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potatoes australia

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EDITORIAL

Every day is different in the potato industry. While some days are better than others, they are never short of their challenges.

Some of these hurdles can be overcome fairly easily, but there are others that highlight the need for a new approach, innovation or development. And when this happens, sometimes the best place to look for a solution is beyond our own backyard.

The unwelcome news of another biosecurity threat to the Australian potato industry – this time in the form of the bacterium *Dickeya dianthicola* in Western Australia – is a timely reminder that growers and the wider industry cannot rest on their laurels when it comes to biosecurity awareness and preparedness.

As the industry begins to navigate the murky waters that surround an exotic plant pest detection in Australia, it is of some comfort to know that valuable lessons can be found in the experiences of our international peers and colleagues.

In a bid to learn from these experiences and increase our knowledge and preparedness of exotic pests, AUSVEG Biosecurity Officer Jessica Lye recently travelled to the United States for a month-long plant biosecurity study tour as part of the 2016 Victorian RIRDC Rural Women's Award.

Jessica visited nine states to further her knowledge of pests such as tomato-potato psyllid, and gain valuable insights into those that have not yet been found in Australia, such as the Colorado potato beetle.

The knowledge gained on this tour will be invaluable for potato growers as they face the challenges of the future. It will not only help to strengthen industry awareness of exotic horticultural pests, but it also presents opportunities for international collaboration and inspiration for new ideas that could be revised and implemented in our local industry.

As we begin to write a new chapter in the history of potato growing in Australia, we also can't forget about how much the industry has developed over time and the wins we have had along the way. This edition's column from the Potato Processors Association of Australia (page 25) looks back on how the sector has developed in the past two decades, and reinforces the potential to further develop the wider potato industry in the coming years.

While it may be a challenging time ahead for Australia's potato growers, it is also an opportunity to expand our knowledge, learn from the experiences of others, implement new practices and innovations and ultimately strengthen the future of the industry.

It has been a difficult year for Western Australia's potato growers, with the discovery of the tomato-potato psyllid (TPP; *Bactericera cockerelli*), the ramifications of the state's deregulation of the industry and more recently, the detection of the bacterium *Dickeya dianthicola*.

The news of another exotic plant pest detection in Western Australia is devastating, not only for the state's growers but the wider industry. At the time of writing, the Western Australian Department of Primary Industries and Regional Development (formerly known as the Department of Agriculture and Food, Western Australia) was in the process of undertaking tracing and testing activities to assess the technical feasibility of eradicating *Dickeya dianthicola*.

The Transition to Management phase for TPP is also continuing in Western Australia, and this aims to implement new pest control options and communication, training and engagement around the psyllid. Further surveillance to determine whether or not the TPP is carrying *Candidatus* Liberibacter solanacearum (CLso), the bacterium that causes zebra chip in potatoes, is continuing but at the time of writing it had not been detected.

It is vital for the potato industry to implement a coordinated and strategically focused response effort to limit the impact of TPP. AUSVEG is in the process of recruiting a National TPP Program Coordinator to join our team as part of a Hort Innovation strategic levy investment across affected industries.

The Coordinator will play a crucial role as the single point of contact for the potato, nursery, vegetable and processing tomato industries and will engage with growers across Australia as well as government, industry groups and researchers. Importantly, they will coordinate the development and implementation of a national TPP management strategy, which includes a national TPP R&D agenda to be updated annually.

In the meantime, it is essential to prepare other parts of Australia for the arrival of TPP, should it spread outside of Western Australia. Therefore, we urge Australian potato growers to revisit their on-farm biosecurity practices, including the development of a biosecurity plan to reduce the impact of existing pests and diseases and prevent the introduction of new pests on their farms.

A range of workshops have been held in Victoria, South Australia and New South Wales over recent months, where the AUSVEG Vegetable and Potato Biosecurity team have encouraged growers to increase the adoption of on-farm biosecurity best practice.

Although it is a challenging time ahead, AUSVEG will continue to communicate and collaborate with government and industry to ensure growers are aware of the latest updates in regards to issues affecting our industry.

Geoff Moar
Chairman
AUSVEG

Over the past few months, I have been working closely with the AUSVEG Board to refine our strategy and identify our priorities moving forward to create a sustainable future for the organisation that represents Australia's potato and vegetable growers.

We have recognised that our strategy calls for a significant increase in investment in advocacy to ensure we are actively representing the needs of growers to governments and other key stakeholders. This is an important step to increase AUSVEG's capabilities, relevance and service offerings to our members and more broadly, Australia's potato and vegetable growers.

To drive this process, we will be reinvigorating our advocacy capabilities, which will be led by a full-time National Manager – Public Affairs based in Melbourne who will work closely with myself and the Board to develop and drive AUSVEG's advocacy agenda nationally. I look forward to sharing more developments with you when the position is filled.

On the topic of advocacy, one of the key ongoing issues facing our industry is the exploitation of backpackers and farm workers in Australian horticulture. The issue recently resurfaced during a two-part series on the ABC's *Australian Story*, which focused on the death of English backpacker Mia Ayliffe-Chung in a hostel in far north Queensland last year.

While this was an isolated case, Mia's death was nothing short of an absolute tragedy. The exploitation and mistreatment of backpackers in any form is completely unacceptable, and AUSVEG is dedicated to working with the wider industry to ensure the safety of all farm workers Australia-wide and to hold rogue labour hire operators and working hostels to account.

The vast majority of growers take great pride in their efforts to attract and retain labour and the industry has already taken proactive steps to address this issue. The national rollout of Growcom's Fair Farms Initiative is already underway and provides growers with the tools and knowledge they need to implement employment practices that comply with workplace relations laws and industry standards.

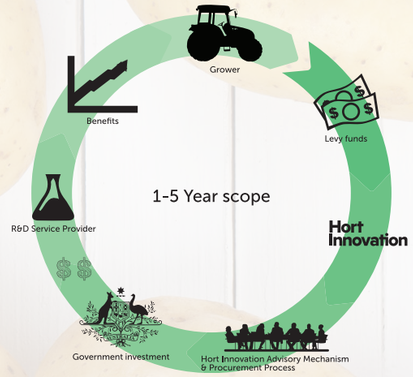
In other news, growers have had some months to familiarise themselves with the new Horticulture Code of Conduct, which came into effect on 1 April this year. The Code is regulated by the Australian Competition and Consumer Commission (ACCC) and outlines that all grower and traders must have a signed Horticulture Produce Agreement (HPA) in place that is compliant with the Code.

AUSVEG strongly advises all potato and vegetable growers to familiarise themselves with their rights and responsibilities under the new Code, as there are now civil penalties (such as fines) in place for non-compliance. Those looking for more information on the Code can find it on the ACCC website.

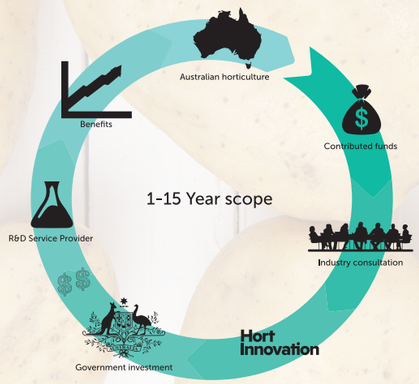
James Whiteside
CEO
AUSVEG

THE FRESH POTATO R&D LEVY AT WORK

STRATEGIC LEVY INVESTMENT



HORT FRONTIERS



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 six 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 PROJECT TO DRIVE INDUSTRY PRODUCTIVITY AND PROFITABILITY

The Tasmanian Institute of Agriculture recently commenced a one-year, levy-funded research project to enhance the productivity and sustainability of Australia's potato industry through improved soil health management practices. *Potatoes Australia* spoke to Project Leader Dr Robert Tegg about the research objectives and the benefits it will provide to growers.

Soil health has long been identified as the foundation of productivity in much of the potato industry's growing practices.

To reflect this, the Tasmanian Institute of Agriculture (TIA) has commenced a one-year project which will develop extension materials and identify the priorities for future research, development and extension (RD&E) in soil management practices. The project *Navigating the wealth of soil health information and identification opportunities* (PT16003) is a strategic levy investment under both the Hort Innovation Fresh and Processing Potato Funds. TIA has also contributed funds to this project.

The project comprises six TIA staff including soil scientists, molecular biologists, agronomists and plant pathologists. In addition, Leigh Sparrow (a former TIA senior soil scientist who is now a private consultant) is also lending his knowledge and expertise to the project.

PROJECT AIMS

TIA Research Fellow and Project Lead Dr Robert Tegg said the project's objective is to provide an independent and comprehensive review of the current state of knowledge of factors that influence soil health.

"Soil health is seen as something that's reasonably important from a potato industry perspective," he explained.

"In this project we're looking at soil health from the growers' perspective in terms of profitability and productivity, but we're also looking at it from a long-term, sustainability perspective."

The project will initially be conducted as a desktop study, with literature sourced from Australia and overseas. The study will examine areas that have been associated with soil health and the factors that have contributed to the profitability and sustainability of the potato industry.

As part of the study, there will be an interactive academic workshop where both invited national and international experts will discuss the key components of soil health.

"This is where we will get feedback on the literature review and we will also recommend a plan for the future," Dr Tegg said.

GROWER BENEFITS

According to Dr Tegg, this project will provide potato growers with direction as to what's required in their growing operations in terms of soil health, particularly in regards to the chemistry, physical properties and biological properties of soil.

Additionally, Dr Tegg said that the outcomes of the academic workshop will be delivered to growers through the Potato Industry Extension Program, which is coordinated by Arris Pty Ltd.

"There is scope for grower involvement at various stages, and we are taking calls from those stakeholders who are interested in being involved and would like to provide their ideas into the project," he said.

