Horticulture Innovation Australia

Final Report

Develop vegetable industry occupational health and safety resources

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RMCG

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VG13053

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Summary

In 2012, a research project titled 'Review of skills and training in the vegetable industry'[1], identified that Occupational Health and Safety (OH&S) was a skill weakness among vegetable growers. This project was designed and implemented to assist the vegetable industry address this issue.

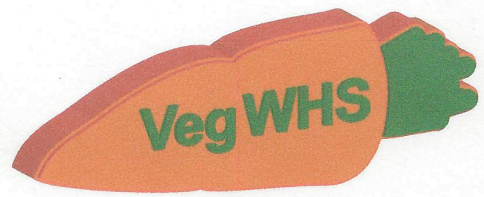
There is a moral and legal obligation for businesses to provide a safe place of work. This project has sought to understand the barriers to safe work in the vegetable industry and to develop a suite of specific resources for vegetable growers to enable them to implement improved workplace safety.

Objectives

The objectives of this project were to:

- Consult with vegetable growers to understand current WHS practice, and the barriers to improved practice
- Review management systems, legislation and existing resources in the industry to understand how best to provide WHS resources to growers
- Develop a suite of tools for growers to use to help them improve WHS practice on farm and in the packing shed
- Provide promotion of the resource and support to growers seeking to implement improved WHS practice within their business
- Ultimately, the final objective is to see improved WHS practice occurring on vegetable farms in Australia.

The objectives have been met with a new range of innovatively packaged resources, approximately 1,200 files of information for the vegetable industry, provided on an easy to use carrot shaped USB to 944 vegetable growers across Australia, called VegWHS.



- [1] P16, Macquarie Franklin, December 2012, Review of skills and training in the vegetable industry, Prospect Tas.

Barriers to improving WHS

The project sought to research and define the barriers to improving WHS among growers as a means of improving adoption of safe work practices. The key barriers to improving safe work practices for vegetable growers were:

- Knowledge
- Resources
- Cost
- Management skill
- Dislike of compliance
- Negative experiences
- It's not necessary

Develop resources for industry

This project developed the following resources for the industry, contained on the carrot shaped USB drive:

- Safety Management System
- 72 Tasks with safe work assessments and procedures
- Diagrammatic, pictorial and LOTE tools

The resources contained an innovation, with a change from a 'system' based approach to WHS to a 'task' based approach, which is how many growers tend to naturally think. This approach allows growers to quickly select a task that occurs on a vegetable farm and then self assess risk and develop risk management policy and procedures.

Providing the VegWHS resource to growers

944 VegWHS carrot shaped USBs were provided to levy paying vegetable growers. The project team estimates that this has resulted in approximately 50% of vegetable growers nationally receiving a copy of the resource.

A small number of growers provided very positive feedback on the resource.

Extension and communication

As the resource has been supplied to growers, there is a requirement for growers to engage with the WHS issues and proactively manage WHS in their businesses.

The extension and communication of the resource has occurred via national and state bodies and also through private networks.

There was little demand for on farm workshops or farm risk assessment walks. The preferred method for training and skill development was with customised one-on-one training for growers.

Recommendations

As a result, the recommendations are:

- Management skill within the vegetable industry be a priority for future development
- Longer term programs such as the Safe Farming Tasmania, provided by the Tasmanian government, and free of charge to vegetable growers should be promoted to the vegetable industry. Where future state government longer-term programs occur they should be promoted to growers, as they allow longer-term engagement with growers and increased likelihood of practice change to occur when compared to short-term projects.
- Sentiment towards WHS needs to change in the longer term, and this may be helped with new approaches, such as: consideration of a national vegetable WHS award, or advantages to market development such as had occurred with environmental credentials in recent history.

Keywords

Occupational health and safety; workplace health and safety; OHS; WHS; vegetables

Introduction

Context

In 2012, a research project titled 'Review of skills and training in the vegetable industry'[2] identified that Occupational Health and Safety (OH&S) was a skill weakness among vegetable growers. The same report, on pages 39 and 50, also noted that the industry did not identify OH&S as a priority skill for improvement. The skills review reported that OH&S was an area of concern, and an area where the vegetable industry feels vulnerable. As such, this project was designed and implemented to assist the vegetable industry address this issue.

The Australian Centre for Agricultural Health and Safety (ACAHS) reported 59 on farm deaths and 81 non-fatal farm injuries in 2011 for all agricultural properties, including vegetable farms. The ACAHS also reported that a significant driver of reducing on farm death and injury is the increased adoption of health and safety systems.

Occupational Health and Safety under older legislation, or Workplace Health and Safety (WHS) under newer harmonised legislation refers to the regulation and codes of practice that exist in Australia. There is a moral and legal obligation for businesses to provide a safe place of work. This project has sought to understand the barriers to safe work in the vegetable industry and to develop a suite of specific resources for vegetable growers to enable them to implement improved workplace safety.

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- Ultimately, the final objective is to see improved WHS practice occurring on vegetable farms in Australia.

The objectives have been met with a new range of innovatively packaged resources, approximately

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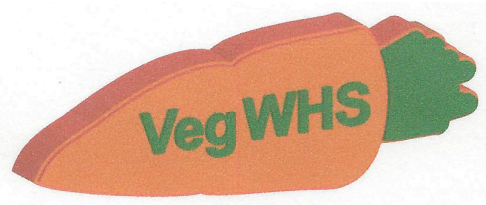
1,200 files of information for the vegetable industry, provided on an easy to use carrot shaped USB to 944 vegetable growers across Australia, called VegWHS.



Report

This report outlines the following:

- **Method:** This section described the approach that the project team used to complete the project. The method was consultative in order to gain understanding on the issues in the industry so that the resource subsequently prepared would be useful to growers.
- **Outputs:** The outputs included in the report include internal outputs, which informed the design of the resource; and some external outputs, which were provided to industry. Other outputs such as confidential consultation with growers is not reported. The main output for this project is the VegWHS USB drive, mailed out to growers and ancillary promotional and training support. Some examples of the outputs are included in the appendix.
- **Outcomes:** The section on outcomes describes the knowledge gained from the project, and specific detail on the number of growers impacted as a result of this project.
- **Evaluation and Discussion:** This section provides insight on the strengths and weaknesses of the project.
- **Recommendations:** The recommendations are provided to industry as a result of this project to help inform future activities that may occur with projects of a similar nature, or projects related to workplace health and safety.

Methodology

This section provides an overview of the method implemented for the project, with a focus on the key tasks carried out. It reflects the project plan and project milestone achievements.

Project inception

The project inception included initial commencement, inception meetings, contract execution and an initial communications summary, as occurs with all HIA projects.

Collaboration

RMCG partnered with Advanced Viticulture and Management (AV&M) for this project. AV&M is a vineyard development and management business that manages 2,000 hectares of vineyard projects across New South Wales, South Australia, and previously Victoria. AV&M has developed comprehensive and customizable WHS solutions for remote sites that have been proven to manage the risks of dangerous agricultural work environments. The experience and approach used by AV&M with proven, commercial, practical WHS solutions was integral to providing a solution to the vegetable industry.

Through the course of the project, a key staff member at AV&M who was responsible for WHS became ill and was unable to work. As such, RMCG appointed Belinda Hazell from TQA Australia, a WHS practitioner with experience in the vegetable industry to continue to provide support in the absence of AV&M.

AV&M, and later in the project, Belinda, were involved in each task, from consultation with growers to understand barriers to WHS, through to review of legislation and finally extension of resources to growers. This practical experience at implementing effective WHS practice in an agricultural context was fundamental to our methodology.

Data capture and industry assessment

The initial phase of the project was to understand issues regarding WHS implementation, the current situation in the vegetable industry and catalogue existing information and data that would be relevant to the new resource for growers. This approach was designed to understand both the supply of resources and demand from vegetable growers.

Research WHS issues

The project team reviewed publications for WHS in vegetable/horticulture/agriculture industries in order to understand specific issues. Previous work[3] by the Australian Centre for Agricultural Health and Safety to define risk levels for a range of farm activities was central to our resource development and extension work. This work helped the project team understanding 'why' vegetable/horticulture farms are dangerous work sites, and why high incidents of injury and death occur on these farms.

[3] Franklin et al, National Farm Injury Data Centre, November 2001, Occupational Health and Safety Risks associated with horticultural produce production, Moree NSW.

Research legislative requirements

This was a national project for levy paying vegetable growers in all states. Most states in Australia have harmonised WHS legislation, with the exception of WA and Victoria that continue to operate under older legislation. A desktop review of the legislative differences occurred to understand appropriate mechanisms to provide resources or training to vegetable growers. The desktop review sought to understand the critical differences between the states and whether those differences ought to feature in the development of a national package of WHS resources for vegetable growers.

Consult with regulatory bodies

A number of regulatory bodies exist in WHS & OH&S, from the national Safe Work Australia statutory agency through to each state's statutory body. Specialist agricultural practitioners exist within the state bodies. The project team consulted with these experts to understand the issues within the vegetable industry and take advice on the most appropriate mechanisms for preparing the industry resource. Their knowledge of the resources available and understanding of the 'real world' issues and advice created additional value and shaped the construction of the VegWHS resource.

Research management systems in industry

Workplace Health and Safety is another 'system' that vegetable businesses need to either adopt on a stand-alone basis or integrate into existing management systems. This is a key decision for vegetable businesses that are implementing WHS systems.

A desktop review of management systems occurred, including: HACCP, Global GAP, BRC, Coles supplier system, SQF, Woolworths Standards, ISO 14001, Enviroveg and Freshcare. This review allowed some understanding of the systems currently used in industry, the 'gaps' in those systems with regard to WHS, and how the new resources should be produced to complement existing systems.

Consult with growers to understand current practice and barriers to adoption

The project team consulted with vegetable businesses of varying scale to understand current practices in the industry, barriers to adoption of WHS, and preferences growers have for WHS implementation. This consultation occurred on seven (7) vegetable farms with face-to-face meetings and site inspections. The consultation included one farm with highly developed WHS systems and some farms with no WHS system in place.

The consultation was documented on a confidential basis, and it informed development of the WHS resources, and also allowed development of case study documents as marketing material for use with vegetable growers in the promotion and extension phase of the project.

Compile existing resources

There is a significant amount of publically available WHS resources. The purpose of this project was not to create any new resources where appropriate resources already existed, rather to assemble existing public resources to allow easy access to the resources and improved implementation of those resources. The project team created some new resources where existing resources were not suitable.

In many cases, for a particular topic there are multiple resources available from each state. This process

involved a desktop review of the resources from each state and selection of the most appropriate for the vegetable industry, and subsequently for inclusion in the VegWHS resource. Where there were a number of good and appropriate resources for a particular topic, these were included in the 'additional information' section for each task.

A significant volume of resources continues to be made publicly available to vegetable growers from the national and state bodies.

Construct resources for industry

The key output for the project was a suite of WHS resources specifically designed and packaged for levy paying vegetable growers. This suite of products was approximately 1,200 documents contained on a carrot shaped USB drive with hyperlinked instruction pages to allow users to navigate the information. The resources were titled 'VegWHS'.

Develop resources for industry

- **Safety Management System.** A Safety Management System was developed using existing resources. It was designed to allow step-by-step navigation of the issues that a vegetable grower could easily follow.

- **Tasks.** The carrot shaped USB contains 72 tasks that occur on a vegetable farm or in a packing shed with a range of documents for each task, including policy, standard operating procedure, risk assessment, code of practice and further industry information. Essentially, this resource allows a grower to assess and implement safe work practices for a range of tasks.

- **Standard Operating Procedure templates.** Safety management systems require demonstrable methods for allow staff to conduct routine tasks safely, this typically occurs with a standard operating procedure. A range of standard operating procedure templates were developed using our project partners and their knowledge of industry practice.

- **Diagrammatic and pictorial tools.** A key issue in WHS is that of language and literacy, particularly among migrant staff. One method of overcoming communication issues is to use diagrams and pictures to communicate WHS practices, rather than documents with words. The diagrammatic tools captured key aspects of 18 dangerous vegetable farm activities and used diagrams and pictures to communicate safe work practices. These tools are customiseable.

- **LOTE tools.** Similar to the previous point, Language Other Than English (LOTE) is an issue. As such the agreed method for the project was to translate some of the resources into common languages that migrant workers could use to understand safe work practices.

- **Packaging.** The method originally identified for providing the resource to growers was a DVD to allow cheap copying and transmission in the post. During the course of the project, and with evolving technology, some growers identified that their computers did not in fact have DVD drives. As such, a decision was made to use a carrot shaped USB drive in order to stimulate interest in the package and provide an effective means of transmitting data to growers. A logo and brand (VegWHS) was created to complete the packaging.

Extension of resources to industry

The final component of the project was that of extending the resource to industry, specifically raising awareness that the package existed, encouraging growers to receive a copy and use it and also to provide training workshops, telephone and email support to growers on any aspect of WHS. The project plan was altered towards the end of the project with very poor uptake of training workshops, as such one on one training and risk assessment was offered to growers nationally.

Collaborate with peak bodies and industry networks

The promotion of the resource to industry was dependent on access to growers in the industry. As such, the project team collaborated with a range of peak bodies and industry networks to engage with vegetable growers. These bodies included:

- Ausveg
- Vegetable Growers Association of Victoria
- NSW Farmers
- Growcom
- NT Farmers
- Vegetables WA
- Tasmanian Farmers and Graziers Association
- Industry development officers
- RMCG networks and mailing list

The collaboration with these organisations was to allow promotion of the resources and help facilitate workshops, training and support across Australia.

Promote resources to industry

The project team mainly used electronic means of communication to promote resources to the industry. Promotion of the resources included magazine articles, case study flyers, electronic database promotions, attending field days and word of mouth.

Mail out resources to industry

The previous steps of collaboration with peak bodies and networks, and promotional activities resulted in consolidation of a number of databases with a total of 761 vegetable growers with physical mailing addresses. Each grower on the database received the carrot USB resource, an introductory letter and an instruction sheet to the VegWHS package.

The purpose of the mail out was to allow as many levy paying growers as possible to receive a copy of the resource so that even through curiosity they may insert the USB into their computer and be aware of the WHS resources available to them.

Regional WHS workshops and farm risk assessment walks

The original project envisaged six regionally based workshops and farm risk assessment walk. These events were to be hosted at a grower's farm with a morning session to provide training on the VegWHS resource, followed by an afternoon session to walk around the farm and practice risk assessments on various pieces of equipment or processes.

The project team worked with predominantly state associations to identify growers to host workshops and seek growers to attend the workshops. This was particularly difficult as growers were reluctant to host, specifically to have other growers come to their farm and look at the WHS issues for the purposes of learning. There was also little interest from growers in attending these group workshops as evidenced by the poor responses. Some of our state association partners worked extremely hard on canvassing support for these events, the project team was grateful for their support.

The almost negligible interest from growers in attending workshops resulted in the cancellation of farm workshops and risk assessment walks on a broad basis. Consequently, these workshops, similar in content were provided in a confidential one on one basis instead. This training involved a morning session to review existing practices with the grower, showing the grower the VegWHS resource and an afternoon session of walking around the farm looking at risky work practices and training in filling in forms, typically hazard identification forms and Job Safety Analysis (JSA) worksheets. This process of one-on-one training and tailored information supply was particularly successful for those growers who requested the service. Further discussion on this aspect is provided in the evaluation and discussion section.

Provide training and support as required

In the period after the mail out of the industry resources, growers had access to the project team who were able to assist with: on farm training, risk assessments, policy develop or any customised support as required by levy paying growers.

Outputs

The main outputs of the project are listed in this section.

Case study development

Early in the project, the team conducted seven consultations with vegetable growers in Victoria and South Australia to understand current practice, systems in place, barriers to adoption and preference for a WHS system. The consultations were conducted on a confidential basis, however four case studies were developed from the consultation.

This section provides a summary of the four cases studies developed for marketing purposes. The case studies were used for promotion of the WHS training and materials in the Vegetable Industry. They are designed to help vegetable businesses identify with the issues and see that change is not difficult. The published documents are in the appendix, the following text is an excerpt from the documents to show the specific issue highlighted around WHS.

Case study 1 – good WHS practice

A family business in South Australia grows a range of fresh vegetables for Coles and Woolworths. The business has been accredited with HACCP, Freshcare and EnviroVeg to meet market requirements, so the family has a really good understanding of systems to help track and manage the crop.

The family knew that they did not have any formal Workplace Health & Safety (WHS) programs in place, but they thought all the staff were 'pretty safe' and did not really need a formal safety system. However, they had recognised the increasing need for businesses to comply with changes to WHS laws.

Before they were able to make any improvements to their practices, a terrible accident on the farm resulted in the death of one of their staff. Since that time, the family has realised that a functioning WHS system is critical to their business and safety of their staff. Some of the changes that the family has implemented since the accident are:

- Stopping and thinking about safety risks before doing tasks
- Writing down lists of near misses and accidents that occur and what to do differently next time
- Regular management meetings and 'brainstorming' to think about making the farm safer
- Checking which staff have licences, and organising a trainer to give licenses and training to staff with specific responsibilities
- Making all staff responsible for safety, and asking them about it at their annual review
- Having enough casual contracting staff that can speak English and translate safety instruction for non-English speakers

The accident has caused this business to change and improve its management of safety. Does your

business need to improve its safety system before an accident happens?

Check to see if you're safe, it's not hard. START HERE.

Case study 2 – good WHS practice

A family owned vegetable business in Victoria claims that "even when you think you're doing it right, you can never be too careful". The business grows a range of vegetables including lettuce, broccoli and cauliflower and supplies the major retailers as well as wholesale and central farmers markets both locally and interstate.

