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Australia's Potato Industry
December 2009



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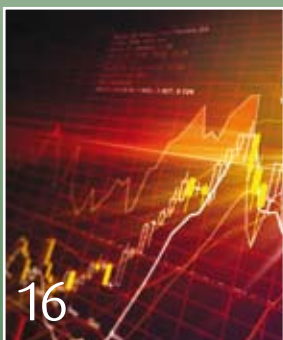
Contents



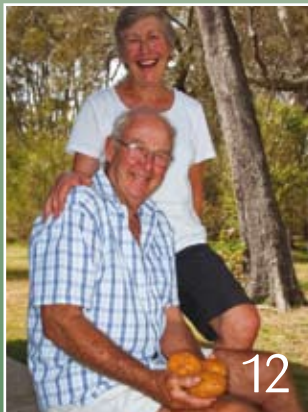
3



8



16



12



20



28

News & Views

- 3** AUSVEG Convention 2010

- 8** Being John Rich

- 10** AUSVEG advances Australia's potato and vegetable industry

- 12** David Montgomery

- 16** The year in review

- 18** Smart snooping

- 20** Quest for survival

Spudscape

- 24** It's a healthy question

- 26** Next generation farm aid

- 28** Experts boost export opportunities

- 32** The facts on bacterial wilt of potato

- 34** Letter from the UK

Regular Items

- 2** Contacts & credits

- 4** Chairman's message

- 4** Editor's message

- 5** CEO's message

- 6** News

- 31** Ask the industry

- 38** Chips: a look at what's new in potato information & technology

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rethink

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Growers, researchers and leading industry representatives will gather at Conrad Jupiters Hotel Casino for the inaugural AUSVEG National Convention in May next year.

AUSVEG

Convention set to wow industry

The 2010 AUSVEG National Convention, held in Queensland in May, will be the largest industry gathering of its kind.

The AUSVEG National Convention, Trade Show,

and National Awards for Excellence—held at Conrad Jupiters Hotel Casino from 27 to 30 May 2010—is expected to be the biggest gathering of growers, researchers and supply chain representatives in the vegetable industry ever held.

At the time of going to print, key strategic partners for the event include Elders, one of Australia's leading rural services providers; Syngenta, industry leader in crop protection solutions; Dupont, one of Australia's most well regarded crop protection and seed technology suppliers, and specialist vegetable seed company Terranova Seeds. Further partnerships will be announced in coming weeks with other leading Australian supply companies.

AUSVEG has previously held conferences that have focused mainly on research and development (R&D) and been funded in part through grower levies. This is the first time AUSVEG will be relying on industry support to stage this spectacular national event.

Diverse drawcards

The program will feature prominent Australians addressing delegates from such diverse areas as politics, business, R&D, retailing and sport. Details of the speaker program will be announced shortly, together with registration details for attending participants.

There will be a strong social program that will include a golf competition held at one the Gold Coast's leading golf courses on Sunday 30 May and a special "Kids' programs" for families attending the convention that will include visits to the Gold Coast's famous theme parks.

One of the features of the convention will be a trade show where up to 70 companies will demonstrate goods and services of interest to growers who want to familiarise themselves with the industry's latest products, technologies and services.

Industry Advisory Committee (IAC) vegetable working groups and IAC meetings will be held at the Gold Coast to coincide with the convention. Levy payer meetings for vegetable and potato levy payers will take place on the afternoon of Friday 28 May at Conrad Jupiters Hotel Casino commencing from 2.30 pm.

Participants in the Vital Vegetables program, including members of the governance board as well as marketing and research partners, also plan to meet at the time of the convention. This will enable growers to discuss opportunities and developments presented by the Vital Vegetables program.

The AUSVEG Board of Directors will also meet at the Gold Coast, as the leading industry representatives come together for what will be an exciting and memorable event.

Awarding excellence

"Invitations have been issued to a number of prominent Australians and we expect a first-class line up of interesting and informative presenters," said AUSVEG CEO Richard Mulcahy.

"We also plan to give focus to the key role that women play in the Australian horticulture industry; they will be recognised at a Women in Horticulture breakfast on the morning of Saturday 29 May.

One of the highlights of the event will be the AUSVEG National Awards for Excellence that will be held at a gala dinner on Saturday 29 May.

The awards will feature new categories and will be an occasion to recognise the achievements of growers, researchers and others who have made outstanding contributions to Australia's horticulture industry.

AUSVEG has negotiated heavily-discounted accommodation rates at Conrad Jupiters Hotel Casino and details of these special offers will be published shortly.

Delegates interested in receiving a convention brochure, companies wanting to exhibit in the trade show and businesses wishing to become sponsors of the event or strategic partners with AUSVEG should call AUSVEG on 03 9544 8098 or email <info@ausveg.com.au>.

More information will soon be published on the AUSVEG website: www.ausveg.com.au



AUSVEG

Chairman's message

Amid growing potato industry concern about the rising levels of imported processed potatoes, there is also increased focus on food labelling laws and the confusion over what information the Country of Origin processors are obliged to supply.

AUSVEG CEO Richard Mulcahy gave evidence at the Senate Economic Committee last month, following AUSVEG's submission to the Food Standards Amendment (Truth in Labelling Laws) Bill 2009, to put the industry's position to the Australian Government.

The legislation seeks to clarify confusing labelling laws by amending the *Food Standards Australia New Zealand Act 1991* to require Food Standards Australia New Zealand to develop and approve food product labelling standards to be used by food producers, manufacturers and distributors.

AUSVEG will continue to represent the interests of growers and the industry to decision-makers, to ensure that government agencies understand the challenges that growers face every day.

As a result of the partnerships that AUSVEG has recently formed with Elders, Dupont, Syngenta and Bayer, growers will have increased opportunities for sharing in greater knowledge resources.

They are also set to benefit when the AUSVEG National Convention is held on the Gold Coast in May next year. The AUSVEG National Convention will have a different focus to the Australian Vegetable Industry Conference, which has been organised by AUSVEG in previous years, with attending growers able to hear presentations by key industry figures and prominent Australians.

I would like to welcome and congratulate John Rich on his appointment as the new Chair for the Fresh and Processed Potatoes Industry Advisory Committees. As the potato industry prepares to meet the new challenges that 2010 may bring, I am confident that John will provide sound guidance on IAC-related decisions about project investment.

I would also like to congratulate potato industry stalwart, David Montgomery, on his retirement after several decades of dedication to the local and national potato sectors.

Finally, I would like to wish all our growers and industry representatives and their families, a safe and prosperous festive season and new year.



John Brent
AUSVEG Chairman

Editor's message

In 2009 our growers have faced pressure from the influx of overseas produce, diminishing demand for their potatoes, mercurial price negotiations, unprecedented pressure from diseases and pests, and extreme weather conditions.

We know that, as Ian James reports, the economic challenges will continue in 2010. We know, as new Potato IAC Chairman John Rich imparts, that there will be more to come in terms of the debate over prices. We know from recent global and local news that we need to be vigilant about managing biosecurity threats. We know as, the Extons from Kinglake have learned only too well, that life-altering events can strike at any time.

But we also know that there is determination because there are young growers like Sara Exton who witnessed her father lose everything to catastrophe, but won't let the worst that nature can throw, get between her and her goal of one day succeeding with the family potato business.

We know there is hope because of the efforts of many researchers, including Dr Stuart Wale and Dr Marco Ferroni, who work across national and international borders and industries to bring the immediate and the wider possibilities of research and development to our attention.

We know too, that there exists unity of purpose because across the Australian potato sector there are growers of character like David Montgomery and his peers at the Crookwell Potato Association who for years have volunteered their time to help better the industry and the wider potato community.

I hope this issue highlights some of these dimensions for you and wish you and yours a safe and wonderful festive season.



Jenan Taylor
Editor
Potatoes Australia

CEO's message

As the year draws to a close I am pleased to announce that AUSVEG has consolidated its support and representation of the national potato industry through a number of key initiatives.

We have strengthened ties with major agribusiness organisations Elders, Dupont, Syngenta and Bayer. These partnerships will increase the existing resources for research and development and provide more scope for being able to find workable solutions to a number of issues, including biosecurity and sustainable farming.

As a result of this partnering there will also be greater collaboration on the AUSVEG National Convention, Trade Show and Awards for Excellence, which will be held in Queensland in May.

This important event will see growers come together with the whole supply chain for a series of keynote presentations by industry experts and leading Australians. Together with a comprehensive and exciting social program, the convention will be unlike anything the industry has seen before.

In October, myself and Industry Economist Ian James appeared before the Senate Economic Committee, following AUSVEG's submission to the Food Standards Amendment (Truth in Labelling Laws) Bill 2009.

This was the second time this year that Ian James and I addressed major decision-makers about issues of high importance to our levy-paying growers. Our previous appeal—in relation to the ASEAN Free Trade agreement—helped advance cooperation between trade negotiators and our industry.

AUSVEG representatives have also engaged with an increased media interest in the potato industry when television, print and radio networks focused on a range of issues affecting the sector and consumers.

I would also like to take this opportunity to welcome new Fresh and Processed Potato Industry Advisory Committees (IAC) Chair, John Rich.

John has an outstanding portfolio of work in representing growers' interests and will be of immense value to the potato industry. You can read more about John in our interview on pages 8-9 of this edition.

Interviews for positions on the Fresh and Processed Potato IACs commenced in late November and we expect to announce the successful applicants early in the new year.

Finally, I would like to wish all our growers and potato industry representatives a wonderful Christmas and a prosperous New Year.

We look forward to continuing to develop opportunities for growers and keeping you fully informed of these and other happenings in 2010. To share your thoughts about the industry and the challenges and opportunities that await us, please email info@ausveg.com.au or call 03 9544 8098.



Richard Mulcahy
Chief Executive Officer
AUSVEG



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NEWS



Horticulture Australia Limited Board looking to the future: new Chair

Mr Selwyn Snell was elected to the role of chair and Professor Rob Clark was elected to the role of deputy chair following Horticulture Australia Limited's AGM held in Sydney earlier this month.

Mr Snell said he was honoured by his appointment and that the Board had made a conscious decision to look to the future in the way it operates and that this would be reflected in a new approach to the operations of the company.

"I am taking up the chair's role at a very exciting time for HAL. We have a new CEO in John Lloyd, we are in the process of developing a new five-year strategic plan and we have a Board of skilled directors that are committed to HAL delivering excellent services for industry," he said.

"The Board has been fortunate to spend the last three days with the leaders of the 37 peak industry bodies of Australia's horticulture industries at our industry forum. The Board will be working hard through John Lloyd and his team to make sure HAL supports each of these industries to develop programs that will deliver profitability and sustainability for their growers."

"While there are many challenges ahead for the industry, the unity of purpose of the organisation and its members will be fundamental to providing a competitive international position," he said.

Mr Robert Seldon was re-elected to the Board as well.

The HAL Board consists of eight directors: Mr Selwyn Snell (chair), Professor Rob Clark (deputy chair), Mr Ken Boundy, Mr David Cliffe, Ms Lisa Cork, Ms Jan Davis, Mr Graeme Hargreaves and Mr Robert Seldon.

AUSVEG AGM

Mr John Brent has been re-elected without opposition to the position of AUSVEG Chair at the AUSVEG Annual General Meeting (AGM) held in Sydney on Monday the 30th of November.

Mr Geoff Moar was also re-elected to his position as AUSVEG Director and Dr Elizabeth Duncan was re-elected to her position as AUSVEG Deputy Chair.

The meeting was held at the Sheraton on the Park hotel, with 30 industry representatives, including several from AUSVEG's new strategic partners, Elders, DuPont and Syngenta, in attendance as well as the Executive directors of each of the AUSVEG State Member organisations.

For more on the AGM please see page 10 of this edition.

Seed Potato Advisory Group talks

The impact of PCN on seed certification bodies was among the agenda items when the Seed Potato Advisory Group held meetings in Western Australia earlier this month.

Group participants, Dr Iain Kirkwood, the Research Director, Tasmanian Institute of Agricultural Research; David Carter from the Crookwell Potato Association; John Fennell, Acting Director Horticulture, Primary Industry and Resources South Australia; Dr Nigel Crump, Manager, Victorian Seed Potato Authority; Mark Holland, Manager AgWest Plant Laboratories, Department of Agriculture and Food, Western Australia (DAFWA); and Jenan Taylor, *Potatoes Australia* Editor met for the first time since they convened at the World Potato Congress in March this year.

DAFWA's, Dr Sarah Collins and Senior Seed Certification Officer, Mike Davies, also presented on PCN and the National Association of Testing Authorities (NATA) accreditation of the seed inspection body.

Some of the other items covered by the group included proposed labelling of generational information, development of tuber virus testing, and the development of tests for fungal and bacterial disease.

Potato grower finalist in Business SA export awards

The South Australian Potato Company has been named a finalist in the recent 2009 Business SA Exporter Awards.

The Premier of South Australia, Mike Rann, presented the annual awards, and paid tribute to local businesses by celebrating their exporting achievements.

"The success of our export program is largely attributed to our growers, freight forwarding companies and our customers



working together in partnership,” said The South Australian Potato Company spokesman, Julian Carbone.

“Exporting fresh potato remains a difficult task. The product is inexpensive, bulky, highly perishable, requires constant refrigeration and is grown in countries with much lower production costs.

