

vegetables

australia

May/June 2014

Gillian Hay

Young grower

**Ben and David
Ellement**

Irrigation focus

Michael Nixon

Precious water proves
productive

The Front Line

Treating irrigation
water

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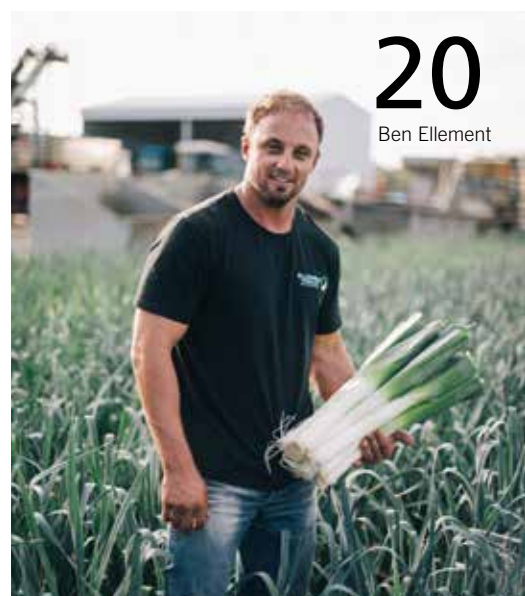
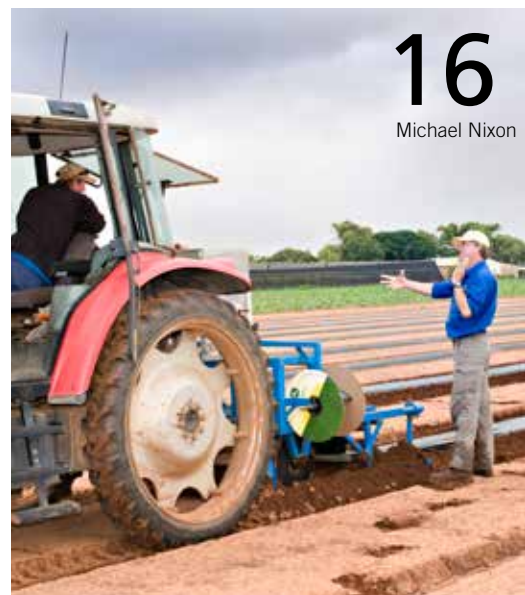
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Geoff Moar

AUSVEG Chairman

Amid the Australian vegetable industry's ongoing efforts to develop and access overseas markets, it is heartening to note the recent announcement of a Free Trade Agreement between the Australian and Japanese governments.

Following the securing of a similar deal between Australia and South Korea, the new arrangement with Japan will likely have some positive implications for Australian horticultural industries, with several vegetable commodities flagged for tariff elimination. Carrots, asparagus and cabbage are among those that look set to benefit.

Though the announcement is promising, our next industry priority will be market access for a greater range of vegetables, to allow more businesses in the sector to take advantage of lower tariffs in to Japan.

These recent FTAs also align well with the Australian vegetable industry's aims of developing export markets to meet expected demand for produce from growing Asian middle classes. Therefore, many in our industry will no doubt be watching future developments in free-trade negotiations with other Asian nations – particularly China. While dealing with China presents some difficult factors to consider, opportunities are likely to emerge from this vast nation.

With that in mind, the Australian vegetable industry was recently represented on the Australia Week in China Mission, which travelled from Guangzhou to Shanghai. The mission was attended by a number of influential players from Australia's business and political spheres, including State and Territory leaders, and Federal Trade and Investment Minister, the Hon. Andrew Robb

MP. Prime Minister, the Hon. Tony Abbott MP, joined the mission shortly after completing Australia-Japan FTA negotiations.

As a delegation member, AUSVEG National Manager – Export Development, Hayden Moore, attended seminars and meetings regarding China's quarantine and inspections regimes, plans for food security and the future of China's agricultural supply chain. This information will prove valuable as the industry continues investigating Asian opportunities.

Speaking of information, there will be an abundance of valuable guidance at the looming 2014 AUSVEG National Convention, Trade Show and Awards for Excellence, in Cairns from June 19 to 21.

An undeniably impressive speaker line-up has been secured. During the Convention, delegates will have the opportunity to hear from influential thinkers within the fields of horticulture, business, science and beyond. Along with a keynote speech from Federal Agriculture Minister, the Hon. Barnaby Joyce MP, addresses from Syngenta's Global Head of Vegetables, Alexander Tokarz, consultant and entrepreneur, Craig Davis, and Yara International's Agronomic Competence and Training Director, Barry Bull, will be among many highlights. For a full list of speakers, and to register for the Convention, please go to www.ausveg.com.au/convention.

Geoff Moar
Chairman
AUSVEG



Richard Mulcahy

AUSVEG Chief Executive Officer

Leading lights from the worlds of business, horticulture and politics recently attended the Global Food Forum in Sydney. During this impressive event, some of the most important issues confronting our sector were also put on the table. Comments made by Visy Executive Chairman, Anthony Pratt, around the need for coherent long-term planning and vision within Australian farming, summed many of these up.

Given the global pressures many in the Australian vegetable industry are facing, I warmly support Mr Pratt's remarks. If Australia is to reach its widely-touted potential then planning and innovation is required to capitalise on global opportunities.

I also applaud Mr Pratt's comments about the need for ongoing investment in packaging. These sentiments are echoed within the Australian vegetable industry, which has invested heavily in packaging-related research and development, to gain a competitive edge, and to reach foreign markets.

Along these lines, an industry-sponsored Produce Innovation Seminar will be held in Cairns on Thursday 19 June, leading into the three-day AUSVEG National Convention, Trade Show and Awards for Excellence. The event will highlight global product and packaging innovation, and will serve as the perfect entree to this year's Convention.

Speaking of the Convention, this year's, at the Cairns Convention and Exhibition Centre, from June 19 to 21, looks set to top even the lofty heights of the 2013 event on the Gold Coast, which attracted 1100 delegates.

With that attendance figure set to be surpassed even weeks out from the Convention, I would urge those who have not already confirmed their attendance in Cairns to do so promptly. To register for the Convention, or for more information, go to www.ausveg.com.au/convention.

With an impressive array of speakers, a world class trade show, the Awards for Excellence, and complementary events, the AUSVEG Convention is a perfect opportunity for those in the industry to network with colleagues and counterparts, celebrate success, and address challenges.

One such challenge, which the industry has campaigned hard on, is Country of Origin Labelling laws. The issue will again come under the spotlight, following the announcement of a Parliamentary Inquiry to examine the current system, possible improvements, levels of compliance, and whether laws are being sidestepped by importers. The development is timely given recent information released by China suggesting nearly 20 per cent of agricultural land in that nation - which is the second largest source of vegetable imports in to Australia - is contaminated with toxic heavy metals. Factors such as these mean it is as important as ever that consumers know where their food is coming from, and are given every opportunity to purchase Australian produce, which remains the cleanest and safest in the world.

Richard J Mulcahy
Chief Executive Officer
AUSVEG

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**FRONT COVER:**

Gillian Hay

Photograph by Lisa Hayman

Editorial

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Gillian Hay

This special themed edition of *Vegetables Australia* is dedicated to one of the most important practices associated with growing successful vegetable crops – irrigation. Investigation into effective irrigation has been gathering momentum, and we are proud to bring readers an edition packed full of irrigation-related research, industry advice, features, and more.

In the Research and Development sphere, we take a look at research from the Tasmanian Institute of Agriculture (TIA), which examined precision agriculture techniques and application across different vegetable crops (page 34). We also speak to Mark Skewes at the South Australian Research and Development Institute (SARDI) who outlines several 'best management practices' for

irrigation (page 38).

Our regular biosecurity column *The Front Line* focuses on untreated irrigation water, in particular, Anthony Brandsema's experience with contaminated water and the methods he adopted to limit risks associated with water-borne pathogens (page 12). Meanwhile, AUSVEG economist Shaun Muscat provides his regular economic update, with a particular focus on irrigation and water use in Australia (page 24).

This edition's EnviroVeg update profiles WA growers David and Ben Ellement (page 20). The brothers have spent several years improving their on-farm irrigation management, and they outline their success in working with local researchers on the issue.

Staying over in the west, for our regular grower profile we speak to Michael Nixon,



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Grower Study Tour

a grower based in Carnarvon, a region hit hard by water restrictions over the years (page 16). He discusses how he dealt with water security in trying times, and gives us an interesting insight into practices on his property.

Back in Victoria, Gillian Hay speaks passionately about her work with Bulmer Farms, managing a busy pack house and facilitating a program encouraging young people to pursue a career in horticulture (page 40).

Readers will enjoy a run-down of the most recent grower study tour to the USA and Canada (page 26), which offered plenty of exposure to new technologies and alternative farming methods.

And after a recent forum in Canberra attended by experts from across the world, we discuss the challenges posed by food security issues with DuPont's US-based President of Crop Protection, Rik L Miller (page 29).

TOP SPEED

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Veggie bites

Facts & figures...



54%

Globally, average vegetable production between 2001 and 2010 was 54 per cent higher than the average of the preceding decade 1991-2000, as reported by the United Nations Food and Agricultural Organisation (FAO) Statistical Handbook.

10.2%

The increase in world vegetable production from 2012 to 2013, according to the Agricultural Market Information Company. This is a rise from 860 million tonnes to 950 million tonnes.

\$735 billion

The world fruit and vegetable market is expected to exceed this amount by 2015, representing 25% growth over five years, reports MarketLine.



2,040 kg

The weight of the largest vegetable stew ever made. This was achieved in the city of Tudela, Spain, on 30 April 2011. The stew used 7 different types of vegetables, according to the Guinness World Records.

408,890 ha

The total area of world greenhouse vegetable production, as at January 2013, according to Cuesta Roble Greenhouse Vegetable Consulting.

1.1%

Vegetables cover 1.1 per cent of the world's total agricultural area, as reported by the United Nations Food and Agricultural Organisation (FAO) Statistical Handbook.



479.92 m²

The size of the largest vegetable mosaic, created by Dr. Gurpreet Wander and Mr. Rajeev Sibal in Ludhiana, India, according to the Guinness World Records.

Dear members of the Australian vegetable industry

It has been just over two years since the implementation of the vegetable industry's Strategic Investment Plan (2012-2017), providing an appropriate opportunity to highlight how growers and grower groups can contribute to the generation of R&D projects.

The Strategic Investment Plan sets out a clear process for the implementation of R&D projects, however, AUSVEG understands that this process may not be clear to all stakeholders, particularly R&D Service Providers who worked within the system prior to the implementation of this plan.

The Strategic Investment Plan was developed to ensure that R&D investment best reflects the needs of Australian vegetable growers, as opposed to directly funding researchers and research facilities using the National Vegetable Levy. Despite the Strategic Investment Plan having been in place for over two years there is still some confusion within sectors of the industry.

Under the current system, three Design Teams are responsible for generating project ideas, which are then considered by the Vegetable Industry Advisory Committee (IAC). The Vegetable IAC has sole responsibility for making recommendations to Horticulture Australia regarding investment of the National Vegetable Levy, and is independent of AUSVEG.

The IAC is made up of vegetable growers and Design Teams are predominantly vegetable growers and other relevant industry stakeholders, including some researchers. All committee members are selected based on their merits and their experience within the Australian horticulture sector.

In order for the Strategic Investment Plan to secure the best outcomes for growers, it is imperative that all members of the horticulture industry understand how the R&D investment process works, and how they can contribute R&D ideas.



Growers and state grower groups can also contribute to the R&D investment process and we welcome these suggestions. R&D project ideas can be submitted via the AUSVEG website. Frequently-run Levy Payers' Meetings also give growers a forum to voice their ideas and influence R&D investment, and these have recently taken place.

These processes have been put in place so that growers can have their say and actively contribute to the direction of the industry; however, the R&D investment process requires the active participation of growers in order to operate successfully. Accordingly, I urge all growers to familiarise themselves with the Strategic Investment Plan, as well as the project suggestion form and contribute whenever possible. In doing so, we can all build a better and more cohesive horticulture industry.

Yours sincerely,

Richard J. Mulcahy

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Treatments might spell the end for mites

Red spider mite (*Tetranychus Evansi*) was first detected in the Sydney Basin in late 2013. The mite is a potentially significant pest of many vegetable crops especially those of the Solanaceae (e.g. tomatoes, capsicums, eggplant and potatoes), however it also infests other commodities including pumpkin, corn and beans.

A chemical treatment for red spider mite infestation has recently been approved for use in snow peas and sugar snap

peas. The use of Acramite miticide containing 480g/l bifentazate as the only active ingredient has been approved at a rate of 65 ml/100L.

A number of additional permit applications for the treatment of red spider mite in other vegetable commodities are currently undergoing assessment with the Australian Pesticides and Veterinary Medicines Authority (APVMA). AUSVEG will notify vegetable and potato growers once these treatments become available



Spider mite nest. Photo courtesy of Eric Coombs, Oregon Department of Agriculture, Bugwood.org

Seeking your ideas for innovation

Australia's largest independent market research agency will be at the 2014 AUSVEG National Convention, exhibiting at the Trade Show, and they want to hear from you.

Colmar Brunton is currently conducting ongoing research for VG12078: *Consumer perception*

and behavior in relation to fresh vegetables. As part of this, growers now have the opportunity to submit potential new ideas or innovations, for inclusion in upcoming research. Once the suggestions are in, a select few will be randomly drawn and evaluated by consumers during the research

process.

To submit your ideas, simply visit the Colmar Brunton booth (space 79) at the Trade Show in Cairns. You will also have the opportunity to discuss the findings of the project so far, and how you can use the insights to better your business.

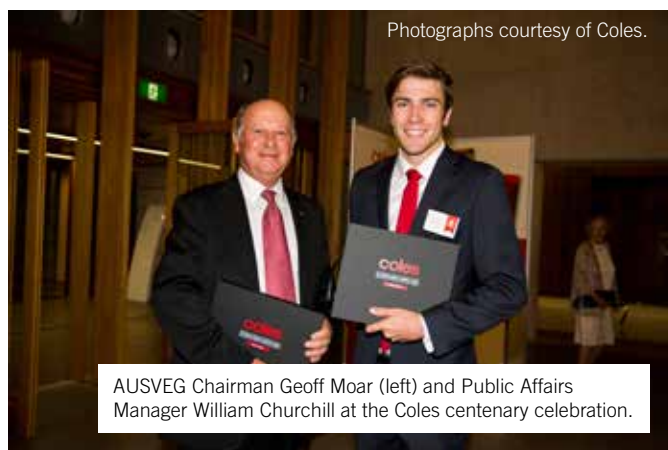
Researchers and consultants

will also be available to discuss your current issues in the vegetable industry, how the ongoing project can be of benefit to you, and what innovations you would like to see in the future.

So bring along your suggestions to Cairns!



Grower John Said (left) with Coles Managing Director Ian McLeod.



Photographs courtesy of Coles.

AUSVEG Chairman Geoff Moar (left) and Public Affairs Manager William Churchill at the Coles centenary celebration.

Industry represented as Coles notches up a ton

The Australian vegetable and potato industries were recently present at a Canberra celebration marking the centenary of Australian supermarket giant Coles.

AUSVEG Chairman, Geoff Moar, and Public Affairs Manager, William Churchill, represented the Peak Industry Body at the function, attended by Prime Minister, Tony Abbott,

and Coles Managing Director, Ian McLeod, among others.

Successful growers Matt Hood, John Said and Carlo Pippo were also on hand during the function at the National Portrait Gallery, in March.

The event was one of a series of celebrations put on by the retailer to mark its centenary this year. The first of what would ultimately become one of the

country's most well-known chain stores was opened in 1914, when GJ Coles and his brother James established their first shop in Collingwood, Melbourne.

Mr Moar congratulated the retailer's management on reaching the 100-year mark, noting it was a significant milestone.

"Given the strong links

between our industry and the supermarket sector, we look forward to building on strong professional relationships with Coles during the years ahead," he said.

Attendees at the Canberra event were also presented with commemorative coffee table books, detailing the history of Coles.



