

Horticulture Innovation Australia

Final Report

Minor Use and Agronomy Coordinator – Minor Use Priorities and Awareness Program

Richard Mulcahy
AUSVEG Ltd

Project Number: VG13096

VG13096

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Tel: (02) 8295 2300
Fax: (02) 8295 2399

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Contents

Summary.....	3
Keywords	4
Methodology.....	11
Outputs.....	15
Outcomes.....	21
Evaluation and Discussion	23
Scientific Refereed Publications.....	28
Intellectual Property/Commercialisation.....	29
Acknowledgements.....	30
Appendices	31

Summary

Project VG13096 – *Minor Use and Agronomy Coordinator – Minor Use Priorities and Awareness Program* was designed to employ a Minor Use and Agronomy Coordinator to undertake a range of engagement and communication activities that would increase knowledge, awareness and involvement in the minor use system for the vegetable industry.

VG13096 ran from 2 May 2014 to 15 November 2016. It involved engagement and consultation primarily with members of the vegetable industry (specifically vegetable growers), relevant personnel at Horticulture Innovation Australia Ltd. (Hort Innovation), as well as permit holders (Growcom), the Department of Agriculture and Water Resources (DAWR), and other relevant stakeholders, such as entomologists, agronomists and chemical registrants.

The MUAC was be tasked with establishing a process for prioritising the industry's minor use requirements and was largely responsible for engaging with growers from all major growing regions of Australia, on all relevant minor use issues, and subsequently communicating this information to the organisation responsible for submitting and managing applications under the minor use permit system.

During VG12105 (*Review of pesticide investment in the vegetable industry*) it was found that there is a need for engagement and involvement directly with growers (a feet-on-the-ground approach) for effective prioritisation of agrichemical requirements in the Australian vegetable industry, and enhanced understanding of the minor use system. This was especially important as the Strategic Agrichemical Review Process (SARP) documents were produced from feedback collected via grower consultation over 2008-11 with a review of the content conducted in 2014. It is likely that high-priority pest issues may have changed since the initial consultation period and the more recent review of content, emphasising the need for a proactive consultative approach to prioritising agrichemical access for the vegetable industry.

VG13096 used numerous engagement methods to increase vegetable grower and stakeholder awareness and involvement in the minor use system. This was primarily achieved through two education symposia, two prioritisation workshops, presenting at regional events, individual farm visits, attendance of industry events and meetings with stakeholders. Through ongoing engagement, the MUAC increased vegetable grower involvement in the minor use system throughout the project.

VG13096 underwent a mid-term review conducted by Scholefield Robinson Horticultural Services Pty Ltd which highlighted that there is a general awareness among industry members of the MUAC's role and activities. This final report makes reference to recommendations arising from the review and for any future investment in this area.

Keywords

Minor Use; AgVet; permit; chemical; agrichemical; vegetable; pest; prioritisation; maximum residue limit; minor crops.

Introduction

Agrichemicals in Australia

While Australian horticulture is a high value industry, with current estimates of industry size to be 30,000 businesses located in every state and territory with a collective farm gate value of \$9 billion, growers of horticultural crops frequently suffer from a lack of legal access to crop protection products (pesticides). High costs for developing on-label requirements for use of agrichemicals in Australia has contributed to a limitation of control options. It is often the case that individual commodities are produced at too low a level for agrichemical companies to pay for registration of products for use on them. This limitation is also faced by growers of larger crops when a pest problem may be localised (regionally) or sporadic (some seasons) in nature.

In Australia, agrichemical supply is tightly regulated, with requirements for approval and maintenance of on-label usage consisting of safety criteria information, evidence of efficacy (trial or laboratory data), information for identification and mitigation of trade risks, residue-management strategies and accompanying data. An agrichemical product must be registered by the Australian Pesticides and Veterinary Medicine Authority (APVMA) before it can be supplied to the market. If a registrant were to supply an unapproved active constituent or a product that is not registered it may be at risk of legal action under the *Agricultural and Veterinary Chemicals Code Act 1994*.

Limited access to agrichemicals is especially a concern for the Australian vegetable industry, which is Australia's largest horticultural industry at an estimated annual gross value of production of \$3.7 billion in 2014-2014 for over 150 levied products. While vegetables are grown in every state and territory of Australia, production of some commodities (especially niche products) are often regionally grown. As such, agrichemical needs may differ significantly between regions.

The consequences of unregistered or non-permitted pesticide use can be severe; including product rejection and fines. In response to increasing agrichemical needs, Australia introduced a national 'Minor Use' system in the 1990's, which was modelled on overseas experiences, such as the Canadian system.

The Australian minor use system

Due to market failure and the economic landscape of Australia in terms of limited agrichemical availability for minor crops, Australian vegetable growers have a long history of needing Minor Use permits to gain access to chemical control options. Intended users may apply to the APVMA for consideration of a minor use permit to authorize an off-label use. Copies of these permits may be obtained from the APVMA website at portal.apvma.gov.au/permits

According to the Agricultural and Veterinary Chemicals Code Regulations (1995) minor use is defined as: *'A use of the product or constituent that would not produce sufficient economic return to an applicant for registration of the product to meet the cost of registration of the product, or the cost of registration of the product for that use, as the case requires (including, in particular, the cost of providing the data required for that purpose).'*

The minor use area is a dynamic one, with chemicals being withdrawn, new pests and diseases emerging and new crops being grown for which no approved chemicals are available. In processing a minor use permit application, a principle consideration for the APVMA is whether a suitable Maximum Residue Limit (MRL) can be established for the proposed use. Hence, data trials may be necessary in order to provide appropriate information to the regulator for permit approval. In establishing MRLs, the

APVMA considers all available data, including overseas data if available and determined relevant. Collating information for application, approving and undertaking data trials, and processing of permits can take six to nine months, and sometimes longer.

In 1998, project VG97066 was commissioned by Hort Innovation (then HRDC) and RIRDC to consider the issue of approvals for the use of pesticides on minor crops. The forum that was the keystone of this project included visitations from program leaders of minor use projects in California and the United Kingdom. Following the commissioning of a limited survey of vegetable growers to demonstrate the extent of the minor use problem, the forum investigated solutions to the minor use problem and developed recommendations for the establishment of a national minor use program. Figure 1 provides a blueprint that arose from VG97066, which lists important elements of a minor use program for national coordination of the system.

As yet, no single national minor use program is established within Australia, although there is coordination of data generation and permit applications amongst a number of industries, most notably horticulture and grains via Hort Innovation and Grains RDC. Five sectors represent the majority of minor use permit applications lodged, namely vegetables, fruit and tree nuts, non-crop situations, broad-acre crops, and forestry.

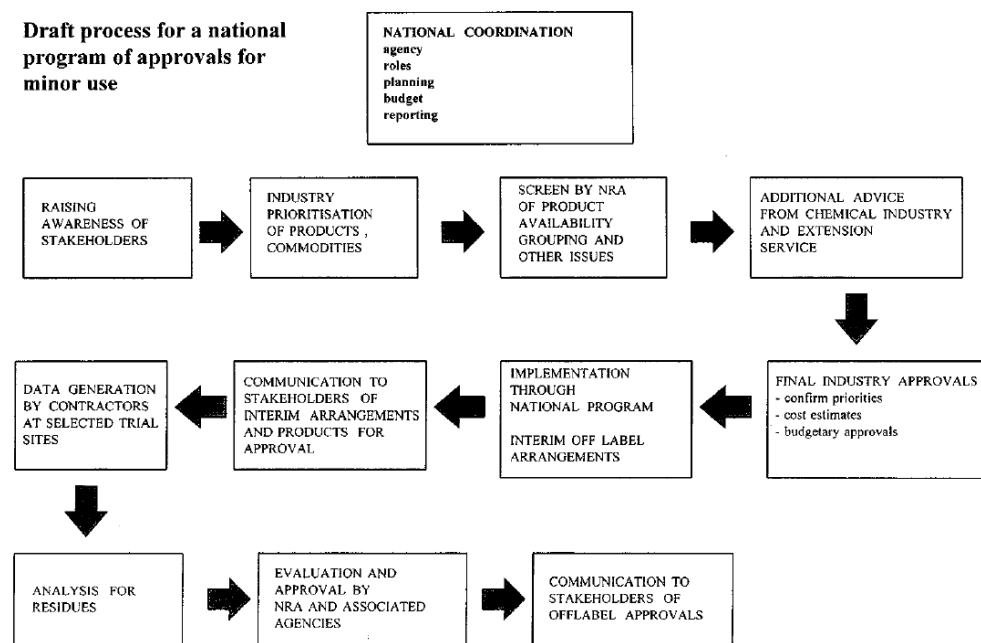


Figure 1. Output of VG97066: Process for a national minor use program

VG12105 – Review of the Minor Use system

In 2012/13 Horticulture Innovation Australia, (formally Horticulture Australia Limited) commissioned a review of the Minor Use system that is currently in place for the vegetable sector. Conducted by Dr Prue McMichael of Scholefield Robinson Horticultural Services Pty Ltd, project VG12105 (*Review of pesticide investment in the vegetable industry*) assessed both the Minor Use system itself, and importantly, how

industry stakeholders understood and were engaged with this system. The review found that while the existing minor use system for the vegetable sector is functional, it is also manifestly complex and is severely lacking in engagement from industry stakeholders; many vegetable growers were found to be unfamiliar with the system and how it operates.

To ensure that the minor use system for the vegetable sector adequately reflects the unique and changing needs of vegetable industry stakeholders (specifically growers), the review recommended that a formal minor use prioritisation process be introduced, which is designed for the industry and driven by the industry.

As an essential part of this, it was recommended that the Australian vegetable industry undertake a range of activities that would increase industry stakeholder awareness, engagement and ownership of the current Minor Use system. This included establishing a central minor use contact point within the vegetable industry as a matter of urgent priority – referred to in this project as the Minor Use and Agronomy Coordinator (MUAC).

VG13096 – Project intent

VG13096 endeavoured to implement recommendations made in the final report of VG12105. According to the project agreement, the vegetable industry MUAC was tasked with establishing an effective process for prioritising the industry's minor use requirements and engaging with growers from all major growing regions of Australia, on all relevant minor use issues, and subsequently communicating this information to the organisation responsible for submitting and managing applications under the minor use permit system (Hort Innovation).

