

# potatoes

australia

October/November 2010

**Rod Fraser**

Up for the challenge

**APRP2**

Kicks into gear

**Zebra Chip**

Ongoing threat

**John Lloyd**

Juggling the demands  
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# potatoes australia

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## FRONT COVER:

Rod Fraser  
Mt Prospect, Central Victoria  
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## John Brent AUSVEG Chairman

It is with great appreciation that I thank those who attended the opening of the new AUSVEG premises on the night of Tuesday, 14 September. It was great to see so many familiar faces and receive so much support from people from all parts of the industry supply chain.

Our wonderful friends at E.E Muir & Sons are to be commended for their sponsorship of the evening, which enabled AUSVEG to showcase its new offices, situated in Glen Iris, not far from the Melbourne CBD.

EE Muir & Sons have long recognised the importance of providing the right information to our growers through their highly qualified experts and I would like to thank them for their long standing support of the industry and in particular of this special event.

I would also like to thank the Honourable Joe Helper MP, Victorian Minister for Agriculture, who officially

opened the new premises; the Honourable Paul Lennon, former Premier of Tasmania; the Honourable Josh Frydenberg MP, the Liberal Member for Kooyong; and NSW Nationals Senator John Williams, for their attendance.

The potato industry was well-represented by AUSVEG Directors including Geoff Moar, VPGC President Des Jennings and Executive Officer Laura Bowles.

We were also privileged to have representatives of AUSVEG's strategic partners attend, including Elders CEO, Mr Malcolm Jackman; Head of New Business Development at Bayer CropScience, Mr Richard Dickman; and the General Manager of Syngenta, Mr Paul Luxton.

The opening of the new premises typifies AUSVEG's ambitious new direction and approach to doing business, which has seen the organisation reposition itself significantly over the past 18 months, following

the appointment of a new CEO, Richard Mulcahy.

With the assistance of the AUSVEG team and through the dedication of my Board of Directors, I am pleased to say that we have strengthened our relationships with our state members and with the supply chain. We are now united in our aim to communicate a better appreciation of the significant issues facing vegetable and potato growers and to promote these in the public domain.

After the success of the inaugural AUSVEG National Convention, we have recently established a Public Affairs Unit within AUSVEG, which will lobby the Government and key decision-makers to ensure horticulture is given the consideration it deserves in the formation of policy and legislation.

With the current status of the Federal Government and the appointment of new Agriculture Minister Senator The Honourable Joe Ludwig MP,

the horticulture industry has a fantastic opportunity to promote its importance to the national economy.

AUSVEG is committed to achieving this goal.



John Brent  
Chairman  
AUSVEG

## Richard Mulcahy AUSVEG Chief Executive Officer

AUSVEG has made considerable changes in the past 18 months to improve our ability to lobby political parties on issues relevant to Australian potato and vegetable growers. In recent months we have also joined forces with other key horticultural bodies to campaign on common across-industry issues by helping establish and joining the Horticulture Taskforce (HTF).

The HTF is made up of the chief executive officers from the major horticulture organisations in Australia and through this united body, we are now better placed to represent our combined interests. I will serve in the role of Deputy Chair of the HTF, supporting the Chair, Mr Tony Russell, CEO of Apple and Pear Australia Limited.

Horticulture is one of Australia's most important industries, and one of the backbones of our national economy. The establishment of this taskforce will lead to more

efficient and targeted use of resources that will ensure horticulture is given the consideration it deserves in decisions made at the federal level.

It will also lead to a stronger voice on issues critical to the survival of the potato and vegetable industry, including labour and food labelling legislation, food regulations, and international trade agreements.

We are also thrilled to announce that the 2011 AUSVEG National Convention, Trade Show and Awards for Excellence will be held in Brisbane at the Sebel-Citigate Hotel from 14-16 April.

Following the success of the 2010 convention, expectations are high that it will once again draw members from right across the industry supply chain, including a huge contingent of growers.

At this year's event, potato growers were extremely well

represented, and were recognised when Daniel Maher from Victoria won the coveted 'Young Grower of the Year' award.

The chance to find out about the latest developments in research and development within the industry, the enormous range of exhibitors on display in the two-day trade show and the amazing networking opportunities, are just a few of the benefits growers can expect by attending the Convention.

Growers should also keep an eye out for the Potato Periodical, an email-based newsletter developed to build awareness of R&D outcomes and communicate information pertinent to Australian potato growers.

The update will be distributed regularly when information or news relevant to potato growers becomes available. The first Potato Periodical was issued in August and represents a

commitment to better inform potato growers. If you are not receiving the update and wish to be added to the online database, please contact AUSVEG by emailing [info@ausveg.com.au](mailto:info@ausveg.com.au).



Richard J Mulcahy  
Chief Executive Officer  
AUSVEG



## Editorial

Another year is flying by, and already another growing season is upon us.

As growers are busy preparing their land, they can be buoyed by the results of a recent benefit/cost analysis.

Growers deserve to see significant returns on their contribution to the National Potato Levy, which along with matched funding from the Australian Government, finances research and development undertaken on the industry's behalf.

The cost/benefit analysis was

completed by an independent consultancy firm and shows that for every dollar spent, growers are seeing a significant return on their investment. See page 32 for the results of the study and judge for yourself.

The National Potato Levy also allows important research to be undertaken on the major diseases affecting the potato industry, such as Powdery and Common Scab, Verticillium and Rhizoctonia, all of which reduce yields and ultimately growers' profitability.

On page 16 we report on an

important component of phase two of the Australian Potato Research Program (APRP2), which is looking at management of the major soil-borne diseases confronting growers.

*Potatoes Australia* prides itself on being the key communication tool between research bodies and growers.

Accompanying this edition of the magazine is our official Reader Survey, which we urge you to fill out and return to AUSVEG via the contact details provided.

We are determined to continue to improve our communication with industry members and through your responses we will be better placed to understand the needs and desires of our readers.

One lucky grower who returns the survey before Monday, 15 November, will win \$1000 worth of crop protection products from our friends at Dow AgroSciences.

# John Lloyd

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# AUSVEG celebrates opening of new premises!

Growers, politicians and members from right across the industry supply chain, including representatives from some of Australia's leading agribusinesses, joined AUSVEG staff and board members to celebrate the opening of AUSVEG's new offices last month.

The Honourable Joe Helper MP, Victorian Minister for Agriculture, opened AUSVEG's new premises in Glen Iris, Victoria on Tuesday 14 September.

AUSVEG CEO Richard Mulcahy said the office opening enabled growers, stakeholders, politicians and key vegetable industry personnel to network and celebrate the opening of the new premises, which are closer to the Melbourne CBD and will enable AUSVEG to better accommodate the growing needs of the sector.

"The opening signifies another step in AUSVEG becoming a stronger and more financially stable organisation, one that is better placed to represent the interests of Australian vegetable and potato growers," Mr Mulcahy said.

In attendance were: The Hon. Paul Lennon, former Premier of Tasmania; The Hon. Josh Frydenberg MP, the Liberal Member for Kooyong; Senator John Williams, Australian National Party; Mr John Lloyd, CEO Horticulture Australia Limited; Mr John Brent,

Chairman AUSVEG; Mr Richard Mulcahy, AUSVEG CEO; Mr Luis Gazzola, President Vegetable Growers Association of Victoria; Ms Maureen Dobra, President vegetablesWA; Mr Des Jennings, President Victorian Potato Growers Council, as well as many other key industry stakeholders and growers from

farm supplies to the Australian agricultural industry, primarily based in Victoria, but also with branches in New South Wales and South Australia.

The new premises has already played host to several important meetings between AUSVEG and members from the major Australian political

industry.

"On July 1 this year, AUSVEG launched its new Public Affairs Unit and these new national headquarters will position AUSVEG to lobby government and represent growers and our industry at a national political level," Mr Mulcahy said.

Opening the office, Minister Helper raised the threat of locusts as an example of the important role AUSVEG plays in communicating key information to growers throughout Australia. "It's organisations such as AUSVEG through their various publications and the weekly update that we are using to engage with thousands of landholders that will be affected by locusts," Minister Helper said.

