

# potatoes

## australia

April/May 2015

### Peter Cooper

Young grower

**Blair Richardson**  
U.S. expert to speak  
at 2015 National  
Horticulture  
Convention

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# Contents

April/May 2015

## Regulars

- 5 Chairman & CEO messages
- 7 Editorial

## Features

- 16 Potatoes and dairy a successful mix for Tony Trigg
- 20 Leading light of U.S. horticulture to share industry insights
- 28 Q&A Young grower profile: Peter Cooper

## Industry update

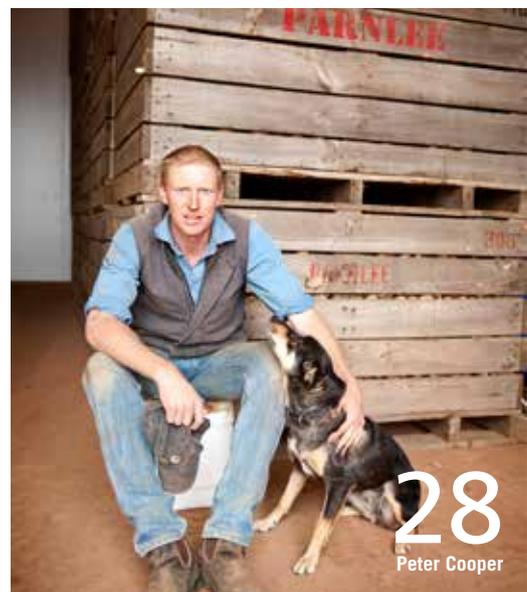
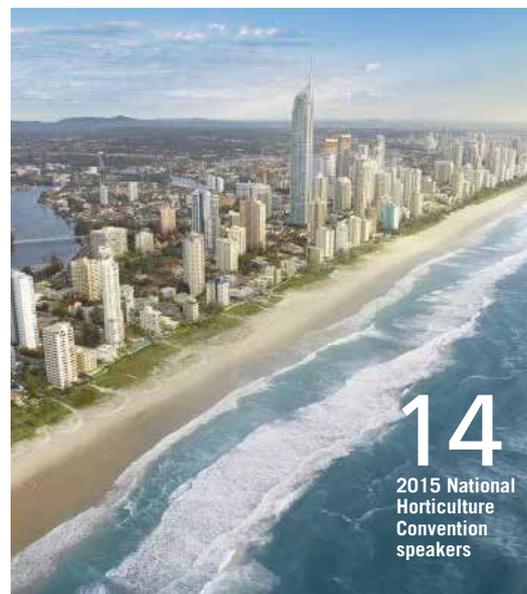
- 8 Growers invited to identify key potato research priorities
- 12 Sign up to have your say in HIA
- 25 U.S. growers and officials rub shoulders at potato event
- 27 Ask the industry
- 34 Young Potato People

## News

- 14 Sizzling speaker line-up for 2015 National Horticulture Convention
- 15 AUSVEG welcomes new Board members
- 33 A note from the CEO

## R&D

- 10 PIEP celebrates spud success at Crookwell Potato Festival
- 18 The Front Line: Keeping seed clean for future generations
- 22 Using precision agriculture tools to understand potato yield variability
- 24 Putting the spotlight on potato export markets
- 26 Potato storage: Avoiding the onset of disease
- 30 Potato Tracker: Aussies still love the humble spud
- 32 A recap on the key findings in Brown fleck research



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## AUSVEG Chairman and CEO messages



## Geoff Moar

AUSVEG Chairman

AUSVEG is proud of its ongoing work representing the interests of Australia's vegetable and potato growers. Our ability to continue achieving this goal has recently received a significant boost through new members who have joined the AUSVEG Board of Directors.

During our first full Board meeting of 2015, we were pleased to officially acknowledge and welcome Bill Bulmer from Victoria, Matt Hood from Queensland, Jonathan Shaw from the Northern Territory and Michael Nixon from Western Australia as new AUSVEG Directors. These growers and respected members of the industry will join their interstate colleagues and existing Directors, David Addison from Tasmania, Danny De Ieso from South Australia and myself from New South Wales. Our Skills-Based Director Geoff Knuckey will also work alongside recent recruit Simon Bolles, an expert in the financial services sector.

Given the diverse array of talent, growing expertise and business sense at its disposal, I am confident that the AUSVEG Board is now in an even stronger position to lead the nation's growers through the challenges that lie ahead.

At the moment, one such challenge for potato growers is ensuring the future direction of R&D remains relevant to the industry, as Horticulture Innovation Australia Limited (HIA) continues its transition to a grower-owned body. In promising news, HIA has begun seeking feedback on its proposed R&D investment priorities across the fresh and processing potato sectors through a recent Potato Research Priorities Meeting.

I was fortunate enough to attend this meeting, which provided a review of important R&D projects that have been conducted in the past, and canvassed directions for future research. I encourage all growers to join the open discussion with HIA to ensure that upcoming research projects address the issues that matter most to them.

As our industry continues to innovate and look to the future, it is also important to recognise the essential role that potato growers play within their local communities. Those all-important contributions were recently highlighted through the runaway success of two potato festivals that attracted thousands of people to the potato hubs of Crookwell in New South Wales and Thorpdale in Victoria.

It was exciting to see so many members of the public travel to these regions to celebrate the hard work of our nation's growers, and the quality potatoes they produce. In particular, the Thorpdale community banded together to bring back the festival after a 12-year absence, raising much-needed funds for the community and simultaneously raising the profile of the potato. These events stand as testament to the fact that Australia's potato growers continue to play a vital role in the fabric of this country, and their work should continue to be celebrated.

Geoff Moar  
Chairman  
AUSVEG



## Richard Mulcahy

AUSVEG Chief Executive Officer

With the 2015 National Horticulture Convention, Trade Show and Awards for Excellence now only two months away, we are pleased to confirm that a leading figure in the international horticulture industry will be presenting a keynote address at the event – and potato growers in particular will not want to miss his words of wisdom.

Blair Richardson, President and CEO of the United States Potato Board, will share the extensive knowledge and experience he has accumulated over an impressive career with Convention delegates at Jupiters Gold Coast from 25-27 June.

Mr Richardson has decades of experience working across many elements of horticulture. As the owner of a cherry farm and leader of one of the most influential horticulture organisations in the United States, his keynote speech promises to be a highlight of the event. I urge all *Potatoes Australia* readers to make the most of this unique opportunity to hear from one of the international industry's most successful individuals.

On another important industry note, the issue of Australia's current Country of Origin Labelling (CoOL) and food import screening systems have come under intense scrutiny following public health scares linked to imported frozen berries and tuna. During the incidents, concerns surrounding the potential threat to consumer safety were reignited and the spotlight was shone back on the unacceptable flaws within these systems. Throughout, our nation's growers received outstanding support from consumers as Australians looked to purchase locally-grown produce that they knew was safe to eat.

Given AUSVEG's long-time advocacy for stronger CoOL laws, we once again led the chorus of calls demanding improvements to the current system. It appears that the message has sunk in, particularly in Canberra, with key figures within the Federal Government indicating they are working towards implementing clearer CoOL on food products. While the development is promising, it is important we do not take our eyes off the ball and allow those seeking to derail these changes to be successful. AUSVEG is determined to see meaningful changes to our CoOL laws to ensure a transparent system for consumers and to help level the playing field for Australian growers.

Finally, I am pleased to advise readers of AUSVEG's re-appointment as the Prescribed Eligible Industry Body for unprocessed potatoes, following a review carried out by Federal Agriculture Minister, the Hon. Barnaby Joyce MP.

I thank the numerous potato growers and industry members who showed their unwavering support for AUSVEG during the review process, as this undoubtedly played a significant role in our confirmation as the legitimate industry body best placed to represent their needs. Potato growers across the country can take comfort in the fact that AUSVEG will continue fighting hard to represent their interests, and further their cause into the future.

Richard J Mulcahy  
Chief Executive Officer  
AUSVEG

**AUSVEG Chairman**

Geoff Moar

**AUSVEG CEO**

Richard J Mulcahy

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All research and development projects are facilitated by Horticulture Innovation Australia Limited in partnership with AUSVEG, and in relation to processed potatoes also the PPAA, and are funded by the National Potato Levy and/or voluntary contributions from the industry. The Australian Government provides matching funding for all HIA's R&D activities. For further information visit:

[www.ausveg.com.au](http://www.ausveg.com.au)[twitter.com/ausveg](https://twitter.com/ausveg)

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**FRONT COVER:**

Peter Cooper

Photograph by Sean McGowan

In this edition of *Potatoes Australia*, we speak to international horticulture leading figure Blair Richardson, who is President and CEO of the United States Potato Board. Mr Richardson elaborates on his extensive experience in the United States horticulture industry and his hopes for the future of the American potato industry in particular on page 20.

Growers and industry members will also have the chance to meet Mr Richardson

in person, as he will be flying over to Australia to deliver a keynote address at the 2015 National Horticulture Convention, Trade Show and Awards for Excellence, which will be held at Jupiters Gold Coast from 25-27 June. Readers can turn to page 14 for a taste of what is shaping up to be a major event in this year's Australian horticulture calendar.

In an important development in the R&D space, potato growers have been given the opportunity to have their say on

the direction of future research in the industry. This was most recently delivered through a Horticulture Innovation Australia Limited (HIA) Potato Research Priorities meeting held in Melbourne, which is examined on page 8. *Potatoes Australia* strongly encourages its readers to sign-up as members of the new grower-owned organisation to help HIA continue to ensure that potato research best meets the needs of the industry (see page 12 for more information).

The Potato Industry Extension

Program Column on page 10 also touches on further potato industry news, with an update on the program's recent visit to Tasmania and the annual Crookwell Potato Festival in New South Wales.

In other R&D news, a research project from the University of Idaho has looked at a new way to combat disease breeding grounds that can form when potatoes are in storage (page 26). Also overseas, Washington D.C. recently played host to the US Potato Fly-In. The event focused on facilitating discussion about the industry's most pressing federal policy priorities (page 25).

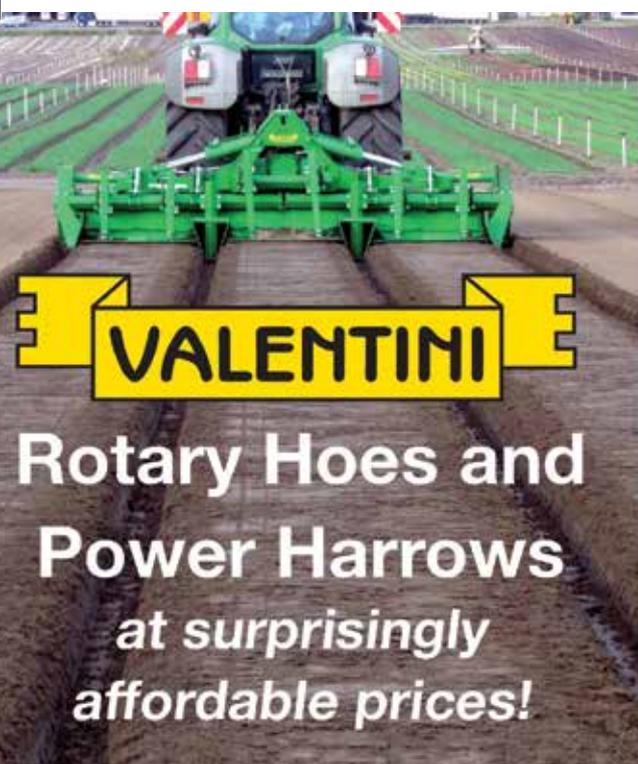
Back home, a two-year research project between the University of Sydney, Simplot Australia and Terrapix has been trialling precision agriculture tools to better understand potato yield variability (page 22). In addition, we also remind readers of the key findings from Queensland researchers who have looked into the control and monitoring of Brown fleck (page 32).