At establishment, it was determined that the project would be comprised of the following elements: MUAC appointment, establishing & implementing the minor use prioritisation process, engagement and consultation, education and awareness campaign (including education symposia), participation in information workshops, participation in industry events, farm visits/meetings, communications activities, mid-term project review, and final report.

It was agreed that the appointed MUAC was not expected to have strong knowledge or responsibility for the regulatory aspect of the current minor use system, or the processes involved with the APVMA and data generation, submission and permit management. However, it was expected that the appointed person would develop their knowledge and understanding of these areas once in the role.

Equally, the MUAC was required to demonstrate strong communications skills, to ensure that messages pertaining to minor use issues would be proactively and effectively communicated to growers and other minor use stakeholders, both regionally and nationally. It was intended that the person appointed to the Minor Use and Agronomy Coordinator position would serve as the primary industry contact point on minor use related issues. Strong stakeholder relations and engagement was an important aspect of this project.

Core responsibilities of the MUAC included establishing and driving a formal minor use prioritisation process and an industry-wide education campaign, as well as serving as a representative for the vegetable industry in consultations with stakeholders. Major tasks, as outlined in the project agreement, included setting up a network of minor use stakeholders, organising an annual agrichemical education symposium, and holding annual prioritisation workshops that would bring together informed growers and industry experts.

Ultimately, the project intended that the MUAC would also provide a much needed link between growers and the minor use submission process, and that through the prioritisation workshops, symposia and communications activities, the MUAC would ensure that Hort innovation and the APVMA were kept informed about the minor use needs and priorities of Australian vegetable growers.

The intended outcomes of this project included an increased level of awareness, engagement and input from members of the Australian vegetable industry in the minor use system for vegetables, which would facilitate an effective process for the prioritisation of minor use permit options. As a result of this project, industry members would be better informed about the system, and the industry would be more effective at identifying and responding to the key minor use needs of the industry. By establishing a central point of contact within the vegetable industry on minor use issues, it was expected that more growers would gain an understanding of how important it is to be involved and provide input into the system for prioritisation purposes.

Relevant organisations

The APVMA issues permits for emergency use, minor uses (minor crops, or minor uses in major crops) and for research purposes. Permits are issued when the use would otherwise be illegal according to state or territory legislation (Victoria is an exception and other states allow for some exemptions). Until 2016, Growcom held all minor use permits for the Australian vegetable industry. That function has now been transferred to Hort Innovation. As well as holding minor use permits for the vegetable industry, Hort Innovation manage data acquisition and generation, strategic and tactical development, and tendering out of research and development required for permit preparation.

Preceding work and current linkages

This project is an outcome of VG12105 (*Review of pesticide investment in the vegetable industry*) and was linked with MT10029 (*Managing pesticide access in horticulture*).

In 1999, Hort Innovation (then Horticulture Australia Limited) supported a minor use project for the vegetable industry with Ausveg and Crop Protection Approvals, a grower-owned company. A coordination project was then established in 2004 as a means of facilitating access to minor use permits by levy-paying horticultural industries. The first iteration was AH04009 (*Pesticide Minor-Use Coordinator*), this continued work from the 1999-2003 minor use initiative, but broadened the project across all horticultural crops. This project ran in parallel to services provided by AKC Consulting Pty Ltd from 2004-2009 under Project AH04007 (*Pesticide Regulation Coordinator*) that addressed the agrichemical review of the time, CODEX and regulatory issues associated with access to pesticides.

Following a 2007 review of project AHO4009 by Scholefield Robinson Horticultural Services Pty Ltd. (AH06104) the coordination project was continued in the 2007-2010 iteration, MT07029 (*Managing pesticides across horticulture*). MT07029 aimed to assist horticultural industries gain access to pesticides necessary for sustainable production by critically assessing pesticide uses and requirements, developing a systematic approach to facilitate access to minor use permits, managing trial data projects to support permit requests, working with international minor use agencies and agrichemical companies to pursue new pest management strategies and options, and conduct a Strategic Agrichemical Review Process to plan for future pesticide requirements.

A myriad of ancillary minor use projects had also been funded prior to this current project and MT10029. In 2007, VG04084 (*Preparing minor use desktop applications for vegetables*) was carried out by AgWare Consulting Pty Ltd, to complete minor use application work initiated by Crop Protection Approvals from

2000. Liaising took place between field researchers and analytical laboratories to monitor progress and ensure tasks designated to these bodies was completed to allow applications to be submitted to the APVMA. This was followed in 2011 by VG11030 (*Desktop preparation of pesticide minor use permit applications in various vegetable crops*) undertaken by AKC Consulting Pty Ltd. VG11030 required the preparation of minor-use permit applications, covering a range of vegetables crops to be prepared and submitted to the APVMA. The goal was to obtain regulatory approvals for eight pesticides covering over 40 pesticide × commodity uses.

Determination and prioritisation of vegetable industry chemical access needs largely took place via industry consultation in MT10029, which began in 2010 and was subsequently brought in house to Horticulture Australia Limited in August 2013. Once vegetable industry needs were determined, project VG12072 was launched in 2012 with the aim of preparing minor use permit applications covering a range of vegetable crops. This Growcom managed project resulted in the preparation of eleven applications submitted to the Australian Pesticides and Veterinary Medicines Authority (APVMA) for assessment. In addition, through 2012-2015 the projects VG12035 and VG12114 (*Minor use permit management for the vegetable industry*) were managed by Growcom.

Strategic Agrichemical Review Process (SARP)

As previously emphasised, access to appropriate pesticides is adequate in some vegetable crops, but limited in others. This hinders management of plant pest issues, especially in minor crops. Hort Innovation, and previous iterations of the RDC, have regularly funded Strategic Agrichemical Reviews of vegetable commodities. A SARP involves a desktop audit and industry liaison component to assess the importance of plant pests affecting a horticultural industry. The SARPs aim to identify key pest priorities by examining existing registrations and determining where a lack of suitable options exist to control key pests. Determination of priority chemical options that industry may pursue for inclusion on labels or minor use permits include considerations of resistance management, residue profiles, withholding periods, efficacy, trade requirements, human safety, environmental issues, and the potential to work into Integrated Pest Management (IPM) systems.

SARPs for the vegetable industry were undertaken during AH04009, MT07029 and MT0029 and involved meetings held around Australia with growers, retailers, consultants, Industry Development Officers and government agencies. During these projects the SARP identified pests and weeds of concern for vegetable industry growers and available management options (pesticide and non-pesticide solutions) were evaluated for against these threats. A desktop audit of the SARPs was also conducted in 2014. Ultimately, a SARP determines gaps in the industry pest control strategy and identifies suitable new or alternatives pesticides to address these gaps.

VG13096 – Project objectives

As a result of the VG12105 review, the project *VG13096 – Minor Use and Agronomy Coordinator – Minor Use Priorities and Awareness Program* was initiated to increase vegetable industry knowledge and awareness of minor use and was informed by recommendations from VG12105 and industry comments. Key project elements were:

1. Appointment of a suitably qualified Minor Use and Agronomy Coordinator
2. Establishing and implementing the minor use prioritisation process
3. Engagement and consultation with industry and Hort Innovation
4. Education and awareness

5. Communications activities

This final report details methodology, activities, outputs and outcomes undertaken from project inception on 2 May 2014 to its conclusion on 15 November 2016. This report also includes recommendations to shape any further iterations of the project.

Methodology

Method to address industry development needs

As stated in the project agreement, key elements of VG13096 were:

1. Appointment of a suitably qualified Minor Use and Agronomy Coordinator
2. Establishing and implementing the minor use prioritisation process
3. Engagement and consultation with industry and Hort Innovation (then Horticulture Australia Limited)
4. Education and awareness
5. Communications activities

Appointment of a suitably qualified Minor Use and Agronomy Coordinator

At the outset of VG13096 a MUAC was employed to undertake requirements of the project. From July 2014-September 2016 Scott Kwasny was based at AUSVEG, Melbourne, and charged with engaging with growers from all major growing regions of Australia, on Minor Use and pest issues, and subsequently communicating this information to Hort Innovation.

The MUAC demonstrated more than seven years of experience in the agricultural sciences. Qualifications included a Bachelor of Science from the University of Queensland with majors in botany and genetics, first class Honours (Botany) and a Certificate IV in training and assessment. Prior to commencement with AUSVEG, the MUAC worked at the CSIRO for five years as part of an international research collaboration to improve yield in rice.

On departure of the MUAC in 2016, it was agreed between Hort Innovation and AUSVEG that this project would be terminated prematurely before the intended end date of 15 May 2017, based on the proximity of the official end date.

Establishing & implementing the Minor Use Prioritisation Process

The first key task of the MUAC, as outlined in the project brief, involved setting up a network of minor use stakeholders. This was a task that was undertaken to support development of a minor use prioritisation process. The MUAC established a database to create a network of stakeholders from which feedback on agrichemicals could be collated. The database also collected information relating to specific crops and total area grown. Sign up to the database was achieved through constant industry engagement, specifically via fax outs, phone calls, regular reminders to industry in the AUSVEG Weekly Update, in *Vegetables Australia*, and during face-to-face meetings with growers and other industry stakeholders. A dedicated webpage on the AUSVEG website encouraged stakeholders to join the database and provided the necessary sign-up sheet.

The primary role of the MUAC was to establish and drive a formal prioritisation process for minor use requirements within the vegetable industry. To this end, while VG13096 was running, the MUAC developed an agrichemical prioritisation strategy for the Australian vegetable industry. The task of developing a prioritisation process was closely linked to the task of raising awareness of the minor use system. Due to a lack of understanding of the system, and a lack of knowledge of the project itself within the Australian vegetable industry, significant effort was input into the industry awareness element of the program. To raise awareness of the system the MUAC presented to growers at industry events, one-on-one to industry stakeholders, and met with growers on farm to discuss the system. As a result of

ongoing engagement, stakeholders opted to join the database and contribute information on agrichemical needs and pest priorities.

The prioritisation process was intended to be underpinned by an annual prioritisation workshop, in line with project brief requirements. According to the project brief, the workshop would:

- Bring together informed growers - representing each crop group and all major vegetable growing regions of Australia - as well as a pool of other attendees potentially including authors of the SARP documents, strategic knowledge experts, technical field personnel and consultants, minor use permit holders, regulators, and Hort Innovation representatives;
- Be held each year; and,
- Be restricted to no more than 50 participants, to ensure that the goal of the workshop – to finalise the vegetable industry’s minor use priorities – can be effectively achieved.