Chemical application to crops for pest, disease and weeds is a regular activity undertaken on-farm and as such, there were "pretty good procedures in place" to ensure the spray operators' safety, particularly when mixing chemicals.

These procedures include:

- The use of personal protective clothing, such as PVC gloves, an apron, gum boots and a face shield. They even have a pair of overalls to be worn only when mixing chemical so they are not transferring the smell of chemical into the tractor cab.
- Operators reading the label before mixing to make sure they have the right gear on
- Keeping good records of what is sprayed when, including the rate of application, the product used and what crop it was applied to. This information is required for their Quality Management System (QMS).

One particular incident occurred during chemical spraying.

The operator was completing a routine nozzle check out in the field, as one of the nozzles appeared to be blocked. He had his gloves on but when he unscrewed the nozzle there was pressure in the line and he was splashed with diluted chemical, on his upper body and face. Fortunately, all of the boom sprays carry fresh water with them so he was able to wash it off immediately and then went back to sheds for a shower.

It was pressure in the line that caused the chemical splash due to the one-way valves. "We've now fitted taps to the end of the line to ensure that any pressure can be released prior to changing or removing nozzles. It is now common practice to turn these taps on before any work is done on the line."

"It's unfortunate the incident occurred, and we were lucky it wasn't more serious. However, it's been a good lesson that by making a pretty simple change to the way we do things we can remove the risk of this happening again."

Check to see if you're safe, it's not hard. START HERE.

Case study 3 – poor WHS practice

A family business on the outskirts of Adelaide produces hydroponic crops for supermarkets. The

business employs a number of casual staff to conduct a variety of tasks in the greenhouses.

The family members realise that they have some risks that probably need to be managed, such as working from scissor lifts, forklift use, using heavy machinery in the workshop and hazards around the site. To date, the business owners have tried to do the majority of 'dangerous' tasks themselves so that it does not put employees at risk. They do not have a Workplace Health and Safety (WHS) system.

The business is looking to install more greenhouses and significantly expand production in the next couple of years. This will mean taking on more staff and working on a remote site where the family may not be able to do all the dangerous tasks.

The family is unsure about exactly what they need to do, or how to go about starting a WHS system, they expect it may require a consultant or be quite expensive.

Are you worried that WHS is expensive and do not quite know where to start?

Choose to be safe; it's not hard. START HERE.

(It's not expensive either!)

Case study 4 – poor WHS practice

Contractors are our biggest liability. How should I manage them?

One of the common challenges faced by large-scale vegetable growers is the management of contractors. "Contractors are our biggest liability", laments one cauliflower and lettuce grower from Victoria, who can have up to 40 contractors on his property during the picking season.

The first challenge lies in the daily variation in individual contractors – the 40 contractors on day one may not necessarily be the same 40 contractors returning to the farm on day two. This makes delivering consistent WHS messages difficult. Staff inductions, while recognised by growers as critical to a safe work environment, are often rushed and informal during busy times. This means there is a risk that important WHS messages are overlooked and inconsistent from one day to the next.

Secondly, many of the contractors employed over the peak season come with no prior farming experience, they may be backpackers, are casually employed, and in many cases "don't want to be on the books". The lack of farming experience and sometimes "casual" approach to the work only exacerbates the WHS risk.

The death of a 24-year-old German backpacker from heat stress on a vegetable farm in Queensland in 2009 highlights the risk of being unfamiliar with the working environment. The young backpacker had only recently arrived in Australia and was unfamiliar with the heat and strenuous nature of the work. The farm owners however were found to be negligent in failing to provide water, shade or sun protection and were fined $25,000.

The varying abilities and experience of the contractors, coupled with the daily variation in individual contractors on the farm, warrants the regular delivery of very clear and consistent WHS instructions and procedures. However, therein lies a third challenge. Even when all reasonable measures *are* taken by the grower to communicate best WHS practices to their workforce "at the end of the day you can tell

your staff (and contractors) everything, but there is no guarantee they will listen. You really rely on the common-sense and good behaviour of your workers".

Not surprisingly, a strong sense of worry remains amongst growers about their liability in managing contractors. Are these concerns familiar to you? And how do you manage contractors on your property?

Choose to be safe; it's not hard. START HERE.

Key messages from consultation

A further output of the project was insight into the requirements that growers had for a WHS package, the key messages were:

- Growers were seeking a flexible package of resources that could be integrated with existing operations and simply showed growers their obligations what to do about those obligations.
- The threat of legal enforcement and prosecution for WHS is a significant de-motivator for vegetable growers.
- Some growers had unrealistic expectations about the impact that WHS would have on their business. If there were a major injury or fatality there existed a commercial risk to that businesses that in most cases growers had not considered.
- Generally, larger growers tended to be better at WHS than smaller growers. This had occurred as a result of accidents, near misses or awareness of accidents on other properties. Some of the smaller businesses had no WHS system and regular occurrences of unsafe work practices.
- Historically, where an accident had occurred in a region, the businesses in that region were audited by the statutory authority and businesses in the region were required to improve WHS. This was a 'negative pressure' event due to an accident or issue in the region. Where this had occurred, businesses were forced to improve WHS, were focused, and hungry for resources. However, over time, the implementation and effectiveness of WHS systems after those events had waned.
- There were no reported 'positive pressure' requirements for WHS, for example the ability to access a new more profitable market, or incentive scheme for growers to participate in WHS. As such, WHS continues to maintain a negative perception among growers.

The following chart shows a spectrum of scale of vegetable businesses encountered in consultation. The chart shows that the focus of the resources this project created were towards medium to large growers as they were the most likely to be seeking resources. The largest growers typically are self sufficient for WHS resources, the smallest growers also have other issues such as technology barriers and language barriers, as such, the focus of the package is toward the medium to larger growers within the industry.

Small grower (1-2 staff)	Medium Grower (10-20 staff)	Large grower (30+ staff)
	TARGET FOR VegWHS PACKAGE	

Conclusion: case studies and consultation

The case studies provided a means of helping growers identify with both positive and negative responses to WHS. The key message was: ordinary people are involved in WHS, it is not hard, but seeking advice and being involved in the VegWHS program was an easy means of starting.

The case studies were disseminated to growers through a range of media and events, mostly electronic.

The consultation was critical to the final development of the VegWHS resource as it enabled insight into the skills, capabilities and preferences for a WHS system among growers. It also revealed that the growers we were targeting did have some scale of operations and, in most cases, support staff and management structure that could be involved with and assist implementation of WHS.

Review of existing systems in the vegetable industry

The following sub headings provide an overview of the existing systems in use in the Vegetable Industry. The existing systems typically cover food safety or environmental accreditation but can include aspects of WHS.

The review was conducted to determine the likely 'overlap' between a dedicated WHS system and an existing system. In many cases the food safety systems, if they are properly implemented will already be contributing to a good WHS approach.

HACCP – Hazard Analysis and Critical Control Points (food safety)

PURPOSE/ACCREDITATION	NOTES
HACCP Australia is a leading food science organisation specialising in the HACCP Food Safety Methodology and its applications within the food and related non food industries. HACCP Australia is a highly specialised project management company with its sole activity being the provision of technically qualified personnel and services to the food industry. Our purpose is to identify and manage hazards, reducing the risks of food contamination events through the development, implementation and ongoing operation of comprehensive, HACCP based Food Safety Programmes. These programmes are tailored to the particular needs of each individual and group enterprise. Suppliers to the food industry can have their products endorsed as food safe under HACCP Australia guidelines, providing a strong marketing platform to the food safety conscious sector of the industry. (From HACCP Australia Website.)	HACCP accreditation is required by some buyers before contracts/purchases will be made. Although HACCP is not a WHS system, several areas relating to WHS are covered during the audit process. For example, growers must have: A food safety policy Systems to conduct a hazard analysis Documented corrective actions Adequate standards maintained to safeguard the product e.g. lighting, floors, employee facilities Communicated hygiene requirements Adequate ventilation to remove fumes Chemicals stored and handled so as to minimise potential contamination HACCP does not give information for the development of these items.

Global G.A.P. – Global Good Agricultural Practice (food safety and environment management)

PURPOSE/ACCREDITATION	NOTES
G.A.P. stands for Good Agricultural Practice – and GLOBALG.A.P. is the worldwide standard that assures it. We're a global organization with a crucial objective: safe, sustainable agriculture worldwide. We set voluntary standards for the certification of agricultural products around the globe–and more and more producers, suppliers and buyers are harmonizing their certification standards to match. Once you successfully comply with the standard's requirements, you will receive a GLOBALG.A.P. Integrated Farm Assurance Standard V4 certificate for the relevant scope. (From Global GAP Website.)	Global GAP is a voluntary system for food safety and environment management. Global GAP is not a WHS system; however, several areas relating to WHS are covered during the audit process. For example: Records of Training records for employees Provision of appropriate personal protective equipment Storage and handling of chemicals Maintenance of equipment

BRC – The British Retail Consortium Global Standard – Food Standard (food safety)

PURPOSE/ACCREDITATION	NOTES
The British Retail Consortium Global Standard - Food Standard (BRC) was developed by UK retailers and suppliers in the late 1990's in response to concerns by suppliers regarding multiple audits and differing food safety management standards. The Standard is used throughout the world and NCSI is a recognised and accredited assessment body and actively delivers audits in Australia including assessment of Coles house-brand products, Asia as well as the USA (including Wal-Mart house-brand products) and UK. (From BRC Website.)	BRC relies on the HACCP Accreditation system and ISO 9000 - Quality management for assessment/auditing. Although WHS is not the main focus of the system, items such as staff training, protective clothing and personal hygiene are covered. ISO 9000 focuses on eight quality management principles, which "can be used by senior management as a framework to guide their organizations towards improved performance." This is not related to WHS specifically, however, the management principles refer to training, continual improvement and systematically defining activities – all aspects of a WHS management system.

Coles Supplier Requirements – Food Supplier Standard: CSR-FV3 May 2011 (food safety and environmental management)

PURPOSE/ACCREDITATION	NOTES
From Coles Supplier Requirements – Food Supplier Standard – CSR-FV3 May 2011 Booklet Suppliers need to ensure that all the additional elements outlined below are incorporated and implemented as part of their in-house Food Safety / Quality Assurance Programs. Suppliers will be audited against these additional elements, and in order to achieve approval as a Coles Brand supplier, they will need to obtain certification against the relevant external standard (e.g.: BRC-Food, SQF2000L3, SQF1000L3, Freshcare) AND against the Coles Supermarkets additional requirements. In addition to this, Coles will impose close-out timeframes and actions for non-conformances, over and above those set by the BRC, SQF and Freshcare standards. (From Coles Supplier Portal Website.)	Coles' requirements are based on BRC-Food, SQF2000L3, SQF1000L3, Freshcare and Coles' additional requirements as stated in the booklet given to suppliers. As covered elsewhere in this document, HACCP, BRF-Food and Freshcare are not WHS focussed systems. Refer to SQF Information elsewhere in this document. Coles require SQF 2000 Level 3 Certification from suppliers. SQF 2000 is a HACCP based system – Please refer to HACCP information elsewhere in this document. SQF 1000 is a HACCP based system – Please refer to HACCP information elsewhere in this document. Additional requirements set out in the Coles Supplier Requirements – Food Supplier Standard – CSR-FV3 May 2011 Booklet refer to Food Safety, with minimal reference to any WHS issues.

SQF – Safe Quality Food Institute (food safety)

PURPOSE/ACCREDITATION	NOTES
SQF is recognised by retailers and food service providers around the world who require a rigorous, credible food safety management system. Using the SQF certification program will help reduce assessment inconsistencies and costs of multiple assessment standards. What's more, the SQF Program is recognized by the Global Food Safety Initiative (GFSI) and links primary production certification to food manufacturing, distribution and agent/broker management certification. Administered by the Food Marketing Institute (FMI), SQF benefits from continual retailer feedback about consumer concerns. These benefits are passed on to SQF certified suppliers, keeping them a step ahead of their competitors.	From the SQF 2000 Guidance Booklet Guidance for Developing, Documenting and Implementing SQF 2000 Systems for General Food Processing 6th Edition NOVEMBER 2008 The SQF 2000 Code is a HACCP-based food safety and quality management program designed primarily for the processing and manufacturing sector. The Code utilizes the CODEX HACCP method to address both food safety and quality. The methods used to manage food safety are documented in a Food Safety Plan and the methods used to manage quality are documented in a Food Quality Plan. The SQF 2000 Code is divided into three

PURPOSE/ACCREDITATION	NOTES
(From the SQF Institute Website.)	certification levels. Each level indicates the stage of development of a Supplier's food safety and quality management system. A Supplier can choose a level that is acceptable to a customer and the attainment of a level indicates the stage of development of the Supplier's food safety and quality management system. The three levels of certification for the SQF 2000 Code are: Level 1 Food Safety Fundamentals Level 2 Certified HACCP Food Safety Plans Level 3 Comprehensive Food Safety and Quality Management System SQF 2000 is a HACCP based system – Please refer to HACCP information elsewhere in this document. From the SQF 1000 Code A HACCP-Based Supplier Assurance Code for the Primary Producer 5th Edition JANUARY 2010 The main feature of the Code is that it is based on the Hazard Analysis and Critical Control Point (HACCP) system, a proven method used by the food industry to minimize food safety risks and reduce the incidence of unsafe food reaching the marketplace (see Appendix 2). The implementation of an SQF 1000 management system addresses a buyer's food safety and quality requirements and provides the solution for Producers supplying local and global food markets.

WQA (Woolworths Quality Assurance) Standards Version 08 (food safety)

Woolworths Ethical Sourcing Policy – An Environmental Management System

PURPOSE/ACCREDITATION	NOTES
The scope of the WQA system each vendor shall implement shall cover all aspects of the supply chain managed by the vendor relating to Woolworths activities. Specific areas of attention in Version 8 are: Customer focus, foreign object management, food allergens, pest prevention and hygiene.	The WQA (Woolworths Quality Assurance) Standards Version 08 is focussed on Food Safety and is not WHS specific. The Woolworths WQA is much more specific in their requirements than other systems, mainly because they do not rely on an external system, such as HACCP, to cover off on Critical Control Points; rather, their system includes

PURPOSE/ACCREDITATION	NOTES
The Ethical Sourcing Policy states: Working Conditions A safe and hygienic working environment shall be provided, bearing in mind the prevailing knowledge of the industry and of any specific hazards. Adequate steps shall be taken to prevent accidents and injury to health in the working environment Workers shall receive regular and recorded health and safety training, and such training shall be repeated for new or reassigned workers. Access to clean toilet facilities and to clean and drinkable water and, if appropriate, sanitary facilities for food storage shall be provided Accommodation, where provided, shall be clean, safe, and meet the basic needs of the workers Suppliers will ensure that personal protective equipment is available and workers are trained in its use. Safeguards on machinery must meet or exceed local laws Suppliers shall assign responsibility for health and safety to a senior management representative (From the Woolworths "Wowlink" Website.)	these aspects of Food Safety. It is the Ethical Sourcing Policy that is very specific in relation to WHS requirements – as shown at left. Although the Policy is specific as to what is required, there is no instruction as to how to go about implementing, for example, training, assigning WHS responsibilities or how to prevent accidents and injury.

ISO14001 – International Organisation for Standardisation

An Environmental Management System

PURPOSE/ACCREDITATION	NOTES
ISO 14001:2004 specifies requirements for an environmental management system to enable an organization to develop and implement a policy and objectives which take into account legal requirements and other requirements to which the organization subscribes, and information about significant environmental aspects. It applies to those environmental aspects that the organization identifies as those, which it can control, and those, which it can influence. It does not itself state specific environmental performance criteria. ISO 14001 was developed primarily to assist companies with a framework for better management control that can result in reducing their environmental impacts. In addition to improvements in performance, organizations can reap a number of economic benefits including higher conformance with legislative and regulatory requirements	The main focus of ASO14001 is better management control that can result in reducing environmental impacts. This relates to issues such as documentation control, emergency preparedness and response, and the education of employees, to ensure that they can competently implement the necessary processes and record results. A successful ISO 14001 system may result in such things as reduction in waste, consumption of resources, and operating costs, all of which would be impacted by WHS. As the focus of ISO14004 is on

PURPOSE/ACCREDITATION	NOTES
by adopting the ISO standard. By minimizing the risk of regulatory and environmental liability fines and improving an organization's efficiency, benefits can include a reduction in waste, consumption of resources, and operating costs. From the ISO (International Organization for Standardization) Website.	environmental impacts, with any WHS issues being referred to in a manner such as "this is required", there is no instruction regarding implementation.

EnviroVeg – An Environmental Management System

PURPOSE/ACCREDITATION	NOTES
EnviroVeg is the vegetable industry's leading environmental program developed specifically for vegetable growers. EnviroVeg provides growers with guidelines and information on how to manage their business in an environmentally responsible manner. It provides a visible way of demonstrating a responsible attitude towards the environment. It also assists growers by showing the community that they are responsible environmental managers. EnviroVeg is an industry owned and developed environmental program for vegetable growers. It is FREE to all levy paying vegetable growers. With the recent launch of the new *EnviroVeg Platinum* Scheme, growers can now access new benefits if they volunteer to submit themselves to independent assessment of their environmental practices. The Scheme was jointly launched with major retailer Coles and will provide Australian vegetable growers with access to enhanced recognition. From EnviroVeg Website. The EnviroVeg Program provides growers with information and resources about environmentally sustainable management through a range of communication outlets, including workshops, websites, *Vegetables Australia* magazine and other industry publications.	EnviroVeg (an arm of AusVeg) is solely focussed on research and development of environmental issues relating to the vegetable industry and has no focus on WHS. The EnviroVeg website states "EnviroVeg is the vegetable industry's own environmental program developed specifically for vegetable growers." Although publications such as *Vegetables Australia* may cover off on WHS issues at some point in time, its focus is to be a "valuable source of industry news and information on the research and development program" and "deliver the latest industry information direct to growers." Other sources of information such as seminars, websites and other publications will provide growers with tools to deal with environmental issues, which may require WHS considerations, however there is no suggestion of training to implement any WHS requirements.

