

# VEGETABLE INDUSTRY ANNUAL REPORT 2014/15





Horticulture Innovation Australia





### Contents

3 Executive Summary

4
Strategic
investment priorities

5 Industry advice

6 Summary of ongoing investment

8
Case study:
An intelligent farm robot for the vegetable industry

10 Financial summary

11 Breakdown of levy expenditure 2014/15

16 Minor use permits



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# **Executive Summary**

The Australian vegetable industry entered a new era of investment after Horticulture Innovation Australia Limited (Hort Innovation) was announced as the research and development corporation for horticulture in November 2014, replacing Horticulture Australia Limited. Hort Innovation is now a grower-owned company with a new operating model that is designed to offer increased consultation with levy payers and other stakeholders in the Australian horticulture industry.

During the 2014-15 financial year, more than \$10 million from the National Vegetable Levy and the Australian Government was invested in over 120 research and development (R&D) projects to increase the efficiency and production of Australian vegetable growing operations, open new avenues for market development and ultimately allow growers to provide premium quality produce to meet consumer demands.

This funding was invested in R&D projects that align with the Australian vegetable industry's four strategic pillars of investment. They are:

- 1. **Consumer Alignment:** Helps growers understand how to offer produce that meets consumer needs and can ultimately increase the demand for Australian-grown vegetables.
- 2. **Market and Value Chain Development:** Aims to capture and develop new markets for Australian vegetables and strengthen the value chain.
- 3. **Farm Productivity, Resource Use and Management:** Focuses on improving farm productivity through the adoption of new technologies and techniques, as well as addressing pest and disease threats to the industry.
- 4. **Development Drive Train:** Provides underlying support to help increase the scope and effectiveness of all R&D projects and activities.

Hort Innovation obtains industry advice for each R&D project funded by the National Vegetable Levy and, as a result, a robust industry advisory process is in place to guide investment. Advisory panels consisting of growers, industry stakeholders and Hort Innovation representatives are selected to ensure that R&D project proposals align with the strategic investment priorities.

Ongoing investment in R&D enhances the Australian vegetable industry's reputation as a producer of premium, clean, green and safe vegetables and helps to create opportunities for innovation and growth. For instance, R&D extension programs can build upon previous and current research to help growers stay up-to-date on new developments, encourage adoption of innovative techniques and improve the growing process and quality of the end product.

Grower Industry Leadership and Development Missions are a good example of short-term R&D investment in the Australian vegetable industry, as they offer growers the opportunity to understand the differences and similarities between vegetable production in Australia and other countries. Participants are encouraged to share their insights from missions with their Australian colleagues to ensure new ideas and perspectives are disseminated throughout the industry.

Longer term investment can be achieved through export development projects, which help to facilitate new market opportunities for Australia's vegetables. Given the increased competitiveness in the domestic market, it is critical for the industry to explore new market opportunities in key export areas such as Asia and the Middle East.

With vegetable growers facing a range of challenges including rising production costs and a variable climate, it is essential that their levy contributions, along with funds from the Australian Government and third-party sources, are invested in R&D projects that increase on-farm efficiency, explore new market opportunities and address consumer trends. This will ultimately allow the Australian vegetable industry to lead the way in farming innovation and increase its profitability into the future.

# Strategic investment priorities

The Australian vegetable industry's *Strategic Investment Plan 2012 – 2017* has identified four key strategic priorities as the pillars of vegetable levy investment.

These key strategic priorities were developed to drive the performance of the Australian vegetable industry and simultaneously form the basis of R&D investment in the future. The four pillars encompass key aspects of the vegetable industry value chain, from vegetable consumers, to value-adding supply chains, to production processes and inputs.

### Consumer Alignment

The main objective of this pillar is to increase both domestic and international consumer demand of Australian vegetables, as well as their perceived value. Through studying consumers' needs and preferences, growers can improve their product offerings to not only increase demand, but also meet consumer expectations.

# Market and Value Chain Development

This pillar aims to develop value-adding processes as well as the domestic and international supply chain. This is a critical strategic priority for the industry as a range of factors can impact the ability for growers to be competitive in the vegetable market, including value-adding capabilities, market access and competition from imports and exports.

# Farm Productivity, Resource Use and Management

This area of the investment strategy comprises initiatives aimed at increasing farm productivity through innovative technologies and techniques. It is crucial for vegetable growers to improve their on-farm management approaches and combat any threats that could affect their profitability, such as emerging pests and diseases, the effects of variable climates, water and soil shortages as well as rising input costs.

#### **Development Drive Train**

The three strategic priorities above are supported by an industry development function known as Development Drive Train, to maximise the development and extension of the Australian vegetable industry's Strategic Investment Plan.

As the industry requires ongoing capabilities in the areas of communication, knowledge management and industry analysis, the Development Drive Train is an underlying support function for existing and future R&D projects for the industry.



### The Bottom Line

The objectives for the vegetable industry are:

- · Consumer Alignment.
- Market and Value Chain Development.
- Farm Productivity, Resource Use and Management.
- · Development Drive Train.

# Industry advice

Hort Innovation obtains industry advice for each R&D project funded by the National Vegetable Levy. As a result, Hort Innovation employs a transparent and robust industry advisory process to guide R&D investments in the industry.

Advisory Panels consisting of growers, industry stakeholders and Hort Innovation representatives are selected to ensure that R&D project proposals align with the industry's strategic investment priorities. In the vegetable industry, advisory panels exist for Consumer Alignment; Market and Value Chain Development; and Farm Productivity, Resource Use and Management.

The advisory process ensures each project is evaluated on validity, is assessed on relevancy and has undergone a cost-benefit analysis. The representatives on these panels are selected to ensure that investment continues to build on industry values and strategy.

A thorough process

Growers and industry members are encouraged to submit ideas and concepts for future R&D projects that can help improve or innovate areas of the vegetable industry. These ideas can be submitted through Hort Innovation's Concept Proposal form (horticulture.com.au/concept-proposal-form).

The Concept Proposal is then filtered into one of the vegetable industry's strategic pillars of

investment and is considered at an advisory panel meeting. For example, a R&D concept proposal that analyses consumers' vegetable purchasing trends will be evaluated by the Consumer Alignment advisory panel.

If the concept is approved by the advisory panel, it is then put to tender. The tender process allows service providers, industry members and other stakeholders to submit a tender bid to undertake the project.

Hort Innovation assesses each tender bid to find the most appropriate service provider to conduct the R&D project and achieve the desired outcome.

Once a bid has been accepted, the service provider then undertakes the project and provides regular progress reports to Hort Innovation.

### The Bottom Line

Each vegetable R&D project is considered, investigated and tendered by Hort Innovation through an advisory mechanism, procurement process and thorough consultation with industry. This process has been developed by Hort Innovation as an interim advisory mechanism to deliver the effective and efficient investment of each levy dollar.



# Summary of ongoing investment

The National Vegetable Levy system is the cornerstone of innovation in the Australian vegetable industry.

Ongoing investment in the Australian vegetable industry is achieved through important R&D projects that align with the industry's four strategic investment priorities, which include Consumer Alignment; Market and Value Chain Development; Farm Productivity, Resource Use and Management; and Development Drive Train.

For instance, market research agency Colmar Brunton has conducted monthly online tracking of specific vegetables as part of the Project Harvest consumer research project. Researchers use a combination of desktop research and field market research to monitor and gauge consumer perception and behaviour in relation to fresh vegetables.

VG14060: Consumer and market program for the vegetable industry (Project Harvest) – Stage 2.

#### The investment process

In 2014, a new levy investment system was introduced with two pools of different funding priorities.

Pool 1 is funded by grower levies with contributions from the Federal Government. This pool has a one to five year scope and will invest in applied R&D designed to directly benefit growers. This includes pest and disease management and biosecurity matters, with findings communicated to growers through a variety of channels.

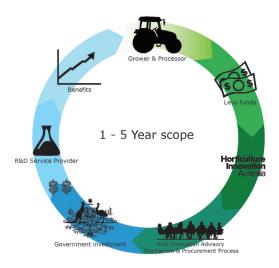
Pool 2 has a one to 15 year scope and matches strategic co-investment funds with at least \$20 million, at the pool's maturity, of government seed funds annually. This pool aims to address multiand cross-industry challenges and opportunities of strategic and long-term importance to Australia's horticulture industries.

