

# GROWER SUCCESS STORIES

REAL RESULTS  
FROM THE  
VEGETABLE R&D  
LEVY





Every year Horticulture Innovation Australia, using the National Vegetable Levy and funds from the Australian Government, invests in research and development (R&D) projects that are designed to enhance the productivity, efficiency and profitability of the vegetable industry.

In the pages ahead, you will find examples of growers from around the country who have been involved in vegetable levy-funded R&D, and have experienced real-world business success as a result.

Given the vegetable industry's ongoing aim to develop export markets, it is vitally important that we look beyond our shores for new business opportunities. Export growth could result in increased demand for high quality Australian produce, and ultimately lead to increased returns for our growers. South Australian grower Scott Samwell is testament to this and he shares his export story in the pages ahead.

Our growers have also had the chance to learn from their global counterparts and make valuable networking connections at industry events. This included the 2014 International Horticultural Congress in Brisbane and the Global Technologies in Horticulture Seminar held on the Gold Coast this year, which provided growers with the opportunity to learn from an array of local and international researchers and industry experts. Growers who attended these events are featured in this publication.

It is also vital to offer Australian growers the chance to witness world-class horticultural technologies that are on display at leading international trade shows to ensure our local industry continues to develop as a global horticulture powerhouse. These events give growers insight into the practices employed by growers around the world, exposing them to international advancements that could benefit all Aussie growers. One example is the Berlin Fruit Logistica, the world's largest trade show for the fresh food sector. Coffs Harbour grower Greg Murtha discusses the value in attending this year's trade show in this edition of Grower Success Stories.

The Australian vegetable industry also enjoys the results of ongoing investment in crop health and disease and soil management. Investment in innovative soil management and growing systems has resulted in real on-farm benefits and contributed to more consistent and healthier crops, as Queensland vegetable grower Rob Hinrichsen explains in this edition.

The environmentally sustainable reputation of the Australian vegetable industry is also highlighted through investment in the successful EnviroVeg Program, which encourages growers to manage their business in an environmentally responsible manner. The benefits of participating as a Platinum member of the levy-funded program are explained by South Australian grower Graeme Pitchford.

I am proud to showcase the achievements of growers in our industry who have embraced levy-funded R&D, and I look forward to seeing more real-world results from ongoing R&D investment in the future.

Yours sincerely,  
**Professor Robert Clark**  
Horticulture Innovation Australia Deputy Chairman



AUSVEG Ltd  
PO Box 138  
Camberwell VIC  
Australia 3124



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



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



Twitter: [twitter.com/ausveg](https://twitter.com/ausveg)



# SCOTT SAMWELL

Export growth



Involvement in the Vegetable Industry Market Access and Development Program, Project VG13097, has already opened up possible new overseas markets for South Australian Brussels sprouts grower, Scott Samwell.

While the program started in 2013 and aims to help establish and improve relationships between Australian exporters and Asian buyers, Mr Samwell has only been involved for the past year.

## Looking beyond our borders

The program works by allowing growers like Mr Samwell to attend overseas conferences such as the World of Perishables Expo in Dubai. On the flipside, overseas delegates are then invited back to Australia so they can visit farms here and “see what we do”, as Mr Samwell explained.

For the Samwells – Scott, his father Kent, uncle Leigh, brother Luke and cousin James – this meant recently hosting 40 delegates from Malaysia, China, Indonesia, the Philippines, Japan, Hong Kong and Dubai on their 500 hectare property in the Adelaide Hills in June.

Mr Samwell said the experience was really exciting. “Just talking to a bunch of people who are passionate about learning what’s happening in Australia was great,” he said.

When the group arrived, Mr Samwell wasn’t sure what to expect. “But they just started firing questions left, right and centre,” he said. “It worked really well.”

The delegates wanted to know about the operation, the steps from paddock to market, and the varieties grown on farm, which includes red and green Brussels sprouts, as well as a newly launched product called kalette, which is a cross between a Brussels sprout and red kale.

## Sparking new ventures

This visit, together with more networking at the 2015 National Horticulture Convention on the Gold Coast, has helped spark possible new ventures. “We’ve already sent Brussels sprout consignments to Malaysia, and a few samples to Indonesia,” said Mr Samwell, who attributes this as “definitely directly related to the program”.