“However our capabilities, resources and passion make our product and our company globally competitive. Our locally grown potato is absolute premium grade quality, guaranteed to be delivered fresh and is backed up with the highest levels in customer care,” Mr Carbone said.

The company, which started exporting in November 2008, spent a few years trialling, growing and developing particular potato varieties specifically designed for the export market.

Bayer and Aussie Helpers to boost rural sector employment prospects

The establishment of a training farm in Mathoura near the border of New South Wales and Victoria will help disadvantaged youth aged between 18 and 25 develop skills and find employment in the sector, as Bayer joins forces with not-for-profit ‘Aussie Helpers’.

The innovative venture is designed to address issues such as high youth unemployment in rural communities and the ageing farming population in Australia.

Aussie Helpers’ founder Brian Egan says the program will fulfill an urgent need.

“It’s no secret that rural Australia has done it tough for a long time and, on the other side of the coin, there is a lack of employment opportunities for young people. This means they leave for the cities and therefore we have a shortage of our next generation of farmers, and we see increased social problems in the community.”

ABS figures indicate that there are approximately 4,500 farmers aged between 20 to 24 and 8,500 farmers between the ages of 25 to 29, compared to approximately 94,500 farmers aged from 50 years and up.

The new program will assist disadvantaged youth develop vital skills and find employment in the rural sector.

“With this initiative, these young people will have the opportunity to obtain some on-farm training and employment, while the farmer gets the benefit of having labour on his farm, helping to keep the farm profitable and alleviating some pressure from himself and his family,” says Brian Egan.

“Helping disadvantaged youth in rural Australia through support and training will assist in bolstering much needed jobs in the area, as well as improving the self-esteem of individuals who often feel helpless in these trying times,” said Mr Joerg Ellmanns, Chairman and Managing Director for Bayer.

In conjunction with the Work for the Dole scheme, the training farm will provide disadvantaged people with up to four weeks’ training where they will be taught basic aspects about farming. Successful graduates will then be placed on a host farm for five months, with the government subsidising their wage of \$250 per week while the host farmer supplies the trainee farmer with food, accommodation and training.

“For many of the farmers we help, there is no reprieve from the difficulties of living off the land,” says Mr Egan.

“One of the reasons we started Aussie Helpers is for farmers to know that they are not alone, and that we are here to help.

Bayer will contribute up to \$40,000 through an interactive Christmas card, where Bayer employees, customers, suppliers and the general public can pledge their support to Aussie Helpers this festive season. For every person who visits the website, Bayer will donate \$1 on their behalf towards establishing the training farm and helping those in need.

For more information on Aussie Helpers, visit www.aussiehelpers.org.au, or to help Bayer achieve their goal of raising \$40,000, visit: www.bayeraussiehelpers.com.au.

The winner is...

Potatoes Australia congratulates NSW grower Terry Morris on winning the 2009 *Potatoes Australia* Reader Survey competition. Terry receives a five-litre pack of Amistar, courtesy of the team at Syngenta.

Thank you to everyone who completed and returned the survey.

Being John Rich



The new Chair of the Fresh and Processing Potatoes Industry Advisory Committees (IACs) has a very long list of potato, vegetable and dairy industry achievements. He recounts some of the major milestones in his career—thus far.

Words | **Jenan Taylor**

Photo | **Erin Lyall**

John Rich says his love for farming stems from his mother's side of the family, while his reputation for being a stickler for detail comes from some years with the Australian Dairy Corporation working with a manager who went the extra mile in terms of attention to detail.

"He taught me that how you do something is as important as what you do," says John.

That ethic saw John through an illustrious 23-year career with the Tasmanian Farmers and Graziers Association (TFGA), the organisation he credits with giving him some of his most significant achievements and memories.

Among other things his work there involved researching, analysing and developing policy options and action plans, consulting with industry leaders and government and not least, advocacy for the many farmers represented by the Association.

Certainly, his attention to minutiae underpinned much of the lobbying he also went on to do on behalf of farmers.

"My most important focus would have been the work I did with potato growers in terms of contract prices with processors during my involvement with the TFGA. I had to do a great deal of research and take on board all the different perspectives involved in the very act of advocacy.

"Certainly from the farmer's perspective this is absolutely essential. I had to consider costs; why prices increase; why farmers weren't getting what they should have been getting; and how to keep communication lines about those issues flowing respectfully between the different parties," he says.

Recalling in particular his involvement with the standoffs between growers and processors McCain and Simplot in price negotiations, John says: "I have a strong affinity with dairy and vegetable growers and the great many issues that impact on them. I especially relate to being able to find things of benefit to them especially when they are doing it hard," he says.

"Although we made some inroads, the growers still aren't getting what they should for the trouble to which they go to produce the food."

When John's activities broadened to a national focus, he became involved with groups including the Potato Growers of Australia and the Australian Dairy Farmers Federation, and the Horticulture Australia Limited Industry Management Committee. In the early 1980's he was a member of the National Potato Panel, an advisory group to the Federal Minister for Primary Industry. Unsurprisingly, his work and industry involvement attracted international attention.

In 2000, John became a member of the World Potato Congress Advisory Committee and was asked to take on a project that aimed to bring people together and enable knowledge sharing across the global potato industry.

"I helped to develop a system of communication for processed potato growers around the world, and worked on that for a number of years."

"As a result of that, I became involved with the North American Potato Marketing Association establishing lines of communication.

"I was invited to be the guest of the US Potato Board and was flown to Tucson, Arizona, where I addressed the most influential people in US and Canadian potato industries about the importance of communication networks with grower organisations.

Naturally, John was disappointed that when he finished with TFGA the project was affected by a lack of parity and ongoing support for the communications proposal. Having been at the core of talks representing farmers to government and business groups for so long, John is passionate about the value of good communication. It, like technology, can affect change for the better. "Case in point," he says, "You only have to look at China."

"When I visited China years ago, I saw in many ways a very much subsistence income. There were some desperately poor farmers and I saw irrigation systems in one village which encapsulated a tin can on the end of a stick dripping water. Everything was very poor.

"After a more recent look at that country, I can say with confidence that their agricultural industry has in the last few years dramatically increased production and they are going to be even bigger than ever. They are getting technology and communications right and moving ahead with things.

"A Dutch company has sold US \$10 million of machinery and equipment to a seed producer in China, and the amount of seed that company will produce is mind boggling. A McDonalds and KFC opens every day in China. Their farming economy is changing as a result of smart use of communications and technology," he says.

"Still," John says, "although I was very disappointed that the international process potato communications project went under, it was certainly a fascinating experience. One of the things that I did find out in the course of this project was that

nowhere in the world are there growers who get what they should for their produce!"

As Chair of the WPC Awards Committee for the Congress held in Idaho in 2002, John also gained an insider's look at what constitutes excellence at the international level.

"We looked at the profile of person within the industry, and particularly what they might have done which was of benefit to their sector and the wider potato community.

"These prestigious Awards recognise outstanding personal contribution and leadership in respect to the development and progress of the global potato industry. Congresses have recognised representatives from Canada, USA, Netherlands, Germany, United Kingdom, Cyprus, Peru, Belgium, Spain, Australia and China," he says.

"The committee recognised the success of JR Simplot and what he'd done. Harrison McCain also received an award, so it was tremendous to be a part of something that recognises all of those people who'd done so much for the industry."

But the crowning glory for John was the nomination of the boy from Down Under. "I couldn't vote on this one because he was Australian, but I was particularly proud when they awarded David Montgomery from Crookwell

and to have him recognised along with the other highest achievers in the world's potato industry," he says.

John's accrual of insight and expertise has placed him in the position of being able to voice with confidence just about anything concerning the world of growing, and he does so regularly in his column in the Tasmanian Country newspaper.

However, John remains solutions-driven and there are some issues with which he has dealt that he says he would like to tackle differently, if given a shot at doing some of them again

"I would be more vigorous in trying to find a way to overcome the threat imposed by the flood of imports. That is one of the harder and more complex issues that I have had to deal with and one in which there would be great value in finding better settlement," he says.

For now, his vision for the Australian potato industry remains focussed on a number of key items: "I'd like to see communication channels advancing and I have a strong belief in research and development. We have to continually work to make improvements for the industry," he says.

"I also strongly believe in extension. The very nature of the farming industry calls for collaboration, and extension activities go a long way towards that."

So retirement is a long way off?

John laughs. "As long as I'm physically and mentally fit, I'd like to continue being actively involved in the farming industry. There's a lot of ground to be covered yet **pa**"

"The growers still aren't getting what they should for the trouble to which they go to produce the food"



AUSVEG advances Australia's potato and vegetable industries

Words & Photos | Erin Lyall

Improved, united and strengthened. Those were the common themes of the AUSVEG Annual General Meeting (AGM) held on Monday the 30th of November in Sydney.

Elections were held on the day of the AGM, with Mr John Brent being re-elected without opposition to the position of Chairman. Also re-elected was Mr Geoff Moar to his position of Director representing New South Wales, and Dr Elizabeth Duncan was re-elected unanimously as Deputy Chair.

All States, including Tasmania, participated in the AGM and AUSVEG Board Meeting, along with other Board Directors, State Executive Officers, AUSVEG CEO, Richard Mulcahy, and two members of AUSVEG staff.

Comments on AUSVEG “having lifted its game” and “moving forward” were frequently heard from many of the vegetable and potato industries’ leaders over the short time the group spent together.

A Board meeting was held prior to the AGM, as well as a State Executive Officer meeting to discuss harmonisation of minor use programs.

AUSVEG Chairman, John Brent, began the meeting by thanking the Board Directors and noting AUSVEG’s hard efforts over the course of the year to work through past issues, unite and move ahead in what has proven to be a positive and determined manner.

Financial matters were discussed, and Board Director, Dr Elizabeth Duncan thanked, for her time spent assisting the new CEO in ensuring AUSVEG’s finances are in order.



AUSVEG CEO presents to Board directors and State Executive Officers at the AGM

AUSVEG CEO, Richard Mulcahy updated those in attendance on AUSVEG's development over the past 12 months, speaking in particular of the progress the company has made since he joined as CEO in April 2009.

He noted that communications, including the strengthening of AUSVEG's public profile, and increased information flow to all stakeholders has been a major focus.

AUSVEG's position as an industry leader has improved significantly in recent months, with financial improvements and extended communication efforts helping achieve this.

Partnerships and grower issues

The acquirement of several strategic partnerships between AUSVEG and companies such as Elders Limited, Syngenta, DuPont, Bayer Crop Science and Terranova Seeds has also served to bring independence to the company and allowed AUSVEG to do more for growers alongside the usual Research and Development (R&D) work, including policy submissions to Government on behalf of Australian growers.

Several representatives from these strategic partners spoke at a lunch following the AGM, speaking of their wish to connect with their customers and engage with growers.

It was noted that this public affairs and advocacy work is set to continue and gain force into 2010 and beyond. Mike Redmond, CEO of the Virginia Horticulture Centre in South Australia, stated



Richard Mulcahy & John Brent

he and other State Executive Officers would be keen to be involved and allowed input, as it is in the industry's interest to hold an official and united position on policy matters.

Further positive outcomes of the strategic partnerships include next year's AUSVEG National Convention, Trade Show, and Awards for Excellence, set to be held at Conrad Jupiters on the Gold Coast in May 2010. The Convention will be an unprecedented event for the vegetable and potato industries and wouldn't be possible without the generous support of AUSVEG's new industry partners.

State Executive Officer and EO of the Potato Growers Association of WA, Mr Jim Turley, requested a formal acknowledgement in the minutes regarding the amount of work the CEO and AUSVEG staff have put in to improve the company's position and move forward for the good of the industry.

Industry issues such as a potential grower registration program to improve biosecurity standards as well as the need to encourage healthy eating and increased vegetable and potato consumption amongst new generations were also discussed, led by VGA President, Luis Gazzola.

Those in attendance at the meeting were impressed and pleased with AUSVEG's outcomes over the last 12 months with Chairman Mr John Brent closing the meeting by declaring, "I'm pretty proud of the progress that's been made." ^{pa}



Dr Elizabeth Duncan, John Brent & Richard Mulcahy



Celebrating David Montgomery

When the Crookwell Potato Association (CPA) held a dinner to celebrate its 25th anniversary, various members, representatives from the wider Australian potato industry, family and friends also gathered to farewell retiring Executive Director, David Montgomery and pay tribute to the grower who became Australia's World Potato Congress Award winner.

Words | **Jenan Taylor**

Photos | **Jon Poyner**

“This is the only way we can thank you for the legacy you’ve left us, your dedication and your contribution to Crookwell. David, you humble us by your relentless pursuit to build a better community, from motivational speeches through to good old fashioned hard work in the spud paddock,” so ended the speech of CPA Vice President Garry Kadwell on behalf of his colleagues to their long time friend and associate, David Montgomery. Although the tribute took the grower and life-long risk-taker by surprise, it provided insight into the life of a high achiever—as well as the state-of-the-art potato industry he helped to establish in Crookwell.

Making waves

According to his brother, Reg, one of the first clues that David Montgomery born 21 November 1936, was a man to shake things up, was when as a boy David placed a small bomb underneath a tram carriage (literally) to enliven his laborious daily journey.

Later, that same adventurous spirit took David from Hawkesbury Agricultural College, a place that shaped his ambitions, to PNG where his training ground for success in agriculture was among the crops of coffee, cocoa, rubber and other tropical produce.

