



ATGA
Australian
Table Grape
Association Inc.

Table Grapes

TRACEABILITY PILOT

FINAL REPORT

AGRICULTURE VICTORIA



RESULT
GROUP OF COMPANIES



Contents

Australian Table Grape Industry	4	Traceability Cost Benefit Analysis Calculator	23
Traceability for the Table Grape Industry	4	Pilot Evaluation	24
Our Industry		Producers	
Export Traceability Drivers for our Industry		Data Integration	
Table Grapes Traceability Pilot	5	Scan rates	
Pilot Partners		Scan rate optimisation and label design	
Pilot Farms	6	Scan rate optimisation and audience engagement	
Pilot Summary	7	Fruit and Supply Chain Data and Integration of GS1 Standards	27
End to End Traceability	8	Communications, Cost Benefit Analysis Calculator and Grower Engagement	28
On Farm Traceability		Grant Management	28
Export Traceability		Appendix 1: Pilot Partners	29
Wholesale export product labelling		Australian Table Grape Association (ATGA)	
Retail export product labelling		Agriculture Victoria	
Microsite contents	11	Perfection Fresh	
Future-Proofing for Traceability Regulations	14	Result Group	
Temperature Tracking	15	GS1 Australia	
Cloud Database and Dashboards	16	Appendix 2: Acknowledgements	31
Data Reveal versus Data Records	19	Appendix 3: Future-Proofing for Traceability Regulations	34
Pilot results	20	Appendix 4: Communications	35
Scan Results	21		
Consumer Surveys	22		

“When each link in the supply chain embraces its role... it will ensure trustworthiness between all businesses right through to the consumer.”

Jeff Scott, CEO



“Traceability is important to our business because it allows us to manage our product through the supply chain... and bring our customers closer to the source.”

Christian Jones,
General Manager Export



Australian Table Grape Industry

Australia's most valuable
fresh horticulture exporter

\$800M total value

\$623M export at its peak

900 growers

Traceability for the Table Grape Industry

Our Industry

Australian table grape exports have grown by a 300% increase over the last 10 years, from \$80M to \$623M in 2019/20, predominantly to Asia.

Export Traceability Drivers for our Industry

Embracing traceability is a priority for growers due to increasing regulation by importing countries.

We are competing in international markets with fellow Southern hemisphere countries — South Africa, Peru, Chile.

Traceability supports high quality, safe product that consumers enjoy.

Product and cool chain traceability often end as fruit enters export countries, preventing producers from monitoring fruit quality and leveraging brand value.

A strong traceability program, from growers through to supply chain, ensures safety and trustworthiness through to our consumers overseas.



Table Grapes Traceability Pilot

ATGA partnered with Agriculture Victoria to conduct a traceability pilot, to enhance traceability throughout the table grape industry and develop a system for growers.

The pilot ran for the duration of the 2021/22 table grape harvest season.

 ATGA Australian Table Grape Association Inc.	Peak Body for Australian Table Grape Industry
	Victorian Government Funding Partner
	Table Grape Producer & Exporter
	Traceability Technology Provider
	Global Traceability Standards Organisation

Pilot Farms

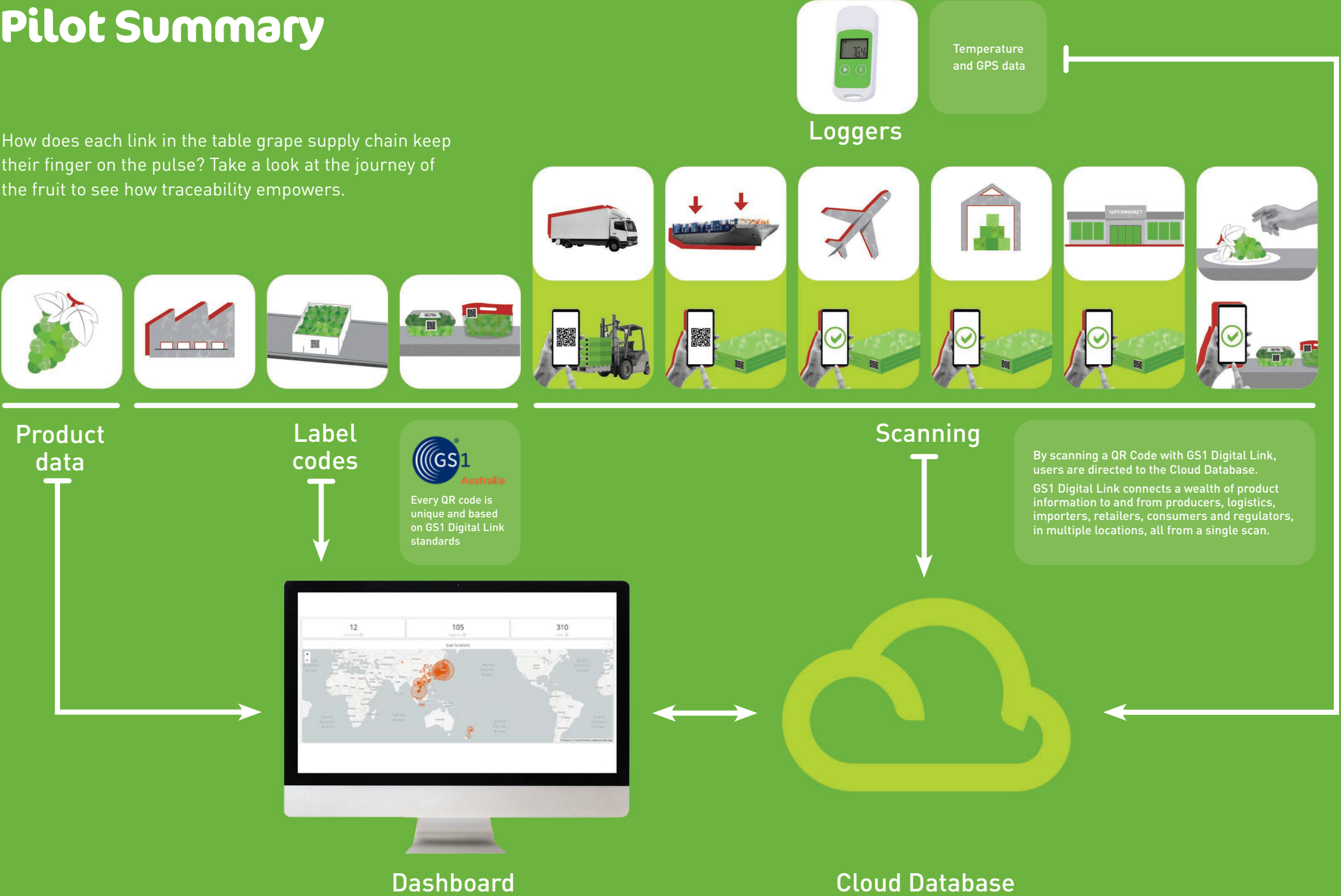
Perfection Fresh are a fresh fruit and vegetable producer and exporter.

Their Australian table grape farms that participated in the pilot are in the Sunraysia region, Victoria.



Pilot Summary

How does each link in the table grape supply chain keep their finger on the pulse? Take a look at the journey of the fruit to see how traceability empowers.



End-to-End Traceability

The aim of the pilot was to achieve end-to-end traceability from farm, through the supply chain, to consumers.

1. On Farm Traceability

It was important to avoid disruption and integrate with pre-existing farm systems. PickScan Pro was already used to facilitate harvest data, and through the pilot, this was linked to GS1 standards and export data within the cloud.



2. Export Traceability

Export product traceability was developed through the pilot by application of unique serialised GS1 Digital Link-enabled QR code labels to fruit product for wholesale and retail.



The majority of labelling was provided through in-line printing in the packing sheds on farm. Specialised printing integration was required to enable every GS1 Digital Link-enabled QR code label to be unique. After labels were attached to product, labels were activated through a scanner. Both steps help avoid food fraud activity.

Overseas labelling and activation was also established with one partner within an export market who repackaged fruit from trays into clamshells.

GS1 Digital Link is a GS1 standard used by companies to connect a wealth of product information from multiple locations to supply chain partners, consumers and regulators; via a single scan.

Wholesale export product labelling

Unique serialised GS1 Digital Link-enabled QR code labels were applied to trays. The QR code within every label was different, and therefore printers in current use by the producer were upgraded to deal with unique identifier labels without operator input. The individualised QR code labels created could be scanned with a mobile phone by any partners in the export supply chains. Scanning did not require a specialised app.

Scanning provided supply chain partners with:

Product verification

Access to a business to business (B2B) microsite, with appropriate language translations

Specialised supply chain information including temperature storage instructions

Scanning provided producers with:
location scan data

scan numbers

tracking for abnormal scan activity indicative of fraudulent labelling (no fraudulent labelling was encountered in this pilot)



End-to-End Traceability

Retail export product labelling

Unique serialised GS1 Digital Link-enabled QR code labels were applied to polybags and clamshells. Again, the QR code within every label was different, and therefore printers in current use by the producer were upgraded to deal with unique identifier labels without operator input.

