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potatoes australia

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AUSVEG

Hort Innovation

EDITORIAL

Effective feedback, both positive and constructive, is crucial if you want to improve.

Over the past few weeks, AUSVEG representatives – including National TPP Coordinator Alan Nankivell and Biosecurity Coordinator Callum Fletcher – have been visiting key potato growing regions across the country to meet with growers and hear their challenges and concerns. These discussions have sparked some feedback on AUSVEG communications materials for the potato industry and it got us thinking: We want to hear more from you.

AUSVEG's *Potato Industry Communications Program* (PT15007) is a strategic levy investment under the Hort Innovation Fresh Potato Fund. It includes many different elements, from *Potatoes Australia* magazine, the annual *Potato Grower Success Stories* booklet, Weekly Update e-newsletter, media relations, InfoVeg services (online database and video – see more at ausveg.com.au/infoveg), as well as our social media platforms including Twitter, Facebook, LinkedIn and Instagram.

Stakeholder engagement also forms a core part of the program makeup. One initiative we have introduced is a regular meeting with the Potato Industry Communications Stakeholder Engagement Committee, which provides advice and feedback on our current activities to ensure the content remains relevant and effective. The committee includes representatives from the AUSVEG communications team, Hort Innovation, state grower representatives and industry members. It is a highly beneficial tool to optimise our communications materials for potato growers, but it isn't the only way we can receive feedback.

In terms of the content for *Potatoes Australia*, over the last two years our team has made a targeted effort to include diverse voices in the magazine, from the seed certification industry to potato processing and beyond.

However, we can only do so much without your help.

We strongly encourage all readers to share their thoughts and concerns as they arise. Our industry communications are in place to serve you, the grower, and improve your awareness of strategic levy investment projects in the potato industry and how they can strengthen your productivity and profitability on-farm.

If there is something we are doing well, or something you think we can do better, we want to hear about it.

AUSVEG will also send a short online survey on all elements of our communications program at the start of 2018, which will be a simple way to provide feedback. Keep an eye out for this survey in January, otherwise you can give us a call on 03 9882 0277 or email communications@ausveg.com.au to share your thoughts and ideas.

Finally, we thank the potato industry and contributors for their support in 2017 and wish you all the best for the coming year.

I have been very humbled to receive the messages of support from the industry following the announcement of my election as AUSVEG Chair.

I would like to pay tribute to the successful four-year tenure of my predecessor Geoff Moar, who has been a loyal and dedicated leader for the industry and will remain on the AUSVEG Board. I am looking forward to stepping up to the role of Chair and leading AUSVEG alongside our Deputy Chair Belinda Adams, Board Directors and CEO James Whiteside in the new year.

For those of you who don't know me, I am a leafy veg grower from Bulmer Farms based in Lindenow, tucked away in the fertile Mitchell River Valley in Victoria's Gippsland region. We started out as a 32-hectare dairy farm in 1948 and now supply fresh vegetables to wholesalers and processors throughout Australia.

I have been farming for over 40 years and have since stepped back from the day-to-day running of the business, leaving this in the very capable hands of my sons, Andrew and Kaine. With some more free time up my sleeve, I decided to start giving back to the industry and tackling the issues that affect growers.

AUSVEG is set to lead the potato and vegetable industry into exciting times in 2018. With a new company strategy in place, AUSVEG is keen to advance a number of critical issues facing our growers.

Our existing advocacy work will be buoyed through increased investment and resourcing, particularly through the appointment of a new National Public Affairs Manager who will be ready to take the reins of this role in the new year. A stronger potato and vegetable industry is a priority for our organisation, and I will ensure we will bring the rest of the horticulture industry with us – it is in everyone's best interest to have a strong and united horticulture advocate and I am certain AUSVEG can play a leading role.

The successful launch of Hort Connections 2017 in partnership with the Produce Marketing Association Australia-New Zealand (PMA A-NZ) was a highlight of the year and AUSVEG is looking forward to building on that success when Hort Connections 2018 returns to Brisbane from 18-20 June. I encourage you all to come along – registrations are open, so don't miss out on the opportunity to meet your peers and learn the latest research and developments in your industry.

While I have taken up the position of AUSVEG Chair, I will also need to rely on the knowledge and experience of the AUSVEG Board, CEO and staff to provide a central voice in the industry that is open and transparent. With their support I am confident of leading AUSVEG into a new era in the Australian horticulture industry.

W Bulmer

Bill Bulmer
Chairman
AUSVEG

Firstly, I would like to welcome Bill Bulmer to the role of AUSVEG Chair following a Board meeting held on Monday 13 November.

Bill is Director of Bulmer Farms, located in Lindenow in East Gippsland. He is a long-serving member of the vegetable industry and currently sits on the Executive Committee of AUSVEG VIC and the Horticulture Committee of the Victorian Farmers' Federation.

Bill's election follows the decision by Geoff Moar, who has held the position of AUSVEG Chair since 2013, to not nominate for re-election. AUSVEG would like to thank Geoff for his guidance over the past four years – he has been a driving force behind advocacy for the Australian vegetable and potato industries, and has overseen significant changes to both the organisation and the wider industry. Geoff will continue to serve on the AUSVEG Board, and we look forward to working with Bill, Deputy Chair Belinda Adams and our Board Directors to continue to effectively represent Australian vegetable and potato growers.

Looking to the year ahead, AUSVEG is particularly excited to host Hort Connections 2018 alongside the Produce Marketing Association Australia-New Zealand (PMA A-NZ) from 18-20 June at the Brisbane Convention Centre.

Delegate registrations are now open for the event, with confirmed co-hosts including Apple and Pear Australia Limited, Australian Organic, the Australian Horticultural Exporters' and Importers' Association, Growcom, Nursery and Garden Industry Australia as well as Onions Australia. Fresh Markets Australia in partnership with the Central Markets Association of Australia are also exclusive sponsors to the Trade Show. We will be continuing discussions with horticulture industry bodies in the coming months to join Hort Connections as co-hosts and further strengthen collaboration in the industry.

The 2018 conference and trade show will build on the success of Hort Connections 2017, which attracted nearly 2,500 members of the local and international horticulture industry. The feedback we received highlighted that it was the most worthwhile event in recent memory for our industry, so we are very excited to bring Hort Connections 2018 to Brisbane in June for what is set to be the most comprehensive horticultural event in the country.

On another note, the annual *Grower Success Stories* booklet has been released, celebrating the achievements of six potato growers who have benefited from the potato R&D levy and acknowledging their contribution to the industry.

The booklet focuses on past and present strategic levy investments in the potato industry, which cover many different aspects of cutting-edge potato production. It is fantastic to see growers embracing the opportunities to learn about the latest in innovation and R&D in the industry, and applying these results on-farm with positive outcomes.

Finally, I would like to thank everyone for their support and assistance in my inaugural year as CEO. It has certainly been a pleasure to work with growers, industry members and AUSVEG staff, and I wish you all the very best for 2018.

James Whiteside

James Whiteside
CEO
AUSVEG

FIVE-YEAR STRATEGIC INVESTMENT PLAN UNVEILED FOR POTATO INDUSTRY

Hort Innovation began developing a new Strategic Investment Plan (SIP) for the potato industry in 2016, with consultation events taking place in key growing regions across the country. As a result, the SIP for the next five years has been released to the industry.

The Strategic Investment Plan (SIP) for the potato industry is the roadmap that will help guide Hort Innovation's management of investment programs for the industry over the next five years. It lays the foundation for decision making in levy investments and represents the balanced interest of the industry.

The very important function of the SIP is to ensure levy investment decisions in the Hort Innovation Potato – Fresh Fund align with industry priorities.

The SIP has been developed in close partnership with growers and other industry stakeholders and Hort Innovation thanks all those who have contributed their valuable time and ideas.

INDUSTRY SNAPSHOT

The potential impact of this plan is $34.6 million, based on an estimated investment of $4.96 million over the next five years.

In 2015-16 there were approximately 800 potato growers in Australia, with the majority based in South Australia (38 per cent), followed by Tasmania (24 per cent), Victoria (21 per cent), New South Wales (eight per cent), Western Australia (five per cent) and Queensland (four per cent).

In 2014-15, the potato supply chain was valued at $660.3 million and produced 1,332,769 tonnes – about 64 per cent of this was in processing, around 35 per cent in fresh supply and less than two per cent in fresh export.

INVESTMENT OUTCOMES

Following consultations with growers and industry stakeholders, the SIP identified four key outcomes for the potato industry over the next five years. These are:

- **Industry profitability is improved** by increasing the value of product sold on the domestic market.
- **Export markets have grown** resulting in increased average returns to growers.
- **Average yields have improved** resulting in reduced cost of production.
- **Increased innovation and agility** in potato businesses has resulted in a sustainable industry that can adapt to highly dynamic markets.

Each outcome includes a list of strategies for the industry to implement to achieve these targets.

MAJOR OPPORTUNITIES

A range of opportunities have been identified for Australia's potato growers over the next five years. These include:

- Development of new consumer products.
- Leveraging 'brand Australia' product integrity in export markets.
- Technology advances.
- Targeted application of agronomy skills to suit the three potato markets – fresh, seed and processed.
- Development of new (non-food) uses to achieve a greater return for waste and by-products.
- Increased adoption of R&D, in particular precision agriculture.
- Internationally recognised standard of seed.

INDUSTRY CHALLENGES

The SIP also outlines a number of barriers facing the industry. These include:

- Negative health perceptions and declining consumption.
- Poor industry understanding of consumer needs.
- Market access restrictions in northern Asian markets.
- Lack of industry cohesion.
- High cost of production and supply chain costs.
- Low adoption of available R&D on-farm.
- Inconsistent seed quality across growing regions.
- Inconsistent agronomic advice and lack of extension specialists.
- Increasing imports (frozen).
- Biosecurity risk and disease incursions.
- Pressure on water availability.

To read the full potato Strategic Investment Plan, please visit horticulture.com.au/potato.

INFO

The next edition of *Potatoes Australia* will include an update on the Strategic Investment Plan for the potato processing industry.

This communication has been funded by Hort Innovation using the fresh potato research and development levy and contributions from the Australian Government.

Project Number: PT15007

Hort Innovation Strategic levy investment | POTATO – FRESH FUND

New AUSVEG Chair Bill Bulmer on his farm in Lindenow, Victoria.

NEW AUSVEG CHAIR BILL BULMER LOOKS TO THE FUTURE

Third generation Victorian leafy vegetable grower Bill Bulmer was unanimously elected to the position of AUSVEG Chair in November 2017, marking a new era for the peak industry body. *Potatoes Australia* spoke to Bill about what vegetable and potato growers, and the wider horticulture industry, can expect from the organisation in the future.

AUSVEG is set to tackle 2018 with a fresh perspective after Bill Bulmer, a third generation vegetable grower from Lindenow in East Gippsland, was announced as the new AUSVEG Chair on 13 November 2017.

As Director of Bulmer Farms and a long-serving member of the vegetable industry, Bill is a familiar face to many. He currently sits on the Executive Committee of AUSVEG VIC and the Victorian Farmers' Federation Horticulture Committee.

"While I've been involved in regional and state industry bodies over the years, I was fortunate to join the AUSVEG Board three years ago as the Victorian Director and have since appreciated the opportunity to deliver real and valid results for the industry," he said.

Bill said AUSVEG has gone from strength to strength over the years, with the organisation well-placed to continue its effective advocacy on important industry issues.

"Now that we have a company strategy in place, I am keen to address the ongoing issues facing our industry into 2018 and beyond. I am looking forward to working with our new National Public Affairs Manager who will build on our existing advocacy work in the new year," he said.

"We will continue developing the existing strong alignments with our state members in the advocacy space and working together to tackle the problems facing growers on a national scale."

CONTINUING ACHIEVEMENTS

Alongside the AUSVEG Board, CEO and staff, Bill is keen to capitalise on the successful launch of Hort Connections 2017 in partnership with the Produce Marketing Association Australia-New Zealand (PMA A-NZ), which attracted nearly 2,500 local and international delegates from the horticulture industry.