It was no accident that David eventually decided to lay down his hat and get involved in potato farming in Crookwell, NSW, a place with a proud history of over 150 years of potato production. “I had to go into growing spuds because my father-in-law was so successful at breeding sheep and cattle,” he was known to joke upon occasion.

Keen to explore further, David became the Managing Director of a farm produce marketing group called Southern Tablelands

Potatoes in 1969 and for the next decade threw himself into the business with gusto.

He became directly involved with all facets of operations including growing seed and ware potatoes, contracting, harvesting, grading, processing, transporting and packing. Potatoes were supplied to the domestic and export markets, and the company also produced a range of other fresh vegetables.

“Southern Tablelands bore all the hallmarks of David’s future successes,” says Garry Kadwell. “It was innovative because it supplied fresh cut chips, carrots and broccoli, something that was quite unique back then.”

David’s wife Gillian remembers that this work also brought him alongside Phil Gillespie and Ian Hart, two Sydney merchants whom David considers to be his mentors, and who assisted him in the many facets of marketing his produce.

As well as his foresight and willingness to learn new things, David’s management style was well-regarded.

Decades after working for him, memories of David and the Southern Tablelands Potatoes remain unclouded for Betty Griffiths. “I was there for years, and I can honestly say it was the best time of my entire working life,” she says.

However, having proved his farming and business sensibilities, David had an eye on an even bigger picture, and he decided to put his skills and vision to use in promoting and advancing the local and national potato industries.

The CPA

Amid some particularly hard times for the Australian potato industry, a group of growers and other industry representatives in Crookwell got together in 1984 to form the Crookwell Potato Association. David was one of those responsible for helping the CPA get off the ground, but for a while it looked as if even he had bitten off more than he could chew.

“In order to help revive the local industry, David thought it best to create a level playing field. This meant pulling together some people with some fairly diverse opinions. They were idealistic, individualistic, some from a co-operative, others not, certified and uncertified seed growers—a real melting pot. Despite all those differences David jumped at the chance to help do this,” says Garry.

“One of the first steps he took was to encourage the involvement of young growers and lead and mentor them to take the industry forward.

“He mentored a refugee, Mr. Hung, who lived in town and travelled to the farm every day, and also assisted agricultural students from Sydney University while they completed their four to six-week work placement requirements.”

In 1988 David became a foundation director of the Horticultural Research and Development Corporation and held that position for the next six years. His involvement included liaising with all sectors of horticulture in Australia and making a contribution to the development of the National Seed Potato Standards Programme.

Continued over page ►

From page 13 ►

He also became Executive Director of the CPA in the late 1980s and his influence helped to launch several high quality research and development projects, including a strategic plan for a working model farm called the Australian Agricultural Centre (AAC).

“David’s concept for the Centre was to deepen the national understanding about Australia’s rural and agricultural heritage and establish—in David and visionary partner Christiaan Durrant’s words—a “reconnection with the land”.

“Their aims for the AAC also included offering informal and formal rural education, agri-tourism, and extension services,” says Garry.

Beyond borders

In 1994, David also became a founding director of Technico, the company that developed TECHNITUBER® seed technology which enables the production of early generation seed.

Technico and its technology are now internationally recognised and operating in many countries worldwide including China and India.

With the company’s successful sales of the technology to overseas investors, it seemed that the organisation had sold out local knowledge to foreign investors, but the local growers soon saw and benefited from the wider dimensions of the international connections.

Other more recent projects that David helped to drive for Crookwell included the implementation of precision agriculture tools and techniques including soil moisture monitoring practices,” says Garry. “We have also created a proposed Quality Assurance scheme which is currently being reviewed and hopefully will contribute to the further advancement of the local industry.”

At the helm of the CPA for 21 years, David also helped instigate the Australian Potato Network, the export arm of the Crookwell Potato Association.

“The formation of the Australian Potato Network gave many growers the chance to undertake travel overseas and interstate, experience grower study tours, World Potato conferences, host state field days, and meet up with others from the national and international industries,” says Garry.

Many in Crookwell and beyond were not surprised then when David’s leadership and full commitment to the potato industry, at local, national and global levels, was formally recognised. He became the first Australian to receive a renowned World Potato Congress award in 2006 in Boise, USA.

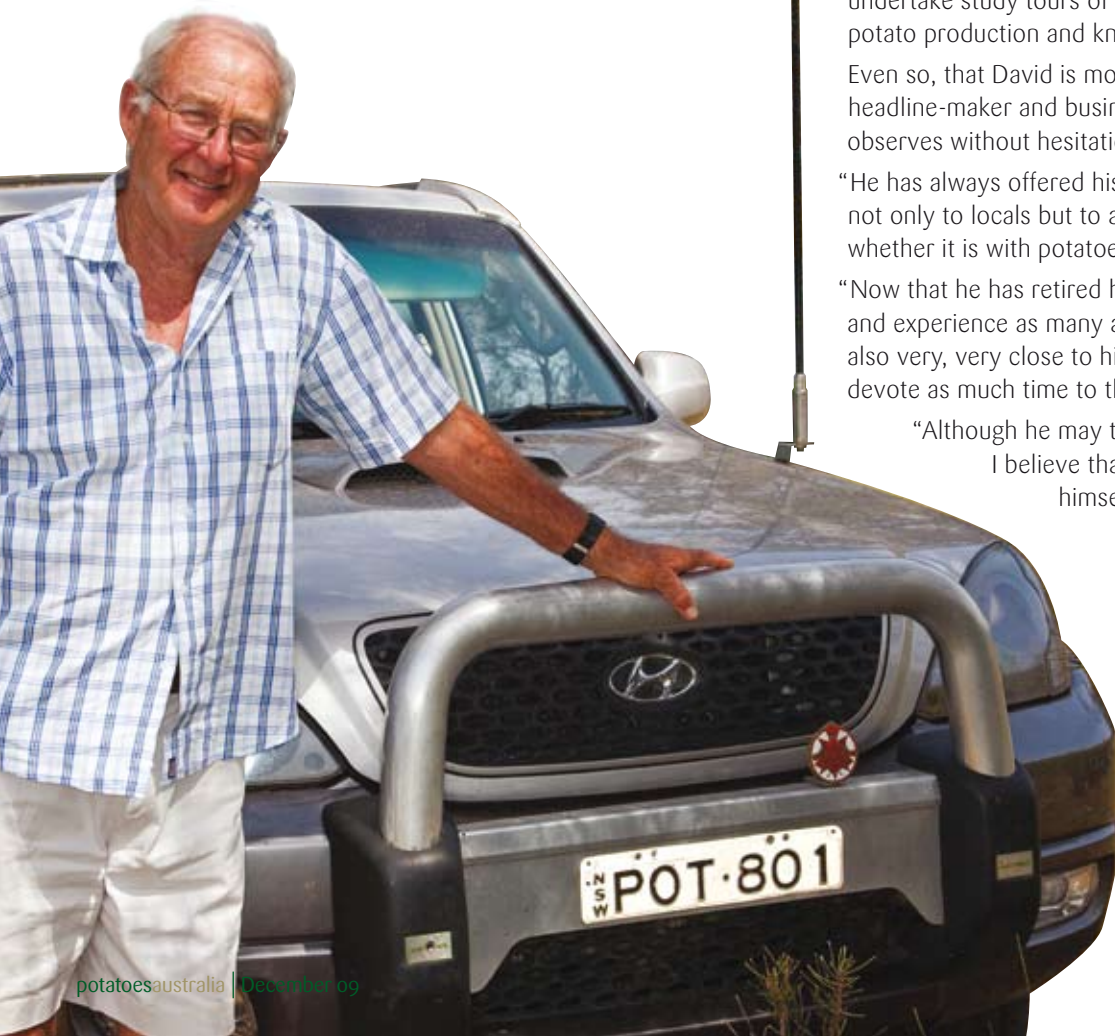
According to CPA Office Manager, Kerry Smith, David’s energy and enthusiasm has continued to pay off for the industry. Various international visitors have descended on the Crookwell region in recent years, with the World Potato Congress committee arranging during the International Year of the Potato for global industry leaders and producers to undertake study tours of Crookwell’s cutting edge approach potato production and knowledge.

Even so, that David is more than just an international headline-maker and business leader is clear. Kerry Smith observes without hesitation:

“He has always offered his expertise, knowledge and wisdom not only to locals but to anyone who needs assistance whether it is with potatoes, farming in general or everyday life.

“Now that he has retired he plans to travel with his wife Gillian, and experience as many aspects of Australia as he can. He is also very, very close to his extended family and will no doubt devote as much time to them as possible,” she says.

“Although he may tinker at his south coast property, I believe that David still intends to challenge himself. He still holds the dream of having the AAC get off the ground, and it will, subject to funding, and he has another ambition—to one day become a better fisherman.” **pa**



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Informing and connecting Australia's Potato Industry



The year in review

Words | **Ian James**

The economy in 2009 proved as traumatic as initially forecast. As the year opened, concerns for the health of the world and Australian economies were paramount in people's minds.

The global financial crisis that emerged in 2008 blew out to become an economic recession in most of the developed world. Unprecedented action by governments in the form of huge expenditure outlays was taken worldwide to prevent the recession developing into a 1930's Great Depression. Action was also undertaken to shore up the financial sector as credit creation had frozen over due to concerns for the health and security of many businesses. At best these measures shored up the world economy but were unable to prevent a severe economic downturn. Unemployment rocketed as debt laden companies folded.

In Australia, the Reserve Bank of Australia which had acted aggressively in cutting interest rates in the last quarter of 2008 undertook further cuts in the early months of 2009. Official interest rates hit an historic low of three per cent in April.

Jumpstarting economic performance

At the same time, the Australian Government waded into the economy and implemented further stimulus packages to boost the economy. The psychological impact of these measures on consumer behaviour was as important, if not more so, than the actual dollars handed out. Consumer expenditure held up. The government also stood behind the banking system providing guarantees to ensure the security of the system. This enabled the major banks to secure funds in a world where credit was at best difficult to obtain or at worse not available.

These measures were successful in helping the Australian economy avoid the recession that engulfed most other nations. Australia stood out like a beacon in a gloomy world outlook with positive economic growth in the March quarter which was repeated in the June quarter.

As the year progressed confidence built. Both consumer and business surveys continued to show extraordinary confidence in the economy. The publicity accompanying Australia's avoidance of recession no doubt helped.

Employment

While unemployment rose it barely registered on the radar compared to the impact of past economic downturns. Reforms to the labour market no doubt helped. Adaptive work practices allowed companies to pare back employment hours rather than sack workers who only twelve months earlier had been in short supply.

The Australian dollar will remain the big headache for growers producing for the processing sector

The aggressive expenditure action taken by foreign governments, particularly the Chinese also helped. Demand for Australia's resources held up better than expected and there was renewed confidence in the Asian growth story. By November the economic story had been rewritten.

Forecasts for economic growth were boosted and for unemployment were pared back. The government's budgetary position was looking far healthier as the expected expenditure increases accompanying the previous forecasts for unemployment and the lost tax revenue were positively revised. The economic debate shifted from one of what the government should do to whether they should do less. On the interest rate front the Reserve Bank felt confident enough about the health of the economy to begin withdrawing the 'emergency' interest rate cuts it had implemented

Given the economic situation confronting the country, the Australian economy put in a remarkable performance in 2009. But on the ground things were hardly a bed of roses for most Australian businesses.

Economic growth slumped dramatically and there were huge issues with managing credit, capital and employment. Access to credit which had been so easy in previous years tightened dramatically. Despite the cut in official interest rates there was little relief for business in the form of lower rates. The banks "re-rated for risk." Simply put, the banks shored up their own position by increasing their margins on business credit rather than pass on the fall in official rates.

Capital management was extremely difficult for small business. The large corporates sought to improve their capital position by going back to shareholders and superannuation funds to raise capital. These were successful and some investors are sitting on huge capital gains in the light of these raisings. Employment was all about preventing the loss of skilled labour while balancing the books. Businesses were reluctant to sack workers and if possible avoided that scenario by reducing working hours.

Potatoes and the climbing dollar

Potato growers were impacted by these economic events. While there is an element of discretionary expenditure associated with the demand for potatoes, the industry has the advantage compared to other goods and services of providing a staple product. Nonetheless there was a sting in the tail for the potato industry from the outperformance of the Australia economy.

The Australian dollar appreciated against a range of currencies. Apart from the stronger economic performance in Australia, the dollar's appreciation was assisted by the fact that although interest rates were low in Australia they were high relative to other developed countries. This resulted in what is called 'the carry trade' where investors borrow in countries with low interest rates and invest in countries with higher interest rates. The dollar's value was also enhanced by a firm demand for Australian resources and the

Australian dollar appreciation



potential for Australia to increase interest rates much earlier than other countries.

An appreciating Australian dollar makes it more attractive to import and places pressure on domestic producers. For potato growers producing for the processing side of the industry an appreciating dollar only compounded the problem of recent years where contracts have been lost to imports.

In summary, the economy performed as predicted in this magazine at the beginning of the year. To quote: 'While the economy will be weak and the economic news bad, especially in the first half of the year, at the end of 2009 we may be surprised at how well the economy has held up in extremely difficult economic times'.