FUTURE PLANS

Towards the end of the project, the findings will be released to the potato industry through various workshops, articles, fact sheets and short videos.

"In regards to the long-term extension of information, some of our recommendations will be for future research work. That will be up to the potato industry to determine whether those projects go forward and if there's more invested in soil health in the future," Dr Tegg said.

"This project is about long-term stability and sustainability. We hope to provide growers with an overview of what soil health is and that things don't happen in the short-term – looking after your soil is a long-term objective."

INFO

For more information including how growers and stakeholders can provide input, please contact Dr Robert Tegg at robert.tegg@utas.edu.au.

This project has been funded by Hort Innovation, using the fresh and processing potato research and development levies, co-investment from the Tasmanian Institute of Agriculture and contributions from the Australian Government.

Project Number: PT16003

Hort Innovation

PROMOTING BEETLE CANNIBALISM TO PROTECT POTATO CROPS

One of the United States' most destructive pests is the Colorado potato beetle, a species highly resistant to many existing crop protection products. However, University of Maine scientists have identified cannibalistic behaviour among adult beetles which could assist in slowing their devastation of potato crops.

The Colorado potato beetle is the most important insect defoliator of potato in the United States. Both adults and larvae feed on potato leaves and the females are very prolific, laying on average about 600 eggs over a lifetime.

If left uncontrolled, this pest can completely destroy potato crops. The beetle is also very adaptable to insecticides, and can develop resistance to a range of crop protection products.

Dr Andrei Alyokhin, Entomologist and Director of the School of Biology and Ecology at the University of Maine, told *Potatoes Australia* that the Colorado potato beetle is a threat to every potato growing area of the United States – including Maine, where the state's potato production was worth more than USD$142 million in 2016.

However, Dr Alyokhin and his team of scientists may have found a solution to assist in slowing the pest's devastation of potato crops, with cannibalism being identified among adult beetles.

LAB OBSERVATIONS

Everett Booth, a graduate student in Dr Alyokhin's laboratory, noticed that adult beetles kept in confined places and faced with starvation ate each other once in a while.

"Such behaviour is unusual for adult herbivorous insects," Dr Alyokhin said.

"Therefore, we conducted several additional experiments to investigate this phenomenon."

Even when presented with other adult beetles or mealworms, the Colorado potato beetles preferred to eat their own.

Although this cannibalistic behaviour may reduce the number of beetles in the field, Dr Alyokhin stressed that it is not the answer to controlling this destructive pest. In contrast, it could be a "lifeboat strategy", in which survival is prolonged and population extinction is prevented.

"Cannibalism is unlikely to provide a solution by itself. It may further increase mortality in beetles that are deprived of food and water," he said.

"I want to make it clear that we did not discover a magic way to control this pest."

GROWER ADVICE

Dr Alyokhin advises that rotating potatoes with crops not suitable for the Colorado potato beetle is a good way to suppress the pest, as it creates conditions in the field that favour cannibalism.

"When deprived of food, they will either fly away (with most perishing on the way without finding other hosts) or starve to death, or turn to eating each other as demonstrated by our study," he said.

However, insecticides and crop rotations are the two most feasible methods in controlling this potato pest, according to Dr Alyokhin.

"Conservation of natural enemies through the use of biorational insecticides is another good approach. On a small scale, living and dead mulches also work fairly well," he added.

ONGOING BATTLE

The fight against Colorado potato beetle in the US is far from over, with Dr Alyokhin's laboratory currently working on the pest's interactions with viral and bacterial diseases of potatoes.

Although it is yet to be detected in Australia, our potato industry must continue to remain vigilant through strict biosecurity practices and careful monitoring of potato fields to ensure the beetle doesn't reach our shores.

"Agricultural authorities have to be alerted at the first suspicion of beetle presence. Initial infestations are likely to be small in size and scope, and relatively easy to eradicate," Dr Alyokhin said.

INFO

For more information about the Colorado potato beetle, please visit potatobeetle.org.

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

BACTERIUM DETECTED IN WA POTATO CROP

There is a new exotic incursion facing Western Australian potato growers, following the detection of a new bacterium – *Dickeya dianthicola* – that causes blackleg and soft rot in potatoes. In this edition of *Potatoes Australia*, AUSVEG Biosecurity Adviser Dr Kevin Clayton-Greene discusses the latest in response to this detection.

As if the recent tomato-potato psyllid (TPP) outbreak in Western Australia was not bad enough, it appears we are now dealing with another exotic incursion. It is a bacterium called *Dickeya dianthicola* (see page 12), which causes blackleg and soft rot in potatoes.

This bacterium can also infect other crops such as globe artichoke and chicory, and some species of flowers (such as *Dianthus* spp. and *Kalanchoe* spp.).

At the time of writing, no decision had been made by the national Consultative Committee on Emergency Plant Pests (CCEPP) as to the feasibility of eradication, as there was not enough information about the extent of the incursion including potential linkages between the site of the original incursion and other properties.

Delimiting the extent of the incursion at this time of year is difficult as many production areas do not have potatoes in the ground and the organism itself is favoured by warmer temperatures. At the time of writing, there were four properties under quarantine due to linkages with the original detection.

Dickeya dianthicola is a serious pest with overseas data indicating significant yield losses in potato crops. It is also a quarantine organism for countries where it does not yet occur, and could have trade implications if found outside of Western Australia. At the time of writing, trade in potatoes from Western Australia is prohibited due to the TPP outbreak, and therefore there are currently no other additional restrictions.

COMPLICATED TAXONOMY

The situation with respect to blackleg and soft rot-causing bacteria taxonomy (the branch of science concerned with classification) has become somewhat complex over recent years.

Extensive revisions of taxonomy have resulted in new genera and species being declared in the soft rot bacteria, with *Erwinia chrysanthemi* being reassigned as *Dickeya* spp. and *Erwinia carotovora* now known as *Pectobacterium* spp.

Dickeya dianthicola is one of six species assigned to the genus *Dickeya (D. dianthicola, D. zeae, D. chrysanthemi, D. dieffenbachieae, D. paradisiaca, D. dadantii). Dickeya* spp. cause diseases on numerous crops and ornamental plants worldwide. Each of the new species has a different host range.

Dickeya dianthicola has never before been detected in Australia. Since the detection, historical collections of *Erwinia* in a number of states (including WA) have been re-tested for *Dickeya dianthicola*, and none have been identified as *Dickeya dianthicola* to date.

Symptoms of *Dickeya dianthicola* in potatoes are similar to the blackleg and soft rot symptoms that growers would already be familiar with. One difference between tuber rots caused by *Dickeya dianthicola* and those caused by *Pectobacterium* is that tubers rotted by *Dickeya* do not always have the typical foul smell associated with blackleg.

FURTHER INFORMATION

The main cause of long distance spread for *Dickeya dianthicola* is through infected planting material, and seed potatoes can be infected even though they do not appear diseased. The disease can also be spread via infected soil, tubers, machinery and water. Therefore, on-farm biosecurity such as good hygiene is very important for controlling the spread of this bacterium, as it is for other soil-borne organisms.

On the positive side, it appears *Dickeya dianthicola* is less hardy and has a lower persistence in the environment than the other blackleg-causing species *Pectobacterium* spp.

For those interested in finding out more about this pest, the following link may be of interest: scri.ac.uk/scri/file/PiP/Erwinia.pdf.

All potato and vegetable growers and production nurseries need to be vigilant for signs of this pest in their crops. If you think your crops may be affected, call the **Exotic Plant Pest Hotline on 1800 084 881.** This will put you in touch with your department of primary industries or agriculture.

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.

Project Number: PT15007

Hort Innovation Strategic levy investment | POTATO – FRESH FUND

Symptoms of *Dickeya* in a potato crop. Image courtesy of Michigan State University.

Severe symptoms of *Dickeya* in a potato crop. Image courtesy of the WA Department of Primary Industries and Regional Development.

INVESTIGATING A BIOSECURITY THREAT TO THE AUSTRALIAN POTATO INDUSTRY

In this edition of *The Front Line*, Biosecurity Officer Madeleine Quirk discusses the *Dickeya* genus and one species in particular, *Dickeya dianthicola*, and its impact on potato crops. Many strains of *Dickeya* have already wreaked havoc on potatoes and a number of ornamentals in various parts of the world. The recent detection of *Dickeya dianthicola* in Western Australia is a potential threat to the Australian potato industry.

Dickeya dianthicola causes soft rot and blackleg disease which degrades tubers and can kill potato plants. The species has the ability to move through the plant's vascular system (stem and tissues) and to spread in latently-infected seed tubers.

While this may not seem as dangerous as other types of pathogens, such as wind-borne or mosaic, infected seed potatoes pose a significant threat to the potato industry as symptoms are often not seen until it is too late.

ABOUT THE PEST

Dickeya spp. are pathogenic bacteria that affect a wide variety of plants, depending on the species. *Dickeya dianthicola* affects potato, chicory and globe artichoke, as well as some species of cut flowers such as dahlia, carnation and flaming Katy, which is also known as Christmas kalanchoe, florist kalanchoe and Madagascar widow's thrill.

Dickeya spp. were only named this way in 2005, by a group of researchers in France. The former name, *Erwinia chrysanthemi*, encompassed a wider variety of other pathogens, including *Pectobacterium* spp. The newly separated *Dickeya* pathogen was named after American phytopathologist Robert S. Dickey, for his extensive research in the field.

Most strains of *Dickeya* spp. thrive in tropical to subtropical climates, but in recent times they have been known to survive in cooler climates. Survival of these destructive pathogens is enhanced by poor farm hygiene, poor soil drainage, wet spring weather and inadequate ventilation during storage. In the future, increasing global temperatures and climate change may extend the range of *Dickeya* spp. Without hosts, this bacteria does not have long persistence in soil.

