MT21011
Foodservice foundational market insights

Category Snapshot Report

July 2022

Hort Innovation
Strategic levy investment

Contents

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Scope and approach

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 categories:

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

This project will prioritise the following seven (7) horticulture industries:

Avocados, Melon, Mushroom, Onion, Papaya, Sweet Potato, Vegetable industry

Objective

The objective of this project is to support Hort Innovation by providing foundational 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 produce;
- Identify what the foodservice sector like and dislike about specific Australian produce. 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 providers.

Methodology

Two research methods (desktop research and foodservice stakeholder consultations), 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 reports;
- market sizing data;
- business directory scanning; and
- government directory scanning.

Qualitative analysis – 22 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).

This report offers a snapshot for each industry and contains a summary of insights that is relevant and practical from across the project

Macro trends

Foodservice macro trends that the horticultural categories align strongly to.

Foodservice channel segmentation alignment

Identified the foodservice channels that best aligned with each horticultural category characteristics. Showcase how each of the foodservice channels vary in how much they demand, or could demand, for each category.

Value chain nuances to be considered by category industries

The value chains that each horticultural category prioritised, and their key nuances that require consideration by industry.

Commercial decision points and strategic opportunities

The practical commercial decision points industries need to align with, as well as key areas of opportunity across all foodservice channels.

Understanding of the four above elements can support and enable greater success with foodservice engagement in the identified commercial and industrial channels.

The Category Snapshot Report ranks the foodservice channels in order of greatest growth opportunity

Each of the key **attributes differ per foodservice channel**.
Foodservice-specific stakeholder consultations identified 5 key attributes used in decision-making when procuring produce.

Foodservice channel rankings were informed by the alignment of the category characteristics against foodservice channel requirements which were then overlayed by the outcomes of foodservice industry stakeholder consultations, desktop research

Foodservice Channel Rankings in order of Greatest Growth Opportunity

Ranking	Foodservice Channel	Key Attribute Score				
1	Cafés	Menu compatibility	Consumer desirability	Nutritional value	Standard of quality needed	Hardy
2	Catering	Cost effectiveness	Consumer desirability	Nutritional value	Standard of quality needed	Versatility
3	Meal kits	Cost effectiveness	Consumer desirability	Nutritional value	Shorter preparation and cooking time	Versatility
4	Tourism	Cost effectiveness	Consumer desirability	Nutritional value	Ease of preparation	Versatility
5	Defence	Long fresh shelf-life	Category familiarity	Nutritional value	Retain shape and textural integrity	Versatility
6	Education	Cost effectiveness	Palatability and liking	Nutritional value	Ease of preparation	Versatility
7	Restaurants	Cost effectiveness	Consumer desirability	Versatility	Standard of quality needed	Hardy
8	Health	Cost effectiveness	Ease of purchasing value added produce	Nutritional value	Ease of preparation	Availability
9	Airlines	Long fresh shelf-life	Retain shape and textural integrity	Nutritional value	Ease of preparation	Retain taste and flavours
10	Mining	Cost effectiveness	Long fresh shelf-life	Nutritional value	Ease of preparation	Versatility

For example: Category 'X' is unable to meet the Mining foodservice channel requirement for 'versatility'. There may be an opportunity to increase engagement by providing inspiration on various ways to utilise product 'X'.

'Key attributes' are five key attributes (not ranked in order) a foodservice channel takes into consideration when procuring a product. The rating of each of the attributes indicates the current ability of the category to fulfil the requirements and contributed to the foodservice channel rankings for each category.

High *– Category able to fulfil* ***most/all*** *of the foodservice channel attribute requirement*

Medium *– Category fulfils* ***some*** *of the foodservice channel attribute requirement*

Low *– Category able to fulfil* ***few/none*** *of the foodservice channel attribute requirement*

Horticultural categories have specific characteristics. Based on each categories' traits, not all foodservice channels have the same potential in each value chain

- Avocado
- Melon
- Mushroom
- Onion
- Papaya
- Sweet Potato
- Vegetable

Some foodservice channel requirements when selecting produce include:

Requirement	Description	Requirement	Description
Menu compatibility	Degree in which horticultural produce suits menu offering and foodservice intention	**Cost effectiveness**	Relatively high quality produce at a lower price point
Ease of purchasing value added produce	Value add of various product formats due to availability, cost effectiveness and ease of use	**Palatability**	Consumer acceptance of the produce
Nutritional value	Measure of a well-balanced nutrients	**Hardiness**	Ability to withstand unfavourable conditions i.e. long transportation
Ease of preparation	Degree in which a horticultural category is easy to prepare (i.e. slice, dice, etc.) prior to cooking or serving	**Consumer desirability**	Consumer's preference when purchasing and consuming food
Versatility	Ability of produce to be utilised and incorporated in multiple ways	**Long fresh shelf-life**	Duration in which produce remains fresh, safe and suitable for consumption
Ability to retain taste and flavour	Degree tastes and flavours are retained by the produce	**Overall liking**	Satisfaction with general qualities of a horticultural category
Ability to retain shape and texture	Structural integrity of the produce is retained	**Standard of quality required**	Quality requirements, determined by a grading system, vary by foodservice channel

Each of the categories' 'scores' (where relevant) against above requirements need to be considered when pursuing strategic interaction with the foodservice industry.

Category snapshots

Avocados

Avocados are fairly limited in their existing use within foodservice, however, meet various criteria that are trending in foodservice

Trends in Foodservice

Trend	Description	Alignment to Avocados
Desire for healthy foods[1]	Consumers are becoming increasingly health conscious and interested in foods with additional health benefits, as a way of managing health concerns such as weight and high cholesterol.	✓
Increased desirability for locally grown produce[2]	Consumers have an increasing desire to purchase locally grown produce to help strengthen communities and support farmers.	✓
Multicultural flavours are becoming more widely desired[3]	Consumers are increasingly exposed and have access to a multicultural society. General increased curiosity and awareness have lead to an increase in variety of international cuisine.	✓
Increase in fast-casual dining[4]	Fast-casual dining has strong growth prospects over the short, medium and long term. Growth patterns are attributed to the embrace of consumer desires through contactless takeout, drive-thru and at home delivery options.	✓
Continued rise in plant-based foods and ingredients[5]	There is a rise in demand from consumers for plant-based foods as education and awareness of health, sustainability and animal welfare issues gain momentum.	✓
Increased focus on ESG (Environmental, Social, and Governance) principles[6]	Consumers are actively seeking foodservice providers that align to their sustainability, environmentally-conscious and socially responsible values.	✓
Need for produce with longer fresh shelf-life[7]	The airline, Defence and mining foodservice channels particularly require produce with sufficient shelf-life and durability due to the complex distribution and logistical requirements.	✗
Foodservice channels requiring greater convenience[7]	With cost of labour rising, and labour shortages remaining, more foodservice channels are shifting to value-added produce that minimises the preparation time and efforts.	✗

Source: (1) Food Navigator, 2020. (2) Food & Drink Business, 2021. (3) Modor Intelligence, 2022. (4) Allied Market Research, 2021. (5) Food Frontier, 2021. (6) Mondelez International Foodservice, 2022. (7) Stakeholder consultations.

