

Final Report

Melon Industry Development and Communication

Project leader:

Dianne Fullelove

Delivery partner:

Dianne Fullelove & Associates Pty Ltd

Project code:

VM17001

Project:

Melon Industry Development and Communication VM17001

Disclaimer:

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 this Final Report.

Users of this Final Report should take independent action to confirm any information in this Final Report before relying on that information in any way.

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 the Final Report or from reliance on information contained in the Final Report or that Hort Innovation provides to you by any other means.

Funding statement:

This project has been funded by Hort Innovation, using the Melon research and development levy and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

Publishing details:

ISBN 978 0 7341 4657 1

Published and distributed by: Hort Innovation

Level 7
141 Walker Street
North Sydney NSW 2060

Telephone: (02) 8295 2300

www.horticulture.com.au

© Copyright 2021 Horticulture Innovation Australia

Content

Summary	4
Keywords	5
Introduction	6
Methodology	8
Table 1 Project Activities	8
Outputs	10
Table 2 Project Outputs and Outcomes	10
Outcomes	13
Industry Development	13
Crises management	18
Technology transfer activities	19
Communications and industry data	23
Consumer education	25
Monitoring and evaluation	26
Levy payer survey	26
Recommendations	29
Appendix 1 Program logic	30
Scope	30
Audience	30
Key evaluation questions	30
M&E budget	30
Program logic model	31
Project monitoring plan	32
Reporting and continuous improvement	33
Appendix 2 Stakeholder Engagement Plan	34
Stakeholder analysis grid	34
Appendix 3 Risk management plan	39
Risk Consequence Scale	41
Appendix 4 Grower story	42
Appendix 5 Factsheets	43

Summary

Communications and industry development activities has been an ongoing program within the Australian melon industry for many years, the current service provider, Dianne Fullelove & Associates Pty Ltd has led these activities since 2010, in three iterations of the project – VM09003, VM12003 and VM17001.

The objectives for VM17001 *Melon Industry Development and Communication* were to network and communicate with levy payers, researchers and government agencies to ensure that the melon industry is positioned as an important Australian industry that is investing in its future and is open to partnerships with research and development agencies. It provided coordination, information and knowledge to the Australian melon industry to facilitate adoption of research and development. The overarching goal was to improve the profitability and long-term sustainability of the Australian melon industry.

VM17001 continued the industry development and communication activities begun in VM09003 *Effective Management & Coordination of Melon Industry Development* and VM12003 *Development of the Australian Melon Industry through communication and market focused activity* to effectively manage industry development activities and coordinate two-way communication within the Australian melon industry.

As well, the project was a central pivot for industry development activities, including communications, research development and industry coordination. This increased the reach of the Melon Industry R&D program by engaging a range of stakeholders in the melon value chain.

With the introduction of the R&D and biosecurity levies in 2016, the melon industry has been able to move forward with investment in research and development. The project has played a significant role in shifting the industry from one where all research was either externally funded or funded by matched voluntary contributions from Horticulture Australia Ltd (now Hort Innovation) to an industry with legislated research and development and biosecurity levies. This has created a significant difference in the ability of the industry to direct and fund research.

VM17001 *Melon Industry Development and Communication* has met the expectations of the two industry strategic plans through a range of activities as outlined in this report.

At the completion of VM17001, Hort Innovation, on advice from the Melon Strategic Industry Advisory Panel has decided to continue communication and export projects, with new projects commencing in late 2020 or 2021.

However, industry development activities for the melon industry do not currently have a clear path forward. The recommendation from VM17001 is that the melon industry and Hort Innovation consider scoping a new industry development project that focuses on fruit quality.

On-going industry leadership training and governance up-skilling is vital to provide the melon industry with clear leadership goals. Melons Australia has relied heavily on the Industry Development Manager for leadership and strategic direction, including crisis management. It is important that the industry and its leaders take ownership and responsibility for their industry and map a pathway forward to manage industry activity including research.

Keywords

Melon

Industry development

Communications

Food safety

Pest and disease management

Biosecurity

Export

Introduction

The Australian melon industry consists of approximately 250 growers producing around 200,000 tonnes of melons annually from 6,000 - 8,000 hectares. The major crop is watermelons (60%) followed by rockmelons (30%) with honeydew and other melons (10%). The value of production for year ending June 2019 was \$180 million. The number of melon growers and area grown under melons in Australia fluctuates considerably from season to season, particularly for watermelon production as it requires less infrastructure.

Melons are grown in all states of Australia except for Tasmania. The largest growing states are Queensland and New South Wales, closely followed by the Northern Territory and Western Australia. Many farms are based in remote regions, although there are concentrated growing areas around Bundaberg & Ayr, Qld, Katherine, NT and Mildura, Vic.

Australia is a net melon exporter (\$37 million 2018-19) . Main export markets are the UAE, New Zealand, Singapore, Malaysia, Hong Kong and Japan.

VM17001 continued the industry development and communication activities begun in VM09003 *Effective Management & Coordination of Melon Industry Development* and VM12003 *Development of the Australian Melon Industry through communication and market focused activity* to effectively manage industry development activities and coordinate two-way communication within the Australian melon industry.

The *Melon Industry Development and Communication* project objectives were to network and communicate with levy payers, researchers and government agencies to ensure that the melon industry is positioned as an important Australian industry that is investing in its future and is open to partnerships with research and development agencies. It provided coordination, information and knowledge to the Australian melon industry to facilitate adoption of research and development.

The overarching rationale for the project was to build industry unity and involvement in industry affairs. This has been achieved through providing a collective point for the melon industry to increase its profile within the rural domain; engage with researchers; create unification between melon growers and lead engagement with service providers. The project has identified significant information required by industry; assessed effective methods for collating and accessing the information; and sought feedback from growers on relevant pertinent industry issues.

The project has played a significant role in shifting the industry from one where all research was either externally funded or funded by matched voluntary contributions from Horticulture Australia Ltd (now Hort Innovation) to an industry with legislated research and development and biosecurity levies. This has created a significant difference in the ability of the industry to direct and fund research.

The *Australian Melon Industry Strategic Plan 2016 – 2021*, has the objective of “Ensure the Australian Melon Industry has appropriate and sufficient capacity to manage industry development and respond appropriately to change by developing appropriate relationships and resources”. Further, the Plan requires that the industry

- Facilitates industry development activities to deliver improved outcomes for growers and industry investors.
- Develops appropriate leadership, structures and resources to provide sound industry stewardship.
- Ensures the industry has appropriate resources and risk management strategies to function effectively.

The Hort Innovation Melon Strategic Investment Plan 2018-2021 had the following aims pertinent to this project:

By 2021, the Australian melon industry has increased on-farm production efficiency, enabling improved returns for growers by:

- Promote the use of existing R&D and proven management practices that improve on-farm efficiency and increase profitability.

By 2021, the Australian melon industry has developed and maintained export market opportunities, enabling increased returns to growers:

- Develop and improve technical market access for Australian melons into priority markets
- Maintain and improve trade with existing export markets, especially where opportunities exist in the

premium end of the market

- Support export market demand through timely and accurate data, information and market research

By 2021, the Australian melon industry has implemented actions in prioritised areas to mitigate and minimise risks including food safety and biosecurity:

- Collaborate with whole of industry supply chain firms to identify and prioritise biosecurity and food safety risks
- Raise awareness of biosecurity and food safety risks across the value chain, through educational programs, on-site training and monitoring and evaluation

VM17001 *Melon Industry Development and Communication* has met the expectations of the two industry strategic plans through a range of activities as outlined in this report.

Methodology

An annual Operational Plan (OP) was developed in consultation with the Project Reference Group. The project needed to be able to pivot to respond to emerging issues or in response to the needs of melon growers. Thus the OP was reviewed regularly to ensure that it met any changes or challenges that occurred in the melon industry.

The format utilised for project planning was a Gantt Chart, a project management tool to assist in the planning and scheduling of project activities. They are particularly useful for simplifying complex projects. Project management timelines and tasks are converted into a horizontal bar chart, showing start and end dates, as well as dependencies, scheduling and deadlines, including how much of the task is completed per stage and who is the task owner. This was useful to keep tasks on track with team members, particularly when the scope changes as it did in this project.

VM17001 had a project variation inserted in August 2018, following the serious food safety event that occurred earlier in that year. The variation included these activities:

- Managing and liaising with food safety agencies such as Food Standards Australia & New Zealand and the NSW Food Authority
- Development of research project concepts for improved food safety management in the melon industry
- Media monitoring

Table 1 describes the project activities and methodologies employed.

Table 1 Project Activities

Activities	Methodology
Research project development	Work with Hort Innovation, levy payers and research providers (private and government) to develop research proposals for funding through the melon R&D levy and other funding sources.
Research project management	Management of non-Hort Innovation funded research projects
Networking with State/ Federal Government and other research providers	Maintain the current research provider database to ensure that research capacity continues to be available. Liaison with food safety project service providers, food safety authorities and health departments in ongoing change to food safety practices in the melon industry.
Research project assistance	Work with research providers to ensure access to levy payers and industry resources that enables research and its application.
Conference and meeting attendance	Keep informed of the latest national and international R&D developments of relevance to the Australian melon industry. Ensure that the industry position on a range of issues pertaining to research and industry development are presented to a range of stakeholders.
Industry liaison	Liaison with supply chain including retailers, wholesalers and exporters Work with food safety schemes and auditors to achieve sustainable outcomes for these programs.
Grower technical meetings	Conduct a program of grower meetings including for food safety topics to ensure that levy payers are informed of research outcomes and industry matters and to seek feedback on research needs from levy payers.
Conference & Field Days	Assist with organisation of the 2018 and 2020 Industry Conference & Field Days.
Industry Plans	Updated industry plans that underpin decision-making for the melon industry.
Crisis events	Lead and manage industry crises as required. Ongoing management of food safety issues resulting from the Feb 2018 listeria

	incident.
Communications plan	Develop a communications plan that works with levy payers, supply chain partners and Hort Innovation to ensure that important results and outputs from R&D projects are communicated and made available to the melon industry.
Industry factsheets	Develop three factsheets per year, based on industry need.
Melon Enews	Deliver a monthly electronic newsletter to levy payers and supply chain partners that provides an overview of the melon industry information with links to more in-depth information.
Melon News	Deliver a quarterly printed newsletter to levy payers that contains in-depth information on research, both levy-funded and externally funded. The information will include Australian and international research outcomes.
Website	Maintain the melon industry website to provide consumer education and a resource bank of knowledge for levy payers.
Consumer education	Social media educational messages for melon consumers
General communications	Maintain an as-required program of timely, relevant communications to inform levy payers, dependent on need. Media monitoring information delivered to growers via communication activities.
Project Reference Group	Establish and lead a Project Reference Group that will guide the project outcomes.
Research project management	Manage and provide input to externally funded research projects
Hort Innovation communication	Work closely with Hort Innovation to utilize and complement existing information delivery channels.
Program evaluation	Develop a program logic framework and monitoring and evaluation plan.
Project risk register	Maintain a project risk register that describes how risks will be managed

Outputs

Project outputs and outcomes are summarised in Table 2 to provide an overview of the entire project. Further detail on specific outcomes is included in the next section “Outcomes” with further explanation of the key project outcomes.

