

# GROWER SUCCESS STORIES

REAL RESULTS FROM THE  
POTATO R&D LEVY

**AUSVEG**

Horticulture  
Innovation  
Australia

**PPAA**

Potato Processing Association Australia



The Australian potato industry continues to enhance its reputation as a global powerhouse in innovative potato growing methods, with world-leading production procedures common-practice by local growers. The high quality of Australian potato produce is possible by ongoing investment in research and development (R&D), which has put Australian growers at the forefront of cutting-edge potato production.

This was highlighted recently when a group of local potato growers, including Chris Waugh from South Australia, featured in the pages ahead, travelled to China for the 9th World Potato Congress to network with leading international potato growers and learn from the most accomplished and renowned industry researchers.

Every year Horticulture Innovation Australia Limited (HIA), using the National Potato Levies and funds from the Federal Government, has invested vital funding in grower-driven R&D projects, which have delivered real results for potato producers.

In the pages ahead, you will find examples of growers from around the country who have embraced industry R&D and brought their business success as a result of taking on levy-funded initiatives.

Biosecurity continues to be a real focus, with continued investment ensuring that the Australian potato industry is a world-leader in producing clean, green and safe potato produce. Two of the industry's biosecurity champions, Tasmanian grower Michael Radcliff and Crookwell grower Kim Weir, are featured in this publication.

Potato growers also increasingly have access to levy-funded consumer research to understand consumers' behaviours with potato purchases and tailor their products to meet their needs. Tasmanian grower Susie Daly has been able to effectively use the data from the industry-funded Potato Tracker project to develop new commercial avenues for her business.

Elsewhere, we see Australian growers take the opportunity to learn about production and technical innovations from their international counterparts, and make valuable networking connections as a result of participation in levy-funded industry missions.

Investment in innovative soil management systems has also resulted in real, on-farm development that has contributed to more consistent and healthier crops, with Victorian grower Scott Dimond's involvement with pre-plant DNA soil testing, using the PreDicta Pt-brand diagnostic test, a testament to this.

I look forward to seeing many more exciting innovations and developments that will continue to help drive the Australian potato industry forward in the years ahead.

Yours sincerely,  
**Selwyn Snell**  
Horticulture Innovation Australia Chairman



AUSVEG Ltd  
PO Box 138  
Camberwell VIC  
Australia 3124

Tel: (03) 9882 0277  
Fax: (03) 9882 6722

Email: [info@ausveg.com.au](mailto:info@ausveg.com.au)  
Website: [www.ausveg.com.au](http://www.ausveg.com.au)  
Twitter: [twitter.com/ausveg](http://twitter.com/ausveg)



# SUSIE DALY

## *Tapping into consumer research*

SUSIE Daly has her finger on the pulse when it comes to what is “trending” in the world of fresh potatoes.

“You don’t need to be a rocket scientist to understand why things are happening in the consumer market, what’s driving this change and what opportunities this can present for your business,” the Tasmanian potato grower said.

“Market research tools, like the Potato Tracker project, are a valuable resource that potato growers can use to tailor their products to what consumers want simply by looking at how they buy their potatoes.”

### **Understanding consumers**

The Potato Tracker project (PT13015), undertaken by leading market research agency Colmar Brunton, delivers monthly reports to the Australian potato industry that measure the size of the Australian fresh potato market, consumers’ spend on potatoes, retail channels, as well as purchasing trends and consumption habits.

Ms Daly said while Australian consumers were still buying potatoes for their taste, convenience and value for money, there was a clear shift towards smaller-sized potatoes purchased in smaller volumes.

**“Market research tools, like the Potato Tracker project, are a valuable resource that potato growers can use to tailor their products to what consumers want simply by looking at how they buy their potatoes.”**

“The research shows that consumer trends have certainly changed over the past 10 years,” Ms Daly said.

“As a reflection of today’s increasingly busy and time-poor society, people are forgoing the big weekly shop and instead, are dropping into the supermarket several times a week to buy ingredients to use for dinner that night.

“Rather than investing in large bags of spuds that will last the distance, people are now choosing to buy smaller one and two-kilogram packs more frequently to avoid having to throw out spoiled potatoes.

“To respond to these trends, we have changed our pack sizes to contain no more than two kilograms of potatoes, which also provides scope to increase consumption among certain groups.”

### **Business innovation**

Ms Daly is also in the process of growing smaller-sized potatoes and is working alongside some major supermarkets and forecasting specialists to assess the opportunities to introduce new, washed varieties onto the market to drive her business’ growth.