GEOGRAPHICAL RANGE

In Europe, *Dickeya dianthicola* was first reported in potatoes in the Netherlands in the 1970s. In the following decades, the pathogen spread to a number of other countries in Europe including France, Sweden, Belgium, Spain and Switzerland.

The disease finally appeared in England in 1990 and since then, more than 40 outbreaks of *Dickeya dianthicola* have been reported and subsequently tested in England alone.

In 2017, *Dickeya dianthicola* was detected in a potato crop north of Perth in Western Australia.

Scotland has a zero-tolerance policy for *Dickeya* spp. because of the damage it has caused to potato crops across the continent and the danger of increasing spread of the disease in the UK potato industry if seed potatoes become infected.

Outside of Europe, *Dickeya* spp. have also been reported in the United States, Columbia, Japan, Israel and New Zealand. The arrival of *Dickeya dianthicola* in Western Australia is a problem for local horticulturalists.

EFFECTS ON POTATOES

In potatoes, *Dickeya dianthicola*, along with bacteria *Pectobacterium* spp., can cause the diseases called blackleg and soft rot.

Blackleg and soft rot present symptoms which vary depending on bacterial concentrations, environmental conditions and the host plant. Typical symptoms include tuber rot, stem rot, and soft, granular and watery plant tissues and wilted leaves. Slimy, wet, black rot lesions are a characteristic symptom of blackleg in potato.

Latently-infected seed tubers are a major contributor to the spread of *Dickeya dianthicola*. As infected tubers rot, the bacterium is released into the soil. It is then transmitted through water in the soil and contaminates neighbouring tubers.

Dickeya dianthicola can also degrade tubers during storage, particularly if they are not stored correctly.

Dickeya dianthicola is associated with various economic impacts and overseas data has indicated significant yield and quality losses in potato crops. This may affect overseas markets and reduce export opportunities.

DETECTION AND CONTROL

Symptoms of infection by *Dickeya dianthicola* are similar to the *Pectobacterium (Erwinia)* bacterium species that growers would already be familiar with, but may be more aggressive. *Dickeya dianthicola* cannot be reliably differentiated from *Pectobacterium* blackleg and soft rot without laboratory testing, and seed potatoes and plants that appear healthy can harbour the bacterium.

In countries where *Dickeya dianthicola* already affects potato crops, on-farm biosecurity measures help to prevent or limit damage from the bacterium. Effective control measures include planting healthy seeds, maintaining clean fields with adequate drainage, and upholding satisfactory sanitation practices such as clean grading lines and adequate ventilation during storage.

Practical advice and information to assist producers, including a monthly e-newsletter, videos, manuals and record sheets, are available through the Farm Biosecurity website at farmbiosecurity.com.au or at ausveg.com.au/biosecurity-agrichemical/biosecurity.

Seed should always be sourced from reliable suppliers. When suppliers, growers and producers undertake strict biosecurity measures, they minimise the chance of infection.

REPORTING

The Western Australian Department of Primary Industries and Regional Development (DPIRD) is continuing to undertake tracing and testing activities following the confirmed detection of *Dickeya dianthicola*.

At the time of writing, four properties have been quarantined, and DPIRD is visiting properties to collect samples for testing.

Early reporting is critical to be able to contain this pest and prevent its spread. If you think your crop is affected, please call the **Exotic Plant Pest Hotline on 1800 084 881.**

WA RESPONSE TO *DICKEYA DIANTHICOLA* DETECTION

The Western Australian Department of Primary Industries and Regional Development (DPIRD) commenced emergency response activities in June 2017 following the confirmed detection of *Dickeya dianthicola* in a potato crop north of Perth.

As of 14 July 2017, four commercial potato properties in Western Australia have been quarantined. DPIRD is continuing to trace the movement of potatoes on and off these properties to define the spread of the infection.

The department is working with growers whose properties are under quarantine to enable farm business continuity while minimising the risk of spreading the bacterium.

Testing of samples from these properties is ongoing. Testing for the bacterium takes time due to the need to grow and test a living organism. DPIRD is developing a new process to reduce the initial screening time to a few days.

DPIRD is working closely with WA industry representatives and national stakeholders to minimise the impact of this new pest, and as of 25 July 2017 is continuing to assess the technical feasibility of eradication.

A *Dickeya dianthicola* web page (agric.wa.gov.au/ddianthicola) is available with information on symptoms and reporting options.

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 or AUSVEG Biosecurity Officer Madeleine Quirk on 03 9882 0277 or jessica.lye@ausveg.com.au or madeleine.quirk@ausveg.com.au. The Vegetable and Potato Biosecurity Program is funded by the Plant Health Levy.

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Project number: PT15007

Hort Innovation Strategic levy investment | POTATO – FRESH FUND

Adult tomato-potato psyllid. Image courtesy of Plant & Food Research New Zealand.

TOMATO-POTATO PSYLLID UPDATE: WESTERN AUSTRALIA

To date, there have been no detections of the bacterium associated with tomato-potato psyllid (TPP), *Candidatus* Liberibacter solanacearum (CLso).

The Department of Primary Industries and Regional Development (DPIRD) is working with the Western Australian horticulture industry and national partners on a Transition to Management plan, to limit and manage the impact of TPP. The plan will include targeted surveillance, market access and trade, management on-farm and along the supply chain, as well as research and economic analysis.

Significant progress has been made towards agreeance at a national level on methodology and confidence requirements for CLso surveillance to underpin the plan. This will be incorporated into the Transition to Management response plan to be considered at a national level.

The national Consultative Committee on Emergency Plant Pests is continuing to meet while this plan is being developed.

The department's Market Access team continues to work with industry to negotiate movement of produce from Western Australia.

HORTICULTURAL RESEARCH RECOVERY FUND

The Western Australian Government has announced funding to establish a Horticultural Research Recovery Fund to support Western Australian growers in finding new international and domestic markets.

Western Australian potatoes and other produce have been restricted from entering interstate markets since the discovery of TPP in Western Australia in February 2017.

The $1.5 million Horticultural Research Recovery Fund will enable industry and government to open up new opportunities in food processing and international markets. The allocation has been funded through the DPIRD.

INFO

For more information, please visit agric.wa.gov.au.

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

13-14 SEPTEMBER 2017: POTATOEUROPE

Where: Emmeloord, the Netherlands

What: PotatoEurope is an annual event for the European potato industry and it is open to all players in the potato supply chain. Program areas include tractors, transport vehicles, conveyor equipment, tillage, seeding, fertilisation and irrigation equipment, harvesting equipment and more.

Further information: potatoeurope.nl

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. 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: Stay tuned for more information at hortconnections.com.au

MAINTAINING A TPP COORDINATION STRATEGY

AUSVEG has been contracted by Hort Innovation to deliver a three-year tomato-potato psyllid coordinator role to assist the potato, nursery, vegetable and processing tomato industries. This is in response to the psyllid being discovered in a Perth backyard in February 2017.

Recently, it was agreed by industry and government that the tomato-potato psyllid (TPP; *Bactericera cockerelli*) is no longer able to be feasibly eradicated and that a Transition to Management program should be implemented in Western Australia.

A vital part of the successful transition into this management phase will be coordinated, strategically-focused response efforts to limit the impact of this pest. This will be conducted through the project *National Tomato Potato Psyllid Program Coordinator* (MT16018), a strategic levy investment under each of the Hort Innovation Fresh Potato, Processing Potato, Nursery, Vegetable and Processing Tomato Funds.

The primary function of the role will be ensuring that research, development and extension (RD&E) and management efforts across the various industries and jurisdictions affected by TPP are coordinated, prioritised and strategic.

At the time of project development, efforts to effectively manage TPP were largely directed at Western Australia. However, this is a national project with coordination activities seeking to benefit both Western Australia and states that are not yet managing the pest but need to prepare for its expected arrival.

Coordination activities for the benefit of Western Australian growers will differ from activities directed at growers in TPP-free states. In addition, coordinator activities are likely to change if and when pest distribution changes. If TPP spreads to other states, the TPP Coordinator would work with government and relevant service providers to ensure that management of the pest in the new state is undertaken effectively and according to best practice. The Coordinator would take guidance from a project steering committee, made up of industry and government representatives.

This role will involve coordinating stakeholder activities to ensure the optimal response to minimise TPP impact, and aid in directing investments to where RD&E is most needed for effective management.

The primary outputs of the program will be the coordinated development and implementation of a national TPP management strategy, which include a national TPP RD&E agenda to be updated annually. The role has a strong communication element and involves engaging with growers, industry groups, researchers and government.

INFO

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

This project has been funded by Hort Innovation using the fresh potato, processing potato, nursery, vegetable and processing tomato industries' research and development levies and contributions from the Australian Government.

Project Number: MT16018

Hort Innovation

SOWING THE SEEDS FOR SUCCESS IN ALL FACETS OF THE POTATO INDUSTRY

Tim Walker is a busy man – a father of three children, an agronomist during the day and operator of the family farm after hours and on the weekend. Michelle De'Lisle spoke to Tim about his rise to Senior Sales Agronomist for Tasmanian-based agribusiness Roberts Limited, and how being in this position assists him with his own growing operation.

From finishing year 10 one day to starting a Certificate II in Agriculture the next: that was the beginning of potato grower and Tasmanian agronomist Tim Walker's journey into the horticulture industry.

During this time, Tim lasted 12 months on a dairy farm as a trainee before he went on to complete his Certificate III on a beef, sheep and cropping farm.

By the end of 2009, Tim had completed his Diploma in Agriculture and this led to a role at Field Fresh in Tasmania as a junior agronomist with a focus on carrots and onions. Now 34 and a father of three, he juggles managing the 120-acre family farm based at Ulverstone with a Senior Sales Agronomist role at Roberts Limited in Devonport.