The individualised QR code labels created could be scanned with a mobile phone by consumers in all export markets. Scanning did not require a specialised app.

Scanning provided consumers with:

product verification

access to a business to consumer (B2C) microsite, with appropriate language translations

specialised consumer information including a feedback survey

Scanning provided producers with:

location scan data

scan numbers

feedback survey data

tracking for abnormal scan activity indicative of fraudulent labelling (no fraudulent labelling was encountered in this pilot)

GS1 Digital Link-enabled QR code labels were applied to polybags and clamshells



Traceability

When you scan...

Scanning this QR code with a mobile phone will display an example of the pilot B2C microsite.

Link: Microsite

**Scan the QR
code to discover
the power of
product verification**



Microsite Contents

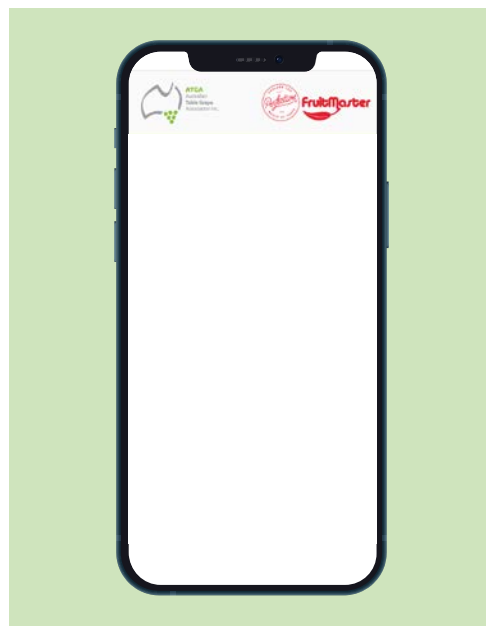


Scanning

The consumer or supply chain partner scans a QR code label with a mobile phone. No specialised app is required.

These are unique serialised GS1 Digital Link-enabled QR code labels.

The QR code within every label was different, and therefore printers in current use by the producer were upgraded to deal with unique identifier labels without operator input.



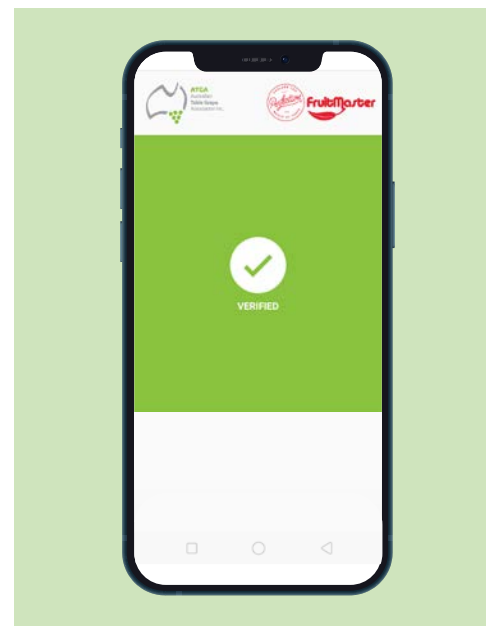
Branding

Microsite branding for the pilot included

Producer and Exporter branding

Peak Body branding

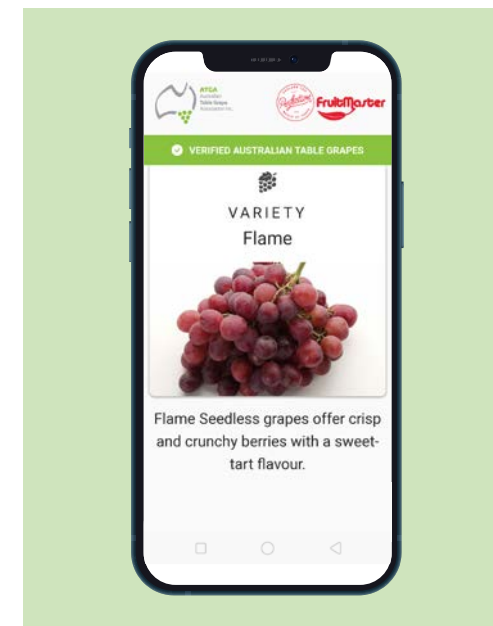
Beyond the pilot, peak body branding supports possible future extension of the microsite template to other table grape industry producers or exporters.



Verification

Verification provides assurance that each product is genuine.

This combats food fraud.



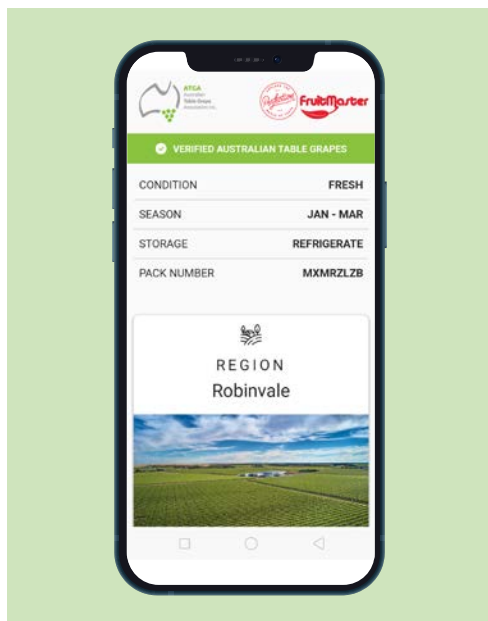
Variety Description

Grape variety description differs dependent on the contents of the tray, polybag or clamshell.

There were 14 grape varieties in the pilot.

Commercial/licensed varieties displayed appropriate breeder branding, logos and trademarks.

Microsite Contents



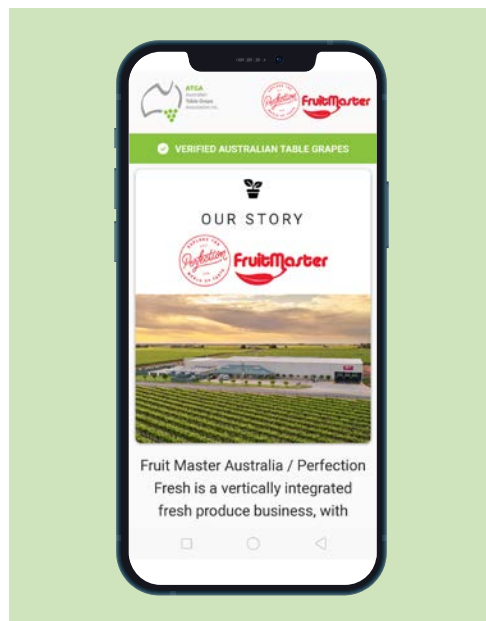
Product Instructions

These can be tailored with specific information for B2B or B2C versions.

For example:

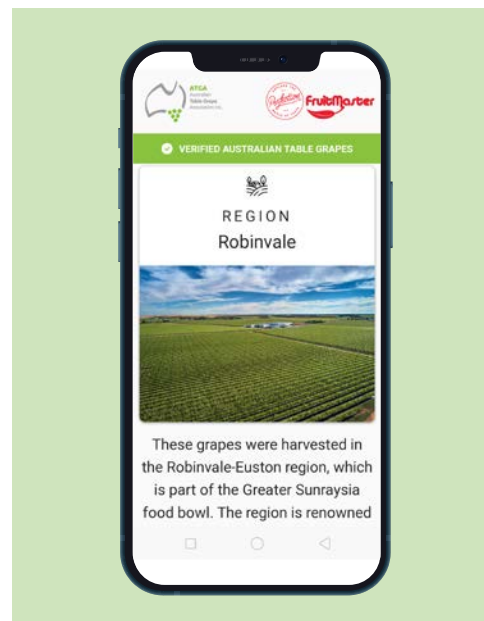
B2B Microsite: Storage: Less than 4°C

B2C Microsite: Storage: Refrigerate



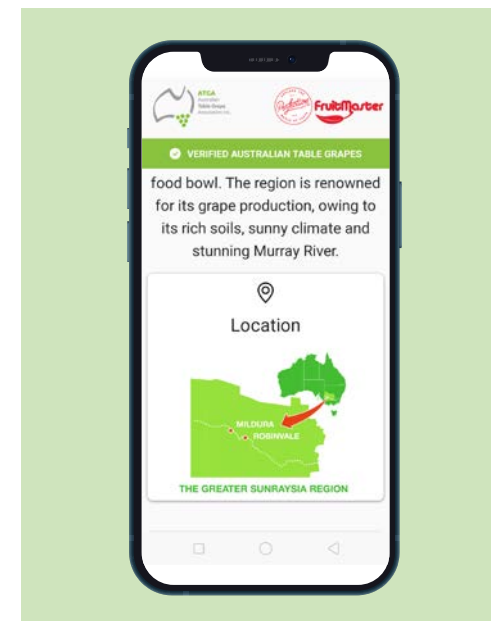
Producer and Exporter Story

The farm story engages consumers and supply chain partners with the source of their food.