Freshcare: The National On-Farm Assurance Program (food safety and environmental)

PURPOSE/ACCREDITATION	NOTES
Freshcare is an industry owned, not-for-profit on-farm assurance program, established and maintained to service the Australian fresh produce industry. Freshcare is currently the largest Australian on–farm assurance program for fresh produce; proudly providing on-farm food safety & quality and environmental certification services to over 5000 members nationally. The foundations of the Freshcare Program are the user-friendly Codes of Practice and detailed training support materials. The Freshcare Codes describe the practices required on farm to provide an assurance that fresh produce is safe to eat, has been prepared to customer specifications and legislative requirements; and has been grown with care for the environment. Freshcare currently offers certification to the following Codes of Practice, following participation in an approved Freshcare training course: Freshcare Food Safety & Quality Freshcare Environmental Freshcare Environmental - Viticulture Freshcare Environmental - Winery The Freshcare Code of Practice Food Safety and Quality has always been based on HACCP principles. Elements of the Food Safety and Quality Code of Practice were derived from an analysis of food safety hazards relevant to horticulture production and packing and have become support programs. Edition 3 of the Freshcare Food Safety and Quality Code of Practice requires businesses to complete a more formal HACCP process and identify risks and control measures specific to their business. (From the Freshcare Website.)	Freshcare is based on HACCP principals; however it is more in-depth with hazard analysis, chemical use and storage, facilities and record keeping. Freshcare audits will cover the produce from paddock to supplier and all aspects of safety for this process, however, no instruction is given on how to, for example, setup and maintain a training register or conduct a hazard analysis, risk assessment and prepare a Standard Operating Procedure. These elements of WHS are required but not explained in the Freshcare documentation.

Conclusion: existing systems in the vegetable industry

Historically, management systems typically used or audited in the vegetable industry have not specifically incorporated WHS components. This is likely to be a function of the previous systems focusing on food safety. The market has required 'safe food' as a priority over food produced in accordance with WHS legislation. At this point in time, there are no strong market signals for vegetable growers to implement safe work practices, or there is no market advantage. As such, the requirement

for WHS remains a moral and legislative one.

Business owners and managers are required to implement WHS practices, regardless of which food safety or supply chain system they may have implemented. As such, the VegWHS system was created to maintain flexibility so that vegetable businesses could pick and choose specific components of the VegWHS resources to be incorporated into existing management systems. This approach also matched messages received in consultation.

Review of WHS/OHS legislation for each state

The purpose of this component of the work was to understand specific differences between state legislation that may impact project delivery. Most states are operating under harmonised legislation with the exception of Victoria and Western Australia.

The following two tables show the differences between the states and main impacts of those differences.

Health and Safety Legislation Across Australia

The following table sets out the health and safety legislation in each jurisdiction and outlines the status of harmonisation in that jurisdiction.

Jurisdiction	Legislation	Harmonisation
ACT	Work Health and Safety Act 2011	Implemented harmonised legislation 1 January 2012
NSW	Work Health and Safety Act 2011	Implemented harmonised legislation 1 January 2012
NT	Work Health and Safety (National Uniform Legislation) Act 2011	Implemented harmonised legislation 1 March 2011
QLD	Work Health and Safety Act 2011	Implemented harmonised legislation 1 January 2012
SA	Work Health and Safety Act 2012	Implemented harmonised legislation 1 January 2013
TAS	Work Health and Safety Act 2012	Implemented harmonised legislation 1 January 2013
VIC	Occupational Health and Safety Act 2004	Not currently planning to introduce the WHS Act
WA	Occupational Safety and Health Act 1984	Date of implementing harmonised legislation undecided

The following table summarises the main differences between jurisdictions.

	Model WHS Act, ACT, NSW, NT, QLD, SA, TAS	VIC	WA
Who is the primary duty holder?	Person conducting a business or undertaking	Employer	
What is their primary duty?	Ensure safety so far as reasonably practicable to provide a safe workplace.		
What are the maximum fines?	$600,000 (individual) $3 million (body corporate)	$253,512 (individual) $1,267,560 (body corporate)	$312,500 (individual) $500,000 (body corporate) plus $625,000 (for repeat subsequent offences)
What are the maximum imprisonment terms?	5 years		2 years
Who holds the onus of proof?	Falls on prosecution		Currently under review
Directors and managers: Who is liable?	Officers: Directors or people who make decisions that affect substantial part of business or financial standing business	Officers: Directors or people who make decisions that affect substantial part of business or financial standing business	Directors, managers, secretaries and other officers
When are directors and managers liable?	Must be proactive in exercising due diligence to ensure compliance by company	Where officer failed to take reasonable care	Where attributable to officer's neglect
To who is the duty owed?	Duty owed to all 'workers'	Duty owed to employees	
What is the highest criminal liability?	Reckless behaviour that causes serious injury or death	Reckless conduct that causes risk of serious injury	Gross negligence

Conclusion: impacts of legislation on resources for the vegetable industry

The majority of states in Australia have relatively consistent legislation for Workplace Health and Safety (WHS). There exists some difference such as fines and specific lines of responsibility. In addition to this review, the project team also spoke with Worksafe Victoria and Workcover WA and there was consensus that it was important for this project to avoid specific legislative detail and that the emphasis needed to be on the principle of creating and maintaining safe workplaces.

The result was that the project team has incorporated resources from across many states to provide an effective solution to WHS implementation, rather than focusing on legislative detail. The WHS issues on vegetable farms are not about legislation, rather they are around poor on farm practice, as such, the resource has been constructed to maximise practice change.

The VegWHS resource

The focus of the project and the major output was to construct a WHS resource tailored to the vegetable industry, allowing growers to improve their WHS capability on the farm and in the packing shed. This resource was constructed taking into consideration:

- Consultation with growers to understand their requirements
- A review of 'off the shelf' Safety Management Systems and resources available
- A review of historical resources that had already been constructed for the industry or could be adapted to the industry
- Advice from state work safe regulatory bodies
- A review of legislative requirements and industry codes of practice

In the early stages of the project, it was clear that existing 'off the shelf' WHS systems were complex and difficult to implement for all but the largest of farms with specialist staff to implement WHS. Existing 'off the shelf' WHS systems (most of which were ring binders with an average of 300 pages each) which are available for commercial purchase, demonstrated that it was impossible to open up the documents and determine how to start a tractor safely. Something had to change to help provide an achievable solution to growers.

The project team believes is has achieved a genuine innovation in building the VegWHS resource that is previously unseen in commercial WHS systems. To achieve effectiveness for vegetable growers, it had to pass the 'can I pick it up and start the tractor safely test?' The major change was a subtle move from a systems based approach, where a system covers all activities covered within a business, to that of a 'task' based approach. Vegetable growers tend to be very practical and 'hands on' people who think in categories of tasks or activities, as such the ability to look up a task (like tractor driving) and see how to do it safely was significant progress for growers, and an innovation in the VegWHS system.

Safety Management System

The resource comprises two main sections: the first is the 'System Book.' The system book is a step-by-step process that enables a grower to build an entire Safety Management System (SMS).

The process of building a complete SMS has been simplified with the use of step-by-step hyperlinked documents with clear instructions, policy templates, codes of practice, and simple clear instructions on action required by a business to implement a system.

There is a significant amount of work involved for a grower to build an entire safety management system from the start, i.e. a number of weeks of work. The project team anticipates that growers will tend to start implementing specific 'tasks' (see following heading) in the first instance before coming to the SMS to systematise the entire WHS activities in the business.

Safe work practices - Tasks

The second section brings the innovation. It contains safety procedures for 72 of the most common tasks that occur on a vegetable farm or in the packing shed. This section of the resource is designed to allow a grower to easily select a task, and then follow the necessary steps to conduct that task safely and comply with legislative requirements. The key difference with this section and the innovation is that it adopts a 'task' or 'activity' approach rather than a 'system' approach to WHS, and this was a key message from our consultation, i.e. growers tend to think in a task framework, not in a system framework. We believe this innovative structure enhances the overall usability of the resource.

Growers can easily look up specific tasks on the carrot USB and find codes of practice, draft policy and operating procedure templates and information on how to assess risks and implement safe work practices.

LOTE and pictorial tools

The third component of the resources, which has also been incorporated into the 'tasks' section of the resource, is that of eighteen (18) diagrammatic and pictorial tools.

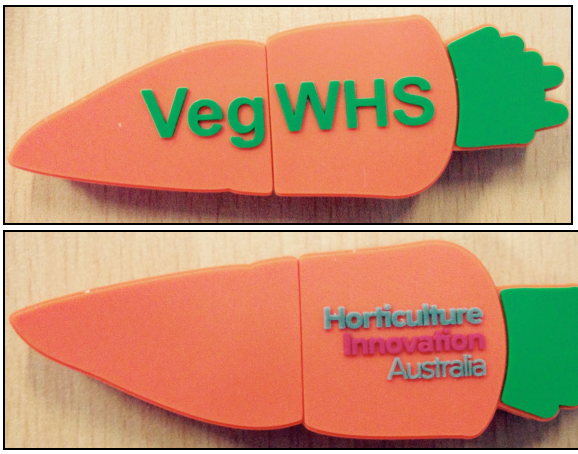
These tools have been identified as the 18 most dangerous tasks that typically occur on a farm and are represented pictorially with minimal amounts of text. These documents provide a basic Safe Work Method Statement in situations where language or literacy is difficult, such as occurs with migrant workers.

These tools have also been translated into Vietnamese, Korean and Chinese for use with migrant and temporary workers. Growers that have seen these resources are keen to implement and adopt it for their own businesses.

An example of these tools is also included in the appendix.

The package

A carrot shaped USB drive contains all this information in an intuitive, hyperlinked format to allow easy navigation of the resource and supporting documents.



The project originally envisaged provision of a DVD resource, however through consultation it was evident that many computers do not have a CD or DVD drive; as such USB was more practical and the preferred means of data transmission. The entire resource is nearly 1 gigabyte (1GB) in size and contains nearly 1,200 files.

Rather than simply provide a standard USB drive, the project team determined that a little carrot shaped USB drive would create additional interest and likely tempt growers to put it into a computer to see what was on the drive.

State work safe authorities, growers and Belinda Hazell from TQA Australia reviewed the resource and were complimentary on the finished product. Finally the product was tested with growers and that feedback was positive due to:

- The simplicity of the resource and navigation through the various steps
- The range and depth of information available
- The LOTE tools
- The supply of lots of templates that are editable and can be customised for each business

The project team is very pleased with the VegWHS resource that we have constructed. It brings genuine innovation, and will help to meet the needs of growers who use it.

Communication and extension

The outputs for the communication and extension for this project are described in the following subheadings. Many of the outputs are also contained in the appendices.

Communication via Ausveg

The project team maintained regular communication with Andrew McDonald, Communications Manager at Ausveg. As Ausveg is the Peak Industry Body and maintains regular communication with their national grower database it was pertinent to provide information for wider dissemination.

Ausveg was able to provide case study flyers, weekly updates (see example in appendix), and a feature in Vegenotes edition 44 (see appendix), through their communication channels to growers. This communication to growers resulted in 28 growers registering to receive a copy of the VegWHS resource.

Promotion through the state and territory associations

Following completion of the resource, the state and territory associations provided assistance with promotional material via newsletter mails outs and then finally mailing out the VegWHS USBs to growers in each state and territory.

The project team prepared a communication flyer (see appendix), which was provided to the associations for dissemination through their communication channels to promote the resource. An example of the type of state communication is attached (see appendix).

In total, 761 carrot shaped USBs were mailed out to growers in five states and one territory as a result of growers responding to Ausveg's national communication or via the stage vegetable association

databases. The project team was unable to obtain database information for South Australian and ACT growers. The national mail out of the VegWHS USB drives was a major output for the project.

Attendance at industry events

The project team consultants attended two field days during early to mid 2015 to promote the resource to vegetable growers. These events included the Pakenham Soils Expo at Pakenham, Victoria and the Precision Agriculture Expo at Deloraine, Tasmania.

The project team also staffed a stall at the 2015 Ausveg National Convention Trade Show on the Gold Coast to promote the VegWHS resource to growers. This interaction at the convention over the three days allowed demonstration of the resource to growers and the ability to provide on the spot training and answer grower questions. In total, 100 USBs were distributed to growers and industry stakeholders at the conference.

Phone support

The mail out of the VegWHS carrot USB to growers included a letter that outlined the provision of follow up phone, email or site visit support to growers.

There was little uptake of phone and email support, with a preference for a site visit from growers who made contact with the project team.

Final site visits

Growers who had requested information, or had any contact with the project team throughout the project were contacted once the resource was finalized to see if they would like to receive customised training in implementation of the VegWHS resource.

A total of 4 large vegetable growers requested follow up and received customized one on one training in the use of the resource, and assistance with risk assessments on farm. The site visits were customized to meet the needs of those businesses and ensure maximum value was provided to meet the greatest needs and highest risks of WHS for those businesses.

Outcomes

The following sub headings describe the outcomes of the project.

Confirmation of the skills research

The Macquarie Franklin skills review[4] of the vegetable industry has proved to be an accurate assessment around the skills assessment for workplace health and safety (WHS).

Page 50 of the skills review identified WHS as one of the 'most significant skills weaknesses' in the industry. The experience of the project team has certainly validated this assessment, with risky work practices evident in the industry, and a genuine requirement for skills improvement in the industry to create safer work environments.

The skills review report also noted that WHS was 'well down the list of skill development priorities' for vegetable growers. The project team confirmed this insight. Generally across the life of this project it was difficult to engage with vegetable growers on issues of WHS.

In general, growers were not willing to be involved in case study development, growers were not willing to attend regional workshops on WHS and growers did not seek out training and support as provided in this project. Other WHS professional practitioners that we collaborated or consulted with for this project confirmed this experience. There were some welcome exceptions to this experience where vegetable growers were keen, willing to engage and seek to promote safe workplaces, however they were in the minority.

The skills review report also noted a preference for 'one-on-one' training, and issues with languages other than English (LOTE). Again, these insights were confirmed with poor responses to regional workshops and improved grower responses to one-on-one training. The consultation at the beginning of the project and subsequent one-on-one training confirmed that LOTE issues are significant and that the VegWHS resource has made significant progress to meeting needs of growers with LOTE WHS challenges.

Understanding barriers to workplace health and safety

An understanding of the barriers for vegetable businesses to implement effective WHS systems was achieved from the consultation and training phases of the project.

- **Knowledge:** One of the main barriers described by businesses, both with some form of WHS capacity and those without, is that 'WHS is complex and I don't know where to start'.

  To some extent this is true and existing systems have been complex, however our review of existing practices suggests that the systems available focused on compliance rather than improving outcomes or adoption.

- **Resources:** Many growers have family businesses in what is a very intensive agricultural sector. Thus, the amount of time available to some businesses to think about WHS, let alone implement change, is limited. The lack of resources is mainly people or staff interested in WHS,

[4] Macquarie Franklin, December 2012, Review of skills and training in the vegetable industry, Prospect TAS.

and a readily available document or procedure to implement.

- **Cost:** A further barrier to adoption, which is likely more perceived than real, is that a WHS system is expensive and will require significant expenditure on new equipment.

- **Management skill:** The interviews revealed that most businesses have a mix of permanent and casual labour. Businesses are typically managed by the family owners of the business, they reported challenges with managing permanent and casual staff, not only in the application of WHS, but also in regard to general people management. We believe that some of the gaps are likely to be: engaging and motivating staff to improve WHS, monitoring and reporting on WHS performance, and implementing a change of practice in the workplace.

  Many of the owners or managers have a 'doing' background, rather than a management background. They are labourers first and managers or business people second. Therefore systems, governance and monitoring is unnatural to their way of thinking.

  Further, these businesses employ low skilled staff for menial tasks, many of the staff are not English speakers, so communication from a non-manager to a non-English speaker multiplies the challenge.

- **Dislike of compliance:** There is a fear from business owners of adding a layer of bureaucracy or red tape that will hinder production rather than promote improved performance.

- **Negative experiences:** A majority of businesses had negative experiences with previous WHS; typically this was the result of an accident or audit from a work safety authority. The negative perception is that WHS is dictated by a government agency simply seeking conformity, which for many independently minded business owners is like red rag to a bull.

  The converse viewpoint was expressed at one site where 'implementing better systems has helped our staff and helped our business', not only in safety but also in problem solving, logistics and profit.

- **It's not necessary:** One of the barriers intimated by only a couple of businesses was that WHS was not really necessary, in that it only applied to big business. They thought that if the owner operator could do all the risky activities (even in a risky way) then there was no problem. Thus, drawing a conclusion that no action on WHS was necessary.

One further barrier to implementation of WHS that was particularly evident in the extension phase of the project was that of diverging views towards WHS within a vegetable growing (family) business. For example, if some family members were in favour of WHS, and other family members were against WHS then employees received mixed messages, and robust implementation of WHS was difficult. This ultimately is a business governance issue where each businesses need to develop, implement and monitor policy to protect business owner and shareholder interests.

