

Yuri Wolfert Young Grower

Jim Mole On Impact

Matt Hood Grower of the Year

A difficult process

Simplot's vegetable processing operations in Australia under threat

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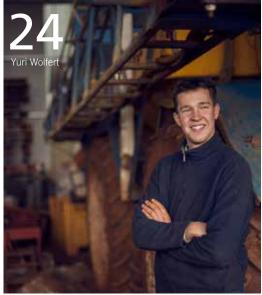
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A clean start for the perfect finish



AUSVEG Chairman and CEO messages



Geoff Moar AUSVEG Chairman

t seems like only yesterday that AUSVEG was hosting over 1,000 delegates at the 2013 AUSVEG National Convention, Trade Show and Awards for Excellence at Jupiters Gold Coast - our most successful Convention to-date. But it is now time to look forward to next year's event. It is with great pleasure that AUSVEG has announced Cairns will play host to the highly anticipated 2014 Convention.

Cairns will prove itself to be an attractive holiday destination for delegates, based in tropical far north Queensland. It will give delegates the opportunity to get away from the farm and surround themselves with the latest developments in R&D and farm technologies, forge new and valuable relationships with key members of the industry. and attend the all-encompassing AUSVEG Trade Show. The Convention, now approaching its fifth year, promises to be a pivotal event on the horticulture calendar again. AUSVEG is set to make more exciting announcements regarding the 2014 Convention in the coming months. To keep up-to-date with more details on the 2014 Convention as they come to hand, keep an eye on the AUSVEG website located at www. ausveg.com.au.

The communications team at AUSVEG strive to represent growers' interests in public forums through the effective engagement of the media. AUSVEG spokesperson Hugh Gurney recently attended the Farmers Forum in Shepparton, hosted by Channel 7's Today Tonight, which was subsequently aired on the free-to-air channel.

The purpose of the forum was to provide greater media exposure to the many important agricultural issues facing growers at the current time, as well as put these issues on the national agenda in the lead-up to the Federal Election. Key politicians representing the National and Liberal parties, as well as Independents, spoke at the event, which was attended by over 100 growers and processors from the Shepparton growing region. Attendees engaged in rousing discussions with the politicians in their attempt to bring attention to the many challenges being faced by the industry, including competing with cheap imports and dumping of produce. The forum highlighted the importance of keeping agriculture at the forefront of politicians' minds, not only as they campaign in the lead up to the Federal Election. but continuing into the future.

Moar

Geoff Moar Chairman AUSVEG



Richard Mulcahy AUSVEG Chief Executive Officer

ast month, AUSVEG officially opened its new premises in Camberwell in Melbourne's east. In just five years, AUSVEG has expanded significantly, enabling the company to move closer to the CBD to facilitate meetings with visiting politicians, government and industry representatives. The move to the new space in Camberwell was made in June, due to the need to better facilitate the continued growth of the organisation.

At the official opening, the local State MP and former Premier, The Hon. Ted Bailieu MLA participated in the unveiling of a commemorative plaque together with Federal MP Josh Frydenberg, the Liberal Member for Kooyong. At the opening, there were around 130 guests in attendance to celebrate the progress that the organisation has made. The evening was an opportunity to reflect on AUSVEG's future and how far it has come in the past five years. I can say with conviction that AUSVEG has never been in a better position to represent the needs of the people who feed our nation, the vegetable and potato growers of Australia.

Also held last month was the Tasmanian Agricultural Productivity Group Limited (TAPG) Mid-Winter Forum, where attendees discussed ways to boost Tasmanian agriculture so that it can prosper in a global marketplace. Held on 23 August at the Devonport Entertainment and Convention Centre, the forum welcomed agribusinesses, processors, researchers, extension practitioners, consultants, students, and others working in the Tasmanian agricultural sector, and included a combination of keynote presentations, panel sessions, concurrent sessions focusing on key industry sectors and a visit to a local agribusiness. At the forum, I had the pleasure of speaking on behalf of AUSVEG about the quality and safe production of Australian vegetables and the benefits of looking to Asia as an export destination.

From 4-6 September, the vegetable industry participated in the Asia Fruit Logistica International Trade Exhibition, held at AsiaWorld-Expo in Hong Kong. Asia Fruit Logistica is the leading international trade exhibition for fruit and vegetables in the Asia-Pacific region. At the exhibition. AUSVEG and HAL hosted a booth, where representatives of the industry, including leading growers, informed delegates from all over Asia about the innovative research and development programs that underpin the quality and safety of Australian produce. The vegetable industry's presence at Asia Fruit Logistica forms part of an industry-wide focus on research into market development initiatives as part of the Vegetable Industry Strategic Investment Plan.

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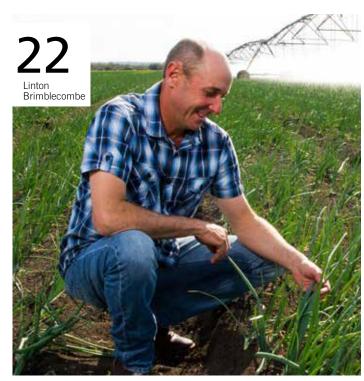




FRONT COVER:

Yuri Wolfert Photograph by Belle Young

Editorial



Vegetable growers around Australia are absorbing the enlivening warmth of the first spring sunshine. Gumboots hosed and shelved, caps donned and fleeces excitedly cast aside (perhaps prematurely), the new season and promise of vibrant fertility re-inspire the grower's passion for the work.

For Queensland vegetable grower, Matt Hood, the challenges brought by seasonal shifts are not as significant as they are for most growers in Australia. Matt has distributed his operations over several areas of his home state, allowing him to produce vegetables all-year round. In "Grower of the Year puts success down to team effort" (page 16), Matt discusses this aspect of his operations, as well as his investments in the automation of on-farm processes.

In Tasmania, spring is rarely felt as early and as intensely as Queensland. In "Young Grower Q & A" (page 24), young Tasmanian grower, Yuri Wolfert, recounts his family's move from the Netherlands to farm in Australia, the long days he works on the farm, and his hopes for the future of his family's business.

Impact Fertilisers' new managing director, Jim Mole, is also featured in this edition (page 39). Mr Mole describes the company's increased focus on horticulture in recent years - a sector he believes has as many unique opportunities as it





does challenges.

In light of Simplot's announcement that it may close its Devonport and Bathurst processing plants in June, this edition of *Vegetables Australia* investigates the significant challenges currently being faced by the Australian vegetable industry, and whether it is likely to continue for years to come, in "A difficult process" (page 50).

A wrap-up of the Vegetable Growers' Study Tour of Israel, Germany and the Netherlands, which took place in February of this year is included (page 34), as is a recount of the official opening of the new AUSVEG offices (page 54).

Recent legislative change with regard to award wages in Australia are detailed, and the ramifications for vegetable growers are explored in "Wage increase: Award rates of pay are up 2.6%" (page 44), courtesy of *Fruit and Vegetable News*. The key drivers of growth for the Australian vegetable industry are also explored (page 26).

Dr Rusty Rodriguez presented his research into plant-fungal symbiosis at the 2013 Emerging Technologies in Horticulture Seminar, held at Jupiters Gold Coast on Thursday 30 May. In this edition, Dr Rodriguez discusses his research (page 32), while fellow presenter at the seminar, Professor Lars Nielsen, talks about his research into synthetic biology (page 36).

Other R&D updates come in the form of research conducted by market research company, Colmar Brunton, into consumer buying habits of vegetables in Australia (page 13), and a study into alternative fruit fly control for market access and to enhance integrated pest management in eggplants (page 42).

Also covered is a new project that simplifies nutritional information available for vegetable products, to allow health claims to be made on packaging (page 28).



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BELT

Veggie bites

Facts & figures...



fresh or chilled cauliflowers and headed broccoli exports to Singapore increased between the financial years of 2011-12 and 2012-13.

1908 The year Australia's first

Quarantine Act was created.

\$504.9 million

The revenue of the vegetable growing (under cover) industry in 2012-13, according to the 2013 IBISWorld *Under Cover Vegetable Growing* in Australia industry report.

\$7 billion

The cost to the Australian economy per year caused by alien invertebrate and vertebrate pests and weeds, as recorded by CSIRO in 2010. 70%

The increase in global food demand by 2050, according to the United Nations' Food and Agriculture Organisation.

150

The current number of Queensland fruit fly outbreaks throughout the NSW Fruit Fly Exclusion Zone and Greater Sunraysia Pest Free Area, as recorded by NSW DPI.

\$336,452

The 2012-13 collection cost charges (excluding GST) by the Federal Government for the National Vegetable Levy.

\$53,523

The 2012-13 collection cost charges (excluding GST) by the Federal Government `for the National Potato Levy.

14%

The percentage of online purchases in Australia that are groceries, according to Nielsen market research, 2013.

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Eggs, toast and The Marmalade Files: Breakfast with Steve Lewis and Chris Uhlmann at the 2013 AUSVEG National Convention

NEWS LIMITED JOURNALIST, STEVE LEWIS, AND ABC JOURNALIST, CHRIS UHLMANN, TEAMED UP IN 2011 TO WRITE *THE MARMALADE FILES* -A POLITICAL THRILLER ABOUT POWER, DECEIT AND REVENGE IN CANBERRA. MR LEWIS AND MR UHLMANN PRESENTED THEIR BOOK AS PART OF THE 2013 AUSVEG NATIONAL CONVENTION, TRADE SHOW AND AWARDS FOR EXCELLENCE.

Steve Lewis and Chris Uhlmann both describe *The Marmalade Files* as a work of fiction.

Regardless of similarities between some of the book's characters and real people in Australian politics, both journalists are adamant that they are original inventions.

"We paid two very expensive lawyers to make sure of that," Mr Uhlmann said. "They might recognise themselves in it but that would be a figment of their imagination."

This was the line they towed at a breakfast event held on Saturday 1 June at the AUSVEG National Convention, where they presented the book to members of the horticulture industry.

"What we tried to do with *The Marmalade Files* is write what is best described as a political, satirical thriller - something that we don't have a tradition in Australia of doing," Mr Lewis said. "It is basically what we describe as a rollicking romp through the dark underbelly of Australian politics."

"We've had a good reaction, mainly. We've had no legal writs - touch wood - thus far," he said. "We've had nobody come to us and demand that we clarify whether this person was based on them."

The idea for the book spawned over a morning coffee that the two shared in the Canberra suburb of Deakin two years ago.

"I'd been watching the things that happened in Canberra, thinking for a long time that it was perfect to do some satire on it then, and...I just had this image in my head," Mr UhImann said. "Steve said, 'Look, I've always wanted to write a thriller based around Canberra,' and so, the marriage of those two is where *The Marmalade Files* comes from."

It is not immediately clear why Mr Lewis and Mr Uhlmann chose the book's title. Mr Lewis said that the marmalade files were a real, mysterious set of files that existed "deep in the bowels of the Department of Foreign Affairs and Trade."

"There are various stories about what the files actually consist of," Mr Lewis said. "The way it was described to me





initially was as the deep, dark secrets of Australian diplomats who were overseas and had done some terrible deeds."

"I'm not sure if that's correct but it's a deliciously wicked interpretation," he said. "It gives a sort-of nice flavour of the marmalade files, a bit mysterious - as we say, a sticky scandal, a political jam."

Mr Lewis and Mr Uhlmann knew each other for some time before they considered working on a book together. Mr Uhlmann said that they once found themselves on either side of a controversial story.

"Back when Malcolm Turnbull was the Opposition Leader. there was a character who was giving him information called Godwin Grech from the Finance Department. Steve is a real newshound. Steve was getting the information, we now know, from Godwin Grech and publishing it," Mr Uhlmann said. "As it became public after he appeared at a senate committee hearing, people started to ask questions like, 'Who is this character?' I was the one who found out that he had been working for the Liberal Party for years, really. So it was during the course of that... that we started chatting to each other."

"Steve is a great joiner. I'm not. Steve is really gregarious. I'm not. And so he got me onto the Press Club Board and thinking like that as well, and so our friendship grew from there," he said.

From both accounts, it seems as though collaborating on the project together was a positive experience.

"We wrote a lot of the book separately, and often we would be writing in different capital cities," Mr Lewis said. "We wrote off a 'cloud' program, so we were able to basically watch each other as we were writing separate chapters or separate parts of the book."

"We had a huge amount of fun and we worked pretty harmoniously," he said. "Even though we have different writing styles, it blended really well together, and I think most people...have been hardpressed to be able to pick who wrote what particular page or chapter."

Mr Uhlmann and Mr Lewis have been contracted to write a second book, which they are currently working on. However, given that 2013 is an election year, it is likely that the two have much work to keep them occupied. Readers may have to be patient for the release of their next project.

Sweet corn trials aiding future production

Early planting of sweet Corn by Sydney basin growers may create marketing opportunities early in the consumer season, but it may also present a number of agronomic challenges, according to Syngenta's Australasian Marketing Manager, Sean Richardson.

"Growers should be monitoring soil temperature and plant into soils above 15 degrees at a minimum. They also need to be selective with the seed lines being planted at this time of year, ensuring that the cold germination temperatures support the planting window they are sowing into," Mr Richardson said.

Syngenta has held a number of trials over several years in collaboration with agriculture merchandise suppliers, Ace Ohlsson, and the New South Wales Department of Primary Industries (NSW DPI) at the Sydney Field Vegetable Demonstration Farm in Richmond, NSW.

A manager of a farm undergoing one of the trials, Leigh James, commented on the significant yields and resilience of the varieties in 2011-12.

"Despite the season's extremely wet summer, the varieties displayed great tolerance and anti-lodging, and a noticeable lack of disease compared to other varieties," Mr James said.

These trials have offered a useful reference point to the entire Sydney Basin sweet corn production for the 2012-13 season trials.

With a significant footprint across the key sweet corn processing and growing regions



around the world, Syngenta focuses its sweet corn breeding and technology developments in three research centres in the United States. The company also runs a hybrid production facility based in Pasco, Washington.

"Shipper sweet corn is grown in both Boise, Idaho, and Naples, Florida, representing both summer and winter production in the Northern



Hemisphere," Mr Richardson said. "The similarities between this production shift from north American states to southern states in winter is a great starting point for Syngenta Australia and New Zealand. We look for suitable varieties and genetics from our US assortment that will be a close agronomic fit for our markets in the Southern Hemisphere."

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Project Harvest taps into consumer habits for fresh vegetables



HORTICULTURE AUSTRALIA LIMITED (HAL) RECENTLY COMMISSIONED MARKET RESEARCH COMPANY COLMAR BRUNTON TO UNDERTAKE A THREE-YEAR PROJECT CALLED PROJECT HARVEST, REQUIRING THEM TO PRODUCE MONTHLY REPORTS GAUGING CONSUMER PERCEPTION AND BEHAVIOUR IN RELATION TO FRESH VEGETABLES. THE PROJECT WAS FUNDED BY HAL USING THE NATIONAL VEGETABLE LEVY WITH MATCHED FUNDS FROM THE AUSTRALIAN GOVERNMENT.

Consumers are the underlying force that drives the vegetable industry. Research into understanding consumer needs and preferences allows growers to best meet consumer expectations, by delivering products that are convenient, sustainable, and consistently of high quality.

Market research company, Colmar Brunton, conducted monthly online tracking, which followed specified vegetables across a three-year period; monthly trend analysis; and additional ad-hoc projects, in order to assist in the understanding of consumer habits.

The first monthly report, titled Wave 1: June 2013, focused on beans, carrots, cauliflowers, and pumpkins, while the second monthly report, Wave 2: July 2013, looked at broccoli, green peas, lettuce, and sweet corn. Nine hundred and eleven people completed the Wave 1 questionnaire, while 1496 completed Wave 2. Respondents represented all states and territories, were aged 18 years and over, and purchased fresh vegetables at least once a month. They were required to have purchased at least one of the monthly commodities within the last month and be the main or joint grocery buyer in their household.

Topics covered in the questionnaire included vegetable purchase and consumption habits, health, price and value perceptions, triggers and barriers to purchase and preparation and cooking preferences. Additional ad-hoc questions were included at the end of the questionnaire.

Wave 1: June 2013

Of the vegetables tracked in Wave 1, pumpkin had the highest level of importance, satisfaction and endorsement for consumers. Of the commodities tracked in this report, cauliflowers had the lowest health scores. For cauliflowers, importance, satisfaction, endorsement, and interest in new varieties were below average for fresh vegetable categories.