Tim's career progression over the years has been recognised by the industry, with the grower/agronomist completing the vegetable research and development levy-funded *Growing Leaders* program in 2011 before being awarded the Rising Star mantle at the 2012 AUSVEG National Convention.

His property, Berkshire Downs has produced 500 tonnes of potatoes a year for McCain for the past three years.

A BURGEONING CAREER

Tim has worked with Roberts for five years as a Senior Sales Agronomist.

"I was a trainee agronomist for Field Fresh, and that learning experience was invaluable for me," Tim explains.

"I worked there for a couple of years and then I unfortunately got made redundant when they sold their carrot operation to Harvest Moon. I was then fortunate enough to get picked up by Harvest Moon to be their carrot agronomist and it grew from there."

A couple of years later, Roberts Limited approached Tim.

"I went from being a trainee, worked my way up the ranks and then started with Roberts as a Senior Sales Agronomist, which was a bit daunting – it was a big title to fill but it has gone really well. We do a fair bit of education, training and showcasing new products for everyone. I'm actually in the process of organising a carrot and onion industry forum to educate farmers with the new products coming into the market."

Tim is at the forefront of all the latest technologies, chemistries and varieties, and is involved in trials with new fungicides and seed varieties. He says this is invaluable when it comes to his own growing operation.

"If I'm unsure about something, or if a new product comes out, I like to see it and have confidence in myself that it works before I go out recommending it. I quite often conduct trials on my place and that's a massive advantage to me. I'm very lucky to be in that position," he says.

WEATHERING CHALLENGES

Like all potato growers, the weather is a huge challenge for Tim. The highs and lows can be in stark contrast; for example, 180 millimetres of rain fell onto his farm two seasons ago following a long drought and the warm, wet conditions resulted in rotten potatoes. On the other hand, 2016-17 was a bumper season.

As an agronomist, Tim can relate to his clients and their challenges as well.

"I look after a number of potato crops along the coast of north-west Tasmania and I really enjoy talking to farmers. I can relate to them fairly well and we form quite strong relationships and friendships. I'm learning from them every day as well – that's what I enjoy the most.

"Weather does influence supply and demand – if there is a wet and warm summer, the disease pressure is a lot higher which leads to increased input costs and premature loss of crops.

"Likewise with insects; cutworms are always an issue, as is potato moth. You've got all the elements that you have to deal with."

Overcoming these challenges is tricky, however Tim's advice is simple: Plan ahead and get in early.

"It is important to be on the forefront of the new technologies coming through, such as fungicides and monitoring techniques. Prevention is better than a cure, especially with disease and insect pressure – it's a bit late once your crop has been wiped out. To prevent or minimise the effects of these challenges is to nip them in the bud early if you can."

ONGOING SUSTAINABILITY

To achieve a balance between work, family and farm life, Tim had to be creative in his approach to maintaining the intensive growing operation and its long-term success.

When the farm was initially purchased, the paddocks were expanded and a portable irrigation pivot was implemented, which slashed the number of days it took to water the property from 32 to just four.

Tim also credits rotation as an important factor in disease resistance as well as sustainability.

"On our farm, we grow potatoes, pyrethrum, poppies, grain and we raise a few beef cattle. We try to have at least a six-year rotation with our potatoes. We're lucky the farm was taken out of production of potatoes for a while, so it gave it a good rest," he explains.

According to Tim, the secret to having a successful farm is smart investment.

"We couldn't be running it how we are now if we hadn't invested in the irrigation infrastructure. I do all spraying, fertiliser spreading and probably 90 per cent of the groundwork myself now and that makes it profitable. It's time consuming but it's more profitable for us.

"My advice would be to keep investing in infrastructure and equipment that makes the farm more manageable and simplifies things. You've got to move forward and do things more productively. All the little things do add up; you've got to have a lot of pride in your work and do things properly."

FUTURE PLANS

Tim is currently in the process of buying Berkshire Downs from his parents. The goal is to expand the farm by increasing the acreage, and build it up to a point where it can be transitioned to his three children.

"The farm is only 120 acres but it's very intense. We're getting really good tonnage and yield per acre at the moment and I'd like to triple that in the next 5-10 years," Tim says.

"I don't think I could have it much bigger than it is at the moment, but with succession planning and making things simple – you can."

Despite these ambitions, Tim has no plans to become a full-time grower.

"I wouldn't want to give up my agronomy position because that is invaluable to my success," he says.

A plant infected by *Rhizoctonia solani*. Images courtesy of the South Australian Research and Development Institute.

A healthy plant at a similar growth stage.

EXAMINING A WIDESPREAD POTATO DISEASE IN AUSTRALIAN CROPS

Rhizoctonia solani causes a number of common disease symptoms found in Australian potato crops including black scurf and *Rhizoctonia* stem canker, which lead to tuber blemishes, uneven crops and reduced yields. South Australian Research and Development Institute (SARDI) Researcher Michael Rettke spoke to *Potatoes Australia* about the different strains of *Rhizoctonia solani* as well as previous and current research being undertaken into the disease.

Rhizoctonia solani is a pathogen found in all major potato production areas of Australia, and is prevalent in the southern production areas of the country.

This fungus is spread by both soil and seed borne inoculum. Visual symptoms of the disease include misshapen tubers, aerial tubers, skin defects and black scurf on tubers. Black scurf refers to the small hard lumpy black structures that develop on the skin and do not actually penetrate the tuber. They do not wash off easily, and can reduce marketability of fresh potatoes.

This fungus is well-known for its ability to cause stem canker and its ability to burn off sprouts under the ground before they emerge. The cankers on the underground stems interfere with the transfer of carbohydrates within the plant.

Incidence and severity of the disease can vary widely depending upon the region, time of planting, season and inoculum levels. Severity of stem canker can be associated with cooler seasonal conditions.

Two main strains of *Rhizoctonia solani* are known to be associated with disease of potatoes in Australia: AG 3 and AG 2.1. Potatoes are the main host for AG 3 and this is the strain most commonly associated with *Rhizoctonia* disease symptoms of potatoes worldwide and is the cause of black scurf. Both strains are capable of causing stem canker. AG 2.1 has a wide host range that includes brassicas and legumes.

"We possibly need to understand *Rhizoctonia solani* AG 4 as well. We know it is prevalent in some regions, but do not know how much it is contributing to *Rhizoctonia*-related disease on potatoes in these regions. Overseas it has shown to be a problem but we don't really have similar evidence of its impact in Australia," Mr Rettke said.

INOCULUM MANAGEMENT

As part of the completed *Australian Potato Research Program Phase 2* (APRP2), projects were conducted to understand the risk of *Rhizoctonia solani* (from both soil and seed inoculum sources) as well as identifying and understanding the different AG strains and with which symptoms they are associated. Researchers from Tasmania, Victoria, New Zealand and the United Kingdom contributed to this research.

Management of *Rhizoctonia solani* starts before planting, from paddock selection until harvesting, according to Mr Rettke.

"You need to think about your rotation management. You're actually managing it through your crop cycle. Firstly you need to manage volunteer potatoes – otherwise you're harbouring the disease towards the next crop," he said.

"Knowing which *Rhizoctonia solani* strain you're dealing with is also important. For instance, AG 2.1 is hosted on a lot of other crops, including brassicas that are commonly used in rotations with potatoes, whereas AG 3 is not," he explained.

Mr Rettke added that improving the general health of the soil is useful in managing the disease.

"*Rhizoctonia* can be worse in situations where you've got a low level of other competitor or antagonistic microbes in the soil. If you put it in a situation where there's not much competition, it can spread quite quickly from infection or inoculum points," he said.

Not only is the soil a source of inoculum, the seed tubers can also contribute significantly to the risk of disease caused by *Rhizoctonia solani*.

"You need to manage seed quality – it comes down to using certified seed with the lowest possible levels of inoculum, which also means knowing where your seed comes from and how it has been handled."

When disease risk is known to be present, an integrated disease management strategy should be adopted, which may include controlling volunteer potatoes, improving soil health, crop rotation, seed selection, trash and stubble reduction, use of appropriate seed and soil treatments, encouraging rapid crop emergence and managing crop desiccation and harvest timing.

TESTING SERVICES

PREDICTA® Pt diagnostic services conducted by SARDI are available through trained agronomists.

"We report the values for AG 3 and AG 2.1 on the test, but they're tests under evaluation so they have a population density rather than disease risk threshold," Mr Rettke said.

"The AG 3 strain in particular is quite difficult because it's very sporadic in the paddock. If you measure it in a small area of soil, you can get a reasonable feel for it. To understand the risk across the whole paddock, you would need to have an intensive sampling grid to achieve that."

SARDI is also currently working on a seed testing service, which will play a significant role in assessing the disease risk posed by *Rhizoctonia solani* to a potato crop. This project is expected to conclude in 2018.

"Once we get that service, you'll actually have a combined risk measurement. Without measuring seed inoculum, you really can't quantify your risk because seed inoculum is a significant contributor to the risk of disease," Mr Rettke said.

Furthermore, SARDI will be investigating how *Rhizoctonia solani* (including the AG 4 strain) affects other potato production regions outside of South Australia, Victoria and Tasmania where the tests have already been evaluated.

INFO

For more information, please contact Michael Rettke at michael.rettke@sa.gov.au. The topic for this article was selected following the results of PT13013 *A review of knowledge gaps and compilation of R&D outputs from the Australian Potato Research Program.*

This communication was 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

Brown lacewing larva feeding on an aphid in a potato crop. Image courtesy of IPM Technologies.

INTEGRATED PEST MANAGEMENT BOOSTS QUALITY FOR VICTORIAN POTATO GROWER

Cummaudo Farms in Mirboo North and Thorpdale, Victoria, are major suppliers of potatoes to Coles supermarkets and other fresh market outlets. Each year, they deliver over 8,000 tonnes of potatoes to Australian consumers. What has changed for the growing operation over the last few seasons is its approach to controlling pests. Dr Paul Horne and Angelica Cameron from IPM Technologies explain.