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JOHN DEERE

The Front Line



Untreated irrigation water: A clear biosecurity risk



IN THIS EDITION OF THE FRONT LINE WE TALK TO ANTHONY BRANDSEMA, CO-PROPRIETOR OF J & A BRANDSEMA, ABOUT HIS EXPERIENCE WITH CONTAMINATED IRRIGATION WATER, AND THE TECHNICAL SOLUTIONS HE ADOPTED TO LIMIT THE RISK OF WATER-BORNE PATHOGENS.

More than 17 species of *Phytophthora*, 26 species of *Pythium*, 27 types of fungi, eight species of bacteria, 10 viruses, and 13 species of plant parasitic nematodes have been detected in water sources worldwide. Pathogens may be introduced via a number of sources, including sewage discharge, recirculated irrigation water, cattle feedlot drainage and storm-water events.

Following a water-borne fungal outbreak in their north Tasmania glasshouse, Anthony and Marcus Brandsema set about fine-tuning their irrigation system to minimise the risk of water-borne diseases, safeguarding their net income in the process.

“We discovered that we were

getting a build-up of pathogens within the recirculated water and as a result we were exposing the rest of the crop to the pathogens and increasing the risk of spreading disease,” says Anthony.

“We were just using hydrogen peroxide but we were never consistent with its use. Following the fungal outbreak we developed a system where we regularly make sure the recirculated water is being dosed with the correct amount of hydrogen peroxide.”

Treatments

Hydrogen peroxide is a natural oxidizing compound which eliminates pathogens as well

as other organic material in the water. Used effectively, hydrogen peroxide is an effective defence against water-borne pathogens.

“In order to further limit the risk, and acting upon advice from agronomists and other growers, we also incorporated an ultraviolet (UV) water sterilisation system,” says Anthony.

UV sterilisation uses electromagnetic radiation at a wavelength which is readily absorbed by microorganisms, resulting in the elimination of most fungi, bacteria and viruses. The UV steriliser acts as a secondary line of defence and should be used in combination with hydrogen peroxide dosing. “The benefit is [increased]

disease resistance and maximising our [production] capacity. We are now able to budget according to that and replicate each production year without being subject to the disease risk. We can budget and be confident knowing that we’re one risk less in our production,” says Anthony.

Investing to mitigate risk

UV sterilisation and hydrogen peroxide dosing systems require significant investment, but Anthony says the risk posed by contaminated irrigation water justifies the investment.

“To remain viable we had to buy these pieces of equipment. Yes it was costly, but in the

scheme of things the overall cost is not much. It's about assessing the exposure to the risk and what measures to take to eliminate, not just reduce the risk," he says.

Many vegetable growers utilise multiple water sources to irrigate their crops. This increases the importance for early detection of water-borne pathogens, determining the pathogen load and assessing the overall risk this presents to crop health.

"We use town supply as a backup and in our misting system, as well as collected roof water, and water from a storage dam which is pumped through the hydroponic unit. We routinely monitor pathogen loads and treat all water, other than the municipal supply which comes pre-treated," Anthony says.



Anthony Brandsema has reaped the rewards of investing in biosecurity measures.

Expanding the system

Anthony and Marcus are so impressed with the results of their UV sterilisation system that they are taking steps to increase its capacity, in an effort to end their reliance on the costly

municipal water supply.

"We're looking at increasing the capacity of our UV steriliser so that we can use all treated dam water rather than having to rely on or pay for town water," says Anthony.

It is important that vegetable

growers are aware of the risks presented by water-borne pathogens, and that they monitor their water supply and take precautionary measures to protect their farm.

i For more information, see the farm biosecurity website at www.farmbiosecurity.com.au, or contact AUSVEG Biosecurity Officer Dean Schriek on (03) 9882 0277.



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- ✓ *MADEC has successfully provided Pacific Seasonal Workers to growers of crops including mangoes, grapes, almonds, tomatoes, citrus, vegetables and berries*
- ✓ *MADEC has over 40 years experience providing workforce solutions for business*

Biosecurity brief



with Dr Kevin
Clayton-Greene

IN THIS EDITION OF BIOSECURITY BRIEF, AUSVEG BIOSECURITY ADVISER DR KEVIN CLAYTON-GREENE DISCUSSES BIOSECURITY ISSUES ASSOCIATED WITH IRRIGATION.

R&D

Farm Productivity,
Resource Use
& Management

To what degree does irrigation represent a biosecurity risk?

If one considers biosecurity as a continuum from pre-border to the individual then this can be a very real issue at the farm and regional level. Irrigation water can harbour many diseases. Bacterial wilt in potatoes is a well-known situation. Common fungal pathogens such as Pythium and Phytophthora are also found in open water sources. Pythium is responsible for damping off diseases, among other things, whilst Phytophthora can cause rots in carrots and other root vegetables. It is also responsible for Late blight in potatoes. In overseas studies they have found over, 26 species of Pythium and 17 species of Phytophthora that have been identified from irrigation water. Apart from bacteria and fungi, a number of nematodes and viruses have also been isolated from irrigation water.

Which are some of the key biosecurity issues growers should consider in relation to their irrigation water?

Work overseas has shown that almost all open water courses have some degree of

contamination. In assessing the risk, or to be more precise, the degree of risk, a number of factors need to be considered. These include other enterprises upstream and their likely discharges, the level, or extent, to which one sees rots/blights, and damping off due to Pythium and Phytophthora on one's own crops. We're talking about things such as whether or not there are other vegetable crops upstream, whether or not you get run off from other areas and the likely incidence of other diseases on upstream properties.

It is always worth looking at potential sources of contamination if these diseases are causing continual trouble. Water can be tested for its pathogen loads and this is relatively inexpensive. The benefit is that this at least informs one as to the potential for problems during crop growth. I am unaware however of work which quantifies the pathogen load or amount in water against subsequent crop performance. I suspect that this would be rather difficult to do due to the large number of variables involved. However, at an individual property level, regular monitoring of water combined with measuring crop performance should, over a period of time, provide guidance.

With on farm storages, such as dams, overseas studies have also suggested that the further one places the irrigation inlet from the runoff source the lower the level of contamination from Phytophthora.

What are some of the broader risks associated with water-borne biosecurity issues?

It also needs to be borne in mind that a large number of pathogens that can cause serious illness in humans are also carried in water. This is particularly important for vegetable production whereby the vegetable is, or could be, eaten uncooked. In such cases the water needs to be monitored and this is part of any sound HACCP (Hazard Analysis Critical Control Point) scheme. Whilst growers supplying to major customers, such as supermarkets, are required to monitor water quality, this is not always mandatory for those who do not. It should always be considered that while most retailers have checks and balances in place, this is not always the case. It is always advisable to wash vegetables prior to cooking.

Thorough washing of, particularly salad or uncooked,

vegetables prior to consumption is always recommended to reduce the likelihood of disease from contamination.

What are some of the major treatment options which exist once a water-borne biosecurity issue has been identified?

Unfortunately, treatment options are not always that straightforward or simple and involve costs – sometimes substantial costs. These include treatment with substances such as Chlorine or other oxidising agents, such as ozone, filtration systems, heat treatments, copper salts, UV light etc. It thus boils down to the usual, cost/benefit analysis of the problem.

Healthy soils can also be an important buffer against waterborne pathogens.



Biosecurity manuals are available through the Plant Health Australia website: www.planthealthaustralia.com.au.
Email: info@ausveg.com.au
Project Number: VG11013



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Precious water proves productive at River Lodge

CARNARVON GROWER MICHAEL NIXON HAS BEEN IN THE INDUSTRY FOR SEVEN YEARS NOW, AND REMAINS POSITIVE ABOUT HIS POSITION. HE SPEAKS TO FELICITY POWELL ABOUT LIVING IN A COUNTER-SEASONAL REGION, MANAGING WATER RESTRICTIONS, AND HIS EXPOSURE TO ALTERNATIVE FARMING SYSTEMS ON THE MOST RECENT GROWER STUDY TOUR TO THE USA AND CANADA.

Living in a region well-known for its scarcity of rain and subsequent water restrictions, Michael Nixon does not shy away from the fact that Carnarvon throws up its fair share of challenges.

“When it’s 40 degrees outside in the middle of summer and you know you have to go out there and work, those days aren’t that enjoyable,” he says.

“But then when we’re in the middle of winter and we’ve got friends coming up from Perth saying, ‘you’re so lucky living in a place like this’ that has the climate we have, I suppose you do sit back and really appreciate living here.”

Michael identifies the counter-seasonality of the Carnarvon region as one of the reasons for making the move to the area

several years ago to establish his business River Lodge Assets. With temperatures averaging anywhere between 17 and 27 degrees Celsius year-round, the fertile land offers the opportunity for vegetable production in an opposite cycle to the Perth metro region.

“I was partly familiar with the area, so that probably added to it a little bit. Besides that, I also just thought it was good value at the time. That’s probably the main reason,” he says.

Precious water

Originally coming from a broad-acre farming background north of Perth, the Nixons moved to Carnarvon to grow bananas, onions, beetroot and pumpkins,

among other vegetables. After deciding to stop growing bananas on the property, the stress of dealing with water restrictions somewhat dried up.

“Bananas were the biggest water users on our property – they’re very thirsty plants. So we’d already made the decision that we’d probably move away from them, which therefore freed up a lot of our water to do other stuff, to grow other crops,” he says.

But the high cost of water in the region is still a reality, and Michael remains sensible about its use on his property.

“We’re very careful with our water – we’ve got some of the most expensive water in Australia. We’d love it to be cheaper, but it does mean Carnarvon probably grows more

produce per dollar invested than other regions in Australia.”

“We’re competing against guys in Queensland where they [might] only have the cost of pumping... whereas we’re paying up to 30 [cents per kilolitre]. So it’s a significant cost.”

On his property Michael uses a Netafim-based full fertigation irrigation system, which is fully automated. Each paddock has its own valve controlled by a computer, meaning programming can be very precise.

“The only time overhead irrigation is used is to wet up paddocks with travelling irrigators to get them ready so we can work tractors through them. Other than that, everybody is on T-Tape or Drip Tape,” he says.

New knowledge on tour

Michael was selected as one of nine growers to attend the most recent grower study tour to the USA and Canada. It was an experience that opened his eyes to the possibility of Australian growers forming closer business partnerships with suppliers, retailers, and other supply chain members.

"What seems to be happening in America more and more is they have full vertical integration, from the reseller right through to the consumer, and everybody's got a stake in it. So instead of the farmer taking all the risk on the weather and the price, it's actually spread across all facets of the industry. So everybody that's got a stake in it, really has a stake in it."

"That was probably one of the biggest things I noticed, that there seemed to be a prevalence of partnerships in America."

Michael says that although he learnt a lot while on the grower study tour, there were no farming systems he would bring back to use on his own operation. While the Tulare Field Day had an impressive spread of cutting-edge agricultural technology for the growers to see, Michael was more interested in the way farmers in California used their water. California has a semi-arid climate very similar to

Carnarvon.

"Those guys use a lot of water... we would use a fraction of what they use. They were flood irrigating still and they were still complaining that they didn't have enough water to grow their crops. A lot of their technologies I thought were a little bit behind, but what it did do was confirm we're on the right path to being the most sustainable we can be," he says.

Looking ahead

Faced with the realities of a job always at the mercy of the weather, Michael knows that fortune created in one month can just as easily be destroyed the next.

"I think for all forms of farming you've got to be partly mad. I mean it will always have its challenges no matter where you are...distinct to irrigation or weather related. My cousins up in Far-North Queensland have been belted again, so you know, it's one of those things," he says, referring to the recent destruction left by Cyclone Ita. "There'll be facets of agriculture that you're always at the whim of, so many different aspects of the environment, that there'll be one that will come up and give you a good going over at some point."

However, Michael says he plans to stick around for a while

yet, and continues to invest in both the industry and his business.

"I think the vegetable industry as a whole is a pretty challenging one, particularly with the cheap imports coming in. It's not for the faint-hearted but I don't see us going anywhere. I mean we're quite excited; we've developed a new sector of the onion market in Western Australia to help

Coles supply Australian-grown onions all year round. Currently, that was only being done in Queensland, so we've taken that on board and we're actively expanding that as quickly as we can," he says.

"We're picking segments out of the state where we believe we can add value to the chain and hopefully we'll get market support."



Green and gold: EnviroVeg gate signs now available to members



EnviroVeg gate signs are now available to members that complete a self-assessment and Environmental Action Plan each year. The signs (pictured) are available as a reward for EnviroVeg members who meet the requirements below, and obtain Gold Membership under the Program.

Requirements of EnviroVeg Gold Membership

- Members complete their annual self-assessment using www.enviroveg.com and achieve 85 per cent of all criteria.
- A short Environmental Action Plan is submitted to AUSVEG

each year using the template located at the back of their EnviroVeg Manual.

As a reward, eligible members will receive an EnviroVeg Gold Membership Certificate and Gate Signage at no charge. The signs can be displayed at the front of the farm as a visible way of showing the environmental commitment of the business to members of the community.

Environmental action plans and self-assessments can be submitted to:

The Environment Coordinator
AUSVEG Ltd
PO Box 138
Camberwell VIC 3124



If you have any further questions or would like to apply for the Gate Signs, please contact the AUSVEG Environment Coordinator on (03) 9882 0277.

EnviroVeg workshops highlight integrated disease management and benchmarking tools for growers

The first EnviroVeg information session for this reporting period was held in Hahndorf, South Australia, on Wednesday 26 March 2014 as part of the AUSVEG Regional Roadshow. Attendees had the opportunity to learn about recent developments in EnviroVeg, including the introduction of gate signs for members. The research and development speaker for the event was Dr Doris Blaesing of RMCG, who discussed carbon and nitrogen budgeting tools available to growers, as well as key levy-funded research into plant health.

EnviroVeg then headed to Queensland where prominent Queensland researcher Dr Denis Persley discussed integrated approaches to the management of regional pests and diseases with growers in Bundaberg

and Bowen. Dr Persley is an advocate of using cultural practices such as crop rotations and biosecurity management to prevent the introduction of disease, as opposed to relying solely on chemistry. In Bowen, growers had the opportunity to hear about advanced crop management and nutrient budgeting techniques from agricultural advisor Hortus Technical Services, while in Bundaberg representatives from Agnova provided growers with insights into practical resistance management strategies they could put in place to ensure sustainable management of crop protectants.

AUSVEG thanks the researchers who gave their time to speak at the events and local growers for making the events such as success.



AUSVEG Environment Coordinator Jordan Brooke-Barnett (left) with Vegetable IAC Chairman Jeff McSpedden at the Bundaberg workshop.

R&D in your region

If growers would like to submit any potential speakers and topics they would like covered under future EnviroVeg Information Sessions they can do so by contacting the AUSVEG Environment Coordinator on (03) 9882 0277. The regional information sessions are a great opportunity to get leading researchers into various vegetable regions throughout Australia and cover

environmental and production-related issues for growers. Plans for the second round of EnviroVeg information sessions of 2014 are due to commence in the coming months, so this represents a fantastic opportunity for growers to provide feedback and suggestions based on the issues that matter in their regions.

Photo courtesy of Good Fruit and Vegetables.

Benchmarking and your business: The benefits of reporting on key performance indicators to improve environmental and economic outcomes

FACED WITH THE ONGOING CHALLENGE OF CONTROLLING COSTS WHILE IMPROVING ENVIRONMENTAL PERFORMANCE, VEGETABLE GROWERS CAN PUT THE FOCUS ON BENCHMARKING TO IDENTIFY OPPORTUNITIES IN KEY AREAS OF SUSTAINABILITY, WRITES BAYER HEAD OF NEW BUSINESS DEVELOPMENT RICHARD DICKMANN.

Measuring results

Assessing performance in your business takes three basic steps: selecting performance indicators (profit, pollution controls, worker training), measuring the performance and documenting the performance. If an area of the business can be measured, it can be improved and reported upon. Many key areas of environmental management, such as energy, chemical and water use are also areas of business importance, as effectively managing these resources is key to managing costs.

Improving processes

By monitoring important areas of the business operations, growers can put strategies in place to improve their performance year-on-year. This can be as simple as monitoring inputs such as electricity and water on a periodic basis, identifying simple strategies to improve and communicating these with staff.

Potential strategies can include improving communication with customers and wholesalers to ensure that infrastructure such as refrigeration and packing lines are operating at maximum efficiency at all times or better instructing field staff on proper machinery use to save fuel and optimize pest control. Once

strategies are in place, these can be reviewed annually to monitor savings across key areas of the business.