2010 gazing

Looking forward to 2010 economic conditions are expected to be better than 2009. But the heady days of the boom have past. Credit criteria will remain tight. Economists are universal in forecasting further interest rate increases although these are likely to be more gradual than forecasts of a rapid move upwards of one and a half per cent.

The Australian dollar will remain the big headache for growers producing for the processing sector. The median forecast amongst economists is for the \$A/\$US to continue to rise with some suggesting that the Australian dollar will reach parity with the US dollar. If the currency holds at the levels of recent months then the attractiveness of import sourcing of prepared potatoes by both processors and retailers will be enhanced. The deluge of imports which was highlighted in the last edition of *Potatoes Australia* is likely to compound. Batten down for a stormy 2010. **pa**

The Bottom Line

- The RBA cut official interest rates to an historical low in April.
- The Australian Government's stimulus package helped the economy avoid recession.
- Potato has the advantage of being a staple product.



Smart snooping

Words | **Frank Smith**

What does the housewife, or increasingly the househusband, look for when buying potatoes? More particularly why would they serve potatoes in preference to rice or pasta?

Potatoes are a fresh product so it is not as easy to ensure consistency and visual appeal as it is with dry foods.

Being fresh is a bonus in the marketing stakes, but variable appearance and quality is not.

So Western Potatoes has set about a proactive program to improve quality. Executive officer, Georgia Thomas, says consumer preference studies show consumers are mainly concerned with cosmetic issues such as lenticels, bruises, cuts and discolouration.

The potato market is still regulated in WA, unlike other states, so it is relatively easy to intervene in the supply chain process.

A program jointly run by Western Potatoes Pty Ltd and the Department of Agriculture and Food WA (DAFWA) aims to improve potato handling and storage from paddock to the retailer.

Damage detection

Physical damage can occur during harvest, in the bin, during transport and cold storage, at the wash-packing plant, on the way to the retailer and during storage on retail premises or movement to the display cabinet.

The key to identifying damage to potatoes is the Smartspud, a

The Smartspud has identified the drop from the harvester into the bin as the major source of on-farm damage.

plastic potato manufactured by Sensor Wireless Inc and containing an accelerometer that measures and records the forces applied in three dimensions.

The Smartspud is added to potatoes in the production process and records the time and severity of every impact. Unfortunately it does not record cuts.

DAFWA Potato Quality Project manager, Peter Dawson says his team are focussing on mechanical and physical damage due to harvest and post harvest handling on tuber quality.

It is important to define quality. We spent a lot of time calibrating the Smartspud with different varieties of potato. It measures impact in terms of

G force. We need to know what G force means to a potato.

There are two types of damage: shadow, which is really a crack and blackspot where cells are crushed but you can't see anything from the outside.

An initial finding is that more damage occurs at higher temperatures.

In trials the harvester to bin drop produced more impacts, more often, than the harvester runs where potatoes are cushioned by soil.

The Smartspud has identified the drop from the harvester into the bin as the major source of on-farm damage. It is interesting data and it makes us growers take care, said Potato Growers Association President, Daryl Smith.

Retailers are concerned with selling potatoes while consumers are more interested in eating quality.

The Smartspud has also found differences between the 12 potatoes varieties grown in WA. Nadine starts to show blackspot bruises after a 40cm drop, compared to Ruby Lou, which only starts to show damage after 60cm.

Calibration of the Smartspud with WA varieties showed that Nadine tubers start to show bruise damage from 160G and Ruby Lou from 200G.

Best practice

DAFWA is surveying growers and processors to compare practices and hopefully identify those that lead to improved quality.

Eventually the take home message might be that farmers and processors can compare their handling with their peers and identify areas critical to improving quality, said Mr Dawson.

DAFWA agronomist Ian McPharlin is conducting irrigation management trials on several sites across the potato growing areas of WA.

We are into our second summer growing season but we are still trying to get a handle on field capacity and wilting point. We haven't got a correlation between quality and soil conditions yet but we think farmers could manage soil temperatures by manipulating their irrigation schedule, he said.

An increase in environmental temperature on farm may lead to starch breakdown, while recent harsh winter weather decreased the amount of foliage and consequently photosynthesis, leading to a larger proportion of chats.

Farmers may need to keep soil temperature down by wetting the soil during hot spells. And they could consider night harvesting to lessen the impact of hot weather, or just try to get potatoes to the cool storage sooner, said Ms Thomas.

Skin thickness can be a problem if potatoes are harvested too early or too late.

Sampling

Skin thickness may not be the whole story. In order to collect base data on potato quality at the supermarket, Western Potato staff collected 10kg samples at random at ten Coles, IGA and Woolworth supermarkets.

They then compared individual potatoes in each sample to a standard chart showing faults, including greening, cuts, bruises, skirting and staining.

Problems can then be traced back to storage, processor or grower, said Ms Thomas.

The sampling and trace back program is only halfway through its six months planned period of operation.

All the Supermarkets concerned were aware of the program and give it their support, said Ms Thomas.

Not too much greening has been found as they are often graded out at the wash-packer.

Potato Marketing Board inspectors visit packers regularly to ensure a high standard to potato handling is maintained.

Potatoes can be mishandled during transport or in store after processing and visual inspection. Some faults are obvious but others take time to show, said Ms Thomas.

Questioning consumers

Western Potatoes also commissioned Curtin University to survey 800 shops. Students interrupted shoppers in store and asked a series of questions relating to potato purchasing habits. The survey was carried out at different times to get a broad demographic range of respondents.

The result of the consumer survey will provide feedback to growers, processor and retailers.

We want to understand our market and look beyond the skin. Preliminary results are that most consumers prefer washed potatoes. They prefer to buy potatoes loose rather than prepacked, said Ms Thomas.

Darryl Smith said the results of the consumer research program were very interesting to growers.


We are finding out what the consumer actually wants, rather than what the retailers or wash packers think they want. And there are differences. Retailers are concerned with selling potatoes while consumers are more interested in eating quality. It has been a great help to growers.

Nobody sets out to grow poor quality potatoes. But we haven't previously had feedback as to how to lift our game.

There is also preliminary agronomic information coming in so we don't stuff up the quality of our product.

Temperature is critical to successful potato storage and a follow up to the Smartspud is temperature monitoring in soil, storage and in transit.

Results are still coming in, but the comprehensive data will provide material for Farmnotes and demonstrations for growers, wash packers and retailers information that will help the industry take quality control to the next level.

Our aim is to produce a manual setting out best practices to drive continuous improvement, said Ms Thomas 

The Bottom Line



- Consumers were concerned with visual appearance and eating quality.
- High temperatures and the drop from harvester into bin cause the most damage in potatoes.
- Participating Coles, Woolworths and IGA supermarkets supported the study

Quest for



survival

Farmers already have a great deal to contend with every day, but what happens when catastrophe hits? The Extons of Kinglake found themselves in the very middle of the Black Saturday fires. They tell how their practices may have saved lives, and what every farmer must heed in the struggle to get back on track.

Words | **Jenan Taylor**
Photos | **Dave Nichols**

At first glance it looks as if the firestorm missed Geoff Exton's property. It's nine months after Black Saturday and the potato paddocks are a rich red-brown surrounded by trees with baby-fresh leaves, blue berry bushes laze beside a perimeter fence, a small dam mirrors the serenity, and there is none of the insistent hammering and chain-sawing that seems to move the air in the town of Kinglake itself. "This part of the property looks like that because of the potatoes," Geoff Exton says. "They were green and the paddock just ploughed."

On the morning of Saturday 7 February, he decided to water in his just-ploughed, green potatoes and later, when the fire descended, devouring anything it could fuel itself with, it seemed unable to cross that patch of earth and get to where Geoff and his family huddled inside a nearby fire shed. "It seemed to last forever, but was only a couple of hours," Geoff says, "And then we noticed that it hadn't gone near mum's house, which is surrounded by potato paddocks."

Indeed, you have to scrutinise very closely the few bushes that have sprung up along the perimeters of the property to notice where the flames did blacken the earth. Down beside a creek bed boundary, the charred tree trunks aren't immediately visible because of the scores of new fronds circling them. And then you see beside a section of new fencing the remains of a massive shed, its buckled steel ribs caramelised in a pose that has left it looking as if it had tried to outrun the inferno.

"I lost mostly fences and tonnage," says Geoff quietly, "but there

are others who lost a great deal more. You ought to see my cousin, Charles."

On the other side of Kinglake is the property and what remains of the farming enterprise of Charles Exton, who like Geoff is a fourth generation potato grower descended from the Exton responsible for suggesting Toolangi as the place for as a research facility for certified seed potatoes.

On Black Saturday, Charles sustained around \$2 million worth of losses to his farm operations. He also lost the house in which he lived in the town of Kinglake, and for days afterwards, possessed only the clothes he'd worn as he battled to save what he could.

On that afternoon, after listening to initial radio reports, intuition led Charles to fill up all his water tanks from the reserves he had for his spring water company. Together with two of his drivers, Charles proceeded to transport water to the fire brigade in the township. They then rounded up family members and friends and herded them as close to the water tanks as they could get them.

"I had 400,000 litres of water near my property site office and we managed to get 26 people to shelter there," Charles says.

As the air began to darken with smoke and dust, they noticed panic begin to ensue as the roads in and out of town became blocked. The three men tried to pacify people and warn them against using routes that they knew were already choked. They also continued to try to get as much water as possible to the fire brigade.

They headed back to Charles' property in time to witness the full scale of the danger descend on a line of Cypress trees bordering his land, which he says, was serendipitously planted by his father in the 1950s.

"This 14 metre-high wall of fire climbed those Cypress trees then arced through the tops jumping from branch to branch. It was as if they formed a guard against the flames, and because the fire couldn't find any fuel beyond the tree line, it just skirted that side of the property which I had cleared of hay and debris in the preceding weeks. The open space was clearly the place to be.

"But then the whole wall just turned and headed straight toward the town," Charles says, "and all I could

think was "Kinglake is gone. Everyone I know in Kinglake is gone."

Once the main front had passed them, Charles and his drivers continued to deliver water to fire fighters for another week. The three men worked in 24-hour shifts, only stopping to have their first proper rest the Tuesday after Black Saturday. The atmosphere of those days will remain with them forever.

"Eventually people started to creep out from where they'd sheltered, and everywhere everyone just threw their arms about each other. You were never so happy to see your neighbour," Charles says.

"People realised that one of the safest places had been the potato properties and they were saying to me "Charles, they should give you a million dollars because your land was the safest place in Kinglake."

Everything related to my branch of the four generations of potato growing was gone, every piece of equipment

Continued over page ►

From page 21 ►

Ironically, it looked as if his potato-growing days were over when Charles found that the fire had managed to get to his farm shed and packing sheds. “Everything related to my branch of the four generations of potato growing was gone, every piece of equipment. That included the harvester, planter, and grader.

“Fortunately I had 600 head of sheep which I had moved up close to the water tanks the day before. I also had 300 acres of perfectly useable land, but if I hadn’t cut and removed the hay on the property, I would have lost absolutely everything,” he says.

By virtue of his chosen field, Charles says that he has often had to rethink and reassess his potato operations, particularly in recent times. “There are just so many challenges with a lack of demand and prices diving even more. I have been forced to go in four years from 50 to 20 to 10 to just seven acres of potatoes. Even though potato growing was always my main focus and family tradition, I had begun looking at diversifying into sheep and then six years ago started High Mountain Spring Water to vary my business mix.”

During the three-week lock down of Kinglake and surrounds imposed by authorities after Black Saturday Charles found himself at an entirely new fork in the road.

“This took a lot of thinking. The thing is that potato growing is in my family, in my blood, and my children do want that heritage,” he says. “I can’t just give it away and I can’t sit down and do nothing.

“Also, I had business relationships that went back for more than 40 years. I couldn’t let those people down. So, I was going to keep going for as long as I could.”

But then seemed as if the headache had only just begun.

“Everyday seemed to start and stop with chaos,” Charles says. “As a result of a marriage break-up, I had stored some other items in my sheds, so there were quite a few personal things gone as well,” he says.

“There were 26 government grants around afterwards, and I was only eligible for \$25,000. That was an R&D grant which only allowed recipients to clean up debris and do fencing, but it was not to be used for reconstruction. It was audited strictly so recipients had to prove that they spent money on cleaning up, or the money had to be returned.

“Then, it turned out that even though I was insured, I wasn’t insured for enough. I sought the relief money but could only access \$5,000, because as a farmer with a company name, I was considered ineligible to get more.

“Part of the hold up for everyone was being able to prove eligibility, which is harder than you could imagine,” he says. “You had to be able to prove how much of your property was affected, and to do that you needed titles, plans and other records, which many people had of course lost in the firestorm. There were cases in which you had to be able to show clear boundaries, and to show boundaries in many cases you had to have the

**You’ve got to have money to grow, or
the costs will be that much greater**



courtesy: Sara Exton

fences most of which had been destroyed in the blaze. So you need funds to try and get kilometres and kilometres of fences resurrected.

“In total I received \$30,000, which didn’t stretch far. For example, the 13 Cypress trees that had formed a guard against the fires were all hazards that needed to be removed. But before that could happen, I had to get an arborist’s report for \$300 then be prepared to pay \$800 a tree for removal. There was no power so I covered the cost of getting power to my property from my own pocket in order to get the clean-up underway,” he says.

