per cent of consumers now buy organic food at least on occasion.

"Such rapid growth is likely to be attributed to a combination of consumer-driven interest in purchasing organic products, in line with overseas trends," said BFA Director, Dr Andrew Monk.

It is intended that the research will be commissioned every two years from 2008. va

• For more information visit: www.bfa.com.au

Comments sought for draft organic standard

There's still time to have your say about how the new Australian Standard for Organic and Biodynamic Products will be shaped—but hurry!

The draft Australian Standard for Organic and Biodynamic Products stipulates requirements for the production, preparation, transportation, marketing and labelling of organic and biodynamic products, and was developed by a group of skills-based stakeholders. Particular emphasis is placed on farming and management practices that promote the use of renewable resources and conservation of soil, water and energy resources.

Colin Blair, Deputy CEO of Standards Australia, said the draft establishes minimum requirements to be met by growers and manufacturers for products that can be labelled "organic" or "biodynamic", which creates a level playing field for growers, retailers and consumers.

The standard aims to address industry and government needs, and consumer uncertainty about marketing and labelling claims on organic products.

"At the moment, consumers looking to buy organic products

have no uniform guarantee of quality and integrity. At the same time, legitimate organic farmers have no protection against the minority of growers misinterpreting or falsely claiming to follow organic agricultural practices," said Colin.

Unprocessed products from plants, animals and fungi such as fruit, vegetables, meat, poultry, mushroom and fibres, as well as processed products such as processed food, cosmetics and skincare products that are labelled "organic" are covered in the draft.

Changes needed

However, Biological Farmers of Australia (BFA) Director and Australian Organic Standard (AOS) Chair, Dr Andrew Monk, said there were issues in the draft Australian Standard that needed to be resolved.

"The industry is yet to determine how a new scheme will operate to deliver more effective regulation outside current industry selfregulated certification arrangements, which have seen Australia develop high-quality, internationally recognised standards," he said.

"Certification is a core component of self-regulation of the organic industry world-wide and especially in Australia where there is no legislation for the term 'organic'." Certification is currently not mandated in the new draft standard.

Compliance with BFA's existing AOS 2006 allows organic stakeholders use of the Australian Certified Organic mark, the organic "bud" logo.

Andrew said that the new base standard, if approved, could act as a legal lever for the ACCC to use when prosecuting operators not complying with industry standards and certification. At present, there are no laws regulating agricultural practice and management of domesticallysold organic products or the use of marketing claims on organic products.



The draft standard is available for public comment until 22 September 2008 and Standards Australia aims to publish the standard by December 2008. va

• For more information visit: www.standards.org.au and click on the 'Drafts for Public Comment' link

The draft Australian Standard for Organic and Biodynamic Products aims to:

- provide a national, consistent framework for the organic industry from the farm to point of sale
- set out minimum requirements for growing products that can be labelled as "organic", "biodynamic" or "in-conversion"
- provide clear definitions about what is organic and what is not
- protect consumers against unsubstantiated claims and misleading labelling
- protect growers against misinterpretation and misleading use of organic agricultural practices and the term "organic"
- provide a guide for growers considering converting to organic growing.

NEWS IN BRIEF

Collaborate for biosecurity success

A new network aims to improve collaboration between various Australian biosecurity sectors.

28,

The systems that help protect the health of Australia's people, plants and animals have been strengthened by the launch of the Australian Biosecurity Intelligence Network (ABIN).

ABIN will develop biosecurity information management tools to increase collaboration across industries and jurisdictions, which will assist producers, industry groups, researchers and policy makers to work together and share knowledge.

ABIN will greatly assist the development of an improved plant pest intelligence network.

"Having a sophisticated national network to provide essential access to a range of databases and an effective, robust emergency response tool will be of significant benefit to Australian governments and industries," said Professor Helen Garnett, Chair of the newly formed ABIN Board.

The eight-person, skills-based ABIN Board will facilitate the processes by which the network accesses information and promotes the application of new ideas, technology and infrastructure.

As part of the National Collaborative Research Infrastructure Strategy (NCRIS), the Australian Government has provided \$16.5 million over three years to develop ABIN, which is the first initiative to combine human, plant, animal, wildlife and aquatic biosecurity sectors in a single program.

PHA steps up

"The recent Equine influenza epidemic, increasing pressures on food security, the threat of Avian influenza and changing pest threats brought about by climate change all justify the importance and timeliness of ABIN," said Helen.

Plant Health Australia (PHA), the national coordinating body for plant biosecurity and the lead agency on the ABIN project, will provide administrative support functions. Also involved will be Animal Health Australia, the Queensland Department of Primary Industries and Fisheries, and the Victorian Partnership for Advanced Computing.

Several proof-of-concept projects have been designed to showcase ABIN capabilities, enabling collaboration between producers, industry groups, researchers and policy makers working within the human, plant, animal, wildlife and aquatic sectors.

Industry response to the new network has been positive. "The formation of ABIN will greatly assist the development of an improved plant pest intelligence network and lead to a more collaborative approach to biosecurity planning and response for Australian stakeholders," said Kim James, Biosecurity and Market Access R&D Manager at Horticulture Australia Limited. va



Certificate needed for tomato seeds

The fight to protect Australia from potato spindle tuber viroid (PSTVd) has been a success.

Following reoccurring outbreaks of PSTVd in tomato crops planted with imported tomato seed, the industry argued that tomato seed imports be banned unless proof of PSTVd freedom was provided and that the onus of proof be placed on the country of source.

After advice from Biosecurity Australia that imports of varieties of tomato seed pose an unacceptably high level of quarantine risk, Australian Quarantine and Inspection Service (AQIS) ordered that all tomato seed imported into Australia be placed in quarantine.

All tomato seed consignments shipped after 24 June 2008 must be accompanied by an official government Phytosanitary Certificate with a declaration that the seeds and parent plants were grown in an area that was found to be free of PSTVd.

Tomato seed shipped after 24 June 2008 that does not have a valid Phytosanitary Certificate with the required declarations will not be permitted entry into Australia. va



Permit number	Permit description (pesticide / crop / pest)	Date issued	Expiry date	States covered				
ALLIUM VEGETABLES								
PER10882	Diazinon / Spring onions, Shallots / Thrips (excluding WFT), Onion seedling maggot	1-Jul-08	30-Jun-13	All states except Vic				
PER10885***	Filan (boscalid), iprodione & chlorothalonil / Onion seed, Onions / Neck rot (Botrytis allii)	8-Aug-08	31-Mar-10	Vaild for Tas and NSW				
FRUITING VEGETABLE	S							
PER5815	Success (spinosad) / Eggplant / Melon thrips	11-Aug-08	31-Jul-13	All states except Vic				
PER10617	Bifenthrin (100 and 250 g/L formulations) / Eggplant, Capsicums / Two-spotted mite	11-Jun-08	30-Jun-09	All states except Vic				
PER10730*	Abamectin / Chillies, Paprika / Two-spotted mite, Western flower thrips	8-Aug-08	31-Sept-12	All states				
PER10878	Trifluralin / Peppers (sweet & chilli) / Broadleaf and annual grass weeds	11-Aug-08	30-Sep-13	All states except Vic				
PER10948****	Abamectin / Eggplant / Two-spotted mite	17-Oct-08	30-Oct-13	All states except Vic				
LEGUME VEGETABLES	6							
PER7419*	Karate (lambda-cyhalothrin) / Snow peas, Sugar snap peas / Pasture webworm, Cutworm, Rutherglen bug, Thrips (not WFT)	11-Aug-08	31-May-13	All states except Vic				
ROOT VEGETABLES								
PER10762**	Vydate L (oxamyl) / Sweet potato / Nematodes	11-Aug-08	31-Mar-12	Valid for NSW and Qld only				
PER10971	Tecto or Storite (thiabendazole) / Sweet potato / Field rots or seed roots caused by scurf (Monilochaetes infuscans), Root rot (Fusarium spp.)	1-Nov-08	30-Sep-10	All states				
STEM & STALK VEGETABLES								
PER10946****	Linuron / Celery / Various weeds	1-Nov-08	30-Apr-12	All states except Vic				

*Note: APVMA requires additional residue data for the renewal of this permit.

**Note: APVMA requires additional efficacy and residue data to renew this permit.

***Note: APVMA requires additional residue data for boscalid and iprodione to renew this permit.

****Note: This is an extension of the existing permit.

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NEWS IN BRIEF

Levy-funded project call opens in October

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It's time to complete your proposal for National Vegetable Levy-funded projects.

A pplications for National Vegetable Levy research and development projects starting in 2009/10 will soon be open. The official Industry Call submissions period is from 8 October to 17 November.

The National Vegetable Levy project call is for industryspecific R&D proposals involving R&D levy funds. Proposals are reviewed by the Vegetable Industry Advisory Committee (IAC) and must align with the industry strategic plan, VegVision 2020, and annual priorities.

Applications must be made through the HAL website. HAL's online application system is available for the preparation of proposals, which allows researchers to work on their proposals outside the official call periods. However, proposal submissions to the Industry Call will be restricted to the official dates.

HAL invests almost \$80 million annually in projects in partnership with the horticultural sector. Projects are funded through R&D levies, marketing levies and voluntary contributions. All HAL's R&D activities are supported by the Australian Government through the provision of matching funding.

• For more information visit: 1
www.horticulture.com.au



The dinner stage of the "Just Add Fruit & Veg" campaign in Victoria was launched in Castlemaine in August. Pictured above, are [from left]: Amber Drake from the National Heart Foundation of Australia; Rosemary McKenzie, Research Fellow and Lecturer, University of Melbourne; and David Fussell from the Melbourne Market Authority.

No emissions trading for agriculture

Agriculture will initially be excluded from the Australian Government's carbon emissions trading scheme, which is set to be introduced in 2010.

The Australian Government released its Carbon Pollution Reduction Scheme Green Paper in July, which contained two main points: a cap on carbon production and a carbon-trading system.

When releasing the paper, Minister for Climate Change and Water, Penny Wong, said the time for action on climate change was now.

"At the heart of the Carbon Pollution Reduction Scheme is emissions trading, in which the government sets a limit on how much carbon pollution industry can produce. Then the government sells permits up to that limit, creating an incentive [for businesses] to look for cleaner energy options," she said.

Penny said this was the most efficient and economically responsible way to reduce carbon pollution, but any move to tackle climate change was not without costs. To assist rural and regional areas, the government will provide a rebate equivalent to the excise cut for businesses in the agricultural and fishing industries for three years.

Short-term exclusion

The paper states that including agriculture emissions in the trading scheme, when it commences in 2010, is not practical.

"While the government is disposed to eventually include agriculture, it recognises that considerable consultation and joint effort with the industry are still required to identify practical methods for inclusion, and to develop reliable and cost-effective methods of emissions estimation and reporting," it said.

"Accordingly, the government has decided that the earliest that agriculture should enter the Carbon Pollution Reduction Scheme would be 2015, with a final decision on inclusion or exclusion to be made in 2013."

In response to the Green Paper, the Climate Institute urged the government to provide more information.

"We need a strong signal from the government that carbon farming, in particular using soils as carbon sinks, can be part of Australia's international response to climate change," said Climate Institute CEO, John Connor.

"Australia's regional and rural communities are at the front-line of climate change impacts. People managing our precious natural resources, such as soil and water, are looking for a clear signal from government that there are opportunities for them in changing farming practices and sinking carbon in the land they manage." va

• For more information visit: www.climatechange.gov.au



Vegetarian Week returns

A ustralia's second annual National Vegetarian Week will run from 29 September to 5 October 2008. With a theme of "Healthy, wealthy and wise", the focus of this year's week will compare meal plans for vegetarian diets with meat-based diets to look at nutrition, cost to the consumer, and environmental impact.

Participants are encouraged to organise their own events to raise awareness about vegetarian meal options and increase vegetable consumption in Australia. va

• For more information visit: 1 www.vegetarianweek.com.au

Pilot scheme to bring overseas workers

Workers flown in from the Pacific Islands will help counter labour shortages in the horticulture industry.

n August, the Australian Government announced a three-year pilot seasonal worker scheme for the horticulture industry, amid claims that up to \$700 million of fresh produce is left to rot because of a lack of reliable workers.

