

# potatoes

australia

December 2012/January 2013

**Matt Ryan**

**Cradle coast  
of production**

**Country of  
Origin Labelling:**

Are we there yet?

**Potato virus Y:**

Determining  
the damage

**Research and  
development**

Outcomes for the  
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# potatoes australia

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## ▶ FRONT COVER:

Matt Ryan

Photograph by Chris Crerar

## John Brent

### AUSVEG Chairman

Over the past 12 months we have seen some valuable new R&D projects commence which will benefit growers across the fresh and processed sectors. One such initiative is the Potato Industry Extension Program, managed by AUSVEG, which aims to provide an effective platform for R&D activities to be communicated to growers, processors and other members of the industry, in clear and accessible ways. The Potato Extension Program workshops and field day events that were held in the inaugural year of the project proved to be a tremendous success, with strong support received from across the industry. Just recently, the program visited the Atherton Tablelands - located in my home state of Queensland - for a field day event hosted on the property of a leading potato grower in the region. It is pleasing to hear that so many

busy growers have attended these events, which really shows the commitment from members of our industry to ensure that we remain at the forefront of new farming approaches and practices. Continuing to bolster R&D knowledge throughout the industry and strengthening the connection between researchers and growers will help to ensure that all potato levy payers can benefit from the investment of the levy into R&D projects.

Looking ahead to the New Year, the 2013 AUSVEG National Convention, Trade Show and Awards for Excellence, which will be held on the Gold Coast, is shaping up once again to be an event not to be missed for all involved with our wonderful industry. With a new program of events, including presentations by some influential guest speakers, and with some terrific agribusinesses on display at

the Trade Show, the convention will no doubt prove to be an informative and entertaining occasion. The National Awards for Excellence will again form a pivotal component of the three-day event, recognising some of the most successful individuals and businesses within Australia's vegetable and potato industries. The Awards ceremony, which will take place at the Gala Dinner on Saturday 1 June 2013, is an important opportunity to celebrate the achievements of the innovative and resilient growers that we represent and I strongly encourage members of the industry to lodge their nominations for the award categories as early as possible. I wish all industry members a prosperous New Year and look forward to seeing you at the AUSVEG National Convention in May 2013.




John Brent  
Chairman  
AUSVEG

## Richard Mulcahy

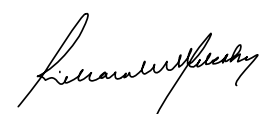
### AUSVEG Chief Executive Officer

Strong representation and advocacy for Australian vegetable and potato growers is fundamental to the future viability of the horticulture industry. AUSVEG has become one of the most respected horticultural representative bodies in the country today. This has been achieved through important associations with key decision makers, maintaining a strong media presence, developing key strategic partnerships and through a depth of both industry and business knowledge represented in AUSVEG's leadership at a Board level. AUSVEG continues to vehemently represent the interests of Australian vegetable and potato growers, to ensure that the challenges facing our industry are communicated to policy makers and to enact appropriate policies that promote growth in our sector.

An AUSVEG Board meeting was held in conjunction with the 2012 AUSVEG Annual General Meeting (AGM) on Monday 19 November in Melbourne. The AGM was attended by representatives from all of our member state grower organisations. These meetings saw Queensland grower, John Brent, re-elected to the Board unopposed and unanimously re-appointed to the position of AUSVEG Chairman. New South Wales potato grower, Geoff Moar, was also re-elected to the Board unopposed and unanimously re-appointed to his position as AUSVEG Deputy Chair. Dr Elizabeth Duncan was also re-appointed to the Board as an Independent Director. The AUSVEG Board boasts some of Australia's most respected vegetable and potato growers as well as highly experienced Independent Directors, who

combine to deliver strong leadership and direction for the company. It is through this breadth of industry knowledge, skills and passion that we continue to make ground in our advocacy activities and deliver valuable outcomes to the industry as a service provider.

Turning our efforts towards 2013, I am pleased to announce that several strategic partners have reinforced their long-term commitment to the industry by signing on to multi-year agreements with AUSVEG. Elders, Bayer CropScience, Peracto and John Deere have all again come on board to show their dedication to the future of the horticulture industry. It is through the support of such leading agribusinesses that our industry will continue to flourish and grow to overcome the challenges that we face both now and in the years ahead.

Richard J Mulcahy  
Chief Executive Officer  
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# Editorial

This edition of *Potatoes Australia* caps off an extremely progressive year in 2012 for AUSVEG, whilst also marking the beginning of an exciting year ahead for 2013. Already momentum is building for the 2013 AUSVEG National Convention, Trade Show and Awards for Excellence. The event, to be held at Jupiters Gold Coast in May, will boast an exciting new program, new national award categories and some prominent guest speakers (pg 10). Nominations for the 2013 National Awards for Excellence are now open and members of the industry are strongly encouraged to begin their submissions. Award categories can be seen on page 35.

Our cover feature for this edition is potato grower and co-Director of the Tasmanian Farmers and Graziers Association, Matt Ryan. A resident Thirlstone grower and transport contract operator, Matt is known as a vocal advocate for the industry (pg 20). The Young grower Q&A sees the Tasmanian-based James Addison discuss his daily growing operations and his views on the state of the industry (pg 14). And in an exclusive interview, Leader of the Australian Greens, Senator Christine Milne, details the Party's recent submission to the Australian Senate and House of

Representatives of the Country of Origin Labelling Bill (pg 16).

Innovative R&D in this edition of the magazine includes a new project, led by the Department of Agriculture and Food Western Australia, investigating the intricacies and possible management strategies for Potato Virus Y (pg 24). The Australian Potato Research Program Phase 2 (APRP2) is also featured in this edition, highlighting some interesting R&D outcomes for the processing industry (pg 26).

A wrap up of the recent Fresh and Processed Potato Industry Advisory Committee meetings is also included, detailing some of the issues discussed and outcomes from both of the committees (pg 12). Spotlight on R&D examines a project that is monitoring native and foreign potato psyllid populations in Australia, in an effort to create an early warning system to keep the Tomato-potato psyllid at bay (pg 19). We also cover a plant industry studentship program, run by the CSIRO, targeted at second and third year university students interested in pursuing a career in agricultural science (pg 13). And the International R&D Update investigates new research in the United States which is developing new potato cultivars with increased health benefits (pg 33).



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# News in brief



## Warragul Potato Extension Workshop attracts several dozen members of the industry

The Potato Industry Extension Workshop held in Warragul, Victoria on 12 November - saw close to 50 members of the industry in attendance.

Bringing together growers, agronomists, researchers and members of leading agribusinesses for an R&D event in Victoria, the Potato Industry Extension Workshop in Warragul proved to be an informative night for those involved. With almost 50 members of the industry in attendance, some having travelled several hours to take part, the evening boasted valuable presentations from a number of leading industry researchers. Potato growers also had the opportunity to participate in a question and answer session with the researchers who presented. "The record number of people who took part in this workshop demonstrates a strong interest from members of the Australian potato industry to better understand research and development outcomes," says AUSVEG Manager - Special Projects, Luke Raggatt. "Attendees heard about a

range of new approaches to potato farming that can help to increase efficiency and improve soil and plant health management."

Researchers from the Victorian Department of Primary Industries (DPI VIC) presented on several current industry R&D projects. Dr Brendan Rodoni spoke about Potato Virus Y which was a prominent topic of discussion among growers in the Q&A segment of the event. Dr Tonya Wiechel detailed the development of DNA testing for soil-borne pathogens and Dr Fiona Constable revealed the results from diagnostic testing for Zebra chip pathogens in Australian potato crops. Darren Hicks from the Tasmanian-based agricultural service provider AgVita Analytical also discussed the benefits of a real-time nutrient analysis and showcased a live demonstration of the sampling process on a potato plant to members of the

audience.

"Workshops like this allow growers to access information about R&D outcomes in a clear way and presents an opportunity for them to speak directly with the researchers who are involved with addressing key issues affecting the industry," says Mr Raggatt. "It is vital that growers, processors and other members of the industry are not only aware of current industry R&D activities, but also understand how their outcomes can be used to benefit their own potato operations."

The Warragul event culminates a successful first year for the Potato Industry Extension Program. The program has generated a high level of interest in workshops held throughout major potato growing regions of Australia including Devonport, Tasmania, Creswick, Victoria and Murray Bridge and Mount Gambier in

South Australia.

"The workshops held this year as part of the Potato Industry Extension Program have involved leading industry researchers, which has helped to open channels of communication between the researchers involved in the R&D and the growers and processors who will ultimately benefit from this important work," says Mr Raggatt.

AUSVEG looks forward to hosting more R&D workshops in key potato growing regions throughout Australia in 2013 as part of this important program.



For more information on future Potato Industry Extension Program workshops and events please contact:  
 AUSVEG  
 Phone: (03) 9822 0388  
 Email: info@ausveg.com.au  
 Project: PT11004



# Potato Industry Extension Program - Annual Survey

The Potato Industry Extension Program is nearing the end of its first year. AUSVEG would like to hear how you think the program is tracking to-date and any new areas that the program could explore.

As the service provider of this important program, AUSVEG is committed to effectively communicating to potato growers and processors the latest Research and Development (R&D) outcomes in clear, practical and accessible ways, as well as promoting a greater uptake of industry R&D. Feedback on the program is vital, so we've developed an Annual Survey to gauge how the program has been received by industry so far, and any improvements that

could be made.