Avocados are a core menu item in café breakfast and lunch offerings. Cafés specifically seek out how to integrate avocados across their menus

Foodservice Channel Rankings in order of Greatest Growth Opportunity						
Ranking	**Foodservice Channel**	**Key Attribute Score**				
1	Cafés	Menu compatibility	Consumer desirability	Nutritional value	Standard of quality needed	Hardy
2	Catering	Cost effectiveness	Consumer desirability	Nutritional value	Standard of quality needed	Versatility
3	Meal kits	Cost effectiveness	Consumer desirability	Nutritional value	Shorter preparation and cooking time	Versatility
4	Tourism	Cost effectiveness	Consumer desirability	Nutritional value	Ease of preparation	Versatility
5	Defence	Long fresh shelf-life	Category familiarity	Nutritional value	Retain shape and textural integrity	Versatility
6	Education	Cost effectiveness	Palatability and liking	Nutritional value	Ease of preparation	Versatility
7	Restaurants	Cost effectiveness	Consumer desirability	Versatility	Standard of quality needed	Hardy
8	Health	Cost effectiveness	Ease of purchasing value added produce	Nutritional value	Ease of preparation	Availability
9	Airlines	Long fresh shelf-life	Retain shape and textural integrity	Nutritional value	Ease of preparation	Retain taste and flavours
10	Mining	Cost effectiveness	Long fresh shelf-life	Nutritional value	Ease of preparation	Versatility

Ability to fulfil foodservice channel requirements key Low Medium High

Scores were informed by stakeholder consultation insights.

Please refer to page 5 to support interpretation and insight derived from the above table and page 6 for attribute definitions

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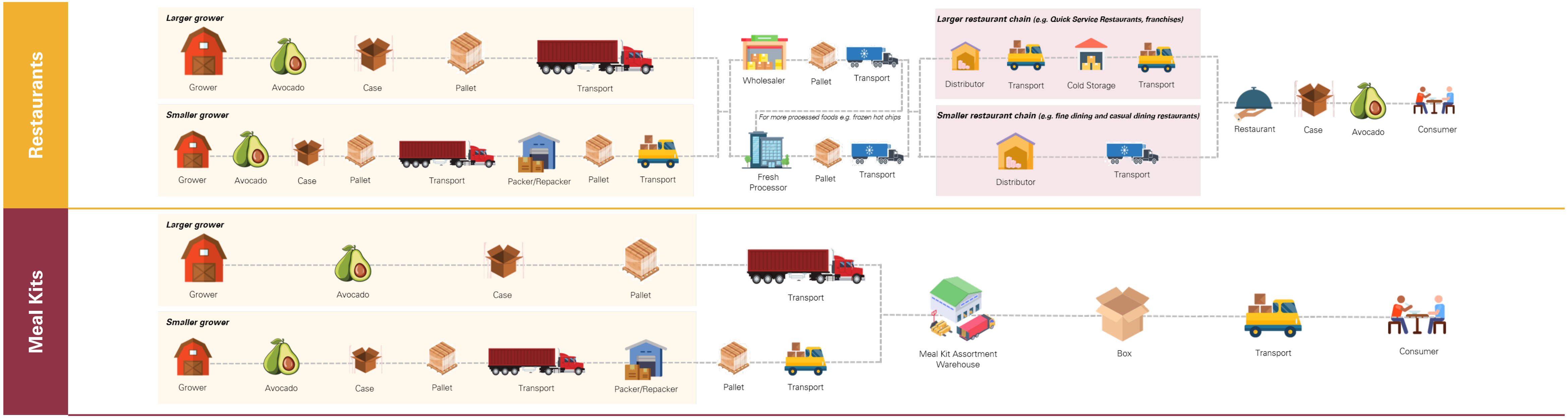
Sourcing processed avocado is becoming increasingly popular as an easy and more convenient solution in restaurants. However, meal kits require whole avocado fruits



Key nuances to be considered along the chosen value chains by the avocado industry

Ripening timing

The ripeness of avocados when procured is important in the restaurant and more particularly, the meal kit value chain as businesses aim to sufficiently time and deliver ready to use, ripe avocados to consumers.

Order frequency

Meal kit businesses typically require weekly bulk orders of produce, including avocados. Restaurants can procure avocados up to 2 times a week, depending on how prevalent avocados are in menu offerings.

Order quantity

Quantity of avocado orders fluctuate based on in-house specials and menu changes. Restaurants can change their menu seasonally, or at least 1 to 2 times a year. Meal kits introduce new recipes every quarter and have a rotating menu based on consumer preferences.

Ingredient use

Despite being a well-liked ingredient by consumers, avocados are more of a 'feature' ingredient as opposed to a staple item in dishes served at restaurants and recipes offered by meal kit foodservices.

Insights have been informed by desktop research and stakeholder consultations.

Understanding the preferred product format and ripeness of avocados desired by foodservice channels will help the avocado industry better meet foodservice needs

Practical commercial decisions and opportunity considerations for the avocado industry

Understanding preferred avocado product formats
Gaining a more refined understanding on preferred avocado product formats and investing in innovation will allow greater leverage for expansion of value-adding opportunities, particularly as certain foodservice channels prioritise produce which require less time and effort to prepare.

Improving transport and cold chain management across the value chain
As avocados are highly fragile, decisions surrounding careful transport and effective cold chain management are particularly important to reduce the possibility of bruised and spoiled avocados.

Inspiring creative ways to incorporate avocados into menu offerings to highlight versatility
Promoting the versatility of avocados through innovative and exciting product and meal formats e.g. guacamole, or use of avocado in dinner / dessert menu items

Increasing advocacy efforts
Promoting desirable avocado attributes e.g. nutritional benefits, and shifting perception of avocados as an expensive horticulture category will help boost demand in foodservice, particularly for institutional channels.

Adapting to foodservice channel changes in a timely manner when menus are updated
Knowing the menu modification requirements for foodservice channels will help growers adapt more flexibly due to an understanding of what is desired from avocados.

Understanding avocado logistical requirements for each foodservice channel
Given the relatively short window of ripeness for avocados, gaining a robust understanding on desired avocado ripeness for each foodservice channel is important to ensure avocados are provided to customers accordingly to preparation and cooking schedules.

Insights have been informed by desktop research and stakeholder consultations.