Under the trial, up to 2,500 visas will be available over three years for workers from Kiribati, Tonga, Vanuatu and Papua New Guinea to work in Australia for up to seven months in any 12-month period. Small groups of workers are expected to arrive later this year.

The government has been working with industry groups to identify possible regions for the pilot, including Swan Hill in Victoria and Griffith in New South Wales. Horticulture Australia Council Chair, Stuart Swaddling, wel-

comed the announcement. "This is an essential initiative for our industry. There is a severe and growing labour shortage in the Australian horticultural industry ... as the ongoing shortfall (particularly harvest) labour has not been met from existing sources," he said.

However, some state-based grower representative bodies in Western Australia and Queensland have raised concerns that growers in these regions are not being considered for the pilot.

"[Queensland has] the most

widely dispersed production areas, the most diverse production base, and some of the worst impacts on labour availability from the mining industry boom. Our growers are keen to participate," said Growcom's Jan Davis.

Overseas low-skilled seasonal workers will be employed only after employers have demonstrated that they have first made reasonable efforts to employ Australians. The pilot program will be reviewed after 18 months to ensure it is meeting the needs of rural communities, rural industries and workers. va

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MEDIA MATTERS

The Australian Government's immigration workers scheme for horticulture, concerns about misleading country-of-origin labeling, and the use of raw sewage on imported produce have all been big news. Here are five recent headlines.

"Shoppers duped as food origin laws ignored"

ssue clos

West Australian, Perth

Saturday 23 August, page 4

Concerns have been raised that Western Australian consumers are not being fully informed as to where their fruit and vegetables are grown. More pressure has been put on the country-of-origin food labeling laws, amid these recent claims arising from a random survey of 17 Perth greengrocers.

The *West Australian* reported that three shops it visited were duping customers by not labeling produce with the correct country of origin. Of the random sample, only five stores had comprehensive labeling on their produce.

VegetablesWA Executive Officer, Jim Turley, said consumers were not being told the truth and that more government money was needed to help councils police the laws.

"Sewage use on crops sparks push for tougher controls"

West Australian, Perth Tuesday 19 August, page 13

Vast areas of the world's crops were watered with raw sewage, according to a report released by the International Water Management Institute. This has sparked calls from Western Australian vegetable growers for tougher controls and restrictions on fresh produce imported into Australia.

Research released from the report found that 80 per cent of the 53 cities examined used untreated or partially-treated waste water for intensive crop production on urban agricultural land.

VegetablesWA Executive Officer, Jim Turley, said the safety of imported produce from countries such as China and Vietnam remained a key concern for the local industry.

"Fresh fruit and veg are healthy for the bank balance too..."

Courier Mail, Brisbane Thursday 24 July, page 63

Fruit and vegetable prices are on the decline, and food prices, which were the driving factor in the upward surge of living costs, have now contributed to the downside of inflation. Sam Mangano, Managing Director of Zone Fresh Gourmet Market, believes his fruit and vegetable prices were "significantly cheaper" this year, compared to recent years.

Statistics showed that apples, bananas, pears and oranges saw the most significant falls in fruit prices, while lettuce, broccoli, cauliflower, and pumpkin prices had the largest price drops for vegetable commodities.

"Guest workers skip state"

Courier Mail, Brisbane Monday 18 August, page 10

A trial to be introduced by Minister for Agriculture, Forestry and Fisheries, Tony Burke, to allow 2,500 Pacific Islander's to pick fruit and vegetables on Australian farms has left Queensland growers angry. The threeyear trial will benefit only southern horticulture producers, leaving Queensland growers out of the loop

Growcom Chief Executive Officer, Jan Davis, said the scheme appeared to be designed to address labor needs in the New South Wales and Victorian areas of the Murray-Darling Basin, where conditions were not representative of the industry-wide situation.

"Processed foods up, fresh down"

The Age, Melbourne Thursday 31 July, page 8

Australia's consumer watchdog, the ACCC, is set to deliver its report on rising grocery prices to the government and it seems the cost of basic food items such as milk, bread and cheese have increased, but fruit and vegetable prices have dropped.

This is supported by figures from the Australian Bureau of Statistics, which has released findings that there has been a 0.1 per cent drop in food prices since March, mainly because fruit prices decreased by 7.4 per cent and vegetable prices fell by 6.5 per cent.

"A lot of areas have had pretty good growing conditions and are in full production, which has caused an oversupply of fruit and vegetables in general," said Victorian Farmers Federation's Peter Cochrane.

Future shock

Can the world continue to feed itself? As the travel component of Tim Harslett's Nuffield Scholarship nears completion, he reports on his findings thus far.

As part of my Nuffield farming scholarship, I spent six weeks travelling the world with 10 scholars from Australia, New Zealand and Canada to expand our awareness of broader agricultural trends, opportunities and challenges around the globe.

Currently, I'm in the final stage of a nine-week trip to the US and Europe for the self-study component of my scholarship. This trip has focussed on vegetables, particularly my study topics of mechanical harvesting and different methods of disease and weed control.

Of the many discussions I had with fellow scholars and the experts we've met, a common theme was whether humans have the capacity to feed ourselves in the future.

Meet the demand

The human population will increase to 9 billion in the next 20 to 30 years. Food demand will increase two- or threefold over the next 50 years because of greater consumer affluence (eating more, demanding higher protein foods, drinking more, feeding pets) and increased population numbers. In theory, we have the capacity to meet this extra food demand. The following are reasons why I believe this:

- While there isn't much potential to increase the world's farming area, we can vastly improve the productivity of much of the present farming land—even in developed countries.
- Genetically modified food sources will help improve yields. Embrace GM because there will be many potential

yield and environmental benefits; however, conventional plant and animal breeding still has a role to play.

Food demand will increase twoor threefold over the next 50 years.

- Stop ethanol production from grains. These grains should be used to feed the population and animals. Sugar cane and developing cellulose conversion technology will be more efficient ethanol production methods, but this will be at the expense of land that could be used for food production.
- It is commonly quoted that western societies waste
 30 per cent of their food and eat more than they need to.
 Making food more expensive will kerb this habit.
- As developing countries' standard of living increases, their means of storing food will improve and less will be wasted.
- Keeping food prices higher so farming becomes more profitable will encourage better agricultural practices and help to keep land for agricultural use.

Face reality

In theory, the above is quite achievable. However, there are reasons why some parts of the world will continue to be hungry:

- Complete free trade between and within countries is never going to happen, so food will not be fairly distributed.
- The gap between the rich and poor is widening. The rich get first preference on the food stocks.
- Governments make cheap food a priority. While this is the case, growers will not be as profitable as they could be and the incentive to farm decreases.



Tim Harslett holds a sample of GM rice, in the development stage for drought tolerance, at the International Rice Research Institute in The Philippines.

Nuffield scholars report their findings

Ecologically sustainable farming and the long-term viability of farming communities will be among the topics presented by Nuffield Scholars at Nuffield Australia's Spring Tour, "Innovation in Australian Farming", held in Tasmania from 7 to 12 October 2008.

The program will see eight of the 16 2008 Nuffield Scholars give presentations about the farm practices they studied while overseas on their scholarships.

Presentations will be followed by the Nuffield Australia Awards Dinner where the 16 new scholars for 2009 will be announced.

• For more information: Call 03 5480 0755 or email <enquiries@nuffield. com.au>

New disease is difficult to counter

After substantial crop losses caused by a recently-discovered stem canker, some brassica growers have chosen to focus on other commodities, discovers David Jarwood.

Climate change and current horticultural practices are among the most likely suspects behind a raft of new plant diseases keeping researchers on their toes.

Barbara Hall, Senior Research Scientist at the South Australian Research and Development Institute (SARDI), has seen this firsthand. She is part of team that is working to counter brassica stem canker, a disease first detected in Australia less than eight years ago.

"Diseases just seem to turn up. I don't know if it is changes in the environment or different farming techniques but we see new diseases pop up regularly," she said.

"It is certainly throwing up new challenges for researchers. Unfortunately, we will never get

THE BOTTOM LINE

- Brassica stem canker was discovered in Australia eight years ago, one of a new batch of diseases attacking vegetable crops.
- Some growers have experienced crop losses of 80 per cent. The Northern Adelaide Plains area is the most affected.
- A study of different varieties and fungicides is getting good results, which will be published in an information pack at the project's completion.

1

 For more information contact: Barbara Hall, Senior Research Scientist, South Australian
 Research and Development Institute
 Email: <Hall.Barbara@saugov. sa.gov.au>

or visit www.ausveg.com.au/ levy-payers Project numbers: VG05005, VG06018

Keywords: Stem canker

rid of all the problems. It is a matter of continually adjusting to stay ahead of them."

Complete collapse

Barbara and her team are two years into a three-year project investigating management strategies for the canker, a potentially devastating disease that can wipe out crops.

Brassica stem canker was first observed on the Northern Adelaide Plains in South Australia in 2000. Growers have reported losses of up to 80 per cent due to stem canker. Potential loss has been calculated to be as much as \$309,000 per week when disease levels are high, and has, not surprisingly, led to a couple of growers in the region opting out of the brassica business.

Barbara said it was a difficult disease to counter, as it comprises a number of different types of fungi. Managing only one of these fungi will not effectively control the disease, which has symptoms ranging from superficial scurfing/ russetting and discrete lesions on the stem, to complete stem rot and plant collapse.

This is the second project concerning brassica stem canker that SARDI has conducted. The first project looked at the distribution of the soil-borne disease. It is an Australia-wide problem, but is more pronounced in the Northern Adelaide Plains.

Brassica stem canker is most severe in cauliflower but also affects Brussels sprouts, red and green cabbages and broccoli. It affects the crop four to six weeks after planting, increasing in incidence and severity as plants mature.



Brassica stem canker—severe infection can cause complete plant collapse. Image supplied by Barbara Hall.

Whatever it takes

Frank Musolino was one of the first growers to detect the canker. He has experienced severe losses to his cauliflower crops as a result of the disease.

"The impact has been devastating, we have suffered 100 per cent losses at times," he said.

Despite the major losses, Frank, who also farms potatoes, onions and cabbages on his 600-acre property in the Northern Adelaide Plains, has never considered giving caulis away.

"We have been growing them for more than 40 years, and we'll do whatever it takes to keep going."

He is closely following Barbara's research work—"we talk just about every other day"—and is keen to see positive results.

"The research has been quite considerable, but it's still early days," he said.

Barbara and her team have completed most of the greenhouse screening and controlled work, and the management project is now looking to take its learnings out into the field.

"We have been doing work with different varieties and looking at what types to avoid. We have also been getting some good results using different fungicides," she said.

At the conclusion of the project, an information pack including control measures will be produced for brassica growers throughout Australia.

What does **AUSVEG** do?

AUSVEG's role as PIB for the vegetable and potato industries has recently undergone some changes.

n the past few months, the work AUSVEG completes in its capacity as Peak Industry Body (PIB) for the vegetable and potato industries has evolved slightly. It's worth clarifying what these changes are.

AUSVEG receives funding from the national vegetable and potato levies, which is matched dollar for dollar by the Australian Government. As a result, most of its activities are levy-funded projects. In one sense, AUSVEG is a communications branch for the vegetable and potato industries, communicating R&D outcomes and information about levy-funded projects to benefit growers.

Status quo

Vegetables Australia magazine and Potatoes Australia magazine are the flagship titles for communicating levy-funded project aims and outcomes to industry. Similarly, VegeNotes will be produced as per usual, distributed with Vegetables Australia. The grower portal on the AUS-VEG website will continue to be a free service for all levy payers. There they can learn more about levy-funded R&D projects, grower tours, integrated pest management (IPM), and professional development opportunities. A list of past publications is available to be downloaded.

The 2009 Australian Vegetable Industry Conference and Australian Vegetable Industry Awards will be held in Melbourne in May, and organised by AUSVEG. This gathering is a great opportunity for growers, researchers, service providers and industry personnel to learn about the latest industry advances and discuss topical issues.

The LOTE program, which is partly funded by RIRDC, continues to build the network of growers who speak a language other than English—about 40 per cent of all Australian growers.