People who purchased French and runner beans did so on average 3.8 times a month, and consumed them eight times a month, typically by steaming, stir frying, boiling or microwaving the vegetable. Consumer awareness of varieties of French and runner beans was very low - those that could recall varieties could typically only recall green beans.

Awareness of different varieties was the highest for pumpkin the most recalled varieties were the butternut and jap varieties. Purchasers of pumpkins perceived the product to be of good value, and typically bought them as half-cut pumpkins, of which only one unit on average was purchased, at a weight of 1.4kg. Pumpkin was typically roasted and/or used in soups, and was most commonly used in Australian cuisine. On average, pumpkin was expected to stay fresh for at least 12 days after purchase.

For carrots, the expectation of duration of freshness was slightly longer, at 12.3 days. The top triggers to buying carrots were the perception that they were healthy and nutritious, easy to cook/prepare, and had a favourable taste. Those that purchased carrots consumed them 13.8 times a month on average. This was the highest frequency for the four vegetables studied in this report.

Wave 2: July 2013

Looking at overall vegetable tracking, the Wave 2 report found that the types of vegetables purchased within the last month were on trend with results found in the Wave 1 report. Cauliflower, carrots, potatoes, broccoli, and capsicums remain the most purchased vegetables by consumers, but over 60% of consumers have added new vegetables to their cooking repertoire in the past five years.

Broccoli was found to be a high-consumption vegetable commodity, with consumption averaging once every three days and purchase averaging at least once a week. The top triggers to purchase were health/ nutrition benefits and ease of preparation. Top barriers were cost (too expensive and short shelf life).

Lettuce had the higheststated intent to increase purchase in the future, at 15%, and awareness of varieties (iceberg and cos) was highest for lettuce, with only 19% of respondents not able to recall a variety. However, lettuce had the lowest expected shelf life, at just over a week. Lettuce was rarely cooked, with 74% of respondents opting to consume it raw.

Of the vegetables tracked in Wave 2, green peas had the highest level of importance to consumers. They also had the highest level of endorsement and interest in new varieties. Green peas were most likely to be purchased as individual peas, at 56%, compared to prepackaged trays of peas. Green

Sweet Potato

Broccol

Bok Choy

Broccolini

Fennel

Fooplant

Zucchini

Squash

Cabbage

Celeriac

Peas

Kale

Leek

peas were also most likely to be accompanied with carrots.

Top insights

New Vegetables in Cooking Repertoire

(Last 5 years)

6%

5%

4%

4%

4%

3%

3%

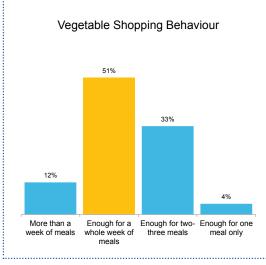
3%

3%

3%

Overall, the Wave 1 report found that awareness of variety and species of pumpkin, carrot, cauliflower and beans is low. With trends showing growing appeal for both varietal

10%



Source: Project Harvest Wave 2: July 2013 report, page 14.

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Inconsistency of shelf life is linked to key barriers to greater purchase.

information and provenance, the authors of this report believe that opportunity exists to educate consumers on these aspects. Consumers of beans and pumpkin who displayed higher interest in new varieties also displayed an increase in future purchase intent. This means the introduction of new varieties may provide retail growth in the future.

Inconsistency of shelf life is linked to key barriers to greater purchase. To increase consumption, a high consistency of in-store freshness and quality needs to be provided. Innovation is another area which can be unlocked for potential future growth, with global trends indicating there is largely untapped potential in Australia to grow demand for produce exceeding what is currently available.

Insights from Wave 2 included the discovery that over a third of all consumers have not added any new vegetables to their cooking repertoire in the last five years, however, sweet potato, broccoli and bok choy were the most popular new additions to respondents' cooking repertoire. The authors of the report believe the opportunity exists to introduce new vegetables into the Australian market, but education on use is mandatory if this is to be embraced.

THE BOTTOM LINE

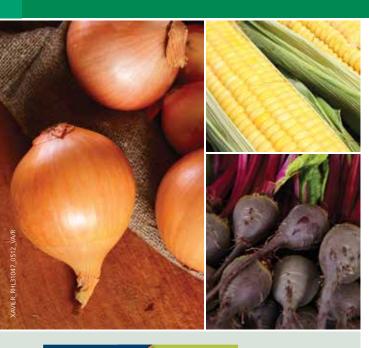
- Awareness of varieties and species of pumpkin, carrot, cauliflower and beans is low.
 Cauliflower, carrots, potatoes, broccoli, and capsicums remain as the most purchased vegetables by consumers.
- There is growing appeal for information on provenance.
 Opportunity exists to educate consumers on varieties of vegetables in order to help negate the threat of imported produce.
- To increase consumption, a high consistency of in-store freshness and quality needs to be provided.

Project VG12078 To see the Wave 1 and 2 reports, log in to www. ausveg.com.au and click 'Vegetable Market'.

> Growers wishing to access the Online Interactive Data Tool, which compares statistics from this project, should contact AUSVEG for details.

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Grower of the Year puts success down to team effort

MATT HOOD, DIRECTOR OF QUEENSLAND GROWING OPERATION, RUGBY FARM, WAS THE WINNER OF THE PRESTIGIOUS GROWER OF THE YEAR AWARD AT THE 2013 AUSVEG NATIONAL AWARDS FOR EXCELLENCE. HE SPOKE TO FELICITY POWELL ABOUT THE CHALLENGES OF RUNNING A LARGE YEAR-ROUND OPERATION, GROWING SEVERAL DIFFERENT CROPS ACROSS QUEENSLAND, INCORPORATING AUTOMATION INTO HIS OPERATIONS, AND HIS SUCCESSFUL RELATIONSHIP WITH ONE OF AUSTRALIA'S LARGEST RETAILERS, COLES.

A lthough Matt Hood was Syngenta Grower of the Year Award on stage at the 2013 AUSVEG National Awards for Excellence, reflecting on the acknowledgement, he says that he is keen to share the credit around. He says the great success of Rugby Farm would not be possible without the hard work displayed by a team of almost 500 loyal and dedicated staff.

"Rugby Farm is much greater than Matt Hood. We couldn't do it without them," he says.

The Rugby Farm director

received the vegetable industry's highest honour, with the award commending outstanding achievement across all areas of the vegetable and potato production supply chain, including growing, environmental and staff management, and quality of produce.

At the ceremony, former AUSVEG Chairman, John Brent, highlighted that the award was in recognition of Matt's generous donation of time and resources to his industry peers as one of Australia's most successful growers. "Matt is well-known for the field days he holds on his Lockyer Valley property to showcase innovative developments, as well as his passionate participation in industry forums. With an enthusiasm for sharing knowledge, he is entirely deserving of this award," said Mr Brent.

Rugby Farm has been based in the Lockyer Valley for three generations, spanning just over 100 years. The soil of Rugby Farm has been tended to produce many different crops over that time - citrus, cotton, potatoes and onions, just to name a few.

Over the past 10-15 years, Rugby Farm has experienced rapid growth and expansion, with growing operations now well-established in Lowood, Fernvale, Clifton, Bowen, Ayr and Stanthorpe, and covering 4,500 hectares of prime growing land. In recent years, in line with this expansion, the key focus of Rugby Farm has been producing a variety of crops, grown over the complete 12 months of the year.

"So we've done that not by extending seasons, but trying to actually find the ideal growing conditions for every day of the year by moving from one region to another. In more recent years, we've expanded the lines that we grow as opportunities come along," he says.

Matt says that summer vegetables are not the only ones grown at Rugby Farm, but that they also specialise in corn, beans, capsicums, tomatoes and eggplants.

"Typically in winter, the only place you can grow them is north Queensland, because everywhere else is too cold," he says. "That was our main driver 12 years ago, to head up there, so we could grow corn 12 months a year. Then we added beans there about eight years ago as well."

Rugby Farm grows winter crops like broccoli, cauliflowers, lettuce and cabbage in the Lockyer Valley in southern Queensland. In summer, growing moves to the Stanthorpe region due to the cooler climate that the elevation of the region provides.

"Basically we have the full loop," Matt says.

Although Rugby Farm is spread far and wide across the sunshine state, the business is, to its core, a family business, and has firm roots based in the Lockyer Valley. Matt works closely with his father, David, and brother, Dan. Parallel to the continuing growth of Rugby Farm, the three have found themselves experiencing their own personal growth. Matt points out that the family's role on the farm has evolved over the years, and the level of professionalism now expected of



vegetable growers is something he is still coming to terms with.

"We've gone from being the doers, out there with the crops each day, to now having to be managers, and then, in recent times, we've had to learn to be managers of the managers. More and more of my time is unfortunately spent in an office chair, in front of a computer, however, I can escape regularly with technology today. Living in an open environment close to mother nature is an important value for me and my family



continued over page

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generally," he says. "We've gone through a lot of personal growth and we've still got a long way to go, but the dynamics of the business have changed and we've had to try and adapt with that."

A significant driver of the success of Rugby Farm can be attributed to the beneficial and long-standing relationship with leading Australian retailer, Coles, which Matt describes as "the foundation of [his] business".

"Their customers have very high expectations of them, and therefore, those expectations get passed down the line to us, so that can be challenging to deal with. As we've worked very hard to meet their expectations... they've been loyal back to us. Our relationship is certainly one that we value with them, even though, as I said, it's demanding and challenging, but it's very important to our business."

Putting this relationship aside, however, Matt is not immune to the hardships faced by those within the horticulture industry across Australia - particularly, unfavourable weather.

"As veggie growers, we've gone through an extremely tough last three or four years where we've had a lot of pain from trying to maintain a sustainable business. It's extremely challenging at the moment, in my view, being a vegetable farmer," he says. "The start to this winter has been one of the worst, with poor pricing, and we've had a very warm winter, with temperatures

about four to six degrees above average. We're in our main production seasons here with our largest volumes typically. We're hurting pretty badly at the moment."

"We just grow to our program based on what we believe we have the markets for, and then we just have to do the best we can," he says.

Currently, Matt uses optical sorting technology on the farm to aid production. He is keen on including more automation in day-to-day operations, but, he says, overall, farming technology has a long way to go.

"My view on automation is that there's a lot of potential out there. However, we're

limited in how we can apply it to our everyday businesses at the moment. It's starting to happen but I think that there's still a lot of things out there that in the next three to five years potentially we can get to a point where we can actually see some significant gains," he says.

"A lot of people talk about robotics that can replicate a human being. We're a pretty incredible piece of work really. so to actually physically pick up a piece of lettuce and assess where it needs to be trimmed, or another leaf needs to be pulled, to do that sort of robotics and automation is very, very challenging," he says. "It can be done but it'll cost ten million bucks. That's the challenge we've got."

Rugby Farm is much greater than Matt Hood.



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| Permit Number | Permit Description (pesticide/crop/pest) | Date Issued | Expiry Date | Comments | Permit Holder |
|------------------|---|----------------|----------------|---|-------------------------------|
| PER10311 | Eco-Oil (Botanical Oil) / Greenhouse & hydroponic capsicum, cucumber & lettuce / Greenhouse whitefly & Silverleaf whitefly | 7-Feb-08 | 30-Sep-13 | Application submitted for renewal. Growcom to be permit holder. | HAL / AgAware |
| PER10089 | Chlorpyrifos / Parsley & Potato / Vegetable Weevil & Black beetle | 12-Feb-08 | 30-Sep-13 | Covered by other permits - PER14074 & PER10283 | HAL / AgAware |
| PER10279 | Abamectin / Cucumber, Zucchini and Squash / Two spotted mite | 22-Feb-08 | 30-Sep-13 | Use now registered - Vantel. | Ausveg |
| PER10273 | Bifenthrin / Sweet potato / Sweet potato weevil & Bean spider mite | 22-Feb-08 | 30-Sep-13 | New permit issued: PER14078 | HAL / AgAware |
| PER10878 | Trifluralin / Peppers (sweet and chillie) / Broadleaf and annual grass weeds | 11-Aug-08 | 30-Sep-13 | Growcom seeking to add crops to PER12823. Growcom to be permit holder. | HAL / AgAware |
| PER11120 | Natrasoap and Neemtech / Greenhouse tomatoes / Greenhouse whitefly | 10-0ct-08 | 30-Sep-13 | Permit holder to be decided. Renewal yet to send to APVMA. | HAL / AgAware |
| PER10902 | Dimethomorph / Leeks / Downy mildew | 11-Oct-08 | 30-Sep-13 | New permit issued: PER13203, Growcom permit holder. | HAL / AgAware |
| PER10948 | Abamectin / Eggplant / Two Spotted Mite | 17-0ct-08 | 30-0ct-13 | Use now registered - Vantel. | AgAware / HAL |
| PER9722 | Talstar (bifenthrin) / Sweet Potato / Wireworm | 31-Mar-09 | 30-Sep-13 | New permit issued: PER14078 | HAL / AgAware |
| PER10818 | Bravo Weather Stik Fungicide (chlorothalonil) / Cucumbers / Botrytis rot | 1-Jun-09 | 30-Sep-13 | Application submitted for renewal. Growcom to be permit holder. | HAL / AgAware |
| PER10934 | Buprofezin / Tomatoes (protected) / Greenhouse Whitefly | 9-Jun-09 | 30-Sep-13 | New permit issued: PER14100, PCA permit holder. | HAL / AgAware |
| PER11800 | Pirimicarb / Garlic / Bulb aphid and other aphid species | 1-Sep-10 | 31-Aug-13 | Residue data required - AGP. | Australian Garli Producers |
| PER11919 | Flint (trifloxystrobin) / Beetroot / Alternaria leaf spot and Cercospora leaf spot | 29-Jun-11 | 30-Sep-13 | Application submitted for renewal. | Growcom |
| PER10486 | Carbendazim / Garlic / Botrytis | 29-Jun-11 | 30-Sep-13 | Permit will not be renewed as product removed from sale. | Australian Garl Producers |
| PER10479 | Iprodione / Garlic / Botrytis | 29-Jun-11 | 30-Sep-13 | New permit issued: PER12464 | Australian Garl Producers |
| PER13002 | Metalaxyl-M / Lettuce / Damping off | 27-Sep-11 | 30-Sep-13 | Application submitted for renewal. | Growcom |
| PER13158 | Dimethoate / Specified Citrus, Tropical Fruit commodities and Hot chilli peppers (post-harvest) / Various Fruit Fly species | 6-0ct-11 | 5-0ct-13 | APVMA will determine if permit extension possible following Chemical Review. | Growcom |
| PER13170 | Dimethoate / Melons including watermelons (post- harvest) / Various Fruit Fly species | 13-Oct-11 | 5-0ct-13 | APVMA will determine if permit extension possible following Chemical Review. | Growcom |
| PER13089 | Acrobat Fungicide / silverbeet, spinach, leafy lettuce / Downy Mildew | 13-Oct-11 | 30-Sep-13 | Application submitted for renewal. | Growcom |
| PER13034 | Score Foliar Fungicide/ Beetroot/ Leaf Spot | 18-0ct-11 | 31-Aug-13 | Application submitted for renewal. | Growcom |
| PER13032 | Pirimicarb / Sweet Potato, Brassica leafy vegetables, Chicory & Coriander / Aphids | 26-0ct-11 | 30-Sep-13 | Application submitted for renewal. | Growcom |
| PER13003 | Ridomil Gold MZ / Capsicums, Chillies and Paprika / Downy Mildew | 26-0ct-11 | 31-Oct-13 | To be renewed. | Growcom |
| PER12999 | Azoxystrobin / Alliums / White Rot | 26-0ct-11 | 30-Sep-13 | Use to be registered by Syngenta by Aug-13. | Growcom |
| PER13009 | Propiconazole / Spinach, Beetroot & Celery / Cercospora, Leaf Spot, Blossom Blight & Anthracnose | 2-Nov-11 | 31-0ct-13 | Application submitted for renewal. | Growcom |
| PER13047 | Acramite Miticide / Tomatoes, Capsicums & Cucumbers / Two-Spotted Mite | 8-Nov-11 | 30-Sep-13 | Chemtura investigating registration of uses. | Growcom |
| PER13254 | Dimethoate / Chilli peppers / Queensland and Mediterranean Fruit Fly | 2-Feb-12 | 5-0ct-13 | APVMA will determine if permit extension possible following Chemical Review. | Growcom |
| PER13123 | Amistar (azoxystrobin) / brassicas, beans, brassica leafy vegetables / various diseases | 02-Feb-12 | 30-Sep-13 | Use to be registered by Syngenta by Aug-13. | Growcom |
| PER13498 | Pirmicarb / Sweet corn / Aphids | 21-May-12 | 30-Sep-13 | Application submitted for renewal. | Growcom |
| PER13860 | Lebaycid (fenthion) / Chilli peppers / Fruit Fly | 7-Dec-12 | 30-Oct-13 | APVMA will determine if permit extension possible following Chemical Review. | Growcom |
| | Dimethoate / Eggplant / Queensland fruit fly & | | | | |

EnviroNews

www.enviroveg.com

Make an appointment to do your EnviroVeg selfassessment

Growers who would like assistance in completing their annual self-assessments are encouraged to contact the AUSVEG Environment Coordinator, Jordan Brooke-Barnett, at the AUSVEG Office.