“People no longer want overly large potatoes – they don’t want to spend the time cutting them, and dirty potatoes are becoming less popular among younger generations who view them as inconvenient,” she said.

“Smaller potatoes, on the other hand, are an attractive option because of the health benefits they deliver for people who are conscious of portion sizes.”

With Australian families driving demand for potatoes, Ms Daly said that it was important for growers to “take note and listen”.

“While the research has confirmed what we already know, it’s reassuring to know that we are on the right track,” she said.



Photographs by Loic Le Guily.



### **Summary:**

- **The main focus of Potato Tracker (PT13015)** is to track consumer purchasing habits of potatoes, with the aim of giving potato growers the tools to tailor their products to meet consumer demands and trends.
- **These reports** are released on a monthly basis and provide information on how often consumers purchase potatoes and how they want to buy them.
- **Susie Daly is a potato grower in Tasmania** who has developed new potato products with her second-grade potatoes.
- **Ms Daly has used the results from the Potato Tracker project** to strengthen her business development by tailoring her produce to what consumers want.
- **PT13015 was funded by Horticulture Innovation Australia** using the National Fresh Potato Levy and funds from the Australian Government.



# CHRIS WAUGH

**Global congress sheds light on export opportunities**

THERE is a real opportunity for Australia to export its potatoes to China, but only through a unified approach and hard work, says South Australian potato grower Chris Waugh.

"China is one of Australia's top agricultural export markets," he said.

"With all the skills and resources at our disposal, and taking our investment in research and development into account, we should be getting behind any chance to gain export access into China and expand Australia's potato industry in the Chinese market."

## International perspective

Mr Waugh was confronted with the reality of China's food security concerns and economic challenges on a recent trip to Beijing where he attended the 2015 World Potato Congress as part of project PT14701.

**"Speakers at the Congress made it clear that Australia is in a good position to contribute to the long-term sustainability of the agricultural sector in China and help stimulate job growth."**

The seed manager for Red Gem Growers and Packers in Mount Gambier said he was interested in attending the event to find out about the latest developments in the global potato industry after participating in a number

of hands-on industry field days in Europe.

"There is a huge push by the Chinese government to phase out rice, wheat and corn and make potatoes a main dietary staple in the population," Mr Waugh said.

"Although China is the biggest producer of potatoes in the world, the problems the country is facing in crop rotations, water pollution, land degradation and skills shortages are making it increasingly difficult for it to produce any substantial gains."

"The problem is that in order to increase their potato yield, Chinese growers will need to enhance quality of the crop, but this relies on them improving their growing practices."

"Speakers at the Congress made it clear that Australia is in a good position to contribute to the long-term sustainability of the agricultural sector in China and help stimulate job growth."

"Potatoes are our highest value horticultural crop that we produce; they are cheap and we have a huge volume of them."

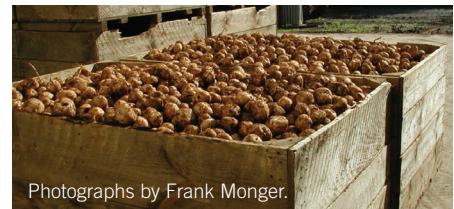
## Potential opportunities

Mr Waugh said he agreed that there was enormous potential for increasing Australian exports to China, but the initiative would require a collaborative effort across the entire sector.

"The frozen spud is a key market commodity and we should be capitalising on this," he said.

"Fresh potatoes, on the other hand, are a bit more difficult to export as they are highly susceptible to physical damage, such as cuts and bruising."

Mr Waugh, who grows approximately 80 hectares of fresh market potatoes on his farming operations, said he was recently asked to provide his services and expertise to help McCain China with its harvesting requirements.



Photographs by Frank Monger.

## Summary:

- **PT14701** gave nine Australian potato growers the opportunity to attend the 2015 World Potato Congress in Beijing, China.
- **Delegates representing industry sectors** in both developed and developing countries also toured key growing and producing facilities in the region.
- **The group witnessed the latest trends in global horticulture**, formed business networks and discovered new and innovative ideas to further develop the Australian potato industry.
- **Participating grower Chris Waugh** was able to assess Australia's international standing in the potato research and development field, and received an insight into existing export opportunities in China.
- **The project was funded by Horticulture Innovation Australia** using the National Potato Levies, funds from the Australian Government and contributions from Australian potato growing businesses.