Melons

Melons are less widely used as a processed ingredient across the foodservice industry. Consequently, there is opportunity in leveraging this value chain further

Trends in Foodservice

Trend	Description	Alignment to Melons
Desire for healthy foods[1]	Consumers are becoming increasingly health conscious and interested in foods with additional health benefits, as a way of managing health concerns such as weight and high cholesterol.	✓
Increased desirability for locally grown produce[2]	Consumers have an increasing desire to purchase locally grown produce to help strengthen communities and support farmers.	✓
Multicultural flavours are becoming more widely desired[3]	Consumers are increasingly exposed and have access to a multicultural society. General increased curiosity and awareness have lead to an increase in variety of international cuisine.	✓
Increase in fast-casual dining[4]	Fast-casual dining has strong growth prospects over the short, medium and long term. Growth patterns are attributed to the embrace of consumer desires through contactless takeout, drive-thru and at home delivery options.	✓
Continued rise in plant-based foods and ingredients[5]	There is a rise in demand from consumers for plant-based foods as education and awareness of health, sustainability and animal welfare issues gain momentum.	✓
Increased focus on ESG (Environmental, Social, and Governance) principles[6]	Consumers are actively seeking foodservice providers that align to their sustainability, environmentally-conscious and socially responsible values.	✓
Need for produce with longer fresh shelf-life[7]	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.	✓
Foodservice channels requiring greater convenience[7]	With cost of labour rising, and labour shortages remaining, more foodservice channels are shifting to value-added produce that minimises the preparation time and efforts.	✗

Source: (1) Food Navigator, 2020. (2) Food & Drink Business, 2021. (3) Modor Intelligence, 2022. (4) Allied Market Research, 2021. (5) Food Frontier, 2021. (6) Mondelez International Foodservice, 2022. (7) Stakeholder consultations.

Melons are highly favourable in airline, health and catering foodservices. However, rock melons, specifically, have been delisted in health due to food safety concerns

Foodservice Channel Rankings in order of Greatest Growth Opportunity						
Ranking	**Foodservice Channel**	**Key Attribute Score**				
1	Airlines	🟠 Long fresh shelf-life	🟢 Retain shape and textural integrity	🟢 Nutritional value	🟠 Ease of preparation	🟢 Retain taste and flavours
2	Health	🟠 Cost effectiveness	🟠 Ease of purchasing value added produce	🟢 Nutritional value	🟢 Ease of preparation	🟢 Availability
3	Catering	🟠 Cost effectiveness	🟢 Consumer desirability	🟢 Nutritional value	🟢 Standard of quality needed	🔴 Versatility
4	Meal kits	🟠 Cost effectiveness	🟢 Consumer desirability	🟢 Nutritional value	🟢 Shorter preparation and cooking time	🔴 Versatility
5	Tourism	🟠 Cost effectiveness	🟢 Consumer desirability	🟢 Nutritional value	🟠 Ease of preparation	🔴 Versatility
6	Defence	🟠 Long fresh shelf-life	🟢 Category familiarity	🟢 Nutritional value	🟢 Retain shape and textural integrity	🔴 Versatility
7	Cafés	🟠 Menu compatibility	🟠 Consumer desirability	🟢 Nutritional value	🟢 Standard of quality needed	🟢 Hardy
8	Education	🟠 Cost effectiveness	🟢 Palatability and liking	🟢 Nutritional value	🟠 Ease of preparation	🟠 Versatility
9	Mining	🟢 Cost effectiveness	🟠 Long fresh shelf-life	🟢 Nutritional value	🟠 Ease of preparation	🟠 Versatility
10	Restaurants	🟠 Cost effectiveness	🟠 Consumer desirability	🔴 Versatility	🟢 Standard of quality needed	🟠 Hardy

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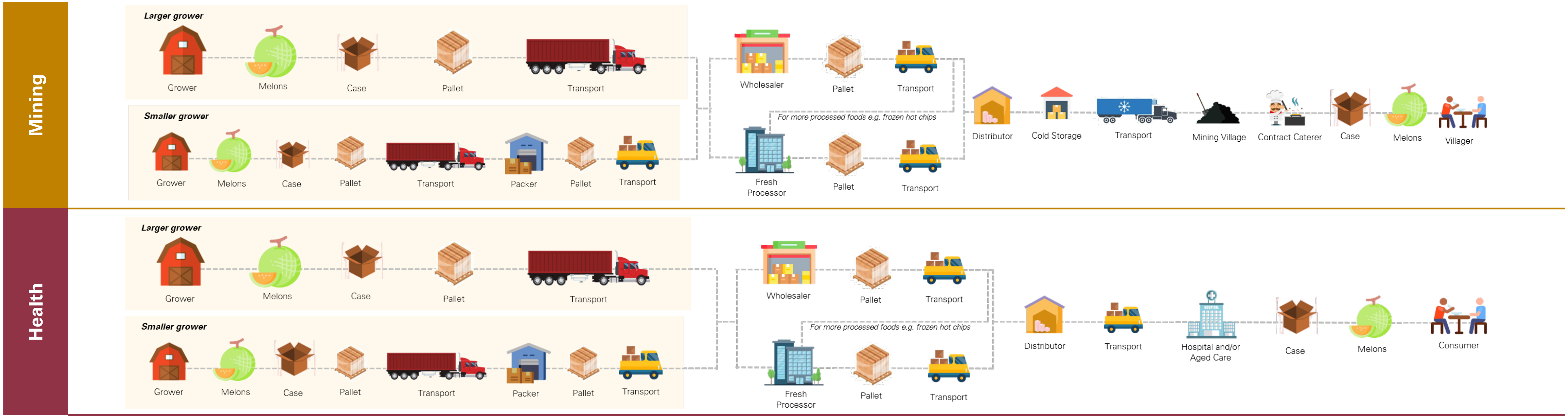
Ability to fulfil foodservice channel requirements key 🔴 Low 🟠 Medium 🟢 High

Please refer to page 5 to support interpretation and insight derived from the above table and page 6 for attribute definitions

Scores were informed by stakeholder consultation insights. Greater detail of foodservice channel values regarding key attributes can be found in the Segmentation Report.

Melons are typically procured whole then served cubed at mining and health institutions to preserve shelf-life



Key nuances to be considered along the chosen value chains by the melon industry

Format preference

Melons are typically preferred whole rather than processed due to its reduced shelf-life once processed, i.e. sliced or diced, across mining and health foodservice channels.

Order frequency and quantity

The health foodservice channel procures melons more frequently than the mining sector, averaging at 1-2 orders a week. Due to logistical complexities, melons are ordered on a weekly basis in large bulk volumes in mining foodservices.

Menu incorporation

Mining and health frequently offer melon on the menu, almost on a daily basis due to their nutritional value and lower price point. Melons do tend to cause more lacerations during preparation, however, this is offset by the cost effectiveness of the category.

Ingredient use

Melons are widely served freshly sliced/diced in a fruit bar at mining mess halls, and within fruit salads in the health foodservice channel.

Extensive advocacy efforts for nutritional benefits and creative preparation formats will help promote demand for melons in foodservice

Practical commercial decisions and opportunity considerations for the melon industry

Inspiring creative ways to incorporate melons into meal formats to highlight versatility
Promoting the versatility of melons through innovative and exciting meal formats will help shift consumer perception of melons as a predominantly summer fruit that is primarily incorporated in salads and juices.

Understanding the quality standards required for each foodservice channel
As the standard of melon quality and sweetness desired differ between each foodservice channel, gaining a more refined understanding on the nuances will allow greater leverage of lower grade produce and reduce food waste.