The self-assessment process takes around 15-20 minutes over the phone and involves completing a number of questions about environmental practices in your growing operation. At the end of the process, growers will have access to a number of reports which show how their businesses compare to other growers throughout Australia in key areas such as soil management, energy management and pest and disease management.

Alternatively, growers can log on to the program website at www.enviroveg.com and complete their self-assessments independently.

The EnviroVeg Program is very important at the industry level, as it assists AUSVEG to measure and communicate the environmental performance of the industry with key stakeholders including the Australian Government, consumers and supply chain. The program has grown considerably in recent years to over 400 growers and around 50% of Australia's vegetableproducing land and is a key means through which the industry can communicate its progress and performance in the field of environmental management.

The AUSVEG Environment Coordinator is available to help growers complete their annual EnviroVeg self-assessments. Contact the AUSVEG office on (03) 9882 0277 and book your appointment today.

Assistance with EnviroVeg Platinum

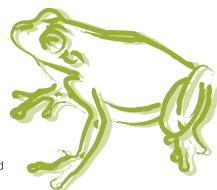
A USVEG recently launched EnviroVeg Platinum, an independently-assessed version of the EnviroVeg Program, which offers growers access to rewards including use of the EnviroVeg logo if growers choose to submit their operations to environmental audit.

The scheme involves a number of record-keeping

requirements on top of what is currently required by EnviroVeg, although has been designed to work into existing Quality Assurance schemes and be easy to implement for the grower.

All documentation relating to the scheme and further information is available on the AUSVEG website: www.ausveg. com.au.

Growers who are interested in implementing EnviroVeg Platinum can contact the AUSVEG Environment Coordinator, who is available to discuss the program with growers and quality assurance staff and provide advice and assistance in implementing the scheme on property.





Sustainability: What it is and why it matters to Australian growers

MANY LARGE COMPANIES TODAY HAVE INCORPORATED THE CONCEPT OF SUSTAINABILITY INTO THEIR BUSINESS PRACTICES AND USE IT AS A KEY WAY TO REPORT ON PERFORMANCE. IN THIS ARTICLE, MR RICHARD DICKMANN, BAYER **CROPSCIENCE HEAD OF NEW BUSINESS** DEVELOPMENT, EXPLORES THE CONCEPT OF SUSTAINABILITY AND WHY IT MATTERS IN MODERN GROWING OPERATIONS IN AUSTRALIA AND THE WORLD.

Why sustainability matters to business

Whether it be consumer responses to recent events, such as the Bangladesh garment factory disaster, or concerns over safe use of crop protectants in agriculture, issues around sustainability continue to feature in headlines around the globe. It is for this reason that the concept of sustainability also features in the minds of executives managing companies and has grown to become a function of business and key consideration in the decisionmaking of top companies.

Likewise, general trends show that consumers are also concerned about the impact of their purchasing behaviour on the planet and people. Although not always translating into changing consumer purchasing behaviour, having a strong record of sustainability is something which the reputation of a company often hinges on.

As a result, many companies have now put sustainability strategies in place and prepare annual reports on their performance in the same way they would report on their financial performance. Likeminded companies around the world are working together to understand and implement this concept including initiatives like the "Sustainable Agriculture

Initiative (SAI)" and the "Sustainability Consortium".

The concept of sustainability

The phrase "triple bottom line" was first coined in 1994 by John Elkington as a new way of reporting on the performance of a business. This was as a result of enhanced consumer awareness of social and environmental issues resulting from their consumption and consequent demands on business. The idea was that in addition to reporting on the financial bottom line (profit and loss), a business should report on their social impact ("people's account") and their environmental impact ("planet account"). The triple bottom line therefore comprises three measures of the performance of a business: people, planet and profit.

The reason why the concept of sustainability exists within business is largely due to the increasing environmental awareness of customers, but also because of shareholders in publicly-listed companies. With the risk of poor social and environmental performance providing a risk of reputational damage and loss of share price, social and environmental performance is now one of the considerations for share traders



an important tool in sustainable farming.

in assessing the risk (and therefore price) of stocks. Also, given the media coverage of potential future food shortages, shareholders of food-related companies are concerned about the actual input supply for these businesses. Since its inception as a concept in business, sustainability has therefore grown from being something on the periphery of business activity to a key factor in decision-making in modern companies, which cannot be ignored in the future.

Why sustainability matters to Australian growers

In short, sustainability matters to growers (and all Australian farmers) because it matters to their customers. Sustainability should be seen as an opportunity for growers as it can allow them to demonstrate their environmental credentials and have transparent discussions about costs, benefits and compensation for sustainability efforts. It is a concept which challenges Australian farmers to continuously improve the efficiency of processes and step

up in terms of the sophistication with which they manage people. Australian growers who embrace sustainability in terms of preserving the land in which they work and decrease their reliance on farming inputs such as fossil fuels often benefit in the longterm from lower operating costs. Those who work to improve the well-being of staff can be better placed to manage staffing and business continuity in an industry that is beset by troubles in sourcing consistent and qualified staff. In bringing people and planet into the business decision-making process, the potential is there to enhance, not detract from operations and profit.

In the end, demonstrating sustainability can be utilised as an additional marketing tool for Australian growers. The combination of "profit" with "people" and "planet" embeds the legitimate need for a fair return for these activities.

In future issues, this series of articles will develop and demonstrate examples of how leading Australian growers and companies are growing whilst respecting their people and environment and gaining profitable returns.

EnviroVeg

Linton Brimblecombe: Dedicated to sustainable practice

SINCE TAKING OVER THE FAMILY FARM IN THE 1980s, LOCKYER VALLEY GROWER, LINTON BRIMBLECOMBE, AND HIS WIFE, MELINDA, HAVE BEEN WORKING TO RESPOND TO THE CHALLENGES OF CLIMATE AND THE NEED TO LOWER PRODUCTION COSTS.



fter operating as cotton Agrowers for 40 years, the Brimblecombes made the choice to transition to vegetable production. For many years, Linton grew beetroots for local processor, Golden Circle, but since contracts in the region were lost to New Zealand, he now grows a variety of crops for local pack houses. Linton remains focused on the key areas of water and energy efficiency in his operations, and has made a number of investments to ensure their ongoing environmental and financial sustainability.

"A lot of the work we have done was in response to a 10-year drought in the area, which ended three years ago," he said. "Whereas then we were motivated by having access to water to grow crops, we are now responding to cost issues."

A key area of focus for the Brimblecombes has been investing in water efficiency during the drought, in order to ensure that the business had access to the water necessary to remain viable. Without relying on a bore, Linton keeps two years of water in storage and has moved to a lateral move irrigator which achieves 90 per cent efficiency.

"Much of our work is part of living in Australia, which often faces extremes of droughts or floods," he said.

Application of irrigation is strictly controlled based on plant needs, due to a comprehensive testing regime and the monitoring of wateruse and supplies. Many of the on-farm investments were achieved with assistance from the Queensland Government, showing the value of farmers working with extension staff and groups such as natural resource management bodies.

In recent times, Linton's

focus has switched from water sustainability to managing the cost of doing business, in particular, rising energy costs. "Our main two areas of focus

now are fuel and electricity and how we reduce their use," he said.

With assistance from a scheme run by the Queensland Government, the Brimblecombes were able to set up one of their water pumps on solar, using a 30-kilowatt solar bank that tracks the sun.

"The Queensland Government is now offering a feed-in tariff, which makes solar attractive, so we are now planning another project to have two pumps we use to transfer water from our dam to the farm, set up with solar for daytime use," he said.

To manage the cost of diesel, Linton has also transitioned to a bed-farming system, which retains beds from crop to crop.

"While not a fully controlled traffic-farming system, it helps to manage our tilling and reduce the number of operations and passes we do, so it saves on fuel and improves soil health," he said.

With the cost of energy doubling in the last financial year, effective management of energy will be essential in keeping production costs at a manageable level.

"It's a no-brainer that technologies like solar can help to run equipment," he said. "The only issue is with using power at night, as battery technology is an issue."

As the cost of cells reduces rapidly over the coming years, Linton sees use of solar on farms becoming even more widespread. At the industry level, it will be essential for Australian growers to keep finding ways to reduce input costs like water and energy.

"If Australian agriculture can't







address costs then it will be hard to remain competitive," he said.

In Linton's view, there needs to be a constant focus on improvement.

"Unless the outlook for the industry changes, Australian growers will need to keep looking for ways to do things smarter and better," he said.

Change is already happening, with broader use of energy sources such as natural gas now in more widespread use in irrigation pumps.

"We have to be open to options as a farming community," he said.

Much of the change on the Brimblecombe's property was brought about by the challenges of a decade-long drought. In current times, however, Linton, Melinda and the rest of their team remain focused on ensuring that they continuously improve the efficiency of their farm to ensure they can manage production costs into the future. Name: Yuri Wolfert Age: 23 Location: Forth, Tasmania Works: JJ & NJ Wolfert Pty Ltd Grows: Sprouts, broccoli, peas, beans & potatoes

Q&A Young grower profile

Forth, Tasmania

How did you first become involved in the vegetable industry?

My parents live on the farm, so I grew up there. We grow sprouts and broccoli, peas and beans, and potatoes of course. We used to grow cauliflower, onions, carrots. You know, it's hard to make a dollar out of anything at the moment, so we've backed right off.

Two years ago, I started growing things for the farmers' markets - small scale, but I liked it nonetheless. This last year was just adding a bit of diversity to the plate. It was a rewarding experience.

What is your role in the business?

Our business is based on no hired labour. As the youngest. I'm the third in charge, as I only got properly involved last year. Before that, I was always there when help was needed. I can do everything on the farm. I'm involved in the growing process. We only grow for packing companies so I'm mainly spending my time in land preparation through nursing to harvest, and a bit of seed cleaning for ourselves - cover crops mainly, but I hope to expand that.

Could you describe your average day at work?

It's very dependent on the time of year. Through springtime, I'm drilling poppies and doing ground preparation and planting vegetables - sometimes driving, sometimes on the back. We kind of share everything around. It can also be spraying. Shortly, my parents will be going on holiday, so I'll have to look after the farm. Through summertime, we're doing the nursing and the irrigation. In the wintertime, we are harvesting Brussels sprouts.

The length of my days depends what part of the season we're working in. Some days, if it starts raining, we'll only do a couple of hours and then go into the workshop and do repairs, maintenance and build some machinery. Other days, it can be you start at seven o'clock in the morning and don't finish until 10 o'clock at night. I work any day I'm required to work.

What do you most enjoy

about working in the vegetable industry?

Watching the grass grow! No, I like to grow the crops, interrow, spray and harvest. It's not always in the most favourable conditions but you get to see what you worked so hard to achieve.

What are the biggest challenges that you face as a grower?

Good question. Trying to be competitive in the market, I'd say. That's very difficult, because of the way prices are at the moment. It's hard to make a living out of it. You can't set the price because there is no competition in the packing industry. Keeping the cost price down is very important.

You and your family are not from Australia originally. Where are you from and when did you move here?

No, we are all from Zeeland in southwest Holland. We lived on a farm over there, and then, 12

years ago, we came here and moved to a farm in Kindred, Tasmania. Rules and regulations in Holland were fairly hard so my parents decided to move out.

How do you think more young people could become encouraged to take up jobs in the vegetable industry?

If the lifestyle was better and the pay was better, that would help. You have to want to do it. It's not just a job, it's a commitment. It's a lifestyle, really. And most people aren't prepared to do that.

You're sort of on call 24/7. You can't walk away from it. I work fairly long days, because we're running 110 hectares with three people. Most weeks, I work six days a week. I think that turns a lot of people off. I talk with a lot of people over Facebook, and they're always asking, "What? You're still working?"

If you weren't working in the vegetable industry, what would you be doing?



I've done Certificate III in agriculture, and I'm looking to do Certificate IV this coming year. I'm only really at the start of the book yet. I'd probably look at doing engineering or working as a boilermaker or welder. I like building things.

Where do you see yourself in five years?

Hopefully, within a five to sevenyear period, taking over the farm, or a large part of it anyway. Soon, my parents are going to retire from full-time work, and then they'd just keep going parttime on the farm.





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Summing up: Keys drivers of growth for the vegetable industry

OVER THE PAST DECADE, THE VEGETABLE INDUSTRY HAS ENDURED MANY CHALLENGES. RISING FARM COSTS, INCREASING COMPETITION FROM IMPORTS AND ADVERSE SEASONAL CONDITIONS HAVE HURT THE FINANCIAL PERFORMANCE OF MANY VEGETABLE FARMS. COST AND PRICING ISSUES PERSIST FOR THE INDUSTRY. TO OVERCOME THESE CHALLENGES, IT IS RECOMMENDED THAT VEGETABLE GROWERS HAVE A GRASP OF THE DRIVERS THAT UNDERPIN GROWTH AND UNDERSTAND HOW THEY CAN BE APPLIED ON THE FARM.

Drivers of growth for the vegetable industry can be classified as internal or external. Internal drivers are factors that a grower can control, while external drivers are out of a grower's control.

Internal drivers of growth

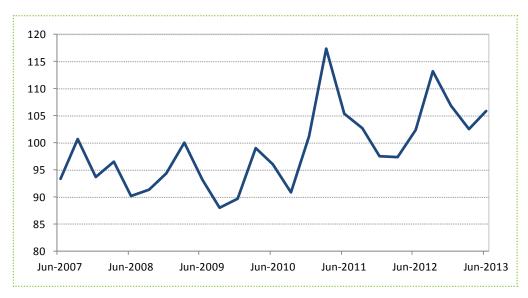
The main internal driver of growth is productivity, which is measured as the ratio of agricultural outputs to inputs. Yield is the most common measure of productivity in the vegetable industry. Yields are specific for each vegetable commodity and are not comparable across vegetables.

An increase in yield denotes an increase of the amount of vegetables produced per hectare. The result is improved price competitiveness at the point of sale and higher earnings for growers.

Increases in yield are led by innovation and technological change. The mechanisation of vegetable farming and improvement of irrigation and soil management practices have historically led to large increases in yields. However, vegetable yields have stabilised in recent years. Yields for carrots and potatoes have increased over the last six years, while yields for capsicums and lettuce have decreased.

Stagnant yields have prompted some growers to consider moving to higheryielding vegetables and acquiring more land to improve productivity. This may produce some short to medium-term gains. In the long term, however, it will be vital for growers to continue to apply new farm technologies and put in practice research undertaken to improve vegetable yields.

Figure 1: Vegetable yields for selected vegetables, 2005-06 to 2011-12 (tonnes/hectare)

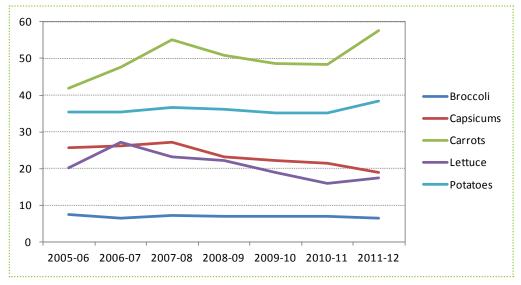


R&D

Drive Train

Source: ABS Catalogue 7121.0 - Agricultural Commodities, Australia, various years.