On the north east side of Kinglake, Geoff Exton was encountering other difficulties. “Because there was no water and power, a good many things were put on hold, so some things had to just wait. Most people were just too tied up, obviously seeing to their own needs. I had a full time worker but he lost nearly everything he had, so I didn’t see him for maybe seven

weeks afterwards,” Geoff says.

Nine months later, it seems the labour is still hard to recoup with a great many people leaving the area never to return. For those who have elected to remain, there is an unspoken understanding.

“Since this has happened, it’s not uncommon to come across someone you didn’t know before the fires but may have seen around town occasionally, and just throw your arms around them. People here don’t take each other for granted anymore. So there is a loss of labour across the board here, and even though that is hard, I don’t begrudge that,” Geoff says. “Those who didn’t go through the fires may not be able to grasp that.”

However, Geoff can’t praise enough the support he and others

According to Charles, one of the real heroes in the Black Saturday disaster was his driver Wayne Duhig, who tirelessly helped him get water to fire fighters. On that night, Wayne came upon a shack inside which 71 people were trapped as it was being consumed by fire.

"They were literally saying their good byes to each other, but Wayne turned the hose on at full strength and soaked that place down, causing the temperature inside to drop 30 degrees within minutes," says Charles.

"A bikie who was among the trapped that day wouldn't leave until he'd found out the name of the person who had saved them, and when he did find him, he promised Wayne safe passage from any kind of violence, wherever he went for the rest of his life. Wayne afterwards continued to work for another 12 hours helping to put out spots wherever he could. He evaded the main stream media who tried to find out about him after the fire and went off to Hoppers Crossing instead.

"If there's anyone who deserves a medal, it's Wayne."

in the community have received from outside, that is helping to rebuild the devastated area.

Charles also adds "The services provided in the immediate aftermath were excellent. The Department of Human Services, the Red Cross, the Church groups—they were all amazing. And Coca Cola were outstanding, especially with the help they extended to everyone during the lockdown.

Charles is particularly grateful to a number of people in the potato-growing community for helping him. "At the moment I have to operate from a torque liner as I haven't had the chance to rebuild the shed just yet, but I have had a great deal of help from my neighbour, Owen Bayliss, from whom I have been able to borrow a harvester. It can be difficult, especially when it is being used by someone else, but we've been very fortunate to be able to have it. As a result, we were able to get about 80 to 100 tons of potatoes harvested and ready and only had to lose 22 tons of seed because they turned out too small.

"Ballarat-based grower Peter Britt has also been particularly terrific. He managed to help me out with the washing and grading of the potatoes, while Chep helped me get disinfected bins for transport. and a washing and grading company from South Australia were very, very good to me helping me out on that side."

Physically and emotionally exhausted, Charles says without that support, he would never have made it through the first harvest of the season.

"What I'd really like growers to know is just how important it is to have absolutely everything in order as far as insurance goes. Adequate insurance is vital. Growers can't afford to dither over that. You've got to have money to grow, or the costs will be that much greater.

"You've got to make sure you've got your property titles, proof of identification, wills, all the paperwork, and keep your family issues in order, because it's amazing what catastrophes and disasters can bring out in families and others. You'll certainly find the good and the bad in people," he says.

The losses seem to have been accounted for, the media stories flow and ebb depending on what goes on with the Victorian Bushfires Royal Commission, and the physical scars appear to be fading and blending smoothly into the regenerating landscape. But there are unseen casualties for many survivors like Charles and Geoff Exton.

Despite having delivered more than 1.6 million litres of water over six days following Black Saturday to help the fire fighting efforts, Charles duels with a demon called guilt on a daily basis. "I am convinced there was more I could have done. I know it was impossible to be everywhere at once, but still."

The stress he is under he says is alleviated immensely by the relationships he has kept up. "I can't emphasise enough to growers how valuable it is to have good relationships with neighbours, your immediate community and the broader grower community. You've got to have the support of your neighbours and you've got to be there for them, too. I have no idea what I would have done without them."

On his side of Kinglake, Geoff Exton admits belatedly, "It's the mental reckoning that's the hardest; it doesn't go away. It's the reason things are slow to move here.

"The major task that I've had to deal with was re-fencing, and after nearly nine months, I've only completed about three to four kilometres of it. I'll be in the middle of getting on with the job and then I'll just stop. There are just so many things to do and sometimes you just don't feel like doing it," he says. "And then I just take a step sideways and thank my lucky stars that our major losses were only fences and tonnage because of the lack of water.

"All this has to be viewed as just another setback in the usual run of setbacks that all farmers encounter at one time or another," he says. "The main thing is that I have my family. They are irreplaceable."

What are their action plans, if ever they were caught out by another fire?

Charles is adamant he would do what he did on Black Saturday. "I would stay on my cleared property out in the open space, close to the water tanks, and try not to panic."

Geoff pauses for a moment. A new fire season is already underway and the official advice about staying or going has altered considerably, but finally, he smiles. "Mum's place, seems a good bet. It's surrounded by potato paddocks, so who knows..?"

Bushfire information hotlines

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SA - 1300 362 361

NSW - 1800 679 737

WA - 1300 657 209

TAS - 1800 000 699

QLD- 1300 369 003

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It's a health

Words | **Gretel Sneath**

Farmers have “sunshine and fresh country air” according to their urban counterparts. But the grass on this side of the fence may not be all that green.

There is overwhelming evidence that the environments in which people live have a significant impact on achieving wellbeing. Logic would suggest that the further you are from city smog and fumes, the fitter you will be, yet according to rural health statistics, there is a grey cloud hanging over regional Australia.

Despite the fact that Australians have one of the world's highest life expectancy rates, the longevity is not shared equally across the entire population; people living in rural and remote areas live up to five years less than those in urban areas and experience higher levels of injury, illness and disease risk factors along with poorer treatment outcomes.

Earlier this year, Diabetes Australia Victoria warned that the farming sector is at risk of “a tsunami of diabetes” after a third of 1,791 farmers tested during a series of *Sustainable Farm Families* workshops showed elevated blood glucose. Somewhat alarmingly, the figure of 33 per cent indicated that the incidence of pre-diabetes in farmers is double that of the general population.

Other results from workshops revealed 73 per cent of men and 61 per cent of women were classified as overweight or obese, instantly putting them into a high-risk category for additional ailments like cardiovascular disease, cancer and osteoarthritis.

Suicide rates, particularly among men, are also significantly higher in rural areas than in the city, with drought conditions severely impacting on the mental health of farmers and their partners.

The National Centre for Farmer Health (NCFH) says the statistical

y question

anomalies can be attributed to a range of factors including poorer access to health services and higher levels of socio-economic disadvantage in rural areas. Less physical activity, late retirement, fears of stigma and a lack of anonymity could also be to blame, along with a general reluctance to consult health professionals and medical practitioners – sometimes it's easier to simply dismiss any symptoms as aches and pains, especially when there is crops to sow!

The NCFH was officially opened in July 2009 in Hamilton, Victoria, to help address and reduce such health inequalities. The Centre, which is a partnership between Western District Health Service and Deakin University, encompasses university research, service delivery and education that will provide national leadership designed to improve the health and well-being of farmers, farm workers and their families across Australia. It is funded through the Victorian Government's Future Farming Strategy and the Geoff and Helen Handbury Trust.

“We're focusing on strengthening the human and rural service workforce to address prevention and early identification of diseases associated with farming and their risk factors, and to develop timely, appropriate and effective interventions,” explains Director and Clinical Associate Professor Susan Brumby.

Potato growers in Gippsland and Clarks Hill have already benefitted from a Sustainable Farm Families program which is being administered by the NCFH. The program is held over a three-year period, and assists farming families to identify strategies to enhance individual, family health and relevant occupational health and safety practices for inclusion in farm management quality assurance processes and risk management.

“The research data and information collected is providing critical insight to the relationships between the farmer, their health, their

farm and farming sustainability along with health as a social issue in rural communities and farm productivity,” says Ms Brumby.

A group of Thorpdale and Trafalgar potato growers have recently ‘graduated’ from the program. Val Murphy, who is chair of the Thorpdale Potato Promotion Group, was one of approximately 30 participants who learnt about everything from blood sugar level testing to shopping for dietary needs. Each member of the group also received a one-on-one health session examining family medical history.

“I think the extra worry of the drought and the bushfires has demonstrated that you really need to look after number one, so the SFF program was extremely helpful,” she says. “The reality is that we need to stop thinking ‘she’ll be right mate, everything happens to the other guy’, as it’s not always the other guy.”

Community health nurse Alison Hescoock facilitated the project, and says some ‘Thorpy farmers’ clearly looked as though they had been dragged to the opening workshop by their wives, but left “singing to a different tune”.

“I often joke that farming men in particular don't present to health services unless they have two hernias and a broken leg, but I think we're gradually changing that, through these sorts of positive, interactive sessions,” she says. “Rural people can now get a pretty comprehensive picture of where they are at health-wise, and also how to avoid the risks.”

This fits well with the *Sustainable Farm Families* belief that the most important aspect of a healthy Australian farm is a healthy farm family 



- For further information about the National Farmer Health Centre and the Sustainable Farm Families programs available in your particular state, please visit www.sustainablefarmfamilies.org.au/the-programs or telephone **(03) 5551 8460**
- For further information about diabetes and related programs in your state please visit www.diabetesaustralia.com.au or telephone the information line **1300 13 65 88**
- For further information about depression, anxiety and other concerns relating to mental well-being, including treatment and support or referral to national support programs please visit www.beyondblue.org.au or telephone **1300 22 36 46**
- For a 24 hour crisis counselling and referral service, please call Lifeline on **13 11 14**

Next generation farm aid

Interview | Jenan Taylor

The Executive Director of the Syngenta Foundation Dr Marco Ferroni visited Australia last month to address private and public organisations about the imperative for bolstering world food security. According to Dr Ferroni, Australian farmers could help to raise productivity in 'lagging' nations by sharing knowledge as well as yields. He spoke to us about how this can benefit Australia and the developing world.

What are the most important agriculture synergies shared between developing nations and developed countries such as Australia?

There are several sources of synergies that come to mind:

- R&D in agriculture and the life sciences in developed countries, including Australia, is known to generate important spillovers (i.e. technology) benefiting agriculture in developing nations.
- International trade in agricultural and food commodities such as grains and high-value products like vegetables and fruit helps supply and stabilize markets for the benefit of producers and consumers in both developed and developing countries.
- Biodiversity is one of the most important global public goods that benefits all nations. All countries, whether developed or developing, should contribute to the conservation of biodiversity as a resource for agriculture everywhere.

With the global credit crunch and a raft of other financial pressures how can more investment in agricultural infrastructure in developing nations be encouraged from public and private sectors in Australia?

Stepping up investment in agriculture is clearly important in food-insecure economies where people's livelihoods depend on agriculture such as in Sub-Saharan Africa, for example. Investment in agriculture in developing countries is a task for the governments of those countries, the international donor community, of which Australia is a highly respected member, and the private sector. Australia has vast and unique knowledge and expertise in water management and drought infrastructure technology. Sharing and transferring this knowledge to drought prone areas in developing countries can be of great help. It is true that much of the world is currently experiencing financial pressures. But agriculture is a priority and I am encouraged by recent pronouncements by the leaders of the G8 countries to the effect that they want to take decisive action to help develop agriculture and improve food security in poor countries.

What types of checks are in place to avoid some of the potential problems that private research investment in the area of biotechnology in smallholder farms in the developing world might bring to those regions (e.g. corporate monopolisation of industries, newer forms of colonialism?)

Small farmers in developing countries are like farmers everywhere: they want technology, services and access to markets. Biotechnology is one of the arrows in the quiver of technologies. The research investment in biotechnology is dominated by the private sector – public sector R&D in agricultural technology is in decline. An important question is why this is so. But the really relevant question, it seems to me, is how are the gains from innovation in biotechnology distributed between the innovators, farmers and consumers. Agricultural economists have studied this for specific innovations over the years. What they found is that all constituents tend to benefit. One study calculated that 33% of the benefits from Bt cotton accrued to input suppliers during the 2002 crop year in India, whereas 67% accrued to farmers. Many of the adopting farmers, furthermore, were small farmers. I have seen repeatedly in developing countries that even very modest farmers will buy and adopt new seeds and other inputs if they think that this will help them raise their yields.

The Australian vegetable and potato sectors are being adversely impacted by the flood of cheaper imports from overseas - including from some developing nations - how can investment in R&D in industrialising nations advantage Australian growers who are already on the back foot because of this?

Agriculture is a business under constant pressure to innovate. Some industrializing countries are gaining ground in specific areas of production such as year-round vegetable growing in greenhouses, and hydroponics, leading to advantages in competitiveness and delivery to markets. The Australian growers, however, are known for their skill and dedication. Their ability to adjust to new competitive conditions is not in doubt.

Cite an example of how the vegetable sectors in developed nations have benefited from private and public collaborations of support of poorer nations?

I know that the World Vegetable Center in Taiwan (AVRDC) has a huge collection of germplasm for something like 300 different types of vegetables from over 100 countries. The Center actively exchanges genetic resources and expertise among national programs, regional organizations, and the private sector in many developing and developed countries.

Potato has been hailed an essential food by the FAO because of its potential to yield large amounts of nutritious food with comparatively little input - are there any private and public investment collaborations currently going on in the developing world?