The MUAC held two prioritisation workshops with industry stakeholders (Gatton, QLD in 2015 and Adelaide, SA in 2016). In order to supplement feedback collected at the workshops, the MUAC produced workbooks that were handed out to industry stakeholders who attended at each workshop. Electronic copies were also sent out in a bulk email to industry stakeholder to fill out and return. These workbooks were developed to collect feedback on existing minor use permits and all new minor use permit requests. In the 2016 workbook. There were additional allowances for new pest issues to be raised by growers for other commodities and to bring new issues forward that were different to the currently listed high-priority pest issues as indicated in the SARP documents.

The workbooks that were handed out to industry stakeholders at each workshop are included in Appendix 1. The MUAC endeavoured to include growers and agronomist participants representing all codex crop groups of vegetable commodities across Australia. Attendees from major vegetable growing regions were targeted as well as other stakeholders, such as technical field personnel and consultants. The codex crop groups that levied vegetables fall under are listed in Table 1.

Table 1. Codex crop groups

Codex number	Commodity group
009	Bulb vegetables
010	Brassica vegetables
011	Fruiting vegetables – cucurbits
012	Fruiting vegetables – other than cucurbits
013	Leafy vegetables
014	Legume vegetables
016	Root and tuber vegetables
017	Stalk and stem vegetables
027	Herbs

Engagement and consultation

Through the prioritisation workshops, symposia and communications activities, the MUAC was tasked with ensuring that Hort Innovation and the APVMA were aware of the Minor Use needs and priorities of Australian vegetable growers. The MUAC was also tasked with providing a much needed link between growers and the minor use submission process.

Engagement and consultation as part of VG13096 was critically important, in order to effectively raise awareness of the minor use process and gather feedback on agrichemical priorities. Methods of increasing awareness and understanding of the minor use system included:

- Regular articles in the AUSVEG Weekly Update e-Newsletter;
- Regular articles in *Vegetables Australia* on Minor Use and chemical access issues;
- Farm visits to key vegetable production areas around Australia;
- Attendance at stakeholder meetings;
- Undertaking speaking roles at grower seminars;
- Manning a project booth at the 2015 and 2016 National Horticulture Convention; and,
- Holding an Agrichemical Education Symposium in 2015 and 2016.

Education and awareness campaign

The Minor Use and Agronomy Coordinator was responsible for establishing a national education and awareness campaign on the minor use system for the Australian vegetable sector. This involved disseminating information to members of the Australian vegetable industry on a range of minor use related issues. This campaign involved elements of communication and engagement with industry members during farm visits and at meetings. During farm visits and at industry workshops the MUAC distributed a minor use pamphlet, which included information on the system and encouraged sign up to the minor use database in order to supply industry feedback where necessary.

To achieve appropriate reach to stakeholders, each edition of *Vegetables Australia* included an article on minor use, written by the MUAC and covering relevant information as part of the project. In addition, 75 short articles providing updates on minor use and chemical access were written for the AUSVEG Weekly Update – a regular e-Bulletin distributed to vegetable growers and other industry stakeholders on a weekly basis.

Education symposia

As the service provider, AUSVEG was tasked with assessing the most appropriate time, location and format for the annual education symposia to be held based on consultations with a range of stakeholders. The symposia had a differing focus to the annual prioritisation workshops, which was on education and raising awareness of minor use related issues within the vegetable industry, and tied in with efforts to increase stakeholder education around the minor use system.

Two agrichemical education symposia were held in 2015 and 2016 on the Gold Coast, QLD, in parallel to the National Horticulture Convention. The purpose of the symposia was to provide an educational vehicle to increase vegetable industry knowledge on agrichemical topics. At each symposium six industry speakers presented to industry stakeholders – growers, agronomists and agri-businesses – on topics related to chemical access and chemical usage. Topics covered at the symposia included minor use, including the role of the MUAC, the use of international data and current projects by the APVMA, minor use trials to develop maximum residue limits, the use of soft chemistry, and the emergence of resistance in pest populations.

Participation in information workshops

The MUAC was required to present on the prioritisation process, and other relevant minor use issues, at relevant existing workshops throughout the life of the project to help obtain further feedback from industry members on minor use issues. During the course of VG13096, the MUAC presented to over 350 growers and stakeholders in addition to presentations at the prioritisation workshops and education symposia. The major presentation topic at these workshops was about the project and the role of the

MUAC, rather than about the prioritisation process.

Participation in industry events

To raise awareness of the Minor Use prioritisation process and to build the profile of the MUAC position, the MUAC participated in industry conferences, field days and events. It was the intention that building awareness of the position would encourage growers to use the MUAC as a central contact point. To this end, the MUAC also had a dedicated Minor Use Information Booth at the 2015 and 2016 National Horticulture Conferences. Throughout the course of the project, the MUAC also attended 29 stakeholder engagement meetings across Australia to raise awareness of the Minor Use system and the role of the MUAC.

Farm visits/meetings

Throughout the life of this project the MUAC was tasked with periodically conducting individual farm visits as part of the broader consultation and engagement activities with industry – working in tandem with the education and awareness raising campaign of the project. The MUAC used these visits to gain feedback on minor use issues, and encourage growers to provide their input into the minor use system. Farm visits, which played an important role in establishing a network of stakeholders interested in providing feedback on agrichemical needs, targeted major vegetable growing regions around Australia.

Communications activities

The MUAC worked with the vegetable communications team within AUSVEG to implement a communications program that included the following elements:

- Dedicated minor use page on the AUSVEG website that included relevant links to the APVMA, vegetable SARP resources, information on the minor use system, contact details for the MUAC, and a sign up form for the minor use database. The website URL is ausveg.com.au/minoruse;
- Information on new permits and permit renewals were supplied by the MUAC for inclusion in the AUSVEG Weekly Update e-Newsletter and *Vegetables Australia*;
- Development of a minor use permit request form and upload of the form to the minor use page on the AUSVEG website; and,
- Regular articles for *Vegetables Australia* on the topic of minor use and encouraging input into the system.

Mid-term review

In April 2016, VG13096 was subject to a mid-term review, which was conducted by Dr Prue McMichael of Scholefield Robinson Horticultural Services Pty Ltd. The review was comprised of consultation with industry stakeholders for feedback on the project, and an analysis of MUAC competency and activities. The outcomes of the review are provided in the 'Evaluation and Discussion', and 'Recommendations' sections of this report.

Outputs

Minor Use prioritisation process

A minor use prioritisation strategy was developed during the early stages of VG13096. The strategy is included in Appendix 2. While the strategy was developed, it was not rolled out completely under VG13096. Elements of the strategy that were rolled out included the prioritisation workshops and prioritisation workbooks. The majority of discussion at the prioritisation workshops involved gaining agreement or otherwise on permit renewals and new permit applications to be progressed. Under advice from Hort Innovation, these activities required a greater emphasis on determining pest prioritisation for use at the AgVet Collaborative Forum, rather than prioritisation of permits for renewal or application.

Minor use prioritisation workshops

The first prioritisation workshop was held on 28 April, 2015, in Gatton, QLD. Thirteen growers and agronomists attended the event with an additional 15 growers and agronomists providing input separate from the event through completion of the workbook. The second prioritisation workshop was held on 28 April, 2016, in Adelaide, SA. Thirty-three growers and agronomists attended the event with additional grower input sought separately from the event. Twenty-eight workbooks were completed in parallel with the workshop. The workshops brought together growers and other stakeholders including strategic knowledge experts, technical field personnel and consultants.

Both workshops evaluated new permit requests and existing permits for renewal. The 2015 workshop evaluated:

- 34 minor use permits for renewal;
- 28 minor use permits for discussion;
 - Expected to require data generation;
 - Have specific data generation requirements;
 - Require data sought from growers;
- Two new permit requests for grower consideration.

All 34 permits presented for renewal received support to be renewed, and all 28 permits for data generation and support were recorded and comments documented. Both new permits received grower support and will continue through the HIA process. The 2015 outcomes report is included in Appendix 3.

The 2016 workshop evaluated:

- 16 minor use permits for discussion;
 - Have specific data generation requirements;
 - Require data from growers;
- Three new permit requests for grower consideration.

A 2016 workshop outcomes report, which includes an updated SARP list based on stakeholder feedback at the prioritisation workshop, was provided to Hort Innovation for use at the AgVet Collaborative Forum. This report is also included in Appendix 3.

Attendees at the 2016 workshop and other vegetable growers contacted by email were asked to provide feedback on pest priorities. This information was used to provide an update to the top five pest priorities for each crop group listed in the SARPS. Feedback surveys were also distributed at the 2016 workshop and 18 were returned. The updated SARP list and the results of the feedback survey part of the 2016 workshop outcomes report.

As stated previously, on advice from Hort Innovation, these workshops required a greater emphasis on prioritising needs for each commodity group. As such, recommendations for improvement of the consultation methodology in order to yield high quality prioritisation information is included in the following sections.

Participation in existing industry workshops/events to communicate the minor use process/issues

During the course of VG13096, the MUAC presented to over 350 growers and stakeholders in addition to presentations at the prioritisation workshops and education symposia. Participation in events is listed in Appendix 4. Throughout the project, the MUAC also attended 29 stakeholder engagement meetings across Australia to raise awareness of the minor use system and the role of the MUAC (Table 2).