Farm Region

Images and storytelling to showcase the food's origin.

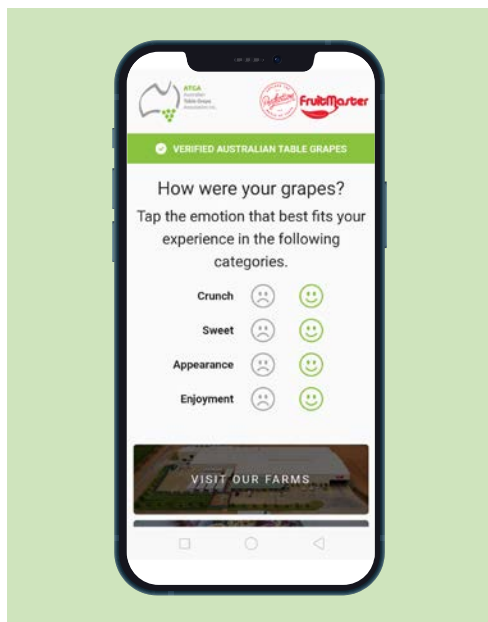


Farm Location Map

Map location to highlight 'brand Australia' and the local farm region.

Note that pinpoint location of the farms were not shared to protect privacy and security.

Microsite Contents

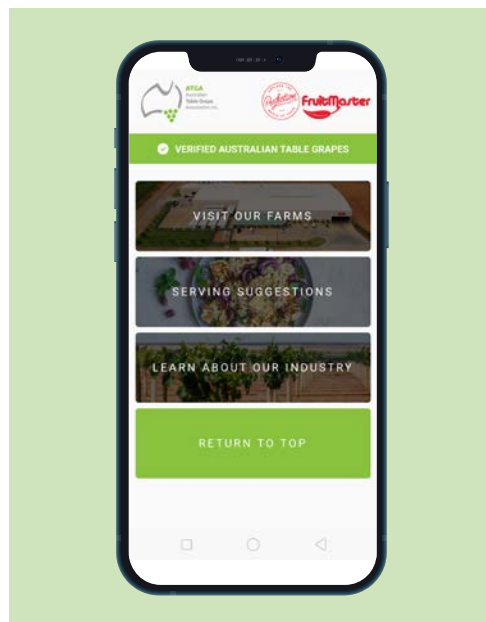


Survey

Surveys enable two way flow of information between the consumer and producer.

This survey was included in the B2C microsite version.

It enabled consumers to give feedback about different components of the food's quality and enabled growers to see how fruit from particular farms was perceived by consumers.



Links

Links were established to:

Farm website

Peak Body website

Serving Suggestions
(hosted on Peak Body website)



“This puts the power of validation in those that matter most; the consumer, of course, but also the supply chain partners, the importers, the retailers - everybody involved in the supply chain.”

Michael Dossor,
Group General Manager

RESULT
GROUP OF COMPANIES

Future-Proofing for Traceability Regulations

Embracing traceability is a priority for growers due to increasing regulation by importing countries.

The proposed US FDA Food Traceability Rule is likely the most comprehensive set of traceability regulations internationally at present and therefore was used as the basis for data compilation and functionality within the pilot. The proposed rule will require compliance by food supply chain businesses undertaking “Critical Tracking Events” to record “Key Data Elements”. This data will need to provide traceability back to the farm within 24 hours in an electronic format.

[Link: Discover more here](#)

The due date for this rule is January 2023, with compliance expected by January 2025. This is an important example of traceability regulations that may be replicated by other importing countries. GS1 consultation informed the design of the US FDA Food Traceability Rule. Therefore, in this pilot, GS1 standards were implemented alongside the producer’s current data to produce a comprehensive set of traceability data in electronic format.

Full details can be found in Appendix 3.

The due date for the proposed US FDA Food Traceability Rule is January 2023, with compliance expected by January 2025.



Temperature Tracking

Escavox real-time loggers of temperature and location were also used in the pilot.

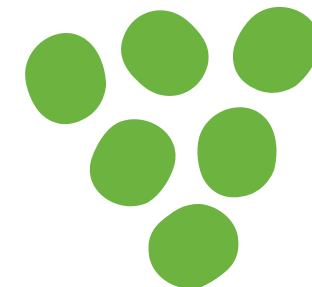
They were loaded into shipping containers.

Their temperature and location results were integrated with traceability data.

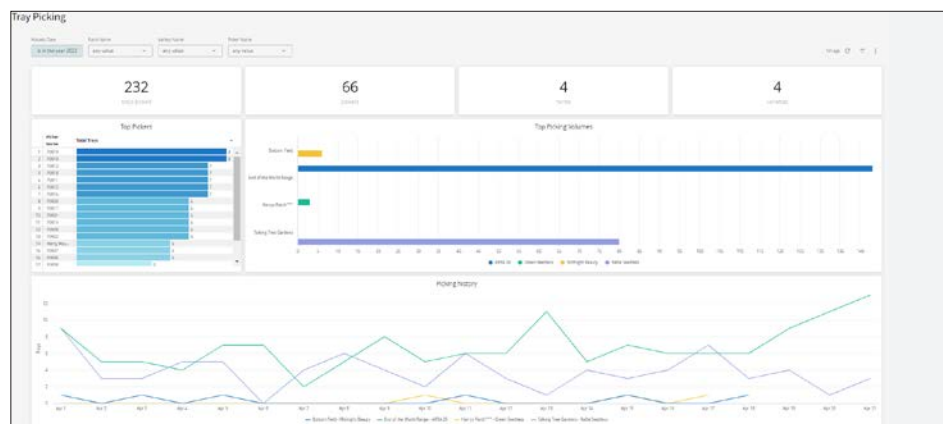
Temperature and location tracking of the shipping containers supports quality management.



Cloud Database and Dashboards

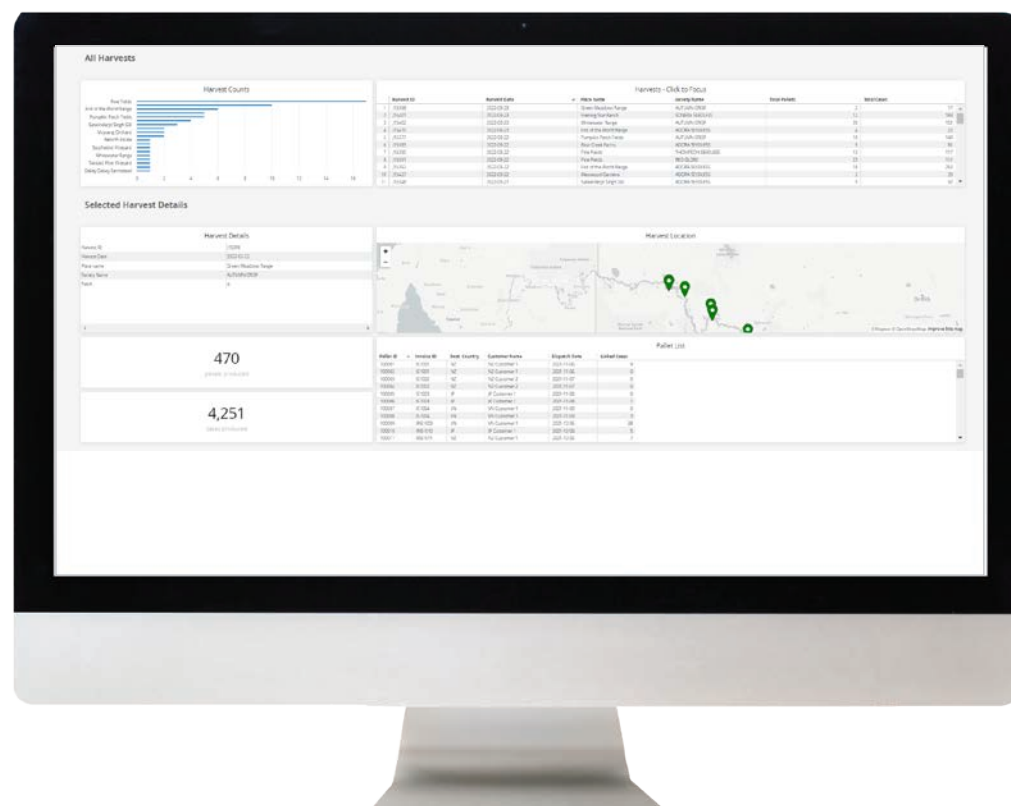


A cloud database was used to integrate and capture all traceability data. Dashboard access was provided to pilot farms.