# KIM WEIR

## Biosecurity matters



Photographs by Kim Shirley.

CROOKWELL is known for its disease-free certified seed potatoes and that's the way grower, Kim Weir, wants it to stay.

He is vigilant about maintaining strict biosecurity practices on his farm and ensures anyone who comes onto his property adheres to these measures.

### Biosecurity preparedness

Kim, together with his son James, has a 400 hectare mixed grazing farm. As well as a Dorset sheep stud, they produce prime lambs, beef and grow up to 20 hectares of certified seed Sebago and Almera potatoes annually.

Crookwell has few of the major pests, diseases and viruses found elsewhere in certified seed potato crops. These include Powdery scab, Potato cyst nematode, Bacterial wilt, Potato virus Y and Potato leafroll virus.

"These can be transmitted by soil, vehicles or even people being in close proximity to the crop during the growing period," Mr Weir explained.

Currently the four certified seed potato growers in Crookwell produce about 2,500 tonnes of seed. According to Mr Weir's estimates, this sows close to 2,000 hectares (about 5,000 acres) of potatoes. These crops then produce about 75,000 tonnes of produce for Australian markets. Any disease or virus threat in Crookwell will have a devastating flow-on effect.

The Weirs are particularly vigilant about what happens on-farm. During the growing period, the crop is treated as an isolation area. Only those with specific tasks are allowed to enter and they follow strict protocols.

For example, the potato inspector comes early in the morning, when he has clean clothes. Before entering the paddock, he dips his boots in a disinfectant footbath and does the same as he leaves.

"Our motto, as in most seed certified seed growing areas, is come clean and leave clean," Mr Weir said.

**"We haven't got a problem at the moment and we will make every effort to keep the area clean."**

Each year during the potato growing cycle, leaf samples from throughout the crop are sent off for virus testing.

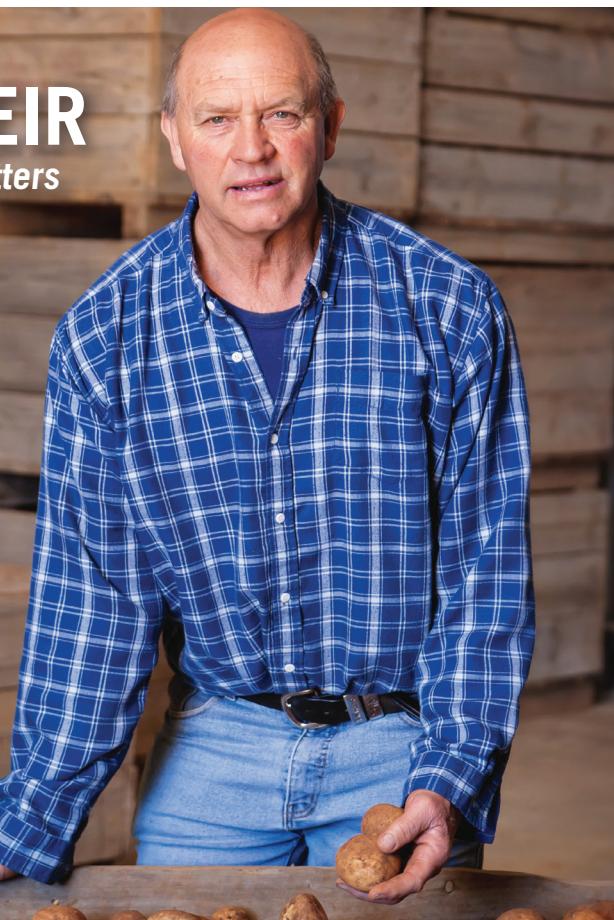
"We have not had positive tests of any of the major virus diseases to date," Mr Weir explained.

### On the front foot

Biosecurity awareness signs are in place and Mr Weir is trying to educate others of the importance of keeping Crookwell disease-free.

"We haven't got a problem at the moment and we will make every effort to keep the area clean," says Mr Weir. But he believes people don't understand biosecurity.

"They think we are just being difficult. They don't understand the position we are in and the risks we are up against if we get pests and diseases in our certified seed potato crops," he said.



### Summary:

- **It's important to practice on-farm biosecurity protocols** to help minimise the threat of pests and diseases in certified seed potato crops.
- **Wearing clean clothes** before entering the crop and having at-gate disinfectant footbaths can help.
- **Education** about the impact of pests and diseases on certified seed potato crops is also vital.
- **Biosecurity activities in the potato industry** are funded using the National Potato Levies and managed by AUSVEG and Plant Health Australia.