Table 2. Stakeholder engagement meetings attended by the MUAC

Date	Location	Event
21 Nov 2014	Melbourne, VIC	Bayer meeting
3 Dec 2014	Sydney, NSW	AHR meeting
4 Dec 2014	Sydney, NSW	DuPont and Syngenta meetings
28 Jan 2015	Devonport, TAS	Peracto meeting
20 Feb 2015	Melbourne, VIC	AgNova meeting
24 Feb 2015	Gatton, QLD	UQ meeting with drone development group
23 Apr 2015	Melbourne, VIC	Farm productivity Vegetable Advisory Committee
6 May 2015	Camberwell, VIC	Department of Agriculture meeting
16 Jul 2015	Sydney, NSW	Department of Agriculture AgVet chemical reform meeting, with Hort Innovation and industry stakeholders, to discuss proposed chemical regulation reforms.
6 Aug 2015	Tullamarine, VIC	Department of Agriculture stakeholder engagement meeting on cost recovery redesign.
17 Aug 2015	Melbourne, VIC	APVMA Information session, detailing changes to the APVMA structure since implementation 1 July 2014, and what can be expected in the future.
19 Aug 2015	Brisbane, QLD	Steritech facility tour and meeting, to discuss benefits of radiation treatments for control of pests.
28 Aug 2015	Camberwell, VIC	Netafim meeting. Detailing current products that are available and possible uses of them in the vegetable industry.
2 Sep 2015	Devonport, TAS	Peracto Industry Seminar, bringing together stakeholders from across Australian horticultural industries to receive presentations on: <ul style="list-style-type: none"> • The agricultural white paper • Safe work in agriculture • Poppy mildew • Drones and advancing technologies
3 Sep 2015	Hobart, TAS	University of Tasmania, Research Engagement Dinner, to bring together members of the agricultural industry for networking and discussion on mutual issues while gaining an overview of research undertaken at the University of Tasmania.
22 Oct 2015	Camberwell, VIC	Meeting with E.E. Muir & Sons agronomists, to discuss future communication and engagement with agronomists across Australia. To try and stay informed on pest issues and changes to what is important in the pest landscape.
13 Nov 2015	Melbourne, VIC	Department of Agriculture Workshop on AgVet chemical regulation reforms. This was the second stage of consultation with industry regarding chemical regulation reforms.
28 Jan 2016	Werribee, VIC	Hort Innovation levy payers meeting.
25 February 2016	Sydney, NSW	Vegetable Farm Productivity, Resource Use and Management

		Advisory Panel
16 Mar 2016	Camberwell, VIC	Teleconference with Deloitte on Global Harmonisation System.
22 Mar 2016	Gatton, QLD	Department of Agriculture stakeholder engagement presentation on vegetable industry projects.
5 Apr 2016	Canberra, ACT	Department of Agriculture Exotic Weed Deed Roundtable.
6 Apr 2016	Tullamarine, VIC	Department of Agriculture Biosecurity Legislation Discussion Forum.
13 Apr 2016	Canberra, ACT	Meeting with CropLife.
14 Apr 2016	Canberra, ACT	Meeting with APVMA and the whole chemical team.
9 May 2016	Melbourne, VIC	APVMA information session.
8 June 2016	Canberra, ACT	AgVet Collaborative Forum
2 August 2016	Sydney, NSW	DuPont Meeting
3 August 2016	Sydney, NSW	Syngenta and Adama Meetings

Periodic farm visits to discuss the MU process directly with growers

During the course of VG13096, the MUAC periodically conducted farm visits as part of the broader consultation and engagement activities with industry. The MUAC endeavoured to visit all major vegetable growing regions around Australia. Farm visits over the course of the project are detailed in Table 3.

Table 3. Farm visits over the course of VG13096

Date	Location	Total farms visited
2 Sep 2014	Cranbourne, VIC	3
25 Sep 2014	Cranbourne, VIC	1
14 Jan 2015	Yarrawonga, VIC	1
16 Jan 2015	Swan Hill, VIC	6
28 Jan 2015 – 29 Jan 2015	Devonport, TAS	13
3 Mar 2015	Gatton, QLD	5
4 Mar 2015 – 06 Mar 2015	Virginia, SA	11
18 Mar 2015 – 19 Mar 2015	Darwin, NT	6
20 Mar 2015	Katherine, NT	3
29 Apr 2015 – 30 Apr 2015	Gatton, QLD	8
22 May 2015	Werribee, VIC	5
22 Jul 2015	Clyde, VIC	6
29 Jul 2015 – 30 Jul 2015	Lindenow, VIC	5
25 Aug 2015 – 26 Aug 2015	Devonport, TAS	7
2 Sep 2015 – 3 Sep 2015	Devonport, TAS – Hobart, TAS	5
14 Sep 2015 – 16 Sep 2015	Yetholme, NSW – Bathurst, NSW – Cowra, NSW	7
14 Oct 2015 – 16 Oct 2015	Manjimup, WA – Gingin, WA	9
12 Jan 2016 – 13 Jan 2016	Virginia and Murray River region, SA	10
21 Jan 2016 – 22 Jan 2016	Gippsland and East Gippsland, VIC	7
23 Mar 2016 – 24 Mar 2016	Lockyer valley region, QLD	6
27 Apr 2016	Virginia region, SA	10
	Total:	134

Annual minor use education symposium

Two agrichemical education symposia were held in 2015 and 2016 on the Gold Coast, QLD, in parallel to the National Horticulture Convention. Registrations for the 2015 symposium totalled 47 industry representatives (21 vegetable growers, four agronomists/consultants and 22 other stakeholders), while the 2016 symposium attracted 60 industry representative registrations (33 growers, 11 agronomists/consultants and 16 stakeholders).

Vegetable levy payers and nominated grower representatives were eligible to receive funded support to attend the symposia. For the 2015 symposium, of the 21 growers who registered, 10 received funding to assist their attendance. They were from South Australia (4), Victoria (1), Northern Territory (1), and Queensland (3). For the 2016 symposium, of the 33 growers who registered seven received some funding. They were from Victoria (3), New South Wales (1), Tasmania (2) and Queensland (1). Topics covered at the symposia are listed in Table 4.

Table 4. Speaker topics at the education symposia, 2015 and 2016

Topic	Presenter
2015	
Minor Use Keynote address	CropLife
Integrated Crop Protection	Applied Horticultural Research
responsible use of chemicals	Agronomist
Chemical control and chemical resistance, their relationship and management	NSW Department of Primary Industries
Challenges and processes involved in minor use registrations	Bayer CropScience
MRLs and minor uses: What information is required for MRL establishment?	APVMA
Introduction to Minor Use in Australia	AUSVEG
2016	
APVMA international initiatives and use of international data in Minor Use	APVMA
Minor Use trials, the practicalities involved in completing a Minor Use permit	Peracto
Soft chemistry, the important considerations of chemical use	E. E. Muir & Sons
Green Peach Aphid management and resistance	Cesar
Vegetable Leafminer in Queensland	QDAF
Minor Use in Australia	AUSVEG

Minor use information booth at the National Convention

In order to build awareness of the MUAC position, encourage growers to use the MUAC as a central contact point, and discuss industry needs, the MUAC had dedicated information booths at the 2015 and 2016 National Horticulture Conventions.

Articles on minor use issues in each edition of *Vegetables Australia*

The MUAC regularly contributed articles and information on new and renewed minor use permits to the *Vegetables Australia* magazine over the course of the project, all of which can be found at <http://www.ausveg.com.au/intranet/publications/va.htm>.

Contributions to AUSVEG e-Newsletters and website to provide updates on minor use issues

Additional articles were contributed to the Weekly Update e-Newsletter and R&D Newsletter as required. Specifically, 75 short articles providing updates on Minor Use and chemical access were written for the AUSVEG Weekly Update. In addition to topical articles, the Weekly Update was supplied regularly with information on new and renewed minor use permits. Weekly Update articles are listed below.

- AUSVEG appointment of the MUAC (1 article)
- Minor Use Prioritisation Strategy (1 article)
- Discussing the Minor Use Awareness Program (11 articles)
- Minor Use Permit articles containing detailed information regarding these permits (4 articles)
- Informing stakeholders of an APVMA chemical review (3 articles)
- Highlighting the upcoming 2015 Minor Use Workshop (1 article)

- Promoting and providing summaries on AUSVEG R&D Information Sessions including presentations on the Minor Use Awareness Program (11 articles)
- Promoting the 2015 Minor Use Education Symposium (9 articles)
- Articles regarding chemical use and disposal (3 articles)
- Regarding CropLife resistance management strategies for 2015 (1 article)
- Regarding responsible disposal of fenthion products (1 article)
- Regarding ChemClear ability to collect waste (1 article)
- Informing stakeholders on the Department of Agriculture and Water Resources agvet chemical regulation reforms and asking for feedback (1 article)
- Detailing the Department of Agriculture and Water Resources agvet chemical regulation reform workshops and how to participate in the reforms (3 articles)
- Informing stakeholders about the Minor Use Database (3 articles)
- Discussed the APVMA crop groupings project (2 articles)
- Noted chemical regulation reforms and asking for feedback from industry (1 article)
- Informed stakeholders on the CropLife web tool on resistance management strategy (1 article)
- Promoted the 2016 Minor Use Prioritisation Workshop (7 articles)
- Promoted the 2016 Minor Use Education Symposium (8 articles)
- Detailing the emergency use permit granted for sweet potato (1 article)
- Informing stakeholders of outcomes from the 2016 Minor Use Prioritisation Workshop (1 article)

Minor use permit feedback and request forms

The MUAC developed a minor use permit feedback form as a method of collecting information about permit usage and effectiveness of the product. The MUAC also developed a permit request form that was subsequently housed on the minor use page of the AUSVEG website. The form included fields for information on requester details, crop details, pest issue, current control methods, the urgency of the request, pesticide request and proposed application regime. When necessary the MUAC aided the requester to populate the form, which was then used by the MUAC to assess applicability for emergency use or minor use permits. The feedback and request forms can be found in Appendix 5.

Minor Use Database

The development of the minor use database was an output of VG13096 that aided in communicating relevant information to industry, as well as gaining feedback from industry in response to permit applications and permit renewals. A breakdown of the database is supplied in Table 5.

Table 5. Minor use database breakdown

Minor Use Database		
Stakeholders	Hectares of levied vegetable crops grown in 2014	Number of levied vegetable commodities represented
270	36,393.41ha	71
These stakeholders from the Minor Use Database represent:		
<ul style="list-style-type: none"> • 219 growers from across Australia representing each state and territory as follows 		

- NSW: 18 growers
- NT: 4 growers
- QLD: 52 growers
- SA: 34 growers
- TAS: 32 growers
- VIC: 53 growers
- WA: 26 growers
- 31 agronomists
- 20 industry stakeholders

The list of 71 commodities covered in the Minor Use Database are: Angled Luffa, Artichoke, Beetroot, Bitter Gourd, Bok Choy, Broccoli, Broccolini, Brussel's Sprouts, Butternut Pumpkin, Cabbage, Capsicum, Carrot, Cauliflower, Celery, Celery, Chard, Chilli, Chinese Broccoli, Chinese Cabbage, Chinese Spinach, Choy Sum, Coloured Carrot, Coloured Lettuce, Continental Parsley, Coral Lettuce, Cos Lettuce, Cucumber, Dutch Carrot, Eggplant, Endive, Fennel, Green Bean, Green Pea, Hairy Gourd, Iceberg Lettuce, Kale, Leafy Lettuce, Lebanese Cucumber, Leek, Lettuce, Okra, Pak Choy, Parsley, Parsnip, Pumpkin, Radish, Red Cabbage, Rhubarb, Rocket, Shallot, Silverbeet, Smooth Luffa, Snake Bean, Snow Pea, Spinach, Spring Onion, Squash, Sugar Snap Pea, Swede, Sweet Peppers, Sweetcorn, Sweetpotato, Swiss Chard, Tatsoi, Turnip, Watercress, White Radish, Wild Rocket, Witlof, Wombok and Zucchini.