Providing the VegWHS resource to growers

The major outcome of this project is that the VegWHS carrot USB has been disseminated to the industry, this has resulted in the following distribution:

- 200 via Vegetables WA database

- 130 via NT Farmers database
- 130 via Victorian VGA database
- 100 via TFGA database
- 51 via NSW Farmers database
- 150 via Growcom database
- 28 via direct response from grower requests
- 30 via Phillip John, WHS consultant working for DPIPWE with Tasmanian vegetable growers
- 25 via Bryan Robertson for the HortEx alliance, vegetable growers in Virginia, SA
- 100 provided directly to growers at the Ausveg 2015 National Industry Convention

This process of direct mail out via state association databases or responses from industry promotion has resulted in 944 VegWHS carrot shaped USB being provided to the vegetable industry. The project team was careful to ensure that growers who responded directly to the project team did not also receive a direct mail out USB from the state association database mailouts.

The VegWHS resource has been provided to Ausveg at the conclusion of the project so that Ausveg can host the resource on their web site so that it is available for growers to download on an ongoing basis.

The outcomes for the resource are:

- An innovative, simple to use USB resource that allows growers to assess workplace safety risk and implement strategies to manage that risk in their businesses.
- The resource has been delivered to a significant number of vegetable growers across the country through mail outs from state VGA databases, RMCG networks or responses to promotional material provided by Ausveg.
- The resource is available for growers to use immediately, or as the project team suspect may happen, that growers will keep the carrot USB in their top drawer and use it at a point in time when there is an accident, near miss or have a question on workplace safety.

Some of the feedback from growers has included:

- "I just wanted to say thanks so much for sending out the USB. This is such a valuable resource! Thank you so much."
- "I looked at the resource carrot and was very impressed, good job, well done. Please pass on my congratulations to the team responsible."
- "I have looked through the carrot USB, which is helpful. Thanks for telling me about it."

There has been additional verbal positive feedback from growers. Essentially, any grower that has followed the instructions and used the resource has been really positive regarding the package and benefit they can achieve. The growers who have engaged with the project team, seeking to improve

their WHS skill and practice have all been in the medium to large scale of business.

Up skilling growers & practice change

The ultimate outcome for this project is to achieve practice change in the vegetable industry and have safer vegetable farms.

Achieving practice change is difficult, but this is compounded for WHS where the barriers to adoption (see previous sections) are numerous.

The project team are confident that the resource:

- Provides simple to navigate menus and content in the absence of knowledge
- Is fast and easy to implement for time poor growers
- Does not bring any cost
- Helps overcome growers who have limited WHS skill
- Avoids a compliance approach and instead focuses on activities

However, growers still need to implement the resource. Some growers will be impacted and receive benefit, others will not. It depends on their engagement, interest and motivation.

There has been no formal component in this project to measure practice change in the industry. It is likely that practice change has been limited due to the multiple and complex barriers for adoption. The project team has followed up growers who made enquiry about the WHS resource and offer: telephone support, email support or site visits in order to help implement and refine WHS practices on farm in a friendly, cooperative environment.

There has been very limited uptake of this free advice and support to businesses. As such, it is likely that factors such as 'dislike of compliance' and 'perceptions that WHS is not necessary' are stronger factors than 'knowledge,' 'limited resources,' or 'cost;' which we think has been overcome in this project. Some growers we have spoken to have received the resource and simply not used it, nor are willing to use it.

The project team suspect that when negative pressure events occur, such as Worksafe audits, death or major injury on a farm or the like that there will then be negative motivation for growers to change. When these events occur in the future, growers will have access to the VegWHS resource to help them implement change.

Evaluation and Discussion

This section evaluates some of the key aspects of this project; it is not an exhaustive list but focuses on the main activities.

Industry context

Workplace health and safety can be difficult in agricultural industries. Projects on improving productivity, profitability or new markets are exciting for the vegetable industry as they can create wealth, and hence enjoy strong grower and industry support.

A large proportion of the industry perceives WHS negatively, as such, it is difficult to engage and generate interest and outcomes with industry. In fact, the project team at some points in time had adopted the phrase that this project was akin to 'selling leprosy' to some growers. Some growers mentioned that they simply wanted to sign a piece of paper to say they were 'compliant' and then not embark on any meaningful practice change.

A small portion of the industry see the benefits of good WHS practice, and these businesses were a pleasure to work with, as they were eager to learn and improve. Typically, these businesses were larger with 20+ staff, had some formal systems in place and were looking to additional systems and management structures to improve performance and help manage the workload and business risk.

Collaboration

A key feature of our approach to this project was to partner with Advanced Viticulture and Management (AV&M) and Belinda Hazell of TQA Australia. These two partners have 'real world' experience and credibility in designing, implementing and managing WHS systems in businesses.

This collaboration and development of practical solutions in a difficult area has driven the innovation and flexibility of the resource. The collaboration has also enabled policy, procedures and assessments to be taken from existing, proven systems and made available for growers to customise and implement. To purchase this documentation commercially would bring a significant cost to growers' businesses yet with collaboration our project partners willing contributed these resources.

Specific credit must go to Sharon Turner of AV&M who worked tirelessly to ensure the VegWHS package was 'practical' for growers and consistent with the messages that were received from consultation.

Consultation with growers

The initial consultation with growers was helpful to understanding the barriers to adoption and the current situation for WHS in the vegetable industry. This process emphasized the range of skills in WHS in the industry and refined the focus of the VegWHS package to be practical for people who tend to think in categories of 'tasks' rather than categories of 'systems'.

Consultation and understanding of issues was critical to successful development of the VegWHS

package.

Research WHS issues

The Australian Centre from Agricultural Health and Safety[5] has some excellent resources on causes and frequency of high-risk activities on horticultural properties. Historically, there have also been a large number of WHS projects and resources provided through industry funds and from statutory bodies to help farmers and horticultural industry improve WHS.

This research into history and obtaining quality data on the issues enabled the project team to avoid reinventing the wheel and simply assemble the existing resources and package those resources in an appropriate way with particular emphasis on high risk activities relevant to the vegetable industry.

The research phase certainly added value to the final resource and avoided wasting time and duplicating resources.

VegWHS resource

The VegWHS resource has been compiled taking into consideration: project collaborators, consultation with growers and previous reports and industry data.

The resource has been well received. In some instances, where growers had NOT followed the instructions that accompany the resource, they were unable to easily navigate the package. However, where growers had followed the instructions, or received training in use of the package, there was unanimous support for the package.

Communication

Communication has been a challenge in this project. The project is a national one across all states and territories, this includes numerous vegetable types and categories, plus challenges with small growers that are non-English speaking. In addition to this our main means of communication has been through Ausveg's national database, State vegetable associations, private databases and networks.

Growers that are not connected with Ausveg, State associations or in the project teams' networks will simply not be aware that the resource exists. The national and state bodies that we worked with in general, were very helpful with regard to promotion of the resource.

Mail out of VegWHS resource

In total, 944 VegWHS carrot USB were distributed to growers. ABARES note there are approximately 2,677[6] vegetable growers nationally in the latest economic survey; however, this number also includes non-levy paying crops such as potatoes, tomatoes and onions. As such, it is possible that the project has achieved say 50% distribution and engagement with vegetable growing businesses.

The mail out and level of engagement through a direct mail out is a reasonable outcome. It would have been preferable to achieve 100% supply of resources to growers, however the limitations on grower

[5] Franklin et al, National Farm Injury Data Centre, November 2001, Occupational Health and Safety Risks associated with horticultural produce production, Moree NSW.

[6] Valle, ABARES, Australian vegetable growing farms, An economic survey, 2012-13 and 2013-14, 2014.

databases have impacted the result.

The original project plan was deficient, as it relied solely upon grower responses to disseminate the VegWHS resource. If the project had continued with that plan, it would have been a poor outcome for industry with only 28 direct respondents to the national promotion. The project manager from HIA, Sharyn Casey, suggested the direct mail out approach, and that advice has significantly improved the outcome by seeing 761 growers receive the resource as a result of this approach.

Extension and implementation

The original project plan envisaged a series of one-day regional workshops across most states in Australia to provide grower training in use of the resource and then have a farm risk assessment walk to look at specific WHS issues.

The project team worked very hard with numerous contacts in the industry to find host farms and attendees who were interested in training and skill enhancement. In the week prior to the first regional workshop in Tasmania, a decision was made to cancel the workshops due to the lack of interest from growers. At that point in time, only four growers had registered for the workshops nationally.

A decision was taken, in consultation with the HIA project manager, to implement the national mail out of USB at that point and then to provide one-on-one assistance to growers in a more confidential setting.

The impact of that decision was a saving of project funds as the extension component was reduced. The one on one training was also relatively poorly taken up with only four grower nationally receiving a days training in use of the resource and assessment of risks on farm. The difficulty the project team experienced in the extension and implementation phase is a reflection of the general disinterest in WHS within the industry.

Conclusion

The development of the VegWHS resources has been a real success thanks to the collaboration of project partners, consultation with industry to understand the issues and hard work in developing the new innovative approach to a 'task based' solution.

The extension and communication has been difficult, and benefited greatly from an adaptive project management strategy. If the original project plan of regional workshops had continued, it would have been poorly attended and wasted project resources. The mail out of the resources to growers achieved broad dissemination of the resource.

Ultimately, it is up to growers to implement an effective WHS system, and as such, many growers in the industry, say 50%, now have the resource.

Recommendations

Management skill

One of the compatible skillsets that is related to WHS, and identified as a barrier to WHS adoption, is that of business governance and management skill. An improvement in management skill within the vegetable industry would also likely have a flow on benefit to the implementation and adoption of WHS within the industry. Improving business management skills, such as the following would have positive impacts on WHS.

- Organisational structures
- Roles and responsibilities
- Governance
- Human Resource Management

Future projects to up skill the industry in these areas would also bring longer-term benefit to WHS development and implementation within vegetable businesses.

Ongoing support

This project has made significant progress for WHS in the vegetable industry with the development and provision of the VegWHS resource.

This particular project has run for a set period of time, and had limited capacity, time and resources for extension with growers. Now that the resource is complete, it is likely that 'negative pressure' events will occur over time such as deaths or injuries on farm, or audits from regulatory bodies. When these negative pressure events occur it would be beneficial for long-term support to be available to growers.

Programs such as that administered by Phillip Johns for Tasmanian farmers, the Safe Farming Tasmania[7] program, provides longer term relationships and support to growers to enable practice change to occur. This program is three years with state funding[8] to allow farmers to get the longer-term support they require. This program should be promoted to Tasmanian vegetable growers as it is a terrific resource freely available and Phillip is keen to help growers use the VegWHS resource.

The Safe Farming Tasmania program is terrific news for Tasmanian vegetable farmers who can work with Phillip over the longer term to implement WHS systems. However, if other states and territories were able to offer a similar service over a longer period of time, that approach would be helpful to see meaningful practice change in the industry.

[7] http://dpipwe.tas.gov.au/agriculture/government-and-community-programs/safe-farming-tasmania

[8] http://www.premier.tas.gov.au/releases/supporting_safer_farms

Create positive WHS events

The WHS space continues to possess a negative perception in the general farming community. If there were ability for the industry to improve sentiment towards WHS, there would likely be increased interest and adoption. Some options may be: a national award for good WHS practice in the vegetable industry, or a marketing advantage that could be used in particular niche markets as has occurred with good environmental practice in recent years.

The change of perception and change of WHS culture is a larger, longer-term issue that is held within the broader community and not isolated to vegetable growers alone.

Scientific Refereed Publications

None to report

Intellectual Property/Commercialisation

No commercial IP generated

References

Fragar LJ, et al, 2005, Rural Research and Development Corporation and Australian Center for Agricultural Health and Safety, Occupational Health and Safety Risk in the Horticulture Industries, Moree, NSW.

Franklin et al, November 2001, National Farm Injury Data Centre, Occupational Health and Safety Risks associated with horticultural produce production, Moree NSW.

Macquarie Franklin, December 2012, Review of skills and training in the vegetable industry, Prospect TAS.

Pollock K, March 2010, The economic cost of farm-related fatalities and the perceptions and management of health and safety on Australia farms, Sydney Medical School, University of Sydney.

Valle, ABARES, Australian vegetable growing farms, An economic survey, 2012-13 and 2013-14, 2014.

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EJ, NSW Farmers.

Greg Owens, NT Farmers.

John Shannon, Vegetables WA.

Karine Cadoret, Tasmanian Farmers and Graziers Association.

Ken Orr, Victorian Vegetable Grower Association.

Phillip John, Senior Health and Safety Consultant, Safe Farming Tasmania.

Rachel Lancaster, Project Manager, DAF, WA.

Sharyn Casey, R & D Manager, Horticulture Innovation Australia.

The project team; Jackie Scally, RMCG; Sharon Turner, Di Stewart, Matt Alexander, AV&M; Belinda Hazell, TQA Australia.

Appendices

Case study 1

Case study 2

Case study 3

Case study 4

VegWHS mail out letter

VegWHS introduction letter

Ausveg weekly update (x2)

In the field publication

Vegenotes report

English diagrammatic tool example

Korean diagrammatic tool example

Vietnamese diagrammatic tool example

Chinese diagrammatic tool example

Do you have a plan?

A family business in South Australia grows a range of fresh vegetables for Coles and Woolworths. The business has been accredited with HACCP, freshcare and EnviroVeg to meet market requirements, so the family has a really good understanding of systems to help track and manage the crop.

The family knew that they didn't have any formal Workplace Health & Safety (WHS) programs in place, **they thought all the staff were 'pretty safe'** and didn't really need any formal safety system. However, they had recognised the increasing need for businesses to comply with changes to WHS laws.

Before they were able to make any improvements to their practices, a terrible accident on the farm resulted in the death of one of their sub-contract employees. Since that time, the family has realised that **a functioning WHS system is critical** to their business and safety of the staff.

What is your workplace health and safety plan?

The family realised that a functioning health and safety system is critical to their business and the safety of their staff.

Some of the changes that the family have implemented since the accident are:

- thinking about safety risks before doing tasks
- keeping a record of near misses and accidents that occur and looking at what they should do differently next time
- regular management meetings and 'brainstorming' to think about making the farm safer
- checking that staff have appropriate licences to undertake their responsibilities - and organising additional training as required
- making all staff responsible for safety and asking them about it at their annual review
- having enough casual contracting staff that can speak English and translate safety instruction for non-English speakers
- carrying out internal audits

The accident has caused this business to change and improve its management of safety.

Does your business need to improve its safety system before an accident happens? Check to see if you're safe – it's not hard.

START HERE TODAY

We are conducting **FREE workplace health and saftey workshops** and **risk assessment farm walks** in most Australian states.

To find out more, or register your interest in a FREE workshop or farm walk contact Jackie Scally at RM Consulting Group, phone: 0468 813 609 or email: jaclynes@rmcg.com.au

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START HERE. We can provide:

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- Farm risk assessment walks
- Health and safety vegetable industry manual

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phone: 0468 813 609

email: jaclynes@rmcg.com.au

The free workshops and farm walks are available for all National Vegetable Levy* payers.

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

**Do you pay a National Vegetable Levy?*
The National Vegetable Levy applies to all vegetables with the following exceptions: asparagus, garlic, hard onions (being bulbs of the species Allium cepa), herbs (other than fresh culinary shallots and parsley), melons, mushrooms, potatoes (other than sweet potatoes), seed sprouts, tomatoes or vegetables of a kind for which the following rates of levy or charge are not applicable: (i) a rate of levy for subclause 4 (3) of Schedule 15 to the Excise Levies Act; (ii) a rate of charge for subclause 3 (5) of Schedule 10 to the Customs Charges Act. Note 1: Vegetables to which Part 17 of Schedule 10 to the Customs Charges Regulations applies are chargeable horticultural products — see that Part. Note 2: Vegetables to which Part 17 of Schedule 15 to the Excise Levies Regulations applies are leviable horticultural products — see that Part.

How do you handle chemicals?

A family owned vegetable growing business in Victoria claims that **"even when you think you're doing it right, you can never be too careful".** The business grows a range of vegetables including lettuce, broccoli and cauliflower; supplying the major retailers as well as wholesale and central farmers markets – locally and interstate.

Chemical application to crops for pest, disease and weeds is a regular activity undertaken on-farm and as such, there were **"pretty good procedures in place"** to ensure the spray operators' safety, particularly when mixing chemicals.

These procedures include:

- The use of personal protective clothing, such as PVC gloves, an apron, gum boots and a face shield. A separate pair of overalls are to be worn when mixing chemicals so the smell is not transferred to the tractor cab.
- Operators are required to read the label prior to mixing to ensure they are wearing appropriate protective clothing.
- Keeping good records on what is sprayed when, including the rate of application, the product used and what crop it was applied to. This information is required for their Quality Management System.

On one particular occasion during chemical spraying, an operator was completing a routine nozzle check in the field when one of the nozzles appeared to be blocked. Due to pressure in the line, the operator was splashed with diluted chemical as he tried to unblock the nozzle. Even though he was wearing gloves, the chemical splashed his upper body and face.

Fortunately, all of the contractor's boom sprays carry fresh water with them so the contractor was able to wash the chemical off immediately and then went back to the sheds for a shower.

Does your farm have a plan for handling chemicals?

"We've now fitted taps to the end of the line to ensure that any pressure can be released prior to changing or removing nozzles. It is now common practice to turn these taps on before any work is done on the line.

