

# vegenotes





# VG15061: SENSITIVITY STUDY – IMPACT OF INCREASING VEGETABLE EXPORTS ON THE DOMESTIC MARKET

## FACILITATORS:

Project VG15061 was completed by a team led by Dr Daniel Terrill, Partner at Deloitte Access Economics Pty Ltd.

## INTRODUCTION

The value of vegetables produced for human consumption in Australia in the 2014/15 financial year totalled \$3.35 billion.

While Australia is a major exporter of agricultural commodities, the total value of fresh vegetable exports in the same period was just \$173 million, or five per cent of the industry's value of production.

However, there is growing export potential for certain vegetable types. This is because of opportunities such as Asia's growing middle class, the increasing demand for sustainably-produced, safe and clean food, and tariff reductions from recent Free Trade Agreements with countries like China, Japan and Korea.

## ABOUT THE PROJECT

Project VG15061 was designed to quantify the economic impacts of current and projected future scenarios of changes in vegetable export activity.

In addition, the work was undertaken to help Horticulture Innovation Australia (Hort Innovation) and Australian vegetable growers better understand the sensitivity of increasing vegetable export activity on the domestic vegetable market. This, in turn, could allow the industry to better plan, prepare and make the most of forthcoming opportunities to export Australian vegetables.

For this project, Deloitte Access Economics modelled three scenarios to assess the sensitivity of different levels of export growth on the domestic vegetable industry: freer trade, increasingly wealthier Asian consumers and improved supply chain efficiency in Australia.

Stakeholder consultations were also undertaken in three regions selected for their large vegetable production and strong potential for export growth – south east Melbourne, the Lockyer Valley and north Perth.

The lead author of the report, Dr Daniel Terrill, said the three scenarios were used to quantify changes in exports of vegetables and what they mean to the Australian industry.

The elimination or reduction in tariffs for three Free Trade Agreements (FTA) with China, Korea and Japan were considered in scenario one.

"A reduction in tariffs by an importing country for vegetables exports from Australia would mean a lower price," Dr Terrill said.

"While these FTAs may be beneficial for other commodities, just removing or reducing tariffs alone will not substantially increase vegetable exports on their own.

"There are other constraints to trade to be considered and, where possible, addressed. For example, trade restrictions because of biosecurity restrict market entry for some

vegetables to these markets, making a lowering of tariffs powerless as a way to increase exports."

In scenario two, faster than expected growth in wealth in middle class Asia was modelled, which is expected to increase demand for fruit and vegetable exports.

And in the final scenario, the model examined lower vegetable transport costs to enable increased exports and more efficient supply chains.

## MAJOR FINDINGS

Dr Terrill said the project found that freer trade was the least important scenario modelled, resulting in the smallest annual increase in demand for Australian levy-paying vegetable exports (\$4.8 million per year).

"The most significant was improvements in supply chain efficiencies, delivering an annual \$9.8 million improvement," he said.

"A modest five per cent efficiency gain – which have been readily achieved in the past – would lead to considerable increases in vegetable output and exports.

"A small improvement in the supply chain can potentially deliver big increases for industry, bigger than those achieved through free trade agreements alone."

Dr Terrill said increasing wealth in Asia was found to have a moderate impact on Australian vegetable output and exports.

## CONCLUSION

Dr Terrill said there were considerable opportunities for the Australian vegetable sector looking forward. Since the project was completed and published in December 2016, an industry strategy has been released that aims to increase the value of vegetable exports to \$315 million (or 40 per cent) by 2020.

The strategy, delivered by Horticulture Innovation Australia and developed in conjunction with AUSVEG, outlines a range of methods to help more growers and the wider industry export vegetables.

"The quality of the vegetables produced in Australia is quite good and countries around the world increasingly want what Australia is good at growing," he said.

"Exchange rates today are also quite favourable for vegetable exports. The industry does have to make the right choices to realise these opportunities and this report can inform these decisions.

"The industry will not grow fast on domestic population growth – it will account for some growth, but it will not be record-breaking by any measure."

## ACKNOWLEDGEMENTS

This project has been funded by Horticulture Innovation Australia Limited using the research and development National Vegetable Levy and funds from the Australian Government.



# VG15704: GROWER STUDY TOUR OF NEW ZEALAND – PRECISION VEGETABLE PRODUCTION

## FACILITATORS:

Project VG15704 has been recently completed by Project Leader Ian Layden from the Queensland Department of Agriculture and Fisheries.

## INTRODUCTION

The grower study tour of New Zealand examined precision vegetable production on the North Island, where delegates had the opportunity to visit fully integrated chain businesses, farms, organic growing operations, a kiwi fruit farm and a separate kiwi fruit packing operation.

The group also attended the two-day LandWISE agricultural and technology conference. LandWISE promotes sustainable production through leadership, support and research. The theme of the 2016 event was: The Value of Smart Farming.