Tours such as the recent Young Growers New Zealand Tour and

October's Growers Tour to USA and PMA Fresh Summit are organised by AUSVEG, as they have been previously.

Communication to growers about the Australian Potato Research Program falls under the AUSVEG umbrella, as does the establishment of a national database for potato growers. A commitment to establishing a national database for vegetable growers is also being finalised.

EnviroVeg, the industry's environmental program, will continue to be run by Helena Whitman.

Shifting activities

While AUSVEG no longer has an in-house economist, independent service provider lan James will still be working on industryspecific data, which will be communicated to growers through the AUSVEG website and *Vegetables Australia* and *Potatoes Australia* magazines.

The people development wing of AUSVEG finished in June with production of the *Australian Vegetable Industry Investment Plan in Leadership & Business Skills Development* (see *Vegetables Australia* 4.1, page 52). A separate service provider has been engaged to put this plan into action.

The partnership agreement, an arrangement between AUSVEG and Horticulture Australia Limited, also continues. Through this, AUSVEG provides minute-taking services for the vegetable and potato Industry Advisory Committees, and helps facilitate the annual levy investment plan for R&D projects.

Among other duties, AUSVEG organises the Annual Levy Payers Meetings for the vegetable and potato industries, and has input into industry committees relating to, for example, biosecurity, chemicals of security concern, and the Nuffield Scholarship.

AUSVEG also engages in lobbying on behalf of growers to the Australian Government, but this is only through the capacity of AUS-VEG Limited, which receives no funding from either the national vegetable or potato levies.



Eastern i

In-field education is a stand-out success

A series of trials west of Sydney is helping Cambodian growers in Australia to improve production and post-harvest techniques, writes David Jarwood.

THE BOTTOM LINE

Cambodian growers in NSW have been working together to learn more about improved growing practices relating to tomato crops.

 The 64 members of the group meet once every three weeks during the three-month growing cycle to compare varieties, and field and greenhouse crops.

- This method of learning provides a forum for growers and allows them to immediately put into action their findings from the workshops. F or the past three years, a team from New South Wales Department of Primary Industries has been working with a number of Cambodian growers in a program designed to improve the sharing of technology and knowledge between Australia and Cambodia.

The project, which is funded by the Australian Centre for International Agricultural Research (ACIAR), started in 2006 and is a DPI project loosely based on the Farmer Field School technique used in many developing countries.

The scheme, developed by the Food and Agriculture Organisation attached to the UN, encourages growers to improve their farming techniques in the field rather than in the classroom.

Project leader Mark Hickey said that the NSW DPI program followed the principles of the Farmer Field School, but was more relaxed in its reporting structure—adapted to suit the competing demands of participating growers.

Field forum

The growers involved meet roughly every three weeks during the three-month growing cycle, enabling the group to learn in their crops rather than in a classroom or growing shed. DPI technical specialists including entomologists, pathologists and irrigation officers are invited to join the field schools, and answer questions. Seed company representatives also participate.

Mark said the project provided a forum for growers to get together and share information among themselves.

"It works much better in many ways than having someone from the DPI come and lecture to them. It is better to have a grower explain best practice, where the crop or field is the classroom," he said.

"It enables them to see exactly where a crop is during the growing cycle and what pests and diseases it may have attracted. They can see whether the crop is flowering or fruiting so that when they go back to their own farm



Grower Sunly Sao [right] and Suzie Newman from NSW DPI at a workshop in May. Image supplied by Alison Anderson.

Asian Vegetable Profile

Centella (Centella asiatica)

Also known as: Asian pennywort, gotu kola, luei gong gen, takip-kohol, antanan, pegagan

Cambodian growers were very keen to expand their horticulture knowledge and learn about more efficient growing techniques.

they can look at their crops and adapt any learnings."

Grower Sunly Sao volunteered his property at Cecil Park, 40 km from Sydney, for the field trials and workshops, which involved tomato crops.

He said there were 64 Cambodian growers in the area who were very keen to expand their horticulture knowledge and learn about more efficient growing techniques.

Sunly said the workshops had shown growers many different farming techniques and different varieties of cherry tomatoes. As a result they have now extended their growing season deep into winter; in the past, May was the end of the season.

Continued page 24

Centella is a creeping, perennial herb grown widely in Vietnam, Cambodia, and other areas in south-east Asia and India. It is reputed to have medicinal properties, including improved wound healing, brain function,

Background

digestion and overall health. The plant's use as a cure for arthritis has been widely publicised in Australia and it is sometimes sold in nurseries as "arthritis herb". The usual suggested dose is two leaves daily.

Centella features in the longevity myth of Tai Chi Chuan master Li Ching-Yuen. He purportedly lived to be 256, due in part to his usage of traditional Chinese herbs, including centella.

Where and how does it grow?

Centella prefers damp conditions and is considered to be semi-aquatic. Although it grows fastest under hot, humid conditions, some say cooler areas produce better quality. It is usually propagated by dividing the clumps and planting out stolons.

The plant grows vigorously and under some conditions can become a weed. As it is semiaquatic, centella is especially sensitive to pollutants in water, which it easily incorporates.

While Australians may be used to having a pot of centella on the verandah, in Vietnam it is grown in large, irrigated fields of several hectares. The short stems are harvested by hand and sold in large bunches.

Preparation and cooking

In south-east Asia, centella is widely used as a vegetable. The small and slightly bitter leaves are used in salads, stir fried and included in soups.

Centella is made into a refreshing and, reportedly, therapeutic drink. This is a frothy, bright green blend of fresh leaves, sugar syrup and water or ice. It is also processed into jellies, canned drinks and various health products.

Centella has a reputation for being a powerful "brainfood", with some claiming it can enhance mental ability by supporting and improving comprehension, memory and recollection. va





Eastern 2

Global reach

Mark, who lived in Cambodia for four years, has been working closely with partner organisations in Cambodia including the Cambodian Agricultural Research and Development Institute (CARDI) and Department of Agronomy and Agricultural Land Improvement (DAALI). Plant breeders from the AVRDC World Vegetable Centre in Taiwan are also part of the project.

Founded in 1971, the AVRDC World Vegetable Centre has a mandate to enhance vegetable production in the Asian tropics, and has a global role in promoting and supporting vegetable research and development in Africa, Asia, and other regions of the world.

The results so far have included new varieties of AVRDC tomatoes

released for commercial trials and the establishment of a postharvest horticulture laboratory at CARDI.

Compare and contrast

In Australia, a key component of the work has been to conduct a series of varietal evaluations and post-harvest research with cherry tomatoes. red and they need to be the right shape," he said.

All but one of the crops studied were outdoor crops. The one greenhouse crop used a hydroponic system. Mark said the aim of the greenhouse crop was not to convert growers to a hydroponic system, but to help them compare the positives and negatives of the two crop-types.

It is better to have a grower explain best practice, where the crop or field is the classroom.

Mark said that while cherry tomatoes were a hardy crop, it was imperative they had the right look and colour.

"They can't have any blemishes, they have to be the right shade of One of the most noticeable differences was that greenhouse fruit was bigger, which can be a negative when growing cherry tomatoes. Mark added that as far as taste was concerned, a consumer survey revealed that the field tomatoes were almost universally sweeter.

On the other side of the equation, the yield from field tomatoes was 40 to 50 per cent less than from the greenhouse.

The project's success was partly due to the involvement of participating seed companies. "The companies made their latest material available for the trials, and this allowed the growers to see a range of varieties grown on the same farm, under the same conditions. They could then draw their own conclusions," said Mark.

The Australian component of the project is winding up, with two more grower meetings planned. The project will then move on to Cambodia to put into place the lessons learned. va

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Dirt-cheap returns on input investment

With extreme price hikes for fertiliser in the past 18 months, and no relief in the guise of higher returns for produce, growers' concerns about input costs are well founded. Jim Thomson explores the reasons for these increases, and what the future holds.

The task seemed simple enough: find out why fertiliser prices had increased so dramatically in recent months. Unfortunately, this question had no easy answers—all that was uncovered was a complex web of interlinking factors, including global agriculture players such as Australia, China, India and America, issues of supply and demand, shortages of base materials, the continuing drought, cultural diet choices, earthquakes, land allocations for biofuel production, and a global agriculture phenomenon that contradicts what vegetable growers are experiencing. To make matters worse, industry experts predict little respite in the future.

Familiar story

In its most basic sense, the question of increased fertiliser prices can be answered in three words: demand outstrips supply.

Sean Richardson, Portfolio Manager for Potatoes and Vegetables at Syngenta, said that for the end user, these increases are largely due to the supply and demand equation for world agriculture, and rising production costs.

"The costs of raw materials, production, power, coal, oil and other base commodities have all risen, as have the costs of phosphorous and trace elements, which particularly affect the fertiliser industry. The cost of sulphur, as a raw commodity, has trebled in the past eight months," he said.

Jamie Rintel, General Manager Strategy and Business Development at Incitec Pivot, said that other factors have also played a significant role.

"Australia represents only two per cent of global fertiliser trade and, because it is dependent on imports to meet demand, is subject to international demand and supply forces. The fundament pressures forcing up fertiliser prices are the surging demand for food from a global population growing at 200,000 a day and escalating demand for high-protein food from increasingly well-off consumers in China and India. There is also increasing demand for fibre for clothing and biofuels to replace fossil fuels," he said.

"The demand for fertiliser has put pressure on raw material resources such as phosphate rock, sulphur and potash, driving up the cost of these inputs. There are limited sources for some of these inputs. For example, phosphate rock for single superphosphate is produced in only a handful of countries. This constraint has been a factor in the cost of phosphate rock imported into Australia rising from US\$50 to approaching US\$400 in the past 18 months."

Some of these materials are used in chemical controls as well as fertilisers. An example is glyphosate, the price of which has increased fourfold in the past 18 months.

"Fertilisers contain many active ingredients, so the gross price increase is exponential. Chemicals don't have as many actives, therefore their cost hasn't increased as much," said Sean. For Tally Matthews, grower and

Agronomist at Ace Ohlsson, these price increases have been unlike anything the industry has ever experienced.

"Twelve months ago, MAP Tech was around \$900 per tonne; now it's between \$3,500 and \$4,000 per tonne—a 340 per cent increase. That's an extreme example, but most horticulture fertilisers have doubled in price this past year," he said.

"It's getting to the stage where input costs for growers are just too high."

When too much is never enough

So why the sudden increase in demand? Economist lan James said that the use of arable land for biofuels is partly to blame.

"Demand for biofuels has seen a switch to input-intensive crops, such as corn. In developing countries, population increases have boosted demand and the encroachment of industry on prime agricultural land has led to more marginal agricultural land being brought into production, which requires higher fertiliser input," he said.

Lachlan McKinnon, General

Manager Australasia at Nufarm, said the marked increase for input prices has been brought about by a set of unique circumstances.

"We had a combination of very low prices—probably unsustainably low prices—for agricultural inputs, then we saw massive demand. This led to a huge spike in the market. If prices increase by that amount again, the cost of inputs would be unfeasible for the selling price," he said.

"The agricultural inputs industry has been accustomed to there being no shortage of base materi"The profit margins for fertilisers are as low as two per cent. If it was a 30 per cent mark up, it might be a different story. Now,

not want to handle it, said Tally.

turnover has increased significantly but margins haven't—this puts financial pressure on both fertiliser resellers and growers alike," he said.

Market discrepancy

So, in this new agricultural landscape, with higher costs for growers and lower profits for manufacturers, have there been any winners?

While prices may settle, they certainly won't return to the good old days—the horse has bolted.

als. Now, manufacturing facilities are running at plus 100 per cent to meet demand. Usually the production rates allow for routine maintenance and replacing equipment."

In light of this, many companies have announced they're increasing production output or expanding into more production facilities. Syngenta, Monsanto and Incitec Pivot have all made announcements along these lines.

But before things start to make too much sense, let's throw a natural disaster into the mix and see what happens. "The knock-on effect is important here; the latest earthquake in Sichuan China hit the mining production of raw sulphur, which exasperated the supply/demand curve and created an even bigger shortage," said Sean.

According to Jamie, we must remember that when it comes to fertiliser, Australia is a price taker. "The rapid rise in global prices in the past year made price forecasting virtually impossible. No-one a year ago forecast the prices we are seeing today," he said.