Heading back to the farm, we speak to young grower Peter Cooper about owning and managing his seed potato operation on Kangaroo Island (page 28). Then over in Bungaree, Victoria, Seed Potatoes Victoria delegate Tony Trigg tells us about living and growing in the region and combining potato growing with dairying (page 16).



16

Tony Trigg



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## Growers invited to identify key potato research priorities

FRESH AND PROCESSING POTATO LEVY PAYING GROWERS HAVE AN OPPORTUNITY TO HAVE THEIR SAY ON THE FUTURE DIRECTION OF R&D IN THEIR INDUSTRY, WITH HORTICULTURE INNOVATION AUSTRALIA LIMITED (HIA) SEEKING FEEDBACK ON ITS PROPOSED R&D INVESTMENT PRIORITIES ACROSS BOTH THE FRESH AND PROCESSING POTATO SECTORS.

The proposed research priorities were outlined in the outcomes of a recent potato R&D advisory workshop facilitated by HIA (previously Horticulture Australia Limited), which was held in Melbourne on 12 March. The workshop aimed to seek input from a broad range of potato industry participants, including AUSVEG Biosecurity Adviser Dr Kevin Clayton-Greene and other scientific researchers, as part of HIA's interim advisory process as it transitions to a grower-owned research and development corporation (RDC).

Participants were presented with findings from the recent consumer research study Potato Tracker, the Australian Potato Research Program Phase 2 (APRP2) Review and Seed

Potato Certification Review, as well as other reviews to assist in the prioritisation of future research and development.

HIA R&D General Manager David Moore said HIA is committed to ensuring growers are the prime drivers of R&D. "Our potato industry workshop is just one of many industry-specific collaborative workshops HIA is facilitating this year to work towards addressing and solving key issues," Mr Moore said.

"We are now calling on fresh and processing growers and other potato industry stakeholders to share their feedback on the outcomes of this workshop, particularly the decision made to apply an overall R&D investment strategy

to both the fresh and processing sectors."

### Australian Potato Research Review

A key outcome of a review of APRP2, which covered all production-related research from the past 20 years, was an inaugural communications program to be rolled out nationally with resources made available to relevant stakeholders.

The implementation of a communications program is seen as a high priority because, while the industry has delivered world-class R&D, the valuable outputs can be more effectively communicated to the wider industry. It is thus essential that

this R&D is made available in a usable format for producers and other individuals with an interest in the industry.

Another outcome of the review was a gap analysis that provided recommendations for future potato R&D, as well as a proposed structure and method of formulating R&D to avoid some of the pitfalls that have beset R&D in the past.



Presentations from the Potato Research Priorities meeting are available for download on the HIA website, [www.horticulture.com.au](http://www.horticulture.com.au). Growers can provide their feedback on the proposed R&D investment priorities to [Potato.Advisory@horticulture.com.au](mailto:Potato.Advisory@horticulture.com.au) by Friday 24 April 2015.

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The Crookwell Potato Festival attracted over 3,000 attendees.

## PIEP celebrates spud success at Crookwell Potato Festival

POTATO INDUSTRY EXTENSION PROGRAM COORDINATOR ALEXANDER MILLER WAS ONE OF THE MANY THOUSANDS OF ATTENDEES AT THE RECENT CROOKWELL POTATO FESTIVAL, WHICH WAS HELD IN THE SOUTHERN TABLELANDS OF NEW SOUTH WALES DURING THE FIRST WEEKEND OF MARCH. HE PROVIDES AN OVERVIEW OF SOME OF THE HIGHLIGHTS OF THE FESTIVAL, INCLUDING A FARM VISIT TO AN INNOVATIVE POTATO GROWER'S PROPERTY.

Crookwell is regarded as one of the birthplaces of commercial potato production in Australia. This year, the famous Crookwell Potato Festival celebrated over 150 years of growing in the region.

Held from 6-8 March, the festival featured a number of potato-related stalls including a Crookwell Potato Association display and the 'Spud Live Kitchen', which featured cooking demonstrations of a number of potato recipes.

The festival, which has been running since 2011, experienced its biggest year yet with over 3,000 people going through the entrance. Crookwell Potato Festival Marketing Manager Susan Reynolds said the event exceeded expectations.

"Two thirds of the attendees came from out of the region and areas including the Sydney Basin, Hunter, the Central Coast and Illawarra. We even had overseas and interstate visitors as well," Ms Reynolds said.

The Crookwell Potato Association stall was manned by local potato growers who were on hand to answer any questions about growing practices and different varieties. Locally-grown Almera and Pontiac potatoes were on sale, while a number of seed potatoes and mini tubers were also displayed.

### Getting back to nature

Another key feature of the festival was a 'Farm and Eco Experience' at the property of

local seed potato grower Garry Kadwell, who has integrated a number of dedicated ecological zones on his property in an effort to encourage the recurrence of native plants and wildlife.

Over 500 people made the trip to Mr Kadwell's property to see his eco farm and seed potato growing operation, which also highlighted the changes in farm technology over the years. A number of modern tractors were on display, while live demonstrations of draught horses ploughing a paddock also entertained the masses. The advancements in technology were well noted, with one onlooker quipping that the air conditioning probably wasn't as good on the horses as it is in a new John Deere.

It was explained on the Farm and Eco tour that the dedicated ecological zones, which are locked away from stock and not used for growing, have been effective in combating common potato pests. Mr Kadwell explained that the native plants and well-balanced areas have promoted beneficial insects, resulting in a reduced need for pesticides and chemicals on potato crops.

Additional benefits were also noted by Mr Kadwell, including the return of native animals such as kangaroos and echidnas. A platypus was also spotted in a regenerated wetland a few months ago.

The Crookwell Potato Festival provided a great opportunity for the general public to learn about the intricacies of potato growing



The Crookwell Potato Association stall displayed locally-grown potato varieties as well as seed potatoes and mini tubers.

and to see exactly where their food comes from.

**Individual grower visits**

A visit to the Crookwell region also provided the perfect opportunity to visit some of the seed growers in the area, as well as the Crookwell Potato Association.

A tour of growers, including a mini tuber producer, provided great insight into potato growing in Crookwell. One of the area's key strengths is its isolation from other commercial potato growing areas, meaning seed potatoes can be grown with a relatively low risk of pest and disease incursion.

Certified seed potatoes from Crookwell are generally known to be of top quality and the

highest cleanliness, and the Crookwell Potato Association has been putting in extra effort to ensure that this remains the case.

For instance, a quality assurance (QA) scheme that has been developed by the Crookwell Potato Association is now in place and is employed by growers of certified seed potatoes in the region. The QA scheme was developed over seven years by the association and is now recognised around the country.

Growers must regularly inspect their seed potato crops and keep a log of all crop activity to ensure that the weekly progression of crops is monitored and any issues that may occur can be acted upon quickly.

Crookwell Potato Association President Matthew Gay explained that the program ensures that commercial potato growers are buying the best certified seed potatoes possible.

"The QA program ensures quality from grower to client. The grower must follow through on a set of robust procedures in an effort to guarantee that the seed is disease-free, virile and high yielding," Mr Gay said.

Leaf virus testing is also carried out on Crookwell crops to indicate the presence of any viruses. This year's results have been completed and Mr Gay was happy to point out that negative results were again returned for Potato virus Y (PVY). Potato Cyst Nematode (PCN) tests have also been negative, with the region declared 'PCN free'.

Another positive from the visits was seeing younger generations of growers involved in some of the local operations, with the children of growers returning to the farm to assist in the family business.

Meetings with individual growers provided a great opportunity for PIEP to discuss issues affecting the region and see the growing conditions first-hand. AUSVEG would like to thank growers and the Crookwell Potato Association for their hospitality.

**Soil health seminar impresses Tassie growers**

The Potato Industry Extension Program also attended a soil health information session in Perth, Tasmania that featured a presentation by US potato grower Dale Gies, who hails from Moses Lake, Washington.

Mr Gies discussed brassica green manure use in commercial production and highlighted the successes he has had in using biofumigants in potato crops. The Moses Lake area is known for its dry soils and Mr Gies has been able to greatly increase his soil health thorough use of green manures.

Mr Gies explained how green manures and biofumigants can reduce wind erosion, increase water penetration, improve microbial populations and increase organic matter and soil tilth, as well as suppress diseases, weeds and nematodes. The presentation also covered studies into the effectiveness of green manures conducted by the Research Institute for Industrial Crops at Bologna, Italy and the University of California Davis.

The correct procedures for maintaining green manure crops during rotations were also discussed, particularly in relation to irrigation and fertilising. It was noted that the moisture level of soils at incorporation is highly important, as well as the correct mix of nitrogen and sulphur when fertilising.

A recording of Mr Gies' presentation is currently being edited as part of the Soil Wealth project (VG13078). To view the presentation once finalised, or for more information on biofumigants and the Soil Wealth project, please contact RMCG's Dr Doris Blaesing at dorisb@rmcg.com.au or on 0438 546 487.



For more information about the Potato Industry Extension Program, contact AUSVEG. Phone: (03) 9882 0277 Email: info@ausveg.com.au Project Number: PT11004



Local seed grower Garry Kadwell hosted more than 500 people on his farm during the Crookwell Potato Festival. A live demonstration of draught horse Albert ploughing a paddock also entertained the masses.

# Sign up to have your say in HIA

AS HORTICULTURE INNOVATION AUSTRALIA LIMITED CONTINUES TO TAKE SHAPE AS THE NEW HORTICULTURE INDUSTRY RESEARCH AND DEVELOPMENT CORPORATION, GROWERS ARE ENCOURAGED TO SIGN UP AS MEMBERS OF THE ORGANISATION AND CONTRIBUTE TO THE FUTURE DIRECTION OF THEIR INDUSTRY.

For the past few months, the new industry services body Horticulture Innovation Australia Limited (HIA) has been making significant developments in its transition to a grower-owned research and development corporation (RDC). According to HIA CEO John Lloyd, the organisation is looking to establish a robust membership base that represents the full spectrum of Australian horticulture industries across all growing regions.

"With HIA being a grower-owned company, establishing a grower registry to communicate

to our members is a key priority moving forward," he said.

