

Horticulture Innovation Australia

Final Report

Extension service for the Victorian vegetable industry

Helena Whitman
Vegetable Growers Association of Victoria

Project Number: VG12107

VG12107

This project has been funded by Horticulture Innovation Australia Limited with co-investment from the Vegetable Growers Association of Victoria and funds from the Australian Government.

Horticulture Innovation Australia Limited (Hort Innovation) makes no representations and expressly disclaims all warranties (to the extent permitted by law) about the accuracy, completeness, or currency of information in *Extension service for the Victorian vegetable industry*.

Reliance on any information provided by Hort Innovation is entirely at your own risk. Hort Innovation is not responsible for, and will not be liable for, any loss, damage, claim, expense, cost (including legal costs) or other liability arising in any way (including from Hort Innovation or any other person's negligence or otherwise) from your use or non-use of *Extension service for the Victorian vegetable industry*, or from reliance on information contained in the material or that Hort Innovation provides to you by any other means.

This report was previously confidential.

The confidentiality period has now expired. Please ignore all references to confidentiality within the report.

ISBN 0 7341 3722 2

Published and distributed by:
Horticulture Innovation Australia Limited
Level 8, 1 Chifley Square
Sydney NSW 2000
Tel: (02) 8295 2300
Fax: (02) 8295 2399

© Copyright 2016

Contents

Summary..... 3

Introduction..... 4

Methodology..... 5

Outputs..... 6

Outcomes..... 7

Appendices..... 8

Summary

This project has enabled the Vegetable Growers Association of Victoria (VGA Vic) to engage the part-time services of an Industry Extension Officer to provide industry development services to the Victorian vegetable industry. These services have included communication and extension of research and development (R&D) outcomes and farm business information through VGA Vic publications and farm visits.

Publications that have been utilised for the communication of information through this project included the VGA Vic quarterly magazine and the In-The-Field newsletter which are distributed to VGA Vic Members, Associate Members and other industry stakeholders. These publications include R & D activities and outcomes and other industry issues.

VGA Vic Extension staff have produced four magazines during this project as well as 26 In-the-Field publications, attended many meetings and events and kept growers informed of relevant and important matters relating to their business. These publications, along with the VGA Vic website are the main communication vehicles for Victorian vegetable growers and industry stakeholders.

Grower visits have also been conducted to distribute information on behalf of researchers and agencies delivering R&D to the Victorian and Australian vegetable industries.

Introduction

This project enabled the Vegetable Growers Association of Victoria (VGA Vic) to enhance its Extension Service for the Victorian Vegetable Industry for a 12 month period by funding a part-time Industry Extension Officer to deliver industry development services.

The withdrawing of all extension, research and development and other information delivery by the Victorian Department of Environment and Primary Industries (DEPI Vic) to the Victorian Vegetable Industry has seen this responsibility ever increasingly fall upon VGA Vic.

The part-time nature of the Association makes it difficult to accede to all grower and other enquiries without the support of Industry Extension staff who can respond to research, extension and training enquiries, identify appropriate sources of information and pass on relevant information upon request. This project enabled the funding of an Industry Extension Officer (covering Eastern Victoria) to support the Executive Manager (covering Northern and Western Victoria for industry development activities).

Extension of research and development outputs and other information remains a critical factor in advancing the Vegetable Industry. VGA Vic provides a range of extension tools to the Victorian industry, including a quarterly magazine (Vegetables Victoria), In-the-Field weekly publications, a searchable website, field days and workshops in conjunction with other service providers. However, a key means of achieving extension and information transfer in Victoria remains the provision of VGA Vic's Industry Extension staff.

It has been our experience that growers being time-poor, and requiring confidentiality, often require face-to-face assistance when implementing changes on-farm, both production and business related. They rely on VGA Vic staff to explain or interpret information, assist in adjusting practices or techniques or finding out more information because of their ability to be independent and maintain confidentiality.

It is also relevant that not every grower is able to attend workshops by visiting researchers or service providers. This role has been filled by VGA Vic staff who then summarise the information in publications allowing much greater penetration of research and development information than may otherwise occur.

The Extension staff have also provided a valuable feedback role so that the broader industry and research providers are kept aware of issues important to growers. In this way the industry can more quickly and more effectively address emerging issues through appropriate channels.

Methodology

The project enabled the appointment of a part-time suitably qualified Industry Extension Officer (IEO) to provide enhanced industry development services by VGA Vic. The IEO serviced Eastern Victoria while the VGA Vic Executive Manager provided industry development services to Northern and Western Victoria. The two Extension staff were performance managed by the VGA Vic Executive Committee.