The Minister also highlighted the important role vegetable and potato growers, and the broader horticulture industry, has to play in creating a healthier nation through nutrient-rich produce.

"The horticulture industry has an incredibly important role to play in providing a solution to the increasing health issues arising in Australia," he said.

“The opening signifies another step in AUSVEG becoming a stronger and more financially stable organisation, one that is better placed to represent the interests of Australian vegetable and potato growers.”

across Australia.

The evening was sponsored by E.E Muir & Sons, a privately owned company operated by the Muir family.

E.E Muir & Sons is a major distributor of fertilisers, chemicals, seeds and other

parties, discussions with expert research scientists from around the world, and they have also seen members of the Vegetable Industry Advisory Committee meet to discuss research and development solutions for the critical issues facing the





3)



4)

- 1) Valerie Bonython and Richard Dickmann, Head of New Business Development, Bayer CropScience
- 2) [From left] AUSVEG CEO Richard Mulcahy, Syngenta General Manager Paul Luxton, Josh Frydenberg MP the Liberal Member for Kooyong, AUSVEG Chairman John Brent, Elders CEO Malcolm Jackman
- 3) The Honorable Joe Helper, Victorian Minister for Agriculture addresses the audience at the official opening
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- 5) [From left] AUSVEG Marketing Manager William Churchill, Ian Muir, Manager/Director E.E. Muir & Sons and Richard Mulcahy
- 6) [From left] John Brent and The Honorable Joe Helper unveiling the plaque for the official office opening



5)



6)

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# 60-day potato binge proves a spud's worth

Chris Voigt, Executive Director of the Washington State Potato Commission in the US, will attempt to eat nothing but potatoes for 60 days straight to educate consumers about the positive health effects of the potato.

In the same way Morgan Spurlock attempted to highlight the negative effects of fast food in his 2004 documentary *Super Size Me*, Voigt is trying to do the opposite for potatoes.

Despite what the rules of moderation would have you believe, Voigt does not seek to supplement his diet with anything other than seasoning and oil.

"In an effort to remind the public about the nutritional value of potatoes, I am going on a diet consisting of only potatoes, nothing else," Voigt wrote on his website [20potatoesaday.com](http://20potatoesaday.com).

"No toppings, no chilli, no sour cream, no cheese, no

gravy, just potatoes and maybe some seasonings or herbs and a little oil for some of the cooking."

Not only will he be attempting to highlight the nutritional value of potatoes, Voigt will also be showcasing the many ways they can be cooked. "I think I'm going to be playing with textures...I thought maybe I could barbeque those, get a little crunchy texture and then like lasagna, put some mashed potatoes in the middle and then another layer of that crunchy lasagna on top of it," Voigt told Capital Press. Voigt began his new diet at the start of September.

# Purple-eyed potato launched

A new variety of potato that boasts 'purple eyes' has been launched by The South Australian Potato Company.



The Kestrel, as it is known, boasts distinctive purple splashes across its white skin and will be available year-round.

The South Australian Potato Company and Fruitorama are among a number of successful tenders granted rights to grow and promote Kestrel by Elders, who holds the license to the variety.

According to Business Development Manager at The South Australian Potato Company, Julian Carbone, it is versatile in cooking and has a

bright future in the Australian market.

"It is locally grown, available all year round, ideal for any cooking method and has a beautiful rich creamy taste," Mr Carbone said.

"In our opinion, Kestrel is better tasting, more versatile and we are hopeful it will revolutionise the way consumers purchase and choose potatoes."

The Kestrel will be sold locally at supermarkets, with hopes that it can succeed on the international potato market.

# Potatoes the new homework for UK schoolchildren

Almost one million schoolchildren throughout the UK have been learning about the many different aspects of growing, cooking and eating potatoes, according to *Potato News*.

Over 14,000 schools in the UK are participating in the study, organised by the Potato Council's 'Grow Your Own Potatoes' (GYOP) project.

The study involves local farmers, or "Potato Ambassadors", in assisting the

schools in harvesting the crops. Originally launched in 2005, GYOP aims to give children a hands-on experience with the growing of produce, while also informing them of the benefits of consuming potatoes.





# Potatoes have potential to be 'super food'

A recent study has found that potatoes have the potential to help limit the chances of heart disease and cancer.

According to a recent Japanese study, when potatoes are subjected to ultrasound or electricity, like the ones found in your microwave, they release almost double the amount of antioxidants that can be critical to fighting off disease. The antioxidants are released when plants are forced to

survive stressful situations, such as drought and infestation.

It was this understanding that led Dr Kazunori Hironaka of Obihiro University in Japan to conduct the experiments.

"We knew from research done in the past that drought, bruising and other stresses could stimulate the

accumulation of beneficial phenolic compounds in fresh produce," he told the Australian Associated Press.

"We found that there hasn't been much research on the healthy effects of using mechanical processes to stress vegetables.

"So we decided in this study to

evaluate the effect of ultrasound and electric treatments on polyphenols and other antioxidants in potatoes." The study found that antioxidant activity increased 50 per cent after just five minutes of ultrasound treatment, while a 10-minute electric shock increased antioxidants by 60 per cent.

## Understanding the market is the key

The President of Peterson Insights, a US-based consulting company dedicated to providing strategic solutions for the fresh industry, said that the potato industry needed to be smarter in the way it markets its product.

Speaking at the 82<sup>nd</sup> annual Idaho Grower Shipper Association Convention, Mr Bruce Peterson said that sophisticated marketing strategies needed to be implemented in order to encourage consumers to choose potatoes. Sighting the worldwide popularity of Doritos and Oreo cookies as tough competition, Mr Peterson said marketers would need to approach the consumer differently in order to succeed.

"The marketing space is a lot more complex than it ever used to be," he said.

"Investing in understanding consumers at the grower level is critical."

Mr Peterson highlighted consumer dynamics and channel market-

ing as keys for marketers to focus on.

He said 18-35 year-old consumers are an important market to understand in order for the market to succeed.

"The consumer value proposition of the 1970s and 1980s does not exist today."

He also added that, despite the fresh produce industry being dominated by

men, a large majority of those making decisions in the supermarket are women, and a better knowledge of marketing to both genders is something that needs addressing in order to successfully promote the potato.

Source: *The Packer*



# Food safety experts gather in Melbourne

Members from various sectors of Australia's food industry gathered last month to discuss turning red tape into real value, at the 3<sup>rd</sup> Australian Food Safety Conference.

Food safety is an issue becoming more important in Australia. Consumers and food producers, including vegetable and potato growers, are more aware than ever of the importance of having safe and healthy food to feed our nation.

Regulatory bodies are tightening their policies on the use of pesticides and other chemicals, and more and more so-called 'red tape' is adding costs to the already constrained process of producing vegetables and potatoes.

These crucial issues were the

manage food safety consistently in the global marketplace?

A number of highly regarded international experts in food safety presented at the three-day conference, including keynote speaker Dr Robert Brackett, Vice President and Director of the USA National Centre for Food Safety and Technology at the Illinois Institute of Technology; and Professor Junshi Chen from the Chinese Centre for Disease Control and Prevention.

A number of local speakers also presented with

looking to buy Australian-grown produce because of the trust they have in Australian food manufacturers.

"A food regulatory framework was essential to give consumers a fair and clear view of the food they are consuming," Ms Hughes said.

Ms Hughes also raised the need for a 'health claims standard' which would ultimately result in more accurate information reaching consumers and might result in a clearer focus on the health benefits of potatoes and

vegetables.

"Currently, a product despite being high in sugar and additives, can claim to contain a certain number of nutrients and thus appear healthy," Ms Hughes said.

Ms Hughes said that gaining consumers' trust was the real value of food regulation and she urged policy makers to consider significant changes to Australia's current food labelling laws.

“Consumers are increasingly looking to buy Australian grown produce, because of the trust they have in Australian food manufacturers.”

focus at the recent 3<sup>rd</sup> Australian Food Safety Conference, held between 7-9 September at the Crown Conference Centre in Melbourne, Victoria.

The conference was attended by food industry professionals involved in food safety from around the globe.