There are indeed some notable private and public collaborations going on. One of my colleagues has just come back from Peru where, at the International Potato Center (CIP), she learned about a project called 'Papa Andina', which is funded by donors in alliance with local organizations, rural communities and the private sector. This project focuses on the development of the potato value chain, creating partnerships such as one with Frito Lay Snacks in Latin America to develop a new brand of potato chips from traditional varieties that will be sold in supermarkets in Peru and other countries.

What types of vegetable commodities R&D investment are being planned for the south Asian and sub-Saharan Africa regions?

Vegetable production in the countries of south and South-East Asia has significantly increased in quantity and quality over the last 20 years owing to research, genetic improvement and the wide-spread adoption of varieties developed by public entities as well as private companies based in some of these countries and in Europe, the US and Japan. The already mentioned contributions from AVRDC in providing genes for disease and pest resistance in Asian and African markets are also to be acknowledged. In India, Bt brinjal (eggplant) has recently been approved for commercialisation by the Indian biotechnology regulator.

Are there any particular lessons that the Australian potato and vegetable industries can learn from R&D investment schemes in developing nations?

As mentioned before, the initiative 'Papa Andina' is a regional effort that promotes technological, commercial, and institutional innovation in the potato sector in Bolivia, Ecuador and Peru. What the effort shows is that it is possible to innovate along the value chain following business principles in partnership between the public and the private sector, creating value for all participants, including the small-scale potato growers in the highland regions of those countries.

What scope is there for direct participation by individual Australian growers who might be interested in investing in R&D in poorer nations?

There are opportunities for knowledge sharing and transfer in terms of advanced agricultural technologies between Australian growers and counterparts in developing nations. Helping with field trials and organizing field visits to Australian farms could be another area where contributions would be welcome [Pa](#)



Researchers, growers and industry reps in Indonesia

Experts boost export opportunities

Words | **Graham Gosper**

Photos courtesy:
Department of Agriculture and Food Western Australia

More Australian growers are turning to seed potato production as market opportunities improve in Asia, and industry leaders look at ways to develop new export markets.

The trend is reflected in the latest seed export and domestic seed production figures which show significant rises over the past 12 months.

Researcher Peter Dawson, a member of an expert team at the forefront of the development of seed potato exports in Western Australia, said there are several reasons for renewed interest in seed potatoes.

“More growers and industry leaders are now recognising the potential for seed exports, both to Asia and to places such as the Middle East,” he said. “And the latest figures indicate that many are prepared to back their judgement with investment.”

Peter said some growers are getting involved after witnessing the success others are achieving with seed exports to countries such as Thailand, Sri Lanka, Vietnam and Indonesia. “More fresh potato growers are now considering diversifying their enterprises with some seed production,” he said

Factors driving the emergence of new export opportunities in Asia, include the ongoing success of research projects aimed at increasing the profitability and sustainability of potato production

among overseas growers, the increasing involvement of potato processing companies in Asia and some changes in food trends in some Asian countries.

Developments such as the establishment of potato processing plants in countries such as Vietnam and Indonesia are helping to speed the establishment of improved production standards by overseas growers and in some cases, are leading to better storage of seed imported from Australia and other countries.

Peter is a member of a Department of Agriculture and Food, Western Australia (DAFWA) research team which is leading a \$1.8 million research project aimed at improving potato production in Indonesia and Western Australia.

The four-year project also involves researchers from the University of Queensland and DPI Victoria, is funded by the Australian Centre for International Agricultural Research (ACIAR) and is supported by the Indonesian Government.

Developments such as the establishment of potato processing plants in countries such as Vietnam and Indonesia are leading to better storage of seed imported from Australia and other countries.

The research team determined production constraints faced by Indonesian farmers through baseline surveys. Armed with this information individual team members travel to Indonesia where they work closely with growers to tackle specific problems and build better management strategies. They establish demonstration plots where growers are actively involved in measuring the impact of single management changes.

Peter said that the range of expertise provided by the multi-skilled members of the research team and the direct approach with growers is proving highly effective. "If growers have disease problems we send a pathologist, if it's a soil issue we send our nutritionist," he said. "Some of the solutions suggested by our experts are already proving much more effective for the growers than the ones they were using."

The benefits of such a project are immediately obvious in a country such as Indonesia, where there are few specialist potato researchers to service the needs of more than 60,000 potato growers.

He said that while longer-term benefits to Australia which flow from the project - and similar projects the research team has been involved in Vietnam and Thailand - are less obvious they are significant and auger well for the seed potato trade.

Expertise built up by the DAFWA team through their direct involvement with overseas growers is already assisting Western Australian seed exporters in establishing overseas contracts. Peter said leading West Australian seed exporters acknowledge that the success they have in Asia would not have been possible without the expertise provided by the researchers.

The work of the project team also gives researchers the opportunity to demonstrate the advantages of quality Australian seed potatoes to overseas growers and to help them develop effective handling and storage techniques for the seed.



Kon and group discuss production techniques

KON PEOS first began exporting seed potatoes from the Manjimup district about 300 kilometres south of Perth more than a decade ago.

He began in a small way first sending a few tonnes to buyers in Mauritius and later to Vietnam.

Today Kon has contracts to supply more than 1000 tonnes annually to seed buyers in Mauritius and between 500 and 600 tonnes a year to buyers in Vietnam, Thailand and Indonesia. He is currently negotiating to fill new orders in Sri Lanka and Bangladesh and says he could obtain orders for many more tonnes if he had the seed to fill them.

Kon says the growth of the business would not have been possible without the assistance of the DAFWA research team which has been involved in a series of seed potato projects in Asia over the years. "The information members of the team have supplied concerning overseas disease, storage facilities and other requirements has been a crucial factor in the success of my ongoing negotiations with buyers," he said.

Kon now makes regular trips to Mauritius, Thailand and Indonesia to meet buyers and growers and to learn more about their seed requirements and problems.

He said there are still many difficulties for anyone exporting seed to Asian destinations - many related to disease and lack of storage facilities.

"Anyone entering the field needs to be prepared to work hard and be patient for results," he said. But Kon believes there are good opportunities for new market players.

"Most of the orders I get are for more seed than I can supply at short notice," he said.

Kon has about 1500 acres of land in the Manjimup area where he grows seed on rotation and he organises other growers to supply him with seed under contract. He employs four full-time staff and up to 18 during harvest.

He plans to expand this business further through more contracts with outside growers.

Continued over page ►

From page 29 ►

The projects also smooth the path towards development of successful trade relationships by fostering understanding between growers in Australia and overseas.

The Indonesian project also involves visits to Western Australia by Indonesian growers who meet local growers and agricultural experts to gain insights into the benefits of better potato handling, pest and disease control measures.

Members of the research team are also learning Bahasa Indonesia

The research team are also learning Bahasa Indonesia to facilitate better communication with the overseas growers during the project

to facilitate better communication with the overseas growers during the project.

Peter said that despite such advances Australia is still only scratching the surface in terms of realising its potential for development of seed potato exports.

He said the experiences of the DAFWA project team have shown that the potential exists for Western Australia to increase seed exports from the current 4,000 tonnes a year to around 50,000 tonnes – a figure roughly equivalent to the State’s annual fresh potato production.

Peter admits there is still much more research to be done and major hurdles to overcome before such figures can be achieved. He said many of the difficulties are tied to the speed with which some overseas countries can develop better production standards and better handling facilities for imported seed. “The Australian seed export industry will also need to develop to a point where it can meet demand for bigger orders, even during times of strong domestic seed demand,” he said. “To that end there are already opportunities emerging for new market players, more growers and new capital.”

Peter said there are also new opportunities emerging for Australian seed potato growers in the Middle East and South Asia.

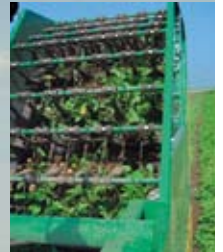
He said methodology developed during seed potato projects in South East Asia could easily be applied in these new areas to hasten the future development of these markets. **pa**



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Ask the industry

If you have a question that you'd like addressed, please ring the advice line on 1800 067 108 or email Potatoes Australia: jenan.taylor@ausveg.com.au. Please note that some questions may be published.

A regular advice column covering issues from resistance management to occupational health and safety.

We have talked previously about foliar disease development and the relationship to plant health and in particular crop nutrition, but a common question from growers is “when do I spray and what should I use?”

This particularly relates to decisions made at or around the important time of ‘row closure’. To answer this, it is important to first understand the difference in terminology when considering fungicide options and how this relates to what is actually happening within the crop, in particular the crop growth stage and whether the disease is present or not.

Understanding the difference in terminology such as preventative and curative, and relating this to the activity of the various fungicides and the fungal disease itself, is also a part of achieving a good result. It sounds complicated, but really it is not and for potato growers in Australia it is about to become a great deal easier with a new fungicide option becoming available in 2010.

What is the difference between a preventative and a curative fungicide?


Preventative

In this instance the fungicide prevents the establishment of an infection occurring. That is, it stops the fungal disease from penetrating the leaf or plant surface. Therefore, they must be applied before infection occurs. Depending on the fungicide group, they have no real ability to “cure” an infection after it has occurred.

However not all preventative or protectant fungicides are the same. Amistar 250SC® (Group 11) after application to the leaf surface, gradually moves into the leaf itself whilst ensuring some product remains on the leaf surface to combat incoming fungal spores. It also has some translaminar movement (moves through the leaf from the top side point of application to the underside) and is xylem mobile within the leaf offering redistribution from the point of application. Though it behaves in this manner, it is still essentially a protectant fungicide.

General protectant’s such as Bravo Weatherstik® (Group M5) offer protection by adhering or forming a deposit (stain) to the outside of the plant or leaf surface so that when the fungal spore germinates and contacts the fungicide, control is obtained before infection occurs. Good spray coverage is important with preventative fungicides.

Curative

These fungicides inhibit the development of an established infection which is not showing visible symptoms, but in many cases are applied at the first sign of disease or during weather conditions highly conducive to disease development. Curative fungicides include products like Score 250EC® (Group 3) and Ridomil Gold MZ® (Group 4 and M3). Both are different with their Mode of Action and movement within the leaf, but essentially the curative components penetrate into the leaf or plant part where they control the disease after infection has occurred (after the fungal disease has started growing inside the plant tissue). The term curative does not imply that visible disease will be eradicated; however Ridomil Gold MZ does exhibit some eradicant activity. Once symptoms are evident, applying a fungicide will not regenerate dead or necrotic tissue, but will halt (in most cases) further development of the disease. 



Phil Hout



The facts on bacterial wilt of potato

Words | **Dr Nigel Crump and René de Jong**

Bacterial wilt, courtesy of DPI Victoria



What is bacterial wilt of potatoes?

Bacterial wilt is a bacterial disease of potatoes, tomatoes, tobacco and some weeds related to the family of the Solanaceous group of plants. The bacterium that causes bacterial wilt of potatoes is called *Ralstonia solanacearum*. In previous cases of infection, crop losses of up to 90 per cent have been reported on farm due to bacterial wilt, while

additional losses in potato quality are observed in the processing of infected tubers. Bacterial wilt of potatoes is not a widespread disease within Australia, occurring only in very isolated areas of Queensland, Victoria and South Australia.

What are the symptoms?

Symptoms of bacterial wilt are yellowing and wilting of foliage and stunting of plants. The symptoms may appear at any stage of growth. The onset of this disease varies between potato varieties but no variety is resistant to this disease. Affected tubers have a brownish discolouration of the vascular tissue. Bacterial exudates may be released from the tuber eyes causing soil to stick to the

outside of the tuber.

Symptom expression occurs at different rates in different varieties and is favoured by warm temperatures (above 15°C with optimum around 25°C) and other environmental conditions (especially high soil moisture). The bacterium has been observed in a wide range of soil types (from sand to heavy clays) and over a wide range of soil pH.

How is the disease spread?

From world wide experience, the most effective way bacterial wilt is spread is through:

- planting infected seed tubers
- contaminated irrigation sources
- the movement of infested soil on machinery

Bacterial wilt can survive between seasons on volunteer potato plants and weed hosts.

It can be multiplied by seed cutting if a potato being cut is infected—the spread in this case may be multiplied greater than tenfold depending on the severity of the infected tubers.

How is it managed?

1. *Prevention.* If you do not already have bacterial wilt— then keep it that way. Maintain your on-farm hygiene ensuring that equipment, potato boxes, vehicles etc. do not bring infested soil or tubers onto your farm.



2. *Use certified seed that is free of disease.*

The National Seed Certification Rules have a nil tolerance for bacterial wilt. The use of non-certified seed, particularly from regions that are known to have bacterial wilt, is high risk for spreading bacterial wilt. Disinfecting knives on seed cutters or avoid seed cutting all together can also reduce spread of the disease.

3. *Irrigation source.* Identify whether local water sources are a source of infection and manage appropriately.

4. *Fumigation.* Soil fumigation can be done but is not widely used due to high costs.
5. *Rotations.* Good control of volunteer potatoes and rotation with non host crops such as grasses (maize, cereals, pasture) can reduce to occurrence of the disease. Avoid continual cropping of potatoes if disease is present. Practice long rotations (greater than five years clear of potatoes). There is evidence that root knot nematode can enhance the occurrence of bacterial wilt, management options to reduce RKN populations can reduce the severity of bacterial wilt.