"AUSVEG is looking forward to building on that success when Hort Connections 2018 returns to Brisbane from 18-20 June. Nathan McIntyre and his team are working hard to strengthen collaboration across the industry and we are looking to partner with more industry co-hosts to develop another unified and valuable event to the industry," he said.

In addition to its advocacy role, AUSVEG will continue its productive work as an industry service provider, particularly in biosecurity and export development.

"Biosecurity has been a major challenge for our growers this year, particularly with the arrival of the tomato potato psyllid in Western Australia, and they are supported by the continued good work of AUSVEG Biosecurity Officers Jessica Lye, Callum Fletcher and Madeleine Quirk," Bill said.

"AUSVEG also has a strong export development program under Michael Coote and Andrea Lin. I have been fortunate to attend fresh produce trade shows in Indonesia and Singapore as part of the program and have witnessed the great work that they do in helping growers to increase their knowledge and awareness of how the export market works."

CHANGING ROLES

Bill also acknowledged the contributions of former Chairman Geoff Moar, who will remain on the AUSVEG Board.

"On behalf of the AUSVEG Board I would like to thank Geoff for his hard work and dedication to the industry during his time as AUSVEG Chairman. I look forward to working extensively with the wider vegetable and potato industries to continue Geoff's legacy and lead our organisation and the Australian vegetable and potato industries into the future," he said.

"The last 12 months have been an exciting period for AUSVEG, following our efforts to increase industry collaboration and work with the wider horticulture industry to provide effective services and representation for our growers.

"AUSVEG is looking forward to continuing to effectively represent Australian vegetable and potato growers in the year ahead. We have plenty of developments in the pipeline that we will roll out over the next 12 months and we're eager to continue working with the wider Australian horticulture and agriculture industry for the betterment of our growers."

INFO

For more information please contact AUSVEG at info@ausveg.com.au or 03 9882 0277.

Former AUSVEG Chairman Geoff Moar.

A TIME OF REFLECTION AND NEW BEGINNINGS

After four years as AUSVEG Chairman, New South Wales potato grower Geoff Moar has decided to step aside and pass on the baton to a new leader. While Geoff will remain on the AUSVEG Board, he spoke to Dimi Kyriakou about his greatest achievements during his time in the role.

As spring draws to a close and the weather heats up, it is arguably one of the best times of the year to visit a potato farm.

It's a time when Geoff Moar monitors his 100th potato crop with pride as he conducts one of many daily checks on the centre pivot irrigation system in place on his farm in southern New South Wales.

The potato crops are in full bloom and the luscious green leaves of the plants are a stark contrast to the rich sandy loam soils that are synonymous with the Riverina region near Oaklands. It is even more striking as the potato fields are interspersed between the dry gold fields of wheat, canola and lupin in the midst of harvest.

These healthy crops are the result of many months of hard work and balancing inputs, all the while overcoming an endless list of challenges along the way. Geoff is a champion of on-farm biosecurity and farm hygiene, as his property and machinery are immaculately clean.

These achievements are even more worthy of recognition considering that Geoff has spent the last four years juggling life on the farm with his work as AUSVEG Chairman. Following a Board Meeting on 13 November, Geoff decided not to nominate for re-election for the position, but he will continue to serve on the AUSVEG Board.

A CAREER OF HIGHLIGHTS

Geoff was part of the small group of vegetable and potato growers that formed AUSVEG, and he has witnessed the organisation develop and strengthen since its inception.

"I was involved in the Riverina Potato Growers Association and the New South Wales Farmers Association, and I was the last Chair of the Potato Growers of Australia. We then merged with the Australian Vegetable Growers Federation and formed AUSVEG. I have seen the organisation through its development," he said.

"It's important to note that my work with these industry associations and AUSVEG wouldn't have been possible without the support of my wife Lesley and son Shane, who look after the farm and the administration while I am away."

While he has witnessed plenty of milestones at AUSVEG during his four-year tenure, Geoff said his proudest achievement as Chairman was the rapid expansion of the AUSVEG National Convention, which eventually led to the development of Hort Connections 2017. The joint initiative between AUSVEG and the Produce Marketing Association of Australia-New Zealand (PMA A-NZ) attracted an array of co-hosts as well as around 2,500 attendees from the local and international horticulture industry to the Adelaide Convention Centre in May.

"The huge expansion of Hort Connections was a highlight. We took a risk particularly as other groups were competing for a similar venture and it will only become bigger and better in the future as the horticulture industry continues to work together."

NEXT STEPS

Geoff recognised the loyalty of the AUSVEG Board and staff, and thanked them for their support and expertise during his tenure as Chairman. He said the industry was in a healthier position as a result of their commitment and tireless work.

"The last four years have seen significant changes to both the organisation and the wider industry. It has been a rewarding and valuable experience to work with such a passionate and cohesive Board to help advance the causes of our growers in this time and I am happy to work with AUSVEG Chair Bill Bulmer and Deputy Chair Belinda Adams to continue representing our vegetable and potato growers," he said.

"The important thing is that the Directors stayed united during unsettled periods of time and David Addison was a great support and a tremendous backup as Deputy Chair during my tenure.

"We have also been able to retain good staff who are valued and do the right thing by the industry. This input is important and we need to have a united group of people to monitor decisions going forward.

"The time is ripe for AUSVEG and it is a golden opportunity for the group to progress as we are a well-organised peak industry body that is recognised as one of the best."

INFO

For more information please contact AUSVEG on 03 9882 0277 or info@ausveg.com.au.

URBAN BIOSECURITY COULD PROVIDE BENEFITS TO THE AUSTRALIAN POTATO INDUSTRY

In this edition of *The Front Line*, AUSVEG Biosecurity Officer Madeleine Quirk discusses the potential for urban biosecurity in Australia based on learnings from overseas counterparts. Madeleine's discussion is based on the findings of AUSVEG Biosecurity Officer Jessica Lye's recent study tour to the United States.

DEFINING URBAN BIOSECURITY

In Australia, biosecurity measures are implemented in production regions to prevent the establishment and spread of plant pests. Urban biosecurity differs in that it addresses the implications of urban population growth and potential pathways for pests entering the urban landscape.

Urban areas can be a year-round reservoir for pests, and they pose a particular threat to horticultural industries due to the diverse range of host crops and ornamentals that would not be found in production areas. In addition, major growing regions around Australia are commonly located within 200 kilometres of major city centres, which are also sites of major air and sea ports.

The strong link between pest transmission and international trade, combined with growing numbers of visitors moving through our airports each year, makes it important to review biosecurity measures currently in place in urban settings, as well as reflect on initiatives that may further bolster biosecurity in these zones.

LEARNING FROM THE UNITED STATES

In the United States, urban plant biosecurity is practiced widely and it is also largely associated with tertiary education institutions. Historically, US Land Grant Universities were established to encourage a shift from philosophical to practical education. This included a focus on agricultural studies.

Today, urban biosecurity aims to encourage public responsibility by training members of the public to monitor their own crops and ornamentals. Three important initiatives exist in the biosecurity space: The Master Gardeners program, the Urban Integrated Pest Management (IPM) Program and the First Detector Program.

Master Gardeners programs are facilitated by Land Grant Universities, which provide horticultural training to volunteers who then can educate the community about horticultural practices. The Master Gardeners often undergo 'First Detector' training, where they are trained to recognise and report exotic pests.

Urban IPM Programs address knowledge gaps in pesticide use among urban dwellers and train urban dwellers to understand pesticide labels and rotation of chemistry. They have been successfully established across major urban areas in the United States, such as at the University of California, where extension officers have been employed to maintain plant biosecurity in the urban landscape. In the instance of a suspect exotic detection, the Urban IPM Program trains urban dwellers to report suspect pests.

IS THERE SCOPE TO IMPLEMENT URBAN BIOSECURITY INITIATIVES IN AUSTRALIA?

Urban regions can mediate biosecurity threats by acting as 'buffer zones' for pest incursions, whereby pest populations are suppressed in urban areas for as long as possible before reaching agricultural regions (this is currently the case with Citrus Greening in Los Angeles).

Based on the success of urban biosecurity initiatives in the United States, it is reasonable to suggest that urban biosecurity programs could be implemented in major cities across Australia. This would target harmful plant pests at the source when incursions have originated in urban areas, which is not unlikely given that ports of entry are most commonly located within or close to the city limits.

Education and awareness may be the best tools towards mitigating biosecurity threats in metropolitan Australia, especially with increasing population density and globalisation.

AUSVEG VEGETABLE AND POTATO BIOSECURITY PROGRAM UPDATE

The Vegetable and Potato Biosecurity Program officers have been keeping busy within the potato biosecurity space.

Jessica Lye and Callum Fletcher have delivered biosecurity planning seminars and raised awareness of the tomato potato psyllid (TPP) at workshops in South Australia, Queensland and Victoria.

The officers are also developing a number of potato biosecurity resources. Jessica and Callum are assisting Plant Health Australia to develop a potato grower biosecurity manual, and they have also been developing the potato owner reimbursement cost framework under the Emergency Plant Pest Response Deed (EPPRD). The owner reimbursement cost is a scheme that provides potato growers with payments in the event of an incursion.

Additionally, Madeleine Quirk is in the process of developing fact sheets for potato pests and diseases. These fact sheets are expected to be released in 2018.

IS YOUR PROPERTY IN NEED OF A NEW FARM BIOSECURITY SIGN?

Would you like to receive a free biosecurity gate sign? All you need to do is send us a photo of you with your sign, once it is in place on your farm.

Email science@ausveg.com.au to express your interest.

INFO

Any unusual plant pest should be reported immediately to the relevant state or territory agriculture agency through the Exotic Plant Pest Hotline (1800 084 881).

For further information, contact AUSVEG National Manager – Science and Extension Dr Jessica Lye at jessica.lye@ausveg.com.au or AUSVEG Biosecurity Officer Madeleine Quirk on 03 9882 0277 or madeleine.quirk@ausveg.com.au.

The Vegetable and Potato Biosecurity Program is funded by the Plant Health Levy. This communication has been funded by Hort Innovation using the fresh potato research and development levy and contributions from the Australian Government.

Project number: PT15007

Hort Innovation Strategic levy investment | POTATO – FRESH FUND

CALENDAR

10-12 JANUARY 2018: POTATO EXPO

Where: Orlando, Florida, United States

What: Potato Expo is the largest conference and trade show for the potato industry in North America. It offers an educational program that covers the key issues facing the industry, networking opportunities with key decision makers and the latest products and services for potato production and distribution.

Further information: potato-expo.com

23-24 FEBRUARY 2018: INTERNATIONAL POTATO TECHNOLOGY EXPO

Where: Charlottetown, Prince Edward Island, Canada

What: The International Potato Technology Expo is one of the leading potato events in North America. Held every two years, the International Potato Technology Expo highlights the latest in potato technology – encompassing everything from seed to soil and growing to harvesting.

Further information: potatoexpo.ca

12 MAY 2018: CROOKWELL POTATO FESTIVAL

Where: Crookwell, New South Wales

What: Celebrating over 150 years of growing potatoes high on the Southern Tableland of New South Wales, the Crookwell Potato Festival is full of entertainment with cooking demonstrations and markets. Consumers can also learn from growers about how potatoes reach their table.

Further information: crookwellpotatofestival.com.au

18-20 JUNE 2018: HORT CONNECTIONS

Where: Brisbane Convention Centre, Queensland

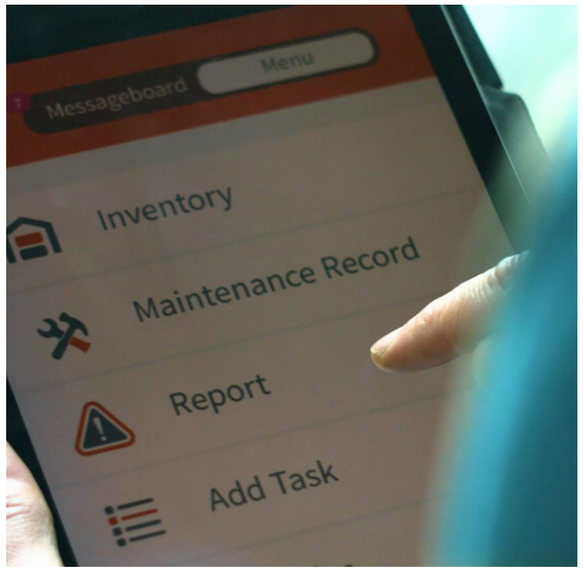
What: A joint initiative between AUSVEG and the Produce Marketing Association Australia-New Zealand (PMA A-NZ), Hort Connections is returning in 2018. A combination of the National Horticulture Convention and PMA Fresh Connections, this premier event of two of horticulture's leading organisations is set to deliver another world-class program and trade show to growers and whole-of-supply-chain companies alike.