The conference theme for the 2010 event was *'From Red Tape to Real Value'*. The theme explored a variety of issues that affect food safety and examined the relationship between regulatory agencies and the food industry in reducing risks associated with the food supply—how do we

information relevant to the potato industry.

Ms Kate Carnell from the Australian Food and Grocery Council discussed the need for a national food strategy.

She highlighted the need for: clean, green and healthy produce; a transparent and clear regulatory framework that was nationally consistent; and a plan to inform and educate consumers about the benefits of eating healthy produce.

Ms Clair Hughes from Choice Australia also spoke about an issue close to growers' hearts, highlighting statistical information which shows consumers are increasingly



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# Eyes turn to 2011

The 2011 AUSVEG National Convention, Trade Show and Awards for Excellence will be held at the five star Sebel-Citigate Hotel in Brisbane from the 14-16 April.

Great excitement surrounds the announcement of the 2011 AUSVEG National Convention following the stunning success of the event in 2010.

Expectations are high, that the 2011 event will raise the bar once again and surpass the standards set at this year's event on the Gold Coast.

The 2011 Convention is set to bring together members from across the industry supply chain, creating an incredible networking opportunity, and a chance for growers to learn of the latest developments in the potato industry.

One of the major elements of the event will again be an enormous trade show, packed with all the major players from the supply and services sectors of the industry.

The National Awards for Excellence will also return, with the event celebrating the achievements of the industry's most inspiring members.

In the coming months, a number of high calibre speakers will be announced, with a strong entertainment program set to be a prominent feature of the event once again.

Potato growers and industry stakeholders are urged to save the date and take part in this crucial industry event.

For more information please contact AUSVEG on (03) 9822 0388 or email [convention@ausveg.com.au](mailto:convention@ausveg.com.au).



# Juggling the demands of horticulture

Appointed to the position of CEO of Horticulture Australia Limited (HAL) in September 2009, Mr John Lloyd is charged with the responsibility of juggling the demands of the vastly different industries that are bound together under the banner of horticulture. Mr Lloyd reveals his approach to helping these industries maximise the benefits of levy and government expenditure, writes David O'Neill.

## **You have held senior positions with Incitec Pivot and Wesfarmers Dalgety. What attracted you to the position of CEO of HAL?**

Well as they say, the older you get, the wiser you become, and I have worked in a variety of industries in a number of different roles. I have had some background in horticulture but not in the area of production.

Whilst working with Wesfarmers Dalgety (the company now known as Landmark), I was General Manager of their retail division and in that process I had some exposure to horticulture markets. I actually led expansion of the company into horticulture, setting up retail outlets in places like Tully, Gatton and Ayr in Queensland.

One of the major aspects that attracted me to the role was that I would be working in agriculture. In many respects it's one of the best industries to work in. It's also one of the most difficult to work in, but

agriculture appeals to me and the people involved in it appeal to me. I think it's the down-to-earth nature of the people, the robust discussions that take place. There isn't a lot hidden in agriculture, it can be political, but there aren't too many hidden agendas.

## **Horticulture producers are faced with numerous challenges. Were you aware of the severity of these challenges when you assumed the role?**

In previous positions I had continuously been exposed to agriculture, and many challenges that face horticulture producers are the same problems other producers in agriculture face also. So yes I was aware of a number of the different issues important to growers.

I concluded that there were two main challenges for HAL. The first was internal, in regards to HAL itself, ensuring its role was more efficient and effective in its processes. The second was external and related to the function and role of HAL in the industry.





## 11 months on, what are the major differences in your own mind in regards to horticulture?

I probably had a somewhat limited depth of knowledge of horticulture, and I am now absolutely blown away by what is happening in the industry. It is by far the most dynamic industry in agricultural Australia, and pretty soon we believe it will become the biggest industry in agricultural Australia.

Horticulture is going through a rapid phase of capital investment, product development and, per se, growth and I don't see it stopping.

## What do you perceive as the major challenges currently facing growers?

I think there are four main challenges, or rather four distinct categories confronting those in horticulture. Demand creation is one. Our industry produces products that make people live happier, longer, healthier and more productive lives, and the challenge is to better deliver this message to consumers.

The second category is what I like to call nuts and bolts challenges, and there are a number of them. Access to chemicals, access to genetics, access to water, peri-urban issues, labour and a whole raft of others that are critical to everyday vegetable production. In horticulture especially, there are more of these nuts and bolts type challenges than in other agriculture industries and that adds to the complexity of solving them.

The third area, representation of the industry, is related to both the previous two categories. Horticulture is a very strong industry that does not have—across all the industries—a strong voice and therefore will struggle to get access and build its rights to land and water issues, labour issues and chemical use.

The final category is investment in transformation technologies.

challenges with respect to extension. Horticulture is at the other end of the spectrum.

It has upwards of 60 commodity groups. Some of those have very little in common. It is the most geographically diverse industry in Australia, and is demographically and ethnically diverse.

There are 39 different member bodies of HAL and our role is to be accountable for the effective and efficient expenditure of both government and industry funds in research and development, and marketing when appropriate, in horticulture.

## Finally, what do you see as the future direction of HAL?

For me, it is about process, and having good processes in place so that the individual industries are well served according to the capacity of the organisation and the capacity of the levy being paid.

I don't see the direction of HAL changing in the coming years, but I believe it has changed in the last 12 to 18 months. HAL has become more focused on being an efficient mechanism and not assuming other roles. It will continue to drive its own efficiencies and ultimately put out better projects, more effectively and in a more timely manner.

The stronger and more capable peak industry bodies become, who for all intents and purposes are shareholders of HAL, then the stronger and better placed the individual industries will be. It is not specifically our role to help develop peak industry bodies, but it is in our best interests that they grow and mature.

We have another key stakeholder of course, which is the Federal Government, but it is the strength of our members which is critical to the continued growth of horticulture.

“ I think it's the down-to-earth nature of the people, the robust discussions that take place. There isn't a lot hidden in agriculture, it can be political, but there aren't too many hidden agendas. ”

These challenges are much more difficult to confront as transformational technologies are ones that you would invest in now, that would make the industry fundamentally different, but perhaps not within five years.

These are technologies relating to genetics, biotechnology, mechanisation, to significant advancements in water usage and these are difficult for people to invest in. In some industries that investment is taking place and it is only when there is market failure that HAL will become involved.

## How do you juggle the demands on the vastly different commodity groups that are bound together under the banner of horticulture?

With some difficulty. It is one of the major challenges for HAL.

If you compare horticulture to say the cotton industry, which is fairly succinct, the cotton industry produces essentially one product, produced by a limited number of growers in a defined geographic area and it has very few



# APRP2 kicks into gear

Highly regarded soil health expert, Dr Ian Porter from the Department of Primary Industries (DPI) in Victoria, speaks to *Potatoes Australia* about working with potato growers in the delivery of phase two of the Australian Potato Research Project (APRP2).

Phase two of the Australian Potato Research Program (APRP2) incorporates a number of research bodies and expert scientists from both Australia and overseas. Designed in this way to combine the efforts of both international and domestic research, APRP2 will ensure no stone is left unturned in finding a solution to the numerous and costly diseases affecting the potato industry.

DPI Victoria and their Principal Research Scientist in Plant Pathology, Dr Ian Porter, have a critical role in the program. Not only is the department one of a number of partners involved in the extensive research attempting to solve issues

relating to soil health, but they also coordinate the largest project of the program, ensuring a cohesive and comprehensive research effort by the large number of research bodies involved.

Dr Porter and his team have recently been conducting trials with Victorian potato growers, allowing tests to be undertaken in the field and new tools to be assessed in an accurate environment.

“The project flows on from a successful project in APRP1 and focuses on issues concerned with soil health and disease mitigation,” Dr Porter said.

“The DPI Victoria has

partnered with Plant and Food New Zealand, A&L Biologicals AGroecology Research Centre in Canada, Flinders University in South Australia, VicSPA and the Tasmanian Institute of Agricultural Research, who each have specific areas of focus.”

This complex structure which incorporates many partners, is networked to ensure the project covers three main areas.