The online survey will take just a few minutes to complete and will provide us with valuable feedback on the program's activities to-date. All potato levy payers, processors and other members of the industry are encouraged to complete the survey.



To complete the Annual Survey, please visit:  
[www.surveymonkey.com/s/NDP2QN6](http://www.surveymonkey.com/s/NDP2QN6)  
 Project: PT11004

## Notice of Annual Potato Levy Payers Meeting 2013

**This is an official notice to all levy paying potato growers advising that the Annual Levy Payers Meeting for 2013 will be held in June on the Gold Coast, Queensland.**

This is an important opportunity for potato levy payers to hear about the collection of the National Potato 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.



To RSVP, please email AUSVEG on [info@ausveg.com.au](mailto:info@ausveg.com.au)

**Where:** Jupiters Gold Coast, Surfers Paradise, Queensland  
**When:** Saturday 1 June, 2013 2.00-2.30pm

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# National Awards at 2013 Convention will recognise best and brightest of the industry

Having fast become some of the most recognised awards in Australian horticulture, the AUSVEG National Awards for Excellence will return in 2013.

With booths for the Trade Show now 50 percent sold, two new award categories and exciting new events added to the program, the 2013 AUSVEG National Convention, Trade Show and Awards for Excellence will return on 30 May - 1 June. Jupiters Gold Coast will play host to the three-day event which will bring together members from all areas of the industry.

The 2013 National Awards for Excellence, which will be the fourth consecutive year for the event, will see the return of the well-received Young Grower of the Year Award, sponsored by Dow AgroSciences. Recognising and encouraging the young progressive members of the Australian vegetable and potato industries represents an important mark of support for the future leaders of these sectors. Winner of the 2012 Young Grower of the Year Award, Michael Vorrasi, says the honour offers more than just acknowledgement for its recipients.

"It was great to receive recognition not only for myself but all people involved in our business. It has given me

further motivation to continue growing our business and to strive for further excellence."

"Winning the award has opened up a lot of new channels for me to expand our business. It has helped to develop new relationships which have in turn led to new ideas and new innovations," he says.

Celebrating the achievements of young members within the industry and encouraging them to pursue their goals is important to the direction and success of the industry into the future says Mr Vorrasi.

"The vegetable industry is an exciting and diverse industry to be a part of - it is continuously changing and growing with new processes, technologies and business practices. In order for Australia to remain competitive we need new people in the industry that will give a fresh perspective into the way we do business."

Horticulture Business Manager with Dow AgroSciences, John Gilmour, says Dow sponsors the Young Grower of the Year Award because, as with all industries, the long term future is clearly in the hands of younger generation

growers.

"We strongly believe that if Australian horticulture is to effectively compete in the global market place [then] we need the best and brightest of the younger generation to drive it into the future. We are proud to be associated with programs that encourage the next generation to play their part and to be trained and educated to the highest level."

"Most people get a buzz from being recognised for their efforts and our Young Growers are no different. If we recognise and reward them for their efforts then we encourage them not only to continue to achieve but we give them another reason to strive for even better results," says Mr Gilmour.

The 2013 Award ceremony, which will boast a total of 12 award categories with the inclusion of the new Trade Display of the Year Award (Single Booth) and Trade Display of the Year Award (Multi Booth), will take place at the Gala Dinner on Saturday 1 June 2013. Nominations for the National Awards for Excellence are now open, with categories also including Grower

of the Year, Productivity Partner Award, Industry Recognition Award and the Women in Horticulture Award.

AUSVEG National Marketing Manager, Simon Coburn, says the awards will showcase the best and brightest of Australia's vegetable and potato industries.

"The National Awards for Excellence present a great opportunity to recognise and celebrate the achievements and accomplishments of those within our industry."

With an exciting new program, as well as leading members of the industry and key agribusinesses in attendance, the 2013 Convention will be an event not to be missed by all members of the industry. Delegate registrations are now open.

*All nomination categories for the 2013 AUSVEG National Awards for Excellence are on page 35.*



For further information visit [www.ausveg.com.au](http://www.ausveg.com.au) or contact AUSVEG on Phone: (03) 9822 0388.





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# Potato IAC Summary

In this edition of *Potatoes Australia*, we outline some of the key issues that were discussed by the Fresh and Processed Potato Industry Advisory Committees (IACs) during their meetings in recent months.

The IACs for both the Fresh and Processing sectors of the Australian potato industry convene several times a year to review current and future R&D projects and to make recommendations to Horticulture Australia Limited (HAL) regarding the investment of the National Potato Levy. The Fresh Potato IAC consists of levy-paying potato growers from each state, while the Processed Potato IAC is made up of both growers and representatives from the processing sector, also from each state. Importantly, the members of both of these committees have a range of skills and knowledge relating to the industry, ensuring that informed decisions regarding the investment of the National Potato Levy are made.

## Fresh Potato Industry Advisory Committee

The Fresh Potato IAC (FPIAC) met in Melbourne, Victoria, on Monday 8 October, for its third face to face meeting for 2012. Chaired by the former President of the Australian Senate, The Honourable Paul Calvert, the key objectives for this meeting were to review a number of current R&D projects, review the

progress of recommendations made at previous FPIAC meetings held in 2012, and to discuss the future direction of levy investment into R&D priority areas.

AUSVEG representatives outlined to the FPIAC some of the recent activities of projects which it manages as a service provider, including the Potato Industry Extension Program. Members of the committee were informed about the range of workshops and field day events that the program has either hosted or been involved with around the country this year, as well as other communication outputs of the program.

Potato breeding programs were also a point of discussion during this meeting - including the various levy and Voluntary Contribution (VC) funded projects completed in this area in 2012. The FPIAC deemed it important that levy-payers be made aware that, given the limited availability of levy funds, the industry potato breeding projects are not currently seen as a priority activity compared with other key project funding areas, and that there are no longer any R&D projects currently being funded by HAL in this area. Finally, issues

regarding seed certification, and the different schemes that are currently in place in various states of Australia, were also raised during the meeting.

The Fresh Potato IAC will meet again in early 2013.

## Processed Potato Industry Advisory Committee

The Processed Potato IAC (PPIAC) convened via teleconference on Tuesday 9 October for its third meeting for 2012. As with the FPIAC, the PPIAC is chaired by The Hon Paul Calvert. This meeting had similar objectives to the FPIAC meeting; namely to review the status of several R&D programs, to check on the progress of recommendations made by the PPIAC at previous meetings and to discuss strategic R&D priority areas moving forward.

Both Potato IACs were recently represented by a member of the PPIAC at a Potatoes New Zealand (NZ) R&D meeting held in Wellington, New Zealand in August 2012. The committee was informed of some of the key issues discussed at this meeting. There are some considerable differences between the potato

industries in Australia and New Zealand, particularly concerning state boundaries and state regulations, and the PPIAC was told that the lack of these in New Zealand helps to unify the industry there on a range of issues. A representative from Potatoes NZ is likely to participate in an IAC meeting next year, as part of a reciprocal arrangement to foster closer ties between the two countries' industries.

The PPIAC also discussed the now complete levy and VC-funded potato breeding projects and the potato germplasm collections that stemmed from these programs. Like the FPIAC, the various seed certification schemes in Australia were also a point of discussion, and how these relate to the processing sector of the potato industry.

The Processed Potato IAC will convene for a face to face meeting in early 2013.



For more information on the National Potato Levy or the Industry Advisory Committees, please visit: [www.ausveg.com.au](http://www.ausveg.com.au) or [www.horticulture.com.au](http://www.horticulture.com.au).



# Pioneering young researchers

Encouraging young people into the industry is not only an area of importance for members of the supply chain, but also throughout the research community.

Training and support plays a critical role in the development of the younger members of our industry and equally university students studying agricultural science. With a skills shortage predicted to occur in the coming years, navigating more young people into the research sector is an area of investment where several leading research institutions and key agribusinesses are focusing their attention.

The CSIRO Plant Industry Division is one of the world's leading research centres for plant science, conducting basic and applied research to promote profitable and sustainable agrifood, fibre and horticultural industries. A Plant Industry Summer Studentship program is offered to second and third year university students giving the opportunity to conduct research at CSIRO Plant Industry, where a variety of plant science areas are available including disease resistance and soil nutrients. The studentship, supported by Bayer CropScience and

the Grains Research and Development Corporation, also allows students to work alongside a CSIRO research scientist.

Program Leader with the CSIRO Plant Industry, Jean Finnegan, says the aim of the program is to introduce undergraduates to the excitement of scientific research.

"Participants get to come into the plant industry labs, they're supervised one-on-one by a scientist at CSIRO and they have their own project that they work on for ten weeks. At the end of the program they get to present those results in a public symposium and write a report in the format of a small scientific paper."

"In most university courses these days there is very little practical work compared to what used to be going on when I was an undergraduate. So they come into the lab and they can actually work - they can see how science is done," says Ms Finnegan.

The program creates

opportunities for participants in terms of future employment, with students often asked about their work in the summer student program in subsequent interviews.

"The program helps students when looking at PhD positions as they can say 'I have done this 10 week research project.'"

Head of New Business Development with Bayer CropScience, Richard Dickmann, says Bayer supports the program in an effort to combat a rural skill shortage and ensure innovation into the future of the industry.

