

potatoes

australia

April/May 2013



Pennie Patane

From finance
to farming

Social media:
connecting
young growers

Growing spuds
in the air:
the world of
aeroponics

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Contents

April/May 2013

Regulars

- 5 Chairman & CEO message
- 7 Editorial

Features

- 10 David Fox: Q&A Young grower profile
- 18 From finance to farming
- 22 Social media: connecting young growers

Industry update

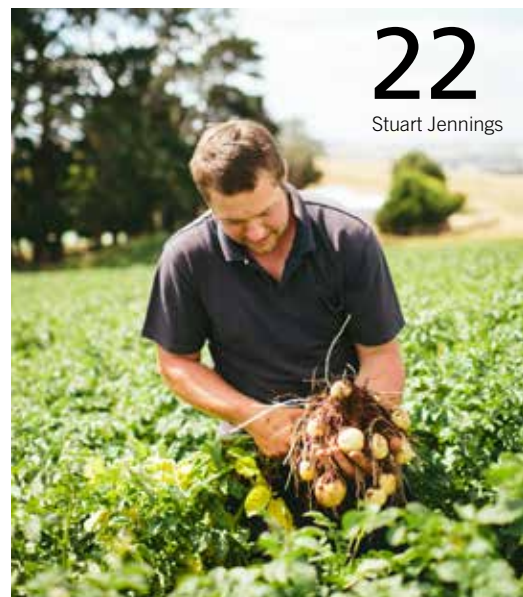
- 27 Ask the industry

News

- 8 Potato Extension Program Booth at 2013 Convention
- 8 Requesting industry feedback on Australian seed certification systems
- 9 New local head for Bayer
- 9 Annual Potato Levy Payers Meeting 2013
- 12 Deere in the spotlight
- 14 Women in horticulture cruise into the 2013 Convention

R&D

- 16 The National Potato Levy: Your investment explained
- 21 Potato Industry Advisory Committee summary
- 25 Slow release fertiliser trials
- 28 The young faces of training and education in the Australian potato industry
- 30 From the lab to the field: R&D hits the road
- 32 International R&D update: Growing spuds in the air
- 34 Southern Ladybird to aid in Tomato-potato psyllid control in New Zealand



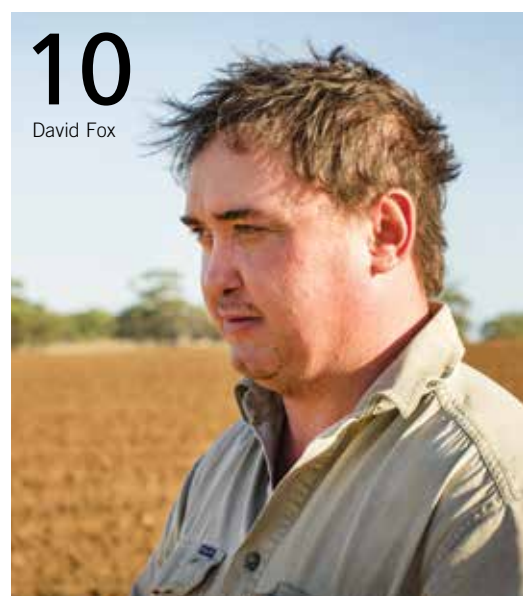
22

Stuart Jennings



18

Pennie Patane



10

David Fox



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AUSVEG Chairman and CEO messages



John Brent

AUSVEG Chairman

Ensuring valuable networking, industry development and educational opportunities are made available to Australian potato levy payers is vital in safeguarding the long-term competitiveness and viability of the Australian potato industry. Grower study tours aim to expose Australian potato growers to the methods and practices used by their international counterparts, and provide tour participants with the opportunity to see firsthand the various technologies, marketing and business initiatives that are being used and implemented in respective foreign industries. The information and experiences gained on these tours is then brought back to growing districts around Australia and communicated to members of the local industry.

In 2013, AUSVEG will lead nine Australian potato levy payers on a study tour to the United States and Canada, to visit key potato production states and regions. On the tour, participants will be taken to major potato growing farms, potato processing operations and key industry businesses.

Witnessing several main components of the supply chain, participants will also be able to see innovative machinery, equipment and on-farm innovations. They will also visit leading research institutions to learn about pioneering R&D that is being conducted in the potato industry abroad. This year's upcoming potato grower study tour will involve visiting some of the largest potato

production areas in the world - including Idaho in the USA and New Brunswick located on Canada's east coast. To be run over 10 days, from 21 to 31 July, the tour will also include attendance at a key industry event, the Potato Association of America Conference.

Giving Australian potato levy payers the opportunity to meet their international counterparts, this tour will help to broaden the industry's understanding of international potato production and provide valuable insights into some of the alternative or differing approaches to potato production and associated activities within the supply chain. The costs for the Australian potato levy payers participating in the tour will be partly funded by the National Potato Levy (processed and fresh sectors), offering a true value-for money experience for all involved. I encourage potato levy payers, particularly younger generation growers, to consider submitting an application to attend this fantastic industry development initiative. Details of the tour will be made available shortly and is subject to HAL approval.

John Brent
Chairman
AUSVEG



Richard Mulcahy

AUSVEG Chief Executive Officer

Australian potato growers face challenges on many fronts, be it rising input or labour costs, skills shortages or trying to stay competitive against cheap imports that are now flooding the market. In recent months we have seen several long-standing Australian vegetable processors, as well as some leading farming operations, either close their doors or take their business offshore, resulting in major job and revenue losses for the broader horticulture industry. It is clear that the demands placed on growers and food producers in Australia to reduce their costs are reaching a critical phase. The closures and relocations of these businesses are indicative of the broader challenges facing the industry. Numerous potato growers have had their contracts cut with leading processors and are rightly concerned for their, and the industry's future, should this trend continue.

The rise of imported food products in Australia continues to come at the expense of local producers, and is leading to a reduced supply of quality Australian food products reaching consumers' shopping trolleys. Despite there being more than enough produce to supply the domestic market, cheap imported vegetable and potato products are rapidly becoming a staple on our supermarket shelves. And with Australian consumers routinely indicating a preference to support their local industry, the practice of increasingly sourcing cheap overseas products seems at odds with consumer

sentiment. The growing practices and standards of Australian producers continue to surpass many, if not most, of our international competitors.

Our major retailers and Government need to support the local food industry to ensure we are offering consumers the high quality products they want and to ensure the industry can remain viable long into the future.

AUSVEG has also advocated the industry's concerns in regards to the recently released Agricultural and Veterinary Chemicals Legislation Amendment Bill 2012. The suggested legislation will require agricultural chemicals to be re-registered every seven to 15 years. This could see safe and effective chemicals that are not widely used withdrawn from the market. The proposed laws would only increase red tape and could severely affect agricultural production in Australia. AUSVEG, alongside other representative bodies, have made submissions to the Senate inquiry and the Bill now sits before the House of Representatives to be voted on.

Richard J Mulcahy
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All research and development projects are facilitated by HAL 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 HAL's R&D activities. For further information visit:

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**FRONT COVER:**

Pennie Patane

Photograph by Ben Yew

Editorial

Pennie Patane, Director, Shareholder and Administration Manager of Patane Produce, graces the cover of the April/May 2013 *Potatoes Australia*. With a background originally in the finance industry, Pennie alongside husband Michael, have established one of the top five facilities in Western Australia for quality vegetable production and supply. She details their journey so far and her thoughts

on women's roles in the industry (page 18).

David Fox features as this edition's Young grower profile. Based in Dandaragan, Western Australia (WA), the fourth generation potato grower shares his views on the industry, the benefit of supplying to the regulated sector in WA and the close working relationship he shares with his father (page 10). Continuing on the theme, Victorian-based young potato

grower, Stuart Jennings, is also featured for his efforts in connecting young growers in the industry. Stuart enacted a novel idea of using social media to build better networks amongst the next generation coming into the sector (page 22).

Coverage of fascinating R&D in this edition includes an international article on growing potatoes with aeroponics (page 32), slow release fertilisers (page 25) and an in-depth look

at the R&D levy system (page 16). In a special Q&A, *Potatoes Australia* speaks with several PhD students from Melbourne University who are contributing to some of the leading research in the sector (page 28). And the Potato Industry Extension Column details the most recent field days and workshops held in Victoria, Queensland and Tasmania, to communicate R&D to growers, processors and agronomists (page 30).