Table 2 Project Outputs and Outcomes

Achievement criteria	Outputs	Outcomes
Project Reference Group established	PRG established – Australian Melon Association plus grower members	Levy payers have input and overview of industry development activities.
Project Reference Group meet by teleconference four times per year	Reported on project activities; received feedback from PRG members.	Active engagement by levy payers with the industry development project to inform activities.
Develop the annual project operational plan.	Completed each year for the project.	This plan monitors the project activities and provides timeframes for activity completion.
Develop a program logic framework for the project	Completed and attached in Appendix 1.	Successful engagement with melon levy payers, service providers and government to build strong relationships that support development and extension of research outcomes.
Develop a stakeholder engagement plan	Completed and attached in Appendix 2. The project maintains a comprehensive contact list of levy payers and supply chain.	Ensures that all required stakeholders are involved, consulted and informed.
Develop a project risk register.	Completed and attached in Appendix 3.	Risks identified that may impact on project outcomes and industry benefits.
Crisis Management Plan reviewed and updated	The Crisis Management Plan was updated before the listeria crisis in February 2018.	This plan guides crisis management activities in the melon industry. It was used to guide and inform crisis management and has been used as a basis for the outputs from VM18002 Risk and crisis management planning for the melon industry.
Cucumber green mottle mosaic virus (CGMMV) National Management Plan updated	Completed in 2018 to provide information on the status and management of CGMMV.	This is an important guiding document for industry management of CGMMV. It informs the decision making by government agencies in managing outbreaks of this biosecurity threat.
Industry magazine available to levy payers.	Melon News (eleven) completed and delivered by mail to levy payers, available as an e-zine on industry website. www.melonsaustralia.org.au/melon-news-magazine/	Levy payers and the supply chain receive information about research projects, both levy-funded and from a broader context.
Monthly electronic newsletter to levy payers and supply chain.	Thirty-six Melon Enews delivered to a distribution list of approx 1100 subscribers.	Levy payers and the broader supply chain are informed about industry issues and opportunities to participate and collaborate.

	www.melonsaustralia.org.au/our-e-news-archive/	
Maintain industry website	Both consumer education and industry sections of the website are updated as required to reflect industry knowledge and maintain issues management. www.melonsaustralia.org.au	The website addresses the needs of consumers, levy payers and industry stakeholders.
Research project development with research partners to support development of research proposals aligned to melon SIP.	The project developed concepts or worked with research agencies for the following concepts:	The outcomes were:
	VM19003: Identification and management of a fungal disease complex in melons	Contracting for research commencement
	Communications for the Australian Melon Industry	Under preparation for release as RFP
	Melon Market Access & Trade Development	Proposals received by Hort Innovation
	Melon Industry Supply Chain Development	Unsupported by SIAP and under review by Hort Innovation
	VM17002 Food safety training, extension and capacity for the melon industry – phase 2 (VM18003). VM18003 Food safety training, extension and capacity for the melon industry – phase 2 (VM18003).	The first of these food safety projects is complete with Phase 2 still underway. The industry development project provided a large amount of support to both food safety projects in organising grower meetings and on-farm visits; communication of project outputs, as well as providing industry knowledge.
	VM18008 Understanding and managing the role of honey bees in CGMMV epidemiology – NT DPIR	Contracted 2019; IDM participates as part of the Project Reference Group
	VM19002 2020 Australian Melon Industry Conference and Field Day	Project completed, although conference was cancelled due to COVID-19. See page 10 for further information. IDM provides coordinating role for conferences.
	VM17000 2018 Australian Melon Industry Conference & Field Days	Project completed. See page 10 for further information. IDM provides coordinating role for conferences.
	VM18007 Melon outbound trade mission Taste Australia Asia Fruit Logistica participation by the melon industry. This project organised the melon display and the participation by 2 growers.	Completed 2019 – two growers exhibited
Externally funded research projects managed in line with project agreements	Increasing melon exports to Japan by consistently meeting importer and consumer expectations - Package Assisting Small Exporters grants (DAWE)	Commenced
	Assessing commercial traceability solutions for suitability and adoption in fresh produce export chains using melon	Commenced

	industry as a pilot – Traceability Grants	
	Biosecurity Champions - Creating awareness of on-farm biosecurity practices in difficult-to-reach populations through biosecurity champions for the Australian Melon Industry - DAWE	Completed 2020
	LEAD – Leadership Exploration And Development – DAWE – Leadership program for nine horticultural industries including melons.	All activities completed 2019; variation for governance training to be completed 2021.
	Reclaiming export share for the Australian Melon Industry – DAWR – in-country visits to melon export markets.	Completed 2019 by IDM. Reports available at https://www.melonsaustralia.org.au
	Development of a tool for real time data on approved crop protectants, Maximum Residue Levels and Withholding Periods for importing countries. – Australian Table Grape Association	Project has received funding and will proceed in 2020/21 in conjunction with a Hort innovation cross industry project.
Networking with State/ Federal Government and other research providers	Work with research partners to ensure that at least four succession plans are put in place over the LOP.	Over the life of the project, the following changes occurred in research staff capability:
	NT DPI&R have employed an officer to lead VM18008 Understanding and managing the role of honey bees in CGMMV epidemiology – NT DPIR	A researcher is in place who has knowledge of pollination in melons and the management of CGMMV.
	QDAF have partnered with Melons Australia to deliver an export cool chain project for export to Japan	A new QDAF staff member is aligned to melon export research.
Conference and meeting attendance	Attended Hort Connections (2); Fresh Produce Food Safety Conference(2); 3rd Australian Bee Congress (presented on melon pollination).	The melon industry has its viewpoint and position on industry issues on the agenda of various forums.
Industry liaison	Alignment of industry food safety practices with requirements of state food safety regulation systems. More robust food safety base schemes that can meet the melon industry and retailers' expectations for food safety standards.	Food safety regulators are informed of activities within the melon industry.
Grower meetings in regional areas (12)	Ten face to face meetings were held in regional growing areas. The topics addressed at the meeting were varied but included food safety, biosecurity, export and communications. An additional seven webinars were recorded to substitute for meetings in 2020 due to travel restrictions.	A webinar program "Talking Melons" was introduced in 2020. Further explanation of this program is on page 20.

Outcomes

Outcomes for VM17001 are grouped here based on themes of:

1. Industry development
2. Crises management
3. Technology transfer activities
4. Communications and industry data
5. Consumer education

Each theme is described in summary with significant activities described in detail.

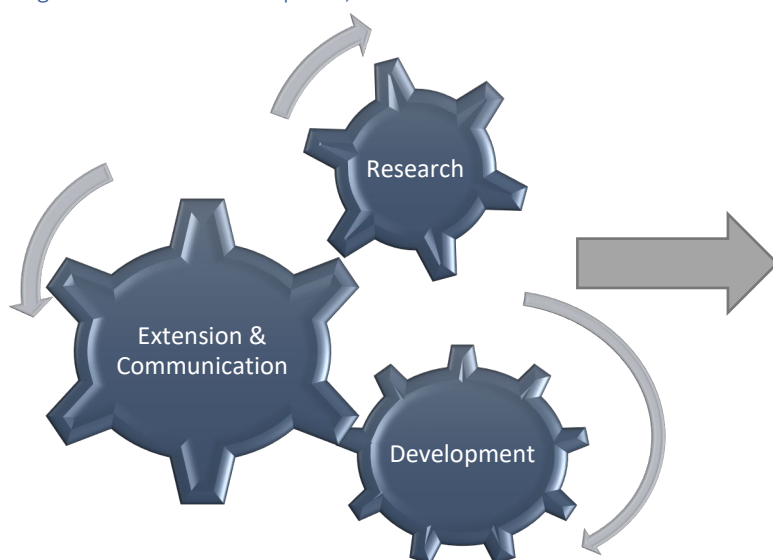
Industry Development

Industry development continues to be a significant activity within this project. For this project, industry development is defined as the activities that lead to improved economic outcomes for the Australian melon industry. Activities in this project can be wide and varied, including:

- Research project development with research partners
- Externally funded research projects managed in line with project agreements
- Networking with governments and research providers
- Conference and meeting attendance and representation
- Industry liaison

Development activities are linked to research, extension and communication, as illustrated in Diagram 1.

Diagram 1 Interrelationship of R, D & E.



The importance of export development has come to the fore in this iteration of the Melon Industry Development project. To illustrate the industry development activities undertaken, export is used as an exemplar in this report.

Australia is a net melon exporter. For the year ending June 2019, Australia exported 21,455 tons of fresh melons. (Source: **Australian Horticulture Statistics Handbook – Fruit – 2019**). With the introduction of the melon levy in 2016, discretionary funds are available for investment in export activities. In addition, VM17001 has also been successful in accessing external funding for export-based projects (as outlined in Table 2 Project Outputs and

Outcomes). The methodology and outcomes of these activities are outlined below.

1. Developing an Export Strategy and Plan to improve market access for the Australian melon industry

This project was funded through the Commonwealth Government's Package Assisting Small Exporters. The aim was to develop an Export Strategy identifying export goals for the melon industry and an Export Plan outlining priority for industry and government activities for market access over the next five years and how these will be achieved.

VM17001 supervised, informed and managed the project. The outcome was an export strategy for the Australian melon industry with five priority markets described in terms of macro-economic factors and trends in the import/export activity of those markets. It also comprises deeper analysis for each of the five priority markets and a "Route-to-Market Strategy", outlining the country's environment, regulations, and stakeholders that are important for anyone exporting to that particular market.