Note: Values for 2009-10 were not available for broccoli, capsicum and lettuce. Values were based on an average of 2008-09 and 2010-11.





Source: ABS Catalogue 6401.0 - Consumer Price Index, Australia, June 2013.

The ability of growers to



cater for changing consumer preferences is another driver of growth. Consumer preferences are shifting towards quality, convenient and diverse produce. This presents opportunities for growers to supply niche or specialty vegetables, such as pre-packaged salads and Asian vegetables. Consumers are also increasingly shopping for locally grown produce, and growers are meeting this need by selling direct to the local consumer or retailer.

Exports present an untapped opportunity for the vegetable industry to drive long-term growth. Only four per cent of vegetable growers currently export, significantly less than other Australian agricultural industries. The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) predicts that rising incomes and increasing populations in developing economies will significantly increase global demand for vegetables over coming decades.

External drivers of growth

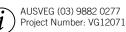
The prices that growers receive for vegetables are a major external driver of growth. An increase in prices received at the farm gate translates to higher returns for growers. Over the last six years, vegetable prices at the consumer level have increased at an annual rate of 2.1 per cent. Vegetable prices have been highly variable over this period and not all of the price increase was passed on to growers.

Prevailing seasonal conditions and the availability of water play a critical role in the performance of the vegetable industry. Favourable seasonal conditions can enhance soil quality and the volume of production, while adverse conditions have the opposite effect. In recent times, extreme weather events have become more frequent, with the floods and cyclones in 2010-11 disrupting vegetable planting and causing damage to infrastructure.

Vegetable consumption is an indicator of the demand for vegetables. An increase in vegetable consumption leads to increased demand from supermarkets and grocery stores, which in turn increases grower revenues. Currently, around 10 per cent of Australians eat the recommended five or more serves of vegetables a day. Growing health concerns are likely to encourage greater uptake in vegetable consumption, which will benefit farm financial performance.

BOTTOM LINE

- Vegetable growers should be familiar with the drivers that underpin business growth and understand how they can be applied on farm.
- Drivers of growth can be internal, such as productivity, the ability of growers to cater for changing consumer preferences, and exports.
- Drivers of growth can also be external, such as the prices that growers receive for vegetables, seasonal conditions and the availability of water.



This project has been funded by HAL using the National Vegetable Levy and matched funds from the Australian Government.

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Veggie-branding: Highlighting the health benefits of Australian vegetables

A NEW STUDY IS SIMPLIFYING THE NUTRITIONAL INFORMATION AVAILABLE REGARDING VEGETABLE PRODUCTS TO ALLOW VEGETABLE GROWERS AND MARKETERS TO EASILY MAKE CLAIMS ABOUT THE HEALTH AND NUTRITIONAL BENEFITS OF PRODUCE.

t would be safe to say that a majority of Australians are aware that vegetables are good for their health. However, the regulatory framework implemented by Food Standards Australia New Zealand (FSANZ) has sometimes restricted the ability of marketers to communicate the various health benefits of fresh produce directly to consumers.

A new project led by Plant & Food Research Australia and MacTavish West aims to simplify the currently available information relating to food regulations, and while only just moving into its second phase, has already yielded significant findings that could positively impact the Australian vegetable industry.

The project, *Conveying the Health Benefits of Australian Vegetables*, is headed by Dr Jocelyn Eason, General Manager, Science and Food Innovation at Plant & Food Research. Funded by the National Vegetable Levy with matched funds from the Australian Government, the project follows the release of a new standard by FSANZ, Standard 1.2.7, which allows the Australian food industry to make claims relating to the nutritional content of food.

R&D

Market &

/alue Chain

Development

The new standard also permits high-level health claims, such as "a high intake of both fruit and vegetables can reduce the risk of coronary heart disease."

Dr Eason said that there were quite a few things that marketers or producers of vegetables needed to get right in order to make a health claim for their product.

"You would have to have a certain level of a nutrient in your

vegetable to make a claim... enough within a serving size that a consumer is getting a benefit," Dr Eason said. "Sometimes you have to meet 25% of the recommended daily intake (RDI) to be able to link that nutrient to a health benefit."

 $R_{\&}D$

Consumer

Alignment

Communicating the benefits

Growers and marketers will be able to obtain nutrition information from a comprehensive database developed on the foundation of a long-standing project titled Vital Vegetables. Vital Vegetables, led by Dr Eason and her colleague Dr Carolyn Lister, investigated the emerging FSANZ regulations and established a national nutrition database of food products for New Zealand. The team has now collated both the findings of Vital Vegetables and data relevant to the Australian vegetable industry to produce a resource from which producers and marketers can determine whether their product is eligible for a health claim.

"We've got the database put together now and the next phase - the phase that we're in at the moment - is making that a suitable web-based tool for the growers," Dr Eason said.

With feedback from the Vegetable Industry Consumer Alignment Design Team, Dr Eason's team has decided to proceed with "Veggycation", an online campaign designed to inform growers and marketers of the health benefits of vegetables, while being broadly applicable to a range of different people in the community. Veggycation functions as one of the project's communication outputs. "We're providing a tool for the growers and marketers...but we have to provide that tool in such a way that consumers can understand," Dr Eason said.

A component of the Veggycation design includes a series of icons that align with nine different health areas that the vegetables will fall under. Categories include heart and circulation, vision, bones and joints, cognition and so on.

"We're developing icons around those as well that can be used on the outside of packaging," Dr Eason said. "Visual cues are usually better than wordy ones."

Targeting the consumer

According to the 2011-13 Australian Health Survey, only 8.3% of adults consume the recommended minimum five servings of vegetables per day. Dr Eason hopes that Veggycation will be a valuable resource for increasing the consumption of vegetables and fighting health conditions such as obesity.

She also suggested that the project might encourage vegetable growers to trial new varieties, such as differentcoloured vegetables. Vegetable colours are usually attributable to the phytochemicals contained in produce, compounds which have been linked to reducing the risk of certain cancers.

"Consumers will buy for quality, taste, texture and flavour, and then a small proportion will also pay a premium for health," Dr Eason said. "There are innovative marketing people in the vegetable industry who are ready to get out there and differentiate their products in the marketplace, and this is a way of differentiating it." She acknowledged that there were always downsides to trialling new varieties of vegetables.

"There may be a yield loss. [The growers] need to trial them in their own environment and growing conditions to see which is the best for them," Dr Eason said.

Industry extension

The communication campaign also includes a series of nationwide workshops designed to explain and discuss the new FSANZ legislation, health benefit claims, testing and quality assurance. Workshops will be held during late September in Melbourne and Brisbane and will target both growers and marketers. Retailers and the health industry have also expressed their interest in the workshop campaign.

"We've also had a request to have a workshop with the health industry - nutritionists... dieticians and those sorts of people - so that they have an understanding of the stability of nutrients in vegetables and the varieties available," Dr Eason said.

THE BOTTOM LINE

- The opportunities for marketing vegetables using health benefits is seriously limited by the complexity of the FSANZ regulatory framework.
- This project is developing a catalogue of key health messages for growers and marketers.
- Creating visible and valued points of difference for products is an important step for product success.



Dr Jocelyn Eason Plant & Food Research Email: jocelyn.eason@ plantandfood.co.nz Project number: VG12043

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Ask the industry Image: Construction of the industry Image: Construction of the industry Image: Construction of the industry

SCOTT MATHEW, TECHNICAL SERVICES LEAD AT SYNGENTA, RESPONDS TO QUESTIONS CONCERNING WATER VOLUME IN SPRAY COVERAGE.

Question: What is the correct water volume for a spray job?

At a spray application training forum held in South-East Queensland, Syngenta staff, growers and members from the local reseller network applied water and fluorescent dye through various sprayer set ups (including differing nozzles, ground speeds, water rates and adjuvants) to determine the best effective coverage in broccoli at pre-buttoning stage. After darkness, a "black light" was used to view results of each application set-up, which created a great deal of discussion about coverage of the target surface.

Question: Water volume - crucial to achieving good spray coverage?

"Required coverage" is one of the key factors to achieving a good result from an application of an agricultural chemical. Arguably, water volume is the key factor in achieving good coverage of a target surface, but other factors need to be considered. Nozzle selection, operating pressure, spray uniformity (are the nozzles worn or damaged?), boom height, travel speed, target density (how much green material are you spraying?), use of adjuvants and environmental conditions when spraying all impact on spray coverage.



Question: Does increasing water volume give better spray coverage?

Many chemical product labels include details about recommended water volumes for application, which are related to a crop's growth stage or the expected canopy volume being sprayed. As a general rule, the greater the density of plants sprayed, the greater the water volume needed to provide the required coverage. However, appropriate water volume must be considered in line with the number of droplets and the quality of spray produced (based on the factors mentioned above). Simply increasing water volumes may be detrimental to coverage. Too much water can result in spray droplets running together on a leaf surface, resulting in the spray running off the plant surface and onto the soil. Depending on the product used, this can have a major negative effect on the chemical's efficacy. When this occurs, it is said that the application has exceeded the "point of runoff" for the volume of water being applied.



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

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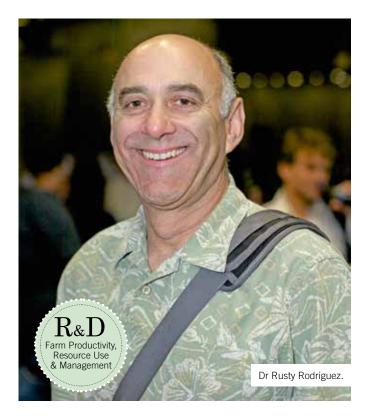
Functional fungus: Conferring stress tolerance to vegetable crops

AT THE 2013 AUSVEG EMERGING TECHNOLOGIES IN HORTICULTURE SEMINAR, HELD AT JUPITERS GOLD COAST ON 31 MAY, US SCIENTIST DR RUSTY RODRIGUEZ SPOKE TO *VEGETABLES AUSTRALIA* ABOUT ENDOPHYTIC FUNGI, STRESS TOLERANCE IN PLANTS, AND THE IMPORTANCE OF A THOROUGH REGULATORY PROCESS FOR NEW TECHNOLOGIES IN THE FIELD OF HORTICULTURE.

Dr Rusty Rodriguez is based scientific research company, Adaptive Symbiotic Technologies, and was a speaker at this year's Emerging Technologies in Horticulture Seminar.

Dr Rodriguez spoke to attendees about the research field of plant-fungal symbiosis, with symbiosis referring to the prolonged and mutually beneficial relationship between two or more different species. Dr Rodriguez discussed "extremophile" plants: plants which thrive in habitats exposed to great amounts of environmental stress, such as drought, salt, or temperature stress. These "extremophile" plants - specifically, species found in geothermal sites based in the US - had managed to survive in high temperatures and highly toxic soils because of the existence of a special endophytic fungi which lived in symbiosis with the plant. Tests carried out by Dr Rodriguez found that combining the endophytic fungi with plant types that had no prior

relationship with the fungi led to the transfer of beneficial stress tolerance properties, indicating the potential for vegetable crop production in arid and saline environments across the world.



Bio Insure

In light of this discovery, Dr Rodriguez and his colleagues at Adaptive Symbiotic Technologies are currently developing a technology called Bio Insure. "It is comprised of microorganisms that are from native plants. These are not genetically modified organisms. We use these to confer stress tolerance - drought stress, salt stress, or temperature stress - to crop plants. We can confer that protective capability to virtually any crops," he said, highlighting the adaptability of the technology.

The idea to confer favourable stress-tolerant microorganisms from stress-tolerant plants to vegetable crops originated from Dr Rodriguez studying how plants adapt to high-stress habitats.

"There are high-stress habitats all around the world - some of them are drought stress, some of them are salt stress,



Left: Four watermelon plants with no endophytic fungi; Right: Four watermelon plants with endophytic fungi conferring heat stress tolerance.



temperature, both cold and hot - and we wanted to know how [the plants] did it and if microbes played a role," he said. "It turns out the first ones we looked at were in these geothermal soils, and the microbes played a tremendous role. In fact, the microbes were completely responsible for that heat tolerance."

Impact on the horticulture industry

Dr Rodriguez believes that the impact that this technology will have, when applied to the horticulture industry, is multifaceted.

"We look at it as four different levels of plant production. These include seed germination, seedling growth and development, heat tolerance, and...yield increases," he said. "We parcel that as four different things. We see significant improvements in seed germination rates, and seedling growth and development establishment."

Limitations to the development

of Bio Insure have thankfully been few and far between for Dr Rodriguez and his team.

"I would say the biggest limitation we have right now is being able to define the mechanism behind what we're observing, both on the plant side and the microbe side. We've been spending a fair amount of time and effort trying to do that. Other than that, we've pretty much worked through all other areas or aspects that we might consider limitations. We've overcome all the problems with scale-up cultivation of the organisms, and formulations for seed treating." he said.

Looking to the future

Currently in their second year of field testing, Dr Rodriguez said testing will continue to be accompanied by greenhouse studies. Several growers who attended the seminar expressed interest in hosting trials on their own farms. It is anticipated that the technology will become available in Australia, Europe, the US and South America in late 2013.

Dr Rodriguez is currently seeking regulatory approval for pilot trials in Australia, and approval is the last obstacle to be overcome. However, Dr Rodrigues does not see this as an impediment to the development of his technology.

"I actually think that the regulatory process is not a bad one. I think that it's critical we have one. I think that it needs to be updated, and made more realistic with ... our new understanding of biology, ecology and whatnot. I don't ever see it being insurmountable," he said. "It is important though. For me, one of the most important aspects of the regulatory process is that we pretty much know now that once something is released, you can't take it back. So once it's out of the bottle, the genie doesn't go back in. We've already seen plenty of problems with that, so that's why I say I think we definitely need a regulatory process."

In reflecting on developing his

technology, Dr Rodriguez said there were many reasons why this field of research kept him happy.

"It's been a fantastic adventure because it's all new discoveries. It kind of flies a bit in the face of what's contemporarily viewed as plant adaptation and ecology, so it's been fantastic from a scientific perspective," he said.

"It's been a fantasy, I think, of most scientists to be able to do basic research, to be able to make new discoveries, develop something and actually bring it to fruition where you're seeing it applied and making a difference," he said. "So for me...changing the way we do agriculture is going to be one of the best benefits of it. To be able to reduce inputs going into agriculture, dealing with water quality and availability, bringing this to developing nations to be able to assist sustainability on small farms, will all be fantastic."



International innovation exchange: Investigating growing operations in Europe and the Middle East

IN FEBRUARY OF THIS YEAR, NINE AUSTRALIAN VEGETABLE GROWERS EMBARKED ON A 13-DAY STUDY TOUR OF ISRAEL, GERMANY AND THE NETHERLANDS, WHERE THEY WERE EXPOSED TO A DIVERSE RANGE OF ON AND OFF-FARM BUSINESS PRACTICES TYPICAL OF THOSE COUNTRIES. THE TOUR ALSO PROVIDED VALUABLE OPPORTUNITIES FOR GROWERS TO NETWORK WITH INTERNATIONAL INDUSTRY COUNTERPARTS AND TO LEARN ABOUT TECHNOLOGICAL INNOVATIONS IN RELATION TO HORTICULTURAL PRODUCTION.

On Friday 1 February, a fatigued but excited group of vegetable growers touched down in Tel Aviv, Israel, in the early hours of the morning, where they spent a day before heading to Jerusalem for a cultural tour.

Visiting farming operations in Israel

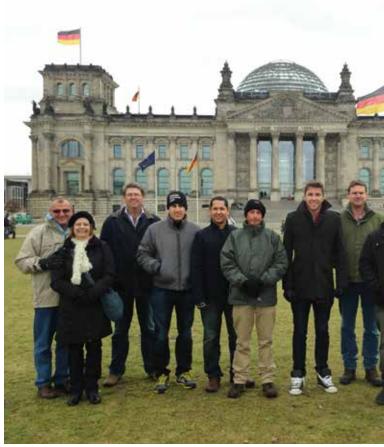
The following day, the group began their farm visits to investigate Israeli growing practices and traditions. North of Tel Aviv, the group visited Kibbutz Re'im, where they visited a potato and carrot growing operation and learnt about a water desalination project that was operating in the area. Israel, like Australia, has water scarcity issues, and while Australia's issues have been relieved for now, Israel still contends with growing produce in what is essentially a desert, and an inhospitable climate for vegetable production. The group visited a dam, which holds 1.3 million cubic metres of water and which is constantly refilled by the desalination site. Two other farm visits followed,

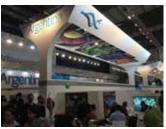
including a tour of a cucumber farm in Moshav Ein Ha'bsor and a lettuce farm in Moshav Ami-Oz, followed by a tour of a local vegetable-packing house.