# SCOTT DIMOND

## Mitigating disease risk

Photographs by Luka Kauzlaric.

A SOIL DNA test is giving Australian potato growers the ability to tackle the scourge of common disease pathogens in their soil samples before they plant their crops.

### Testing for disease

Developed by the South Australian Research and Development Institute (SARDI) as part of project PT09023, the testing service, called PreDicta PT, can assess the risk of diseases that reduce yield and tuber quality caused by Root knot nematode and soil-borne fungi that contribute to Powdery scab and Black dot.

Scott Dimond, a potato grower from Ballarat, Victoria, is one of a number of local farmers who have put their hands up recently to host trials of the DNA testing service on their properties.

**“Going forward, this information can be used to guide farm management processes and cropping decisions.”**

Mr Dimond said *rhizoctonia* had been a significant issue on a large part of his farm for quite some time.

“*Rhizoctonia* is one of the diseases that can be assessed using the PreDicta testing tool,” Mr Dimond said.

“Due to its unpredictable nature, it’s a tricky disease to control, but I was intrigued to learn what levels were in my soil and whether it was going to pose any significant threats.

“Root damage and yield loss from common pathogens are two scenarios that potato

growers would probably prefer to avoid, therefore, being able to produce a healthy, quality crop – minus the use of unnecessary chemicals – sounded like a brilliant idea.”

### Next steps

Upon receiving the test results, Mr Dimond worked closely with members of the Victorian Department of Economic Development, Jobs, Transport and Resources (who were working in collaboration with SARDI) to identify where disease management practices could be altered to more effectively minimise the potential impact of *rhizoctonia*, and other soil-borne diseases, on his potato yield and quality.

“Going forward, this information can be used to guide farm management processes and cropping decisions – it will affect the variety of crops that growers use, how they prepare the paddock for planting and whether chemicals are needed,” he said.

“However, because we mainly grow one variety of potato, if a high level of disease is detected in the soil, we know we have the opportunity to do things differently.”

Since reaching the pre-commercial phase in August 2013, PreDicta PT is fast becoming an important pre-planting disease management tool available to Australian potato growers.

Mr Dimond said the research was especially critical for seed and fresh market growers where quality and appearance of the potato were imperative to producing a marketable crop.

“Being able to run some tests before planting the seeds will be highly beneficial to them in the long run,” he said.



### Summary:

- **PT09023** aims to use DNA soil diagnostics to provide an indication of disease risk.
- **SARDI** has developed a unique method of determining the risk of crop diseases with the PreDicta Pt-brand diagnostic test.
- **Pre-plant DNA soil testing** enables growers to identify fields (or part of fields) that are at risk of specific diseases.
- **Knowledge of each field’s disease risk** will help growers to make informed decisions on planting plans and management practices to minimise the impact these diseases pose to yield and quality.
- **PT09023** was funded by Horticulture Innovation Australia using the National Potato Levies and funds from the Australian Government.



# KAIN RICHARDSON

## Learning experience

Photograph by Luka Kauzlaric.

KAIN Richardson took a 10-day Potato Industry Leadership and Development Mission to the US and Canada in 2013, as part of project PT12704, and can't speak highly enough of the experience.

"I learnt so much," the 35-year-old potato grower from Newlyn in west-central Victoria said.

"At the age of 21, I never thought I would leave the country. So for me, this is a fantastic industry initiative," he said.

### Brave new world

The mission involved visiting potato farms throughout the US, including a stop-off in Idaho, before visiting Canada, Prince Edward Island and then the 2013 Potato Association of America (PAA) Conference in Quebec City.

Mr Richardson and his parents run a 220 hectare property and grow Bliss and Atlantic potatoes for the processing industry. Comparing their operation with the scale of the overseas farms was an eye-opener for Mr Richardson.

The irrigation systems were advanced and the machinery was capable of handling large capacities. "I was amazed they could shift that many spuds in that period of time," Mr Richardson said.

Other areas of difference included cheaper operating costs, such as electricity, machinery and labour in both the US and Canada. The farmers also receive taxpayer support.

"Subsidies are common over there

and provide a significant advantage," he explained.

Mr Richardson also noticed differences regarding biosecurity and maintaining clean seed varieties. For example, everything entering or leaving Prince Edward Island was monitored and checked to make sure there were no diseases.