Improving processes along the value chain to preserve melon shelf-life
Decisions surrounding efficient transport and cold chain management are particularly important in order to preserve the shelf-life of melons, particularly once cut.

Understanding preferred melon product formats
Certain foodservice channels have utility staff (as opposed to chefs) preparing ingredients and thus prefer produce that are easy to handle and prepare. This provides value-adding opportunities for melons that are relatively more difficult to cut.

Advocating nutritional benefits of melons
Increasing advocacy efforts in promoting the nutritional benefits of melons through daily consumption e.g. in juices, will help the melons industry capitalise on the growing demand for healthier foods.

Building trust and quality proposition
Increasing efforts in promoting melon quality assurance and practices through production and processing is important to build trust with the foodservice sector and shift the perception on melon quality.

Insights have been informed by desktop research and stakeholder consultations.

Mushrooms

Mushrooms are highly popular in foodservice, particularly with the rise of alternative diets and growing demand for nutritious, flavourful, and 'meat-substitute' plant-based alternatives

Trends in Foodservice

Trend	Description	Alignment to Mushrooms
Desire for healthy foods[1]	Consumers are becoming increasingly health conscious and interested in foods with additional health benefits, as a way of managing health concerns such as weight and high cholesterol.	✓
Increased desirability for locally grown produce[2]	Consumers have an increasing desire to purchase locally grown produce to help strengthen communities and support farmers.	✓
Multicultural flavours are becoming more widely desired[3]	Consumers are increasingly exposed and have access to a multicultural society. General increased curiosity and awareness have lead to an increase in variety of international cuisine.	✓
Increase in fast-casual dining[4]	Fast-casual dining has strong growth prospects over the short, medium and long term. Growth patterns are attributed to the embrace of consumer desires through contactless takeout, drive-thru and at home delivery options.	✓
Continued rise in plant-based foods and ingredients[5]	There is a rise in demand from consumers for plant-based foods as education and awareness of health, sustainability and animal welfare issues gain momentum.	✓
Increased focus on ESG (Environmental, Social, and Governance) principles[6]	Consumers are actively seeking foodservice providers that align to their sustainability, environmentally-conscious and socially responsible values.	✓
Need for produce with longer fresh shelf-life[7]	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.	✓
Foodservice channels requiring greater convenience[7]	With cost of labour rising, and labour shortages remaining, more foodservice channels are shifting to value-added produce that minimises the preparation time and efforts.	✓

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The versatility, nutritional value and relatively long shelf-life of mushrooms place them well for Defence, airline and health foodservice channels

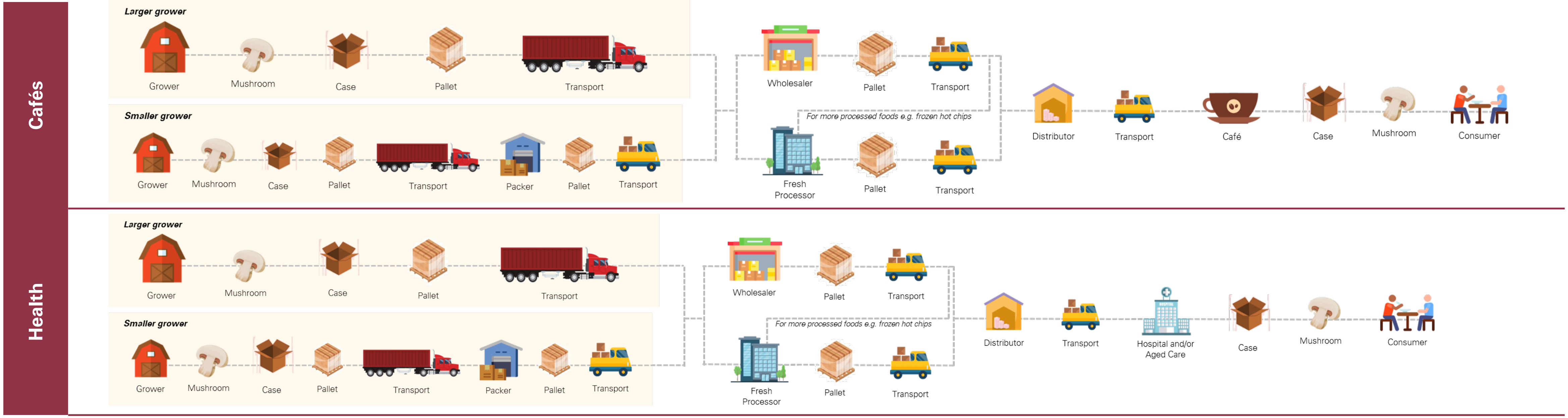
Foodservice Channel Rankings in order of Greatest Growth Opportunity						
Ranking	**Foodservice Channel**	**Key Attribute Score**				
1	Defence	Long fresh shelf-life	Category familiarity	Nutritional value	Retain shape and textural integrity	Versatility
2	Airlines	Long fresh shelf-life	Retain shape and textural integrity	Nutritional value	Ease of preparation	Retain taste and flavours
3	Health	Cost effectiveness	Ease of purchasing value added produce	Nutritional value	Ease of preparation	Availability
4	Mining	Cost effectiveness	Long fresh shelf-life	Nutritional value	Ease of preparation	Versatility
5	Restaurants	Cost effectiveness	Consumer desirability	Versatility	Standard of quality needed	Hardy
6	Cafés	Menu compatibility	Consumer desirability	Nutritional value	Standard of quality needed	Hardy
7	Meal kits	Cost effectiveness	Consumer desirability	Nutritional value	Shorter preparation and cooking time	Versatility
8	Tourism	Cost effectiveness	Consumer desirability	Nutritional value	Ease of preparation	Versatility
9	Catering	Cost effectiveness	Consumer desirability	Nutritional value	Standard of quality needed	Versatility
10	Education	Cost effectiveness	Palatability and liking	Nutritional value	Ease of preparation	Versatility

Ability to fulfil foodservice channel requirements key: Low | Medium | High

Please refer to page 5 to support interpretation and insight derived from the above table and page 6 for attribute definitions

Scores were informed by stakeholder consultation insights. Greater detail of foodservice channel values regarding key attributes can be found in the Segmentation Report.

Mushrooms are relatively well adapted to the needs of foodservice due to existing promotion of category versatility



Key nuances to be considered along the chosen value chains by the mushroom industry

Format preference

Most mushrooms are typically desired in whole form by cafés, without additional processing (e.g. dicing). This differs to the health channel where value-add mushrooms are desired due to increasing labour shortages and labour costs.

Order frequency

Mushrooms are highly desired by café and health foodservice channels. Their relatively long fresh shelf-life makes them favourable to the health sector. As a result, they are ordered once a week in health institutions, and up to two times a week by cafés.

Menu incorporation

Mushrooms are available year-round and don't have significant seasonality. Therefore, mushrooms are consistently used and featured on the menus of cafés and health channels. They are typically offered as sauteed with various flavours.