The group's last day in Israel presented the opportunity to tour a different kind of operation - the headquarters of Israeli smart-drip and microirrigation solutions company, Netafim. The main purpose of the Netafim centre is to deliver knowledge about a variety of Netafim's agro-technologies. such as different greenhouse solutions, open-field irrigation systems, peripheral equipment and agro-machinery. Following the tour, the group boarded the bus once again to visit the operations of Makteshim Agan, a major Israeli crop protection company. Here, they learnt about the organisation's global strategy, as well as local market trends and initiatives.

Berlin and Mannheim

The group then left Tel Aviv for the next leg of the tour in the German capital of Berlin. After a day to recover, the group were privileged to receive a tour of







the Berliner Großmarkt by its CEO, Mr Dieter Krauss. The Beliner Großmarkt is the city's wholesale fruit and vegetable market that consists of many wholesale distributors who supply groceries and markets in the greater Berlin area. It has been operating since 1967, though is now substantially smaller than it used to be. One grower noted that the market was guiet, to which Mr Krauss replied that the market had been shrinking in size for a few years, which was due to the increased number of growers who now supply produce directly to supermarket chains with their own distribution centres.





Following the tour of the market, the group spent the day at Fruit Logistica, which turned out to be one of the highlights of the whole study tour. Hosting over 40,000 attendees, Fruit Logistica is the leading international meeting place of fresh produce trade. It offers the opportunity for growers and others associated with the world's vegetable industries to learn about new machinery, packaging technologies, varieties, shipping options and market development opportunities. The immensity of the exposition demanded two days of the study tour, which turned out to be time very well spent.

In Mannheim, the group also



visited Rudolph Sinn & Co., a vegetable farm that grows 10 million plants each year. Their crops include celery, salads, cabbage, fennel, cauliflower and parsley.

Amsterdam

Following the visit, the group headed for Amsterdam, stopping along the way at Tasty Tom, a glasshouse tomato and capsicum grower. Tasty Tom runs a profitable business selling tomatoes, but has also diversified the its income streams by funding its own input costs, such as electricity, and selling surplus power back into the local power grid. The group received a guided tour from Managing Director, Mr Hans Reiker, who told the group that 70% of their product was supplied to Germany, 20% went to the Netherlands, and 10% went to the United Kingdom, as well as detailing his extensive integrated pest management (IPM) program.

After spending a day exploring

the sights of Amsterdam, the group visited Koppert Cress, which was easily the highlight of all the farm visits of the tour. The group received a tour from Managing Director, Rob Baan, who purchased the company 10 years ago, when its turnover was almost €2 million per year. Since Baan purchased the company, turnover has increased to €20 million per year. Growers were told that they should challenge institutionalised conventions related to conducting business in Australia. They were also told that Australia didn't capitalise on the benefits of eating vegetables, in that they failed to illuminate some of the most exciting health benefits, such as the properties that broccoli has related to the prevention of heart disease.

The group's final visit of the study tour was the Syngenta vegetable seeds breeding facility near Enkhuizen, located two hours north-east of Amsterdam. The facility has been breeding vegetables for 100 years, the focus of which, according to Syngenta, has been to achieve uniformity and disease resistance in crops. Achieving uniformity allows for more efficient harvesting, as growers only need to go through and cut a uniform field once.

Overall, the 2013 Grower Study Tour to Israel, Germany and the Netherlands was a tremendous success. Participants provided overwhelmingly positive feedback, and all said they would recommend the tour to others. The tour was funded by Horticulture Australia Limited using the National Vegetable Levy, voluntary contributions from industry and matched funds from the Australian Government. The full report for project VG11706 is available by logging on to the AUSVEG website at www.ausveg.com.au.

AUSVEG Phone: (03) 9882 0277 Email: info@ausveg.com.au Project number: VG11706

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Fabricating genes: Professor Lars Nielsen discusses synthetic biology

PROFESSOR LARS NIELSEN PRESENTED HIS RESEARCH INTO SYNTHETIC BIOLOGY AT THE 2013 EMERGING TECHNOLOGIES IN HORTICULTURE SEMINAR, HELD THURSDAY 30 MAY AT JUPITERS GOLD COAST. SYNTHETIC BIOLOGY IS AN EXCITING FIELD OF RESEARCH, WHICH PROFESSOR NIELSEN SAYS IS ADVANCING AT AN EVER-INCREASING RATE.



The creation of artificial life, for some, is a weird and troubling concept - something from science fiction that could dramatically change the world as we know it and open up debate over myriad brainteasing philosophical problems.

Some associate the creation of artificial life with the relatively new scientific field of synthetic biology, and have consequently been hesitant to explore its potential. However, as Professor Lars Nielsen from the Australian Institute for Bioengineering and Nanotechnology says, synthetic biology has other priorities.

"We have all the people out there [saying], 'Oh, we're making new life', and all the excitement about making new life, which scares a lot of people, and it scared me as well, if it wasn't that I know we can't," he said. "The reality is we don't know how to make new life."

"So there's a disconnect between the hype of what synthetic biology can do, and what people are excited about," he said. "I think a realistic concern for us is that the more hype that comes about all the things we can do, the more kick-back there will be from people who naturally are concerned."

Conceiving a goal

Prof. Nielsen runs a research group of 50 people across five different scientific areas at the institute. He is currently "training the next generation of scientists", as a mentor to 20 PhD students. According to Prof. Nielsen, the central focus of synthetic biology is the production of genes, which are created artificially. He said that the base technology for this research has come from classic molecular biology.

"They don't have to already exist in nature for us to make use of [them]," he said. "There is a dream, a hope, in synthetic biology that we can standardise and make more generic parts that we can then use in many different applications."

"It's less clear that that is realistic, but what we can do is we can make all our parts stick well together, so if you want to put in three, four, five genes into an organism, you can make them so they can stick together like Lego blocks, and you can quickly build them up and you can do many combinations," he said.

Applying the science

Prof. Nielsen presented his research into synthetic biology at the 2013 Emerging Technologies in Horticulture Seminar in May. The seminar showcased some of the most exciting research that had been done in Australia and abroad over the past few years that could potentially be applicable to the horticulture industry.

"We use synthetic biology, to a large extent, to replace or to accelerate the development of logical ways of making products of interest," he said. "So we use it to make various chemicals, polymers, that we would normally use that are normally made of petrochemicals...so in terms of sustainability, that is obviously not the best option."

"An interesting parallel



application is the things we can do in biology that we haven't totally made use of yet," he said. "Biology can do things that no other system can do, and we try to explore what it is biology can do."

A rapid evolution

Prof. Nielsen said that the impact of his research on the Australian agricultural industry was broad

"It probably in the first instance will be more on broadacre sugarcane and things like that, because they're more in the low-cost chemical industry that we're working on, so it's of interest for the sugar industry if they can make a dollar per kilogram instead of 30 cents per kilogram of sugar, and if they make a chemical, they can make a dollar per kilogram easily of their sugar," he said. "We do work on bio-pesticides, so an indirect impact would be that the input traits in all the agricultural industry is that we will see the industry moving to

bio-pesticides because that will be the cheaper, better option."

Prof. Nielsen said that there was much that he enjoys about his work, and that synthetic biology was an exciting field of research.

"Every two years, I go to a conference and get baffled by what other people have done. The rapid change of what can be done is amazing," he said. "If I look a decade back, I could have sworn that what we're doing right now would never have been done. So it's hard to

predict how much can change."

Prof. Nielsen said that "we always overestimate how much we can achieve over the next two years, but we vastly underestimate how much will be achieved over a decade." It is fitting that in his presentation at the seminar, he quoted Microsoft co-founder, Bill Gates, in reminding attendees that "we are only limited by our creativity."

Project Number: VG12050

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Jim Mole: On Impact

JIM MOLE RECENTLY JOINED IMPACT FERTILISERS AS MANAGING DIRECTOR WITH A FOCUS ON TAKING THE BUSINESS TO THE NEXT LEVEL, WHILE MAINTAINING IMPORTANT RELATIONSHIPS WITH IMPACT'S KEY CUSTOMERS: AUSTRALIAN GROWERS. MR MOLE SPOKE TO VEGETABLES AUSTRALIA ABOUT HIS BACKGROUND IN HORTICULTURE, CHANGES IN THE FERTILISER INDUSTRY AND THE INTRODUCTION OF IMPACT FERTILISERS' LATEST CONTROLLED RELEASE FERTILISER PRODUCT.

A new recruit to the role of Managing Director at Impact Fertilisers, Jim Mole joins the fertiliser industry with knowledge and expertise stemming from a background in horticulture. Growing up on a vegetable and beef cattle farm in Mount Cotton, Queensland, Mr Mole is familiar with the importance that growers place on getting both efficiency and value for money from their fertilisers.

On joining the fertiliser industry after being outside of the Australian agricultural context for a number of years, Mr Mole says he took a handson approach in finding out more about his customers' wants and needs. He focused on the ways in which the company could improve its internal operations, before looking to foster Impact Fertilisers' important relationships with external stakeholders.

"I came into it pretty much 'eyes wide open'. I wanted

- Jim Mole.

to take a good look at firstly, who we were and what our capabilities were, and secondly, I wanted to meet as many customers as possible to find out what we were like to do business with," he says.

Upon joining the team at Impact Fertilisers earlier this year, Mr Mole's initial reaction regarding the fertiliser industry was that it was using the wrong sort of business model - one based on the assumption that fertiliser was a commodity, and therefore, that a fertiliser business should be operated like a logistics business.

"I don't sway with that," Mr Mole says. "At the end of the day, I think a lot of it will come down to the value that can be attributed to either service and quality, rather than this focus on a commodity that everybody's got and therefore goes for price, price, price, every time."

Reflecting on the trends and issues he sees in the

You can't fool people. They either see value or they don't.



fertiliser industry, which are closely related to those of the horticulture industry in Australia, Mr Mole is thoughtful and direct. He stresses the need for the fertiliser industry to better recognise the difference between the use of fertilisers in broad-acre agriculture, as opposed to horticulture. One size does not fit all, he says.

"I think there's an opportunity for more specific advice around horticulture, given the more specific needs of horticultural crops, rather than the general feeling that 'here's a bucket of commodity fertiliser that we're throwing at broad-acre agriculture', which seems to be the norm," says Mr Mole.

"I also think there's a lot more environmental consciousness on the horticultural side of things than we see in broad-acre agriculture, even though the scale of broad-acre agriculture is more significant," he says.

Considering the growing trend of environmental consciousness, according to Mr Mole, the need for traceability of food from the paddock to the plate is also going to become more significant.

"As consumers become more conscious of where their food

is coming from, if we see any issues in that chain, people are going to want to know where it came from, and the inputs that were required," he says. "You can only do that through a fullyserviced model."

To create a fully-serviced model, Mr Mole says Impact Fertilisers' current goals are focused on taking a longterm look at the industry, with particular focus on the people who use their products - growers.

"The challenge for us is: 'how do we work out what others further down the chain require?' We're starting with the growers. How do we work out what they truly value, and deliver that, and stop doing things that aren't valued?" he asks.

"For a grower, it's really got to translate to cost first, and yield second," he says. "The smarter we can do things, the better off everyone's going to be in the process."

One of Mr Mole's key concerns is re-investing in people within the industry and diverting funding towards their development.

"If the industry's not profitable, it's not going to reinvest in its people for the longer term, and it's not going to be investing in



new products," he says.

"If you're going to offer specialist horticultural advice, and back that up with products that are more specifically targeting horticulture, you need to be able to fund that work either through development in the products or development in people," he says. "For me, right now, that's a bit of a hot-button issue."

Impact Fertilisers recently introduced Agrocote® controlled release fertilisers into the Australian market. When asked to list the benefits to growers of this product, Mr Mole says that in short, it comes down to a matter of efficiency.

"How efficiently can a crop use fertilisers which, one, aren't cheap, and two, aren't endless in supply? I think that's the underlying benefit of controlled release technology. Agrocote® also allows growers to reduce the number of fertiliser applications, saving labour costs. Growers can get on with managing the business without the worry of exact fertiliser timings."

"I think it's our challenge to say: 'don't just bring things to the market, but bring things to the market that are of value', and if growers see that, well, they're not silly," he says. "You can't fool people. They either see value or they don't."

In closing, Mr Mole says he and the team at Impact Fertilisers still have a lot more to offer growers.

"We see ourselves as a key contributor from the input side to horticulture. Horticulture is dear to my heart, and I think that we've got a significant contribution to make," he says. "Where in the past our focus might have been on broad-acre agriculture, we see horticulture as a real opportunity."

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Aubergine armament: protecting eggplant from pestilent fruit fly

A NEW STUDY INVESTIGATES METHODS OF DEALING WITH QUEENSLAND FRUIT FLY, WHICH POSES A SIGNIFICANT THREAT TO THE STATE'S EGGPLANT INDUSTRY, WRITES RACHEL WILLIAMS.



t could be a year before authorities give approval for three insecticide sprays to be used by eggplant growers in the battle against Queensland's damaging fruit fly.

Researchers from the Queensland Government's Department of Agriculture, Fisheries and Forestry (QDAFF) have spent the past three years determining the best way to deal with the pest, to ensure the future of the state's \$20 milliona-year eggplant industry.

If approved for use commercially, it could also cut down spray costs for farmers and improve integrated pest management.

The research was funded by HAL using the National Vegetable Levy with matched funds from the Australian Government.

Dr Siva Subramaniam said the research was conducted

in response to a decision by the Australian Pesticides and Veterinary Medicines Authority (APVMA), to suspend the use of the insecticides dimethoate and fenthion on a number of crops, including eggplant.

The decision resulted in the loss of both pre and post-harvest applications for eggplant, leaving growers with limited effective management options to satisfy market access requirements.

"Currently ICA 26 is the last option available for eggplant growers, but only trichlorfon is allowed to be used as a pre-harvest cover spray in this system," Dr Subramaniam, a senior entomologist, said.

"A particular concern to the vegetable industry is the fact that the long-term availability of trichlorfon is uncertain. It's been nominated by APVMA for review under Priority 1 category

because of toxicological, human health and residue concerns. This means that the need to investigate and develop alternative methods of controlling fruit flies in eggplant remains important," he said.

Queensland is a major supplier of eggplant across the country. Ninety per cent of eggplant production is based in the Bowen, Burdekin and Bundaberg regions, which supply to the domestic markets from March to December.

Dr Subramaniam said the research project gathered baseline data on fruit fly seasonal activity in those three key growing areas and examined the effectiveness of several alternate chemistry groups applied prior to harvest.

Multiple field trials and commercial product sampling was conducted, demonstrating that the pre-harvest cover sprays tested in this work, combined with a rigorous packhouse grading process, can effectively reduce the risk of fruit fly infestation in eggplant to a low level.

During the project, a total of 21,894 eggplants were collected from five trials on government department research stations and sampling from a commercial eggplant farm in Bowen. No infested products were recorded from products that were classified as commercial grade.

In addition, only a single infested eggplant was recorded from the Bundaberg trials where 6,394 were sampled.

As a result of the research, Dr Subramaniam said three sprays (bifenthrin, abamectin and spinosad) had been identified as best protecting eggplant from fruit fly infestations.

They have been recommended for use as a pre-harvest cover



Eggplant harvested from a field trial in Bowen. Photograph by Siva Subramaniam.



Queensland fruit fly.

spray regime, but farmers are not allowed to use the sprays on crops until final APVMA approval is given.

"Minor use permit applications will need to be developed and submitted to APVMA for the insecticides before they can be included in the market access protocol," Dr Subramaniam said. "Detailed information on the cover sprays such as application rates, spray volume, spray intervals and timing of application has been completed," he said. "All this information will be included in the report to assist Biosecurity Queensland in preparing an interstate certification assurance (ICA) procedure."

"They've already been approved to use against other insect pests in the crop. However, APVMA approval is necessary for use against Queensland fruit fly (*Bactrocera tryoni* and closely related species such as *B. neohumeralis*)," he said.