The outcomes of this work have been the identification of potential future expansion of export markets with a concentration on a specific number of priority markets rather a broad-brush approach to export markets. Industry and government have a common purpose that all participants can understand and work towards with strategic direction for developing market access proposals. It also allows new, inexperienced melon grower exporters to increase their understanding export markets and to create an export culture among melon growers who have been domestically focussed. Another benefit is ensuring that industry market access and export priorities are backed by sound commercial and technical information. It provides a focus for future export development activities through Hort Innovation.

The Export Plan can be found at https://www.melonsaustralia.org.au/wp-content/uploads/2018/12/ExportStrategyandPlanforAustralianMelons_Final.compressed.pdf

2. Melons to Japan

This project was managed by VM17001 and funded through the Commonwealth Government's Package Assisting Small Exporters to evaluate the export opportunities of melons in Japan. It included understanding the local market dynamics; identify the potential barriers for melon exports and how to overcome challenges and understand consumer attitudes and behaviours toward the consumption of melons.

VM17001 managed the tendering process for potential service providers and supervised the implementation of the Melons to Japan project. The outcome was a comprehensive report on the melon market in Japan that has been distributed to melon growers, exporters and potential exporters through the communication channels of VM17001.

3. Reclaiming export share for the Australian Melon Industry

This industry development work was aimed at regaining market share in key export markets for Australian rockmelons following the Listeria incident in February 2018. This event had a significant impact on sales of rockmelons, both domestically and in export markets.

In response, the following initiatives were undertaken in 2019. In-market visits by the melon IDM and a food safety researcher with experience in melon food safety practices were conducted to the key export markets of Japan, Singapore, Malaysia and the Middle East (Dubai, Saudi Arabia, Bahrain & Kuwait). Resources were developed to inform the stakeholders in these markets of the initiatives being undertaken in Australia to increase melon food safety practices.

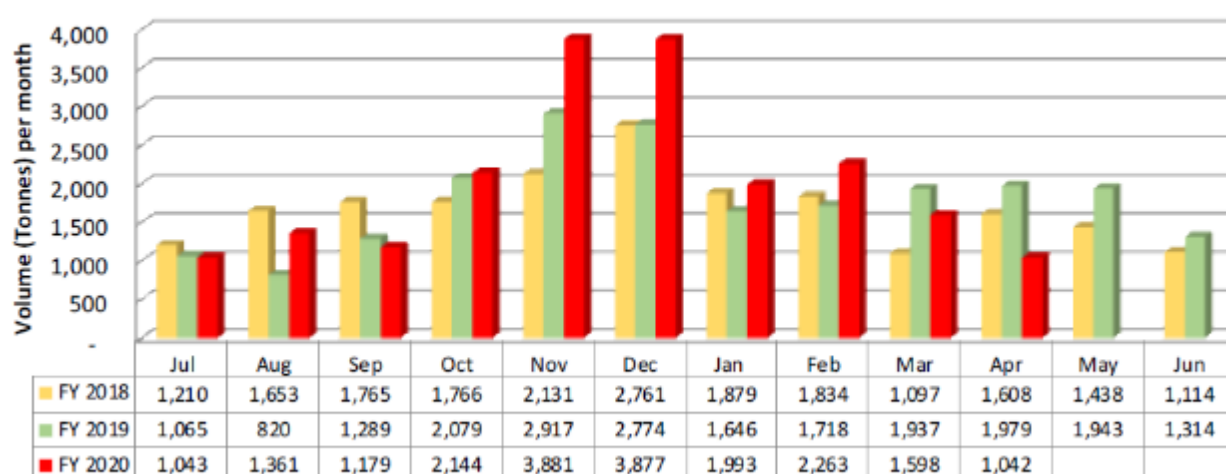
In consultation with Austrade, in-market visits were planned to consult with as many stakeholders in a wide cross-section of the supply chain. These included government agencies, importers, retailers and Austrade staff in the key markets.

The outcomes were that possible market barriers in selected export markets have decreased with increased exports; Networks were established with government, Austrade and importers in each of the visited countries. Trade officials (Austrade) have become more well informed of the Australian melon industry and its melon food safety processes.

In reporting by Fresh Intelligence, as of 30th April 2020, exports of melons were 12 per cent higher than the same period in the previous year. (Figure 1). Unit values were 6 per cent higher and has meant the overall value has increased by 18 per cent for the 2019/20 season to date. *Source: ABS 2019 via IHS Global Trade Atlas; Fresh Intelligence analysis.*

Japan has increased 268 per cent to 2,989 tons and is now the No.4 destination. Singapore has recorded 5,015 tons to date up 4 per cent. Other movers were Malaysia up 95 per cent and Qatar up 40 per cent. Figure 1 shows melon exports for the last three years. Exports in March and April 2020 are likely to be impacted by COVID-19 as food service in export markets decreased, particularly in Dubai and Singapore (less air travel).

Figure 1 Melon Exports per month vs last 2 years



A grower story of his experience of participating in this project is available at Appendix 4.

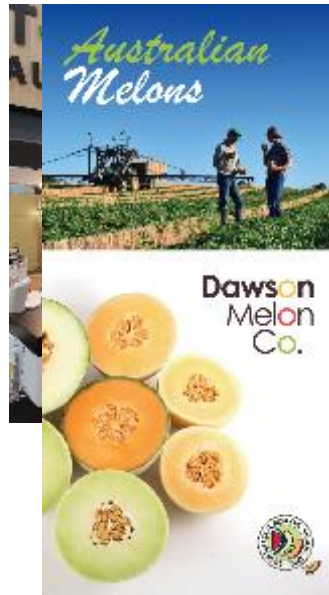
4. VM18007 Melon outbound trade mission

This project was coordinated by VM17001 for a melon delegation to attend Asia Fruit Logistica 2019 (AFL). The aim was to arrange and coordinate logistics for the attendance of the IDM and two Melon growers at AFL 2019 and communicate the outcomes of the outbound trade mission to the broader industry via industry communication channels.

This involved organizing the grower representation, booking of travel arrangements, preparation of display materials, coordinating fruit displays and delivery to Hong Kong, organizing a retail tour, presenting at the trade commissioners and Austrade at meeting prior to AFL and liaising at the display space at Asia Fruit Logistica.

Two growers nominated to be part of Asia Fruit Logistica through the project and two further self-funded delegates accompanied the trade mission.

The value return to the melon industry of this work was the increase in the profile of the melon industry to a range of importers in many different countries. Follow up with requests for grower exporter contact have been numerous. VM17001 maintains a list of growers who wish to increase their export networks and contacts.



5. Horticulture Exports & Importers Consultative Committee (HEICC)

This project represented the melon industry on the Horticulture Exports & Importers Consultative Committee (HEICC). This group is a broad across industry group representing a range of plant exporting industries, convened by the Department of Agriculture, Water & Environment (DAWE).

Examples of the topics discussed at these bi-annual meetings are:

- Authorised Officer Program
- Horticulture Exports Cost Recovery Arrangement
- Market Access Activities
- Industry updates
- Fruit Fly update/ PFA acceptance by trading partners
- New Zealand Export Plan
- Agriculture trade modernisation
- Export legislation review update

This group is important to the melon industry due to the breadth of export topics discussed. It also positions the melon industry as an important exporter and thus puts the industry firmly on the Commonwealth Government agenda when exports are discussed.

As a result of participation in the HEICC, the IDM has been part of the Horticulture Export Cost Recovery Charging Review Group to provide feedback from the melon industry to the Federal Government on the impact of increased costs on exporters. Information from HEICC meetings are communicated to the Project Reference Group and the broader melon supply chain including levy payers.

6. Hort Innovation Trade Advisory Panel (TAP)

Hort Innovation convenes the TAP to provide advice to industry issues regarding exports and receive advice on export issues for individual industries. The group usually meet biannually. However, in 2020 the meetings moved to an online format and were convened monthly by Hort Innovation to ensure that COVID-19 impact on horticultural exports was minimised.

This project informed the group of export issues that were relevant to the melon industry as well as broader export issues.

7. Trade negotiations

VM17001 represented the melon industry in negotiations with DAWE Export Operations regarding stop in trade of melons to New Zealand in 2019-2020. The New Zealand Ministry of Primary Industries ceased all melon imports from Australia following detections of Cucumber green mottle mosaic virus (CGMMV). This work is ongoing following many teleconferences that have been held to negotiate suitable outcomes for melon exporters.

To date, the outcomes have been:

- New South Wales, Victoria and Queensland have developed their own protocols for determining CGMMV property freedom.
- DAWE developed a process for individual growers in New South Wales and Victoria to register on the DAWE export website based on their property-freedom from CGMMV.
- Work is ongoing for acceptance of the Queensland protocol by New Zealand.

The outcomes have been that growers in New South Wales and Victoria have been able to export to New Zealand. Queensland growers are currently commencing on-farm testing for CGMMV with the view to the New Zealand trade recommencing in 2021.

8. Market access issue

VM17001 facilitated the commencement of a Hort Innovation project (MT10057) to add melon to ICA 55, an irradiation protocol for export to New Zealand and interstate. A nutritional profile was also completed as part of MT10057 and approved by Food Safety Australia & New Zealand (FSANZ).

The outcome is that New Zealand MPI are currently requesting feedback from their industry on irradiation for melons as part of the current Australia New Zealand Bilateral discussions.

9. New export focused projects

VM17001 has facilitated the development of new project applications for export-based melon projects, funded through the Commonwealth Government:

- Increasing melon exports to Japan by consistently meeting importer and consumer expectations - Package Assisting Small Exporters grants (DAWE)
- Assessing commercial traceability solutions for their suitability and adoption along fresh produce export chains using melon industry as a pilot – Traceability Grants (DAWE).

VM17001 completed the concept development in conjunction with staff at Hort Innovation for a Melon Market Access and Trade Development project that is now in the tender stage. The outcome will be a dedicated project to coordinate all export activities for the melon industry.

Crises management

Crisis and issue management for the melon industry has been managed through VM17001. The Crisis Communication Plan was updated in January 2018. Following this, a purpose driven crisis communication project VM18007 was contracted by Hort innovation to assist the melon industry in developing a broader skill base in crisis management. A renewed Crisis Plan and specific training for industry members is part of this project. VM17001 participated in the planning for VM18007 and the Industry Development Manager assisted in the workshops and grower training.

1. Food safety

A significant outbreak of listeriosis occurred in February 2018. VM17001 was responsible for managing the incident from an industry, government and media point of view. The outbreak impacted on the melon industry through much of 2018 and significantly reduced both domestic sale volumes and prices.