Liaison role

During the course of the project, 83 minor use permits and permit requests were evaluated by industry:

- 34 permits required industry support for renewal;
- 44 permits required data generation and required industry support to fund data generation projects; and,
- Five new permit requests were processed by the MUAC and forwarded to Hort Innovation.

Evaluation was facilitated by the MUAC on each occasion and where necessary, the MUAC researched validity of application, populated the permit application and forwarded the application to Hort Innovation for further assessment. Feedback from industry was gained through use of the project database.

Chemical Access Advisory Group (CAAG) formation

During the project it was agreed that the industry would benefit from a Chemical Access Advisory Group (CAAG), which had an inaugural meeting in October 2016. This group was tasked with reviewing and providing comment on new Minor Use permit requests. At the completion of VG13096 in November 2016 the CAAG was still active.

Outcomes

According to the VG13096 project agreement, *"The outcomes of this project will be an increased level of awareness, engagement and input, from members of the Australian vegetable industry in the minor use system for vegetables. This project will ensure there is an effective process in place for the prioritisation of minor use permit options, which address the industry's unique and changing crop protection needs. As a result of this project, industry members will be better informed about the minor use system, and will be able to more effectively identify and respond to the key minor use needs of the industry."*

The direct value of the project is difficult to measure as stakeholders are varied and reside across Australia. However, according to outcomes of the Scholefield Robinson 2013 review, industry possessed little knowledge of the minor use system, its purpose, and how it may benefit them as growers at the time of writing. The industry also lacked a facilitator for the purpose of guiding industry members through the process of applying for minor use permits, and a 'feet on the ground' engagement officer to undertake consultation with industry and collate information on pest issues for both major and minor crops. Establishment of VG13096 allowed both of these roles to be filled.

Creating an industry liaison function for the purposes of evaluating and improving agrichemical access was well received by the industry. As a result of consistent engagement activities, the MUAC was regularly contacted by industry stakeholders for guidance on whether agrichemical needs were applicable for a minor use application, and how to populate applications with the appropriate information. In addition, gaining industry feedback on existing permits and new permit requests using the 'opt-in' process for developing the project database allowed industry stakeholders to play an active role in determining agrichemical priorities for vegetable production.

Throughout the project, the MUAC was responsible for driving an education and awareness program aimed at increasing Australian vegetable growers' understanding of, and engagement with, the minor use system. The ultimate purpose of the awareness program was to yield greater overall input from growers into the minor use system, and input into chemical access needs for the vegetable industry as a whole. Throughout the project, information related to the minor use system and other agrichemical topics of importance were disseminated through various communications methods and activities, including updates on minor use permits available to the industry.

Industry education organised throughout the project was well received. Feedback was collected from attendees at the 2016 symposium. Feedback surveys, and responses on the day, indicated that the MUAC must continue to engage with agronomists and consultants. There were 17 feedback forms completed, and on a scale of one to seven, with one being *not engaging/not relevant* and seven being *very engaging/very relevant*, all speakers received an average response rating of between 5.2 and 6.1 for engaging with the audience and 5.2 and 6.3 for relevancy. The MUAC received 6.2 for engagement with the audience and 6.3 for relevancy. Responses also emphasised that the question and answer section at the symposium was very relevant, considering the expertise available in the room and ability to get feedback on topics on which they could not usually obtain information with ease.

The stakeholders and the growers who opted to join the project database provided significant insight into the Australian vegetable industry, through their feedback on chemical needs, and information regarding hectares of production area. In addition, it can be reasonably assumed that the stakeholders who are a part of the database are now informed and aware of the minor use system and how they can be involved in providing input into industry agrichemical needs. The number of stakeholders involved on the database (270) is indicative of the level of engagement achieved since project commencement in

2014.

Extrapolating from Australian Bureau of Agricultural and Resource Economics and Sciences data on vegetable commodities, there are 125,667 hectares of all vegetable commodities grown in Australia. With the removal of 33,034 hectares for potatoes, this leaves 92,633 hectares of levied and non-levied vegetable commodities. Therefore, the project database represented approximately 39% of total estimated hectares of Australian vegetable growing land. This aggregated production area information is valuable data that may aid in future attempts to fill agrichemical needs for the industry.

Going forward, this database will be an important tool in gaining agrichemical usage information from industry in future iterations of this project.

Evaluation and Discussion

This project aimed to implement recommendations made in the Final Report for project VG12105 – (*Review of pesticide investment in the vegetable industry*), conducted by Dr Prue McMichael from Scholefield Robinson Horticultural Services Pty Ltd, which concluded that vegetable growers are not actively engaged in the current minor use program, and are largely unfamiliar with how the system operates. It found that there is a lack of communication and engagement with vegetable growers on minor use related issues, and that the level of input from growers into the minor use program is minimal.

The minor use system is complex, and at the outset of VG13096 there was a lack of knowledge throughout the vegetable industry regarding the benefits of the system, methods of applying for agrichemical access through minor use permits, and the overall purpose of the system. At the outset of this project, it was clear that education of industry and raised awareness around use and benefits of the system was necessary. Effective education and raised awareness would ultimately lead to better involvement in the system, greater understanding of industry needs, and support for the agrichemical access argument on the part of Australian vegetable growers.

Initiation of VG13096 was a step towards rectifying the above-mentioned issues. Indeed, throughout the project it was found that, despite a lack of knowledge about the minor use system, vegetable growers were willing to get involved in discussions on the topic, and were often interested in learning more. This highlights the importance to vegetable growers.

Outcomes of the VG13096 mid-term review

The VG13096 mid-term review noted the following: *"At the core of an effective prioritisation process is leadership and education/knowledge. Informed prioritisation of pests of each commodity and of new permit/label requests, requires extensive background work by the leadership team (MUAC), and informed input from aware vegetable levy payers, across all states. The background work and level of informed input to the current system, can be improved."*

In relation to the 'effectiveness' of the prioritisation workshops the review made several observations, several of which are included below.

2015 prioritisation workshop summary: *"The prioritisation required was minimal as only two new requests were presented. Growers were somewhat burdened by reviewing renewals, but appear to have learned something about minor use, in the process. Growers indicated their support for data generation projects. Grower information, useful for the MUAC to pursue post-Workshop, was presented."*

2016 prioritisation workshop summary: *"Prioritisation required was minimal as only three new requests had been raised. The new requests were not fully evaluated or justified, prior to the Workshop. All growers acknowledged they learnt something from the Workshop. Growers supported data generation projects and prioritised pests, but the latter outcome was not provided in the form expected. Technical overview of 'prioritised' new requests by Vegetable Technical Advisory Group (VTAG), as required in the project description, has not been undertaken. VTAG was inactive at the time of the Workshop. Its oversight of priorities in the past has provided valuable insight to the strategic validity of requests. A replacement committee and costing for it, needs to be pursued."*

It is clear from these summations that any new permits presented to industry for feedback must be presented with greater justification for the request and increased rigour must be undertaken in request evaluation. Additionally, according to the review it was determined that grower representation at future prioritisation workshops must be increased in order to adequately reflect crop groupings and regions. It was stated that *"The Workshop outcomes can be considered reflective of reasonable but insufficient, representation."* In terms of the general effectiveness of the workshops the review provided the following observations:

- Feedback confirmed that knowledge of the minor use system was gained by participants;
- Grower input was received;
- Growers at the workshops gained and shared information;
- Some growers in attendance produce non-levied crops;
- Growers suggested on-line as another means of delivering and receiving minor use input;
- Very few new requests have been raised since 2014;
- Crops needing more attention and requests for new access were identified at the workshops;
- Regionally specific needs were not distinguished;
- The importance of capturing input and background data on new requests, before the workshop, became apparent;
- The workshop outcomes were as expected in terms of approval for data generation; and,
- The prioritised list of top 5 pests/diseases was not delivered by crop, and appeared not to reflect the highest priority pests.

On the topic of the education and awareness aspect of the project, the review noted that the MUAC had been active in their engagement of industry and stakeholders.

"From discussion with stakeholders and reports, it is clear that the MUAC has conducted an extensive communication campaign to raise awareness of the Minor Use system. The communication frequency, delivery formats, reinforced messaging, and the forms provided for grower input (requests, adverse experience, database entry etc.), are impressive. Regular reinforcement of information on a complex area like minor use, is a good communication strategy. Stakeholders, regionally and nationally, have been given numerous opportunities to become more active in the minor use process, be educated about the prioritisation process, the MUAC role, and about current and recently-approved permits."

However, the review also noted that a diverse array of industry meetings can be helpful in acquiring new contacts at the outset of a project, but the main focus of meetings should be to engage growers, to which AUSVEG agrees. Narrowing the scope of the project at the outset would have aided in maintaining more focused engagement.

Overall, the mid-term review provided the following recommendations for VG13096:

- Continue the project with a renewed focus on grower input;
- Increase and maximise opportunities to capture and record direct input from growers, so that different regional and crop issues can be addressed;
- Consider a database for maintenance of grower input and requests;
- Identify gaps and priority pests, and investigate potential solutions before presenting new requests;
- Identify key growers who collaborate and have sufficient collective knowledge of crop groups through targeted group regional meetings;

- Invite only informed growers to be regional representatives at prioritisation workshops;
- Ensure more growers learn about and consider new and strategic solutions;
- Ensure that the prioritisation workshop is the culmination of an 11-month, grower-focused, extensive engagement period in regional centres;
- Explore the potential to re-activate or replace the Vegetable Technical Advisory Group, so that oversight of industry Minor Use priorities from a technical, strategic perspective, is provided;
- Continue to develop Minor Use-relevant communication material;
- Extend the reach of the developed database to include re-sellers and consultants who can reinforce the information and direct growers to the MUAC; and,
- Maximise the use of expertise and resources within the Minor Use system, increasing the interaction and information sharing between entities working in the Minor Use area.