Dr Subramaniam said project staff would work with local industry organisations such as HAL and Growcom, to prepare permit applications and provide supporting documents such as efficacy reports.

While he expects it will be around 12 months before signoff, he said it was positive news for eggplant growers, given fruit fly is regarded by quarantine authorities as a serious pest that can infest a wide range of commodities.

"As such, any commodity regarded as a host to Queensland fruit fly is required to be treated before movement into markets such as South Australia, Tasmania and Western Australia which were considered to be free of Queensland fruit fly," he said.

"The current pre-harvest insecticide trichlorfon only works against fruit fly but still, growers have to use other insecticides on regular basis to control various pests. The system developed in this project minimises insecticide use in the crops and cuts down the spray cost and improves IPM practices," he said. "These three chemicals are also efficacious in controlling several other pests, for example, whitefly, thrips and mites, in eggplant. Therefore there is a dual benefit for growers to use against various pests as well as satisfying market access requirement."

THE BOTTOM LINE

- Research centered on Bundaberg, Bowen and Burdekin. They produce 90 per cent of Queensland's \$20 million eggplant crop.
- Three new insecticides have been submitted for approval by the APVMA for commercial use on-farm.
- The system developed in this project will minimise insecticide use, cutting costs to farmers.

Dr Siva Subramaniam Queensland Department of Employment, Economic Devlopment and Innovation Phone: 0417 784 686 Email: siva.subramaniam@ deedi.qld.gov.au Project Number: VG09023

Eggplant assessment process. Photograph by Siva Subramaniam.



Wage increase: Award rates of pay are up 2.6%

THE FAIR WORK COMMISSION'S (FWC) MINIMUM WAGE PANEL HAS INCREASED ALL AWARD RATES OF PAY BY 2.6% IN THE 2013 ANNUAL WAGE REVIEW RULING, HANDED DOWN LAST MONTH. THIS WILL PUT ADDITIONAL PRESSURE ON GROWERS WHO ARE ALREADY OPERATING ON SLENDER MARGINS, BUT IT IS NOT AS BAD AS IT COULD HAVE BEEN, GIVEN THAT THE ACTU WAS SEEKING A \$30 A WEEK INCREASE, WRITES GROWCOM COMMERCIAL SERVICES MANAGER, DONNA MOGG.

The decision increases the national weekly minimum wage by \$15.80 to \$622.20 with the base hourly rate set at \$16.37 from this month.

This is the last year of a five-year transitional period for moving off "old" Award provisions and rates to the new Award provisions. It means that this year, the casual loading payable by growers in Queensland is 24.6%. This latest increase brings the Level 1 casual rate for a horticulture worker in Queensland to \$20.40 per hour. All industries will move to the full award provisions, including the 25% casual loading by 1 July 2014 when the "modern" Award will begin to apply in full.

In reaching their decision, the panel did take account of the 0.25% increase to the superannuation guarantee charge (SGC) from the start of this month. Superannuation contributions payable on behalf of eligible employees is now 9.25%.

If you are already paying your staff above the new minimum, you are under no obligation to increase the rate, unless the new legal minimums exceed their current rate of pay. However, all five levels of the Horticulture Award will increase by the 2.6% awarded.

Workplace Agreement

If you operate under a workplace agreement, this should be reviewed against the new minimum rates to ensure that they at least meet those. Don't forget also that if your agreement provides for a 23% casual loading, this will continue to apply. If you have fewer than five levels in your agreement, you should check your wage levels against the award wage levels and determine the appropriate level to match those contained in your agreement. If you apply a percentage increase to your upper wage levels, this must apply as your agreement is a legal document.

Wage summary sheets and the final transitional arrangements table are available on the Growcom website and have been sent out by email to all Growcom members as a Special Industrial Relations Alert. Basic information will also be available in *Horticulture Now*.



Minimum rates payable from 1 July

| Level | Hourly | Weekly | Casual (+ 24.6%) |
|----------|---------|--------|------------------|
| Level 1 | \$16.37 | 622.20 | \$20.40 |
| Level 2* | \$16.76 | 636.90 | \$20.88 |
| Level 3 | \$17.15 | 651.70 | \$21.37 |
| Level 4 | \$17.69 | 672.25 | \$22.04 |
| Level 5 | \$18.58 | 706.05 | \$23.15 |

* "standard rate" used for calculating allowances

Please note: These are "transitional" Queensland rates, so they are different to those set out in the Horticulture Award. We are still in the process of transitioning across to the new Award provisions. Increases and decreases are being phased in at a rate of 20% per year over five years. The award will apply in full from 1 July 2014.

The casual loading will move from 24.2% to 24.6%. This loading is added to the relevant minimum base rates for all Levels 1-5 as set out above (e.g. Level 1 casual hourly rate is \$20.40).

Piece rates

The piece rate loading was not a transitional issue and so remains at 15%. If you use casual piece workers, the new casual loading must be applied. However, the piecework loading and the casual loading are applied separately to the base rate and then added together they are not compounded.

Public holidays

Public holiday penalty rates are a transitional issue, moving from 250% under our old Award to 210% this year (and 200% from 1 July 2014).

The Superannuation Guarantee Charge (SGC) increases from 9% to 9.25% from this month. This will apply to all eligible employees earning more than \$450 in a calendar month and is calculated on ordinary hours, where these are stipulated.

Leading hand employees

If you appoint an employee to a Leading Hand/Supervisory role, you are required to pay a minimum allowance. The allowance is calculated using the Level 2 hourly 'standard rate' but is paid weekly:

| In charge of | Per week |
|-----------------|----------|
| 2-6 employees | \$18.68 |
| 7-10 employees | \$21.76 |
| 11-20 employees | \$31.02 |
| More than 20 | \$38.98 |

This article first appeared in the July 2013 edition of Fruit & Vegetable News.

Editor's note: Some information and figures in this article are specific to the state of Queensland. Information in the minimum rates payable table, as well as information concerning casual loading, public holiday rates and leading hand employees is applicable to the state of Queensland. Information regarding workplace agreements in other states can be sourced on the Fair Work Commission website: www.fwc.gov.au



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Industry in the media

The past two months have seen AUSVEG take an increasingly prominent position in the media, providing a strong voice for Australian growers. AUSVEG has continued to draw attention to key issues across print and broadcast media, reaching audiences across Australia in order to give a greater voice to the horticulture industry.

During July, a total number of 475 media reports in Australia mentioned AUSVEG. The majority of media mentions were on radio, followed by print and television reports. The total audience exposure to the media reports during this period was 2.9 million Australians.

AUSVEG has been vocal in the media prior to the Federal Election. In August, AUSVEG CEO Richard Mulcahy welcomed Prime Minister Kevin Rudd's comments on the importance of investment in agriculture. Mr Mulcahy said it was pleasing to see agribusiness on the political agenda in the lead up to the Federal Election, held on September 7. He said future leaders needed to assist food producers in accessing important export markets, as the mining boom was now coming to an end, soon to be replaced by the "dining boom" led by Australian growers and processors. Speaking to The Weekly Times, The Ballarat Courier and 3WM radio in Horsham, Victoria, Mr Mulcahy said a "well-constructed approach" to Australian export was needed, and that he would like to see direct promotional assistance with Asian marketing, and clearer Country of Origin Labelling (CoOL) legislation. At the recent Global Food Forum, Mr Mulcahy was quoted in The Australian as saying that the government needed to take the lead from the United States in liaising more closely with the companies that will be affected by free trade deals to achieve a better outcome for business.

AUSVEG Public Affairs Manager, William Churchill, urged the two major political parties to release agriculture policies that recognised the strong and growing contribution of horticulture. He said pressure was mounting on both Labor and the Coalition to release their plans for agriculture, and that he would like to see more details revealed on the parties'





oday Tonight hosting the Farmers Forum Summit.

plans to keep manufacturing in Australia. On the ABC's Tasmania Country Hour, Mr Mulcahy said he hoped that agriculture would not take second place to other election issues

AUSVEG also received media attention for its support of the Greens' policy initiatives to increase competition between supermarkets, after the Greens outlined their Food Plan policy for the Federal Election. On 2MN radio, Mr Mulcahy said removal of the requirement for intent in regard to anticompetitive behaviour was a good move. He also said the Greens were on the agricultural front foot, working closely with industry and AUSVEG.

Also in August, AUSVEG spokesperson Hugh Gurney attended the Farmers Forum Summit, hosted by Channel Seven's Today Tonight in Shepparton, Victoria. The forum provided a voice for over 100 growers in the area to express their concerns about the state of the industry, with Independents

and members of the Liberal and National parties speaking at the event. Nationals candidate for New England, Barnaby Joyce, Liberal Senator, The Hon. Bill Heffernan, Victorian Senator, Bridget McKenzie, The Hon. Dr Sharman Stone MP from the Liberal Party, and The Hon. Bob Katter MP attended the Forum, and were urged by growers to keep important horticultural issues like foreign countries dumping produce and cheap imports at the forefront of their minds as they campaign in the lead up to the Federal Election, as well as into the future. Footage of the forum was broadcast on Today Tonight on August 19, which normally attracts between 1.5 - 2 million viewers.

Several media outlets gave coverage to the findings of the Wave 2: July 2013 Colmar Brunton report (more on this report can be found on page 13). AUSVEG spokesperson Andrew White spoke to 702 ABC Radio Sydney, 2HD and 2NM about the report, and said educating Australians about different vegetable varieties and how to cook them may lead to retail growth. Mr White said that there was a real need to look at how vegetables can be marketed more closely to what consumers need, and including more information which details how people can cook their vegetables on their packages

could be a good medium to educate people on the varieties of vegetables.

Other media appearances included AUSVEG spokesperson Michael Bodnarcuk, speaking about the importance of eating more vegetables in a highcholesterol diet.

Key topics for the September-October period:

- AUSVEG CEO Richard Mulcahy's call for agricultural issues to be high on the political agenda, and AUSVEG's support for the Greens' Food Plan policy ahead of the Federal Election.
- Keeping important horticultural issues affecting growers and processors in the spotlight, as discussed at the Farmers Forum Summit with politicians from the Liberal and National parties, and Independents.
- Findings of the latest Colmar Brunton report, which outlined the need for greater awareness of varieties of vegetables through education and marketing.

Ne know Horticulture



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48 Young Australians take on Canada for the Global Youth Ag Summit

Four young Australians have recently returned from Calgary, Canada, after participating in the Global Youth Ag Summit from August 19 to 25.

They were joined by 120 other young adults from 20 countries who shared ideas and discussed the contribution of agriculture to feeding the planet, sustainability and innovation.

The summit was hosted by 4-H Canada, a rural youth organisation, and made possible by the partnership of Bayer CropScience and the Future Farmers Network (FFN).

Richard Dickmann. Head of New Business Development at Bayer CropScience, said, "We know there is a shortage of agricultural graduates necessary to meet the current and future need for skilled labour...The Youth Ag Summit is a unique way to stimulate interest in Australian agriculture as a career of global importance." "We believe the Summit

will give...participants global educational linkages and the opportunity to extend their networks," said Georgie Aley, Chair of the FFN.

The four Australian delegates have now returned home with actionable ideas on how Australia's new generation of industry leaders can face the challenges that lie ahead for the world in terms of food security.

Tiffany Hunt was one of the Australians to participate. She said that the summit was important because young people have new ideas.

"From attending the summit, I had a great opportunity to talk to a lot of people who've come from many, many countries," she said.

"I think my generation has a real interest in taking a much wider view of looking after our community," said Caspar Roxburgh, another participant. "When it comes to something like the Youth Ag Summit, I think it was extremely valuable because it showed the delegates not only that there are a lot of people who share their passion...and their interest in trying to achieve a food-secure world, but also that there are major players, such as Bayer, such as Cargill and other supporters, that have a real willingness to help facilitate that change."

Tiffany said that if there was one sentiment that she could share with young Australians that are working in the agriculture sector but are unsure about their industry's future, it would be that there is a multitude of opportunities for career development.

"It doesn't matter what your passion is or what your career aspirations are, there's a place for you within the production chain and within the food chain that form our industries," she said. "The biggest outcome of the whole summit was that we developed a vision statement and...we've elected a board of



directors who are going to try and implement the strategies that we've come up with."

"I would ask all young people to act, to do something that contributes towards whatever it is they're passionate about to do with agriculture," Caspar said. "We all need to take a personal responsibility for making sure that we deal with the challenges that the world faces in avoiding mass hunger."

> For further information go to www.facebook.com/ YouthAgSummit

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A difficult process

IN JUNE 2013, SIMPLOT AUSTRALIA ANNOUNCED THAT IT MAY HAVE TO CLOSE ITS PROCESSING PLANTS IN DEVONPORT, TASMANIA, AND BATHURST, NEW SOUTH WALES, AFTER THE COMPANY CONDUCTED AN INTENSIVE SIX-MONTH REVIEW OF ITS SUPPLY CHAIN OPERATIONS IN THE VEGETABLE CATEGORY. IF SIMPLOT IS TO CLOSE THE PLANTS, IT COULD SPELL THE END OF VEGETABLE PROCESSING IN AUSTRALIA, WRITES WILLIAM GREGORY.

 $S_{\text{vegetable processor to}}^{\text{implot is the last major}}$ exist in Australia. An American company, Simplot has operated here for the past 18 years, and during that time, has acquired iconic Australian brands such as Birds Eye, Leggo's, Chiko, Edgell, John West and Lean Cuisine, which it supplies to Australia's major supermarkets. When the company announced in June of this year that it may have to close its Devonport and Bathurst plants, it came as a chilling omen to its growers and suppliers, as well as the Australian public, whose options for consuming locally processed food were becoming increasingly limited.

Simplot said that its announcement followed a sixmonth review of its supply chain operations in the vegetable category. Simplot Australia Managing Director, Mr Terry O'Brien, said that the company's immediate imperative was to seek sustainable improvement opportunities with key stakeholders to help return the plants' financial performance to the required level. Simplot also said that it would seek ways in which its Australian operations could improve returns in order to survive the significant structural changes in the dynamics of the Australian market.

Andrew Craigie's family has been supplying produce to Simplot's Devonport and Ulverstone plants for around 40 years. He is reliant on this partnership to sustain his business.

"I need Simplot as a customer because the opportunities are not that forthcoming," he said. "All of our processed vegetables go to Simplot."

"If Simplot closes, there is no processing vegetables. That's it. Finito. None in Australia," he said.

Mr Craigie said that if the plants were to close, he would be forced to diversify his operations and find other sources of income, as would many other Australian growers.

"Devonport is around \$20 million per year at farm-gate," he said, referring to the Simplot plant. "There are 142 growers for Simplot, Devonport...A lot of regions in Tasmania from the north-west coast, right out through Deloraine, across to what we call the Northern Midlands...They probably supply \$18-19 million out of that \$20 million."

In light of this, it is possible that some growers may consider looking internationally for processors to whom they can supply. However, AUSVEG Public Affairs Manager William Churchill said that this was a difficult undertaking. Mr Churchill also said that many growers would likely consider the fresh market as a destination for their produce.

"If [the Simplot plants] closed, you'd be looking for quick options," he said. "The central market system would be where you'd look, but it is not a viable option for [growers who supply to Simplot], because the fresh market is already saturated and an influx of more product would cause an enormous glut and wreck a lot of people's businesses."

"Therein lies the challenge," he said. "[Vegetable processing] is an industry we've got to keep here, because it would lead to a tidal wave of people entering into another market that can't accommodate them, so it's massively challenging."

An industry under threat

Simplot's announcement does not come unexpectedly, as Australian vegetable processing has been in decline for some time. Difficulties faced by processors first came to light following the closure of McCain's processing plant in Smithton, Tasmania, after having been in operation for 60 years. The industry continued to struggle over the next four years, until 2013 saw the successive, rapid closure of several key operations. In March, food manufacturer, Rosella, was forced to close its doors after having been in operation for over a century. That same month, Windsor Farm Foods, the last wholly Australian-owned cannery, went into voluntary administration. Simplot's announcement followed in June.

There are several fundamental threats to the future of this industry. At the time of its announcement, Simplot cited "unsatisfactory financial returns arising from a very competitive food industry environment and unsustainably high costs associated with manufacturing in Australia" as major reasons for considering closure. Costs of energy and also labour are high here, and vegetables are subject to what is amongst the most stringent standards of production in the world.