In spring 2013, Tony Cummaudo from Victorian-based Cummaudo Farms contacted entomologists Dr Paul Horne and Angelica Cameron from IPM Technologies with a request for help in achieving better control of insect pests. The potato growing operation's aim was to improve pest management, particularly reducing damage by potato tuber moth, which would improve the quality of the product that was delivered to retailers. It was suggested that Tony trial Integrated Pest Management (IPM) in his potato crops and potentially implement it on-farm if successful.

This involved a significant change for Tony. Cummaudo Farms went from an approach that relied on routine broad-spectrum insecticide applications to biological controls (natural predators and parasites of pests) and cultural controls (management practices) that formed the basis of the pest management program. Insecticides were only applied rarely, as required.

SUPPORTING THE TRANSITION

To help Tony trial IPM, Paul and Angelica visited Cummaudo Farms on a weekly basis between October and March. On each visit they demonstrated how to monitor potato crops and make decisions based not only on what pests were present, but also on the beneficial species that they could find. Throughout the season they gave advice regarding all aspects of pest management and with this support, Cummaudo Farms successfully implemented IPM for the first time. What started out as a trial on one paddock became the standard practice over the entire farm.

Paul and Angelica continued to offer on-the-ground support during the next season and after that, Tony and his local adviser had gained enough knowledge, experience and confidence to monitor the crops and make IPM decisions themselves.

Cummaudo Farms now successfully uses IPM in all of its potato crops as well as its expanding onion production. Tony only occasionally needs back-up support from IPM Technologies; for example when he encounters an unfamiliar insect and needs to check whether it is a pest, a beneficial, or neither.

CONSTANT VIGILANCE

Tony is pleased with the results of IPM in both his onion and potato crops. He has seen how effective biological and cultural controls can be and keeps a careful eye on his crops, checking that the arrival of any pests is closely followed by the arrival of their natural enemies.

Most of the time Tony can let the predators and parasites control pests for him, or use cultural practices such as soil and irrigation management to improve pest control. If he needs to put a spray on during the life of the crop, Tony uses soft products that are compatible with his army of natural predators and parasites. He only applies broad-spectrum insecticides if the soil cover is inadequate to give protection from potato tuber moth after the crop has died down or has been sprayed off.

Cummaudo Farms' adoption of IPM is seen by their customers, particularly the major supermarkets, as a positive move. Coles has been impressed by the quality of Tony's product and Cummaudo Farms has had no product rejections due to insect pest damage since changing to IPM.

Adopting IPM has allowed Cummaudo Farms to boost the quality of its product and reduce its insecticide inputs, and both of these factors have helped to secure the profitability and sustainability of the business.

INFO

IPM Technologies invites potato growers and agronomists to participate in the project *An IPM Extension Program for the Potato and Onion Industries* (MT16009), a strategic levy investment fund under the Hort Innovation Onion, Fresh and Processing Potato Funds. For more information about the project, please contact Dr Paul Horne and his team on 0419 891 575 or email info@ipmtechnologies.com.au.

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

Project Number: MT16009

PREPARING YOUR BUSINESS FOR THE NEW HORTICULTURE CODE OF CONDUCT

On 1 April 2017, the new Horticulture Code of Code came into effect. The Code replaces the old mandatory Horticulture Code established by the *Trade Practices (Horticulture Code of Conduct) Regulations 2006* and is regulated by the Australian Competition and Consumer Commission (ACCC).

The new mandatory Horticulture Code of Conduct has been in effect since 1 April 2017. If you trade in horticulture produce you must comply with the terms of the new Code. AUSVEG strongly urges Australian growers and packers to familiarise themselves with requirements under the new Code.

Further information can be found at accc.gov.au/horticulturecode.

SUMMARY OF KEY CHANGES

- Growers who deal with packhouses and wholesalers must have a signed Horticulture Produce Agreement (HPA) in place and keep copies of each agreement for six years.
- Growers should familiarise themselves with the new mandatory code and relevant clauses governing the pricing and handling of produce and dispute resolution mechanisms under the new Code.
- Many wholesalers and agents are preparing new HPAs for their customers. Growers have an obligation under the new code to have a signed HPA in place when trading with a wholesaler.

The main change to the Code is that growers and traders MUST have a signed HPA in place that is compliant with the Code.

AUSVEG has been advised that the majority of wholesalers operating from the central markets will be sending through HPAs to their supplying growers in the next few weeks for signing.

Australian growers are strongly advised to familiarise themselves with their rights and responsibilities under the new code. The ACCC has prepared sample HPAs for growers and packhouses to use online at accc.gov.au/horticulturecode.

In addition to the signing of an HPA, growers are required to keep copies of their HPA, any written notices indicating the grower accepts the agreement, and written notices of termination of the agreement by the grower for six years.

APPLICATION TO PACKHOUSES BUYING PRODUCE FROM OTHER GROWERS

Some packhouses which consolidate produce from other growers may be defined as Agents or Merchants under the new Code when acting in the capacity of a trader. In these instances, the packhouse would have to comply with the clauses of the Code relating to Agents and Merchants, such as drafting and having an HPA signed with supplying growers and complying with record keeping requirements for Agents and Merchants under the Code.

This largely depends on the business arrangements between the packhouse and the supplying growers, and who pays them (e.g. does the grower pay the supplying grower for produce or charge for the packing service with a separate entity such as a supermarket or wholesaler paying the grower). Growers running packhouses consolidating for other growers are advised to contact the ACCC for advice specific to their business.

AUSVEG has also been advised by the ACCC that growers buying produce from other growers on an irregular basis to fill wholesaler and supermarket orders will need to comply with trader requirements under the Code if they are determined to be acting as an Agent or Merchant.

The following table explains the difference between growers and traders under the Code.

DESCRIPTION	EXAMPLE
Grower	John is a farmer who owns an orange orchard and produces fresh oranges.
Agent	John sells his oranges via Fruit Agents Pty Ltd, who takes them to the local fruit market and finds a buyer for John's oranges. Fruit Agents Pty Ltd is an agent who receives a commission or fee from John.
Merchant	Sometimes John sells his oranges directly to Orange Buyers Pty Ltd. Orange Buyers Pty Ltd buys directly from John and then sells the oranges on to Big Supermarket Pty Ltd. Orange Buyers Pty Ltd is a merchant who buys produce for the purpose of resale.

INFO

For more information, or to discuss any further questions about the Code and how it applies to a specific business, please contact the ACCC Infocentre on 1300 302 502 or the ACCC Small Business Helpline on 1300 302 021.

MOVING TOWARDS MARKET RECOGNITION FOR FAIR FARMS

Australian fruit and vegetable industries generally enjoy a clean, green, fresh and healthy reputation among consumers. Media stories about young workers – often overseas visitors – being mistreated, underpaid or exploited on Australian farms are highly damaging. Growcom's Fair Farms Initiative aims to improve the reputation of the horticulture industry in relation to workers.

The Fair Farms Initiative, launched in May at Hort Connections 2017, provides a timely opportunity to coordinate industry efforts around the issue of worker mistreatment.

Fair Farms aims to foster good employment practices within the Australian horticulture industry. It is coordinated by Growcom and funded by the Fair Work Ombudsman. Through the initiative, grower-employers have the opportunity to work through Growcom's Hort360 Workplace Relations module. This steps growers through all relevant aspects of the Fair Work Act and the award wages system and highlights the practices and procedures necessary to ensure full compliance with Australian employment laws.

To provide an effective verification mechanism, Growcom is working with Freshcare to translate the Hort360 module into an auditable national industry standard.

"Freshcare is well established in the Australian marketplace as an effective food safety and quality assurance certification for thousands of fresh produce businesses," Freshcare's Clare Hamilton-Bate said.

"Now we are working to develop an additional standard that will enable growers to achieve third-party certification of their fair employment practices."

The new employment standard, along with the audit and certification process, will be piloted with at least four production horticulture businesses later in 2017. The new certification will be available to Freshcare members late this year or early in 2018. The training requirement for the new certification can be achieved by growers working through the Hort360 workplace relations module.

HOW WILL THIS WORK IN EXPORT MARKETS?

Freshcare is currently being benchmarked against the GLOBALG.A.P. farm assurance standard which, with the addition of an export addendum, will enable growers to build on their existing Freshcare certifications to be recognised in international markets.

WHAT ABOUT LABOUR HIRE COMPANIES?

The Recruitment and Consulting Services Association (RCSA) is close to finalising an auditable industry standard for labour hire companies – which is good news for growers who use these services. While voluntary, the standard will allow labour hire companies to demonstrate a commitment to good and proper practice, providing growers with reasonable assurances that they are using a reputable firm. The certification process will, among other things, assess if the firm is run by fit and proper persons, has systems for work safety and that workers are employed in accordance with immigration laws and paid correctly. Ms Hamilton-Bate participates in the advisory group for the new certification, which will help to ensure consistency and alignment across the certification systems.

Queensland growers should also be aware that the Queensland government is developing a labour hire license scheme. Strict penalties will apply for any host employer who does not use a licensed labour hire provider.

A FAIRER FRESH PRODUCE SUPPLY CHAIN

Some Australian retailers have adopted the SEDEX system and associated SMETA audits for their suppliers. This framework, however, covers a broader set of issues that are not all relevant in the Australian context. The emerging certification process through Freshcare and RCSA will offer a sound alterative to SEDEX that provides a strong focus on the issues relevant in Australia around fair work practices. Together, the certifications being developed for farm employers and labour hire companies have the potential to drive real improvements across the fresh produce supply chain.