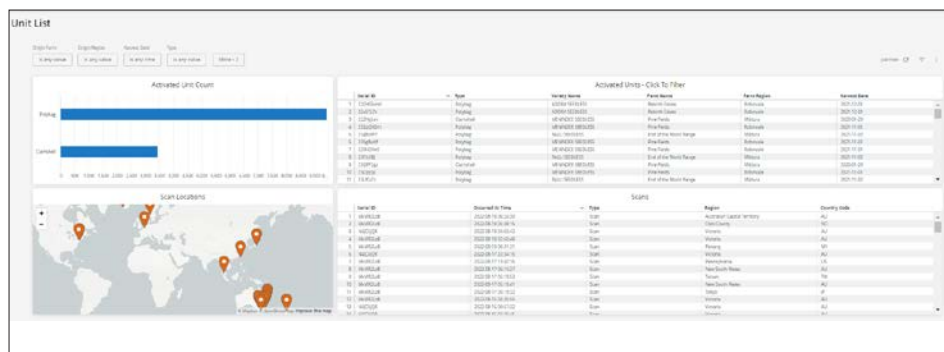
Picking Picking history was provided through integration to PickScan Pro.

Label Printing Unique serialised GS1 Digital Link-enabled QR code labels records.

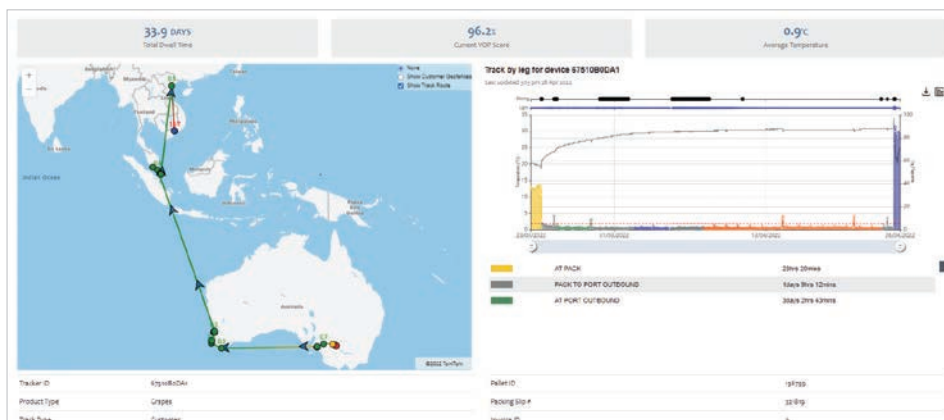


Harvest List Fruit harvest records through integration to PickScan Pro.

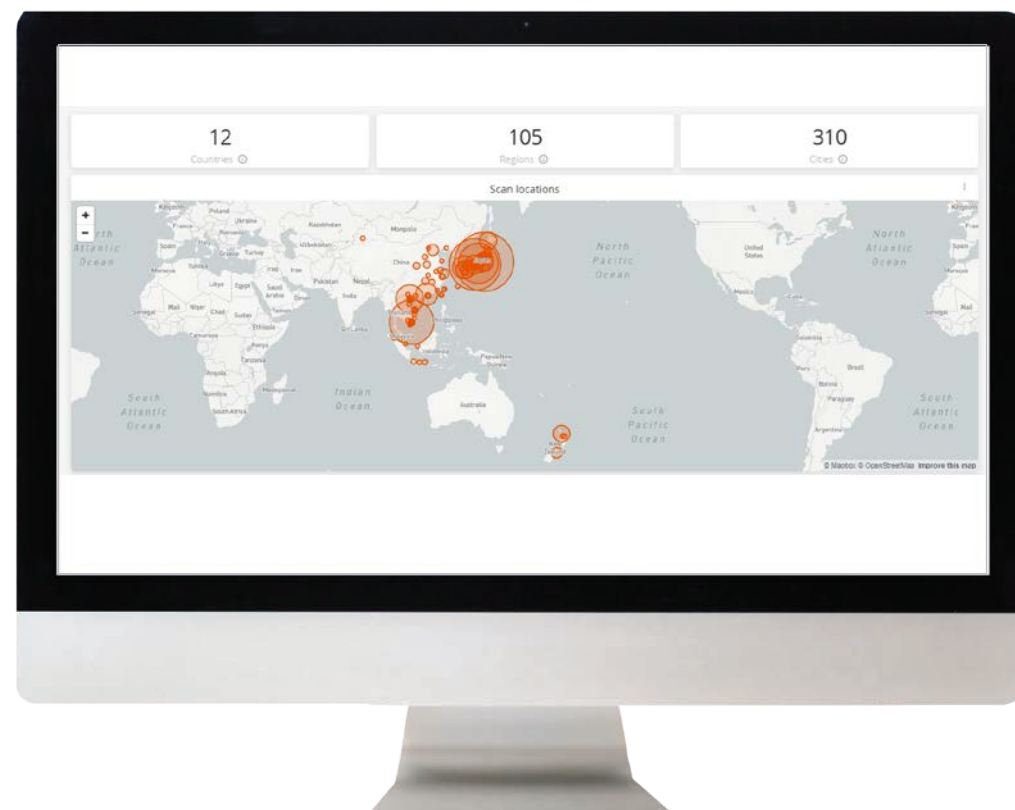
Cloud Database and Dashboards



Unit List Record of units with activated unique serialised GS1 Digital Link-enabled QR code labels.



Temperature Monitoring Temperature and location monitoring of shipping containers through integration with Escavox loggers.

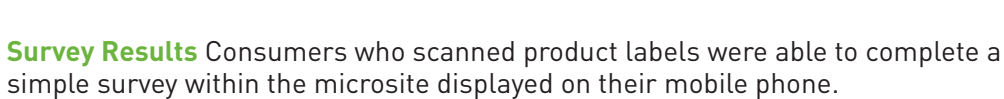


Product Scanning The unique serialised GS1 Digital Link-enabled QR code labels on wholesale and retail products were scanned by supply chain partners and consumers, for all export supply chains.

Scanning was performed with a mobile phone and did not require a specialised app. Dashboard scan data was available by unit, product, number, date and location.

Brand Protection Potential food fraud activity was monitored through tracking of diverted, duplicate or unauthorised scans.

name (age)	name (age)	name (age)	name (age)	name (age)
------------	------------	------------	------------	------------



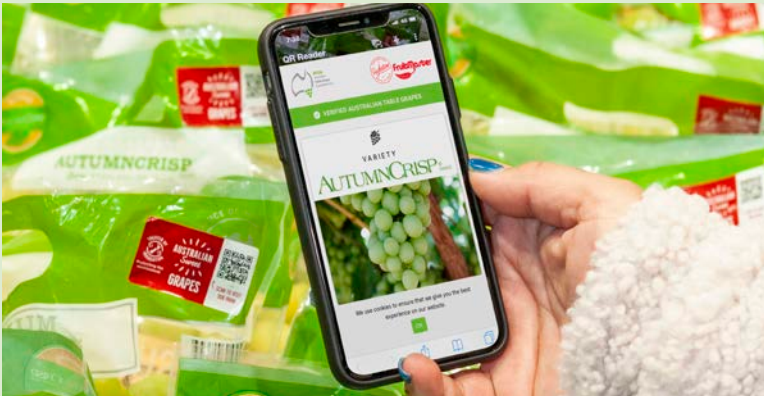
1. **Identify the problem.** The first step in the problem-solving process is to identify the problem. This involves recognizing the issue, gathering information, and defining the problem clearly.

Data Reveal versus Data Records

Data privacy is a common concern when sharing traceability information with supply chain partners and consumers.

For reassurance, it's important to understand the difference between data that is "revealed" to supply chain partners and consumers, from data that is "on record" at the farm.

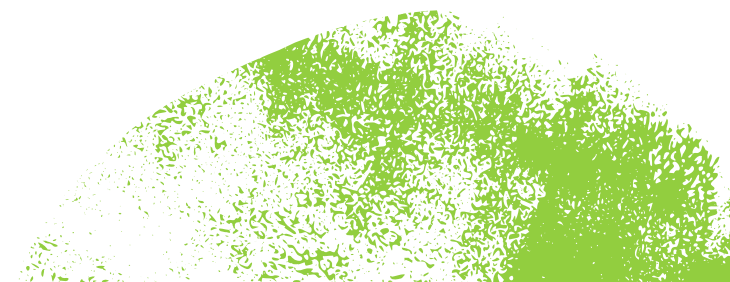
The data "revealed" through the mobile phone microsite is chosen specifically by the producer, and the microsite is designed accordingly.