Learnings from VG13096

The project has highlighted the importance of the MUAC in building contacts within the chemical industry. In particular, the structure of the project database was largely informed by consultation with chemical companies, who suggested important requirements for the database if it were to be used as a tool to understand agrichemical needs for the Australian vegetable industry. Additional benefit from relationships with chemical companies were identified – specifically, these relationships enabled data to be sourced and use patterns confirmed. As a result, additional information for permit applications could be sourced quickly and with confidence.

During communications with chemical companies it was noted that when a company determines return on investment, unknown knowledge of minor crop production functions as a deterrent to funding trials to achieve on-label approval. Representatives from chemical companies indicated the need for a greater understanding of the current makeup of Australian crops, particularly in relation to total hectares that specific crops are grown on, if the vegetable industry is to achieve greater agrichemical access. Ultimately, developing a greater voice for growers through an understanding of the total hectares for each crop grown will assist in encouraging chemical companies to consider more crops for inclusion in on-label use within Australia.

The AgVet Collaborative Forum promotes information sharing and co-investment opportunities for supporting applications to the APVMA for Agvet chemical uses and allows horticultural industries to have direct communication with registrants and other stakeholders. The AgVet Collaborative Forum was a new initiative launched after the initial implementation of this project. During the project, it was decided that outcomes of the vegetable industry prioritisation workshops would aid discussions at the forum. However, while the prioritisation workshops allowed evaluation of industry priorities through collation of attendee feedback on 83 minor use permits, information gained through the workshop was restricted by attendee numbers and groups represented.

It is suggested that ongoing collation of prioritisation information, through regional workshops, would yield a larger data set representing a broader range of crops within the vegetable industry. Additionally, it is clear that a shift of prioritisation of permits to prioritisation of pests per commodity is necessary. The MUAC largely concentrated on the former. However, Hort Innovation has advised AUSVEG that the latter focus would aid address of agrichemical gaps to a greater degree, particularly since inception of the AgVet Collaborative Forum. Going forward, a distinction should be made between prioritising minor use permits to retain in the system/put forward as new requests, and prioritisation of pests that require management options. Greater use of SARP documents to determine high-priority pest issues should be carried out. As noted in the mid-term review, these documents are useful in engagement and

prioritisation, and they require updating.

During 2016, the CAAG was formed to provide oversight of industry minor use priorities from a technical and strategic perspective. The CAAG is comprised of industry experts selected to advise on permits for the vegetable industry. The Terms of Reference of the CAAG are to review and provide comment on new minor use permit requests and permits up for renewal.

Going forward, culmination of an agrichemical prioritisation process for the vegetable industry with a twice yearly CAAG meeting, will allow for high quality information to be directed into the AgVet Collaborative Forum. In the long-term, it is expected that continuation of an effective prioritisation process through industry engagement and review by the CAAG will result in increased agrichemical access for vegetable growers through the renewal of useful minor use permits, approval of necessary new permits, cancellation of redundant or unnecessary permits, and greater on-label usage options.

This project has demonstrated that determination of industry agrichemical priorities is a difficult task that would best benefit from regionally based grower meetings and collaboration with regional grower groups/ Industry Development Officers.

Concluding Statements

This project has laid foundations to ensure that members of the Australian vegetable industry, specifically vegetable growers, understand the Australian system for achieving agrichemical access. The project has resulted in a more active role in the current minor use system for the vegetable sector and aided in increasing industry ownership of the system. Throughout the project, the MUAC encouraged informed input into minor use priority areas and provided a necessary liaison function for vegetable growers and other industry stakeholders submitting minor use requests.

Recommendations

For the purposes of facilitating agrichemical access where needed it is recommended that future projects include the following key deliverables:

- Annual update of high pest priorities for each vegetable commodity;
- Annually produce the top five pest priority gaps for each vegetable commodity to be put forward in the annual AgVet Forum to identify new pest solutions with registrants that can be progressed for Minor Use permits or registrations;
- Identification of industry pest priorities to Hort Innovation to assist with updating all the vegetable SARPs to ensure that each commodity has a current and updated SARP.

The recommendations from the mid-term review highlight the need for this role to continue, but in another capacity and with greater focus on specific areas. As such, it is suggested that the objective of future related projects should be to coordinate vegetable industry agrichemical pest needs by identifying and prioritising potential gaps through implementation of an effective prioritisation process for the industry. Going forward, it is recommended that implementation of any analogous projects have a focus on extensive grower engagement in regional areas across Australia, and replace the annual prioritisation workshop with regional visits and workshops. The project coordinator should interact directly with growers to ensure that the agrichemical needs for the vegetable sector are adequately reflected.

During engagement activities, the project coordinator should capture and record direct input from growers relating to individual crops, and by region and in conjunction with industry existing SARPs. These priorities would need to be shared with registrants and other industries via the annual AgVet Collaborative Forum to seek solutions for registrations and/or Minor Use permits. It is further suggested that grower group workshops are organised and facilitated in collaboration with regional Industry Development Officers where possible.

Finally, it is recommended that the CAAG continue to provide oversight to pest management needs and requests. The panel should be made up of experts in each of the disciplines such as insects, diseases and weeds and aim to meet twice a year to assist in review of minor use requests.

Scientific Refereed Publications

None to report.

Intellectual Property/Commercialisation

No commercial IP generated.

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References

Agricultural and Veterinary Chemicals Code Regulations 1995, Statutory Rules No. 27 (*Agricultural and Veterinary Chemicals Code Act 1994*) <https://www.legislation.gov.au/Details/F2013C00473>

Bodnaruk, K., Clark, J., Dal Santo, P., Norden, A. (2012) Overview of Minor Use activities within Australia. Global Minor Use Summit.

Dal Santo, P. (2007) AH04009 - Coordination of minor use permits for horticulture. AgAware Consulting Pty Ltd.

Dal Santo, P. (2010) MT07029 - Managing pesticide access in horticulture. AgAware Consulting Pty Ltd.

McMichael, P. (2016) Mid-term review of VG13096. Scholefield Robinson Horticultural Services Pty Ltd.

Merriman, P and Gordon, B. (1999) Final Report for the Horticultural Research and Development Corporation – Project VG97066.

Appendices

Appendix 1. Prioritisation work book

Prioritisation work book distributed for the 2015 and 2016 workshops – submitted as separate document with final report.

Appendix 2. Australian Vegetable Industry Minor Use Prioritisation Strategy

Background

The Australian Vegetable Industry Minor Use Prioritisation Strategy must work in conjunction with the education and awareness campaign, the Annual Education Symposium for Minor Use and the Minor Use Prioritisation Workshop. All three of these activities must be designed to interact effectively. This will ensure that the education and awareness campaign develops an across-industry understanding of the Prioritisation Strategy and also gathers information regarding the current situation of crop-pest interaction in the Australian Vegetable Industry. In turn, this will benefit the Strategic Agrichemical Review Processes (SARP) documents, which can be kept up to date to better represent the requirements of the Australian Vegetable Industry.

The AUSVEG Minor Use and Agronomy Coordinator (MUAC) is responsible for:

- Taking and processing Minor Use requests
- The Minor Use Prioritisation Strategy follow-through
- Education, engagement, awareness and communication within the industry relating to Minor Use

Prior to this Prioritisation Strategy there was little in the way of industry consultation, and end users were not effectively engaged in driving outcomes in the Minor Use program. The Prioritisation Strategy is designed so that requirements within the industry are responded to by the industry.

Prioritisation of Minor Use needs across the Australian Vegetable Industry should occur on an annual basis so that all stakeholders in the Minor Use system can effectively allocate resources to the most important and urgent needs. The MUAC needs to be engaged across industry, receiving requests and justification so that they can be processed through the Prioritisation Strategy. There is still provision for emergency use permits to be issued outside of this annual cycle, and the potential for further Minor Use permits to be issued when there is a definite and immediate need which would not qualify for an emergency permit.

The annual cycle, starting with the Minor Use booth at the AUSVEG Convention in June and ending in the Minor Use Prioritisation Workshop just prior to the next AUSVEG Convention in June the following year, will identify the industry's top 30-38 Minor Use needs to be further investigated and processed. When requests are submitted, crop-pest interactions will be ranked, determining the most important and damaging and taking into account approved chemistry, then crop combinations for permit applications will be determined and potential solutions will be selected.

Design

As crops grown across the Australian states suffer from different environmental and crop-pest impacts due to differing climatic and weather conditions. Given this the Minor Use Prioritisation Strategy must account for the different growing environments across Australia. Protected-grown cropping must also be represented in the requests for Minor Use permits as it is a vastly different environment to open cropping.

Crop-pest interactions should be the focus of the Minor Use Prioritisation Strategy, gathering information on the various interactions and using the information gathered as justification for entry into the Strategy. Crop-pest priorities are judged on:

- Total harmful damage to the crop
- Currently available chemistry
- The type of pest
- Efficacy of current chemistry
- Emerging resistance in the pest species
- National and international trade requirements
- Integrated Pest Management (IPM) compatibility

It should be noted that much of this is judged in relation to the efficacy of current approved treatment methods against the pest for the crop in question.

Throughout Australia there are numerous established crops, as well as many emerging crops continually entering the growing/sale market. These emerging crops should be kept in consideration and any crop-pest issues with them should be continually documented. Any time an emerging crop could be included in a permit with an established minor or major crop for the same or a similar crop-pest interaction, it should be given consideration. It can be difficult to grow emerging crops in current conditions, where there is limited, if not non-existent, approved on-label chemistry available to use on them. Information gathering is the key to multiple crops being included on permit applications, and is of a high priority.

It is important to try to represent all of the crop groups grown across Australia in the priority crop-pest interaction lists. Growers across Australia representing different crop groups and growing regions should be consulted to gather information about current crop-pest interactions and severity.

The information gathered from growers and other Minor Use stakeholders will be combined and summarised into a Minor Use Database, to be managed by the MUAC. This database will include information such as which crop groups are grown, where they are grown as well as the total hectares for each specific crop. This will be useful for the MUAC, who then can share the information with other stakeholders in the Minor Use system as appropriate.