"Up until now, growers committed to employing workers fairly and paying award wages have been significantly disadvantaged by less scrupulous operators who could undercut them on price," Growcom Chief Advocate Rachel Mackenzie said.

"We are calling on all major Australian retailers and food services companies to strongly support industry's efforts in this area. Once these certifications are up and running, no-one should be buying cheaper product from a supplier who cannot verify their fair employment practices – and growers should only use labour providers who are certified to the RCSA standard."

INFO

To find out more about the assistance available to growers under the Fair Farms Initiative, please contact Annabel Hutch at Growcom on 07 3620 3844 or email 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.

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 POTATO CROPS: WHEN DOES IT ALL BEGIN?

Poor handling of potato seed can lead to disease or physiological ageing, which can result in decreased yields and profitability. Syngenta Technical Services Lead Scott Mathew reminds growers of the steps to successfully manage their crops and maintain good quality seed from purchase to planting.

I often field calls about situations where poor seed handling by a commercial grower has led to diseased or poor quality seed being planted and the outcome being poor yields. In this month's column, I am going to discuss when management of a potato crop actually begins.

Management of a grower's potato crop begins with the contracting and purchasing of good quality seed that is both cosmetically sound and of the physiological age. The purchase of good quality seed is a critical factor in producing a quality potato crop and is one of the most significant investments a grower makes each year in the production of this crop.

CLEAR COMMUNICATION

It is important that commercial growers and seed growers have good, open discussions with each other throughout the season around the progress of the seed crop and that each party understands 'what they want the seed to do' in the commercial phase.

The communication should be clear and understood by both parties. As a commercial grower, you should clearly specify your requirements as early as possible to ensure that you give your seed growers every opportunity to produce a seed crop that meets these requirements. These may include:

- The size range of seed potatoes you require – this will depend on whether or not you intend to plant whole or cut seed;
- The level of disease/virus that may be present in/on the seed, as this will impact on what management strategies you will adopt in the commercial growing phase of the crop; and
- Any other factors that may influence your management plans when growing the commercial crop.

Also ensure that specific requirements are understood and accepted prior to committing to a purchase.

In my experience, quite a few commercial growers do not actively start managing their crops until they receive their potato seed and begin planting it, yet it is the steps prior to planting that can have the greatest impact on the final yield results achieved.

SEED IN TRANSIT

Once quality seed has been purchased and delivered, growers then need to focus their attention to the next step: storage and handling.

Proper seed handling and storage by growers prior to planting is extremely important.

To ensure a desirable yield out of the potato crop, growers need to ensure they have correct seed storage and handling practices in place. All too often I witness potato seed stored in poorly-maintained, dusty or poorly ventilated sheds with fluctuating temperatures. Storing potato seed in these conditions can cause the seed to be infected with diseases such as silver scurf, or lead to the physiological ageing of seed. Other factors, such as grading the seed using poorly-maintained and dirty equipment, can also lead to infecting potato seed.

As I've pointed out above, good shed hygiene practices as well as the use of well-maintained and clean handling equipment is absolutely critical when storing and handling potato seed.

Ultimately, this is a timely reminder to ensure growers pay attention to detail when handling and storing seed to maximise the returns from a good quality and high yielding potato crop.

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

PROCESSORS TAKE A TRIP DOWN MEMORY LANE

As an industry, we are busily attempting to produce more from less. In this article, the Potato Processors Association of Australia (PPAA) looks back on how far it has come in the last 20 years. PPAA Executive Officer Anne Ramsay spoke to former Simplot Business Development Manager Peter Hardman about the innovation he has seen over the years.

Recently retired after 21 years with Simplot, Peter Hardman reflects on the biggest game changers he's seen over his time in the processing potato industry.

"Most of the gains in productivity have come from new treatments, knowledge and technology. We've seen a growth in saleable yield but we have also seen greater efficiency around our inputs," Peter said.

In this time, the industry has faced many challenges but Peter has seen enormous growth in productivity. He lists the changes and the evolution he has witnessed below.

SEED

- Bulk handling of seed and fertiliser has significantly reduced labour costs and increased turnaround times.
- New knowledge and technology has improved seed storage, treatment and handling, resulting in huge improvements in seed quality and performance. In Tasmania 20 years ago, 50 per cent of seed was rejected due to common scab – now it is close to zero for that disease.
- Physiological age of seed has become a focus with seed grown to meet the physiological age requirements of particular cultivars. For example, Russet Burbank needs a young physical age. Planting the seed crop later, harvesting earlier and storing at two degrees Celsius as soon as possible leads to a much greater result.
- Pre-cutting seed has saved time at cutting just prior to planting.
- Cutting contractors are providing a professional service and are offering a good product.

PLANTING

- Planting machinery is now more commonly multi-rowed and developments in seed cutting have led to greater seed and planter efficiency.
- Precision guidance through GPS is seeing paddocks efficiently planted to maximise land use and minimise compaction through controlled traffic systems.
- In-furrow developments have led to precision application of fertiliser and chemicals, leading to greater operator efficiencies, less product wastage, earlier crop maturity and better yield outcomes.

PESTS AND WEED CONTROL

- The evolution of new fungicides has seen a significant reduction in the impact of diseases such as *Rhizoctonia*, which once claimed 20 per cent of yield. Through the use of new treatments, the impact of this disease has been significantly reduced.
- As mentioned earlier, new knowledge has resulted in a significant drop in the impact of common scab. In Tasmania, a slight delay in planting and promoting rapid and even growth has resulted in little common scab presence. In other parts of Australia, the use of seed treatments has played a role.
- In Tasmania, the registration of Boxer Gold by Syngenta three years ago for use as a pre-emergence herbicide for control of nightshade has been a very important agronomy tool.

IRRIGATION

- The use of pivots and linear irrigators has reduced labour requirements (and likely saved many marriages), delivering greater uniformity of application and reduction in water wastage.
- Moisture monitoring equipment means that we are applying water when the crop needs it, not when we think it should be applied.
- We also have a better knowledge of how much and how often we should apply water.
- The development of more accurate weather forecasting has assisted growers in managing irrigation scheduling.

"Looking back, we have achieved so much," Peter said.

"To keep us striving for production efficiency, we need to continue to invest in the development of new technology and knowledge. We also need to have the confidence to embrace new approaches and information."

INFO

For more information or to provide your feedback, please contact Anne Ramsay on 0400 368 448 or email ppaa.eo@gmail.com.

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

The effect of heat stress in potatoes. Image courtesy of James Hutton Institute.

TAKING THE HEAT OUT OF POTATO CROPS IN SCOTLAND

Increased temperature has been identified as a prime factor affecting the growth and yield of a potato crop. To strengthen a crop's vulnerability to heat stress, scientists at the James Hutton Institute in Scotland have developed a technique to identify a particular version of a gene that is present in heat tolerant potatoes. Project leader Dr Mark Taylor spoke to *Potatoes Australia* about the research.

Given Scotland's capital Edinburgh records an average summer temperature of 15 degrees Celsius, it would appear strange for scientists there to be working on heat stress in potatoes.

However, as Dr Mark Taylor explains, Scottish seed is exported to many countries with warm environments – and yet, this trait is often overlooked in the country's breeding programs.

Dr Taylor is a Project Leader at the James Hutton Institute's Cell and Molecular Sciences group in Dundee, Scotland, and his team's approach combines genetics, genomics and molecular physiology, which looks at how cells interact and operate within a living system (in this case, potatoes).

When the Scottish potato industry identified heat tolerance as an issue in its crops, it began to co-fund work to develop tools to identify a particular gene that is present in heat resistant potatoes. Other funding has been obtained from the Scottish Government as well as European organisations and those interested in expanding the scope of potato in warm environments (for example, in Sub-Saharan Africa).

SYMPTOMS OF HEAT STRESS

Research has predicted that the effects of a warmer climate will decrease global potato yields by around 10-19 per cent in 2010-39, and 18-32 per cent in the 2050s.

A complex array of heat stress responses may impact overall tuber yield and quality. For instance, high temperatures may cause various tuber disorders, including irregular tuber shape, chaining in potato tubers (when the tubers form a chain as they struggle to reproduce) or secondary tuber formation (often associated with excessive stolon elongation and branching). High temperatures during tuber maturation impacts on tuber dormancy and can result in pre-harvest sprouting.

"Despite the fact that most commercial potatoes are sensitive even to mildly elevated temperatures (above 25 degrees Celsius), relatively little is known about the response of potato to heat stress or how to make potatoes more heat tolerant," Dr Taylor said.

GENETIC RESEARCH

Initially Dr Taylor and his team characterised changes in gene expression that were associated with elevated temperature in potatoes, before adopting a genetics approach.

"We characterised a potato population for tuber yield under heat stress and with help from my more genetically-inclined colleagues, we were able to identify a particular version of a gene that is present in heat tolerant potato types but is lacking in the susceptible ones," Dr Taylor explained.

"There are gene codes for a Heat Shock Protein – a group of proteins that are switched on at higher temperatures to protect the cellular machinery from heat damage. The 'good' version of the gene is switched on far more quickly and to a much higher level than other versions."

So far, Dr Taylor and his team have used this gene version in the test population and in wild potato species from the germplasm found within the Commonwealth Potato collection, a large potato genebank located at the James Hutton Institute's Dundee site.

"We want to see if this version is present in any commercial potatoes and if this gives them heat tolerance. Additionally we are working on ways of introducing this gene version into a commercial background using conventional breeding approaches."

If this research is successful, Dr Taylor said heat tolerance in potato will potentially give more stable yields and increase the climate zones in which the benefits of potato production can be realised.

CLOSER TO HOME

Dr Taylor said he was happy to discuss any aspect of potato quality and development, particularly in heat tolerance, with the Australian potato industry.

"I would have thought that heat tolerance was very important for Australian growers and would be interested to know how this problem is dealt with," he said.