The industry Crisis Management Plan was used to manage the food safety incident, however the volume of media interest in this crisis was unmanageable by the project. External funding from a consortium of seed companies was received by Melons Australia to assist with the provision of a crisis management advisor. The knowledge that this person provided was crucial to the management of this crisis.

Future melon industry development and/or communication projects should not be expected to handle such a large crisis event as this was. The impact on staff was tremendous and the impact continued to be felt for another year of the life of VM17001.

While crisis management plans are essential to the planning and execution of a crisis event, it is essential that resources from the melon industry are applied to build a team that can work on such crises. This level of crisis event is large, has a massive impact on industry and should be managed in a coordinated way from the industry association with a project such as VM17001 providing guidance, rather than expected to manage the crisis without any real leadership from the industry association. It is important that Hort innovation as the funding body for communications and industry development projects maintains a watching brief to ensure that future projects of this type do not suffer from scope creep and enter into the industry spheres that should be led and managed by the industry body.

2. Closure of New Zealand export market

The closure of the New Zealand export market on 13 December 2019 following the detection of Cucumber green mottle mosaic virus (CGMMV) in Australian melons in New Zealand has had an enormous impact on the Australian melon industry. The trade is valued at \$25 million for melons alone.

This project has led the negotiations with DAWE, Qld Department of Agriculture & Fisheries (QDAF) and Ausveg to regain New Zealand access for all cucurbits. This has involved supporting export growers, liaising with state jurisdictions regarding protocols and organising a foundational survey of farms to determine the extent of CGMMV.

The current situation is that New Zealand Ministry of Primary Industries is consulting with its stakeholders regarding a proposed Pest Free Place of Production (PFPP) for Queensland exporting growers.

The outcomes to date are:

- This project in conjunction with DAWE and QDAF developed a PFPP that is a workable solution to the need to meet the concerns of New Zealand MPI for pest-free status for Queensland cucurbits imported into New Zealand.
- The IDM has worked intensively with exporting growers to ensure that they have suitable on-farm biosecurity plans in place for when the New Zealand export market is open.

This crisis for Queensland exporters has had a long chronic impact, as compared to the listeria event which had an extremely large impact Australia-wide with a long residual period of on-going impact on rockmelon growers. It is important that future crisis management planning for the melon industry addresses both chronic and acute crisis management. Crises can be quite targeted at one growing region or one type of product, but it is important that these events are managed effectively as the individual impact on a growing business can be significant.

Technology transfer activities

Technology transfer has occurred in VM17001 through a range of activities.

1. Conference & Field Days

VM17001 had responsibility for leadership and management of conferences during the project. Two conferences for the melon industry were planned during the LOP – 2018 in Townsville, Qld and 2020 in Perth, WA (cancelled).

The 2018 conference attracted a wide range of levy payers including 3 sponsored young melon growers and other supply chain partners who were exposed to presentations at the Conference and trials and demonstrations during the field day. This created opportunities for all sectors of the melon industry and supply chain to develop a greater understanding of industry research outcomes and opportunities, export markets and relevant issues such as food safety. It is especially significant that young growers who potentially would not have had access to this opportunity without sponsorship have gained this knowledge and had the opportunity to interact with the broader supply chain at an industry level.

Presentations by Hort Innovation, Brian Ramsey and Dianne Fullelove (IDM) ensured levy payers gained a much greater understanding of the levy investment process and the importance of the Strategic Investment Plan. This was further cemented in the panel sessions whereby delegates including levy payers were able to ask questions and instigate discussions with Brad Mills from Hort Innovation as well as other industry members about the levy investment process and specific projects funded through the program. There was extensive discussion related to the biosecurity levy and its purpose which provided levy payers with an increased understanding of its function and how it can be used into the future. The evaluation survey indicated that 80% of those delegates who attended the panel session found it to be a worthwhile addition to the conference.

Delegates were also exposed to new technologies, products and methods that may increase farm productivity and farm-gate returns e.g. Professor Ron White presented on Smart Sensing technologies. At the field day, there were demonstrations from companies such as Northern Agriservices who exhibited the latest in drone and laser technology. The extensive biosecurity precautions taken by the farmer hosting the field day with assistance from Biosecurity Queensland also educated other farmers and members of the supply chain as to the importance of incorporating biosecurity measures into organizing events and educated them on how to do so.

Components of the conference such as the welcome function and the conference dinner gave delegates the opportunity to network and discuss shared goals and values that have the potential to increase both their own business and industry profitability. In both cases the evaluation survey indicated that 85% of those who attended found these to be worthwhile events. In the case of the dinner where more detail was sought in the survey it was indicated that 85% of those who attended found the dinner to be either a good, very good or excellent opportunity for networking.

For people unable to attend the conference, presentations have been published to the industry website. Go to www.melonsaustralia.org.au.

The 2020 conference was cancelled two weeks before the planned event start date due to COVID-19 virus concerns. However, the planned outcomes were:

1. To create opportunities for all sectors of the melon industry and supply chain to develop greater understanding of industry research outcomes and opportunities, export markets and relevant issues such as product traceability. Participants would have been exposed to new technologies, products and methods that may increase farm productivity and farm-gate returns.
2. The Conference would have increased levy payer understanding of the levy investment process, both R&D and biosecurity.
3. Increase opportunities to develop shared goals and values that have the potential to increase both their own business and industry profitability.

As a result of the cancellation, presentations were moved to an on-line delivery model, Talking Melons 2020 - a series of presentations that brings the latest information to assist in growing and marketing Australian melons to levy payers and others. <https://www.melonsaustralia.org.au/melon-talking-melons-2020/>

The information is available as videos to watch, podcasts to listen to and slide decks to watch and print. The available presentations are:

1. Global Melon Production & Export Trends by Wayne Prowse
2. Melon Consumer Insights by Dr Denise Hamblin
3. Pollination of Hybrid Watermelon by Dr Lisa Evans
4. Exotic leafminers – an update for the Australian melon industry by Dr Elia Pirtle and Madeleine Quirke
5. Packhouse Environmental Management by Dr SP Singh
6. Cations in Soils and Their Importance on Melon Soil Fertility – Assoc Prof Peter Kopittke
7. Soil health: Constraints, Indicators and Solutions - Dr Tony Pattison

In addition, the field day variety trials were filmed on location at Capogreco Farms. The Field Day series features five melon variety trial sites by seed companies Syngenta, Seminis, BASF Nunhems, HM Clause and Rijk Zwaan, as well as a compilation video featuring all variety trials.

1. Melons Australia compilation video of the field trials
2. Syngenta video of their varieties grown at the field trials
3. Seminis video of their varieties grown at the field trials
4. BASF Nunhems video of their varieties grown at the field trials
5. HM Clause video of their varieties grown at the field trials
6. Rijk Zwaan video of their varieties grown at the field trials

Talking Melons 2020 provided growers with the opportunity to access research information and understand new opportunities in growing and marketing.

Additionally, the increased profile of the Australian melon industry gained through its quick pivoting to delivering many of the conference outputs remotely to the entire industry, has caught the attention of many more growers and industry partners than had originally registered as conference delegates. Planning of future melon conferences may consider some change from the template used for the past 4 conferences to achieve wider levels of industry engagement than previously achieved.

2. Food safety

VM17001 has provided significant support to the three levy-funded projects in food safety through organisation of grower meetings, individual visits to melon farms and providing background information and industry contextualization for food safety activities. These projects were VM17002 and VM18003 (Food Safety Training, Extension and Capacity for the Melon Industry – Phase 1 & 2) and VM19000 (The effective control of listeria on rockmelons through alternative post-harvest treatment methods).

Without the facilitation and input to these projects by VM17001, the outcomes would have been significantly reduced. The industry networking developed by long-term projects such as VM17001 are invaluable in establishing trust and rapport with levy payers and enabling contextualization of new research projects against previous industry activity. Methods of quantifying these type of outcomes are difficult as the actual benefit is only reflected in the success of the facilitated projects.

Suggested future research work in food safety in the melon industry could develop a method for quantifying practice change in melon growers following the delivery of these food safety projects. The level of change and the drivers for change could be measured by a sociology-based project.

3. Industry meetings

Grower regional meetings are a significant method of technology transfer for research outcomes, of both levy-funded research and external domestic and international research.

Seventeen grower meetings have been held in all growing regions during the life of the project:

- Bundaberg, QLD (5)
- Ayr, QLD (2)

- Chinchilla, QLD (1)
- Griffith, NSW (2)
- Mildura, VIC (2)
- Perth, WA (1)
- Geraldton, WA (1)
- Carnarvon, WA (1)
- Kununurra, WA (1)
- Katherine, NT (1)

The meetings followed the format of an industry update followed by presentations by industry experts including:

- Pests and diseases – CGMMV, fungal diseases, silverleaf whitefly
- Food safety
- Pollination
- Exporting
- On-farm biosecurity
- Industry Strategic Investment Plan

The meetings drew an average audience of 30-40 industry participants with 50% growers and 50% industry service providers.

The outcomes from grower meetings were multi-fold. They maintain industry cohesion with opportunities for social interaction; they provide the possibility for growers to directly question industry experts and provide feedback on their views on research and development direction.

Grower meetings build community by creating new friendships and business partnerships and by deepening existing ones and gives growers a venue for peer-to-peer discussion, which can result in innovative production or marketing strategies.

However, this form of industry development was severely curtailed in 2020 due to COVID-19 quarantine measures.

4. Research project development & management

The Industry Development Manager managed or had input into many research projects aligned to VM17001. A number of these projects have been mentioned in specific parts of this report however, a list of other research projects is provided here.

- Developed concept for R&D project to provide support for rockmelon growers to implement more robust food safety systems. Two projects followed:
 - Food Safety Training, Extension and Capacity for the Melon Industry – Phase 1
 - Food Safety Training, Extension and Capacity for the Melon Industry – Phase 2

These projects have been instrumental in changing food safety practice in the melon industry and this project, VM17001 has been an integral part of the extension of both projects.

- Developed concept for a melon consumer insights project to investigate the impact of 2018 food safety event on melon retail sales (VM18000). The project was completed as two separate projects for consumer data and consumer interviews.
- Worked with Hort innovation to develop a project to increase crisis management skills in the melon industry. VM18002 Risk and crisis management planning for the melon industry is ongoing with training occurring and a renewed crisis management plan in draft form.