"As part of Bayer's Sustainability Strategy process, we identified that a rural skill shortage was a critical issue facing Australian agriculture. We therefore searched for opportunities to help address this issue in the most effective way possible."

"We found that the CSIRO Plant Industry Summer Studentship Program offered an excellent way to leverage our own position to add maximum value. Bayer CropScience not

only supports the program financially, but can inspire students in the program to continue in agriculture by providing real life examples of successful career paths," says Mr Dickmann.

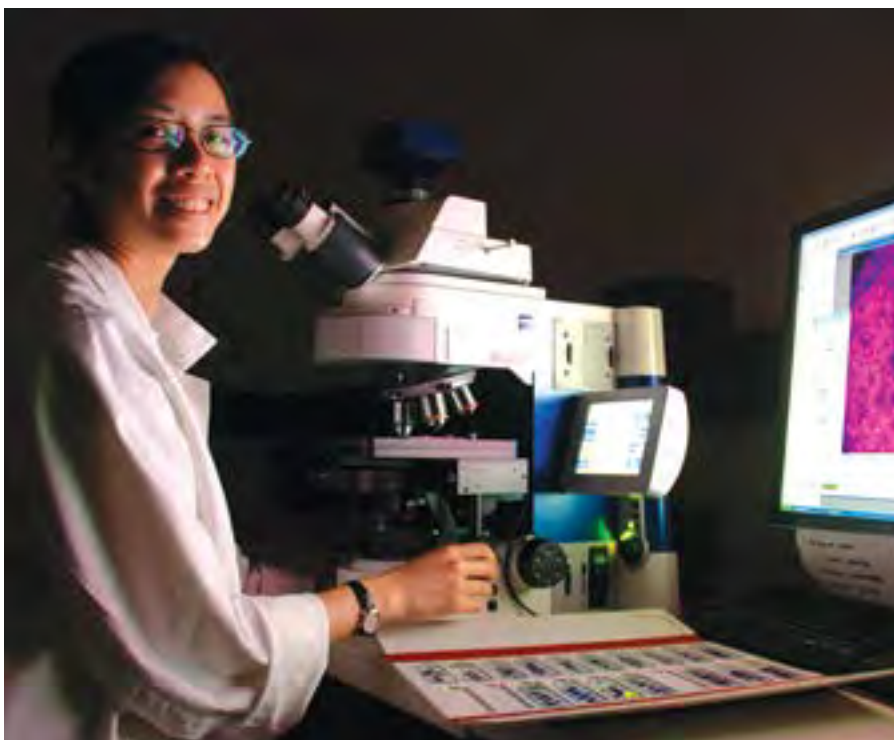
With the requirements of food production set to double in a resource and climate challenged environment, Bayer supports the CSIRO program to ensure that the very best young people are involved in solving these daunting challenges.

"A key driver of Australia's future success in agriculture is having a world class agricultural research base," says Mr Dickmann.

"Solving these problems will not only address our own challenges, but give us knowledge assets that we can trade on the world market to get access to global technologies."



For more information visit:  
[www.csiro.au](http://www.csiro.au)



Plant Industry Studentship participants Amanda Huen and Matt Dunn. Photos courtesy of CSIRO Plant Industry.

# Q&A Young grower profile

**Name:** James Addison

**Age:** 27

**Location of farm:** Moriarty, Tasmania

**Crops:** Potatoes, Onions, Poppies, Pyrethrum, Beans, Peas and Brassicas

**Role in company:** General Manager

## How did you first get involved in the industry?

My brother and I grew up on the farm. Working there over the summer holidays for pocket money left us both wanting to pursue a career in the vegetable industry. After completing a three year agriculture degree in Hobart, I headed back to the farm. Nowadays it is difficult to imagine working in any other industry. It doesn't take long for you to adapt to the time demands and the high and low nature of agriculture.

## What is your role on the farm?

I undertake the annual rotation and area planning for the 160 hectares of crops we grow each year, then plan and oversee the processes and inputs that occur for each crop, from planting through to harvest. Processing potatoes is the number one priority for the farm as far as yields, quality and efficiency in production are concerned. I also have a role in co-ordinating the planning, planting and agronomy for 110 hectares of brown and red onions which we source from local growers in our area. We pack and market those under our Charlton Farm Produce brand. I also spend some time trialling new crops and varieties to assess their potential and to learn more about crop agronomy, production techniques and also the economics associated with the production of different vegetables in both the fresh and processing sector.

## What does your average day on the farm involve?

Organising daily tasks for our farm employees and assisting them throughout the day, helping out with irrigation, and spraying and planting during the busy periods. I also monitor the growth and condition of the crops and work with our agronomist and field officers for the companies that we grow for to achieve the best outcomes.

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

I enjoy working outdoors, although the Tasmanian winter



Moriarty, TAS



weather can wear a bit thin at times when it continues into October. There is always a good variety of jobs involved with my work, and there is always something new to try in terms of plant health and nutrition. I also think a growing population and an increasing demand for quality fresh and processed fruit and vegetables will always keep the ball rolling, so it's nice to be in an industry with such a range of opportunities.

### What are the biggest challenges you face as a grower?

Trying to determine which direction to take the business in terms of growth in what is now such a complex global marketplace. With the industry being influenced so heavily by nature, the quality of growing seasons in other countries now matters more than it used to, and the effect on the local industry is greater and harder to predict. There are opportunities for Australian producers to make some major changes in the way they manage crop input or production techniques in order to remain globally competitive, but in most cases it requires significant capital outlay by growers, contractors and processors. There are a lot of great ideas about, but it is difficult for individuals to find a balance between being innovative and not getting themselves into too much trouble financially.

### How do you think young people could be encouraged into the industry?

I think people need to be made more aware of the wider range of career opportunities that are available in agriculture these days. The role of a vegetable farmer has become more diverse with the development of new industries and distribution channels, and with the gap between growing and retail slowly getting smaller. A career in the industry often requires skills in business and people management, soil and plant science, environmental management, marketing and sales, and of course field production. You get to have a really good sense of how all the work pays off and what areas need improvement if you can be

in touch with each aspect of the business. I've always thought it's the range of skills required daily in agriculture that makes the job so interesting.

### What do you think are some of the biggest threats to the Australian potato industry?

Competing against subsidised production in other countries seems like a pretty big challenge. Growers in these countries are compensated to look after their growing environment and we have to compete with them without

harming ours. The production costs across different countries are heading in all directions, but the price paid to processors for a product that is now traded in a globalised market is becoming more uniform every year. It's likely that this effect on price is something we will have to accept and adapt to, hopefully with some more recognition and help from our own government in the future. Imports may become the norm if we're dealing with global companies, but bringing in product from a disease affected growing region and threatening our own growers' future doesn't make sense to me. With the current

forecast on global population and food demand for 2050, who knows what degree of national food security we may need in the future.

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

Hard to say exactly. I have some interest in meteorology I guess, but it would have to be something that involved lots of field research, and travelling to remote areas around Australia. If not that, I'd probably head to England and buy an old country pub!



# Country of Origin Labelling: are we there yet?



With the recent introduction of a new food labelling Bill into the Senate and House of Representatives, many in the industry are hoping the proposed new rules will aid consumers in supporting Australian growers and products. Leader of the Australian Greens, Senator Christine Milne, discusses why the Greens have championed the issue of clearer food labelling and the potential benefits this would have for the industry, writes Caitlin Rodé.

Country of Origin Labelling has entangled members of the horticulture industry, consumers and policy makers in a carousel of debate for quite some time. Many in the industry question how consumers can buy and support local producers, if they cannot tell domestic and imported products apart in a simple and clear-cut way. Confusing and unclear labelling systems all too often find the discerning customer on their weekly grocery jaunt having to decipher the fine print to understand where the food

they're buying comes from. 'Made in Australia', 'Product of Australia' and 'Grown in Australia' labels all purport local origins, however some require only a percentage of local ingredients to qualify. Is it any wonder that consumers are baffled? With the results of several recent consumer studies and a comprehensive independent review illuminating the need to make Country of Origin Labelling clearer, the bolstering of origin labelling through legislative reform is a welcome initiative.

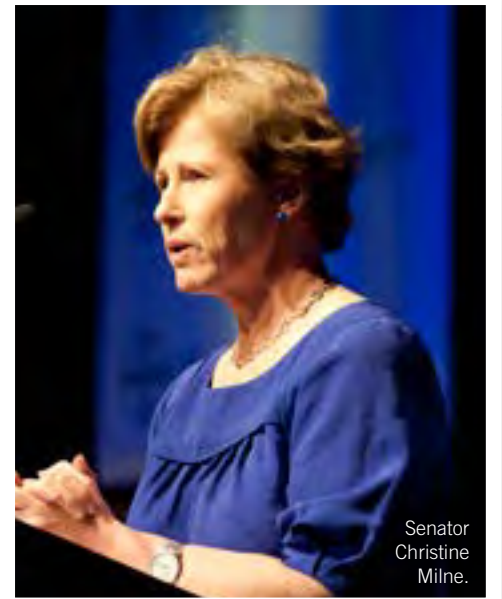
Australian Greens Leader, Senator Christine Milne and Deputy Leader of the Greens, Adam Bandt introduced a new food labelling Bill into the House of Representatives and the Senate on 17 September 2012. The *Competition and Consumer Amendment to Australian Food Labelling Bill* requires that labels state where food is actually grown or produced, rather than only placing emphasis on where it is packaged or processed.