"There are many benefits in becoming a member, including the opportunity for growers to have a say in the leadership and future direction of Australia's new horticulture RDC.

"Members will also be invited to attend information forums, field days and workshops held around the country."

## Membership opportunity

AUSVEG encourages potato levy payers to take up this unique opportunity to register as a

member of HIA as it presents one of the easiest and most direct ways to contribute to the future direction of the potato industry and subsequent R&D projects. Registration is free and membership is open to active business entities participating in horticulture industries.

When applying for membership, please note that HIA accepts only one membership per ABN with one nominated representative. However, you are welcome to register as an individual stakeholder should your company already have a

nominated representative.

Please ensure you review the HIA membership eligibility criteria prior to applying, which can be found in Section 6.3 of the HIA Constitution (visit [www.horticulture.com.au](http://www.horticulture.com.au) for more information).

HIA will also be present at the upcoming 2015 National Horticulture Convention incorporating AUSVEG and Apple and Pear Australia Limited, which will be held at Jupiters Gold Coast from 25-27 June.

**Please return your completed Horticulture Innovation Australia Limited Membership Application form to AUSVEG via: Email: [info@ausveg.com.au](mailto:info@ausveg.com.au) Fax: 03 9882 6722 Mail: AUSVEG, PO Box 138 Camberwell VIC 3124**

Title (Mr/Ms/Mrs/Miss/Dr/Prof) \_\_\_\_\_

First Name \_\_\_\_\_

Last Name \_\_\_\_\_

Postal Address \_\_\_\_\_  
\_\_\_\_\_

Town/ Suburb/ Locality \_\_\_\_\_

State \_\_\_\_\_ Postcode \_\_\_\_\_

Phone Number \_\_\_\_\_

Fax Number \_\_\_\_\_

Email Address \_\_\_\_\_

Business Name \_\_\_\_\_

Trading Name \_\_\_\_\_

ABN \_\_\_\_\_

### Entity Type (please tick)

Sole Trader  Incorporated association

Body corporate  Partnership

Trust  Other \_\_\_\_\_

### Nominated representative (please tick position)

Principal  Director

Secretary  Managing Director

Chief Executive Officer  Other \_\_\_\_\_

### Do you pay horticulture levies or charges? (please tick)

Yes  No

### Business Size (please tick number of employees)

Up to 10  51 to 100  Over 200

11 to 50  101 to 200

### Total Hectares Farmed (please tick total horticulture production only)

Less than 10Ha Protected Cropping  Less than 50Ha Field Cropping

Over 10Ha Protected Cropping  Over 50Ha Field Cropping

### What industries are you a participant in? (please tick)

Potato - Fresh  Vegetable

Potato - Processing  Other \_\_\_\_\_

### What is the nature of your industry participation? (please tick)

Growing & Harvesting  Processing  Packing

Transporting  Marketing  Wholesaling

Retailing  Exporting  Other

### Communications Preference (please tick)

Email only  Email and post

Signature \_\_\_\_\_

Date \_\_\_\_\_

*By submitting this form you consent to AUSVEG providing the information contained within to Horticulture Innovation Australia Limited for the purposes of processing your membership application, and you acknowledge that you have read HIA's Privacy Policy and consent to your personal information being handled in the manner set out in that policy. A copy of HIA's Privacy Policy can be found at [www.horticulture.com.au/privacy](http://www.horticulture.com.au/privacy).*



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Dr Debbie Hudson



Tass Angelopoulos



Alex Mills



Dr Peter Batt

## Sizzling speaker line-up for 2015 National Horticulture Convention

THE INITIAL SPEAKER LINE-UP FOR THE 2015 NATIONAL HORTICULTURE CONVENTION, TRADE SHOW AND AWARDS FOR EXCELLENCE IS QUICKLY TAKING SHAPE. DELEGATES WILL BE TREATED TO A WEALTH OF WORLD-CLASS INTERNATIONAL AND DOMESTIC EXPERTS ON A VARIETY OF TOPICS, WITH THE PROGRAM DESIGNED TO PROVIDE GROWERS WITH PRACTICAL INFORMATION FOR THEIR BUSINESSES.

AUSVEG and Apple and Pear Australia Limited (APAL) are thrilled to announce the initial speaker line-up for the 2015 National Horticulture Convention, taking place from 25-27 June at Jupiters Gold Coast in Queensland.

Blair Richardson, CEO and President of the United States Potato Board (USPB), will present the keynote address at the Convention on Friday 26 June. Mr Richardson has a wealth of experience in horticulture, having headed up several major grower organisations in America throughout his career.

In 2005, he received the Produce Business "40 Under 40" award in both the domestic and international categories. His expertise regarding the marketing of produce will come to the fore when he shares with delegates the details of a variety of innovative campaigns that the USPB is currently working on (turn to page 20 for more information).

### R&D experts

Recent developments in research will feature heavily throughout the program. John Lloyd, CEO of Horticulture

Innovation Australia Limited (HIA), will present the opening address at the Convention and will provide an update on activities for all vegetable, potato, apple and pear growers.

Dr Debbie Hudson from the Australian Bureau of Meteorology will explain how growers can use seasonal climate prediction systems to better understand weather variations. An increased ability to forecast weather events will assist with decisions such as when to plant and harvest, as well as the application of fertilisers and crop protectants.

Gianluca Di Tommaso, from Italian company Valagro, will discuss the use of biostimulants and how they can be used to enhance yield and nutritional quality. Valagro is a pioneer in the field of biostimulants (which are naturally-derived formulations of compounds) and produces a broad range of nutrient solutions to complement conventional inputs.

Delegates will also be able to gather practical information for their companies from a selection of domestic professionals. Joining the extensive line-up will be Tass Angelopoulos, Special Counsel, who will return this

year to discuss developments in Australian labour law and how this can affect your business. Meanwhile, Alex Mills from Adama will launch Trapview®, an insect monitoring system that can assist in tracking pest populations, while Dr Peter Batt will help delegates understand consumer choices and how to cater to the requirements of the shopper.

### Women in Horticulture

APAL Chair Dr Michele Allan and Tasmanian potato grower Susie Daly will address attendees at the Women in Horticulture event.

The event, which is proudly sponsored by Steritech, will take place on Saturday 27 June, with the Women in Horticulture Award to be announced later that evening at the 2015 National Awards for Excellence.

Delegates are encouraged to register now for the 2015 National Horticulture Convention in order to take advantage of early bird rates, which end on Saturday 25 April. Discounted accommodation is also available for delegates who register through AUSVEG.



For more information, contact AUSVEG. Phone: (03) 9882 0277 Email: [convention@ausveg.com.au](mailto:convention@ausveg.com.au), or visit [www.ausveg.com.au/convention](http://www.ausveg.com.au/convention).

## AUSVEG welcomes new Board members

THE AUSVEG BOARD RECENTLY CONVENED FOR THE FIRST TIME IN 2015, FOLLOWING THE APPOINTMENT OF FIVE NEW DIRECTORS LATE LAST YEAR. *POTATOES AUSTRALIA* OUTLINES THE WEALTH OF EXPERIENCE THAT THE DIRECTORS WILL BRING TO THE GROUP.

Left to right: Simon Bolles, David Addison (Deputy Chair), Jonathan Shaw, Geoff Moar (Chairman), Danny De Ieso, Geoff Knuckey, Bill Bulmer, Richard Mulcahy (CEO) and Matt Hood. Absent: Michael Nixon.

Photography by Luka Kauzlaric.

### Geoff Moar Chairman, NSW

As the longest-serving director since his appointment to the AUSVEG Board in 2004, Geoff Moar has grown fresh and processed potatoes in the Riverina region for more than 40 years.

In his role as AUSVEG Chairman, Mr Moar is keen to improve the percentage of retail dollar that is delivered to growers. He was re-elected as Chairman in November 2014, a position he has held since 2013.

### David Addison Deputy Chair, TAS

David Addison has managed his onion packing, potato and vegetable growing operation in Moriarty for almost 40 years.

Mr Addison has represented the vegetable industry in various roles with the Tasmanian Farmers and Graziers Association and the Tasmanian Vegetable Centre Advisory Committee. He was elected to the AUSVEG Board in September 2010 and has held the position of Deputy Chair since 2013.

### Danny De Ieso Board Director, SA

Danny De Ieso has been involved in the vegetable industry for over 30 years and currently operates a bunch line operation on the Northern Adelaide Plains. He was elected to the AUSVEG Board in September 2014.

As the inaugural Chairman of AUSVEG SA, Mr De Ieso has been instrumental in re-establishing formal membership with AUSVEG, ensuring that South Australian growers have a strong, effective voice both within the national industry and with government.

### Geoff Knuckey Skills-Based Board Director

With a long and distinguished background in finance management, Geoff Knuckey is currently the Chair of the AUSVEG Audit Committee, a position he has held since November 2014.

Mr Knuckey was originally appointed to the AUSVEG Board in December 2013, given his professional expertise in risk management, auditing, internal controls processes, corporate governance and Board performance.

### Simon Bolles Skills-Based Board Director

Simon Bolles brings an incredible wealth of experience to the AUSVEG Board, with a 30-year career in investment banking and stockbroking. He is considered an expert in the financial services sector and has direct research and advisory experience with many industries.

Mr Bolles, who was appointed to the AUSVEG Board in November 2014, holds a portfolio of non-executive director and investor relations/career advisory roles.

### Michael Nixon Board Director, WA

A vegetable grower from Carnarvon, Michael Nixon has been involved in the industry for over seven years.

Mr Nixon was a member of the Consumer Alignment Design Team before being elected to the AUSVEG Board in November 2014.

### Matt Hood Board Director, QLD

Matt Hood's Gatton-based operation produces 5,000 hectares of vegetables each year across four growing regions.

Mr Hood is particularly interested in the application of innovative technology and how it can contribute to the future direction of the horticultural industry. He was elected to the AUSVEG Board in November 2014.

### Bill Bulmer Board Director, VIC

A third-generation vegetable grower from Lindenow in eastern Victoria, Bill Bulmer was elected to the AUSVEG Board in November 2014.

He is an active member of the local and state vegetable industry and passionate about developing the horticultural industry into the strongest sector possible.

### Jonathan Shaw Board Director, NT

Joining the AUSVEG Board in November 2014, Jonathan Shaw is a vegetable grower who joint-owns and manages a market garden operation near Katherine.

A 2005 Nuffield Scholar, Mr Shaw studied biological farming and marketing to ascertain the feasibility of incorporating biological farm principles into his own operation.



Photography by Ian Wilson.

## Potatoes and dairy a successful mix for Tony Trigg

FIFTH GENERATION GROWER TONY TRIGG SPEAKS TO FELICITY POWELL ABOUT GROWING SEED POTATOES AND MILKING COWS, HIS INVOLVEMENT WITH SEED POTATOES VICTORIA AND HOPES FOR SEED EXPORT GROWTH.

The Trigg family has farmed at Bungaree, near Ballarat in Victoria's central region, for five generations.