Outlined below are examples of Pool 1 R&D investments, categorised by the four strategic investment priorities outlined in the Australian vegetable industry's *Strategic Investment Plan* 2012 – 2017.

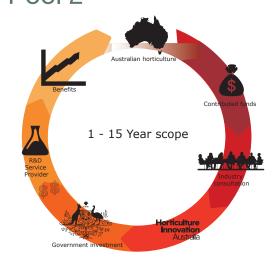
#### Consumer Alignment

An important area of ongoing investment in the Australian vegetable industry is to understand the mind of the consumer and stay abreast of current market trends and demands. This can help growers to increase their profitability and highlight potential gaps in the market, as well as potentially increase consumer consumption rates and foster product innovation.





Pool 2





# Market and Value Chain Development

Strengthening the supply chain and enhancing export development in the industry are important ongoing investments within the Market and Value Chain Development strategic investment pillar for the Australian vegetable industry. A range of R&D projects are funded through the National Vegetable Levy to improve the supply chain for growers and to give them the tools they need to either begin to export or develop their current export operations.

One of the research projects in this strategic investment pillar involved an in-depth market analysis to determine if potential exists for Australian broccoli exports to Japan, with promising results. Encouraging growers to capitalise on lucrative export markets can provide an avenue for the oversupply of domestic produce and give growers another avenue to sell fresh, clean and green Australian vegetables.

VG13048: Market analysis and strategy: broccoli to Japan.

# Farm Productivity, Resource Use and Management

It is critical for vegetable growers to remain vigilant against pests and diseases that threaten their crops throughout the year. Pests such as Mediterranean fruit fly and diseases such as Downy mildew can seriously affect the quality and yield of a crop and ultimately a grower's bottom line.

Investment in R&D projects that address pest and disease threats in the vegetable industry are often categorised under the Farm Productivity, Resource Use and Management strategic pillar of investment. One example includes a project that reviewed information on fruit flies and identified strategies that could be developed further to assist with control in vegetable crops.

VG13040: Fruit Fly research: gap analysis

### **Development Drive Train**

The fourth pillar of strategic investment in the Australian vegetable industry, the Development Drive Train, operates as a cohesive, financially and environmentally sustainable objective that engages growers and stakeholders.

A range of levy-funded R&D projects that fall under this pillar will continue to be an important priority for ongoing investment in the industry. This includes projects that revolve around industry communication, skills and training, industry leadership and development missions, and information transfer and extension.

For instance, the Growing Leaders National Vegetable Industry Leadership program is facilitated by Rural Training Initiatives and focuses on developing personal, business and industry skills in emerging industry leaders.

VG12053: Growing Leaders 2013-2015 (inclusive)

### The Bottom Line

During the 2014-15 financial year, \$10,137,022 from the National Vegetable Levy and the Australian Government was invested in R&D projects to further the development of the industry.

The vegetable industry had an estimated annual gross value of production of \$3.35 billion in 2014-15, making the Australian vegetable industry one of the country's largest horticultural industries.

# Case study: An intelligent farm robot for the vegetable industry

Since 2012, Professor Salah Sukkarieh and his team at the University of Sydney's Australian Centre for Field Robotics have been developing intelligent farm robots for use in the vegetable industry. These machines can conduct crop surveillance and collect data on an ongoing basis, as well as perform autonomous weeding and spraying of different vegetable crops.

'Ladybird' and 'RIPPA' (Robot for Intelligent Perception and Precision Application) are two of the greatest achievements of this project to date, due to their ability to automate various tasks to increase efficiency and lower input costs, with the aim to maximise grower returns.

#### Ladybird

Ladybird earned its moniker from a combination of solar panels and red colouring on its outer shell. Beneath its aesthetic exterior is a comprehensive

mix of technologies that represent the latest innovations in on-farm research.

High resolution cameras can classify and detect pests in a crop, while omnidirectional wheels and GPS software help Ladybird to navigate its way around the field using the most efficient route.

However, the most impressive feature of Ladybird is its mechanical arm, which can be used for targeted spraying, as well as weeding or harvesting. Professor Sukkarieh and his team are continuing to investigate and implement new uses for Ladybird's mechanical arm so it can best serve vegetable growers across the country.

On-farm testing of Ladybird commenced in 2014, with the bug-inspired robot passing with flying colours. The robot successfully demonstrated solar recharging capability, adept manoeuvrability, data sensing acquisition and algorithm mapping. These features, combined with the fully-automated arm,





have the potential to revolutionise the vegetable growing industry by minimising inputs and maximising returns.

#### **RIPPA**

The project's second robotic development, RIPPA, can be customised to suit most vegetable growing operations. RIPPA is mounted with a 'VIIPA' (Variable Injection Intelligent Precision Applicator) that can autonomously target weeds using a directed micro-dose of liquid at high speeds. The benefits of this type of application includes reduced costs, greater efficacy and reduced stress across the crop.

In addition, the robot's modular body makes wheel

or height alteration simple, allowing RIPPA to be modified to suit a wide range of vegetable crops across different farms.

#### Ongoing benefits

The University of Sydney's Australian Centre for Field Robotics has been conducting research in autonomous, remote sensing robots and intelligent software for the agricultural industry for more than a decade.

Ladybird and RIPPA – two important robots that were developed for the vegetable industry through levy-funded research – have great potential to help growers manage on-farm costs and achieve greater efficiency in the production process.

### Information

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

VG12104: An intelligent farm robot for the vegetable industry.

### The Bottom Line

Initial trials of Ladybird and RIPPA have been successful and it is expected the adoption of farm robot technology will result in less chemical use for weeding, more efficient production practices and improved knowledge and application of robotics on vegetable crops.

# Financial summary

	2014/	2015
	R&D	Total
Opening balance	\$10,107,592	\$10,107,592
Levies from growers (net of collection costs)	\$7,747,733	\$7,747,733
Commonwealth funds	\$5,751,824	\$5,751,824
Other income	\$332,675	\$332,675
	\$13,832,232	\$13,832,232
Project funding	\$10,137,022	\$10,137,022
Consultation with and advice from growers	\$120,057	\$120,057
Service delivery	\$1,246,568	\$1,246,568
	\$11,503,647	\$11,503,647
Levy contribution to across industry activity	\$260,824	\$260,824
Closing balance	\$12,175,352	\$12,175,352
Levy collection costs	\$368,542	\$368,542



# Breakdown of levy expenditure 2014/15

<b>Project Number</b>	Project Title	Service Provider	Funding
VG12008	EnviroVeg Program for promoting environmental best practice in the Australian vegetable industry	AUSVEG Ltd	\$213,388
VG12043	Conveying health benefits of Australian vegetables	Plant & Food Research Australia Pty Ltd	\$66,800
VG12078	Consumer and market program for the vegetable industry	Colmar Brunton	\$201,66
VG12090	Conveying the Positive Social, Economic, Environmental and other Benefits of Australian Vegetables	Review Partners	\$21,100
VG12096	New Vegetable Products for Personal Nutrition	CSIRO Division of Animal, Food and Health Sciences	\$31,87
VG13033	2014 Produce Innovations Seminar: USA Showcase	AUSVEG Ltd	\$-22,81
VG13047	Malaysia and UAE market analysis and strategy: carrots and sweet corn	AgEconPlus Pty Ltd	\$51,54
VG13057	Environmental Assessment of the Vegetable Industry	RMCG	\$72,52
VG13073	A revolutionary new sensor for in-field measurements of food safety in leafy vegetables	The University of Sydney	\$80,00
VG13082	Evaluation of quality assurance software for the vegetable industry	TQA Australia Inc	\$24,16
VG13083	Identifying and sharing postharvest best practice on-farm and online	Applied Horticultural Research Pty Ltd	\$81,50
VG13086	Identify process improvements for preserving peak freshness of Broccoli	Applied Horticultural Research Pty Ltd	\$13,94
VG13087	Review Optimal Cooking Techniques for Vegetables to Maximise Retention of Nutrients	MacTavish West Pty Ltd ATF MacTavish West Family Trust No. 1	\$38,47
VG13088	Baseline Demographic Research for the Vegetable Industry	The Nielsen Company	\$517,50
VG13089	Development of a Vegetable Education Kit	CSIRO Food and Nutrition Flagship	\$200,00
VG13090	A Strategy to Address Consumption of Vegetables in Children	CSIRO Food and Nutrition Flagship	\$104,60
VG13105	Benchmarking and comparing the production and regulatory conditions of Aust vegetable producers with our competitors	Control Risks Group Pty Ltd	\$115,44
VG13110	Economic modelling of the vegetable industry	Econtech Pty Ltd	\$91,01
VG14024	Market research around the opportunity to create more vegetable snacking options to quantify market size	Freshlogic Pty Ltd	
VG14025	Pre-harvest practices that will increase the shelf-life and freshness of vegetables	NSW Dept of Primary Industries, an office of Dept of Industry	\$53,98
VG14026	Market research for investigating opportunities for more vegetable meal occasions	Horizon Research Corporation Pty Ltd	\$80,00