Clarification of recent media reports about bacterial wilt

Comments about the scourge of bacterial wilt that afflicts many growers in the highlands around Atherton were made in the media. There were implications relating to bacterial wilt that were false, unfounded and without justification.

It is extremely important in dealing with a serious disease such as bacterial wilt that there is correct information supplied to growers so that they can effectively prevent or manage the disease. Here we hope to dispel the myths and provide sound information relating to bacterial wilt.

Myth one

The origin of some recent outbreaks was linked to certified potato seed that originated from Thorpdale in Victoria.

In accordance with the National Standards, there is a nil tolerance for bacterial wilt in certified seed. This means that any crop with any degree of bacterial wilt cannot be certified.

ViCSPA, the body responsible for certification in Victoria and South Australia have well- trained certification officers who routinely inspect all seed crops for many diseases including bacterial wilt. These officers are extremely professional in dealing with seed certification. No bacterial wilt has been identified by

certification officers in the Thorpdale region in certified seed crops. There is no evidence to suggest that recent outbreaks of bacterial wilt around Atherton are linked to certified seed from Thorpdale. Certified seed remains as the best risk mitigation strategy for bacterial wilt management.

It is important that buyers of certified potato seed understand that certified potato seed is the safest and least risk seed that you can use.

Myth two

The recent outbreaks of bacterial wilt in the Atherton region were caused by a new strain of bacteria.

Despite the headlines that have now travelled the world, there is no new strain of *Ralstonia solanacearum* identified in Australia that causes disease of potatoes. It is extremely important that correct information be disseminated to protect both interstate and international trading from damage. The *Ralstonia solanacearum* isolated from Atherton is Race 1 biovar 3 which is not a new report or occurrence.

Myth three

Seed Certification schemes are failing in relation to bacterial wilt.

ViCSPA takes seed certification very seriously. As previously stated, there is a zero tolerance when it comes to bacterial wilt and certification of seed crops. The ViCSPA certification label is evidence of a seed crop meeting robust certification standards including those for bacterial wilt.

If you have any concerns regarding certified seed that you have purchased please inform the certification authority involved immediately.

Myth four

Markets are being affected by recent bacterial wilt outbreaks.

Comments were also made about markets in Western Australia and South Australia being denied access because of bacterial wilt. Prior to this year, there have been long-standing quarantine-based restrictions on the importation of potatoes to Tasmania from Queensland that relates to bacterial wilt. There have been no recent changes to quarantine rules that affect the marketing of potatoes to Western Australia and South Australia due to bacterial wilt. ^{pa}

For further information, contact Dr Nigel Crump, Manager ViCSPA (Victorian Certified Seed Authority) on 0408 592051 or email nigelcrump@vicpsa.org Or Rene de Jong, Manager Potatoes, Elders Rural Services Australia Ltd, on 0418 523710 or email rene.dejong@elders.com.au

Letter from the UK

Words | **Dr Stuart Wale**, Scottish Agricultural Collage (SAC), Aberdeen



The wrong kind of wind

During summer in the UK, the Jet Stream high in the air normally sits to the west of the country. This means warm air is brought up from the south across the UK and good weather is (normally) guaranteed. At the start of the summer the Met Office predicted a 'BBQ' summer. Everyone quoted the Met Office and presumably BBQ sales went up. The spring and first part of the summer lived up to expectation. Notably, potato growers got stuck into planting early and virtually never stopped. They experienced their earliest and most continuous planting in memory. The dream of a wonderful summer loomed large. The warm soils resulted in rapid emergence and yield potential from an early stage was high. Crops reached full canopy at the time of the longest day and light interception was good.

However, after the good start, the Jet Stream moved over to the east of the country changing the weather pattern substantially. The weather became unsettled and as a result from July the BBQ's stayed in the barn as a series of weather fronts crossed the country. Localised thunderstorms were common in parts of the UK. This led to heavy rain in one place and nothing just down the road. Lightning strikes were surprisingly common leading to the symptoms in the photo.



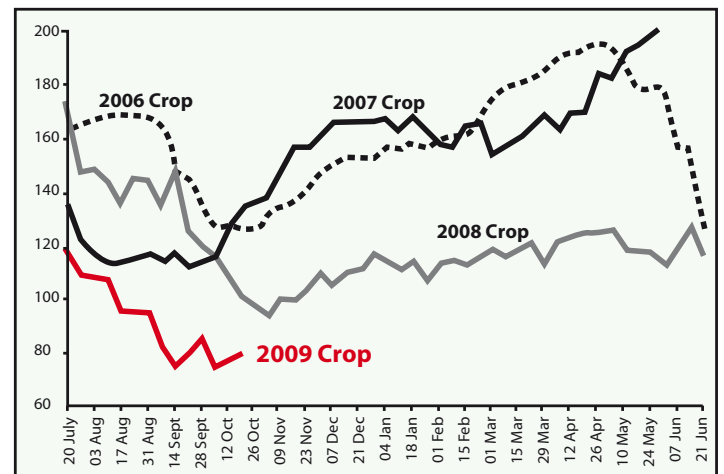
Photos courtesy: Mr Ian Torrie, Westerton Farm, Rothienorman, Aberdeenshire



There was a time for some growers when we thought we were heading for another wet season, the third in a row. However, it never reached the torrents experienced in the previous two years. The impact of the localised rain meant that some crops were well catered with water and others left short of water just yards away. This affected yield and quality and it was difficult at times to explain variations in yields this season. In those locations missing downpours yields were sometimes restricted. Those planting later were also less lucky and those suffering torrential rain found adjacent fields might yield differently, with those on a slope never being waterlogged.

However, even though the weather pattern changed there was generally above average sunshine and yields were above average overall. This meant that the industry was predicting high yields and low prices from a relatively early stage—and so it came to pass. The graph of the average free-buy potato price shows 2009 having a price even lower than 2008.

GB ex farm weekly average free-buy ware potato price 2006 - 2009 crop years (£/t)



Source: Potato Council

In the south and east of England (the 'bread-basket of the UK') where the highest concentration of ware crops are grown and elsewhere along the east coast of England, the autumn was particularly dry. Dry matter contents were high with bruising a severe problem. Thus at harvest there was a SE England/ everywhere else divide. High dry matters were also common across a lot of northern Europe. Some growers simply stopped lifting in parts of Europe as bruising and damage was such a major issue.

Breeding means diversity

The Dutch are famous for potato breeding and the major Dutch companies pour out new varieties for every conceivable use. Breeding in the UK has caught up to some extent with a range of private breeding companies, some assisted by advanced technology available from Scottish Crop Research Institute (SCRI) at Dundee. With these companies the hunt is on to find that elusive variety that will displace the most popular varieties—which are mainly free market varieties. As a result the list of varieties grown seems to continuously expand. Of course, some fall off the list at the other end as hopefuls that failed to be accepted. Rather than displace the top varieties, new varieties have tended to find their own niche. Breeders are looking for a variety that they have control over and thus earn enough to pay back the considerable costs that breeding demands. This breeding effort seems to be encouraged as each supermarket and processor wants to find varieties that provide a marketing edge or an improved product for them. In consequence, a plethora of new varieties appear. It probably means that the consumer is confused by the choice. When asked if they can name potato table varieties many consumers will refer to Maris Piper or King Edward as these are long standing and familiar names. If pressed they may mention some of the tastier salad varieties such as Maris Peer or Charlotte (a French variety). The table provides an idea of the range of varieties being marketed in the UK.

Great Britain potato plantings by variety - 2008 to 2009 (hectares)

	2009p	2008	Change		2009p	2008	Change
First early	8403	7989	+5.2	Others	1882	1682	+11.9
Premiere	2204	2124	+3.8	Maincrop	85820	82468	+4.1
Accord	1534	1133	+35.4	Maris Piper	24272	25182	-3.6
Maris Bard	1099	1206	-8.9	Lady Rosetta	6838	5664	+20.7
Innovator	710	372	+90.9	Markies	5906	4012	+47.2
Vivaldi	698	1016	-31.3	Saturna	4032	4115	-2.0
Vales Emerald	457	360	+26.9	Harmony	3996	3023	+32.2
Winston	316	328	-3.7	Hermes	3838	4061	-5.5
Rocket	158	156	+1.3	Desiree	3693	3624	+1.9
Lady Christl	155	189	-18.0	King Edward	3479	3496	-0.5
Rembrandt	154	273	-43.6	Pentland Dell	3020	4240	-28.8
Annabelle	153	157	-2.5	Melody	2919	1568	+86.2
Dunrod	145	173	-16.2	Cabaret	2089	1512	+38.2
Others	620	502	+23.5	Osprey	1586	1671	-5.1
Second Early	36008	39777	-9.5	Cultra	1501	1625	-7.6
Estima	9771	13260	-26.3	Russet Burbank	1481	1714	-13.6
Maris Peer	5889	5964	-1.3	Sante	1282	1230	+4.2
Marfona	5048	5106	-1.1	Morene	1078	842	+28.0
Saxon	4458	4188	+6.4	Shepody	1065	920	+15.8
Rooster	2475	1723	+43.6	Vales Sovereign	922	409	+125.4
Charlotte	1677	1907	-12.1	Romano	787	1019	-22.8
Nadine	1508	2306	-34.6	Cara	654	618	+5.8
Wilja	1389	1506	-7.8	Others	11383	11923	-4.5
Victoria	1135	1178	-3.7	TOTAL	130231	130234	0.0
Lady Claire	463	626	-26.0	First Early %	6.5	6.1	+5.2
Nicola	313	331	-5.4	Second Early %	27.6	30.5	-9.5
Fambo	Nq	Nq		Maincrop %	65.9	63.3	+4.1

Source: Potato Council

Change = percentage change between 2008 and 2009

Competitive edge

In order to educate consumers, some packers have put a great deal of effort into promoting new varieties. Probably, the most obvious example is promotion of the variety Rooster by Albert Bartlett (one of the largest UK packers of vegetables for the fresh market). Rooster is a variety bred by Irish Potato Marketing but which Bartletts have rights to in the UK. They have spent a great deal of money using celebrity chefs and advertising campaigns to raise the variety profile. Oddly, in the Irish Republic, Rooster has become the public's favourite without a great deal of fuss. However, in the competitive UK market it has needed promotion to reach a modest level of popularity. The latest advert involves Marcia Cross from Desperate Housewives, a real coup. Marcia Cross who plays the character Bree Van De Kamp in the hit US television show is fronting a light-hearted ad in which a pushy agent tries to persuade her to promote the red-skinned potato brand. Initially appalled at the idea, the actress is ultimately convinced to film a short slot. It's Cross's first ad campaign in the UK. The three-month, £3m campaign is Albert Bartlett's most expensive to date. The whole range of fresh, chilled and frozen Rooster potatoes is being promoted, including new Rooster Chilled Mash, which was launched in October. The campaign which is primarily targeted at 25 to 54 year-old housewives, the next generation of consumers, would help attract younger consumers to the category.

Bartlett's Rooster brand recorded 45% year-on-year growth to March 2009 and has a 2.5% share of the total potato market and 33% of the reds category.



Seed exports on the rise

One market that GB seed growers have been developing, at the expense of the Dutch, is seed export. Over the last few years, the level of exports has risen steadily to just under 90,000 tonnes last year. This steady rise has been due to the high levels of seed health in, mainly, Scottish seed. To put the increase in perspective, the export from Holland still outstrips that from the UK by many fold but the last few years has seen The Netherlands facing a series of plant health issues, which are absent or

continued over page ►



From page 35 ►



Seed being unloaded at Montrose for export

limited in the UK. These include ring rot, brown rot and *Erwinia chrysanthemi* (now called *Dickeya* spp.)

The success of seed exports and the issues faced by the Dutch has heightened awareness of the risks from non-indigenous diseases in the UK and particularly Scotland. The Potato Council set up a Safe Haven Scheme to provide confidence that disease and pest threats are kept at bay. This is a voluntary scheme that growers sign up to with a set of procedures aimed to limit outbreaks of non-indigenous diseases down the chain of production. At British Potato 2009 (see below), the theme is continued with a seminar on the threats of *Erwinia chrysanthemi*.

However, under EU rules seed of suitable grade can be imported into the high grade seed producing regions of Britain from any EU country. Of course, the seed industry, wants to preserve the freedom from disease and Scotland particularly maintains a voluntary ban on seed imports. Maintaining a voluntary ban is not always enough as there is often commercial pressure to grow ware crops from imported seed. A best estimate was that last year 50+ crops were grown from imported seed totalling around 220 ha and comprising 17 varieties. The programme of awareness as to the risks has to be never ending.

British Potato 2009

Harrogate in Yorkshire was the destination of a very large part of the Potato Industry in Britain at the end of November. This Potato Council biennial event is the GB industry's showcase and will be the biggest networking event of the year. Almost all potato and machinery companies and institutes will be present showcasing their wares.

No doubt the biggest talking points at the event will be the state of the industry, low prices, poor margins and how to survive a recession (a potato one— not just a global one). But there are side issues that will form an undercurrent. What the long term future will be with a good number of pesticides destined to be lost in due course as a result of EU legislation, the new EU PCN legislation which could potentially have a major effect on those ware producers whose land is contaminated, what impact the increasingly stringent residue testing will have on production and much more.