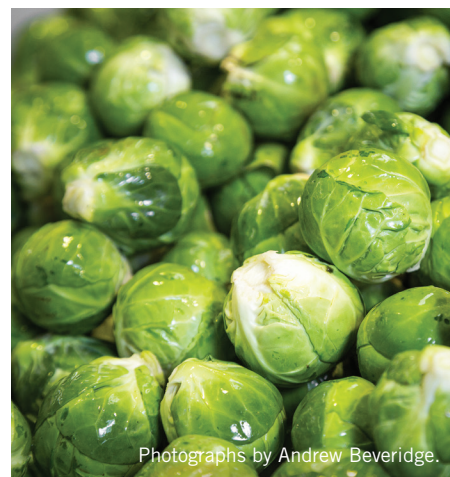
**“These are people willing to spend money on clean, green quality products.”**

Brussels sprouts are a traditional European vegetable, so emphasis is on educating an emerging Southeast Asian middle class about using a new food. “These are people willing to spend money on clean, green quality products,” said Mr Samwell. He believes that the kalette, with its loose leaves that are excellent in stir fries, will also be a good bet for the market.

While there are still logistics such as transportation to discuss, as well as pre-planning because “we don’t have a surplus to just suddenly send 10 or 20 tonne of produce”, Mr Samwell believes it’s a good opportunity.

“Without the program we, on our own, would not have pursued it that hard. It’s a great way to showcase our business, and share stories with people who are really keen to learn and who get excited about what they do,” Mr Samwell said.

“It inspires you to not only keep going, but to do better.”



Photographs by Andrew Beveridge.

## Summary:

- **Exploring international markets** can open up new export opportunities for Australian growers.
- **Australian produce**, with its clean, green reputation, is viewed favourably internationally and specifically by an emerging Southeast Asian middle class with money to spend on quality food.
- **An export initiative** under the auspices of AUSVEG has more clout than individual growers trying to find new international markets themselves.
- **Project VG13097** is funded by Horticulture Innovation Australia using the National Vegetable Levy and funds from the Australian Government.





# ANDREW CRAIGIE

*Sowing the seeds for industry development*

Photograph by Belle Young.

Networking can open up doors to new business contacts and career opportunities, but as one vegetable grower has found, it can also sow the seeds for future development.

“Interacting with researchers and growers at last year’s International Horticultural Congress in Brisbane really forced me to take a step back and reconsider how my farm was tracking and how I could turn any pending challenges into potential opportunities for growth,” Andrew said.

“Research and development (R&D) is rarely a ‘one-size-fits-all’ approach, so what we do locally must be micro-managed to suit all our areas and horticultural commodities.”

## Representing the industry

Hailing from the Tasmanian town of Latrobe in the state’s north west, Mr Craigie runs a “traditional, sustainable family farm” centred on the production of vegetables, poppies and pyrethrum.

He was also one of the growers chosen to represent the Australian industry at the Congress, as part of project VG13707, where he was immersed in the latest and most innovative R&D taking place at an industry level.

“With growing pressure on the world’s resource systems, it seems everyone in the industry is chasing productivity gains and sustainable practices,” Mr Craigie said.

“The availability of clean, safe water at an international level is a major concern for the horticulture industry, with a lot of R&D today focusing on sustainable vegetation, water, soil and crop management.

“However, Australian vegetable growers have a distinct advantage in terms of our geography – other countries don’t have the same luxury of long variances in latitude, whereas we can ‘move’ our production season to match the climate.”

## Valuable insights

One of the lessons Mr Craigie said he took away from the many forums at the Congress was that R&D investment in the Australian vegetable industry was either on track or ahead of other industries.

“While Australia’s contribution to agriculture is relatively modest in the grand scheme of things, we are no doubt forging ahead when it comes to innovation, productivity and technology adoption,” he said.

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“A key message conveyed at the Congress was that if Australia is to achieve greater productivity gains, there would need to be a heavier reliance on precision agriculture, which uses a combination of new technology and existing agronomic knowledge to maximise farm efficiency.

“Different irrigation systems that can manage variations in crop production or variable rate fertiliser to increase productivity and improve nutrient use efficiency are just some examples.

“These are principles I put into practice at varying degrees on my property.

“From reducing input costs to changing planting and cultivation direction to achieve better drainage, our attention to detail has to be spot on.”