10

David Fox: Q&A
Young grower
profile



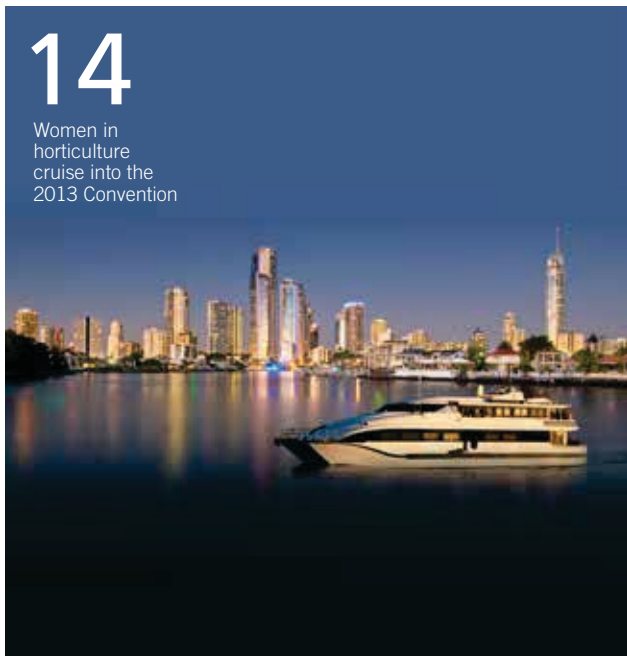
34

Southern
Ladybird to aid in
Tomato-potato
psyllid control in
New Zealand



14

Women in
horticulture
cruise into the
2013 Convention



32

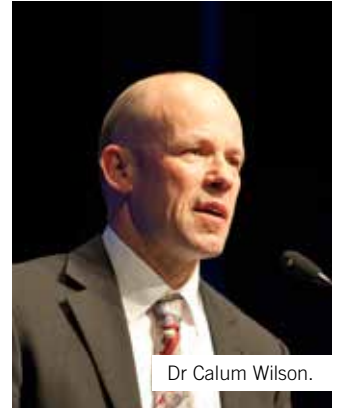
Growing
spuds in
the air



Potato Extension Program Booth at 2013 Convention



Dr Kathy Ophel Keller.



Dr Calum Wilson.

Communicating R&D outcomes and how they can be implemented on-farm will be a key focus of the Potato Extension Program Booth at this year's Convention.

The Potato Industry Extension Program will showcase a broad range of material on current industry R&D projects and outcomes, in a dedicated Information Booth at the 2013 AUSVEG National Convention Trade Show.

Current and past editions of the *Potatoes Australia* magazine will be available, as well as up-to-date information flyers on several R&D projects, which provide a snapshot of the activities being undertaken in these projects and the practical benefits these can/will have for growers and processors. The R&D flyers have been identified

by many within the industry as a valuable source of information - some of the research covered includes Root-knot nematode, Zebra chip and Improving the management of White-fringed weevils. Visitors will also have the opportunity to hear about the many R&D Field Days and workshops that have been held by the program around the country over the past 18 months.

In an exciting development, the Potato Industry Extension Program is also very pleased to announce that a number of leading industry researchers will appear as special guests at the Information Booth at various times throughout the two-day Trade Show, to discuss the R&D projects they're involved in directly with visitors to the booth. The 2012 Researcher

of the Year, Dr Calum Wilson, from the University of Tasmania (UTAS), will be there to discuss several industry R&D projects he has been involved with, including the management of potato viruses and diseases (such as Potato virus Y, Potato Leaf Roll Virus and the Tomato Spotted Wilt Virus), as well as monitoring for incursions of the Tomato-potato psyllid in Australian potato crops (PT10001). Dr Kathy Ophel Keller, from the South Australian Research and Development Institute (SARDI) will also appear at the booth to discuss the commercial roll-out phase of project PT09023 - Diagnostic tests for soil-borne pathogens, which is part of APRP2.

Members of the Australian potato industry are strongly encouraged to visit the Potato

Industry Extension Program Information Booth, to learn more about the valuable R&D projects that are currently underway, and the benefits these are delivering.

All visitors to the booth will receive a complimentary hot baked spud, with a variety of delicious fillings to choose from!

The 2013 AUSVEG National Convention Trade Show will be held at Jupiters Gold Coast from 30 May - 1 June.



For more information on the 2013 AUSVEG National Convention:

Email: convention@ausveg.com.au
Phone: (03) 9822 0388
Project: PT11004

REQUESTING INDUSTRY FEEDBACK on Australian seed certification systems

Seed certification schemes are an initiative established across potato industries - domestic and international - to ensure that growers are using only the most superior seed

potatoes, grown, handled and stored with care, and free from pests, diseases and viruses, to produce high yielding and high quality crops.

Concerns have been raised

by a range of industry members about the lack of a unified approach to certification schemes in Australia. The confidence in quality assurance for seed has been said to be fading, where some seed potatoes are making it through the inspection system with objectionable levels of virus infection.

AUSVEG is requesting feedback from all potato levy payers who have had involvement with a seed potato certification scheme.

Are the current schemes working to ensure only the

most superior disease-free seed potatoes are sold? What have the benefits been to your potato operations? Are there areas within the current seed certification systems which need to be improved?

The issue of seed certification systems in Australia has featured in the magazine previously. You can read the full article on this important issue in the February/March 2013 edition of *Potatoes Australia*.



Please email your feedback to info@ausveg.com.au

New local head for Bayer

Dr Jaqueline Applegate has been appointed Senior Bayer Representative for Bayer Australia and New Zealand and the Managing Director of Bayer CropScience Pty Ltd.

Based in Melbourne, Dr Applegate assumes the role from Joerg Ellmanns, who returns to Germany to join Bayer CropScience's Strategy and Business Management Team as Head of Soybeans, Corn and Herbicides.

Dr Applegate brings a wealth of experience to the role, having joined Bayer Crop Protection in 1992 as a chemist in Process Development. Working throughout Europe and North

America, she has held positions as diverse as Global Project Manager, Head of Global Portfolio Management at Bayer Environmental Science and most recently, President of Bayer Environmental Science North America.

Dr Applegate holds a PhD in Organic Chemistry from Iowa State University with a focus on agricultural and pharmaceutical chemistry, as well as an MBA from Rockhurst College.

AUSVEG congratulates Dr Applegate on her new role and wishes her all the best in furthering the Australian vegetable industry.



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.

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



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

Q&A Young grower profile

Name: David Fox

Age: 34

Location of farm: Dandaragan, Western Australia

Work/Title: Grower/Farm manager

Grows: Fresh market potatoes and seed potatoes



How did you first get involved in the industry?

I am a fourth generation potato farmer. Growing up in Pemberton, there were lots of potatoes around and when we moved to Dandaragan to expand the farm business I looked at how potatoes might go up here and then we decided to try them. That was six years ago.

What is your role on the farm?

I work on the farm with Mum and Dad. I manage the potatoes and Dad manages the livestock, and we both work on the cropping together. It is a mixed farm growing potatoes, sheep, cattle and cereal crops. We work very closely together and have a good working relationship.

What does your average day on the farm involve?

An average day on the farm involves getting up with the



kids (earlier than I would like), turning on the irrigation, working in the tractor - whether it be spraying, seeding or digging - and also sometimes I do some stock work with the cattle or sheep. There are lots of phone calls organising things, and then [I return] home at the end of the day to my beautiful two boys and lovely wife.

What do you enjoy most about working in the industry?

I am passionate about agriculture and love working in the industry. I like that when we are delivering our potatoes, they are going to be served up on dinner plates all around the state and families will be consuming them and having a nutritious meal and a good family conversation. I also like digging for new potatoes and checking for size - it is like digging for gold, perhaps not as lucrative though.

What are the biggest challenges you face as a grower?

The rising costs and stagnant returns. The biggest worry is the increasing rate of input costs in the business. I wish our returns were growing at the same rate but they're not. At some stage something has to give. Labour is a big issue here in the west, the wages are high but more importantly we are having to take on less skilled labour because a lot of the good farm workers are going to the mines and I can't blame them for doing so.

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

It is hard to get young people into agriculture unless they have a passion for it. If you don't love it then getting up early, working in the elements and coming home late to your family doesn't

sound very appealing, unless you are really passionate about what you do. The only way to encourage young people into agriculture is to give them a chance, employ young people out of an agricultural school or the like and teach them things that are practical and hope they develop a passion for the industry too.

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

In Western Australia, I think deregulation is a big threat, there are also some opportunities from deregulation but I really believe that the industry is better off the way it is. We have travelled to New South Wales, Tasmania and Victoria looking at potatoes and all the growers we have met wish that they had a similar system. We recently had state elections here and the Labor Party said that they would

deregulate the industry; luckily they didn't get in. They said prices to consumers would come down and they would have more variety, but on our travels over to the east coast the price seems about the same in the shops and the growers are getting far less than here.

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

I have thought about this and I am really not too sure. I would probably like to work with my hands, I have no education above year 12 and I had lots of fun at school hence my grades weren't that flash. I think this was because all I wanted to do was be a farmer much to the dismay of my teachers. I like to know how things work and make improvements to machinery to make it work better, so maybe I would pursue something in that direction, such as agricultural engineering.



The 5100MH Speciality Tractor.

Deere in the spotlight

ONE OF THE MOST RECOGNISABLE BRANDS IN THE HORTICULTURE INDUSTRY, JOHN DEERE, WILL SHOWCASE SOME OF ITS MOST IMPRESSIVE MACHINERY AT THE 2013 AUSVEG CONVENTION.