DATA REVEALED	DATA ON RECORD
Unique serialised GS1 Digital Link QR codes on product enable scanning and access to a B2B microsite (wholesale product) or B2C microsite (retail product).	A cloud database captures all product traceability data and this is available to view through a dashboard on farm.
Everyone in the supply chain from farm to consumer can authenticate product origin and engage with the brand via phone scan.	GS1 standards are used for traceability data.
Privacy is ensured through controlled data reveal.	Unit and pallet codes support inventory management.
B2B microsite data may include information such as storage needs, certification, food journey, expiry dates and marketing.	Temperature and location logging support quality control.
B2C microsite data may include information such as marketing, promotions and feedback surveys.	Scan data supports anti food fraud brand protection.
There is two-way flow of information, with surveys and scan data providing information back to the producer.	Survey data from consumers can be used for marketing and product development.
Product alerts including food fraud notifications or recalls may be activated through the microsite. (No food fraud notifications or recalls were activated within this pilot.)	Electronic traceability data can be used for instantaneous regulatory compliance in times of crisis e.g. recalls.

Pilot Results

DELIVERABLE	ACHIEVEMENTS
Duration	Product labelling and scanning occurred during 1 February – 20 July 2022
Saleable Units	842,568 saleable units labelled Wholesale: 459,121 Trays Retail: 192,495 Clamshells, 190,952 Polybags
Grape Varieties	14 grape varieties labelled, with tailored information for each variety displayed through the microsite
Countries / Supply Chains	Wholesale B2B: 12 countries Retail B2C: 2 countries Microsite language translations: 5
Integration	Integration of label design, printers, label codes, GS1 Digital Link, product cloud with GS1 EPCIS protocols, Farm software, 6 mobile scanners, 100 Escavox Blue Box Trackers, PickScan Pro picker data, microsite (mobile web app) B2C and B2B versions, dashboard for 4 farms and head office
Fruit & Supply Chain Data	Key Data Elements (KDEs) & Critical Tracking Events (CTEs) to correlate with future proposed US FDA requirements and GS1 standards
Traceability CBA Calculator	Cost Benefit Analysis Calculator developed



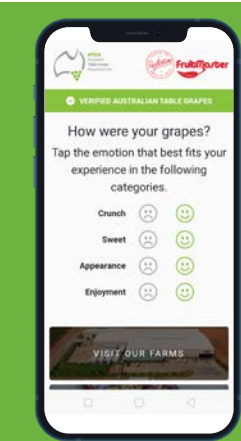
Scan Results

		Trays	Clamshell	Polybag
		Wholesale B2B	Retail B2C	Retail B2C
Grand Total	Labelled products	459,121	192,495	190,952
	Scans	637	1,129	92
	Scans %	0.14%	0.58%	0.05%
Countries		1 to 12	Country 11	Country 12
Fraudulent Scan Activity or Abnormal Scan Activity: None Recalls: None				

Consumer Surveys

Consumer surveys were available through the B2C microsite, which was accessible via scans on retail products i.e. clamshells and polybags:

		Clamshell	Polybag
Country 11	Labelled products	192,495	
	Scans	1,129	
	Scans %	0.58%	
Country 12	Labelled products		190,952
	Scans		92
	Scans %		0.05%



Consumers could provide feedback on four fruit features using a “happy” or “sad” emoticon.

85% of feedback was “happy” indicating good fruit quality. “Sad” fruit quality feedback correlated with end of season fruit. Unexpected “sad” feedback was not detected, but had it occurred, would have been used to highlight unknown quality issues within the supply chain.

Consumer survey rates and responses were as follows:

B2C labelled products	383,447
Total scans	1,221
Total number of consumers giving feedback	279
Feedback rate from consumers who scanned	23%
Overall labelled product feedback rate	0.07%
Number “happy”	236
Percentage “happy”	85%
Number “sad”	43
Percentage “sad”	15%

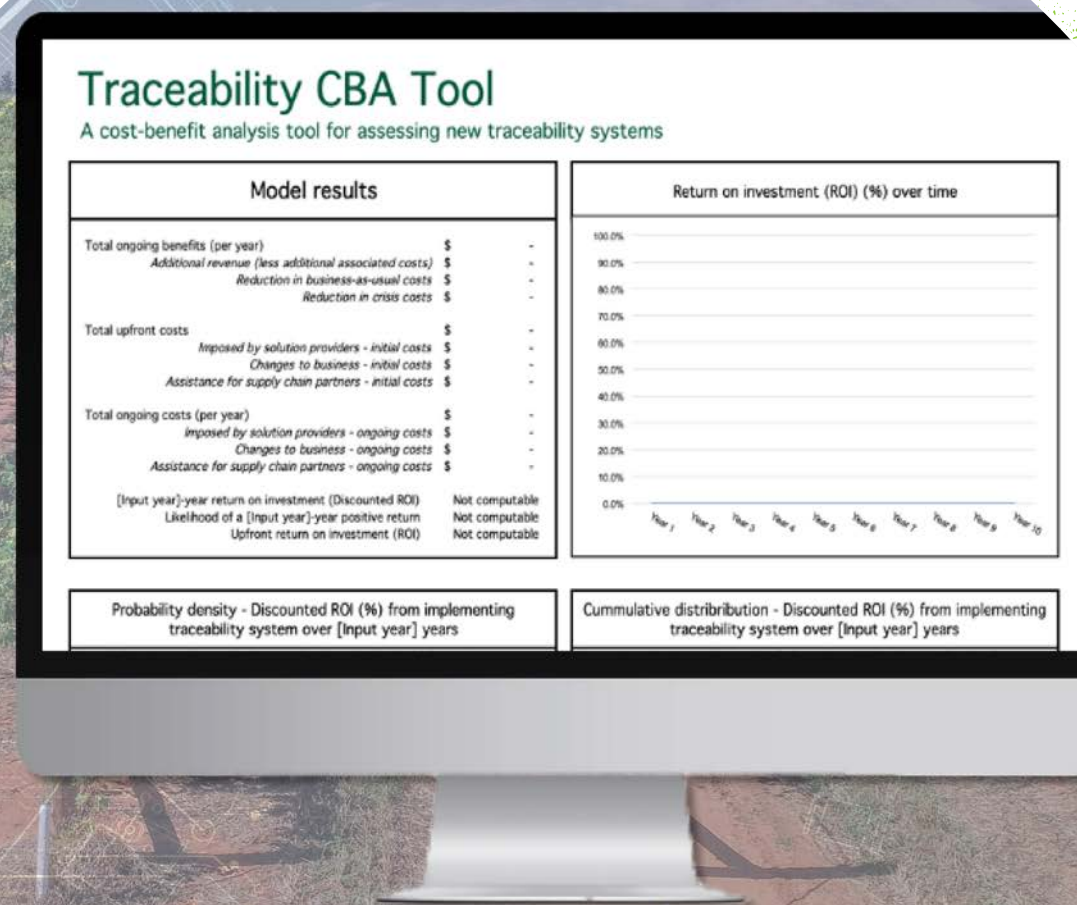
Traceability Cost Benefit Analysis Calculator

As a deliverable of the pilot, a Traceability Cost Benefit Analysis Calculator was developed for use by primary producers who are considering implementing traceability systems, to foster uptake and adoption of traceability in horticulture.

It was developed through a workshop with peak body and business representation from Table Grapes, Citrus and Cherries industries, together with GS1 Australia, traceability solution providers and Agriculture Victoria.

The Traceability Cost Benefit Analysis Calculator was developed by economists from the Victorian Government Department of Job, Precincts and Regions (DJPR). It is available as an excel spreadsheet for use by producers below.

[Link: Calculator spreadsheet](#)



Pilot Evaluation

This pilot implemented a traceability system for a table grape producer and exporter with multiple products and export supply chains to 12 countries.

There is opportunity to duplicate traceability frameworks with other producers and exporters across the Table grape industry or in other horticulture industries. Traceability systems could be developed by a peak body as a whole-of-industry solution for their members' participation, or implemented by individual businesses.

At the conclusion of the pilot, partners evaluated the pilot and made a series of recommendations, based on the pilot experiences and findings:

Producers

Horticulture producer engagement with traceability currently is often low, and producers may be unaware of the needs of the other end of the supply chain – particularly importers, retailers, consumers and government regulations in export countries. Producers need support to implement traceability systems. The

briefing process for whole-of-industry solutions needs to be refined to capture the needs of all players, large, medium and small.

Data Integration

Data integration can present challenges through the variety of systems producers already have in place, and software upgrades that may be required prior to integration. Integration of solutions needs to be workable for businesses of different sizes. Interoperability is key. Producers want minimal disruption to their existing systems. Integration with different data sources such as picker data and temperature logger data can generate a variety of issues and collaborations should be approached early in the planning phase. Beware of the current global shortage of scanners, and allow appropriate lead times prior to fruit harvest periods for equipment ordering.