Highlighting success

Any successes year-on-year, such as a reduction in energy use or environmental improvements, can be communicated with key customers and the community. With the increasing importance placed on sustainability within business and the broader community, these successes can have considerable impact if they are communicated broadly.

Information resources available to growers

EnviroVeg Platinum

The *EnviroVeg Platinum* program has a number of tools to assist with management and reporting on environmental performance in your business. The Program Induction Package and Manual Template contain a number of planning documents, such as energy management plans, which can be used by growers to plan, prioritise and monitor different areas of their business.

EnviroVeg Platinum resources are available on the AUSVEG website, or by contacting the AUSVEG Environment Coordinator on (03) 9882 0277. If growers would like further

information about monitoring farm inputs they can consult the Environment Coordinator at any time.

Carbon emissions monitoring

Many businesses are reporting on their carbon emissions with key customers, stakeholders and the community. The benefit of reporting on carbon emissions is that it is a globally recognised measure of environment performance and can be used as a powerful message to send to key stakeholders about the efficacy of your business.

Vegetable growers can easily calculate their emissions using the National Vegetable Levy funded Vegetable Carbon Calculator at www.vegiecarbontool.com.

Benchmarking resources

Internationally, companies like Bayer have developed project management tools such as its 'Sustainability Radar' software to work with the food supply chain to identify and monitor key sustainability performance indicators. While models such as this have been trialled internationally, with case studies to improve production through adoption of integrated pest management practices and other sustainability initiatives, much of this work is yet to be trialled in Australia. As part of the upcoming AUSVEG National Convention, Bayer CropScience

Head of Integrated Weed Management and Sustainable Farming Advice, Dr Christine Brunel-Ligneau will speak to the Australian industry about how project management tools such as the 'Sustainability Radar' can be implemented on-farms and integrated with programs such as EnviroVeg.

In addition, a number of research organisations from across agriculture have developed information resources on the subject of benchmarking, such as the NSW DPI *Farm Business Management Analysis Manual* developed for the dairy industry and available at www.dpi.nsw.gov.au. While developed for other agricultural industries, these resources can run growers through the benchmarking process in detail and contain information on effectively managing inputs such as fertiliser and fuel.

Benchmarking is a process routinely adopted in all kinds of businesses as a means to monitoring costs and environmental performance, and is applicable to vegetable production due to the increasing costs of important production inputs. In effectively using the resources available and putting systems in place to monitor business processes, growers can benefit from a greater understanding of costs and risks within their operations.

Irrigation focus: Harnessing the Elements



MODERN AGRICULTURE OFFERS GROWERS A MULTITUDE OF SYSTEMS AND SOFTWARE TO MANAGE CROP NUTRITION AND WATER USE. HOWEVER, IT REMAINS IMPORTANT TO SUCCESSFULLY INTEGRATE THESE TECHNOLOGIES INTO A FARM MANAGEMENT SYSTEM.

For Western Australian growers David and Ben Ellement, years of work on irrigation mapping and scheduling are proving successful in effectively managing their crop nutrition program. As with many on-farm initiatives, the brothers looked to local researchers to investigate irrigation management on their farm. “Basically we started out a while ago by teaming up with Department of Agriculture researcher Rohan Prince and started to look into our

irrigation performance,” says David Ellement. “We started by mapping our irrigation system and investigating factors such as the distance between sprinklers to see how we could improve our irrigation.”

The next step

After initial investigations, the Ellements contracted a commercial irrigation provider and started using lycemeters and soil moisture probes to get a better understanding of their

irrigation performance. The use of soil moisture data was then helpful in investigating the saturation point for crops, watering requirements after events such as rain, and determining when to water their crops. “We needed to build an understanding about the requirements of our crops so we were only delivering the amount of water the crop actually needed,” says Ben Ellement. “We found from the process that we were actually watering at 110 per cent of evaporation,

which seemed the industry standard for growing in sand.”

More information

As a result of the process, the Ellements realised they needed data to determine how much they needed to water. As a solution to this, the brothers now make use of a text message program – a joint venture between the Western Australia Department of Agriculture and vegetablesWA – which sends weather station data, and the

past 24 hours of evaporation data for their region. This data is then used as an indicator to guide irrigation scheduling each day.

The Ellements then use variable rate controllers and apply in split applications, as the sandy soil they grow in cannot take single applications. Soil moisture probes are then used as back up and confirmation of scheduling decisions. In addition to the probes, the Ellement brothers also use a number of 'old' ways to measure irrigation performance including visual inspection, rain gauges and cup tests. The goal is to obtain data on irrigation performance in a number of ways to get a full picture of crop water requirements. "Underpinning what we do is the research that Ben has done over the years and monitoring of crops to ensure that irrigation scheduling is based on previous experience on the property," says David Ellement.

Benefits of a comprehensive program

A key benefit of comprehensive irrigation management is the efficiency gained through using water to grow a better crop.



Ben (pictured) and David Ellement's keen focus on irrigation has helped ensure the success of their business.

"Rather than monitoring overall use, our focus is on using our existing water resources to grow a 20 per cent better crop," says David Ellement. "When it all goes well and we get the balance right, like this year, we can confidently say we have achieved one of the best crops we've ever grown."

The Ellements say one of the key benefits achieved through

their irrigation management has been getting sprinkler performance right. "About four years ago, we replaced every sprinkler on the farm because efficiency had dropped, but we knew that the benefit of more-even watering was going to pay off in crop quality," says David Ellement.

"The ultimate goal with irrigation was to get better results from our fertigation, and the real benefits in terms of crop quality are achieved when you understand the relationship between fertigation and irrigation scheduling."

This is central to the efforts of the business to keep water up to the crop at all times, not waste fertilisers and that water and nutrients are delivered based on crop requirements. Similar to their use of soil probes, the Ellement brothers use analytical leaf and sap tests to better understand crop nutrition requirements during the plan cycle and adjust their fertigation program.

Using irrigation data in a crop nutrition program

"Initially it was a pain to set up our irrigation management system, but now the data is in the business and something we use every day," says Ben Ellement. As for equipment, the Ellement brothers are able to implement their irrigation management program with relatively simple controllers and probes. "It is not the equipment, but how it is used that is most important to us and the results we have achieved have been manageable with relatively simple equipment," says Ben Ellement. The brothers credit their ongoing commitment to learning more about the nutritional requirements of their crop, and their good working relationship with ensuring that best practices are implemented every day on-farm. "We are lucky in that a lot of the data gets sent to us each morning by SMS and it is now just something we do every day," says Ben Ellement.



Photographs by Ben Yew.

More speakers to captivate in Cairns

Just weeks out from the 2014 AUSVEG National Convention, Trade Show and Awards for Excellence in Cairns, the depth of the impressive speaker line-up continues to grow.

Complementing confirmed appearances from the likes of Federal Agriculture Minister, the Hon. Barnaby Joyce MP, Syngenta's Global Head of Vegetables, Alexander Tokarz, and Yara International's Agronomic Competence and Training Director, Barry Bull, AUSVEG is delighted to announce a series of additional speakers, with expertise ranging from consumer behaviour, the media, research and development, innovative agricultural practices and beyond.

During convention events of Friday June 20, delegates will

have the opportunity to hear from the Chief Executive officer of Horticulture Australia Limited, John Lloyd. Mr Lloyd brings experience in several senior roles within the agriculture industry to his current position at the helm of the industry-owned company.

DuPont, Crop Protection Sales and Marketing manager for the Australian business, Jeremy Cocks, Managing Director of Cognition Research, Bill Morgan, and Colmar Brunton's Stuart Todd and Megan Ferguson are also due to speak on the Friday.

On Saturday June 21, consultant and entrepreneur Craig Davis will offer delegates valuable insights, calling on his experiences working with companies, including Coca Cola, Unilever, Nokia and Sony. Netafim Agronomist, Sam



John Lloyd.



Megan Ferguson.

Birrell, and Dr Graham Stirling from Biological Crop Protection, will also speak on Saturday.

Along with the confirmed speakers during the main Convention events, AUSVEG is also pleased to reveal, *The Australian* newspaper's Rural and Regional Affairs Reporter, Sue Neales, and the Winner of the Women in Horticulture Award at the last year's Convention, Belinda Adams, will speak during this year's Women in Horticulture event. This year's 'Rainforest Discovery', will give delegates the opportunity to go on a journey through the lush tropical rainforests north of Cairns, on the scenic Kuranda

Railway. The event on Saturday June 21 is looming as the perfect celebration of the all-important role women continue to play in horticultural industries.

With spots for the Convention filling fast, time is running out to secure your attendance at Australia's leading horticultural event at the Cairns Convention and Exhibition Centre from June 19 to 21.



To view the full Speakers Brochure, or for more information on the convention go to www.ausveg.com.au/convention.
Phone: (03) 9882 0277

Reef Tour

Explore the Great Barrier Reef!
Sunday 22 June

REEF TOUR WITH
SNORKELLING ONLY **\$195**

REEF TOUR WITH SCUBA
(training and a 30 minute
dive) ONLY **\$325**

Limited
places!

Transport will depart from Pullman Cairns International
9:45am and return to Cairns Convention Centre at 5:45pm.
Contact AUSVEG to register (03) 9882 0277 or convention@ausveg.com.au

You don't need to travel to the other side of the globe...



...just to Cairns.

2014 Reverse Trade Mission Making the world smaller.

AUSVEG invites you to showcase your produce to **forty** leading international buyers at the 2014 AUSVEG National Convention.

To express your interest in this opportunity phone AUSVEG on 03 9882 0277 or email export@ausveg.com.au



This project has been funded by HAL using the National Vegetable Levy and matched funds from the Australian Government.



Horticulture Australia

The 2014 Reverse Trade Mission will see 40 buyers from key Asian markets attend the 2014 National Convention, Tradeshow and Awards for Excellence. **Those currently exporting or interested in exporting are invited to display produce to the key buyers during the Convention.**

Displaying produce will also provide the opportunity for **one-on-one business matching sessions with these buyers** to help facilitate future business opportunities. For more information or to register your interest in this opportunity please contact export@ausveg.com.au.

Fluid economics



AUSVEG ECONOMIST SHAUN MUSCAT EXAMINES IRRIGATION AND WATER USE.

Efficient irrigation of vegetables is critical in ensuring vegetable growers maximise their yields and reduce their water costs. Improving water efficiency is essential to vegetable growers since the majority of vegetables produced in Australia are

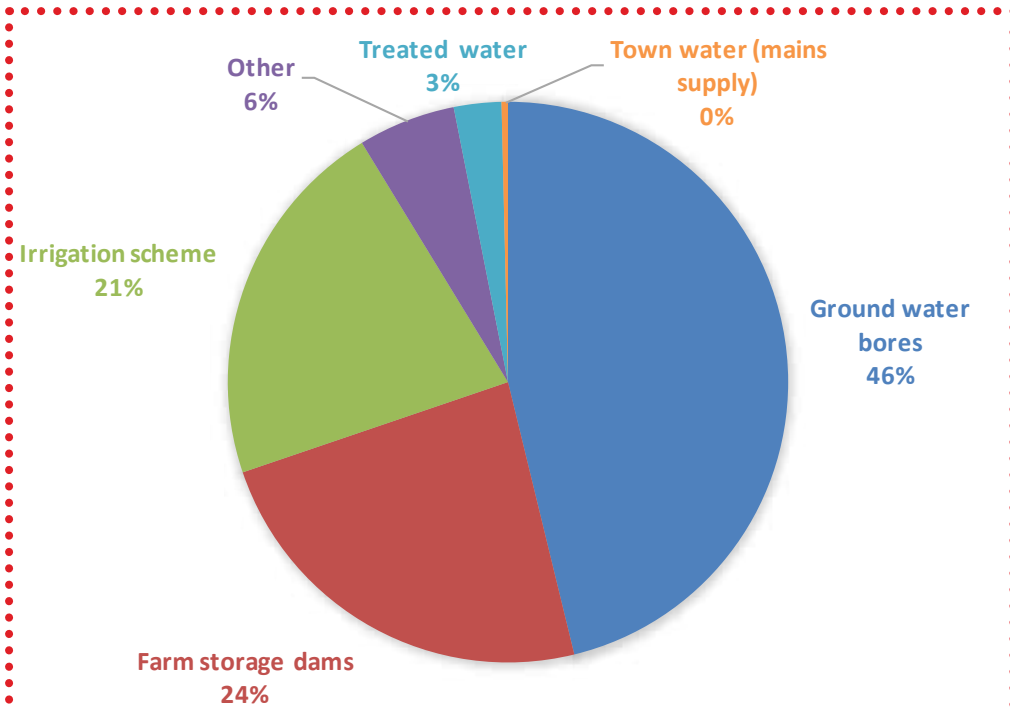
irrigated. The average area of irrigated vegetable crops accounted for 94 per cent of the total area sown for vegetables in 2011-12.

A key trigger and motivation for farmers to invest in water efficiency due to reduced water availability and price increase

was the millennium drought, which occurred from 2002 to 2009.

This article will analyse vegetable growers' irrigation practices both at a national and state level, in particular focusing on the water sources used to irrigate crops, the total area

Figure 1: Irrigated water sources (average per farm)



of vegetables irrigated and the average water use per hectare of irrigated vegetables.

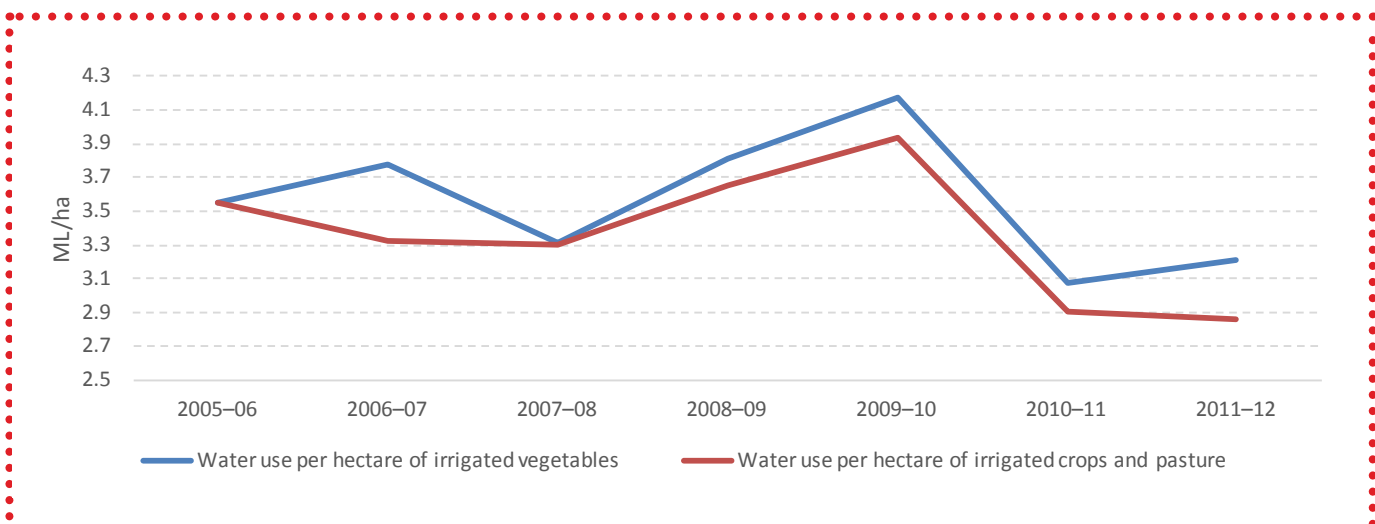
Irrigated vegetables play a significant role in contributing to the Australian economy. According to the Australian Bureau of Statistics, in 2011-12, the total gross value of irrigated agricultural production (GVIAP) for Australia rose by 5 per cent over the previous year to \$13.5 billion. The three commodities with the highest GVIAP in Australia were vegetables, valued at \$2.6 billion, fruit (excluding grapes) valued at \$2.4 billion and cotton valued at \$2.2 billion.