Over its long history, John Deere has cemented itself as an innovative and reputable brand amongst its competitors on the domestic and international stage. A leader within the Australian horticulture industry, the manufacturing giant is set to showcase some of its most impressive machinery at the 2013 AUSVEG National Convention Trade Show.

Advertising & Communications Manager with John Deere, Brian Torrey, says the company aims to cater to Australian growers through innovative approaches to production and building strong lines of communication.

“John Deere is dedicated to those linked to the land. Understanding customers, where they live and work,

their wants and needs, and how to meet and exceed their expectations is at the heart of everything we do. Staying connected with our customers is reflected in the way we as an organisation learn, think and act, and a goal into which we invest significant time, resources and effort,” he says.

“Agricultural producers around the world face many challenges in providing food, fibre, and fuel to a rapidly growing global population. The Australian horticulture industry is no exception. There is a need to produce more with less in more sustainable ways so that Australian producers can achieve financial security and long-term growth.”

A frequent sighting on

many a farm across Australia, John Deere machinery has also become a fundamental component of the AUSVEG Trade Show and in 2013 the 5100MH Speciality Tractor and the RSX850i Utility Vehicle will be sure to impress delegates as part of the John Deere display at the Convention.

With the Trade Show now 95% sold, delegates will be presented with an array of exhibitors from all areas of the supply chain. AUSVEG National Marketing Manager, Simon Coburn, says the popularity of the Trade Show has continued to increase over the four year history of the National Convention.

“With nearly all of the exhibition booths for this year's Convention now sold, it is clear

that the Trade Show provides valuable opportunities for both agribusinesses and other industry members to showcase the latest on-farm machinery and horticulture products, and to also network,” he says.

“As the industry keeps moving forward, so too do the on-farm needs of our growers. John Deere continues to lead the field with cutting-edge technology tailored specifically to these evolving needs.”



The RSX850i Utility Vehicle.



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WOMEN IN HORTICULTURE

cruise into the 2013 Convention



Tina Lamattina.

THE WOMEN IN HORTICULTURE EVENT HAS BECOME AN EXCITING AND MEMORABLE COMPONENT OF THE AUSVEG NATIONAL CONVENTION, AND 2013 WILL BE NO EXCEPTION.

Celebrating and recognising women in the industry has formed a pivotal component of the Convention, with the Women in Horticulture Award and Event continuing to be well-received by members of the industry. After a successful and memorable occasion held at the 'eyebrow-raising' Museum of Old and New Art (or MONA) in Hobart during the 2012 Convention, the Women in Horticulture Event, which is again sponsored by Steritech, is set to return in 2013 with a

sparkling splash.

Delegates of the Women in Horticulture Event will be taken off-site on a beautiful cruise of the Gold Coast harbour. With champagne on arrival and delicious canapés, attendees will have the opportunity to network and hear from high-profile industry speakers while taking in the glittering scenery.

Guest speakers will include last year's winner of the Women in Horticulture Award, Victorian-based, Tina Lamattina. The award recognised Tina's success

in managing the administrative, accounting, quality assurance and environmental aspects of the Lamattina group, which produces up to 100,000 tonnes of fresh produce each year. With an inspiring and relatable journey, the national award winner will address delegates in what is sure to be an inspiring speech.

The event is recognised by many members of the wider horticulture industry as an invaluable opportunity to create new personal and business links

within the sector. Due to take off into the afternoon waters on Saturday June 1, the event will be followed by the stunning Gala Dinner where all national award winners will be announced.



For more information on the 2013 AUSVEG National, Convention, Trade Show and Awards for Excellence:

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THE NATIONAL POTATO LEVY:

Your investment explained



FOR EVERY TONNE OF POTATOES PRODUCED IN AUSTRALIA, A LEVY IS COLLECTED AT THE FIRST POINT OF SALE. BUT WHERE DOES IT GO AND WHAT IS IT USED FOR? *POTATOES AUSTRALIA* EXPLAINS YOUR INVESTMENT.

For the Australian potato industry, a national levy of \$0.50 per tonne is collected at first point of sale from both potato growers and processors, which is then matched by the Australian Government

when invested into key R&D areas. The fresh potato levy is collected by first purchasers, agents, merchants, exporters etc, while the processed potato levy is collected by processors, who must forward

it to the Levies Revenue Service (LRS) - an agency within the Department of Agriculture, Fisheries and Forestry (DAFF) that is responsible for the administration, collection and delivery of all levy funds on

behalf of the industry, on a cost recovery basis. After the funds have been collected and matched dollar-for-dollar by the Australian Government, they are then forwarded onto Horticulture Australia Limited (HAL) who

manages these funds. The levy is then invested into projects which have recently included control strategies for an incursion of the Tomato-potato psyllid, management practices for Root-knot nematode, a series of plant and soil health programs (such as those within the Australian Potato Research Program Phase 2, funded by processed potato growers and processors) and a range

of industry development and communication projects.

The R&D projects in these areas are imperative for levy payers to not only understand and manage disease and virus issues affecting both the fresh and processing potato sectors, but to also safeguard the wider industry against future threats and challenges to production. Industry development programs are also a critical component of

the R&D levy investment.

Without this investment by the industry, producers would likely be less prepared to deal with new and complicated diseases, and sectors may experience a build-up of emerging disease and virus issues, potentially causing extended crop and economic losses to the wider industry. Many of the R&D programs underway also aim to equip potato levy payers with

the kinds of training, education and leadership skills they will need to steer the industry towards a viable and competitive future.

Before levy funds are invested into R&D programs there are several requirements and vetting processes potential projects must navigate including Horticulture Australia Limited (HAL) and the relevant Industry Advisory Committees (IACs).

HAL's role

Horticulture Australia Limited (HAL) is an industry owned Rural Research and Development Corporation (RRDC) which coordinates investment of the levy in to prioritised areas of research on behalf of levy payers. It works in partnership with Australia's horticulture industries to invest in R&D and marketing

initiatives. Recommendations on investments are made to HAL from the Industry Advisory Committees (IACs) of each industry, whose members have strong backgrounds in the industry and can provide a high level of expertise in regards to what areas require investment and progression.

The Industry Advisory Committees' role

The Fresh and Processed Potato IACs are representative committees of each sector. The IACs are committees of HAL that provide advice to the HAL Board on investment decisions. Members of the IACs are recommended to HAL by the Peak Industry Bodies (PIBs) for each industry, which in the potato sector are AUSVEG (representing potato growers), and also the Potato Processing Association of Australia (PPAA) in the processing potato sector (representing the major potato processing companies). The IACs provide advice and make recommendations to HAL about how levy funds should be invested to best meet the needs of the potato industry. Each

IAC committee provides input for their respective sectors and it is the industry's responsibility, through grower and industry representation on the potato IACs, to recommend how levy funds should be invested in alignment with the fresh and processed potato industries' strategic priorities (which are detailed in their Strategic Investment Plans). The potato IACs meet in person and via teleconference several times a year to discuss and debate existing and proposed R&D projects and make recommendations to HAL on whether these projects should proceed. For a summary of the most recent Fresh and Processed Potato IAC meetings held in March this year, please see the article on page 21.

The role of the Peak Industry Bodies

It is important for potato levy payers to be aware that national Peak Industry Bodies (PIBs) such as AUSVEG, play no role in the collection of levy funds. The PIBs serve in an advisory capacity in relation to project proposals and ensure that the needs and interests of the levy payers they represent are addressed. In the potato industry, recommendations are made by AUSVEG to HAL about the configuration of the Fresh and Processed Industry Advisory Committees (growers only), to ensure that the most appropriate industry members are providing input as

to what areas the National Potato Levy should be invested into. The PIB for Australia's potato processing companies, the Potato Processing Association of Australia (PPAA), has the same role for the processing members of the Processed Potato IAC.

These Peak Industry Bodies are also 'ex-officio' members of their respective IACs - which means that they have no voting rights for the approval of R&D projects. The PIBs can, however, provide feedback and ensure that R&D programs are properly scrutinised.