"Even when you think you're doing it right, you can never be too careful"

"It's unfortunate the incident occurred and we are lucky it wasn't more serious. However, it's been a good lesson that by making a pretty simple change to the way we do things we can remove the risk of this happening again." *- Farm manager*

Have you had a close call like this on your farm? Check to see if you're safe – it's not hard.

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Work Health & Safety – *where do I start?*

A family business on the outskirts of Adelaide produces hydroponic crops for supermarkets. The business regularly employs a number of casual staff to conduct a variety of tasks in the greenhouses.

The family members realise that they have some risks that need to be managed, such as working from scissor lifts, forklift use, using heavy machinery in the workshop and hazards around the site.

To date, they have tried to do the majority of 'dangerous' tasks themselves so that it does not put employees at risk. They do not have a Workplace Health and Safety (WHS) system.

They expect it [a health and safety plan] may require a consultant or be expensive

If you decided to expand your business, do you have the health and safety systems in place?

Expanding the business

The business is looking to install more greenhouses and significantly expand production in the next couple of years. This will mean taking on more staff and working on a remote site where the family may not be able to do all the dangerous tasks.

The family are unsure about exactly what they need to do, or how to go about starting a WHS system. They expect it may require a consultant or be quite expensive.

Are you worried that WHS is expensive and don't quite know where to start?

Choose to be safe; it's not hard. (It's not expensive either!)

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Do you hire contractors?

Contractors are our biggest risk. How should I manage them?

One of the common challenges faced by large-scale vegetable growers is the management of contractors. "Contractors are our biggest risk", laments one cauliflower and lettuce grower from Victoria, who can have up to 40 contractors on his property during the picking season.

There is a risk that important health and safety messages are overlooked

The daily variation in individual contractors is a challenge – the 40 contractors on day one may not be the same 40 contractors returning to the farm on day two. **This makes delivering consistent Work Health and Safety (WHS) messages difficult.** Staff inductions, while recognised by growers as critical to a safe work environment, are often rushed and informal during busy times. This means there is a risk that important WHS messages are overlooked and inconsistent from one day to the next.

Many of the contractors employed over the peak season come with no prior farming experience, they may be backpackers, are casually employed, and in many cases "don't want to be on the books". The lack of farming experience and sometimes **"casual" approach to the work can increase the WHS risk.** The death of a 24-year-old German backpacker from heat stress on a vegetable farm in Queensland in 2009 highlights the risk of being unfamiliar with the working environment. The young backpacker had only recently arrived in Australia and was unfamiliar with the heat and strenuous nature of the work. The farm owners however were found to be negligent in failing to provide water, shade or sun protection and were fined $25,000.

The varying abilities and experience of the contractors, coupled with the daily variation in individual contractors on the farm, warrants the regular delivery of very clear and consistent WHS instructions and procedures. However therein lies another challenge. Even when all reasonable measures are taken by the grower to communicate best WHS practices to their workforce "at the end of the day you can tell your staff (and contractors) everything, but there is no guarantee they will listen. **You really rely on the common-sense and good behaviour of your workers**".

Not surprisingly, a strong sense of worry remains amongst growers about their liability in managing contractors.

Are these concerns familiar to you? How do you manage contractors on your property? Choose to be safe – it's not hard.

What is your health and safety plan for contractors?

START HERE TODAY

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Our ref: 66-H-02

June 2015

Dear Vegetable Grower,

Re: Workplace Health and Safety - VegWHS

Enclosed with this letter is your very own VegWHS carrot USB drive. It contains information on Workplace Health and Safety (WHS) that can help your business avoid serious accidents or death.

Vegetable Industry and WHS

VegWHS has been requested by growers, people just like you, who said that WHS is a problem, especially for small and medium size businesses.

We have been talking with real vegetable growers to understand the current situation of WHS on farms and in packing sheds, and how we can make it easy for you to make your workplace safer.

The three main messages from growers were clear as to why WHS is difficult to implement in vegetable businesses:

- "WHS is complex and I don't know where to start"
- "I don't have time to do all the research, and I can't afford to pay someone to do it"
- "We just want to do our jobs on the farm, not worry about more systems and compliance"

VegWHS has been developed in response to these concerns and is presented in a simple, easy to use format that will help you overcome these issues.

How do I start?

1. Copy the information from the carrot USB, onto your computer.

2. Go to the VegWHS folder on your computer, at this point you have a choice.

   You can follow the 'System Book' to set up an entire WHS system for your business, or you can look at individual 'Tasks' for a quick check of specific activities that will occur in your business and how to do them safely.

   a. The 'System Book' folder has a step-by-step approach to set up an entire WHS system for your business.

   b. The 'Tasks' is a quick start guide to check a range of tasks to see how

to assess, document, train and monitor safety risks in your business.

3. Open the 'Introduction' document in either the "System Book" or "Tasks" folder, click the hyperlinks to guide you through the resource. .

A good way to start is to simply spend 20 minutes one evening on a computer looking through the folders on the VegWHS USB. You will soon see how to consider risks and manage them for a whole range of tasks that occur in your business.

After sales service!

We are here to answer questions and provide any support you may need to implement safe work practices. Some of the things we can help with:

- Installing and using the carrot USB and implementing the VegWHS system.
- Assistance with risk assessments or safety checks on your farm.
- Assistance to write a Safe Work Method Statement or develop a Standard Operating Procedure for a specific piece of equipment.
- Assistance in running a meeting with your staff to talk about WHS.
- Any other query you may have about working safely on the farm or in the packing shed.

We can provide telephone and email support on any of these items and in some situations we will also make site visits, depending on the issue.

Remember that Safe Work Australia, and state regulatory bodies have really good resources and people who can help you. For more information visit

www.safeworkaustralia.gov.au

VegWHS after sales service will finish at the end of August, so please contact us ASAP if you need assistance with WHS on your farm.

This project has been funded by Horticulture Innovation Australia using the vegetable industry levy and funds from the Australian Government.

Yours sincerely

Jackie Scally & Luke Rolley
RMCG

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WELCOME TO VegWHS

A step by step guide to managing safety in your workplace

VegWHS is easy, it is designed to help you….

1. **ASSESS the risk**. Think about and talk with your staff about what could go wrong and if something did go wrong, what would be the outcome.

2. **DOCUMENT the risk and actions.** Write down the risks and what you will do to manage them to ensure that dangerous activities and consequences are either removed or minimised. Have a checklist in your calendar to make sure you remember the action items over time.

3. **TRAIN your workers.** Spend time with your staff or get external training on how to conduct each task, or use equipment safely.

4. ***MONITOR your progress over time.*** Make appointments in your calendar to run through checklists to make sure you are implementing safe work practices.

VegWHS is not a manual you put on your bookshelf; it is an approach. It is the way you think about every day tasks, checking to make sure they are carried out in the safest way possible.

VegWHS helps you to implement this process. The documents to conduct these exercises are all contained on the carrot USB drive and there are helpful menus to allow you to navigate through the risk, documentation and policy options for each task on your farm.

This project has been funded by HIA[1] using the vegetable industry levy and funds from the Australian Government.

[1] **HIA Disclaimer**: Any recommendations contained in this publication do not necessarily represent current HIA policy. No person should act on the basis of the contents of this publication, whether as to matters of fact or opinion or other content, without first obtaining specific, independent professional advice in respect of the matters set out in this publication.

In this section, you will find:

- What VegWHS actually is
- Who VegWHS is for
- Discover how VegWHS will help you
- How to use VegWHS
- Identify who needs to be involved in WHS
- Learn more about troubleshooting issues

What is VegWHS?

Work, Health and Safety laws across Australia require employers to have in place a means to:

- identify all hazards in their workplace;
- assess the risks arising from those hazards;
- implement measures to eliminate or control those risks;
- provide instruction, training and supervision for employees; and
- consult with employees on matters which affect their health, safety and welfare.

VegWHS has been designed to help you develop and put in place a health and safety system that will help you comply with the law, but is flexible and easy to understand.

By using the activities and tools provided here in VegWHS, you and your workers will be able to determine the best way to manage the health and safety risks in your workplace. This process is called risk management and it helps create a safe workplace.

VegWHS uses the term Work Health and Safety (WHS) management system or Program to include all activities that help you manage health and safety risks.

VegWHS is a resource on a carrot USB drive that will make the job of creating a safe and healthy workplace easy to understand and easy to achieve.

Who Is VegWHS For?

VegWHS has been specifically designed for levy paying Vegetable Growers. It recognises the resource issues facing businesses and the need to streamline the process of developing a WHS management system as well as the documentation requirements.

VegWHS is for you if: your business needs to develop a work, health and safety system from scratch, but you don't know where to start. Or you are looking for additional resources or ideas to improve your existing WHS program.

How can VegWHS help?

The carrot USB resource provides practical guidance to managers of Vegetable Growing businesses on how to comply with the requirements of the work, health and safety laws.

In particular, it provides methods to help your company consult with their employees on WHS matters, as well as tools and activities that will help your workplace undertake risk management.

When you have completed all the activities in this kit, your company will have in place a basic work, health and safety system, tailored to your specific work activities.

The VegWHS components need to be integrated into all its business activities to ensure that your workplace is free from health and safety risks and complies with WHS laws.

How to use VegWHS

VegWHS consists of three components. You will find a folder on the carrot USB drive for each of the following components:

- **System Book**
- **Tasks**
- **LOTE Pictorial Tools**

You will see there is a folder for each component. Beneath is an outline of what is contained in each component.

- The **System Book** provides a master checklist to assess all areas of WHS and help determine where you currently stand with your WHS program. If you run through this checklist and realise you are missing WHS components, then you need to implement VegWHS!

  The System Book contains background information on hazard and risk assessment, Standard Operating Procedures, Job Safety Analysis (JSAs), Corrective Action Records (CARs), WHS policies and more.

  The System Book includes a "Self Audit Kit" so you can run an audit to make sure your WHS Program in complete.

  There is also a step-by-step guide to help you set up your Safety Management System. This is an important part of any WHS program and an ideal place to start.

  You can collect, store and manage the electronic files associated with VegWHS in the recommended folder structure found in the VegWHS System Template (located in the System Book folder).

- The **Task** folder contains a list of tasks that are common to vegetable farms and packing sheds. It is designed to be a 'quick start' guide to allow you to quickly assess safety aspects for a range of common tasks. Within each task, there is an instruction page that will guide you through the WHS requirements for that task. A checklist of tasks is provided, which enables you to identify those tasks that are relevant to your operation. An example of how to use the Tasks folder is provided toward the end of this document.

- The **LOTE Pictorial Tools** folder contains pictorial tools for 18 high risks tasks that are available in English, Chinese, Korean and Vietnamese. The tools are designed to be printed off and displayed around your workplace or given to staff. They are also provided as editable word documents, allowing you to customise the tools to suit your workplace.

Who needs to be involved?

WHS requires a consultative approach with staff. It is essential that both managers and employees are involved.

1. If your company is an owner-operated company then the Managing Director/owner needs to be involved.
2. If your company has different levels of management, then someone from senior management needs to be involved.

3. The people who plan and manage the work such as plant managers and foreman/supervisors need to be included.
4. Representatives of the people who do the work must be involved and given the time to participate in the process.
5. If you rely heavily on contract staff then they will need to have some input.

Consultation is an essential requirement of the WHS laws and is central to the use of VegWHS so, a facilitator is required to lead the workgroup through the activities.

The facilitator is YOU!

The facilitator can be the owner or manager of the company, a senior manager or anyone else who has the authority to successfully work through the process.

The role of the facilitator is to:

1. familiarise themselves with the overall structure, content and approach of VegWHS;
2. read the background information supplied in VegWHS;
3. schedule and coordinate meetings, ensuring the involvement of all participants;
4. coordinate and follow-up on any work that needs to be completed.

EXAMPLE

One of your workers needs to drive a TRACTOR. Here's how to use the VegWHS.

1. **Open VegWHS on your computer.**

   Open the Tasks folder.

   Go to "TRACTOR AND IMPLEMENTS" folder.

   You will see one file called INSTRUCTIONS and folders called CUSTOMISABLE FORMS, DOCUMENTS and LOTE PICTORIAL TOOLS.

   The INSTRUCTIONS file contains all the information you need to start!

   The CUSTOMISABLE FORMS folder contains all the forms you need to print off and use or change to suit your workplace.

   The DOCUMENTS folder contains all the resources relating to that task.

   The LOTE PICTORIAL TOOLS folder contains forms that can be used with staff.

2. **Open the INSTRUCTIONS file.**

   Read the instructions about tractor and implement safety and risk management.

3. **Follow the INSTRUCTIONS.**

   The instructions tell you to print off a HAZARD CHECKLIST and the RISK ASSESSMENT TABLE.

   Go to the tractor and fill in a checklist with the help of your workers. You need to complete a checklist for each tractor at your workplace.

   The checklist will show if there are any issues with the tractor or implements that need to be fixed.

   Let's say there is a broken door handle, this needs to be fixed as soon as possible.

   You decided it is a high risk after looking at the RISK ASSESSMENT TABLE.

4. **Follow the instructions about CORRECTIVE ACTION RECORDS.**

   Print one off and fill it in so you know who is responsible for fixing the door handle.

   Enter it in your diary to follow up and make sure it gets fixed.

5. **Read the information regarding STANDARD OPERATING PROCEDURES (SOP).**

   There is an example SOP for tractors and lots of implements.

   If the SOP isn't right for your workplace, or you want to add your company name at the top, change it using the word file in the CUSTOMISABLE FORMS folder.

   Print it off along with the ACKNOWLEDGEMENT SHEET and have all the workers read the SOP.

   Have everyone sign off on the ACKNOWLEDGEMENT SHEET to say they have read and understood the SOP.

6. **Read the information regarding the DAILY START UP CHECKLIST.**

   If the checklist isn't right for your workplace, change it using the word files in the CUSTOMISABLE FORMS folder.

   Discuss the checklist with your workers and let them know they need to complete one every time they first start up the tractor, no matter what time of day that is.

   Set up a place for the workers to file the checklists, after they have filled them in.

Your workers are now ready to start working!

Troubleshooting

Making WHS easy

VegWHS uses existing WHS systems that have been tried and tested in real life situations. The hard work has already been done; now it's over to you to start implementing WHS on your farm or packing shed. It's easy!

Large vegetable businesses that already have WHS systems in place can pick and choose from the components in the VegWHS system to add or enhance existing management systems. It is easy to scroll through the tasks on the carrot USB, and find policies that you can customise and adapt to your specific needs.

Small and medium size businesses that don't really have a WHS program, and we know there are a lot of them, can easily start with VegWHS to implement WHS into their business. You can either approach it task-by-task, using the range of tasks on the USB, or you can set up an entire WHS system in the 'System Book' folder. Both will help you think about and implement a safer workplace.

VegWHS on your computer

VegWHS is designed for your computer. It has easy to follow menus that are hyperlinked to the relevant documents for that section. Where you see a word with blue underlined text you can click on it to find that resource.

We recommend copying the VegWHS across to your computer before using it. It will run faster from your computer than if operated from your carrot USB drive.

Hyperlinks don't work

The VegWHS package runs from pdf reader software like Acrobat or Preview. In some cases this software has settings that stop the hyperlinks from working.

If you click on a hyperlink (blue underlined text) and you don't see a new screen pop up with the necessary information, it is likely that you need to change the settings in your pdf software.

In your settings in the software there will be a check box with something along the lines of "automatically detect URL's from text" this box needs to be ticked for the hyperlinks to work.

Hyperlinks open up in the same window, not a new window

VegWHS has been designed to have a base 'Instructions' page for each task. From here, you can navigate to a number of other documents, while keeping the Instructions page open in the background.

Sometimes, the settings on your pdf software will replace the Instructions page with the new page you have clicked on, not keeping both pages open. This is frustrating and is easily fixed by changing a setting on your pdf software.

To correct this issue, open Preferences. In the documents section, deselect the check box "Open cross-documents links in the same window". This will fix the problem. When you click on a hyperlink, it will now keep the original 'Instructions' page open in the background for you to reference.

Other troubleshooting

If you come up against other issues with the VegWHS program that you need help with, please simply contact us.

Jaclyne Scally

Phone: 03 5261 6105

Email: jaclynes@rmcg.com.au

Subject: AUSVEG Weekly Update
From: AUSVEG <info@ausveg.com.au>
Date: Tue, 5 May 2015 09:29:40 +0000
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AUSVEG Industry Representative Body for vegetable and potato growers

WEEKLY UPDATE

Tuesday 5 May 2015

DuPont's Dr Luís Teixeira confirmed to speak at the 2015 National Horticulture Convention

AUSVEG is proud to announce that Dr Luís Teixeira has been added to the speaker list for the 2015 National Horticulture Convention, Trade Show and Awards for Excellence.

Dr Teixeira is a leader in DuPont Crop Protection's efforts against insect pests. The insecticide specialist earned a doctorate degree in Entomology from Rutgers University in the USA, where he continued to work as a postdoctoral researcher at both Rutgers University and Michigan State University. Since then he has been working for DuPont, where he has pursued his keen interest in insecticide biology with a focus on chemical resistance.

On Saturday 27 June, attendees will gain valuable insights from Dr Teixeira's recent research. The speaker session will address the mechanisms of resistance to diamide insecticides and review global efforts to prevent diamide resistance.

Additionally, the University of Queensland's Dean of Agriculture Professor Neal Menzies will address delegates on Friday 26 June. Prof. Menzies has a passion for agriculture and the environment, and endeavours to inspire people of all ages to join him in the field he loves. He considers himself primarily a soil scientist, and sees soil science as a central discipline in solving environmental issues.