"Australians want to know where their food is from, they don't want it treated like any

other good or service. It's got to be labelled based on thresholds of local content," says Senator Milne.

"In that proposed new section, it stipulates that for packaged and processed foods, a minimum of 90% by dry weight of the ingredients must be of Australian origin to be able to claim 'Made from Australian Ingredients'. So the key change proposed here is for processed food. Additionally, such processed food wouldn't be able to claim 'Made in Australia'. That claim under





Senator  
Christine  
Milne.

the Act is all about where the costs of manufacturing the food have been incurred - If 51% or more of those costs have been incurred in Australia, a processed food at the moment can say 'Made in Australia' regardless of where the food was grown."

In 2009 the Council of Australian Governments (COAG) and the Australia and New Zealand Food Regulation Ministerial Council stated that former Australian Health Minister, Dr Neal Blewett AC, would lead an Independent Panel for the comprehensive Review of Food Labelling Law and Policy. Known as 'the Blewett Review', the investigation saw the 2011 release of a final report, *Labelling Logic*, with key recommendations for Country of Origin Food Labelling. Significant recommendations within the report placed emphasis on key areas including erasing public confusion over the 'Made in Australia' claim. With the needs of the industry and consumers

now substantiated through the extensive information and recommendations released, the Greens have driven the Bill in the hopes of implementing change in the food industry to erase the ambiguity surrounding food labelling.

But many would argue that there has been a strong preference from consumers to buy Australian food products for many years. The pertinent question seems to be: why has it taken until now to initiate a reform to food labelling legislation? Senator Milne acknowledges that food labelling in Australia is complex and as a result, trying to initiate reform to give Australians the information they want all too often ends up in the 'too hard basket' - or parked with the Council of Australian Governments which seems to be where complex policy problems often go to die.

"I also think that governments have been far too swayed by some vested interests arguing that Australians only care about food price; and that label changes are therefore an

unnecessary cost to business and a waste of time," says Senator Milne.

"This ignores the evidence that Australians very much do

as processed food that is made locally here, but we think it's possible and must happen. We know that if we wait, this issue will remain unresolved...this has

“ Our growers are being held over a barrel by a concentration of market power in food wholesale and retail, particularly the supermarket duopoly. ”

want to know where their food comes from, and over half say they choose local products when they can identify them to support local growers. It's a challenge to come up with labelling that clearly identifies Australian grown food, as well

been dragging on for years.”

The Greens have been criticised by some fellow parliamentarians for rushing the amendment and not

continued over page ►



consulting appropriately with the Commonwealth, with particular mention of how the legislation will affect the processing sector. However, the introduction of the Bill has been supported by leading players in Australian agribusiness including Elders Chief Executive Officer, Malcolm Jackman. Mr Jackman said the legislative improvements around Country of Origin Labelling are important for Australian food producers, and will provide consumers with the ability to make more informed choices when purchasing food. A sentiment reinforced by AUSVEG Chairman, John Brent.

“Industry and consumers alike have been calling for improvements to these laws for a number of years now. To finally see action on this issue is incredibly encouraging,” says Mr Brent.

“Consumers deserve the right to easily distinguish what country the food that they purchase has come from, so if endorsed by Parliament, these laws will represent a great win for Australian grocery buyers and food producers alike.”

Echoing the passion for the industry held by Mr Brent and many within the Australian horticulture sector, Senator Milne says we need to enact policy now to ensure a level playing field and a viable future for Australian growers: “We want to see a sustainable and thriving

Australian agricultural sector, supported by decent farm-gate prices, strong biosecurity and research and development,” says Senator Milne.

“The Greens are pushing for urgent competition policy reform to help growers get decent prices for what they produce. Our growers are being held over a barrel by a

failing our growers. We are incredibly lucky to be free of a lot of pests and diseases. All our growers want is the best available science applied to potential risks from imports, yet here we are right now locked in a battle to stop the import of New Zealand potatoes that are exposed to Zebra chip. It’s a symptom of our approach

the Government’s single-minded obsession with export to Asia as the golden goose for Australian producers means that they’re ignoring a lot of key issues that urgently need fixing to ensure we have a healthy and profitable domestic industry. Export is, of course, important but we can’t afford it to come at the expense of our own domestic fresh food producers. The fact that Australia is importing more and more fresh food when we’re a net food exporter should be sounding very loud alarm bells, but nothing is being done.”

When asked if the Bill will create a more even playing field for Australian producers where consumers can clearly differentiate between local and imported product, Senator Milne states it is fundamentally what they want to deliver.

“We are actively seeking feedback on the Bill, including any ways to improve it, because the Greens are keen to broker a real solution here. Country of Origin Labelling reform has simply taken too long, it’s time to resolve it and support Australian farmers.”

“Country of Origin Labelling reform has simply taken too long; it’s time to resolve it and support Australian farmers.”

concentration of market power in food wholesale and retail, particularly the supermarket duopoly, and the result is that growers are trapped as price takers with lower and lower farm gate prices. We urgently need to reinsert anti-price discrimination and give greater powers to the ACCC to ensure a level playing field.”

“Similarly, the current biosecurity system is flat-out

to trade - the government is so obsessed with free trade it ignores the fact that this isn’t fair trade for our growers - they are facing repeated challenges to our disease-free status, and being forced to compete with a very high dollar against imported fresh food that is produced without meeting the high environmental and labour standards our growers do.”

“We are really concerned that



For more information on Country of Origin Labelling visit:

[www.accc.gov.au](http://www.accc.gov.au)

[www.foodstandards.gov.au](http://www.foodstandards.gov.au)



# Spotlight on R&D: keeping the psyllids at bay

Understanding the connection between certain species of psyllids and different types of bacterium is a key component of a research project which is developing early warning strategies against an incursion of the Tomato-potato psyllid.



The Tomato-potato psyllid (TPP) is an insect which has caused significant damage to processing sectors across the United States (US) and New Zealand (NZ). A pest of solanaceous crops, the psyllid can transmit the bacterium *Liberibacter* causing Zebra chip disease in processing potatoes. Both insect and bacterium are, for now, absent from Australia. A research project, led by the Tasmanian Institute of Agriculture at the University of Tasmania, is investigating potato psyllid populations and the distribution of phytoplasma, a bacterium that can affect potatoes.

Learning more about the different forms of phytoplasma that exist in potato tubers and understanding whether there are any links with native psyllids has formed a key area of the project work. With research in the US and NZ hoping to understand the connection between phytoplasma, the potato psyllid and *Liberibacter*, local researchers are keeping a watchful eye on international project results as this could have related or applicable outcomes for the psyllid/bacterium connection in

Australia.

Project leader Dr Calum Wilson says the project will enable researchers and industry to monitor crops across major production regions for psyllids and provide an early warning system for TPP should it arrive.

“In New Zealand, control of the pest and disease is barely achieved and only with very heavy usage of insecticides at what most believe is an unsustainable level. Recent studies suggesting the potential of IPM approaches for the pest are promising but have yet to be validated in broad use.”

“We are gaining valuable information about native psyllids present in or around potato crops, and skilling both entomologists and industry in psyllid identification,” he says.

Recent project work has initiated a monitoring program across key potato production regions in south-east Australia over the past several growing seasons. This area has been chosen as there are concerns that the foreign psyllid could be carried on strong wind currents across the Tasman from NZ. The installation of a network of weekly and fortnightly insect traps has shown that

the presence of diverse psyllid species within potato crops is at low levels. These include species closely related to, but distinct from the potato psyllid.

In the 2011/12 season almost 3,500 psyllids were trapped in around 1,300 sticky traps in Tasmania, Victoria and South Australia. While a range of species were found, importantly, none of these were the TPP. This has provided researchers with information to collate a valuable database of native psyllids and to train entomologists in psyllid identification, which will be critical for an early response if TPP ever made its way to Australian shores.

“The project will consolidate data from the previous trapping seasons. We will have a comprehensive picture of native psyllids present in or around potato crops and we hope we can again confirm the absence of the Tomato-potato psyllid within trapping areas,” Dr Wilson says.

Training in species identification and the use of traps has been conducted for entomology staff and field officers within processing companies. Field officers from

processing companies and other members of the industry were invited to attend two psyllid identification and information workshops. These were held in Ulverstone, Tasmania and in Ballarat, Victoria.

It is anticipated that a better understanding of the native psyllids in key growing regions throughout Australia will aid in an efficient detection strategy and response plans should an incursion of TPP occur.

The research is funded by HAL through Voluntary Contributions from Simplot Australia, McCain Foods Australia, Snack Brands Australia, Smiths SnackFood Company and the Tasmanian Seed Certification Scheme, with matched funds from the Australian Government.



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## Cradle coast of production

Managing a diversified business across several properties, Matt Ryan has experienced the hardships that come along with a career in the horticulture industry. An advocate for Tasmanian growers, he is still optimistic about opportunities on the horizon for Australian producers.

Tasmania is often described as the cradle of Australia's rich and dynamic history. Renowned for its agricultural production, the north-coast finds one of the key potato growing and processing regions in Australia. A short scenic drive from Port Sorell, once the largest town on Tasmania's north coast, finds potato and vegetable grower Matt Ryan. Matt, alongside his wife Tricia and their three daughters, reside in Thirlstane amongst the rolling green hills and rich deep soils which encircle their diverse property.