Further information: hortconnections.com.au

Safe Ag Systems CEO Katy Landt.

STARTING THE FARM SAFETY CONVERSATION

Statistics of workplace fatalities on Australian farms are staggering, with around one person a week losing their life as a result of an accident. Safe Ag Systems is a business that is focused on lowering these figures through education and software solutions for farmers and growers. CEO Katy Landt spoke to *Potatoes Australia* about the concept and the importance of on-farm safety practices.



A near-miss on Katy Landt's family farm involving her father, who had a collision with an electricity pole, led to the creation of Safe Ag Systems.

Following the incident, Katy's mother Caroline Graham started to research the implications for their business if the outcome was worse, along with the ways to assist farmers and growers to create safe workplaces. Surprisingly, she found that farmers and growers fall under the same umbrella as every other business when it comes to workplace safety, regardless of the size of the operation. Given this, the penalties were quite severe as their farm was significantly lacking in safety procedures.

Farm safety is paramount but often taken for granted, and the statistics reflect its importance. As of 1 September, Australia had 45 fatalities in 2017 – which equates to one death per week as a result of an on-farm accident. While the agriculture industry employs only 2.6 per cent of the population, approximately 24 per cent of workplace deaths occur on-farm.

After conducting her research into workplace safety, Caroline found that most of the information available was not applicable to farming or it was unrealistic towards the industry. So, mother and daughter put their heads together and came up with the solution of Safe Ag Systems, which provides software for both desktop and mobile, and allows farmers and growers real-time access to their work health and safety (WHS) system.

THE IMPORTANCE OF SAFETY

Ms Landt described farm safety as incredibly important, and pointed to the changes over time which have seen it shift into greater focus in the agriculture industry.

"We have gone generations of what typically would be called 'using your common sense' but things change. For example, the types of machinery that we're dealing with and the pressure of productivity is increasing," she said.

"Also we have an ageing population in farming, so as much as they would never admit it, the reaction time is not quite as quick as it used to be, so we will find that most of the incidents are in the 65 and over age group.

"Safety is really important to get into the forefront of their minds."

Ms Landt said that taking safety seriously within a business depends on the type of operation.

"With corporate farmers, it's high up on their list and they understand they are obligated to do it; they're held responsible by their boards and corporations. But when you get down to the smaller operations (mum-and-dad farmers), there has never been anyone to hold them accountable," she said.

"Now, agriculture has become the focus industry for Safe Work Australia. It's too big of a risk not to – the penalties are huge. We have penalties up to $3 million nationally. To take it up a notch, Queensland has just voted in the ability to increase that penalty up to $10 million. I think we will take it seriously once we know how and why we need to do it."

Some of the biggest on-farm risks include quad bikes, livestock and machinery. Falls from tractors and misuse of or faulty rotational equipment can also be fatal.

GETTING INVOLVED

At a grower level, Safe Ag Systems designs software solutions so someone with a limited knowledge can get started on a trial.

The company uses desktop and mobile software which allows the user real-time access to their WHS management system, both in the office or while out in the field. It also allows the user to develop an emergency response plan as well as keep a machinery log. This streamlines and provides evidence to support the possession maintenance program.

"Just ask the question – if you have people that want to know about farm safety, we can deliver it," Ms Landt said.

In addition to the software, Safe Ag Systems runs 'Keep Safe. Keep Farming.' workshops across Australia and also conducts webinars on the subject.

"The first step towards meeting compliance is understanding why you need to do it, and having the realisation that it doesn't need to be hard," Ms Landt said.

"We simplify the terminology and map out a day or a year of what your operation looks like when you've got an active safety system, and these workshops are our forums to do that."

For Australia's potato and vegetable growers, Safe Ag Systems aims to offer a solution, education and resources for farm safety, including access to a WHS Manager.

"We have created a solution and a service. It's one thing to say 'here, do this and you'll be fine', or 'give it a go, start doing this and you've got something in place', but if they don't use it, it's not going to have the end result that we want, which is obviously increasing safety and decreasing that fatality number."

Looking ahead, Safe Ag Systems aims to help reduce the fatality rates in the agriculture industry and grow the company. It also has plans to share its knowledge globally.

"We've been getting enquiries from the United Kingdom already, seeking the same sort of solution. My number one rule around business growth is to keep it industry-specific, not to sway from agriculture," Ms Landt said.

"This is where our skillset lies and definitely where the problem needs solutions."

INFO

For more information, please visit safeagsystems.com.

Dr Mark Taylor from the James Hutton Institute. Images courtesy of Heather Briggs.

UK potato agronomist John Sarup.

UK RESEARCHERS DISCOVER HEAT-TOLERANT GENES IN POTATOES

There has been extensive research conducted in the United Kingdom which focuses on developing heat-resistant genes in potatoes. So far, there have been over 200 potato types screened in the search for a variant of the gene, which can protect potatoes from suffering heat stress. Heather Briggs spoke to Dr Mark Taylor from the James Hutton Institute and SPUD Agronomy's John Sarup about the research and its findings.

Potato breeders may have genetic markers to help them predict how a potato type will react to high temperatures within the next couple of years. This is thanks to research by Dr Mark Taylor, Plant Molecular Physiologist at the Scottish-based James Hutton Institute (JHI).

Dr Taylor has discovered a variant of the gene which encodes a heat-shock protein present in plants and animals, which can be turned on to protect cell machinery.

"The difference is that it is more readily switched on at high temperatures," he said.

"This will help us to find markers which enable us to predict heat tolerance and will become a useable marker for breeders within the next couple of years."

As a result, growers in countries with warm climates – including Australia, which can suffer from extreme heat – may benefit. Opportunities may also open up for the local seed industry to export to sub-tropical climates.

PROMISING NEWS FOR AUSTRALIA

Thanks to sunshine hours, water availability and ideal soils in the potato growing regions of Australia, yields of most varieties (both ware and processing) are good, according to John Sarup of SPUD Agronomy, who recently returned from a visit to the region. Additionally, yields are consistently above those expected in the United Kingdom.

However, he points out, success is very much dependent on irrigation – a very different scenario to northern Europe, where many potato crops are grown without irrigation.

"This could be a real opportunity to use water more efficiently – and a real benefit across parts of the world where water is such a necessary and valuable commodity, like Australia."

The specialist potato agronomist notes that when the weather is too warm, growth stops and plants can become stressed. This makes them more vulnerable to fungal attack from the likes of *Alternaria* – which can cause yield loss if it occurs early in the season – as well as net necrosis of tubers and early dying complex diseases including Verticillium wilt. This results in premature plant senescence which again affects yields and quality.

The ability to cope with higher temperatures may potentially provide growers with an opportunity to use water more efficiently – as these heat-tolerant potatoes may not need irrigating daily to keep them alive, they will continue to grow rather than just survive.

INITIAL FINDINGS

Dr Taylor's starting point in the search for this gene variant which helps prevent heat-shock was to use potato types which are already performing better under heat stress.

However, he cautions, there is significant variation in response to heat stress between different cultivars.

Discovering which genes confer this type of resilience had not been a real focus of academic attention in the past, but recent leaps in the understanding of genomics, genetics and crop science have made it possible to screen the genetics of over 200 potato types in the search for this one variant of the gene.

"Once we had established that the expression (turning on) of the gene named A2 *HSc70* provided a temperature-dependent protective effect, we suspected this could also protect tuber formation and yield at a moderately elevated temperature," Dr Taylor said.

"We did some work in a controlled environment chamber and when the temperature was 20 degrees Celsius we found yield was not significantly different between the wild type and any of the three transgenic lines tested (these are plants modified by genetic engineering techniques). However when we turned the temperature up to 28 degrees, we found the Desiree wild-type suffered a fall in yield of 75 per cent compared to what we achieved at 22 degrees."

FURTHER RESULTS

Dr Taylor reveals that although yield reductions were also observed in transgenic lines over-expressing *HSc70* at higher temperatures, these were not as extensive as those seen in the Desiree. Dry weight yield values were also found to follow the same pattern, with the transgenic lines proving to be better able to cope with these elevated temperatures.

When the maximum day temperature was 20 degrees, two of the three transgenic lines exhibited no significant difference in tuber yield between the over-expressing lines and wild type control, while line 48 exhibited a significant increase in both fresh and dry tuber weight. In contrast, at 28 degrees, tuber yield was significantly higher ($p < 0.05$) in all the transgenic lines relative to the controls on both a fresh weight and dry weight basis (see Table 1).

The next stage will be to learn whether these variants are present in any commercial potato types, which would allow breeders to screen and predict yield in a real-life situation.

"Expression of the natural version of *HSc70* occurs in many diploid (a potato with two copies of each chromosome – most commercial varieties are tetraploid, with four copies) potato types we have tested and results in enhanced *HSc70* expression at elevated temperature, leading to improved yield under moderately elevated temperatures.

"Therefore, we can conclude that *HSc70* expression level is a significant factor influencing yield stability when moderately elevated temperatures occur. These variants will be able to be bred in the future using conventional introgression (non-genetically modified breeding methods) or molecular breeding approaches."

TABLE 1: WEIGHT OF TUBERS FROM SINGLE STEM PLANTS OF A2 HSC70 EXPRESSING LINES.

TRAIT MEASURED	LINE 33 (GRAMS)	LINE 48 (GRAMS)	LINE 56 (GRAMS)	WT (GRAMS)
FW AT 20°C	11.9	4.7	11.2	10.6
FW AT 28°C	15.3	19.7	17.6	8.8
DW AT 20°C	1.89	2.93	1.7	1.96
DW AT 28°C	2.7	4.80	2.90	1.39

Data is presented as mean. WT: Wild type (the untransformed control), FW: Fresh weight, DW: Dry weight.

INFO

For more information, please contact Dr Mark Taylor at mark.taylor@hutton.ac.uk or visit hutton.ac.uk.

This communication has been funded by Hort Innovation using the fresh potato research and development levy and contributions from the Australian Government.

Project Number: PT15007

Hort Innovation Strategic levy investment | POTATO – FRESH FUND

Tomato potato psyllid. Image courtesy of Plant & Food Research New Zealand.

UPDATE ON NATIONAL TOMATO POTATO PSYLLID COORDINATOR ACTIVITIES

The strategic levy investment MT16018 – *Tomato potato psyllid (TPP) National Program Coordinator* is well underway, with a Steering Committee for the project established. National TPP Coordinator Alan Nankivell has also hit the ground running, visiting Western Australian potato industry members and listening to their TPP stories. Alan reports on his latest project activities.

At the time of writing this column, I have been in the role of National TPP Coordinator for four weeks. This is part of the project *Tomato potato psyllid (TPP) National Program Coordinator* (MT16018), a strategic levy investment under the Hort Innovation Vegetable, Fresh Potato and Potato Processing Funds.

So what have I been doing during the past month? Firstly, we have established a Steering Committee with the following members: Dr Nigel Crump (ViCSPA), Callum Fletcher (AUSVEG), Geoff Raven (PIRSA), Michael Hicks (Snack Brands Australia), Simon Moltoni (WA Potatoes), Troy Cukrov (Supafresh) and myself, with AUSVEG National Manager – Science and Extension Dr Jessica Lye as Chair. We had a teleconference on Tuesday 24 October and discussed the two primary tasks for the project, which are:

1. To develop a national action plan.
2. To recommend TPP R&D priorities.

The committee will meet four times a year. One of the meetings will be face-to-face, which is scheduled for late January 2018.