Strategy

The Strategy for Minor Use Prioritisation is divided into several steps, which are to be completed on an annual basis. Some steps are effectively an ongoing process, and there is also ongoing activity after outcomes are developed, which must be kept in consideration. Further evaluation once Minor Use permits are approved prior to data generation is a key step in the process.

Crop-pest interactions will be divided into the following disciplines being:

- Disease
- Pest (insect and nematode)
- Weed

The Strategy for Minor Use prioritisation are as follows:

- Step 1: Identification of needs
- Step 2: Evaluation
- Step 3: Shortlisting
- Step 4: Collating crop-pests
- Step 5: Resource management
- Step 6: Prioritisation list generation
- Ongoing Activity: Information collection

Step 1: Identification of needs

The first step in the annual cycle for the Strategy is initiated at the AUSVEG Convention via the Minor Use Booth, where the MUAC will promote information regarding the education and awareness campaign. The MUAC then continues through the education and awareness campaign itself, meeting and communicating with growers across each state to review the needs of each commodity sector. The MUAC will establish contact with growers, holding meetings with regional groups where growers will be provided forms to submit Minor Use permit requests to the Prioritisation Process. All needs for each crop and crop group will be assessed by discipline, with information collected and collated during the annual process. Minor Use requests will be accepted up to the date of the Annual Education Symposium for Minor Use to be processed into the Prioritisation Strategy. Throughout this step, information will be gathered for emerging crops and crops without a SARP document, to be used later in the Prioritisation Strategy.

All requests will be processed and added to an annual database for the discipline in which the crop-pest interaction belongs. The requester, crop group, crop, specific pest and the chemical requested (if any) will be documented in the database. The database will allow for an understanding of requests and the levels of requests for the different disciplines over time to better inform Minor Use permits being granted or rejected through the Prioritisation Strategy.

Step 2: Evaluation

Information and requests which have been gathered throughout the education and awareness campaign will be evaluated based upon specific requirements. Updates and information relating to the current growing conditions and crop-pest interactions will be reviewed and used as part of the evaluation process. At this point, it will be a matter of identifying requests which have a foundation in need or requirement and creating a list for each discipline accordingly.

Requests should be evaluated based upon:

- SARP documents
- Information regarding current crop-pest interactions is gathered and confirmed
- Total harmful damage to the crop by pest interaction
- Currently available chemistry, looking at effect of chemistry, numbers of approved chemicals (and the potential for rotation of these chemicals to reduce resistance emergence risk) and harm of current chemistry
- Type of pest, especially if it is newly emerging or a biosecurity risk
- Emerging resistance in pest
- National and international trade requirements
- IPM compatibility
- If the chemical is under review by the APVMA

Step 3: Shortlisting

This step involves identifying currently approved permits and identifying any which could be updated to include additional crop-pest interactions. This is especially important for emerging crop species, which will have very little in the way of approved on-label use. Any permits found should be evaluated carefully, as this method can be a highly cost-effective way of gaining further crops on a Minor Use permit.

Step 4: Collating crop-pests

It is important to determine which crop-pest interactions could be included in each potential permit application and also which crops and crop groups. Crop-pest interactions should be evaluated for severity, to determine the total number of crops affected and any chemistry which would be effective for that particular crop-pest interaction. Prioritisation changes from confirming the need to assessing how strong the need is and determining how many crops a single permit may be able to cover. Potential permit applications will be created, and this list will be finalised once the Annual Minor Use Symposium is completed and requests have ceased for the current cycle.

An "A" Priority Without Solution (APWS) is a crop-pest interaction which currently does not have any approved chemistry, for example an emerging crop which does not yet have many, or any, approved on-label uses. An APWS should be evaluated carefully to determine if there are any matching crop-pest interactions with emerged crop types which could be included on the same permit for cost effective data generation. The cost of data generation for permits may be high if the APWS is unable to be combined with another crop with the same pest issue, however it should still be a priority included for presentation at the Minor Use Prioritisation Workshop.

Strategic crop combinations on these proposed permit applications should be identified and evaluated for efficacy. These will form the final shortlist for each discipline. Using the same evaluation outlined in Step 2 of the strategy, a list of 20-25 potential permit applications will be selected for each discipline, in addition to up to seven regional specific requests and all APWS which have been found. This list should be in the order of around 30-32 total requests, prioritised per discipline for evaluation at the Minor Use Prioritisation Workshop.

Step 5: Resource management

This step in prioritisation occurs concurrently with Steps 1-4. However, there should be more capacity to complete the resource management portion of the prioritisation process once Step 4 is complete.

Information which has been gathered and confirmed during Step 1 regarding crop-pest interactions and any changes since the last annual cycle will be recorded. SARP documents will have changes and modifications recommended as required. Additionally, information will be gathered to create SARP documents for emerging crops and crops where no documents have been produced.

It is important that any changes to information and further information gathered during the annual cycle of prioritisation is captured in these documents to ensure they are as current and accurate as possible for the start of the next annual cycle. This will also provide useful information for reference purposes, as well as understanding the crop-pest interactions and chemistry used in the Australian Vegetable Industry.

Furthermore, each current collated crop-pest interaction from Step 4 and the proposed active chemical for treatment will be looked into further. The proposed spray regime for the crops will be evaluated off any approvals or any on-label use from overseas data along with what growers recommend in the request submissions.

Finally, contact will be made with chemical companies who have the proposed active chemical for treatment registered in Australia and/or overseas to gather as much relevant data as possible. This can be used further to speed up the permit submission and understand the application to the crop in question more effectively. It could even lead to removal of some requests from the process if it has been shown in trials to not work effectively or have an unwanted effect on the crop.

Step 6: Prioritisation list generation

The shortlist of combined requests for the three disciplines will be prepared in documents for the Minor Use Prioritisation Workshop. Each discipline will have a document created listing the priorities with a number from '01' onwards, a short description of the crop-pest interaction, the crops covered and the proposed permit for that priority.

The MUAC will host an annual national Minor Use Prioritisation Workshop prior but adjacent to the AUSVEG Convention. This will include growers representing all crop groups across all of the major growing regions of Australia (or their proxies), along with Minor Use stakeholders and other industry personnel. These selected individuals will work together to vote for:

- The top 10 priorities for each discipline
- One specific regional request for each discipline

- One APWS for each discipline
- Two requests from the organic sector

This will result in a prioritised list of approximately 30-38 proposed permit requests for the annual cycle. The list will be added to the annual database for each discipline so that it can be annotated with subsequent requests for future reference.

Output: Prioritised list

Once the Minor Use Prioritisation Workshop has concluded, the MUAC will tally all votes and document outcomes to create a final prioritised list of annual Minor Use permit applications. This prioritised list will then be sent to relevant stakeholders for evaluation. All requests on this list should be considered a priority for permit application approval.

Ongoing Activity: Information collection

Once the Workshop has concluded and new permits are issued, further information must be gathered by the MUAC throughout the course of the annual cycle. Over the 12 months following permits being issued, new permits will not yet have had data generated for regarding Maximum Residue Limits. Throughout the implementation of the Prioritisation Strategy, information will be gathered regarding the permits. Effectively, this means that permits which have passed through the Prioritisation Strategy will continue to be included.

If a particular approved permit is not being utilised, or if growers have used it but then found that it was inappropriate, this information will be captured. If this is the case, these permits will not be continued and no data generation will be conducted. Only permits which are in use and have proven to be effective over the first 12 months will proceed to data generation for a Minor Use permit.

Outcomes

By making use of this Prioritisation Strategy, there should be a constant stream of current, useful and relevant information relating to the Australian Vegetable Industry and vegetable crops. In addition, permits will be evaluated and approved when there is a demonstrable need, and data generation will only occur if these prioritised permits are in use. This should assist to significantly streamline and lower the cost of the Australian Vegetable Industry Minor Use program over time.

The information and data gathered by the MUAC can in turn influence industry and demonstrate that markets exist which chemical companies may not have known about previously. This then improves the potential for more crops to be included as on-label use of new and coming chemistry targeting areas of need.

Appendix 3. 2016 Prioritisation Workshop outcomes documents

Outcomes documents submitted to Hort Innovation following feedback from the 2015 and 2016 prioritisation workshops - submitted as separate document with final report.

Appendix 4. Forum and seminar attendance

Title: International Horticulture Congress 2014	Date: 21-22 August 2014
Summary Attended chemical use and study sessions Attended disease and pest research sessions Introduction and engagement with industry and growers in attendance	
Title: EnviroVeg and Biosecurity Information Session - Cranbourne	Date: 2 September 2014
Summary The MUAC received a formal introduction by the Chair to growers in attendance Attendance and meeting with growers of the region	
Title: On-farm power generation project workshop	Date: 25 September 2014
Summary Attendance and meeting with growers	
Title: 2014 Honours Research and Careers Forum – University of Tasmania	Date: 3 October 2014
Summary Informing Honours students and undergrad students of career opportunities within agriculture Meeting with industry represented at the forum	
Title: Nanotechnology Regulation Symposium	Date: 28 October 2014
Summary Nanotechnology in Agvet chemicals discussion Potential for the new and novel compounds such as nanotechnology still being relevant to current chemical regulations discussion Meeting with industry stakeholders and regulators involved in nanotechnology	

Title: Access to Agvet chemicals forum	Date: 7 November 2014
Summary	
Discussion into the current heading for Government investment of \$8 million into gaining greater access to Agvet chemicals	
Across greater Agvet area stakeholders meeting and engagement for a greater voice into regulations and needs	

Title: Industry priority presentation	Location: Canberra, ACT	Date: 25 Feb 2015
Summary		
MUAC led a team presenting on vegetable industry priorities		
Attendance: Professor Ian Chubb and three representatives from the office of Australia's Chief Scientist		

Title: AUSVEG information seminar	Location: Gatton, QLD	Date: 2 Mar 2015
Summary		
MUAC presented on Minor Use Awareness Program		
Attendance: 19 growers and stakeholders		

Title: AUSVEG information seminar	Location: Virginia, SA	Date: 4 Mar 2015
Summary		
MUAC presented on Minor Use Awareness Program		
Attendance: 28 growers and stakeholders		