"It would be interesting to look at any heat tolerant Australian varieties and see if they carry the gene version of interest, and also how abiotic stress threats to potato are dealt with in Australia."

INFO

For more information, please visit plantmanagementnetwork.org.

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

EXTENSION PROGRAM PLANS ACTIVITIES FOR 2018

Hort Innovation is seeking information and feedback for extension activities for the Australian potato industry.

Extension activities for the potato industry are undertaken using funds from PT16000, a strategic levy investment under the Hort Innovation Fresh Potato and Processing Potato Funds. Planning for two extension activities in 2017 – a focus on seed potato quality/physiological age, and the production of a web-based insects and diseases app – has been completed. Work should commence on these in August after the contracting of the delivery agencies has been completed.

Advice is being sought to plan the industry extension activities to be delivered in 2018, with plans to engage with stakeholders to determine what extension activities are required to meet the needs of industry.

SEEKING FEEDBACK

Hort Innovation is keen to hear from industry stakeholders about what extension activities are required by growers and the best way to deliver them. Learning and understanding new practices through on-farm and grower participation activities have been identified as effective learning methods by many in the industry and will be considered as a delivery method for future extension activities.

Information and feedback from industry stakeholders is welcome, as is input into other extension activities, which may include literature reviews, future industry forums and visits from international experts.

Use the contact information below to tell Hort Innovation about your ideas and thoughts on extension activities for 2018.

INFO

For further information or to discuss extension activities in the potato industry, please contact Hort Innovation R&D Manager Bianca Cairns on 07 3198 6757 or bianca.cairns@horticulture.com.au.

Extension activities for the Australian potato industry are funded by Hort Innovation using the fresh and processing potato research and development levies and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

Project Number: PT16000

Hort Innovation

Photography by Chris Kershaw.

ADJUSTING TO CHANGE TO CREATE A VIABLE BUSINESS

NAME: Greg Humfrey
AGE: 29
LOCATION: Gingin, Western Australia
WORKS: Humfrey & Co Pty Ltd
GROWS: Potatoes – Nadine, Royal Blue, Rodeo, Maranca, Kipfler

HOW DID YOU FIRST BECOME INVOLVED IN THE POTATO INDUSTRY?

I grew up on the farm so I have always been around the industry, and potatoes was the main line Dad was growing when I started so that's what got me involved.

WHAT DOES YOUR ROLE IN THE BUSINESS INVOLVE, AND WHAT ARE YOUR RESPONSIBILITIES?

I look after one of our farms so everything from planning, planting areas, seed volumes, fertilising, spraying, irrigation and all the usual farm jobs.

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

It's always changing, and there is never one season the same. We always try to improve our techniques and supply a better product.

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

We have a constant increase in our input costs and constant downward pressure on our return for our product. Trying to produce the best quality at the highest yield for the least inputs is the only way to try and keep up.

In Western Australia, we have had a recent deregulation of our industry which has been an adjustment for every grower, along with unfavourable decisions by the state government and also the detection of tomato-potato psyllid. This has been a massive issue, with product not being able the leave the state as freely as before.

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

I am lucky to be around my Dad who has been growing potatoes for close to 30 years. Advice from anywhere in the industry is good, then it's up to us to relate it back to our conditions and make our own decisions.

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

The more information we have on anything, the better chance we (as an industry) have. There's constant variety research which is good. I think marketing research is important to keep the public aware and realise potatoes are a healthy product.

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

We have been trying green manure crops and also high quality compost, as opposed to manure. We will see what comes from that.

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

Maybe developing ready-to-cook packaged potatoes, since people are becoming time-poor.

WHERE DO YOU SEE YOURSELF IN FIVE YEARS?

There has been a lot of change within the potato industry in Western Australia recently and hopefully in five years' time, we are still growing potatoes at a viable level and improving our business.

WHAT IS YOUR VISION OF THE AUSTRALIAN POTATO INDUSTRY IN THE FUTURE?

Hopefully it can gain an increase in consumption and have the consumers become more in touch with their locally-grown product. Australia produces such a high level of produce and it needs to be rewarded.

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

I think trying to keep people within the industry is a good start. If you have an opportunity on the farm or in the pack shed, the merchant side should be strongly looked at. There is rarely a simple, boring day – it's always changing and when you can work through all the scenarios, it's a good achievement.

Rye grass cover crop in Tasmania. Image courtesy of RMCG.

SOIL WEALTH AND CROP HEALTH: VITAL COMPONENTS TO POTATO AND VEGETABLE CROPS

The Soil Wealth and Integrated Crop Protection (ICP) projects have assisted vegetable growers over the past three years, providing extension and outreach services on soil health, crop nutrition and crop health management. It is not surprising that a great deal of lessons learned and project outputs can be applied across horticulture, including the potato industry.

Much has been written about the Soil Wealth and Integrated Crop Protection (ICP) projects in our sister publication, *Vegetables Australia*. The projects *Soil condition management – Extension and capacity building* (VG13076, Soil Wealth) and *Extension of Integrated Crop Protection information* (VG13078, ICP) are strategic levy investments under the Hort Innovation Vegetable Fund. However, many of the activities and learnings from these projects facilitated by RMCG and Applied Horticultural Research (AHR) can apply to potato crops as well.

Over the past three years, RMCG and AHR have been conducting a wide range of extension activities as part of the Soil Wealth/ICP projects, including soil borne disease masterclasses, farm walks located at the 15 demonstration sites around Australia, online webinars and the production of fact sheets and guides for growers.

As phase 1 of both projects will conclude in November 2017, *Potatoes Australia* spoke to RMCG soil and crop management scientist Dr Doris Blaesing and agricultural consultant Donna Lucas about how the research can benefit the wider horticulture industry, particularly potato growers.

FOCUS ON POTATOES

The consulting groups worked with a range of vegetable growers (some of whom also grow potatoes) and Dr Blaesing said many findings were relevant to the potato industry.

"Every industry likes to run its own soil health project, however the soil doesn't mind what's growing in there – the principles of keeping soil healthy are all the same. The trick is to apply these to different production systems," she said.

"Growers are keen to look after their soil – it's their main asset – and they're keen to look at new ways to do things. We help the understanding of how new practices fit into a specific system and business; for example, if a solution is to use cover crops, how does that fit into the management of your cash crops?

"You can put together a checklist of things you need to think about to manage soil and crop health and it would be the same, whether it's for potatoes or vegetables. The main things to think about are how to improve soil organic matter and manage soil structure."

Mrs Lucas said that the main project outputs were relevant to both potato and vegetable growing operations.

"The key areas are cover cropping, including biofumigation crops, reduced tillage management (looking after soil structure), site-specific crop nutrition and management of soil borne diseases. Whether you talk to potato or vegetable growers, their priorities are the same, even though the specific crop diseases will be different.

"I think potato growers have a challenge because they put a lot of pressure on the soil. Maintaining minimum tillage is a challenge because when you're harvesting and planting, you're actually tilling the soil. Many growers have found a solution of just reducing the amount of time they move the soil such as one pass planting which is now used in Tasmania. People aren't aware of the fact that every time they move the soil and leave it without anything growing on it, it's going to lose organic matter and it's going to decline, if nothing is done about it."

Mrs Lucas added that soil and crop health in potato and vegetable crops also comes down to rotation, and the Soil Wealth/ICP projects demonstrate what can be done.

"This is about considering what other crops you might have in the rotation as well, and looking after the soil for the long-term apart from thinking about short-term inputs. Where rotation is not possible, other ways of leaving at least 4-5 year breaks between commercial potato crops have to be explored."

FORWARD THINKING

One of the positives for Dr Blaesing and the Soil Wealth/ICP team has been the willingness of participating growers to be open to change in their farming operations. The team is grateful that the 15 demonstration site growers were happy to try new things and share their experiences with the industry via the Soil Wealth website and farm walks.

"This is because of what they've been thinking and trying already and seeing overseas. We basically share our ideas, talk about what we have learned and together we sort out new management practices such as reducing tillage, using compost or cover crops," Dr Blaesing said.

The most encouraging aspect that the team has learnt since conducting the Soil Wealth/ICP soil borne disease masterclasses and other activities is that, according to Dr Blaesing, growers are looking for solutions that are not solely based on products – they want to look after the soil and make decisions that keep the soil and crops healthy.

"The best thing is to keep the soil covered and minimise tillage. That sounds simple, but it isn't; ways to achieve this are somewhat different for each farm," she said.

"Many producers now use cover or biofumigation crops regularly as part of their system. Other growers try to bring in organic matter if they can. Compost used to be for the home gardener but there are some large scale producers now who are using compost and other organic amendments. We are finding that there are challenges like getting the right machinery, the costs of soil amendments, or the best use of new technologies such as precision ag. We still need to do more work on the longer-term cost/benefits of some practices in different systems.

"There are a lot of opportunities to do things differently and many growers want to bounce ideas off others – growers, agronomists or researchers. We're the ears and eyes out there trying to find and evaluate information and I believe that's really important. We are keeping our ears to the ground to have responses to new challenges brought on by climate variability and opportunities emerging with the development of new technologies."

NEXT PHASE

While the first Soil Wealth/ICP projects are coming to an end, there is still plenty of work to be done in this space for both potato and vegetable growers.

"What we hear is that growers would like to have more advice on nutrition management, especially on site-specific nutrition management and the use of different fertilisers and about minimum tillage and how to fit summer or winter cover crops into their system, as well as precision agriculture," Dr Blaesing explained.

"It would be nice if we could work with all growers who produce annual crops. Ideally, we would like to see a Soil Wealth project for all horticulture crops. The Soil Wealth principles apply to perennial crops even though management solutions will differ."