Standards

Any traceability system needs to be built upon standards. Standards should be global, used by all levels of supply chain and enable seamless consumer engagement. GS1 standards enable exactly that and the pilot

demonstrated that those standards when coupled with the right software and hardware technology enable a low barrier to entry for growers to deploy traceability systems. Advice on GS1 standards is integral to the project framework and this should also be incorporated early in the planning phase, with ongoing support during implementation. Look for opportunities for label harmonisation through GS1 standards. To increase efficiencies in the implementation of 2D Barcodes, GS1 Australia has established a 2D in Retail Advisory Group. This group will collaborate to define minimum data requirements for the use of 2D across several different sectors that will lead to a harmonised approach to 2D implementation, with specific focus on the data that is embedded inside the codes.

Scan Rates

Scan rates in the pilot were lower than expected but published scan rates to provide comparison for traceability systems are rare in this rapidly developing field of food labelling. In the experience of the pilot partners, consumers are generally more active scanners than supply chain partners, however there were some variations in this pilot. Of the two retail

labelling export countries in this pilot, consumers in "Country 11" showed the more active scan rates of 0.58%. Consumers in "Country 12" showed scan rates of 0.05%, and it was felt that this may have been contributed to by lesser fruit quality entering "Country 12" predominantly at the end of the season due to 2022 competitive pricing issues. Supply chain partners showed an average scan rate of 0.14% across 12 Asia Pacific export countries, ranging from 0.62% to 0.006%.

Following the global covid pandemic, QR code scanning has become a well-established activity for everyone with a smartphone. Many smartphones now incorporate a QR code reader into the native camera. QR code scanning is simple, does not require any additional complex scanning equipment, and has the potential to serve multiple purposes as a 2 dimensional barcode such as consumer marketing, supply chain traceability, certification access and future point of sale pricing. Linkage with GS1 Digital Link and incorporation of global GS1 standards provides international traceability harmonisation.

Pilot Evaluation

Scan Rate Optimisation and Label Design

QR Codes recommendations:

A colour differentiated section of the label to contain the QR code

A QR code that is as large as possible

Call to Action recommendations:

A colour differentiated section of the label to contain the Call to Action, alongside the QR code

Call to Action text that is as large as possible, in a differentiated colour, in capital letters

Call to Action text in both English and local language translation

Appropriate messaging for the audience within the Call to Action

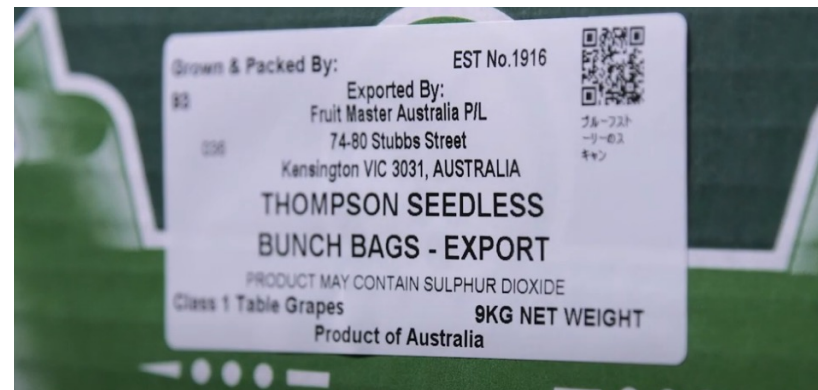
Additional icons may be added such as a map of Australia

Highest scan rates were seen with retail product labels in “Country 11”. As can be seen in the example shown, this may have been partly due to product labelling design, which may have attracted more attention. Note the colour differentiated section of the label which contains the QR code, the Call to Action text “SCAN TO VISIT OUR FARM” within local language and English and capital letters, and a map of Australia.

Lower scan rates were seen with wholesale product labels. Again, as can be seen in the example shown, this may have been partly due to product labelling design which in this case failed to attract attention. Small, black and white QR codes were used on wholesale product labels in this pilot. Wholesale product label size and variation was a limiting factor in label design, and QR codes on fruit trays were often limited to 14mm diameter, and were in the same colour as other label text. Some feedback was received that supply chain partners had not noticed them. Calls to Action such as “Scan here to prove product origin” were translated for key export markets, but for minor export markets, they appeared in English and therefore may not have been understood. Again, due to label size and variation, Calls to Action were in small font size and black text, and therefore may have gone unnoticed.



Label for “Country 11” Retail Market – for Consumer Scanning



Label for Wholesale Export – for Supply Chain Partner Scanning

Pilot Evaluation

Scan Rate Optimisation and Audience Engagement

Beyond the invitation of the product label, there needs to be consideration of the drivers of scanning for consumers and supply chain partners. What will induce them to scan?

Benefits for supply chain partners are illustrated by this pilot video series quote from Kevin Munroe, Auckland Manager Imports Division, MG Group, New Zealand:

“In the New Zealand market, we deal with the full range of customers from supermarkets to independents, to wholesalers, to food service people, anyone that deals with fruit and produce we deal with. Our customers not only want the best product they can get at the best value they can get it. They also want clear established traceability. In addition to the regulations that we have in New Zealand, which is becoming greater and greater, our customers are becoming far more aware of where product comes from, where it’s grown, and how it’s grown. Not only is it a requirement now for us to be able to trace from a spray programme or a safety programme. It’s also very important from a variety, a seasonal base, a quality perspective. We see traceability labelling as such an important function for the authenticity of the fruit that we’re offering our customers.”

“As we know, with 700 suppliers from time to times, things will go wrong that are out of the supplier’s control. Traceability comes into its own in those situations where we can go back, we can follow the event of from the moment that product is grown to transported to arrival. We have clear indicators of how that product has travelled and where it’s come from.”

Recommendations for fostering supply chain partner scanning include instructions (in relevant languages) that can be adopted into their operating procedures, ongoing communications to foster scanning and on-pallet posters to remind staff on the ground to scan when they encounter product. It should also be noted that even if supply chain partners are not actively scanning, they value instant traceability when problems arise to track the food’s source and journey.

Benefits for consumers are illustrated by this pilot video series quote from Alex Kingi, Category Manager for Foodstuffs North Island, New Zealand.

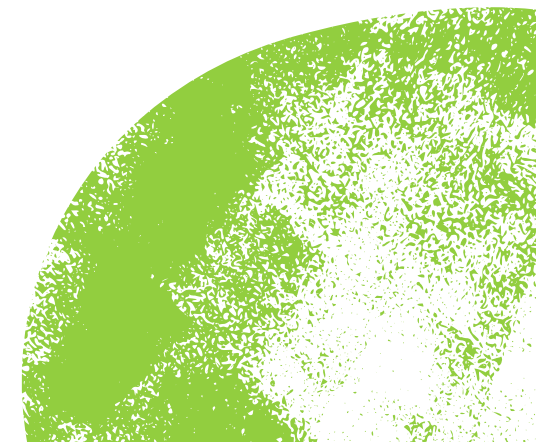
“Good traceability supports our hard work every day to meet our customer’s needs and exceed their expectations. Traceability helps us give our customers confidence about the origins and features of the fruit we sell. Customers enjoy new shopping experiences and through QR code label scanning, they can interact with the growers that produce their food and give feedback about their preferences. Good traceability helps us showcase the products that we sell to our customers.”

“Our customers are always looking forward to inspiration for their next meal. They want the best produce

from around the world. Our customers want to know where their food came from and who produced it. Our customers want to discover the story of their food and connect with the growers.

Our customers want safe, fresh, premium quality food, and good traceability gives them confidence about the food’s origin.”

Recommendations for fostering supply chain partner scanning include in-store and online merchandising and social media, which highlights the traceability features of the fruit and encourages customer scanning. Also recommended are marketing promotions, giveaways and competitions and features within the microsite app itself that foster engagement including surveys and gamification.



Fruit and Supply Chain Data and Integration of GS1 Standards

GS1 standards were integrated into fruit and supply chain data to bring harmonisation across domestic and export supply chains, and future-proof the table grape industry for global regulatory traceability requirements.

The pilot producer felt that the implementation of GS1 standards in parallel to pre-existing data had been seamless. However, its value was hard to assess due to inconsistent uptake currently across the supply chain, with low mandated requirements and participation currently in South East Asia, the primary current market for Australian fruit. The peak body felt that GS1 standard data is useful but issues for growers' implementation would be around complexity, understanding, perception of value and prioritisation of costs. It was noted that GS1 standards offer potential to support diversification into markets beyond Asia, notably USA, and to support developing domestic market requirements from Australian retailers.

All were agreed that GS1 standards within farms and across supply chains are useful and would ultimately decrease costs for industry. Scaling of costs would ideally be better across an industry as a whole, however the Table grape industry faces unique challenges because businesses are generally vertically integrated and directly competitive, rather than operating through large exporter hub businesses as seen in some other horticulture industries.