Identifying and understanding the factors influencing bioactive levels in vegetables	The New Zealand Institute for Plant and Food Research Ltd	\$50,000
New Product Development Information for the Vegetable Industry	MacTavish West Pty Ltd ATF MacTavish West Family Trust No. 1	\$83,440
Health Claims in Food Advertising	Civic Creative	\$47,520
Development of a stakeholder engagement plan to enhance uptake of vegetable consumer and market research outputs	Edelman Public Relations Worldwide Pty Ltd	\$65,000
Scoping Study of a disorder that reduces shelf life and consumption of green beans	Agriculture Victoria Services Pty Ltd	\$10,000
Consumer and market program for the vegetable industry (Project Harvest) – Stage 2	Colmar Brunton	\$120,624
Process improvements for preserving peak freshness in broccoli (Stage 2)	Applied Horticultural Research Pty Ltd	\$52,786
	influencing bioactive levels in vegetables  New Product Development Information for the Vegetable Industry  Health Claims in Food Advertising  Development of a stakeholder engagement plan to enhance uptake of vegetable consumer and market research outputs  Scoping Study of a disorder that reduces shelf life and consumption of green beans  Consumer and market program for the vegetable industry (Project Harvest) – Stage 2  Process improvements for preserving peak	influencing bioactive levels in vegetables  New Product Development Information for the Vegetable Industry  Health Claims in Food Advertising  Development of a stakeholder engagement plan to enhance uptake of vegetable consumer and market research outputs  Scoping Study of a disorder that reduces shelf life and consumption of green beans  Consumer and market program for the vegetable industry (Project Harvest) – Stage 2  Process improvements for preserving peak  Food Research Ltd  MacTavish West Pty Ltd ATF MacTavish West Pty Lt

<b>Project Number</b>	Project Title	Service Provider	Fundin
MT12004	Improving efficacy of MAT to enhance areawide management of Queensland fruit fly	Macquarie University	\$8,00
MT12028	OHMA Operational Support 2012 to 2015	Horticulture Australia Ltd	\$70
MT12029	Horticultural Market Access Manager 2012 - 2015	Langley Consulting	\$40
MT14027	Horticultural Market Access Manager 2014 - 2015	Lawrence Consulting	\$2,00
MT14058	Asia Fruit Logistica 2015	Oliver and Doam	\$10,46
VG09023	Alternative fruit fly control for market access and IPM enhancement in eggplant	The Department of Agriculture and Fisheries (DAF)	\$-49,10
VG12034	Pilot scale development and assessment of microwave postharvest disinfestation of insects of economic significance	CSIRO Climate Adaption Flagship	\$85,00
VG12083	Understanding the Nature, Origins, Volume and Values of Vegetable Imports	RM Consulting Group	\$13,67
VG13035	2014 Reverse Trade Mission	AUSVEG Ltd	\$-24,56
VG13043	New end-point treatment solutions to control Fruit Fly (1)	NSW Dept of Primary Industries, an office of Dept of Industry	\$133,41
VG13044	New end-point treatment solutions to control Fruit Fly (2)	The Department of Agriculture and Fisheries (DAF)	\$146,94
VG13069	Developing vegetable export opportunities in Asia and the Middle East - 2014	AUSVEG Ltd	\$179,04
VG13080	Global scan for vegetable innovation - Fresh and Minimally Processed	Euromonitor International Ltd	\$19,25
VG13084	Investigating the physical supply chain to improve transport efficiency	Supply Chain STO	\$14,26
VG13085	Benchmarking Australian Vegetable Industry Points of Difference	Euromonitor International Ltd	\$20,23
VG13097	Vegetable Industry Market Access and Development Program	AUSVEG Ltd	\$818,78
VG14023	Development of a China market access strategy for the Australian vegetable industry	Asian Agribusiness Consulting	\$15,92
VG14031	New Product Development Information for the Vegetable Industry	KPMG	\$51,10
VG14708	Southeast Asia & Indonesia Export Symposium	AUSVEG Ltd	\$166,04

### Objective 3. Farm Productivity, Resource Use & Management

Project Number	Project Title	Service Provider	Funding
MT09067	Managing the nematode threat	Tasmanian Institute of Agriculture (TIA) - University of Tas	\$-10,979
MT10029	Managing pesticide access in horticulture (cont. from AH04009 and MT07029)	Horticulture Australia Ltd	\$26,516
MT12011	National honey bee pest surveillance program	Plant Health Australia Limited	\$17,043
MT13059	SITplus: Developing and optimising production of a male-only, temperature-sensitive-lethal, strain of Qfly, B. tryoni	South Australian Research and Development Institute (SARDI)	\$54,427
VG08102	Efficacy of dimethoate and fenthion at low dose rates	The Department of Agriculture and Fisheries (DAF)	\$-6,702
VG11013	Strengthening biosecurity for the Australian vegetable industry	AUSVEG Ltd	\$21,222
VG11033	Vegetable minor use allocation	Horticulture Australia Ltd	\$24,038
VG12052	Generation of Efficacy, Crop Safety and Residue Data for the Control of Anthracnose in Lettuce	Peracto Pty Ltd	\$92,850
VG12075	Generation of residue and crop safety data for pesticide minor-use permit applications in vegetables 2012 - Agrisearch	Eurofins Agrisearch	\$7,000
VG12104	An Intelligent Farm Robot for the Vegetable Industry	University of Sydney	\$147,984
VG12109	Management of insecticide resistance in the green peach aphid	Cesar Pty Ltd	\$97,230
VG12112	Improving grower access to new chemistry to control downy mildew disease	Syngenta Australia Pty Ltd	\$19,000
VG12114	Minor use permit management for the vegetable industry	Growcom Australia	\$105,740
VG13004	Innovating new virus diagnostics and planting bed management in the Australian Sweetpotato Industry	Australian Sweetpotato Growers Inc	\$210,022
VG13026	Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2013 - Agrisearch	Eurofins Agrisearch	\$86,949
VG13027	Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2013 - AgriSolutions	AgriSolutions Australia Pty Ltd	\$41,252
VG13028	Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2013 - CPR	Crop Protection Research Pty Ltd	\$106,810
VG13029	Adaptive pest management for horticulture under climate change – pilot pest scoping	CSIRO Climate Adaption Flagship	\$10,000
VG13039	Remediation of soil contaminated by Salmonella enterica to expedite plant or replant of vegetables	University of Sydney - Faculty of Agriculture & Environment	\$27,000
VG13040	Fruit Fly research: gap analysis	Applied Horticultural Research Pty Ltd	\$15,166
VG13041	New in-field treatment solutions to control Fruit Fly (1)	The Department of Agriculture and Fisheries (DAF)	\$80,000
VG13042	New in-field treatment solutions to control Fruit Fly (2)	Applied Horticultural Research Pty Ltd	\$165,916
VG13051	On-farm power generation - options for vegetable growers	Applied Horticultural Research Pty Ltd	\$75,910
VG13052	Confirmation of ultra filtration as a viable low cost water disinfection and nutrient solution recycling option	Primary Principles	\$110,650