INFO

For more information, please contact project leaders Dr Gordon Rogers on 02 8627 1040 or gordon@ahr.com.au and Dr Anne-Maree Boland on 03 9882 2670 or anne-mareeb@rmcg.com.au.

More information and resources are also available from the Soil Wealth/ICP website at soilwealth.com.au or integratedcropprotection.com.au. Project achievements to date can be viewed at: youtu.be/gkRsEL6O6ZE.

The Soil Wealth/ICP projects have been funded by Hort Innovation using the vegetable research and development levy and contributions from the Australian Government. This communication has been funded by Hort Innovation using the fresh potato research and development levy and contributions from the Australian Government.

Project Numbers: VG13076, VG13078 and PT15007

REGIONAL UPDATES

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AUSVEG SA continues to work with Biosecurity SA and AUSVEG to coordinate our state response to the threat of tomato-potato psyllid (TPP). Recently, we held a workshop at the Virginia Horticulture Centre to provide growers and agronomists with the information they need to conduct effective surveillance. Biosecurity SA was also on-hand to outline risk management activities and explain what would occur if TPP makes its way to South Australia.

AUSVEG SA is fortunate to draw upon the expertise of Callum Fletcher in our national biosecurity team, who has had extensive experience managing industry responses to TPP in New Zealand. We thank Biosecurity SA and AUSVEG for assisting us to pull together the researchers and speakers for this critical event for tomato and potato growers.

Any growers or advisers seeking further information on the SA TPP response can call the AUSVEG SA office for further information.

In other news, as a result of a cross industry and significant community effort, Playford Council has postponed its proposed 200 per cent rate increase for primary producers. Instead, Playford Council has agreed to hold rates for the time being and instigate a broad public consultation process around future rate increases.

It is likely that primary producers again will have to make their voices heard in this process to ensure that future rate increase proposals are equitable, and will not significantly disadvantage the local horticultural industry.

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VGA trading as AUSVEG VIC

AUSVEG VIC Executive Officer Kurt Hermann has resigned from the organisation following a successful tenure that saw him lead the transition of the Vegetable Growers Association of Victoria rebranding to AUSVEG VIC in November 2015.

On behalf of AUSVEG VIC President David Wallace, I would like to thank Kurt for his time at AUSVEG VIC and wish him all the best for his future endeavours. In the meantime, queries relating to AUSVEG VIC can be addressed to me as Acting State Manager until a full-time replacement is appointed.

AUSVEG VIC, in partnership with Australia's leading environmental and engineering consulting company KMH Environmental (pitt&sherry), has secured a grant from Sustainability Victoria to build the capabilities of the state's vegetable growers in environmentally sustainable practices. The grant will fund the Victorian Vegetable Growers Energy Efficiency Program and will ensure AUSVEG VIC and pitt&sherry will be able to build the knowledge and skills capacity of Victorian vegetable growers to deliver energy efficiency improvements to small and medium sized businesses (SMEs) in the Victorian vegetable industry.

This is an opportunity for Victorian growers not to miss, as the grant will give them the ability to assess their businesses and make calculated business decisions to improve the energy efficiency on their growing operation.

There is an opportunity for eligible growers to participate in the program to minimise energy use and become more sustainable with on-farm practices. If you are a grower who would be interested in participating, please contact me.

Matthew Gay
Crookwell Potato Growers' Association
President
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Website: seedpotatoes.com.au

In Crookwell most crops are now dug and stored, grading and packing is in full swing and orders are organised with some lines of seed still available; however they are being sold quickly.

The season has been an extremely good one with little insect pressure and moderate soil moisture through growing, too-ideal harvesting conditions. The only negative is the severity of frosts in the highlands – consecutive frosts of -10 degrees Celsius have occurred and some potatoes have suffered frost damage, yet minimal enough for these extremes. I guess the positive with extreme cold is the impact on pest and disease – not too many bugs can handle sub-zero conditions, especially continuously. This then breaks the life cycle of pests and disease and helps Crookwell maintain its 'disease free' status.

We also seem to be on the cusp of an export opportunity, with contact being made at our office by a number of interested countries. This is being looked at by our growers and the Association. It would be pleasing if our State Agriculture Departments could help us in this area as it would of course be of huge economic benefit for all concerned. We will see how it goes.

Now growers are looking at next season's paddocks and I would say as soon as moisture becomes available (it is very dry here at the time of writing this update), fallowing will begin. How fast seasons come and go now it seems; then of course, it will be planting time and another crop will be in and growing. Hopefully I can report all is going well at that time.

Dean Bone
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Chairman
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Website: spv.org.au

We've come to the end of what has mostly been a very good season. Quality has been good and there has been good demand for seed potatoes again, which is wonderful. It is encouraging that growers are embracing the benefits of using certified seed potatoes for their crops.

With the detection of tomato-potato psyllid (TPP) in Western Australia, SPV is mindful that an incursion of TPP is very likely to happen in Victoria at some point. SPV considers that there is an urgent need for a response plan/protocol prior to the event, and one that is practical, effective and doesn't cause any more grief than necessary. It is good to hear via continual industry updates that there is some very positive, cohesive work being done to make this happen.

A short grower trip to New Zealand (South Island) is on the agenda for January/February 2018, when crops are at their best for inspecting. There is so much information our fellow potato growers in New Zealand can share with us regarding the management of, and possible control measures for TPP. This trip is being arranged with the help of ViCSPA General Manager Dr Nigel Crump and Potatoes New Zealand Inc. CEO Chris Claridge.

Finally, to follow on with the TPP issue: As part of your R&D funds, there is a new project MT16009 – *An IPM Extension Program for the Potato and Onion Industries*. This project is being run by IPM Technologies and while TPP was not initially included as part of the project, the workshop, in-field training plus regular one-on-one support will include TPP identification and management.

The IPM Technologies team consisting of Dr Paul Horne, Angelica Cameron and Jessica Page have started this five-year, Australia-wide project with their first workshop in Mt Gambier in South Australia. A second has been scheduled for Ballarat and SPV is assisting Paul, Angelica and Jessica to gather numbers for a workshop in Gippsland.

If you are interested in being part of this project, please give Pauline a call on 0409 805 166 or email admin@spv.org.au. IPM Technologies can also be contacted for more information – call or email Angelica Cameron on 0466 112 343 or at angelica@ipmtechnologies.com.au.

You can also visit the website: ipmtechnologies.com.au/projects/potato-onion-ipm-extension.

SPV is currently having its website rebuilt and updated to make it mobile-ready. Stage one is looking very good, refreshed and easy to navigate. We apologise for the down time of the website.

Wayne Johnston
Tasmanian Farmers & Graziers Association
President
Cnr Cimitiere and Charles Streets
Launceston, TAS 7250
Phone: 03 6332 1800

The head of TFGA's Simplot Potato Committee, Trevor Hall, has urged continued vigilance in the fight to keep the tomato-potato psyllid out of Tasmania.

In Tasmania, psyllid eggs would likely hatch one week after being laid. Nymphs would pass through five instars over three weeks before becoming adults.

Low summer heat in maritime parts of Tasmania, such as the north-west coast, would likely retard population growth in summer. Perhaps 3-4 generations per year would occur on outdoor host plants in Tasmania and, in protected cropping facilities between 15-32 degrees Celsius, development would progress more rapidly.

"The psyllid must be kept out of Tasmania at all costs. It would just destroy the industry," Mr Hall said.

Recent ABS statistics rated potatoes as Tasmania's fourth most valuable commodity. Mr Hall estimated that just the farm gate value alone was in the vicinity of $120 million without any quantifiers.

He said that Simplot and McCain alone were responsible for growing well over 350,000 tonnes of potatoes.

"The lion's share of all the French fries eaten in Australia are grown in Tasmania. There are so many reasons to make sure that we keep the psyllid out of the state, including the fact that our pesticide and chemical usage would probably treble."

Mr Hall said that he had first seen the effects of the psyllid in a United States' research facility about four years ago.

"The tuber became completely unsaleable. It's such a waste."

YOUNG POTATO PEOPLE

G'day again,

I hope you've been managing to keep warm this winter. Even though it's cold, winter can be a wonderful time filled with snow trips, cold morning walks, hot chocolate while sitting in a hot tub, sleep-ins, long nights by the fire and movies.

For a farmer, winter means more work, but rather than doing it in hot and dry conditions, you are working in cold and wet conditions – at least that's what it's like here at Thorpdale. It's a great time to pack up the kids and get away to a warmer climate for a few days, but this isn't always possible as the farm doesn't take a break.

At Thorpdale, the local kindergarten has a unique way of celebrating winter. It's the tradition to gather up the kids and their families for the annual Gumboot Throw with a barbecue lunch, which is generally enough to attract Dad away from his work, and into the fun and games of the event. Each child gets two attempts to hurl a gumboot as far as they can in front of a crowd of cheering adults. For some, the gumboot throw is a serious business and some will have spent time in the week prior practicing their action. Others are more content to go into this massive event untested.

After all of the kids have had their throw, medals are awarded to all participants. It may not be the Olympics, but the competition is fierce and friendly and kids and families get the chance to do something a bit different.

The thing I really like about the Gumboot Throw is that it is a celebration of winter. Winter is not a season we need to dread, but it can be one we all look forward to.

As well as a time for celebration, winter can be great to catch up on things that you haven't been able to get to during the rest of the year. Winter is a time of year when you can be more involved in the local community, because when you're busy on the farm it's almost impossible to make it down to the local footy club for a fundraiser to go to the end of year trip.

There's a lot to be said for winter, and when you get up in the morning, while you shake the ice off the bed sheets, I challenge you to embrace and enjoy the chill. If you can't manage that, it may be time to upgrade your heating, but regardless just remember winter only lasts a few months then the weather will warm up again.

Cheers,

Stu

@youngpotatopeps facebook.com/groups/youngpotatopeople Proudly supported by Adama

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