

Final Report

Supply Chain Quality Improvement – Retailer Point of Purchase Improvements

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Delivery partner:

Applied Horticultural Research

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AV15011

Project:

AV15011 Supply Chain Quality Improvement – Retailer Point of Purchase Improvements

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Content

Content	3
Summary	4
Keywords	5
Introduction	6
Methodology	7
Outputs	10
Outcomes	14
Monitoring and evaluation	17
Recommendations	19
Refereed scientific publications	21
References	21
Intellectual property, commercialisation and confidentiality	22
Acknowledgements	22
Appendices	23

Summary

Avocado quality at retail requires improvement, with 20–25% of fruit damaged at the point of retail. Flesh bruising is one of the key issues, with most bruising occurring at point of retail when consumers select avocados to purchase. Merchandising and consumer education concepts were therefore developed to assist consumers with fruit selection. Retail training was also developed to help improve handling and practices by staff at point of retail.

Merchandising Innovations: Consumer interviews and observations in retail stores suggested that if quality of retail displays are improved then the fruit selection process is made easier for consumers, reducing squeezing and increasing purchase of avocados. Merchandising and consumer education concepts were developed, and provided to retailers for feedback. As a result of that engagement, a high impact – low cost display and merchandising system was developed for Hass avocados, comprising:

1. Avocados sorted into ripe and unripe categories
2. Ripe fruit consistently available
3. Green and black coloured foam pads for display
4. Header cards identifying stages of ripeness

Benefits of the system were demonstrated through trials in retail stores (Appendix 7), and included:

- **Reduction in squeezing by retail customers:** 41% reduction in the number of avocados squeezed per fruit purchased
- **Reduction in bruising:** 59% reduction in bruise severity
- **Increased sales:** 30% increase in average number of fruit purchased per customer, 43% reduction in the number of customers who handled avocados without making a purchase

The trials successfully demonstrated to the avocado industry that it is possible to reduce damage at retail from approx. 25% to 10%, primarily due to reductions in customer squeezing.

The trials also demonstrated that the displays are easy to setup, with a number of remote stores putting into place the displays without direct assistance from the project team. Maintenance of the sorted displays is also simple, with consumers observed to almost always return unpurchased fruit to the correct side of the display.

Communication and extension activities have resulted in over 150 stores implementing the system by May 2018. Further uptake is also likely, as the benefits continue to be promoted.

Online training: The other major project output was the online avocado training program for store-level staff, which was developed in consultation with retailers. The program, which can be completed in 30 minutes, incorporates five videos covering: customers; ordering, receipt and storage; ripening; plus display and merchandising. The training link will be provided on the Avocados Australia website: <http://www.avocado.org.au/>.

Each section has a brief quiz, to reinforce key points, and successful completion of the program enables participants to download an industry-endorsed certificate of recognition. Back-room charts that reinforce key messages from the videos were also developed.

The online training is easy to access from anywhere in Australia, quick to undertake and easy to obtain recognition on completion. The training program will remain active for years to come, which is useful given the high turnover of retail produce staff.

The project has successfully demonstrated to the avocado industry that it is possible to reduce damage at retail to avocados by sorting displays by ripeness. Future monitoring of fruit quality at retail is required to identify longer-term impacts of the sorted display system, as well as retail training. Sorted display trials should also be conducted on green-skin avocados to determine impact on customers squeezing and purchasing behaviour. Also, an annual merchandising service and audit would assist retailers in implementing and maintaining retail best practice in the future.

Keywords

Avocados; bruising; customers; merchandising; ripening; retail; training

Introduction

Surveys of avocados at retail over several years have consistently found that 20–25% of the fruit on sale have significant damage. This is defined as >10% of the internal flesh having bruising, internal rots or other disorders. The total GVP of avocados in 2015 was \$412.3 million, so in simple terms, 25% damage means that retailers are paying about \$100 million per year for damaged fruit, and consumers presumably spending about \$150 million per year on this inferior fruit. This reduces consumer satisfaction (Gamble et al., 2010) and limits potential expansion of the sector.

Australian avocado production is expanding rapidly, with a large percentage of trees in the ground less than three years old. To maintain profitable returns to growers, the demand for avocados needs to increase even more rapidly than has occurred over the past few years.

Given the known issues with damaged fruit, improving quality is an obvious way to increase consumer demand. Hort Innovation therefore developed three projects as part of a Supply Chain Quality Improvement Program:

1. Technologies and practices to reduce bruising (AV15009)
2. Cool-chain best practice adoption (AV15010)
3. Retailer point of purchase improvements (AV15011).

Supply chain practices are a major contributor to fruit damage, which is covered in AV15010. However, consumer squeezing by customers and handling by staff at retail are the main sources of flesh bruising (Joyce, 2015), and contributes to approximately half of the damaged fruit at retail in Australia (Tyas, 2016). To understand this further, project AV15009 is investigating factors contributing to susceptibility to bruising of fruit as well as tools for identifying fruit ripeness at retail.

