MT21011

Foodservice foundational market insights

Segmentation Report

July 2022

Contents

Project and Segmentation Report Introduction

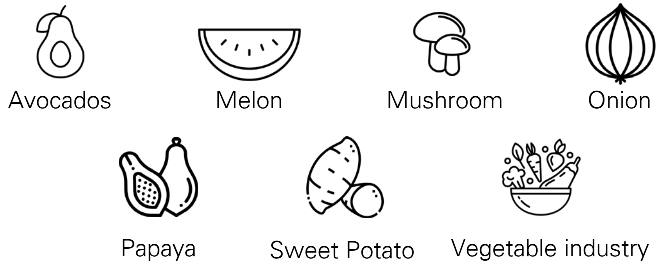
MT21011 aims to uncover foundational market insights and opportunities in the Australian foodservice sector for the horticulture industry to pursue

Introduction

Hort Innovation aim to obtain market insights on the foodservice sector and identify targeted opportunities for growers to engage directly with foodservice channels in the following sectors:

- Commercial channels (restaurants, cafés, catering, airlines, tourism and meal kits); and
- Institutional channels (Defence, health, education and mining).

This project will prioritise the following 7 horticulture categories:



Objective

The objective of this project is to support Hort Innovation by providing foundational market research into key commercial and institutional foodservice channels. The key objectives of this program are to:

- Produce timely and commercially relevant market intelligence reports;
- Understand the current foodservice macro landscape;
- Define who influences menu design and understand what criteria influences their decisions;
- Understand the role of provenance and supporting Australian horticulture categories;
- Identify what the foodservice sector like and dislike about specific Australian horticulture categories. Consider taste attributes, quality, price, supply, versatility etc.;
- Understand the nuances of each of the channels including requirements (currently met or not met), new or improved product formats, target foodservice 'consumer' segment/s and $ size of opportunity; and
- Identify targeted opportunities for growers to more effectively engage directly with foodservice channels.

Methodology

Two research methods were used to deliver the project objectives. Qualitative and quantitative data was analysed to offer a holistic perspective on the opportunities for the horticulture industry:

Quantitative analysis – desktop research:

- reviewed industry reporting;
- market sizing data;
- business directory scanning; and
- government directory scanning.

Qualitative analysis - up to 20 interviews were conducted with foodservices industry stakeholders spread across priority channels and SME's.

Market Profile and analysis ✚ **Stakeholder identification** ✚ **Strategic market considerations and opportunities**

MT21011's Phase Approach

Phase 1
Kick off and industry objectives

Phase 2
Macro insights analysis

Phase 3
Customer and channel preferences

Phase 4
Value chain map

Phase 5
Recommendations and reporting

MT21011 has a phased approach, with Hort Innovation leading the project with validation and guidance from the Project Reference Group (PRG).

The Segmentation Report integrates practical and relevant stakeholder insights highlighting foodservice channel nuances, differing attitudes and preferences

MT21011’s Phased Approach

- **Phase 1** Kick off and industry objectives
- **Phase 2** Macro insights analysis
- **Phase 3** Customer and channel preferences
- **Phase 4** Value chain map
- **Phase 5** Recommendations and reporting

The Segmentation Report is a key output of project MT21011, and was delivered to Hort Innovation at the completion of Phase 3: Customer and Channel preferences.

Segmentation Report

Through stakeholder engagement, and supplemented desktop research, the Segmentation Report highlights information on **different preferences of key attributes and categories** within each of the foodservice channels (commercial and institutional).

As part of this, insights are provided on:

- Foodservice channel growth opportunities and challenges;
- Horticulture industry’s opportunities, challenges and risks that need to be considered;
- Market drivers, trends, market entry barriers, attitudes and perceptions, menu influencers whist factoring in procurement decisions; and
- Categories of greatest growth opportunities within each foodservice channel.

Approach

The below approach was followed for the Segmentation Report development:

- 1:1 consultations with stakeholders who supply to and operate in foodservice channels in commercial and institutional sectors were conducted
- Desktop research was validated by stakeholder insights and embed metrics and values into the report
- SME insights were sought to further develop understanding and embed richness
- A PRG workshop was held to validate and receive input on findings and work done to date.

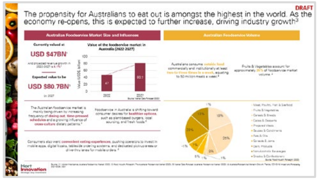
While the Market Profile provided a macro analysis of the foodservice sector, this Segmentation Report provides greater insight into each foodservice channel’s procurement influences regarding horticulture categories

Market Profile Purpose

The intent of the Market Profile report was to support the horticulture industry’s **baseline understanding of the foodservice sector**. The report **informed the project’s direction** in how each of the foodservice channels were prioritised and defined.

In its entirety, the report provided **a current state assessment** of the existing foodservice macro landscape and selected channels.

The insight attained in the report was informed by **desktop research** and macro data, thus providing an indicative high-level overview of each foodservice channel.

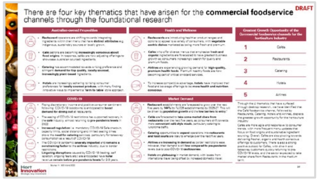


DRAFT

The propensity for Australians to eat out is amongst the highest in the world. As the economy re-opens, this is expected to further increase, driving industry growth3

DRAFT

COVID-19 recovery for Australian foodservice is expected to be steady over the next few years in the commercial sector. Institutional sectors continue to operate at relatively undisrupted levels



DRAFT

There are four key thematics that have arisen for the **commercial foodservice** channels through the foundational research

DRAFT

There is potential for the defence sector with the industry experiencing relatively undisrupted operations during COVID-19 and forecasted operational growth

Segmentation Report Purpose

The Segmentation Report aims to provide **practical and relevant information** on each of the foodservice channel’s **general requirements and attitudes**. The intention behind this insight is to equip the horticulture industry with **foundational and critical knowledge** to foster engagement with the identified foodservice channels pursued.
The Segmentation Report is an extension of the Market Profile report as it is **embedded with foodservice industry insight** that was collated through various stakeholder consultations.

As part of this report, the below themes will be highlighted:

- Foodservice channels arranged by growth opportunity for the horticulture industry
- Major opportunities, challenges and risks for the horticulture industry
- High-level consideration factors that need to be evaluated should next steps be pursued
- Foodservice channel category and format preferences
- Market drivers, appetite for change, market entry barriers, attitudes and perceptions, menu influencers and factors in procurement decisions
- Opportunities and challenges for categories within foodservice channels
- Categories of greatest growth opportunity within foodservice channels

Segmentation Report and the Project Objectives

The Segmentation Report will deliver against four of the seven project objectives:

1. Define who influences the menu and understand what their motivations are;
2. Understand the role of provenance and supporting Australian horticulture categories;
3. Identify what the foodservice industry like and dislike about specific Australian horticulture categories. Consider taste attributes, quality, price, supply, versatility etc.; and
4. Understand the nuances of each of the channels including requirements (currently met or not met), new or improved product formats, target foodservice ‘consumer’ segment/s and $ size of opportunity.

Executive Summary

Commercial and institutional foodservice channels have different requirements but fundamentally seek supply and quality assurance and cost effectiveness

Segmentation Report Key Insights

Commercial foodservice decisions are primarily **influenced by media food trends** and the **preferences of the end consumer** (profit driven), while the **institutional channels** are more **influenced by regulators** e.g. DSTG for Defence, nutritionists for health (purpose driven).

Menu design is **heavily impacted by seasonality**, with chefs incorporating particular ingredients and/or creating certain menu dishes based on warmer or cooler months (e.g. mushroom soup/casseroles in winter, melon salad in summer).

Whilst quality is an important factor in procurement decisions, many foodservice operators are **predominantly concerned about price**. Institutional foodservice channels are particularly limited by budget constraints.

An **increase in labour shortages and labour costs** in the foodservice sector is driving the **demand for ready to use product formats of fruit and vegetables** i.e. pre-sliced, peeled, diced or mixed. Cost-effective, processed, value added produce is imported making higher priced domestic processed produce less desired.

Foodservice operator procurement decisions are being increasingly **influenced by consumer preference** for **healthy, high-quality, locally grown and sustainably sourced categories**.

Assurance of supply and quality is a significant concern for foodservice operators as they aim to procure produce consistently at particular price point range and quality standards. This has been a **challenge in the last two years for operators due to environmental factors**.

Foodservice operators, particularly the institutional channels, **gravitate towards versatile horticulture categories** that are able to be cooked in various formats and dishes due to bulk purchases.

Produce fragility is a contributing factor in procurement decisions as operators significantly prefer produce that is **easy to handle, able to retain product integrity** and have a **long shelf-life**.

Foodservice operators are faced with **increased business costs** due to COVID-19 ramifications and economic conditions increasing operational, labour and transport costs.

Information was informed by stakeholder consultation insights.

From stakeholder consultations, there are universal key trends which highlight potential **opportunities** for the horticulture industry

Trend	Description	Maturity	Opportunity	Impacted Channels
Ageing population	Australia has an ageing population (those aged 65 and over) which will increase demand for aged care facilities.	↗ This trend will continue to grow as Australia's older generation is projected to more than double by 2057.[1]	This is likely to translate into growing demand for high quality and nutritious foods in aged care facilities. There is potential for the horticulture industry to capitalise on this projected growth through establishing relationships in the health foodservice channel.	⊕
Nutrition focus	Educational campaigns and national standards are influencing consumer awareness which has encouraged the incorporation of healthy and nutritious ingredients in the foodservice sector, particularly the institutional channel.	→ The focus on nutrition has been prevalent in Australia over the past few years and is likely to continue at a steady rate.	There is potential for the horticulture industry to increase engagement with Australian foodservice as a whole, however particularly with the Defence, health, education and mining channels. These foodservice channels face greater pressure through standards and guidelines and are increasing efforts to introduce healthier meals.	All
Increased need for ready to use product formats	Due to labour shortages and increased costs, it is becoming increasingly difficult for foodservice channels to do quality processing in-house.	↗ Although COVID-19 impacts on labour shortages are less severe, this trend is anticipated to grow due to increased costs.	There is opportunity for the horticulture industry to grow in foodservice channels through providing the option of various product formats e.g. shredded, diced, peeled.	All
The role of provenance	The procurement of Australian sourced produce is an integral consideration for the commercial sector due to rising consumer preference for local produce and providers. The Defence sector also have requirements to source Australian grown produce.	↗ Australians are becoming increasingly conscious and concerned about produce sources.	There is opportunity for the horticulture industry to leverage the 'locally sourced' proposition and build relationships with the commercial sector. There is also strong potential to enter into contracts with the Defence sector providers for Australian growers.	👮 🚢 ☕ 🍽
Rising Consumer Preference for Grade 1 Quality	The 'foodie culture' in Australia has lead to an increased standard for food quality, resulting in greater demand (through online blogs, word-of-mouth, social media etc.) for commercial foodservice businesses who meet these standards.	→ 'Foodie culture' has been prevalent in Australia over the past few years and is likely to continue at a stagnant rate.	As consumer preference for quality rises, commercial foodservice operators will require more fresh and premium produce to meet demands. This is a significant opportunity for Australian horticulture produce as operators will opt for locally sourced produce over imported produce (frozen, lower grade etc.).	☕ 🍽

Channel key

🍽	☕	🧺	✈	🚢	🍱	👮	⊕	🎓	⚒
Restaurant	Cafe	Catering	Airline	Tourism	Meal Kit	Defence	Health	Education	Mining

Hort Innovation
Strategic levy investment

Source: (1) Australian Institute of Health and Welfare

Information was informed by stakeholder consultation insights.

From stakeholder consultations, the prevalent key trends which highlight potential **challenges** for the horticulture industry are similar across all channels

Trend	Description	Maturity	Challenge	Impacted Channels
Increase in Seasonal Related Issues	Seasonal and environmental impacts (e.g. rain, floods, bushfires) on the price, quality and availability of produce is a significant challenge for foodservice operators as they aim to provide core menu items at a consistent price point and quality standard.	➡ Seasonal factors are relatively cyclical while natural disasters are unpredictable.	Pricing fluctuations, quality and availability of produce may lead to dissatisfaction with Australian produce by foodservice operators, potentially leading to a shift in purchase habits to imported produce.	All
Limited Category Familiarity	Certain horticulture categories (e.g. papaya) are not widely sought after in the foodservice sector due to limited awareness on taste, health benefits and recipe ideas.	↘ This trend is declining as Australians are slowly growing more familiar with these horticulture categories.	The horticulture industry is faced with the challenge of increasing familiarity of certain horticulture categories with everyday Australians in order to influence foodservice operators to consider procurement of ingredients.	All
Rising Business Costs	Businesses across the foodservice channels are facing rising labour and transport prices, increasing the cost to procure ingredients in the appropriate location and condition for use.	↗ Business costs are expected to grow due to growing input and wage costs.	Rising business costs may translate to foodservice operators increasingly focusing on price for ingredients as they are concerned about bottom line profit. This could lead to a shift in procurement decisions towards cheaper, imported produce.	All
Need for Produce with Long Shelf-life	The airline, Defence and mining foodservice channels particularly require produce with sufficient shelf-life and durability due to the complex distribution and logistical requirements in these channels.	➡ This requirement is likely to remain unchanged until logistical channels and technology improve.	Due to the fragility of certain horticulture categories, the horticulture industry must explore methods that are most effective in extending produce shelf-life and enduring bulk transport should they choose to service these foodservice channels.	Airline Mining Defence
Produce Preparation Difficulty	Certain horticulture categories (e.g. avocado) have limited desirability in the institutional channels due to the time and efforts required to handle and prepare the produce when serving large amounts of meals.	↗ This is likely to grow as labour shortages and labour costs increasingly become an issue.	It is critical for the horticulture industry to explore ways in which product format/recipes can be leveraged to increase simplicity of produce preparation in order to better engage with the institutional foodservice channel.	Education Mining Defence Health
Fruit and Vegetable Imports	Australian imports of fresh and processes fruits and vegetables has steadily increased over the last 10 years by 77%, with great variance. Australia is a net importer of processed fruits and vegetables specifically.[1]	↗ This is likely to grow with increasing cost of labour, inflation and domestic supply chain issues continuing.	Rising costs to operate business and grow fruits and vegetables may cause foodservice channels (especially channels that are particularly cost conscious) to turn to cheaper alternatives where supply is guaranteed, despite quality not being as high as what is domestically grown.	All

Channel key: Restaurant, Cafe, Catering, Airline, Tourism, Meal Kit, Defence, Health, Education, Mining

Hort Innovation
Strategic levy investment

(1) *Trading Economics, 2022.*
Information was informed by stakeholder consultation insights.

Through stakeholder consultations and synthesising insights attained through supplementary desktop research, the Meal Kit foodservice channel has been identified as having greatest growth opportunity

1 Meal Kits

- The meal kit industry is in its **growth phase**, highlighting significant opportunity for growers
- Greatest potential for **direct engagement** with channel due to a **shorter supply chain** (grower → meal kit warehouse → end customer)
- Companies have a heavy focus on **healthy meals**, **locally sourced ingredients** and **sustainability**

2 Cafes

- Significant **role of provenance** in procurement decisions due to **increased consumer consciousness on produce origin**
- Opportunity to **build relationships with operators** at local produce markets
- Need for **fresh and premium** produce with the **rise of "brunch culture"** setting higher quality standard and expectations

3 Restaurants

- The restaurants channel is highly competitive, resulting in increased **need for high quality** produce to remain competitive
- There is a **high appetite for change** and **willingness to try new produce**, highlighting low market entry difficulty
- However, restaurants are also particularly **concerned about price**, shifting demand to cheaper, imported produce

4 Catering

- Increase in **flexible and customisable food offerings**, highlighting potential for entry into the channel
- Increase in **healthy food** offerings, including vegetarian, vegan and plant based options
- However, consumers are **shifting away from traditional catering** post COVID-19, limiting growth in this channel

5 Education

- Educational institutions are increasingly **prioritising nutritious ingredients** in meals
- There is a **high affinity to sourcing local** produce
- There is **low market entry difficulty** compared to other institutional channels due to **fewer regulation and logistical complexities**

6 Health

- Australia's **ageing population** highlights opportunity in aged care facilities where there is also an **increased focus on serving nutritious meals**
- However, the health foodservice channel is **highly sensitive to price** due to budget constraints
- There are also **strict quality assurance** requirements, increasing market entry difficulty

7 Defence

- Significant priority on **procuring Australian sourced produce**
- However, there is **med-high market entry difficulty** due to **mature relationships with current contractors**
- The Defence foodservice channel also has very **complex distribution and logistics**

8 Tourism

- Hotels and resorts are increasingly meeting consumer preference for **ingredients native to the area**
- Cruise operators are primarily **concerned about price and volume**
- **Limited opportunity** due to **slow recovery from COVID-19** ramifications

9 Mining

- The mining industry is becoming **increasingly concerned about nutrition**, increasing desire for fruits and vegetables in meals
- Produce **must meet sufficient durability and shelf-life requirements** due to complex logistics in regional and remote locations

10 Airlines

- Airlines have **difficult requirements** due to **concern on taste and product integrity at altitude**
- Airlines also typically already have **mature relationships with suppliers**
- **Limited opportunity** due to industry growth forecasted to remain **below pre-pandemic levels for 2-3 years**

The methodology (page 16), elaborates on the assessment methodology in greater detail of the foodservice channels and the categories.