Water source

The types of water sources used by vegetable growers to irrigate crops largely depends on the location of the farm and the natural resources

Source: ABARES, Australian vegetable growing farms, an economic survey, 2011-12 and 2012-13

Figure 2: Average irrigated water use per hectare of irrigated vegetables



Source: ABARES, Australian vegetable growing farms, an economic survey, 2011-12 and 2012-13



amounts of water being used to irrigate vegetable crops. For many growers, this reduction in water use would be expected to translate to a reduction in water costs and therefore an overall improvement in returns. The reduced use of water per hectare of irrigated vegetables could be derived either through efficiency improvements to capital used to irrigate the crops, favourable seasonal conditions, improved natural resource management, or vegetable types that require less water to produce an equivalent or increased amount of vegetables.

Notwithstanding the declining trend in water use per hectare of irrigated vegetables, this trend has been at a slower rate in comparison with the water used in irrigated crops and pastures. In 2011-12, the average water use per hectare of irrigated vegetables was 3.2 (megalitres per hectare), whereas the average water use for crops and pastures was 2.9 (megalitres per hectare). This difference could be simply due to vegetables requiring greater water use for optimum yield in comparison to crops and pastures. More importantly, both the irrigation of vegetables, and crops and pasture follow almost identical paths. This suggests that the efficient use of water is occurring at a similar rate for both vegetables, and crops and pastures.

Analysing the water use of irrigated vegetables at a state level presents some interesting findings (see Figure 3). Whilst most states have reduced their water use, both Western Australia and Tasmania remain

the exception.

Despite a reduction in the water use of irrigated vegetables at a national level, both Western Australia and Tasmania have increased their water use per hectare. Since 2005-06, Tasmania's water use increased albeit marginally. Tasmania has invested significantly in irrigation storage, increasing the availability of water.

Western Australia's water use per hectare of irrigated vegetables has also increased since 2007-08. This increase in water use could be due to a combination of factors, including growers shifting their enterprise mix towards crops which require additional water, a greater intensification of the land or the availability of water being more prevalent.

Overall these findings demonstrate that vegetable growers are actively exploring and implementing efficient water use techniques to minimise their dependence on water. Water use will continue to remain an integral aspect of vegetable production, growers reducing their use of water is essential in improving growers' returns, particularly if the predictability of rainfall is less certain in the years to come.

available. Nationally, the most common type of water source for vegetable growing farms is ground-water bores, accounting for approximately 46 per cent in 2011-12. Over the past seven years, the average use of ground water-bores to irrigate crops has remained rather stagnant.

As shown in Figure 1, farm storage dams are the second largest source of irrigation for vegetable growers, accounting for 24 per cent of the water sourced to irrigate crops in 2011-12. Conversely, this is marginally greater than the national average over the last seven years of 20 per cent.

Irrigation schemes are also an important source of irrigation for vegetable crops. However, their use in 2011-12 was 21 per cent, the lowest since records

were first taken in 2005-06.

The types of irrigation water sources differ extensively among states. For example, Tasmanian vegetable growers largely use farm storage dams (87 per cent), whilst storage dams only account for 20 per cent in Queensland.

Water use

The average total water use per hectare of irrigated vegetable crops provides a reasonable indication of efficiency improvements in irrigation being used by vegetable growers. As shown in Figure 2, the long-term trend of the water use per hectare of irrigated vegetables has been declining. This implies vegetable growers are generally becoming more efficient in the

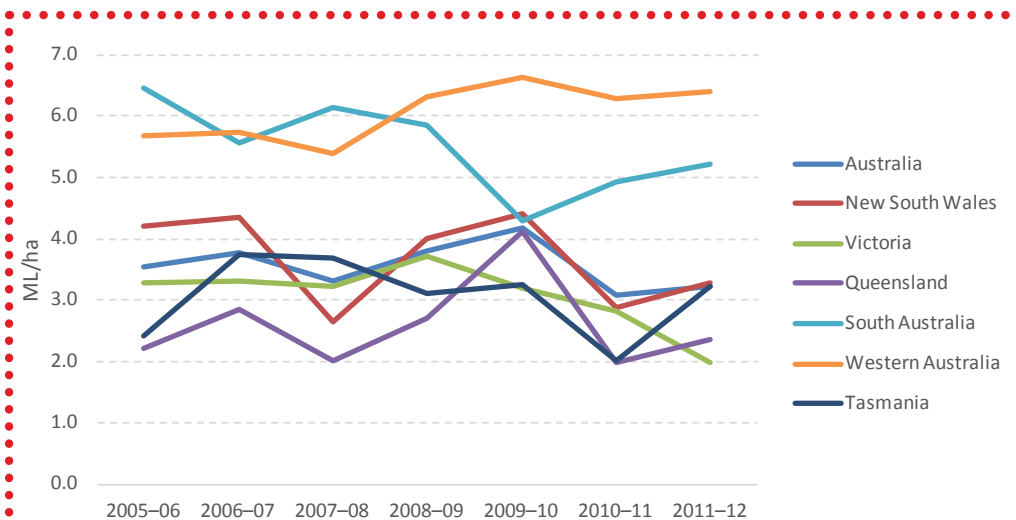
THE BOTTOM LINE

- According to the ABS, in 2011-12, the total gross value of irrigated agricultural production (GVIAP) for Australia rose by 5 per cent over the previous year to \$13.5 billion.
- Nationally, the most common type of water source for vegetable growing farms is ground-water bores, accounting for approximately 46 per cent in 2011-12.
- Types of irrigation water sources differ extensively among states.
- Data implies vegetable growers are generally becoming more efficient in term of the amounts of water being used to irrigate vegetable crops.
- Water use will continue to remain an integral aspect of vegetable production. Growers reducing their use of water is essential in improving returns.

i AUSVEG: (03) 9882 0277
Project Number VG12078

This project has been funded by HAL using the National Vegetable Levy and matched funds from the Australian Government.

Figure 3: Average water use per hectare of irrigated vegetables by state



Source: ABARES, Australian vegetable growing farms, an economic survey, 2011-12 and 2012-13

Study Tour wows Aussie growers

FROM THE CHILLY NORTH TO THE SUN-SOAKED SOUTH, THE 2014 USA AND CANADA GROWER'S STUDY TOUR OFFERED PLENTY TO ATTENDING AUSTRALIAN VEGETABLE GROWERS.



The tour group poses for a photo at Vessey Farms with host Jack Vessey (front row centre).

In February, nine vegetable growers departed Australia for a Study Tour of the United States and Canada. Throughout the 13-day journey, the group learnt from US and Canadian growers who produce vegetables in a range of extremely diverse settings, from snow-covered greenhouses to sun-soaked lettuce fields on the US border with Mexico. The Study Tour was funded by Horticulture Australia Limited (HAL) using the National Vegetable Levy, matched funding from the Australian Government, and voluntary contributions from industry.

Canadian chills

It was early February, and the snow was knee deep and crisp as a group of Australian vegetable growers ploughed through the car park of St. David's Hydroponics in Ontario, in Canada's south west. The region was in the grip of some of the most extreme winter weather seen in more than a decade, yet despite a daytime maximum temperature of -12°C , it was business as usual for these Canadian capsicum and eggplant growers.

As the group entered the 6.7 hectare Ontario greenhouse, the blast of humidity and heat that they were met with forced everyone to immediately shed their coats, hats and gloves. As the guide Edward explained, the heat is generated by four diesel burners – each the size

of a cement truck. This heating allows the greenhouse to produce year-round, and allows every plant to yield 30 kilograms of eggplant per year.

In the summer, St. David's encounters the opposite problem, as the overhead sun makes the greenhouses too hot for optimal production. To combat this, a remote-controlled helicopter sprays the roofs with a white paint-like substance that helps deflect the sun's rays. As the weather cools and heat is more expensive to come by, the coating is removed.

American industry

The following day, the group visited the global headquarters of Dow AgroSciences in Indianapolis, where they were welcomed by an Australian flag displayed proudly in the foyer of its impressive facilities. The headquarters boasted an impressive research and

development facility, where a range of greenhouses are used to test unreleased treatments and seed varieties.

Temperatures plummeted to a bone-chilling -22.5°C as the group headed east to tour the factories of John Deere in Iowa. The group explored the engine works and tractor cab factory, the latter of which is the second-largest factory in the USA, after Boeing in Seattle. The operations are located in Waterloo, which is where the precursor to the John Deere - the Waterloo Boy tractor - gets its name.

Heating up

It was with relief, and the abandonment of snow boots, that the group arrived in sunny Bakersfield, California, where 90 per cent of all the carrots consumed in the USA are grown. The group visited the fields of Bolthouse,

where a harvester the size of a London double-decker bus, and nicknamed 'Goliath', harvests four rows of carrots at once, pouring an orange river into B-double trailers hauled alongside. The fields are rented to Bolthouse to farm and yield up to 50 tonnes per hectare. As in parts of Australia, Powdery mildew and Pythium are major issues in Bakersfield.

These trailer-loads are then processed at a state-of-the-art processing facility, where they are made into a range of products including Sweet Petites, carrot juices and Shakedown - bagged baby carrots marketed as a quick snack and sold with a sachet of chilli-lime dressing. Wastage is minimal - even the carrot fibre remaining from the juicing stage is processed into a fine white powder used to thicken soups.

Following Bakersfield, the group then headed north to the Tulare Farm Show, the biggest



farm show in the world. The expo featured 1,400 exhibitors over three days, and some of the biggest and best agricultural gear on offer.

Towards the border

Next stop was the Salinas Valley, home of vegetable transplant leaders King City Farms, where over 350 million seedlings are produced per year. The nursery utilises a germination chamber which maintains constant levels of heat and humidity to achieve uniform germination. Like the Ontario greenhouses, the roofs are sprayed by with a white film during summer to control heat.

The group then travelled south to the Imperial Valley, located near the US border with Mexico. Due to this region's proximity to the equator, February's weather allows for the production of lettuce and baby-leaf spinach, which are sent all over northern America. The group visited Vessey Farms in Holtville, a highlight for many of the attendees. These farms are wholly irrigated from the All American Canal, which is

diverted from the Colorado River and channelled over the entire region in concrete aqueducts. Growers pump directly from these aqueducts onto their crops.

The group shortly arrived at its final destination in Yuma, Arizona, another growing area irrigated by the Colorado that was in full production. The group was hosted by Steve Alameda, President of the Yuma Fresh Vegetable Association and co-owner of Topflavor Farms. The scores of Mexican workers at Topflavor keen to earn a US wage highlighted to Australian growers the need for a greater investment in mechanisation and technology to improve harvesting efficiency, as Yuma's cheap labour is not an option in Australia.

After an informative, exhilarating and exhausting 13 days, the group packed their bags and began their long-haul journey back to Australia, having learnt techniques for their own operations from some of North America's best growers, while forming new bonds with their Australian brethren.



Grower Tim Cresswell takes in the massive scale of Bolthouse.

i Project Number: VG12700
A full project report will be released in coming weeks and will be made available on the AUSVEG website www.ausveg.com.au.

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Ask the industry



with Scott Mathew

SCOTT MATHEW, TECHNICAL SERVICES LEAD AT SYNGENTA, OFFERS TIPS ON SEEDLING TREATMENTS AND ASSOCIATED IRRIGATION CONSIDERATIONS.

Many growers are now opting to get their vegetable seedlings treated by their nursery with fungicides and insecticides, or alternatively, they may consider applying the insecticide or fungicide themselves as a planting hole application.

The point of insecticide or fungicide applied as either a seedling drench prior to transplanting, or as a planting hole application in the field, is to protect the young plant in the critical establishment phase. These application options provide growers with flexible, alternative application methods that deliver excellent insect and disease control and crop safety with a more favourable environmental profile.

For this to be effective the active ingredients need to be taken up by the roots of transplanted seedlings and then translocated throughout the entire plant via the xylem.

There are also many other factors that can affect the performance of crop protection products applied as seedling treatments. The soil properties, particularly soil moisture and soil type, will affect the persistence of the active ingredients in the soil and thus the amount of active ingredient available for plant uptake. Excessive soil moisture due to watering or irrigation may also cause leaching.

Plant uptake is fastest in sandy soils, followed by loams and peat soils. Conversely, persistence is greatest in

clay soils. Persistence is also affected by application type. In general, application as a seedling tray treatment will provide faster uptake and pest control, but shorter persistence. Conversely, application as a planting hole treatment will provide slower uptake but longer protection.

As an example to demonstrate some watch outs, we can use DURIVO. It is a broad spectrum, systemic insecticide that controls key Lepidoptera, chewing and sucking pests in brassicas, fruiting vegetables and leafy vegetables, and can be applied either as a seedling tray or as a planting hole application.

If you are looking to use DURIVO (or other soil applied products) there are a couple of key points you need to consider:

1. Plant the treated seedlings within the recommended time frame on the label, or as directed by the nursery.
2. Watering of seedling trays after application may wash product from cells. If the crop protection product applied is lost due to overwatering, this will reduce the period of insect or disease control observed in the field.
 - a. If watering is required between application and transplanting, it should be done so sparingly, and only as required.
 - b. DO NOT allow run-through from the cells. (DO NOT WATER TREAT

SEEDLINGS TO THE POINT WHERE YOU SEE WATER RUNNING OUT OF THE BOTTOM OF THE CELLS).

- c. Always separate racks before watering. DO NOT water the top rack and let the water flow through to the bottom rack.
3. DO NOT plant out treated seedlings if heavy rain is being forecast within 48 hours and DO NOT apply a leaching irrigation for 48 hours after transplanting.
4. The transplanting of seedlings might cause an initial shock to the plant (known as transplant shock) which may stop or slow root development for a short period of time.
5. Begin crop monitoring for insects or disease as you would under normal requirements.

Finally, always remember to seek professional advice for your specific situation.

Q

For more information or to ask a question, please contact your local Syngenta Territory Manager, the Syngenta Advice Line on 1800 067 108, visit www.syngenta.com.au or email Vegetables.Australia:info@ausveg.com.au. Please note that your questions may be published.

Food security takes centre stage in Canberra

A RECENT FORUM IN CANBERRA HAS EXAMINED THE OPPORTUNITIES AND CHALLENGES PRESENTED BY INTERNATIONAL FOOD SECURITY ISSUES

Food security. It's an issue set to significantly influence the planet's capacity to deal with future growth, and one which will present this country with both challenges and opportunities. The crucial topic was also at the top of the agenda during a recent Canberra forum, curated by DuPont, featuring leading Australian and international thinkers.

During the special event hosted by DuPont's US-based President of Crop Protection, Rik L Miller (pictured), the likes of Australia Crop Diversity Trust board member, and former Deputy Prime Minister, the Hon. Tim Fischer, Australian Food and Grocery Council CEO, Gary Dawson, Elders General Manager of Trading, Cameron Hall, and CEO of Croplife Australia, Matthew Cossey, offered their views on this important issue.

The March forum was convened specifically to discuss new research findings in the Economist Intelligence Unit (EIU) report, *Feeding Asia Pacific: Australia's role in regional food security*. The report is one of the most recent outputs stemming from a series of global food security spotlight events, held around the world since the launch of the EIU's Global Food Security Index, sponsored by DuPont.

Among other things, the

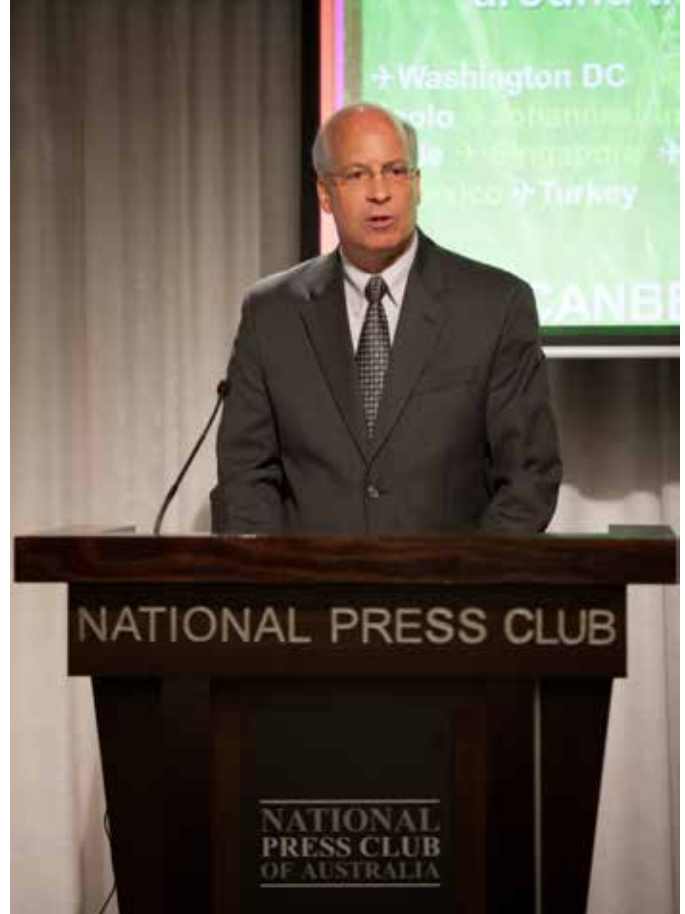
report found Australia had the opportunity to increase the role it plays in food security in Asia, with specific modelling contained in the document suggesting food consumption in the region could more than double by 2030. While few argue Australia is well positioned to benefit from this looming Asian boom, there are unquestionably challenges associated with meeting additional demand and likely market gaps. The report suggests in order for the nation to seize these opportunities, consideration may have to be given to changing Australia's global and political approach towards agriculture.