VISITING THE WEST

The second task was to visit Western Australia and meet with key stakeholders to listen and learn from their experience of TPP. Clearly as the incursion unfolded, TPP was identified to be widely spread and it was recognised early on that it was not going to be eradicated. Plans were established under the Emergency Plant Pest Response Deed (EPPRD) to develop a Transition to Management (T2M) plan. The T2M plan was implemented in September 2017 for completion in May 2018.

Many thanks to Simon Moltoni from WA Potatoes, John Shannon and the team from vegetablesWA, Matthew Lunn (Nursery and Garden Industry Western Australia), Troy Cukrov (Supafresh), Carole Fudge (Benera Nurseries) and Rohan Prince and the Western Australian Department of Primary Industries and Regional Development (DRIRD) team for taking the time to share their stories.

The lessons learnt have provided a sound foundation for the tasks I have to achieve over the next three years.

TRANSITION TO MANAGEMENT

The themes of the T2M plan are:

1. Surveillance around the 15 local government areas of Perth, specifically looking for the presence of *Candidatus* Liberibacter Solanacaerum (CLso) – the bacterium which causes the zebra chip complex in potatoes – in TPP populations.
2. Reviewing market access and trade requirements.
3. Managing TPP by developing Enterprise Management Plans in consultation with industry stakeholders. Gavin Foord (Foord Systems) is leading the development of these plans.
4. Undertaking research into the safest methods of TPP management as well as aiming for a nationally endorsed diagnostic protocol for CLso.
5. Engaging stakeholders, both industry and government, in the progress and decision making along the way. A Steering Committee for these activities was formed during the first meeting held on Friday 24 November.

FURTHER DETAILS

While in Western Australia I had the opportunity to get to know Gavin Foord, of Foord Solutions, who is contracted under the T2M plan to develop Enterprise Management Plans for crops affected by TPP. These include tomato, chilli, capsicum, eggplant, tamarillo and sweetpotato.

As a member of the T2M Steering Committee I will report the progress with the plan in future editions of *Potatoes Australia*.

As part of the T2M plan, other state jurisdictions (Queensland, Victoria, New South Wales, Tasmania and South Australia) are all undertaking surveillance programs to determine if TPP is present. I will provide updates as the findings from the surveillance become available.

Finally, I will undertake a study trip to New Zealand in December to examine the management practices growers have put in place to manage the psyllids and particularly the CLso in potatoes.

I will be visiting growers and processors in the North and South Island as well as several research facilities and industry bodies to learn from their experience. If you have any specific "growing with TPP/CLso" questions that you would like me to investigate, please contact me on the details provided below. I will be reporting the outcomes of my trip in my next column.

INFO

For more information, please contact National TPP Coordinator Alan Nankivell at alan.nankivell@ausveg.com.au.

This project has been funded by the fresh potato, potato processing and vegetable research and development levies and contributions from the Australian Government.

Project Number: MT16018

Hort Innovation

PLAN TO MANAGE TOMATO POTATO PSYLLID

The tomato potato psyllid (*Bactericera cockerelli*) was detected in Western Australia for the first time in February 2017. This prompted a comprehensive biosecurity response by industry and government to minimise the impact of the pest on the state's businesses. The Western Australian Department of Primary Industries and Regional Development provides an update to this response.

Western Australia is leading the implementation of a Transition to Management (T2M) plan to develop the science, biosecurity and business systems to support growers and industry manage tomato potato psyllid (TPP; *Bactericera cockerelli*).

The T2M plan aims to improve the capacity of growers and industry to manage TPP. It will build confidence around the status of the bacterium *Candidatus* Liberibacter solanacearum (CLso), which is associated with TPP and causes zebra chip disease in potatoes.

Transitioning to management follows national agreement that TPP cannot be eradicated and efforts should focus on management.

WHAT'S INCLUDED IN THE PLAN?

The T2M plan runs from September 2017 until May 2018 and includes:

- Scientific research and development to improve our understanding of TPP, its biology and options for control.
- National and Enterprise Management Plans to help manage TPP on properties and throughout the supply chain.
- Targeted surveillance for TPP/CLso complex.
- Market access and trade.

The Western Australian Department of Primary Industries and Regional Development (DPIRD) is undertaking a range of research and development activities to improve our scientific understanding of TPP and increase control options available to growers.

A literature review will also be completed to identify the best-available research on TPP/CLso from Australia and overseas, and help guide future research investment.

PRE-HARVEST TRIALS

Pre-harvest treatments help maximise the quality of product intended for markets, and are an important part of managing TPP along the entire supply chain. Pre-harvest trials will evaluate the effectiveness of using chemical and biological controls for TPP.

Insecticide trials at the department's glasshouse facilities aim to identify effective chemicals for use in tomato, potato and capsicum crops. Several insecticides will be assessed, including insecticides already registered for use in tomato, potato and capsicum crops, but not currently registered for use on TPP.

The department has also commenced a joint trial with Biological Services to evaluate the effectiveness of three different insect species against TPP. Brown lacewings, ladybirds and a predatory mirid bug will be trialled in tomato, capsicum and chilli crops.

POST-HARVEST DISINFESTATION TRIALS

Disinfestation of capsicum, chilli and tomato is required for interstate and international market access. The department is undertaking a small-scale chemical effectiveness trial for post-harvest disinfestation of these crops.

Research by the department will feed into the national TPP research and development agenda.

ENTERPRISE MANAGEMENT PLANS

An essential component of the T2M plan is the development, and implementation, of Enterprise Management Plans for affected industries. These plans will outline measures to effectively control TPP and demonstrate industry commitment to minimising its spread and impact. Enterprise Management Plans will be critical in supporting ongoing efforts to renew and maintain market access, and underpin certification and assurance schemes.

Assisted by the Enterprise Management Plan Coordinator, each industry will develop complete Enterprise Management Plans addressing their entire supply chain and will include:

- Understanding pest and pathogen biology and their identification.
- Identification of risk pathways.
- Application of control and management options.
- Biosecurity awareness and implementation, e.g. signage, surveillance and sanitation.
- Post farm-gate management.

SURVEILLANCE, MARKET ACCESS AND TRADE

At the time of writing, the DPIRD was in the final stages of its spring 2017 TPP surveillance program. 'Sticky traps' were installed on commercial and non-commercial properties in and around the Perth metropolitan areas with known populations of TPP.

The department had great support from the Western Australian community with more than 1,000 properties registering to host a 'sticky trap' during the surveillance period.

Each trap collected is inspected by department entomologists and any TPP collected were tested for CLso. About 4,000 traps will be processed through the department's diagnostic laboratories. At the time of writing, there have been no detections of CLso in Western Australia. A second round of surveillance will be undertaken in early 2018.

Other states are also required to develop surveillance plans for the pest in accordance with national and international standards.

The DPIRD continues to work on mitigating the risk of spread of TPP through appropriate movement controls. This includes developing nationally harmonised protocols for interstate trade and maintaining confidence of international partners that TPP is being effectively managed in Australia.

INFO

For more information, please contact Western Australia's TPP Project Coordinator Ian Wilkinson on 08 9780 6278 or ianstewart.wilkinson@dpird.wa.gov.au or Foord Systems Enterprise Management Plan Coordinator Gavin Foord on 0435 018 189 or gfoord@westnet.com.au.

More information, including signs and symptoms of TPP and control options, is available at agric.wa.gov.au/tpp.

This communication has been funded by Hort Innovation using the fresh potato research and development levy and contributions from the Australian Government.

Project Number: PT15007

Hort Innovation Strategic levy investment | POTATO – FRESH FUND

Photography by Andrew Beveridge.

YOUNG GUN WITH A BRIGHT FUTURE

NAME: Ben Walter
AGE: 25
LOCATION: Virginia, South Australia
WORKS: Thomas Foods International
GROWS: Potatoes (for the wash market and various supermarket chains)

HOW DID YOU FIRST BECOME INVOLVED IN THE POTATO INDUSTRY?

When I was hired in 2015 by Thomas Foods International, my previous work had been in citrus and beneficial insects so it was quite a change.

WHAT DOES YOUR ROLE AS A FIELD TECHNICIAN AT THOMAS FOODS INVOLVE, AND WHAT ARE YOUR RESPONSIBILITIES?

It involves crop monitoring (pests, diseases, yield and quality), test collections (petiole, soil and virus testing), agchem and fertiliser management on all the crops and water use monitoring.

WHAT DO YOU ENJOY MOST ABOUT WORKING IN THE POTATO INDUSTRY AND HOW DO YOU MAINTAIN YOUR ENTHUSIASM?

Each week there is a different problem to deal with, which helps with variety on the job. Also as corny as it sounds, there's always something new to learn in the industry.

WHAT ARE THE BIGGEST CHALLENGES YOU FACE WORKING IN THE INDUSTRY, AND HOW DO YOU OVERCOME THEM?

I would say at first it was the fact I'm quite young in industry standards, so maybe there was a stigma towards that. I would also say coming into the industry with little to no knowledge about the wash potato industry.

WHERE DO YOU RECEIVE YOUR ON-FARM PRACTICE ADVICE AND INFORMATION FROM?

From a variety of different places. Sometimes from more experienced people from the wash/packing shed, along with experienced on-farm workers.

IN YOUR OPINION, WHAT AREAS OF RESEARCH ARE IMPORTANT TO THE INDUSTRY AND YOUR BUSINESS?

At the moment, we are implementing an Integrated Pest Management (IPM) program on most of our crops. This has enabled us to step away from pesticides and move towards beneficial insect control of pests within the crop. I believe some of the research going into microbial development within the soil is also important to our business at the moment.

WHAT NEW INNOVATIONS, RESEARCH AND/OR PRACTICES HAS YOUR BUSINESS IMPLEMENTED RECENTLY?

As I mentioned, we have implemented an IPM program. We are also looking into beneficial microbial growth within the soil and better water management systems for our pivots in the Mallee.

WHERE DO YOU SEE OPPORTUNITIES FOR GROWTH IN THE AUSTRALIAN POTATO INDUSTRY?

I could definitely see opportunities to grow the washing export market and the seed industry. I believe that the seed industry is a little behind the wash potato industry in terms of quality standards. If seed prices were more dependent on seed quality then I think the industry would grow, and the opportunity to make more money for your seed would grow also.

In terms of the wash industry, there is more product being sent overseas (mostly Asia), and I believe that is where the wash potato industry needs more of its product going. Asia is a massive market if you can provide a product suitable for long-term freight.

> I could definitely see opportunities to grow the washing export market and the seed industry... Asia is a massive market if you can provide a product suitable for long-term freight.

WHERE DO YOU SEE YOURSELF IN FIVE YEARS?

Hopefully I'll still be at Thomas Foods, but with plenty more experience under my belt. I'm encouraged with where the company is going, and I'm keen to see some of the new ideas within the company come to fruition.

HOW DO YOU THINK MORE YOUNG PEOPLE COULD BE ENCOURAGED TO STUDY AND TAKE UP JOBS IN THE POTATO INDUSTRY?

I think through earlier education and marketing. At school we could try to relate some of the curriculum to real world applications, such as in the potato industry.

Masterclass in Horticultural Business participants. Images courtesy of Hort Innovation.

Masterclass participant Marcela Badim Rocha-Lima.

FOSTERING LEADERSHIP IN THE INDUSTRY

Hort Frontiers is a strategic partnership initiative developed by Hort Innovation that facilitates collaborative, cross-horticulture projects. *Potatoes Australia* spoke to Hort Innovation Relationship Manager – Strategic Co-Investment Sharyn Casey about the Leadership Fund, one of the seven funds within Hort Frontiers, and how it will benefit the future of the horticulture industry.

A long-term focus and a desire to solve major and often complex challenges to secure the future of the Australian horticulture industry led to the establishment of Hort Frontiers – a strategic partnership initiative developed by Hort Innovation which incorporates seven funds that facilitate collaborative projects from a range of co-investors.

After extensive consultation with the horticultural industry around the key areas for cross-industry investment, seven funds were announced which focused on advanced production systems, Asian markets, fruit fly, green cities, pollination, leadership, and health, nutrition and food safety.