Levy funds received 2011/12

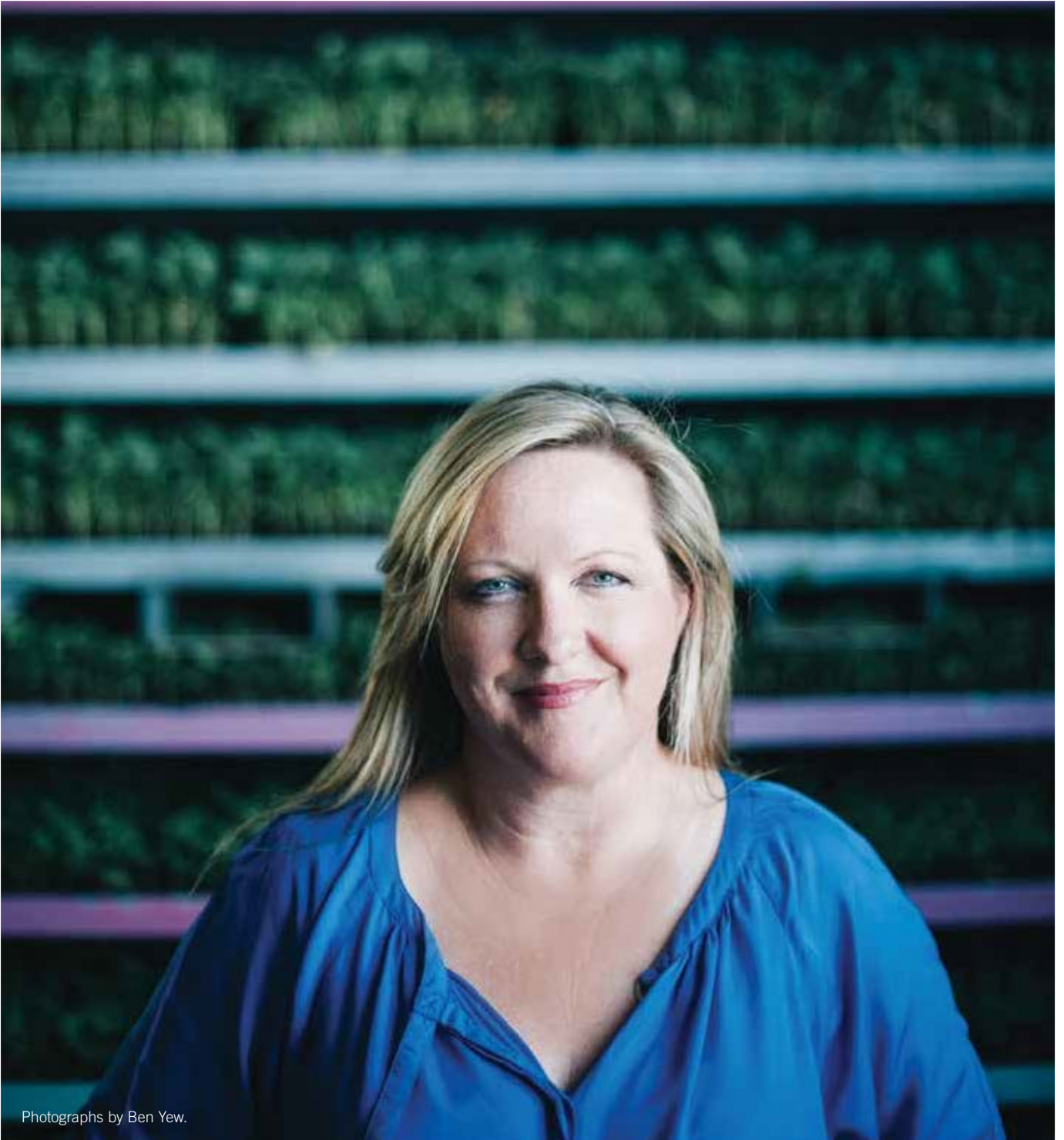
In 2011/12, total levy funds received for the fresh potato industry was \$303,490. In addition to levy funds, \$331,228 of voluntary contributions from industry, with matched funding from the Australian Government, was provided to the fresh potato sector. In 2011/12, the total levy funds received for the processed potato industry was \$668,088. In addition to levy funds, \$1,898,414 in voluntary contributions from industry was provided to the processed potato industry. There were a total of 19 levy and VC projects funded for the fresh potato industry in 2011/12; while a total of 20 levy and VC projects were funded for the processed potato industry.



For more information on how your levy works or to read more about the current R&D projects for the potato industry visit:

Horticulture Australia Limited (HAL)
www.horticulture.com.au

AUSVEG
Phone: (03) 9822 0388
Email: info@ausveg.com.au
www.ausveg.com.au



Photographs by Ben Yew.

From finance to farming

SWAPPING A CAREER IN THE FINANCE INDUSTRY FOR ONE ON THE FARM HAS SEEN PENNIE PATANE CO-CREATE A SUCCESSFUL AND DIVERSE HORTICULTURE BUSINESS VENTURE IN WESTERN AUSTRALIA'S SOUTH-WEST, WRITES CAITLIN RODÉ.

Planning a tour of Europe with her best friend turned out to be Pennie Patane's path towards meeting her future husband and, perhaps unexpectedly, her introduction

to a successful career in the Australian horticulture industry.

"I shared a house with a girl in Perth and we were going to Europe - just before we were due to leave she met a guy in

Donnybrook and decided not to go on our trip, so I went on my own. When I was away she rang me and told me that she'd gotten engaged but it was alright because her partner had a

friend and she could introduce us," the mother of three says with a laugh.

And alright it was, as Pennie met said friend and years later was married herself. Her

partner Michael hails from a background in the agriculture industry, having grown up amongst orchards and potato crops. Today Pennie, alongside husband Michael and their dedicated team, manage a property spanning across 80 hectares of land in the Myalup region of Western Australia, which is supplemented by several other properties contributing to a total growing area of almost 440 hectares.

Initially a foreigner to the industry herself, Pennie had extensive experience in the finance sector. Moving across several financial positions in Melbourne and Perth throughout her early twenties, she settled in to working for banking giant Westpac until the pair bought their own land and started their business, *Patane Produce*.

had enough, I think I'll leave you guys to it now' and he said 'No, you have to work there all day!' I was covered head to toe in mud, I was absolutely exhausted, every muscle ached in my whole body and I thought I just can't do this. But we've muddled through!"

Now overseeing the financial side of things, including paying the bills, transferring money, wages and a little bit of quality assurance, Pennie also spends a lot of time working on particular projects which involve dealing with government departments, developing farms and organising licenses for various activities. Producing potatoes, carrots, onions and broccoli for both domestic and export markets, the sheer size of the Patane business seems to have surpassed both Michael and Pennie's expectations: "I



“ We really started from scratch and built it [the business] up - there were times where financially it was really tough, where we didn't have enough money to buy a loaf of bread. ”

- Pennie Patane.

“It was hard to set up the business initially, we both worked jobs Monday to Friday and the first couple of crops we had potatoes and pumpkins which Michael did on the weekends,” says Pennie.

“I'll never forget the first crop of potatoes which we harvested together. I was living in Perth and said that I would come down on weekends to help. We had to get up at four o'clock in the morning, I had never done that, I'd gone home at that time of the morning but I'd never gotten up at that time of the morning,” she says reminiscing of her nights out on the town.

“I got on the potato harvester and they had me on the trash belt, digging in mud. About an hour later it was morning tea and I said to Michael, 'oh I've

don't think my husband ever envisaged he'd be running a business this size with this many people - you learn the skills as you go.”

Pennie concedes that there were indeed hard times in the early stages of setting up the business. Not owning any property for production initially meant that the couple needed to save for years to buy land.

“We had to finance everything that we were doing, every tractor - Michael was buying wrecks and rebuilding them - we really started from scratch and built it up. There were times where financially it was really tough, where we didn't have enough money to buy a loaf of bread. The financial strain is always there but the difference now is we know how to manage



continued over page ►

“Modesty is a trait which seems to be engrained into the DNA of most women working within the sector.”



it better. I think coming from a banking background has helped.”

The knowledge gained from previously having worked in a regulated industry has lent itself to Pennie’s familiarity with financing personal loans and payment plans for their business. It has been said that the importance of women’s roles not only in the industry but in business in general, has not always been acknowledged and perhaps overlooked as simply a caretaker role. But with women in the sector facing the hardships of modern day production alongside their partners and the responsibilities which are demanded on a

day-to-day basis, many in the industry state that we are now entering a time where women’s efforts should be better acknowledged and celebrated.

“The role of women in the industry is probably not recognised enough. Though, I think people are starting to see it. From my point of view, because I came from outside of the industry, and Michael has grown up with it and it was his dream to do this, I probably don’t take ownership of how much I put in for that reason. It’s a bit of a humility thing probably that women tend to try not to claim too much of the glory for their businesses. I think most of what we’ve learnt about

farming has been from listening to our husbands rant on,” says Pennie.

Modesty seems to be a trait which is engrained into the DNA of most women working within the sector. Responses from women to questions regarding the importance of their role on the farm and in the business commonly carry with them an air of humility. Though upon reflection, the Director, Shareholder and Administration Manager admits that she is very proud of the company which they have built together from the soil up.

“There’s quite a bit of pride when every now and again someone will say to us ‘wow,

you’ve built this business up and it’s huge’. And you kind of stop and think well yeah we have, it’s been really hard and I guess you don’t have the time to look at what you’ve done. So I do take pride in what we’ve achieved,” she says.

Pennie’s story is one which many women in the industry could relate to, as the job on the farm often comes along with the wedding ring. But her determination and commitment to the business highlights the significant roles of leadership that women are increasingly taking on in this diverse and ever-evolving industry.

Potato Industry Advisory Committee Summary

THIS EDITION OF *POTATOES AUSTRALIA* OUTLINES THE KEY TOPICS OF DISCUSSION AT THE RECENT FRESH AND PROCESSED POTATO INDUSTRY ADVISORY COMMITTEE MEETINGS.