## Summary:

- **Andrew Craigie**, of Latrobe, Tasmania was one of the growers chosen to represent the Australian industry at the Congress. He has taken lessons learnt from the experience and intends to use them to aid the broader industry in undertaking and adopting the latest research and development.
- **More than 3,000 delegates** from 100 countries attended the International Horticultural Congress in Brisbane in August 2014.
- **Attendees had the opportunity to network** with leading international horticulture researchers and industry pioneers, and receive an update on global innovative research spanning horticulture, arboriculture and indigenous, medicinal and aromatic plants.
- **Project VG13707** was funded by Horticulture Innovation Australia using the National Vegetable Levy and funds from the Australian Government.





# GRAEME PITCHFORD

Platinum sustainability



Photographs by Andrew Beveridge.

Since signing up to the EnviroVeg Platinum Program in 2014, Graeme Pitchford's twin-pack baby cos lettuce has garnered the attention of overseas buyers.

However, the membership benefits the South Australian-based grower has been enjoying for the past 12-months extend well beyond the supermarket shelf.

## Sustainable practices

EnviroVeg, Project VG12008, is an industry-owned and developed environmental program that provides growers with guidelines and information on how to manage their business in an environmentally responsible manner.

“The Platinum is a way for us, as growers, to have a say in what we have been doing on the environmental front.”

Mr Pitchford said the program's Platinum Program, which was jointly launched with major retailer Coles, provided Australian growers with access to enhanced recognition by advertising their business logos on their product packaging.

“The Platinum is a way for us, as growers, to have a say in what we have been doing on the environmental front,” he said.

“The self-assessment component of EnviroVeg (which takes growers through nine elements of environmental management on-farm) is relevant, but through Platinum, people can take this accountability to the next level by volunteering to have their on-farm practices independently assessed.”

Mr Pitchford said he had adopted a number of new measures to improve the environmental footprint on his farm based on the results of previous audits.

“I like the idea of looking after the land and

the health of people, but of course, there are definitely areas I could improve on,” he said.

## Environmental management

Passionate about soil health, Mr Pitchford has been using and evaluating some organic materials as an alternative to chemical fertilisers.

“One of my main priorities is enhancing the health and structure of my soil in the crop root zone,” Mr Pitchford said.

“My strategy for this combines the use of controlled traffic, permanent raised beds with green manure crops and good rotations to minimise disease and environmental risk and manage the soil's nutrient requirements.”

Mr Pitchford has also set out to improve the management of his onsite water system and waterways to curtail energy consumption while boosting the productivity of his crops.

“Installing a drip tape irrigation system for my broccolini has been pivotal to this,” Mr Pitchford said.

“I have been trialling this deeper-root watering system for three years and have found that it grows a significantly better crop packed with vitamins and minerals.

“There is also less risk of losing water to evaporation during the hotter months, as would be the case with using sprinklers.”

Mr Pitchford is in the process of growing creeping saltbush among the irrigation line, which he plans to trial alongside other native vegetables in an effort to attract beneficial insects and reduce unnecessary chemical use.

## Summary:

- **The EnviroVeg program (VG12008)** aims to promote environmental best practices in the Australian vegetable industry.
- **Graeme Pitchford** has been associated with the program for many years and currently serves on the EnviroVeg committee.
- **Recently, the vegetable grower** increased his membership to Platinum status, which involves external auditors examining his South Australian property to ensure environmental best practice procedures are undertaken.
- **This system** allows Mr Pitchford to easily audit the resources used in the production process in order to achieve optimum productivity and efficient use of land.
- **The EnviroVeg Program** is funded by Horticulture Innovation Australia using the National Vegetable Levy and funds from the Australian Government.





# GREG MURTHA

*Innovations on a global stage*



Photographs by Steve Young.

One lesson that Greg Murtha took away from his experience at this year's Berlin Fruit Logistica, as part of VG14707, is that there is no room for complacency in a competitive global marketplace.

The fruit and vegetable grower from Coffs Harbour, New South Wales, said he left the world's largest fresh produce trade show feeling "excited" and "very inspired" about the future of Australia's vegetable industry.

"Vegetable production is constantly evolving and horticulture equipment is becoming increasingly high-tech, especially in overseas markets, but I think Australian produce – and growers – are some of the best in the world," Mr Murtha said.