Ingredient use

Mushrooms have strong produce diversification and are becoming increasingly popular as a plant-based substitute for its 'meaty' texture. They have prevalence across breakfast, lunch and dinner meal offerings.

Insights have been informed by desktop research and stakeholder consultations.

Showcasing various mushroom varieties, product formats and meal inspiration will help better meet the needs of foodservice channels

Practical commercial decisions and opportunity considerations for the mushroom industry

Advocating nutritional benefits of mushrooms
Increasing advocacy efforts in promoting the nutritional benefits of mushrooms, particularly as a source of protein and its versatility in plant based foods, will help the mushroom industry capitalise on the growing demand for healthier foods.

Showcasing different varieties of mushrooms and shifting perception on price points
Enhancing marketing for mushrooms outside of white button mushrooms will help meet the growing desire of foodservice operators to incorporate a variety of mushrooms on their menu offerings.

Inspiring creative ways to incorporate mushrooms into meal options
Promoting the versatility of mushrooms in innovative and exciting meal options will help shift consumer perception of mushrooms as a predominantly winter and breakfast vegetable.

Understanding the quality standards required for each foodservice channel
As the standard of mushroom quality desired differ between each foodservice channel, gaining a more refined understanding on the nuances will allow greater use of high and low grade produce.

Exploring mushroom product formats
Trialing mushroom product formats that alter the texture of produce will help better meet the needs and palatability of certain foodservice consumers, e.g. elderly in health channel and kids in education channel.

Improving processes along the value chain to preserve mushroom shelf-life
Efficient transport and effective cold chain management are integral in preserving the shelf-life of mushrooms. This is particularly important as the freshness of mushrooms are visibly apparent.

Insights have been informed by desktop research and stakeholder consultations.

Onions

Onions are a staple ingredient of almost every major cuisine and are therefore widely used across foodservice channels

Trends in Foodservice		
Trend	**Description**	**Alignment to Onions**
Desire for healthy foods[1]	Consumers are becoming increasingly health conscious and interested in foods with additional health benefits, as a way of managing health concerns such as weight and high cholesterol.	✓
Increased desirability for locally grown produce[2]	Consumers have an increasing desire to purchase locally grown produce to help strengthen communities and support farmers.	✓
Multicultural flavours are becoming more widely desired[3]	Consumers are increasingly exposed and have access to a multicultural society. General increased curiosity and awareness have lead to an increase in variety of international cuisine.	✓
Increase in fast-casual dining[4]	Fast-casual dining has strong growth prospects over the short, medium and long term. Growth patterns are attributed to the embrace of consumer desires through contactless takeout, drive-thru and at home delivery options.	✓
Continued rise in plant-based foods and ingredients[5]	There is a rise in demand from consumers for plant-based foods as education and awareness of health, sustainability and animal welfare issues gain momentum.	✓
Increased focus on ESG (Environmental, Social, and Governance) principles[6]	Consumers are actively seeking foodservice providers that align to their sustainability, environmentally-conscious and socially responsible values.	✓
Need for produce with longer fresh shelf-life[7]	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.	✓
Foodservice channels requiring greater convenience[7]	With cost of labour rising, and labour shortages remaining, more foodservice channels are shifting to value-added produce that minimises the preparation time and efforts.	✓

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The cost effectiveness of onions makes it a favourable category for institutional foodservice channels, which tend to be more cost-conscious

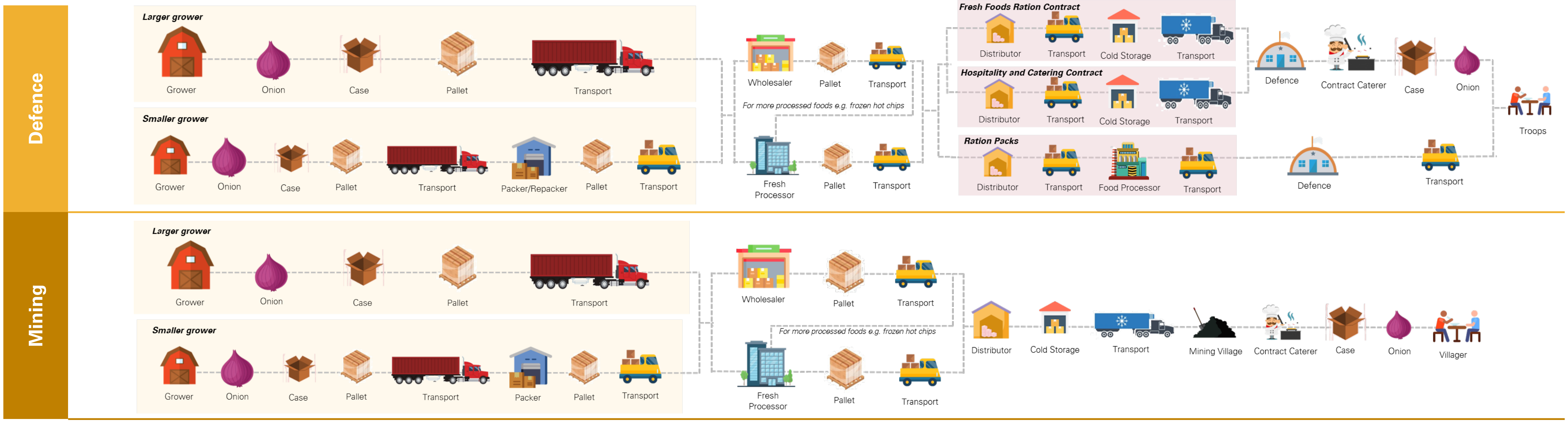
Foodservice Channel Rankings in order of Greatest Growth Opportunity						
Ranking	**Foodservice Channel**	**Key Attribute Score**				
1	Defence	Long fresh shelf-life	Category familiarity	Nutritional value	Retain shape and textural integrity	Versatility
2	Airlines	Cost effectiveness	Long fresh shelf-life	Nutritional value	Ease of preparation	Versatility
3	Health	Long fresh shelf-life	Retain shape and textural integrity	Nutritional value	Ease of preparation	Retain taste and flavours
4	Mining	Menu compatibility	Consumer desirability	Nutritional value	Standard of quality needed	Hardy
5	Restaurants	Cost effectiveness	Consumer desirability	Versatility	Standard of quality needed	Hardy
6	Cafés	Cost effectiveness	Ease of purchasing value added produce	Nutritional value	Ease of preparation	Availability
7	Meal kits	Cost effectiveness	Palatability and liking	Nutritional value	Ease of preparation	Versatility
8	Tourism	Cost effectiveness	Consumer desirability	Nutritional value	Ease of preparation	Versatility
9	Catering	Cost effectiveness	Consumer desirability	Nutritional value	Shorter preparation and cooking time	Versatility
10	Education	Cost effectiveness	Consumer desirability	Nutritional value	Standard of quality needed	Versatility

Ability to fulfil foodservice channel requirements key Low Medium High

Please refer to page 5 to support interpretation and insight derived from the above table and page 6 for attribute definitions

Scores were informed by stakeholder consultation insights. Greater detail of foodservice channel values regarding key attributes can be found in the Segmentation Report.