“The first phase is strategic and the part that DPI is heavily involved in,” Dr Porter said.

“It is about looking at the affect of nutrients on the reduction of soil-borne diseases, and improving on our knowledge of the mechanisms of disease control.”

The second phase or the novel phase as Dr Porter explained it, looks at developing new ideas to control disease.

“We are looking at ideas such as endophytes which are a fungi that can give protection to a host, and low rates of 2,4 D herbicide and similar hormones that have reduced Common Scab in potatoes.”

The third part, Dr Porter explained, is being completed through VicSPA, investigating the significance of bacterial wilt infestation in irrigation water.

Dr Porter has more than 25 years experience in plant pathology and has a passion for understanding the complexities of soil health.

[From left] Wayne Tymensen, George Lazarovits (Canadian Research Scientist), George Lineham





He said the aim of this project was to provide sustainable methods to control pathogens by using the natural soil compounds, with the addition of nutrient fertilisers which have a benefit to the crops whether the leaves are there or not.

"It is also to use better rotations because pesticides are historically difficult to register and there are very few doing well against the four major diseases: Powdery Scab, Common Scab, Rhizoctonia and Verticillium," Dr Porter said.

"We need to find new ways of tackling these diseases or else the future is pretty bleak." According to Dr Porter, the potato industry is one of Australia's worst in regards to threats from soil-borne diseases, of which there are no known cures, and as a result potato growers currently suffer significant yield losses every season.

"We need to look at other ways of doing things. We need to get smarter about application, finding the right compounds to apply, the right time to spray and the most accurate way to do it," he said.

Dr Porter said that growers in the seed, fresh and processed industry, and in all regions of Australia, needed to find new ways of dealing with these diseases.

With the help of growers, new methods to combat serious

Mr Wayne Tymensen from Cora Lynn in south eastern Victoria, is a potato grower who has been assisting with the research by providing crops for field trials, a contribution he has been making for close to twenty years.

"They are looking at a range of solutions to managing the major diseases, such as finding new fertilisers using sulphur, planting green manure crops and collaborating with the Canadians," Mr Tymensen said.

"I have trialled planting green manure crops such as mustard and corn with some success." Mr Tymensen said the research was an important part of the industry and he was happy to have regular visits from the DPI team.

It will be some time before the results of this project come to fruition, but according to Dr Porter, growers were already using DNA diagnostic tools developed in the project in their own rotation strategy.

"We held a workshop in Cora Lynn and growers indicated that they were already using soil sampling regularly, and the DNA results from these samplings were helping to show what pathogens were evident," Mr Porter said.

Mr Porter said that growers had reported this technology was their best tool for planting rotations that are tolerant or disease resistant.

“ We need to look at other ways of doing things. We need to get smarter about application, finding the right compounds to apply, the right time to spray and the most accurate way to do it. ”

potato diseases are being tested in the field and this research is invaluable in finding tangible outcomes that will flow through to the farm gate.

Mr Tymensen said the work being undertaken by the DPI was incredibly valuable and would be of huge benefit to growers.

## Growers support testing

The support of the growers is imperative to the research undertaken by the Victorian DPI and other research bodies involved in APRP2. Researchers need to test diagnostic tools and crop protection methods in the field and it is growers who facilitate this important aspect of R&D.

For this project, the DPI in Victoria has worked with growers in the Cora Lynn and Ballarat regions who have allowed researchers access to their crops. Mr George Lineham is one of those growers from Cora Lynn involved in the trials and he said that playing a role in R&D offers a way of giving back to the industry.

"I take from the industry and this is a way of putting back into it," Mr Lineham said.

Mr Lineham said the researchers work in with his rotation and they initially began with soil testing looking for levels of rhizoctonia and verticillium in his soil.

"The research has minimal impact on usual business and just involves the guys from the DPI coming out every second week or so and retesting the soil," he said.

"The results they are finding in regards to DNA profiling and suppression measures will ultimately benefit the entire industry including myself, so why wouldn't I help out?"

Mr Lineham said that too often R&D wasn't having an effect at farm level but the DPI in Victoria had been holding workshops once a year to fill growers in on their results and explain new ways to control serious disease.

"In the end we are chasing the common goal of improving our practices and creating a better industry," Mr Lineham said.

### THE BOTTOM LINE

- Dr Ian Porter and a team of researchers from the Department of Primary Industries in Victoria have been working with Victorian growers as part of phase two of the Australian Potato Research Program (APRP2).
- DPI Victoria are focusing on the affects of soil nutrition on the reduction in soil-borne diseases and improving their knowledge of the mechanisms of disease control.
- Potato growers in Cora Lynn in Victoria are helping with field trials in phase two of the program and are already experiencing results from the diagnostic tools developed in APRP1.

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 Project code: PT09026



# Up for the ch

With a young family, and the responsibility of managing a large family-run potato business, Fraser is concentrating on life within his own fence line. But this young grower is looking to its future as a member of the Processed Potato Industry Advisory Committee.

The Fraser name is synonymous with potato growing in the Ballarat region. Along with his two brothers, Mr Fraser is part of an incredible fifth generation, continuing the family tradition and ensuring the region's rich history in the potato industry lives on.

Extending across three locations in the Central Highlands near Ballarat, the family business produces

up to 5,000 tonnes of potatoes per year, on approximately 1,800 acres (700Ha).

The brothers, along with their father and uncle who are still heavily involved in the business, grow the majority of their spuds for processing and crisping, though they still produce fresh varieties.

Mr Fraser grew up on the family farm at Dean, just a short drive from where he currently resides at Mt Prospect in

Central Victoria.

According to Mr Fraser, growing up and learning the diverse roles of a potato grower was the perfect preparation for life on the farm.


"Growing up on the farm you are able to learn and see first-hand what it takes to produce a crop. You do all the tough jobs and that makes it a little easier when you start managing the business," he said.

While the demands of the growing season certainly have their pitfalls and this means long hours away from his young family, it's the challenges of the job that keep him enthusiastic.

"I enjoy the hard work. No-one enjoys the hours at times, but the challenge of it all I suppose is why I'm still involved in growing," Mr Fraser said.

"Each year, the challenge to produce a good crop at the end of the season means you



A man with dark hair, wearing a blue polo shirt with white horizontal stripes and blue jeans, is operating a green tractor. He is looking towards the camera with a slight smile. The tractor has a large green fuel tank and a headlight. The background shows a field under a clear sky.

# allenge

growing business, one would forgive Rodney giving back to the industry and contributing

always have something to work towards.”

The family nature of potato growing also clearly has its appeal, and Mr Fraser said it was great to be working with his brothers and father.

“It doesn’t work for everyone,” Mr Fraser said.

“But if you each have a role in the business and have interest

*continued over page* ▶



in it, then it does work pretty well.”

Mr Fraser’s wife Gabrielle also plays a pivotal role in the business, not only looking after things at home, but becoming involved in different aspects on the farm.

“It is pretty hard at times, especially with my youngest (child) only being 12-months old, but my wife Gabrielle does a pretty good job looking after us all,” he said.

“She is now helping me out with different things in the business too, which makes a big difference.”

Not only is Mr Fraser waging the war many growers across Australia are fighting in regards to increasing input costs, he is also representing his industry as a member of the Processed Potato Industry Advisory Committee (PPIAC).

Despite some initial hesitation—due mainly to time constraints—about joining the committee which makes recommendations to HAL about the investment of Research and Development (R&D) levy funds in the industry, Mr Fraser in his own words thought ‘he’d give it a go’. He was enthusiastic to

learn more about the process which has such a significant impact on the potato industry.

“I sat down and thought about it, and on the one hand my kids are pretty young and the demands of the farm keep me

“ I enjoy the hard work. No- one enjoys the hours at times, but the challenge of it all I suppose is why I’m still involved in growing. ”

pretty busy, but on the other hand it was something I was keen to have a go at, and so far so good,” Mr Fraser said.

As a young grower in an ageing industry, Mr Fraser brings a fresh perspective and different ideas to the committee meetings.

“As an industry we need to

stay positive,” Mr Fraser said.