J. Trigg and Sons grow about 2,500 tonnes of certified seed potatoes on about 10 per cent of their 450 hectare land. The rest is dedicated to dairy, in what has been a successful mix of spuds and milk for the family.

Eighty per cent of the seed potatoes are sold to McCain's growers, with the remaining 20 per cent being mainly crisping varieties. The growing land rotates with dairy cows on a five to six year basis.

Specifically within the potato industry, Tony has seen

many operational efficiency developments over the years, which he says are the "biggest changes for the Ballarat area". These changes have also been welcomed by the broader industry as growers attempt to keep their produce competitive.

Although Tony has not been directly involved with testing new potato-related technologies, he has been involved in trialling new varieties grown on the property over the years that he's been on the farm.

"We grow mainly McCain varieties. The Innovator has pretty much replaced the Russet Burbank here now."

### Seeds of knowledge

The skill of growing seed potatoes is strengthened by Tony's roles, as one of the eight Seed Potato Victoria (SPV) regional delegates, and the President of the Ballarat Seed Growers Association.

Tony says he enjoys the community aspect that comes from being a delegate and being part of the Association, but adds that he'd like to see more onus placed on using certified seed.

"SPV membership is declining, but it's interesting. You get to talk with other growers every two months when we meet," Tony explains.

"I'd like to see more commercial growers using certified seed. It's not law but in some countries it's the law to use seed that's certified or has gone through some sort of certification process."

Upon reflecting on the state of the industry and his position within it, Tony says that while he's happy to see younger growers working their way up, it can't be the only thing to help boost the industry. He points to a growing demand originating overseas for safe, certified Australian-grown produce as a bright prospect for the future.

"There is certainly some growers coming through, but

they're not coming through at a rate to replace older growers who are leaving the industry, which is the same for the whole agricultural industry. In saying that, the bigger growers are getting bigger and, as I said before, the efficiencies in which you can handle things these days is great. The demand is slowly increasing; hopefully with some demand from Asia for seed, which is looking likely for us, we can try some new things out when the time comes."

### An exciting future

With his father still working on the farm and young children not quite ready to get on the tractor and join him in the potato fields, Tony anticipates he'll be sticking to spuds for a little while longer.

"Now 43, I look at my father and appreciate how healthy he is to be working in his 70's," he says.

"I would also like to acknowledge the hard work and long hours the previous generations have put in to allow us to be in the position we are now."

Tony has plenty of reasons to stay on the farm – like the majority of growers, he loves working outdoors. Although he may be surrounded by family, Tony is grateful for the independence the job affords him, stating proudly: "I get to be my own boss."

"I'm busy in the summer, which is not great, but when the spuds are finished I get to travel during the winter to a warmer climate, which is the best part. Generally we're finished by the start to mid-June and then we go away for a month or six weeks, up to northern Australia with family. It works in well with what I like doing," he says.

Looking ahead, Tony has a positive outlook for his future within the industry, however this comes with the usual farmer's caveats.

"As far as the industry as a whole – as long as the dollar stays low and the imports stay away, I think things will work out okay in the future."





## Keeping seed clean for future generations

THE PURCHASE OF CLEAN SEED POTATOES FROM CERTIFIED SOURCES IS AN EXTREMELY IMPORTANT FACTOR IN PROTECTING WARE POTATO CROPS FROM THE IMPACTS OF PESTS AND DISEASE. IN THIS EDITION OF THE FRONT LINE, AUSVEG BIOSECURITY AND SPECIAL PROJECTS COORDINATOR DR JESSICA LYE DISCUSSES DISEASE TRANSFER BETWEEN SEED AND WARE POTATOES AND THE IMPORTANCE OF USING CLEAN SEED.

Growing successive generations of seed potatoes holds many benefits, as favourable traits such as colour and taste can be reliably transferred to the ware potato offspring. However, there is a cost for consistency. The clonal nature of ware potato offspring means that diseases can easily be contracted from an infected seed potato parent.

By the latter years of the 19th century, declining potato quality and yield in the United States and Canada was directly attributed to the accumulation of pathogens in tubers that had been replanted from one field to the next, generation after generation. As a result, certification programs were established with the aim of maintaining supplies of disease-free seed potato.

Since the establishment of seed potato certification programs worldwide, it has

been shown that seed potato quality, which is an important yield determining factor, can be controlled through disease surveillance, maintenance of controlled growing conditions and biosecurity best practice.

### It's all about genetics

A plant's response to disease is similar to that of a human. Disease resistance in humans involves a complex immune response, in the form of disease recognition by immune cells and the production of antibodies that can reduce impacts of pathogens.

The plant response to disease similarly involves molecular mechanisms that recognise the disease and fight off infection. For example, many plants produce antimicrobial chemicals, such as phytoalexins, and antimicrobial enzymes, such as peroxidases,

to combat bacterial and fungal infections.

As ware potatoes are genetic clones of their seed potato parents, pathogens and diseases encounter few molecular barriers when migrating from seed potatoes to ware potato progeny. If a seed potato plant is susceptible to a disease or pathogen, the resulting clonal tubers will be similarly susceptible. In turn, a high disease burden in a seed potato is directly related to a high chance of ware potato progeny contracting disease.

The implication? Protecting seed potato from disease is extremely important during propagation.

### Strict control essential

Seed potatoes are commonly grown in cool climates that do not favour pest and pathogen activity. Growing regions located

at high elevations also reduce the potential for potato diseases to be spread by insects.

Before being sold commercially, seed potatoes are grown for up to five clonal generations. As a result, each



## The genetics of seed

Seed potatoes are selected for ongoing propagation based on favourable traits.

The potato plant contains a wealth of genetic resources. While a complete potato plant genome contains 24 chromosomes (two unique copies of each chromosome), the major species grown worldwide, *Solanum tuberosum* L., is commonly tetraploid and carries four copies of each chromosome – a total of 48 chromosomes.

When potato plants reproduce, usually through self-pollination, the chromosomes (along with the genes they carry) are reshuffled and allocated randomly to each seed. Therefore, each seed develops into a plant with unique characteristics.

For example, some may demonstrate a fast growth rate while others may show excellent disease resistance. From the variety of potato plants produced, seed potatoes are selected for ongoing vegetative propagation.

successive generation holds a potential for plant pathogens, such as Tomato spotted wilt virus, to accumulate in tubers and be passed on from generation to generation.

State seed certification organisations monitor the health of seed potatoes during production and set strict tolerances for freedom from disease. In South Australia and Victoria, for example, there is a zero tolerance policy for Potato cyst nematode (PCN) (*Globodera rostochiensis* or *Globodera pallida*), Bacterial wilt (*Ralstonia solanacearum*) and Ring rot caused by *Clavibacter michiganense* pv. *Sepodonicum*. Additional diseases that are routinely monitored include Fusarium dry rot, Rhizoctonia, Powdery scab, Common scab and bacterial rots.

It is important to remember that seed potato can contract

disease during the growing period or post-harvest period, and that pathogens can be carried either *in* tubers or *on the surface* of tubers. *Phytophthora infestans*, which is the cause of Late blight, is one example of a pathogen that can be contracted by seed potato as a post-harvest disease. For this reason it is important that seed potatoes are stored in sanitised facilities and are grown and stored far from cull piles, which can harbour potato pests and pathogens.

In short, once a seed potato has been infected by a pathogen, transfer of diseases from seed potato to future generations can happen with ease. In major part this is due to vegetative propagation of seed potatoes and the clonal nature of potato progeny.

## Tips to avoid high disease transfer rates between seed and ware potato

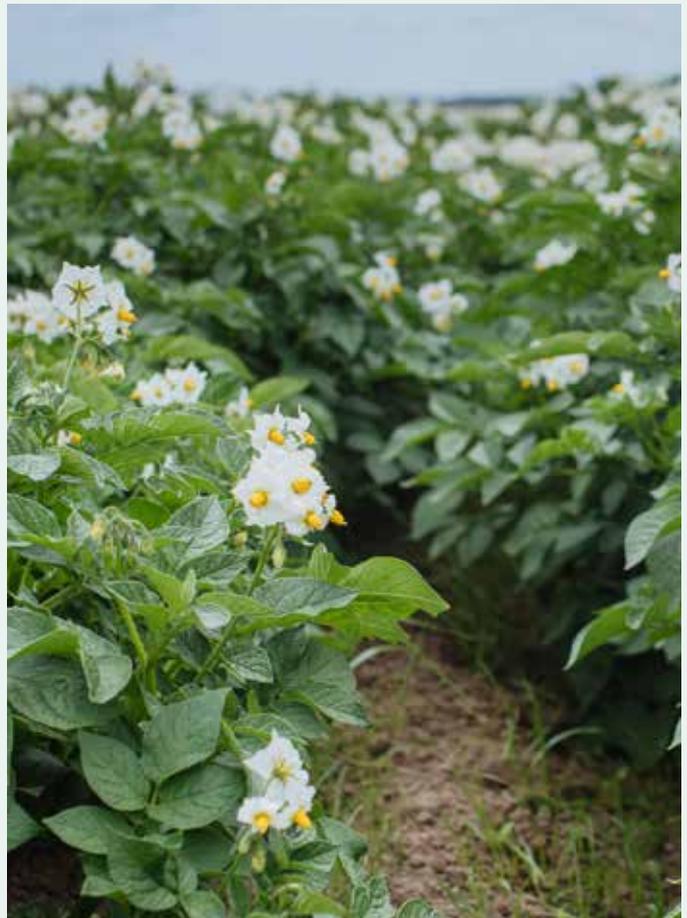
- Plant only Certified Seed (on receipt check the certification documents).
- Ensure that historical aspects of seed, such as generation source, are recorded.
- Develop relationships with seed potato suppliers.
- Seek assurance about growing conditions, post-harvest treatments and storage conditions.

## Tips for maintaining biosecurity best practice

- Clean and disinfect seed potato storage facilities.
- Do not store seed potato near potential sources of inoculum (e.g. cull piles).
- Keep seed lots as separate as possible.
- Check for signs of damage during transit (odours and liquefaction).
- When seed cutting, clean and disinfect cutting equipment between seed lots.
- Enforce sanitation practices for workers.



For more information on protecting seed potato crops from the impacts of pests and disease, please contact AUSVEG:  
Phone: (03) 9882 0277 Email: [info@ausveg.com.au](mailto:info@ausveg.com.au)





United States Potato Board President and CEO, Blair Richardson.

## Leading light of U.S. horticulture to share industry insights with local growers

AUSTRALIAN POTATO GROWERS WILL SOON HAVE THE CHANCE TO LISTEN AND LEARN FROM AN EXPERIENCED MEMBER OF THE INTERNATIONAL HORTICULTURE INDUSTRY, BLAIR RICHARDSON, AT THE UPCOMING 2015 NATIONAL HORTICULTURE CONVENTION. DIMI KYRIAKOU SPOKE TO THE PRESIDENT AND CEO OF THE UNITED STATES POTATO BOARD ABOUT WHAT GROWERS CAN EXPECT TO HEAR FROM HIS KEYNOTE ADDRESS.