The Extension staff continued to spend time in the field directly engaging with growers on a one-on-one basis, providing on-farm support; facilitating/organising workshops where requested by service providers, researchers or growers; attending and reporting on workshops and forums; and publishing relevant articles.

The Extension staff also prepared articles for each edition of the quarterly Vegetables Victoria magazine, consisting of 8 pages of industry information including 4 pages on research or other relevant matters such as worker or food safety, chemical use, etc. In-the-Field articles (1 per week on average) were also prepared on all matters relevant to growers and distributed. They also distributed any other materials provided by service providers, researchers, HAL and AUSVEG for dissemination during farm visits.

Materials produced by the national research and development program were promoted as appropriate.

Outputs

- The Extension staff have contributed numerous articles for the Vegetables Victoria magazine each quarter (sent to over 500 subscribers) such as
 - Stabilised nitrogen for vegetable crops
 - VG 09086 - Evaluation of vegetable washing chemicals
 - Veggycation
 - Growing Leaders Program
 - Sanitation of Water
 - East Gippsland Leafy Veg Demo Day
 - Fresh Produce Safety Centre
 - Chemical User Permits
 - Measuring Crop Water Use Efficiency
 - Ladybird developer awarded Researcher of the Year
- 26 In-the-Field newsletters have been prepared and distributed to over 200 growers and industry stakeholders over the past 12 months including:
 - R & D reports & findings
 - Pest & Disease outbreaks
 - Promoting industry programs and leadership training opportunities
 - Promoting field days, workshops and forums
 - General industry information
 - Grower profiles
- Face-to-face and group grower visits have been conducted in Northern, Eastern and Western Victoria;
- Representation at workshops, meetings and forums
 - HAL/AUSVEG Levy Payer meetings
 - White Blister Field Day – Werribee
 - APEN Conference in NZ
 - Agribusiness Summit in Ballarat
 - HAL Review meeting
 - EnviroVeg Field Walk & app launch
 - Vegetable Health Benefits Workshop
 - AUSVEG Convention
- Extension staff have been involved in assisting researchers with either accessing growers or providing information and feed-back
- Encouraged participation in the HAL funded Vegetable Leadership Program 'Growing Leaders' – seven Victorian growers in 2013 intake and several in 2014 intake and assisted Victorian participants with information and guidance
- Assisted Emma Germano to obtain a Nuffield Scholarship and provided guidance and information
- Nominated growers for various Industry Awards
- Made application and written tenders for various R&D projects
- Assisted media with information
- Responded to various enquiries, reviews, R&D surveys, interviews and questionnaires
- Provided feedback from growers to VGA Vic
- A well-populated and accessed website with over 2000 visitors per month.

Outcomes

Through this project we have been able to promote many of the R&D project outcomes available to growers, including apps developed by AUSVEG and other R&D Service Providers that may be of benefit to growers. Extension staff have also distributed publications and outputs resulting from R&D projects.

VGA Vic has conducted and promoted surveys on behalf of R&D Service Providers, mailed out information and booklets produced by Service Providers and generally assisted where possible to promote R&D outputs and outcomes.

VGA Vic has also provided feedback to AUSVEG on R&D issues and potential projects.

Appendices

Examples of In-the-Field articles



Leafy Vegetable Demonstration Day



Clearing Native Vegetation



Growing Leaders 2014



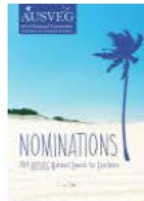
Veggycation



Lettuce Classifications



Horticulture - The Next Generation



National Awards for Excellence



Negotiation Training



Chemical Security



Cost of Production Survey



Levy Payer Meetings 2014



National Heavy Vehicle Regulator



R&D on your phone



Vic Grower Wins Nuffield Scholarship



Biosecurity Survey



OH & S Training



Free Energy Audits



EnviroVeg App Launched



R&D Project Design Teams



New Migrant Worker Act



White Blister Field Day



Farm Dam Danger



2013 Annual General Meeting



Cooperative Marketing Grants



What is a head of lettuce?

Examples of Magazine articles



**vegetables
victoria**
The Journal of the Vegetable Growers' Association of Victoria (Inc.)



March 2014

ISSUE 55

Growing Leaders Program 2013



Last year saw four Victorian participants take part in the Growing Leaders program. The program is a vegetable levy funded program that has been running for several years and seen many graduates from all states and aspects of vegetable production participate. Many grower businesses have realised the value of the program and enrolled staff in an effort to enhance their business skills, as well as their understanding of the industry.