To register for the 2015 National Horticulture Convention and hear from the leading minds in horticulture, please click here.

IN THIS ISSUE

HIA membership application form

AUSVEG encourages all Australian Vegetable and Potato Levy Payers to register as members of

Horticulture Innovation Australia (HIA), the new grower-owned Research and Development Corporation for Australian horticulture.

By registering as a member of HIA, business entities, individuals and the wider horticulture sector can enjoy many benefits, including:

1. Keeping informed about HIA's transition from the former Horticulture Australia Limited (HAL).
2. Keeping up to date with the latest industry news, events and project outcomes.
3. Having their say on the future of Australian horticulture and the future direction of levy expenditure.
4. The ability to vote on HIA leadership positions.
5. Presenting a united front for the Australian horticulture industry that is looking to improve the sector's productivity and profitability.

Membership is open to active business entities participating in horticulture industries, including those in growing and harvesting, processing, packing, transporting, marketing, wholesaling, retailing and exporting.

Growers are welcome to register as an individual stakeholder should your company already have a nominated representative. However, please note that HIA accepts only one membership per ABN with one nominated representative.

To download the HIA Membership Application form, please click here

Please return your completed Membership Application form to AUSVEG via email at info@ausveg.com.au, or by fax on (03) 9882 6722.

For any additional information, please call AUSVEG on (03) 9882 0277.

Export-ready growers sought for Reverse Trade Mission produce display

The 2015 Reverse Trade Mission will bring over 40 buyers from key Asian and Middle Eastern markets to Australia to attend the 2015 National Horticulture Convention and participate in a range of farm tours and industry meetings across the country.

AUSVEG invites all export-ready growers to express their interest in displaying their produce and attending one-on-one buyers meetings with these 40 international delegates at the National Horticulture Convention on Friday 26 June 2015.

Please click here to download the information package and registration form to confirm your attendance at the 2015 Produce Display. For more information please contact AUSVEG on (03) 9882 0277 or email export@ausveg.com.au.

Are you looking to export to Southeast Asia?

On Sunday 28 June, AUSVEG will host a symposium on behalf of HIA to discuss the trade opportunities available to Australian vegetable growers in the Southeast Asian export market. This seminar will run immediately after the 2015 National Horticulture Convention, Trade Show and Awards for Excellence.

The Symposium will help increase the understanding of the Southeast Asian vegetable markets, provide insights around consumer behaviours in these areas and advise growers on the ins and outs of exporting to these locations.

The Symposium will help attendees explore their export opportunities and deliver practical advice on how to best access these markets.

Expressions of interest are now welcome. Vegetable levy paying growers can apply to have associated travel and accommodation costs covered.

To express your interest, contact AUSVEG on (03) 9882 0277 or email export@ausveg.com.au.

2015 Minor Use Education Symposium - Save the date!

AUSVEG is excited to announce that a Minor Use Education Symposium will take place at Jupiters Gold Coast on Saturday 27 June from 1-5pm.

The Symposium will feature presentations by experts in the field of agricultural chemicals and will provide growers and industry stakeholders with an opportunity to gain knowledge and engage with like-minded attendees.

A limited number of funded positions are still available, so please submit expressions of interest as soon as possible.

To register your interest for this event, please email AUSVEG on info@ausveg.com.au or simply call (03) 9882 0277.

HIA meet-and-greet - Between the Rows continues in Queensland

HIA invites vegetable growers from the Lockyer Valley and Mareeba regions to attend 'Between the Rows', a local meet-and-greet event featuring key HIA representatives.

Participants will discuss:

- how your levies will contribute to strategic areas of investment in your region
- the benefits of becoming a member of HIA
- the latest insights into market access

The meetings will provide growers and key industry stakeholders with excellent opportunities to engage with HIA and have a say on the important issues facing the Queensland vegetable industry.

Mareeba, QLD
Date: Wednesday 6 May
Time: 4:00PM to 6:00PM (followed by BBQ dinner)
Venue: Mareeba United Football Club, Borzi Park, Chewko Road, Mareeba QLD 4880
Click here to view the agenda and register.

Lockyer Valley, QLD
Date: Thursday 7 May
Time: 4:00PM to 6:00PM (followed by BBQ dinner)
Venue: Gatton Research Station, Warrego Highway, Lawes, QLD 4343
Click here to view the agenda and register.

If you have any queries about the events, please contact HIA on (02) 8295 2300 or via email at communications@horticulture.com.au.

AUSVEG representatives visit Queensland growers

AUSVEG Minor Use and Agronomy Coordinator Scott Kwasny and EnviroVeg Coordinator Andrew Shaw visited a range of growers in Southeast Queensland to inform them about the wide range of benefits they can gain by becoming a HIA member, the EnviroVeg program and the importance of being on the minor use database.

For more information about HIA membership click here, for EnviroVeg click here, or to sign up for the Minor Use database, please click here.

Australian grower delegation congratulates Netafim on 50 year anniversary

Members of an AUSVEG grower delegation attending Agritech in Israel have joined with Netafim to celebrate that company's 50th anniversary. Netafim also hosted a dinner for the growers in Tel Aviv which was thoroughly appreciated by members of the delegation.

AUSVEG would like to congratulate Netafim for reaching its significant milestone.

Netafim, an AUSVEG Strategic Partner, will be exhibiting at the 2015 National Horticulture Convention at Jupiters Gold Coast in June.

Australian grower delegation meets with Haifa

Haifa this past week hosted a breakfast for an AUSVEG grower delegation attending Agritech in Tel Aviv, Israel. Joining the group was His Excellency David Sharma, Australian Ambassador to Israel.

Haifa, an AUSVEG Strategic Partner, will also be exhibiting at the 2015 National Horticulture Convention at Jupiters Gold Coast in June.

Workplace Health & Safety workshops and farm walks to be held across Australia

RM Consulting Group (RMCG) is hosting a series of Workplace Health & Safety (WHS) workshops and farm walks focusing on WHS and on-farm risk assessments.

The events will allow levy paying growers the opportunity to:

- Find out how to easily avoid health & safety problems on farms
- Walk around a farm while a risk assessment expert discusses risk management techniques
- Discuss managing risks with a risk assessment expert

Forth, Tas
Forthside Vegetable Research Facility, 124 Forthside Rd, Forth
Friday 5 June

Manjimup, W.A.
Manjimup Horticultural Research Institute, 28527 South West Highway, Manjimup
Tuesday 16 June

Venues to be confirmed:
Gatton, Queensland - Monday 29 June
Stranthorpe, Queensland - Tuesday 30 June
Victoria - Date TBC

The workshops will run from 10am to 3pm and will also include morning tea and lunch. Select events will include sessions on soil health and integrated crop protection.

RSVP is essential for catering.

To register please contact Jaclyne Scally on 0468 813 609 or jaclynes@rmcg.com.au. For more information on the workshops, please click here to view the flyer.

This project has been funded by HIA using the National Vegetable Levy and funds from the Australian Government. This free event is available to all vegetable levy payers.

Growers will also have the opportunity to speak with RMCG representatives and learn about risk assessment and on-farm WHS issues at their booth during the 2015 National Horticulture Convention.

ICP to host Spray Application workshops in Victoria and South Australia in partnership with Syngenta

The Integrated Crop Protection (ICP) team have partnered with Syngenta to invite vegetable growers and advisors to attend workshops on spray application in Victoria and South Australia. The workshops will include:

- Field demonstrations of equipment using ultra violet (UV) dye to assess coverage.
- Technical presentations and Q&A sessions over a free BBQ dinner.

Both workshops will include presentations from:

- Scott Mathew, Senior Solutions Development Lead, Syngenta Australia Pty Ltd
- Dr Doris Blaesing, Associate, RM Consulting Group.

Clyde, VIC
Date: Monday 11 May
Time: 4:00PM to 7:00PM
Venue: Schreurs & Sons, Ballarto Road, Clyde VIC 3978
(download flyer)

Waterloo Corner, SA
Date: Wednesday 13 May
Time: 4:00PM to 7:00PM
Venue: Thorndon Park Produce 613-623 Waterloo Corner Road, Waterloo Corner, SA 5110
(download flyer)

Places are limited, to register contact Heather Buck at heatherb@rmcg.com.au or on (03) 9882 2670.

For futher information, contact Anne-Maree Boland on (03) 9882 2670, or Gordon Rogers 0418 517.

AUSVEG hosts successful Minor Use workshop in Queensland

On Tuesday 28 April AUSVEG hosted a successful Minor Use workshop for vegetable growers at the Gatton Research Station in Gatton, Queensland.

At the information session, attendees discussed the issues surrounding minor use, provided feedback on proposed minor use permits and permits up for renewal and were treated to in depth insights into the role of minor use in Australia.

Speakers included Jodie Pedrana, HIA Project Manager - Minor Use Chemicals and Scott Kwasny, AUSVEG Minor Use and Agronomy Coordinator.

AUSVEG would like to thank Dr Kevin Clayton-Greene for chairing the session and all those who attended for making it such a worthwhile event.

Victorian Potato Industry Strategic Plan - Regional Forums

Regional meetings will be held in Bungaree and Warragul in May to seek grower input on the Victorian Potato Industry Strategic Plan.

The Strategic Plan is being developed to help guide areas of focus for future R&D investment for the Victorian potato industry and to ensure that it has a vibrant, profitable and sustainable future.

Victorian potato growers are encouraged to attend their local meeting to give input and feedback on the plan.

Bungaree
Friday 15 May
Bungaree Community Centre
Cnr Bungaree Creswick Road and Bungaree Wallace Road, Bungaree 3350

Warragul
Friday 29 May
West Gippsland Arts Centre
Cnr Smith Street and Albert Street, Warragul 3820

Refreshments will be provided at both events, which will run from 12:30PM to 4:30PM.

To RSVP, please contact Melly Pandher on (03) 5833 5358 or at melly.pandher@ecodev.vic.gov.au. For more information contact Aimee McCutcheon, Industry Development Officer, on (03) 5833 5308.

The strategic plan is an initiative of the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) Horticulture Centre of Excellence. Outcomes of DEDJTR R&D will also be showcased at the forums, while disease workshops will also be held. Growers are invited to bring along any samples they may have for the workshops.

Soil fumigation - what are my options?

Looking for a more environmentally friendly and cost effective way to manage soil-borne pests? Have a look at the 'Alternatives to Metham Sodium' fact sheet developed by the Integrated Crop Protection and Soil Wealth extension team. The fact sheet provides information on:

- Why an alternative to Metham Sodium is required
- What options are available
- Biofumigation as part of an integrated crop protection approach

To download the fact sheet please click here, and keep it handy to effectively and sustainably manage pests in your crops. Stay tuned to the Integrated Crop Protection website and Twitter (@ProtectingCrops) for updates.

The ICP Project is managed by RM Consulting Group, Applied Horticultural Research and IPM Technologies. It is funded by HIA using the National Vegetable Levy and funds from the Australian Government.

Minor use permits

The following permit is a consolidation of permits PER10692, PER10145, PER10695. PER12389 and PER10699. The individual minor use permits have been withdrawn.

Permit Number	Crop	Date Issued	Expiry Date	Permit Holder	States
PER80718	Methyl Bromide / Vegetables fruit and fruiting; Food producing plants and ornamentals / Fruit fly, Silverleaf whitefly (all biotypes), thrips	12-Apr-15	31-Mar-25	Biosecurity SA	All states

Persons without an appropriate license for fumigation with methyl bromide will be unable to use this permit.

Please note that the above permit does not come into force until the date stipulated above and there may be current permits active.

All efforts have been made to provide the most current, complete and accurate information on permits. However, AUSVEG recommends that you confirm the details of any permits at the APVMA website.

Please consult APVMA documentation before applying any product to your crop. For more information contact the APVMA on (02) 6210 4701 or Growcom on (07) 3620 3880.

AUSVEG in the media

AUSVEG Deputy CEO Andrew White was interviewed on ABC Riverina last week to discuss the importance of improving Australia's Country of Origin Labelling laws. Mr White said that concerns over the current labelling system had been repeatedly raised by AUSVEG and the wider community, and that the reforms needed to focus on removing the confusion around where ingredients are grown and where food products are manufactured.

Mr White also appeared in print media welcoming Coles' announcement of a new $50 million Nurture Fund, which will allow growers to access grants and interest free loans to encourage small businesses to find more productive and innovative ways of doing business. Mr White said the Fund will help farmers focus on business opportunities in a climate of rising on-farm costs.

AUSVEG Manager – Communications Andrew MacDonald appeared in print media this week discussing the detection of Cucumber Green Mottle Mosaic Virus (CGMMV) in Queensland. Mr MacDonald said that on-farm biosecurity awareness was crucial in stopping the spread of the disease.

CALENDAR OF EVENTS

21 May 2015
Soil Health Farm Walk
East Gippsland, Vic

21 - 28 June 2015
Reverse Trade Mission
Gold Coast, Qld

25 June 2015
Global Technologies in Horticulture Seminar
Gold Coast, Qld

25 - 27 June 2015
2015 National Horticulture Convention, incorporating AUSVEG and Apple & Pear Australia Ltd
Gold Coast, Qld

26 June 2015
Produce Display
Gold Coast, Qld

27 June 2015
Minor Use Education Symposium
Gold Coast, Qld

28 June 2015
Southeast Asia and Indonesia Export Symposium
Gold Coast, Qld

28 June 2015
Horticulture Field Day
Gold Coast, Qld

Our mailing address is:
AUSVEG Limited
PO Box 138, Camberwell, Victoria, Australia
Camberwell, VIC 3124
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Subject: AUSVEG Weekly Update
From: AUSVEG <info@ausveg.com.au>
Date: Tue, 2 Jun 2015 08:28:44 +0000
To: <luker@rmcg.com.au>

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AUSVEG Industry Representative Body for vegetable and potato growers

WEEKLY UPDATE

Tuesday 2 June 2015

Kalfresh and AUSVEG renew Strategic Partnership

AUSVEG is pleased to announce the renewal of its Strategic Partnership with Kalfresh.

Kalfresh is committed to developing a prosperous and efficacious industry, taking an active role in ensuring that the industry has an audible voice in politics.

Queensland based, Kalfresh is one of Australia's leading vegetable production companies which grows, packages and distributes its own produce.

AUSVEG is enthusiastic about continuing to work closely with Kalfresh over the coming year towards a more productive agricultural sector.

To find more information on Kalfresh, please click here.

Stay connected with the Convention web app

The largest event in Australian horticulture is looming, with less than one month to go until 1,400 delegates descend on the Gold Coast for the 2015 National Horticulture Convention, Trade Show and Awards for

IN THIS ISSUE

Reduced Till in Vegetable Production - HOW by AHR Video Productions

Soil Wealth is being run by Applied Horticultural Research (AHR) and RM Consulting Group (RMCG). The project is funded by HIA using the National Vegetable Levy and funds from the Australian Government.

Vegetable Workplace Health & Safety

The Vegetable Workplace Health and Safety System (VegWHS) is now available to levy paying vegetable growers. It is a free resource, provided on a carrot shaped USB drive and is designed to make starting and implementing safe work practices easy.

VegWHS:

- Is designed specifically for the vegetable industry using 'real world' experience from successful horticulture businesses
- Contains the tools you need to ensure that common daily tasks are conducted safely
- Contains customisable policy, forms and checklists
- Contains information on how to safely conduct common risky tasks in: Korean, Vietnamese and Chinese languages
- Is simple, clear and easy to use
- Is Absolutely FREE! (We can also provide assistance with implementing the program on your farm!)

To receive your free copy of VegWHS, please contact Jaclyne Scally at RMCG on 0468 813 609 or jaclynes@rmcg.com.au

If you would like further training on the resource, or have specific questions about a workplace health and safety issue, please visit the RMCG Booth at the 2015 National Horticulture Convention Trade Show.

Booth #18

2015 National Horticulture Convention Trade Show
Jupiters Gold Coast
Broadbeach, QLD
25 – 27 June 2015

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

AUSVEG in the media

AUSVEG CEO Richard Mulcahy appeared on broadcast and in print media this week calling for the rogue operator, or operators, in the horticulture sector to be named and shamed. Mr Mulcahy was responding to evidence which was recently given to a Senate Inquiry into agricultural levies which referred to one unnamed PIB suspected of financial impropriety. Mr Mulcahy said those responsible should be named, and failing to do so tarnished the reputations of all PIBs doing the right thing, including AUSVEG.

AUSVEG Deputy CEO Andrew White featured in print this week reinforcing the need for reform to Australia's Country of Origin Labelling (CoOL) system. Mr White emphasised that a recent WTO ruling relating to the American CoOL system was not a barrier for the successful implementation of CoOL reform in Australia.

AUSVEG Special Projects Coordinator Alexander Miller featured in print media, commenting on the potato R&D workshop held in Devonport, Tasmania last week. Mr Miller said the workshop provided growers with the latest R&D information and that AUSVEG is working to ensure Australia's potato growers get the most out of their potato crops and maximise productivity and profitability.

AUSVEG Global Innovations Coordinator Stefan Oberman appeared on broadcast media discussing the wide range of international horticulture R&D experts that will be presenting at the 2015 Global Technologies in Horticulture Seminar. Mr Oberman said that growers will have the opportunity to learn about the most innovative production methods from around the world that are commercially viable for use on their growing operations, including lasers as bird control and aeroponics - growing vegetables in air.