When you can trace your family's farming roots back to the mid-1800s – to a time when Texas was still part of Mexico – you could arguably say that farming runs in your blood.

For Blair Richardson, his family lineage and involvement in farming does extend back to this era. The knowledge he has gathered not only from his ancestors but also his personal experience in the United States horticulture industry will be highlighted in his keynote speech at the 2015 National Horticulture Convention, Trade Show and Awards for Excellence, which will be held at Jupiters Gold Coast from 25-27 June.

As President and CEO of the United States Potato Board (USPB), the country's central potato marketing organisation, Mr Richardson is regarded as a leading member of North American horticulture. And he has an impressive CV to prove it.

Prior to his USPB appointment in August 2013, Mr Richardson was the CEO of WesPak, a successful private farming/packing/sales company based in California. A highlight of Mr Richardson's career came in

**"Horticulture is a fantastically dynamic industry that is changing so rapidly it is difficult to keep up with the innovations."**

**- Blair Richardson**

2005 when he received the Produce Business "40 Under 40" award (which celebrates industry leaders under the age of 40) in both the domestic and international categories.

Having a vast array of experience across a range of horticultural commodities has helped forge Mr Richardson's general philosophy and approach to managing the USPB's programs and operations. As a result, the Texan native will no doubt provide an exciting international perspective on horticulture – particularly the potato industry – to Convention delegates.

"Some of my early experience working in the cotton industry and then in the international food and beverage trading business provided me with opportunities to challenge myself in the international arena and learn about business structures, sales strategies and the importance of building and

maintaining relationships," he said.

"My tenure as CEO of the California Tree Fruit Agreement helped me learn what can and can't be done by industry associations. But, owning my own cherry farm and managing a 1,200 acre farming/packing/sales company in the fresh fruit sector of our industry gave me a true appreciation for the challenges faced by farmers, packing companies and sales companies in the fresh produce business."

### International perspective

At the 2015 Convention, Mr Richardson will relay his unique insights into the horticulture industry to an expected 1,400 delegates. In particular, he plans to delve into the realm of generational change and the impact that future generations will have on the industry.



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“The Millennials and Generation Z are absolutely intriguing and are already having a substantial impact on our businesses and our personal lives,” he explained.

“Trends are changing with a lot of positive information regarding potato nutrition and health benefits. Moreover, as our demographics change in the United States and around the world with a shift in economic power from the Baby Boomers and Generation X to the younger generations, potatoes will face new challenges but even more exciting opportunities. This is a great time to be in the potato industry and certainly very exciting.”

In the meantime, he admits that the potato industry – the largest segment of produce industry in the United States – must stand up to the challenge of maintaining relevance.

“News and information is immediate today and an inherent part of life for the younger generations. Our industry must embrace this and be willing to act on opportunities that may only be available for moments. This will be a challenge for organisations structured like commodity boards and traditionally very conservative. But, it is not impossible.”

### Bright future for industry

Looking ahead, Mr Richardson said the USPB will focus on

completing the industry’s long-term plan to implement strategies that allow for a more aggressive approach to increase consumption.

“Additionally, we just approved a trial program to donate a significant number of salad bars to public schools across the United States as part of a larger program designed to educate children regarding healthy, flavourful potato recipes. This is an important program and one that should yield benefits for many years as we reach out to our future consumers,” he said.

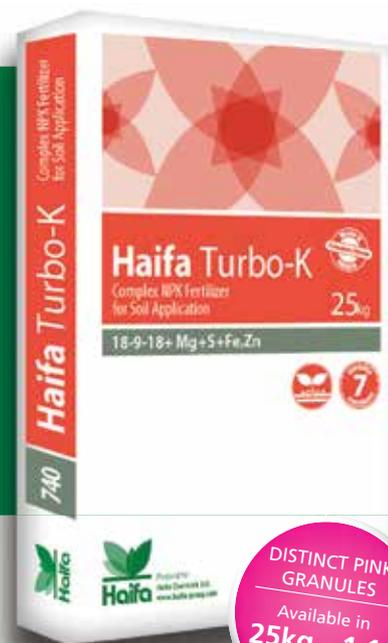
After a previous whirlwind visit to Australia that lasted a mere 12 hours, Mr Richardson is looking forward to spending more time here and networking with his Australian colleagues at the 2015 Convention.

“It is impossible not to admire our produce industry. Horticulture is a fantastically dynamic industry that is changing so rapidly it is difficult to keep up with the innovations,” he said.

“From the perspective of the potato industry, we have one of the few categories that can be used for breakfast, lunch, dinner and snack time – in forms including fresh, fresh-frozen, dehydrated and as ingredients. Who would not be excited upon waking each morning with all this innovation and opportunity?”

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Pioneering the Future



To secure your place at Blair Richardson’s keynote address at the 2015 National Horticulture Convention, contact AUSVEG.  
Phone: (03) 9882 0277  
Email: [convention@ausveg.com.au](mailto:convention@ausveg.com.au) or visit [www.ausveg.com.au/convention](http://www.ausveg.com.au/convention)



# Using precision agriculture tools to understand potato yield variability

A TWO-YEAR PROJECT INVOLVING THE UNIVERSITY OF SYDNEY, SIMPLOT AUSTRALIA AND TERRAPIX, WITH CONTRIBUTIONS FROM SIMPLOT AUSTRALIA AND HORTICULTURE INNOVATION AUSTRALIA LIMITED USING FUNDS FROM THE AUSTRALIAN GOVERNMENT, IS AIMING TO BUILD AN UNDERSTANDING OF THE EXTENT AND CAUSES OF WITHIN-FIELD SPATIAL VARIATION IN POTATO YIELD AND PROVIDE A PRELIMINARY DETERMINATION ON POTENTIAL MANAGEMENT RESPONSES.

Researchers surveyed potato fields in the duplex soils of the Midlands and the Ferrosol loams of northern Tasmania, using in-crop sensing from both aerial and ground-based platforms. A harvester-mounted yield sensor was used to harvest the paddocks to measure within-field variation in actual crop yield.

## Soil and yield sensors

The project is the first of its kind in Australia for exploration of variability within potato production fields. During the trials, researchers used three different technologies: electromagnetic induction instruments, crop reflectance imagery and a potato yield monitoring system.

### Electromagnetic induction instruments

These instruments measure the ability of the soil to conduct electricity. The conductivity is influenced by changes in soil texture, soil moisture, soil cation exchange capacity (driven by the type of clay minerals and soil organic matter), ions in the soil solution (dissolved salts, which include fertiliser) and soil temperature.

The higher the level of each of these attributes, the greater the apparent electrical conductivity of the soil (ECa). Higher apparent electrical conductivity generally means better fertility and yield potential. However, excessively high readings tend to indicate salinity.

In terms of useability, these instruments are not invasive when connected to a GPS and can be pulled across the

soil surface to map the ECa of the soil profile.

“These sensors have proved remarkably useful in mapping within-field changes in soil type and yield potential in the grains and cotton industries,” Brett Whelan, project researcher and Associate Professor in Precision Agriculture at the University of Sydney, explained.

### Crop reflectance imagery

Aerial imaging of the crops during the growing season, which use the Normalised Difference Vegetation Index (NDVI), were able to track variation in crop development and monitor crop stress for irrigation purposes. The ability for the imagery to predict final potato yield is also being tested.

### Potato yield monitoring

The potato yield monitoring system has been developed in Australia by Advanced Technology Viticulture. The system includes a cabin-mounted logging/operation terminal that connects to a GPS and yield sensor. The yield sensor is a load cell mounted under the final portion of the delivery belt. Software allows the time from lifting to weighing to be used to match the measured yield with the right location in the field.

“Being able to map the changes in yield within a field to quantify the extent of production variability, and also to measure the results of trials, is vital for the introduction of precision agriculture,” Mr Whelan said.

## Results

Researchers were able to document substantial variation in soil properties and crop production.

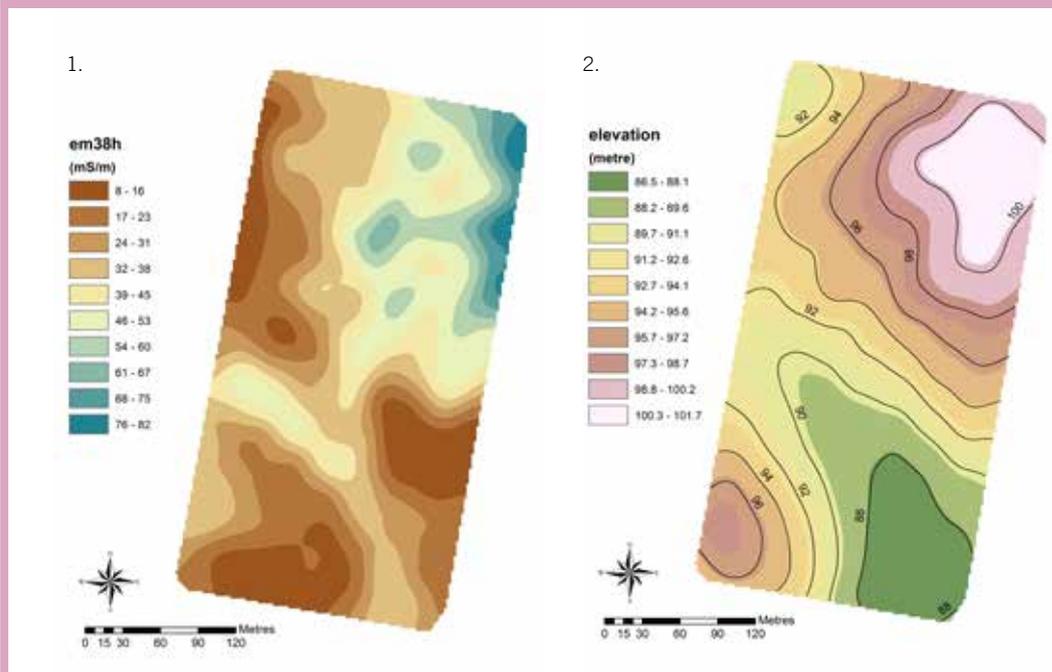
### Soils and spatial variability

Soils across the farms that were tested ranged in texture from ‘sands’ to ‘clays’, with soil clay content varying up to two-fold within fields. The depth to restrictive soil strength varied from 17cm to 50cm. Soil nitrate levels can vary between two- to six-fold within single fields, while soil phosphorous levels can vary between two- to ten-fold within single fields.

In terms of spatial variability, the number of plants per three

The following images show variation in soil, landscape and production.

1. Soil apparent electrical conductivity (ECa) 2. Elevation 3. Crop reflectance during the growing season 4. Potato yield





The yield monitoring system has a cabin-mounted operational recording terminal that connects to the yield sensor (load cell mounted under the final delivery belt) and a GPS.

metres can range from six to 12, and the number of stems per three metres can range from 14 to 50. Stem length can range from 60cm to 140cm, and average harvester yield variability is four-fold within a field.