Onions are highly demanded in the Defence and mining channels due to their long fresh shelf-life, versatility and hardiness



Key nuances to be considered along the chosen value chains by the onion industry

Format preference

Defence has strong preference for locally grown and supplied onions that have already been value added. Mining values provenance less, however, similarly to Defence, also demand value added onions to reduce preparation time and efforts.

Order frequency

Onions are procured on a weekly basis by Defence and mining as they are heavily incorporated across a range of menu offerings. Due to logistical complexities of these value chains, bulk volume orders of onions are highly favourable.

Menu incorporation

Onions are not explicitly mentioned in Defence and mining menu offerings, however are frequently incorporated as a core base ingredient in many savoury dishes. Unless there is a unique way in which the onions are prepared and served, onions typically remain unmentioned.

Ingredient use

Onions are widely served cooked (typically preferred sauteed) in the Defence and mining foodservice channels as they tend to be less palatable raw. Onions are often used chopped or sliced and cooked with fats to soften and caramelise produce.

Insights have been informed by desktop research and stakeholder consultations.

Understanding product format preferences in each foodservice channel will allow the onions industry to capitalise on bulk value-add, lower grade onions

Practical commercial decisions and opportunity considerations for the onion industry

Understanding preferred onion product formats
Certain foodservice channels have utility staff (as opposed to chefs) preparing ingredients and thus prefer produce that are easy to handle and prepare. This provides value-adding opportunities for onions that are more difficult to slice and increases lacerations.

Inspiring creative ways to incorporate onions into meals
Promoting the use of onions as the main ingredient or accompaniment in dishes (as opposed to base ingredient) e.g. onion rings, caramelised onions will help boost desirability of onions within Australian consumers.

Understanding the quality standards required for each foodservice channel
Gaining a more refined understanding of the quality standards required for each foodservice channel will allow the onions industry to capitalise on bulk value added (e.g. chopped, diced, frozen), lower grade onions.

Enhance marketing and communication on ESG practices
Showcasing how the onions industry has responded to environmental, social and governance principles will enable growers to leverage the sustainability value proposition.

Improving processes along the value chain to preserve onions shelf-life
As most onions are procured in infrequent, bulk orders, decisions surrounding efficient transport and effective cold chain management are particularly important in order to preserve the shelf-life of onions.

Advocating nutritional benefits of onions
Increasing advocacy efforts in promoting the health benefits of onions through daily incorporation in meals will help the onions industry capitalise on the growing focus on health and nutrition in Australia.

Insights have been informed by desktop research and stakeholder consultations.


Papayas

Despite aligning with a number of foodservice trends, papayas are less commonly used throughout foodservice channels due to general category unfamiliarity

Trends in Foodservice

Trend	Description	Alignment to Papayas
Desire for healthy foods[1]	Consumers are becoming increasingly health conscious and interested in foods with additional health benefits, as a way of managing health concerns such as weight and high cholesterol.	✓
Increased desirability for locally grown produce[2]	Consumers have an increasing desire to purchase locally grown produce to help strengthen communities and support farmers.	✓
Multicultural flavours are becoming more widely desired[3]	Consumers are increasingly exposed and have access to a multicultural society. General increased curiosity and awareness have lead to an increase in variety of international cuisine.	✓
Increase in fast-casual dining[4]	Fast-casual dining has strong growth prospects over the short, medium and long term. Growth patterns are attributed to the embrace of consumer desires through contactless takeout, drive-thru and at home delivery options.	✓
Continued rise in plant-based foods and ingredients[5]	There is a rise in demand from consumers for plant-based foods as education and awareness of health, sustainability and animal welfare issues gain momentum.	✓
Increased focus on ESG (Environmental, Social, and Governance) principles[6]	Consumers are actively seeking foodservice providers that align to their sustainability, environmentally-conscious and socially responsible values.	✓
Need for produce with longer fresh shelf-life[7]	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.	✗
Foodservice channels requiring greater convenience[7]	With cost of labour rising, and labour shortages remaining, more foodservice channels are shifting to value-added produce that minimises the preparation time and efforts.	✗

Source: (1) Food Navigator, 2020. (2) Food & Drink Business, 2021. (3) Modor Intelligence, 2022. (4) Allied Market Research, 2021. (5) Food Frontier, 2021. (6) Mondelez International Foodservice, 2022. (7) Stakeholder consultations.

Papayas have potential to grow demand across foodservice. However, there may be challenges with institutional channels as they are highly cost-conscious

Foodservice Channel Rankings in order of Greatest Growth Opportunity

Ranking	Foodservice Channel	Key Attribute Score				
1	Airlines	Long fresh shelf-life	Retain shape and textural integrity	Nutritional value	Ease of preparation	Retain taste and flavours
2	Health	Cost effectiveness	Ease of purchasing value added produce	Nutritional value	Ease of preparation	Availability
3	Education	Cost effectiveness	Palatability and liking	Nutritional value	Ease of preparation	Versatility
4	Tourism	Cost effectiveness	Consumer desirability	Nutritional value	Ease of preparation	Versatility
5	Catering	Cost effectiveness	Consumer desirability	Nutritional value	Standard of quality needed	Versatility
6	Meal kits	Cost effectiveness	Consumer desirability	Nutritional value	Shorter preparation and cooking time	Versatility
7	Defence	Long fresh shelf-life	Category familiarity	Nutritional value	Retain shape and textural integrity	Versatility
8	Cafés	Menu compatibility	Consumer desirability	Nutritional value	Standard of quality needed	Hardy
9	Mining	Cost effectiveness	Long fresh shelf-life	Nutritional value	Ease of preparation	Versatility
10	Restaurants	Cost effectiveness	Consumer desirability	Versatility	Standard of quality needed	Hardy

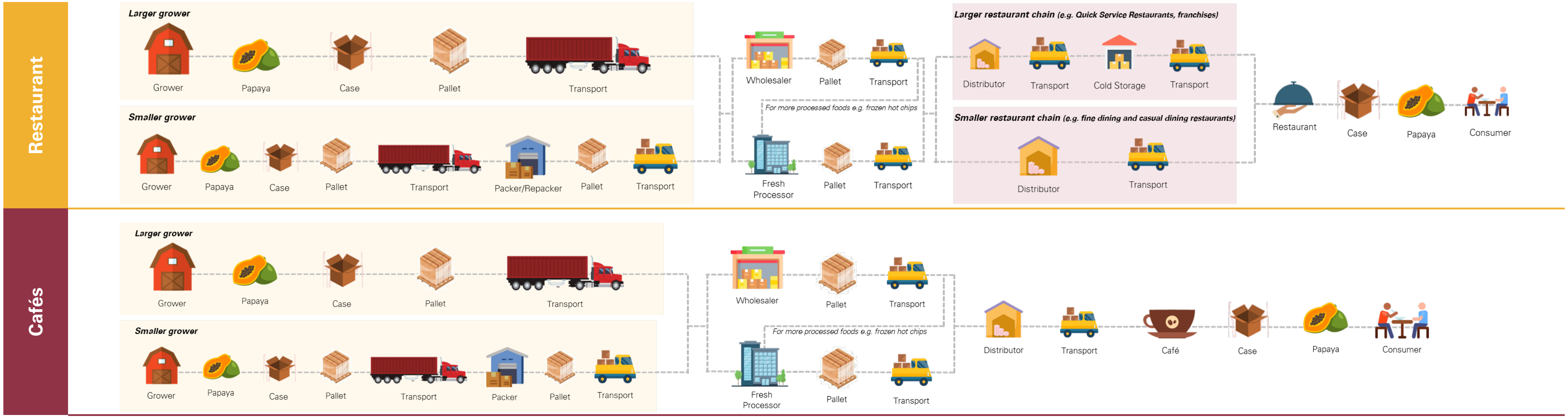
Hort Innovation
Strategic levy investment