VG13054	Economic evaluation of farm energy audits	 Infotech Research	\$121,938
	and benchmarking of energy use on vegetable farms		
VG13055	Building codes and greenhouse construction	Osborn Lane Consulting Engineers	\$21,558
VG13075	An investigation of low-cost protective cropping	Applied Horticultural Research Pty Ltd	\$179,920
VG13076	Soil condition management – Extension and capacity building	Applied Horticultural Research Pty Ltd	\$259,330
VG13077	Soil-Borne Disease Management Diagnostics	Tasmanian Institute of Agriculture (TIA) - University of Tasmania	\$65,657
VG13078	Extension of Integrated Crop Protection information	RMCG	\$325,733
VG13079	Weed Management for the Vegetable Industry - Scoping Study	University of New England	\$37,648
VG13081	Prioritisation of vegetable crop commodities and activities for mechanisation	Tasmanian Institute of Agriculture (TIA) - University of Tas	\$6,672
VG13092	Improved skill for regional climate in the ACCESS-based POAMA model	Bureau of Meteorology	\$60,000
VG13096	Minor Use and Agronomy Coordinator - Minor Use Priorities and Awareness Program	AUSVEG Ltd	\$185,226
VG13101	Effective management of parsley summer root rot	NSW Dept of Primary Industries,an office of Dept of Industry	\$52,800
VG13106	Evaluation of commercially available farm management software programs for the vegetable industry	TQA Australia Inc	\$30,136
VG13107	Benchmarking international road transport regulations	HGH Consultants	\$121,000
VG13109	Innovative ways to address waste management on vegetable farms	RMCG	\$59,715
VG13111	Manipulation of regulatory microRNAs to suppress insecticide resistance in diamondback moth	The University of Queensland	\$100,688
VG14038	Generation of Residue Data for Pesticide Minor-use Permit Applications in Vegetable Crops 2014 - Peracto	Peracto Pty Ltd	\$121,224
VG14039	Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2014 - Eurofins	Eurofins Agrisearch	\$32,758

Objective	4. Development Drive Trai	n	
Project Number	Project Title	Service Provider	Funding
MT07055	Facilitating the communication and development of the Tasmanian Vegetable Industry (continuation of VG00070)	University of Tasmania	\$-98,944
MT14006	Export - Import Market Intelligence Project 2014 - 2016	Fresh Intelligence Consulting	\$3,868
VG11001	Nuffield Farming Scholarship	Nuffield Australia Farming Scholars	\$6,000
VG11711	Vegetable Young Growers Tour 2012-2014	AUSVEG Ltd	\$34,776
VG12006	Production of Australian Vegetable Industry Vegenotes series	AUSVEG Ltd	\$60,000
VG12014	National Vegetable Industry Communication Strategy (VICS): management and implementation	AUSVEG Ltd	\$284,299

VG12033	Vegetables Australia (continuation of VG09095)	AUSVEG Ltd	\$259,676
VG12053	Growing Leaders 2013 - 2015 inclusive	Rural Training Initiatives	\$89,886
VG12071	Coordinated Knowledge and Industry Development Program	AUSVEG Ltd	\$511,224
VG12080	Leadership program expenses 2013 - 2016	Horticulture Australia Ltd	\$21,981
VG12087	Updating & Republishing Valuable Vegetable Industry Resources	Applied Horticultural Research Pty Ltd	\$28,650
VG12113	Enhancing best practice in vegetable production and business management in the Northern Territory	Northern Territory Farmers Association Inc	\$90,000
VG12700	USA Growers Tour 2013-2015	AUSVEG Ltd	\$101,091
VG13018	Implementation Officer and Design Team Coordination for the Vegetable R&D Program - stage 2 (AUSVEG)	AUSVEG Ltd	\$79,200
VG13019	Vegetable R and D program implementation and design team support (HAL) - Phase 2	Horticulture Australia Ltd	\$156,780
VG13025	Plant Health Plan Implementation for the Vegetable Industry	RMCG	\$6,556
VG13036	Graduate Alumni Industry Network (GAIN)	Rural Training Initiatives	\$25,000
VG13059	Vegetable industry Academy of Excellence	Stride Consulting	\$15,753
VG13063	Guest worker scheme desktop study	Richard O'Brien	\$9,818
VG13064	Enhanced influencing and negotiation training program	ENS International Pty Ltd	\$24,518
VG13068	Financial Performance of Australian Vegetable Farms 2013-14 to 2015-16	Aust Bureau of Agricultural & Resource Economics & Sciences	\$299,791
VG13071	ABS Survey of Additional Vegetable Commodities 2013-14	Australian Bureau of Statistics (ABS)	\$87,659
VG13072	Export Opportunities for Carrots, Sweet Corn, Beans, Broccoli and Baby Leaf – Symposia	AUSVEG Ltd	\$-69,651
VG13114	Printing of Tropical Pests and Diseases Field Guide	Department of Primary Industry & Fisheries, NT	\$63,877
VG13116	2015 Global Innovations in Horticulture Seminar	AUSVEG Ltd	\$289,806
VG13706	Women's Grower Study Tour 2014-2016	AUSVEG Ltd	\$7,747
VG13707	Vegetable Industry's Participation at the International Horticultural Congress, Brisbane, August 2014	AUSVEG Ltd	\$9,816
VG14061	Vegetable Industry Education & Training Gap Analysis	RMCG	\$30,000
VG14064	Facilitating Knowledge Sharing and Extension through the National Vegetable Convention	AUSVEG Ltd	\$70,000
VG14707	2015 European Industry Leadership and Development Mission - Berlin Fruit Logistica	AUSVEG Ltd	\$35,636
VG14709	PIRSA Netherlands Trip	AUSVEG Ltd	\$24,339
VG14800	Vegetable Industry Advisory Committee Annual Report 2013/14	Horticulture Australia Ltd	\$48,151

# Minor use permits

Permit Number	Permit Description (pesticide/crop/pest)	Date Issued	Expiry Date	Permit Holder	States
PER7909	Pyrimethanil/Cucumber/Botritis rots	5/04/2012	30/09/2017	Growcom	All States (Ex Vic)
PER8930 v2	Phorate/Eggplant, Peppers, Shallots, Spring Onions/ Aphids, Jassids, Mites, Thrips & Onion maggot	14/08/2011	31/07/2019	Growcom	All States (Ex Vic)
PER10272	Diazinon/Cauliflower, Leeks/Onion fly & Onion seedling maggot	13/08/2013	30/09/2016	Growcom	NSW, Qld
PER10312 v2	Glufosinate-ammonium/Capsicums, Snow & Sugar snap peas/Broadleaf Weeds & Grasses	30/06/2015	30/06/2018	Growcom	All States (Ex Vic)
PER10845	Zineb/Brassica leafy veg/Cercospora leaf spot & Downy mildew	6/02/2015	31/05/2020	Growcom	All States (Ex Vic)
PER10875 v2	Pirimicarb/Celeriac/Aphids	7/05/2012	30/09/2020	Growcom	All States (Ex Vic)
PER10918	Imidacloprid/Carrots, Leafy lettuce, Silverbeet & Spinach/Greenhouse whitefly	30/06/2015	31/05/2018	Growcom	All States (Ex Vic)
PER10938	Imidacloprid/Snow & Sugar snap peas/Greenhouse whitefly	1/07/2015	31/07/2018	Growcom	All States (Ex Vic)
PER10976 v2	Bentazone as Na salt/Snow & Sugar snap peas/ Broadleaf Weeds	10/8/2009	31/03/2020	Growcom	All States (Ex Vic)
PER10988 v2	Cyanazine/Snow & Sugar snap peas/Broadleaf Weeds	10/8/2009	31/03/2020	Growcom	All States (Ex Vic)
PER11127	Boscalid/Peppers, Celery/Sclerotinia Rot	30/06/2015	30/06/2018	Growcom	All States (Ex Vic)
PER11348	Clethodim/Parsnip/Weeds	1/11/2012	31/03/2022	Growcom	All States (Ex Vic)
PER11438	Glyphosate (shielded sprayer)/Rakkyo, Daikon, Galangal, Garlic, Ginger, Burdock, Shallot, Yam, Taro, Tumeric, Yam bean/Grass & Broadleaf Weeds	5/05/2009	30/06/2019	Growcom	All States (Ex Vic)
PER11440 v3	Procymidone/Peppers /Sclerotinia Rot	1/6/2009	31/01/2020	Growcom	ACT, NSW, SA, Tas, NT, WA & Qld
PER11441	Propachlor/Radish, Swede, Turnip/Grass & Broadleaf Weeds	27/05/2009	31/12/2019	Growcom	All States (Ex Vic)
PER11451	Chlorothalonil/Garden Peas, Eggplant & Radish/ Various Fungal Diseases	12/06/2013	30/06/2018	Growcom	All States (Ex Vic)

Please note: The permit information listed in this section is current as of 1 June 2016.