Each of the foodservice channels prioritise and value key attributes differently, thus contributing to varied considerations when it comes to horticultural procurement decisions

	Foodservice Channel	Market Entry Difficulty	Appetite for Change	Importance of Key Attributes Comparison				
				Provenance and Supporting Australian Produce	Sustainability	Pricing	Quality	Health and Wellness
Commercial	**Restaurants**	3	9	8	7	8	8	7
	Cafés	3	9	9	7	8	9	8
	Catering	3	8	8	7	8	8	7
	Airlines	8	5	9	7	6	6	7
	Tourism	2	7	8	7	6	8	7
	Meal Kits	3	9	9	7	8	9	8
Institutional	**Defence**	7	5	10	2	4	3	7
	Health	9	4	6	3	10	4	9
	Education	4	6	6	4	4	7	9
	Mining	7	5	7	5	9	7	8

Importance of Key Attribute 🔴 Low (1-3) 🟠 Medium (4-7) 🟢 High (8-10)

The numbers in each cell are drawn from each of the foodservice channel's pages and have been informed by the key requirements in the project scope as well as stakeholder consultations.

Hort Innovation
Strategic levy investment

The below graph highlights the relationship between each of the foodservice channel’s opportunity for the horticulture industry and market entry difficulty

The *market entry difficulty* and *opportunity* axes were determined by the ratings allocated in the previous page. Market entry difficulty ratings were informed by the consultations conducted with stakeholders who work directly within each of the foodservice channels as well as the wholesalers/distributors who service and supply into the channels. The opportunity rating was informed by 5 key criteria including provenance and supporting Australian produce, sustainability, pricing, quality and health and wellness. The 5 criterion had the same weighting. The opportunity score for each of the foodservice channels is elaborated on within their sections.

Overall opportunity key 🔴 Low opportunity 🟠 Medium opportunity 🟢 High opportunity

This key is used in each of the foodservice channels. Further elaboration is provided on the ranking in the first page of each foodservice channel.

Horticulture produce that are cost effective, versatile, hardy and demanded by consumers show signs of greatest growth opportunity

Vegetables

"Mesclun is a popular ingredient for lighter meals"
- Fruit and Vegetable Wholesaler

Vegetables, particularly **mesclun, spinach, capsicum, zucchini, lettuce, broccoli and cauliflower** are highly favoured in foodservice channels due to **cost effectiveness, versatility, availability and nutritional benefits**.

Melons

"People don't relate to melons in winter"
- Founder of Food Consultancy Group

Melons are **well liked in warmer months**, however face **decreased demand in cooler months** due to consumer perception of melons as a predominantly 'summer' fruit. Operators are also **particular about the quality and sweetness of produce**, only wanting to serve melon if it is "perfect".

Papayas

"People either love or hate it"
- Café Operator

Papayas have a **low familiarity amongst Australians**, and are therefore not commonly served in foodservice channels. Foodservice operators also have **limited awareness and knowledge on creative ways to incorporate** the fruit into dishes.

Onions

"No #1 produce used across all cuisines, however it's not a sexy product"
- Founder of Food Consultancy Group

Onions are favoured as a **cost-effective, versatile ingredient** incorporated in dishes across all foodservice channels. However, onions currently lack popularity and has **limited desirability** from consumers.

Mushrooms

"We'd like to see a variety of mushrooms served in different, interesting ways"
– Mining Foodservice Consultant

Mushrooms are **growing popularity** in the foodservice sector as a **main ingredient** in dishes. Chefs in both the commercial and institutional channels are **seeking creative ways to incorporate different types of mushrooms** in various dishes. Currently, mushrooms are **a heavily favoured ingredient in winter**.

Sweet Potato

"The healthier alternative to potato"
- Café Operator

Consumers are increasingly perceiving sweet potato as a **healthier alternative to potato**. This has led to sweet potato options becoming **more mainstream and prevalent in restaurants and cafes** (e.g. Grill'd Sweet Potato Fries). Sweet potatoes are also well liked in the **institutional foodservice channel** due to **ease in handling** and **ability to retain product integrity and versatility**.

Avocados

"Avocados are too expensive"
- Defence Partner

Avocados are **highly popular and well liked in the commercial channel**, supported by **prominence in media and the rise of 'brunch culture'**, creating a large following amongst Australians. However, avocados are **perceived to be expensive, fragile** and are **less commonly considered by channels that do not operate to generate profit** such as the health, Defence and education foodservice channels.

Information was informed by stakeholder consultation insights.

From our consultations with stakeholders, below are areas identified to be key considerations that the horticulture industry will need to address when taking next steps

Market-specific awareness and the supply chain needs are an important consideration. Accurate information on the end-use of categories, will help **identify opportunities to reach the foodservice channel customer better through supply chain efficiencies**. This has potential to help growers **produce more strategically**.

The supply and demand relationship is a **foundational economic principle** that can help growers forecast **how much to produce and when more accurately**. There have been cases of premium produce being oversupplied to the point where the profit margins severely reduce. The trade off as well in over-supply is that there can be a drop in quality which can affect consumer and client relationships and perceptions.

Relationship development with the wholesalers/suppliers, food processors and contractors who supply to and prepare meals for the foodservice channels are key in **leveraging opportunities to grow in identified foodservice channels**. **Direct contact** is required as it is a very **competitive** market landscape in supplying to foodservice, particularly in **commercial channels** where a premium exists.

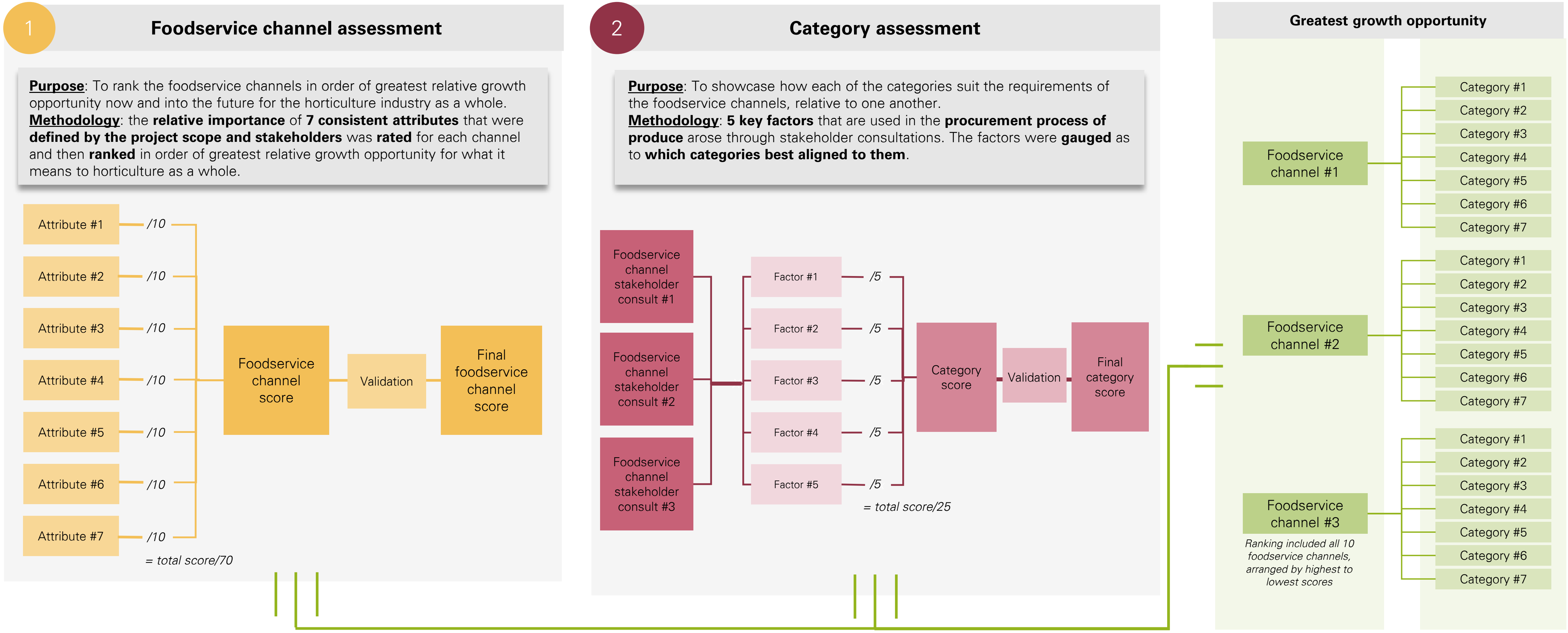
Adaptability is key in **meeting constantly changing market requirements**. Commercial foodservice channels have a greater appetite for change in comparison to the Institutional channels due to changing consumer preferences. Consequently, the horticulture industry needs to be able to flex and adjust in a timely manner, or predict opportunities that arise from emerging trends, to remain relevant and competitive.

ESG is becoming an **increasing priority for many businesses**. Business strategies and their missions are shifting to accommodate to this new set of standards. These non-financial factors showcase **how advanced a business is with sustainability and ethical impact**. More end-use clients, particularly in big corporates, are adopting ESG. The horticulture industry needs to respond and acknowledge how they align and have changed to accommodate the ESG principles as this is expected to influence how much a supplier may be used.

Horticultural produce that can be **utilised in numerous ways that have different textures and take on various flavours**. Sweet potatoes, for example, can be served as mash, chips, in curries, stews and soups. The horticulture industry can highlight versatility of various categories to **inspire produce to be used differently**.

Methodology

The Segmentation Report ranks the foodservice channels in order of greatest growth opportunity for the horticulture industry. Individual categories within each channel are also ranked by their alignment to these opportunities



1 Foodservice channel assessment

Purpose: To rank the foodservice channels in order of greatest relative growth opportunity now and into the future for the horticulture industry as a whole.
Methodology: the **relative importance** of **7 consistent attributes** that were **defined by the project scope and stakeholders** was **rated** for each channel and then **ranked** in order of greatest relative growth opportunity for what it means to horticulture as a whole.

2 Category assessment

Purpose: To showcase how each of the categories suit the requirements of the foodservice channels, relative to one another.
Methodology: **5 key factors** that are used in the **procurement process of produce** arose through stakeholder consultations. The factors were **gauged** as to **which categories best aligned to them**.

Greatest growth opportunity

Ranking included all 10 foodservice channels, arranged by highest to lowest scores

Further detail of each of the assessments is provided over the next two pages.

Ranking the importance of 7 key attributes helped identify the nuances between each of the commercial and institutional foodservice channels

1

The **foodservice channel assessment** aimed to showcase the extent of fundamental values, attitudes, and perceptions held by the sector. The 7 attributes that foodservice channels were assessed against were informed by the MT21011 project scope and thematics that arose in stakeholder consultations.

Market Entry Difficulty

Hindrances that would make it difficult for the horticulture industry to enter a given the foodservice channel.

Appetite for Change

Actively responds to changing and evolving needs and wants of their consumers and target markets.

Supporting Australian Produce

Sourcing fresh produce that are domestically grown and supplied.

Sustainability

Sourcing fresh produce that have adopted sustainable growing and supply chain practices.

Pricing

Driven by price and how price sensitive they are.

Quality

Quality of produce in terms of colour, appearance, texture and flavour.

Health and Wellness

Values offering a nutritious and well-balanced menu.

These attributes were placed on a scaling system (1 indicating low importance, and 10 indicating great importance). They provide a holistic foodservice channel profile that indicates how certain attributes influence the foodservice channel's procurement decisions, degree of difficulty if further expansion in the channel is pursued, and the foodservice channel's general response to change.

Through the assessment of the 7 key attributes, and noting the project intent and the desires amongst the horticulture industry, the foodservice channels were ranked in order of growth opportunity. This ranking was informed and validated by stakeholders and subject matter experts.

Through the category assessment methodology, sweet potato, vegetables, onions and mushrooms show signs of greatest growth opportunity amongst the foodservice channels

2

The **category assessment** aims to highlight which of the categories displayed greatest growth opportunity and why. Each of the foodservice channels had a unique set of 5 factors that were emphasised by stakeholders as being most desirable traits when procuring horticultural categories, and formulating menu offerings. These factors (shown below) differ between each of the commercial and institutional foodservice channels.

- Menu compatibility
- Ease of preparation
- Ability to retain taste and flavours
- Cost effective
- Hardiness
- Standard of quality needed
- Long 'fresh' shelf-life
- Nutritional value
- Consumer desirability
- Can be easily value-added through different product formats
- Versatility
- Ability to retain shape and textural integrity
- Palatability
- Overall liking

The 7 categories (sweet potato, vegetables, onions, mushrooms, papayas, melons and avocados) were rated out of 5 (5 being an indication of being highly favourable, and 1 being an indication of being less favourable).

The tally of the individual scores produced a total out of 25 for each category. The higher the number, the greater the potential of growing and having successful market penetration in the foodservice channel. This ranking was validated by stakeholders and subject matter experts, especially for categories that received the same score to ensure ranking was sound.

Commercial Channel Segmentation

Overall, the commercial foodservice channels is highly competitive. The suppliers and wholesalers who provide produce to these channels need to ensure they remain competitive in terms of price, quality and freshness

The commercial foodservice sector comprises of 6 key channels as per below.

Restaurants

The restaurant industry includes licensed, unlicensed, BYO and Quick Service Restaurants (QSR).
Restaurants are very consumer-focused and rely on marketing, good service, value and quality food to stay competitive and profitable.

Cafés

Cafés include small eating and drinking establishments that have a limited menu offering that consists of breakfast and lunch items, with a greater emphasis on sweet food items and coffee.
The café landscape is very competitive, particularly in major cities.

Catering

Catering operators arrange the preparation, delivery and presentation of cold and hot foods at specified locations or events.
Caterers are trying to increase their margins and market share by being more agile to changing consumer trends and requirements.

Airlines

The airline industry consists of domestic and international airlines that have foodservice as a component of the in-flight experience.
Airlines often assess how the in-flight experience can be improved, as part of this, foodservice is looked into as well.

Tourism

Tourism includes hotels, resorts and cruises operating in Australia and offer foodservice as part of their offering.
Tourism has been hard hit as a result of COVID-19, and are becoming increasing purchasers of lower-grade produce in large volumes.

Meal Kits

Meal kits include any service that sends pre-portioned ingredients and recipes to customers, usually as a subscription service.
The demand for Meal Kits boomed during the pandemic lockdowns, and is a growing space that directly procures from growers.

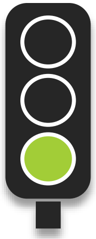
Each of the foodservice channels underwent an assessment that aimed to showcase the fundamental values, attitudes, and perceptions held by the sector.
The assessment included 7 key attributes *(market entry difficulty, appetite for change, supporting Australian provenance, sustainability, pricing, quality, and health and wellness).*

The methodology (page 16), elaborates on the assessment methodology in greater detail of the foodservice channels and the categories.

There is high potential to engage with **restaurants** as operators are agile and willing to try new ingredients and sources to best meet consumer preferences

Restaurants

Degree of Opportunity



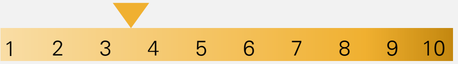
High opportunity

Restaurants have high opportunity for the horticulture industry due to the increase in consumer focus on fresh, high quality produce and it's impact on restaurant procurement decisions. In the short term, high imported produce prices (due to increased transport and labour costs) will influence demand from imported goods to Australian sourced produce as restaurants are also heavily concerned with cost effectiveness.

Important Foodservice Channel Insights

- The restaurant foodservice channel is **highly competitive**, with failure to offer a **reasonable price or quality proposition** leading to industry exits. [2]
- With the rising prevalence of foodie culture on social media platforms, reviews and rating are crucial, resulting in operators increasingly focusing on **enhancing quality standards** to differentiate themselves.[2]
- Consumers are increasingly **valuing restaurants with locally sourced produce** and who are **transparent** with produce origin. However, the emphasis placed by customers on provenance is highly dependent on the type of restaurant. [2]
- **Rising awareness of sustainability** is putting pressure on restaurants to implement environmentally friendly practices such as **reducing food waste and sourcing sustainable produce**. The level of concern on sustainability is highly dependent on the price bracket of the restaurant (e.g. top end restaurant vs QSR). [2]
- Menu designs are partly dependent on **price and availability of produce** which is determined by **seasonal and environmental factors** e.g. rain, floods, bushfires. Chefs are constantly changing menus to accommodate accordingly. [1]
- With **nutrition labelling requirements on the rise**, restaurant operators are becoming **more conscious about ingredient choices** in their menu offerings . [1]

Market Entry Difficulty



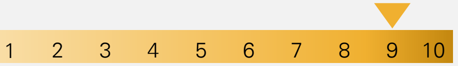
Low Market Entry Difficulty

Great Market Entry Difficulty

Market entry difficulty is low. Although the industry is highly fragmented, growers can build relationships with major distributors to effectively engage with the channel. Furthermore, as restaurants frequently change food offerings, operators are more open to engage with different growers.

Ratings were informed by stakeholder consultation insights.

Appetite for Change



Low Appetite for Change

Great Appetite for Change

High appetite for change as they work to meet changing consumer preferences. As the industry is highly competitive, operators need to be agile and responsive to changes in the market demand, actively trying to differentiate from competitors with a unique offering.

Ratings were informed by stakeholder consultation insights.

Who Influences the Menu

- Chefs typically develop menus with their specialty and creative insights. [2]
- Restaurants are influenced by mainstream preference and palate. [2]
- With the rise of 'foodie culture', restaurants are being particularly influenced by foodie preferences shared online.[2]

Significance of Key Attributes

Provenance and Supporting Australian Produce

Low importance and/or significance

Great importance and/or significance

Sustainability

Low importance and/or significance

Great importance and/or significance

Pricing

Low importance and/or significance

Great importance and/or significance

Quality

Low importance and/or significance

Great importance and/or significance

Health and Wellness

Low importance and/or significance

Great importance and/or significance

Ratings were informed by stakeholder consultation insights.