Ability to fulfil foodservice channel requirements key Low Medium High

Please refer to page 5 to support interpretation and insight derived from the above table and page 6 for attribute definitions

Scores were informed by stakeholder consultation insights. Greater detail of foodservice channel values regarding key attributes can be found in the Segmentation Report.

Restaurants and cafés do not widely use papaya since consumers do not generally associate the fruit to typical menu options in these channels



Key nuances to be considered along the chosen value chains by the papaya industry

Format preference

Papayas have a relatively immature value chain for processed produce across Australian restaurants and cafés due to preferences for whole fruit. Pickled papaya is a common processing technique, however, this product is mostly imported.

Order frequency

Papayas are typically featured in Asian cuisine restaurants. Purchase frequency vary across restaurant cuisine-types, however is typically procured once a week at most. Order frequency for papayas in cafes is similar.

Menu incorporation

Papayas are explicitly mentioned on the menus of cafes and restaurants if incorporated, as dishes typically revolve around papayas e.g. green papaya salad. Papayas are also commonly served in fruit salads.

Logistical arrangements

Papayas are relatively fragile fruits and are therefore less hardy. Consequently, foodservice channels need to consider additional arrangements to protect and store papayas along the foodservice value chain.

Enhancing marketing and education for desirable papaya characteristics and meal options can help improve papaya familiarity amongst consumers and drive demand in foodservice

Practical commercial decisions and opportunity considerations for the papaya industry

Increasing advocacy efforts to improve papaya familiarity

Increasing advocacy efforts in promoting desirable papaya attributes e.g. cost effectiveness, consistent quality and supply and nutritional benefits can help improve familiarity within consumers and foodservice operators.

Improving processes along the value chain to preserve papaya shelf-life

Decisions surrounding efficient transport and effective cold chain management are particularly important in order to preserve the shelf-life of papayas, particularly once cut.

Adapting to foodservice channel changes in a timely manner when menus are updated

Knowing the menu modification requirements for foodservice channels will help growers adapt more flexibly due to an understanding of what is desired from papayas.

Understanding preferred papaya product formats

Gaining a more robust understanding of what product formats are most commonly desired for papayas will allow greater leverage for expansion of value-adding opportunities.

Inspiring creative ways to incorporate papayas into meal options

Promoting the versatility of papayas through innovative and exciting meal options will help boost familiarity of papayas amongst chefs and help increase incorporation of produce in dishes.

Enhance marketing and communication on ESG practices

Showcasing how the papaya industry has responded to environmental, social and governance principles will enable growers to leverage the sustainability value proposition.

Insights have been informed by desktop research and stakeholder consultations.

Sweet Potatoes

Sweet potato value chains are relatively mature, particularly with processing, thus highlighting advantage in meeting demands of channels requiring value added produce

Trends in Foodservice		
Trend	**Description**	**Alignment to Sweet Potatoes**
Desire for healthy foods[1]	Consumers are becoming increasingly health conscious and interested in foods with additional health benefits, as a way of managing health concerns such as weight and high cholesterol.	✓
Increased desirability for locally grown produce[2]	Consumers have an increasing desire to purchase locally grown produce to help strengthen communities and support farmers.	✓
Multicultural flavours are becoming more widely desired[3]	Consumers are increasingly exposed and have access to a multicultural society. General increased curiosity and awareness have lead to an increase in variety of international cuisine.	✓
Increase in fast-casual dining[4]	Fast-casual dining has strong growth prospects over the short, medium and long term. Growth patterns are attributed to the embrace of consumer desires through contactless takeout, drive-thru and at home delivery options.	✓
Continued rise in plant-based foods and ingredients[5]	There is a rise in demand from consumers for plant-based foods as education and awareness of health, sustainability and animal welfare issues gain momentum.	✓
Increased focus on ESG (Environmental, Social, and Governance) principles[6]	Consumers are actively seeking foodservice providers that align to their sustainability, environmentally-conscious and socially responsible values	✓
Need for produce with longer fresh shelf-life[7]	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.	✓
Foodservice channels requiring greater convenience[7]	With cost of labour rising, and labour shortages remaining, more foodservice channels are shifting to value-added produce that minimises the preparation time and efforts.	✓

Source: (1) Food Navigator, 2020. (2) Food & Drink Business, 2021. (3) Modor Intelligence, 2022. (4) Allied Market Research, 2021. (5) Food Frontier, 2021. (6) Mondelez International Foodservice, 2022. (7) Stakeholder consultations.

Sweet potatoes are highly favourable across all foodservice channels due to great versatility in meeting various requirements

Foodservice Channel Rankings in order of Greatest Growth Opportunity						
Ranking	**Foodservice Channel**	**Key Attribute Score**				
1	Defence	Long fresh shelf-life	Category familiarity	Nutritional value	Retain shape and textural integrity	Versatility
2	Health	Cost effectiveness	Ease of purchasing value added produce	Nutritional value	Ease of preparation	Availability
3	Education	Cost effectiveness	Palatability and liking	Nutritional value	Ease of preparation	Versatility
4	Mining	Cost effectiveness	Long fresh shelf-life	Nutritional value	Ease of preparation	Versatility
5	Airlines	Long fresh shelf-life	Retain shape and textural integrity	Nutritional value	Ease of preparation	Retain taste and flavours
6	Meal kits	Cost effectiveness	Consumer desirability	Nutritional value	Shorter preparation and cooking time	Versatility
7	Cafés	Menu compatibility	Consumer desirability	Nutritional value	Standard of quality needed	Hardy
8	Tourism	Cost effectiveness	Consumer desirability	Nutritional value	Ease of preparation	Versatility
9	Catering	Cost effectiveness	Consumer desirability	Nutritional value	Standard of quality needed	Versatility
10	Restaurants	Cost effectiveness	Consumer desirability	Versatility	Standard of quality needed	Hardy