- A concept was developed to investigate better management of soil-borne fungi in melon crops, VM19003: Identification and management of a fungal disease complex in melons. To date, this project is still being scoped by Hort Innovation.
- VM18008 Understanding and managing the role of honeybees in CGMMV epidemiology has been contracted by NT DPIR to investigate the interaction of honeybees with the spread of cucumber green mottle mosaic virus.
- The Industry Development Manager led “Reclaiming Market share for Australian Melons”, funded by DAWE to rebuild trust in Australian melon exports after the 2018 listeria event. Meetings were held with importers and governments in Japan, Singapore, Malaysia, Dubai, Saudi Arabia, Bahrain and Kuwait.
- A Biosecurity Champions project, funded by DAWE, was aimed at increasing biosecurity awareness in difficult-to-reach groups who have an impact of on-farm biosecurity for Australian melon growers was funded by DAWE. The project targeted English as a Second Language (ESL) melon growers in the Carnarvon district and travelling holidaymakers to increase their understanding of on-farm biosecurity practices. The project produced a large amount of resources that are available on the melon industry website.
- Development of the TAP application for irradiation for melons to New Zealand. This project assisted the service provider to assess previous research on irradiation of melons. The application has moved successfully through the TAP process and is currently with the Commonwealth for discussion at the next Bilateral Trade discussions.
- *Native Pollinators in the Riverina Local Land Services region* (funded by NSW DPI) was developed and managed by VM17001 to extend the melon-growing regions covered by the University of New England in its native bee pollination project.
- A Leadership Exploration And Development (LEAD) project was funded by the Commonwealth Government to deliver leadership training to a group of nine industries including melon growers. The project trained 32 growers including 4 melon growers in leadership skills.
- A new project has just been contracted to monitor the cool chain for exports to Japan, funded by DAWE. Led by QDAF, this project commenced in 2020.
- A new project for food safety traceability has been contracted to Melons Australia to assess food safety traceability for melon-growing businesses in 2020. The project will assess commercial traceability solutions for suitability and adoption in fresh produce export chains using melon industry as a pilot.

Communications and industry data

1. Melon News

A quarterly printed magazine was distributed to all levy payers. The Melon News included a range of topics including technical information, research reports, government and supply chain information. Copies of Melon News are available on the industry website <https://www.melonsaustralia.org.au/melon-news-magazine/>

During the final year of the project, Melon News was redesigned to a larger research-based journal. Edition size increased from 16 pages to 28 and 24 pages. This provided the opportunity to include longer stories with a broader base, including international research. Feedback on the redesign has been favourable and will be further assessed in VM20001 *Melon industry communications evaluation, needs analysis and strategy development* currently underway.

2. Melon Enews

A monthly electronic newsletter to all growers and industry members (distribution list 1,100) containing the latest industry information. Melon Enews format was short paragraphs with links to further information. The Melon Enews archive is at <https://www.melonsaustralia.org.au/our-e-news-archive/>

3. Melon industry website

The website <https://www.melonsaustralia.org.au> has been continually redeveloped and modified during the project. It provides industry and consumer information. A large amount of industry information and reports are held on the website, readily accessible to levy payers and other industry members.

4. Direct email to levy payers

Information was sent to growers as required, particularly as part of crisis management e.g. biosecurity and food safety issues. Examples of the direct emails sent:

- Export information
- On-farm biosecurity
- Biosecurity incursions
- Food safety issues
- Levy information
- Strategic planning
- Conferences

All email, including Melon Enews are stored in an archive available to the industry in the future.

5. Factsheets

A range of industry factsheets were completed during VM17001. These included factsheets on

- Post-harvest management of melons
- Cucumber green mottle mosaic virus
- Melon necrotic spot virus
- Managing Tobamoviruses in Melons
- Managing Orthotospoviruses in Melons

In addition to factsheets completed by VM17001, the IDM worked with NSW Department of Primary Industries to complete a farm biosecurity planner. The planner is complemented by two factsheets; Exotic Pest Alert: Solanum

fruit fly and Fusarium root rot of melons.

Factsheets are available on the industry website and promoted to the wider industry via Melon Enews and Melon News. In addition, a flashdrive was direct mailed to growers containing all of current factsheets.

The project developed three factsheets in the Vietnamese language to meet the needs of English as a Second Language growers. The factsheets are available on the melon industry website.

Melon necrotic spot virus https://www.melonsaustralia.org.au/wp-content/uploads/2020/06/MNSV_Viet_ver3a.pdf

Cucumber green mottle mosaic virus https://www.melonsaustralia.org.au/wp-content/uploads/2020/06/CGMMV_Viet_ver3a.pdf

Fall armyworm https://www.melonsaustralia.org.au/wp-content/uploads/2020/06/FAW_Viet_ver3a.pdf

They were also distributed to relevant industry organisations that work directly with ESL growers in regional Australia, including Northern Territory Farmers, Vegetables WA, Carnarvon Growers Association and the Ord River Cooperative.

Examples of the factsheets are available in Appendix 5.

6. Media releases

The project managed media enquiries, conducted media interviews and supplied industry information for media activities. This activity was particularly intensive during the 2018 listeria event. An extremely large demand for media interviews and information was managed by the IDM in isolation with no support from other organisations or industry members. This is not a situation that should have occurred, and it is recommended that the melon industry addresses the need to have a wider support base for managing media in the event of another serious crisis such as the food safety event.

Consumer education

These activities were designed to better educate the consumer about Australian melons using melon-specific information and resources. Examples are resources about different types and varieties of melons, their health benefits, how to select, store and prepare, and nutritional benefits. The objective was to enhance the knowledge of the public about melons.

The project participates in social media on Facebook and Instagram to educate consumers about melons and to create connections between consumers and the farming community. The objective is to build trust and knowledge in consumers and create links that increase growers' social license to farm.

Videos remain the most popular posts. An example of a social media post is below:



Monitoring and evaluation

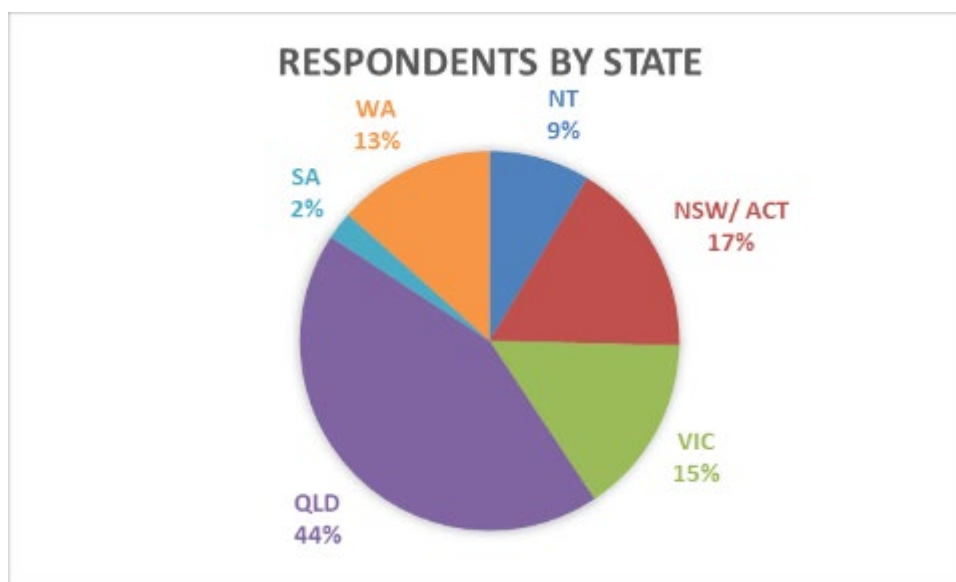
As technologies and the needs of an industry change over time it is important to confirm what is working well and how certain R&D communication challenges can be approached from a new angle. VM20001 *Melon industry communications evaluation, needs analysis and strategy development* has been contracted by Hort Innovation to evaluate the communication section of VM17001. It reports on 31 October 2020 and will scope the knowledge needs of melon growers and the associated supply chain and examine the effectiveness of current approaches to direct future communication activities.

The IDM has spent considerable time in the last two months in assisting the service provider for VM20001. Further surveying of melon levy payers has not been conducted as would be expected at the end of the industry development project due to the commissioning of VM20001.

An industry survey was conducted half way through the LOP of VM17001.

Levy payer survey

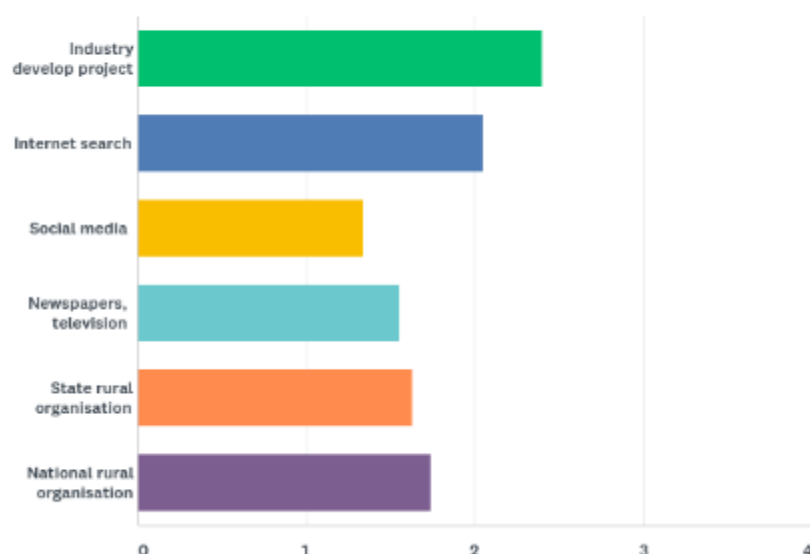
An industry development survey was completed in September 2018 to assess the impact of industry development activities. The survey was sent to 1,000 recipients, including 220 levy payers. In two weeks, 222 replies were received from a range of industry people (as below).



The results of the survey are outlined below.

VM17001 continues to be the main source of information for levy payers and the supply chain. 94% of respondents found the information supplied by VM17001 was useful, very useful or extremely useful.

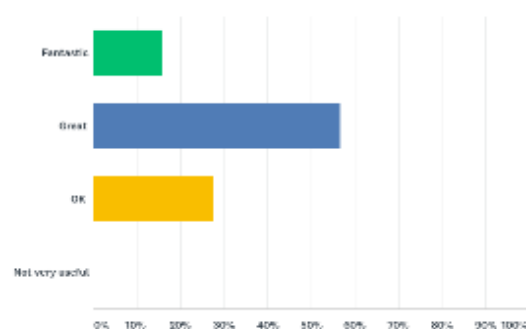
Q3 What are your most used sources of information about the melon industry?