This project focused on involving retailers to help develop merchandising tools and training for immediate implementation. Consequently, a cross-section of retailers were involved and consulted throughout the project.

The objectives of the project were to improve the retail point of purchase environment by:

- Developing and implementing merchandising/educational tools at point-of-purchase to assist consumers in the selection process
- Developing and implementing training programs across major and independent retailers to improve handling by retail staff

Methodology

Reviews

Merchandising, consumer education and retail training, best-practice materials and approaches were reviewed prior to initial concept development. This included Australian and international sources, both, through desk research and in-store interviews and observations. Domestic sources included previous Hort Innovation projects and resources developed by Avocados Australia Ltd (AAL). Internationally, information was sourced from industry organisations and major grower-packer-marketers in the USA, New Zealand and South Africa. Importantly, reports were accessed from the US Produce Marketing Association's Members' Only Resource Center and the Hass Avocado Board's Consumer Insights Studies.

That led to the development of initial merchandising, consumer education and retail training concepts that could then be reviewed by retailers and the PRG.

Retail Consultation

Initial merchandising, consumer education and retail training concepts were canvassed across all retail sectors (supermarkets and independent retailers), to assess their potential, acceptability and ease of understanding/implementation, before final selection for trials. Specific feedback was sought to understand interest levels of the suite of concepts, key barriers to adoption, and any considerations/requirements that were specific to particular retailers. Consultations involved national category managers and buyers at Woolworths, Coles, Aldi, Costco, IGA and a cross-section of store owners from independent retailers.

Consumer studies and merchandising

In order to better understand avocado customer purchasing behaviour, customer surveys were undertaken in-store. Questions targeted how the avocado selection process can be made easier for consumers and their ripeness preferences.

Preliminary observations were also undertaken on how customer behaviour differed according to display quality. Customer handling and purchase of avocados was observed at a range of stores in Sydney, with displays that ranged from sorted by ripeness and well organised, to unsorted and disorganised displays.

As a result of consultation and preliminary consumer observations and interviews, a combined merchandising and consumer education concept was developed. This was based on sorted displays with the following components:

- i. fruit sorted according to stages of ripeness – ripe vs unripe
- ii. consistent availability of ripe and unripe fruit
- iii. coloured foam display pads – green for unripe, black for ripe
- iv. stages of ripeness header cards ("eat now", "eat later")

Our hypothesis was that consumers presented with clearly labelled options of ripe and unripe fruit would not need to squeeze as many avocados to find the fruit that they wanted. However, it could take several visits before consumers were fully confident in the options provided; we expected that initially they would squeeze a little less, but after several successful shopping visits they would squeeze only those fruit that they purchased.

Retailers were then approached to conduct in-store sorted display trials, which were scheduled to last at least six weeks. The first two weeks would not be monitored, but allow shoppers and retail staff to become used to the new format. Only after this introductory period would observations be recorded. Consumer behaviour in the modified stores could then be compared to that in nearby, unmodified stores used as controls.

A number of stores agreed to conduct the trials, and sorted displays were set up in a number of independent stores in Sydney. Sorted displays were also setup in regional NSW and Queensland stores. Unlike the Sydney stores, these businesses did not have direct assistance from the project team.

A project team member visited each of the Sydney stores weekly, spending at least two hours at each store observing how many times consumers squeezed the fruit and how many they eventually purchased. Samples (10 fruit) were purchased directly from the display and from trays prior to display (10 fruit) for destructive assessment. These were returned to the Sydney laboratory and evaluated once firm ripe for bruising and rots. Sales data for the relevant period was provided by the store. In the case of the regional stores, direct assessments were not possible but sales data was used to evaluate progress.

A number of issues were observed with this methodology. These mainly related to availability of consistently ripe fruit and the relatively low volume of avocado purchases through some of the stores, even during busy periods.

In order to generate statistically analysable data, a final set of trials was set up in a large independent fruit and vegetable store in a shopping centre in Sydney's western suburbs. Trials were conducted on the weekend to capture maximum store activity. Consistently ripe fruit was provided which was of similar size and quality to the unripe fruit the store had available. The display was set up and monitored by the project staff daily. The type of display was alternated over four weekends:

Date	Display	Price
Saturday 10 th February	Sorted	\$4.99/each
Sunday 11 th February	Mixed	\$4.99/each
Saturday 17 th February	Mixed	\$4.99/each
Sunday 18 th February	Sorted	\$4.99/each
Saturday 12 th May	Sorted	\$2.99/each
Sunday 13 th May	Mixed	\$2.99/each
Saturday 19 th May	Mixed	\$2.99/each
Sunday 20 th May	Sorted	\$2.99/each