The Vegetable Industry Annual Report 2014/15 references the Hort Innovation projects listed below:

VG12114 - Minor Use Permit Management for the Vegetable Industry

VG11033 - Vegetable minor use allocation (Hort Innovation)

VG14038 - Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2014 – Peracto

VG14039 - Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2014 – Eurofins

VG13026 - Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2013 – Agrisearch

VG13027 - Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2013 - AgriSolutions

VG13028 - Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2013 – CPR

All efforts have been made to provide the most current, complete and accurate information on these permits, however it is recommended that you confirm the details of these permits at the following APVMA website: apvma.gov.au/permits/search.php.



Permit Number	Permit Description (pesticide/crop/pest)	Date Issued	Expiry Date	Permit Holder	States
PER11564 v2	Cyprodinil+Fludioxonil/Capsicum/Botrytis, Sclerotinia rot	29/10/2014	30/11/2017	Growcom	All States (Ex Vic)
PER11686	Fipronil/Celery, Lettuce/Western Flower Thrips, Onion Thrips	25/03/2014	31/03/2017	Growcom	All States (Ex Vic)
PER11764	Spiroxamine/Snow & Sugar snap peas/Powdery mildew	1/07/2015	30/06/2018	Growcom	Qld, Tas, SA, WA, Act, NT
PER11768 v2	Chlorpyrifos/Pumpkin/African black beetle	28/6/2013	31/03/2021	Growcom	All States (Ex Vic)
PER11848 v3	Clethodim/Brassica leafy veg, Chicory, Endive, Radicchio, Rocket/Weeds	20/6/12	30/03/2021	Growcom	All States (Ex Vic)
PER11850 v2	Lambda-cyhalothrin/Parsley, Coriander/Insect Pests	5/4/2012	31/08/2016	Growcom	All States (Ex Vic)
PER11935 v2	Triadimenol/Parsnip, Radish, Swede & Turnip/Powdery mildew	5/2/2012	6/30/2017	Growcom	All States (Ex Vic)
PER11949 v2	Lambda-cyhalothrin/Beetroot & Radish/Various Insects	1/11/2010	31/03/2020	Growcom	All States (Ex Vic)
PER11964	Chlorothalonil/Snow & Sugar snap peas/Downy mildew	13/11/2012	31/03/2018	Growcom	All States (Ex Vic)
PER11990	Chlorothalonil/Brassica leafy veg/Downy mildew, Alternaria leaf blight, Grey mould	12/04/2015	30/06/2017	Growcom	All States (Ex Vic)
PER11991	Quinoxyfen/Silverbeet/Powdery mildew	29/06/2011	31/03/2016	Growcom	All States (Ex Vic)
PER12008 v3	Propachlor/Various vegetable crops/Weeds	18/6/2012	11/30/2020	Growcom	All States (Ex Vic)
PER12047	Thiabendazole/Sweetpotato/Field rots	29/06/2011	30/09/2016	Growcom	All States (Ex Vic)
PER12048 v2	Prometryn/Parsnip/Weeds	9/5/2012	30/09/2020	Growcom	All States (Ex Vic)
PER12221 v2	Petroleum oil/Specified Vegetable Crops/Insect Pests	29/6/2012	11/30/2017	Growcom	All States (Ex Vic)
PER12351	Imidacloprid/Leafy Lettuce, Okra, Broccoli, Cauliflower, Head cabbage/Silverleaf whitefly	30/03/2015	30/06/2020	Growcom	All States (Ex Vic)
PER12357 v2	Linuron/Parsnips/Weeds	9/5/2012	30/09/2020	Growcom	All States (Ex Vic)
PER12378 v2	Acephate/Ornamentals, Tomatoes, Peppers/Western Flower Thrips	25/10/10	31/10/2020	Growcom	All States (Ex Vic)
PER12384	S-metolachlor/Rhubarb/Various Weeds	18/11/2010	31/08/2020	Growcom	All States (Ex Vic)
PER12386	Chlorthal-dimethyl/Lettuce/Stinging nettle	29/06/2011	31/08/2016	Growcom	SA, WA
PER12391	Methoxyfenozide/Cucumbers, Peppers, Eggplant, Leafy lettuce (PC grown), and Cucumber & Leafy lettuce (Field grown)/Lepidopteran pests	31/05/2013	30/09/2017	Growcom	All States (Ex Vic)
PER12399	Mancozeb+metalaxyl-M/Snow & Sugar snap peas, Field grown Capsicum, Chillies & Paprika/Downy mildew	17/10/2013	30/09/2016	Growcom	All States (Ex Vic)
PER12447 v2	Fenhexamid/Peppers (Capsicum & Chilli), Cucumber, Lettuce (Head & Leafy) (Field & PC grown)/Botrytis grey mould	30/09/2013	31/05/2021	Growcom	All States (Ex Vic)
PER12489	Imidacloprid/Celery, Cucumber, Peppers & Cape gooseberry/Aphids	30/06/2015	31/05/2020	Growcom	All States (Ex Vic)
PER12506 v5	Dimethoate/Eggplant/Qld Fruit Fly, Med Fly	30/1/2013	31/10/2018	Growcom	All States (Ex Vic)
PER12565	Pyrimethanil/Capsicum & Lettuce (PC only)/Botrytis bots	4/05/2012	9/30/2017	Growcom	All States (Ex Vic)
PER12567	Iprodione/Green beans, Carrots, Spinach & Silverbeet/ Sclerotinia, Grey mould or Suppression of Black mould as specified on permit	18/11/2014	30/09/2017	Growcom	All States (Ex Vic)
PER12712	Buprofezin/Cucumber, Zucchini, Squash, Marrow, Choko, Eggplant, Peppers, Capsicum, Lettuce - Leafy/ Various Whiteflies, Jassids, Leafhoppers as specified in permit	13/05/2014	31/03/2017	Growcom	All States (Ex Vic)