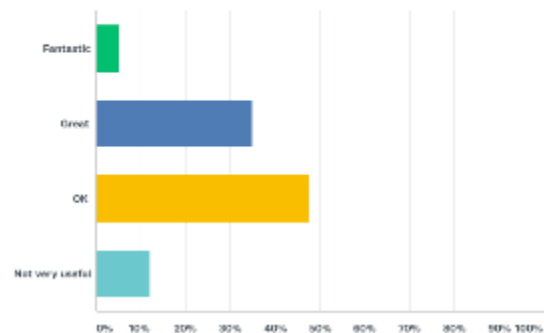
Grower meetings seem to have become less important to growers over the last three years. A survey in 2015 asked growers to rate the usefulness of the information they received at grower meetings, particularly regarding biosecurity incursions. Sixty percent felt that the meetings were useful, very useful or excellent. In this survey, less respondents felt that grower meetings were useful to them and 45% do not attend.

In response to questions about the usefulness of the Melon Enews and the Melon News, the following information was received. The Melon Enews was regarded more positively than the Melon News.

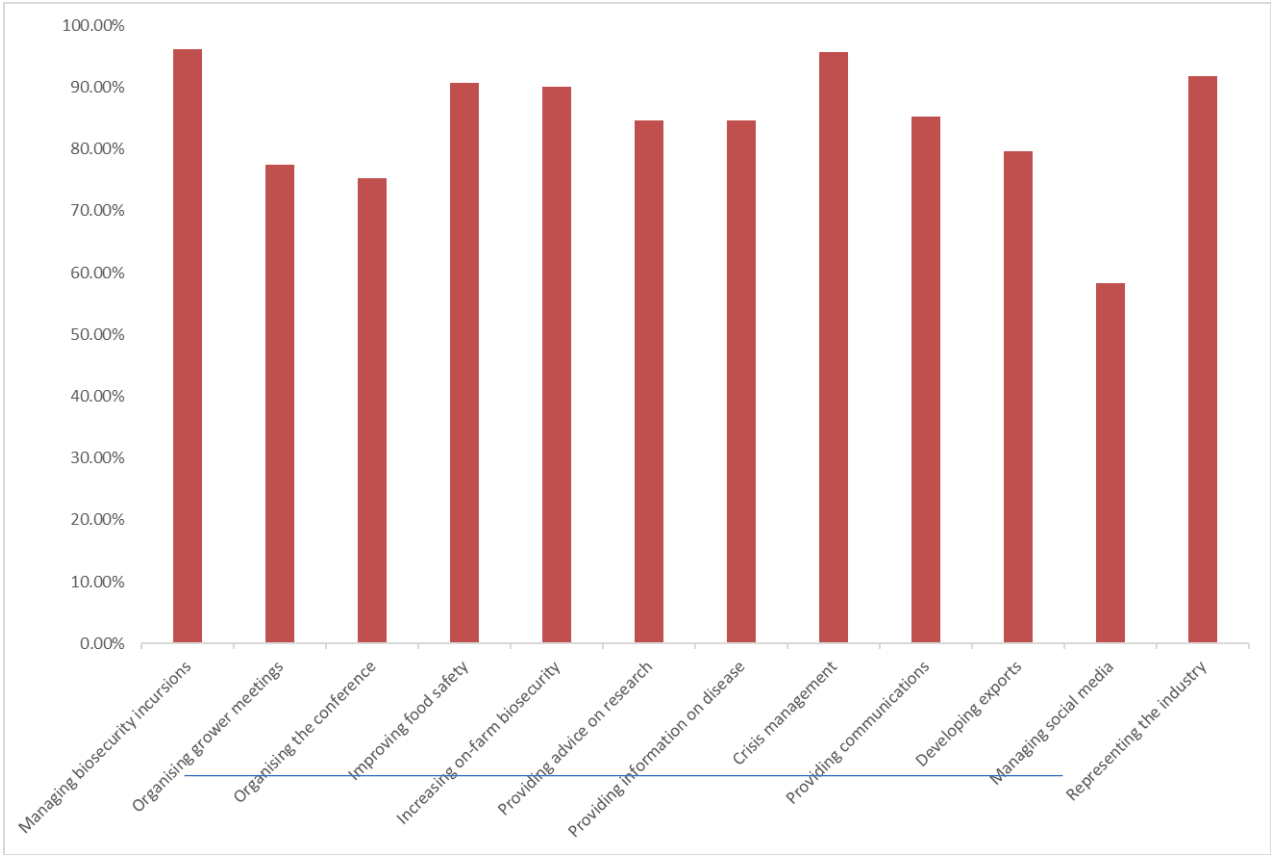
Q8 The Melon Enews is a short electronic newsletter emailed each month. It contains short pieces of information with links to longer articles on the industry website. How would you rate the usefulness of the Melon E-news?



Q9 The printed Melon News magazine is posted each quarter to growers and AMA members. If you receive Melon News, please answer the following questions. How would you rate the usefulness of the Melon News?



When asked what activities the Industry Development project should be involved in, the following information was received. Managing biosecurity incursions and food safety; increasing on-farm biosecurity; crisis management; and representing the industry were nominated as very important activities. VM17001 operational plan was reviewed to reflect these activities for 2018/19.



Recommendations

Communications and industry development activities has been an ongoing program within the Australian melon industry for many years, the current service provider, Dianne Fullelove & Associates Pty Ltd has led these activities since 2010, in three iterations of the project – VM09003, VM12003 and VM17001.

At the completion of VM17001, Hort Innovation, on advice from the Melon Strategic Industry Advisory Panel has decided to continue communication and export projects, with new projects commencing in late 2020 or 2021.

Industry development activities for the melon industry do not currently have a clear path forward. The recommendation from VM17001 is that the melon industry and Hort Innovation consider scoping a new industry development project that focuses on fruit quality. This would include consideration of several factors that impact on the quality of melons:

- Variety selection to meet consumer demand
- Postharvest practices that minimise loss of fruit quality
- Cool chain maintenance
- Retail store practices

Such a project would aim to achieve fresh melon supply chain excellence including end-to-end collaboration, technology to improve temperature control, and improved product traceability, packaging to protect produce, reduce handling damage, supply chain velocity and responsiveness and commitment to retail staff training.

In addition, on-going industry leadership training and governance up-skilling is vital to provide the melon industry with clear leadership goals. Melons Australia has relied heavily on the Industry development Manager for leadership and strategic direction, including crisis management. It is important that the industry and its leaders take ownership and responsibility for their industry and map a pathway forward to manage industry activity including research.

Appendix 1 Program logic

Scope

The target audience for adoption of project deliverables and the strategies for adoption are:

1. Melon levy payers – all production (250 growers) in all growing regions
2. Research providers
3. Hort Innovation
4. State and federal government
5. Project team
6. Project Reference Group
7. Supply chain partners

The critical success factors for the project will be the skills of the contracted service provider and continuity of the established relationship with melon growers. The previous industry development project, VM12003 increased the profile of the melon industry significantly. (See VM12003 Final Report)

Sixty percent of the outcomes of the project will have immediate impact, with the remaining 40% having an impact within 1 year of project completion. A project risk register will be developed in the second project milestone.

Audience

Audience	Information need
Primary	
Project team	Survey results; feedback from meetings; electronic communication reports
Hort Innovation R&D Manager	Copy of communication activities; Extent of levy payer engagement in the project
Secondary	
Project Reference Group	Project milestone reports

Key evaluation questions

Key evaluation questions	Project-specific questions
1. To what extent has the project achieved its expected outcomes?	To what extent has the project improved knowledge and awareness of melon research?
2. How relevant was the project to the needs of intended beneficiaries?	To what extent has the project met the needs of industry levy payers?
3. How well have intended beneficiaries been engaged in the project?	To what extent were the target engagement levels of industry levy payers achieved?
4. To what extent were engagement processes appropriate to the target audience/s of the project?	Did the project engage with industry levy payers through their preferred learning style?
5. What efforts did the project make to improve efficiency?	What efforts did the project make to improve efficiency?
6. Impact	To what extent have the number of research projects increased?

M&E budget

It is expected that collection of monitoring data will occur through normal project activities.

Program logic model

Relevant SIP outcome(s)	SIP outcome(s) – The Melon SIP is not yet completed. This table will be reviewed after release of the SIP.				
End-of-project outcomes	Successful engagement with melon levy payers, service providers and government to build strong relationships that support development and extension of research outcomes.				
Intermediate outcomes	Levy payers kept informed of the latest R&D to enable farm and business decision making Create opportunities for levy payers to engage with researchers	Communications to all levy payers and extended supply chain	Industry plans maintained and remain relevant to levy payers. Growers utilising Food Safety Guidelines, SARP and CGMMV National Management Plan in their businesses to improve productivity	Facilitate development of research projects, both levy and external funded Researchers understand the research requirements of the melon industry	
Outputs	Conduct 12 grower meetings in various growing regions Assist with organisation of the 2018 Industry Conference & Field Days	Twelve Melon Enews annually Four printed Melon News annually Three industry factsheets Maintain industry website Two social media posts per week One melon story to Hort Link List industry events on Hort Innovation website	Updated Food Safety Guidelines Updated CGMMV Management Plan	Research collaboration - Work with at least four research partners per year to support their development of research proposals aligned to melon SIP. Externally funded research projects managed in line with project agreements	
Activities	Provide services for registration, organisation, facilitation.	Complete communication outputs and distribute to levy payers and the wider supply chain.	Consult with content experts to update industry plans.	Work with research partners to ensure that at least four succession plans are put in place over the LOP Attend at least three relevant conferences per year, including Hort Connections and FPFSC conference.	
Foundational outputs	From VM12003 Levy payer list Templates for Melon News & Melon Enews. Industry website				
Foundational activities	Project administration - Four Project Reference Group teleconferences per year	Baseline data collection - Annual stakeholder survey Grower meeting feedback	Establishing partnerships - Maintenance of melon contact list	Project planning - Monitoring and evaluation plan Project risk register Stakeholder engagement plan	Communication plan updated Crises communication plan updated