“We need to attract young growers and promote the benefits of growing to make sure the next generation is coming through. We also need to make sure those who are involved in

the industry needs to find a way to keep prices up, rather than continuing the downward trend.

“We must look at keeping the prices up, instead of bringing them down all the time, trimming our wings to survive as they say,” he said.

According to Mr Fraser, growers have been great at finding ways to improve their efficiency and become more productive, but at the end of the day a good price was needed to remain viable in the future.

“Most growers in the last five years have improved their irrigation systems. We’ve tried just about every system in the market to find the best. Ground preparation has also improved, with destoning and bed forming proving to be crucial elements in achieving a higher quality product, greater yields and minimising labour costs at harvest time,” he said.

“We do need to and are trying to stay abreast of the latest technologies and ideas to keep moving ahead, but there is no point if we are getting bare minimum for our product.”

*Potatoes Australia* visited Mr Fraser in early September in the week following Victoria’s

the industry, remain in it for the long-term.”

Mr Fraser said it was also time to change the image of the industry and look at options to promote the health benefits of eating potatoes, which hasn’t been a focus in the past.

Perhaps more important than anything though, Mr Fraser said



## Grower Information

<b>Producer:</b>	Rod Fraser
<b>Region:</b>	Mt Propect, Central VIC
<b>Growing:</b>	Mostly for processing and crisping
<b>Other activities:</b>	Member of the Processed Potato IAC



largest rainfall in almost 15 years. Buoyed by the recent rains, Mr Fraser indicated that a wet winter meant that the area's catchments were full and growers in the region were in a good position entering the summer season.

"It depends on whether we have a dry summer, but the recent rain should help," he said.

"Last year was a good season with plenty of water, and certainly catchments in the area are fuller than they have been in a long time."

As a member of the PPIAC, and a grower out in the field every day, Mr Fraser is all too aware of the threats posed by viruses and diseases.

He said it was important for the industry to find out more about threatening pests and for growers to look at the basics and make sure they know how to tackle outbreaks.

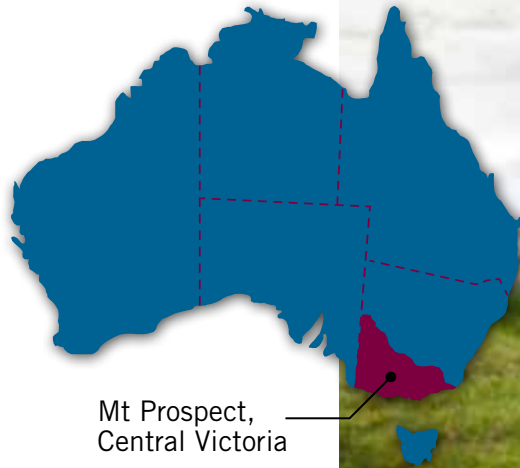
"In this area alone there are problems with Rhizoctonia, Leaf Blight, Powdery Scab, Potato Virus Y and others, and we must continue to find the best ways to manage them," Mr Fraser said.

"We also need to keep the research up, to make sure we

don't face a similar situation to that which occurred in New Zealand in regards to Zebra Chip."

A committed grower, methodical in his planning and with an eye for the benefits of mechanisation, Mr Fraser has a bright future in the potato industry.

Despite the complexities of potato growing his motto is simple: "If you're not going to do it properly, then there is no point doing it at all."



Mt Prospect, Central Victoria



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# WA researchers help verify area freedom from Potato Cyst Nematode (PCN)

According to nematologists from the Department of Agriculture and Food in WA, Dr Sarah Collins and Dr Vivien Vanstone, Western Australia has verified the successful eradication of Potato Cyst Nematode (PCN), following its initial discovery in the mid-1980s.

After more than two decades of research, comprehensive testing, stringent border quarantine controls and widespread planting of resistant potato varieties, WA Agriculture and Food Minister The Honourable Terry Redman announced on September 13 that Western Australia had been reinstated as Potato Cyst Nematode (PCN) free.

All state and territory governments have endorsed the recommendation that the Plant Health Committee notes the successful eradication of PCN in Western Australia and recognises Western Australia's area freedom for PCN.

The Department of Agriculture, Fisheries and Forestry (DAFF) will, however, need to negotiate with Australia's relevant trading partners to gain their

acceptance of that status.

## History in the West

Potato Cyst Nematode (PCN), one of the biggest threats to Australian potato growers, was first discovered in the West in 1986. Since the discovery scientists have conducted over 32,000 tests to prove that the disease, which greatly increases the cost of production and can cut yields by up to 90 per cent, has been eradicated.

*Globodera rostochiensis*, the yellow or golden potato cyst nematode, was first detected when a grower suffered crop damage and contacted the department for help. PCN was diagnosed and a huge quarantine and eradication effort swung into action, involving overseas experts who were familiar with this problem.

The virus, which penetrated

quarantine barriers, has very advanced survival mechanisms and is very difficult to detect in its early stages. It has the ability to slowly build in soil and crops for at least seven years before visibly affecting plants.

Six properties within a 15 kilometre radius were found to be infested. Crops were destroyed, soils fumigated, areas quarantined and extensive testing continued over many years, first to contain and then to eradicate the infestation.

Since 1991, legislation has restricted the movement of potatoes, machinery, equipment and soil from risk areas in WA. Quarantine officers have inspected all bulk bins, bags, potatoes and equipment to ensure they are free of soil, plant material or PCN cysts before movement from the Perth metropolitan area to any

other part of the state.

This effort totalled almost 29,000 inspections to the end of 2009.

Although the affected land has been out of commercial vegetable production since the early 1990s, and much of this land is now under suburban housing, it is known that PCN in some cases can lie dormant for 20 years or more, even when no potatoes are grown.

Individual cysts contain up to 400 eggs when mature and these have a delayed hatching pattern over prolonged periods: about 30 per cent hatch in the first year, similar numbers the next year, and smaller hatchings follow over many years. Long before the problem becomes obvious, cysts can be spread widely via potato seed, machinery, boots, soil, bins and other equipment, making



At the announcement of WA's area freedom for PCN: Department of Agriculture and Food (DAFWA) Plant Biosecurity Director Shashi Sharma, DAFWA nematologist Vivien Vanstone and WA Agriculture and Food Minister Terry Redman.



eradication extremely difficult.

Besides potatoes, the nematode can also live on the roots of other host crops such as tomatoes and eggplant, and weeds such as nightshade.

### Research pays off

In the 24 years since the infection was detected in WA, comprehensive testing (nearly 32,000 routine tests before the recent area of freedom work) has proved that the pest was eradicated from where it was found and did not spread further within the state.

Adoption of stringent border quarantine and widespread planting of resistant potato varieties since the original outbreak have also contributed.

The final report of a study by the Department of Agriculture and Food on the status of PCN in WA was completed in March.

This major verification and testing effort was supported by Horticulture Australia Limited (HAL) and funded partly by the National Potato Levy and matched funding from the Australian Government.

To verify WA freedom from PCN following a suitable span of years without re-infection, a sensitive molecular test was developed, able to detect one cyst in the organic matter extracted from 20 kilograms of soil. This would have been very efficient in testing numerous samples from large quantities

of soil, but proved accurate on sandy soils only. With further development and validation, this test could be useful to detect very low levels of PCN (or other organisms of interest) in large soil samples.

The next step was microscopic

“ In the 24 years since the infection was detected in WA, comprehensive testing has proved that the pest was eradicated. ”

examination of organic matter extracted from soil sampled from all growing areas across the state.

Almost three tonnes of soil were collected from potato farms across all growing regions, from Dandaragan to Albany over 13 months in 2007 and 2008.

The soil was sampled to 15 centimetres on a five metre by five metre grid in the highest risk paddocks to provide about 20 kg/ha. This represented a sampling intensity that was unmatched internationally at the time, and has since been used as the basis for new protocols

developed by the United States Department of Agriculture and Canadian Food Inspection Agency to test for PCN.

This soil was then separated into its mineral and organic fractions, leaving 27 kilograms of organic matter as more than

5,000 samples to be scrutinised closely for cysts under a microscope. No viable *Globodera rostochiensis* cysts were found.