Reaching potential

Mr Miller said despite the challenges, Australia had the potential to make a greater contribution to Asian food security, and increase the international competitiveness of its farming sector.

"Obviously within Australia, we'll be highlighting what we think are some great opportunities for Australia to capitalise on that and take advantage of the opportunity to help meet that challenge in the Asia Pacific region," said Mr Miller.

"If you take a look at the body of work that has been done



around the Food Security Index by the Economist Intelligence Unit, it obviously draws out the need for an increase in agricultural productivity, to feed the rising population, especially here in Asia Pacific and areas like China, where we're really going to have tremendous increases in consumption and demand for an enriched diet as we have an increasing middle class."

"I think what we're going to be engaged in is discussions around how Australia can take advantage of that as an opportunity, to help not only meet the challenge but also improve the agricultural sector. It's about the opportunity for Australia to participate, and to help address that challenge on a regional front."

With work associated with

the Global Food Security Index continuing, Mr Miller said the Canberra event was just part of an ongoing series of discussions, aimed at meeting common global challenges.

"This is an ongoing dialogue that we're having as new research becomes available, as new innovation emerges, and as advancements are made in this innovation and technology. "This is an ongoing dialogue and discussion that we intend to have in the years to come, in making sure that we are sharing in that progress, and that we're also leveraging across the various countries in regions where we're making progress. This ensures that it really becomes a collaborative effort around this challenge, to make sure we are all successful."

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Opening eastern doors during Australia Week in China

China must feed 21 per cent of the world's population with only 8.5 per cent of the world's arable land. As incomes in China grow, demand for high-quality, fresh and safe vegetables will increase dramatically. Despite increased demand, China can be a challenging market in which to do business. In order to better understand the Chinese market, Hayden Moore, National Manager – Export Development at AUSVEG, joined the Agribusiness delegation to participate in the Australia Week in China Mission from 7-11 April.

The Australia Week in China Mission was also attended by many influential industry and political representatives. All state and territory leaders were present, as well as the Hon. Andrew Robb AO, MP, Minister

for Trade and Investment. Prime Minister, the Hon. Tony Abbott MP, joined the mission following the successful completion of the Australia-Japan Free Trade Agreement negotiations in Japan.

The mission travelled from Guangzhou to Shanghai. As a member of the delegation, Mr Moore attend seminars and meetings regarding China's stringent quarantine and inspections regimes for imported food, plans for future food security, and the future of China's agricultural supply chain. Mr Moore also visited Shanghai Asia Pacific International Vegetable Co. Ltd (SAIPV) which operates a certified greenhouse and a processing and packaging facility that serves premium produce to local and multinational supermarkets,



(L-R) Hayden Moore, Federal Minister for Small Business the Hon. Bruce Billson MP and Australian produce exporter Lisa Liang in China.

R&D
Market &
Value Chain
Development

R&D
Consumer
Alignment

hotels and restaurant chains.

Despite the opportunities within the Chinese vegetable market, the major challenge is market access. "Most Australian vegetable commodities do not have direct market access to China, meaning protocols for addressing plant health issues have not been negotiated between China and Australia," says Mr Moore. "It is hoped that

this trade mission will provide additional momentum for a Free Trade Agreement with China later this year and, critically, break down market access barriers."

AUSVEG's presence on this trade mission will enhance understanding of the Chinese market and will stand the industry in good stead for further market access and trade agreement negotiations.

Dozens enlist for Reverse Trade Mission

The 2014 Reverse Trade Mission is fast approaching. Interest in attending has been significant, with the number of buyers now sitting at 40 – double last year's attendance figure. Delegates attending are from major retailers, importers and wholesalers in their respective markets. Representatives from AEON (Japan, Malaysia and Hong

Kong), Cold Storage (Singapore and Malaysia) GCH Retail (Malaysia) as well as significant importers such as Euro Atlantic (Malaysia), Three Shine Trading (Taiwan) and Ban Choon Marketing (Singapore), are among them.

Along with a host of other activities, buyers attending the RTM will be given a presentation by representatives of the

Australian Organic organisation. The organics sector has been identified as one area of potential export growth, along with other segments of the Australian vegetable industry.

Attending buyers have expressed a strong interest in meeting with growers to create a broader network of suppliers in Australia. Involvement in the Reverse Trade Mission

is available to all growers. To register your interest, please contact AUSVEG on (03) 9882 0277 or by emailing exports@ausveg.com.au.



For more information on the Reverse Trade Mission:
AUSVEG
Phone: (03) 9882 0277
Email: info@ausveg.com.au
Project Number: VG13035

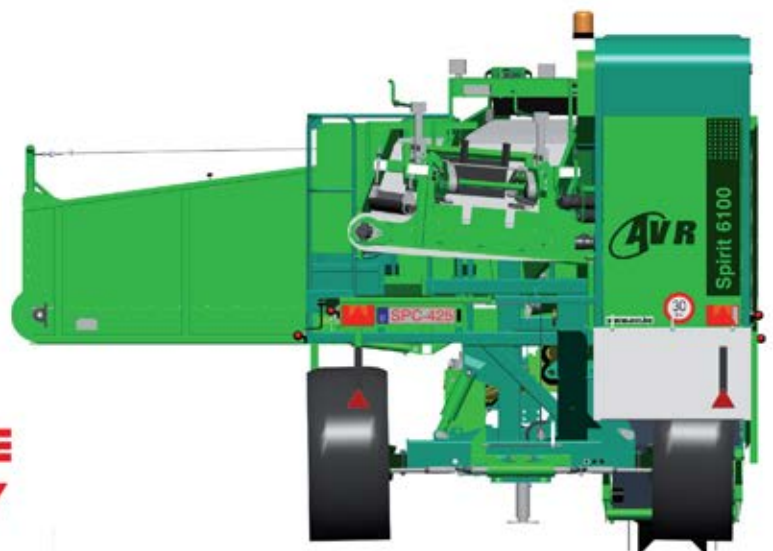
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Market Update: Japan

In 2012-13 Australia exported \$20 million worth of fresh vegetables to Japan. Japan does not produce enough vegetables to cover its domestic demand and as such, has steadily increased import volumes in order to secure supply to meet the country's needs.

Opportunities

There are many opportunities in Japan for vegetable growers who are looking to export. Currently, key exports to Japan are asparagus, carrots and leeks. However there are great opportunities for cabbage, broccoli, cauliflower, sweet corn, kale and lettuce exports to increase in the future.

Australia has a competitive advantage when it comes to accessing the Japanese market. There is broad consumer awareness in Japan that produce from Australia is clean, fresh and safe. This presents an opportunity for growers who are looking to export to Japan to capitalise on this consumer awareness through appropriate branding. Further, geographically, produce from Australia has less shipping time to reach Japan than some competitors; this means produce will be fresher on arrival.

Tariffs, quotas and Free Trade Agreements

Australian vegetables imported into Japan will be subject to tariffs and in some instances phytosanitary protocols. Further, Japan adheres to strict maximum residue limits (MRLs) for vegetable imports; it is vital that exporters to Japan take note of these levels. It is however an exciting time for those interested in exporting to Japan as Australia has just agreed on a Free Trade Agreement with Japan.

The conclusions of the Japan-Australia Free Trade Agreement negotiations in April will stand Australian vegetable producers looking to access Japan in good stead. Key outcomes from the introduction of the Japan-Australia FTA are expected to be the immediate elimination of the 3 per cent tariff on asparagus, carrot, leek, shallot,

carrot, cauliflower, broccoli and a range of other commodities. The removal of this tariff rate will allow exporters to be more competitive in the Japanese market.

Entering the market

Strategies for market entry will vary depending on commodity, product and segment.

Leverage from Australia's high quality, safe and fresh image

Let buyers know that your produce is Australian grown. Convey this through communications with buyers but also through packaging and branding. If you are selling a high quality product, packaging should reflect the quality of your produce.

Visit the market

Go to Japan and meet with buyers. This personal relationship is vital in ensuring a successful trading relationship. It is important to note that English is not widely spoken and an interpreter may be required for business meetings. Be punctual, polite and bring plenty of business cards.

Offer consistency and reliability

When engaging in export with any market, it is important to understand that consistency and reliability are two characteristics that are integral in successful trading relationships.



To express your interest in participating in any event on the calendar please contact AUSVEG on (03) 9882 0277 or email export@asveg.com.au.

Exporting to Japan: A symposium for vegetable growers

An Exporting to Japan Symposium will be held at the AUSVEG National Convention on Sunday 22 June 2014. Any grower with an interest in exporting is invited to attend. For expressions of interest please contact AUSVEG on (03) 9882 0277 or email info@ausveg.com.au.

Export Events Calendar

16-22 June: 2014 AUSVEG Reverse Trade Mission

20 June: Produce Displays

22 June: Exporting to Japan Symposium, Cairns Convention Centre

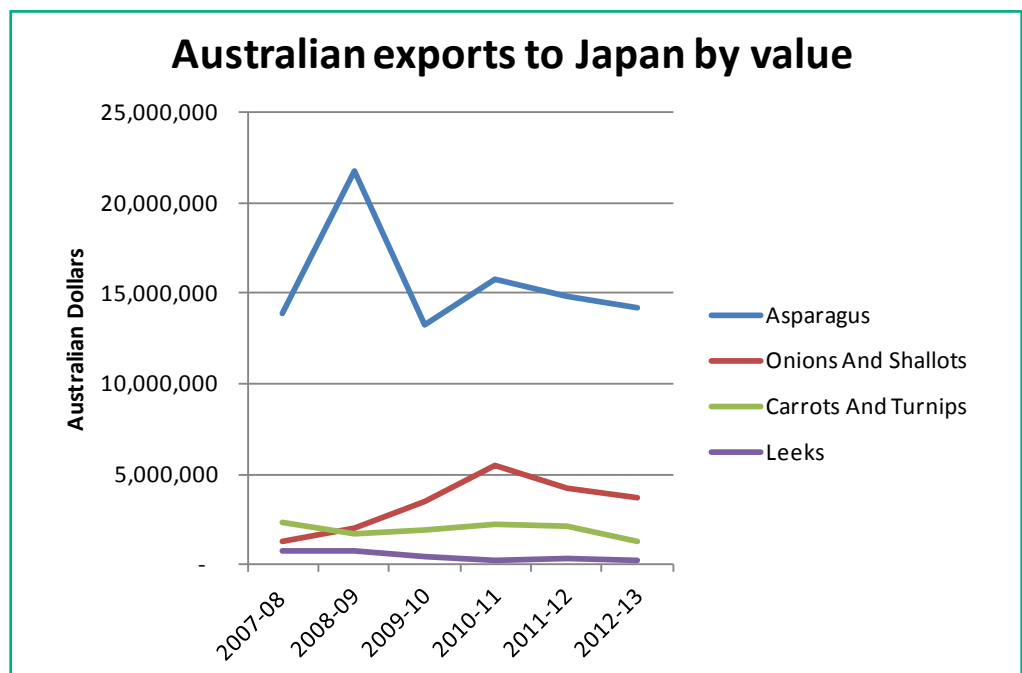
International Trade Shows

3-5 September: Asia Fruit Logistica, Hong Kong

15-17 October: Agritech Japan, Japan

9-11 November: World of Perishables, Dubai

Market	Total Imports	AU Market Share (#)	AU Value Share	Overall key imports	AU key exports
Japan	\$2.51b	12	0.9%	Onions, cabbages, pumpkins, mushrooms, leeks	Asparagus, carrots, leeks





Negating adverse impacts of nitrous oxide with the NT DPI



The Northern Territory Department of Primary Industry (DPI) facility at Berrimah Farm recently played host to the Northern Territory Levy Payers' Meeting, one of several get-togethers as part of the 'Regional Roadshows' held across Australia by AUSVEG and HAL.

Stuart Smith, Project Leader at the NT Department of Primary Industries (DPI), was one of several special guests at the meeting. He gave a presentation updating attendees on the project *Reducing greenhouse gas emissions through improved nitrogen management on Northern Territory farms*, which focused particularly on cucumber crops.

Focus on nitrous oxide

Nitrous oxide is produced by bacteria in the soil in semi-waterlogged conditions and high temperatures. Vegetable growers use a lot of nitrogen fertiliser and water so the potential for nitrous oxide production is high. This is not always favourable, as nitrous oxide has 296 times the global warming potential of carbon dioxide and can affect the ozone.

The first round of the project's trials took place on growers' properties at Lambells Lagoon, almost 50km east of Darwin, in the dry season of 2013. The trials focused on cucumbers in

particular due to its prevalence as a crop grown in the Northern Territory. According to Mr Smith, the industry is approaching a \$10 million turnover per year, with crops grown under shade-houses in the dry season (the equivalent of winter in the southern states).

Typically, about 268 kilograms of nitrogen per hectare was used for a cucumber crop, with one to three per cent of applied fertiliser lost as nitrous oxide. However, the facilitators of this trial recommend that only 107 kilograms per hectare should be used. Cucumber growers are keen to maximise their yields, and use large amounts of nitrogen fertilisers like potassium nitrate, calcium nitrate, and other NPK mixes, according to Mr Smith. The challenge is for growers to use just enough nitrogen fertiliser to optimise financial returns but minimise nitrous oxide production.

"We suspect they are over-using fertiliser and we are keen to demonstrate to them that they can reduce their fertiliser use, [and] have less impact on greenhouse gases, without risking loss of yield," says Mr Smith.

Helpful cover crops

The trials also assessed the effectiveness of using cover crops in the wet season. Cover crops can be beneficial in many



Field work underway as part of the nitrogen management project.

ways; from stopping nitrogen from being leached through the soil, to protecting the soil from erosion. They may also reduce the production of greenhouse gases, particularly nitrous oxide. This means they are of particular interest to researchers in this project.

In his presentation, Mr Smith gave an update on trials that used sweet sorghum, lab-lab and Fumig8or™ as cover crops. The three legume cover crops were used as a means of trapping nitrogen from dry season vegetable production cycles so it would not be released as nitrous oxide during the wet season.

The trials found that the cover crops grew successfully and protected the ground, and that nitrates were minimal in the soil when the cover crops were growing. Gas emission seemed to depend on soil moisture, but there were no conclusive

differences between cover crop and fallow treatments (i.e. bare dirt).

Future trials

Mr Smith says there is scope for further trials in this research space.

"We will continue to conduct trials in melons and cucumbers, and possibly okra, pumpkin, snake bean and bitter melon, which are also major vegetable crops for the Northern Territory," he says.



Australian Government



This project is supported by funding from the Australian Government.

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Seeking irrigation efficiency



WORK BY RESEARCHERS FROM THE TASMANIAN INSTITUTE OF AGRICULTURE HAS EXAMINED HIGH-TECH WAYS OF IMPROVING IRRIGATION EFFICIENCY.

Given the pressures many growers face in terms of the supply and cost of irrigation, breakthroughs that can improve financial and resource efficiency are welcome. With a view to achieving this, work carried out by researchers from the Tasmanian Institute of Agriculture (TIA) examined precision agriculture techniques and application across different vegetable crops.