### New reflections

Considering Australian farmers have no government assistance or subsidies, Mr Richardson believes local growers stack up pretty well.

"Our biggest issue is to keep the costs of production down," he said.

While Mr Richardson describes the PAA Conference in Quebec City as very "scientific", with a focus on diseases and control mechanisms, he admits it was a fantastic opportunity to see how that side of the industry operates.

"It was a great two days to wander around and listen to talks on things of interest."

Presentations of interest included learning more about Zebra chip disease and its associated psyllids, and bulk processing storage of potatoes, which allows them to be stored for up to 11 months, which is uncommon in Australia.

Another advantage of participating on a study mission with other like-minded potato growers is the networking opportunities. As well as developing a business relationship with a grower from Western Australia, who

has supplied the Richardsons with a new variety of seed potato, Mr Richardson met others from New South Wales, South Australia and Tasmania.

"It's a fantastic opportunity to discuss how things are done on individual farms," he said.

For Mr Richardson, it's all part of the value of taking an industry study tour. As well as meeting and talking with Australian farmers, you get to see what's going on in other parts of the world.

### Summary:

- **Taking an overseas Potato Industry Leadership and Development Missions** provides a great opportunity to learn about what's happening in the industry internationally.
- **Farmers visit properties overseas** and get ideas for what might work at home.
- **The study missions** also give growers a chance to network and form valuable business connections.
- **PT12704** was funded by Horticulture Innovation Australia using the National Potato Levies, voluntary contributions from potato growing businesses and funds from the Australian Government.



# MICHAEL RADCLIFF

## Biosecurity vigilance

WHEN it comes to biosecurity, Australia cannot afford to let its guard down. And in the opinion of Tasmanian farmers Michael and Heidi Radcliff, the issue must be tackled at the national, state and property level.

Putting their money where their mouths are, the couple is vigilant about strict biosecurity practices on their property in Tasmania's north. Michael and wife Heidi farm almost 404 hectares (1,000 acres) in Wesley Vale, 10km east of Devonport. As well as growing potatoes, broccoli, onions, carrots and pumpkins for the fresh market, they also grow processing potatoes, peas, beans, plant poppy crops and harvest pyrethrum.

### Clean and disease-free

Mr Radcliff is concerned that maintaining Australia's disease-free status will continue to be a problem, particularly with increasing economic pressures. He is particularly worried about the potential spread of potato Zebra chip disease in Australia, which has devastated the New Zealand potato industry.

Most concerning is the discovery on Norfolk Island of both the Tomato-potato psyllid (*Bactericera cockerelli*) as well as the Zebra chip-causing bacterium *Candidatus Liberibacter solanacearum* (*Lso*).

"This is a vivid reminder of the risks and the way this disease can spread," he said.

Michael and Heidi maintain strict

biosecurity practices on their farm. For example, they are particularly vigilant about removing dirt from farm machinery and equipment so that organisms are not transported from one paddock to another.

"For us it's about making sure we are looking after our farm to the best of our ability and ensuring there are no foreign diseases or anything like that coming onto the farm," Mr Radcliff said.

### Biosecurity assessment

The couple have completed the AUSVEG Biosecurity quiz, which Mr Radcliff believes is a valuable tool because it makes people more aware of what's happening on their farms.

The self-assessment quiz covers areas of business management including keeping records for chemical, fertiliser and irrigation use, as well as pest and disease management.

Questions include whether participants practice good hygiene to minimise the introduction and spread of pests and diseases and whether they recognise the major pests and diseases that affect their crops.

The couple scored more than 80 per cent on the quiz, demonstrating a strong knowledge of biosecurity protocols.

Mr Radcliff found that completing the quiz gave some important insight.

"It's about self-assessment so you have to be honest or there's no point doing it," Mr



Radcliff said.

"It really does give a clearer picture of what's happening on-farm because you are looking into your own operation a bit closer."

Mr Radcliff agrees the quiz is helpful, and a good step to ensure there is vigilant biosecurity at both state and national level.

"We don't have a lot of pests and diseases down here and we want to keep it that way," he said.

### Summary:

- **Biosecurity** – the management of pests and diseases entering Australia – is important at national, state and property level.
- **Completing the AUSVEG biosecurity self-assessment quiz** helps farmers understand more about what's happening on their property.
- **The quiz encourages** producers to be honest about practices such as pest and disease management and hygiene on their farm.
- **Biosecurity activities in the potato industry** are funded using the National Potato Levies and managed by AUSVEG and Plant Health Australia.