A nominated Director of the state's peak agricultural body, the Tasmanian Farmers and Graziers Association (TFGA), Matt together with Tricia - whose family has been growing in the Scottsdale region for three

generations - grow potatoes, onions, poppies, pyrethrum, cauliflower, broccoli, seed canola and cereals. Managing around 550 hectares over three farms, and additionally raising livestock including sheep, beef cattle and a chicken (broiler) production unit, the Ryans also run a transport contract business. Matt acknowledges that although he himself is not a generational vegetable grower, his family has in fact farmed in the region for over 150 years.

"The original family farm was bought in 1838 for £300 as a base for wagons transporting bread around Launceston. Two decades later, it became a dairy farm until the land was sold off in 1988. My mother's family were farmers in Tasmania for generations," says Matt.

As an advocate for the state's vegetable and potato growers, he provides a strong voice to represent the Tasmanian industry and the issues it faces. Seeing the pressures and challenges faced by his fellow growers and admittedly through his own hardships, Matt holds strong opinions on the current state of the horticulture industry. Commenting on the trend towards fixed prices for produce by the major supermarkets, Matt says: "It is a relentless pressure and has been lowering growers' margins and making things pretty tough for the whole industry."

"We are under pressure to get the prices down while our input costs still increase, so it's a real challenge. Especially in the industry down here in Tasmania,

the fresh market and processing sectors are under a fair bit of pressure, I think the fresh market is probably going to sort itself out quicker than the processing industry is. Basically there is very little value at the bottom end of the supply chain for us, which is a big challenge."

Matt believes that consumers have been conditioned so that when they purchase foods the main consideration is now price and not value for the product that has been produced under conditions that are expected here in Australia.

"I think that's the biggest threat to our industry - consumers in Australia expect high standards of food safety, environmental stewardship, industrial relations policies which look after our employees in the





Photographs by Chris Crerar.



best possible ways, [good] pay rates, superannuation, workers [compensation], OH&S issues - but they are conditioned now to be focused only on low prices," he says.

"We are being bombarded by products and by imports coming in from other countries that are either undermining our own products because they are from subsidised market systems such as Belgium or the Netherlands, or they are processed vegetables like broccoli, cauliflower, peas and beans from places like China, that are grown under conditions that nobody here in Australia would accept under any circumstances."

"Think of the example of KFC, they have got on their boxes that their chips are cooked in 100% Australian canola oil and they are supporting Australian farmers. That is fantastic, but what about the chips? They are probably coming from Canada or somewhere like that. Why don't the spuds matter? We need to be telling that story. Maybe we can use social media as a part of doing that. Maybe we can have an influence... [we could] put out a message that just prompts the consumer to say 'okay well that's great about the Australian canola oil, but...where are the spuds from?'"

As a grower for the processed industry, Matt says the need for change to Country of Origin Labelling is dire, if not only to give consumers the information they should be getting in regards to where their food comes from. He highlights the importance of the recent introduction of a Parliamentary Bill to reform food labelling: "I think Country

of Origin Labelling is a debate that has been politicised and toed around for too long and I welcome that the Greens are bringing a reform forward."

"I would like to think that they would get support from the other major parties, but of course the issue will just be politicised. The issue of Country of Origin Labelling has been a big one for the processing industry and growers within the processing industry to ensure that

Selling the story of the grower to future young growers is one way in which we might better promote the opportunities available in the industry and perhaps change the attitudes surrounding growers in this country says Matt.

"We have got to create value at the bottom end. There aren't a lot of young people coming into the industry at the moment but I think the tide will turn, but I think it is a sad indictment really on

vegetable production, Matt still describes his occupation as the best in the world and this is something which he believes must be communicated to young people: "Your job changes on a daily and a weekly basis, as the season changes your job changes. That's probably the best thing about it. We need to showcase the great parts of this job as well."

Discussing pertinent industry issues with key decision makers forms an integral component of Matt's role as a representative of the industry. He recently met with the Federal Minister for Agriculture, Fisheries and Forestry, the Honourable Joe Ludwig, to bring attention to the current issues facing growers and the challenges to be tackled on the horizon.

"I don't think there is a silver bullet issue, but I think one of the things that government needs to consider is a change in policy," Matt says.

"We have been a free trading nation for more than 30 years now and it has completely changed our economic structure in this country. We have lost most of our manufacturing base now and we've become a service based economy - we are also at the point where our food industry is under enormous threat."

According to Matt, competing with products that are either subsidised or produced under conditions that Australian consumers wouldn't accept is a real battle for the industry. This will particularly be the case if overseas products flooded the

“ KFC have got on their boxes that their chips are cooked in 100% Australian canola oil and they are supporting Australian farmers. That is fantastic but what about the chips? ”

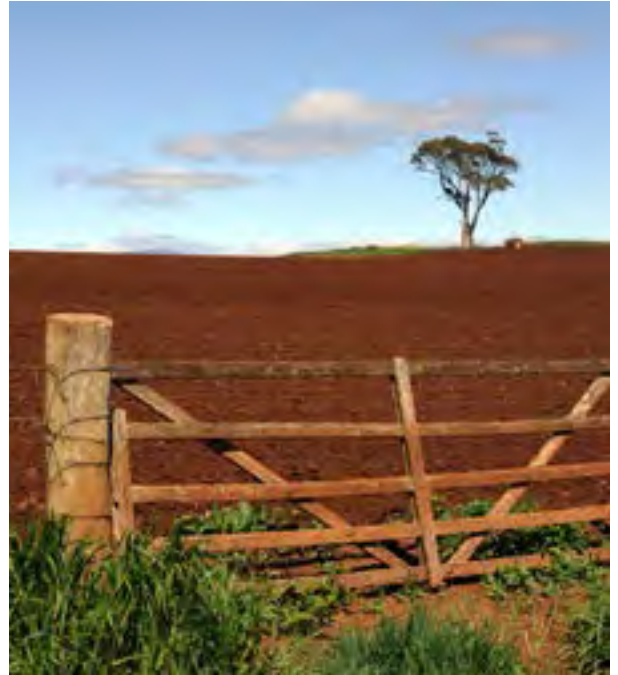
consumers get clarity and truth in labelling, and I think that it is really important that they do have reform. Unfortunately I don't have a lot of faith that they're going to get the support for it and I think it's sorely needed."

Similarly, Matt also stresses the importance of attracting more young people into the horticulture industry and in particular the potato sectors.

where we are at. We don't value what food producers really do for society, it's almost like it's taken for granted. I think that needs to be overcome and to encourage people into the industry we need to be able to show them that there's a future and that there's a strong career path moving forward."

Despite the pressures that come alongside a job in

*continued over page* ►



Australian market, undermining the legitimate position of our own industries.

“It’s going to be a sad situation in Australia if our food processing sector does completely disappear and we can’t even feed ourselves. We need to form some policy around what’s going to be appropriate to make sure that industries survive through a period where the Australian dollar is higher,” he says.

Representation of growers by industry bodies or grower groups can at times be a contentious topic of discussion among members of the industry. Some growers have suggested, for instance, that not enough is being done to tackle the day to day obstacles facing those within the sector. In response, Matt says that grower organisations or groups need the support of everybody in the industry, rather than just a select few.

“Rather than throwing stones, what we need is more people to be pro-active and be part of the process, giving support and giving some of their time,

then they will find that those organisations will become as robust as they can possibly be,” he says.

“You see farm organisations in places like France and Germany and places like that, they are really strong and really well supported and they are really effective. Because they have got the support of the farmers behind them and the farmers themselves are pro-active in being part of the process...and working hard to try and solve their own issues.”

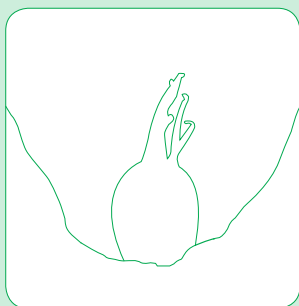
With almost a century and a half of farming in his blood, Matt’s commitment to ensuring that agriculture in Australia can continue to remain viable and competitive into the future is evident.

“When you think about it, who is it that is going to speak for growers? It’s not going to be the nurses’ union; it’s not going to be the teachers’ union or the police union. It is going to be the farmer organisations - it needs to be supported.”

“Consumers have been conditioned so that when they purchase they only consider price and they don’t really value the product that’s been produced under the conditions that we all expect here in Australia.”



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Photographs courtesy of Brenda Coutts.

# Potato virus Y: determining the damage

A new research project is developing management strategies and investigating factors that increase levels of Potato virus Y in seed potato crops.

Potato virus Y (PVY) affects seed potatoes, which can result in tuber yield and quality losses, while also inhibiting export opportunities. With multiple strains, several avenues of transmission and varying symptoms, PVY can pose considerable threat and damage to a potato crop. Western Australia (WA) was previously thought to be free from PVY infection, however, routine testing of potato crops

as part of the Western Australian potato certification scheme has found an increasing number of PVY detections across some growing regions in WA. To ensure efficient management strategies are in place and in an effort to reduce the incidence of PVY in seed potatoes in WA, a collaborative research project was initiated. Led by Plant Virologist Brenda Coutts, from the Department of Agriculture and Food Western Australia

(DAFWA), the project aims to gain a better understanding of the causes which lead to increases in PVY levels in seed potato crops. Other areas of research which the project will investigate include determining where PVY survives between growing seasons, identifying PVY resistant and susceptible cultivars, ascertaining how the virus is spread and gaining a better understanding of the molecular properties of WA PVY

isolates.