The Hort Frontiers – Leadership Fund was developed to address a vital gap in the industry. The fund is targeted at current and existing employees across the horticultural sector and aims to develop leaders in the industry to ultimately increase Australian horticulture's competitiveness at the farm gate.

Hort Innovation Relationship Manager – Strategic Co-Investment Sharyn Casey said people are the key to the Leadership Fund and its success.

"This fund is about investing in people so that they can build their leadership skills and as a result, the industry will become more competitive, innovative, resilient and profitable," she said.

"We're focused on supporting people at all stages of their career to build their leadership skills."

SUPPORTING CAREERS IN HORTICULTURE

There are several Leadership Fund projects underway for industry members.

One project focuses on attracting new people to the horticultural sector in partnership with specialist recruitment company Rimfire Resources. Final year university students of any discipline are invited to apply for an internship within a horticultural business for up to 12 weeks, and they receive a scholarship to undertake their internship, which will ideally transition to full-time employment.

Hort Innovation has also partnered with the Winston Churchill Memorial Trust to provide three scholarships per year to allow people the opportunity to travel overseas to a country of their choice and investigate a research topic which must have cross-sectoral benefits to the horticulture industry. Applications for this scholarship open in February 2018.

Another project within the Hort Innovation Leadership Fund is the Masterclass in Horticultural Business, which is supported by the University of Tasmania, Lincoln University in New Zealand and the Wageningen Research Academy in the Netherlands. The Masterclass runs for nine months and includes three face-to-face components as well as online learning.

Other initiatives underway include an alumni program for industry members who complete leadership programs in the horticulture industry (such as the Growing Leaders program, a strategic levy investment under the Hort Innovation Vegetable Fund) or any individual industry leadership program. There are also scholarships to assist women in the industry to build their leadership skills, which is developed in conjunction with Women and Leadership Australia.

"We also have a scholarship program for PhD students run by the University of Tasmania, but it is open to PhD candidates across Australia who are enrolled at any university," Ms Casey said.

"The aim is to offer a competitive stipend of up to $40,000 per year, and we want to attract PhD candidates from disciplines who may have never considered a research career in horticulture before. The PhD candidates need to take on a topic that's got cross-sectoral benefit; something that is quite transformational."

INDUSTRY BENEFITS

Ms Casey said that the graduate engagement programs can allow the industry to attract new employees and students who may not have considered a career in horticulture before.

"It will help the industry overcome a skills shortage and it will help businesses that are keen to expand," she said.

Ms Casey added that the Masterclass in Horticultural Business has tremendous potential to help the potato industry by enabling individual growers to participate in a program that boosts their business skills.

"They'll be able to take that back to the farm and either enhance their own business or start a new business that they've been keen to start, but perhaps just needed a few more business skills to do so."

GETTING INVOLVED

Hort Innovation is constantly on the lookout for project ideas, and Ms Casey encourages growers and industry members to submit any ideas through the Concept Proposal Form on the Hort Innovation website.

"Growers know what they need in terms of leadership development," she said.

"I'd encourage anybody to fill the form out. It doesn't have to be long and detailed; it just gives us an idea of what is currently missing in the leadership landscape. And that's what we're looking for."

INFO

To submit an idea for a future project, visit Hort Innovation's Concept Proposal Form at horticulture.com.au/concept-proposal-form. *Potatoes Australia* will profile each Hort Frontiers Fund in further detail in future editions of the magazine.

For more information, please visit horticulture.com.au or contact Sharyn Casey on 02 8295 2379 or sharyn.casey@horticulture.com.au.

These projects have been funded by the Hort Frontiers Leadership Fund, part of the Hort Frontiers strategic partnership initiative developed by Hort Innovation, with funding from a range of co-investors and contributions from the Australian Government.

hort frontiers Strategic partnership initiative | LEADERSHIP FUND

Tasmanian Institute of Agriculture (TIA) PhD candidate Sabine Tanios is investigating the issue of potato greening. Image courtesy of TIA.

TASMANIAN PHD STUDENT DELVES INTO POTATO GREENING

Potato greening is an issue that affects all aspects of the industry, from production through to the supply chain. Tasmanian Institute of Agriculture PhD student Sabine Tanios is currently conducting a research project to uncover the major risk factors that affect greening in potatoes, and understand the genetics behind it. She spoke to *Potatoes Australia* about her project.

Despite being safe for human consumption, potatoes with a shade of green are causing losses in the field, in the packing shed and ultimately at the point of sale.

Potato greening is caused when a potato is exposed to light – this can occur over just a few days. Over this time it starts to accumulate chlorophyll, which is a photosynthetic pigment. It doesn't pose any harm but it can cause a green colour on the tuber surface and consequently lead consumers to throw the potato away.

Tasmanian Institute of Agriculture PhD student Sabine Tanios is currently contributing to knowledge about potato greening. Her wide-ranging research project into the problem is being conducted in collaboration with Daly Gourmet Potatoes in Tasmania, Zerella Fresh in South Australia and Woolworths.

PROJECT OBJECTIVES

There are a number of components to Sabine's project, with the aim to reduce losses caused by greening in the field and post-harvest stages.

> We've found that blue light can cause much higher greening than others so we're trying to work on controlling the type (of light) that you can use in the supermarket.

"We are working in the field to optimise the nitrogen levels because we know that nitrogen can impact the level of greening in potato during the post-harvest stages," Sabine said.

The second component is aiming to understand the genetic basis of greening and trying to identify candidate genes involved in the process.

Sabine's project has so far screened a wide range of cultivars and identified the key light wavelengths which are detrimental to tuber greening.

"Different wavelengths can impact greening in different ways. Some wavelengths can speed up the process and some can reduce the length of the process," she explained.

"We've found that blue light can cause much higher greening than others so we're trying to work on controlling the type (of light) that you can use in the supermarket."

FURTHER FINDINGS

Sabine and her research team also checked the effect of potato maturity levels on greening incidence.

"We found how maturity can affect greening; therefore, the time of plant desiccation and storage duration can affect greening susceptibility," she said.

"I'm also working on the physiology behind the greening so we have screened a high number of varieties – we've found some are resistant and some are more susceptible, so I'm trying to understand what can cause these differences. We found that some potato skin properties play a role in the susceptibility to greening."

GROWER ADVICE

Sabine explained what growers can do to minimise the risk of potato greening at the field level.

"You can reduce in-field greening by optimising the agronomic practices, such as cultivar choice, selection of optimum planting depth, sufficient hilling during the growing season and improved irrigation practices to reduce soil erosion.

"Greening can really be controlled by small practices, and we are hoping to get those into frame."

INFO

For more information, please contact sabine.tanios@utas.edu.au.

This work was supported by the Australian Research Council's Industrial Transformation Training Centres scheme (project IC140100024) and in-kind support from the Tasmanian Institute of Agriculture, a joint venture of the University of Tasmania and the Tasmanian Government.

This communication has been funded by Hort Innovation using the fresh potato research and development levy and contributions from the Australian Government.

Project Number: PT15007

Hort Innovation Strategic levy investment | POTATO – FRESH FUND

MANAGING BLACK DOT IN POTATOES

Black dot is a fungal disease caused by the pathogen *Colletotrichum coccodes*. It is found in all Australian states and plants can become susceptible to the disease when they are weakened or stressed by events such as fluctuations in temperature. Syngenta Technical Services Lead Scott Mathew answers some commonly asked questions about black dot.

The temperamental spring weather has put a lot of stress on plants. For example, in the Mallee and Riverland regions of South Australia, it was 30 degrees Celsius one day and would fall to 12 degrees Celsius the next. This brings to mind some of the questions I get asked around managing black dot.

Is black dot seed-borne or soil-borne?
Black dot is generally introduced into soil by infected seed pieces or tubers, however once introduced it will remain there for years, surviving in the form of sclerotia on and within the tubers, and also in plant debris in the field and on host weeds. Under the right growing conditions, the black dot sclerotia produces masses of spores that are readily moved within and between paddocks as the spores are easily carried by air currents, windblown soil particles, splashing rain and irrigation water.

When are the tubers susceptible to infection?
Infection of the tubers can occur at all stages of development, but formation of sclerotia on the tuber surface is more prevalent late in the season when soil temperatures are at their highest.

When I desiccate my potato crop there does not appear to be a high level of black dot infection, but leaving them in the ground for a period of time appears to make the tuber infection worse. Is this the case?
After you desiccate the potato plant, the spores present in the foliage are released by decaying plant material and progress downward through the soil to infect the tubers, which increases the black dot infection level.

What weeds host black dot?
Black dot has numerous host plants such as solanacea crops, fat hen, black nightshade, skeleton weed, heliotrope and legumes.

I have heard you use the term "weak pathogen" in regards to black dot. What does this mean?
Black dot is considered a 'weak' plant pathogen, meaning that the potato plant has to be weakened or stressed by something in order to be susceptible to the disease.

What are some of the stresses that can increase the risk of black dot infection?
There are many stress factors that can increase the risk of infection. These include waterlogging, wind damage and mechanical damage of poor nutrition status. All of these factors can increase the risk of infection in potato plants.

What are some of the ways I can try to manage black dot infections?

1. Increasing the interval between potato crops and weed hosts reduces soil-borne inoculum. The most recent recommendations suggest cropping for five years with non-host plants before planting potatoes in a previously infected area.
2. Potato seed with visible infections of black dot should be avoided.
3. Reducing plant stress is an important management tactic for black dot.
4. A balanced plant nutrition program is important to reduce the effects of black dot on plant growth.
5. Over-irrigation compaction should be avoided. Not only does water-saturated soil favour spread and development of *Colletotrichum coccodes*, but oxygen is displaced in the soil, which is needed for oxidative respiration by roots.
6. Protecting young plants from blowing sand, which may increase the incidence of foliar infections, should be avoided.
7. As black dot is a weak pathogen (it needs some form of damage/stress to successfully infect), the management of other diseases is important in managing black dot.

INFO

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

The R&D content for this article has been provided to *Potatoes Australia* to educate Australian potato growers about the most relevant and practical information on crop protection technologies and their on-farm applications.

This communication has been funded by Hort Innovation using the fresh potato research and development levy and contributions from the Australian Government.

Project Number: PT15007

Hort Innovation Strategic levy investment | POTATO – FRESH FUND

TIPS FOR PROTECTING VULNERABLE FARM WORKERS

The treatment of farm workers in the horticulture industry is increasingly in the public spotlight. It is essential that growers follow fair and proper employment practices, particularly for workers identified as vulnerable to exploitation, as Growcom Workplace Relations Advisor Annabel Hutch explains.

Workers considered by the Fair Work Ombudsman (FWO) to be highly vulnerable to exploitation within the horticulture industry include people from non-English speaking backgrounds, or those who come from places where there are strong cultural differences to Australia, those on work visas, and younger people.

There are a number of positive measures vegetable and potato farm business owners can implement to minimise risks to potentially vulnerable farm workers. In particular, employers should consider the following actions:

- For non-English speaking employees and visa holders, additional management efforts are necessary compared with workers who speak English as their first language. Take steps to ensure these employees fully understand their workplace health and safety obligations and their employment rights and obligations. For example, you can provide fact sheets in their native language and make greater use of videos, pictures or demonstrations during induction and training to help overcome language barriers.
- Employees who have significant cultural differences may be vulnerable if there is a lack of sensitivity and awareness to them in the workplace. Employers should familiarise themselves with the cultural practices, mannerisms and behaviours of those they employ to better understand how they may react to certain scenarios. Encourage sensitivity and patience within the workplace towards employees from diverse cultures.
- Young employees are also more vulnerable to exploitation. Ensure you meet your obligations to junior employees and understand the differences between them and adult employees.

UNDERSTANDING FAIR WORK LAWS

The Fair Farms Initiative, coordinated by Growcom, is an important vehicle to help ensure that both horticulture employers and workers understand their obligations and entitlements under Australia's Fair Work laws. Through the initiative, growers in all states can access seminars and support, in particular assistance to work through the workplace relations module of Growcom's Hort360 program. This is a comprehensive process for farm business owners to review their employment practices and check that their systems and procedures fully comply with all legal requirements. From 2018, growers will also have the opportunity to have their fair practices certified through Freshcare.