Project monitoring plan

Program logic level	What to monitor	Performance expectations	How to monitor	Data source Target audience	When	Responsibility
Foundational activities	Formation of project reference group	4 meetings per annum	Feedback from project reference group	Project Reference Group	Quarterly	Project leader Milestone reports Final Report
Activities & Outputs	Research project development Research project management Grower meetings Conference & Field Days Industry plans Communications program	Work with at least four research partners per year to support their development of research proposals aligned to melon SIP. Externally funded research projects managed in line with project agreements Work with research partners to ensure that at least four succession plans are put in place over the LOP. Conduct 12 grower meetings in various growing regions during LOP. Three industry plans updated Communication plan reviewed and updated. 3 factsheets completed. 12annual Melon Enews 4 annual Melon News	Research projects contracted by Hort Innovation Record keeping Website analytics Feedback from project reference group	Hort Innovation Growers Advisors	Mid term End of project	Project leader Milestone reports Final Report
Intermediate outcomes	Levy payers kept informed of the latest R&D to enable farm and business decision making Create opportunities for levy payers to engage with researchers	Increased engagement by growers in research development	Number of concepts submitted by levy payers	Hort innovation	Annually	Project leader Milestone reports Final report
End of project outcomes	Levy and co-investment funded research, development, extension and marketing and extension outcomes	Practice change created with 50% increased awareness by growers of project activities	Interviews Survey Case studies	Growers Supply chain	End of project	Project leader Final Report

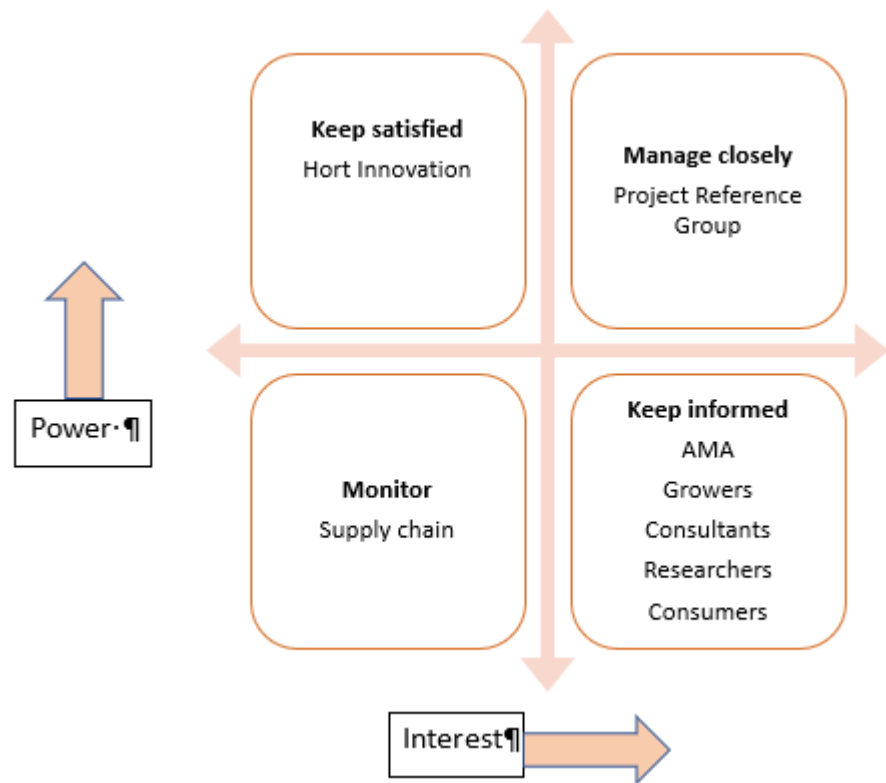
Reporting and continuous improvement

Report type	To whom	Timing
Milestone Reports	Hort Innovation	Six monthly
Final Reports	Hort Innovation	At end of project
Article	Industry magazine	Quarterly
Verbal update	Project Reference Group	Quarterly
Financial reports	Project Partners	At end of project

Continuous improvement process	Details	Timing
Reflection meeting with Hort Innovation R&D Manager	Meeting with R&D Manager to discuss progress and agree any follow up actions	Six monthly
Project Reference Group teleconference	Meetings between project team members, Hort Innovation and industry representatives to gain feedback on project activities and refine methodology	Quarterly
Peak industry Body	Meeting between project team and PIB to discuss project activities and seek feedback to determine gaps in adoption and preferred learning styles for incorporation into project	Six monthly

Appendix 2 Stakeholder Engagement Plan

Stakeholder analysis grid



Who	Stakeholder	Project Reference Group	Growers	Supply Chain	Consultant/ Agronomist	Researchers	AMA	Consumers	Hort Innovation
Why	Why engage with this group?	Project management; objectives implementation	Delivery of research outcomes to demonstrate effective ROI; Seek input for future research; Support industry knowledge base	Build an understanding of industry research outcomes; engage to support research – both levy-funded and Frontier Fund.	Build an understanding of industry research outcomes; Obtain information on current industry agronomic practices and pest & disease incidence	To develop research proposals that will benefit the industry; ensure that researchers are aware of other non-levy funded research	Delivery of research outcomes to demonstrate effective ROI; Seek input for grower engagement	Build understanding of the melon industry	Build understanding of industry; To provide input about industry issues
How	What is the level of engagement	Inform, consult, involve, collaborate	Inform, consult, involve, collaborate, empower	Inform, consult, involve	Inform, consult, involve, collaborate	Inform, consult, involve, collaborate, empower	Inform, consult, involve, collaborate, empower	Inform	Inform, consult, involve, collaborate
	Proposed method of engagement	Teleconference; email	Factsheets, Conference & Field Days, Melon News, Melon Enews, direct email, Regional meetings, Workshops,	Conference & Field Days, Melon News, Melon Enews, Regional meetings, Workshops; Annual survey	Factsheets, Conference & Field Days, Melon News, Melon Enews, Regional meetings,	Factsheets, Conference & Field Days, Melon News, Melon Enews, Regional meetings, Workshops; Annual survey	Teleconference	Social media	Direct consultation; teleconference

			Media releases, Industry magazine articles, Engagement with AMA, SIAP and PRG; Annual survey		Workshops; Annual survey	Direct consultation			
	Timing of engagement	Quarterly	Biennial Conference & Field Days, Monthly Melon Enews, Quarterly Melon News, Industry website; direct email as required, Quarterly PRG teleconferences , AMA and SIAP as required	Biennial Conference & Field Days, Monthly Melon Enews; Industry website	Biennial Conference & Field Days, Monthly Melon Enews; Industry website	Biennial Conference & Field Days, Monthly Melon Enews, Industry website; direct email as required; biannual face-to-face meetings	Quarterly	Two posts/ week	As required
	Resources required		Printed newsletter, bulk email distribution; SurveyMonkey	Printed newsletter, bulk email distribution; SurveyMonkey	Printed newsletter, bulk email distribution; SurveyMonkey	Printed newsletter, bulk email distribution; SurveyMonkey	Printed newsletter, bulk email distribution	Facebook, Pinterest, Twitter	Printed newsletter, bulk email distribution

	Responsibility	Project leader	Project leader Administration	Project leader	Project leader	Project leader	Project leader Administration	Administration	Project leader Administration
	Key messages to communicate	Project outcomes; future activities	Melon research outcomes, industry news, Hort Innovation information, DAWR information, Relevant research outcomes from other industries, International research outcomes	Melon research outcomes, industry news	Melon research outcomes, industry news, Relevant research outcomes from other industries, International research outcomes	Melon research outcomes, industry news, Relevant research outcomes from other industries, International research outcomes	Melon research outcomes, Hort Innovation information, Relevant research outcomes from other industries, International research outcomes	Understanding the melon industry; engaging with growers to build understanding of industry practice	Project outcomes; future activities
Special Considerations	Risk management issues, engagement barriers, audience characteristics	Project timelines which, unless managed effectively, could impact the breadth of consultation and quality of outputs	Growers are familiar with the engagement tools, Introduction of e-zine may take time to gain acceptance however printed magazine will continue,	Provide opportunity to provide input and feedback through surveys; Ensure that all input by is addressed in a timely manner	Provide opportunity to provide input and feedback through surveys; Ensure that all input by is addressed in a timely manner	Potential dissatisfaction about the opportunities to provide input	Lack of buy in for the project activities, however there is an established IDM relationship with PIB	Negative feedback on social media will be monitored to counteract influences	Demonstrate the advantages and efficiencies of the project

			meetings and field days need to be coordinated to times of lower farm activity. Provide opportunity to provide input and feedback through surveys; Ensure that all input by is addressed in a timely manner						
--	--	--	---	--	--	--	--	--	--

Appendix 3 Risk management plan

The risk What could happen?	Potential causes/sources What could happen? What would cause it?	Potential impacts How would the risk impact on delivery of project?	Controls What controls are in place, or will be in place, to manage the risk	Likelihood with controls in place <i>From Risk Likelihood Scale</i>	Consequence with controls in place <i>From Risk Consequence Scale</i>	Treated risk assessment <i>From Risk Assessment Matrix</i>	Risk evaluation Could you defend this level of risk is acceptable? <i>Yes/No</i>	Responsible person Who is the person/s responsible for monitoring and managing the risk?
Loss of key project personnel	Resignation or retirement	Loss of key knowledge and experience	Project team trained in multiple skills; Regular project team meetings to share information on progress; Central storage of project data/information	Unlikely	Insignificant	Low	Yes	Project leader
Unsuitable Project Reference Group	Membership of PRG not representative of industry	Advice from PRG is not beneficial to project	Invite members from a range of industry sectors	Unlikely	Minor	Medium	Yes	Project leader
Low grower engagement in adoption activities	Growers unable or unwilling to attend; Adoption activity content not relevant; Inappropriate extension strategies for the target audience	Low uptake of new research outcomes; Underachievement of intended project outcomes	Development of stakeholder engagement plan; Strong current industry networks; Close liaison with levy payers; Project leader with knowledge transfer expertise	Possible	Insignificant	Low	Yes	Project leader
Levy payers are disengaged with research investment and outcomes	Lack of opportunities for melon growers to engage with researchers on farm and in regional areas	Relevant research is not available to levy payers.	Regional meetings and conference location and timing maximised for grower participation	Remote	Minor	Low	Yes	Project leader
Lack of research project development	Researchers do not understand the research requirements of the melon industry	Levy investment is constrained due to lack of suitable projects.	Partnerships with researchers, growers and Hort Innovation to increase understanding of SIP	Possible	Insignificant	Low	Yes	Project leader