The comprehensive survey combined with high sampling intensity and efficient soil processing and assessment techniques confirmed that PCN had been eradicated.

Distance from other potato growing areas and WA's strict quarantine regulations have helped prevent further entry of PCN since the 1980s. Under WA regulations, ware, seed potatoes and tissue culture imports are strictly controlled

to ensure that material potentially harbouring PCN does not expose the state to risk.

Strict adherence to these regulations is vital to avoid the risk of bringing in the pest again and repeating the devastating effects on individuals and the whole industry.

### THE BOTTOM LINE

- Detection methods established by nematologists from the Department of Agriculture and Food in Western Australia, and more than 20 years of eradication work has culminated in the state claiming 'area freedom' from PCN.
- Western Australia's claims to have verified the successful eradication of PCN have been accepted by the Plant Health Committee, which provides advice to the Primary Industries Standing Committee (PISC), and is made up of Commonwealth, state and territory governments.

• For more information contact:  
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# Processed and Fresh Potato IACs meet in Hobart

The Processed Potato and Fresh Potato Industry Advisory Committees (IACs) met in Hobart at the end of August 2010 to discuss various matters of importance to the potato industry.

A meeting of the Potato Industry's two advisory committees was held in August with discussion including: 'Zebra Chip' disease complex, international collaboration for the purpose of sharing Research and Development (R&D) knowledge, and the strategic direction of the industry in 2011/12.

## Zebra Chip

The 'Zebra Chip' disease complex, which has devastated New Zealand's potato industry, continues to be of major concern to the Australian industry with both IACs discussing the issue at length.

Dr Paul Horne, from IPM Technologies, presented to the Processed Potato IAC on research being undertaken in relation to IPM strategies seeking ways of controlling the psyllid that spreads the bacterium.

The major difficulty in undertaking IPM research relating to the psyllid is that it has not yet been discovered in Australia, so work must be undertaken in New Zealand. As a result, successful IPM in New Zealand may or may not be relevant to the Australian environment.

The development of a contingency plan and categorisation of the disease were also discussed.

## International collaboration

Following successful collaboration between Australia and New Zealand in relation to the 'Zebra Chip' disease complex, the issue of renewed collaboration between the two countries for the purpose of sharing R&D knowledge has arisen on the IACs' agendas.

To understand how such a relationship might work, a Memorandum of Understanding (MoU) was presented for consideration. This was endorsed with a review to be conducted after two years. The document will now be referred to Potatoes New Zealand for their consideration.

The next World Potato Congress, set to be held in 2012 in Edinburgh, Scotland, was also discussed as an opportunity for a potato grower study tour, following the success of several vegetable grower tours to New Zealand, the USA, Israel, Berlin and Spain.

AUSVEG was asked to develop a proposal to enable a

tour group to participate in the congress.

## Strategic priorities 2011/12

A key item for discussion on the agenda was the analysis of current and recently completed fresh and processed potato R&D projects against the industry strategic plans.

The purpose is to provide an overview of how the plan is being implemented against the current strategic plan leading into future discussion on investment priorities for 2011/12 and beyond.

The current value of 2010/11 R&D investment against government priorities had been assessed by the Industry Services team at HAL and presented to the IACs for their review. Members provided feedback on the relevance of a range of strategic objectives.

## Policy matters

While the IACs are R&D committees and are not funded to make decisions or provide advice on political matters, a bid by New Zealand to export fresh potatoes to Australia for processing was topical in the media at the time of the

meetings and was of natural concern to members of the committees, particularly given the threat of those imported potatoes potentially being infected with 'Zebra Chip' disease.

The issue was raised by AUSVEG CEO Richard Mulcahy with the former Minister for Agriculture, Fisheries and Forestry, The Honourable Tony Burke MP, who by coincidence was also in Hobart for separate meetings and briefly met with the Processed Potato IAC during a lunch adjournment.

## Economic assessment of HAL investment in six project clusters for the potato industry

An independent report on the economic analyses of six areas of potato research and development investments was presented for members' information and discussion.

The six investment analyses all yielded positive results with benefit/cost ratios ranging from 3.5:1 to 10:1, all demonstrating a positive outcome for the key stakeholders, the levy payers. This demonstrates that the research is making, or is likely to make, a positive difference.



[From left] David Antrobus, AUSVEG CEO Richard Mulcahy, Rod Fraser, Daryl Lohrey, The Honourable Tony Burke, former Minister for Agriculture, Chair John Rich and Frank Mulcahy



# Ask the industry



with  
Scott Mathew

After my recent trip around the major potato-growing areas of Victoria talking to growers about the new product AMISTAR Top and discussing how to improve the control of pink rot, it was interesting to hear from many growers about what is going to happen when the locusts hatch in early October and what options they may have for controlling them.

**Question: When are locusts most likely going to become a problem?**

Answer: I suggest growers keep their ears open to regional radio stations for updates as to the current situation or they can visit the Australian Plague Locust Commission (APLC) website which is a great source of information ([www.daff.gov.au/animal-plant-health/locusts](http://www.daff.gov.au/animal-plant-health/locusts)). At this stage the best guess is that landholders should be keeping a close eye out for hatchings from mid-September onwards.

**Question: When should we begin our control program if they become a problem?**

Answer: Before deciding on the action needed to control locusts, first determine how much of your cropping program and individual crops may be at risk. As a general rule, immediate action will be required once crop damage from hoppers and adult locusts is being seen in your crops.

**Question: How can we ensure we get the best results when controlling locusts?**

Answer: Hoppers may be sprayed as long as the prevailing wind conditions are suitable and ensuring the spray hits the hopper band target. To achieve good control of locust bands, it is more effective and efficient to carry out control early i.e. when the locusts are banded together, and the locusts are in the 2nd and 3rd instar stages. If targeting adults, it is best to spray them while they are settled in the early morning or late evening.

**Question: What products can we use for controlling locusts?**

Answer: There are many insecticides that are currently used in potato crops that have activity on locusts, however, these products may not be registered for locust control in potato crops, so therefore you will need to check for those that are registered for use in potatoes and have been issued with a minor use permit from the Australian Pesticides and Veterinary Medicines Authority (APVMA) on their website ([www.apvma.gov.au](http://www.apvma.gov.au)) under the minor use permit heading for the control of locusts in these crops.



## Ask the industry

For more information or to ask a question, please contact your local Syngenta Territory Manager, the Syngenta Advice Line on 1800 067 108, or visit [www.syngenta.com.au](http://www.syngenta.com.au)

or email *Potatoes Australia:*

[andrew.mahony@ausveg.com.au](mailto:andrew.mahony@ausveg.com.au)

Please note that your questions may be published.



# The benefits of CTF

Researchers and extension officers from DEEDI believe the results of a recent study into the economic benefits of Controlled Traffic Farming show that the innovative system can significantly reduce costs for growers.

The practice of Controlled Traffic Farming (CTF) is certainly gaining momentum in the potato industry, with a number of growers using the system to increase production and reduce soil compaction. Now, researchers from a team within the Department of Employment, Economic Development and Innovation (DEEDI) have results, which quantify the benefits and present growers with a clear view of how the method might reduce their fuel and labour costs.

The study has been undertaken as part of the broader DEEDI FarmFLOW project, which involves working with horticultural producers to improve soil and nutrient management practices for productivity and profitability gains, as well as minimising potential soil and nutrient losses.

CTF refers to maintaining machinery traffic in the same wheel tracks over consecutive crops. With this technique, research shows that soil and productivity may improve as crops are not growing in compacted areas.

Soil structure, infiltration and water use are said to also improve and erosion risk may

“Reduced fuel consumption due to changes in machinery operations on the 80-hectare property was one of the key benefits of a CTF system identified in the study.”

be reduced.

Machinery efficiencies are also believed to improve by trafficking permanently compacted wheel tracks.

Global Positioning Systems (GPS) are used to manage farm traffic and achieve accuracy in the alignment of wheel tracks. Previous research has estimated that 20 per cent of tractor power is used compacting the soil, and 25 per cent goes into breaking up clods created by compaction.