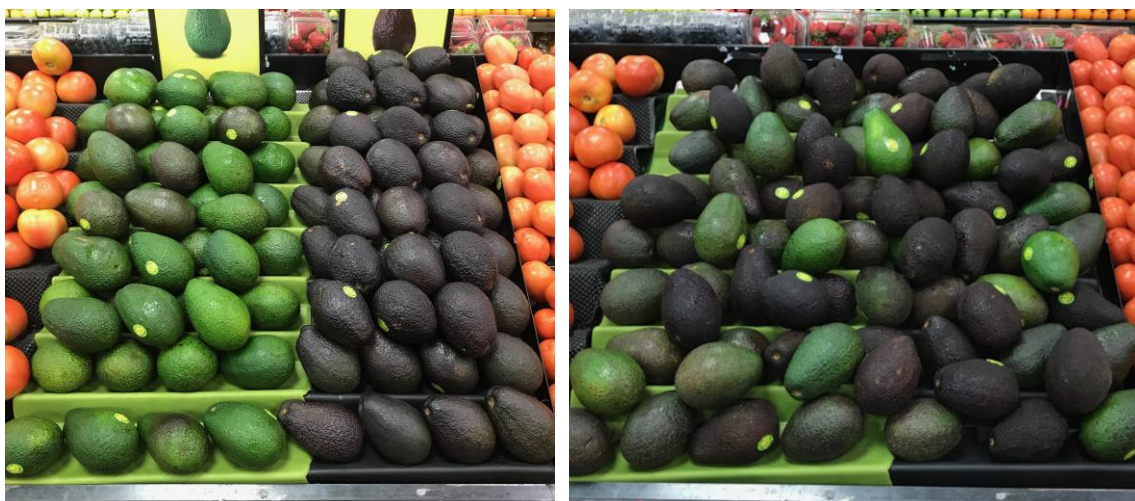


Figure 1. Sorted (left) and mixed displays at Trim's Fresh, Penrith.

Consumers were discreetly observed in order to record the number of fruit squeezed, number purchased and whether they returned squeezed fruit to the correct side of the display. At least 60 customers were recorded each day of the trial. During the trials conducted in May, units of 20 fruit were sampled directly from trays before display and from the sorted and unsorted displays. Care was taken to select fruit for assessment that had been displayed for at least two hours.

Retail training

The project involved regular meetings with representatives of the major retailers. Interest in growing and improving the avocado category is strong, with all businesses agreeing that improved handling could provide significant benefits. To build on this interest, a suite of retail training materials were developed.

Initial script and presentation concepts were provided to the PRG and a cross-section of retailers for comment, before development of a final video training package. This includes:

- Sections covering customers; ordering, receipt and storage; ripening; care and handling; and display, signage and merchandising
- Online delivery, easily accessible via computer or portable devices, such as smart phones
- Training categorised into five short sections (less than 30 minutes) allowing staff to undertake the training at their own pace
- Information applicable to other fresh produce items where possible
- Footage shot in a store to highlight practical implementation
- Short quizzes at the end of each section, to reinforce key messages
- Downloadable industry-endorsed “Certificate of Completion” on successful completion



Two hard-copy resources were developed to complement key messages in the training: “Avocado Back Room Management” and “Display and Merchandising” wall charts. These are suitable for prominent display in back of store areas.

The training videos and hard-copy resources have been made available to retailers through a link on the Avocados Australia website. The link includes instructions on sourcing materials and setting up a sorted display.

Communication and implementation

Results from the merchandising and consumer education trials and the online training program have been presented to the major retailers. Encouragingly, retailers identified the elements of the project which could be customised to meet their specific needs and formats, demonstrating a good level of engagement with the project goals.

Further extension to encourage uptake of the sorted display merchandising system and retail training includes:

- Articles in trade publications *Retail World* and *Produce Plus*
- Article in the industry publication *Talking Avocados*
- Booth at the 2018 Hort Connections Exhibition, the largest produce specific trade show in Australia and New Zealand
- Booth at the 2018 IGA Expo, attended by around 6,000 IGA store owners, managers and staff
- Presentations on the retail displays and training at seven regional avocado meetings (May–June, 2018).

Outputs

Retailer consultation

All the main supermarket chains (Woolworths, Coles, Aldi, Metcash/IGA and Costco), along with a cross-section of leading independent retailers were consulted, to gain their input into the merchandising concepts, consumer expectations and staff training, and to gain their active participation in the project. Outputs included:

- *Retail consultation generic presentation (13 March 2017)*
- *Avocado retail toolkit draft concepts (23 August 2017)*
- *Minutes of meetings with retailers*
- *Merchandising concepts trial proposal for Woolworths*
- *Retail consultation presentations (March-June 2018)*
 - Reporting to retail category managers on results of merchandising trials and retail training
 - Presentations made to IGA produce managers:
 - Brisbane – 24 attendees
 - Sydney – 33 attendees
 - Melbourne – 27 attendees
 - Adelaide – 18 attendees
 - Perth – 31 attendees
 - Sorted displays and retail training to be promoted to retailers at Hort Connections in June 2018