Fresh and Processed Potato Industry Advisory Committees

On recommendation from their relevant Peak Industry Body - AUSVEG and the Potato Processing Association of Australia (PPAA) - members of both the Fresh and Processed Potato Industry Advisory Committees (IACs) are appointed by Horticulture Australia Limited (HAL), to represent levy payers on matters relevant to the investment of the National Potato Levy into R&D programs. Members of both IACs are equipped with a diverse mix of skills and knowledge relating to their sector (fresh or processed), ensuring that informed decisions are made by the respective committees.

Summary of recent meetings - March 2013

On Thursday 14 March, the IACs for both the fresh and processed potato sectors convened in Melbourne, for their first meeting in 2013.

The key objectives of both meetings were for members to be updated by HAL on the status of several R&D projects, to review a number of project

proposals that have been put forward for consideration by each sector, and to discuss the investment of R&D levy funds for the 2013/14 financial year, taking into account the R&D investment objectives outlined in each industry's now finalised Strategic Investment Plan (SIP).

Amongst the R&D projects presented to the IACs for review and/or endorsement was the proposed 2013 Potato Grower Study Tour to the United States and Canada, which was developed following a highly successful Grower Tour in 2012 to the World Potato Congress in the United Kingdom, and several major potato operations in Europe. Both the Processed and Fresh Potato IACs engaged in constructive discussions regarding the arrangements of the proposed tour and expressed their support for this valuable industry development initiative. The IACs for both sectors endorsed the 2013 Potato Growers Study Tour to proceed subject to HAL approval.

The two committees also discussed the current status of the National Public Potato tuber collection (the 'National Heritage Collection'), following a preliminary review of the potato

varieties that are included in the public collection. Both IACs were provided with details on the varieties that are currently being maintained by the industry in either tuber form or *in vitro*. On this issue, specific discussions revolved around those potato varieties which fall under the Plant Breeder's Rights (PBR) Act - which grants exclusive commercial rights to those who have acquired their ownership. Members of both IACs discussed the need to ensure that the varieties maintained in the public collection, which is funded by the National Potato Levy (fresh and processed), aren't PBR varieties.

Turning their attention to the next financial year (2013/14), the IACs conversed on the key R&D investment priorities outlined in their respective SIPs, including how these should be implemented moving forward.

The IACs looked at the current areas of R&D expenditure, and discussed how these would be incorporated into the four core objectives of each Strategic Investment Plan.

The Fresh Potato IAC also discussed the advantages and disadvantages of R&D information being disseminated

via online platforms, including in the Knowledge Management System (KMS) on the AUSVEG website; while the Processed Potato IAC was provided with an update on activities within the Australian Potato Research Program Phase 2 (APRP2), and the Milestones recently achieved within the sub-projects of the program. This included a briefing on the proposed process for the commercial roll-out phase of project PT09023 - *Diagnostic tests for soil-borne pathogens*, which is set to become available to members of the processing potato sector in the coming months. And finally, both committees were updated on the progress of the Potato Industry Extension Program, managed by AUSVEG, which has held a string of successful R&D Field Days and workshops so far this year, to raise awareness of the practical benefits of R&D.

The Potato IACs will next convene for face-to-face meetings in early June.



For more information on the National Potato Levy:

See article on page 16 or visit ausveg.com.au

SOCIAL MEDIA:

connecting young growers

USING FACEBOOK TO BETTER CONNECT YOUNG GROWERS IN THE INDUSTRY IS AN IDEA WHICH HAS SEEN ONE INNOVATIVE VICTORIAN POTATO GROWER FORGE NEW LINES OF COMMUNICATION IN THE SECTOR.

If you had asked a potato grower five years ago whether they thought they would use Facebook to communicate with their fellow industry members, you would have most likely been met with a look of bewilderment.

But Victorian-based potato grower, Stuart Jennings, has created a new social group called the Young Potato People - or YPP as it's known amongst its members - for which he says will hopefully strengthen communication amongst the younger generation in the industry. The 27 year old father-of-three says the idea to set up a new network came to him whilst on a grower study tour to Europe.

"I've always thought it would be a good idea to have more communication between growers," he says.

"When I was in Europe on the AUSVEG grower tour to the World Potato Congress in 2012, I was talking to a few of the other guys there who were young growers themselves. I mentioned that I'd like to get a group going and they all agreed and thought it would be a good idea. We needed something to enable that connection."

"The trip had focused very much on young people. It gave a great opportunity to meet others from the industry from different areas. When I got back after the trip I thought to myself, 'well why don't I do something?'

So I created the Facebook group as a starting point and from there we have built up the members and started doing trips with the young growers to different areas, to network and see how other producers are doing things."

A modest admission of the work put into the social group's outings so far, Stuart has been involved in several grower visits to differing locations throughout Victoria, including a tour involving young potato growers in the Ballarat region in late December, and another in February which saw Ballarat-based growers travelling to

Thorpdale for a similar outing. The social network, now growing in its popularity, has helped to forge social connections between growers from as far away as the Atherton Tablelands in northern Queensland, to Moriarty in Tasmania's north.

Posting photos of their potato crops, weather warnings and funny moments, members of the group share their on-farm experiences and show support for their fellow growers.

"I'm hoping that through the group we can achieve better communication in the industry. I'd like to see the young people in the industry have a stronger

relationship with each other. If you've got growers and other people in the industry communicating then you're going to have a stronger industry as a whole," Stuart says.

Recent data released by the Australian Bureau of Statistics shows that the average age of farmers in Australia has now reached 54 years. Fostering the development of younger generation growers then has become a critical issue for the Australian horticulture industry, and something which producers are becoming increasingly aware of.

"I don't think there are



Stuart Jennings on his farm in Victoria.



Photographs by Louise Buma.

enough young people in the industry today,” Stuart says.

“I was at an event in Ballarat for the Victorian Seed Conference and looking around there, out of 50 people, there were only 10 younger guys. I spoke to a few of the people there and said to one of the guys, ‘hey, where’s your kid?’ and he said ‘oh he is too young to come to things like this’... I thought well how is the younger boy getting his information? ... I don’t know whether it is because there is a level of uncertainty in the industry, but even the older generation aren’t encouraging the younger generation to be involved in it.”

Stuart’s innovative approach to building better relationships between younger growers in the industry has seen several leading agribusinesses take notice; one such business is Farmoz. A major supplier of crop protection products to Australian growers for over 20 years, the company has shown its support for the group of young potato growers by establishing the YPP website.

Commercial Manager for Southern Victoria and Tasmania with Farmoz, Andrew Skinner, says through his own family involvement in growing fruit crops for many years, he has been aware of the importance of young people and what they can bring to their roles and their responsibilities working on the family farm.

“I jumped at the chance for Farmoz to support the Young Potato People group as a way of encouraging our next generation of growers,” he says.

“My first exposure to the YPP group was during the Seed Potato Conference

held in Ballarat last year. The enthusiasm of young growers like Stuart and his desire to share opinions and introduce new ideas impressed me greatly and I wanted to be involved personally, as well as on behalf of Farmoz.”

Establishment of the YPP website was seen as an effective way of assisting information transfer and it was an easy decision for the Farmoz Marketing Team to lend some of its skills to help get the ball rolling, says Andrew.

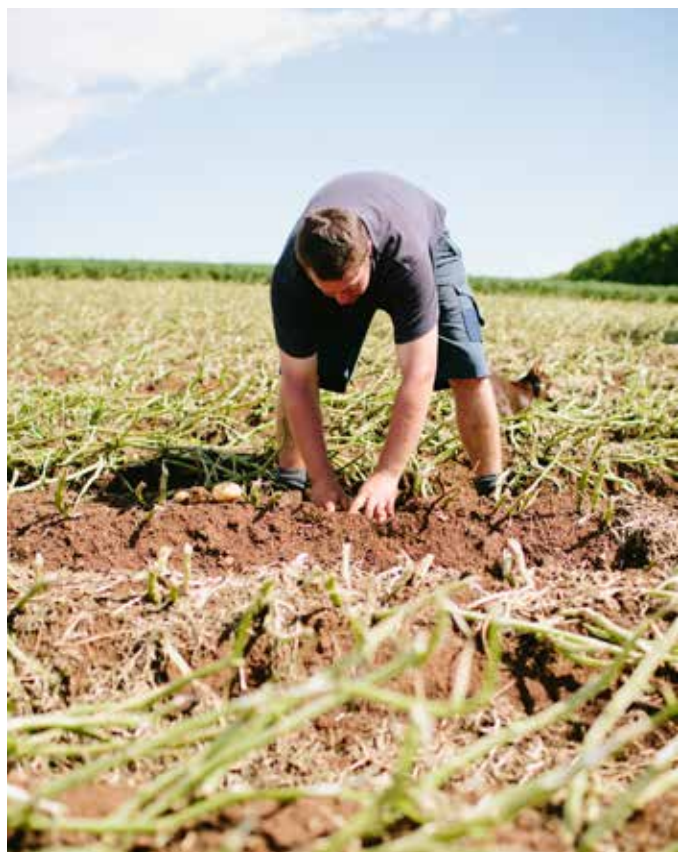
“Our role has simply been to help get the site up and running and allow the YPP members to drive the discussion on topics that are important to them. We will provide additional support when and where required and fund the cost of the site, but the ideas, discussions and messages for the wider industry will be directed by YPP themselves.”