Source: (1) Wholesaler for restaurants (2) Restaurant Owners

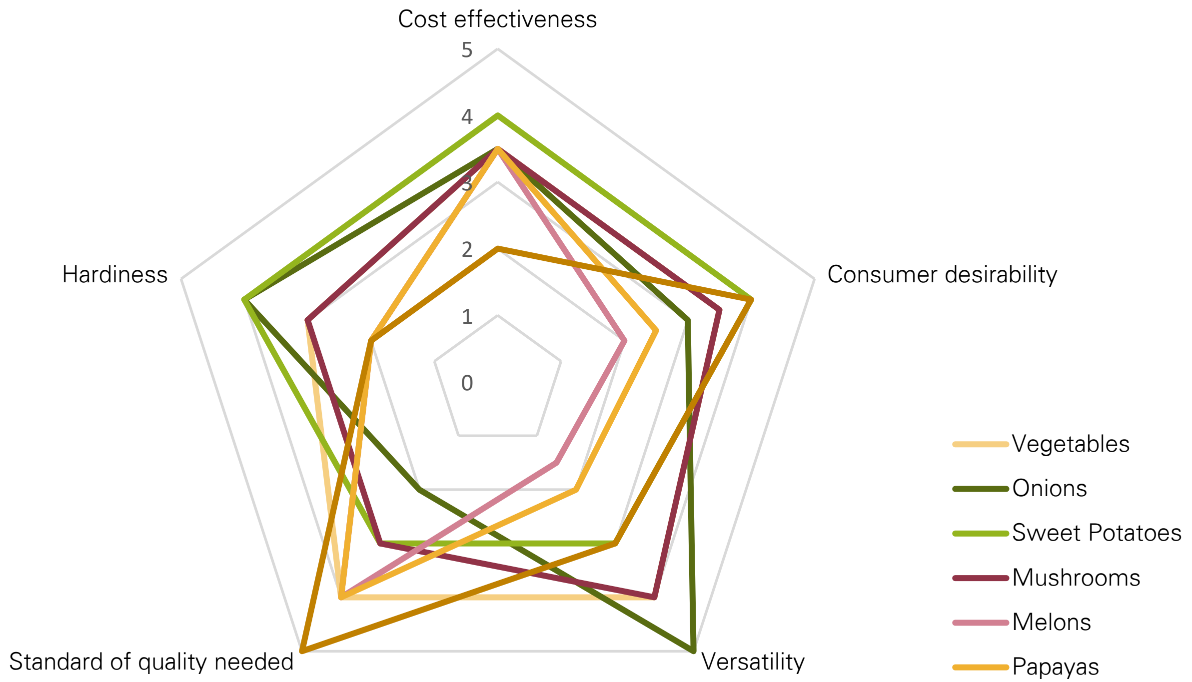
Freshness and top quality requirements often drive operators to source local produce over imported options

Restaurants

Category of Greatest Growth Opportunity

Ranking	Category	Score
1	Vegetables	18
2	Sweet Potatoes	18
3	Onions	17.5
4	Mushrooms	17
5	Avocados	16
6	Papayas	14
7	Melons	13

Extent that each Category fulfils Restaurant requirements



5 is an indication of being highly favourable, and 1 is an indication of being less favourable in fulfilling restaurant requirements. Ratings were informed by stakeholder consultation insights.

Hort Innovation
Strategic levy investment

Restaurant operators look to showcase the quality of premium ingredients to remain relevant and competitive in the market

Restaurants

Opportunities and Challenges for Categories

- **Avocados** have had a recent surge in popularity in recent years and is becoming a staple add-on for burgers, wraps, sandwiches, salads and dips (e.g. guacamole). However, avocadoes are extremely fragile and requires care to avoid bruising and browning, increasing time and efforts expended on produce.
- **Melons** aren't commonly served in restaurants. Though well liked amongst consumers, melons have limited compatibility with restaurant food offerings. Melons may be served as part of a dessert or salad, however restaurant operators typically opt for other fruits such as apple or berries. If incorporated, restaurants are typically stringent on the quality and sweetness of melons, posing as a challenge.
- **Mushrooms** are a core vegetable used in various restaurant savoury meal offerings. However, as mushrooms are typically sauteed or processed in stews, soups and sauces, most restaurant operators are not looking for premium quality.
- **Onions** are one of the most versatile and commonly incorporated categories in restaurants due to its use as a base ingredient in savoury dishes. It is also prominent across many cuisines, highlighting opportunity due to the growing influence of multi-cultural foods. Onions are easy to purchase in bulk, easy to store and sturdy compared to other vegetables.
- **Papayas** are prominent in South-East Asian dishes (e.g. Thai green papaya salad), however are less common and do not have a strong presence in western cuisines. This poses as a challenge for the papaya industry due to limited familiarity. Education on how papaya can be incorporated and used would help with the familiarity and versatility of produce.
- **Sweet potatoes** are becoming increasingly mainstream in the restaurant industry as a healthy alternative to potatoes e.g. sweet potato fries, sweet potato mash. This trend is in line with the shift in Australian dietary and nutritional preferences and is anticipated to grow. Sweet potatoes are also less fragile and have a longer shelf-life than other vegetables, appealing to restaurant operators.
- **Vegetables**, predominantly lettuce, spinach and tomato, have a strong presence in the restaurant foodservice channel (particularly in QSRs). Vegetables are also a versatile ingredient, used across various menu offerings. As the freshness and quality of these horticulture categories are particularly important, there is high opportunity for the Australian vegetable industry to build relationships with operators and highlight provenance as a targeted marketing strategy.

Source: opportunities and challenges category insights were informed by wholesalers for restaurants and restaurant owners.

Procurement Decision Influences

Quality

Restaurant operators are being increasingly influenced by the level of produce quality. As restaurant patrons become more focused on high quality and premium ingredients when dining out, operators must adhere to a high standard to remain competitive in the market. [2]

Cost Effectiveness

Although quality does play a significant factor in procurement decisions, pricing is a primary concern and restaurant operators are constantly trying to find a balance between the two. Particularly for low to middle end restaurants, produce costs tend to influence volumes purchased and/or incorporation into food offerings. [1]

Media Trends

Types of ingredients used are becoming increasingly influenced by trends and presence of food in TV shows (e.g. MasterChef) and social media (e.g. Instagram and Tiktok). Chefs tend to incorporate produce that have become a huge sensation online and globally. [2]

Source: (1) Wholesaler for restaurants (2) Restaurant Owners

The increased role of provenance and supporting Australian produce highlights high opportunity for the horticulture industry

Cafés

Degree of Opportunity

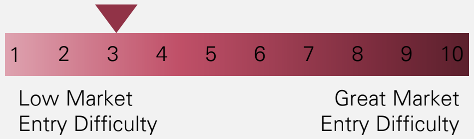
High opportunity

Cafes have high opportunities for horticulture categories due to the increased role of provenance and rising consumer preference for Australian sourced and sustainably grown produce. As independent businesses typically differentiate themselves based on quality, café operators are also increasingly focusing on fresh, premium produce to meet heightened consumer expectations.

Important Foodservice Channel Insights

- Large café businesses typically source produce from **major wholesalers and commercial distributors**. On the other hand, it is common for independent café owners to **directly interact with growers** at local produce markets. [1]
- Consumers are increasingly wanting to know **where their ingredients are sourced** and **whether cafes are supporting local farmers**. The founder of a boutique food service consultancy group found that cafes "will struggle to charge a premium if they are unable to **provide a story** on ingredients". Particularly for independent café businesses, there is a certain affinity for produce **local to the area.** [3]
- Cafes typically have **core menu items** which require certain produce year round (e.g. onions, tomatoes, avocados). There is also a **rise in "specialty menu items"** where café operators and chefs will actively search and **incorporate unique, seasonal, exotic produce** (e.g. lemonade – mandarin x lemon hybrid). [2]
- An **emphasis on quality** due to the rise of "brunch culture" across the café industry has led to independent coffee houses growing at a faster rate than coffee chains. Consumers are increasingly seeking high quality and experience at cafes which they associate with independent businesses. [4]
- Due to the **rise in health consciousness**, cafes are increasingly **incorporating fruit and vegetable juice/smoothies** in their menu offerings. [2]

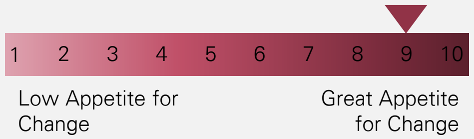
Market Entry Difficulty



Market entry difficulty is low. Although the industry is dominated by a high number of independent businesses, there are various channels (e.g. commercial distributors, grower markets) growers can use to engage with cafes.

Ratings were informed by stakeholder consultation insights.

Appetite for Change



Cafes have a high appetite for change, developing new menus as they seek to differentiate themselves. In particular, operators have a keen appetite to try unique, specialised ingredients that can support a point of difference to their café.

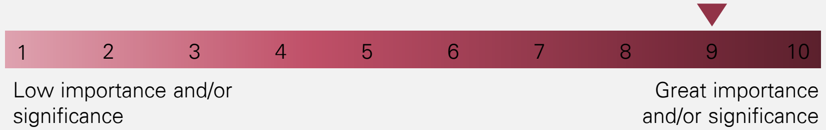
Ratings were informed by stakeholder consultation insights.

Who Influences the Menu

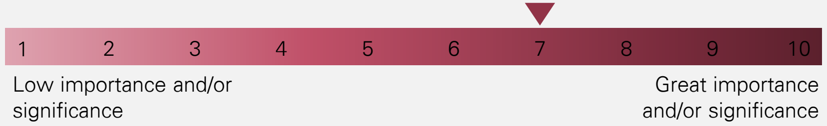
- Café menus are influenced by the preferences and palate of their patrons, particularly coffee consumers as coffee remains a large segment in café business. [2]
- 'Brunch culture', a millennial trend, has influenced the level of creativity and gourmet offerings on café menus. [2]

Significance of Key Attributes

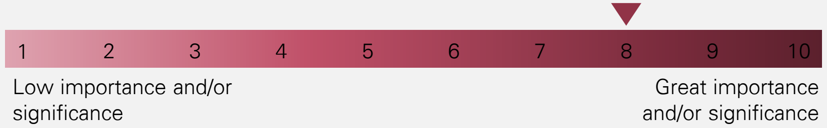
Provenance and Supporting Australian Produce



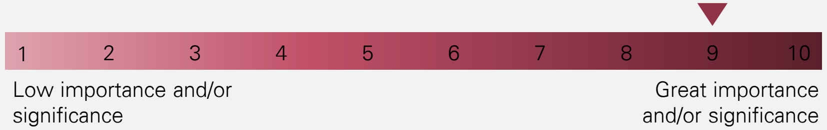
Sustainability



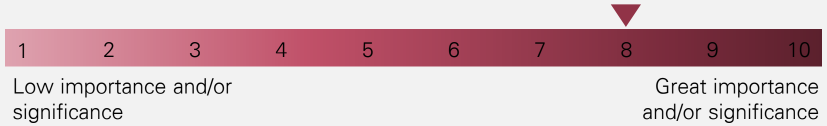
Pricing



Quality



Health and Wellness



Ratings were informed by stakeholder consultation insights.

Source: (1) Wholesaler for cafes (2) Cafe Owners (3) Foodservice Consultant (4) IBISWorld

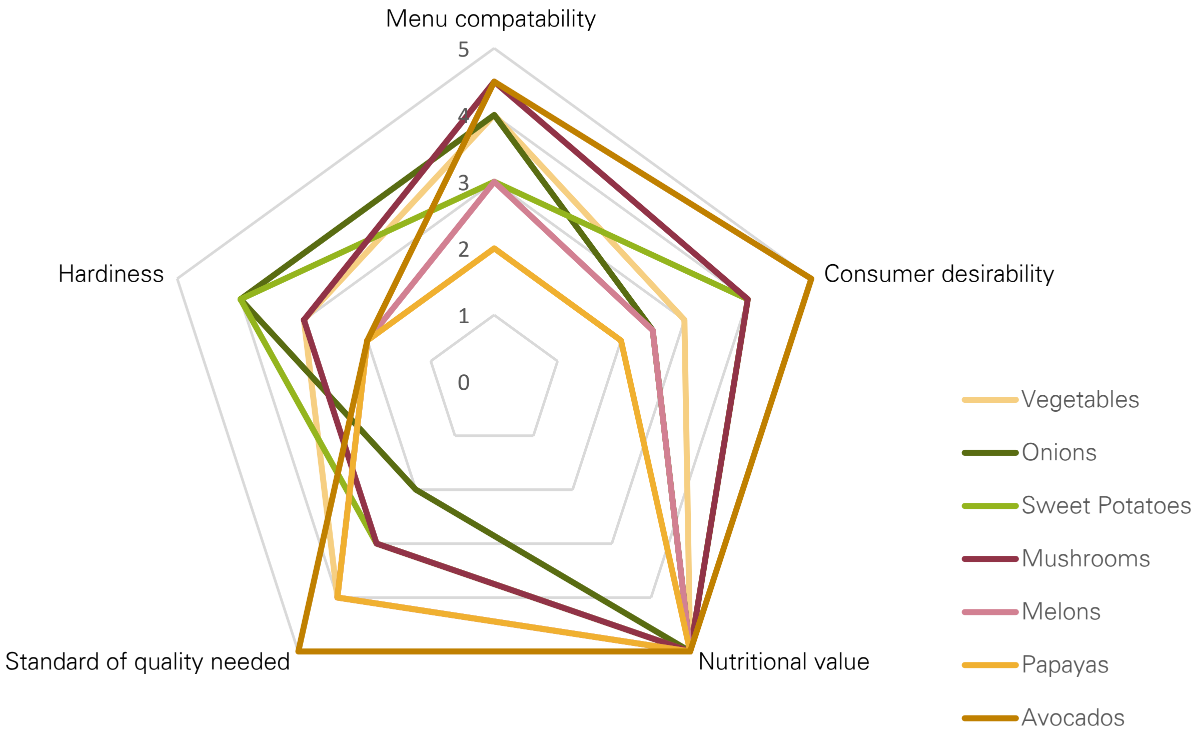
Avocados are highly favourable in the café channel predominantly due to its popularity and prominence on brunch menu offerings

Cafés

Category of Greatest Growth Opportunity

Ranking	Category	Score
1	Avocados	21.5
2	Mushrooms	19.5
3	Vegetables	19
4	Sweet Potatoes	19
5	Onions	17.5
6	Melons	16.5
7	Papayas	15

Extent that each Category fulfils Café requirements



5 is an indication of being highly favourable, and 1 is an indication of being less favourable in fulfilling café requirements. Ratings were informed by stakeholder consultation insights.

Freshness and quality of produce is particularly important for cafes as consumers hold higher expectations for independent café businesses

Cafés

Opportunities and Challenges for Categories

- **Avocados** are now a staple ingredient year round for cafes, supported by the rise of "brunch culture". Avocado on toast, amongst other avocado centric dishes, are extremely prominent in media and has become a sensation globally, highlighting significant opportunity for the avocado industry.
- **Melons** are popular in salads which are prominent on café menus. They are also becoming increasingly popular as an ingredient used in juice/smoothies. Due to the rise in health consciousness amongst consumers, café operators are growing their healthy fruit drink alternatives to traditional hot drinks. However, melons are strongly favoured in summer months and face changing consumer preferences in winter.
- **Mushrooms** are strongly favoured in breakfast meal offerings which is a prominent segment in cafes. There is growing popularity for mushrooms as the main ingredient in café dishes e.g. mushroom shakshuka, wild mushrooms on toast. These dishes are particularly popular as vegetarian and vegan options due to the flavour and versatility of mushrooms. Café chefs are also increasingly incorporating unique types of mushrooms in meals as a specialized item, adding a gourmet touch to dishes.
- **Onions** are one of the most commonly incorporated horticulture categories in cafes due to its use as a base ingredient in savoury dishes. However, onions have limited desirability and popularity in media. Insights on how onions can be more creatively incorporated and emphasized in dishes can be made.
- **Papayas** are not widely used in cafes due to unfamiliarity with the fruit amongst Australian consumers. Café operators also have limited awareness on how to incorporate papaya into more of their dishes.
- **Sweet potatoes** are becoming increasingly prominent in cafés as a healthy alternative to typical potato offerings e.g. sweet potato hash. However, the horticulture category has limited versatility and there is potential to inspire creative ways on how to incorporate sweet potato in breakfast and brunch items.
- **Vegetables**, particularly lettuce and mesclun, are common produce incorporated in café menu offerings such as salads, wraps and sandwiches. As freshness and quality is particularly important for these ingredients, cafes will typically seek local produce over imported vegetables. This is particularly important as cafes increasingly push high quality value propositions.

Source: opportunities and challenges category insights were informed by wholesalers for cafes and café owners.

Procurement Decision Influences

Seasonality

Availability of produce due to seasonal and environmental factors impact procurement decisions. For instance, the availability of mangoes in June 2021 saw many cafes serving mangoes throughout winter. Ingredients incorporated in menu dishes is also influenced by consumer seasonal preferences e.g. curries and soups in winter and salads in summer. [2]

Quality

The café industry is dominated by small, independent businesses who differentiate themselves based on quality. As consumers expect fresh, high quality produce at cafes, operators will often focus on quality of ingredients when procuring items to meet these standards. [3]

Australian Sourced

There is an increasing consumer preference for ingredients native to the area. Through offering Australian organic produce or specialty ingredients, cafes are able to capitalise on the locally sourced value proposition. As such, café operators lean towards Australian sourced produce over imported goods. [1]

Hort Innovation
Strategic levy investment

Source: (1) Wholesaler for cafes (2) Cafe Owners (3) Foodservice Consultant (4) IBISWorld

Catering operators are becoming more versatile and creative with menu options. Shifting from traditional menu items to more diverse, multi-cultural cuisines

Catering

Degree of Opportunity

High opportunity

The catering foodservice channel high opportunity for growth as they trend towards healthier and higher quality menu options. As fruits and vegetables are an important segment in corporate and event catering, there is significant opportunity for growers. These catering businesses also have a high appetite for change for produce, suppliers, menu items etc. highlighting potential for horticulture industry entry.