Conflicting priorities may be a barrier to GS1 standards implementation. The producer and peak body both noted that the 2022 season had presented many challenges for the Table grape industry including the ongoing effects of the Covid pandemic, disrupted logistics throughout South East Asia, weather-associated harvest pressures and competitive fruit pricing issues. Navigating these issues, and their costs, may take precedence over traceability implementation. Additionally, accreditation schemes, including traceability credentials, may also be viewed with scepticism by growers when they are not stipulated by retailers and do not provide a competitive advantage for fruit sales.



Communications, Cost Benefit Analysis Calculator and Grower Engagement

An extensive communications program shared the pilot findings with a range of stakeholders with the aim of building traceability awareness and fostering traceability adoption.

The videos and final report will also provide a standing record of the pilot. The communications program was considered to have been a success by the pilot team, and this was also evidenced by the figures for audience reach and winning an award. Engagement was greatest amongst the wider supply chain, with growers being challenging to reach. It was noted that word of mouth endorsement is vital amongst growers. The development of a Traceability Cost Benefit Analysis Calculator was welcomed as an innovative new tool for traceability implementation which would give growers the opportunity to assess value for their businesses and make their own decisions.

Grower Engagement

The pilot producer noted that the key driver for growers' participation in traceability systems is visibility of the fruit's journey after its arrival in export countries. Information about fruit unloading, storage, quality and feedback from supply chain partners and consumers is extremely valuable. Growers value systems that don't disrupt current processes and simply share scanned information into the cloud database. They want systems that have easy interoperability and have inexpensive integration with data from other sources such as pickers, contractors and temperature loggers. The peak body commented that pricing structures for traceability systems need to be available for small, medium and large businesses.

Recommendations for future grower engagement include sharing the Traceability CBA Calculator, running grower workshops to discuss traceability solutions that will work for them and participation of the peak body field team in traceability communication.

For further details on the communications program, see Appendix 4.

Grant Management

The pilot was funded through a grant of \$650,000 from Agriculture Victoria's Food to Market Program to the Australian Table Grape Association. Arranging subcontractor agreements directly with ATGA gave the peak body the leading role in the pilot. There was agreement among the pilot team that now the technology has been trialled for the Table Grape industry, future programs should be focussed on industry deployment, rather than further pilots, with a key emphasis on implementing interoperability.

Seeking grant funding for projects can require multiple attempts, and project teams wishing to run similar initiatives are advised to create a proposal that can be submitted to multiple grant bodies or programs to increase the chances of funding success.

Appendix 1: Pilot Partners

Australian Table Grape Association (ATGA)

Australian Table Grape Association (ATGA) is the peak industry body representing the nation's \$800 million table grape industry.

The ATGA works to cultivate a stronger, sustainable future for the table grape industry by improving grower productivity and profitability, maintaining and strengthening market access, investing in research, technology and marketing, sharing knowledge, connecting growers nationwide, communicating with industry, government and other stakeholders.

The ATGA was established in the early 2000s and has supported and facilitated significant growth for the industry over the past 15 years. The ATGA brought together pilot partners, provided project management and engaged industry through the communications program.

Key Pilot Personnel:
Jeff Scott, Terry Milner

Agriculture Victoria

Agriculture Victoria is a state government organisation and works in partnership with farmers, industries, communities and other government agencies to grow and secure agriculture in Victoria. Victoria is Australia's largest producer of food and fibre products, and these make up over half of Victoria's total product exports.

Agriculture Victoria provided \$650,000 of funding for the pilot from its Food to Market Program. The Food to Market Program supports businesses and organisations in the agri-food supply chain to help them undertake projects that invest in and improve supply chains. Agriculture Victoria provided project management, regulatory insights and communications support for the pilot.

Key Pilot Personnel:
Caroline Barrett

Perfection Fresh

Perfection Fresh were the producer and exporter for the pilot. Their Australian table grape farms that participated in the pilot are in the Mildura region, Victoria.

They are a home-grown company. For over 44 years, Perfection Fresh have operated as a privately owned business with a long history in agriculture and horticultural innovation.

They grow the freshest produce around. They are dedicated to creating respectful, long-lasting relationships with the Australian farming community to grow the most flavoursome produce for their customers.

They have a legacy of flavour perfection. Begun with founder Tony Simonetta, their passion for bringing customers unforgettable, fresh flavours has been handed down through the Perfection family.

They travel the world to find the best produce. Since 1978, Perfection has been searching the globe...

And when they find the absolute best, they grow, perfect, share and enjoy.

Key Pilot Personnel:
Christian Jones



Appendix 1: Pilot Partners

Result Group

Result Group is a supplier of innovative packaging technology with equipment, software & materials that help Australian businesses achieve better efficiency in their manufacturing and distribution processes. Since commencing in 2009, Result Group has developed four business units enabling the supply of Traceability technology: Product Identification, Value Added Packaging, Process Automation, Self Adhesive Materials. Result Group has 20 major partnerships with European and American brands, some of which are the largest companies in their field. Each partner has been deliberately selected based on a specific technology feature that is unique in the Australian market, offering a distinct advantage to our customers.

Result Group were the traceability technology providers for the pilot.

Key Pilot Personnel:

Michael Dossor,
Sathish Leelakrishnan

GS1 Australia

GS1 Australia is the leading provider of the most widely used global supply chain standards and services for over 25 industry sectors to improve efficiency, safety and visibility of supply chains across physical and digital channels. GS1 enables more than 22,000 Australian member companies, of all sizes, to become more competitive by implementing the GS1 system. GS1 standards are nominated by the World Trade Organisation. GS1 traceability standards were used within the pilot.

GS1 Digital Link is a GS1 standard that is used by companies to connect a wealth of product information from multiple locations to consumers, retailers, regulators, patients, clinicians and more; from a single scan.

EPCIS 2.0 is a GS1 standard that achieves granular transparency of products throughout their lifecycle, from manufacture and distribution to their end destination for enhanced traceability.

Key Pilot Personnel:

Marcel Sieira, Tracey Kelly-Jenkins



Appendix 2: Acknowledgements

The pilot team would like to acknowledge all participants who supported this pilot and provided valuable services including:

Creativa	Dana Newell Jeremy Pitman Sarah Schwab	Creative Agency
Escavox	Luke Wood	Temperature and Location Loggers
Cavallo IT Services	Joe Cavallo	Pickscan Pro
Victorian Transport Association	Peter Anderson	Logistics
Port of Melbourne	Leatrice Treharne Rebecca McLellan	Logistics
MG Group	Beena Bhana Kelly Wetere Kevin Munroe Humphrey Lawrence	Importer, New Zealand
Foodstuffs North Island	Alex Kingi	Retailer, New Zealand

Appendix 3: Future-Proofing for Traceability Regulations

Embracing traceability is a priority for growers due to increasing regulation by importing countries.

The proposed US FDA Food Traceability Rule is likely the most comprehensive set of traceability regulations internationally at present and therefore was used as the basis for data compilation and functionality within the pilot.

[Link: Discover more here](#)

The due date for this rule is January 2023, with compliance expected by January 2025.

This is an important example of traceability regulations that may be replicated by other importing countries.

GS1 consultation informed the design of the US FDA Food Traceability Rule. GS1 solution responses are available for industry which provide global GS1 standards and a common language across international industry supply chains. The GS1 Fresh Fruit and Vegetable Traceability Guideline correlates with traceability implementation within the pilot.

[Link: Traceability Guideline](#)

US FDA Food Traceability Rule

The proposed rule will apply to foods within a Food Traceability List (FTL) including

- Fruits & Vegetables (fresh-cut)
- Ready to eat deli salads
- Cucumbers
- Herbs
- Leafy Greens
- Melons
- Peppers
- Sprouts
- Tomatoes
- Tropical Tree Fruits
- Nut Butter
- Cheeses
- Shell Eggs
- Finfish
- Crustaceans
- Molluscs, bivalves

The rule will also apply to foods that contain foods on the FTL.

Under the proposed rule, all foods above will need traceability back to the farm within 24 hours in an electronic format.

FDA will also be authorised to refuse imports that do not comply with record keeping requirements.

Beyond foods on the FTL, there is also encouragement of voluntary compliance for all other foods.

The proposed rule will require compliance by food supply chain businesses undertaking these “Critical Tracking Events” (CTEs):

- Growing
- Receiving
- Transforming
- Creating
- Shipping

These businesses will need to record “Key Data Elements” (KDEs) at receipt and dispatch of food.

In this pilot, global GS1 standards were used to record KDEs:

Key Data Element	GS1 Standard
Where	GLN Global Location Number - Farm
What	GTIN Global Trade Item Number - Product Unit SSCC Serial Shipping Container Code - Logistic Unit
Data storing and sharing	EPICS 2.0 Electronic Production Code Information Services
Data Access	GS1 Digital Link: B2B and B2C connections through scanning QR code / RFID / barcode

Appendix 3: Continued

The table below provides an example set of data from the pilot.