## International exhibition

Held annually in February, the Berlin Fruit Logistica spans the broad spectrum of the fresh fruit and vegetable sector, providing participants with an insight into the latest innovations, products and services at every link in the international supply chain.

Mr Murtha, who was among nine Australian vegetable growers who converged in Berlin from 3-5 February, said he took advantage

**“Australian growers have a huge potential to export their products overseas, and into Asia, but I think, in order to grow our business opportunities and be seen as competitive, we need to be innovative.”**

of the event's networking and contact opportunities, "if only to see what the opposition is up to".

"Having the chance to compare notes with leading industry representatives from more than 2,000 companies worldwide – learning what makes them tick and how they are staying ahead of the curve – was fantastic," he said.

"I also got a first glimpse into some of the new varieties of European cucumbers and greenhouse tomatoes coming onto the scene.

"Although I mainly grow hydroponic Lebanese cucumbers and blueberries, I've recently begun trialling a number of new varieties of tomatoes ... greenhouse tomatoes are another product I'm keen to explore."

## European insights

Despite not having any intentions to expand his operations globally in the near future, Mr Murtha said he was not ruling out a local group co-op scheme if the opportunity arose.

"Australian growers have a huge potential to export their products overseas, and into Asia, but I think, in order to grow our business opportunities and be seen as competitive, we need to be innovative," he said.

"It is clear that European growers are champions of innovation, especially when it comes to packaging and mechanical developments ... a huge premium is placed on presentation and marketing.

"There were some great plastics on show, including special coverings for grape vines, innovations in hydroponic lettuce growing and watertight food packaging.

"Europeans are also making a name for themselves in advanced imaging technologies ... these can scan fruit to determine its quality and taste based on its colour, 'softness' or ripeness and sugar content without having to destroy the fruit, which is very impressive."



## Summary:

- **Project VG14707** gave nine Australian vegetable growers the opportunity to attend the 2015 Industry Leadership and Development Mission – Berlin Fruit Logistica, the world's largest trade show for the fresh produce sector.
- **Attendees observed the latest trends and innovations** in global horticulture, including exciting new industry developments and cutting-edge growing techniques, as they engaged with leading international growers, researchers and industry members.
- **Through leveraging the knowledge of R&D experts**, NSW grower Greg Murtha has developed strategies to increase his on-farm efficiency and eventually establish a strong foothold in the competitive marketplace.
- **Project VG14707** was funded by Horticulture Innovation Australia using the National Vegetable Levy, funds from the Australian Government and voluntary contributions from vegetable growing businesses.





For Kingsley Songer, General Manager of 4 Ways Fresh Produce, learning more about climatic forecasting was a topic of interest at the recent Global Technologies in Horticulture Seminar.

Held on the Gold Coast in June, the seminar, Project VG13116, attracted eight leading international speakers.

## Global innovations

Mr Songer, who has a background in accountancy, worked in associated industries before joining the South Australian-based vegetable growing and packing company two years ago.

He believes attending events such as the seminar is important for Australian horticultural businesses. "It's inspiring hearing about what is happening in the world," he said. "We can then see whether we can apply it to our business."

He was interested in hearing American climatologist and aWhere Inc. CEO Dr John

**“It’s inspiring hearing about what is happening in the world.”**

Corbett talk about climate prediction. "Using specialised technology, it's possible to provide location-centric data management and analysis for agricultural enterprises."

Dr Corbett spoke about once premium growing areas in California, which had been hit by extended periods of drought and flood, and were now virtual deserts. For Mr Songer this premise was clear – the importance of monitoring climate and weather patterns to plan for the future, something 4 Ways Fresh Produce is about to start.

## Looking to the future

The company is currently expanding its operation into Western Australia and has built 100 growing tunnels in Geraldton. It will be working with the Western Australian Department of Agriculture and Food to start a project to monitor weather patterns.

Equipment will measure and monitor moisture in the ground, air temperature and rainfall. "We will then collate this data to help forecast the climate longer term. We want to build up a database and eventually hope to better forecast the optimum time to pick and plant our vegetables," Mr Songer explained.

The other more "futuristic" presentation that appealed to Kingsley centred on using robots to harvest vegetables and was given by Netherlands-based Dr Jan Bontsema, who incorporates R&D projects with the use of robotic machinery in vegetable greenhouses.