*Production relationships*

The average tuber weight increases with increasing depth to soil compaction, and increases with increasing plants/ stems per three metres.

Yield also increases at the same rate.

Meanwhile, higher crop reflectance generally means greater numbers of plants/ stems per three metres, with these measurements generally transferring to higher yield. Usually, yield increases as clay content increases.

While the results of this project are preliminary, they suggest that site-specific crop management, where inputs and

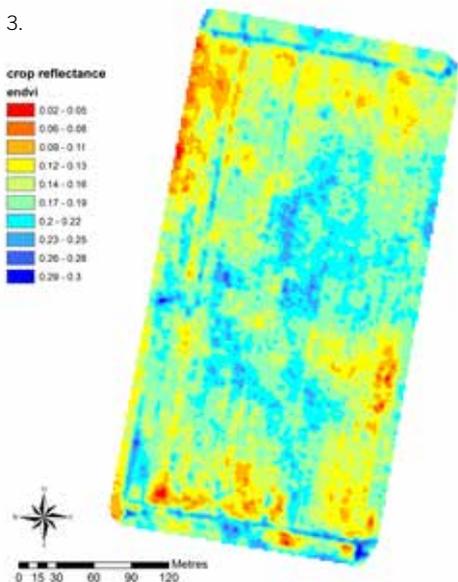
agronomic practices are matched to soil properties and crop requirements as they vary across a field, may be applicable to potato production. With an estimated break-even yield of around 42 tonnes/hectare, the fact that yield has been found to vary four-fold within a field should be a good indication that improvements in the efficiency and profitability of crop production could be achieved.

The main barrier to site-specific crop management in

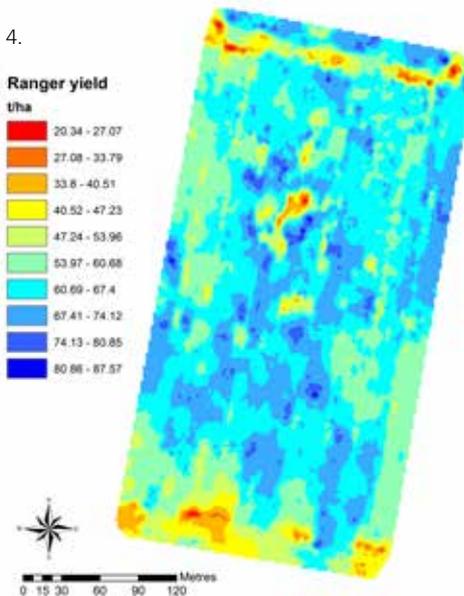


An EMI instrument and GPS setup for soil surveying.

3.



4.



vegetable production is a lack of accurate data on the extent to which natural resources and crop yield/quality vary within vegetable fields. This project is beginning the process of determining which tools will help break down these barriers and lead farmers to decisions on how/where traditional management could be modified to optimise production. Another year of data collection is being planned for 2015.



For more information please contact Brett Whelan from the University of Sydney at [brett.whelan@sydney.edu.au](mailto:brett.whelan@sydney.edu.au) or Frank Mulcahy from Simplot Australia at [mulcahy@simplot.com.au](mailto:mulcahy@simplot.com.au)

Project Number: PT13000



## Putting the spotlight on potato export markets

A RECENT INDUSTRY DISCUSSION PAPER HIGHLIGHTED THAT NEARLY 90 PER CENT OF VEGETABLE EXPORTS TO SOUTH KOREA ARE POTATOES. IN THIS ARTICLE, *POTATOES AUSTRALIA* LOOKS AT THE OPPORTUNITIES THIS KEY EXPORT MARKET CAN PROVIDE TO AUSTRALIAN POTATO GROWERS, AND GIVES AN OVERVIEW OF OTHER POTENTIAL EXPORT MARKETS TO CONSIDER.

Australia's potato growers face a challenging business environment in the domestic market, as rising costs and lower prices result in decreasing farm profitability across the sector.

However, the Middle East and Asia have emerged as key export markets for Australian growers, as countries in these regions are experiencing high population growth and increased wealth. According to the discussion paper, *Exporting Australia's vegetables to the Middle East and Asia – Market analysis and overview*, the proximity of Australia to the Middle East and Asia also increases the viability of vegetable and potato exports, which are currently low compared with domestic sales.

### Why export?

Domestically, the Australian vegetable growing industry as a whole contributed around \$3.7 billion to the gross value of agricultural production in 2013-14, which was a 12 per cent increase from 2011-12. However, vegetable and potato growers are facing increasing production costs, particularly

labour, which is the most significant production cost on average for Australian growers.

Australian vegetables and potatoes are mostly grown for the domestic market, with only seven per cent of the value of gross vegetable production exported in 2013-14. As this often results in an oversupply in the domestic market, growers have a unique opportunity to redirect their high-quality produce to lucrative export markets.

As the discussion paper showed, there is untapped potential for growers in the export space. In fact, the value of total vegetable exports has remained relatively stable over the past few years, amounting to almost \$256 million in 2013-14.

Specifically in the context of potatoes, Asian countries dominate imports of fresh potatoes from Australia, comprising six out of the top seven countries that import Australian fresh potatoes in 2013-14 (being Indonesia, South Korea, Thailand, Singapore, Malaysia and Hong Kong). For local growers, there is ample opportunity to further grow the export of potatoes to the Asian region.

### South Korea and Asia

Nearly 90 per cent of Australia's vegetable exports to South Korea are potatoes, which is welcome news for potato exporters. South Korea has a population of almost 51 million and is Australia's third largest export partner.

The formation of the Korea-Australia Free Trade Agreement (KAFTA) came into effect in December 2014, forging an important agricultural trade link between the two nations. The KAFTA will eliminate tariffs and therefore ensure Australia is on a level playing field with other regions such as the United States, Europe and other Asian countries that already have existing free trade agreements.

Elsewhere in the Asian region, Indonesia has now become Australia's largest export market for fresh potatoes, purchasing approximately \$7 million worth of fresh potatoes from Australia in 2013-14.

### Middle East

Exports of fresh potatoes to the United Arab Emirates (UAE) increased by eight per cent from 2012-13 to 2013-14. Bilateral

relations between Australia and the UAE are growing rapidly, arising from extensive people-to-people contact due to a large population of expatriate Australians living and working in the UAE.

The food sector in the UAE is expected to grow at 20 per cent per annum through to 2018, with an expanding hospitality sector and increasing emphasis on healthy eating.

### Looking ahead

Starting out in the export game can be challenging, and there are many factors that need to be considered before shipping the first container of potatoes to an overseas market. However, armed with the knowledge that there are significant export markets very much within reach from our industry, exporting high quality Australian produce to these markets could be a viable option for potato growers across the country for years to come.



This information was sourced from the discussion paper, *Exporting Australia's vegetables to the Middle East and Asia – Market analysis and overview* (2015).



## U.S. growers and officials rub shoulders at potato event in Washington, D.C.

THE UNITED STATES NATIONAL POTATO COUNCIL RECENTLY HOSTED THE 2015 POTATO D.C. FLY-IN. MORE THAN 150 POTATO GROWERS AND INDUSTRY MEMBERS BASED IN AMERICA ATTENDED THE EVENT, WHICH FOCUSED ON FACILITATING DISCUSSION ABOUT THE INDUSTRY'S MOST PRESSING FEDERAL POLICY PRIORITIES.

Growers and industry members had the opportunity to meet with 136 US Senate and House offices representing 22 states, as well as federal regulators at the US Department of Agriculture (USDA) and Environmental Protection Agency (EPA), to discuss key industry issues. This included funding for the Potato Research Special Grant, pollinator health, truck weight reform and voluntary GMO labelling.

The 2015 Fly-In featured a number of presentations from law-makers, many of whom were influential in reversing the

ban on fresh white potatoes in the USDA Food and Nutrition Service's Women Infants and Children (WIC) program. Both Democratic and Republican Senators applauded the recent WIC victory.

### Communication is key

Several members of Congress who spoke to attendees focused on the importance of participants willing to make the trip to the event and share their story.

"We're here to help and can communicate your concerns much more effectively to our

colleagues and regulators if we know what is on your mind," Independent Senator for Maine Angus King said.

Fly-In attendees heard from a number of renowned political strategists and commentators, including Jonah Goldberg from the *National Review Online*; Stuart Rothenberg of the *Rothenberg Political Report* and *Roll Call*; and Reid Wilson of the *Washington Post's Read In*.

Katty Kay of *BBC World News America* was also on hand to give participants her views on the current domestic and international climate. Additional speakers included Alexis Taylor

from USDA's Farm and Foreign Agricultural Services and Anita Pease from EPA's Office of Pesticide Programs.

In conjunction with the Fly-In, the US National Potato Council hosted the annual Friends of Potato Growers Congressional Potato Luncheon, where growers and officials joined together for a delicious lunch... of potatoes, of course.



For more information on the Potato D.C. Fly-In, visit the National Potato Council website at [www.nationalpotatocouncil.org](http://www.nationalpotatocouncil.org).



## Potato storage: Avoiding the onset of disease

MAINTAINING POTATO QUALITY THROUGHOUT THE SUPPLY CHAIN IS ESSENTIAL. ONE RESEARCH PROJECT FROM THE UNIVERSITY OF IDAHO LOOKED AT A NEW WAY TO COMBAT THE BREEDING GROUND OF DISEASES THAT CAN FORM WHEN POTATOES ARE IN STORAGE.

Growers face myriad challenges in ensuring the potatoes they produce maintain their quality throughout the growing, harvesting and storage stages, right through to transport and the point of sale.

In Idaho – the second largest producer, fresh packer and processor of potatoes in the United States – potatoes are commonly stored for two months or longer, making the control of storage pathogens extremely important. It has been previously estimated that, out of the total number of tubers going into storage in Idaho, losses from blemish diseases may be as high as 30 per cent.

Potatoes are susceptible to a variety of storage pathogens that cause blemish diseases, including Soft rot (*Pectobacterium spp.*), Silver scurf (*Helminthosporium solani*) and Black dot (*Colletotrichum coccodes*). Given this, researchers at the University of Idaho looked to

develop novel methods to control post-harvest diseases and reduce losses in potato storage.

### A different approach

The research stemmed from the fact that many naturally occurring, plant-derived volatile compounds are known for their anti-fungal properties. With a small grant from the Idaho Potato Commission, several plant volatile compounds were tested for their antimicrobial properties against three potato pathogens.

Two compounds that are produced by bananas, tomatoes and other fruits – acetaldehyde and 2E-hexenal – were selected for testing based on previous research that showed their

effectiveness at inhibiting the growth of fruit rot pathogens.

While the results showed that 10 parts per million (ppm) of acetaldehyde in the air was not effective at inhibiting growth of the potato blemish pathogens, in contrast, 2E-hexenal was highly effective. A concentration of as little as five ppm 2E-hexenal in the air was capable of completely inhibiting growth of these pathogens, and none resumed growth after being transferred to jars containing a volatile-free atmosphere.