Margins are so tight for fertiliser sales that many companies do

The answer is yes, but it certainly hasn't been vegetable growers. Share prices for agriculture companies have bucked the global trend—they've had good returns when most other companies are performing poorly. Vegetable growers, however, are not seeing these returns.

It's a situation that Tally is concerned about. "The primary reasons we're given (for these increases) are the global market, rising fuel costs and mining costs. My biggest issue is that the share prices have jumped too quickly. It's profiteering to a degree. When you see some of the profits posted by these companies, it doesn't match what we're being told," he said.

The discrepancy is that vegetable growers aren't seeing these profits on-farm.

"The irony for vegetable growers is that agriculture, as an industry, is taking off. This is partly driven by increased population, the actual stocks-to-use ratio (simplistically, the global food stock on hand compared with the global food-use demand), and the demand for fuel, specifically biofuel," said Sean.



Fertiliser increases—the reality

Vegetables Australia asked a number of growers about their experiences with fertiliser costs during the past six months.

Joe Elbustani, Sydney Basin, NSW

Crops: Hydroponic cucumbers and tomatoes

Increase in fertiliser costs: Depends on the mix, overall about 200%

We don't understand why these increases are happening. We are running on the edge of the business—inputs are becoming more than the returns. If the situation keeps going at the same rate, I don't think many growers can survive.

Ray Townsend, central west NSW

Crops: Potatoes, wheat and oats, fat-lamb operations

Increase in fertiliser costs: Substantial increases, more than 40%

We're still experimenting with spuds, it's our third year growing them, but we've been with mixed farming for over 100 years.

If prices remain stable, at the higher, post-drought rate for commodities, then we can absorb the extra costs of fuel and fertiliser. However, if wheat goes back to \$100 per tonne, we'll go broke. We've been promised a good grain price; if this stays, we can absorb extra costs. Our vegetable crops are irrigated; they're sustainable at their current price.

Paul Gretch, Sydney Basin, NSW

Crops: Cabbages, cauliflowers, broccoli, potatoes, lettuce **Increase in fertiliser costs: 30 to 40%, depending on the product** The increases are starting to hurt. The trouble with the industry is that we can't pass the costs on. It makes it difficult to budget. Fertiliser is one of the first inputs, and now no fertiliser is put on crops for the sake of it. Not that we did that anyway, but we're much more aware of how much we're using.

Rob Henry, northern midlands, Tasmania

Crops: Cereals, wool sheep, prime lamb, onions, potatoes, peas, broccoli, veggie seeds, essential oils, cold-pressing canola and poppy seed for biofuel

Increase in fertiliser costs: These haven't been across the board but DAP has increased 300% and sulphur rose from \$60 per tonne to \$500 per tonne

The most alarming thing is that fertiliser prices are still increasing. I've locked in some prices, but some companies can't lock in prices from their end. I purchased some fertiliser at the end of last financial year, I had had some surplus cash, and I knew it would be a good investment.

Mostafa Osman, Sydney Basin, NSW

Crops: Hydroponic cucumbers, tomatoes and capsicums Increase in fertiliser costs: About 200%

What can we say? Everything has gone up, it's very hard to make a living. Every time we try to look to the future, the input costs don't allow us to do this, they hold us back. We're minimising everything instead.

"It's not so much the price of input costs, it's that growers aren't able to recover these costs. From an industry perspective, they're in a very weak marketing position," said Jeremy Badgery-Parker, Extension Horticulturist at Gosford Horticultural Institute, NSW DPI.

It's not a situation he sees changing in the near future. "If you compare it to the truckies, it's not the cost of petrol that's the issue, it's that they can't pass on these costs. Historically, growers would have good seasons that would carry them through the leaner years, but more recently, the highs are getting lower," he said.

The difference between horticulture and broad-acre is the perfect illustration

"Growers' concerns are mediated somewhat if they feel that they will be well-rewarded for produce. While broad-acre growers have received higher prices, so far this hasn't been the case for horticulture," said Lachlan.

Sean notes the shifting prices for broad-acre crops. "The base price growers receive for canola, wheat or barley is very buoyant, but horticulture growers do not see the same rosy returns. If we look back two years, the prices received by horticulture growers for their produce has not increased much, while the input costs have sky-rocketed," he said.

One potential reason for this is the small export market for vegetables. "With grains, we play on the global market; in fresh, we're domestically focused. Also, culturally many Asians countries prefer to eat rice, not potatoes,

which may have something to do with the increase in rice prices," said Sean.

Questions asked

Shortages in food supply and increased fertiliser costs have industry powerhouses questioning the best use of available land, and expected produce levels. The recent swing to biofuel production is one shift that warrants serious attention.

"The concept was fine for the use of low-productivity land but not when prime agricultural land is used," said lan.

It also points a finger towards the necessary output per acre needed to feed the world's growing population.

growers can take advantage of the global demand for many farm commodities," said Jamie.

"The global phenomenon in agriculture is quite amazing; if Australian growers can get their hands on some water, they can fully compete in this global market," said Lachlan.

Plan of attack

The next five years will make or break many growers, said Tally, who advises them to think wisely before unnecessary spending.

"Growers will need to invest more into monitoring their crops. In the past, they may have been a bit reckless with fertiliser and chemical input. Now, they need to be more scientific. A while

It's not so much the price of input costs, it's that growers aren't able to recover these costs. **))**

"Australia is a relatively minor user of fertiliser compared with the United States or Europe. In Australia, we get 2.5 tonnes per hectare of wheat, compared with six or seven tonnes in Europe," said Sean

For horticulture, he highlights the increased produce per acreage in greenhouse operations as a potential avenue for future farming operations.

In Australia, water is cited as a crucially limiting factor. "Like everyone connected with agriculture, we are looking for more rain after years of drought so that ago, a \$100 tissue or sap test was considered expensive, but now that input costs are so high, it's a lot more cost-effective. It's also better for the environment to monitor," he said.

Based in the Sydney Basin, where property prices have skyrocketed due to encroaching urban development, Tally predicts many growers who are nearing retirement age may try for one last big harvest before retiring or selling their land. Corporate farms may have an increased presence, to fill this vacuum.

To combat the reality of lower

returns, Tally said growers should present a unified front. "Growers should band together and say, 'We're not going to plant unless we get a fair price.' Vegetable growers are price takers, and until that mentality dies out, the shortterm future doesn't look good."

Short-term settling

The comparatively good news is that most industry forecasts expect input prices to stabilise. However, while prices may settle, they certainly won't return to the good old days-in this instance, the horse has bolted.

Sean advises growers to get in early with their input orders for next season, as shortages may still be in effect. More importantly, he warns of the new reality that growers face.

"Having been an agriculture agronomist and farmer, I know that reducing the cost of inputs is a short-term answer. What growers need to do is focus on instigating better production systems, producing more, finding new markets, and marketing themselves more effectively. Focus less on what you're putting in and do more with what you get out," he said.

"Even if growers find a way to deal with fertiliser input costs, with water availability, fuel costs, carbon footprinting, and increased environmental management, the game has shifted. It was always going to get more expensive to be in horticulture, but this has certainly happened much more quickly than people expected." va

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Vegetables Australia September/October

IPM info at your fingertips

The new IPM section on the AUSVEG website provides a wealth of information for levy payers, writes Lucy Jarman.

THE BOTTOM LINE

- A sub-site devoted specifically to IPM is now available via the grower portal on the AUSVEG website.
- The grower portal is a free service available to all National Vegetable Levy payers.
- The IPM sub-site contains case studies, interviews, information about R&D projects, and contact details for adoption and extension support programs.

 For more information or to register for your free access to the grower portal, contact: Lucy Jarman, AUSVEG Communication Officer
 Email: <lucy.jarman@ausveg. com.au>
 Phone: 03 9544 8098 Visit the grower portal at the AUSVEG website and you'll find a brand new feature: a sub-site devoted specifically to integrated pest management (IPM).

National Vegetable Levy payers can access the IPM website by logging on to www.ausveg. com.au. Growers who have already registered for the grower portal have automatic access to the IPM information, while those who have not yet registered can do so via the website. Registration is free for all levy payers.

The main section of the IPM sub-site can be accessed only via the grower portal. A webpage containing general information about IPM is available through the public section of the AUSVEG website but the grower portal contains considerably more information in much greater detail.

The IPM sub-site comprises four sections: IPM in Australia, R&D Projects, Current Issues and Priorities, and IPM Resources.

IPM in Australia

This section outlines and explains IPM, providing a brief overview of its use in Australian vegetable crops.

'IPM in Australia' details the history of IPM and provides expert commentary from growers, researchers and IPM consultants who have been extensively involved with Australian IPM research and development, and its implementation and adoption.

This section focuses on prioritising the ongoing IPM investment for vegetable crops, and the status of IPM in key vegetable commodities and minor crops.

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There is also a series of individual grower case histories about cucumber and capsicum greenhouses in Western Australia and South Australia, and several IPM business interviews, available via audio download.

R&D Projects

This section allows users to search through an extensive database of R&D projects funded by the National Vegetable Levy.

Type either an IPM-related phrase or project number into the search function and press enter to bring up a list of related results. To search for more specific IPM information, click the advanced search option and enter the required details.

Current Issues and Priorities

'Current Issues and Priorities' focuses on pest management issues, strategies and products, as these constantly change within the industry.

As new pests and diseases emerge, chemical resistance may become an issue. Seasonal, climatic and market factors also play a major role, as do the crops and practices of neighbouring landholders.

Based on the National IPM Stocktake and the Pathology Gap Analysis conducted in 2005 and 2006, the results and outcomes from these reviews have been presented and broken down into nine key areas.

IPM Resources

This section contains a range of resources and support including manuals, pocket guides and ute guides, industry publications, case histories, expert contacts and more.

Many IPM resources can be downloaded from this webpage. Effective implementation of IPM requires reliable information ranging from pest and disease facts, to tools, training and commercial expert help on-farm.

'IPM Resources' also provides information about overseas IPM practices, and adoption and extension support programs.

Ask the industry

Phil Hoult, Syngenta Technical Services Lead, responds to questions, concerns or problems you have about crop protection solutions.

What can be done about spray drift?

This question is commonly asked by agriculture groups around Australia. Each year there are incidences of "off target" damage that occur, sometimes even when products are applied with care to an intended target.

Legislation surrounding this issue is already impacting some product-use patterns in cropping sectors, such as phenoxy herbicides in sugar cane. Many new product labels now have detailed application guidelines to reduce the risk of drift. A product label is a legal document; its recommendations must always be followed.

The Australian Pesticides and Veterinary Medicines Authority

(APVMA) defines spray drift as: "the physical movement of spray droplets (and their dried remnants) through the air from the nozzle to any non- or off-target site at the time of application or soon thereafter". This definition excludes vapour drift. Some key factors that cause

spray drift are:

 Environmental conditions at application (wind speed, temperature, humidity and atmospheric stability).
 Although high wind (>15kph) can greatly increase the risk of drift, "dead calm" conditions can be even more serious, because of "drift clouds" in stable atmosphere conditions. This generally occurs at night (but not always) as the earth cools and a layer of cool air forms closer to the ground. This is a temperature inversion. Spray drift gets trapped by the inversion over the treated area and moved off-target as light and variable winds pick up, leading to severe drift damage.

• Nozzle selection and operating pressures (droplet size). Fine droplets have a tendency for greater drift, but coarse droplets may not always be suitable for the product. Sometimes, a trade off between coverage and potential for drift is necessary; however, efficacy may be compromised.

 Boom height. As boom height increases from 40 cm (optimum height for 110° nozzle at 50 cm spacing) to 70 cm above the target, the amount of drift doubles. It doubles again between 70 cm and 80 cm.

This subject can be expanded on in future columns—just 'Ask the industry' for more details. va



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When equipment pays for itself

Spending money to make money has been a successful game plan for growers Frank and Francis Tedesco. Jim Thomson finds out why.

Three years can be a long time in horticulture, with ample opportunity for businesses to evolve and progress, playing to their strengths. When *Vegetables Australia* visited carrot grower Frank Tedesco at his 1,000-acre property in Woodridge, 90 km north of Perth, in November 2005, we met a man always on the lookout for ways to improve his business.