## Real benefits

To support the belief that CTF would bring about cost reductions for growers, a case study was launched based on an 80 hectare family-owned fruit and vegetable cropping business in the Lockyer Valley in south east Queensland.





The grower co-operator was concerned about the damage done to his soil through machinery traffic, particularly at harvest, and interested in improving the quality of the soil.

The opportunity to reduce operations and inputs where possible was also motivation for implementing a CTF system. While many potato growers, such as Daniel Maher—who was awarded Young Grower of the Year for 2010 and featured in the last edition of this magazine—promote the benefits of CTF, the main aim of this research was knowing just how the technique affects the bottom line for growers through improved farm operation efficiencies and reduced input costs.

According to DEEDI Senior Extension Officer, Dr Julie O'Halloran, the cost/benefit analysis was directed by the grower, who had input into what was a practical and realistic approach to the practice changes and expected benefits from a CTF system.

Data for the analysis was collected from the grower and they also had input into reviewing and auditing the analysis.

An initial investment of \$71,000 to install precision GPS

guidance systems in two tractors was required.

This technology provided increased precision to help control machinery traffic.

The grower then worked through the changes to the farming operations based on a controlled traffic system.

Two key analyses were applied by DEEDI Agricultural Economist Jim Page:

- 1) An analysis of machinery operations with or without CTF.
- 2) An analysis of crop gross margins with or without CTF.

“Significant savings of \$216.80 per hectare in fuel, oil, repairs, maintenance and labour were found through using CTF.”

### Machinery operating costs and associated labour

Changing to a CTF system resulted in differences in the number, type and power requirements of machinery operations.

Significant savings of \$216.80 per hectare in fuel, oil, repairs, maintenance and labour were found through using CTF.

Mr Page also indicated that growers were likely to experience a great return on their investment, estimated to be 37.6 per cent of variable costs in year one and 26 per cent of total costs.

*continued over page* ▶

**Table 1.** Reduction in fuel and carbon dioxide (CO<sub>2</sub>) emissions.

Tractor	Reduction in tractor hours per year with CTF (hours)	Fuel savings per year with CTF for each tractor (litres)
Tractor 1 (82.4 pto kW)	184	5299
Tractor 2 (57.6 pto kW)	86	3798
Tractor 3 (29.6 pto kW)	92	580
Tractor 4 (24 pto kW)	71	501
Total reduction in carbon emission (kg/ ha/ yr)		344 kg CO <sub>2</sub>
Total fuel saving as a percentage		40.42%





### Reduced fuel consumption

Reduced fuel consumption due to changes in machinery operations on the 80-hectare property was one of the key benefits of a CTF system identified in the study.

Results for the largest tractor used showed tractor hours reduced by 184 hours per year, thus saving over 5,000 litres of fuel.

Even for the smallest tractor, the estimated reductions in

tractor hours and fuel consumption were substantial.

Carbon dioxide emissions were also reduced as a result of CTF on the 80-hectare property (see Table 1).

Machinery operation cost savings are the result of many small gains including reduced power requirements for machinery operations (CTF reduces area of compaction and tillage requirements), greater machinery efficiencies, and elimination of some machinery operations due to GPS guidance

technology.

### Gross margins

The co-operating grower identified the possibility of achieving up to four per cent yield gain with a CTF system due to soil quality improvements.

The analysis identified possible gross margin gains with a CTF system even without any yield increase (see Table 2).

### THE BOTTOM LINE

- Researchers and extension officers from the Department of Employment, Economic Development and Innovation (DEEDI) have undertaken trials with Queensland growers to examine the economic benefits of Controlled Traffic Farming.
- Results show significant costs may be saved by using this technique including a decrease in the machinery power required and the flow-on effect this has on fuel usage.
- Growers involved in the trials have also identified the possibility of achieving up to a four per cent yield gain with a CTF system due to soil quality improvements.

Table 2. Gross margin gains with CTF.

Yield gain	Average gain per crop (\$/ha)	Allow for double crop (\$/ha)	Sum of CTF gain for 80 ha double cropped farm (\$/year)
0%	\$122	\$244	\$19,540
1%	\$318	\$636	\$50,904
2%	\$498	\$995	\$79,609
3%	\$725	\$1,451	\$116,050
4%	\$926	\$1,853	\$148,215

**i** For more information contact:  
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 Phone: 0409 054 263

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# Researchers meet to enhance the processed potato industry

Writes John Rich



Most growers will be aware that phase two of the Processed Potato Research and Development Program (APRP2), is an extension, or continuation, of the successful Australian Potato Research Program Phase One (APRP1) run over the previous five years and focussing on the major soil-borne potato diseases, including Common Scab, Powdery Scab and Rhizoctonia. The program focused on Tomato Spotted Wilt Virus, with nematodes and verticillium wilt as secondary subjects for research.

The APRP2, another five year program is now off and running, utilising grower and processor levy contributions through Horticulture Australia Limited (HAL). The program also has voluntary funding from research collaborators including: the New Zealand Institute for Plant and Food Research; Horticulture New Zealand; British Potato Council and A and L Laboratories, Canada. All funds are matched by the Australian Government.

APRP2 is under the management of Scott Williams and his team from SED Consulting based in Ballarat, Victoria.

The three sub-programs of APRP2 focus on soil-borne diseases; soil health; and insects, pests and viruses, with six projects covering these topics.

I recently attended a meeting of the APRP2 Technical Advisory Committee and I am pleased to report to the readers of *Potatoes Australia* that it was an absolute pleasure to be in the company of such a dedicated and knowledgeable group of researchers.

The project leaders at the

meeting included: Nigel Crump, VicSpa; Frank Hay, John McPhee; Calum Wilson, Tasmanian Institute of Agricultural Research; Kathy Ophel-Keller, SARDI; Ian Porter and Tonya Weichel, Victorian Department of Primary Industries; and VR Prakash, Melbourne University.

Each of the leaders presented their specific project summaries to the meeting and open and enthusiastic dialogue between presenters and the other researchers in the room followed.

With APRP2 we have the continuation of excellent and beneficial collaboration that began with APRP1. The level of collaboration between all researchers is inspirational.

It is interesting to note that the apple industry is now following the APRP2 collaboration model and now working with researchers in New Zealand on specific projects.

I was also reminded of an interest I took, earlier this year, looking at the history of the Tasmanian potato industry since 1803. I found reference to trials being done to improve potato yield and quality in the 1880s. The matter of research and development has been ongoing since that time. I cannot see a time in the future when the research will not be an essential part of the potato industry. There will always be new and exciting technological developments, such as the DNA work now being done, aimed to provide a better understanding of field production systems.

## John Rich

Chairman, Fresh and Processed Potato Industry Advisory Committees

# Zebra Chip poses ongoing threat

AUSVEG CEO Richard Mulcahy has warned that diseased potatoes have the potential to threaten the viability of the entire Australian potato industry, if the Australian Federal Government allows potatoes to be imported for processing from New Zealand.

The devastating 'Zebra Chip' disease complex (spread by the tomato-potato psyllid) has caused widespread destruction in New Zealand, and before that in the United States, costing the international potato industry millions of dollars.

The Ministry of Agriculture Biosecurity New Zealand (MAFBNZ) has formally requested renewed market access for fresh potatoes (*Solanum tuberosum*), for processing under a Quarantine Approved Premise (QAP) arrangement, into Australia.

"This has the potential to be catastrophic for the Australian potato industry and I must say that I've been very surprised at the lack of appreciation for the gravity of this situation by Biosecurity Australia in the discussions we've held with them," Mr Mulcahy said.

"The information we're getting from experts who've travelled to New Zealand investigating the devastation this disease has caused there, is that there is so much we don't know about the

disease that we would be crazy to take the risk by importing potatoes from countries like New Zealand, which we know are highly infected," Mr Mulcahy said.

"It's important that the

to be permitted they would only be admitted under a secure regime, scientists are warning the industry that the risks are just too great to take," Mr Mulcahy said.

Potatoes which are exposed to

"The facts are we still don't know how the disease reached New Zealand. With due respect to our colleagues in New Zealand, it would be foolish in the extreme for the Australian Government to approve the import of potatoes for processing from New Zealand."