SAC's exhibit at BP2009 is focussing on 'Due Diligence'. Instead of a series of technical topics based on R&D, SAC are challenging growers, potato and food companies over whether their quality assurance is up to date. Due diligence is not just about demonstrating that potatoes are fit for purpose but also about avoiding risks in production (for example by careful field selection), by ensuring staff are properly trained, by being compliant with protocols—and much more. In recent months, the issues of Due Diligence have been at the forefront of SAC's activities with growers and we believe we are better geared to help the industry than many organisations.

So there's a lot of debate to be had in Harrogate. More on this next year! [pa](#)



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chips

A look at what's new in potato information and technology



Studies

Drought stress

Six articles examine drought stress in potatoes and irrigation techniques to maximise water use efficiency.

The first paper (*Iwama*) reviewed potato root systems, presenting some very interesting information. For example, most potato roots are found in the top 30 cm of soil although some extend to a depth of 100 cm. In addition, the total root length throughout the soil profile can reach about 10–20 km below an area of 1 m². Total root mass can differ widely between cultivars, breeding lines and wild relatives, but is generally consistent across different environmental conditions, such as soil types, fertiliser rates and planting densities. The paper goes on to discuss how this understanding of root systems can be used to develop tests that can be used to select new drought tolerant cultivars.

In *Hudak et al.*, three potato genotypes differing in drought tolerance were tested in the laboratory for the activity of two enzymes, peroxidase (POD) and polyphenol oxidase (PPO), and the total phenol content. These biochemical parameters differed between the genotypes and the degree of water stress so could potentially be used as markers for drought-tolerance.

Recently a new irrigation technique called alternate partial root drying (PRD) has been investigated. This is where half of the root zone is irrigated while the other half is allowed to dry out, and then the irrigation is reversed. This paper (*Brocic et al.*) reports experiments conducted during 2007 and 2008 that compared PRD with full irrigation, which was scheduled on evapotranspiration and soil water. In both seasons, PRD improved water-use efficiency and increased tuber quality, as measured by starch content, compared to full irrigation. The PRD technique was also tested in a field experiment in China (*Li et al.*). No difference was seen in crop yield between PRD and full irrigation, but there was a significant improvement in both water use efficiency and nitrogen use efficiency for potatoes under PRD.

The fifth article (*Cooley et al.*) investigated a method to overcome the dry zone that often occurs when potatoes are

grown in a ridge and furrow system under sprinkler irrigation. While trickle irrigation has been shown to improve this problem, the authors proposed that a more cost-and-labour-effective solution could be found by using a surfactant to change soil water surface tension and promote more uniform water distribution into hills. Potatoes were planted along with surfactant at 9.35 litres/ha. Soil water content was measured using time domain reflectometry probes, and soil nitrate levels at a depth of one metre were monitored by collecting leachate. Trials carried out in 1998, 1999 and 2003–2005 showed that the application of surfactant increased water movement into the dry portion of potato hills and in many cases decreased nitrate levels in leachate.

In the final paper (*King et al.*), a chemical application system was assembled using mini-sprinklers and common commercial irrigation system components, and installed on a four-span centre-pivot irrigation system. Field testing demonstrated that spatially variable chemical applications could be effectively and uniformly applied. This was done concurrently and independently of the spatially variable water application.

Physiology of the potato: new insights into root system and repercussions for crop management. *Iwama (2008) Potato Research 51: 333-353.*

Influence of osmotic stress on biochemical properties in potato. *Hudak et al. (2009) Acta Horticulturae 812: 237-240.*

Partial root drying: new approach for potato irrigation. *Brocic et al. (2009) Cereal Research Communications 37: 229-232.*

Effect of alternate partial root-zone irrigation on nitrogen and water use efficiency of potato. *Li et al. (2009) Transactions of the Chinese Society of Agricultural Engineering 25: 92-95.*

Surfactant use to improve soil water distribution and reduce nitrate leaching in potatoes. *Cooley et al. (2009) Soil Science 174: 321-329.*

Center-pivot irrigation system for independent site-specific management of water and chemical application. *King et al. (2009) Applied Engineering in Agriculture 25: 187-198.*

Research Summaries

Potato diseases

Most of the scientific papers featured below have investigated biological or cultural control options and inoculum source for a range of potato diseases.

Crop rotation with brassicas reduces *Phytophthora* populations in potato soil. This paper reports results from three growing seasons using five rotational crops (potato, pasture, brassica, cereal and squash) to suppress soil-borne diseases. Metalaxyl fungicide did not affect soil levels of *Phytophthora* and *Pythium* spp., but *Phytophthora* spp. and other fungi were significantly reduced by the presence of BQ Mulch (a brassica crop) in potato and cereal rotations. *Cheah et al. (2008) New Zealand Plant Protection 61: 256-260.*

Suppression of *Phytophthora infestans* in potatoes by foliar application of food nutrients and compost tea. In two separate trials involving three potato cultivars, the incidence and severity of late blight was reduced by up to 35 per cent by the application of compost tea and a range of other nutrients, including seaweed extract, whey and potassium bicarbonate. While these treatments do not reach the level of control given by manzate fungicide (up to 99 per cent), they are a relatively cheap, environmentally safe alternative that can be used to help manage fungicide resistance. *Al-Mughrabi (2007) Australian Journal of Basic and Applied Sciences 1: 785-792.*

Biological control of black scurf and dry rot of potato. Two major potato pathogens, *Rhizoctonia solani* and *Fusarium sambucinum*, were suppressed under greenhouse conditions by a number of potential fungal and bacterial biocontrol agents, with the most effective being *Trichoderma harzianum*, *Epicoccum* sp., *Streptomyces endus* and an actinomycetes isolate, particularly the first two. The effects were similar to those of tolclofos-methyl fungicide, which increased emergence, chlorophyll content of potato leaf, potato tuber yield and reduced black scurf and dry rot severity. *El-Kot (2008) Egyptian Journal of Phytopathology 36: 45-56.*

Pathogenicity to potato tubers of *Fusarium* spp. isolated from potato, cereal and forage crops. Three potato cultivars were artificially inoculated with isolates of *Fusarium* spp. obtained from various crops in Prince Edward Island, Canada, from 2002 to 2004. All isolates from potato crops were strongly pathogenic, while isolates from cereal crops were pathogenic (*F. graminearum*), weakly pathogenic (*F. sporotrichioides*) or non-pathogenic (*F. poae*). There was similar variability with isolates from alfalfa and clover crops, which ranged from non-pathogenic to pathogenic. Thus, crop rotation may not remove all *Fusarium* spp. pathogenic to potatoes. *Peters et al. (2008) American Journal of Potato Research 85: 367-374.*

Biological control of the potato dry rot caused by *Fusarium* species using PGPR strains. This study tested 17 plant growth promoting rhizobacteria (PGPR) strains for activity against three *Fusarium* species causing dry rot disease. All strains had inhibitory effects on at least one species in Petri dish experiments. The strongest antagonism was observed with *Burkholderia cepacia* strain OSU-7, which was effective on all three *Fusarium* species. This biocontrol agent was also effective on tubers of two potato cultivars, 'Agria' and 'Granola', under storage conditions. *Recep et al. (2009) Biological Control 50: 194-198.*

Aggressiveness of *Streptomyces* on four potato cultivars and implications for common scab resistance breeding. Recently it has been shown that various *Streptomyces* isolates cause common scab disease and these vary in their distribution and aggressiveness. This paper investigated the interactions between *Streptomyces* isolates and different potato cultivars. The research indicated that other factors outside the pathogen and potato genotype also affect the development of the disease. It was concluded that further understanding of these factors will enable more accurate and reproducible phenotyping, which is required to understand the genetic basis of resistance to common scab. *Wanner & Haynes (2009) American Journal of Potato Research 86: 335-346.*

Biochemical and genetic diversity of pectolytic enterobacteria causing soft rot disease of potatoes in New Zealand. Eighty-nine micro-organisms associated with soft rot of potatoes in New Zealand were characterised by physiological, biochemical and genetic analyses. The majority were classified as the standard pathogens, *Pectobacterium carotovorum* subspecies *carotovorum* and *Pectobacterium atrosepticum*. However, some highly virulent, atypical strains were isolated, and this suggested that novel species or subspecies, including *Pectobacterium wasabiae*, may be responsible for soft rot of potatoes. *Pitman et al. (2008) Australasian Plant Pathology 37: 559-568.*

***In vitro* tests of resistance to soft rot *Erwinia* on potato tubers.** This paper describes a method that can be used for quickly screening breeding materials and cultivars for resistance to different *Erwinia* species and strains. Tuber discs from 13 potato genotypes were inoculated with the bacterial suspension and incubated at 26°C for 24-26 hours. Decayed tissues were then washed away and the remaining weight of healthy tissues was measured and used to estimate the degree of resistance. *Hudak et al. (2009) Acta Horticulturae 812: 103-106.*

Partial replacing of concentrate feed mixture by potato processing waste in sheep rations. In a two detailed studies, the intake and digestibility of concentrate feed mixture substituted with various levels of potato peel waste were measured in the laboratory and in sheep. Crude protein content was similar between the concentrate feed and the potato peel, while the potato peel had a lower crude fibre content. There was no difference in animal intake of the diets, but the total amount

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chips: a look at what's new in potato information and technology

From page 39 ►

of digestible nutrients and crude protein decreased as the level of potato peel waste in the diet increased. However, the level of volatile fatty acids increased with increasing potato peel waste. Thus it was concluded that potato peel waste can successfully replace up to 50% of concentrate feed mixture in sheep diets. *Tawila et al. (2008) American-Eurasian Journal of Agricultural and Environmental Science 4: 156-164.*

Price volatility of Idaho fresh potatoes: 1987-2007. This study analysed the prices of Idaho fresh potatoes before the United Fresh Potato Growers of Idaho cooperative was formed and since it has been operating. There is statistically significant evidence that the volatility of fresh potato prices has been reduced since the formation of the cooperative. Although the mean price for fresh potatoes has been slightly higher during the cooperative period relative to the pre-cooperative period, this difference was not statistically significant. *Muthusamy et al. (2008) American Journal of Potato Research 85: 438-444.*

Snippets from www.freshcut.com

Measuring sustainability. This article describes how a group of about 40 companies in the USA is developing a verifiable sustainability index for the produce industry. Incorporating all stakeholders, including non-governmental organisations, suppliers, trade associations and buyers, the index is not focusing on practices but rather is selecting parameters that can be quantified as indicators of sustainability.

Produce traceability starts NOW. The produce industry in North America is developing a "Produce Traceability Initiative" in response to some recent food contamination scares. While currently voluntary, the plan is to get everybody involved in the food supply chain to join the initiative. A series of seven milestones has been developed, with the first one being for companies to obtain their prefix code. This is the initial step in creating a 14 digit "global trade item number" (GTIN) that will be placed on all cases of produce. A case is the smallest unit of labelling envisaged at this stage since the value of labelling individual items has not yet been demonstrated.

Snippets from www.potatonews.com

Effects of size of normal seed tubers and growth regulator application on dormancy, sprout behaviour, growth vigour and quality of normal seed tubers of different potato cultivars. This item reports on a paper from the first issue of volume 1 of the Research Journal of Seed Science, which was published in 2008 (pp. 41-50). It describes an experiment that found higher

sprout numbers from 55-65 mm than smaller tubers, and from tubers treated with 5 mg/litre of gibberellic acid. There were also considerable cultivar effects on sprouting and growth vigour parameters. *May 2009, Research.*

Feature Article

Got Pink Rot? Get Phosphorous Acid for Harvest.

(www.extension.uidaho.edu/bingham/Aug%202009.pdf), a newsletter produced by the University of Idaho Extension System, discussed the use of a postharvest treatment to prevent healthy tubers becoming infected with the pink rot and late blight pathogens. An application of phosphorous acid as the tubers are transferred into storage is highly recommended for susceptible cultivars (such as 'Russet Norkotah', 'Premier Russet' and 'Western Russet'), tubers harvested from low-lying areas or where infection is suspected. The newsletter discusses recommended phosphorous acid application rates and techniques, and also considers the interaction of pink rot, late blight and Pythium leak disease with other storage diseases, such as soft rot.

News Headlines

Canada: From potato peel to biogas. This article describes how waste from the Cavendish Farms' potato processing facilities located in Prince Edward Island, Canada, has been diverted from a landfill into powering the company's boilers. The biogas facility can process 100,000 tonnes of potato waste per annum and will reduce the company's overall carbon footprint by 30-35%. This comes from reducing the fossil fuels previously used to power the plant along with decreased resources for trucking waste potato product to disposal sites. The greenhouse gas emission reduction will be equivalent to taking 7300 cars off the road for 1 year. The biogas process also produces an organic, natural fertiliser that can be applied to potato fields..

Dutch wingsprayer possible solution in fight against 'Zebra chips' in New Zealand. New Zealand potato growers recently visited Dutch potato grower Toon van der Heijden to see his wingsprayer in action. The technique has been developed through the 'Clean water for Brabant' project in Holland and produces a very fine droplet spray to enable application of pesticides with minimum dosage and emissions to the environment. The main target for the equipment, which is expected to be shipped to New Zealand soon, is the insects responsible for vectoring the pathogen that causes zebra chip disease. The disease has only very recently been found in New Zealand and it will be important to kill all of the insect vectors within the potato crop.

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