Title: AUSVEG information seminar	Location: Lindenow, VIC	Date: 12 Mar 2015
Summary		
MUAC presented on Minor Use Awareness Program		
Attendance: 22 growers and stakeholders		

Title: AUSVEG information seminar	Location: Darwin, NT	Date: 17 Mar 2015
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Summary MUAC presented on Minor Use Awareness Program
Attendance: 41 growers and stakeholders

Title: AUSVEG information seminar	Location: Katherine, NT	Date: 20 Mar 2015
Summary MUAC presented on Minor Use Awareness Program		
Attendance: 10 growers and stakeholders		

Title: AusChem Annual Trainers Conference	Location: Dookie College, VIC	Date: 28 May 2015
Summary MUAC presented on issues facing market gardeners regarding AgVet chemical use AusChem trainers responded positively: <i>"The feedback on your presentation was excellent, and it provided a comprehensive background to the difficulties faced by market gardeners, especially when they are faced with having to use AgVet chemicals off-label. Certainly, the trainers are much better informed and able to integrate this into their AgVet chemical course delivery."</i>		
Attendance: Over 60 AusChem trainers		

Title: DEDJTR Chemical Operations meeting	Location: Melbourne, VIC	Date: 14 Jul 2015
Summary MUAC talked about the Minor Use Awareness Program and role of the Minor Use and Agronomy Coordinator for the vegetable industry		
Attendance: 10 individuals from the DEDJTR Chemical Operations team		

Title: E.E. Muir and Sons Conference	Location: Healesville, VIC	Date: 27 Jul 2015
Summary MUAC presented on the Minor Use Awareness Program, role of the Minor Use and Agronomy Coordinator and how agronomists are vital for information gathering and understanding current pest issues		

Attendance: 80 Agronomists from E.E. Muir & Sons

Title: AUSVEG R&D Information Session	Location: Forth, TAS	Date: 25 Aug 2015
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Summary MUAC presented on the Minor Use Awareness Program

Attendance: 22 growers and stakeholders
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Title: AUSVEG R&D Information Session	Location: Cranbourne, VIC	Date: 24 Sep 2015
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Summary MUAC presented on the Minor Use Awareness Program

Attendance: 24 growers and stakeholders
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Title: AUSVEG R&D Information Session	Location: Neerabup, WA	Date: 15 Oct 2015
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Summary MUAC presented on the Minor Use Awareness Program

Attendance: 34 growers and stakeholders
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Title: Department of Agriculture stakeholder engagement presentation on vegetable industry projects.	Location: Gatton, QLD	Date: 22 March 2016
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Summary MUAC presented on the Minor Use Awareness Program

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Pest Scientific Name (if known):

What is this pest? Disease Pest (insect, nematode) Weed

Is this a new pest for this crop?

Yes (answer below)

No (answer below)

When was it first identified?

What control measures are currently used?

What control methods are currently used?

Do you have any efficacy comments or data?

This request is: Urgent Normal

Justification:

In which states would it be of importance?

AUS WIDE ACT NSW NT QLD SA TAS VIC WA

Would this be considered an emergency for the purposes of an emergency permit? Yes No

If yes, provide justification and mention why currently approved products (if any) are not suited for use to treat this emergency.

4. Pesticide Details

What is the pesticide being requested?

Trade name:

Active ingredient:

Active ingredient concentration:

Is this pesticide registered in Australia? Yes No

Is this pesticide registered overseas? Yes No

Do you have any data for this pesticide? Yes No

If yes, please attach data (eg. efficacy and residue) at the end of this form.

Have you trialled the pesticide on the pest? Yes No

Has an application been made to register this product for use on this crop?

Yes (answer below)

No (answer below)

Why is a request being submitted before the application is determined?

Why has no application been made?

If the crop is exported to other countries, do you know if the requested pesticide is registered in those countries? Do you have any further information (such as Maximum Residue Limits)?

If you require additional space, please attach any extra information to the end of this form.

5. Proposed Application Regime

First date of proposed use (eg. Apr):
Annual timing of use (eg. Sep-Mar):
Spray volume proposed:
Proposed addition of wetter:
Proposed timing of applications for growth stage/stages of the crop:
Proposed maximum number of applications per crop per season or year:
Proposed minimum re-treatment interval between consecutive applications (days):
Proposed application rate (e.g. 100mL or 100g product/100L, and/or 1L or 1kg/ha):
Proposed application method:
Proposed application equipment:
Proposed Withholding Period:
Proposed shortest period between last application and harvest (days):
Any special precautions or critical use comments:

Have you discussed this application with the manufacturer? Yes No

If yes, which manufacturer and what were their comments?

Are there any special precautions on the use of this product?

6. Crop Growth Information

Is Integrated Pest Management (IPM) important to this crop/these crops? Yes No

If IPM is important, how would the proposed pesticide fit into an IPM program?

Are components of this crop, or area around this crop, grazed by livestock? Yes No

If yes, which species of livestock?

If yes, what would be the estimated proportion of their diet (%) which would come from this area?

7. Additional Comments

Do you have any additional comments?

Please remember to attach any additional information or data to the end of this form.
Please fax completed forms to AUSVEG at (03) 9882 6722 or scan and email to minoruse@ausveg.com.au.



Project: VG13096



MINOR USE PERMIT FEEDBACK FORM

1. Person Details

Full name:	
Business name:	
Location:	
Phone number:	
Mobile number:	
Email:	
Role (eg. Grower, Agronomist, etc.):	

2. Permit Details

Permit Number:	
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Of the applications within the approved regime, how have you used the product?

Which specific product did you use?

3. Crop Effects

Crop group:		Crops:	
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Include the number of the crop group, if known.
For crops, if all crops in the particular crop group are covered by this request, write 'all' in the box. Otherwise, document the specific crops to be covered.

Cropping environment: Field Protected Both

What has been the effect of this active on the crop?

If you have pictures or data please attach to the end of the form.

4. Pest Effects

Pest Common Name:	
Pest Scientific Name (if known):	

What is this pest? Disease Pest (insect, nematode) Weed

What has been the effect of the product on the pest?

If you have pictures or data please attach to the end of the form.


5. Additional Comments

Do you have any additional comments?

Please remember to attach any additional information, pictures or data to the end of this form.
Please fax completed forms to AUSVEG at (03) 9882 6722 or scan and email to info@ausveg.com.au

Appendix 6. Minor Use webpages

itl Pest risk analysis | Sco



Minor use resources

Minor use permits must be requested and supported by the end user. This is especially important in the case of vegetables because the minor use permits that provide for chemical access for crop protection use vegetable levy funds.

To appropriately represent the crop protection needs of vegetable growers, it is imperative to get involved:

- Sign up to the [Minor Use Database](#).
- Direct your questions regarding minor use to the Minor Use and Agronomy Coordinator.
- Work with the Minor Use and Agronomy Coordinator to identify chemical needs and request minor use permits.

If you know of a chemical which can deal with a pest issue for a vegetable crop, please complete a [request form](#) and send it to the Minor Use and Agronomy Coordinator. If you are requesting a permit, you must be on the Minor Use Database so that you can be contacted as part of permit use and follow up.

The AUSVEG Minor Use and Agronomy Coordinator will also be involved in relevant events to raise awareness of the Minor Use Awareness Program.

Australian Pesticides and Veterinary Medicines Authority

The Australian Pesticides and Veterinary Medicines Authority (APVMA) provides information and resources for on-label chemicals, minor use permits and crops.

On-label chemical uses: [PUBCRIS database](#)

Minor use permit database: [Permits database](#)

Crop information: [Minor use Guide for determining minor use](#)

Infopost from Growcom is an alternate source for finding information on current minor use permits and label registrations.

On-label and minor use database: [Infopost](#)

Strategic Agrichemical Review Process

To best understand the needs of vegetable growers, documents which represent current requirements are needed. The following Strategic Agrichemical Review Process (SARP) documents were produced with collaboration from growers across Australia.

[All current vegetable SARP documents available here.](#)

These documents may not currently represent the needs and major pest issues of vegetable growers. If you believe there should be additional pest priorities listed, or that a pest is listed as too high, or too low a priority, please get in contact with the Minor Use and Agronomy Coordinator and provide what information you have.

To best understand the needs of vegetable growers, communication is key.

GET INVOLVED!

It is imperative to have as many vegetable growers involved in the minor use system as possible. This will ensure a good understanding of the needs of the vegetable industry, and as a result gain the best possible push for improved access to chemicals.

This is important not just for minor use, but also for access to chemicals as a whole. If a good understanding of the vegetable industry can be gathered, then through communication with chemical company registrants improved access to new chemicals from the start can occur.

If you are interested in improved access to chemicals, please complete a Minor Use Database Form.

itl Pest risk analysis | Sco



What is minor use?

Minor use is the permit system in Australia which allows for approved off-label use of agrichemicals for specific purposes. It is designed to assist minor crops gain greater access to agrichemicals when needed, and for approved minor use of agrichemicals on major crops.

Why is minor use important?

Minor use plays an integral role in the Australian vegetable industry as on-label options are often limited for many vegetable crops, especially in the case of emerging crops grown for niche markets.

The Minor Use Awareness Program

The Minor Use Awareness Program is managed by the AUSVEG Minor Use and Agronomy Coordinator and who engages with growers across Australia to better represent vegetable pest issues.

The aim of the Program is to ensure the minor use system adequately reflects the unique and changing crop protection needs of Australia's vegetable growers.

The Program launched May 2015, and has been increasing engagement with growers and stakeholders since.

The Minor Use and Agronomy Coordinator

The Minor Use and Agronomy Coordinator as part of the Minor Use Awareness Program:

- Liaises with the Australian Pesticides and Veterinary Medicines Authority (APVMA), Horticulture Innovation Australia Limited (HIA) and chemical company registrants on vegetable minor use permits and permit requests.
- Communicates new permits to growers via the AUSVEG Weekly Update.
- Is a contact point for vegetable growers and stakeholders in the industry who want to know more regarding minor use permits in the vegetable industry.
- Collects information from the vegetable industry to identify minor use requirements, and information from growers regarding minor use permit use and any information that the APVMA requires to keep the permits in use.
- Works with the vegetable industry to improve access to chemicals through minor use permits.

Contact information:

You can contact the Minor Use Coordinator using the following details:
Tel: (03) 9882 0277
Fax: (03) 9882 6722
Email: minoruse@ausveg.com.au

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