Consumer studies and merchandising

Consumer insights review

- Review of existing Australian and international consumer data relating to consumer selection and purchase of avocados

Merchandising best practice review

- Review of existing avocado merchandising and consumer education materials in Australia and internationally

Merchandising trials to reduce consumer handling and bruising

- Trial report detailing consumer surveys, the effect of display quality on consumer behavior, and sorted display trials

Merchandising display materials and instructions

- Customised foam pads developed specifically for avocados
- Header cards – Buy Now, Eat Now; Buy Now, Eat Later
- A how-to guide for setting up sorted displays (Figure 2), for store staff use



Figure 2. Header cards, foam pads, and fruit sorted by ripeness at Trim's Fresh store

IGA Expo 2017 fact sheet

- Promotes the benefits of best practice merchandising to attendees at the 2017 IGA Expo (approx. 6,000 attendees)

Retail Training

Avocado training best practice review

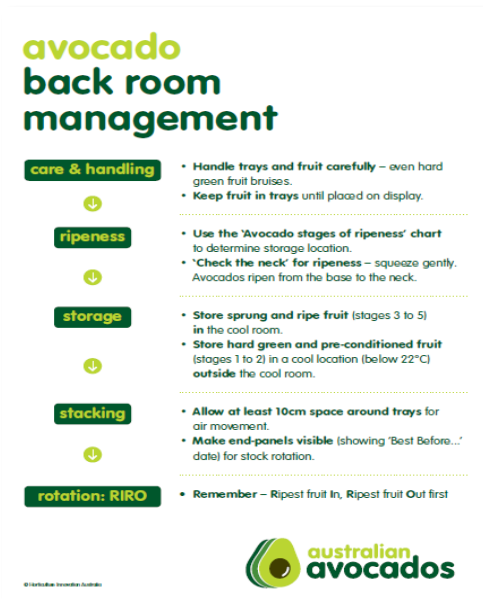
- Review of retail training materials in Australia and internationally

Avocado retail training final concepts

- Documents the final concepts agreed to by retailers and the PRG

Avocado back room management and display and merchandising charts

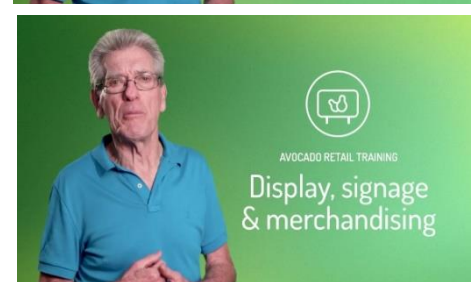
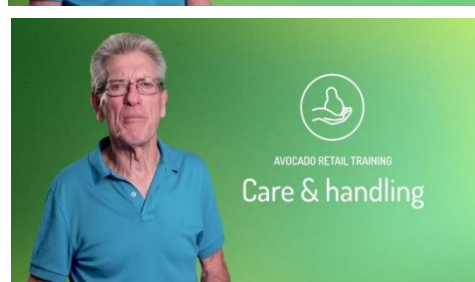
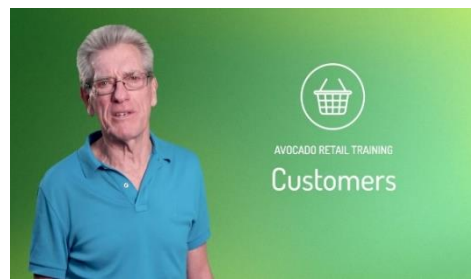
- Back-of-store avocado handling chart to support the retail training



Avocado retail

training course

- Online retail training course for retail produce staff– available here: <https://ahr.talentlms.com/catalog/info/id:125>



Industry communications

- Project update presentations to industry:
 - Bundaberg avocado industry presentation – Nov 17 – 40 attendees
 - Atherton avocado grower meeting – 3 May 2017 – 10 attendees
- Final project outcomes presented to industry at regional avocado grower meetings:
 - Crows Nest, Qld – 1 May 2018 64 attendees
 - Sunshine Coast, Qld – 2 May 2018 49 attendees
 - Bunbury, WA – 15 May 2018 83 attendees
 - Renmark, SA – 21 May 2018 42 attendees
 - Mareeba, Qld – 31 May 2018 73 estimated attendees
 - Stuarts Point, NSW – 5 June, 2018 53 estimated attendees
 - Childers, Qld – 7 June, 2018 62 estimated attendees
- *Talking Avocados* articles:
 - Autumn 2017 – “Avocado supply chain improvement projects are well underway”
 - Winter 2018 (planned) – Retail training and results from sorted display trials
- Project outputs to be showcased on the AHR stand at Hort Connections in June 2018

Project reference group meetings

- 13 February 2017 – progress report to PRG
- 14 August 2017 – progress report and issues for industry consideration
- 14 March 2018 – progress report to PRG

Outcomes

The project has successfully demonstrated it is possible to reduce avocado damage at retail from approx. 25% to 10%. This can be achieved by a combination of:

1. **Improved merchandising:** Presenting consumers with sorted displays with clearly labelled fruit at different ripeness stages: eat now and eat later. This reduces consumer squeezing by 40%, reduces bruising severity by 59% and increases sales by 30%.