AUSVEG Assistant Manager – Industry Development Kurt Hermann discussed recent Project Harvest findings, which suggested the number of consumers opting to buy their vegetables from local greengrocers rather than the major supermarkets has surged. Mr Hermann said shoppers enjoyed the experience of visiting the local greengrocer.

Charlie Cooper the new AUSVEG Trooper

We are pleased to announce that AUSVEG Administration Officer Brittney Jones and partner Tim Cooper have recently welcomed a beautiful baby boy, Charlie, into the world.

We would like to congratulate the proud parents and wish their new family the very best.

CALENDAR OF EVENTS

21 - 28 June 2015
Reverse Trade Mission
SA and Qld

25 June 2015

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Gold Coast, Qld

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Our mailing address is:
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Australia

In The Field
News for Victorian Vegetable Growers
09 Jun 2015

Workplace Health & Safety

Workplace Health and Safety (WHS) has been identified as a concern for vegetable growers.

RMCG has been leading a project for **Horticulture Innovation Australia (HIA)**, which aims to address the WHS concerns of vegetable growers and help make the vegetable farm and packing sheds safer.

VegWHS has been developed following discussions with vegetable growers, to help you deal with WHS issues on your farm.

The **VegWHS** resource is suitable for businesses of all sizes. Large vegetable businesses can pick and choose from the components of **VegWHS** to enhance their existing system.

Small and medium sized businesses that don't have a formal WHS program, can easily use **VegWHS** to build WHS into their business.

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

Horticulture Innovation Australia

VegWHS

VegWHS:

- Designed specifically for the vegetable industry using 'real world' experience from successful horticulture businesses
- The tools you need to ensure that common daily tasks are conducted safely
- Customisable policy, forms and checklists
- Safety procedures for common farm tasks in multiple languages
- Simple, clear and easy to use
- Absolutely FREE! (We can also provide assistance with implementing the program on your farm!)

For more information contact :

Jaclyne Scally

M: 0468 813 609

E: jaclynes@rmcg.com.au

RMCG
Environment | Water | Agriculture
Policy | Economics | Communities

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IN THIS ISSUE:

• Production of fish feed from vegetable waste.

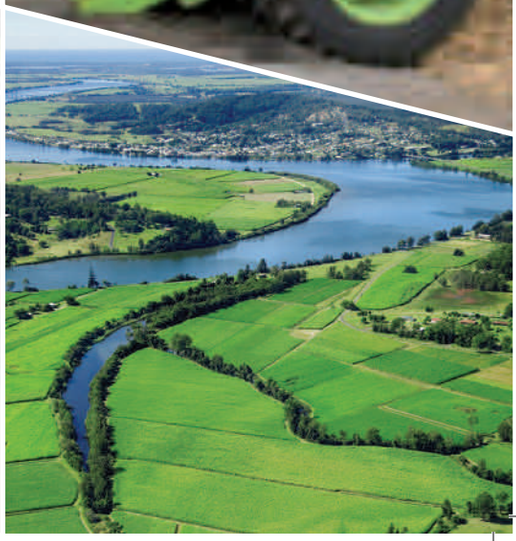
HAL R&D project number: VG13050

Project VG13050 examined the potential use of vegetable waste to rear insect larvae for aquaculture feed.

• Vegetable industry workplace health and safety resources.

HAL R&D project number: VG13053

Project VG13053 will provide 'Practical Workplace Health and Safety' resources and training to growers, to increase WHS compliance in the vegetable industry, resulting in safer vegetable farms.



Production of fish feed from vegetable waste.

Facilitators:

Project VG13050 was completed by project leader Dr Jenny Ekman, from Applied Horticultural Research Pty Ltd.

Introduction

Australian consumption of seafood has doubled in the past 10 years and this growth is predicted to continue. But with most wild fisheries already maximised or in decline, the only way to meet this demand is through increased aquaculture. Currently, one factor limiting aquaculture is the continued reliance on wild caught fish to produce fishmeal. Much research has focused on replacing fishmeal with animal and/or plant-based products, however, with only partial success.

Researchers have found that insect-based protein meals offer an alternative to plant and animal-based fish food as ingredients in fish food for aquaculture. High in protein and fat, insects can be reared on waste products, have a high conversion rate and are part of the natural diet of some carnivorous farmed fish species.

About the project

Project VG13050 examined the potential use of vegetable wastes to grow insect larvae, which can be used in animal or aquaculture feeds.

Led by Dr Jenny Ekman of Applied Horticultural Research Pty Ltd, the project reviewed what is known about cultivation of these insects in terms of lifecycle, reproduction and feed use efficiency.

Larvae.

Initially, a desktop study was conducted on four species with known potential - black soldier fly (BSF), yellow mealworm, superworm and housefly. Of the insects studied, BSF appeared to be a clear frontrunner.

"The black soldier fly's larvae can live on vegetables alone, 'self-harvesting' when they are fully mature," Dr Ekman said.

"Another benefit is that adult flies are found naturally in Australia. They are not pests and don't carry diseases, and they usually just live long enough to mate and lay eggs."

A series of small trials were conducted examining the issues involved in setting up a BSF colony, testing suitable vegetables to use as feedstocks and analysing the quality attributes of the dried meal produced compared to the commercial fishmeal.

Main Findings

An immediate challenge faced by Dr Ekman and her team was encouraging the adult insects to mate and lay eggs under the controlled conditions.

"Although adults have been widely reported to not eat, our flies only mated and laid eggs once they were provided with cut apples (a sugar source). They also preferred to lay their eggs into vegetable wastes rather than other materials," Dr Ekman said.

Feeding trials with larvae showed that pumpkin, carrot, eggplant, capsicum and even processed vegetable sludge were all readily consumed.

"We found that the larvae could live on lettuce for only a short time and that these larvae were effectively bloated compared to those fed other foods. Meanwhile, cauliflower and broccoli were not found to be suitable, and sweet potato was non-preferred," Dr Ekman said.

For the research team, calculating the exact amount of food required to produce the maggots was also difficult.

Despite this, estimated feed conversion rates were obtained, with larvae conversion found ranging from 4.9:1 to 2.0:1 - the average being 3.3:1 (dry weights).

"Basically, this means that around 25 grams of fresh pumpkin or 30 grams of fresh carrot would be needed to produce one gram of dried larval meal," Dr Ekman said.

"Importantly, the ratio could be improved further simply by adding ground flax seeds to the diet. This doubled the rate of weight gain and reduced the volume of fresh feed required by around 70 percent."

Next steps

This project has demonstrated that BSF larvae can be reared successfully on a range of different vegetable crops.

Dr Ekman said that while some of the results were definitely promising, this area of research was still in its infancy.

"More needs to be known about the effects of diet on nutritional attributes of the larvae, as well as how to optimise the process for different aquaculture feeds, if this is to make the big jump to commercialisation," she said.

"Although investment in BSF would currently be a risky venture for an individual vegetable farmer, this industry has considerable potential and may well develop in the future as fishmeal prices continue to rise."

Dr Ekman said commercial facilities were being developed in other countries, which would help provide better guidance about how Australia can grow and use these animals.

"But such a large research project needs to be funded using university or national-based funding - preferably involving a large commercial partner such as one of the aquaculture feed suppliers, and possibly overseas expertise."

THE BOTTOM LINE: VG13050

- Black soldier fly can be reared on a range of different vegetable wastes and could potentially be valuable additions to aquaculture feeds. However, rearing methods and processing need to be refined to allow commercialisation.

Acknowledgements

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

Vegetable industry workplace health and safety resources.

Facilitators:

Project VG13053 is being completed by RM Consulting Group (RMCG) and Advanced Viticulture & Management (AV&M).

Introduction

The high rate of death and serious injury for people who live, work on and visit farms is significant, and continues to be widely recognised as an area for concern.

The Australian Centre for Agricultural Health and Safely (ACAHS) reported 59 on-farm deaths and 81 non-fatal farm injuries in 2011 for all agricultural properties, including vegetable farms. Vegetable growers broadly accept the importance of providing a safe workplace, however, confusion remains a major problem.

In particular, growers are confused about their responsibilities, and where and how to implement a workplace health and safety (WHS) system.

About the project

Managed by RM Consulting Group (RMCG) (in conjunction with AV&M), and led by Luke Rolley of RMCG, Project VG13035 will provide practical WHS resources and training to growers to increase WHS compliance in the vegetable industry, resulting in safer vegetable farms.

In the early stages of the project, a series of case studies were developed through consultations with vegetable growers in Victoria and South Australia.

RMCG consultant Jackie Scally said the information gathered would help shed light on the main WHS issues faced by growers.

"The case studies were carried out to show examples of 'good' and 'bad' WHS in farms across Victoria, South Australia and Queensland," she said.

"These will be used as tools to not only promote WHS and the importance of addressing these issues, but to encourage growers to participate in the various activities we have planned as part of this project.

"Specifically, the activities include training sessions and farm risk assessment walks for growers which will be conducted in a number of states around Australia towards the end of the year."

Ms Scally said another main component of the project was the provision of a package of customisable WHS resources.

"We are currently preparing a manual which will be available to vegetable growers and will focus on practical things they can do to improve their WHS practices on-farm, and identify and manage risks on their property," she said.

"The manual will identify a number of risks associated with farming covering all elements of the production systems, from what's happening out on the field and in packing sheds, to hiring contractors and handling chemicals.

"Within each of these key areas, WHS policies and risk assessment frameworks will be developed to help growers improve their practices.

"This will be made possible through a review of current industry WHS practices and state legislative requirements which we recently completed."

Main findings

Through general discussions and targeted questions, the project team has defined the main barriers to adoption of WHS practices, which Ms Scally said could be "relatively easily overcome".

"One of the main barriers described by businesses, both with some form of WHS capacity and those without, is that 'WHS is complex and I don't know where to start'," she said.

"Resources are another issue. Many growers have family businesses in what is a very intensive agricultural sector. Therefore, the amount of time available to some businesses to consider WHS, let alone implement change, is limited.

"A further barrier to adoption is cost, which we believe is perceived rather than real. There is a common sentiment between growers that a WHS system is 'expensive' and will require significant expenditure on new equipment."

Ms Scally said the interviews revealed that most businesses had a mix of permanent and casual labour.

"In the majority of cases, the businesses are managed by the family owners of the business," she said.

"Among these owners, challenges were reported with managing permanent and casual staff, not only in the application of WHS but also in regard to general people management."

Other barriers for vegetable growing businesses included dislike of compliance, negative experiences with previous WHS (typically as a result of an accident or work safety authority audit) and the belief that WHS is "not really necessary" and only relevant to "big business".

Next steps

RMCG will be conducting free farm risk assessment walks and WHS workshops in 2015 in Queensland, New South Wales, Victoria, South Australia and south-west Western Australia.

To learn more about the Project VG13053, or to register your interest in a free workshop or farm walk, contact Jackie Scally at RMCG on 0468 813 609 or email jaclynes@rmcg.com.au.

THE BOTTOM LINE: VG13053

- Vegetable growers are positively engaged with the issue of WHS and are keen to improve WHS performance.
- The project team has defined the barriers to adoption and how extension can overcome these barriers.
- There is more harmonisation, rather than less, between the states, making a package of resources reasonably efficient to deliver.
- There has also been good support in promoting the project from the peak industry body.

Acknowledgements

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

Photo credits:
VG13050 photos credit: Dr Jenny Ekman
VG13053 photos credit: Jackie Scally

Please contact Shaun Lindhe at AUSVEG on 03 9882 0277 or email shaun.lindhe@ausveg.com.au to submit topics for potential inclusion in future editions of **vege**notes.

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VegWHS

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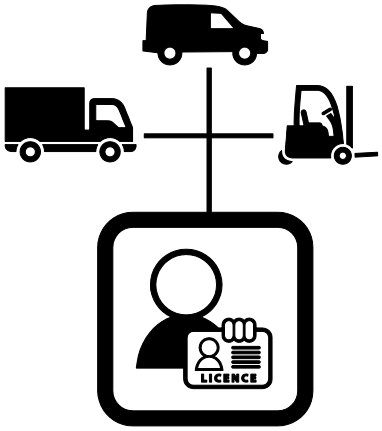
Motor Vehicle Safety

1

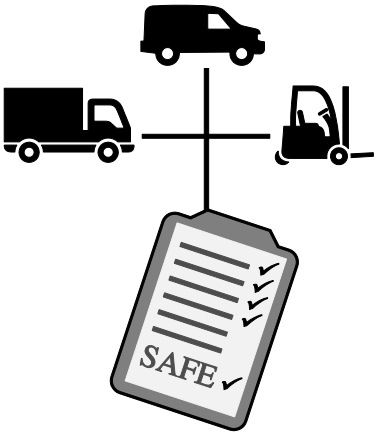


- Drivers must be licensed to operate vehicle.

2

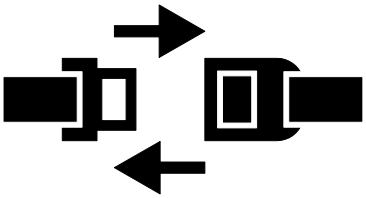
- Plan the task.
  Choose the right equipment for the job.

3



- Complete start-up checklist (check safety lights are working / signs fitted).

4



- Wear a seat belt where fitted.

5

- Limit vehicle movements during evening or peak hours.

6

- Use warning flashes, lights and Slow Moving Vehicle (SMV) signs.
- Use a follow car with flashing lights when using public roads.

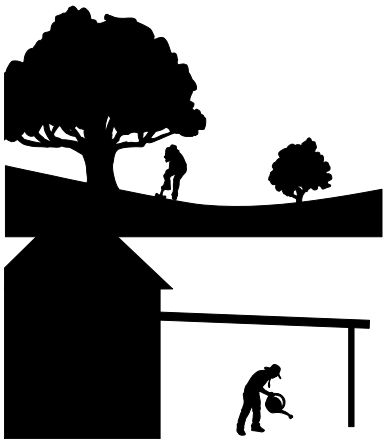
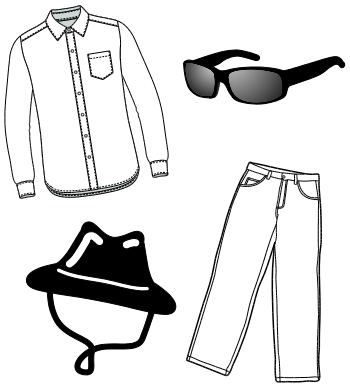
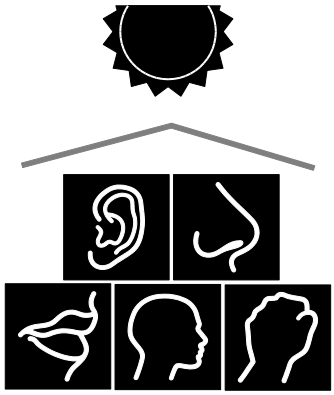
7

- Watch out for road obstacles.

8

- Follow road rules.

Sun Damage & Skin Cancer

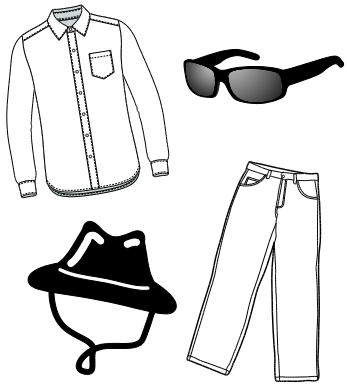
1  • High risk time in the sun is between 11 am and 3pm.	2  • Work in shade if possible.	3  • Wear long sleeve shirts, collars, long pants and sun protective hats. • Wear sun glasses.
4  • Use a sunscreen (SPF 30+) before you go out into the sun.	5  • Noses, lips, ears, bald heads and the backs of hands need extra protection.	6  • Re-apply sunscreen every 2 hours.

Heat Stress

1

- Watch out for signs of heat stress: tiredness, headache, nausea, loss of concentration, muscle cramps, dizziness.

2



- Wear loose fitting clothing and sun protective hats.
- Wear sun glasses.

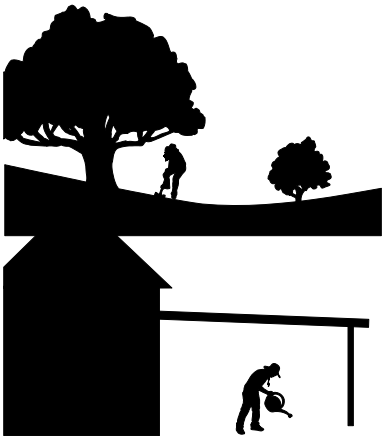
3

- Use a sunscreen (SPF 30+) before you go out into the sun.
- Apply every 2 hours.

4

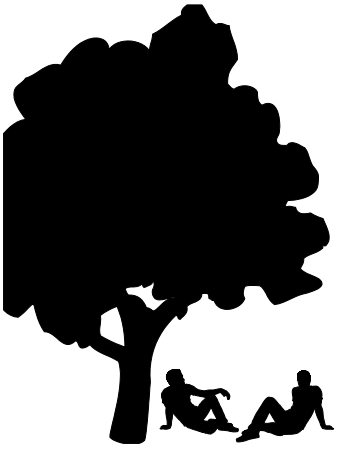
- Drink small quantities of cooled non-alcoholic drinks every 20 mins.

5



- Stay out of the sun as much as possible.

6



- Take regular breaks in a cool place.

VegWHS

Horticulture Innovation Australia

물 - 댐, 관개, 재생수

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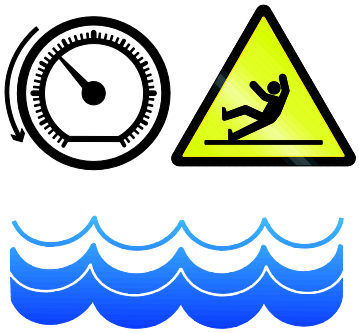

- 수원 부근에서는 차량 속도를 줄입니다. 해당 지역이 미끄러울 수 있습니다.