Over three growing seasons, from 2010 to 2012, two retro-fit irrigation systems were tested. The first was a pressure control system for a travelling gun irrigator. The second was a variable rate irrigation (VRI) system for a linear move irrigator.

The project was funded by Horticulture Australia Limited (HAL) using the National Vegetable Levy, matched funds from the Australian Government. Further in-kind support was provided by Seattle Services Pty Ltd, and the CSIRO ICT Centre.

Pressure control system for a travelling gun irrigator

Travelling gun irrigators are common in horticulture thanks to their low capital cost and practicality on undulating topography. During the project, travelling gun irrigators were modified to improve performance. The collaborative project between TIA and Seattle Services involved the retro-fit of telemetry and modified irrigation components to a travelling gun irrigator. This allowed a constant set pressure to be maintained by the gun, regardless of slope or length of the irrigation run.

Researchers compared modified and conventional travelling gun irrigation systems in terms of energy and water

use, yield, quality and disease assessments in a carrot crop.

In 2011 there was a 17 to 21.8 per cent decrease in energy use and a 5 to 10 per cent reduction in water use between the modified and conventional irrigator. The modified irrigator site also yielded 10 per cent more carrots.

Variable rate irrigation

The other component, involving TIA, Seattle Services Pty Ltd and CSIRO ICT, used soil moisture measurements collected in real-time from a wireless sensor network (WSN), to schedule irrigation events, develop VRI, and develop a decision support system to enable closed loop site-specific irrigation to meet plant water requirements.

The two components (VRI and WSN) were independently assessed. The WSN soil moisture system provided data during the second season (2011), however, some calibration problems remained unresolved. The variable rate system operated with water savings of 10 to 15 per cent over the three cropping seasons. However, high rainfall resulted in reduced irrigation events during the growing seasons and limited the ability to monitor equipment in this trial.

Cost benefit analysis

A cost benefit analysis of the system carried out as part of the research listed the total capital cost for the pressure control system at \$2500 (plus installation costs of \$1000). Additionally it was estimated expenditure of approximately \$5000 to \$12,000 would be required to purchase a variable



Linear move irrigator fitted with variable rate technology.



Travelling big gun irrigator fitted with a pressure control system (and below).

speed drive (VSD) if the pump was not already fitted with a VSD.

Total capital costs for the retro-fit system for VRI were estimated at \$25,000 (plus installation costs of \$1,000).

Detailed breakdowns of fixed and variable costs associated with the systems are also

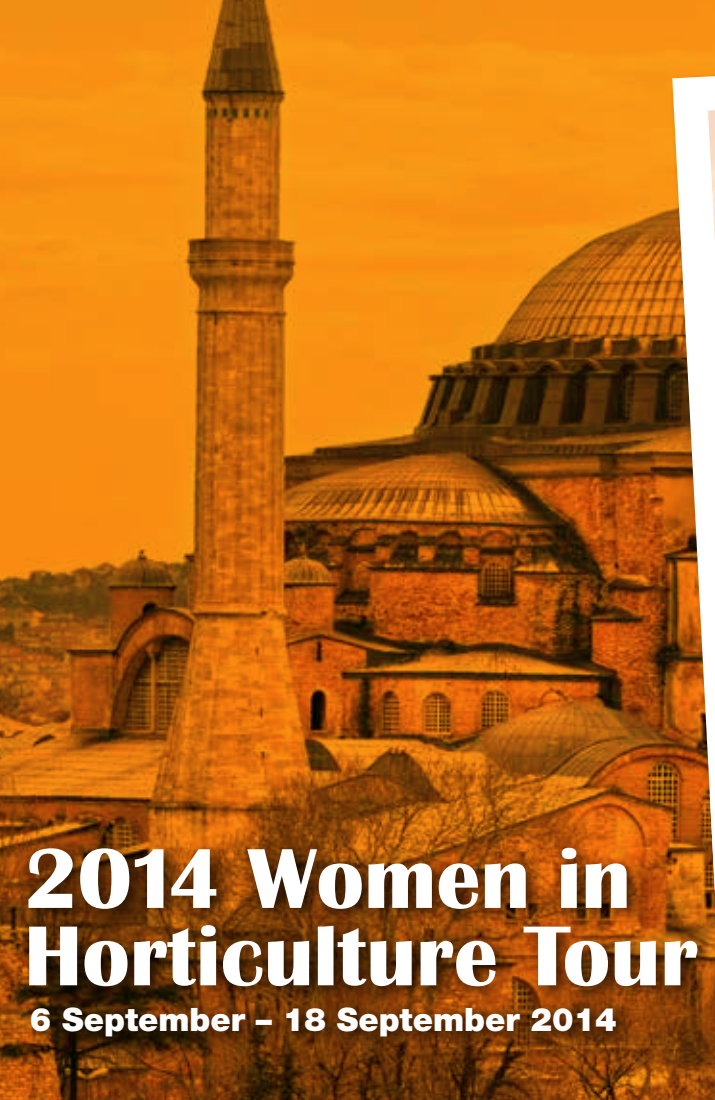
contained in the final report.

The economic evaluation indicated the pressure control system was economically beneficial under trial conditions and assumptions, whereas the retro-fit variable rate irrigation system was not economically beneficial under trial conditions and assumptions.



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Project Number: VG08029



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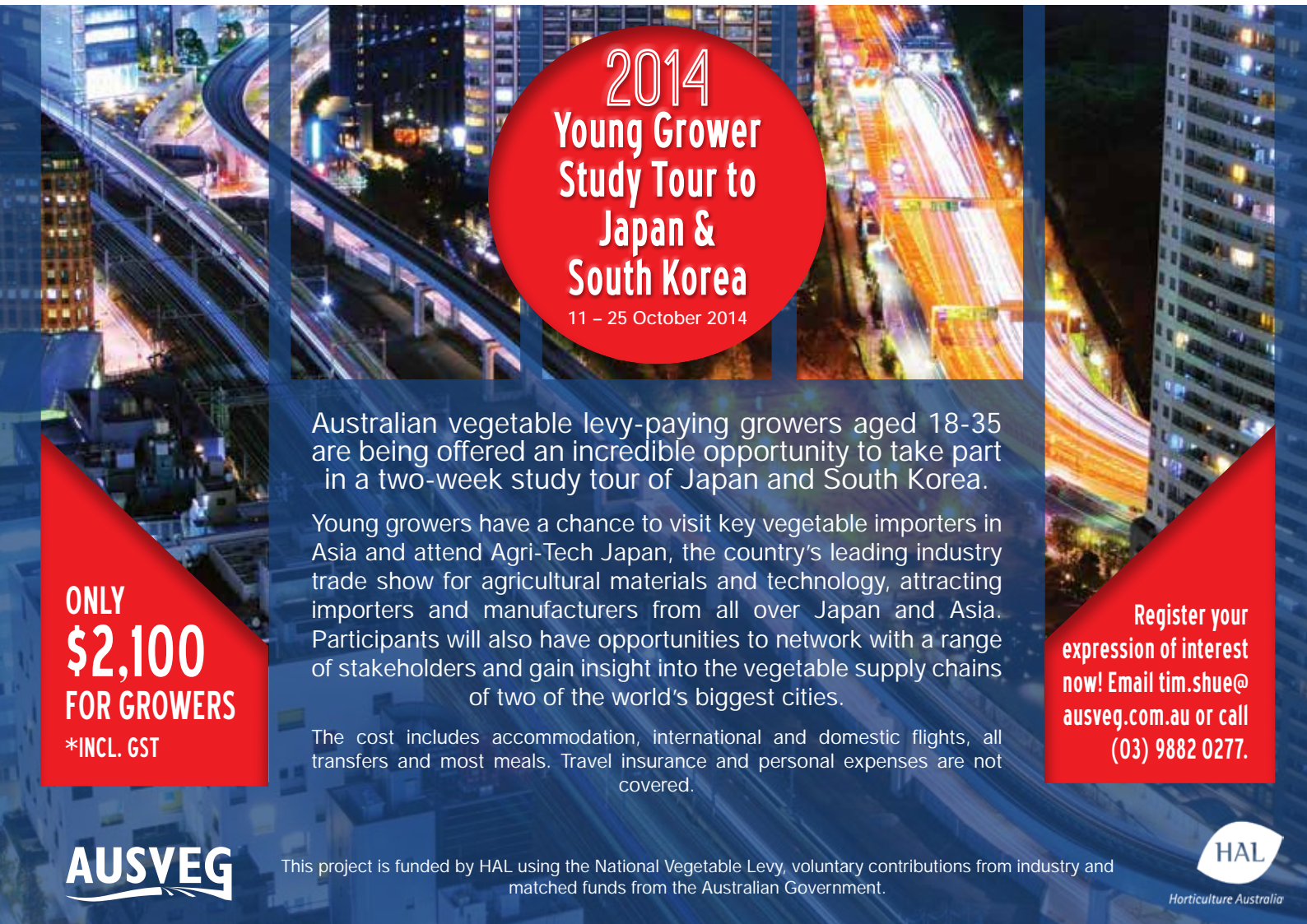
REGISTER YOUR INTEREST NOW!

For further information please contact AUSVEG on 03 9882 0277 or email info@ausveg.com.au

This project is funded by HAL using the National Vegetable Levy, voluntary contributions from industry and matched funds from the Australian Government.
Growers will be required to make a voluntary contribution towards the cost of this tour.
All air and land travel, single room accommodation and most meals will be included.

AUSVEG
Horticulture Australia

HAL
Horticulture Australia



2014 Young Grower Study Tour to Japan & South Korea

11 – 25 October 2014

Australian vegetable levy-paying growers aged 18-35 are being offered an incredible opportunity to take part in a two-week study tour of Japan and South Korea.

Young growers have a chance to visit key vegetable importers in Asia and attend Agri-Tech Japan, the country's leading industry trade show for agricultural materials and technology, attracting importers and manufacturers from all over Japan and Asia. Participants will also have opportunities to network with a range of stakeholders and gain insight into the vegetable supply chains of two of the world's biggest cities.

The cost includes accommodation, international and domestic flights, all transfers and most meals. Travel insurance and personal expenses are not covered.

ONLY \$2,100 FOR GROWERS
*INCL. GST

Register your expression of interest now! Email tim.shue@ausveg.com.au or call (03) 9882 0277.



This project is funded by HAL using the National Vegetable Levy, voluntary contributions from industry and matched funds from the Australian Government.





Yara International Senior Vice President, Sean de Cleene, (left) participates in the Global Food Forum with Primary Industries Education Foundation CEO, Ben Stockwin. Photograph: Nikki Short / Newspix.

A global view

FOLLOWING HIS RECENT INVOLVEMENT IN THE GLOBAL FOOD FORUM, IN SYDNEY, SENIOR VICE PRESIDENT OF GLOBAL INITIATIVES, STRATEGY AND BUSINESS DEVELOPMENT AT YARA INTERNATIONAL, SEAN DE CLEENE, OFFERED A GLOBAL PERSPECTIVE ON THE AUSTRALIAN VEGETABLE INDUSTRY.

In his role as Senior Vice President of Global Initiatives, Strategy and Business Development at Yara International, Sean de Cleene calls on a wealth of experience operating in international business, NGO and academic spheres.

Along with a seven-year stint in China and 12 years in Africa, the currently Belgium-based executive's CV features highlights, including Creative Architect of Agricultural Growth Corridor initiatives in Mozambique and Tanzania, involvement as a Visiting Practitioner within the CSR Initiative, linked to Harvard University's Kennedy School of Government; and stints as a Founding Co-Chair of Grow

Africa, and as a special Advisor to the UN Office of the Special Representative of the Secretary General for Food Security and Nutrition.

Mr de Cleene also sits on the board of the New Vision for Agriculture, within the World Economic Forum, is a member of the World Economic Forum's Global Agenda Council on Climate Change, and is on the Executive Committee of the African Green Revolution Forum.

He recently joined a host of Australian and international leading lights, in Sydney, at the Global Food Forum. Following his involvement in a panel discussion on increasing innovation and productivity in agriculture, food manufacturing

and supply chains, he spoke to *Vegetables Australia* about an array of Australian and international horticultural issues.

African opportunities

While the scope for growth in Australian exports to Asia is regularly discussed, Mr de Cleene believes other world markets could also be on the verge of opening up. Having spent much of his professional life in Africa, he says the vast continent could potentially present opportunities for enterprising Australian growers.

"I think the African market is very interesting because it has not moved over several decades and, now suddenly, you get a sense it is all about to really take

off," says Mr de Cleene.

"So there really are opportunities for Australian growers to go in and develop strategic partnerships in specific countries, with local growers within those countries, to position them competitively. Whether it's potatoes, or different types of crops, you have got real demand for uptake in those countries and they are looking for strategic partnerships to make that work."

Battling input costs

Few deny opportunities exist abroad for Australian growers, but high input costs are often identified as barriers to profitability. Mr de Cleene says although he was yet to find a 'perfect model', careful

management and the pursuit of efficiencies were vital components of the fight to remain competitive.

"I think what is happening now is a lot of focus is on issues like sustainable optimisation," he says.

"It's the question of how can you actually grow more with fewer inputs, in a more targeted, appropriate way. That requires building things like traceability in to the value chain, so that the farmer, when they make that investment in improved quality, with better targeted inputs, gets the market return, and that the consumer actually understands what that means."

Mr de Cleene says innovation is an important part of this, as companies like Yara work with growers to ensure initiatives like fertigation are developed and honed.

"I think we're seeing a lot of focus on emerging areas like fertigation, so moving beyond just drip irrigation. We're also seeing globally a shift in discussion beyond just high-tech fertigation, to low-tech

fertigation, so how you can use compound NPK (fertilisers), in more innovative ways within that."

"I think we're at the early stage of creating those efficiencies in the market, that would see a more targeted plant nutrition agenda that maximises yields and returns for the farmers, while reducing the input burden in a sustainable way."

Youth and technology

It could be argued the aging demographic within the Australian vegetable industry is somewhat at odds with identified opportunities for future growth worldwide.

Mr de Cleene says given the appeal of technology to the younger generation, it is important horticultural industries embrace and adapt to the tech-savvy world, in order to attract the next generation.

"I think the younger generation is much more interested in using smart

technology and so we're starting to see a lot more interest in investing in things like precision agriculture. The younger generation is very interested in that discussion because what they want to see is a shift from the previous generation's way of farming."

"There are also a lot of conversations happening internationally about how to get young people, even in urban environments, involved and excited about horticulture."

Australia at the table

Given the Global Food Forum focused on the broad theme of 'Australia's place at the table', Mr de Cleene says there are undeniably opportunities for Australia to play a significant global role.

He says the nation's technological proficiency, international reputation, geographical location, and willingness to try different ideas could all prove advantageous.

"Australia has a huge amount

to offer in terms of innovative practice, in terms of cutting edge thinking, in terms of smart value chains, in terms of marketing and products. In that respect, Australia could be well positioned to engage at a global level," he says.

"That could be in terms attracting talent and investment to Australia through innovative design and uptake, but also in terms of Australia looking outward, and asking how can Australian producers and service providers in the agriculture sector contribute to global change in terms of food systems."

"I think Australia also serves as a natural bridge in terms of information and ideas sharing between Asia and Africa for example, it can act as a natural bridge between those two quite different cultures."

"Even in terms of cuisine and the whole concept of fusion, and the use of products in new dynamic ways, there's a lot of originality of thought in Australia that can be really harnessed at a global level."

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Eight pointers to irrigation success

SOUTH AUSTRALIAN RESEARCH HAS RESULTED IN THE IDENTIFICATION OF A SERIES OF 'BEST MANAGEMENT PRACTICES' FOR IRRIGATION.



Irrigation is a vital component of any successful growing operation, and some approaches are clearly more effective than others.

With this in mind, research carried out by the South Australian Research and Development Institute (SARDI) examined various strategies employed by irrigators. This was done with a view to establishing 'benchmark levels of performance', to compare set-ups and relative levels of success.

The study, headed by Research Scientist, Mark Skewes, also identified a series of best management practices for irrigation. While the initial study was carried out some years ago and specifically involved a sample of wine grape, potato and citrus irrigators, Mr Skewes says the work remains relevant to horticultural irrigators in general.