### The final verdict

As current control options for potato storage pathogens

are currently lacking, the development of 2E-hexenal technology could have a very high commercial market demand, particularly as the potato tubers may only need to be treated once going into storage to provide season-long protection. However, the researchers noted that it was necessary to determine the exact concentration needed to effectively control these pathogens under realistic potato storage conditions.

Nevertheless, the results of the project showed that the use of naturally occurring volatile compounds could potentially be used as a way to control potato blemish diseases in storage.

Most importantly, it could help growers continue to produce high quality potatoes to meet market needs and extend the shelf life of the potato itself.



A Black dot sample with no volatile added.



A Silver scurf sample with 2E-hexenal added.

**i** For more information, contact Dr Phillip Wharton at [pwharton@uidaho.edu](mailto:pwharton@uidaho.edu).



with Scott Mathew

## Keeping a watchful eye on potato crops

SCOTT MATHEW, TECHNICAL SERVICES LEAD AT SYNGENTA, RUNS THROUGH SOME OF THE MORE FREQUENTLY ASKED QUESTIONS HE RECEIVES FROM GROWERS AND AGRONOMISTS WHEN HE TRAVELS AROUND AUSTRALIA AND NEW ZEALAND LOOKING AT POTATO CROPS.

### Why is careful monitoring of potato crops so important?

Potato production can be seriously affected by weeds, disease and insects, generally referred to as “pests”. But these impacts can be minimised by implementing Integrated Pest Management (IPM) strategies. A sound IPM strategy is one that combines several agricultural practices such as tillage, use of rotational crops, variety selection and registered chemicals to manage problems.

Regular monitoring of potato crops (or any crop for that matter) is the cornerstone of good crop management and should always form the basis of deciding how and when to apply control measures.

### How often should I inspect my potato crops?

It is likely that you will be either in the crops or looking at them on a daily basis, so this provides an ideal opportunity to have a good look through the crop – I suggest twice a week.

### What is a good monitoring technique?

Effective monitoring is often overlooked in order to save time. Good monitoring involves systematically moving through the crop looking for pests (this does not mean winding down the window and having a look as you drive past), measuring populations and then using these records to make informed control decisions.

The use of a good monitoring technique allows you to identify potential problems early on and manage them accordingly, thus reducing control costs and potential crop losses.

When monitoring crops there are several methods you can use when walking through the crop. These are either a “V”, “X” or “W” pattern to gather a random sample of pest populations within the field. For example, between 50 to 100 plants should be randomly selected for examination. The larger the area being cropped, the more plants should be inspected to help you observe and note any high population areas in the field.

### What parts of the plant should I monitor?

Random selection of plants is the key to an accurate indication of an insect, disease or weed population. Any unusual-looking plants (both crop and weed) or insects that draw your attention should be recorded.

When examining a plant for insect pests, you should inspect the top, middle and bottom leaf as well as the stalk. Often I have found insects on areas of the plant where you wouldn't expect to see them.

When monitoring for diseases, pay particular attention to the disease-prone areas of the field. For example, areas that tend to be damp for long periods of time should be checked for Pink rot as well as Early and/or Late blight. This includes low-lying, sheltered or shaded areas of the paddock.



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:Potatoes Australia: info@ausveg.com.au). Please note that your questions may be published.

## Q&A Young grower profile

**Name:** Peter Cooper

**Age:** 28

**Location:** Parndana, Kangaroo Island, South Australia

**Works:** Parnlee Potatoes

**Grows:** Seed potatoes, wool and fat lambs, canola, beans and oats





**How did you first become involved in the potato industry?**

I first became involved in the potato industry in 2010 when I grew my first crop of seed potatoes. I was working on another property at the time but, with the help of my parents, I had to try to keep a close eye on an old soft hose irrigator, watering my 10ha of seed. It wasn't a particularly good crop but I could see that if I improved my irrigation system, increased my area and managed my own seed that it could be a business that would allow me to farm alongside Mum and Dad.

**What is your role in the business?**

I am the owner and manager of the business so I am involved in every step of growing the seed crop. During the growing season, I employ one full-time worker and Dad helps out when we are busy. At harvest time I employ backpackers and one of my mates to get the spuds out of the ground and on to trucks.

**What do you most enjoy about working in the potato industry?**

The potato industry has allowed me to become a self-employed farmer. It has enabled me to not only grow a business that employs myself and one other person, but also purchase another farm to run sheep on.

**What are the biggest challenges that you face working in the industry?**

I run only a small operation so I have the challenge of trying to be efficient and profitable. To do this I need to have adequate machinery without being overcapitalised. I have the environmental challenges like the weather, but so do all growers. I would like to expand my business in the future but with this comes challenges with local and state government bodies.

**What do you see as some of the greatest threats facing the Australian potato industry?**

The decline in domestic consumption of potatoes is our greatest threat. People see potatoes as unhealthy and an inconvenient side to a meal.

I believe there is quite a bit of work being done in the market and hopefully this can slow the decline.

**Where do you see opportunities for growth in the Australian potato industry?**

As a seed grower on Kangaroo Island, I believe we have great potential for growth as we are currently growing disease- and virus-free seed potatoes. Whether we market them to our domestic producers or export them, I believe we are in a great position to not only increase our own production but also increase the production of commercial growers with high quality seed potatoes.

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

I would be working in another aspect of farming, either broad-acre cropping or livestock.

**Where do you see yourself in five years?**

Here, growing seed potatoes, wool and fat lambs.



# Potato Tracker: Aussies still love the humble spud

UNDERSTANDING CONSUMER PERCEPTIONS OF POTATOES IS ESSENTIAL FOR ANY GROWER TO CONTINUE DELIVERING QUALITY PRODUCE THAT MEETS MARKET NEEDS. *POTATOES AUSTRALIA* LOOKS AT SOME OF THE KEY INSIGHTS FROM THE LATEST POTATO TRACKER RESEARCH FINDINGS.

Six months on from its launch, the Potato Tracker project continues to provide useful insights into consumer attitudes towards potatoes and overall market trends. The project, developed by market researchers Colmar Brunton, aims to help growers understand the decisions consumers make when it comes to purchasing potatoes.

Just over 300 Australians completed the online questionnaire for both Wave 5 and Wave 6.

## Wave 5 results

In light of the recent food safety concerns that have been linked to imported products, it was no surprise to see that 75 per cent

of those surveyed in Wave 5 wanted to know their potatoes were Australian-grown, above all other provenance information.

In addition, almost three quarters of respondents said they preferred an all-purpose

variety of potato that could be mashed, roasted and boiled across key cooking styles. It was therefore recommended to investigate a versatile, all-purpose potato variety and promote the commodity as

'perfect for all your cooking needs'.

It was also noted that different types of consumers have different requirements. For instance, those who are time-poor see potatoes as a

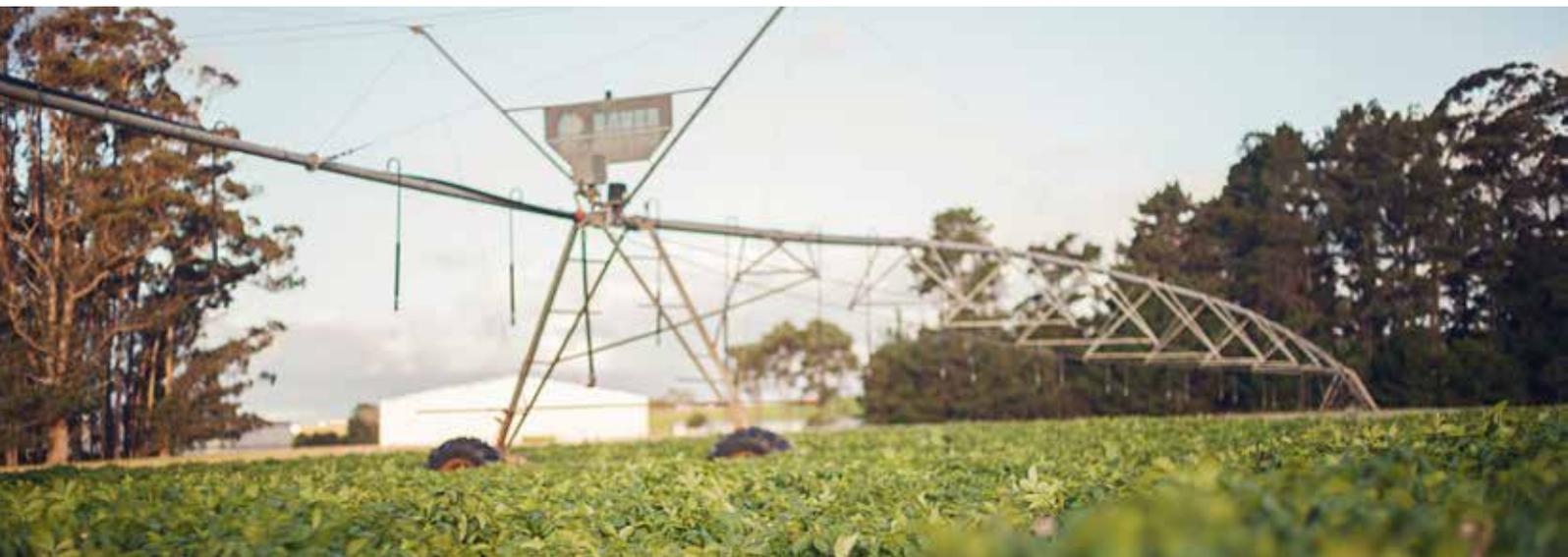
convenient vegetable, while they are typically viewed as a favourite for young and established families.

On the other hand, budget-conscious consumers see potatoes as a staple item in

their kitchen. In light of this, another recommendation was put forward to use a multi-layered approach to capture the consumer's attention in-store and on packaging using multiple messages.

Wave 5 also found that potatoes continue to have strong importance and satisfaction with consumers, which is on-trend with previous waves. Overall, consumers perceived both washed and brushed potatoes

"... it was no surprise to see that 75 per cent of those surveyed in Wave 5 wanted to know their potatoes were Australian-grown, above all other provenance information."





to be equal value for money and usually purchased them loose.

While consumers were satisfied with the current range of potatoes available, the Desiree, Dutch and Kipfler varieties were most regularly purchased this month.

**Wave 6 results**

Experiences with quality issues at both the purchase location and while cooking were examined in Wave 6. Approximately 12 per cent of respondents indicated a decline in quality over recent months; surface imperfections and skin colour where the main concerns in-store while internal quality issues such as bruising and rots surfaced when cooking with potatoes at home.

Firmness was also an issue particularly with washed potatoes, which may have resulted from incorrect storage once purchased, or extended display in-store. Given this, it was recommended to reassure consumers in-store that despite visual and superficial defects, the quality of the potato itself is not affected.

The expected length of potato freshness was also down this month to 16 days, the lowest tracked so far. As this concern could be related to the quality issues reported as well as shelf life, it was recommended to educate consumers on the correct storage of potatoes, as well as conduct and enforce regular quality checks to maintain freshness and quality throughout the supply chain.