Lack of communication to levy payers	Communication activities not suitable for audience	Investment portfolio not communicated to levy payers	Existing proven communications activities that audience is familiar with. Has been tested with surveys over several years	Remote	Insignificant	Low	Yes	Project leader
Industry plans not reviewed	Project timelines not adhered to	Industry guidance not available or suitable for purpose	Project controls using Gantt charts; Ongoing supervision by PRG; Project leader experienced in managing and delivery of project activities.	Possible	Moderate	High	Yes, can be dependent on unforeseen activities such as an industry crisis E.g. food safety incident	Project leader
Project not supported by industry	Activities not supported by levy payers	Project outcomes not achievable	Industry has instigated this project through SIAP	Remote	Minor	Low	Yes	Project leader

Risk Likelihood Scale

Descriptor	Definition
Remote	May occur only in exceptional circumstances during the project. < 10% probability
Unlikely	Could occur in some circumstances during the project; 10 – 20% probability
Possible	Should occur at some time during the project; 20 – 50% probability
Likely	Will probably occur in most circumstances during the project; 50 – 80% probability
Almost Certain	Expected to occur in most circumstances during the project. > 80% probability

Risk Consequence Scale

Descriptor	Definition
Insignificant	All project outputs delivered, and outcomes achieved; No loss of reputation of organisation; No loss of work time (e.g. due to availability of staff or weather interruptions); Minimal loss/damage to assets; Loss or impairment of a small amount of non-critical information
Minor	Outputs delivered but some quality reduction; Some reputational damage to organisation/s; Temporary loss of work time; Temporary corruption/loss of services/resources or non-critical information; Some loss of opportunity
Moderate	Failure to deliver some outputs and/or significant quality reduction in some outputs; Moderate reputational damage to organisation/s; Medium-term loss of work time; Corruption/loss of non-critical information resources
Major	Failure to deliver most outputs; Significant reputational damage to organisation/s; Long-term loss of work time; Loss/irrecoverable corruption of critical information resources; Major loss of opportunity
Catastrophic	Outcomes unable to be achieved and failure of delivery of all outputs; Irreparable damage to reputation of organisation/s; Loss of irreplaceable key staff or work time completely disrupted; Total loss/corruption of all information services/resources

Risk Assessment Matrix

Likelihood	Consequence					
	Scale	Insignificant	Minor	Moderate	Major	Catastrophic
	Remote	Low	Low	Low	Medium	Medium
	Unlikely	Low	Medium	Medium	Medium	High
	Possible	Low	Medium	High	High	High
	Likely	Medium	Medium	High	High	Extreme
	Almost Certain	Medium	High	High	Extreme	Extreme

Appendix 4 Grower story

The Australian melon industry looks to a bright future

The entire Australian melon industry was severely impacted following the 2018 incident with listeria detected in rockmelons from one farm in New South Wales. Sales, both domestic and export, ceased for around six weeks and it has taken the following two years to regain market share.

Following the outbreak, a Hort Innovation funded project was established to support rockmelon growers combat foodborne illness risks with a review of all industry food safety practices to strengthen food safety measures and provide training support for the industry.

Delivered by the NSW Department of Primary Industries, the project has worked individually with all Australian rockmelon growers to review and audit current practice and critical control points and provide one-on-one food safety consultations with growers, managers and key farm staff.

The project also developed a Melon Food Safety Best-Practice Guide and a 'toolbox' for grower use including risk assessment templates, training guides, food safety posters and record sheets to support food safety programs.

Lead researcher, Dr SP Singh said that "the melon industry has made great strides forward in rebuilding consumer confidence and building a collaborative and consistent approach underpinned by the supply of safe fruit to consumers."

A current successive project, also funded by Hort Innovation, continues to monitor food safety practice by growers and has been extended to include major watermelon growers.

One of the growers who has worked closely with Dr Singh in reassessing his food safety systems was Jamie Schembri from Greenview Farm, located in the Riverina irrigation area of NSW. Greenview Farm grows more than 1350 ha seedless watermelon, rockmelons, Piel de sapo melons and almonds.

Mr Schembri is also a board member of Select Melons Australia, a 100% grower owned marketing business supplying fresh melons direct from farm to Australian and international customers.

While Greenview Farm was severely impacted by the listeria incident, Jamie has a positive outlook for the industry and welcomes the opportunity to show his farming and packing operation to visitors. FSANZ staff recently inspected the melon fields and viewed fruit being sanitised and packed.

Mr Schembri commented "We are always looking to how we can improve our operation. We believe that our melons are safe and healthy for consumers, but we don't want to rest on our achievements. We are always looking at new methods and research in food safety."

Importing country visits in 2019 were funded through a Federal Government grant to assist the melon industry to recover export market share. Mr Schembri and his wife Marie participated in the project meetings and workshops in Singapore and Malaysia.

Mr Schembri was surprised during his visits by the level of impact of the 2018 listeria outbreak in the Asian market. However, he said "Importers were willing to learn of the importance that Australian melon growers were placing upon food safety and product quality."

The Australian melon industry is looking forward to the future, knowing that growers are working with technical experts, exporters and retailers to ensure that melons provided to consumers are safe and top quality.

ENDS

Appendix 5 Factsheets



Department of
Primary Industries

primefact

Fusarium root rot of melons

May 2018, Primefact 1642, First edition

Rebekah Pierce, Plant Biosecurity & Product Integrity, Orange

The fungal species *Fusarium oxysporum* f.sp. *melonis*, *F. oxysporum* f.sp. *niveum* and *F. oxysporum* f.sp. *radicis-cucumerinum* that cause root rot in melons are present in Australia

However, there are exotic strains of fusarium wilt overseas that can be more damaging or harder to control than Australian strains

Exotic strains of this disease are a concern for Australia's melon industry

Fusarium root rot

Fusarium root rot, or fusarium wilt, infects the roots of plants at all stages of crop development.

There are a number of different strains of fusarium root rot throughout the world. We have some strains already present in Australia, however, different strains generally affect different host plants and so remain a threat to biosecurity. There are also exotic races of the species we already have that have evolved overseas and can be more aggressive or harder to manage with our regular control methods.



Figure 1. Early signs of Fusarium root rot in melon



Figure 2. Fusarium root rot of melon in the field

Description

Initially, the lower leaves of plants infected with fusarium root rot show signs of wilt at midday, only to recover during the evening and at night (Figure 1). As the disease progresses, the wilt advances to affect all leaves followed by symptoms of yellowing, leaf death and stunting of mature plants.

In mature plants, the wilt may initially be confined to particular tendrils if only a section of the root system is infected.

MAY 2020



Managing Orthotospoviruses in Melons

What is an Orthotospovirus?

Orthotospovirus is a genus of plant virus species that infect a broad range of crops including both watermelon and melon. These viruses are transmitted by Melon Thrips (*Thrips palmi*), which was first reported in Australia in 1991. Melon Thrips cause economic damage to melon crops, both as a direct result of its feeding activity and from its ability to vector Orthotospoviruses such as Groundnut bud necrosis virus, Melon yellow spot virus and Watermelon silver mottle virus.

Orthotospoviruses that are important pests of melon growing regions overseas include Melon yellow spot virus (MYSV), Watermelon silver mottle virus (WMSMOV), Groundnut bud necrosis virus (GBNV), Watermelon bud necrosis virus (WBNV), and Melon severe mosaic virus.

Symptoms

Watermelons affected by Watermelon silver mottle virus in Japan have been described as having silver mottling on leaves and chlorotic mottling on fruits that were malformed. Field symptoms on watermelon in Taiwan were described as affected plants being severely stunted, had shortened internodes, upright growth of younger branches, tip necrosis and dieback. Foliar symptoms included mottling, crinkling, yellow spotting and narrowed leaf blade.

Fruits were small and malformed and exhibited necrotic spots or silver mottling. Fruit set was reduced. Symptoms on melon were described as foliar mottling, plant stunting, upright growth of branches and tip blight.



*Silver mottling of watermelon leaf
– Image from East-West Seed Plant Doctor.*

Distribution

Orthotospoviruses that infect cucurbits including melons are widespread throughout Asia and India but do not occur in Australia.

As Melon Thrips are known to occur in the Northern Territory and Queensland, the entry of any Orthotospoviruses into Australia would have a mode of transmission already present.



*World distribution of MYSV and WMSMOV
– Image from EPPO Global Database.*

Tờ thông tin



Virus gây bệnh đốm hoại tử dưa

Virus gây hoại tử dưa là gì?

Virus gây bệnh hoại tử (MNSV) là một thành viên của chi Carmovirus. Virus này có thể gây tổn thất năng suất nghiêm trọng cho dưa và dưa chuột. MNSV ảnh hưởng đến lá và thân cây cũng như làm suy giảm chất lượng quả.

Dấu hiệu cần nhận biết?

Các triệu chứng có thể xuất hiện giống như bệnh héo khô do nhiễm nấm bao gồm các đốm hoại tử màu nâu khu trú hoặc các tổn thương hoại tử lớn trên lá và thối nửa gần gốc cây. Lá có thể bị cong và héo và toàn bộ cây có thể đột ngột héo khô và mất sức sống khi quả chín.

Quả bị nhiễm bệnh có các chấm hoại tử màu nâu vàng và hoại tử vỏ, cũng có thể bị đổi màu, và biến dạng cả bên ngoài lẫn bên trong. Phần thịt quả có thể hóa lỏng hoặc bị rỗng kèm xuất hiện màu nâu ở vỏ.

Bệnh lây lan như thế nào?

MNSV có thể lây lan theo hạt, qua đất và có thể bị lây truyền cơ học bằng việc tiếp xúc của việc chiết ghép hoặc bằng các công cụ được sử dụng để cắt tỉa. Virus có thể dễ dàng phân bố trong các khu vực trồng dưa vì chúng tồn tại trong đất đến vài năm. Virus này cũng có thể tồn tại trong một thời gian dài nếu chúng đi cùng với vec-tơ truyền bệnh qua đất là nấm *Olpidiumbromovanus*, ký chủ được xác nhận ở Úc. Một khi bị nhiễm MNSV, tình trạng này sẽ tồn tại suốt đời sống của cây.

Hiện tại chúng có ở đâu?

MNSV đã được ghi nhận ở Châu Mỹ, Châu Âu, Châu Á và một phần của Châu Phi và vùng Caribe. Virus gây bệnh hoại tử dưa (MNSV) được cho là không tồn tại ở Úc tuy nhiên các triệu chứng được phát hiện trong năm 2012 tại NSW phù hợp với bệnh MNSV. Công việc chẩn đoán đang diễn ra để xác định tình trạng nhiễm MNSV tại Úc.



Đốm trên lá gây ra do MNSV



Tổn thương trên dây gây ra do MNSV



Tổn thương do MNSV trên vỏ dưa hấu