2

- 수영 금지 구역입니다.

3

- 점검이나 수리를 하기 전에 먼저 물 속에 잠겨 보이지 않는 것이 있는지 확인합니다.

4

- 장비에 잠금 장치 / 태그 처리(LOTO)를 적용합니다.

5

- 물 근처에서는 전기 장치를 조심합니다.

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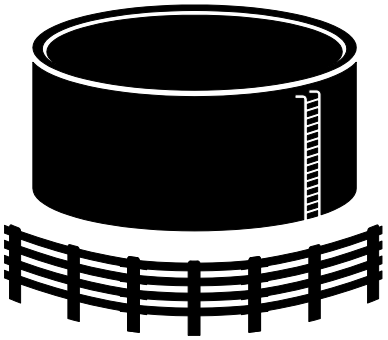

- 우물, 시추공, 탱크와 같은 물 저장소는 덮개를 씌웁니다. 가능하다면 해당 구역을 울타리로 구분합니다.

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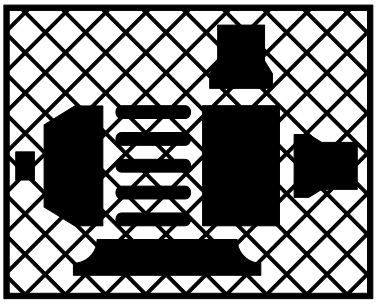

- 펌프 장비가 가동 중일 때 뜨겁거나 위험한 부분에 닿지 않도록 보호대를 설치합니다.

8

- 관개차의 회전팔처럼 움직이는 부분을 조심합니다.

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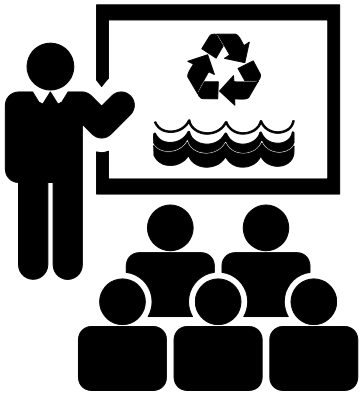
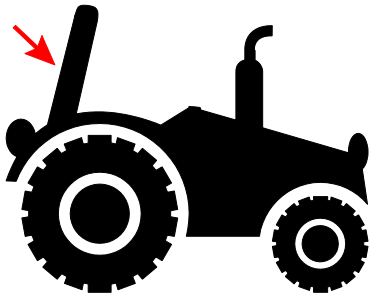
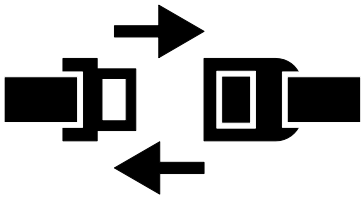


- 직원을 교육하고 재생수의 안전 표지를 확인합니다.

트랙터 및 기구

1  • ROPS(전복방지시스템) 장착 트랙터를 사용합니다.	2  • 시작 점검표를 작성합니다.	3  • 안전벨트를 착용합니다(장착된 경우).
4  • PTO 축이 보호되지 않은 경우 기구를 사용하거나 부착하지 않습니다.	5  • 트랙터에 과적하거나 잘못된 지점에 부착하지 않으며, 사용자 매뉴얼을 이용하여 점검합니다.	6  • 제어를 유지할 수 있을 정도의 저속으로 운행합니다.
7  • 위험 요소에 주의합니다.	8  • 사람을 싣고 다니지 않습니다.	9  • 운전자는 반드시 트랙터 사용 교육을 받아야 합니다.

교통 관리

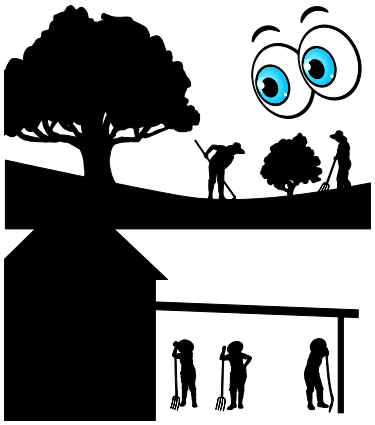
1

- 교통 관리 계획을 확인합니다.

2

- 제한 속도를 준수합니다. 통행금지 구역, 양보 구간, 주차 지역, 우선 차량 등을 확인합니다.

3



- 공사 및 작업 지역 주변의 사람을 조심합니다.

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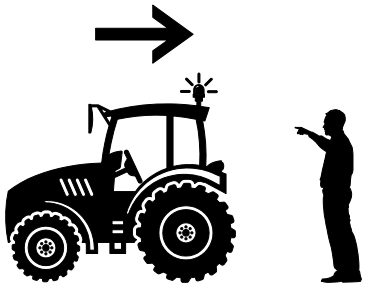

- 후진하는 차량은 신호음, 카메라, 백미러로 지원하거나 사람이 안내합니다.

5

- 출입 금지 구역 근처에서 작업 시 주의합니다.

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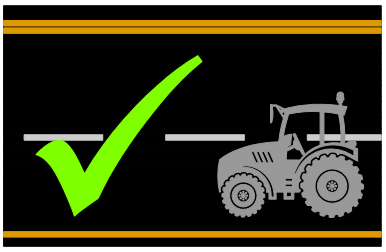


- 도로와 차도를 치우고 정리합니다.

7

- 교통 위험 요소를 경고합니다.

Thao tác thủ công

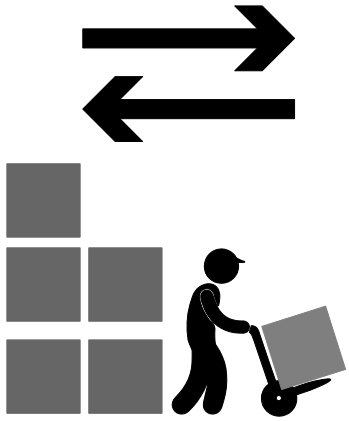
1

- Lưu ý các phương pháp nâng.

2

- Sử dụng công cụ hỗ trợ như xe kéo, công cụ cẩu tay, công cụ kê kích.

3

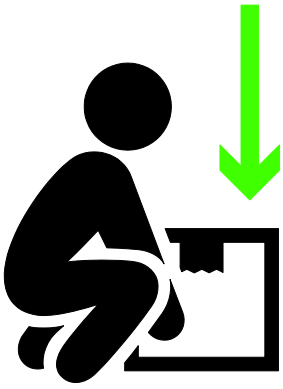


- Chia hàng hoá thành các phần vừa sức hay nhờ người phụ giúp.

4

- Khi nâng: Nắm chặt vật nâng, khụy gối nhưng giữ lưng thẳng, duy trì vật nâng thật gần cơ thể.

5



- Khi dặt xuống: Hạ vật nâng bằng cách khụy thấp gối nhưng không khòm lưng.

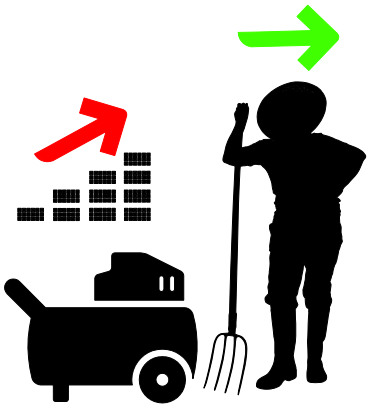
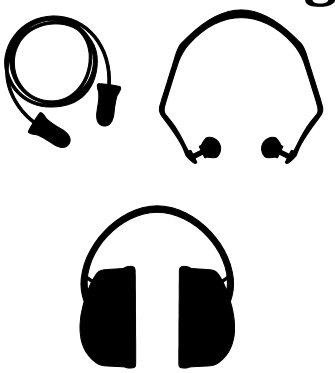
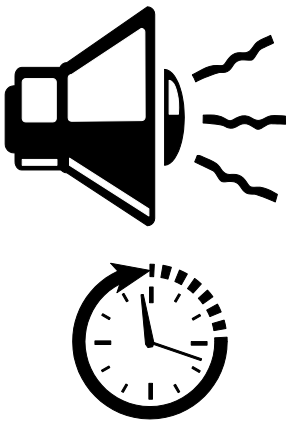
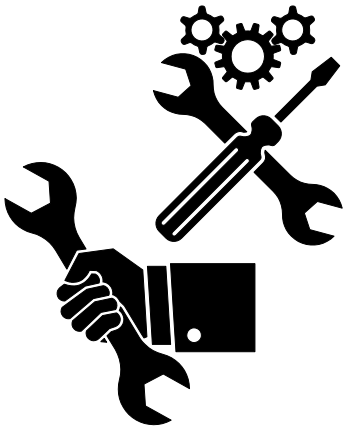
6

- Mang giày bảo hộ.

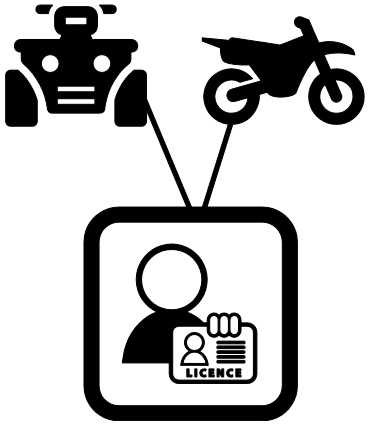
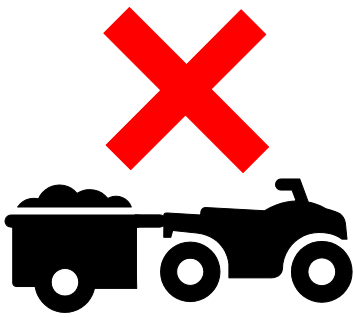
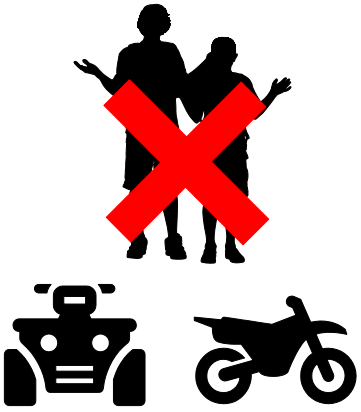
7

- Giải lao đều đặn.

An toàn thính giác

1  • Trách xa các máy móc ầm ỉ.	2  • Mang dụng cụ bảo vệ tai như chặn tai, nút tai khi điều khiển máy kéo, cưa máy, hay các loại công cụ gây tiếng ồn hoặc khi bắn súng.	3  • Không ở quá lâu trong môi trường ầm ỉ.
4  • Bảo dưỡng máy móc tốt.		Giới hạn thời gian ở trong các môi trường với các mức độ tiếng ồn**: 82dBA: 12 giờ 85dBA: 8 giờ 88dBA: 4 giờ 91dBA: 2 giờ 94dBA: 1 giờ 97dBA: 30 phút 100dBA: 15 phút 103dBA: 7.5 phút 106dBA: 3.75 phút
	** Bảng thông tin về tiếng ồn trong nông nghiệp - Chính phủ tiểu bang Tây Úc.	Các loại tiếng ồn điển hình có khả năng gây tổn thương thính lực trong nông nghiệp **: - Máy kéo 95-100 dBA - Máy xén cành 88-90 dBA - Máy phun thuốc 85-100dBA - Máy mài cắt cầm tay 95-105dBA - Máy mài cố định 90-95dBA - Cưa máy 105-120 dBA - Súng Shortgun 140dBA

Mô tô và mô tô bốn bánh

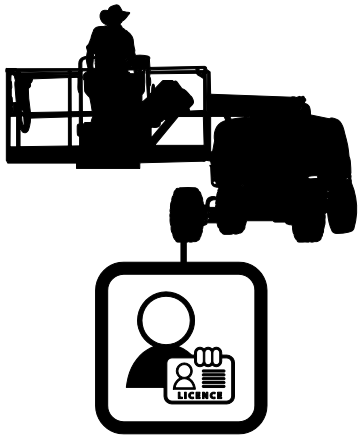
1	2	3
 • Người điều khiển buộc phải qua huấn luyện sử dụng phương tiện.	 • Mang mủ bảo hiểm và các dụng cụ bảo vệ mắt, tay, chân.	 • Kiểm tra trước vận hành.
4  • Vận hành với tốc độ vừa phải trong tầm kiểm soát .	5  • Cảnh giác các nguy cơ như địa hình dốc hay trơn trợt.	6  • Không được chở người trên mô tô bốn bánh.
7  • Không chở hay kéo theo tải.	8  • Trẻ em dưới 16 tuổi không được điều khiển.	

VegWHS

Horticulture Innovation Australia

移动升降工作平台

1



- 操作者必须经过培训才可以使用移动升降工作平台。

2

- 计划任务
- 为工作选择正确的工具。

3

- 完成启动检查清单。

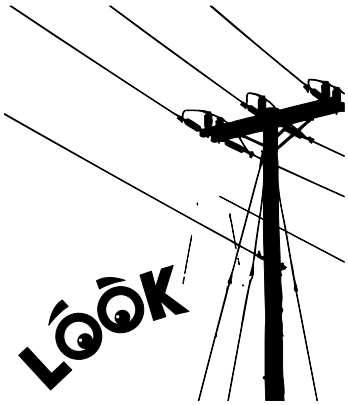
4

- 检查工作场地。

5

- 安全地移动升降平台到工作现场 。

6



- 检查头顶上方的高压线。
- 向上看。
- 注意周围。

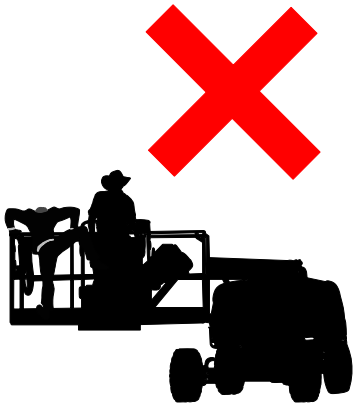
7

- 使用安全监护人员。

8

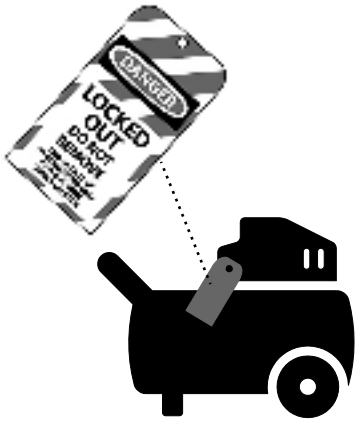
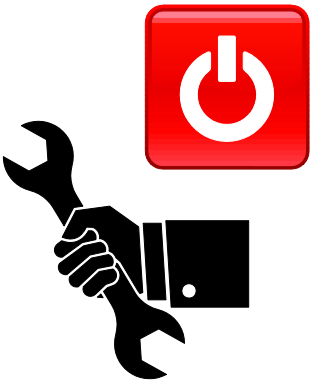
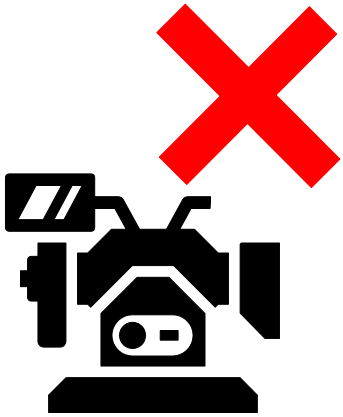
- 任何时候都要连上连接绳索（如果有吊杆类移动升降平台，或有安全笼）。

9



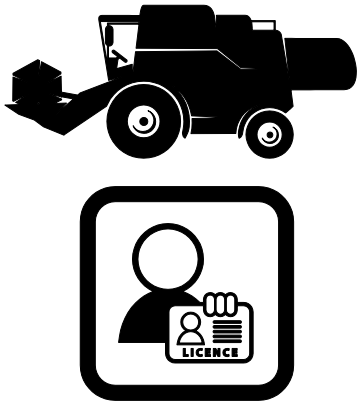
- 开始工作。
- 移动升降平台位于高处时不要爬进或爬出平台。

手动工具

1  • 为工作选择正确的工具。	2  • 清理工具，开工前检查工具。	3  • 穿戴安全防护装置。例如安全眼镜，听力保护设备等。
4  • 锁定/标示故障设备。	5  • 调试机器前要关闭电源。	6  • 绝对不能使用没有安全保护装置的手动工具。
7  • 就近备有紧急抢救套箱。		

收割机

1



- 驾驶员必须经过培训才能使用车辆。

2

- 计划任务。

3

- 完成启动检查清单。

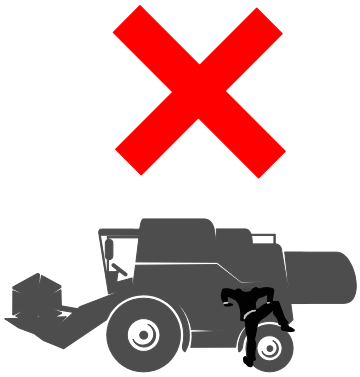
4

- 检查工作场地。向上看/注意工作现场是否接近高压线。

5

- 维修结束前使用 '安全停止' 步骤。

6



- 除非发动机及设备已被停止，否则不可攀爬或进入收割机。要取出启动点火钥匙。

7

- 按照任务的安全工作手册操作。

8

- 穿戴 安全防护装。