

# vegenotes





# VG14038: GENERATION OF RESIDUE DATA FOR PESTICIDE MINOR-USE PERMIT APPLICANTS IN VEGETABLE CROPS 2014

## FACILITATORS:

Project VG14038 has been recently completed by a research team led by Peracto Pty Ltd Technical Manager Phillip Frost in partnership with Horticulture Innovation Australia Limited.

## INTRODUCTION

The selective use of pesticides to control pests plays an important role in increasing production, improving the quality of horticultural crops in Australia and enabling vegetable growers to earn reasonable returns on their investments.

At the same time, today's health conscious society is extremely sensitive to issues relating to chemical use, and it is essential that consumers be protected by adequate regulations governing the use of agrochemicals.

## ABOUT THE PROJECT

The aim of this project (VG14038) was to generate residue data to support the renewal of eight minor-use permit applications to the Australian Pesticides and Veterinary Medicines Authority (APVMA).

Eight Good Laboratory Practice (GLP) residue studies – or trials – were undertaken throughout Australia in key growing regions for various active ingredients and in several crops, ranging from broccoli and snow peas to zucchini, cucumbers and cauliflower.

The trials were conducted by a research team led by Peracto Pty Ltd Technical Manager Phillip Frost and covered commercially grown crops in both outdoor (field) and protected cropping situations, depending on the requirement.

Each trial consisted of a specific application and sampling regime to obtain the necessary data to support the aim of the project.

Mr Frost said the project team was guided by the requirement of Horticulture Innovation Australia Limited (Hort Innovation) and Queensland Fruit and Vegetable Growers (trading as Growcom) that residue trials be undertaken to maintain the various minor-use permits and set Maximum Residue Limits (MRLs).

"We were hoping to obtain residue data that supported the continued use of the minor-use permits in the crop and current temporary MRLs already in place for the various active ingredients. The aim was achieved," he said.

## KEY LEARNINGS

Results generated during the project were reviewed at various stages by the Hort Innovation R&D manager and Peracto project team members to ensure the intended outcomes of the trials were achieved while planning the next steps of the project.

Mr Frost said the key outcome was the renewal of approval from the APVMA for the pesticide uses listed under the APVMA minor-use permits.

"The various pests and diseases within this project can cause significant damage to crops unless they are controlled," he said.

"But often, growers have limited control measures for various pests and diseases in minor crops.

"The continued minor-use permit provides an alternative product or more effective control measure for industry to utilise."

The APVMA's National Permit System adds some flexibility to the lengthy registration process.

It also works to legalise the availability of products for minor-use purposes that are not specified on the product label.

However, off-label permits issued by the APVMA still must be applied for, along with information/data that verifies that the permitted use will be effective and will not have any harmful effects on humans, crops or the environment.

Mr Frost said the availability of more flexible control options played a vital role in increasing production capabilities, improving the quality of produce and enabling growers to earn reasonable returns on their investments.

The final residue reports for this project were presented to Growcom for submission to the APVMA, together with the relevant renewal application for minor-use permits.

## NEXT STEPS

"The next steps from this project would be the continued use of the minor-use permits by the industry," Mr Frost said.

## ACKNOWLEDGEMENTS

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

## THE BOTTOM LINE: VG14038

With APVMA approval of the minor-use permit applications that have been submitted, this project provides growers with effective pesticide options for the control of various pests and diseases.

Control measures for the various target pests and diseases are limited with the proposed uses able to provide an alternative product or a more effective level of control for the fruit and vegetable industry.

Hort Innovation and Growcom require the generation of residue data for the control of various pests and diseases to support minor-use permit applications to the Australian Pesticides and Veterinary Medicines Authority (APVMA).



## VG15031: ECONOMIC MODELLING OF IMPACT OF INCREASED VEGETABLE INTAKE ON HEALTH EXPENDITURE

### FACILITATORS:

Project VG15031 has recently been completed by Deloitte Access Economics for Horticulture Innovation Australia Limited.

### INTRODUCTION

The Australian Bureau of Statistics has estimated that about 93 per cent of Australian adults aged older than 18 years do not get the recommended daily vegetable intake of approximately five or more serves.