Back then, Frank said that he made it a priority to be aware of advances in new machinery and that technology was introduced when finances allowed. A \$3 million investment in a state-of-theart packing shed, operational as of June this year, is testament to this. The farm's two businesses, Center West Exports and Sun City Farms, have also invested in GPS technology and have been lucky enough to have had a weather station installed on-farm.

Package deal

The desire to increase efficiency on-farm and decrease overhead costs, such as wages, was the driving force behind the \$3 million packing shed. As you'd expect, it wasn't a decision that was made lightly.

"We've been thinking about it for the past 12 months," said Frank. "It was designed to be practical, because we're not harvesting gold, we're harvesting veggies, and there's only so much you can get for the product." Plans for the shed were changed to accommodate the needs of the business, with an emphasis not on increased productivity, but rather increased efficiency.

The new packing shed will

give the business greater flexibility in its staffing options. For example, it could allow staff numbers to be cut from about 40 to 25, or staff members may finish their shifts earlier.

While the business hasn't had trouble maintaining staff levels, it has been difficult to pass on the increased fuel and fertiliser costs to clients. Also, the money saved on wages will be used to pay for the equipment. "We don't have to find new money," said Frank.

Better efficiency gives better results, said Francis Tedesco, Frank's son and Farm Manager at Sun City Farms. "Though we'll still be looking at the same amount of produce, these changes were about spending money to save money. We're not out to be the biggest, but the best. Quality has always been our numberone goal."

Now in his early 70s, Frank has reduced his involvement with the Sun City Farms and Center West Exports, which has given 30-yearold Francis the opportunity to assume more responsibility.

Both Frank and Francis were involved with the design and implementation of the packing shed, which took five weeks to construct and used parts sourced from across the globe.

"The carton fillers came from Denmark, robots from Sweden, carton closers and erectors came from Italy, all the bits and pieces come from all over the place," said Frank.

"We pack about 120 tonnes a day, five days a week. The new packing shed doesn't necessarily increase the tonnage, but it will make it more efficient."

Embracing technology

Separate to the packing shed, GPS technology has also been a new addition to the farm.

"GPS is used on all machinery over 290 horse power. This, along with the weather station and measuring our water and nutrient requirements, has played a big part in improving our efficiency these past three years," said Francis.



The land at Sun City Farms is irrigated with a combination of centre pivots and fixed irrigation.

The weather station was installed on the property in early 2008. It is linked to other weather stations around the state.

"The weather station provides readings about evaporation, wind velocity and rainfall—it gives you everything. It's on 24 hours a day," said Frank.

"It stores all the information, so if you want to know what the wind was like in July last year, you can find out. It's linked to other weather stations, and other growmm is sufficient for a crop of carrots, why use 500 mm?" asks Frank.

"With our nitrate levels they can say, 'You're watering too much, your nitrate is going into your aquifer'. Every three months we send in a report to the Waters and Rivers Commission to demonstrate what we're doing. It's part of what we do to retain our water license." This attention to details saves money and resources.

It's important that staff feel as if the business is their business, because it is.

ers can access the information via the internet. We're just lucky enough to have one on-farm."

The business has also invested time and money into an irrigation management plan, which it began four years ago. Every Monday, moisture probes are used to measure soil moisture and nitrate levels to ensure crops are not over-fertilised. The consultants who measure the crops advise Francis and Frank how much water is needed.

"The benefit is that you're not wasting water. If 300 mm or 400

Invest in people

Another critical area of investment has been in the farm's people capacity.

"It's important to offer staff challengers to keep them engaged and push them to build on their abilities. For instance, my guys did some in-house irrigation in one section of the farm. They used GPS technology and the rows are perfect," said Francis. "We didn't have to get anyone to help with the construction of irrigation. It's important that staff feel as if the business is their business, because it is."

Providing these opportunities for staff has increased the number of acres farmed.

"We have increased the size of the farm by about 80 acres. Parts of the farm had centre pivots; we had wedges of land that we couldn't irrigate using centre pivots, so we installed fixed irrigation into these wedges," said Frank.

"By the time we finish this process, we'll probably have about 900 acres—500 irrigated with centre pivots and 400 with fixed irrigation."

Francis emphasised that his staff is a team he couldn't do without.

"I strongly rely on my staff. Managing a farm is one thing, but you need good staff to bring it together. Some of the team have been here for more than three years. As every farm is individual, you need to train everyone who works for you, sort of like an apprenticeship for each person," he said.

"It helps that we plant and harvest all year round, so the skill set doesn't go to waste we're never at a loss for something to do." va





THRIPS: WESTERN FLOWER, TOMATO, BEAN BLOS PLAGUE, MELON, ONION

Frankliniella occidentalis, Frankliniella schultzei, Megalurothrips usitatus, Thrips imaginis, Thrips palmi, Thrips tabaci

Description

Adults are about 2mm long, torpedo shaped, and range in colour from pale yellow to yellow orange, honey brown, grey and black. The wings are long and narrow, with a fringe of fine hairs along the margin. Nymphs are similar in shape to the adults, pale yellow to orange-yellow, but are wingless and smaller. Species identification requires the skills of a professional taxonomist.

Damage

Damage appears as silvering or flecking of leaves or deformation of growing tips and young foliage. Most obvious damage is to the pods which may be twisted and scarred. It is unknown whether Tomato spotted wilk virus and other viruses are transmitted to beans by these thrips.

Where to look

Check new growth, buds and flowers

- Management options
- Western flower thrips and Melon thrips can quickly develop resistance to insecticides, so it is important to follow an insecticide resistance management plan. Manage weeds and other host plants in the vicinity of the
- crop
- Biological control is an option only in protected crops (i.e under plastic) (predatory mites, parasitic wasps).

You-beaut ute guide: the bible for green bean growers

With their new ute guide in hand, green bean growers can identify pests attacking their crops and respond in an economical and environmental fashion, writes Angela Brennan.

here is potential for more pests and diseases to affect green bean crops than any other vegetable commodity in Australia. However, growers' pains may be eased with the recent publication of a ute guide, which assists in the prompt identification of pests, diseases and beneficials, and advises a course of action, where appropriate.

The guide, Green beans: insect pests, beneficials and diseases, is being sent to growers, and has the potential to become their new bible. It contains more than 200 images, and information about pests, beneficials and diseases. It also includes a simple key to disorders of seedlings, roots, stems, leaves, flowers and pods, and where to find the likely cause of these disorders.

The guide provides a definition of integrated pest management (IPM) and advises growers about crop monitoring-the cornerstone to any IPM system. Information

about pathogens responsible for causing plant diseases is included, as is general information about disease and insect life cycles.

Extensive research

The national green bean industry is worth about \$65 million annually. Queensland and Tasmania dominate the market with around 40 per cent each in the fresh market produce and process industry, respectively. The fresh market produce and process industry. However, growers lose hundreds of thousands of dollars each year in unsaleable crops due to losses from pests and diseases.

Research into IPM against the myriad invaders attacking green beans has been conducted for a number of years (see Vegetables Australia 1.6, page 20). This earlier project centred on developing an IPM system suitable for the green bean industry in the face of

increasing insecticide resistance and access to only a small range of effective insecticides, which limited the level of insect pest control achieved by growers.

On the strength of this project an extension was granted. This enabled the team to complete its work with the production of the ute guide and further research into the complex problem of thrip management.

"Traditionally, growers have relied on heavy insecticide use to control the most common pests," said John Duff, Senior Plant Protectionist at the Queensland Department of Primary Industries and Fisheries, who compiled the ute guide with a team of researchers.

"However, very few insecticides are registered for green beans, so our original research focused on alternative approaches. We did on-farm and research-station trial work to compare conventional pest management systems with

35

Best Management Options (BMO)."

These options included modified cultural practices, soft option insecticides, insect monitoring, augmentation of beneficial insects where possible, and modified pesticide application techniques.

John described the results as variable, but said they demonstrated that growers don't need to spray just because they see an insect flying within their crop.

"We found we were able to

and select soft option or biological insecticides as a first option, then beneficial insects will build up, helping growers manage their insect pest problems with much less cost in the long-term."

Elusive thrips

Although the guide covers an extensive range of pests, some, such as flower thrips, continue to slip through the net. "We're not out of the woods yet," said John. "Thrips are a particularly

We were able to halve the use of some insecticides, which has the benefit of cutting costs and improving yields.

halve the use of some insecticides in certain situations, which has the benefit of cutting costs and improving yields," he said.

"I cannot see a time when we won't use insecticides, but if we can minimise the old 'kill everything in the paddock' approach, difficult pest to manage. It is a big issue for growers, with very few insecticides fully effective against the suite of species that can be found in bean flowers."

Up to 10 different thrips have been identified in green bean flowers, including bean blossom thrips, western flower thrips, tomato thrips and plaque thrips.

"Part of the problem, particularly in Tasmania, is confusion about whether damage is caused by 'wind scorch' or thrips, both of which can have a very adverse impact on Tasmania's processing industry," he said.

John's team is conducting insecticide efficacy trials in both Tasmania (with Agronico Research) and Queensland, comparing new sap-sucking insecticides with the traditionally used products.

"We hope that alternative products show some promise. In Queensland, growers tend to use traditional broad-spectrum insecticides, which are very disruptive to an IPM program," he said.

"In Tasmania, growers currently don't use any insecticides for thrip control at flowering, which can potentially lead to the entire crop being rejected by the processor."

John added that if alternative products are found that help in the management of thrips, most growers would consider using these new products when they are registered for green beans use.

THE BOTTOM LINE

- A ute guide has been produced for growers in involved in the green bean industry.
- The guide will help growers identify pests, diseases and beneficials, and advise on a course of action, where appropriate.
- Thrip control in the green been industry is a more complex issue, and trials are being conducted in Queensland and Tasmania to find efficient ways of dealing with this pest.

For more information contact: John Duff, Senior Plant Protectionist, Queensland Department of Primary Industries and Fisheries Email: <john.duff@dpi.qld. gov.au> Phone: 07 5466 2222 or visit www.ausveg.com.au/ levy-payers Project numbers: VG02030, VG06016 Keywords: Green bean industry



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Grower opinions shape industry development services

Innovative business models and staff development could be the focus of levy funding used for industry development in the future.

THE BOTTOM LINE

- The current review of levy funds invested in vegetable industry development is focusing on information gaps that previous reviews have not covered.
- More than 400 levy payers have been surveyed, and another 75 in-depth interviews were conducted to canvas opinions about investment in industry development.
- Findings indicate that future investment should focus on developing staff, marketing arrangements and improving growers' business fundamentals.

 For more information contact: Lucy Keatinge, HAL Industry Services Manager—Vegetables Email: <lucy.keatinge@horticulture.com.au>
 Phone: 02 8295 2342 than 400 National Vegetable Levy payers participated in a structured survey designed to identify the types of services and information they would like their levy dollars to fund. A further 75 in-depth interviews were carried out with levy payers, industry service providers and value chain members. The research was conducted as

uring June and July more

part of a review of the industry's investment in industry development. Industry development investment involves informing and empowering those in the vegetable industry to make better business decisions. Between 2002 and 2008 the vegetable industry invested \$15.3 million in industry development projects, which accounts for 25 per cent of the total R&D levy investment.

The purpose of the review is to ensure the vegetable levy continues to be invested in areas of industry development that provide the greatest return on investment to levy payers.

Focus on staff and marketing

The survey found there is a widespread view that little more efficiency can be squeezed out of production, with the notable exceptions being reduced costs via mechanisation and advances in genetic material.

The big drivers for improved competitiveness included staff development, improvements in selling and marketing arrangements, and improvements in business fundamentals. Many interviewees noted that the most successful businesses in the industry were developing new business models and mutually beneficial relationships within the value chain.

Increased competitiveness of the industry was seen to be driven by innovations that are noticeable to the consumer and by investing resources in growing the demand for vegetable products.

The results indicated that industry development investment in competitiveness should focus on assisting growers to adopt innovative business models and improve the image of the industry in the eyes of the consumer and the wider community. information from a large number of sources. In this complex environment, the industry requires a multi-pronged and sophisticated information dissemination strategy. The best approach to deliver value is to target information to the identified industry segments on the basis of their information needs.