Importantly, he says irrigators identified as performing well are not necessarily using the same types of irrigation systems or monitoring and scheduling tools. "Very similar irrigation systems, and sites using very similar scheduling tools were represented at both ends of the

performance spectrum," says Mr Skewes.

The project was conducted by Primary Industries SA and funded by the Murray Darling Basin Commission, under their Natural Resources Management Strategy.

Irrigation as a high priority

Mr Skewes says all irrigators used in case studies cited irrigation as one of the most important factors in their production system, if not the single most important. He adds many surveyed indicated irrigation was worth investing both time and money in, given its importance.

"When irrigation is seen as a low priority, it is no wonder if irrigation performance is low, and likewise it is not surprising that the best irrigators all place irrigation as a high priority in their growing system," he says.

Get to know the soils

Mr Skewes says efficient irrigation is very difficult without good information about the capacity of soil to hold water,

and about where in the soil profile the roots of the crop are.

"On vacant land, a soil survey is extremely useful for appropriate crop selection, irrigation system layout, and irrigation management once the crop is planted," he says. "Even on existing plantings, irrigation management can be greatly improved by an understanding of the soils and their water holding capacity, and assessment of where in the soil profile the roots of the crop are growing."

Design and maintain irrigation systems correctly

Mr Skewes says poor irrigation system operation can make good irrigation management almost impossible. Difficulties linked to irrigation system setup, age and maintenance were cited by some irrigators as limiting their ability to manage irrigation as well as they would have liked.

Mr Skewes says all new irrigation systems should adhere to the set of standard practice guidelines, under which the Australian irrigation industry

operates. These include:

- Variation in emitter discharge rate between any two emitters within a valve unit should not exceed ± 5 per cent.
- For non-pressure compensating emitters, this can be approximated by restricting the variation in emitter pressure between any two emitters within a valve unit within ± 10 per cent.
- Emitter pressure at all emitters should lie within the range of pressures recommended by the manufacturer.
- Distribution uniformity for a full-cover irrigation system should aim to exceed 75 per cent. Less than 67 per cent is unacceptable.

"The use of Certified Irrigation Designers under the Irrigation Association of Australia's (IAA) Certified Irrigation Designer (CID) program is highly recommended," says Mr Skewes.

He adds existing irrigation systems should undergo annual checks, preferably during the non-irrigation season.

scheduling tools is that they must be appropriate, both to the crop and irrigation system they are used with, and also to the irrigator who must maintain them and interpret the data provided by the tool."

Use more than one tool for scheduling irrigations

Mr Skewes says all of the case study irrigators used a range of information sources in making decisions on when to irrigate, and how much to apply. He adds while much of the decision relied on one particular tool, other factors were taken into account, with the most common, and simplest, being:

- Digging holes to check soil water.
- Observation of the appearance of plants.
- The checking of test wells or drain flows after irrigation, and subsequent adjustment in practice at the next irrigation.

Mr Skewes says using multiple tools improves the quality and reliability of information used to make management decisions, and that cross checking against other sources of information can help identify problems, if one tool is flawed.

Retain control of irrigation scheduling

Mr Skewes says while it was tempting for growers to set up entirely automated irrigation systems, or allow consultants to

dictate irrigation schedules, it was important they maintained some control over irrigation management.

"The case study irrigators all firmly held onto control of irrigation scheduling. That is, they took into account the data from the scheduling tool or the recommendation of the consultant, but retained the power to vary the schedule using their own judgement, and the use of other tools," he says.

Multiple sources of information

The case study irrigators cited a range of different ways of accessing information about irrigation. Mr Skewes says the fact some of the top performing irrigators had only been in the horticultural industries for a relatively short period of time, could in part explain their willingness to seek information and to learn from others.

"There is always more to learn, and a better ways to do things," he says.



Copies of reports summarising the original research and best management practices are available free of charge from Mark Skewes.
Phone: 08 8595 9149
Email: mark.skewes@sa.gov.au

Monitor all aspects of an irrigation event

Mr Skewes says proper monitoring of irrigation refers to before, during and after the irrigation event.

"Monitoring where water is going, both during the irrigation, by measuring system performance and uniformity of application, and after the irrigation, by assessing under and over-irrigation, is vital to efficient irrigation," says Mr Skewes.

"Information is invaluable in the decision making process, and collecting that information

is vital to making good management decisions."

Use objective monitoring tools to schedule irrigation

Mr Skewes says all case study irrigators used at least one objective monitoring tool, usually a soil based device, in determining the timing of irrigations.

"The important thing is that they measured something, rather than relying on intuition, the calendar, or when the neighbours watered," he says. "An important point about

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Q&A Young grower profile

Name: Gillian Hay

Age: 35

Location: Lindenow, Victoria

Works: Bulmer Farms Pty Ltd

Grows: Broccoli, bunching baby broccoli, lettuce varieties, endive and baby leaves.



How did you first become involved in the vegetable industry?

I first started at Harvest Fresh Cuts Vegco back in 2000. My first day was cutting onions on the onion line for five hours and I thought to myself, 'I am not going to last a year here!'

During my time there I met Andrew Bulmer, a young grower in my local area, and we hit it off and he offered me a position with his family-owned and run business.

What is your role in the business?

I'm the pack house manager and I'm responsible for all inbound product and outbound produce, all transport and logistics, all quality specifications and training, and all sales and stock management.

We also run trial programs where we trial new varieties. I support the trial processes for our on-site agronomist team Stuart Grigg Ag-Hort Consulting.

How would you describe your average day at work?

First thing in the morning I ring our market agents and touch base on what happened in the markets the previous night - busy or not, pricing, stock requirements. I then set the orders up in the shed and task out to the teams the daily production plan.

I review the previous day's picking records and any quality issues and report any major raw material issues to the paddock management team. I then organise with transport companies pick up times and drop off times for various market deliveries and process

deliveries.

I walk the processing lines, making sure everything is going well with machinery and time, and quality is to spec. I may jump on a forklift for a while to get orders loaded and sometimes go and inspect product in-field and support the cutting crews if required. Sometimes I will host visitors to the farm and do site tours and host seed reps coming on site to visit Andrew.

At the end of the day I gather information from the field teams on what is being cut and volumes for the next day and negotiate purchase orders with processing factories. I set the times and rosters up for the staffing in the production shed based on incoming product and sales orders.

What do you most enjoy about working in the vegetable industry?



There is so much development in the industry and opportunity for people to get involved, so for me, the best part is being involved with a growing business that is passionate about the future and willing to change and expand into new technologies to continually improve our procedures.

What are the biggest challenges that you face?

One of the most consistent challenges we are faced with is getting people to choose farming as a career path. We have the capacity to put on two apprentice roles and struggle to find young people interested in pursuing a career path in horticulture.

How do you think more young people could become encouraged

to take up jobs in the vegetable industry?

We need to find a way to educate the young people that are preparing to make decisions on which career paths to take.

Currently Bulmer Farms is participating in The East Gippsland Food Cluster's traineeship program where we have a number of businesses in the same industry working together by hosting year 11 and 12 students on-farm one day a week while also achieving Certificate II in Food Processing. These students rotate around the group of businesses learning on farms, in processing factories and working with logistics and transport companies. It's a great program for the kids to see the whole picture from paddock to plate and they get a bit of pocket money too.

If you weren't working in the vegetable industry, what would you be doing?

I really have no idea what I would do if I was not in the vegetable industry. I cannot imagine taking a different career path!

Where do you see yourself in five years?

Still working at Bulmer Farms! Hopefully we will be exporting our Gippsland Lakes Fresh Produce brand overseas, and our strong relationships here in the markets and processing plants will grow stronger.



Industry in the media



Vegetable exports and Zebra Chip have been hot topics in horticulture in recent weeks, following the establishment of the Japan-Australia Economic Partnership Agreement (JAEPA) and release of the Senate Standing Committee's final report on the *Proposed Importation of Potatoes from New Zealand*. As the leading voice for the vegetable and potato industries, AUSVEG weighed in on these issues on behalf of the growers it represents.

A total of 341 media reports mentioned AUSVEG during March, with radio continuing to produce the most media exposure. March saw a total cumulative reach of 2,127,928, a significant increase on the previous period.

NZ imports

AUSVEG Public Affairs Manager William Churchill was interviewed by ABC Radio regarding the Senate Inquiry into the proposed importation of potatoes from New Zealand. In its report, the Committee recommended that the Department of Agriculture's Biosecurity division undertake a stricter, scientific-based Import Risk Analysis (IRA) for New Zealand potatoes.

Mr Churchill said that it was important that the IRA was

conducted again, and AUSVEG welcomes the opportunity to be more involved with the process. He also shared his concern that biosecurity was taking a back seat in the rush to establish free trade agreements with neighbouring countries in Asia. The report was syndicated widely across the country.

Following the report, Potatoes NZ Chief Executive Officer Champak Mehta claimed that AUSVEG's statement was 'overblown'. Mr Churchill told broadcast and print media that Mr Mehta's comments were reckless, and that AUSVEG has long raised concerns about the risk of the disease entering Australia.

Export opportunities

AUSVEG welcomed the establishment of the JAEPA announced in early April by Prime Minister Tony Abbott, receiving widespread coverage in both print and broadcast media. Spokesperson Hugh Gurney featured across a variety of broadcast media, including ABC Radio, stating that the agreement would make it easier for vegetable growers of some commodities to access the Japanese market and help increase demand for Australian vegetables in Asia. Mr Gurney stated, however, that more market access was required

for Australian vegetables into Japan.

EnviroVeg kicking goals

AUSVEG Environment Coordinator Jordan Brooke-Barnett was interviewed by ABC Wide Bay in Bundaberg regarding the EnviroVeg program. Mr Brooke-Barnett said that membership for the program had doubled over the past two years and that AUSVEG had recently partnered with Coles to deliver the EnviroVeg Platinum program.

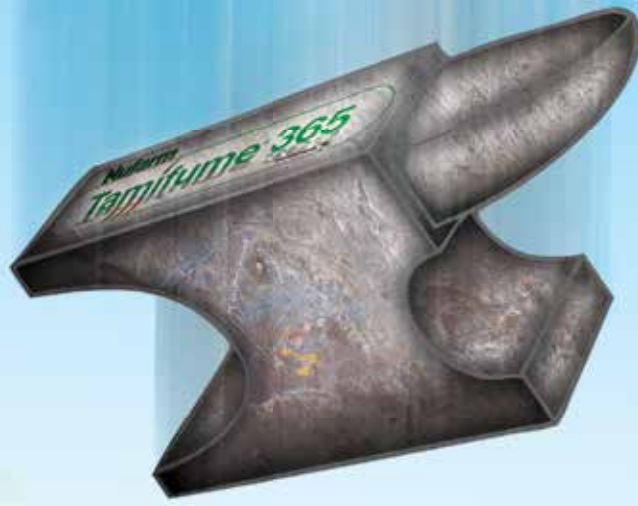
Effective advocacy

AUSVEG Spokesperson Hugh Gurney appeared in *Good Fruit and Vegetables*, regarding a report released by the Australian Farm Institute which stated that farm advocacy lacked effectiveness in Australia. Mr Gurney said that Mr Keogh's statements were unfounded, particularly as the report Mr Keogh authored showed that AUSVEG was perceived to

have one of the highest levels of influence in the nation for farmers' advocacy groups.

Key topics for the March/April period:

- AUSVEG welcomes Senate Inquiry final report on the proposed importation of potatoes from New Zealand.
- Japan-Australia Economic Partnership Agreement (JAEPA) welcomed by AUSVEG, with a range of horticultural commodities to benefit from the trade agreement.
- EnviroVeg program continues to grow.
- AUSVEG perceived to be one of the most influential advocacy bodies in agriculture.



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Biodegradable film makes plastic waste history

It was frustration with the amount of plastic waste generated by horticultural industries which inspired Joe Gagliardi to investigate options for an environmentally-friendly answer.

In 2004, armed with an Australian-made, corn starch-based biodegradable mulch film, Mr Gagliardi and co-investor Tom McConchie began setting up their fledgling Australian Bio-Plastics business.

Their aim was to offer an alternative to the black plastic mulch film which is so often

discarded as waste, once crops are grown. Ten years on, the project founded out of frustration now inspires more positive emotions.

With Australian Bio-Plastics now offering the natural film to individual specifications, depending on crop cycle requirements, the product has been designed to degrade at the top of the crop cycle, and can be ploughed straight back in to the soil.

The enterprise has also yielded accolades, including a Telstra Award for Innovation and



Joe Gagliardi (right) receives his Industry Impact Award at last year's AUSVEG National Awards for Excellence.

Technology in 2011, and the Industry Impact Award at the 2013 AUSVEG National Awards for Excellence, on the Gold Coast.

Mr Gagliardi said he hoped to continue building on his business' successes while offering sustainable options to

growers.

"We were just a couple of local guys who got together using a few smarts and believed there was a smarter way of working out there, whilst being able to look after our environment," he says.

For more information go to www.ausbioplas.com.au.

2014 Annual Vegetable Levy Payers' Meeting

This is an official notice to all levy-paying vegetable growers advising that the 2014 Annual Vegetable Levy Payers' Meeting will be held in June 2014 in Cairns, Queensland.

This is an important opportunity for vegetable levy payers to hear about the collection of the National Vegetable Levy, strategic priorities for the industry, and updates on current industry issues. It also allows growers to provide feedback on the levy process and R&D levy investment.

Where: Cairns Convention Centre, Cairns Queensland

When: Saturday 21 June 2014, 2:30pm-3:00pm

To RSVP, please email AUSVEG on info@ausveg.com.au.

Minor-use permits

Permit Number	Permit Description (pesticide/crop/pest)	Date Issued	Expiry Date	States
PER13031	Maldison / Capsicums & Cucumbers (field & PC) / Queensland Fruit Fly, Mediterranean Fruit Fly & Cucumber Fly	6-Oct-11	31-May-16	ACT, NSW, NT, QLD, SA, VIC & WA
PER12442	Trichlorfon / Eggplant, Thai Eggplant, Pepino & Cape gooseberry/ Queensland Fruit Fly & Mediterranean Fruit Fly	10-Aug-11	31-May-16	All States (excluding VIC)
PER13567	Bifenthrin / Capsicums & Tomatoes (field only) / Queensland Fruit Fly & Lesser Fruit Fly	7-Dec-12	31-May-16	Growing districts of Bowen & Gumlu, QLD only
PER13566	Methomyl / Capsicums & Tomatoes (field only) / Queensland Fruit Fly & Lesser Fruit Fly	7-Dec-12	31-May-16	Growing districts of Bowen & Gumlu, QLD only
PER14744	Rhubarb / Clethodim (Select herbicide) / Grass weeds listed on label	1-Jul-14	30-Jun-19	All States (excluding VIC)
PER11994	Protected cropping / Brassica leafy vegetables / Emamectin (Proclaim) / Diamondback moth, Heliothis and Vegetable looper	2-Mar-12	31-May-15	All States (excluding VIC)

All efforts have been made to provide the most current, complete and accurate information on these permits, however we recommend that you confirm the details of these permits at the following APVMA website: <http://www.apvma.gov.au/permits/search.php>

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Safe food equals safe reputations

NEW RESEARCH HAS HIGHLIGHTED THE IMPORTANT ROLE FOOD SAFETY SYSTEMS CAN PLAY IN PROTECTING THE REPUTATION, AND ECONOMIC FORTUNES, OF THE AUSTRALIAN VEGETABLE INDUSTRY.



A major food safety incident can not only leave an individual grower or supply chain operator open to legal action, but also seriously damage the industry if consumers consider fresh produce unsafe to eat. As evidenced by major events in Europe and the United States, public health incidents linked to food not only pose a threat to human health but can also result in a loss of reputation, which can have a significant lasting effect on industry.

A recently-released report entitled *Fostering and Enhancing Food Safety in the Vegetable Industry* has examined the state of play relating to food safety systems in Australia.

Among other things, the research led by Dr Doris Blaesing from RMCG, has recommended increased awareness of food safety risks and legal obligations among growers, and other supply chain members. The report also highlights the importance of public education, and implementing effective food safety systems across all vegetable supply chains, to

minimise risks.

The research was funded by Horticulture Australia Limited using the National Vegetable Levy and matched funds from the Australian Government.