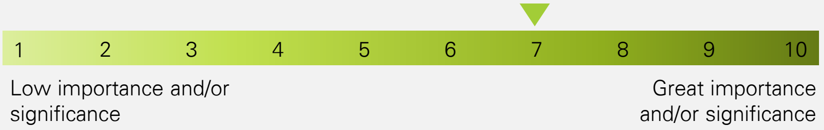
Important Foodservice Channel Insights

- Private businesses and events are **shifting towards local caterers** who offer more **flexible and customised menu offerings**. As such, catering businesses are focusing on innovative dishes as a point of difference. [1]
- Catering companies, particularly corporate caterers, are slowly **moving from typical menu offerings** e.g. sandwiches to **incorporating a variety of flavours and multi-cultural cuisines** e.g. Vietnamese, Lebanese. [2]
- There is rising consumer preference for **healthier food options**, as well as the provision for **various dietary requirements** e.g. vegan, vegetarian, gluten free, nut free.[2]
- Although operators are **gradually returning back to buffet style catering** post COVID-19 restrictions, **individual servings and takeaway catering remain prevalent**. [2]
- Caterers **operate on a budget per person** basis. **Rising produce costs are influencing menu offerings**. As typically 'cheaper' menu items e.g. sandwiches grow in cost, operators are substituting these with higher value dishes. [2]
- **Fruit is an important segment** in catering, typically served in fruit salads, fruit platters or fruit bowls. Corporate caterers will typically have a **regular supply of fresh, seasonal fruit** on a weekly basis. [2]

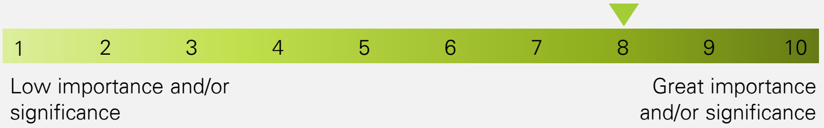
Significance of Key Attributes

Provenance and Supporting Australian Produce

Sustainability

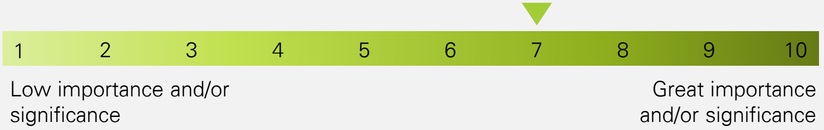


Pricing



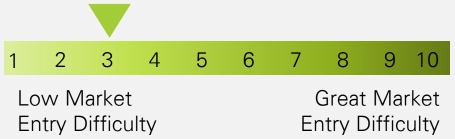
Quality

Health and Wellness



Ratings were informed by stakeholder consultation insights.

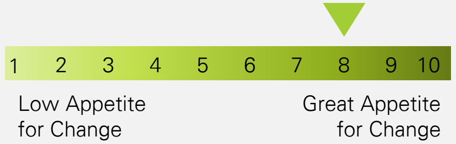
Market Entry Difficulty



Similarly to the restaurant and café foodservice channel, market entry into catering has low difficulty due to flexible arrangements with wholesalers and distributors and willingness to work with various produce and suppliers.

Ratings were informed by stakeholder consultation insights.

Appetite for Change



As catering businesses become increasingly flexible through customised menu options to meet consumer demand, appetite for change is also growing as they seek to try new ingredients and recipes as a point of difference.

Ratings were informed by stakeholder consultation insights.

Who Influences the Menu

- Catering menus are predominantly influenced by client preferences. Many small catering businesses typically work together with clients to create a menu and to understand likes and dislikes. [2]
- Dietary requirements and options are also a critical aspect when creating menus. [2]

Hort Innovation
Strategic levy investment

Source: (1) Wholesaler for catering (2) Catering Chef

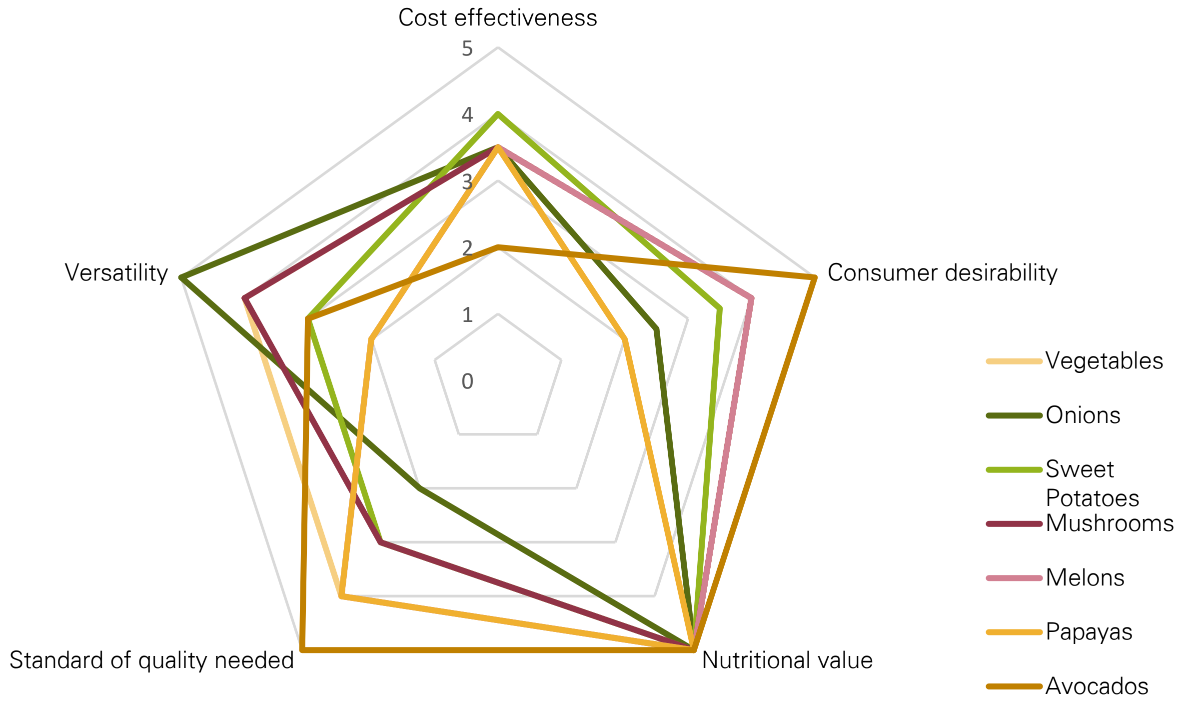
Produce with high consumer desirability have the greatest growth opportunities as catering menus are predominantly influenced by client input

Catering

Category of Greatest Growth Opportunity

Ranking	Category	Score
1	Vegetables	20.5
2	Avocados	20
3	Mushrooms	19.5
4	Melons	18.5
5	Sweet Potatoes	18.5
6	Onions	18
7	Papayas	16.5

Extent that each Category fulfils Catering requirements



5 is an indication of being highly favourable, and 1 is an indication of being less favourable in fulfilling catering requirements. Ratings were informed by stakeholder consultation insights.

Hort Innovation
Strategic levy investment

Though prioritisation is highly dependent on client, quality and price are the greatest considerations of catering businesses when procuring ingredients

Catering

Opportunities and Challenges for Categories

- **Avocados** are highly desired by consumers in the catering channel due to popularity in media and trends in restaurants and cafes. Avocados are commonly incorporated in salads e.g. pear, rocket and avocado salad. From a catering chef perspective, these salads are a safe, well liked dish that is relatively easy to prepare and serve. However, caterers face supply issues and consistency with availability, price and quality.
- **Melons** are popular amongst clients, particularly during summer. Melons are typically sliced and served on fruit platters. However, while COVID-19 restrictions continue to linger, many catering services are shifting towards single serve fruit e.g. mandarins, apples, bananas and pears that do not require preparation. For fruit platters, catering chefs prefer to use melons due to longer shelf-life and ease of handling compared to other fruits.
- **Mushrooms** are strongly favoured in the catering foodservice channel as they provide strong, well liked flavours in savoury dishes, particularly various soups, stews and sauces. Caterers will also commonly incorporate mushrooms in salads and roasted vegetable sides. Mushrooms are also particularly popular as an ingredient for vegetarian and vegan options. This is a growing segment in the catering space, highlighting potential for the mushroom industry.
- **Onions** are a commonly used produce across various savoury dishes. Onions are also extremely versatile and incorporated in a range of different cuisines, highlighting opportunity due to the rise in multi-cultural dishes in the catering foodservice channel. However, as caterers are highly influenced by customer preference, onions are not a focus due to limited desirability as a stand-alone ingredient.
- **Papayas** are a well liked option for fruit platters, however are not typically procured on a weekly basis due to limited versatility and short shelf-life. Catering operators will generally only use papaya sliced on fruit platters and have limited knowledge on different ways to incorporate the fruit in other catering dishes.
- **Sweet potatoes** are popular amongst consumers as a healthy option, particularly with the rise of health consciousness amongst Australians. It is also a well liked horticulture category in the catering space as it is easy to cook in meals and easy to serve as a catering dish.
- **Vegetables**, particularly broccoli, potato, squash, mesclun, lettuce and spinach are popular ingredients as part of roasted vegetables and salads. Vegetables are becoming increasingly incorporated in catering dishes as private businesses and events desire more healthy and lighter options.

Source: opportunities and challenges category insights were informed by wholesalers for catering and catering chefs.

Procurement Decision Influences

Quality

Catering operators place a significant focus on quality and freshness of produce to improve the experience of work/events. This is particularly important for catering businesses as they build relationships with their clients and seek to meet high customer expectations. [2]

Cost Effectiveness

Balancing price and quality is important for catering businesses as they seek to procure fresh and high quality produce within their budget per person. The priortisation of price is highly dependent on the type of catering service, with corporate catering typically focusing on quality more than price due to higher budgets. [1]

Versatility

With the rise in more customisable menus and increasing consumer preference for variety, versatility of produce is a high consideration of catering operators. Chefs tend to gravitate towards produce that are able to be incorporated in a range of ways across various cuisines. [2]

Hort Innovation
Strategic levy investment

Source: (1) Wholesaler for catering (2) Catering Chef

Airlines invest resources into the research on taste, texture and overall aesthetic of food served in-flight, as air pressure and dry atmospheres affect passenger palettes

Airlines

Degree of Opportunity

Low opportunity

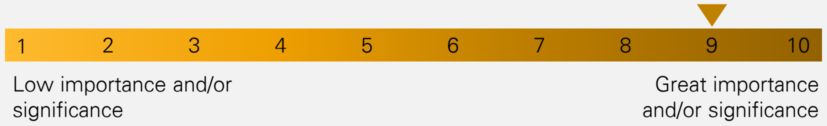
Airlines have low opportunity for the horticulture industry. Airlines are looking to see how the in-flight meal experience can be improved. Vegetables will be a key area for airlines if further engagement with airlines is desired as certain vegetables like potatoes, onions, sweet potato and mushrooms can retain their flavour and integrity more easily at altitude.

Important Foodservice Channel Insights

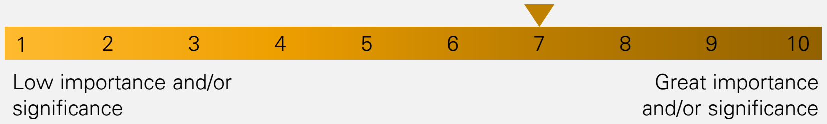
- Airlines invest a lot of **time and research** into how a foods **taste, texture and flavour** can be 'normal' as if they were consumed by passengers on the ground. The combination of dryness and pressure in an aircraft **reduces the sensitivity of taste buds to sweet and salty foods** by around 30%. [1]
- **International flights have a lot more focus** than domestic flights when it comes to foods served on board as well as the design and presentation. [1]
- **Food is the cheapest component** of the foodservice experience for Airlines. The complexity and cost is mainly associated with transport, storage, movement, cleaning and recycling efforts to get the food to the passenger. Therefore, a lot of airlines look at ways to streamline the supply chain to lower costs, and improve efficiency. [1]
- Airlines are increasingly looking at how they can make their **food operations more sustainable** i.e. recyclable food packaging and compostable cutlery. Airlines want to dispose of all wastage that is produced from a flight, reusing food utensils and plates is not an option as it is a cost to the business (cleaning labour), and may increase food safety concerns. [1]
- There is a shift towards **improving the economy class experience** by shifting from frozen to **fresh foods** that includes salads, and fresh fruits and vegetables. [1]

Significance of Key Attributes

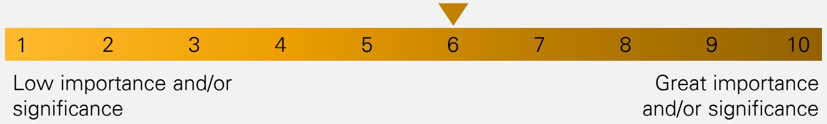
Provenance and Supporting Australian Produce



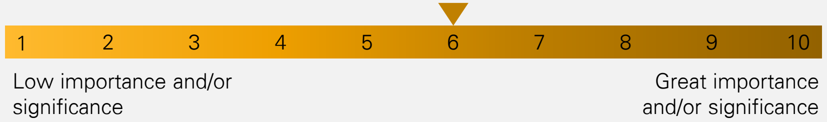
Sustainability



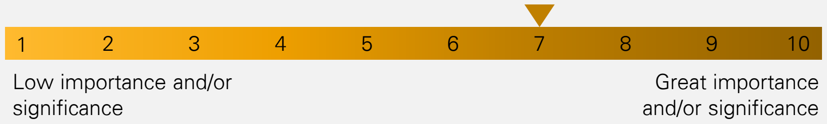
Pricing



Quality

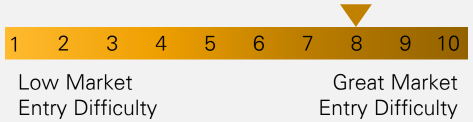


Health and Wellness



Ratings were informed by stakeholder consultation insights.

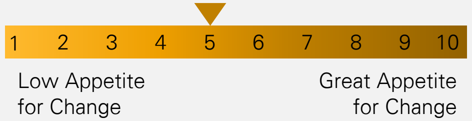
Market Entry Difficulty



Market entry difficulty to airline foodservice channels is high. This is due to the Airline industry have very specific requirements and having already well-established relationships with suppliers who are already able to meet value-added produce requirements.

Ratings were informed by stakeholder consultation insights.

Appetite for Change



Airlines will adapt to the wants, desires and changing preferences of consumers out of necessity to remain competitive in the market. Their appetite to change is moderate as they need to consider key supply chain, food processing and cost factors.

Ratings were informed by stakeholder consultation insights.

Who Influences the Menu

- In-flight passengers are the main influences of the airline menu offering. Airlines accommodate to what their passenger want on a flight, such as offering a 'comfort food' goody bag on long hauls. [1]
- Trained chefs also help influence the menu and work with senior airline employees to ensure menu offerings are palatable and of a good standard. [1]

Source: (1) Airline foodservice Subject Matter Experts (SME)

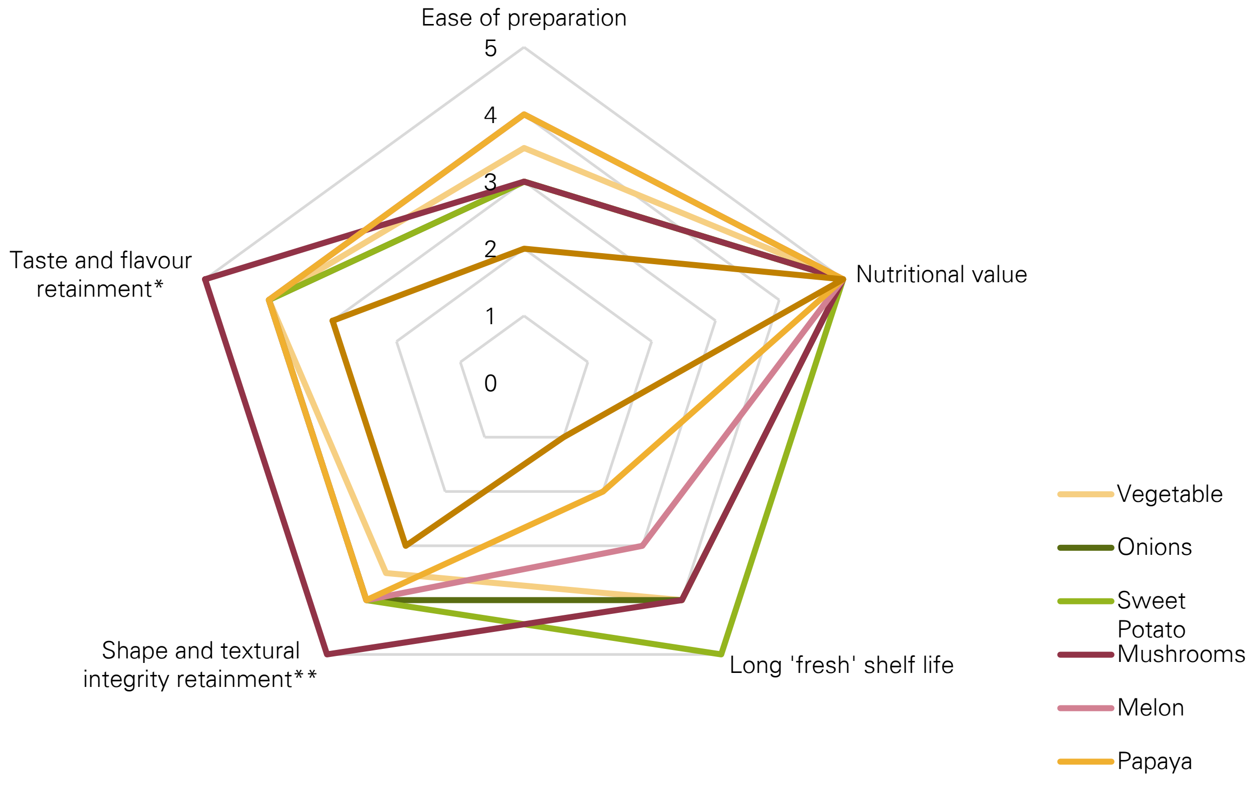
Vegetables are one of the largest food groups purchased by airlines. They are practical and valuable items to serve to passengers. There is continuous research being conducted on taste and how to preserve freshness of food in-flight

Airlines

Category of Greatest Growth Opportunity

Ranking	Category	Score
1	Mushrooms	22
2	Sweet Potatoes	21
3	Vegetables	20
4	Melons	20
5	Onions	20
6	Papayas	19
7	Avocados	14

Extent that each Category fulfils Airline requirements



5 is an indication of being highly favourable, and 1 is an indication of being less favourable in fulfilling airline requirements. Ratings were informed by stakeholder consultation insights.