A new merchandising system has been developed that maintains fruit quality, can increase sales and is easily implemented and maintained in stores.

2. **Online retail training:** A new retail training program was developed that will improve handling and management of avocados by retail staff, contributing towards maintaining fruit quality and increasing sales.

Successful engagement with retailers throughout the project means that both the merchandising system and online training modules are already finding commercial application. This has the potential to provide long-term benefits for the industry. For example, the merchandising system is easy and inexpensive to implement, so uptake is expected to continue beyond the project.

The online training is easy to access from anywhere in Australia, quick to undertake and easy to obtain recognition on completion. Given the high turnover of retail produce staff, the training program will remain active for years to come, allowing new staff to be trained well beyond the end of this project.

Impact of merchandising on consumer handling and purchase

A new avocado merchandising concept was developed that sorts ripe and unripe fruit, with labelled header cards, and coloured foam pads. Benefits of this system have been clearly demonstrated through trials in retail stores (see detailed trial report in Appendix 7). At a price point of \$2.99, benefits included:

1. **Reduction in consumer squeezing:** 41% reduction in the number of avocados squeezed per fruit purchased (Figure 3).
2. **Reduction in bruising:** 59% reduction in bruise severity (Figure 4).
3. **Increased sales:** 30% increase in average number of fruit purchased per customer, 43% reduction in the number of customers who handled avocados without making a purchase (Figure 5).

At higher retail prices (\$4.99) similar results were achieved, although purchases per customer were similar regardless of display type.

The trials also demonstrated that the displays are easy to setup, with more than 160 IGA stores implementing the system without direct assistance from the project team. Maintenance of the sorted displays is also simple as consumers were observed to almost always return un-purchased fruit to the correct side of the display.

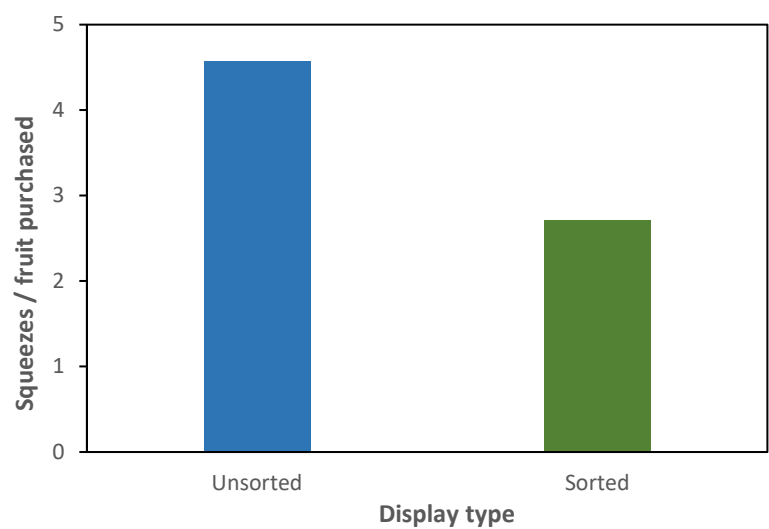


Figure 3. Average number of avocados squeezed per fruit purchased (n = 120) from displays sorted by ripeness or unsorted at a price point of \$2.99. Values were significantly different for both price points at $p \leq 0.05$.

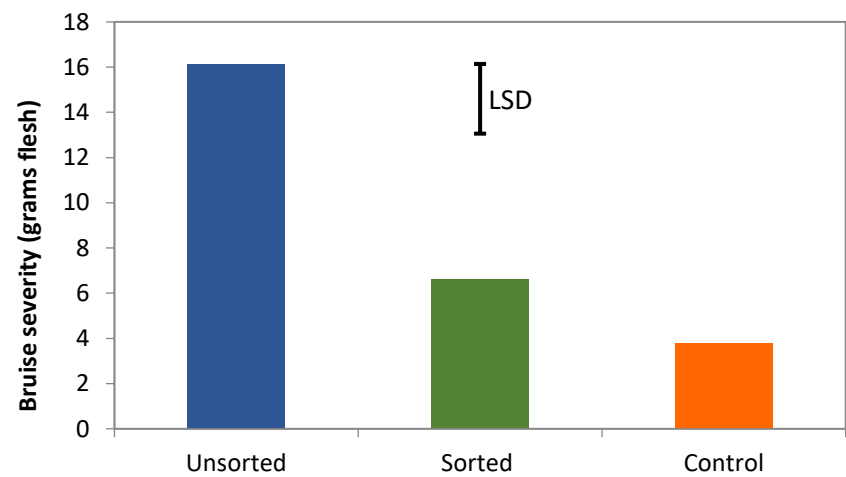


Figure 4. Average severity of bruised avocados before retail display (control) and on displays sorted or unsorted by ripeness at a price of \$2.99. LSD at $P = 0.05$.