With YPP still very much in its infancy, Stuart hopes that the network will show other young growers that support, and perhaps most importantly camaraderie, exist amongst our next generation.

“The Young Potato People will aim to create an enjoyable environment for the younger guys who are already in the business. For people that are looking at being involved in the industry it will show that we all know and support each other and that it’s a good environment to be in.”



For information on upcoming YPP events or if you are a young grower wanting to join the group: Visit: www.youngpotatopeople.com.au



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Slow release fertiliser trials

A CONTROLLED-RELEASE NITROGEN FERTILISER DEVELOPED IN NORTH AMERICA IS NOW A PROVEN PERFORMER DOWN UNDER IN AUSTRALIAN POTATO CROPS, WRITES GRETEL SNEATH.

High yielding, high quality potato crops depend on correct nitrogen application and management, and both the quantity and timing of this is critical. Controlled or slow-release fertiliser is widely considered the most cost-effective, environmentally friendly approach to optimising plant nutrition, and some recent arrivals in the Australian marketplace are proving strong

performers in soils here.

Senior agronomist at Landmark, Alistair Tippett, says he is always on the lookout for something new that will make farm systems more efficient and productive, and says the Canadian-constructed Environmentally Smart Nitrogen (ESN) could be a saviour for Australian growers. The developers have dubbed it 'the most technologically advanced

nitrogen fertility product in decades' due to its controlled-release technology.

How the Technology Works

Urea granules are contained within a thin polymer coating which helps to prevent against all forms of nitrogen loss (volatilisation, denitrification, leaching) and ensures delivery of nitrogen to crops as it's

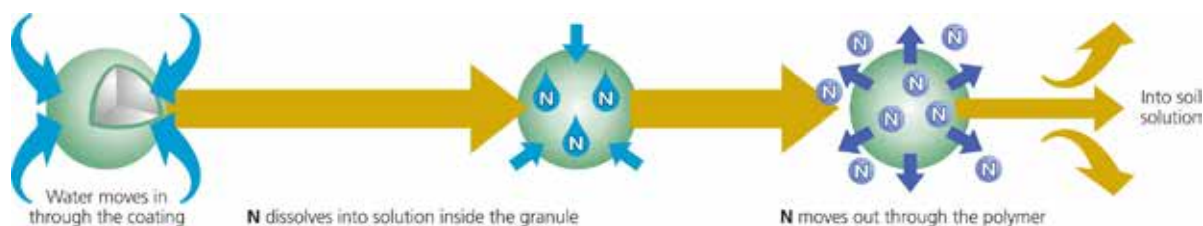
needed over an 80-100 day period throughout the growing season.

"The diffusion rate is determined by soil temperature and moisture," says Mr Tippett.

"If it's hot and dry, it won't release, so you're not wasting nitrogen. But if it's cold and wet, it won't release either. It's a very efficient method of delivery."

The ESN is a differentiated product, so it is not going to suit

Fertiliser Trials - ESN Temperature Control Diffusion Process



every crop. It is designed for land that is at risk of nitrogen-loss and where nitrogen has been the limiting factor for growth in the past. Initially developed for the North American corn industry, it's proven to be a good fit for the potato industry as well, with both crops exhibiting almost identical nitrogen requirements.

But how would it perform in Australian soils?

Australian Performance

Trials began in the Ballarat district of Victoria in October 2011, and when the dig results produced increased tonnages, the research was expanded.

"Last season it was plot trials, this year it is paddock trials, and farmer adoption has driven the speed of it," says Mr Tippet.

"There's a lot of half and full paddock trials going on by

private growers - it's getting to that stage already. It's exceeded our expectations, and growers can already see the value of it in terms of saving labour costs and removing those extra passes across the paddock."

Newlyn potato grower, Rodney Fraser, trialed ESN on two hectares last season.

"It was hard to gauge the success because it was such a good growing season in terms of temperatures and rain, but we certainly think we got a result - there was good product at the end and they seemed to hold on greener for longer than the untreated paddocks alongside them," he said.

This season, Mr Fraser has opted to increase the ESN application to 60 hectares, and there is added anticipation as he looks towards harvest.

"We put it straight into the potato planter so that it goes

in furrow with the potatoes when they're planted, and the ratio was around 1700kg per hectare," he explained.

"It's slightly higher than standard, but you can justify the higher rate as you are not having to go out and spread it during the season. By the end of the season, you are putting on the same amount as you would in three side dressings."

Tests have also shown that ESN can also be combined with standard sowing starter fertiliser for increased affordability. Surface application also works well, but given that ESN will not release in very dry soil, it is advisable to incorporate it during the last pass if a soil is already being tilled.

Alternative Options

Where ESN has been a big fit for processors looking to maximise

yield and quality, Mr Tippet says seed growers in pursuit of consistent sizing, quality and uniformity are achieving good results with another product called Awaken. The solution contains ACA, a patented agricultural crop additive, as well as other plant nutrients, and can be used in furrow or applied as a foliar treatment.

"We discovered it by accident while we were having a play in our trial site. Because our soils near Ballarat are very high locking, we thought that it might be able to make the tied up nutrients more available to the plant, and it definitely set more tubers in the plant," says Mr Tippet.

"We have been getting an extra two to three tubers on standard 5-6 tuber plants, and tests in South Australia, Western Australia and Queensland have produced the same results."



Senior Agronomist, Alistair Tippet.

THE BOTTOM LINE

- New controlled-release fertiliser products could enable growers to 'set and forget', with one up-front application covering a crop's total nitrogen needs.
- Diffusion rates are determined by soil temperature and moisture, thus minimising wastage.
- Benefits include reduced labour, improved yield and quality, and in some cases, more tubers per plant.



For more information:
Landmark
Phone: (03) 5281 4000
Email: alistair.tippet@landmark.com.au

Ask the industry



with Scott Mathew

GAUGING THE COMPATIBILITY OF CROP PROTECTION PRODUCTS AND WHETHER THEY CAN BE TANK MIXED ARE DILEMMAS WHICH MANY IN THE INDUSTRY ARE CURRENTLY FACING. TECHNICAL LEAD WITH SYNGENTA, SCOTT MATHEW, ANSWERS YOUR QUESTIONS IN THIS EDITION OF ASK THE INDUSTRY.

Question: Why is it sometimes difficult to get compatibility information on many products?

Crop protection products typically contain a combination of the ingredients, these may include the active ingredient(s), emulsifiers, adjuvants, dispersing agents, thickeners, anti-freeze and anti-foaming agents to improve efficacy, mixing, spreading, sticking, safety and storage life. These can be changed by companies for any number of reasons which include some of the ingredients no longer being available, different adjuvants to improve the efficacy etc. Any change in the formulation of a crop protection product can potentially impact the compatibility of that product with one that it had previously been compatible with.

Question: Who should I call in order to determine the compatibility of products before I mix them?

Always give your local agronomist a call first because it is likely that you are not the only grower who is going to use these products and they may have already found out the information. If you have no

luck with your local agronomist I would suggest ringing the chemical company representatives of the crop protection products you are looking to use to get the required information. I suggest ringing them both because formulations may have changed, or they may be aware of other factors that could affect the compatibility of any mixes you wish to try.

Question: If I cannot get in touch with anyone is there anything I can do to test the compatibility?

The short answer is yes, you can carry out a 'jar test', however, this procedure will only test for physical compatibility or incompatibility of various products. It is still possible for some mixtures to be chemically incompatible - i.e. efficacy may be impacted despite no physical evidence of mixing problems. It is always better to delay the application and gather the correct information than to rely solely on the 'jar test'.

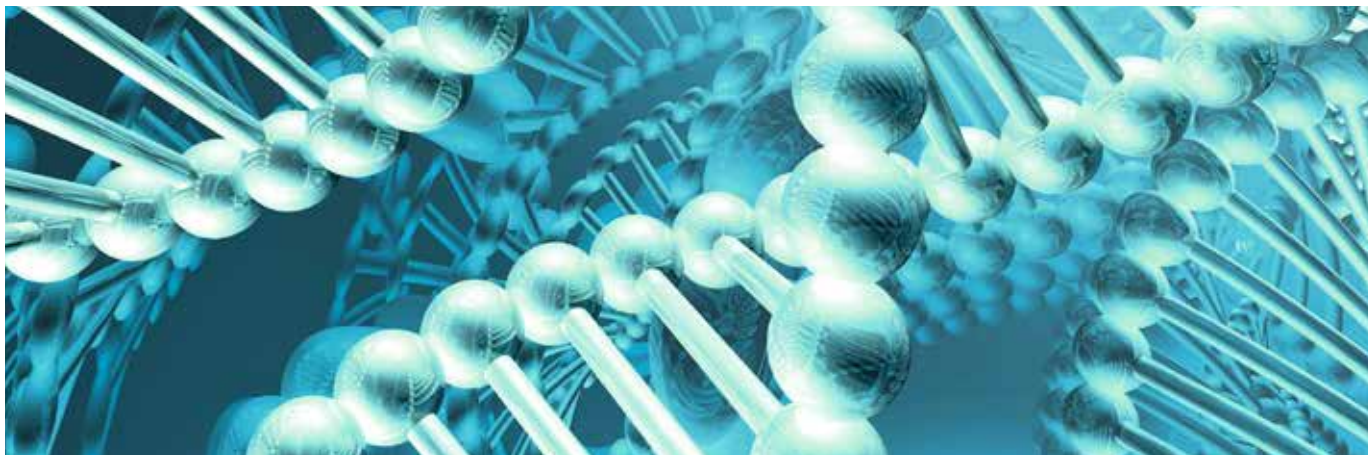
Question: I quite often hear the terms 'physical incompatibility' and 'biological incompatibility'. What do these terms mean?