Similarly, there is greater leverage to be gained from established channels within the value chain, commercial networks and the media. This will increase the impact of industry investment in

Death by review?

The question is a simple one: hasn't the vegetable industry been reviewed to death in recent years?

Yes, there have been several studies completed on the vegetable industry in recent times. However, the findings from these studies and reports are being incorporated into the Industry Development Needs Analysis currently underway. The only new research being completed is in areas where specific and important information gaps have been identified.

Targeted information needed

The quality and availability of information in the industry was seen as variable by growers and other stakeholders. Growers, service providers and value chain participants have diverse requirements that include technical/production information, supply and demand volumes and insights into consumer tastes and preferences.

The research demonstrated that industry stakeholders access

information dissemination.

Value propositions for future investment based on these research findings are now being developed. These will be considered by the Vegetable Industry Advisory Committee in September before a recommendation is made to HAL on how future industry development investment should be made.

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Members of CWA's Benalla Branch at the Woolworths Drought Action Day in February. Image supplied by CWA of Victoria.

Low profile, high achiever

The CWA has been quietly helping rural communities for more than 85 years, but misconceptions about its activities have resulted in a declining membership, writes Youna Angevin-Castro. Mention the Country Women's Association (CWA) to women across Australia, and the name often evokes visions of crocheted doilies and country fairs. However, according to national president, Lesley Young, the CWA is much more than just 'tea and scones'.

First formed in New South Wales and Queensland in 1922, the CWA, which describes itself as being non-party political and non-sectarian, is now Australia's largest women's association, with a membership of more than 25,000, and about 1,500 branches throughout the country.

Since her first CWA meeting with her mother at age 16, Lesley experienced the value of the CWA, which has led to an association with the organisation spanning more than four decades.

"My mother used to help organise concerts and plays as a means of raising funds. Sometimes we would perform for schools or aged-care facilities, and I got an enormous amount of pleasure doing that sort of thing. The women were so open and friendly, and I can remember listening to them talk about everyday things, they talked about how things were affecting them on the farm. Everyone needs an outlet, and the CWA provided that," she said.

A move to Bruny Island, off the southern coast of Tasmania, led to Lesley's discovery of the organisation's more serious side—its lobbying arm.

"We had issues on Bruny Island that we weren't happy about, such as the state of the roads, issues with some of the facilities at the local hospital and nursing centre, and various other things. Our branch began to lobby government, both local and state, about our concerns. I became actively involved in that side of things, and soon realised that there is more to rural and remote communities than just people—we need to consider the whole infrastructure of those communities, and what they need to survive."

Stop the decline

It is this passion and concern for rural communities that drives Lesley, and she sees the CWA as an important resource for families within the communities—often providing a lifeline at times of hardship. For this reason, Lesley, who took on the role of national president in late 2006, feels it's necessary to mention the association's flagging membership, and her desire to reposition the CWA as an organisation of significant national relevance.

"The CWA has been so good at getting on with things over recent years—we've been busy fundraising, lobbying, and helping people—that we've forgotten to look after the organisation internally. As a result branches have closed and our membership has declined," she said.

Lesley also feels that the 'tea and scones' tag has sometimes worked against the organisation, particularly when it comes to attracting younger members.

"Additionally, there has been a significant change in the social structure, in that many more women are working these days, which they weren't 50 years ago. In some areas, especially in South Australia and Tasmania, this has been a difficult challenge for our branches," she said.

However, as Lesley explains, 'tea and scones' have allowed the CWA to achieve many things over the years, particularly with regards to raising public issues at a government level.

"A couple of years ago, the CWA lobbied the government for the introduction of the trials for the use of marijuana for terminally ill people. Although it was controWe need to consider the whole infrastructure of rural and remote communities, and what they need to survive.

versial, it did help to raise public awareness of the issue, and at the same time raise the profile of the CWA," she said.

"We also actively lobbied for the drug *Herceptin*, a breast cancer treatment, to be included as part of the Pharmaceutical Benefits Scheme, and back in the early '50s, the CWA lobbied very hard for women's rights to attend agricultural college, which they weren't allowed to do at the time."

Support those who need it most

Looking towards the future, Lesley believes there are enormous opportunities for the CWA to work with the government and sociallyconscious corporates to provide on-ground support to rural communities where it's needed most. In 2007, the CWA was called upon by retailer Woolworths to distribute funds raised through its National Drought Action Day.

"I was absolutely speechless when they contacted me. I still can't believe that somebody in the corporate world could be so generous. They raised \$4.7 million dollars that year; that was absolutely phenomenal, because it was obvious there was a significant need for it within the community," said Lesley.

With the initial \$4.7 million distributed within months, the CWA has continued to work with Woolworths, as well as the government and other organisations, to raise and distribute funds to assist drought-affected farmers and their families. In 2008, CWA once again worked closely with Woolworths to promote the Drought Action Day initiative, which raised an additional \$5.8 million.

"I have a lot of respect for the work that Woolworths is doing out there in the community, some of which you don't hear about. In many ways, they're like the CWA—we just get on with the job, and don't tell people about it. Hopefully, in the not-too-distant future, that won't be so much of a problem." va

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Vegetables Australia September/October 2008



HAL releases 2008/09 R&D project list

The list below is of newly approved projects that the National Vegetable Levy will invest in for the 2008/09 financial year.

This suite of projects covers major issues in the industry, from crop disease research to professional development. Please note that it does not include the ongoing projects funded in

previous years.

This year, projects have been aligned with the five strategic imperatives, outlined in the vegetable industry strategic plan, VegVision 2020. The table below has colour-coded the projects in line with their strategic imperatives.

Information was provided by HAL, and correct at the time of printing.



Project No.	Project Title	Start date (2008)	Finish date	Strategic imperative
MT08010	Prevention or Preparedness? That is the question	October		1
VG07160	Trends in children's vegetable intake from 1995 to 2007	May		1
VG08000	Consumer insights on vegetable consumption to guide industry response and measure trends on successive years	August	31-May-09	1
VG08002	Increasing children's liking for and consumption of vegetables: the effects of exposure, modelling and reward	September	27-Nov-09	1
VG08049	Sensory barriers and facilitators of children's and parents' vegetable consumption	August	01-Dec-09	1
MT08018	Submissions regarding the Japanese Positive List to address provisional MRLs	November		2
VG08039	Vegetable Industry Export Network Secretariat	July	30-Jun-09	2
VG08059	Update and review of processed Asian foods in Australia	September	30-Jun-09	2
VG08069	Enhancing confidence in product integrity in domestic and export markets	August	31-May-10	2
VG08077	Implementation of Domestic Marketing Plans - VG07115	August	30-May-11	2
MT08015	Scan data project	July		3
MT08016	Protecting pollination for the Australian horticultural industry	November		3
VG07055	Development of residue management strategies and action plans for export vegetables	October		3
VG07192	Carbon footprint tools	May		3
VG08010	Overseas study trip to expand capabilities in biocontrol mass production, marketing and large-scale uptake	August	01-Jan-10	3
VG08020	Optimising water and nutrient use on vegetable farms	October	01-Aug-11	3
VG08026	Identification of IPM strategies for <i>Pythium</i> -induced root rots in vegetable crops	November	31-Dec-11	3
VG08029	Design and demonstration of precision agriculture irrigation applied to different vegetable crops	October	16-Oct-11	3
VG08043	Development of methods to monitor and control soil-borne diseases of beans	October	01-Oct-11	3
VG08046	Extension to the National IPM Coordinator for vegetables	March	31-Mar-13	3
VG08048	Identification of immune-suppressors of diamondback moth (DBM)	July	11-Jul-11	3
VG08051	Getting the most out of <i>Eretmocerus hayati</i> , an effective natural enemy of silverleaf whitefly	August	30-Jun-11	3

Project No.	Project Title	Start date (2008)	Finish date	Strategic imperative
VG08053	Exploring a novel strategy to enhance efficacy of insect pathogens and disrupt cuticle hardening in insects	August	30-May-11	3
VG08066	Insecticide resistance detection and management in currant lettuce aphid	August	31-Aug-09	3
VG08067	Management of insecticide resistance in silverleaf whitefly in vegetables	August	31-Aug-09	3
VG08068	Development of herbicides for weed control in brassica crops	February	31-Jul-10	3
VG08074	Minor use programme allocation for 2008/09	September	01-Jul-10	3
VG08088	Rhubarb group scoping study	August	30-May-09	3
VG07193	Completion of industry development needs assessment	May		4
VG08021	VegBIZ - Vegetable Enterprise Decision Support Systems	October	30-Jun-11	4
VG08040	Economic services to vegetable industry	August	30-May-11	4
VG08058	National Vegetable Industry Database	August	15-Jan-09	4
VG08078	Communications program	July	30-May-11	4
VG08079	R&D levy BCA communications	November	30-May-09	4
MT08014	2009 conference (Vegetables, Potatoes and Onions)	May		5
VG07175	Young Growers Study Tour - New Zealand 2008	May		5
VG07176	Growers Study Tour - PMA/USA 2008	May		5
VG07191	3rd International Biofumigation Symposium	April		5
VG08004	Grower-friendly tool for comparing management and profitability of vegetable crops	September	30-Apr-09	5
VG08006	Young vegetable leaders development	November	30-Jun-09	5
VG08012	Nuffield Farming Scholarship	October	31-Mar-11	5
VG08035	Investigate overseas trends and innovation for the Australian vegetable industry	July	30-Jun-09	5
VG08045	National greenhouse industry business and productivity analysis system	October	30-Sep-12	5
VG08080	Young Growers Study Tour - New Zealand 2009	April	30-May-10	5
VG08081	Growers Study Tour - PMA/USA 2009	April	30-May-10	5
VG08082	Industry development needs assessment allocation	September	30-May-11	5
VG08083	Program administration	July	30-May-09	5
VG08084	ARLP 2009	December	30-Nov-10	5
VG08900	Partnership Agreement 2008/09	July	01-Jun-09	5
VG08910	Partnership Agreement 2008/09 - Consultation Funding (including HR component)	July	01-Jun-09	5

VegVision 2020 strategic imperatives

- 1. Delivering to changing consumer preferences and increasing demand
- 2. Market recognition for Australian quality, safety, reliable supply and innovation in products and services
- **3.** Internationally competitive vegetable production and supply chain
- 4. Advanced industry data and information systems to meet future needs
- 5. Visionary leadership and managing change, including people development

Secondary pests need a soft approach

Collaboration between research organisations in three states has been a boon for IMP in the sweet corn industry, writes Jenan Taylor.

THE BOTTOM LINE

- Improved IPM for Heliothis in sweet corn crops has opened the door for populations of secondary pests to increase.
- Soft or narrow-spectrum insecticides are being trialled for these secondary pests, which will allow beneficials to flourish.
- This project involved the collaboration of different research agencies around the country, to properly canvas Australia's sweet corn growing regions.

 For more information contact: Dr Siva-Subramaniam, Entomologist, Queensland DPI&F
 Phone: 0417 784 686
 Email: <Siva.Subramaniam@dpi. qld.gov.au> or visit www.ausveg.com.au/ levy-payers
 Project numbers: VG97036, VG05035

Keywords: Sweet corn industry



Successful IPM of major pests such as *Heliothis* [above] has opened the door for populations of secondary pests to increase.

A study into the performance of integrated pest management (IPM) strategies in sweet corn systems has led to the potential availability of additional soft or narrow-spectrum insecticides to helps growers control major and secondary pests, despite resource constraints and other challenges faced by the research team.

The three-year project aimed to find ways to control secondary pests in sweet corn production while improving and maintaining integrated strategies for managing the major pest *Heliothis* (also known as *Helicoverpa*). Researchers from the Queensland Department of Primary Industries & Fisheries, New South Wales Department of Primary Industries, and the Western Australia Department of Agriculture and Food (DAFWA) collaborated on the project.

The national effort was preceded by the larger IPM project that focused on integrated methods for the control of Heliothis. A survey conducted in 2006/07 as part of the follow-up project found that the pest was being well-managed by growers using IPM options in Australia's main sweet corn growing districts. However, since then, the control of secondary pests has become critical for the maintenance of the estimated \$60 million sweet corn industry.