“WA had been considered free of PVY up until we discovered more detections in 2009, so it was a concern for our export markets, but also for our seed potato producers,” says Ms Coutts.

“I wouldn’t say that the actual incidence of PVY has increased, but we are finding it in more locations. It is a concern to a lot of growers and also a concern for how it may affect a lot of



our exports which forms a key component for the industry in WA.”

“We hope to get a better understanding of why we are finding more PVY in these crops and some of the management strategies that can be incorporated. If we can go out into a crop and find there is a particular weed species in an area that's harbouring PVY, then growers can obviously get rid of those weeds because they know that they will be a source for the next year. If it is different varieties which may be more susceptible, it might mean changing some of the varieties that growers use. We are also looking at if it is spread by contact. If that is the case then growers may need to review certain strategies or on-farm practices to help contain it.”

Identifying a PVY infection can in some cases prove difficult, with symptoms similar to that of other viruses. Depending on the variety grown, there can be irregular spots or patches of colour, the leaves can be quite stunted and in some cases the plants will actually die.

Ms Coutts says through the research, she is expecting to find solanaceous weeds that are infected with PVY, which could consequently cause crop infection. Identifying the level of incidence in those weeds is one of the main aims of the project work.

“Night Shade seems to be one of the highly susceptible weed species out there. We will soon be conducting quite a big survey of weed species around areas that we have had PVY detections in crops in the past.”

“We are hoping to potentially test up to 100 ware crops from the different growing areas and see what levels of PVY there are. We have tested a couple of growing areas and haven't identified PVY in those ware crops, so we are really happy with that result so far.”

In some cases, potato varieties may display increased susceptibility to viruses when compared with other cultivars. To better understand the resistance and susceptibilities to PVY, the project is utilising glasshouses to examine different potato varieties.

“It's quite a big glasshouse project that we are doing. We are screening the most common potato varieties that we grow in WA against these isolates, looking at the reactions on the primary plant, if the plants



PVY infected King Edward.



Screening potato varieties with PVY isolates in glasshouse.



Glasshouse screening of potato varieties.



Blackberry Night Shade symptomless infection with PVY.

become infected and what effect this has on the tubers as well. We just started that work here in south Perth in the glasshouses so it's going to take another few months before we get the results,” says Ms Coutts.

Transmission of the virus is also an area which the project has been investigating, with machinery already understood to be an avenue through which spread of the virus can occur. Through initial stages of the project work, it is understood that the virus can also spread from infected plants to non-infected plants by direct contact, though this is to be confirmed through further testing.

“We have been investigating instances where growers have an infected plant growing in a paddock, with plants growing quite close together,” says Ms Coutts.

“The research has examined movement of the plants, looking at how machinery moves along between the rows in a crop and if the virus is spread on machinery tyres as plants get crushed, such as a pivot irrigator or tractors moving through. In the glasshouse study we have also been rubbing infected plants on healthy plants to identify if the spread will occur through that type of contact and we are finding that the virus can spread that way. So essentially it is quite stable, though we do need to do some more experiments to confirm that.”

The project will culminate mid-2013. It is expected that through the collaborative research work a better understanding of the spread and incidence of PVY will be developed, as well as efficient management techniques.

## THE BOTTOM LINE

- A new research project is investigating factors that increase levels of Potato virus Y in seed potato crops.
- The project is examining the multiple avenues of transmission of the virus and the effects they have on the plant and tubers.
- It is anticipated that the results of the research will aid in the development of management strategies for improved control of PVY in potatoes.



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# Research and development for the processing industry

The Australian Potato Research Program Phase 2 is set to conclude its third year of operation in coming months. Tasked with tackling some of the major diseases of the potato, several research projects are giving outcomes for growers and the industry.

The second phase of the Australian Potato Research Program (APRP2) for processing potatoes commenced in March 2010, consisting of five R&D sub-projects focused on an overall theme of soil and plant health. The program's main areas of research are investigating diseases including Common scab, Powdery

scab and Rhizoctonia, with a secondary focus on the Tomato-potato psyllid, Bacterial wilt and Verticillium.

With innovative research into what is a prominent issue right now - the Tomato-potato psyllid and Zebra chip disease - a collaborative research project has recently culminated with some interesting outcomes

relating to integrated pest management (IPM) systems. Dr Paul Horne and Jessica Page, of IPM Technologies Pty Ltd, designed and applied an IPM approach for the control of the Tomato-potato psyllid in New Zealand. The psyllid, in combination with the bacterium *Liberibacter*, has caused the devastating Zebra chip disease

throughout New Zealand and across several key growing regions in the United States. The IPM strategy combines biological, cultural and chemical practices, capitalising on the predatory activity of several species of the insect that eat the psyllid. These species were identified in the initial stages of the project.



Dr Horne says: "We are confident that the work completed in New Zealand can be replicated in Australia should the Tomato-potato psyllid arrive."

"Predators of the psyllid are also found in Australia and most of the soft chemicals needed to control the psyllid are already registered or in the process of being registered for potato production. The results from our project mean that if the psyllid should arrive we may not have to rely on the heavy chemical regime that the New Zealand growers used when it arrived there, which is costly and could destroy the biological control of a range of other pests, such as potato moth, aphids and thrips, that we also have to deal with," he says.

In another of the APRP2 projects, work conducted by the Tasmanian Institute of Agriculture (TIA) has used DNA diagnostic technologies, developed by the South Australian Research and

Development Institute (SARDI), to test how well the visual seed certification system in Tasmania identifies tubers carrying diseases. The results have shown that the current certification systems are unlikely to be enhanced by DNA testing technologies.

Dr Robert Tegg of TIA says: "The amount of DNA from a disease-causing organism, which is the inoculum on a tuber, related very well to the visual certification grades for Common scab, Powdery scab, Black scurf and Root-knot nematode, which gives us a high level of confidence that our current system is doing a good job with those diseases."

"We hope to spend the next two years enhancing our understanding of the role that seed tuber inoculum has on resulting disease. So far it looks as though tuber inoculum might be important for some diseases, like Black scurf caused by *Rhizoctonia*, but not others," says Dr Tegg.

The findings of the TIA project will be combined with those of a separate SARDI project that is validating DNA tests and studying the effect of soil-borne inoculum in the development of disease. Potato growers will be able to make planting decisions and to manage crops knowing the risk of various diseases occurring.

SARDI is now running pre-plant tests for Powdery scab, Root-knot nematode and Black dot with technical support and evaluation of the results as part of a pre-commercialisation phase. Project leader Dr Kathy Ophel Keller says: "We are excited to be rolling out the tests to growers in the next year. We are finalising a manual for advisors that will be available both in hard copy and also on iPads or other tablet devices. We will be running training for advisors in 2013 to assist them in interpreting soil test results for growers."

"Growers interested in testing their soils for Powdery scab,

Root-knot nematode and Black dot will be able to access the testing service through on-farm advisors before planting in 2013," she says.

After almost three years, APRP2, which is funded by HAL using the National Potato Levy, Voluntary Contributions and matched funds from the Australian Government, is now coming to the stage where some practical results are reaching the industry. The focus for the final two years of the program will be to convert the research work into clear and applicable practices for industry.



For more information please contact:

Scott Williams, SED Advisory

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Email: [scottw@sedadvisory.com.au](mailto:scottw@sedadvisory.com.au)

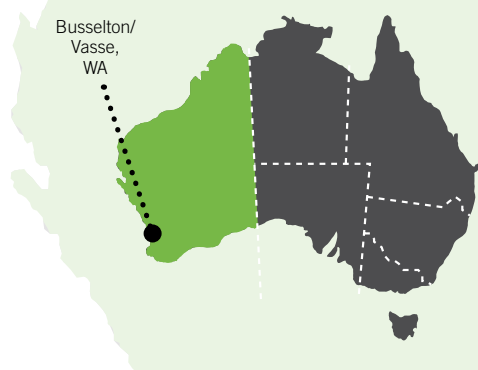
Project: PT09039





## An R&D day in the fields

R&D field day events provide growers with a valuable opportunity to learn about current research activities and outcomes in a practical and accessible environment. In this edition of *Potatoes Australia*, the Potato Industry Extension Program highlights two recent potato industry field day events held in Western Australia and Queensland.



### Busselton/Vasse, Western Australia

In October 2012, a field day event was held at the Vasse Research Station in Busselton, Western Australia (WA). The event was organised by a number of WA potato industry organisations and stakeholders, including the Department of Agriculture and Food Western Australia (DAFWA), AgWest Plant Laboratories and the Western Australia Seed Potato Producers (WASPP). The State Industry Body, Potatoes WA, also took part. The event enjoyed a strong turnout, with up to 70 potato growers, agronomists, researchers and other members of the WA potato industry travelling some distance to take part. Attendees listened to a series of presentations on potato-related pests,

viruses and diseases, and took part in several practical activities that aimed to show growers how to more effectively identify and manage these kinds of threats in their crops. All sectors of the industry were well represented at the event, including many seed potato growers.