Employers should also be aware of recent changes to employment laws, made through the *Fair Work Amendment (Protecting Vulnerable Workers) Bill 2017* which came into effect on 15 September.

The Fair Work Ombudsman's evidence-gathering powers have been strengthened and other changes include:

- Penalties for providing Fair Work inspectors with false or misleading information or records have tripled and new prohibitions for hindering or obstructing inspectors have been introduced.
- Maximum penalties for record-keeping and pay slip breaches have doubled to $12,600 per contravention for individuals and $63,000 for companies. The maximum penalty for false or misleading employment records has tripled.
- Employers who do not meet record keeping or pay slip obligations and cannot show a reasonable excuse, will need to disprove wage claims made in a court.
- The prohibitions against unreasonably requiring employees to make payments, so-called 'cashback' arrangements, have been strengthened and extended to prospective employees.
- Certain franchisors and holding companies are now responsible for underpayments by their franchisees or subsidiaries where they knew, or reasonably ought to have known, about the contraventions and failed to take reasonable steps to prevent them.
- A new category of serious contraventions has been introduced. Penalties are now 10 times higher where employers knowingly contravene the law and their actions are part of a systematic pattern of contravening conduct. In such cases, maximum penalties of $630,000 and $126,000 per contravention could apply to corporations and individuals respectively.

INFO

To register your interest in a Fair Farms seminar or Hort360 workplace relations risk assessment for your business, contact Annabel Hutch at Growcom on 07 3620 3844 or ahutch@growcom.com.au.

The Fair Farms Initiative is delivered by Growcom in partnership with Freshcare and other industry groups. It is supported with funds from the Fair Work Ombudsman community engagement grants program.

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Hort Innovation Strategic levy investment | POTATO – FRESH FUND

Photography by Tanya Ewen.

CREATING A "FIELD OF DREAMS" IN THE POTATO INDUSTRY

As a fresh potato Strategic Investment Advisory Panel member, Director of ViCSPA and Dowling AGRITech General Manager, Ben Dowling is a busy man who is passionate about the Australian potato industry. In this edition of *Potatoes Australia*, Ben shares his views with Michelle De'Lisle and outlines the on-farm challenges he faces, plus his thoughts on the future of the industry.

From humble beginnings as a mini-tuber producer for the Department of Agriculture in New South Wales to being at the helm of Australia's biggest supplier of seed potatoes, Ben Dowling has enjoyed a successful career in the potato industry.

In 1997, as Agronomy Manager for global mini-tuber producer Technico, Ben relocated to Mount Gambier in the south-eastern corner of South Australia where he established a seed production base. Just under 10 years later, the company moved overseas and Ben made the decision to buy the Mt Gambier business – and Dowling AGRITech was born.

Today, Dowling AGRITech has partnered with Eurogrow, a seed potato business in New Zealand, and this season it will supply over 9,500 tonnes of certified seed from over 280 hectares of crop. The business has early generation seed growers in Tasmania and Kangaroo Island, and customers in all eastern states from the Atherton Tablelands in far-north Queensland to Warrnambool in southern Victoria, and all of Australia's potato growing districts in between.

A small amount of seed will be exported to Vietnam, Thailand and Indonesia (if market access is finalised for Indonesia). The business also has its own modern large-scale seed grading facility, including a cool storage complex with four full-time staff and up to 20 casual employees working during the peak harvesting and grading periods.

OUTLINING PRIORITIES

In addition to his day-to-day duties in the business, Ben is a member of the fresh potato Strategic Investment Advisory Panel (SIAP). Each SIAP has been established to provide strategic investment advice to Hort Innovation, and the panel meets twice a year (or as needed) so that industry members such as Ben can add to the discussion on what their priorities are for research and development across the potato industry.

"We're trying to provide that hands-on experience, to give direction on how the R&D funds are spent," he explains.

As a current SIAP member, Ben says that the threat of disease is a crucial issue affecting the potato industry.

"The challenges diseases pose is a big one, so we've been doing a lot of good work on soil health over the years and we've got to continue to do that. We've got world-class testing procedures with PreDicta Pt but we can add to all that with further investigations on what contributes to soil health, for example why are some soils suppressive to powdery scab?" he says.

"On top of that, we've got to look at the health of the crop above the soil; that is, the virus and insect pests that are prone to attacking the crop. We need to prepare the industry in terms of crop scouting capacity and Integrated Pest Management approaches."

Additionally, as a Director of ViCSPA – one of Australia's seed potato certification agencies – Ben provides input from a seed grower's perspective.

"We're strong believers in the certification process. I think ViCSPA has been strengthened over the last 10 years and has made enormous gains in the whole credibility of the certification process," Ben says.

"I think we're getting strong interstate recognition for that credibility and that's helping us to move our certified seed interstate, which is really key to our business. If state borders close, we wouldn't exist – and neither would potato growing in the northern states. They have to be able to get their seed from southern seed producing areas and we have to have a good, credible system of certification to support that interstate movement."

OVERCOMING CHALLENGES

There are two main challenges for Ben and his business: Biological and economic.

"The biological challenges are viruses and disease. Just recently we've had two exotic pests and diseases in tomato potato psyllid (TPP) and *Dickeya dianthicola* enter Australia that we want to prepare ourselves for. They're not here yet in our location but they are in Australia, so we've got to assume it's a matter of when they arrive. We've got our challenges from that point of view," Ben says.

"There are also economic challenges. Australia is a high-cost economy. Our wages are high, the equipment we use is very costly by world standards and we've got very expensive electricity prices so we've just got to keep improving productivity and do more with less to stay competitive."

As for biosecurity practices, crop scouting is on top of the list at Dowling AGRITech and this is followed by Integrated Pest Management crop protection programs.

"We put a lot of emphasis on crop scouting – we walk our crops on a weekly basis and we keep trying to increase our scouting skills," Ben explains.

"This season we're going to introduce a monitoring program and we'll have sticky traps around the crops that we'll be sending off to independent labs for assessment. It's a matter of getting out there, looking early on and taking the appropriate steps if we find anything."

With Eurogrow as a partner, Ben and his team can call on their colleagues in New Zealand to assist with advice and ideas in relation to TPP, which has been affecting the potato industry across the ditch since 2006.

BRIGHT FUTURE

Ben believes there is renewed interest in Australian agriculture in general, adding that there are exciting developments in terms of variety improvements in the potato industry.

"The new technologies are quite sophisticated – it's not as if the agricultural sector is a third rate sector to be in; there's a lot of sensors built into equipment, remote soil moisture sensing, even drones – we love our little quadcopter. It's a good blend of inside and outside work and I think it's a great environment to be in," he says.

"It also gives you a great buzz each year to go out at the start of the season with really high hopes for your crops. You can see the potential when you're standing in a paddock before you start planting and you sit there and think 'this is the field of dreams, I want to do everything right this time and we'll end up with a bumper crop'. I enjoy that stage of it – the potential of the potato crop."

The Mount Gambier grower plans to continue to produce the highest quality seed well into the future.

"We want our seed marketing itself. We want to be sustainable so we're looking at introducing new varieties to improve on the yield and the economics of potato production. We've got to keep at the forefront of that," Ben says.

"We've got to do as much as we can to improve the cost-benefit of using quality seed. We hope the industry can grow, and it can realise the export market potential that I think is building out there, because there could be a massive increase in production if some of the export opportunities come off for Australia."

INDUSTRY BIOSECURITY IN FOCUS AT ROUNDTABLE DISCUSSION

In November, the National Biosecurity Committee hosted a Biosecurity Roundtable in Canberra, which provided biosecurity stakeholders with an opportunity to engage with Australian, state and territory government representatives. AUSVEG Biosecurity Adviser Dr Kevin Clayton-Greene reports on the forum.

The National Biosecurity Roundtable held in Canberra in November encompassed both the animal and plant sectors, with representatives from around Australia gathering for the annual forum. It had several foci – all of which have relevance to the potato industry.

A major theme has been the release of the final report on the Intergovernmental Agreement on Biosecurity (IGAB). This agreement is a mechanism between all Australian governments to develop better collaboration across the biosecurity landscape. I have touched on this agreement in previous *Biosecurity brief* articles.

In 2016, the Federal Government initiated a broad and wide-ranging review of IGAB, from which a draft discussion paper was released in December 2016. AUSVEG provided feedback on this draft.

The final report has a strong focus on market access, environmental biosecurity and resourcing the system. It also discusses R&D. The report is available on the Department website at agriculture.gov.au/biosecurity/partnerships/nbc/intergovernmental-agreement-on-biosecurity/igabreview/igab-final-report.

It makes 42 recommendations, most of which will affect or have an impact upon industry to a greater or lesser extent. These recommendations address:

- Capability and risk management.
- Communication and engagement across the entire biosecurity continuum.
- Financing the system on a sustainable basis.
- Governance of the system.
- Government accountability and performance.

NATIONAL BIOSECURITY IMPACT

The report also sees a much more prominent role for the National Biosecurity Committee (NBC) in the national system. The NBC is made up of the senior officer responsible for biosecurity in each jurisdiction and the Commonwealth. The report has been accepted by the country's agriculture ministers and a national response is being prepared for agreement in mid-2018.

Jurisdictions also agreed that there would be a national biosecurity statement prepared in conjunction with industry and community. Currently, there is no single policy shared by all participants and this has meant that the biosecurity system means many different things to many different people/groups.

Many of the findings (but not all) resonate with my experience in operating within the biosecurity system.

Governments are already progressing a number of recommendations and are seeking input on a variety of themes including:

- National R&D priorities.
- An emergency response deed for exotic weeds and aquatic animals.
- A national priority list for exotic pests and diseases, which includes several of direct concern to potato growers such as *Candidatus* Liberibacter solanacearum (CLso), leafminers, exotic late blight, potato cyst nematodes and exotic strains of fusarium wilt.
- Engagement with the environmental sector.
- The possible extension of Property Identification codes into the plant sector. The latter has been a topic of interest to regulators and a number of plant industries for some years.

WHAT ARE THE IMPLICATIONS FOR AN INDIVIDUAL GROWER?

A subtext within the report is that there will be increasing obligations placed upon industry for biosecurity and an increasing obligation around good on-farm biosecurity. This is an area in which AUSVEG, together with Plant Health Australia and Hort Innovation, has made considerable investment over the past few years and is something that cannot at this stage be more strongly emphasised. It is not clear what it means in practice but it is worth noting that in both Queensland and New South Wales, the new biosecurity legislation is placing a biosecurity obligation upon landholders.

The importance and intractable nature of many soil borne diseases and their impact upon potato production render it important that one knows and controls what is coming onto one's property. Clean soil is like believing in Santa Claus; once lost it can never be regained!

INFO

For more information, contact AUSVEG on 03 9882 0277 or email info@ausveg.com.au.

This communication has been funded by Hort Innovation using the fresh potato research and development levy and contributions from the Australian Government.

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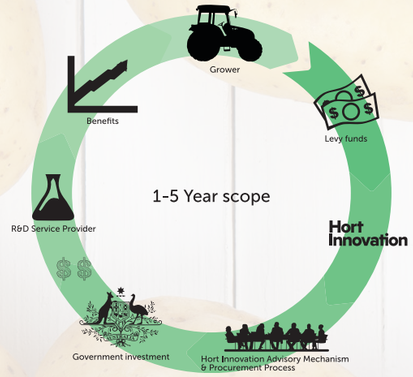
Hort Innovation Strategic levy investment | POTATO – FRESH FUND

THE FRESH POTATO R&D LEVY AT WORK

STRATEGIC LEVY INVESTMENT



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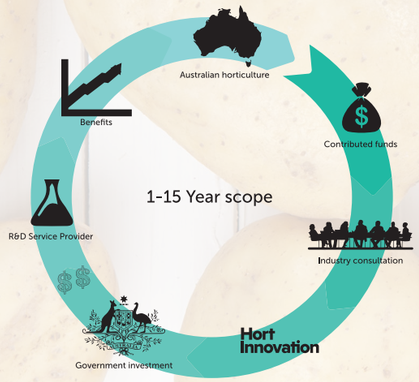

WHO PAYS THE FRESH POTATO R&D LEVY?