The Western Advocate reported in June that one Simplot supplier said labour costs - specifically, penalty rates - were killing Simplot. However, the Australian Manufacturing Workers' Union said that the problem didn't lie with penalty rates, but that poor management was to blame for the company's lack of profitability.

"I think a range of factors are in play," William Churchill said. "Penalty rates and arrangements...can't be so generous that the business is unable to employ the people in the conditions that they want. However, we have done a lot of work in this country to build up conditions so that people can't be exploited either."

"Business, industry and unions, need to work together in order to have something that's sustainable. It benefits nobody if manufacturers and food processors like Simplot close at the cost of all those jobs,' he said. "I strongly believe that unions need to be realistic about what they expect, however, I also place an expectation upon the business as well that they need to be effective in what they need to be doing in terms of maintaining their profitability... Every party has a role in fixing the problem."

"One of the issues that a lot of people don't actually look at is the ability to reinvest in your business," he said. "It can't all be about wages. It might be that you need to buy a more energyefficient processor. In order to be able to reinvest in that, you need to be able to make enough of a profit, so that every few years, you can go out and buy new technology to keep you competitive. If you're trying to be competitive based on price, you're generally eroding your profit margin."

A competitive environment

The enforcement of high standards of production means that Australian consumers receive a clean, safe product. However, it also means that Australian vegetable processors are forced to charge a higher price for their product, making it extremely difficult for them to compete with imported products that are not grown and processed to the same standards. Simplot said that the Devonport and Bathurst plants were not competitive in the face of much lower-cost imported product alternatives and that the high Australian dollar, whilst not causing the underlying lack of competitiveness, exacerbated difficulties

One likely reason why Australian consumers do not pay more for Australian product to the extent that the industry can be sustained is because it can be difficult to discern on packaging where products are actually grown or processed. This has been a major source of controversy in the Australian horticulture industry for years. AUSVEG and the Australian Greens Party say that the lack of satisfactory Country of Origin Labelling legislation has been an important contributor to difficulties faced by processors.

AUSVEG's stance on Country of Origin Labelling legislation is that products should state clearly in which country they have been grown and processed. In September of last year, the Greens introduced a food labelling bill to the House of Representatives, which would have required that labels state where food is grown or produced, rather than only stating where it is packaged and processed. But the Bill did not pass.

"We took on board a lot of feedback with our first Bill ' Leader of the Australian Greens Party, Senator Christine Milne said. "In a nutshell, lots of people said, 'We're happy you're taking this on, but this Bill needs some changes', which is hardly surprising, given food labelling is such a complex area."

"Clear Country of Origin Labelling gives Australians what they want. About 90 per cent say that knowing where your food was grown and where it was manufactured is incredibly important to them," Senator Milne said. "People use Country of Origin Labelling to make informed decisions about the quality, safety, work conditions and environmental sustainability of their food, as well as wanting to support Australian farmers and local jobs."

"We know more than half of Australians say they will buy Australian food over an imported product if they can identify it, even if there's a cost difference. Companies like Simplot are therefore up against it if Australians can't easily identify local content and trust the information they are seeing on labels," she said. "Free trade agreements that don't take into account that imported food doesn't have to meet the same environmental and labour standards as our local

producers and manufacturers are also a major contributor."

Unclear Country of Origin Labelling is not the only variable that is adversely impacting on the likelihood of Australian consumers to purchase local produce. Product dumping is a predatory pricing strategy, whereby manufacturers export products to other countries at a price either below the price charged in the country where it is produced or below the costs incurred for its production. AUSVEG, the Greens and the Coalition support changes to the current legislation.

"While Country of Origin Labelling is important, there's plenty more we need to do. The Greens support invoking antidumping measures as a start," Senator Milne said.

AUSVEG Public Affairs Manager William Churchill said the laws behind product dumping were a key cause of the difficulties faced by Simplot and other Australian vegetable processing operations.

Australia like a can of tomatoes, and you sell it to Australia for 80 cents a can, but it's from Italy, and in Italy, you can get \$1.20 a can, you could consider that product as being dumped here in Australia," he said. "That's a 33 per cent mark down on the product to sell it here in Australia. Now, that would be causing injury to the local canned market for processed tomatoes, and that's causing growers to go out of business because they're uncompetitive internationally."

Mr Churchill said that one of the most important flaws in current anti-dumping legislation was that it was the responsibility of Australian producers and/or processors who suffered injury due to product dumping to prove that dumping occurred.

"That's a really expensive and difficult process to go through, because you've somehow got to get access to everyone else's statistics, all their data." he said.

Mr Churchill said that by the time a company is able to assemble a dumping claim, the injury to their business might have passed, and the industry that the company is attempting to protect "could be all out of

work".

"I've seen examples where it's taken ten years to prove that peas were dumped in Australia," he said. "This is something that started back in 1995. Damage was done, and then by 2005, they got the claim together...If we change around some of these back-of-house legislation rules, it could...make the system a lot more workable for Australian farmers and Australian consumers."

Shadow Minister for Innovation, Industry and Science, Sophie Mirabella MP. led a taskforce in 2011 to examine Australian antidumping legislation. The result of the taskforce's work was the formulation of a policy that reverses the onus of proof in cases of alleged product dumping, among other amendments.

"Our anti-dumping policy is focused largely on reducing the time and cost associated with accessing the system," she said. "We want to transfer anti-dumping responsibilities from Customs to the Department of Industry: reverse the onus of proof in anti-dumping investigations, through more active use of the preliminary affirmative determinations mechanism: introduce more stringent and rigorous enforcement of deadlines for submissions; crack down on those overseas producers who don't cooperate with antidumping investigations; and strengthen enforcement of the provisions of the WTO (World Trade Organisation) Agreement on Subsidies and Countervailing Measures."

AUSVEG has expressed support for the Coalition's policy. William Churchill said that reversing the onus of proof was a positive step.

"It is a far simpler system, and it is significantly faster to get a resolution out of that," he said. 'It's also a fairer system."

There have been a lot of problems over recent years, and many businesses have already been forced into retrenching workers and/or closing down altogether," Ms Mirabella said. "We're optimistic that our improvements to the antidumping system will stimulate

continued over page





important practical changes, as well as send a strong message about our determination to ensure that local markets aren't distorted by dumping."

Reason for hope

Some encouraging developments have taken place recently in the Australian vegetable processing industry. The Weekly Times reported on August 21 that Rosella had been acquired by another Australian company, Sabrands, which will process Rosella tomato sauce in the Yarra Ranges. The ABC also reported on July 31 that a NSW beetroot farmer had purchased most of the processing lines from Windsor Farm Foods, after he was approached by Woolworths. Also, on August 22, Deputy NSW Premier Andrew Stoner announced that Simplot Bathurst would gain support in the form of tax rebates from the NSW Government for the next three years, during which time the company will assess its future. Simplot grower, Andrew Craigie, believes that despite difficulties, the industry has a future in Australia, and that the Simplot plants that are currently facing potential closure can still be saved.

"The simple fact that we're seeing the Australian dollar change...[means] it's going to be more expensive for people to import, and you've got to look at processed vegetables from a food security point of view, as in Australia, we tend to grow allyear round," he said. "Ideally, if we could capture more of the Australian market for Australian product, that would be a big help."

Mr Craigie does not believe that government subsidies are the way to ease difficulties. He said that without subsidies, growers "strive to become the most efficient, best-practice producer there is."

"Subsidies don't drive efficiencies and productivity. They drive complacency," he said.

Mr Craigie, along with a group of other growers, recently structured a five-year proposal to resuscitate Simplot's plant in Devonport. The proposal was presented to Simplot management on 16 August.

"Simplot approached me to assemble a committee, a group of people, which I did, and for seven weeks, we worked through that as a group. We had a lot of different people coming into the discussion," he said.

Mr Craigie said that he had presented the proposal to the Labor Minister for Agriculture, The Hon. Joel Fitzgibbon MP and Senator The Hon. Richard Colbeck, as well as to the Tasmanian state Liberal and Labor parties.

"They were very, very positive. For many years, we've been trying to explain to politicians that the inevitable crunch will come, and Simplot's announcement was that crunch," he said. "McCain's finished a few years ago, and we forewarned every political party that this was something that was going to happen." "We cannot afford to lose any

margin that we haven't got,"



For many years, we've been trying to explain to politicians that the inevitable crunch will come...

Andrew Craigie.

he said. "There is virtually no margin now, so we can only strive to improve our margin. Now that comes about through productivity gains. It may mean a raw product price reduction, but our margins will increase if we get better yields."

"I'm cautiously confident that Simplot will accept the proposal plan from the growers," he said. "The message back from Simplot is they're impressed by the way we've gone about it... They've been pretty impressed with...the depth [at which] we've looked at things, and where it came out. But it's going to be a very tough slog."

Senator Milne said that as well as addressing legislation regarding unfair competition from cheap imports, there were other measures that needed be taken, such as the reduction of energy costs for growers and processors and the revision of trade agreements to ensure they do not undermine local production.

"It's crunch time. If Australia wants to keep growing and processing vegetables here, we've got to act and turn that into tangible assistance for the industry," she said.

AUSVEG Public Affairs Manager William Churchill said that the industry had met a fork in the road.

"To the left is a bleak outlook that I'd rather avoid. The right path is a solution that is sustainable," he said. "I'd like to look back ten years from now and be able to say that the industry managed to avoid disaster."

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AUSVEG HQ Unveiled

LAST MONTH, AUSVEG WELCOMED GUESTS TO WITNESS THE OFFICIAL OPENING OF ITS NEW HEADQUARTERS IN CAMBERWELL IN THE EASTERN SUBURBS OF MELBOURNE.

Held on 29 August, AUSVEG hosted over 100 attendees, including the AUSVEG Board of Directors, HAL Directors, AUSVEG staff, members of the Australian horticulture industry, friends of the organisation, and public figures, to celebrate the official opening of its new office space.

The new office provides the space necessary to accommodate the anticipated growth of the organisation, as AUSVEG takes on more tasks and increases its advocacy for the industry. It has been an exciting time for the AUSVEG staff as it has settled into the new environment.

The AUSVEG office was officially opened by Mr Josh Frydenberg MP, Federal Member for Kooyong, in the presence of The Hon. Ted Bailieu MP, Member for Hawthorn. This was executed through the unveiling of a commemorative plaque.

The opening provided AUSVEG with the valuable opportunity to express gratitude to its supporters, and was thoroughly enjoyed by all attendees. Addresses were delivered by AUSVEG CEO Richard Mulcahy, former AUSVEG Chairman John Brent, Mr Frydenberg, Greg Lindsell on behalf of E E Muir & Sons Pty Ltd and Anthony Ladds from Fairbanks Seeds.

"From little things, big things grow," Mr Mulcahy said. "This sentiment is not only remarkably relevant to the horticulture industry. It is representative of the growth of AUSVEG over the past four years. This dramatic growth, in both size and influence, is why we are here to open our new premises."

"From humble beginnings, many organisations rise to greatness. Apple, Dyson, Mattel and Maglite all started in garages," he said. "Over the last four years, AUSVEG has grown to be the leading voice for horticulture in Australia, and, according to The Weekly Times, is considered in Canberra to be one of the nation's most powerful agri-lobby groups."

"I know that AUSVEG will continue to go from strength to strength, and I look forward to leading this charge from these offices," he said.

Mr Brent said that a person's home is their castle.

"This sounds like a strange thing to say at the opening of an office, but I know that Richard and his staff probably spend more time at the office than they do at home, so, in a way, this is fitting," he said. "It is fitting also to use the expression...to describe the office of an organisation such as AUSVEG. There are ideals to defend, battles to plan and negotiations to be held. During my time as AUSVEG Chair, we have faced our fair share of challenges, however, we have also experienced some fantastic triumphs, where we deliver real results for the people that we are charged to represent - the vegetable and potato growers of Australia."

"The new office represents how the Australian vegetable-











growing empire is expanding," he said. "The staff of AUSVEG has almost tripled in size over the past five years, as the industry grows and looks increasingly at markets overseas and markets here in Australia. I, for one, am extremely excited about the future opportunities for the Australian vegetable industry. As growers, the industry is becoming more innovative and more aware of the needs and wants of the consumer, both here and abroad."

"I am proud to be here tonight as we celebrate the milestone that is this much-needed shift into larger premises for AUSVEG," he said.

Mr Fydenberg said that it was his great pleasure to celebrate AUSVEG because AUSVEG does an incredible job in the community, representing 9,000 growers.

"The produce of those 9,000 growers is equivalent to \$3+ billion on an annual basis. That's absolutely critical to the Australian economy," he said. "The thing that AUSVEG does so effectively within the halls of power is that it advocates the specific interests of its members. It doesn't matter if it's on an issue like biosecurity, an issue of competition policy in terms of the big supermarket chains, issues around skills and the cost



of doing business. It's a very, very powerful advocate within the halls of power, and I think this is an exciting time for...the horticulture sector in Australia."

"There's a lot to look forward to," he said. "You guys are extremely important to the Australian community in every way, not just feeding our population but also in terms of export dollars.'

"I'm sure that this office will be the launching pad for bigger and better things for AUSVEG, so it's now my great pleasure to announce that this new AUSVEG office in the electorate of Ted's and mine is officially open," he said.

The official opening of the AUSVEG offices was sponsored by E E Muir & Sons Pty Ltd in partnership with Fairbanks Seeds. Ric Muir, on behalf of E E Muir & Sons Pty Ltd said that his company was a family business, supported by other family businesses, and that family businesses were very important to the Australian horticulture industry. Anthony

Ladds, on behalf of Fairbanks Seeds, said that his company was proud to support AUSVEG and would continue to do so into the future. Mr Brent, the AUSVEG Board of Directors and Mr Mulcahy thanked all attendees and contributors for making the office opening one to remember.

Captions: 1: The Hon. Ted Bailieu MP, Member for Hawthorn, addresses the crowd. 2: Jonathan Zadka, Regional Counsellor to the Pacific Islands for the Embassy of Israel, Canberra, and SA grower, Danny De leso 3: Former AUSVEG Chairman John Brent and Josh Frydenberg MP, Federal Member for Kooyong. 4: Steven Moore, E.E. Muir & Sons Pty Ltd; Anthony Ladds, Fairbank Seeds; James Muir, E.E. Muir & Sons Pty Ltd and Tony Schultz, E.E. Muir & Sons Pty Ltd. 5: Josh Frydenberg, John Brent and Ted Bailieu unveil the commemorative plaque.

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Potassium fertiliser options

IMPACT FERTILISERS' NATIONAL AGRONOMY SERVICES MANAGER, ANDREW OLLEY, DISCUSSES POTASSIUM AND ITS RELATIONSHIP TO WATER REGULATION.

When constructing nutrient programs for horticultural crops after the Phosphorus and Nitrogen components have been calculated, the next critical nutrient is often Potassium.

Growers and advisors are well aware of Potassium's role in the filling of plant cells in the harvested product. However, Potassium is also part of the key process of water regulation in the crop. Many nutrient programs focus on large Potassium applications late in the crop. However, it is important that a small, consistent Potassium supply is available after planting and through early growth stages to allow uptake of water, in order to ensure key nutrients, such as Calcium, Boron and Nitrogen, can be absorbed and translocated in the plant.

When applied in "slug" doses via fertigation or granular products, Potassium can often induce Magnesium deficiencies, reducing the crop's ability to covert sunlight into sugars for crop maturity. In soils where Magnesium supply may be marginal and when large Potassium levels are applied, it is beneficial to apply Magnesium to ensure induced deficiencies do not occur. There are three common groups of Potassium fertilisers used in horticulture:

- Potassium Chloride (Muriate Potash MOP)
- Potassium Sulphate (Sulphate Potash SOP)
- Potassium Nitrate

All three of these groups, whether fertigated or granular-applied, supply Potassium in a water-soluble form, which can then be taken up by the crop. The choice of group to use is dependent on soil and irrigation chemical properties.

Where soil and/or irrigation water conductivity levels are high or contain chloride, Potassium Sulphate or Potassium Nitrate is the preferred group, as it does not add to existing conductivity and chloride levels. In situations where soil conductivity is low and irrigation water is of good quality, Potassium Chloride is often used, as it is the cheapest form of Potassium available.