Amongst the researchers that presented on the day, DAFWA entomologist Stewart Leirmonth, spoke specifically on seed potato related issues. In his presentation, 'Integrated Pest Management (IPM) - virus vectors, tuber pests and canopy feeders', Mr Leirmonth provided attendees with some valuable information on effective and practical measures that seed potato growers can implement in their day-to-day activities, to ensure that harmful crop viruses and pests can be managed more easily and with minimal financial burden. Mr Leirmonth discussed the strong need for growers to be able to correctly identify key viruses and pests affecting seed potato crops. He encouraged growers to access the wide range of information available on identification, including material developed by DAFWA and the Victorian Department of Primary Industries (DPI VIC).

Growers at the WA field day event were also reminded that monitoring crops consistently and on a regular basis is vital. In his presentation, Mr Leirmonth encouraged growers to set aside at least 1-2 hours each week to inspect their crops

for the presence of pests, viruses and diseases. He said that it is important that growers act preventatively on these issues, rather than reactively.

Other topics discussed at the WA field day event by the DAFWA researchers included the management of Potato virus Y (PVY) and Potato Leaf Roll Virus (PLRV), and the seed certification schemes in WA.

Plant Pathologist, Andrew Taylor gave a presentation on managing potato viruses and outlined a current research project on PVY that is being led by DAFWA Plant Virologist Brenda Coutts. This valuable work is featured in the R&D coverage on page 24 of this edition of *Potatoes Australia*.

As part of the Potato Industry Extension Program's involvement in the event, Senior Researcher at the South Australian Research and Development Institute (SARDI), Michael Rettke, also attended to speak about the work on the assessment of soil borne pathogens and the development of a DNA testing service. Growers were very interested in this research work and its findings to date.

*PT09023 - Testing for soil borne pathogens* is part of the Australian Potato Research Program Phase 2 (APRP2) that is currently being undertaken within the Processed Potato sector.





Potato growers taking in the information on R&D outcomes.



**Atherton, Queensland**

In November 2012 the Potato Industry Extension Program held a field day event in Atherton, Queensland (QLD), hosted by leading potato growers David and Jayne Nix. David Nix is also a member of the Fresh Potato Industry Advisory Committee (IAC). The field day event was attended by a number of local growers, agronomists, researchers and other key members of the industry, despite it being a busy period for growers in the Atherton Tablelands region. Joining the event to present on a range

of R&D projects was the 2012 Researcher of the Year Award winner, Dr Calum Wilson from the Tasmanian Institute of Agriculture. Dr Wilson is currently involved in industry-funded R&D projects PT09019 Testing tuber-borne pathogens (APRP2) and PT10001 Native psyllid populations and the distribution of *Candidatus phytoplasma australiense*.

**In his presentation, Dr Wilson discussed:**

- The development of disease resistant potatoes.
- Tomato-potato psyllid monitoring.
- Potato viruses and their management.
- Tuber-borne pathogens.
- General issues relating to soil testing for pathogens.

Dr Wilson then led a question and answer (Q&A) session, giving attendees the chance to ask questions on the range of issues he covered. The Q&A session proved a valuable opportunity for growers to better understand Dr Wilson's research, and how the outcomes of this work can be applied on-farm. Attendees showed

particular interest in the dynamics of the Tomato-potato psyllid and the development of the Zebra chip disease, which is not currently present in Australia.

Also attending the Atherton field day event were several local researchers from the Queensland Department of Agriculture, Fisheries and Forestry (DAFF QLD). In a presentation to attendees, DAFF QLD Plant Pathologist Nandita Pathania, outlined a program she has been involved with through the Australian Centre for International Agricultural Research (ACIAR), which is investigating integrated strategies for the management of Bacterial wilt (BW) and other solanaceous crops in the Philippines and Australia. Ms Pathania is working with regional potato related issues through this project.

**i** For more information on future Potato Industry Extension Program workshops and events please contact:  
**AUSVEG**  
 Phone: (03) 9822 0388  
 Email: [info@ausveg.com.au](mailto:info@ausveg.com.au)  
 Project: PT11004



## Ask the industry



with Scott Mathew

Understanding water rates, Delta T and tackling Late blight infections in potato crops. Technical Services Lead at Syngenta, Scott Mathew, answers your questions in this edition of Ask the industry.



### Question: What water rate should I use when spraying my potato crop?

The correct spray volume required will vary according to the product being used, the chosen target site and the density of the crop. In general, protectant and translaminar fungicide or insecticides must be spread evenly across the target surface for best results and therefore require higher spray volumes. Conversely, systemic (or xylem mobile) fungicides and insecticides may be applied using slightly lower spray volumes, because their active ingredients are absorbed by the plant and move within the plant tissue - providing Delta T conditions are followed.

Always select a water volume that is appropriate to the crops being sprayed, target area and crop protection product selected. The application of higher water volumes than required to achieve satisfactory coverage may result in the active ingredient being washed off the target area, reducing efficacy. Conversely, low application rates may result in poor coverage or the droplet drying too quickly, reducing uptake.

### Question: You have mentioned Delta T previously, what exactly is Delta T and how is it measured?

Delta T is calculated by subtracting the wet bulb temperature from the dry bulb temperature and is a measure that allows you to capture the combined effects that temperature and humidity have on the evaporation rate and droplet lifetime of your spray application. As the temperature increases and humidity decreases, the spray droplets will evaporate at a great rate, reducing the ability of the droplets to reach the target, spread across the target and penetrate in to the target.

If you are able to measure the

temperature and relative humidity, you can determine whether spraying conditions are suitable using the table below. When applying pesticides, Delta T should ideally be between 2°C and 8°C.

### Question: Why do curative fungicides for the control of Late blight often suggest two consecutive applications 7 to 10 days apart?

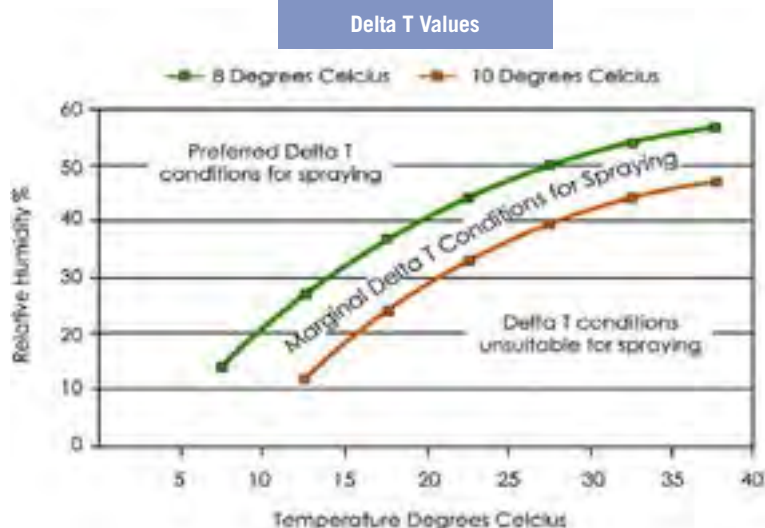
When you apply a curative fungicide product to a crop, it is usually under high disease pressure situations when your protectant fungicide program has failed to stop a disease infection.

In these situations a significant amount of active ingredient applied (in this case Metalaxyl) is used to fight the disease infection that is attacking the leaf tissue, thus reducing the forward protection period to perhaps 5-7 days. A second application under high disease pressure situations is required to top up the reservoir of active ingredient inside the leaf and extend the forward protection period out to 10-14 days.

If you had applied the curative fungicide product prior to the disease infection occurring, the forward protection may last closer to 10 days. Maximum disease protection against an infection of Late blight is still achieved through the active ingredient, which is not exhausted by fighting an existing infection.

# 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](http://www.syngenta.com.au) or email *Potatoes Australia*: [info@ausveg.com.au](mailto:info@ausveg.com.au). Please note that your questions may be published.





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with Rohan Davies

## How can I get more from my nitrogen?

Technical Agronomist with Incitec Pivot Fertilisers, Rohan Davies, shares the findings from a recent nitrogen trial held in the Atherton Tablelands in Queensland.

Matching nitrogen supply to the demands of a crop was the focus of a trial on potatoes in the Atherton Tablelands last year. Conducted for Incitec Pivot Fertilisers by Biotechnical Field Services on Sebago potatoes, the trial compared nitrogen fertiliser treated with ENTEC®, with untreated nitrogen fertiliser. In the trial, 150 kg/ha of nitrogen was applied in a basal application and 38 kg/ha of nitrogen was topdressed.

It was thought that using the treatment on the basal nitrogen fertiliser could help better match nitrogen supply to the demands of the crop. ENTEC® works

by disabling the nitrifying bacteria in the soil for a period of time, delaying the conversion of ammonium to nitrate nitrogen. This delay allows the plant to access ammonium nitrogen at any time, while mitigating the potential for denitrification and leaching losses.

Potato crops require very little nitrogen in their early stages of development, drawing heavily from their reserves. During the first 37 days of growth, potato crops only require approximately 50 kg/ha of nitrogen. Unfortunately, this is also the best opportunity to get fertiliser placed near the roots of the plant. Growers will typically apply up to 70% of the crop's fertiliser program at this stage.