The levy is paid by growers who produce and sell either fresh or processing potatoes in Australia.

The charge is set at 50 cents per tonne for fresh and processing potatoes and must be paid by the producer of fresh potatoes or the owner of processing potatoes. The Federal Government also provides funding in addition to grower levy payments. Once paid, these funds are managed by Hort Innovation.

HOW IS LEVY MONEY INVESTED?

Hort Innovation has two funding models for investment in research and development. The industry's levy is invested with Australian Government contributions through the Hort Innovation Potato – Fresh Fund, which is part of organisation's strategic levy investment activities.

All investments through the Potato – Fresh Fund are made with advice from the industry's Strategic Investment Advisory Panel (SIAP) – a skills-based panel made of panellists from across the fresh potato industry, the majority of whom are levy-paying growers.

Strategic levy investments have a one- to five-year scope and the R&D is designed to directly benefit growers in the potato industry. Project topics range from pest and disease management to biosecurity matters, with findings communicated through a variety of channels, including *Potatoes Australia*.

You can find information on all current strategic levy investments, and details of the SIAP, on Hort Innovation's Potato – Fresh Fund page at **horticulture.com.au/grower-focus/potato.**

The second Hort Innovation funding model is the strategic partnership initiative known as Hort Frontiers. Hort Frontiers projects do not involve levy dollars, unless an industry chooses to become a co-investor in them, through advice of the SIAP. Instead, Hort Frontiers facilitates collaborative across-horticulture projects involving funding from a range of co-investors. These projects have a long-term focus and are designed to solve major and often complex challenges to secure the future of Australian horticulture.

You can read more about Hort Frontiers and the seven funds within it at **horticulture.com.au/hort-frontiers.**

HOW CAN GROWERS GET INVOLVED?

All potato growers are encouraged to share their thoughts and ideas for the research they want to see, both within the levy-specific Potato – Fresh Fund, and within the wider Hort Frontiers strategic partnership initiative.

Ideas can be submitted directly to Hort Innovation through the online Concept Proposal Form at **horticulture.com.au/concept-proposal-form**. Growers are also encouraged to reach out to the SIAP panellists for the industry (available from the Potato – Fresh Fund page).

Hort Innovation Strategic levy investment | POTATO – FRESH FUND

This project has been funded by Hort innovation using the fresh potato research and development levy and funds from the Australian Government. For more information on the fund and strategic levy investment visit horticulture.com.au

New PPAA Chairman Les Murdoch pictured in a field of early planted Ranger Russets that will head to the factory for processing in 2018.

INTRODUCING THE NEW PPAA CHAIRMAN: LES MURDOCH

Simplot Agricultural Manager for Potato Operations Les Murdoch has been appointed the new Chairman of the Potato Processors Association of Australia (PPAA), replacing Peter Hardman who had been at the helm for eight years. PPAA Executive Officer Anne Ramsay spoke to Les about his new role, and the future of Australia's processing industry.

Over the past eight years the Potato Processors Association of Australia (PPAA) has been skilfully led by Chairman Peter Hardman. In his time as Chair, Peter was a passionate advocate for the potato processing industry and a stalwart for seeing processor levies translated into producer outcomes on-farm.

In October 2017 Peter stepped down from the role and the PPAA would like to take this opportunity to thank him for his unwavering commitment to the PPAA, and to wish him a wonderful and well-earned retirement.

In this column, we introduce Les Murdoch who was elected to the role of PPAA Chairman following Peter's departure.

INDUSTRY BACKGROUND

Les has the fortune to be based in the rich agricultural tapestry of Tasmania's north-west coast. Although born and bred in a Tasmanian farming family, Les ventured to Queensland for his tertiary education before returning home and commencing off-farm work in the vegetable and potato industries, largely working for multinational companies McCain and Simplot.

"My entrée to potatoes began as the Manager of Corporate Farming Operations with McCain, where we were growing around 240 hectares of potatoes, 500 hectares of peas and 100 hectares of beans. A few years later I took on a more dedicated potato role as Potato Agronomist while also managing the harvesting division for vegetables," Les said.

Working his way up through the ranks, Les then commenced the role of Agriculture Manager for McCain (Tasmania), assuming responsibility for all agricultural operations. It was in 2012 that Les was lured over to Simplot Australia as the Seed Potato Manager and now holds the position of Agricultural Manager for Potato Operations.

ASSOCIATION AIMS

Les is looking ahead to the future of the Association, and outlined what he would like to achieve in his new role as Chair.

"I certainly have a comprehensive understanding of French fry production in Australia and I'm keen to enhance relationships with the Australian mainland processors to ensure that the PPAA advocates for the whole of the processing industry. This is certainly made easier with Allan Smith holding the position of Deputy Chairman with the PPAA," Les said.

"Growers today are juggling a great many decisions and variables, and we need to make research and development outcomes as accessible to growers as possible. In my time as Chair I'd like to continue the legacy left by Peter in developing relationships that will see all of industry working together towards an effective research and development program.

"I see future processor levy investment delivering a mixture of practical outputs that will help productivity – but also new and innovative blue sky research that will provide the solutions of the future."

EMBRACING TECHNOLOGY

Les spoke about the latest in innovation in the potato industry and mentioned a particular interest for a simple free app called The Yield.

"The app links into the nearest bureau of meteorology data and provides all the growing conditions you need from water balance, evapotranspiration, temperature and rainfall to humidity and wind activity, so you can make better informed decisions," he said.

"PreDicta Pt is another very effective tool for growers. When you know the level of pathogens in the soil you can manage them and get better crop outcomes," Les explained.

Les believes that simple tools such as The Yield app and PreDicta Pt will help farmers enormously in optimising potato yield and quality.

"We need to be doing more to understand what tools will help growers and how growers would like to access research and development outcomes. We need to look at capacity building so that we have people who can generate the tools and outputs for farmers," he said.

INFO

For more information, please contact Les Murdoch on 0418 140 309 or email les.murdoch@simplot.com.au.

This communication has been funded by Hort Innovation using the fresh potato research and development levy and contributions from the Australian Government.

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Hort Innovation Strategic levy investment | POTATO – FRESH FUND

GRIMME Ventor 4150 potato harvester in the field.

POTATO HARVESTERS LAUNCHED ON THE WORLD STAGE

Agritechnica is an annual six-day event that showcases the latest in crop protection and agriculture technology to Europe's farming industry. In 2017, it was held from 12-18 November in Hannover, Germany. This year's event included the launch of two new potato harvesters, which aim to improve performance and ensure safety standards are met.

The future in crop protection and agriculture technology was on show at Agritechnica in Hannover, Germany in November.

Among the new products that were released at the event, held from 12-18 November, were two potato harvesters from GRIMME.

The company unveiled Ventor 4150, a four row, self-propelled harvester that complies with stringent transport restrictions in Europe. The second harvester, Evo 290, is a two-row trailed harvester with a nine tonne bunker and features that allow for easy operation.

Landpower GRIMME Operations Manager Rob Breedveld said both models attracted strong interest from visitors to Agritechnica.

UPDATED FEATURES

Mr Breedveld described the differences between the two latest harvesters compared to their predecessors.

"The Ventor 4150 is essentially two SE twin row harvesters mounted side-by-side, but with the product flow going toward the back of the machine into a 15 tonne bunker," he said.

> Today's owners are far more aware of the importance of safety than they were 10 years ago and I would like to think we have contributed to this awareness.

Additionally, this model has deviner webs to remove trash and the pintle webs on each side that fold down for narrow road transport.

"The Evo 290 is a two-row trailing bunker machine that has all the separation features of its predecessor, the SE 260. It has a large nine tonne bunker, three wheels with hydraulic wheel assist and hydraulically-adjustable vario drive for main, second and deviner web, including stop and reverse," Mr Breedveld added.

SAFETY FIRST

Improved safety has been addressed with the launch of these harvesters, with ProCam video surveillance available with Ventor 4150, while Evo 290 offers optional driver assistance systems including Visual Protect and Speedtronic.

"Protecting the safety of farm workers is of the highest importance to GRIMME and its Australasian distributor, Landpower," Mr Breedveld said.

This comes in the form of a department at GRIMME dedicated to ensuring the machinery meets country-specific safety standards in all export markets, as well as a comprehensive safety-training program that Landpower has had in place for over 10 years.

"Today's owners are far more aware of the importance of safety than they were 10 years ago and I would like to think we have contributed to this awareness," Mr Breedveld said.

GROWER BENEFITS

Mr Breedveld added that with the release of two new models, there is greater flexibility for the company to meet the needs of its customers in Australia and New Zealand.

"The release of these two models reinforces GRIMME's leadership in potato harvesting, planting, cultivation and handling technology. It invests heavily in research and development to optimise the efficiency and productivity of its customers throughout the world," he said.

Both models should become available in Australia and New Zealand in late 2018.

INFO

For more information, please visit landpower.com.au or agritechnica.com/en.

Image courtesy of Dr Mark Gagnon.

NEXT GENERATION THINKING ADDS VALUE TO THE PRODUCT LINE

Agribusiness students from Penn State's College of Agricultural Sciences in the United States have been assisting Pennsylvania's largest potato producer in its quest to add a new ready-to-cook product to the market. One of the project's coordinators, Dr Mark Gagnon, spoke about the exercise and how it has provided students with real-life experience and a potential career path in the industry.

When owning or managing a business, it is essential to encourage fresh perspectives and new ideas to maintain sustainability and future growth.

This challenge was achieved through a project undertaken in the United States, where agribusiness management students at Penn State's College of Agricultural Sciences joined forces with Sterman Masser Potato Farms, Pennsylvania's largest potato producer, in a bid to generate new, innovative ideas in ready-to-cook potato products.

The project culminated with around 75 students visiting the Sterman Masser business, which is seen as an innovative entrepreneurial agribusiness leader in the region through its new technologies and keystone potato products.

Dr Mark Gagnon, Entrepreneurship Coordinator at the College of Agricultural Sciences, spoke to *Potatoes Australia* about the project and what it aimed to achieve for both the students and Sterman Masser.

REAL-LIFE BUSINESS CASE

Dr Gagnon explained that the students have a capstone agribusiness course called 'Managing the Food System' and he was keen to integrate a live business case to better prepare students with applied experience in the industry.

"This class is really about agribusiness as a food system and the various aspects that the students would need to think about in practice, so it's a general manager training course where they pull together all the subject content that they have learnt through the major and apply it," he said.

"I thought this would be great to team up with Sterman Masser to do a real business challenge."

Dr Gagnon spoke to Sterman Masser CEO Keith Masser about the challenges he was facing that could be framed for the students to tackle and provide some ideas.

"We came up with a list of ideas and then narrowed it down to one that focused on value proposition enhancement and marketing with a recently launched fresh-cut potato product line," Dr Gagnon said.

"The company has a fresh-cut potato product that it's merchandising through traditional grocery retail in the vegetable aisle. So it's about pre-cut, ready-to-cook potatoes and how we can create more awareness to consumers about what the value proposition looks like in lieu of alternatives, and have the students make some suggestions as to how to make them more successful and bolster the value proposition of the lines."

LEARNING EXPERIENCE

Once the case was set up, the students visited Sterman Masser where they could ask questions. They then prepared an eight minute presentation via video and an executive brief on their solutions that was presented to the company.

"The tour was a really hands-on exercise and the students got a fair amount of experience and learning from the project," Dr Gagnon said.

"They just did a great job of tackling some of the issues for the business and presented some solutions.

"I think one of the biggest takeaway lessons for the company was they had seen some consistent themes – but I think they are really excited to see those similar themes coming from the students, with some new ideas as to how to address them.

"Many companies right now are looking at the millennial market and are really trying to get a sense of what they value, what they are interested in, what kind of products they are looking at and how they look at certain categories; so being able to provide their perspective adds value."