He's not sure when, but Mr Songer firmly believes robots will come to the Australian fruit and vegetable industry. "I don't think there's any doubt that we will see it in some form or another in the next 10 years."

While the initial outlay of buying and installing a robotic picking system would be high and require customised facilities, for a company like 4 Ways Fresh Produce there would be advantages.

"We always have problems getting people to pick our vegetables. A machine would work 24 hours a day, seven days a week if required – with no overtime," said Mr Songer. "So there are some benefits."

He believes "you always get something out of these seminars that makes it worthwhile". For Mr Songer, as well as fact-finding, he plans to keep in touch with the speakers to continue the advantageous networking for the business.



## Summary:

- **Attending events** like the Global Technologies in Horticulture Seminar gives insight into what's happening internationally.
- **Attendees learn** about technologies that can be applied to Australian businesses.
- **The events provide excellent networking** opportunities with renowned guest speakers as well as local industry delegates.
- **Project VG13116** was funded by Horticulture Innovation Australia using the National Vegetable Levy and funds from the Australian Government.





# Rob Hinrichsen

## Soil wealth

Photographs by Seth Mourra.

Being involved with the Soil Wealth Program is sure to help quantify what Queensland carrot grower Robert Hinrichsen is already doing on-farm to improve his soil health.

The Soil Wealth Program, Project VG13076, is designed to highlight the importance of soil in the productivity and efficiency of crops as well as examine farming methods to better manage and improve soil.

For Mr Hinrichsen, an important phase of the program is underway with on-farm carrot

taking its toll on the soil. “Carrots are pretty hard on the ground,” he said.

Four years ago he introduced controlled traffic farming and has already seen dramatic soil improvement. The practice involves establishing specific growing and traffic zones with the aim of not driving tractors where crops are grown.

Although the initial outlay to get custom made equipment was expensive, the decreased compaction has resulted in “an immediate difference in our clay-based soils”.

There has also been an increase in soil fungus. Where previously the ground was worked six to eight times between crops, now it's only twice, which not only decreases diesel costs, it gives important fungus a chance to establish. This has invaluable benefits. “It helps promote better plant root growth, and nutrient uptake and helps build soil resilience,” he explained, adding this also means more resilient crops.

For example, he describes the recent survival of a flooded bean crop at bud stage, as something he'd never seen before. “They went under water after a freak storm. Normally they would die. But these beans came through, flowered and we harvested a crop.”

Another innovation has been introducing cover crops such as tillage radishes. Their long taproots have been measured at up to 1.8 metres, advantageous because they take up nutrients from this depth that are ultimately released back into the soil when the radish tops decompose.

While being innovative is part of Mr Hinrichsen's on-farm philosophy, he's also aware that it has to be economically sustainable. “It's no good having the healthiest soil in the Valley if you're going broke. I've instigated these things on my farm and now am very keen to see how the numbers work.”



### Summary:

- **The Soil Wealth Program** is designed to help farmers better manage soil for improved productivity.
- **Techniques** such as controlled traffic farming, experimenting with cover crops, and using organic fertilisers can help.
- **Having experts** design on-farm trials helps crunch numbers to provide an economic bottom line.
- **The Soil Wealth Project** is managed by Applied Horticultural Research and RM Consulting Group. It is funded by Horticulture Innovation Australia using the National Vegetable Levy and funds from the Australian Government.

**“It helps promote better plant root growth, and nutrient uptake and helps build soil resilience.”**

trials. Plots were grown with biologicals; others trialled chemical fertilisers compared with compost. The plots will be harvested separately from the main crop with experts on hand to help crunch the figures.

“When you start using compost instead of fertiliser there's a lot that's anecdotal, but this will put a number on it. That's why I think it's worthwhile,” he said of the three-year trials.

### Improving soil health

Mr Hinrichsen, the director of Kalfresh Vegetables, also runs a 202 hectares (500 acre) farm in Queensland's Fassifern Valley. He got involved in the Soil Wealth Program earlier this year.

As well as 60.7 hectares (150 acres) of carrots, on a four-year rotation, he grows onions, green beans, pumpkins, maize and cover crops. Over the years, Mr Hinrichsen had noticed this intensive cropping was