** Ability to retain taste and flavours when cooked and during flights.*

***Ability to retain shape and textural integrity when cooked and during flights*

Versatile vegetable produce are of greater demand for in-flight meals. Meal product development consider passenger preferences, ease of handling/supply chain requirements and ingredient integrity

Airlines

Opportunities and Challenges for Categories

- **Avocados** are less shelf stable than other fruits and vegetables and are relatively more expensive. Therefore, moving avocados through airline food value chains may be difficult as ripeness timing is harder to control. Avocados when cut open are also more prone to oxidation. This would require more efforts from flight attendants to quickly cut, dice and prepare avocados in-flight, which is not practical to flight staff who need to tend to other on-board matters. If served oxidised, this may also result in negative reactions amongst passengers due to the avocado not looking fresh. Avocadoes are also not a category that can be cooked, which eliminates its ability to be used in other meal formats.
- **Melons**, specifically rock melons, watermelons and honey melons are fruits that are commonly served already cubed and diced into bite-sized pieces as part of fruit salads served on flights. There are challenges in ensuring melons remain fresh and don't dry out during a flight. Time management in serving freshly diced fruit is a consideration for on-board flight staff.
- **Mushrooms** are both nutritious and hold their integrity, taste flavour and texture well when served raw and cooked which is a highly favourable factor when selecting categories to be integrated into cold and hot meals on flights.
- **Onions** are a staple item used in most hot meals served on flights. However, they're not known to be very exciting. They are incorporated as part of most hot meals as a base ingredient to add flavour.
- **Papayas** are not widely sought after due to an unfamiliarity with the fruit amongst Australian passengers and the contractors who service food across Airlines. There is an opportunity for papayas to be more commonly used as part of the in-flight fruit salads as they are cost effective and require similar preparation as fruits such as melons that are already used in airline foodservice channels.
- **Sweet potatoes** are a nutritious option to be served in-flight but also hold and retain their integrity, taste, flavour and texture in comparison to other horticultural categories. Sweet potatoes also have a long shelf-life which will help as the raw material goes through the airline food value chan.
- **Vegetables** (particularly potatoes and eggplants) are practical and valuable items to serve passengers on flights. More investment on how vegetables can keep their flavour will help further promote vegetables used in airlines. This is particularly the case for tomatoes, beans and other vegetables that are prone to losing 'appealing' attributes when cooked. Fresh vegetables are becoming more commonly served in-flight.

Source: opportunities and challenges category insights were informed by airline foodservice subject matter experts (SMEs)

Procurement Decision Influences

Ease of preparation

Ease of preparation is an important factor for Airlines as the on-board flight attendants (not trained as cooks) are responsible for heating and serving food to passengers. Therefore, meals (especially for economy class) need to be completely prepared once entering the aircraft. Flight attendants might add garnishes or sear cuts of meat for first class passengers. [1]

Certainty of supply

Airlines order significant volumes of food, with bigger airlines ordering more than 75,000kg of fruits and vegetables on a daily basis. Food menus and their meal designs are planned months in advance to ensure quantity of orders can be fulfilled and that the supply chain in which fruit and vegetables need to go through are prepared. [1]

Meal format and design

An important consideration for Airlines is the meal formats served in-flight. Airlines spend time and effort working with chefs to ensure meals served look appealing enough to passengers. Consequently, foods that are able to retain their integrity are favoured, and more frequently used on in-flight meals. [1]

Source: (1) Airline foodservice Subject Matter Experts (SME)

The **tourism** channel is increasingly aiming to showcase locally sourced produce to elevate the travel experience

Tourism

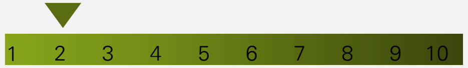
Degree of Opportunity

Medium opportunity
Tourism has medium opportunity for the horticulture industry. Hotels, resorts and cruises are increasingly focusing on locally sourced, healthy and high quality produce to elevate the travel experience for both domestic and international tourists. However, the tourism channel faces ongoing ramifications from the COVID-19 pandemic (particularly the cruises channel), limiting potential growth in this channel.

Important Foodservice Channel Insights

- Hotels and resorts **offer various forms of foodservice** including buffets, silver services, "on the go" offerings and room service, requiring produce of various types and quality standards. [1]
- Hotels are increasingly **adopting the "locally sourced produce" trend** into their marketing strategy. Particularly for tourists, hotel chefs aim to elevate the travel experience through creating dishes that provide an appreciation for the local destination and its native produce. Consumers also tend to **perceive locally sourced food as being "premium"**, enhancing the customer experience. [1]
- Tourism operators are increasingly **accommodating for business and health conscious travelers**. For instance, Pullman Hotels and Resorts created new menus to align with the **trend to provide fresh, lighter, high protein options**. [2]
- Cruises are **predominantly concerned about price** due to limited budgets for ingredients, typically incorporating lower-grade produce. **Wholesalers and distributors are currently hesitant to expand in the cruise channel** due to **ongoing COVID-19 ramifications** on the industry. [1]
- Procuring fresh produce to a distribution center with **enough shelf-life** to reach a port is vital for cruises. Cruises will often store fresh produce in various stages of ripeness. [1]

Market Entry Difficulty



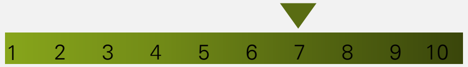
Low Market Entry Difficulty

Great Market Entry Difficulty

Market entry difficulty for the tourism channel is low as the industry works with major wholesalers and distributors who also supply to the restaurant, café and catering channels. As the tourism channel has larger operations, scale and value can be leveraged.

Ratings were informed by stakeholder consultation insights.

Appetite for Change



Low Appetite for Change

Great Appetite for Change

Hotels and resorts have a relatively high appetite for change as they prioritise customer experience and are willing to adapt to changing preferences. Cruises have a moderate appetite for change as they need to consider key logistical and cost challenges.

Ratings were informed by stakeholder consultation insights.

Who Influences the Menu

- Hotel, resort and cruise menus are predominantly influenced by tourists preferences, catering to both the domestic and international palette. [1]
- Seasoned chefs help meet these preferences and develop dishes to ensure a high quality and gourmet touch to elevate standards of the hotel, resort or cruise. [1]

Significance of Key Attributes

Provenance and Supporting Australian Produce

Low importance and/or significance

Great importance and/or significance

Sustainability

Low importance and/or significance

Great importance and/or significance

Pricing

Low importance and/or significance

Great importance and/or significance

Quality

Low importance and/or significance

Great importance and/or significance

Health and Wellness

Low importance and/or significance

Great importance and/or significance

Ratings were informed by stakeholder consultation insights.

Source: (1) Tourism foodservice staff, (2) Hotel Management 2018

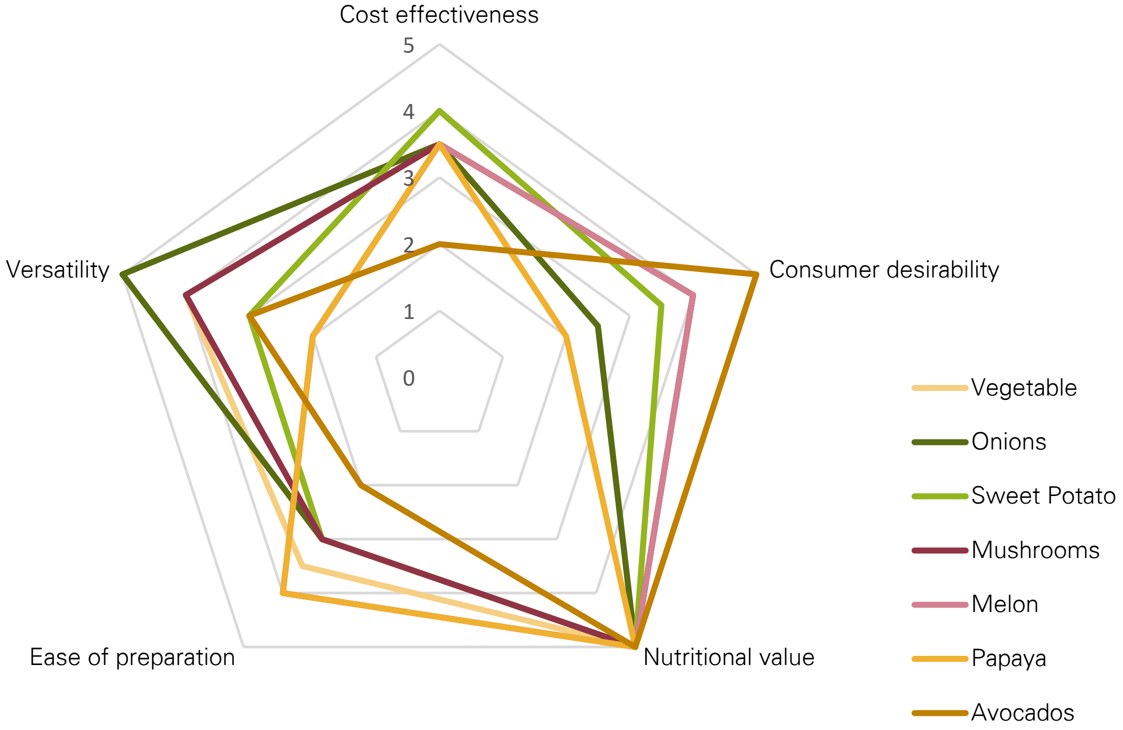
Vegetables are highly favoured in the tourism channel due to the cost effectiveness and versatility of produce

Tourism

Category of Greatest Growth Opportunity

Ranking	Category	Score
1	Vegetables	20
2	Mushrooms	19.5
3	Onions	19
4	Melons	18.5
5	Sweet Potatoes	18.5
6	Avocados	17
7	Papaya	16.5

Extent that each Category fulfils Tourism requirements



5 is an indication of being highly favourable, and 1 is an indication of being less favourable in fulfilling tourism requirements. Ratings were informed by stakeholder consultation insights.

The shelf-life of produce is particularly important for the cruise line channel due to complex logistics and cold chain management

Tourism

Opportunities and Challenges for Categories

- **Avocados** are well liked by tourism consumers, particularly in the breakfast segment e.g. smashed avocado on toast with a poached egg. Avocados are particularly growing in popularity in the tourism channel due to its surge in popularity in Australian cafes. However, avocados are a challenge for the cruise line channel due to the fragility and high perishability of produce. Timing of ripeness is particularly important for cruise lines as produce is procured days in advance.
- **Melons** are popular amongst consumers as a breakfast/dessert selection as they are fresh and sweet. They are highly favoured in the tourism foodservice channel as a fruit option served, particularly in buffets. Whilst many hotels, resorts and cruises have suffered buffet restrictions due to COVID-19, the tourism channel is gradually re-opening this foodservice style.
- **Mushrooms** are highly favoured as a flavoursome ingredient for various savoury dishes served in the tourism foodservice channel, particularly Italian food offerings which are commonly incorporated on menus. Mushrooms also have a stable shelf-life once refrigerated which is a priority for operators particularly in the cruise channel.
- **Onions** are a staple ingredient that is highly favoured by tourism operators and chefs predominantly due to its cost-effectiveness and versatility. Onions are also a sturdy ingredient with a long shelf-life, appealing to cruise line operators with these requirements.
- **Papayas** are a suitable option for fruit offerings served in "on the go", room service and buffet foodservice styles. However, papayas are not consumers' first preference for fruit, typically preferring traditional melons, berries, apples and bananas. Papaya also faces challenges in the cruise line segment as procuring fresh papayas with a long enough shelf-life to reach a port from the distribution center and then last up to a week before served on a cruise is difficult.
- **Sweet potatoes** are becoming increasingly popular in the tourism foodservice channel as a more healthy, gourmet alternative to white potato. Sweet potatoes are particularly well favored by hotel, resort and cruise operators due to its long shelf-life and low fragility when being transported.
- **Vegetables** are core ingredients ordered in the tourism channel regularly, particularly with the increased focus on health and nutrition. Due to the increase in business and health conscious travelers, tourism operators are creating menus incorporating a range of vegetables as fresh, lighter and healthier options. This particularly includes leafy vegetables, carrot, broccoli and cauliflower.

Source: opportunities and challenges category insights were informed by tourism foodservice staff.

Procurement Decision Influences

Australian Sourced

Sourcing locally and creating menu items revolving around native produce is becoming increasingly important for the tourism foodservice channel to elevate the consumer travel experience. For instance, Pullman Hotels and Resorts has created a menu featuring Sunny Ridge strawberries, Meredith's Goat Cheese etc. [1]

Shelf-life

Produce shelf-life is particularly important for the cruise channel as they procure the fresh fruits and vegetables only when docked at the wharf. As such, cruise lines will often store fresh produce in various stages of ripeness. Cruises must also give extra consideration to how produce may be impacted by the cruise's storage environments (temperature, hygiene etc.). [1]

Versatility

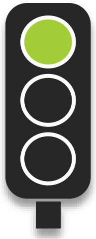
Due to sheer volume of bulk orders placed in the tourism foodservice channel, versatility of produce is a top priority for operators and chefs. Ingredients that are able to be prepared in various ways and incorporated in a range of popular and well-liked dishes is preferred. [1]

Source: (1) Tourism foodservice staff.

Meal kit companies have strong value propositions towards locally and sustainably sourced produce

Meal Kits

Degree of Opportunity



High opportunity

Meal kits have high opportunity for the horticulture industry as the channel is currently in its growth phase. As such, there is opportunity to build relationships for long term engagement. The meal kit foodservice channel is also highly favourable for growers due to its shorter supply chain (grower → meal kit warehouse → end consumer) and growing focus on nutritious, locally sourced and sustainable produce.

Important Foodservice Channel Insights

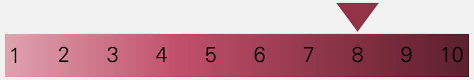
- Meal kit companies aim to provide their customers with **fresh, high-quality ingredients while proudly working with local suppliers**. For instance, HelloFresh source their dairy products from Meredith Dairy, a family run business in Melbourne. [1]
- Working with small, local producers is also a priority for meal kit businesses as they are able to discover and **consistently introduce new and unique ingredients** to consumers. [1]
- Meal kit companies are increasingly ensuring the **entire recipe development process is as environmentally friendly and sustainable** as possible, particularly working to reduce food waste, increase recyclable packaging and decrease transportation emissions. [1]
- Recipes are heavily based on **seasonal ingredients** to ensure fresh fruits and vegetables are delivered to subscribers. Many meal kit businesses e.g. MarleySpoon have an emphasis on '**fresh, not frozen**'. This also enables operators to develop and offer a wide variety of dishes throughout the year. [2]
- Meal kits are delivered on a weekly basis, **packed with cooler bags and ice packs** to keep ingredients as fresh as possible. [1]

Market Entry Difficulty

Market entry difficulty is particularly low for the meal kit channel as businesses source directly from growers. This provides opportunity for the horticulture industry to better understand and meet demands of the channel due to closer engagement.

Ratings were informed by stakeholder consultation insights.

Appetite for Change



As a relatively new foodservice channel with many businesses in their growth phase, there is high appetite for change in the meal kit space as operators learn what best meets consumer preferences. As such, companies are open to trying new ingredients from various sources.

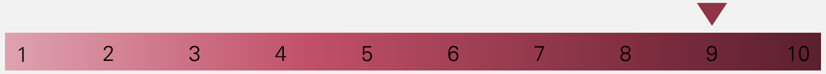
Ratings were informed by stakeholder consultation insights.

Who Influences the Menu

- Meal kit menus are predominantly influenced by mainstream consumers - particularly working individuals/couples, busy families and millennials. [1]
- Menu design is also influenced by seasoned recipe developer/chefs who work to create simple, time efficient and delicious meals. [1]

Significance of Key Attributes

Provenance and Supporting Australian Produce



Sustainability

Pricing

Quality

Health and Wellness

Ratings were informed by stakeholder consultation insights.

Source: (1) HelloFresh 2021, (2) MarleySpoon 2022

Note: The Meal Kit foodservice channel was not validated by stakeholder insights and was mainly informed by desktop research.