Tomato-potato psyllids are found in the USA, parts of Mexico, southern Canada, and now New Zealand. It's been reported that the psyllid caused losses of \$43 million for New Zealand producers in 2008/09, with the psyllid alone said to be considerably destructive.

But the psyllid can also infect potatoes with *Liberibacter*, the bacterium which causes 'Zebra Chip' in potatoes.

*Further information on the tomato-potato psyllid can be found in the fact sheet distributed with this edition of Potatoes Australia.*

“It would be foolish in the extreme for the Australian Government to approve the import of potatoes for processing from New Zealand.”

government fully understands the serious nature of this destructive disease. There is just not a compelling case for putting ourselves at this unnecessary risk," he said.

"While Biosecurity Australia says that if these potatoes were

the 'Zebra chip' pathogen as it's known, have black lines resembling the stripes of zebras which make the potatoes unsellable. No health risks have been identified in relation to the consumption of potatoes which are infected with the disease.

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# Your hard earned dollars

A recent cost-benefit analysis of projects conducted in the potato industry, shows

Research and Development (R&D) undertaken to enhance the potato industry is funded by the National Potato Levy as well as through voluntary contributions from various organisations and research bodies across the industry, with matched funding provided by the Australian Government.

Understanding the return the industry is receiving on this investment is a critical process to ensure levy payers and taxpayers alike are receiving adequate information on the investment of their hard-earned dollars.

The project was initiated after Horticulture Australia Limited (HAL) agreed with the other R&D corporations to meet an Australian Government requirement, that independent economic evaluation of R&D projects be undertaken on a

regular basis. This is in order to provide independent justification for levy-funded investment in R&D, and corresponding taxpayer

with another consultancy firm, AgTran Consultants, with the objective of evaluating whether R&D was providing sufficient returns for potato growers.

(in value terms) were excluded from the analysis in order to ensure that the random selection did not result in only a small proportion of the portfolio (in value terms) being analysed.

This resulted in a total population of 151 projects, which were grouped into 14 clusters.

The total value of the projects (HAL and industry funds only) was more than \$15 million.

Mr Clarke said that once all the projects had been grouped into clusters, a completely independent advisor was engaged to select a random sample of clusters to evaluate.

"This was done to ensure there was no favouritism, in that we didn't just pick out the best projects and focus on their returns," Mr Clarke said.

It was determined that only six clusters could be analysed given the time and resources

“R&D generates a benefit/cost ratio of somewhere between three and 11, which indicates the potato industry has done well compared to other industries in agriculture.”

contributions. The project was led by Mr Michael Clark from agricultural consultancy firm, AgEconPlus, who partnered

The six-month process began by obtaining the final reports of projects with a completion date in the period from July 2004 to June 2009. Very small projects

**Table 1.** The results for each cluster analysed.

Investment Cluster	B/C Ratio
Seed Production and Seed Quality (13 projects)	5.1
Processor – disease – soil amendments (1 subprogram)	5.0
Processor – DNA monitoring tools (1 sub-program)	6.5
Agronomy and Production Management (16 projects)	7.2
Environment and Health (4 projects)	3.5
Extension (8 projects)	10



# reaping returns

that R&D funding is producing significant returns on investment.

available.

The six clusters drawn for analysis were:

- Seed Production and Seed Quality (includes 13 projects)
- Processor – disease – soil amendments (1 sub-program)
- Processor – DNA Monitoring Tools (1 sub-program)
- Agronomy and Production Management (includes 16 projects)
- Environment and Health (includes 4 projects)
- Extension (includes 8 projects)

Mr Clark said that together the investment in these six clusters represented approximately 42 per cent of the total investment in the potato industry R&D program over the period.

The most important measure to evaluate the returns on

investment was the benefit/cost ratio (B/C) he said, which estimates for every dollar spent, a particular dollar amount of benefit returned.

See Table 1 for the results on each cluster analysed.

Mr Clarke said the results showed that the industry was receiving good returns, and in the case of projects concerned with extension, better than average returns had been found.

“Typically, when you look across all agriculture industries, R&D generates a benefit/cost ratio of somewhere between three and 11, which indicates the potato industry has done well compared to other industries in agriculture,” he said.

“Results were quite good in the health and environment cluster but the best results were projects involved in extension,

with a high benefit/cost ratio of 10 to one.”

Mr Clarke said the analysis process was a complex but thorough one, which took a conservative approach to estimating the returns experienced or expected in the future.

“You work through a process that looks at a number of things: what are the activities involved in each R&D project; what are the outputs achieved; then examine the outcomes and how this will manifest through to the supply chain,” he said.

“You then need to test the suggested outcomes with growers, other researchers, the R&D program manager, and industry economists such as the highly respected Dr Peter Chudleigh, in an attempt to turn these outcomes into economic returns.”

## THE BOTTOM LINE

- Independent economic evaluation of R&D projects will be undertaken on a regular basis in order to provide independent justification for levy-funded investment in R&D.
- The evaluations ran over a six-month period, and six clusters were randomly drawn from a total of 151 projects for analysis, worth a total of \$15 million.
- The results prove that R&D generates a benefit/cost ratio that indicates the potato industry is doing well when compared to other industries.



For more information contact:  
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AgEconPlus  
Email: <Clarke@AGEconPlus.com.au>  
Project no. PT 091016

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# What's on

**22-23 October 2010**

## **Bendigo Agricultural Show 2010**

**Where:** Prince of Wales Showgrounds, Bendigo, Victoria

**What:** The Bendigo Agricultural Show Society is proud to present the 2010 Annual Show. The Show promises to be another great two days of action and entertainment for the whole family.

**Further information:** [www.bendigoshow.org.au](http://www.bendigoshow.org.au)

**5-7 November 2010**

## **The Good Food & Wine Show – Brisbane**

**Where:** Brisbane Convention & Exhibition Centre, Brisbane, Queensland

**What:** The Good Food & Wine Show provides traders and visitors alike with an opportunity to mingle and explore the wide array of exhibits.

**Further information:** [www.goodfoodshow.com.au](http://www.goodfoodshow.com.au)

**10-11 November 2010**

## **Agriculture Roundtable Conference 2010**

**Where:** Amora Hotel Jamison, Sydney, New South Wales

**What:** This annual event, held by the Australian Farm Institute will be chaired by Fran Kelly, presenter of ABC Radio National's Breakfast program. It will feature a 'Great Debate' on the topic of water development in Australia.

**Further information:** [www.farminstitute.org.au/news-and-events/upcoming-events](http://www.farminstitute.org.au/news-and-events/upcoming-events)

**28-30 November 2010**

## **Interpom I Primeurs**

**Where:** Kortrijk, Belgium

**What:** Belgium's leading trade fair for potatoes, fruits and vegetables.

**Further information:** [www.interpom.be/interpom-en.aspx](http://www.interpom.be/interpom-en.aspx)

**5-9 December 2010**

## **African Potato Association Conference**

**Where:** Cape Town, South Africa

**What:** The largest potato event in South Africa sees the five-day-long event feature the title: 'Potatoes and Sweet Potatoes – the driving force behind food security in Africa'.

**Further information:** [www.potatoes.co.za](http://www.potatoes.co.za)

**10 – 11 December 2010**

## **International Potato Group (IPG) Meeting**

**Where:** Cape Town, South Africa

**What:** The IPG, which has a focus on R&D, marketing, and industry strategy, was formed through the World Congress with the first meeting held in 2007, followed by a second in Christchurch, New Zealand in 2009. The next meeting is set to be held in South Africa in December this year.

**Further information:** [www.potatoes.co.za](http://www.potatoes.co.za)

**14-16 April 2011**

## **AUSVEG National Convention 2011**

**Where:** Sebel-Citigate Hotel, Brisbane, Queensland

**What:** The largest single gathering of vegetable and potato growers of the year, once again featuring the annual trade show that promises to be bigger and better than last year.

**Further information:** Phone (03) 9822 0388 or email [convention@ausveg.com.au](mailto:convention@ausveg.com.au)





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