Permit Number	Permit Description (pesticide/crop/pest)	Date Issued	Expiry Date	Permit Holder	States
PER12716	Imidacloprid/Asian Root Vegetables/Greenhouse Whitefly, Green Peach Aphid, Plus suppression of Plague Thrips	12/04/2015	30/09/2020	Growcom	All States (Ex Vic)
PER12823 v2	Trifluralin/Chilli, Paprika, Eggplant/Weeds	21/11/2013	30/06/2021	Growcom	All States (Ex Vic)
PER12846 v2	Abamectin/Snow & Sugar snap peas, Lettuce/Two- Spotted Mite	31/5/2011	30/09/2017	Growcom	All States (Ex Vic)
PER13031 v3	Maldison/Capsicum, Cucumber/Fruit Flies	6/10/2011	31/05/2017	Growcom	NSW, Qld, SA, WA, Act, NT
PER13035	Clethodim/Radish/Grass Weeds	27/09/2011	30/09/2016	Growcom	All States (Ex Vic)
PER13036	Chlorothalonil/Fennel/Downy mildew & Purple blotch	21/09/2011	31/07/2021	Growcom	All States (Ex Vic)
PER13088	Spinetoram/Asian Root Vegetables/Various Pests	29/03/2012	31/03/2017	Growcom	All States (Ex Vic)
PER13091 v2	Tebuconazole/Carrots/Powdery mildew (suppression)	14/5/2012	30/09/2025	Growcom	NSW, SA and Tas
PER13114	Prometryn/Celeriac/Weeds	29/03/2012	31/03/2017	Growcom	All States (Ex Vic)
PER13116 v2	Propiconazole/Sweet corn/Northern corn blight	8/2/2012	31/03/2021	Growcom	ACT, NSW, Qld, SA, NT and WA only
PER13121	Metalaxyl-M/Parsley/Pythium & Phytophthora	16/11/2011	30/11/2016	Growcom	ACT, NSW, Qld, SA, NT and WA
PER13122	Emamectin as benzoate/Celery, Eggplant/Heliothis, Light brown apple moth, Cluster caterpillar	31/10/2013	30/09/2016	Growcom	All States (Ex Vic)
PER13147	Clopyralid/Cauliflower/Capeweed & Clover	16/12/2014	30/11/2019	Growcom	WA
PER13151	Zinc phosphide/Sweetpotato/Mice & Rats	14/12/2011	31/12/2016	Growcom	NSW, Qld
PER13152	Mcpa as Na salt/Rhubarb/Weeds	4/12/2011	30/09/2016	Growcom	All States (Ex Vic)
PER13153	Fipronil/Sweetpotato/White fringed weevil & Wireworm	14/12/2011	31/12/2016	Growcom	NSW, Qld, WA, NT
PER13154	S-metolachlor/Brassica leafy veg/Weeds	20/02/2012	31/03/2017	Growcom	All States (Ex Vic)
PER13158 v8	Dimethoate/Post-harvest Fruit & Fruiting veg/Fruit Flies	6/10/2011	5/10/2017	Growcom	All States (Ex Vic)
PER13205	Chlorfenapyr/Spring onions, Shallots/Western Flower Thrips	28/05/2012	30/06/2017	Growcom	All States (Ex Vic)
PER13254 v6	Dimethoate/Chillies/Fruit Flies	2/2/2012	5/10/2017	Growcom	All States (Ex Vic)
PER13257	Clethodim/Leeks, Spring onions & Shallots/Grass Weeds	28/05/2012	31/03/2017	Growcom	All States (Ex Vic)
PER13300 v2	Abamectin/Rhubarb/Broad Mite	11/10/2013	31/12/2016	Growcom	All States (Ex Vic)
PER13301 v2	Alpha-cypermethrin/Lettuce/Red-Legged Earth Mite & Vegetable Weevil	12/6/2012	31/05/2020	Growcom	All States (Ex Vic)
PER13304	Etoxazole/Specified Cucurbits/Two-Spotted Mite & Red Spider Mite	12/07/2013	30/06/2018	Growcom	All States (Ex Vic)
PER13446	Chlorpyrifos/Taro/African black beetle	11/04/2012	31/03/2022	Growcom	All States (Ex Vic)
PER13496	Linuron/Celery/Weeds	4/05/2012	30/04/2017	Growcom	Qld
PER13499	Diazinon/Parsley, Coriander/Onion maggot	4/05/2012	31/03/2017	Growcom	Qld
PER13566 v3	Methomyl/Tomatoes, Capsicum/Fruit Fly	7/12/2012	31/05/2021	Growcom	All States (Ex Vic)
PER13567 v2	Bifenthrin/Tomatoes, Capsicum/Fruit Fly	7/12/2012	31/05/2021	Growcom	All States (Ex Vic)
PER13626	S-metolachlor+Metolachlor/Various Veg crops/Weeds	23/07/2012	30/06/2017	Growcom	All States (Ex Vic)
PER13653 v2	Maldison/Leeks, Spring onions, Shallots/Onion thrips	13/11/2013	31/10/2018	Growcom	All States (Ex Vic)
PER13673 v2	Metalaxyl-M+Mancozeb/Celery, Silverbeet, Spinach/ Late blight, Downy mildew	22/04/2013	30/09/2021	Growcom	All States (Ex Vic)
PER13675	Maldison/Tomatoes/Fruit Fly	16/05/2013	31/05/2018	Growcom	All States (Ex Vic)
PER13695	Potassium bicarbonate/Various Veg/Powdery mildew	31/10/2012	30/09/2017	Growcom	All States (Ex Vic)

Permit Number	Permit Description (pesticide/crop/pest)	Date Issued	Expiry Date	Permit Holder	States
PER13696 v2	Trifluralin/Parsnips/Wintergrass	31/08/2013	31/03/2018	Growcom	All States (Ex Vic)
PER13698 v2	Phosphorous acid/Lettuce, Fennel & Bulb Veg/Downy mildew	8/04/2015	30/09/2017	Growcom	All States (Ex Vic)
PER13859	Dimethoate/Orchard clean up, Fruit Fly hosts/Fruit Fly after harvest application	9/02/2015	31/07/2024	Growcom	NSW, Qld
PER13899 v2	Etoxazole/Snow & Sugar snap peas/Two-Spotted Mite	1/01/2013	31/03/2020	Growcom	All States (Ex Vic)
PER13901 v2	Glyphosate/Capsicum, Snow & Sugar snap peas/ Weeds	6/4/2013	30/06/2019	Growcom	All States (Ex Vic)
PER13902	Phorate/Sweetpotato/Various Insect Pests	2/01/2013	31/03/2018	Growcom	All States (Ex Vic)
PER13920	Fatty acids - K salt/Capsicum, Cucumber, Lettuce/ Whiteflies	1/03/2013	31/03/2018	Growcom	All States (Ex Vic)
PER14032	Chlorthal-dimethyl/Parsley/Weeds	1/05/2013	31/03/2023	Growcom	All States (Ex Vic)
PER14033	Lambda-cyhalothrin/Snow & Sugar snap peas/Pasture web-worm, Cutworm, Rutherglen Bug, Thrips	1/06/2013	31/05/2018	Growcom	All States (Ex Vic)
PER14034	Chlorothalonil/Spinach, Silverbeet, Spring onions/ Downy mildew, Alternaria leaf blight & Grey mould	9/12/2014	31/10/2019	Growcom	All States (Ex Vic)
PER14035	Diflufenican/Green peas/Broadleaf Weeds	1/05/2013	31/03/2023	Growcom	WA
PER14036	Bupirimate/Eggplant/Powdery mildew	1/04/2013	31/03/2018	Growcom	All States (Ex Vic)
PER14037	Alpha-cypermethrin/Cauliflower/Staphylinid beetle	1/05/2013	31/03/2023	Growcom	All States (Ex Vic)
PER14038	Cu as Hydroxide+Cu as oxychloride+Cu as cuprous oxide + others/Various Veg/Various Disease	1/04/2013	30/09/2023	Growcom	All States (Ex Vic)
PER14043	Chlorothalonil/Beetroot, Celeriac, Parsnip, Cucumbers/ Alternaria, Botrytis, Cercospora leaf spot, Phoma leaf spot, Early blight, Septoria leaf spot	16/04/2014	30/11/2018	Growcom	All States (Ex Vic)
PER14045 v2	Mancozeb+metalaxyl-M+metalaxyl/Brassica leafy vegetables, Broccoli, Brussels sprouts, Cauliflower, Chicory, Endive, Radicchio, Rocket, Carrots and Parsnip / Various fungal disease	1/4/2013	31/03/2018	Growcom	All States (Ex Vic)
PER14046	Mancozeb/Cucumbers/Grey mould	1/05/2013	31/03/2018	Growcom	All States (Ex Vic)
PER14047	Methidathion/Peppers & Eggplant/Rutherglen bug	1/06/2013	30/06/2018	Growcom	All States (Ex Vic)
PER14048	Pendimethalin/Spring onion, Shallots and Radish/ Weeds	1/05/2013	31/03/2023	Growcom	All States (Ex Vic)
PER14049	Permethrin/Celery/Insect Pests	1/04/2013	31/03/2023	Growcom	All States (Ex Vic)
PER14050	Trifloxystrobin/Cucumbers, Capsicum (PC grown)/ Powdery mildew	1/06/2013	30/06/2023	Growcom	All States (Ex Vic)
PER14051	Iprodione/Broccoli Seed/Rhizoctonia	1/05/2013	31/03/2018	Growcom	All States (Ex Vic)
PER14071	Pirimicarb/Sweet corn, Spring onions, Celery/Aphids	7/06/2015	30/06/2019	Growcom	All States (Ex Vic)
PER14073	Diazinon/Spring onions, Shallots/Thrips (excluding Western Flower Thrips), Onion seedling maggot	1/07/2013	30/06/2018	Growcom	All States (Ex Vic)
PER14077	Botanical oil - emulsifiable/Capsicums, Cucumbers, Lettuce/Silverleaf whitefly	1/10/2013	30/09/2023	Growcom	All States (Ex Vic)
PER14126	Methomyl/Radish, Swede, Turnip/Cabbage white butterfly, Cabbage centre grub, Heliothis, Loopers, Cluster caterpillar & Western Flower Thrips	30/06/2015	30/09/2017	Growcom	All States (Ex Vic)
PER14127	Pendimethalin/Brassica leafy veg, Rocket/Weeds	31/10/2013	31/08/2018	Growcom	All States (Ex Vic)
PER14142 v2	loxynil as octanoate/Spring onions, Welsh onions, Shallots/Weeds	17/10/13	31/03/2019	Growcom	All States (Ex Vic)
PER14164	Clethodim/Brocoli, Brussels Sprouts, Cauliflower/Rye Grass, Winter Grass	11/10/2013	30/06/2017	Growcom	All States (Ex Vic)
PER14184	Phosphorous acid/Beetroot, Brassica leafy veg, Carrot & Parsnip/Mildew	1/07/2013	30/06/2017	Growcom	Qld, SA,WA