Considerations

In the final report, Dr Blaesing says food safety issues affect people's perception of safety, as much as their actual health. This can be compounded by a trend for the reporting of food safety issues in the media to be sensationalist. For all businesses dealing with the production, distribution and preparation of food, food safety issues can have financial and legal repercussions. They can also affect trade relations.

In the report, 'food safety risks' is defined as 'microbiological, physical or chemical agents in food that are reasonably likely to cause illness or injury if not controlled'.

Biological hazards are generally considered as presenting the greatest risk of widespread serious harm. *Salmonella* species, *Escherichia coli*, *Staphylococcus aureus*, *Shigella*, *Clostridium*

perfringens, *Clostridium botulinum*, *Listeria monocytogenes*, *Campylobacter*, Hepatitis A and Rotavirus are among the microorganisms of concern.

Physical hazards can include metal, glass, wood, insects, stones, soil, dirt, and other debris in food items.

Chemical hazards can include agricultural residue, cleaning chemical residues, factory contaminants, food allergens, naturally occurring harmful chemicals and industrial heavy metals.

Food safety incidents refer to any situation within the food supply chain where there is a risk, potential risk, perceived risk or confirmed occurrence of a food safety hazard, illness or injury associated with food consumption.

According to the report, vegetables eaten raw are the most frequent cause of individual foodborne illness outbreaks traced back to vegetables. Therefore efforts should especially be made to make these vegetables safe to eat for all consumers including vulnerable groups like children, sick or elderly people.

Obligations

Legally, any business, including a vegetable farm, that supplies food directly to the public is classified a 'Food Business' under the Food Standards Code, and as such must have a food safety program in place.

Dr Blaesing notes some vegetable growers and others who sell at farmers' markets may not be aware of this. She adds that differing state-based rules, and regulation derived from the code can be inconsistent and therefore create some confusion.

While some may be unaware of their obligations, Dr Blaesing also notes major retailers and their suppliers require food safety certification from their suppliers.

"As a result, a majority of Australian vegetable growers have at least one food safety program in place," she says in the report.

Despite this, it is noted those who do not have food safety systems in place are still placing themselves, and industry, at risk.

The report also notes most vegetable growers believe a food safety related incident would affect their business, and a straightforward system would



be suitable to prevent such an incident from happening.

Horticultural producers, if considered a 'primary producer' in the Code, have no legal requirement to have a food safety system in place. However that changes as soon as they retail directly to consumers, be it through roadside sales or farmer's markets, or begin processing, including prepacking on-farm.

Protecting the industry

Dr Blaesing says, apart from the moral obligation to produce safe food, there is a powerful industry argument to ensure members of the vegetable industry adopt effective food safety systems. The primary reason is to avoid a food safety incident that could result in significant economic and reputational damage to the entire industry.

"The adoption of adequate preventative measures via practical food safety management should be a focus for the vegetable industry," says Dr Blaesing in the report.

Dr Blaesing says food safety certification under a recognised, preferably uniform, third party

audited system is an important step in minimising the risk of foodborne illness and other food safety hazards.

"A food safety program should be adopted by owners and staff of each business in the supply chain and be part of the business culture," says Dr Blaesing.

She also notes food safety systems implemented with a poor attitude and culture, could be worse than having no system at all.

The report also recommends that good food safety practices be promoted to achieve an improved understanding of risks, and how to manage them, especially by business that do not have a more rigorous system in place.

"One option or first step could be a food safety self-assessment tool. This would help identifying risks in their business, and implementing an action plan to control them," says Dr Blaesing.

Crisis Management Plan

While preventing food safety incidents through strong food safety systems is key to risk minimisation, there may be occasions when the worst happens.

With this in mind, AUSVEG has developed a Crisis Management Plan to enact in the event of major incidents, including food safety scares.

Under the plan, growers whose businesses is the subject of a food safety incident should contact the Crisis Management Hotline on 1300 855 170.

Growers will then be provided with immediate initial advice, as the Crisis Management Team is mobilised to oversee the crisis response, in accordance with the Crisis Management Plan.

It is important also any inquiries, particularly from the media, are referred to AUSVEG.



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Around the states

Queensland



Growcom has warmly welcomed Queensland Deputy Premier Jeff Seeney's announcement that important horticultural lands have been excised from the proposed Galilee Basin rail corridor, near Bowen in North Queensland.

The original proposal included more than 5000 hectares of prime horticultural

land near Euri Ck, north-west of Bowen, which currently produces around 40 per cent of Australia's winter tomato crop, together with capsicums and other vegetables.

Deputy Premier Jeff Seeney announced in Parliament that this area would be removed from the proposed State Development Area.

This is an excellent result for Bowen vegetable growers and Growcom congratulates the Deputy Premier for taking an active role in protecting high-value agricultural land.

We were deeply concerned about the proposed inclusion of this land in the proposed rail corridor, not only from the perspective of the individual

growers but from the perspective of the industry as a whole.

Together with the Queensland Farmer's Federation (QFF), Growcom has lobbied hard on this issue, as the long term viability of the Queensland winter tomato growing industry would have been under threat if this area became a rail corridor.

We thank the Deputy Premier for listening and for respecting the existing landholders and industry. This shows the commitment of the Queensland Government to agriculture as one of its four economic pillars and its commitment to its election promise to grow agriculture.

Growcom looks forward to

a final clarification of the area around the existing Aurizon rail corridor near Merinda and anticipates that the same sensible approach will be taken.

We also thank local the Member for Burdekin, Rosemary Menkens, for her advocacy on this issue and the Bowen Gumlu Growers Association for their technical assistance.

Alex Livingstone

Growcom
Chief Executive Officer
68 Anderson Street,
Fortitude Valley, QLD 4006
Phone: (07) 3620 3844
Fax: (07) 3620 3880

Western Australia



vegetablesWA has been actively involved with a range of activities to assist our industry.

As our industry has many different growers from many different perspectives, we appreciate hearing feedback from everyone to make sure we are representing and assisting our industry as accurately as possible. In line with this, I, along with our President, Maureen Dobra, and Field Extension Officer, Sarah Houston, was very pleased to make the trip south to meet with and visit growers around Albany recently. Some of the issues facing these growers were universal to growers across WA, but there were some problems which appear to be unique to areas such as Albany and vegetablesWA have begun to take some steps to sort these out.

Our message is clear - if you as our grower members have problems, please let us know so

we can do what is possible to assist.

For example, fracking is an issue which has now come onto the radar of growers in West Australia. Unfortunately some growers in particular areas are now at the very pointy end of this debate in the face of legislation from 1967, which does not adequately serve the legitimate needs of the landholder. The last edition of our magazine included legal advice about your rights and responsibilities, but we don't think these are currently fair. vegetablesWA have begun advocacy in this area, but as always, would be very pleased to hear specific concerns of growers to further advance the case. I can be contacted for this and any other matter at john.shannon@vegetableswa.com.au or on 0488 111 526.

As appreciated by an expanding number of growers, there are increasing opportunities in export markets. Most recently, vegetablesWA has accompanied the national carrot and sweet corn export project to markets in Malaysia and assisted with UAE markets; had meetings with various producers and producer groups; presented to the WA China Agribusiness Collaboration Conference in Kings Park; made a presentation to The

Southern Forests Food Council in Manjimup on this topic; and had various meetings with government and non-government organisations about export, market access and the potential expansion of production areas. Our Export Development Management, Gavin Foord, is keen to work further with growers and grower groups regarding opportunities and export readiness. He can be contacted at gavin.foord@vegetableswa.com.au or on 04 3501 8189.

In terms of productivity, vegetablesWA has organised a series of soil health workshops to be held in conjunction with NRM groups, UWA and vegetables WA. Workshops will be held in Wanneroo, Bunbury, Manjimup and Carnarvon for both English and Vietnamese speaking growers. We are also assisting grower workshops about the potential for solar energy to assist grower profits in conjunction with Solar Gain, growers Maureen Dobra from Loose Leaf Lettuce and Peter and Anthony Ivankovich from Ivankovich Farms. Further information about these is available from our Field Extension Officer, Sarah Houston.

Grower visits around Bullsbrook and other affected Stable Fly areas have been

conducted to validate the long term effects of alternatives growers' practices to control stable fly. We are continuing to help growers adapt to new management and legal requirements in this area - please let us know if you want to understand the issue further.

vegetablesWA have recently provided language and other assistance to WA growers completing application forms for Farm Finance Concessional Loan Scheme. All interested growers are encouraged to contact us to see whether we can assist with applications.

vegetablesWA also recognises that quality assurance may be important to accessing markets for both English and Vietnamese speaking growers. Vietnamese speaking growers may contact Vo The Truyen to discuss this subject further and English speakers may contact either Truyen or Sarah Houston.

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New South Wales



With the recent trouble surrounding Queensland fruit fly and Mediterranean fruit fly and the loss of pest free areas across NSW, there may be a new sign of hope. DPI has started an Area Wide-Integrated Pest Management (AW-IPM) program that will incorporate the use of Sterile Insect Technique (SIT) to target Queensland fruit fly. This is achieved by releasing a large number of sterile male insects into the environment where they will compete with the fertile, wild males. This technique has been

successful in reducing and eradicating other insect species, such as screwworm in the USA. The program will operate over several properties in south-eastern Queensland, near the NSW border.

Another potential risk is the concern with Zebra chip disease entering Australia via imports of potato from New Zealand. Mr Champak Mehta, CEO of Potatoes New Zealand, has recently made claims that New Zealand potatoes do not pose a substantive risk to the Australian industry. This statement is in direct opposition to the report from the Senate committee which raised concerns about the Department of Agriculture being able to keep the vector, Tomato-potato psyllid (TPP), and the disease out of Australia. The TPP has a diverse range of crops it can feed off, including potatoes, tomatoes and cucumbers. Potato imports

from New Zealand are still currently banned, and with over \$200 million in damages to the NZ industry, it would be a disastrous situation if this disease was able to get into Australia.

This also brings into focus the current issue of Country of Origin Labelling and the review of competition laws. NSW Farmers has been working with the NFF and other industry representatives to develop a strategy for effective industry representation in the government root and branch review of competition laws. The key outcomes for horticulture will be in maintaining the Horticulture Code of Conduct and ensuring it covers all first sales of horticultural produce, and that the ACCC will have a greater ability to enforce the code.

NSW Farmers supports mandatory labelling with respect

to representation of 'Product of' or 'Grown in' for the top three ingredients, labelling of significant local ingredients, and agrees that there should be labelling of where a product was manufactured and packaged. It is expected that with Country of Origin labelling, the consumer will be better informed about where their food is coming from and that producers will be able to benefit from stated origin production percentages, where currently they are unable due to restrictions on Australian grown food that use a small percentage of imported ingredients.

Peter Darley

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Victoria



Recent audits of Victorian farms by the Fair Work Ombudsman have highlighted the need for growers to be even more vigilant about the people they hire to work for them or the Labour Hire Company (LHC) who supply them with a workforce.

Changes to the Migration Act put the onus back on employers to ensure workers are working legally. Growers employing people directly must check the worker's status by sighting their passport, or any other documents, and then verify this through Visa Entitlement Verification Online (VEVO). Fines for illegal workers are up to \$15,300 per worker.

Labour Hire Companies are obliged to ensure their workers are legal, however, the grower

must have a written agreement or contract with the LHC, clearly stating this to protect themselves.

It is also a grower's responsibility to ensure that workers are being paid full entitlements under the Horticulture Award 2010, even when using a LHC. Growers should request a detailed account that shows how much the workers are being paid. Growers need to have appropriate paperwork between themselves and the LHC, as the grower can still be taken to court if the workers are being underpaid.

VGA Vic President David Wallace also holds the position of Chairman to the Growers Advisory Committee (GAC) at the Melbourne Wholesale Market. This includes fruit and vegetable growers who sell fresh produce daily. The challenges that have faced the GAC through continuing discussions with the State Government and Melbourne Market Authority over the past decade have been frustrating and time-consuming. Despite meetings that have taken both the Chairman and

committee members away from operating their farms, there is still no conclusion to the trading floor allocation or size of trading stands, and yet the building construction is completed with an expected relocation to the new site in early 2015.

Recent consumer surveys indicate average vegetable consumption by Australian adults is only half of recommended intake based upon guidelines provided by National Health and Medical Research Council. The survey indicated adults were consuming only 2.5 serves of vegetables per day, not the recommended five serves per day. Young people were consuming an average of only two serves per day which is an even worse scenario for the vegetable industry. High intake of vegetables, especially greens, has long been associated with health benefits, and reduces certain coronary disease. In a country that produces the cleanest and greenest vegetables, there should be more emphasis on eating a wide range of local fresh produce.

This is my last contribution

to this publication. After 12 years in the role of Part-Time Executive Officer and Secretary, I will finalise my duties on the 22 May 2014. My involvement in the fruit and vegetable Industry over the past 39 years has created many friendships and colleagues around Australia, which have been most pleasing and rewarding.

I hand over the column in this publication to Helena Whitman and offer my best wishes to Helena and VGA Vic in future years.

Remember VGA Vic is your growers' voice of the Victorian Vegetable Industry.

For industry information contact Executive Manager Helena Whitman. Mobile 0407 772 299 or email: helena.w@vgavic.org.au

Keep smiling.

Tony Imeson

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Tasmania



The 'Repeal Day' program unveiled in late March by the Federal Government resulted in legislation introduced to rid the statute books of more than 10,000 pieces of legislation and regulations that Prime Minister Tony Abbott described as the 'dead weight' on Australian businesses, community groups and households. The government estimates the cuts will save the national economy more than \$700 million a year.

The National Farmers' Federation (NFF) also weighed

into the debate, and revealed a study by consultant Holmes Sackett that demonstrates the real cost to farmers of red and green tape.

With the NFF's Holmes Sackett report, we can start to understand the real financial and lost-time impact on each farm. Their report looked not only at the direct cash expense of meeting the administrative and compliance requirements of red tape; but also the cost of time between 2007 and 2013.

They found the average grazing farm had an average total expense of \$24,625 pa relating to bureaucratic red tape. Of this \$19,091 (78 per cent) was for overhead expenses and \$5534 (22 per cent) was for the cost of time. That means it took the farmer an average three working weeks a year to comply. This was valued at \$24,625, which equates to 14.7 per cent of net farm profit.

The findings for a mixed farm

were just as bad: \$43,935 pa on red tape, of which \$30,304 was overhead expenses and \$13,631 the time cost, but it cost the mixed farmer six working weeks a year to comply. The \$43,935 per annum equates to 12.3 per cent of net farm profit of these mixed farms.

If you put the two together, the bottom line is that the average Australian farmer spends more than \$31,000 year on bureaucratic red tape; and it takes them four working weeks to comply with all these rules and regulations. This is equal to almost 14 per cent of net farm profit.

The most frightening aspect of this analysis comes from reading between the lines. Many farmers would wish that the Holmes and Sackett assumption that all farms make a profit each year was true. However, regardless of whether a farm makes a profit, the cost of regulation would change very

little.

Governments cannot continue to oppress the most vital, vibrant and innovative sector of the economy with this yoke of having to comply with unnecessary trivial rules and regulations.

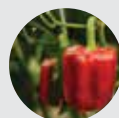
We're encouraged by the Federal Government's first round of reducing costly burdens. We're now looking to the incoming State Government to work with us to undertake the same process in Tasmania.

Maybe then farmers will be able to get on with the job of farming, rather than acting as unpaid paper-shufflers.

Jan Davis

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CALENDAR



19 June 2014

Produce Innovation Seminar

Where: Cairns Convention Centre, QLD.

Further information: AUSVEG (03) 9882 0277, or alexander.miller@ausveg.com.au

19 – 21 June 2014

AUSVEG National Convention, Trade Show and Awards for Excellence

Where: Cairns Convention Centre, QLD

Further information: AUSVEG (03) 9882 0277, convention@ausveg.com.au, or www.ausveg.com.au/convention

21 June 2014

2014 Annual Vegetable Levy Payers' Meeting

Where: Cairns Convention Centre, QLD at 2:30PM

Further information: To RSVP, email AUSVEG: info@ausveg.com.au

22 June 2014

TFGA 2014 Biennial Conference, Dinner, AGM & Field Trip

Where: Country Club Tasmania, Launceston

Further information: Nardia Deverell, Marketing & Communications Manager, TFGA. Phone: (03) 6332 1800

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