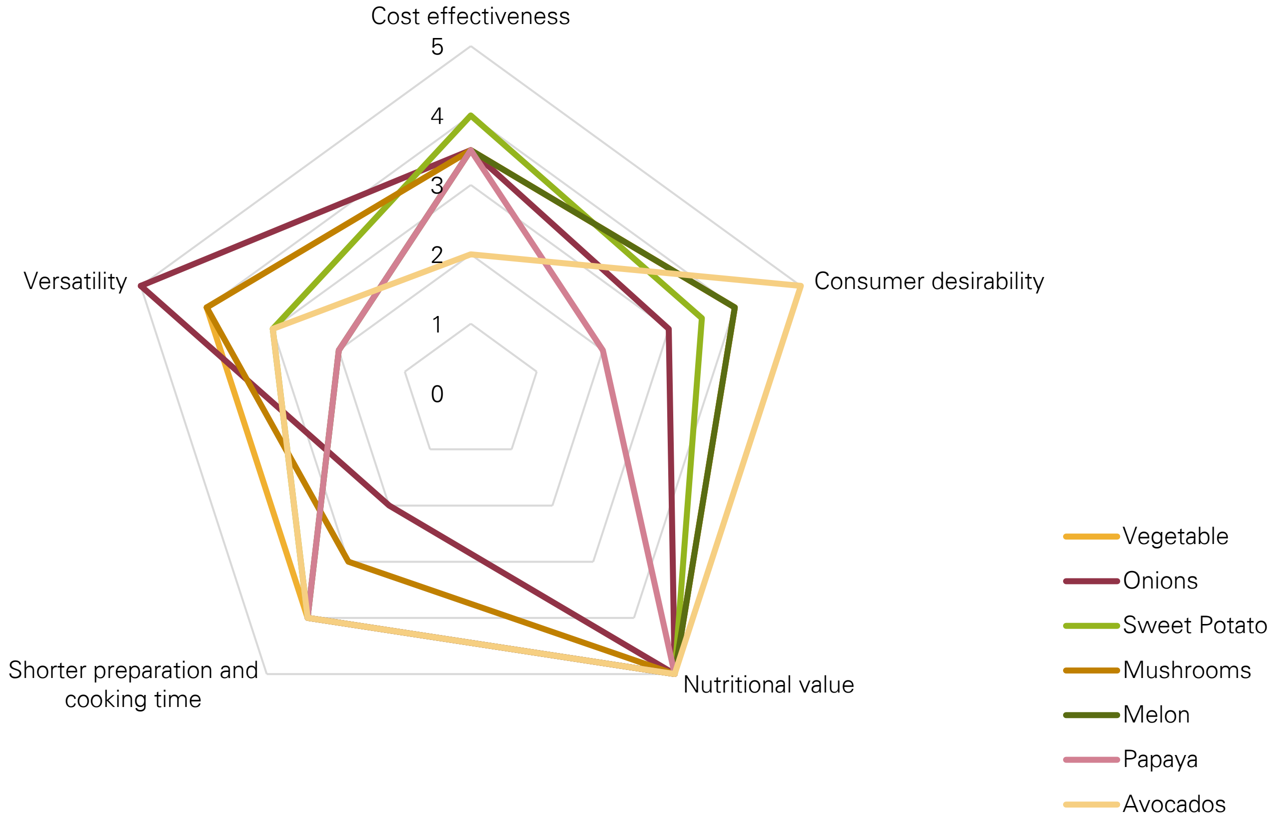
Meal kit operators value horticulture categories that are versatile and require minimal preparation effort and time to meet the needs of time poor consumers

Meal Kits

Category of Greatest Growth Opportunity

Ranking	Category	Score
1	Vegetables	20.5
2	Mushrooms	19.5
3	Sweet Potatoes	19.5
4	Avocados	19
5	Onions	18.5
6	Melons	18.5
7	Papayas	16.5

Extent that each Category fulfils Meal Kit requirements



5 is an indication of being highly favourable, and 1 is an indication of being less favourable in fulfilling meal kit requirements. Ratings were informed by stakeholder consultation insights.

Hort Innovation
Strategic levy investment

Note: The Meal Kit foodservice channel was not validated by stakeholder insights and was mainly informed by desktop research.

Procurement decisions for the meal kit foodservice channel are heavily influenced by seasonality and availability of produce throughout the year

Meal Kits

Opportunities and Challenges for Categories

- **Avocados** are highly desired by Australian households for their taste and health benefits. As avocados require shorter preparation and cooking time as it is served fresh, it is a favourable ingredient in recipes. However, due to the nature of meal kit services, avocados are delivered to consumers in its whole form, increasing the frequency of bruising, browning and ripeness challenges. These risks are exacerbated due to limited visibility of produce inside the skin.
- **Melons** are well liked by consumers in meal kit salad recipes e.g. steak and melon salad with vinaigrette, watermelon and farro salad with mozzarella. Whilst melons are favourable for healthier and low-carb options, melons are currently fairly limited in creative ways to cook and incorporate in recipes. This is particularly a challenge in the meal kits channel as recipes predominantly focus on lunch and dinner segments where melons have limited versatility. Preserving freshness of melons once it has been cut open is also a challenge for meal kit delivery.
- **Mushrooms** are regularly incorporated by meal kit services in weekly recipes across various cuisines e.g. Italian, Chinese, Korean. Mushrooms are highly favoured as they are easy to prepare and require short cooking times. Whilst well liked, extra consideration must be given to the delivery of mushrooms due to its short shelf-life once cut. This is particularly important in the meal kits channel as freshness is more obvious when raw.
- **Onions** are a focused accompaniment in meal kit lunch/dinner recipes e.g. haloumi and caramelized onion burger, Japanese pork tacos with pickled onions. Whilst well liked by consumers, onions require extra care and time when preparing and cooking, constraining regular incorporation of the ingredient.
- **Papayas** are rarely incorporated in weekly meal kit recipes. This is due to limited versatility in lunch and dinner recipes, only being used in limited recipes e.g. Thai soft-shell crab green papaya salad. Papayas are also not particularly desired by households due to limited familiarity with the category.
- **Sweet potatoes** are popular in the meal kits channel due to its high consumer desirability, versatility and nutritional benefits. As many meal kit subscribers are health conscious, the incorporation of a perceived healthier carb in recipes is growing demand for sweet potatoes. Sweet potatoes are also heavily incorporated in Mexican dishes which is a popular cuisine in the meal kit space.
- **Vegetables** are highly favoured in meal kit recipes, particularly due to the rise in health consciousness amongst Australian households driving the development of more nutritious, low carb options. Vegetables are also relatively easier to prepare and requires less cooking time.

Procurement Decision Influences

Seasonality

As most meal kit companies market the delivery of fresh and high quality produce, many operators will procure ingredients based on seasonality. As such, recipes will accommodate and heavily include fruits and vegetables in season and vice versa to meet consumer standards. [1]

Sustainably Sourced

Meal kit businesses are deeply committed to sustainability across their entire business, including procurement of produce. Operators will ensure growers are involved in sustainable practices (with a particular focus on carbon emissions, packaging waste etc.). Meal kit businesses also aim to predict customer orders and hence procurement orders to reduce food waste. [1]

Australian Sourced

Meal kit companies are proud to source local and will prioritise Australian grown produce, typically working with artisanal producers, select small farms and family-owned businesses. There is also a strong preference for fresh fruits and vegetables over imported frozen produce. [1]

Source: (1) HelloFresh 2021

Note: The Meal Kit foodservice channel was not validated by stakeholder insights and was mainly informed by desktop research.

Institutional Channel Segmentation

The institutional foodservice channels value various attributes quite differently despite being a sector that does not operate to generate profit (excluding mining). Consequently, each industry has different strategies, values and drivers

The commercial foodservice sector comprises of 4 key channels as per below.

Defence

The Australian Defence Force (ADF), consists of the army, navy, air force, intelligence operations, and others.
The foodservice operations mainly include contractors that serve mess halls and food processors who provide ration packs to troops.
The ADF has an increasing focus on catering that enables optimal delivery of human performance in all operating environments.
.

Health

The Health industry consists of public & private hospitals and aged care facilities. The foodservice operations in this space cater to people who are unwell, and the elderly who typically eat smaller portions, and therefore require smaller meals that are nutritionally dense.
The health foodservice channels are expected to comply with state-based set of nutrition standards that are not always met by the sector.
.

Education

The education foodservice channel consists of childcare menus, canteen operations in primary and high schools as well as what is offered to tertiary students who do and don't live on campus.
Education facilities face pressure, particularly primary and high schools, from the Federal Department of Health and State Government departments to provide healthy foods and drinks options.

Mining

The mining industry relies on large contract caterers to supply meals in food halls in remote areas. Mining employees can go to establishments outside the camps, however, mining sites are typically located in rural and remote areas with limited options.
The caterers who manage foodservice in mining tend to also manage other services such as laundry and cleaning. Foodservice operations usually operate at a loss which is offset by other profitable operations for the sector.

Each of the foodservice channels underwent an assessment that aimed to showcase the fundamental values, attitudes, and perceptions held by the sector.
The assessment included 7 key attributes *(market entry difficulty, appetite for change, supporting Australian provenance, sustainability, pricing, quality, and health and wellness).*

The methodology (page 16), elaborates on the assessment methodology in greater detail of the foodservice channels and the categories.

Defence has medium opportunity for the horticulture industry. Development in this foodservice channel would require investment in building relationships with contractors and the SEG who have established relationships with suppliers.

Defence

Degree of Opportunity

Medium opportunity

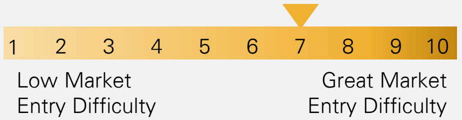
Defence has well established relationships with their foodservice contractors. Efforts will need to be made in building relationships with these contractors.

Growers will need to promote that they are Australian grown and sourced and to remove connotations that may impede any initial consideration around procuring a different fruit and vegetable categories that are not commonly served in Defence.

Important Foodservice Channel Insights

- The Australian Defence Force (ADF) has a **mature set of food standards** and **existing relationships** with the contractors (Compass, Serco and Ventia) that are responsible for their foodservice.[1]
- There are **four points of entry for food used in Defence**: Fresh Foods Ration Contract, Hospitality and Catering Contract, Defence Catering Working Group and Soldier Modernisation Packs. [1]
- The **Fresh Foods Ration Contract** (fresh whole foods delivered directly to remote locations and prepared and cooked by catering staff) and the **Hospitality and Catering Contract** (service delivery contractors that also provide other services such as laundry and cleaning as part of a base services contract) are most relevant to the horticulture industry, both are **operated by the Security and Estate Group (SEG)**, who are the security and service delivery organisation for Defence. [2]
- Despite an aim to increase the sustainability of Australia's Defence industry as stated in the 2018 Defence Industrial Capability Plan, there is relatively **low value for sustainability** when it comes to foods served to troops. [2]
- The **Defence Science and Technology Group** (DSTG) **review catering standards** for troops, assess nutritional needs, and influence what is on the menu and serving sizes. [2]

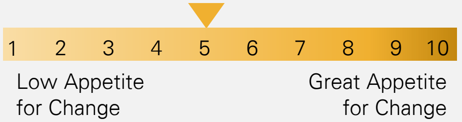
Market Entry Difficulty



Market entry difficulty is relatively high for Defence as the ADF has mature relationships with their contractors. Relationships would need to be built with these parties before trialling of different categories can occur.

Ratings were informed by stakeholder consultation insights.

Appetite for Change



Defence have a moderate appetite for change. They are comfortable with the current offerings on their mess hall menu. Food is a concern to the ADF in regards to nutritional value to support troop performance. Where there can be improvement made here, they will change.

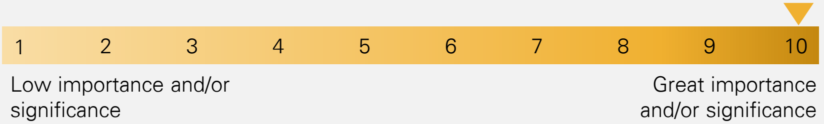
Ratings were informed by stakeholder consultation insights.

Who Influences the Menu

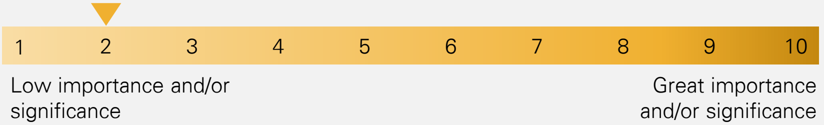
- Overall troop satisfaction with foods offered is an important factor for what is placed on a menu. However, there are limitations for what is offered, particularly in ration packs which are highly processed to offer shelf-life and sustenance. [1]
- The DSTG are main influencers of the menu, ensuring that the offering is nutritionally satisfactory. [1]

Significance of Key Attributes

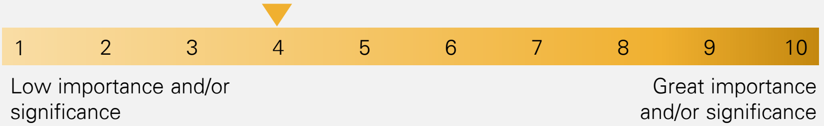
Provenance and Supporting Australian Produce



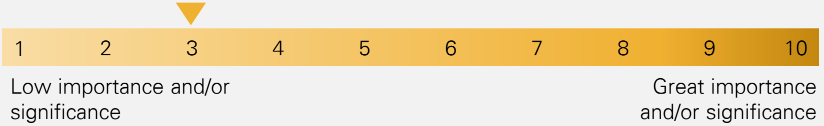
Sustainability



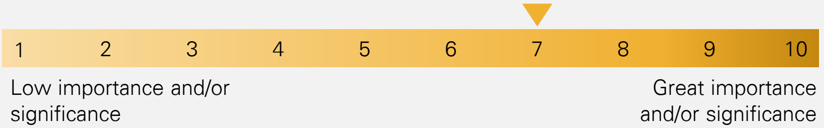
Pricing



Quality



Health and Wellness



Ratings were informed by stakeholder consultation insights.

Source: (1) Defence Partners (2) Defence Subject Matter Expert

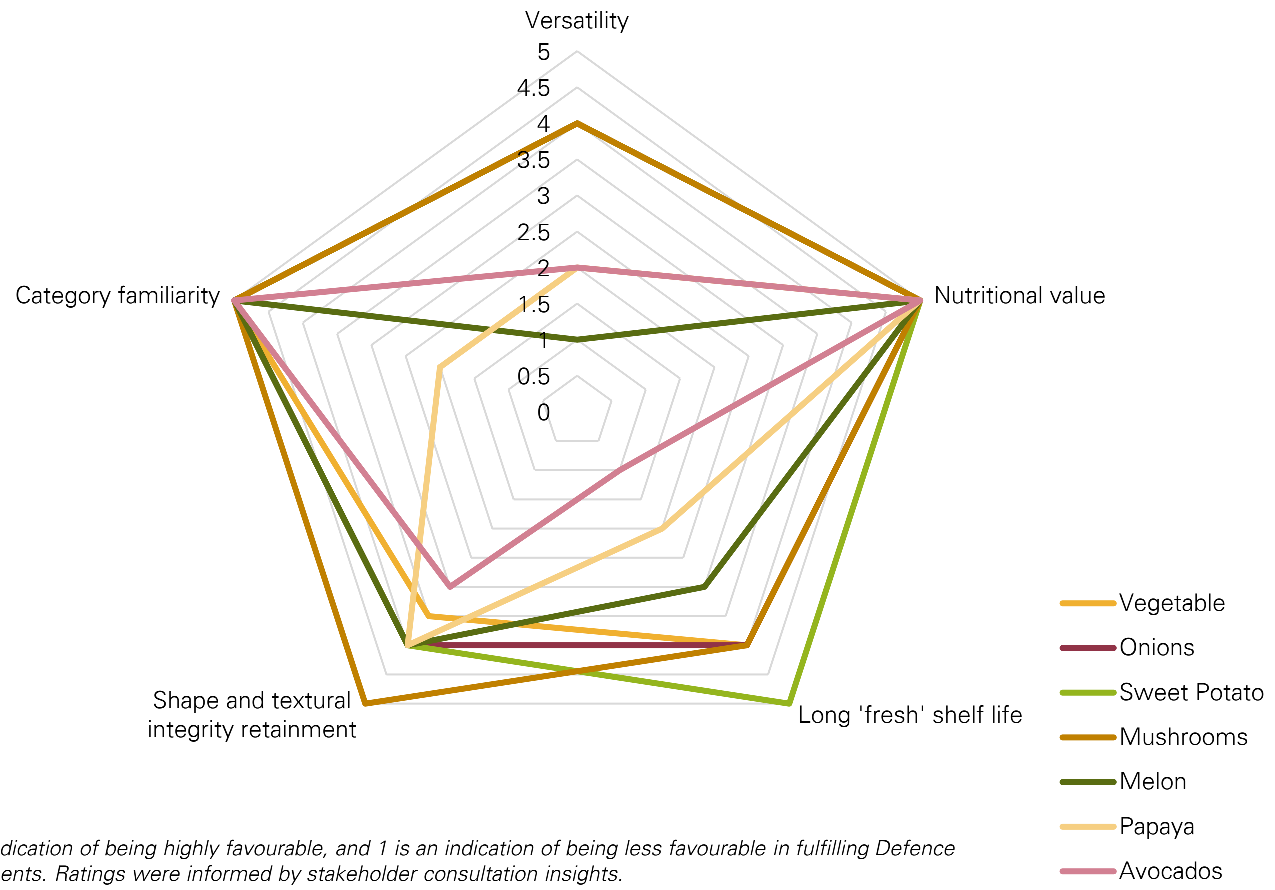
Sweet potatoes, mushrooms and onions and vegetables are the three most highly favourable categories for Defence due to their versatility, nutritional value, product integrity and familiarity

Defence

Category of Greatest Growth Opportunity

Ranking	Category	Score
1	Sweet Potatoes	23
2	Mushrooms	23
3	Onions	22
4	Vegetables	21.5
5	Melons	18
6	Avocados	16
7	Papayas	15

Extent that each Category fulfils Defence requirements



5 is an indication of being highly favourable, and 1 is an indication of being less favourable in fulfilling Defence requirements. Ratings were informed by stakeholder consultation insights.