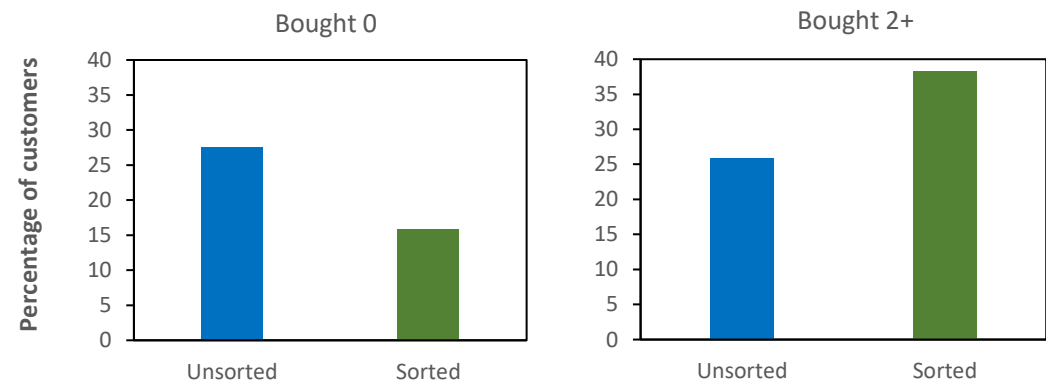


Figure 5. Percentage of customers (n=120) who purchased none, or two or more avocados from displays sorted or unsorted by ripeness at a price of \$2.99.

Merchandising uptake

Metcash/IGA has been enthusiastic in its uptake of the new merchandising approach. Over 160 sorted display units (header cards and foam pads) have been purchased and distributed to IGA stores. In addition Ritchies, one of the main multi-store IGA owners and a trial participant, has installed 40 units in their Queensland stores, with more stores in other states yet to be supplied.

“The concepts work, it is the way to go”.

David Scally, NSW Regional Manager Ritchies Supa IGA:

Metcash has also arranged for the avocado merchandising system to be displayed again at the 2018 IGA Expo, to further encourage implementation of the system.

Independent retailers who participated in the trials are also enthusiastic supporters:

“Customers naturally gravitate to the ripe side of the displays – and they buy more, squeeze less”. Patrick Trimboli, Trims Fresh, Sydney.

Coles was presented with the concepts and their benefits, and have implemented many of the merchandising features. That includes customised header cards, aiming to achieve ripe fruit always being available, segregating ripe and unripe fruit and considering the use of coloured display pads (Adam Heitmann, Coles Category Manager, pers. comm., 2018).

Woolworths continues to commit to implementing merchandising trials in their three store formats, although a date for commencement has yet to be confirmed (due to staff changes during the project). The benefits of the sorted displays have been presented to produce category managers, and they remain interested in testing the concept in their stores.

Planned communications and demonstrations of the benefits will encourage further uptake from retail stores. That includes articles in retail industry magazines, as well as a display at the Hort Connections tradeshow in June 2018.

Retail training

The retail training package consists of a series six videos, combined with short quizzes and a certificate on completion. Produce staff can quickly and easily learn about consumer needs, ordering, receipt, storage, handling, ripening and merchandising/display of avocados.

Although only recently completed (May 2018), there has already been an excellent response from retailers. That includes strong support from Metcash and IGA store owners at presentations around Australia. Metcash are planning a competition for the first 200 IGA store staff to complete the training. The training will be featured at the 2018 IGA Expo.

Coles was presented with the video content at an early stage of production, but as it requires training in its own corporate format, it has utilised much of this project’s training content to develop its own avocado retail training video.

Woolworths was also presented with the training program, and is keen to use the content, but would customise it to suit own format and delivery via its Food Academy and Faster Fresher Food Team.

Independent retailers involved in the project have started using the training for their staff.

Costco has responded positively to the training program and promoted it to produce staff at its 11 warehouses.

Monitoring and evaluation

Project success relied on engaging with a number of Australian retailers. This was essential to allow development, testing and implementation of both the merchandising strategy and training program. Retailer support was readily given, resulting in the development of practical and cost-effective tools to improve fruit quality at retail.

Retailer engagement throughout the course of the project meant that the outputs have been well received by them with the merchandising approach and retail training implemented by IGA and independent retailers. Costco has promoted the retail training program to its staff. In addition, Coles has taken the initiative with both new merchandising guidelines and online video training for its staff, with messaging consistent with content developed by the project.