## ABOUT THE PROJECT

The overall aim of VG15704 was to provide vegetable producers in Australia with an opportunity to travel and learn from each other while visiting New Zealand-based precision horticultural farms and research sites.

Representatives from 14 vegetable businesses from Queensland, Victoria and Tasmania participated in the 10-day study tour.

For the purposes of this project, precision practices are defined as:

- Soil mapping and strategic sampling programs.
- Yield monitoring.
- Prescription mapping and variable rate inputs (soil ameliorants, nutrients and irrigation).
- Biomass mapping/crop sensing.
- Minimum or strategic tillage.

Mr Layden said selecting appropriate producers to participate in the study tour was crucial.

“We wanted to bring together Australian vegetable growers who were not only interested in these types of farming approaches but were already committed to investing in these technologies in their own operations,” he said.

“Getting people together to share ideas and to generate new relationships within a precision production theme was a clear and obvious potential benefit.”

Mr Layden said New Zealand offered something that was close to Australia but served as a point of difference to the local industry.

“There is significant variability in the New Zealand industry – within a very small area of the country you can see a diverse range of farming businesses,” he said.

“Based on the feedback received, the New Zealand tour reaffirmed the participants’ commitment to using and optimising precision farming tools and techniques.

“Growers felt validated that the work they were doing in this

space was not always easy within a production system that is busy in any case, but their New Zealand counterparts were experiencing the same issues.

“Importantly, all are continuing and some have ramped up their precision farming activities. For example, after spending time with the tour group, one of the growers made a decision to get all their spatial data organised and more useable.”

## MAJOR FINDINGS

Mr Layden said while the technology or the hardware employed in a New Zealand context was not necessarily new to participants, learning about the way the industry was applying it in New Zealand and its vision to go forward was of crucial importance.

“While we visited some domestically-focused businesses, the New Zealand industry is very export focused. The great potential of applying the technology to vegetable production was obvious,” he said.

“The complexity is a lot higher in vegetable systems. It can be quite difficult for vegetable producers to implement and adopt and derive value from the investment.”

## CONCLUSION

Mr Layden said the major outcome of the tour was a new network of like-minded Australian-based growers interested in precision vegetable production.

“It is challenging to measure the industry impact of study tours like this,” he said.

“For a modest industry investment, the net business and personal benefits can be significant. Study tour participants are leveraging this network beyond the study tour, where they have developed strong relationships across borders and growing regions.

“After seeing others in the group using social media, some of the participants have begun to use these platforms to keep in touch with each other. Tasmanian-based study tour participants have visited Queensland growers and two New Zealand growers have travelled over to Australia to visit the producers involved in the tour.

“It is an excellent business practice to be connected with other similar businesses.”

Mr Layden said another outcome for participants was an understanding of the current status of New Zealand precision agriculture research and adoption in vegetable systems.

“Participants are making changes to progress the application of precision technologies in their farming system,” he said.

## ACKNOWLEDGEMENTS

This project has been funded by Horticulture Innovation Australia Limited using the research and development National Vegetable Levy with co-investment from the Queensland Department of Agriculture and Fisheries and funds from the Australian Government.





### THE BOTTOM LINE: VG15061

Project VG15061 was designed to quantify the economic impacts of current and projected future scenarios of changes in vegetable export activity.

There is growing export potential for certain vegetable types due to opportunities presented by factors such as Asia's growing middle class, the increasing demand for sustainably-produced, safe and clean food, and tariff reductions from recent Free Trade Agreements with Asian countries like China, Japan and Korea.

Three scenarios were used to assess the sensitivity of different levels of export growth on the domestic vegetable industry: freer trade, increasingly wealthier Asian consumers and improved supply chain efficiency in Australia. Freer trade was the least important scenario modelled, resulting in the smallest annual increase in demand for Australian levy-paying vegetable exports (\$4.8 million per year).

Supply chain efficiencies was most significant, delivering an annual \$9.8 million improvement, and increasing wealth in Asia was found to have a moderate impact on Australian vegetable output and exports.

### THE BOTTOM LINE: VG15704

Representatives from 14 vegetable businesses from Queensland, Victoria and Tasmania participated in a 10-day study tour of New Zealand-based precision horticultural farms and research sites.

Bringing Australian and New Zealand growers together to share ideas and to generate new working relationships within a precision production theme proved extremely beneficial.

Based on the feedback received after the study tour was completed, the New Zealand tour reaffirmed the participants' commitment to using and optimising precision farming tools and techniques.

Participants have started to use social media platforms to keep in touch with each other, which is acknowledged as excellent business practice.

Understanding the current status of New Zealand precision agriculture research and adoption in vegetable systems has increased, and this has led to participants making changes to the application of precision technologies in their farming system.

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