Depending on soil type, all three of the Potassium groups have the potential

to leach below the crop's root zone and hence can have low efficiency in uptake to the crop over time. Strategies to alleviate this problem include split applications at regular intervals to hold Potassium in the root zone.

New technologies in controlled release fertilisers, such as Agrocote®, negate the need for multiple split applications. The Agrocote® technology allows the release of Potassium over a period of up to four months. This controlled release allows a large portion of the total Potassium requirement to be applied at planting with a relatively consistent release throughout the crop's growth. Not only is the Potassium released on a daily basis, but so too is the Chloride, thus issues with soil high-conductivity levels, and chloride in irrigation water, are significantly reduced. A secondary benefit of Agrocote® technology is that the coating protects transplants and seed pieces from root burn that is common with conventional Potassium fertilisers.



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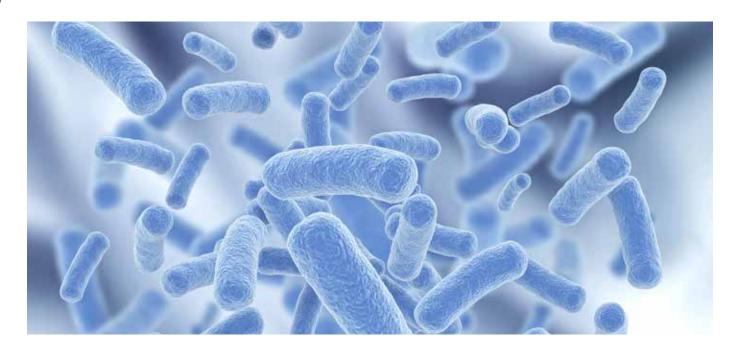
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A new study investigates food safety management in Australian vegetable businesses

R (RMCG) is conducting a study of what food safety means to vegetable businesses in Australia and how they approach food safety management.

Key questions for the study are whether a potential consumer health scare is a real concern or threat to businesses, how businesses would be affected by a fresh vegetablerelated illness outbreak if it were to occur, and whether vegetable supply chains have adequate systems in place to prevent an outbreak.

The study aims to provide data on whether and why growers and supply chain partners have implemented a third party certified food safety system or use their own management approach. It also aims to investigate how and why businesses have chosen their particular strategy to manage food safety, how it works for their business or supply chain, and whether they desire help in this area

Australia's record in food safety management is good, but maintaining attentiveness to risk is imperative if we are to avoid outbreaks. There have been several major outbreaks of foodborne illnesses due to fresh produce in different parts of the world in recent history. In 2011, a novel strain of E. coli 0104:H4 caused a major outbreak of foodborne illness in Germany, which subsequently also affected 15 other countries. Over 4,000 people were affected by the illness, 50 of which died. For some time during and after the outbreak, many people stopped buying fresh produce altogether. This had severe economic consequences for growers and supply chains.

That same year, an outbreak of listeria, which can cause infections of the central nervous system, bacteraemia and gastroenteritis, occurred in the United States. The listeria was believed to have come from cantaloupes produced by a single farm in Colorado. A final count put the death toll at 30. Infections occurred across 28 states.

Outbreaks of foodborne illness do occur, and Australia is not immune to this. It is important to be vigilant to prevent problems and prepared to deal with them, should they occur. Readers are encouraged to participate in an online survey or contact RMCG about taking part in a phone interview for the study. Participants will be entered into a draw to win an iPad mini.

This project was funded by HAL using the National Vegetable Levy with matched funds from the Australian Government.

> The survey can be completed at the following link: www. surveymonkey.com/s/ vegetablefoodsafetysurvey Alternatively, contact Doris Blaesing. Project Number: VG13020 Phone: 0438 546 487



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Around the states

Queensland



Horticulture is dependent on seasonal workers (mostly backpackers) to harvest vegetable and fruit crops in a timely manner each year.

As the peak body for horticulture, Growcom knows that labour costs - including wages, superannuation and payroll tax - are the single highest expense faced by growers.

Nevertheless, the exploitation of seasonal workers is illegal and cannot be condoned under any circumstances.

We emphasise that we know the majority of growers are doing the right thing and paying correctly.

However, complaints have been aired on the media that a

small number of growers are not paying their seasonal workers the correct wages.

The correct amount that should be paid can easily be checked on the Growcom website (www.growcom.com. au) or on the Fair Work Australia website (www.fairwork.gov.au).

This is a very serious issue and one with potentially a major impact on the reputation of the entire horticulture industry. A number of crops featured in the visuals in the media story, even though growers of these crops are not the subject of the current controversy. In fact, an entire horticultural region was named in the program, unfair to the majority of growers who are doing the right thing.

We are aware that Fair Work Australia is conducting employer audits in industries using backpackers across Queensland - horticulture and hospitality specifically.

In response to grower concerns that some producers may be underpaying workers, Growcom Commercial Services Manager, Donna Mogg addressed a Sunshine Coast meeting of growers last week to outline employer obligations to all workers and, specifically, their additional obligations to overseas workers, particularly:

- Working Holiday Maker (WHM/backpacker) 417 visas - what they are, why they exist and the rules for their use
- Employers' legal obligations to 417 employees
- Legal sanctions applying to employers misusing these workers and
- Piecework arrangements provisions, requirement for written agreements and Fair Work Australia sanctions for misuse.

It is no excuse that there may be some labour hire contractors who are not passing on payment to the workers. Growers are in the front line. It is ultimately their responsibility to ensure that the labour hire contractor is doing the right thing and paying the workers correctly. If they are not, they should be reported and their services terminated. Seasonal workers are an

the vegetable industry is experiencing unprecedented competition from frozen imported cooked vegetable products entering this country. Therefore, the vegetable industry should consider spending a lot of money on marketing and promotion, educating our consumers (particularly the 18 to 44 year-olds) about the benefits of eating fresh and safe vegetables grown in Australia and how vital they are for their health and wellbeing.

If the industry doesn't concentrate its marketing and promotion dollars in this area, then our consumers in this age group will continue their drift into frozen vegetable products for convenience.

Most consumers know fresh and safe is more beneficial for them. However, these benefits must be reinforced in the area of the consumer's health and wellbeing. The government should also be involved to help slow their soaring health bill. extremely valuable part of this industry and as the peak industry body for horticulture in Queensland, Growcom firmly supports their right to be treated fairly at all times.

This issue will no doubt be raised at Growcom's Workplace Essentials Seminars which will be held for growers throughout regional Queensland from September through November. Seminars which will be free for Growcom members and \$100 for non-members will cover the full gamut of industrial relations issues pertinent to the horticulture industry.

For more information please email Growcom Commercial Services Manager Donna Mogg on dmogg@growcom.com.au or call 07 3620 3844.

Alex Livingstone

Growcom Chief Executive Officer 68 Anderson Street, Fortitude Valley, QLD 4006 Phone: (07) 3620 3844 Fax: (07) 3620 3880

I am also pleased to be leaving vegetablesWA in the very capable hands of John Shannon as the new CEO. I know John and the vegetablesWA team will do great work to continue helping the West Australian vegetable industry navigate its future challenges and opportunities with strong support from the vegetablesWA Committee of Management and our grower community.

Finally, I am also pleased to report that I am not leaving Horticulture House completely, as I will retain my part-time roles as Executive Officer of the Potato Growers Association of WA and Horticulture WA.

Best wishes for the future and thanks again.

Jim Turley

vegetablesWA Executive Officer 103 Outram St West Perth WA 6005 Phone: (08) 9481 0834 Email: pga-vga@vegetableswa. com.au

Western Australia



Sadly, this will be my final column for the Vegetables Australia magazine as I retire from my position of Executive Officer of vegetablesWA from 1 October 2013.

On 8 September 2003, I was appointed Executive Officer of the Western Australian Vegetable Grower Association (Inc) at their Annual General Meeting.

The past 10 years with the vegetable industry has been one of the highlights of my working career of almost 50 years. Meeting and representing all the wonderful vegetable growers and their families has truly been a fantastic experience. Of

course, there were challenges along the way. However, I strongly believe the vegetable growers and their industry are far better as a whole.

I have been fortunate to develop many wonderful relationships with the growers and their families. From Carnarvon to Albany, working with the growers and the knowledge I have gained has been remarkable. The initiative and action I've seen in the vegetable production process over this time has also been an amazing experience.

To all those growers, families and other people who were so generous with their time to help me help the vegetable industry, I offer a sincere thank you. To Maureen Dobra, President of vegetablesWA, I offer the most sincere thank you of all. Her work, her leadership, her outstanding knowledge of our industry is truly remarkable.

Finally, I leave the industry with a strong recommendation to consider. I believe

New South Wales



The decline of the vegetable processing sector over the last decade has been tough. Many growers have had to close up shop because the processing companies that buy their vegetables are moving their operations offshore or closing up shop themselves. This not only affects the growers who supply processors but the fresh vegetable growers who have to compete against the flood of processing vegetables that enter markets as a consequence. In the last issue, I mentioned the closure of Simplot processing facilities in Bathurst fuelled

by the downward pressure on prices from cheap imports and the pricing strategies of the retailers. Now SPC Ardmona is facing the same tough choices.

Despite what is happening, I am still optimistic for the future. In the last few months, there have been developments in the processing space that call for a bit of optimism. Commitments from major supermarket chains like Woolworths to move supply of their own branded canned fruit from overseas and bring it back home have been welcomed. This isn't an act of charity. They know consumers want to support Australian growers and processors. Whilst this alone is not enough to revert the spiralling decline of the processing fruit and vegetable sector, it is a start. We need to continue to apply pressure to the major retailers to see the value in Australiangrown produce and they are coming around, albeit slowly,

but it is not just the retailers who are realising this value.

Rosella, with its iconic Australian tomato sauce, went into receivership in 2012. Last month, it was announced that the iconic Australian business was acquired by another familyowned Australian business which saw its potential. A commitment has been made to ensure that the tomatoes that go into its products are grown and processed in Australia.

The undue pressures faced by the processing sector from cheap imports have been called into question by the Productivity Commission inquiry into imports of processed fruit and tomato products. If successful, the inquiry will support WTO safeguard measures being placed on the import of these products giving growers and processors the opportunity to adjust.

The road ahead is going to be tough and ideas which

have been in the pipeline for some time need to be at the forefront of the discussion. NSW Farmers believes developing the Australian brand is vital for the viability of the entire industry and recognition of that brand ultimately starts at home.

I want to take this opportunity to commend Ed Fagan, a beetroot farmer near Cowra, who made the best of a bad situation. When three of the processors he supplied to, including Windsor Farm Foods, closed five months ago, he took a chance and purchased some of the machinery to go it alone. Mate, I wish you all the best.

Peter Darley

NSW Farmers' Association Horticulture Committee Chairman Level 25, 66 Goulburn Street Sydney, NSW 2000 Phone: (02) 8251 1804 Fax: (02) 8251 1750

Victoria



It was revealed at a recent industry training forum held in Melbourne from a survey of industry employers and associations in Victoria, that TAFE colleges and registered training organisations were not fulfilling the training requirements of the small business industry.

In the vegetable industry, progressive growers see the need for on-farm training and experience as an alternative to paper qualifications in agriculture.

Food safety and occupational health and safety (OH&S) still remain major factors for training on the farm.

The costs involved in training

farm workers and middle management supervisors can be a detrimental issue unless a return on investment can be justified.

Growers are concerned that they are unable to identify the skills and training required for their workers in order to meet the needs of the industry.

Vegetable growers require information that relates directly to the on-farm decisions they have to make about skills and training. They need to know how new regulations will affect their business operation, about new technologies, and how to find a training provider that understands the skill requirements of the vegetable industry.

It has been reported that the use of the internet is not totally favoured within the vegetable industry yet there are numerous web sites such as www. education.vic.gov.au/training, which provide the framework for communication and training. However, experience has shown that the vegetable industry still prefers the face-to-face meeting or the one page leaflet for contact

A successful annual Vegetable Growers' Golf Day was held at the Lang Lang Golf Club in south-east Victoria early in August. Fantastic support was received from industry associates providing both golf competition and raffle prizes. A field of 78 golfers teed off in sunny conditions for the Ambrose competition. Gendore Tractors and Machinery Team were worthy winners of the President's Perpetual Trophy. Special thanks to our sponsors, Melbourne Market Authority, EE Muir & Sons and SE Organic Fertilisers. Proceeds from the raffle were donated to the Royal Children's Hospital Ladies' Auxiliary.

The Melbourne Wholesale Fruit, Vegetable and Flower Markets are being relocated to a newly constructed market at Epping, scheduled to be operational from July 2014.

Vegetable growers who trade produce at the current

Melbourne Market in Footscray Road should be aware of the new trading building facility and it is recommended that all growers make contact with David Wallace, Chairman of the Growers Advisory Committee, in relation to trading stand operations at Epping.

Another year has flown by with members and associates advised of the approaching Annual General Meeting (AGM) to be held on Friday 18 October 2013 at the Crowne Plaza Hotel in Spencer Street, Melbourne. Registration will be from 4.00pm and the AGM will commence at 4.30pm, followed by the business session and election of office bearers. There will also be industry updates from invited guests. Dinner will be at 6.30pm with a guest speaker presentation.

Tony Imeson

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Tasmania



As winter draws to an end and we are looking forward to another spring planting season, the reality of margins and market pressure comes to the front. This is especially true for the processing sector.

Simplot (the last frozen vegetable producer in Australia) recently announced that both their Bathurst and Devonport factories were under major review and needed to become more profitable. As producers, we are looking at how we can also become more profitable for the future.

Over the last two months since

Simplot's announcement, there have been many discussions on the influence that growers can have on the future of the Devonport factory. Six growers and myself have developed a plan for Simplot product supply. It is no surprise that it takes the threat of a factory closure to force growers to analyse all facets of production from variety selection to delivery at the factory gate.

One thing that came out in discussions was the fact that growers have suffered from raw product price reduction for many years and have only recovered some of this through productivity gains and other efficiencies.

There is a cautious optimism for the future of Simplot vegetables. However, it will be difficult for Simplot and its suppliers to compete in the global market. Product arrives in Australia from countries where producers and processors are supported by subsidies, which lowers their cost of production and thereby allows their businesses to stay viable. Is it worth working for a future for the Australian vegetable processing industry? Simplot is a customer that buys around \$20 million per year worth of product at farm gate. If it can remain one of our customers, it is worth continuing this relationship, as long as our growing businesses can remain profitable. Simplot has acknowledged that growers' margins cannot be eroded any further and must improve in order to remain competitive suppliers.

Another subject that will cause a lot of debate in the near future is genetic modification (GM). Tasmania has in place a GM-free moratorium which is up for review. I am sure that there will be a lot of debate from both sides over the future of GM in agricultural production - in vegetables and other commodities. This is one subject about which everyone has an opinion. It will be a challenge for the decision makers to balance the scientific and social points of view, as well as that of the producers, and then the customers' acceptance or rejection of GM product. In the near future, we have a federal election, which is always an interesting time to gauge the support from government for vegetable production and agriculture in general. In Tasmania, we also have a state election due in March. What will the outcome of these be? One thing we must make all political parties aware of is that the amount of red tape that is imposed on us is costing the industry far too much money. If we are to comply with all of these so-called necessities, then perhaps it is time for the consumer to contribute to the cost, not just expect the producer to absorb it.

Andrew Craigie

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CALENDAR



23 September - 6 October 2013

Women in Horticulture Study Tour

Where: Italy and Spain Further information: AUSVEG (03) 9882 0277 or info@ausveg.com.au

25 - 28 November 2013

19th Biennial Australasian Plant Pathology Society Conference 2013

Where: Auckland, New Zealand Further information: www.apps2013.co.nz

17 - 22 August 2014

International Horticultural Congress

Where: Brisbane, QLD Further information: www.ihc2014.org/



29 September - 2 October 2013

1st International Conference on Global Food Security 2013

Where: Noordwijkerhout, The Netherlands Further information: www.globalfood securityconference.com

19 – 21 June 2014

AUSVEG National Convention, Trade Show and Awards for Excellence

Where: Cairns Convention Centre, QLD

What: The AUSVEG National Convention showcases speaker sessions, entertainment and an impressive trade show. The event will provide delegates with an opportunity to forge relationships with members of the industry, supply chain, researchers and growers.

Further information: AUSVEG (03) 9882 0277 or convention@ausveg.com.au





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