The one area where further work is needed is with Woolworths. Merchandising concepts and trial results were presented to Woolworths category managers regularly, and despite initial interest in participating in merchandising trials, the retailer didn't start the trials. In March 2017 a concept proposal was accepted by Woolworths, with research across six stores to be undertaken from May 2017 (when Hass was in good supply). A major staff restructure, new staff, then high prices for avocados resulted in a series of delays by Woolworths, which extended until the end of 2017. Short supply of Hass leading into the Shepard season further delayed the start of merchandising trials. Regular contact was maintained with Woolworths during this period, with the expectation trials would begin in May 2018 as good volumes of Hass once more became available. Despite regular indications of wanting to participate, and intervention by Hort Innovation, Woolworths has yet to allow trials to proceed, although plans still remain in place to assist the retailer once the go-ahead is given.

The key components of the project (consumers, retail merchandising and retail training) form an overall program rather than separate tasks. This represents a strength of the current approach, where different areas are integrated into a cohesive whole.

The initial surveys and consumer observations were invaluable in developing a merchandising concept that would help consumers in the selection process. It provided the project team with a better understanding of consumer attitudes and behaviour in-store. Likewise, retailer feedback helped ensure the merchandising option with the best chance of success was selected.

The sorted display merchandising system has made a demonstrated improvement to fruit quality, with reductions in consumer squeezing and subsequent bruising. As more stores implement the sorted displays, the level of damaged avocados at retail will be reduced. This needs to be measured nationally in the three years that follow the project.

The other benefit that the merchandising system achieved was the increase in sales per customer. This is an impressive result, particularly at a time when the industry is concerned about potential oversupply (mainly due to rapid increases in plantings and forecast production). The sorted displays will help reduce the chance of oversupply for the avocado industry.

Data to back up the benefits of such an improved merchandising system was very useful in convincing retailers that the system is worth implementing. That was particularly the case for IGA, who had trials in their stores, and could then extrapolate those results to other stores in their network.

Data on consumer behaviour was more difficult to collect than anticipated, despite the closeness of paired stores and their similar customer demographic. The initial plan was to switch the modified and control stores after the first trial, but once stores had implemented sorted displays they were then reluctant to remove them. Furthermore, paired stores remained independent, often displaying different quality fruit at different price points.

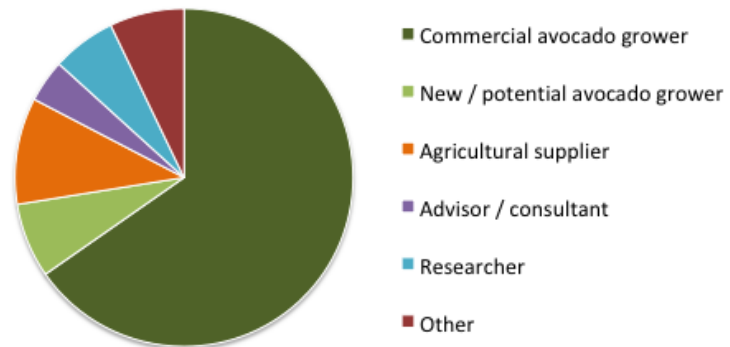
The trial where the displays were switched on alternate days proved a better approach. Although this did not foster the consumer confidence gained through repeated exposure to the same display, it allowed the project team to compare results within the same store, at the same price and with the same batches of fruit. Results may have further improved had it been possible to continue the trials over a longer period.

Presentations of the merchandising system and retail training to the avocado industry have been very positively received by the industry, with a number of attendees at regional meetings commenting on how simple but effective the merchandising system and retail training are. Some were keen to promote the

concepts to avocado buyers they deal with.

Feedback from Regional meetings in Crows Nest, Coolumb, Bunbury and Renmark (n=98)

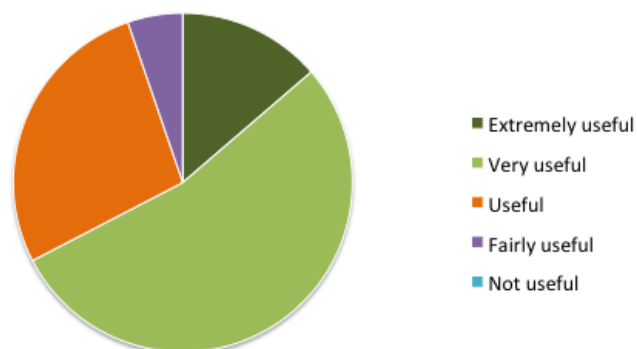
Role of participant



Which presentation was of most interest?



How useful was the meeting overall?



Finally, the project timeframe made it challenging to ensure the results from the merchandising trials were completed before final development of the retail training program and content. Initial results were included, however, in the future it would be better to complete all trials before developing training resources.