Physical incompatibility - this is the most common kind of incompatibility. It occurs when two or more products react adversely and cause 'settling out' in the spray tank or nozzles. It can be caused by incompatibility between different formulations (e.g. flowable and emulsifiable products) or chemical reactions between ionic and non-ionic ingredients (e.g. crop oils and wetters).

Biological incompatibility - this is the next most common form of incompatibility. It occurs when two or more products interact, often only under very specific environmental conditions, and can cause crop damage or a reduction in efficacy. There is also a third term that is sometimes used and this is when the products are antagonistic to each other, this type of incompatibility is rare. It occurs when two or more products interact to reduce the efficacy of one or more of the products.



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



The young faces of training and education in the Australian potato industry

YOUNG SCIENTISTS ARE MAKING HEADWAY IN PIONEERING RESEARCH FOR THE AUSTRALIAN POTATO INDUSTRY.

Younger generations are sorely needed across many of the diverse areas that encompass the Australian potato industry. And the research sector is no exception. Here we speak to some of the best and brightest PhD students from the University of Melbourne who are making notable contributions to the world of R&D.

Student's name: Jiang Chang
Working towards: PhD

What are you researching?

The project is called "Characterisation of *Colletotrichum coccodes*, the cause of Black dot disease of potatoes in Australia". The project aims to better understand the biology, population structure and pathogenicity of Australian isolates of *C. coccodes*.

Why are you conducting this research?

Black dot is prevalent in all Australian potato production regions, and impacts on the industry due to reducing yield and marketability through peel blemishes. Several areas of the biology and epidemiology of the Black dot fungus are not well understood.

What does this research mean for the potato industry?

This research will grow understanding of the disease cycle, and the ability of the pathogen to adapt to changes in climate and genetic resistance, which in turn will help to develop better management approaches for the future.

When will you complete your studies?

November 2014.

What would you like to do after you finish your studies?

I'd like to continue my research in an Australian university or in a government institute focused on disease problems affecting the potato industry.





Student's name: Prakash Vijayamma Ramakrishnan Nair
Working towards: PhD

What are you researching?

My research investigates the role of the pathogens associated with Potato early dying (PED) syndrome in Australia. The PED syndrome refers to the early ageing and death of a potato crop and is caused by the synergistic interaction between the soil-borne fungus *Verticillium* spp. and root lesion nematodes. Major objectives are to grow our understanding of the *Verticillium* species and to understand the taxonomy, morphology, pathogenicity, incidence, disease development and synergistic interaction between *V. dahliae* and *Pratylenchus* species nematodes that cause PED in Australia.

Why are you conducting this research?

The PED syndrome is a major economic disease wherever potatoes are commercially grown, but is poorly understood in Australia. Although *V. dahliae* and *Pratylenchus* species are widespread in potato soils throughout Australia, there has only been speculation as to the role these pathogens play in PED and what yield losses they cause. In North America, yield reduction can easily be 10 - 15% for moderate disease infection and as high as 30 - 50% for severe disease infection.

What does this research mean for the potato industry?

Knowledge of pathogen biology, genetic diversity and accurate identification is a cornerstone of effective management strategies. Correct species identification is very important for determining the ecological roles of *Verticillium* species and for diagnosing disease. My study is focused on the nematode/fungus interaction and the role of seed tuber infection in *Verticillium* wilt development. Understanding these will allow the potato industry to make decisions for better management of the disease.

When will you complete your studies?

July 2013.

What would you like to do after you finish your studies?

After finishing my Doctorate, I wish to continue my research on PED in Australia. I sincerely hope to make meaningful contributions to the potato industry and thereby positively influence the lives of people in Australia.



Student's name: Veradina Dharjono
Working towards: PhD

What are you researching?

This project is linked to the PhD work that is being undertaken by Prakash (see left). I am investigating the resistance of commercial potato cultivars to *Verticillium* wilt, which is associated with PED syndrome, as well as studying the efficacy of organic soil amendments to prevent *Verticillium* wilt infection and reduce the soil inoculum.

Why are you conducting this research?

Currently, a limited number of potato cultivars are grown to suit the needs of the processing markets in Australia. The majority of these cultivars are susceptible to *Verticillium* spp. Screening selected cultivars from the national potato collection for resistance to *Verticillium* spp. will identify cultivars that could be used in soils that have high incidence of *Verticillium* and reduce the potential impact of PED. New management strategies are urgently required to address PED in Australia and, ultimately, to improve potato yields. Overseas, the management of PED has relied heavily on broad-spectrum fumigants, which are expensive, and are not an environmentally acceptable or sustainable option for the long-term management of this disease. A second focus of my research is to assess the efficacy of organic amendments as alternatives to soil fumigants to suppress *Verticillium* spp. and to attempt to identify their mechanism of disease suppression.

What does this research mean for the potato industry?

Long term, this research will benefit the potato industry as it will increase production and improve integrated disease management strategies of PED by allowing growers to make better decisions on choosing cultivars and applying potential biological treatments.

When will you complete your studies?

September 2013.

What would you like to do after you finish your studies?

I'd like to continue research work and pursue further study to assist the potato industry to develop integrated disease management strategies for improved disease control.

Potato Extension Program



From the lab to the field: R&D hits the road

THE POTATO EXTENSION PROGRAM HIGHLIGHTS THE R&D EVENTS IT HAS HELD SO FAR THIS YEAR AND SOME OF THE IMPORTANT INFORMATION SHARED AT EACH OF THESE OCCASIONS.

Off the back of a highly successful first year in 2012, the Potato Extension Program has moved quickly in the first few months of 2013 to continue expanding the reach of the program and ensure that useful R&D information is communicated to growers, processors and agronomists right across the country.

The program is continually exploring ways to increase awareness of R&D activities and encourage more potato producers to utilise new practices and techniques that will serve to strengthen their operations. As detailed below, one of these has been to further engage with agronomists to facilitate the extension of R&D to the field.

Bungaree Field Day (Victoria)



Bungaree, Victoria (near Ballarat) was the site for the first Potato Extension Program event for 2013, where a Field Day was held on the property of seed potato grower, Tony Trigg. The event was attended by an impressive 54 members of the Victorian potato industry, including a significant number of growers.

The Bungaree event brought together a diverse mix of speakers to discuss a wealth of emerging industry R&D information, relevant to potato producers operating in Victoria's west. Leading industry researchers

from the South Australian Research and Development Institute (SARDI) and the Tasmanian Institute of Agriculture (TIA), presented on some valuable industry-funded R&D projects (see right); while two Victorian agronomists joined the event to discuss some novel farming practices that local growers could benefit from. The application of controlled-release nitrogen fertilisers was discussed, and the results from trials recently conducted on potato crops in the Ballarat area (see page 25 for more details).

Industry R&D projects presented:

- PT09023 - Diagnostic tests for soil-borne pathogens (Part of APRP2)
Presented by Dr Kathy Ophel Keller, SARDI
- PT09027 - Improving the management of White-fringed weevils in potatoes
Presented by Dr Paul Walker, TIA
- PT10001 - Monitoring for incursions of the Tomato-potato psyllid in Australian potato crops
Presented by Dr Paul Walker, TIA

Gatton Workshop (Queensland)



Heading north, the Potato Extension Program next held an R&D workshop in Gatton, Queensland, in early March. Held at the Gatton Research Station, the event combined with a Vegetable Levy Payers meeting, bringing together more than 40 potato and vegetable growers operating in the Lockyer Valley area. Attendees heard from a range of speakers - including a number of interstate-based researchers and representatives from HAL and AUSVEG - on industry R&D; the investment of the National Potato and National Vegetable Levies; and the development of the Strategic Investment Plans (SIPs) for both industries.

Industry R&D projects presented:

- Potato virus Y - (research undertaken in a now complete VC project)
Presented by Dr Brendan Rodoni, DPI Victoria
- PT09023 - Diagnostic tests for soil-borne pathogens (Part of APRP2)
Presented by Michael Rettke, SARDI

Sassafras Field Day (Tasmania)



Rounding off the first wave of events arranged by the program so far this year, was a Field Day held on the property of David Perry, in Sassafras, Tasmania - just a short drive from Devonport in the state's north-west.