In this trial, 150 kg/ha of nitrogen was applied at planting, which is well in excess of the amount required by the plants. This basal application of nitrogen, typically ammonium nitrogen, goes through the nitrification process and is transformed to nitrate nitrogen, which is then susceptible to leaching losses. Nitrification to nitrate nitrogen can occur in as little as two weeks under warm soil conditions.<sup>1</sup>

Typically, potato crops draw nutrients and water from the top 30 cm of the soil for the majority of their growing period, and if we assume that 1 mm of applied net water will take nitrate nitrogen 1 cm down the soil profile, we can plot the potential movement of nitrogen as shown in Figure 1. The amount of water applied in the trial crop became a significant leaching threat towards the end of the initial period (see the red circle).

This transition from the initial to mid season period was a critical time, coming into a period of rapid nitrogen uptake for potato crops. Over the next 91 days,

approximately 320 kg/ha of nitrogen was required by the crop. Under these conditions, we could test whether using treated nitrogen fertiliser would help reduce losses of nitrate nitrogen and allow enough nitrogen from the applied fertiliser to be available to the crop.

The advantages of protecting nitrogen from leaching losses are highlighted when comparing the yield results from Treatments 1 and 2, or Treatments 3 and 4. The total converted yield for the Grower Standard treatment (35 t/ha) and the treated equivalent of this practice (39.2 t/ha) demonstrates the yield potential of protecting against losses of nitrate nitrogen from the potato plant root zone.

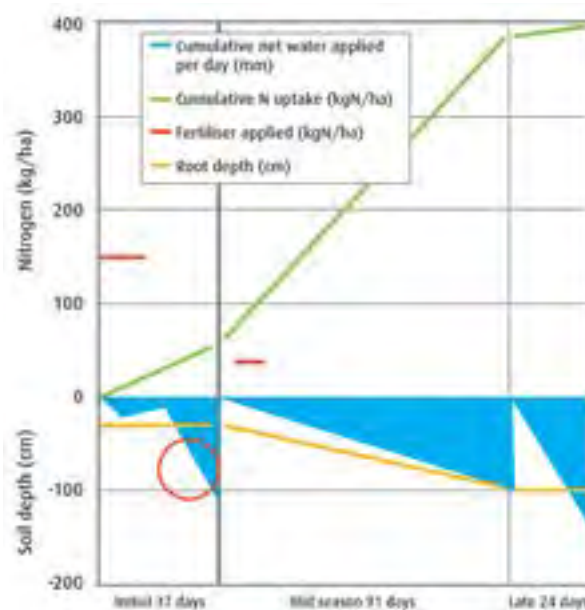
### Take home messages

- Always ensure you understand your crop's specific water requirements and adapt to rainfall events by reducing your irrigation accordingly to prevent leaching losses.
- If you suspect leaching losses are likely to be significant, consider using a treated nitrogen fertiliser as a preventive measure.

(The full trial report is available on the Agronomy Community website or [www.incitecpivotfertilisers.com.au/agronomy-news](http://www.incitecpivotfertilisers.com.au/agronomy-news).)

<sup>1</sup> Chen, D. Suter, H. et al (2008) *Australian Journal of Soil Research*, Vol 46, pp 289 - 301.

Figure 1: Potential leaching analysis versus nitrogen requirements as separated by growth stage of the Sebago crop, Atherton Tableland, 2011.



Source: Incitec Pivot Fertilisers, 2012.

**Q** Please send your soil nutrition questions to *Potatoes Australia*. Email: [info@ausveg.com.au](mailto:info@ausveg.com.au) Phone: (03) 9822 0388



# Pioneering health benefits in yellow-fleshed spuds



New research in the United States is looking at ways of increasing beneficial carotenoid levels to improve the health benefits of the potato.

The research, conducted by the United States Department of Agriculture (USDA), sought to determine whether it was possible to cross-breed wild varieties of potatoes with cultivated types, in an effort to develop high-carotenoid potatoes. Carotenoids are organic pigments that can be found in plants and can boast a wide range of health benefits. Several carotenoids have vitamin A benefits and others can also act as antioxidants. Researchers found that wild potatoes with intense yellow flesh had 23 times more beneficial carotenoids than white-flesh potatoes. Plant geneticist Kathy Haynes and nutritionist Beverly Clevidence from the Agricultural Research Service, a branch of the USDA, conducted the research.

Several carotenoids involved include neoxanthin,

antheraxanthin, violaxanthin, lutein, and zeaxanthin. Both lutein and zeaxanthin are found in high concentration in dark-green leafy vegetables like spinach and kale; however these vegetables are not eaten in large portions by American consumers.

Ms Haynes says that if the research can elevate these levels in potatoes, which are a popular food choice by American consumers, then these new varieties could have significant effects on consumer health and diet. Lutein and zeaxanthin are also of importance for eye health. It is understood that they protect against age-related macular degeneration and perhaps against the formation of cataracts.

Three diploid clones with dark yellow-flesh, moderate yellow-flesh and white-cream-

flesh were crossed with a light yellow-fleshed advanced breeding selection to determine the generational presence of carotenoid content. Twenty-six to 43 progeny from these families were grown in a replicated field experiment in Presque Isle in Maine, United States, for two years. After harvest, carotenoids were extracted and quantified by high-performance liquid chromatography (a technique used to separate a mixture of compounds) in 13 to 14 randomly selected clones from each family.

Researchers found that the cross-bred cultivars had carotenoid levels that were two to three times higher than those of the popular Yukon Gold yellow-fleshed potato variety. Results showed that selection for high-carotenoid characteristics can be derived

from within any family with at least one yellow-fleshed parent.

The findings, published in the *Journal of the American Society for Horticultural Science*, have shed some light on the innovative processes through which researchers are now scientifically able to introduce improvements to staple diet items.

**Source:** Sharon Durham, ARS. 'Fruits and Veggies for Now and in the Future.' *Agricultural Research Magazine*. October 2012 - Vol. 60, No. 9.

Kathleen G. Haynes, Beverly A. Clevidence, David Rao and Bryan T. Vinyard. 'Inheritance of Carotenoid Content in Tetraploid x Diploid Potato Crosses.' *Journal of the American Society for Horticultural Science*, July 2011 vol. 136 no. 4 265-272.

# CALENDAR of events



**9-11 January 2013**

## Potato Expo 2013

**Where:** Las Vegas, Nevada, US

**What:** The largest potato conference in North America, organised by the National Potato Council, brings together the entire potato industry of the United States and beyond and includes an impressive trade show. Delegates can network with key decision makers and international industry leaders, and learn about the latest trends and innovations in the industry and ways to grow your business.

**Further information:**

[www.potato-expo.com](http://www.potato-expo.com)

**30 May - 1 June 2013**

## AUSVEG National Convention, Trade Show and Awards for Excellence 2013

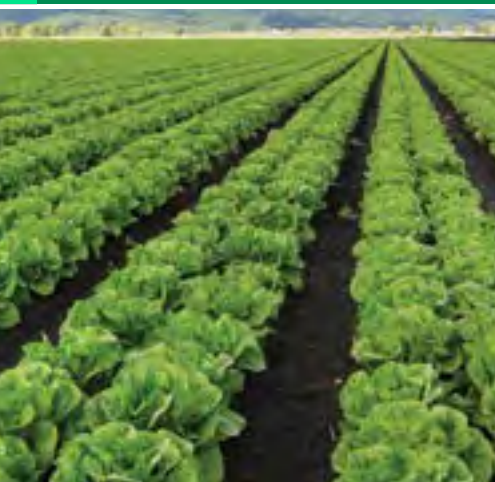
**Where:** Gold Coast, Queensland

**What:** Now the biggest event of its kind in the Australian horticulture industry, the AUSVEG National Convention showcases speaker sessions, exhilarating entertainment and an impressive trade show. To be held at Jupiters Gold Coast, the event will provide delegates with an opportunity to forge relationships with key members of the industry, supply chain, researchers and vegetable and potato growers.

**Further information:**

AUSVEG (03) 9822 0388  
or [convention@ausveg.com.au](mailto:convention@ausveg.com.au)

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# NOMINATIONS


2013 AUSVEG National Awards for Excellence

Now  
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The 2013 AUSVEG National Awards for Excellence will be held on Saturday, 1 June at Jupiters Gold Coast and will highlight the outstanding achievements of our industry's most successful growers, researchers and businesses across the supply chain. This event is set to be a highlight of the highly anticipated 2013 AUSVEG National Convention.

Nominations are being sought in the following categories:

## Grower of the Year

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## Industry Impact Award

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## Researcher of the Year

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## Industry Recognition Award

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## Environmental Award

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## Productivity Partner Award

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## Rising Star of the Year

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New  
Awards

Trade Display of the Year Award (Multi-booth)\*

Trade Display of the Year Award (Single-booth)\*

There will be two new award categories at the 2013 AUSVEG National Awards for Excellence. Exhibitors will be judged on the appearance, creativity and interactivity of their trade display.

\*The Trade Display of the Year Awards are **not open for nomination**.

*All exhibitors are deemed entrants for Trade Display of the Year Awards.*

For full award nominee criteria or to nominate please contact AUSVEG

Tel: (03) 9822 0388 Fax: (03) 9822 0688 Email: [convention@ausveg.com.au](mailto:convention@ausveg.com.au) Website: [www.ausveg.com.au](http://www.ausveg.com.au)

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