Recommendations

Retail merchandising service

A current gap in the current avocado marketing program appears to be a lack of service and contact with retailers in two sectors – specialist greengrocers and IGA stores. With specialist greengrocers there is no central point of contact, as there is for the major supermarkets (Woolworths, Coles, Aldi). They are a significant contributor to avocado sales. Many IGA stores, are significantly underselling avocados as a percentage of their overall market share – a paradox when some of the best fresh produce retailers are IGA multi-store owners, such as Drakes, Ritchies, Romeos and Chapley Groups

Significant growth in avocado sales is possible through both these channels, if they are regularly provided with the information to meet the needs of their customers for having ripe avocados consistently available, well displayed and merchandised. An annual merchandising service, at the commencement of the Hass supply season in May, could not just assist retailers to increase sales and reduce shrink, but also be used to undertake audits and interviews to measure improvements as a result of the service. With the high turnover of staff in fresh produce, the service could also be used to promote participation in the avocado online training program.

Recommendation 1

Implement an annual (or bi-annual) avocado merchandising service and audit in up to 300 independent greengrocers and 150 IGA stores nationally, with the number to vary according to measurable results.

Quality monitoring at retail

There is considerable value in monitoring avocado quality at retail. Only by examining retail quality can the effectiveness of avocado industry-funded projects be truly measured. Regular purchasing and destructive analysis of avocados sourced from different retailers would indicate overall changes in performance, and highlight specific problems within supply chains.

Recommendation 2

Implement a quarterly program of quality monitoring, through retail purchase and destructive sampling, to measure quality performance across all retail sectors.

Uniform conditioning/ripening

As a consequence of uneven post-harvest handling and fruit conditioning practices, retailers are regularly faced with receiving fruit of uneven stages of ripeness (i.e. uneven within avocado trays), making it difficult to display fruit correctly and resulting in more customer handling and bruising. Conditioning avocados is a skill, yet there are no recognised avenues to obtain these skills, other than by experience. The development and provision of an avocado conditioning training program, recognised by the industry, would be a first significant step in providing retailers with consistent, uniform, conditioned fruit (along with best-practice cool-chain management, from harvest to conditioning facilities).

Recommendation 3

Utilise existing technical resources, such as the Australian Avocado industry Ripening Manual and/or the California Avocado Commission “Avocado Pre-Conditioning and Ripening Manual”, as base documents to develop an industry-recognised training program for suppliers of avocado conditioning/ripening services.

Merchandising green-skin avocados to reduce bruising

The sorted display merchandising program was successfully developed with a range of retailers for Hass avocados. The same elements should work for green-skin varieties, such as Shepard, but should be trialled to confirm this is the case. Using the system with green-skin avocados will necessarily involve greater staff training on how to squeeze avocados without causing bruising.

Recommendation 4

Utilise the four merchandising concepts (ready-to-eat fruit available, fruit displayed according to ripeness, coloured foam display pads and header cards modified for Shepard) to test the impact of the merchandising concepts in reducing bruising and increasing sales.

Long-term benefits of sorted displays

The merchandising program trialed in this project had immediate impact in reducing consumers squeezing fruit, reducing bruising and increasing avocado sales. This was despite the fact that consumers have had long experience with avocados in variable quality and presentation at retail. What is not known is the longer-term impact of merchandising and retail training on consumer purchase and handling habits. As consumers become more familiar and confident with the sorted displays, they may reduce handling prior to purchase even further.

Recommendation 5

Undertake annual consumer observation research to assess the longer-term impact of sorted display merchandising on consumer squeezing and purchasing of avocados.

Refereed scientific publications

None to report.

References

Tyas, J. (2016). Avocado industry fruit quality benchmarking. Horticulture Innovation Australia. Final Report AV11015.

Joyce, D. (2015). Understanding and managing avocado flesh bruising. Horticulture Innovation Australia. Final Report AV12009.

Intellectual property, commercialisation and confidentiality

No issues identified

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- **Fruitezy:** Max Filipe, owner

Appendices

Retail consultation

- Appendix 1. Retail consultation presentation generic
- Appendix 2. Retail consultation meeting minutes
- Appendix 3. Merchandising concepts trial proposal – Woolworths
- Appendix 4. Retail consultation presentation March 2018

Consumer studies and merchandising

- Appendix 5. Consumer insights review
- Appendix 6. Merchandising best practice review
- Appendix 7. Merchandising trials to reduce consumer handling and bruising
- Appendix 8. Merchandising display materials
- Appendix 9. Avocado merchandising set up instructions
- Appendix 10. IGA expo 2017 fact sheet

Retail training

- Appendix 11. Avocado training best practice review
- Appendix 12. Avocado retail training final concepts
- Appendix 13. Avocado back room management chart
- Appendix 14. Avocado display and merchandising chart

Industry communications

- Appendix 15. Industry update presentation
- Appendix 16. Final project outcomes presentation
- Appendix 17. Talking avocados article – Autumn 2017

Project reference group & project management

- Appendix 18. PRG meeting presentation 13 Feb 2017
- Appendix 19. PRG meeting presentation 14 Aug 2017
- Appendix 20. PRG meeting presentation 14 Mar 2018
- Appendix 21. AV15011 MERI framework