Second to none

According to researchers Dr Siva-Subramanium and Sonya Broughton, secondary pests such as aphids and mites have now become a problem because of widespread adoption of narrowspectrum control measures for Heliothis. Aphids and mites damage the corn by leaving traces of, among other things, mould and discolorations, which lead to reduced marketability. They can also reduce yields and cause contamination of packed product, which can be detrimental to local and international markets, and

erode profitability.

Researchers conducted field and laboratory trials in sweet corn growing regions in Queensland, New South Wales and Western Australia that evaluated the type, rate, frequency and chemical application techniques for their impact on major and secondary pests.

In Yanco, New South Wales, the comprehensive trials made use of Krispy King varieties, while tests conducted in Queensland used Golden Sweet, Lancaster and Sentinel varieties. Studies then focused on identifying secondary pests and quantifiying their activity and infestation levels in crops.

Laboratory trials in Western Australia further measured the effects of soft insecticides to control *Heliothis* on beneficials such as ladybirds and *Trichogramma* wasps, which both occur naturally.

The trials confirmed that *Heliothis* is still a major pest for the sweet corn industry but that it was being managed effectively through the use of soft insecticides. The project also established ways to apply narrow-spectrum pesticides to Heliothis, including rotational routines, which prevent major pests from building resistance to soft insecticides.

It found that the use of narrowspectrum insecticides, alongside biological measures that did not adversely affect beneficials, helped contain Heliothis considerably.

Queensland grower Rod Emerick participated in the field trials. He said that, in his crops, Heliothis had become a minor



A sweet corn field day, held in November last year. Image supplied by Dr Siva-Subramaniam.

Narrow-spectrum or soft insecticides provided better control when applied at the early silking stage.

issue because of the narrowspectrum chemicals.

"The former secondary pests such as aphids and thrips have increased, but on the scale of things are still minor," he said.

Sonya Broughton said that an added result of the study was the identification of soft chemicals suitable for managing secondary pests.

"Prior to this study, only one insecticide was registered for control of aphids. During this project, two narrow-spectrum insecticides have been identified for mites and aphids," she said.

The extensive data generated

by the trials helped establish the information needed to apply for the registration of three more soft chemical options for the management of Heliothis and secondary pests—currently there are only two suitable for sweet corn IPM systems in Australia.

Increased options

Subra said that on-farm practices would benefit from the study's establishment of definitive approaches to managing pests.

"Selecting the right insecticides and applying them at the right time is critically important in controlling Heliothis. These

narrow-spectrum or soft insecticides have provided better control when applied at the early silking stage," he said.

"Fresh sweet corn production relies on insecticides, specifically during the flowering and silking periods, to ensure the supply of clean produce to the markets. Availability of more soft or narrowspectrum insecticides will provide additional options to growers so they can rotate the products and avoid pests developing resistance to insecticides."

Rod, who has incorporated narrow-spectrum chemicals into his management program, agreed that it was satisfying to not be "blasting things with broadspectrum chemicals".

He indicated that soft chemicals were cost-effective because of their targeted application. This strategy also reduces tillage and traffic passes over cultivation areas.

Stately cooperation

The joint study has immense benefits for the sweet corn industry, including growers and chemical manufacturers, as the usual data collection procedures for gaining chemical approval and registration can be costly and time consuming.

The national approach to the project enabled broad knowledge and extensive experience to be tailored to suit the ecologically and geographically distinct sweet corn production areas around Australia

"The researchers [had] the freedom to focus on the pest spectrum specific to their area," said Tony Napier from NSW DPI. "Not all projects are suitable for a national approach but this one was and with the level of communication throughout the project, any difficulties were minimised."

Subra said that while the knowledge exchange and networking between researchers worked very well in many instances, the differences in regional focus presented their own challenges, particularly for a project with a limited budget.

"Pest management strategies developed for one region can't be readily adapted to another region. This requires testing and validation for each region before it can be implemented at farm levels," he said. In this instance, the team's ability to reach some solutions was compromised by funding constraints. 🗸



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Visible benefits speak for themselves

Helping the protected cropping industry fulfil its potential is what drives extension horticulturist Jeremy Badgery-Parker, writes Graham Gosper. G reenhouse industry development and extension specialist Jeremy Badgery-Parker has a simple formula to help growers take full advantage of the opportunities offered by advances in research. "My prime objective is to provide practical solutions. I focus on outcomes that address the underlying obstacles that growers face every day," he said.

Jeremy has successfully applied that formula for more than 10 years in his role as a New South Wales Department of Primary Industries extension horticulturist. He is based at the National Centre for Greenhouse Horticulture in Gosford and while much of his work is with greenhouse growers in the Sydney Basin, he is also involved with a range of national projects.

Over the years, Jeremy has helped countless growers adopt changes that have had visible benefits in their greenhouse operations. He has integrated projects ranging from managing waste water to improving irrigation efficiency, from introducing safer work practices to building improved greenhouse structures, and from reducing pesticide use to improving the management of greenhouse and hydroponic systems.

One of the most satisfying aspects of his work has been witnessing firsthand the steady progress and change of the controlled environment horticulture (CEH) industry in Australia. "A highlight is seeing recommendations and advice that I have provided gradually take hold on farms and spread through the industry," he said.

Loyal to the cause

For much of his childhood Jeremy helped his parents run a goat farm near Goulburn, NSW, before growing up on Sydney's North Shore. The dual experiences of living on a farm and in the inner-city led to his career in horticulture and helped chart its course.

"Those years helped me develop a keen appreciation of the need for agriculture to remain embedded in the urban outlook, and the need for a connection involving food, the environment and consumers to help sustain us all. They also gave me an appreciation of the value of practical assistance to anyone who operates a farm," he said.

Following a year working in the pearl farms in Northern Australia, Jeremy began studying horticulture at the University of Sydney in 1992. His passion for finding



Jeremy Badgery-Parker [right] with growers Joe Elbustani [left] and Anne Wilson. Image supplied by Alison Anderson.

Jeremy Badgery-Parker career timeline

With practical solutions, strategic thinking and advice in all aspects of greenhouse and hydroponic horticulture, Jeremy Badgery-Parker encourages growers to strive for and benefit from long-term plans for controlled environment horticulture in Australia.

- 1995Graduated Honours degree in Agricultural Science (Horticulture)1997Appointed NSW DPI extension horticulturist for greenhouse and hydroponic horticulture2000Graduated Master of Business Administration2001Churchill Fellowship—study tour of international greenhouse horticulture industries
- 1997 present Involved in numerous industry-focused projects and extension programs addressing:
 - Waste water management (published Managing waste water with a wetland, 2003)
 - Greenhouse profitability, improving business skills, adopting better management practices (published *Being safe in the greenhouse*, 2004)
 - Industry development (published Guidelines for the development of controlled environment horticulture, 2005)
 - Industry training needs, preventative pest and disease management and evaluation of low-cost protected cropping systems.

Keeping greenhouses clean can significantly reduce management costs and crop losses due to pests and diseases.



sustainable solutions meant he soon became interested in the benefits offered by CEH.

"Here was an industry that could provide safe, reliable, efficient and sustainable food production close to the consumer," he said.

After completing an agricultural science degree and a short stint with the Australian Quarantine and Inspection Service (AQIS), he took up his position with New South Wales DPI. Completing his MBA, Jeremy began working with the New South Wales greenhouse and hydroponics industry. His commitment to the industry was recognised when he was awarded a Churchill Fellowship to undertake a study tour of the greenhouse industry in England, The Netherlands, Spain and Canada.

Broad involvement

Jeremy is currently leading a two-year research project that aims to provide growers with a guide to the sources of pests and diseases around the greenhouse, along with basic preventative management practices. "Keeping greenhouses clean can significantly reduce management costs and crop losses due to pests and diseases," he said.

Jeremy also assists with other projects, including one to develop a national greenhouse industry training program, one aimed to help growers in the Philippines develop their capacity to produce local fresh product, and another to improve low-cost greenhouse systems and production practices.

Later this year he will begin work on a project to develop a national greenhouse industry business and productivity analysis system. "The aim is to develop a grower-friendly, real-time industry business and productivity analysis tool for the industry," he said.

More than a decade of extension work has done nothing to dampen Jeremy's enthusiasm for the industry and its future. "Though we still have some obstacles to overcome, CEH offers prime opportunities for sustainable, reliable production of quality, safe food in challenging times of climate change, climate variability, water scarcity and rising energy costs," he said.

Over the next few years Jeremy will work towards bringing together the information and opportunities necessary for greenhouse growers to capitalise on the advantages of their production systems. He said specific areas the industry must address include reducing energy inputs, improving business and greenhouse production analysis and establishing better communication and interaction within the industry.

> For more information contact:
> Jeremy Badgery-Parker,
> Extension Horticulturist, Gosford Horticultural Institute, NSW DPI
> Phone: 02 4348 1900
> Email: <jeremy.badgery-parker@ dpi.nsw.gov.au>

ECONOMIC OUTLOOK

The secret's out about undercover operations

For too long, data about undercover vegetable production has been lumped with field production, but that situation is changing, writes Economist Ian James.

THE BOTTOM LINE

- Until now, data relating to protected cropping production levels has been combined with field production. The industry has invested in data collection specific to undercover crops.
- While it is too early to ascertain trends within protected cropping production, the number of undercover growers decreased between 2005/06 and 2006/07.
- The number of undercover growers whose value of operations was less than \$100,000 per annum fell 40 per cent, but the number of those who earn between \$100,000 and \$500,000 per annum more than doubled.

U ndercover vegetable production has received little attention in the past because of inadequate data. Assumptions have been made that the volume and value of vegetables produced in a protected cropping environment has increased, but there has been little data to support this. As part of the vegetable industry's bid to increase its recognition as an important part of mainstream agriculture, extra resources have been devoted to collecting this information.

Decisions were made back in 2005 and 2006 on the range of data that should be collected, within budgetary constraints. While we'll never be completely satisfied with the range and accuracy of data collected, the industry is already seeing the benefits of the initiatives undertaken thus far.

In devising the range of data to be collected, the need to separate undercover production and field crops was taken into account. The rationale was fairly simple: techniques and requirements for protected cropping production differ from those for field production. Aggregate data that combined field and undercover production could lead to conclusions being drawn that were inaccurate. This could, in turn, result in decisions being made that were harmful to industry. In this instance, expanded data could be more harmful to the industry than no data.

Tomatoes provided a classic case. Previous data collected on tomatoes combined all tomato

production, despite there being significant differences between tomatoes produced undercover and those produced in the field. What's more, field tomato production is declining due to changing consumer preferences, and the domestic processing tomato industry is facing market-share losses because of imports. These developments could lead to less acreage devoted to field tomatoes, while undercover production of tomatoes expands.

The industry now has reasonably comprehensive production data for financial years 2005/06 and 2006/07, which means we know a great deal more than before about undercover vegetable production.

Year		NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Aust
2005/06	Undercover	324	152	181	261	100	19	5	0	1,043
	Outdoors	904	731	1,114	345	435	504	43	1	4,077
	Undercover growers as a proportion of total growers %	26	17	14	43	19	4	10		20
2006/07	Undercover	296	142	181	262	37	20	10	0	947
	Outdoors	935	761	1,033	375	439	424	38	1	4,006
	Undercover growers as a proportion of total growers %	24	16	15	41	8	5	21		19

Table 1.Undercover and field-crop grower numbers, by state

Note: Covers growers whose major source of income is from vegetable growing. Figures for undercover exclude mushroom growers. Figure for undercover growers for WA for 2006/07 subject to statistical error and needs to be used with caution Source: Australian Bureau of Statistics



Chart 1. Estimated value of operations of undercover vegetable growers (\$000)



Source: Australian Bureau of Statistics

Declining grower numbers

Table 1 shows the number of undercover vegetable producers. Roughly 20 per cent of vegetable growers produce vegetables in a protected cropping environment. While New South Wales has the largest number of undercover growers, they are relatively more important in South Australia than any other state as more than 40 per cent of South Australian growers produce vegetables undercover. In contrast, Tasmania's undercover growers account for only five per cent of the total number.