The program is designed to increase confidence in dealings with all aspects of life and business. It improves participant skills in negotiations, conflict resolution, and assists in creating invaluable networks. The enthusiasm of past participants and their glowing reports make it difficult to understand why every vegetable business is not taking advantage of this opportunity. It is hard work but well worth the effort invested.

Continues page 4...

Jointly funded by the VGA and DPI Victoria



VG09086 - Evaluation of vegetable washing chemicals

A recent project completed by Dr Robert Premier evaluated a number of sanitising chemicals and compared them in terms of efficacy, ease of use, cost and effects on the postharvest shelf life of leafy vegetables.

Part of the requirements of a good on-farm QA plan is the sanitary washing of vegetables, especially leafy vegetables, in water containing a sanitiser chemical. This sanitation step will reduce the levels of bacteria, including any contaminating human pathogens, and prevent cross contamination of produce during the washing stage.

The three main reasons for washing produce are:

- to remove dirt and dust so that they can be presented to the consumer in a visually appealing manner;
- Washing with sanitisers for postharvest treatment purposes so that postharvest plant diseases can be kept under control and vegetable shelf life is increased; and
- Washing with sanitisers for food safety purposes so that human pathogens that may be present on the surface of vegetables are not passed on to consumers and to prevent cross contamination of produce during the washing stage.

The latter purpose is becoming more and more important as supermarkets, wholesalers and processors are pushing food safety down the line of supply to growers.

In Australia there are many sanitising chemicals available to growers, however, growers do not have much independent information available regarding these chemicals. This project has evaluated a number of sanitising chemicals and compared them in terms of efficacy, ease of use, cost and effects on the postharvest shelf life of leafy vegetables.

The aim of the project was to compare the efficacy of sanitising chemicals in reducing both spoilage and pathogenic microorganisms on vegetables, particularly leafy vegetables. Leafy vegetables are often consumed uncooked and hence the way that they are washed is critical in preventing food safety incidents at point of consumption. The comparison between sanitisers was carried out in a realistic commercial setting, using equipment already present on farm. The vegetables used in the testing were part of a normal harvest on that same farm.

The project studied:

- The efficacy of peroxyacetic acid and acetic acid sanitisers;
- The efficacy of chlorine and chlorobromo sanitisers;
- The efficacy of organic sanitisers derived from natural material;
- The efficacy of new and emerging chemical free sanitiser technology; and
- The shelf life of leafy vegetables after treatment with a number of sanitisers.

The results show that chlorine, as used currently by growers, is still an efficient way to achieve the aims of the sanitation step. Growers who produce leafy vegetables that are sold as pre-washed and ready to eat should consider using peroxyacetic acid based sanitisers. These sanitisers are, however, considerably more expensive and may contribute to a lower shelf life of the product.

Washing vegetables in water containing 100 ppm of chlorine remains the most suitable system available to growers that wash on-farm at the moment. Chlorine has advantages in terms of efficacy, cost effectiveness and ease of handling. This is closely followed by chlorobromo sanitisers, which are just as effective but have a slightly

higher cost.

Growers who supply the organic market should consider an organic based sanitiser. Although the efficacy of these is not as good as chlorine, chlorobromo, or peroxyacetic acid sanitisers, they still show some level of efficacy and are better than acetic acid.

In these trials electrified oxidised water, an emerging technology, was shown to have superior efficacy to any of the other products tested. Results also showed that product washed with electrified oxidised water had a longer shelf life. This technology could become a very useful tool for the sanitary washing of vegetables at on-farm level in the near future. The process would fulfil a chemical free washing claim and also be user friendly for the grower. It can be easily adapted to an automatic system with record of efficacy available for review by auditors of on-farm QA systems.



VEGGYCATION



Workshops on communicating the health benefits of vegetables were recently held around Australia. Presented by Dr Hazel MacTavish-West, Carolyn Lister and Jocelyn Eason (Plant & Food Research New Zealand), the workshops were attended by a cross section of industry, including growers, wholesalers, marketers and dietitians.

The project, funded by the National Vegetable Levy with matched funds from the Australian Government, aims to highlight the health benefits of vegetable consumption through the Veggycation website and other material.

All of the nine major health benefit claims identified by FSANZ can be claimed by vegetables. Veggycation plans to use symbols, similar to The Heart Foundation's 'tick of approval', to highlight health benefit claims, such as improved sight and stronger bones, or enhanced energy and hydration.

The Veggycation website (www.veggycation.com.au) is live now, with a searchable database and links to downloads including a fun site for children and teachers. The website will also provide a tutorial regarding FSANZ regulation of health claims on-pack and elsewhere for promoting the health benefits of vegetables.