There are opportunities to break down existing perceptions of certain horticultural categories, as well as advocate for the nutritional value held by fruits and vegetables that showcase how they can enable optimal performance for troops

Defence

Opportunities and Challenges for Categories

- There are connotations with some fruits and vegetables as being expensive. Consequently, these categories are not even explored to be put onto the menus offered by Defence. This applies to avocados. **Avocados** also require a lot more handling by cooks and catering staff which is difficult when preparing for large sized mess halls that cater to 500+ people. Avocados have a short fresh shelf-life, making it harder to manage for large contract caterers trying to serve significant volumes.
- **Melons** are served in mess halls and are offered in the Defence menu offerings. Watermelon and rock melons are served but are less frequent than the common apples, pears, oranges and bananas due to the requirement of further preparation being needed. Increased melon supply in Defence can be actioned if there are ways to identify how best to value-add the category to minimise preparation time and labour required
- **Mushrooms** are a favourable item to serve in Defence as they are nutritious and hold structural integrity throughout the cooking process. Mushrooms, unless served in a mess hall, are also typically served to troops in cans. They also are able to retain tastes and flavours easily which would make it a suitable category to add to ration packs that tend to be processed, 'unappetising' and lacking nutritional value.
- **Onions** are a inexpensive, and versatile ingredient with a relatively long shelf-life. This is particularly helpful for the complex supply chains that need to be considered when servicing Defence.
- **Papayas** are not widely sought after due to an unfamiliarity with the fruit amongst troops. Ultimately, the unfamiliarity drives Defence foodservice contractors to other fruits such as apples, pears, oranges and bananas. These fruits are also easier to serve to troops as their natural state is a single serve. Papayas require additional preparation of slicing and dicing. Papayas have room to grow in Defence foodservice if familiarity is established through increased supply in this channel.
- **Sweet potatoes** are a nutritious option for troops, that are also have a relatively long shelf-life. They are also able to retain their shape and textural integrity throughout the cooking process, making them a highly favourable category to add in troop meals, and ration packs. Sweet potatoes also have a long fresh shelf-life as they can be stored at room temperature conditions for 3-5 weeks, and refrigerated for 2-3 months.
- **Vegetables** are highly nutritious by being a great source of vitamins, minerals and dietary fiber which highly aligns with the ADF's aspirations of having menu offerings that are nutritious and enable optimal performance. The challenges with certain vegetables is that they require great consideration regarding cold chain management as some vegetables have a low fresh shelf-life such as corn, asparagus, fresh beans, broccoli, and tomatoes.

Source: opportunities and challenges category insights were informed by Defence Partners and Defence Subject Matter Experts

Procurement Decision Influences

Ease of preparation

Ease of preparation is an important factor for Defence as the food is mostly driven by labour costs. Therefore, foods usually served have been already processed (sliced, diced, frozen) to help chefs prepare foods for large quantities and many troops.[1]

Australian sourced

Purchasing Australian grown and sourced foods is a big priority for Defence. Defence are willing to pay a higher price point to ensure that the foods supplied are grown and supplied by a domestic producer. For Defence, this is more of a 'tick a box' activity, so that they can remain true to this requirement. [1]

Nutrition

Nutrition is becoming a bigger item for foodservice, as the DSTG are trying to ensure menu offerings are nutritious and enable optimal performance for troops. There are challenges here, particularly for the ration packs that are highly processed to ensure optimal shelf-life.[2]

Source: (1) Defence Partners (2) Defence Subject Matter Expert

One of the key considerations for the **health** sector when procuring fresh produce is cost effectiveness, followed by nutrition and ease of preparation

Health

Degree of Opportunity

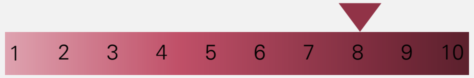
Medium opportunity

The health sector is highly sensitive to price. Price extends from fruit and vegetable procurement, to include the cost of labour as well. Therefore, produce need to go through a value adding process, which is an additional consideration for the horticulture industry, prior to entering a health care facility kitchen to minimise food preparation activities required on-site.

Important Foodservice Channel Insights

- The health care sector (hospitals and aged cares), are increasingly looking to **procure more value-added fruits and vegetables** that are pre-sliced, diced, or pre-mixed ready to be added to dishes. This is due to cost of labour increasing, and staff shortages. The ideal is to only open a bag, wash the produce and then cook it.[1]
- Fruit and vegetable **prices are a big component in the procurement decisions** of the health sector. There is a trend of **seeking more fresh produce** over frozen. However, this is **only preferred if the options are still cost effective**.[1]
- Hospitals and aged cares operate on a **4 to 6 week rotating menu**, and is typically driven be **seasonality of fruits and vegetables** to keep costs of food down. [1]
- Hospitals and aged cares **don't want to pay a premium**. Food budgets are tiered based on type of service expected. For 7 courses per resident/patient and per day: $8.60 (low-end), $11-12 (medium-end) $14-16 (high-end). [2]
- **In-house nutritionists review the food requirements** for residents and patients and tailor menus based on changing needs. People in hospitals and aged cares don't eat as much so there is a focus on maximising nutrition in smaller portions. [2]
- **Emulsified foods** are also growing in health. More creativity on liquifying food offerings. [2]

Market Entry Difficulty



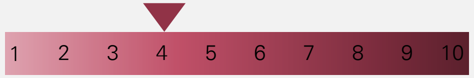
Low Market Entry Difficulty

Great Market Entry Difficulty

Market entry difficulty is high for hospitals and aged care facilities. This is due to strict quality assurance controls operated by foodservice staff to ensure maximum precaution is taken with food entering facilities. Market entry difficulty, however, mostly applies to the wholesalers supplying fresh produce.

Ratings were informed by stakeholder consultation insights.

Appetite for Change



Low Appetite for Change

Great Appetite for Change

The health sector has a lower appetite for change in comparison to other foodservice channels. They operate with strict food budgets which limits their ability to expand their menu offerings with exotic and unique produce, as well as their ability to procure different product formats.

Ratings were informed by stakeholder consultation insights.

Who Influences the Menu

- Patient liking in hospitals is a consideration that is moderately weighed by hospitals. [2]
- Resident liking in aged cares is a consideration that is moderately weighed by aged cares. Resident family members' opinions of the food are highly considered. [2]
- Ultimately, in-house nutritionist also play a significant role in change the menus. [2]

Significance of Key Attributes

Provenance and Supporting Australian Produce

Low importance and/or significance

Great importance and/or significance

Sustainability

Low importance and/or significance

Great importance and/or significance

Pricing

Low importance and/or significance

Great importance and/or significance

Quality

Low importance and/or significance

Great importance and/or significance

Health and Wellness

Low importance and/or significance

Great importance and/or significance

Ratings were informed by stakeholder consultation insights.

Source: (1) Distributor for hospitals and aged cares (2) Health foodservice staff

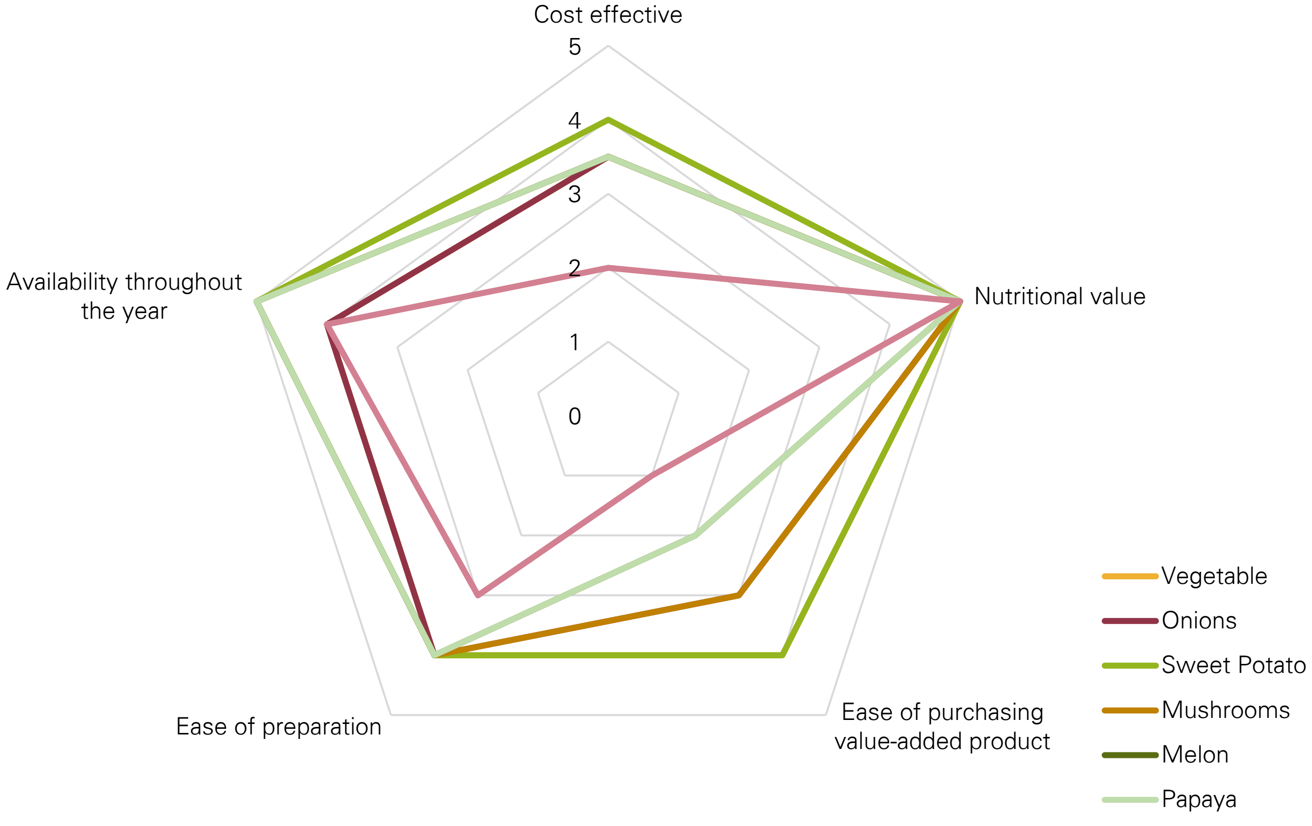
Sweet potatoes, vegetables and mushrooms are a cost effective and nutritionally rich categories that are easy to prepare, making it a highly favourable option to the health foodservice channel

Health

Category of Greatest Growth Opportunity

Ranking	Category	Score
1	Sweet Potatoes	22
2	Vegetables	20.5
3	Mushrooms	20.5
4	Onions	19.5
5	Melons	19.5
6	Papayas	19.5
7	Avocados	15

Extent that each Category fulfils Health requirements



5 is an indication of being highly favourable, and 1 is an indication of being less favourable in fulfilling health requirements. Ratings were informed by stakeholder consultation insights.

Horticultural categories may face difficulty entering into health foodservice channels if there is unfamiliarity with produce, concerns around quality assurance controls, and a higher price point

Health

Opportunities and Challenges for Categories

- **Avocados** are perceived as an expensive category to be served to residents in aged cares and patients in hospitals and don't fit into the current food budgets allocated by health services. Avocados are also prone to oxidation so preparation would require a lot of labour which is considered a cost to health foodservices. For aged care, residents may sign up for 'extra services', and expensive produce (commonly avocados) can be requested at no additional cost. With increasing awareness, liking of avocados, and easy palatability (for residents who have chewing difficulty), avocados have opportunity in this channel.
- **Melons** can be a very cost effective option for hospitals and aged cares as they are seasonal and available almost all year-round. However, rock melons have had major issues in recent years relating to food safety due to having traces with Salmonella and Listeria. Consequently, food safety standards have delisted rock melons as a fruit that is able to be served to resident in aged cares and patients in hospitals. There remains an opportunity for watermelon and honeydew melons to be served in health foodservice due to an overall liking in flavour and taste.
- **Mushrooms** are a versatile and easy ingredient to incorporate into simple dishes served at hospitals and aged cares. They tend to be well-liked amongst patients in hospitals. However, they can be more difficult to chew for residents in aged cares who have difficulty chewing.
- **Onions** are a cost-effective, highly nutritious, flavoursome ingredient that can be added to almost any hot meal served in hospitals and aged cares.
- **Papayas** are very slowly becoming known as a super food due to its rich nutritional value with various vitamins, minerals and antioxidants. Papayas are also abundant in the fresh produce market as they are available 52 weeks a year, making it a relatively cheaper option compared to other fruits. The main challenge with papayas is that they have relatively low familiarity amongst food procurers in hospitals and aged care, as well as the patients and residents.
- **Sweet Potato** are a favourable item to serve in hospitals and aged cares as they are nutritious and hold structural integrity throughout the cooking process. They are also a versatile and a more cost effective ingredient that is easy to prepare. Sweet potatoes is also a category that has popular palatability, and is well received by patients and residents. The category can also be easily pureed as a carbohydrate or vegetable in meals served to patients and residents who have difficulty chewing, swallowing, and/or digesting food.
- **Vegetables** are highly nutritious as they are a great source of vitamins, minerals and dietary fibre which highly aligns with health sector's aspirations of having menu offerings that are nutritious. Vegetables are also a cost effective option for hospitals and aged cares, particularly when they are in season.

Source: opportunities and challenges category insights were informed by a distributor for hospitals and aged cares, and health foodservice staff.

Procurement Decision Influences

Cost effectiveness

Hospitals and aged cares operate on a strict food budget, with a third of aged cares spending less than $10 a day on residents' meals and snacks. With tight budgets, the health sector are limited in their ability to access adequate, safe, tasty, nutritious and culturally diverse foods that cater to the range of palettes of hospital patients and aged care residents.[1]

Nutrition

Nutrition is important to health sector foodservice. However, nutritional value is a consideration that is commonly paired with cost-effectiveness. Budgets will be prioritised over introducing extremely nutritious, high-end, and exotic fruits and vegetables. More state government are placing more emphasis on the nutrition for hospitals and aged cares. [1]

Ease of preparation

Food safety and standards are a high priority in health care. As labour shortages remain an issue, and cost of labour increasing, the health sector seek options for value-added foods where fruits and vegetables are prepared off-site with regulated food safety principles that help relieve the consideration for health care catering staff. [2]

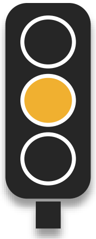
Hort Innovation
Strategic levy investment

Source: (1) Distributor for hospitals and aged cares (2) Health foodservice staff

Education foodservice channels highly value Australian produce. Childcare centers and primary schools try to explore different ways of integrating healthier and more nutritious options on their menus and canteen offerings

Education

Degree of Opportunity



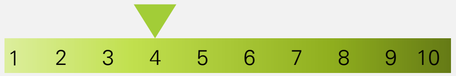
Medium opportunity

The education sector is favourable to the horticulture industry as it has great demand for healthier and more fresh foods. Some educational institutions have a high affinity to procuring top quality produce, and are willing to pay a higher price point for this. Other facilities are bound by strict budget constraints and are limited to the diversity of produce available for their students.

Important Foodservice Channel Insights

- The priority for primary and high schools in the **private education system** as well as childcare centers is on delivering **quality, fresh, organic, nutritious and locally sourced produce**. Australian grown is a priority, but it is further favoured if produce were sourced from the local area. Pricing considerations are considered secondary. The **public education system** (primary and high schools) places greater emphasis on **price, and nutritional value of foods**, and less focus on produce being sourced from local suburbs.[1]
- Educational facilities that cater to children and teenagers tend to offer **seasonal vegetables** that are **popular in terms of taste, flavour and texture**.[1]
- The **menu offerings** are **changed less** frequently in **high schools and primary schools** in comparison to **childcare centers**, where **menus can change once a fortnight**. [1]
- **Education courses are encouraged**, but not compulsory for those who prepare food and design menus. This is to help educate the staff on Australian nutritional guidelines for children and teenagers.[2]
- **University food catering** at private college student accommodation, have menu changes weekly, and also prioritise **fresh, Australian grown, nutrition** and **price**. [2]
- University catering is typically **more diverse in multicultural** food offerings. [2]

Market Entry Difficulty

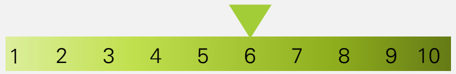


Low Market Entry Difficulty | Great Market Entry Difficulty

Market entry difficulty into the education foodservice channel is relatively low. Although QA controls are still stringent, they are open to receiving new, quality, fresh, organic and locally sourced produce and are willing to try new options and offerings.

Ratings were informed by stakeholder consultation insights.

Appetite for Change



Low Appetite for Change | Great Appetite for Change

Education has a slightly higher than moderate appetite for change. They do look for ways to cater to the changing nutritional needs of children, teenagers and students. However, there isn't a sharp focus on being creative with their offerings or adapting menus often.

Ratings were informed by stakeholder consultation insights.

Who Influences the Menu

- Children, teenagers and students influence the menus. Popular items will be offered more frequently on menus. [1]
- At childcares, parents can play a more active role in what is added to menus as well. [1]
- Dietary requirements and allergies are also a big component when considering offerings for childcares and primary schools. [1]

Significance of Key Attributes

Provenance and Supporting Australian Produce

Low importance and/or significance | Great importance and/or significance

Sustainability

Low importance and/or significance | Great importance and/or significance

Pricing

Low importance and/or significance | Great importance and/or significance

Quality

Low importance and/or significance | Great importance and/or significance

Health and Wellness

Low importance and/or significance | Great importance and/or significance

Ratings were informed by stakeholder consultation insights.