The cost of potatoes was also seen to increase, however this is commonly driven by consumer perceptions rather than an increase in retail price. One way to combat this is to highlight value for money options, particularly in the form of loose and brushed potatoes.

Wave 6 also predicted that an increase in volume will most likely come from younger age groups with no children and a single income. While dinner remains the most popular time of day to eat potatoes, it was suggested that consumers should be encouraged to eat potatoes outside of dinner meals to help increase overall consumption.



The Potato Tracker project will continue over a total 12-month period with a wave of new findings released each month. Full copies of the report can be found on the AUSVEG website at [www.ausveg.com.au/potatoes/potato-consumer-research.htm](http://www.ausveg.com.au/potatoes/potato-consumer-research.htm).

This project has been funded by Horticulture Innovation Australia Limited using the Fresh Potato Levy and funds from the Australian Government.

Project Number: PT13015



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## A recap on the key findings in Brown fleck research

MUCH RESEARCH HAS BEEN CONDUCTED OVER THE YEARS ON BROWN FLECK IN POTATO TUBERS. *POTATOES AUSTRALIA* REMINDS GROWERS OF SOME OF THE MOST IMPORTANT FINDINGS THAT HAVE BEEN DISCOVERED IN THIS AREA BY QUEENSLAND RESEARCHERS.

The potato tuber is susceptible to a wide variety of physiological disorders including internal tuber disorders, which are a major setback to growers. The mere presence of these disorders reduces profitability and the economic viability of potato production, and often prevents growers from achieving a retail market specification.

In sub-tropical Australian potato production, Brown fleck can be a significant problem in potato tubers, mostly affecting spring-harvested crops. Its symptoms include an irregular, brown discolouration of the tuber tissue.

Unfortunately, the disorder produces no external symptoms, which makes it difficult to detect. Brown fleck is classified as a physiological disorder rather than a disease, as it does not spread to other tubers and has no pathogen association.

Past research has shown that the incidence of Brown fleck is generally more pronounced in large, rapidly growing tubers. The cause of these problems has previously been attributed to various unfavourable environmental factors such as temperature and crop nutrition.

### Key Queensland research findings

As global research on the causes of Brown fleck and the ways to tackle the disorder have not been substantive, Queensland Department of Agriculture and Fisheries researcher Stephen Harper has previously run a project that evaluated the causes and management strategies for Brown fleck.

Past research has shown that incidence and development of Brown fleck symptoms appear to be two separate processes. In particular, the initiation of Brown fleck relates to the death of specific sugar conducting cells in the tuber and as a consequence, further severe cellular disruption occurs.

#### Temperature

Results over a series of experiments have demonstrated that elevated night time temperatures and vigorous foliage growth dramatically increase the expression of Brown fleck, while high soil temperatures also enhance the development of symptoms. Alternatively, elevated day temperatures do not appear to

greatly increase the incidence of the disorder.

Short-term weather conditions that favour rapid tuber growth also favour Brown fleck; in particular, warm nights, mild sunny days and rain events.

#### Tuber yield

There is a strong relationship between crops that have high yield potential and high Brown fleck incidence. As mentioned above, the factors that favour rapid tuber growth also tend to favour high Brown fleck incidence.

The link between tuber growth, temperature and incidence of Brown fleck is important to consider, as an increase in night temperature consistently increases the incidence of Brown fleck as well as tuber yield.

#### Foliage management

To help minimise the incidence of Brown fleck, growers need to prevent prolific canopy development, which can largely be achieved by ensuring that nutrient application and irrigation are not excessive. Early monitoring of tubers for the first evidence of Brown fleck incidence should be conducted, as this can form the basis of determining

whether preventative measures are required.

If early evidence of Brown fleck is detected and conditions are favourable for its development, the management of crop foliage to reduce vigour should also be considered.

The maintenance of weed or vegetative cover at crop senescence should also be encouraged to provide shade to the soil and prevent excessive soil temperatures that favour the enhancement of Brown fleck symptoms.

#### Nutrition

The literature on internal disorders suggests that crop nutrition, particularly calcium, can influence the expression of internal browning disorders. There is also evidence that boron deficiency may be involved.

Results from a series of field and glasshouse experiments have shown that the application of calcium and boron (alone or in combination) have no consistent effects on the incidence of Brown fleck. Given this, the application of these nutrients is not recommended as a means of controlling Brown fleck; instead they should be applied at appropriate rates to meet normal growth requirements.



## A note from the CEO

### Dear members of the Australian potato industry,

AUSVEG is pleased to advise of its re-appointment as the Prescribed Eligible Industry Body for unprocessed potatoes, following a review carried out by Federal Agriculture Minister, the Hon. Barnaby Joyce MP.

The Minister's decision is most welcome and provides a solid foundation for AUSVEG to continue effectively representing the interests of Australian potato growers into the future.

Throughout the review process, we have received unwavering support from potato growers across the country, and thank them for their vote of confidence in AUSVEG as their legitimate industry body, best placed to represent their needs.

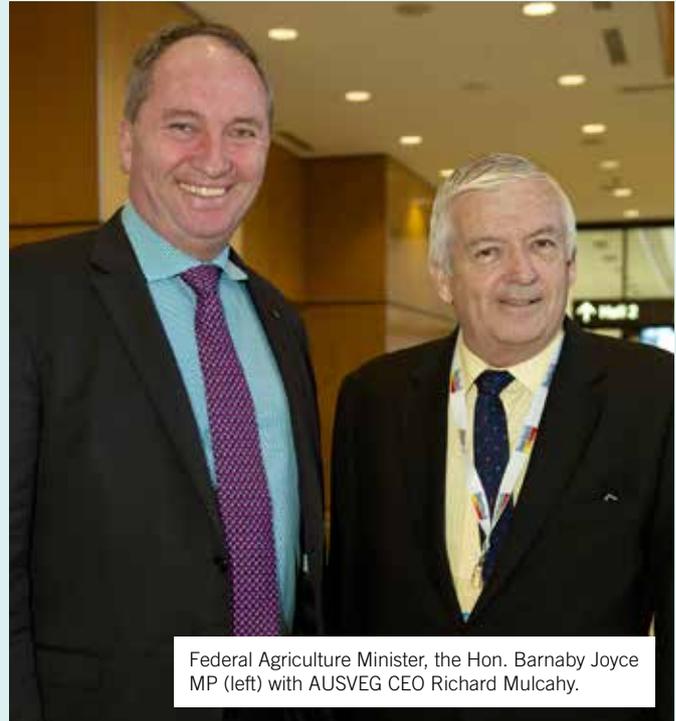
AUSVEG is proud of its record of meaningful and effective representation of Australian potato growers, and remains committed to furthering their cause in relation to the investment of the potato R&D levy, on the farm, in the media and in the corridors of power in Canberra.

While Australian potato growers continue to face many challenges, they can rest assured that AUSVEG will continue fighting hard to represent their interests.

Yours sincerely,



Richard J. Mulcahy  
AUSVEG CEO



Federal Agriculture Minister, the Hon. Barnaby Joyce MP (left) with AUSVEG CEO Richard Mulcahy.

## CALENDAR of events



### 25-27 June 2015

**National Horticulture Convention, Trade Show and Awards for Excellence incorporating AUSVEG and Apple and Pear Australia Ltd.**

**Where:** Gold Coast, QLD

**What:** The National Horticulture Convention is the biggest event in Australian horticulture, providing local and international delegates with an opportunity to forge relationships with members of the vegetable, potato, apple and pear industries. This is a must-attend event for growers, suppliers, wholesalers, researchers and agribusinesses alike.

**Further information:**

Please contact AUSVEG on (03) 9882 0277, email [convention@ausveg.com.au](mailto:convention@ausveg.com.au), or visit [www.ausveg.com.au/convention](http://www.ausveg.com.au/convention)

### 28-30 July 2015

**9th World Potato Congress**

**Where:** Beijing, China

**What:** The World Potato Congress is dedicated to supporting the global growth and development of the potato. It is the first time the Congress will be held in the Yanqing, Beijing region and will be staged at the base of the Great Wall of China. The Congress will be held concurrently with the China Potato Expo and China Potato Congress. It is expected that more than 900 delegates will attend, including growers, researchers, producers, traders, processors and manufacturers.

**Further information:**

[www.potatocongress.org](http://www.potatocongress.org)



Stu Jennings

It's amazing how much can happen in such a short amount of time – not that everyone hasn't been busy to make it all happen. Harvest is well under way in the southern part of the country and I hope that you too are reaping the benefits of your hard work wherever you are.

No matter what part of the industry you're from, any event that celebrates your community and the 'fruits' of your labour is surely a good thing. Our little part of the world has seen its biggest day in 12 years

recently with the return of the Thorpdale Potato Festival held on 8 March.

The town of Thorpdale has a proud history in the Australian vegetable industry. The dominant crop though has always been the humble spud, grown and harvested to perfection in our rich red volcanic soil. With the festival on hold since 2003 after red tape became too difficult to manage, last year we pulled together a determined committee and along with the generous support of our sponsors and an enthusiastic community, 'Spud Fest' made a huge comeback in 2015!

Over 6,000 people came through the gates. There was something for everyone including great live music, market stalls, culinary delights and cooking demos, vintage cars and machinery, stunt bikes and a host of other activities for young and old. A big feature was the competitive events that the festival had previously been renowned for, including potato picking, packing, stacking, peeling and eating contests, the Sack Races and a mighty Tug-of-War.

The day was a great success with coverage in local and regional media putting Thorpdale firmly back on the map. We were also able to support many of the local community groups that can otherwise struggle to raise funds for their day-to-day good work.

Special thanks to all of our many sponsors without whom we could not have pulled it off and, in particular, our friends at Vin Rowe Farm Machinery who went out of their way to ensure that the Thorpdale Potato Festival returned bigger and better than ever.



All in all it was a fantastic day for all those who attended, and it was so positive to see the engagement around our industry – one thing we are all truly connected by.

My challenge to all the YPP family members out there in 2015 is to get involved in your local community and help drive the spirit that makes yours a great place to be. It's even more rewarding than you might think and you'll be surprised how many people will be happy to help!

Stu



[www.youngpotatopeople.com.au](http://www.youngpotatopeople.com.au)



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Bird's eye view of Thorpe Dale's big day out



Young local talent having a crack at the Quick Shear Contest



Spuds laying in wait for the Picking Competition



'Chippy' the potato spent the day meeting everyone



1<sup>st</sup> and 2<sup>nd</sup> place in 'Hessians on the Field' - all made from spud sacks!



Kids having fun in the sack races



The 50kg bag throw - highest stack of pallets wins

At Adama we understand that potato farming can be complex. We also recognise that our industry is strengthened by sharing our achievements and challenges with the wider community - and that's why we are proud to sponsor the Young Potato People. We believe that the fostering of community spirit and a sense of connection is as important today as it ever has been.

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