		Fruit Master usual data format		GS1 Standards		
Critical Tracking Event (CTEs)	Key Data Elements (KDEs)	Receival	Dispatch	GS1 Standard	Receival	Dispatch
Farm	Farm	1093	1093	GLN	93777840000935	93777840000935
	Block	D	D	GLN / EPCIS 2.0	93777840000935	93777840000935
	Harvest Containers e.g. Bins, Trays	5484	5484	GTIN / EPCIS 2.0	9346244001399	9346244001399
	Picker Number	P0026	P0026	EPCIS 2.0	P101 & E0001	P101 & E0001
Item	Logistic Unit identification	129820	129820	SSCC	129820 (Non GS1 format)	129820 (Non GS1 format)
	Clam Shell or Poly Bag	NA	NA	GS1 Digital Link	https://kggqw.tn.gg/01/9346244000422/21/6JHdwbq7	https://kggqw.tn.gg/01/9346244000422/21/6JHdwbq7
	Case or Carton	NA	NA	GS1 Digital Link	https://kggqw.tn.gg/01/9346244001566/21/txdzRRDj	https://kggqw.tn.gg/01/9346244001566/21/txdzRRDj
	Batch	NA	NA	EPCIS 2.0	J14515	J14515
	Lot	NA	NA	EPCIS 2.0	J14515	J14515
	Serial Number	129820	129820	SSCC - Serial Number	129820	129820
	Commodity	Table Grapes	Table Grapes	GTIN	9346244001399	9346244001399
	Variety	Autumn Crisp	Autumn Crisp	GTIN	9346244001399	9346244001399
	Trade Item Description	Poly Bag	Poly Bag	GTIN	https://kggqw.tn.gg/01/9346244000422/21/6JHdwbq7	https://kggqw.tn.gg/01/9346244000422/21/6JHdwbq7
	Trade Item Quantity	96	96	EPCIS 2.0	96	96
	Trade Item Unit of Measure	Units	Units	EPCIS 2.0	Units	Units
Production / Processing	Processing: packing	NA	NA	GLN and GTIN – Additional Farms	93777840000935 and 9346244001399	93777840000935 and 9346244001399
	Date of processing	20/01/2022	20/01/2022	EPCIS 2.0	20/01/2022	20/01/2022
	Location Identifier	1093	1093	GLN	93777840000935	93777840000935
	Location Description	Robinvale	Robinvale	GLN	93777840000935	93777840000935
	Location coordinates	NA	NA	GLN	93777840000935	93777840000935
	Traceability personnel	NA	NA	EPCIS 2.0	Username & password	Username & password
Transit	Transit date	20/01/2022	20/01/2022	EPCIS 2.0	20/01/2022	20/01/2022
	Transit time	NA	NA	EPCIS 2.0	Date and time	Date and Time
	Transit personnel	NA	NA	EPCIS 2.0	NA	NA
	Transit document type	NA	NA	EPCIS 2.0	NA	NA
	Transit document number	320812	320812	EPCIS 2.0	320812	320812
	Transit / Shipment Identification	NA	NA	EPCIS 2.0	NA	NA
	Entry number assigned to the food	TG001 - T01	TG001 - T01	EPCIS 2.0	TG001 - T01	TG001 - T01

Appendix 4: Communications

An extensive communications program shared the pilot findings with a range of stakeholders with the aim of building traceability awareness and fostering traceability adoption. Stakeholders included producers in the table grape industry, peak bodies and producers in other horticulture industries, supply

chain partners within Australia and overseas, international retailers and consumers, Commonwealth, State and Territory governments, international governments and traceability standards agencies.

Wide media coverage was achieved. At the pilot launch, 19 media articles and

11 radio broadcasts were published, achieving an audience reach of 334,800. Throughout the pilot a series of 8 videos illustrating end-to-end supply chain traceability were made with creative agency, Creativa, and shared through social media. Other communications activities included presentations, publications and direct

communications to supply chain partners. Of all social media channels, strongest engagement was achieved through LinkedIn, particularly with the greater supply chain.

Deliverable	Achievements	Links & Comments
Webpage	ATGA Webpage with full details of the pilot and all communications assets	https://australiangrapes.com.au/traceability/
Media Releases	AGTA Minister: Victorian Government GS1 Australia Result Group	https://www.australiangrapes.com.au/atga-secures-major-pilot-project-on-traceability/ https://www.premier.vic.gov.au/getting-our-food-market-investing-agribusiness https://www.gs1au.org/what-we-do/standards/traceability
Videos	8 videos illustrating traceability in the end-to-end supply chain from Australian table grape farm to international consumer	https://www.youtube.com/watch?v=KTdk0xj6pFA Video animation of supply chain https://www.youtube.com/watch?v=XFN12V0vH1I&t=2s Video: “Our Industry” https://www.youtube.com/watch?v=YxzP6oZg3-Q&t=4s “Our Producers” https://www.youtube.com/watch?v=UdJ1VnOI9J0 “Our Technology” https://www.youtube.com/watch?v=RdX1xTtpA2A “Our Importers” https://www.youtube.com/watch?v=tKdNVDi33NI “Our Retailers” https://www.youtube.com/watch?v=3VqNX5oal2k “Our Standards” https://www.youtube.com/watch?v=49RJIP10Y0I Montage Video
Tiles	4 social media tiles	The tiles included a QR code demonstration tile which the audience could scan and gain access to a demonstration version of the microsite.
Presentations	Hort Innovation Network GS1 NGTAG Forum Growing Smarter in the Mallee International Grapes Forum DAWE Traceability Summit Retailer groups Logistics groups	
Social Media	LinkedIn, Facebook, Twitter	All pilot partners actively shared pilot communications through social media. Strongest engagement was achieved through LinkedIn, particularly with the greater supply chain.
ATGA Publications	“Pick of the Bunch” (520 growers) “The Vine” (1300 growers & industry associates)	Multiple articles and sharing of pilot videos
Agriculture Victoria Publications	Biosecurity Executive Director and Chief Plant Health Officer Newsletters Agriculture Victoria Yammer	Multiple articles and sharing of pilot videos
Supply Chain Partners	Supply Chain Partner Operating Instructions (5 languages) Perfection Fresh EDMs A5 posters on pallets	https://australiangrapes.com.au/product-verification-instructions-for-use/ Adoption of routine scanning practices by supply chain partners was encouraged through a variety of communications: Operating instructions available in multiple languages, Electronic Direct Mail (EDM) to supply chain partners, and A5 posters on pallets encouraging scanning practice.
Collaborative Partners	Victorian Transport Association Port of Melbourne MG Group Foodstuffs North Island	Collaborative partners supported development of pilot video footage through interviews and when pilot produce was handled by their businesses.
Media Coverage	ABC, FruitNet, FreshFruitPortal, Fresh Plaza, Food and Drink Business, Good Fruit and Vegetables, Packaging News, Australian Institute of Packaging, AIPIA News, PKN – APPMA, Mildura weekly, Food Technology and Manufacturing, Robinvale Sentinel, Stock and Land, Food and Beverage, Wimmera Mail, Trade Farm Machinery Industry News, Future Food Systems, The Gippsland Times, Sounds of the Mountains FM, Coonamble Community Radio	http://www.fruitnet.com/produceplus/article/186131/covid-recovery-backing-for-australian-industry-bodies https://www.freshfruitportal.com/news/2021/08/31/australian-table-grape-industry-to-carry-out-major-traceability-project/ https://www.freshplaza.com/article/9350985/atga-secures-major-pilot-project-on-traceability/ https://www.foodanddrinkbusiness.com.au/news/result-group-traceability-trial-sets-new-standard http://www.packagingnews.com.au/latest/result-group-brings-tech-to-grape-traceability-pilot https://www.foodmag.com.au/bringing-victorias-locally-grown-processed-food-to-market/ https://www.tradefarmmachinery.com.au/industry-news/2109/investment-for-victorian-food-production Aipia News https://issuu.com/aipack/docs/aip_oct2021?fr=sZGU2ZjQzMjAwNDc https://www.goodfruitandvegetables.com.au/story/6898074/table-grape-exports-head-northward/ https://www.foodmag.com.au/bringing-victorias-locally-grown-processed-food-to-market/ https://online.flipbuilder.com/YaffaMedia/vxpn/#p=61 https://www.abc.net.au/radio/southwestvic/programs/western-victoria-mildura-swan-hill-rural-report/western-victoria,-mildura-swan-hill-and-central-victoria-rural-r/13516124
Awards	Australian Institute of Packaging (AIP) Packaging Innovation and Design Awards 2022 (PIDA)	Silver “Outside of the Box Design” Award



ATGA
Australian
Table Grape
Association Inc.

33 Madden Avenue, Mildura, Victoria, 3500
enquiries@atga.net.au | +61 3 5021 5718
australiangrapes.com.au