Source: (1) Education caterer (2) Distributor for education

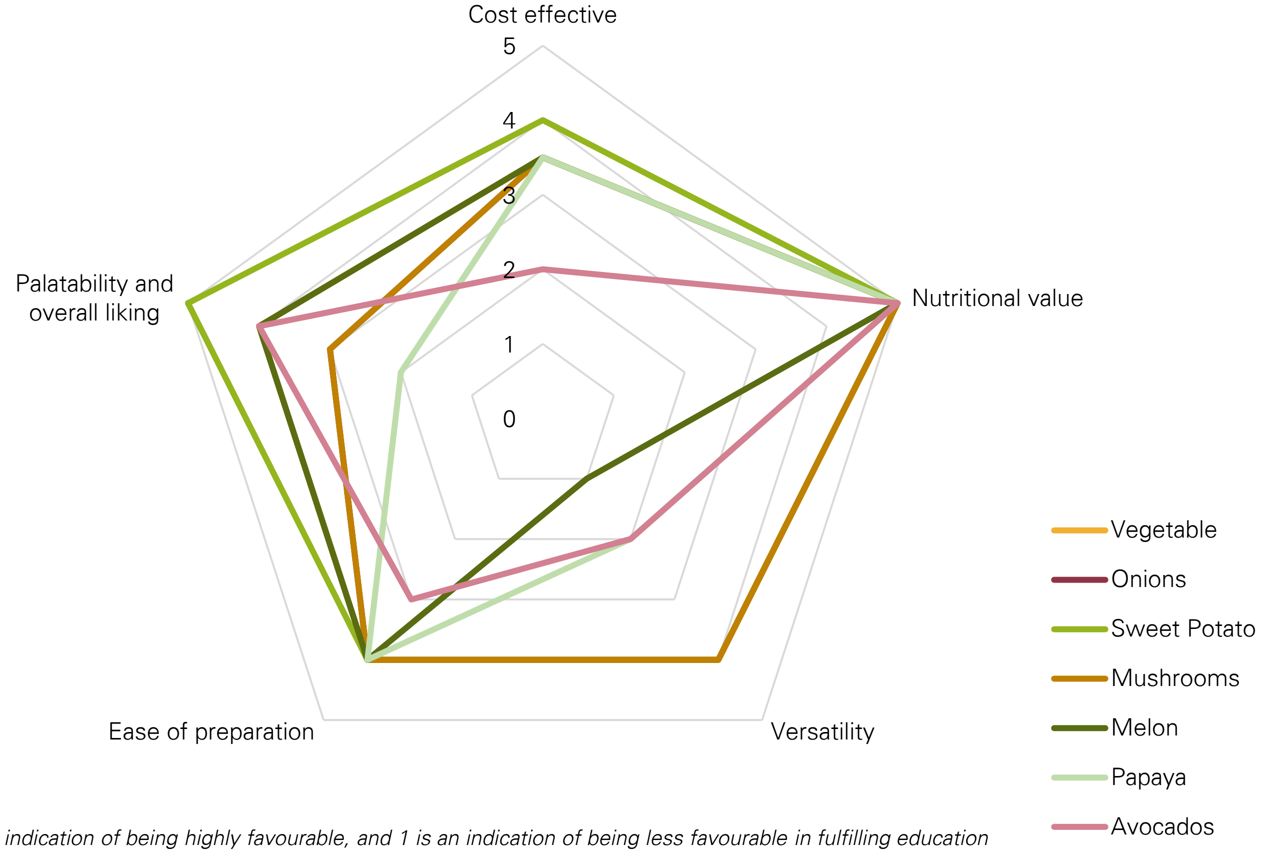
Sweet potatoes are well liked amongst all age groups who attend childcare centers, schools, TAFE’s and universities as they are flavoursome, versatile, and are a cost effective

Education

Category of Greatest Growth Opportunity

Ranking	Category	Score
1	Sweet Potatoes	22
2	Vegetables	20.5
3	Onions	19.5
4	Mushrooms	19.5
5	Melons	17.5
6	Papayas	16.5
7	Avocados	16

Extent that each Category fulfils Education requirements



5 is an indication of being highly favourable, and 1 is an indication of being less favourable in fulfilling education requirements. Ratings were informed by stakeholder consultation insights.

Students, particularly children and teenagers, tend to be more particular with their food choices. Consequently, there are opportunities for the horticulture industry to showcase unique ways to cook and eat different produce

Education

Opportunities and Challenges for Categories

- **Avocados** are an expensive category to be served to students, particularly those in the public education system. Avocados are better suited to institutions with higher-end food offerings and greater budgets, as well as tertiary student accommodation that have onsite catering facilities.
- **Melons** (watermelon, rock melon, honey dew) are well-liked by students in general. They are served less in primary schools and high schools due to more preparation required in comparison to apples, pears, oranges and bananas. There is opportunity to see how melons can be supplied to education foodservice that has been pre-sliced and diced in a creative way to appeal to young age groups.
- **Mushrooms** are well liked amongst older students in high school, university and TAFE. Mushrooms can be flavoursome, and are a versatile ingredient for any meal of the day. Cooking styles to make more palatable for children can be explored as the ‘chewy’ and more ‘fleshy’ texture is generally less preferable amongst younger age groups.
- **Onions** aren’t as common or served as a main ingredient when raw in meals that are ‘cold’ or at room temperature such as sandwiches, wraps, salads due to their sharp and intense flavour. In these foods, raw onion is considered to be less palatable, particularly by children and teenagers. Consequently, onions are used less in primary schools and high schools, particularly in the public education system that don’t use commercial kitchens or have a focus on providing premium foods to students. Onions, however, are a nutritious base ingredient served in most hot meals. They are versatile and can be added to most hot meals, and are enjoyed raw and cooked in different product formats by older age groups, like university or TAFE students.
- **Papaya** is becoming increasingly liked amongst Australians, but due to a lack of exposure/familiarity with the fruit, the education sector doesn’t typically serve it. It is a cost effective option for schools with year round availability. There are opportunities to serve papayas more to education to help promote the fruit and increase category awareness and familiarity.
- **Sweet Potato** are a favourable item to serve in the education sector as they are well-liked and highly palatable. They are also nutritious and highly align with the agenda of nutritional campaigns organised by Federal and state governments. However, sweet potatoes do require more thought around preparation and cooking, particularly in primary and high schools where commercial kitchens for foodservice aren’t available.
- **Vegetables** are highly nutritious by being a great source of vitamins, minerals and dietary fibre which highly aligns with the education sector’s aspirations of having menu offerings that are healthy and nutritious. There are opportunities to be more creative in presenting the vegetable to make them more enticing, particularly for younger children and teenagers.

Source: opportunities and challenges category insights were informed by a distributor for education, and education foodservice staff.

Procurement Decision Influences

Palatability

There is more focus on what students will enjoy and what they consider to be palatable. Therefore, particularly in childcare centers, there is more fruit served, and creative methods are trialed to cook vegetables and make them more exciting and appetizing. School canteens and universities cater more fruits and vegetables that are well liked by students, for example, baked sweet potato chips.[1]

Nutrition

Serving nutritious foods at schools and childcare centers is becoming an increasingly high priority item due to federal and state government initiatives highlighting the need to offer healthier foods to growing children and teenagers. Student accommodation caterers are also mindful of this to encourage optimal student learning.[1]

Quality

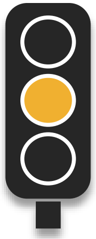
Fresh is considered a key component of high-quality produce in the education system. Quality is high on the agenda, particularly for childcare centers and private education systems.[1]

Source: (1) Education caterer

Mining foodservice contractors review their menu every quarter for breakfast and dinner which is buffet-style, and lunch which requires villagers to pack their own meals

Mining

Degree of Opportunity



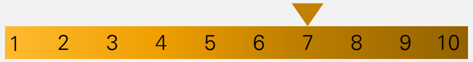
Medium opportunity

The mining sector has medium opportunity for the horticulture industry as the foodservice contractors drive procurement decisions and frequently look at methods of lowering their costs and expenses which often affects produce procured for this channel. Mining companies do review and set standards to ensure fresh, nutritious, multicultural, Australian grown and quality produce is served to villagers, however, there are challenges related to ensuring consistent delivery for this area.

Important Foodservice Channel Insights

- Mining foodservices are **dominated by large industry operators** (such as Compass Group who recently acquired Sodexo) who typically engage in full service contracts for 2-3 years.[1]
- The mining foodservice channel has a **significant focus on dollars per kilo** on mining sites as they are constrained by a budget of ~**$15 a day** to feed each person in each camp. [1]
- Mining companies refer to the miners who stay in mining villages as 'villagers'. The villagers have separate accommodation rooms and a village center (mess hall) and a space for recreational activities. [1]
- Villagers can spend rotational periods of **7-14 days at mining villages** before leaving to return home. Since relatively long periods are spent in these areas, mining companies often try to see how to make the village experience more comfortable, which includes **improving the eating experience**. [1]
- **Mining companies set standards** for their foodservice contractors. These standards address sourcing Australian produce, sustainability and quality of fruits and vegetables used in meals. **Contractors** try to find ways to **reduce their foodservice costs** that still allow them to meet the food standards set by mining companies. Contractors operate foodservice at a loss, which is often offset by other services delivered. [1]

Market Entry Difficulty



Low Market Entry Difficulty

Great Market Entry Difficulty

Market entry difficulty is relatively high for mining as companies typically have mature relationships with their contractors. Building relationships with major stakeholders will be key to engaging with the mining foodservice channel.

Ratings were informed by stakeholder consultation insights.

Appetite for Change

Low Appetite for Change

Great Appetite for Change

Mining has a moderate appetite for change. Food offerings are not particularly creative and innovative. However, the growing need for more healthy, nutritious foods and a good eating experience may increase willingness of mining companies to explore other options.

Ratings were informed by stakeholder consultation insights.

Who Influences the Menu

- Villager feedback, response and satisfaction to the menu and foods served is a component of what drives the menu. [1]
- Mining companies play a role in making dietary decisions. E.g., the push for more healthy, nutritionally rich foods will be driven by head management in the companies. [1]
- Consultants employed by mining companies also play a role in determining what should be on the menu. [1]

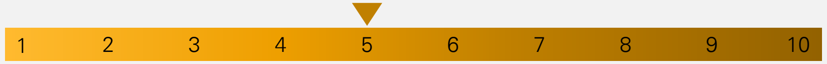
Significance of Key Attributes

Provenance and Supporting Australian Produce

Low importance and/or significance

Great importance and/or significance

Sustainability



Low importance and/or significance

Great importance and/or significance

Pricing

Low importance and/or significance

Great importance and/or significance

Quality

Low importance and/or significance

Great importance and/or significance

Health and Wellness

Low importance and/or significance

Great importance and/or significance

Ratings were informed by stakeholder consultation insights.

Source: (1) Mining foodservice consultants.

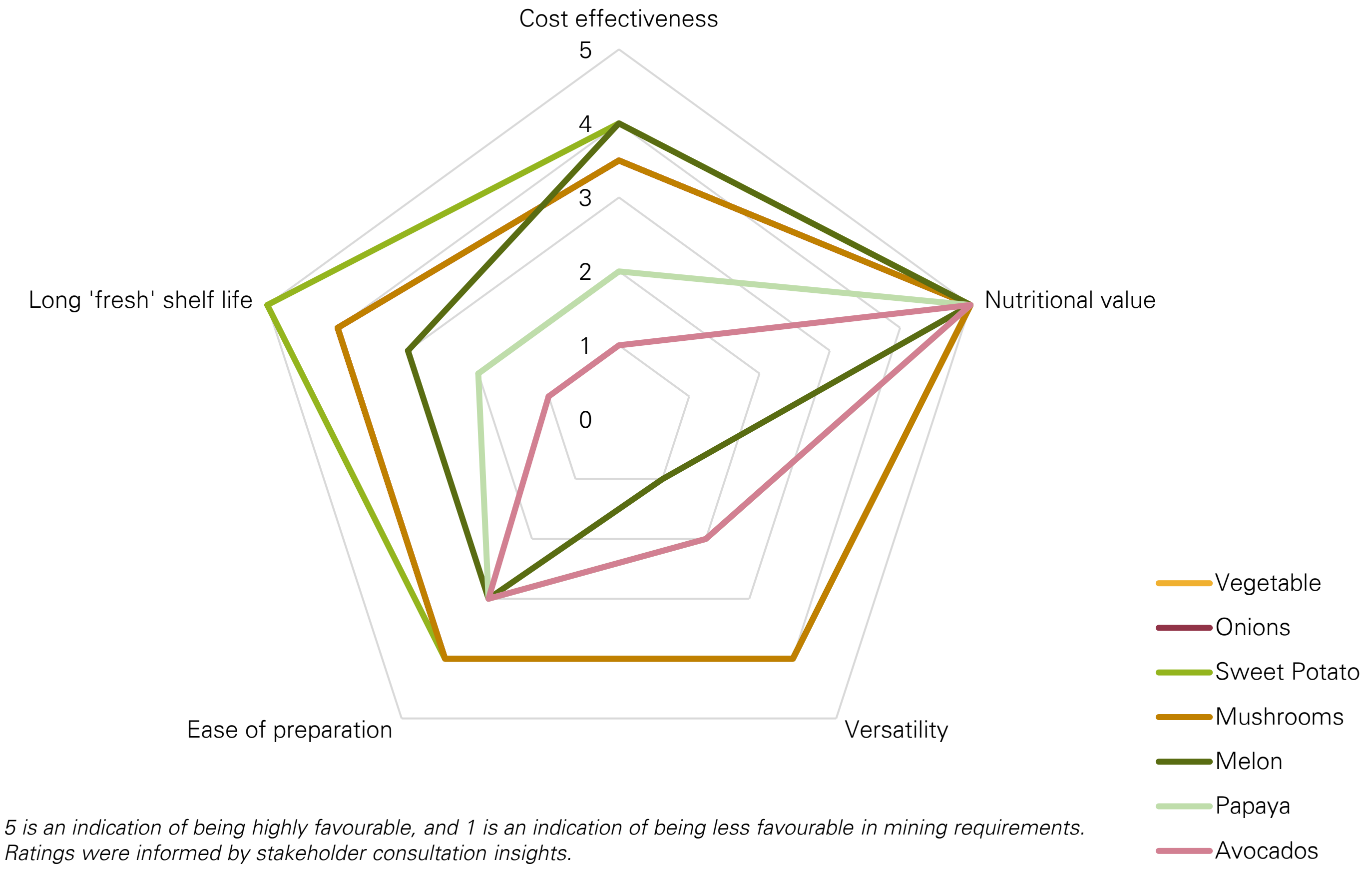
Sweet potatoes are a favourable category that shows great opportunity for growth in the mining foodservice channel. The channel is also trying to use them more creatively, through different formats and cooking styles

Mining

Category of Greatest Growth Opportunity

Ranking	Category	Score
1	Sweet Potatoes	22
2	Vegetables	20.5
3	Mushrooms	20.5
4	Onions	20.5
5	Melons	16
6	Papayas	14
7	Avocados	12

Extent that each Category fulfils Mining requirements



5 is an indication of being highly favourable, and 1 is an indication of being less favourable in mining requirements. Ratings were informed by stakeholder consultation insights.

Through standards set by mining companies, foodservice contractors are required to look for a range of different produce that are nutritious and have a long shelf-life

Mining

Opportunities and Challenges for Categories

- **Avocados** are an expensive category to be served to villagers in mining sites. Foodservice contractors in mining sites do not consider avocados for this reason as they are highly cost-driven. However, villagers are appealing for more avocados to be put on the menus at mining sites. Consequently, avocados are being offered on menus in the form of bulk purchases of guacamole as opposed to fresh whole avocados.
- **Melons** (watermelon, rock melon, honey dew) are well-liked by mining foodservice contractors and are almost served on a daily basis to villages due to their cost effectiveness. Melons tend to have a higher frequency of causing lacerations amongst catering staff who prepare food for villagers. However the cost of labour involved (time and effort) in serving melons is offset by its lower price point.
- **Mushrooms** are widely used in hot and cold meals served to villagers. More so than other horticultural categories, mushrooms tend to be more cuisine specific. Contractors procure button mushroom regularly as they are the lower-end in comparison to other mushroom varieties. Villagers would like more mushroom varieties of mushroom served, however contractors resist to pay a premium for other mushroom varieties. There is an opportunity here to showcase how other varieties can be of a similar price point to button mushrooms.
- **Onions** are ordered on a consistent and regular basis. They are ordered having already been peeled or sliced. The process of cutting onions is time consuming. Therefore, it is the main ingredient that is purchased having already been processed. There is an opportunity to explore other ways onions can be value added. For example, serving healthy frozen baked onion rings that only require reheating.
- **Papaya** is rarely used in mining sites. This is due to two primary reasons: high price point and short shelf-life. Papaya is also seen by villagers as a fruit to enjoy on a non-frequent basis such as every fortnight, not on a daily occurrence. Cold chain management options can be explored here to showcase how shelf-life of papayas can be extended through simple management and handling techniques.
- **Sweet Potato** is a favourable item to serve in the mining villages and are well received and greatly liked by villagers. Sweet potatoes are a well established ingredient that is incorporated into the menus offered to villagers. Consultants who help formulate the menus are looking to increase the use of sweet potatoes given they are nutritious and versatile, however, the challenge is in investigating how to use them more creatively, in different formats and cooking styles. This is an opportunity area for the sweet potato industry can further engage in.
- **Vegetables** are highly nutritious by being a great source of vitamins, minerals and dietary fiber which aligns with the mining industry's standards. Vegetables are widely used in mining. Some of the core vegetables include tomatoes, broccoli and cauliflower. Procurement considerations for vegetables include cost effectiveness, ability to hold well (product integrity), ability to be pre-packed and have low wastage.

Source: opportunities and challenges category insights were informed by mining foodservice consultants

Procurement Decision Influences

Variety

Introducing more variety into the menus and diets of villagers is becoming an increasing focus. This is mainly driven by increasing dietary requirements and evolving preferences of villagers. Consequently, companies need to accommodate for vegetarian, vegan and multicultural meals and buffet-style foods on offer at mess halls. Variety is also becoming a focus due to improvement efforts of the eating experience in the mining villages.[1]

Nutrition

Serving nutritious foods in mining villages is becoming an increasingly high priority amongst the big mining companies such as BHP, Rio Tinto and Fortescue Metals Group. Contract foodservice caterers are highly cost-driven and cost conscious. As such, meals previously served in villages were more processed and were not as nutritionally rich with quality fruits and vegetables.[1]

Long fresh shelf-life

Mining companies and villagers are increasingly wanting more fresh and healthy foods. However, this requires significant consideration around logistical management and handling to ensure fresh produce are served in an appealing state to the villagers in mess halls. Consequently, there is more of a focus on fresh produce that naturally have a longer fresh shelf-life when refrigerated. [1]

Hort Innovation
Strategic levy investment

Source: (1) Mining foodservice consultants.

Hort
Innovation
Strategic levy investment