While there was a decline in the number of undercover vegetable growers in 2006/07, data for the next few years is needed before a trend can be ascertained. The decline may reflect smaller producers leaving the industry rather than a decline in the importance of undercover vegetable production. Expansion of production to achieve economies of scale involves substantial capital outlay. For some growers, especially those nearing retirement, this investment is not worthwhile.

Not surprisingly, undercover vegetable growing is conducted on smaller properties than field vegetable production. Ninetythree per cent of operations are conducted on farms of less than 50 hectares.

Chart 1 shows the estimated value of operations of undercover vegetable growers. Generally, returns to undercover growers were much better in 2006/07 than 2005/06. The number of growers whose value of operations was less than \$100,000 fell 40 per cent in 2006/07. This may have been partially due to some smaller growers leaving the industry. However, there was an overall uplift within the industrythe number of growers who earn between \$100,000 and \$500,000 more than doubled.

High productivity

As Table 2 shows, the acreage devoted to undercover vegetable crops increased by 1.4 per cent in 2006/07. However, production of the four major undercover commodities increased 20 per cent, which reflects higher productivity.

Cucumbers and tomatoes were the major vegetables produced undercover. In 2006/07, there were 477 growers producing cucumbers and 412 producing tomatoes undercover. Some growers produce more than one vegetable. Compared with 2005/06, the number of tomato

Table 2. Undercover production and acreage, by commodity

Vegetable	2005/06	2006/07
Number of capsicum growers	176	173
Capsicums area (m ²)	1,713,776	1,499,438
Capsicums production (kg)	6,549,866	6,926,118
Number of cucumber growers	448	477
Cucumber area (m ²⁾	2,837,826	3,077,458
Cucumber production (kg)	19,395,401	38,250,334
Number of head lettuce growers	21	8
Lettuce (head) area (m ²)	297,767	606,893
Lettuce (head) production (kg)	1,612,883	2,653,769
Number of lettuce growers	89	84
Lettuce (looseleaf butterheads and colour-fancy) area (m ²)	1,364,751	1,922,285
Lettuce (looseleaf butterheads and colour-fancy) production (kg)	4,039,806	4,859,252
Number of tomato growers	493	412
Tomatoes (fresh market) area (m ²)	2,002,416	1,594,987
Tomatoes (fresh market) production (kg)	26,239,750	16,859,575
Number of other vegetable growers	87	48
Other Vegetables area (m ²)	418,284	52,689

Source: Australian Bureau of Statistics

growers fell significantly, as did both the acreage devoted to tomato production and the volume of production. These falls were concentrated in Victoria and Western Australia.

In contrast, the number of growers producing cucumbers increased, the acreage devoted to cucumber production expanded, and production levels rose to more than 38,000 tonnes. Production increases were particularly strong in South Australia and Queensland.

Lettuce and capsicums are two other vegetables where undercover growing is important. In lettuces, undercover production is more favoured for looseleaf, butterhead and colour-fancy varieties than for head lettuce. Still, in 2006/07 there were more than 26,000 tonnes of head lettuce produced undercover. Production of lettuces undercover is concentrated in New South Wales, especially the Sydney Basin and Richmond-Tweed.

While the acreage devoted to capsicum production fell in 2006/07, production increased due to higher yields. More than 40 per cent of capsicum producers were located in South Australia, principally on the Adelaide plain.

Undercover vegetable production is an important part of the industry. In the future, trend analysis will be completed to better understand this vibrant industry sector.

AUSVEG CEO Message

Later this year, a vote will be put to the members of AUSVEG with a view to changing the organisation's constitution. This follows from a motion put forward in July this year, which failed to reach the required 75 per cent in favour of the change, falling short by one vote.

f the proposed new constitution is successful, how will this benefit growers? Currently, the members of AUSVEG are six state-based grower associations, and nine individuals. While the six state associations aim to represent growers' interests, not all National Vegetable and Potato Levy payers are members of these associations.

The main aim of the new constitution is to enable all vegetable and potato levy payers to become members of AUSVEG, and obtain direct voting rights for who is elected to the AUSVEG board. This change will also allow growers to have a say in the direction of AUSVEG, encourage greater ownership of the organisation among growers, foster increased unity within the industry, and ensure that AUSVEG fully represents the needs of all vegetable and potato growers in Australia.

To put it simply, if adopted, the new constitution will include a national membership base and a skills-based board, with organisation policy to be determined by members. Moving away from a membership that comprises statebased organisations and selected individuals, with a representational board, as is currently the case, will ensure that AUSVEG is better positioned to deliver greater benefits for growers in the future.

This shift from a federated membership base to a direct membership has become increasingly common for many not-for-profit organisations, who consider it to be a more appropriate management and governance model.

If the constitution change is successful, growers who are presently members of the six state-based organisations will automatically become members of AUSVEG. Growers who are not members of the representative state organisations can become direct members of AUSVEG. All grower members of AUSVEG who wish to vote for a board director from their state will have the opportunity to cast their vote directly.

Among other changes, the present state-based organisation members will assume the mantle of Associate Members, ensuring that they have a continued lead role in the organisation. However, they would not have voting rights as they are not individuals; only their members may vote.

The structure of the new board would include six board directors, one from each state (elected by levy-paying growers in their state), the immediate Past President, and three skills-based directors appointed by the seven directors. The Chair would be elected from the board.

This is an exciting time for AUSVEG and we hope to be able to adopt the new constitution to better represent all growers.



Robert Lawler Acting CEO AUSVEG Ltd

New South Wales



Producers shaped the key policy direction for the NSW Farmers' Association at the Horticulture Committee Conference and Annual General Meeting in July. Horticulture Committee Chair, Peter Darley, was re-elected for the coming year. David Cameron was re-elected to represent the Horticulture Committee on the Exotic Disease, Quarantine, Plant and Animal Health Committee, while Geoff Moar and Jeff McSpedden were elected as AUSVEG directors. Peter and Geoff were also elected to the association's Executive Council as horticulture representatives. At the conference, Robert

At the contenence, Robert Belcher from Sustainable Agricultural Communities Australia discussed the impacts of managed investment schemes on Australian agriculture and the future of family farms.

Climate change was also on the agenda; its potential impact on horticulture was discussed by Michael Cashen from the Tocal Agricultural College. The Horticulture Committee AGM passed a number of motions that will shape key policy areas for the association in coming months.

The association has submitted amendments to the draft AUSVEG Constitution. One of these amendments will provide the opportunity for all National Vegetable Levy payers to be nominated for a position on the board.

Claire Hull

Policy Officer – Horticulture NSW Farmers' Association Address: Level 25, 66 Goulburn St Sydney NSW 2000 Phone: 02 8251 1885 Fax: 02 8251 1750

AROUND THE STATES

Queensland



Growcom held a workshop for growers recently to discuss the state government's draft biosecurity plan, which was released in July. The workshop bought together representatives from Biosecurity Queensland, Plant Health Australia, Growcom, Horticulture Australia Council, industry groups and growers.

Queensland has had more biosecurity incursions and associated impacts than any other Australian state or territory, mainly as a result of its location and the diversity of crops grown. As a result, biosecurity is one of the most important issues identified by growers.

Biosecurity Queensland is developing a comprehensive biosecurity strategy for the state. The government believes this will ensure all Queenslanders can be confident that our economy, unique environment and way of life are adequately protected from the full range of pests, diseases and contaminants.

Biosecurity is a shared responsibility between governments, industry and the community. In an effort to bring everyone together, the government is consulting widely on this strategy.

With the predication that major biosecurity incidents are expected to become more frequent as the movement of products and people around the world increases, climates and environments change, trade agreements become more common and market requirements intensify, it is important that the Queensland horticulture industry has its say on what should be included in the strategy. The workshop considered key issues such as improving Queensland's emergency response and surveillance, management of established pests and diseases and identifying gaps in Queensland's biosecurity arrangements.

For more information, contact Growcom.

Jan Davis

Outgoing Chief Executive Officer Growcom Address: Floor 1 385 St Pauls Terrace Fortitude Valley QLD 4006 Phone: 07 3620 3844 Fax: 07 3620 3880



Bundaberg Fruit and Vegetable Growers (BFVG) conducted the official launch of two exciting and innovative tools for the national horticulture industry on 9 July at the Bundaberg campus of Central Queensland (CQ) University.

Senator John Hogg, Deputy President of the Senate and Chair of Committees, launched Your Future is Here on behalf of Julia Gillard, Deputy Prime Minister and Minister for Education, Employment and Workplace Relations.

Your Future is Here delivers a careers DVD along with an interactive Careers Pathway Mapping resource for use by school leavers, tertiary students, existing employees and those wanting to enter the industry.

The tools were developed through the Bundaberg Horticulture Career Pathways Project by BFVG in conjunction with CQ University and other funding providers, including State and Federal Governments, Growcom and Rural Skills Australia.

Horticulture operations rely on people to get the job done. These tools will convey to the nation that interesting and rewarding careers are available in the production horticulture industry in Bundaberg and around Australia.

For copies of *Your Future is Here* contact BFVG.

Matt Dagan

Executive Officer Bundaberg Fruit and Vegetable Growers Address: 13/2 Tantitha Street PO Box 45 Bundaberg QLD 4670 Email: <info@bfvg.com.au> Phone: 07 4153 3007 Fax: 07 4153 1322





The response to the Vegetable Growers Golf Day, sponsored by E. E. Muir & Sons, at the Lang Lang Golf Club in South Gippsland was very encouraging-59 golfers braved the blustery and rainy conditions of the day. Life member Jack Walker invited 15 non-playing guests who enjoyed the comfort of the clubhouse with lunch and excellent table discussions. It was encouraging to receive immediate responses on the day and it will be a firm recommendation to the VGA Victoria Executive Committee that the vegetable industry golf day be an annual event.

There has been a great deal of media exposure to the retail price levels of vegetables with little reference to the rises in fuel, fertilisers, water and transport that has increased costs to vegetable growers without the equivalent increase in farm-gate prices. Industry training in vegetable growing is slowly being eroded because of a lack of interested apprenticeships or trainees attending certificate and diploma courses. A future industry crisis looms, when trained and experienced growers of vegetables will be hard to locate.

Core industry development activities have centred on improving communication between growers, researchers and service providers who all contribute to advancing our industry.

Funding for the Victorian Industry Development Officer (IDO) project contract has been extended to 30 December 2008. We expect the recent grower survey undertaken as part of the Industry Development Needs Analysis will recognise the value of IDO services to industry and recommend that state-based IDOs receive continued support.

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

September 2008

20 September

Bundaberg Fruit and Vegetable Growers Gala Ball For more information: Email: info@bfvg.com.au Phone: 07 4153 3007

24 September

Managing water for yield and profit—grower workshop Humpty Doo, NT For more information:

Phone: Lynn Christie from AHR on 02 9527 0826

29 September – 5 October

National Vegetarian Week For more information: Website: www.vegetarianweek.com.au

October 2008

6 October

Nominations close for the 2008 Horticulture Australia Limited (HAL) Awards

Winners will be announced at the Future Focus Industry Summit to be held in May 2009.

For more information:

Website: www.horticulture.com.au

13 October

Managing water for yield and profit—grower workshop Sydney, NSW

For more information: Phone: Lynn Christie from AHR on 02 9527 0826

15 October

Nominations close for the Australian RIRDC Rural Women's Award For more information:

Contact Edwina Clowes, RIRDC Rural Women's Award National Coordinator

Email: clowesedwina@bigpond.com Phone: 07 5442 1401 or 0417 727 544

17-31 October

Growers Tour to USA and PMA Fresh Summit For more information: Website: www.ausveg.com.au Phone: AUSVEG on 03 9544 8098

November 2008

13 November

Managing water for yield and profit—grower workshop Gatton, Qld For more information: Phone: Lynn Christie from AHR on 02 9527 0826

May 2009

4-6 May



Australian Vegetable Industry Conference 2009 Melbourne Convention Centre, Melbourne, Vic For more information: Website: www.vegieconf.com.au

Phone: AUSVEG on 03 9544 8098

7-8 May

National Vegetable Expo Werribee, Vic For more information: Phone: VGA Victoria on 03 9687 4707



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