Permit Number	Permit Description (pesticide/crop/pest)	Date Issued	Expiry Date	Permit Holder	States
PER14186	Spinetoram/Eggplant/Melon thrips	3/10/2013	30/09/2018	Growcom	All States (Ex.Vic)
PER14203	Propyzamide/Globe Artichoke/Weeds	12/11/2013	30/11/2016	Growcom	All States (Ex Vic)
PER14210	Bifenazate/(PC grown) Lettuce - Head & Leafy/Two- Spotted Mite	17/10/2013	30/09/2018	Growcom	All States (Ex Vic)
PER14211	Fenhexamid/Snow & Sugar snap peas/Grey mould & Chocolate spot	27/11/2013	30/09/2016	Growcom	All States (Ex Vic)
PER14212	Imidacloprid/Rhubarb/Aphids	31/10/2013	30/06/2018	Growcom	All States (Ex Vic)
PER14245	Difenoconazole/Beetroot/Leaf spots	16/12/2013	31/08/2018	Growcom	All States (Ex Vic)
PER14282	Fluazifop-P as butyl/Taro & Other Asian Root Veg/ Weeds	22/11/2013	31/12/2016	Growcom	All States (Ex Vic)
PER14318	Metalaxyl-M/Lettuce/Damping off	23/12/2013	30/09/2018	Growcom	All States (Ex Vic)
PER14326	Captan/Leafy lettuce, Cucumber, Capsicum & Chilli/ Grey mould	19/12/2013	30/11/2016	Growcom	All States (Ex Vic)
PER14336	Methoxyfenozide/Head lettuce/Cluster caterpillar, Looper, Light brown apple moth	17/12/2013	30/09/2017	Growcom	All States (Ex Vic)
PER14337	Trifluralin/Swedes, Turnips/Weeds	10/03/2014	30/06/2020	Growcom	All States (Ex Vic)
PER14341	Pymetrozine/Celery/Aphids	30/05/2014	30/06/2017	Growcom	All States (Ex Vic)
PER14351	Petroleum Oil/Lettuce/Various Bugs	24/12/2013	31/03/2017	Growcom	NSW, Qld, NT
PER14352	Metalaxyl-M+Fludioxonil/Broccoli (Seed)/Damping off & Rhizoctonia	28/01/2014	31/03/2019	Growcom	All States (Ex Vic)
PER14353	Iprodione/Peppers, Celeriac/Sclerotinia rot	1/07/2014	31/03/2017	Growcom	All States (Ex Vic)
PER14384	Pyriproxyfen/Broccoli, Brussels Sprouts, Cabbages, Cauliflower/Silverleaf whitefly	13/07/2014	30/06/2018	Growcom	All States (Ex Vic)
PER14385	Prometryn/Root Veg/Weeds	10/03/2014	31/03/2019	Growcom	All States (Ex Vic)
PER14430	Azoxystrobin/Lettuce/Bottom rot	21/03/2014	30/06/2017	Growcom	All States (Ex Vic)
PER14431	Tolclofos-methyl/Lettuce/Bottom rot	21/03/2014	30/06/2017	Growcom	NSW, Qld
PER14432	Pendimethalin/Brussels Sprouts/Weeds	23/05/2014	30/06/2019	Growcom	All States (Ex Vic)
PER14436	Buprofezin/Celery/Greenhouse whitefly	9/05/2014	30/06/2019	Growcom	All States (Ex Vic)
PER14454	Mancozeb+metalaxyl-M/Capsicum, Chilli, Paprika/ Downy mildew	10/03/2014	30/06/2019	Growcom	All States (Ex Vic)
PER14456	Tebuconazole/Beetroot, Beetroot leaves, Chicory, Endive, Radish, Silverbeet, Spinach/Sclerotinia rot	1/04/2014	30/06/2019	Growcom	All States (Ex Vic)
PER14457	Alpha-cypermethrin/Chicory, Leeks, Shallots, Spring onions/Redlegged earthmite & Onion thrips	19/03/2014	30/06/2019	Growcom	All States (Ex Vic)
PER14470	Dimethomorph+Mancozeb/Snow peas/Downy mildew	1/05/2014	30/04/2017	Growcom	All States (Ex Vic)
PER14471	Lambda-cyhalothrin/Spring onions, Shallots/Various Insects	30/05/2014	31/03/2019	Growcom	All States (Ex Vic)
PER14473	Dimethomorph+Mancozeb/Spring onions, Shallots, Leeks/Downy mildew, Purple blotch & Botrytis	18/12/2013	30/06/2018	Growcom	All States (Ex Vic)
PER14474	Methoxyfenozide/Sweet corn/Lepidopteran pests		30/07/2017	Growcom	All States (Ex Vic)
PER14479 v2	Propiconazole/Spinach, Silverbeet, Beetroot, Celery/ Leaf spot, Powdery mildew, Rust, Septoria & Early blight	10/12/2014	30/11/2019	Growcom	All States (Ex Vic)
PER14484	Fluazifop-P as butyl/Eggplant, Shallot, Spring onion, Leek, Garlic, Parsnip & Sweetpotato/Grass Weeds	16/04/2014	31/03/2018	Growcom	All States (Ex Vic)
PER14493	Phosphorous acid/Rhubarb/Downy mildew	1/07/2014	31/01/2019	Growcom	All States (Ex Vic)
PER14494	Trifloxystrobin/Silverbeet, Spinach, Chicory, Endive, Celery/Diseases	1/10/2014	30/06/2019	Growcom	All States (Ex Vic)
PER14505	Pyrimethanil/Snow & Sugar snap peas/Botrytis grey mould	1/07/2014	30/06/2019	Growcom	All States (Ex Vic)

Permit Number	Permit Description (pesticide/crop/pest)	Date Issued	Expiry Date	Permit Holder	States
PER14535	Clethodim/Carrots/Grass weeds	12/05/2014	31/03/2019	Growcom	All States (Ex Vic)
PER14536	Abamectin/Various Crops/Two-Spotted Mite	30/05/2014	30/06/2017	Growcom	WA
PER14583	Chlorpyrifos/Various Crops/Various Insect Pests	1/04/2014	31/03/2019	Growcom	All States (Ex Vic)
PER14584	Imidacloprid/Brassica leafy veg/Aphids, Whitefly & Thrips	1/04/2014	31/03/2019	Growcom	All States (Ex Vic)
PER14593	Mancozeb/Specified Fruiting Veg & Legume Veg/ Downy mildew, Antrhacnose & Alternaria	10/07/2014	30/06/2020	Growcom	All States (Ex Vic)
PER14596	Chlorpyrifos/Brassicas/Adult Vegetable beetle	1/10/2014	30/09/2019	Growcom	All States (Ex Vic)
PER14694	BTi/Capsicum (PC), Cucumber, Eggplant, Herbs, Lettuce/Fungus gnats	1/06/2014	30/06/2019	Growcom	All States (Ex Vic)
PER14695	Metalaxyl-M/Parsnip/Pythium spp. & Phytophthora spp.	1/05/2014	30/06/2019	Growcom	All States (Ex Vic)
PER14696	Abamectin/Head lettuce/Two-Spotted Mite	1/04/2014	31/03/2019	Growcom	All States (Ex Vic)
PER14701	Pyriproxyfen/Beans/Silverleaf whitefly	4/02/2015	30/06/2020	Growcom	All States (Ex Vic)
PER14703	Ethofumesate/Silverbeet, Spinach/Weeds	1/08/2014	31/07/2019	Growcom	All States (Ex Vic)
PER14722	Abamectin/Various Vegetables as Specified/Tomato Red Spider Mites	17/02/2015	30/09/2020	Growcom	All States (Ex Vic)
PER14725	Etoxazole/Capsicum, Tomato, Snow & Sugar snap peas, Cucurbits & Asian Cucurbits as Specified/ Tomato Red Spider Mites	22/10/2014	30/06/2018	Growcom	All States (Ex Vic)
PER14742 v2	Methabenzthiazuron/Leeks, Spring onions, Shallots/ Weeds	22/10/2014	30/06/2021	Growcom	All States (Ex Vic)
PER14744	Clethodim/Rhubarb/Grass Weeds	1/07/2014	30/06/2019	Growcom	All States (Ex Vic)
PER14765	Hexythiazox/Various Vegetables/Tomato Russet Mite, Broad mite, Two-Spotted Mite, Tomato Red Mite as specified	21/02/2015	31/03/2018	Growcom	All States (Ex Vic)
PER14812	Difenoconazole/Celery/Cercospora leaf spot & Septoria leaf blight	2/17/2015	9/30/2020	Growcom	All States (Ex Vic)
PER14816	Azoxystrobin/Carrot/Powdery mildew	1/06/2014	30/06/2019	Growcom	All States (Ex Vic)
PER14837	Mandipropamid/Leafy Veg/Downy mildew	24/05/2015	31/03/2018	Growcom	All States (Ex Vic)
PER14839	Zineb/Eggplant, Silverbeet & Spinach/Anthracnose	1/08/2014	30/09/2019	Growcom	All States (Ex Vic)
PER14840	Bupirimate/Cucurbits, Peppers/Powdery mildew	1/10/2014	30/09/2019	Growcom	ACT, NSW, Qld, SA, TAS, WA
PER14841	Chlorothalonil+Pyrimethani/Chicory, Endive, Radicchio, Silverbeet, Spinach/Botrytus & Alternaria	1/10/2014	30/09/2019	Growcom	All States (Ex Vic)
PER14842	Cu as oxychloride+Cu as hydroxide + others/Spring onions, Shallots/Downy mildew	1/10/2014	30/09/2019	Growcom	All States (Ex Vic)
PER14843	Indoxacarb/Celery/Various Insect Pests	1/10/2014	30/09/2019	Growcom	All States (Ex Vic)
PER14858	Pendimethalin/Parsnip/Weeds	1/04/2015	31/03/2020	Growcom	All States (Ex Vic)
PER14864	Pirimicarb/Sweetpotato, Brasica leafy veg, Chicory, Radicchio, Rocket/Aphids	11/11/2014	30/06/2019	Growcom	Tas
PER14890	Methomyl/Shallots, Spring onions/Western Flower Thrips	25/11/2014	31/10/2019	Growcom	All States (Ex Vic)
PER14891	Trifloxystrobin/Beetroot/Alternaria & Cercospora	1/01/2015	30/09/2019	Growcom	All States (Ex Vic)
PER14892 v2	Pymetrozine/Selected Leafy & Fruiting Veg/Specified Aphid & Whitefly pests	6/1/2015	31/05/2017	Growcom	All States (Ex Vic)
PER14896	Bentazone as Na salt/Green, Processing peas/ Specified Weeds	1/10/2014	30/09/2019	Growcom	All States (Ex Vic)
PER14906	Triadimenol/Various Alliums/White rot	22/10/2014	31/10/2019	Growcom	All States (Ex Vic)