GENERATING INTEREST

The project was also a boost for the food and agriculture sectors, with a number of students now showing a strong interest in a career in those fields.

"Some of the students even made additional connections beyond the class exercise to look at internships and employment opportunities, so it reinforced the connections between the university and the agriculture industry," Dr Gagnon said.

"I would imagine we would have some additional discussions with the company as they start to implement some new strategies as they go forward. There are probably opportunities to engage some other students in the future as well."

INFO

For more details, please contact Dr Mark Gagnon at mag199@psu.edu.

This communication has been funded by Hort Innovation using the fresh potato research and development levy and contributions from the Australian Government.

Project Number: PT15007

Hort Innovation Strategic levy investment | POTATO – FRESH FUND

Trapping Coordinator Raylea Rowbottom. Image courtesy of TIA.

NATIONAL TOMATO POTATO PSYLLID SURVEILLANCE GETS UNDERWAY

The Tasmanian Institute of Agriculture has been coordinating a national surveillance of tomato potato psyllid (TPP) since 2011. After the incursion of TPP in Western Australia, surveillance efforts required escalation and this led to the appointment of Raylea Rowbottom in April 2017 as a Trapping Coordinator.

PROJECT OVERVIEW

Tomato potato psyllid (TPP) surveillance coordinated through the Tasmanian Institute of Agriculture (TIA) is focused on the early detection of adult psyllids using yellow sticky traps, in the hope of improved chances of containment, control and eradication if TPP should be discovered outside of Western Australia.

The supply of traps is driven by industry demand, with TIA providing traps as requested to surveillance participants in Tasmania, South Australia, Victoria, New South Wales and Queensland. After deployment of traps in the field for 7-10 days, they are then returned to TIA for checking for the presence of TPP.

These activities form part of the project *Surveillance of the tomato potato psyllid in the Eastern States and South Australia* (MT16016), a strategic levy investment under the Hort Innovation Fresh Potato, Potato Processing and Vegetable Funds.

With continual collaboration between TIA and state governments, the data collected through this project will also go towards supporting state-wide Area Freedom. TIA will continue to work with government, supplying details of trapping locations and frequency to maximise resources and minimise duplication.

TIA has provided training workshops in most states on psyllid identification, how to recognise TPP crop damage and symptoms of the bacterial disease that can be transmitted by this pest. The project will continue until the end of April 2018, with supply of traps continuing throughout the season.

FIGURE 1: INDIVIDUAL TRAPS DELIVERED SINCE AUGUST 2017

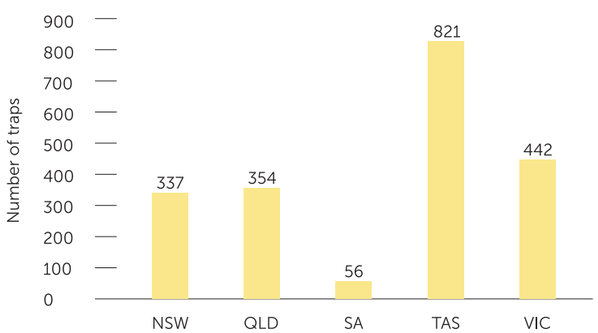

FIGURE 2: SURVEILLANCE TRAP DISTRIBUTION

SURVEILLANCE EFFORTS

TPP surveillance through TIA covers all Solanaceae crops including tomatoes, chilli, capsicum, potatoes and weedy nightshade plants. Yellow sticky traps have been distributed among industry partners, commercial crops, educational farms, community gardens, hobby farms and domestic gardens.

So far, over 2,000 traps have been posted around the eastern states for use between now and April (see Figures 1 and 2). More traps are expected to be delivered over December 2017/January 2018.

COORDINATOR PROFILE

Raylea Rowbottom is a PhD student at the University of Tasmania. Her field of research is entomology, in particular vector borne diseases. She has been coordinating the TPP surveillance program since April 2017.

Several others make up the team, including Calum Wilson (Project Manager) and Paul Walker (Senior Entomologist) along with Geoff Allen and Stephen Quarrel.

INFO

If you would like to be included in the surveillance program, please contact Raylea Rowbottom on 0428 745 752 or raylea.rowbottom@utas.edu.au.

For more information on the project visit utas.edu.au/tia/centres/vegetables. This project has been funded by Hort Innovation using the fresh potato, potato processing and vegetable research and development levies and contributions from the Australian Government.

Project Number: MT16016

Hort Innovation

REGIONAL UPDATES

Crookwell Potato Association Incorporated

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The weather has been kind to us in our part of New South Wales, with moderate temperatures and good rain coming at the right time. In saying that, we are still experiencing frosts on the lower ground so we know we still live in cold country. Our potato seed paddocks are all but ready and planting is very close. All going well, seed will be planted under ideal sowing conditions.

Recently New South Wales held its state Landcare Awards. Congratulations to Crookwell Potato Association Vice President Garry Kadwell for winning the State Champion Landcare award. Garry has shown through the management of his property that sustainable farming can be attained with good planning and foresight.

This leads to high productivity and embraces the environment to help with productivity as well as balancing natural diversity on Garry's farm. Garry can accomplish this sustainability on his farm because of the strategic planting of conservation areas or ecological zones. These areas provide a natural environment which encourage native plants, animals and insects to thrive. This, in turn, enables biodiversity to do what it does best: Balance the ecological system which is critically important for sustainability as well as high profit production levels.

It is exciting for our area to have Garry win this prestigious award. Because he has a large potato seed growing enterprise, this sustainability shows everyone that high production of a very important food source can be accomplished without harming our environment or farming future. Garry opens his farm to tours on the Crookwell Potato Festival weekend in May each year. This is a hugely patronised event and people are amazed at how Garry has developed his farm and his understanding of the environment, not to mention his exceptional ability to articulate what is happening back to everyday people.

The National Awards will be announced in 2018. Garry will go on to represent New South Wales in the Agriculture and Land Management for leadership in the discovery and application of innovative land management practices.

We wish him all the best and again congratulate him on his State Champion award.

AUSVEG VIC

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VGA trading as AUSVEG VIC

The AUSVEG VIC Annual General Meeting (AGM) was held on 6 October at Gazzola Farms, with over 20 members in attendance. The AGM highlighted the past 12 months' achievements, focusing on the AUSVEG VIC Awards for Excellence and the two projects secured by the organisation, with funding coming from Hort Innovation and Sustainability Victoria. Acting State Manager Tom Cohen discussed his vision for AUSVEG VIC and the future direction that AUSVEG VIC's Executive Committee would like to see achieved for the Victorian industry.

Following the AGM, the attendees went for dinner at the Hastings Marina. Throughout the evening, a number of awards were given out to recognise the efforts of some of Victoria's most passionate and industry-engaged growers. In particular, the AUSVEG VIC Executive Committee would like to thank and congratulate two outstanding growers for their passion and hard work representing the Victorian vegetable industry. Lifetime Achievement Awards were presented to Peter Cochrane and David Wallace, who have both dedicated endless hours to the success of the Victorian industry.

In other news, the Seed Potatoes Victoria AGM and General Meeting was held on 10 October at the Bungaree Community Centre. The AUSVEG VIC State Manager attended the event along with 18 seed potato growers from around Victoria. During the meeting, Dean Bone stepped down from the president's role and a new leader was elected. AUSVEG VIC would like to congratulate Gordon Jones from Thorpdale as the new President of Seed Potatoes Victoria, and we look forward to working with him on potato issues in Victoria.

Seed Potatoes Victoria has also released its *2017 Seed Buyers Guide*, which can be found with this mailout of *Potatoes Australia*. It can also be downloaded from spv.org.au.

AUSVEG SA

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Please note we have moved to a new address.

Applications have now closed for the $150 million Northern Adelaide Irrigation Scheme with final applications due to SA Water on 15 November 2017. AUSVEG SA assisted a number of key growers to submit applications under the scheme and is aware of upwards of seven gigalitres worth of demand for new water resources under the scheme. This includes field pivot, fixed irrigation and protected cropping production across a broad range of businesses and commodities.

The vast majority of applications were conditional on SA Water significantly revising their initial offer of $490 per mega litre for water under the scheme and upfront capital contributions and licence fees. AUSVEG SA remains engaged with SA Water and is hopeful for productive negotiations to achieve a price economical for horticultural producers.

In other news, AUSVEG SA is continuing to work with national body AUSVEG and other state members to put forward a comprehensive reform package to address access to labour through Australia's visa program. In particular, we are proposing reforms to skilled and low skill migration programs to improve industry access to the labour it needs for the future.

Addressing the current issues with the proposed Temporary Skills Shortage visa remains an ongoing priority and we have joined other states and the National Farmers' Federation in proposing a specialised agriculture visa class for entry level labour in horticulture. We are also working closely with University of Adelaide academic researcher Dr Joanna Howe on how a proposed agriculture visa would be designed.

Seed Potatoes Victoria

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Seed Potatoes Victoria held its Annual General Meeting and General Meeting on 10 October 2017 at the Bungaree Community Centre. This was a well-attended day – it is always great to see so many members make the time to come along.

Gordon Jones has taken on the role of President for 2017/18, with Tony Trigg as Vice President and Mark Labbett as Treasurer/Secretary. The meetings were followed by an enjoyable presentation from Daniel Grayling of McCain Foods Australia on his recent involvement in the McCain's AgriBusiness Development Program. This program was made up of three sessions in three countries – Canada, the United States and South Africa.

Victorian Farmers Federation Horticulture Group President Emma Germano also attended and spoke very passionately on the need for grower groups to work more cohesively. There is a real need to develop a synergy for groups to work together on common issues for a unified grower voice.

SPV is looking forward to collaborating with ViCSPA in the development of management protocols for pest and disease incursions, given the detection of tomato potato psyllid in Western Australia. These issues highlight the importance of and need for good interstate trade control measures.

Planting has begun in earnest. The week of cold wet weather set a few growers back a bit, but the tractors are all on the go again.

YOUNG POTATO PEOPLE

G'day again,

Well it's coming to the time of year where 'normal' non-farming folk start to wind down. The holiday plans are made, Christmas is organised, and everyone knows where they will be heading to eat five times their body weight in food.

It's a little different on a farm in Australia. With the summer heat setting in, you might be less concerned with what stocking fillers you are going to buy your cousins, nephews and nieces and more focused on when the irrigation will need tending to.

Someone a long time ago worked out they could add value to the crop they were growing by irrigating it. And if they put some fertiliser on, they could add more value. Value adding isn't new in farming – it's innovation at its best. And farmers have always been well-known for innovation.

So what does it look like in today's world, when most things we use on a farm are now made by multinational companies?

Value adding and innovation is by no means dead. It is just in different forms these days. Yes, at times you still need to modify equipment, and change the way you do things. But rather than simply putting the fertiliser on the crop now, you put a certain blend on that is designed to match your country and the crop to ensure you get the best results.

Another way people are value adding is by finding new ways to sell their produce. Either changing the product they sell, like DK potato chips, vodka, and/or shifting to online sales. As farmers, it's fairly hard to take time away from the general running of the farm in order to spend time in front of a computer screen. Even if it is to sell your produce. This is where family members come in; people who may not be spending as much time out in the paddock. This could be your spouse/partner or a child of yours. The fact is, someone with more experience on the computer is always going to do it better.

Take the mums that blog for example. These are people who have had children and have, in a way, value added to this time by writing about it or something they have done online so other people can read about it. A local lady from the Thorpdale area, Emma Steendam, recently won the Bupa Blog of the Year award which has come from years of putting in hours, blogging about her adventures and life with her family.

All of these things are only as good as the effort you put into them – a lot like the farm. This is why you may need someone to help you sort out the nitty gritty. And hopefully if you put in the work, your value adding will benefit you greatly and you will get a lot out of it.

Have a good Christmas and I'll catch you in 2018.

Check out dkpotatoes.com.au and Emma's blog at shesowsseeds.com.

And if you want to see what I'm up to, search 'Stu the farmer' on social media.

Cheers,
Stu

@youngpotatopeps

facebook.com/groups/youngpotatopeople

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