Chaired by Tasmanian potato grower and Tasmanian Farmers and Graziers Association (TFGA) Vegetable Council Chairman, Andrew Craigie, the event involved a string of informative presentations on industry R&D activities and issues, which were followed by a tour of the property's potato crops, led by hosts David Perry and his son Tony.

In yet another positive display of industry-wide interest in, and support for, these kind of valuable R&D events, almost 35 members of the Tasmanian potato industry attended including local potato growers, processors, agronomists, researchers and other members of the supply chain. Leading researchers presented on a number of industry-funded R&D projects; while potato grower Darren Long, from MG Produce, and Senior Agronomist from Serve-Ag, Doug Green, also presented on some exciting new farming practices that growers can utilise to potentially increase their yields and reduce crop rotation periods.

The tour of David and Tony Perry's potato crops invoked some valuable discussions amongst the group about a host of R&D issues and the challenges

facing the industry. The Perry's explained some of the crop trials they have been involved with in recent years and the results these have delivered, and the group talked constructively about the need for more potato producers to explore new techniques that will lead to small but important improvements being made to an operation. As one attendee aptly put it during these discussions:

"There aren't any single great leaps in potato production now like there used to be, that will dramatically increase yields and profits. Instead, it's about making small improvements all the time across a range of areas that together will help to strengthen [an] operation."

Industry R&D projects presented:

- PT09023 - Diagnostic tests for soil-borne pathogens (Part of APRP2)
Presented by Michael Rettke, SARDI
- PT09027 - Improving the management of White-fringed weevils in potatoes
Presented by Dr Paul Walker, TIA
- PT10001 - Monitoring for incursions of the Tomato-potato psyllid in Australian potato crops
Presented by Dr Paul Walker, TIA

Industry R&D - Helping a "sophisticated business"

Reflecting on the realities of contemporary potato production in Australia, one potato grower at the Sassafras Field Day commented: "Farming isn't a way of life anymore - It's a sophisticated business and you've got to be doing a lot of things right or else you won't stand a chance."

In order to stay competitive and profitable, both now and in the years to come, it is vital that growers and processors are not only aware of, but also utilise, emerging R&D outcomes and farming practices, to help tackle some of the challenges they face. Through activities and events such as the ones highlighted above, the Potato Extension Program aims to provide an effective platform for the communication of R&D information in an effort to increase the overall level of R&D adoption.

Attendees at the Field Day held on the property of David Perry in Tasmania.



Dr. Kathy Ophel Keller speaks to WIN News about her research.



Agronomist Alistair Tippett presenting at the Bungaree Field Day.



For further information on upcoming Potato Extension events please contact AUSVEG:
Phone: (03) 9822 0388
Email: info@ausveg.com.au
Project: PT11004

GROWING SPUDS IN THE AIR

CONSIDERED A MAJOR BREAKTHROUGH IN R&D, AEROPONICS IS THE LATEST PIONEERING RESEARCH THAT COULD OPEN A WORLD OF OPPORTUNITIES FOR POTATO GROWERS IN DEVELOPING COUNTRIES.

Growing vegetables in the air, without soil - it sounds like something out of a science fiction film, but through modern-day technology it has become a reality. The innovative approach to production is termed 'aeroponics', and has been introduced in several regions across the globe. Importantly, leading research institutes are focusing on establishing the new approach to potato growing in developing countries.

The technique, used mostly for growing high quality seed potatoes, has been adopted by commercial operations in China and South Korea for some time. Other bases for aeroponic production now include Peru, Ecuador, Malawi, Kenya, Ethiopia, Mozambique, Rwanda, Uganda and Tanzania. The International Potato Centre (or

CIP), a root and tuber research-for-development institution, has worked in recent years to develop aeroponic systems to create higher yielding seed potato crops for disadvantaged communities.

Dr Victor Otazu is one of the lead researchers involved in the aeroponic project work and says the technology is very useful as it allows for speedy minituber potato seed production in small areas.

"Aeroponics is primarily for multiplication of disease free potato seed in the greenhouse," he says.

"A clean minituber costs approximately \$0.20 but it will produce almost 100% more than the common seed used by most farmers in developing countries."

The aeroponic systems were

necessitated after a key soil disinfectant for potato seed production was internationally banned 10 years ago. The conventional systems started to have complications with substrate disinfection, so new technologies were investigated.

The project work which CIP has conducted, with involvement from multiple international pioneering researchers, has shown that aeroponics can multiply quality seed very quickly. In a modest 20x6 metre greenhouse, researchers were able to produce over 35,000 minitubers which was enough to plant one hectare in the field.

"From this hectare we will be able to have enough planting material for 10 hectares for the following season," says Dr Otazu.

"[And] from these 10 hectares we can have 100 hectares and enough seed to distribute to farmers. With this strategy, that was called 3g (3 generations), with funds provided by USAID, we were able to significantly increase the amount of quality potato seed in Kenya, Uganda and Rwanda. In most sub-Saharan African countries farmers use their own seed which are contaminated with diseases and yield poorly. With quality seed we can increase their yields significantly."

The modern avenue of growing has also been used for strawberry production and other vegetables including lettuce, and also in some other Andean root and tuber crops. Although producers can considerably reduce the production cost of quality seed, as the production



Seed potatoes and their roots grown through aeroponic production methods.



Potatoes grown in sand hydroponic systems.



Large potato tubers grown in sand hydroponic systems.

of minitubers is 10 times more than when using the conventional soil system, there are drawbacks to the innovative technology.

“The main disadvantage of aeroponics is its dependence on electricity,” says Dr Otazu.

“This service is deficient in most sub-Saharan African countries, so it becomes very risky to produce seed in these conditions. Because of this limitation, we are implementing another technology that does not depend on electricity; sand hydroponics. The approach uses sand and gravity and although its production rate is not as high as aeroponics, it is much better than the conventional technique. It is a less risky technique and simpler to operate.”

Besides electricity, risk factors

associated with establishing an aeroponic system also include climate, water and the extensive specialised training required to educate operators. All risks should be analysed prior to setting up a system Dr Otazu says.

“Aeroponics, although it is a very productive technology, should not be used by

everyone.”

“We have developed a risk analysis, after which we can or cannot recommend the technology for a given place. Sand hydroponics requires bigger greenhouse space, but it is less risky and can be operated by mid-size farmers with no electricity.”

With the pioneering research

providing tangible results for developing nations, it is fascinating to think about what kinds of applications this technology could be used for on Australian shores in the near future.

Photographs courtesy of CIP.



Southern Ladybird

to aid in Tomato-potato psyllid control in New Zealand

NEW BIOLOGICAL CONTROL RESEARCH HAS SHOWN THAT A PARTICULAR SPECIES OF LADYBIRD CAN SIGNIFICANTLY DECREASE TOMATO-POTATO PSYLLID POPULATIONS WITHIN A 24-HOUR PERIOD.

Most members of the industry are familiar with the devastation caused amongst the international potato industries by the Tomato-potato psyllid (TPP). Causing significant financial losses to foreign industries, TPP is a damaging insect to solanaceous crops, with current treatment methods involving numerous applications of insecticides. In an effort to enact management strategies not dependant on chemical treatments, leading industry researchers are investigating alternative control options including biological approaches. Biological approaches use natural enemies

of the pest affecting the crops to reduce pest populations in an effort to lessen the amount of damage caused.

Research conducted by the Bio-Protection Research Centre at Lincoln University in New Zealand, is investigating the use of the southern ladybird as a biological control agent in reducing levels of TPP. The program, entitled 'new species association', examines natural enemies of TPP which have not evolved with the pest. Research has shown that new associations had a 75% greater success rate than if the natural enemy had co-evolved with the pest.

Laboratory testing carried out

as part of the initial stages of the project work revealed that the southern ladybird can consume up to 100 TPP during a 24-hour period. The work has now moved away from the laboratory phase and further to the trials carried out in glass houses, the first release of the ladybird into an organic potato crop in Hororata took place in mid-March. The release of the first round of the southern ladybird is being observed in an effort to evaluate how the control agent responds in field trials. Ladybird adults and eggs have been placed in the organic potato crop and will be monitored for their lifespans in the field,

whether they reproduce and spread throughout the crop and if levels of TPP are in fact reduced.

The southern ladybird is also located throughout southern and central Australia. If the management strategy proves successful, this could be another useful method to combat TPP should it ever arrive on local shores.

Photographs courtesy of Lincoln University: southern ladybird research.



For more information on the Tomato-potato psyllid visit: www.ausveg.com.au

CALENDAR of events



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

Saturday 1 June 2013

Annual Potato Levy Payers Meeting 2013

Where: Jupiters Gold Coast, Queensland

What: This is an official notice to all levy paying potato growers advising that the Annual Potato 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.

Further information:
AUSVEG (03) 9822 0388
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