There is a marked difference in consumption between men and women, with less than four per cent of males consuming the recommended daily intake of vegetables compared to more than 10 per cent of females.

Overall, the average Australian eats 2.3 serves of vegetables per day, which is less than half the recommended amount. Australia is in the bottom half of the Organisation for Economic Co-operation and Development (OECD) countries in terms of vegetable consumption – behind countries such as Canada, the United States and New Zealand.

### ABOUT THE PROJECT

In 2016, Deloitte Access Economics was commissioned by Horticulture Innovation Australia Limited (Hort Innovation) to model the impact of increased vegetable consumption on government health expenditure and producer returns.

David Creelman, Manager at Deloitte Access Economics, said the project's aim was twofold – to estimate how much money governments could save if Australians ate more vegetables and how much additional profit Australian vegetable producers would make if vegetable consumption increased.

"Health expenditure in Australia continues to increase, and the most recent data shows that health spending has reached 10 per cent of GDP," he said.

"One way to reduce health expenditure is for Australians to eat more vegetables – about one per cent of health expenditure is due to people not eating the recommended five serves a day."

Mr Creelman said there was a well-established link between increased intake of vegetables and improved health outcomes.

"There is strong evidence to show that eating the recommended amount of vegetables reduces the risk of developing cardiovascular disease and some cancers," he said.

"Fewer cases of cardiovascular disease and cancer means that less money could be spent on treating these diseases."

The objectives of the project were to assist Hort Innovation to:

- Identify the potential reduction in health costs due to an increase in vegetable intake.
- Develop a business case for external funding support from other sources with an interest in improved health outcomes resulting from increased vegetable intake.
- Identify the increase in grower returns from an increase in vegetable consumption.

It involved an academic literature review, construction of detailed economic models and development of a report.

### MAJOR FINDINGS

If people increased their vegetable intake by 10 per cent (about two extra carrots per week, or an extra handful of broccoli per week), governments in Australia would save \$100 million per year, Mr Creelman said.

"This is because there would be fewer cases of cardiovascular disease and cancer, and so the cost of treating these cases – such as hospitals, medicines, doctors, allied health professionals and pathology – could be avoided," he said.

"If men increased their intake to match that of females, then governments would save \$58 million per year."

He said these results, while compelling, were hardly surprising. "Everyone knows that eating vegetables is good for you, and that most people would benefit from eating more vegetables."



"Interestingly, the economic modelling highlighted diminishing marginal returns from increasing vegetable consumption in terms of lowering the risk of developing disease.

"What this means is that increasing your consumption from two to three serves of vegetables per day provides more bang for your buck than increasing your consumption from four to five serves per day."

There are also major benefits for vegetable growers, Mr Creelman said.

"Most vegetables eaten by Australians are produced by Australian farmers," he said.

"The economic modelling shows that if governments invest in policies that drive a 10 per cent increase in consumption, then this could translate into an extra \$23 million in profit per year for Australian farmers in the long run."

## NEXT STEPS

Mr Creelman said these results presented a compelling argument for governments to invest in policies that address the social, economic and environmental barriers to increasing vegetable consumption. However, more work is needed to design and implement these policies.

"In a time of continued budgetary pressure, a small increase in vegetable consumption would save governments \$100 million per year, while also delivering other benefits to Australians, such as increased productivity, fewer deaths and improved quality of life," he said.

Mr Creelman said the private sector could also assist with driving this change in eating behaviours.

"Following the release of the project report, Deloitte Australia now provides fresh vegetables for staff as part of its efforts to increase health and wellbeing options, which has proven to be very popular."

## ACKNOWLEDGEMENTS

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### THE BOTTOM LINE: VG15031

If people increased their vegetable intake by 10 per cent (about two extra carrots per week, or an extra handful of broccoli per week), governments in Australia would save \$100 million per year.

Australian vegetable producers could receive up to \$23 million in additional profit if vegetable consumption was 10 per cent higher, and \$11 million if average consumption of vegetables by males were equal to that of females.

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