Permit Number	Permit Description (pesticide/crop/pest)	Date Issued	Expiry Date	Permit Holder	States
PER14907	Emamectin as benzoate/Leafy Veg (other than lettuce) Parsnip, Swede, Turniip, Radish, Beetroot/ Diamondback moth, Heliothis, Cabbage White butterfly, Vegetable looper	9/12/2014	30/11/2019	Growcom	All States (Ex Vic)
PER14958	Dimethomorph+Mancozeb/Brassica leafy veg & Other Vegetable Crops/Disease Management	21/12/2014	31/10/2019	Growcom	All States (Ex Vic)
PER14964	Chlorothalonil/Lettuce seedlings/Anthracnose (shot hole)	21/12/2014	30/11/2019	Growcom	All States (Ex Vic)
PER80099	Alpha-Cypermethrin/Fruiting Veg (Except Cucurbits)/ Med Fly & Qld Fly	26/02/2015	31/03/2020	Growcom	Qld
PER80100	Clothianidin/Fruiting Veg (Except Cucurbits)/Med Fly & Qld Fly	10/11/2015	30/09/2018	Growcom	All States (Ex Vic)
PER80101	Clothianidin/Cucurbits/Cucumber Fruit Fly	10/11/2015	30/09/2018	Growcom	All States (Ex Vic)
PER80138	Alpha-Cypermethrin/Cucurbits/Cucumber Fruit Fly	26/02/2015	31/03/2020	Growcom	NSW, Qld, Tas, SA, WA, ACT
PER80169	Metribuzin/Carrots/Weeds	3/03/2015	31/03/2018	Growcom	All States (Ex Vic)
PER80501	Cyprodinil+fludioxonil/Alliums other than Onions/ Black mould & Grey mould (suppression)	20/07/2015	31/05/2020	Growcom	All States (Ex Vic)
PER80538	Mancozeb/Radish, Swede, Turnip, Parsley, Chicory & Brassica leafy veg/Cercospora leaf spot, Alternaria, White blister, Antrhacnose, Septoria as specified	1/04/2015	31/03/2025	Growcom	All States (Ex Vic)
PER80558	Bifenazate/Snow & Sugar snap peas/Mites	10/11/2015	31/08/2020	Growcom	All States (Ex Vic)
PER80717	Trichlorfon/Eggplant, Thai eggplant, Pepion, Cape gooseberry/Fruit Fly	28/10/2015	31/10/2020	Growcom	NSW, Qld,SA, WA, ACT, NT
PER80891	Tebufenpyrad/Cucumbers/Two-Spotted Mite & European red mite	30/09/2015	30/09/2020	Growcom	All States (Ex Vic)
PER80954	Methoxyfenozide/Snow & Sugar snap peas/Native budworm, Tomato grub, Cluster caterpillar	1/10/2015	30/09/2020	Growcom	All States (Ex Vic)
PER80975	Lambda-Cyhalothrin/Parsley/Insect Pests	11/10/2015	30/09/2020	Growcom	All States (Ex Vic)
PER80977	Propiconazole/Parsley/Fungal Diseases	8/12/2015	31/03/2021	Growcom	All States (Ex Vic)
PER81131	Prochloraz present as the manganese chloride complex /Leafy, Open-Head lettuce (Field grown only) /Anthracnose	2/02/2016	31/12/2018	Growcom	All States (Ex Vic)
PER81136	Cyprodinil+Fludioxonil/Lettuce/Anthracnose	12/10/2015	30/09/2018	Growcom	All States (Ex Vic)
PER81196 v3	Bifenthrin/Various Crop/Sliverleaf whitefly, Two- Spotted Mite, Greenhouse whitefly and Thrips	8/02/2016	31/03/2021	Growcom	All States (Ex Vic)
PER81241	Phenmedipham/Lettuce, Chicory, Endive, Radicchio, Spinach, Baby Spinach/Weeds	29/05/2015	31/05/2020	Growcom	All States (Ex Vic)
PER81244	Fluazifop-P as butyl/Various Vegetables & Herbs/ Annual Grass Weeds	1/07/2016	30/06/2019	Growcom	All States (Ex Vic)
PER81260	Imidacloprid/Beetroot/Aphids & Thrips	1/12/2015	30/09/2020	Growcom	All States (Ex Vic)
PER81271	loxynil, simazine, cyanazine, propachlor, ethofumesate, oxyfluorfen, pendimethalin/Leeks, Garlic/Weeds	10/11/2015	31/10/2021	Growcom	NSW
PER81285	Chlorothalonil/Parsley/Fungal diseases	7/08/2015	30/06/2020	Growcom	All States (Ex Vic)
PER81408	Phosphorous acid/Capsicum & Eggplant/ Phytophthora soil fungus	7/09/2015	30/09/2020	Growcom	All States (Ex Vic)
PER82039	Bifenthrin/Cabbage, Chinese cabbage & Cauliflower/ Symphyla	20/11/2015	31/10/2018	Growcom	All States (Ex Vic)
PER82341	Bifenazate/Cucumber, Peppers, Zucchini, Eggplant, Sinqua, Bitter melon, Tomato & Snake bean/Two- Spotted Mite & Red Tomato Spider Mite	21/10/2013	31/03/2021	Growcom	All States (Ex Vic)
PER82358	Esfenvalerate/Celery/Helicoverpa	5/02/2016	31/03/2021	Growcom	All States (Ex Vic)
PER82359	Pirimicarb/Chilli, Peppers/Aphids	5/02/2016	31/03/2021	Growcom	NSW, Qld, WA,NT
PER82551	Diazinon/Leeks, Cauliflower, Spring onions, Shallots, Coriander, Parsley/Onion fly, Onion seedling maggot & Thrips	20/05/2016	31/03/2021	Growcom	All States (Ex Vic)