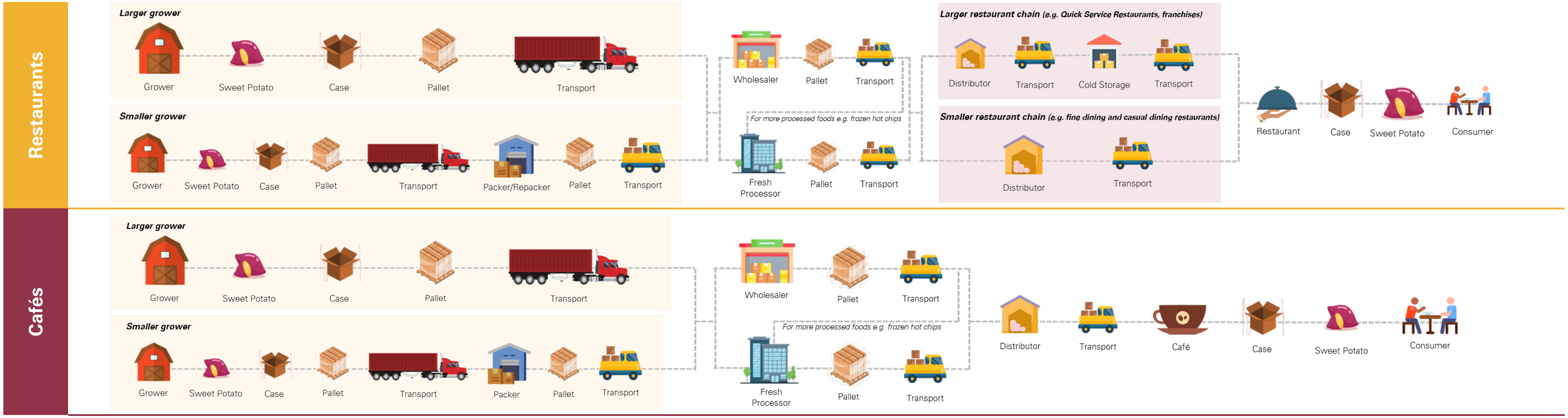
Hort Innovation
Strategic levy investment

Ability to fulfil foodservice channel requirements key Low Medium High

Please refer to page 5 to support interpretation and insight derived from the above table and page 6 for attribute definitions

Scores were informed by stakeholder consultation insights. Greater detail of foodservice channel values regarding key attributes can be found in the Segmentation Report.

Sweet potatoes are versatile ingredients and are consequently more mature in their food processing value chain



Key nuances to be considered along the chosen value chains by the sweet potato industry

Format preference

Sweet potatoes are becoming a popular processed and whole ingredient in restaurants and cafés. Restaurants and cafés typically procure sweet potato having already been processed and value added through slicing, dicing, mashed and pureed.

Order frequency

Sweet potato is favourable across various foodservice channels, including restaurants and cafés, due to their long fresh shelf-life. Consequently, foodservice channels have an ability to order large volumes less frequently. However, due to popularity, order frequency is weekly.

Menu incorporation

Sweet potatoes are a common ingredient served in various meals in restaurants and cafés. This is mostly driven by high popularity of sweet potatoes amongst customers and perception of it as a healthy substitute to traditional carbohydrates.

Logistical arrangements

Group purchasing organisations (GPOs) can be explored by the sweet potato industry for various foodservice channels. In particular, sweet potato growers can leverage bulk supply opportunities for restaurants and cafes.

Insights have been informed by desktop research and stakeholder consultations.

Enhancing marketing for sweet potatoes as a healthier and more versatile ingredient compared to other carbohydrates will help increase incorporation of produce in menu offerings

Practical commercial decisions and opportunity for the sweet potato industry

Seasonal demand fluctuations of sweet potato across the different value chains
Determining when sweet potatoes are more widely sought after throughout the year will help equip growers with a more sophisticated ability to plan and forecast demand.

Exploring ways to improve palatability of sweet potatoes
Trialing sweet potato product formats that alter the texture of produce (e.g. thinner cut fries to improve crispiness) will help increase desirability of sweet potatoes in menu offerings.

Enhance marketing and communication on ESG practices
Showcasing how the sweet potato industry has responded to environmental, social and governance principles will enable growers to leverage the sustainability value proposition.

Understanding preferred sweet potato product formats
Gaining a more robust understanding of product formats requirements to reduce handling and preparation efforts will allow greater opportunities for processing and innovation.

Advocating nutritional benefits of sweet potato
Increasing advocacy efforts in promoting the nutritional benefits of sweet potato, particularly compared to white potato, will help the sweet potato industry capitalise on the growing demand for healthier foods.

Inspiring creative ways to incorporate sweet potato into meal options
Promoting the versatility of sweet potatoes through innovative and exciting formats and cooking styles will help grow incorporation of sweet potatoes in menu offerings as variations are currently limited.

Insights have been informed by desktop research and stakeholder consultations.

Vegetables

Vegetables are well placed to further expand across all of foodservice due to an increase in health, wellness and nutrition awareness

Trends in Foodservice		
Trend	**Description**	**Alignment to Sweet Potatoes**
Desire for healthy foods[1]	Consumers are becoming increasingly health conscious and interested in foods with additional health benefits, as a way of managing health concerns such as weight and high cholesterol.	✓
Increased desirability for locally grown produce[2]	Consumers have an increasing desire to purchase locally grown produce to help strengthen communities and support farmers.	✓
Multicultural flavours are becoming more widely desired[3]	Consumers are increasingly exposed and have access to a multicultural society. General increased curiosity and awareness have lead to an increase in variety of international cuisine.	✓
Increase in fast-casual dining[4]	Fast-casual dining has strong growth prospects over the short, medium and long term. Growth patterns are attributed to the embrace of consumer desires through contactless takeout, drive-thru and at home delivery options.	✓
Continued rise in plant-based foods and ingredients[5]	There is a rise in demand from consumers for plant-based foods as education and awareness of health, sustainability and animal welfare issues gain momentum.	✓
Increased focus on ESG (Environmental, Social, and Governance) principles[6]	Consumers are actively seeking foodservice providers that align to their sustainability, environmentally-conscious and socially responsible values.	✓
Need for produce with longer fresh shelf-life[7]	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.	✓
Foodservice channels requiring greater convenience[7]	With cost of labour rising, and labour shortages remaining, more foodservice channels are shifting to value-added produce that minimises the preparation time and efforts.	✓

Source: (1) Food Navigator, 2020. (2) Food & Drink Business, 2021. (3) Modor Intelligence, 2022. (4) Allied Market Research, 2021. (5) Food Frontier, 2021. (6) Mondelez International Foodservice, 2022. (7) Stakeholder consultations.

Vegetables are highly favoured across all foodservice channels. Both commercial and institutional sectors need to meet the health-conscious trends of consumers and requirements set by industry and Government

Foodservice Channel Rankings in order of Greatest Growth Opportunity						
Ranking	**Foodservice Channel**	**Key Attribute Score**				
1	Defence	Long fresh shelf-life	Category familiarity	Nutritional value	Retain shape and textural integrity	Versatility
2	Health	Cost effectiveness	Ease of purchasing value added produce	Nutritional value	Ease of preparation	Availability
3	Education	Cost effectiveness	Palatability and liking	Nutritional value	Ease of preparation	Versatility
4	Mining	Cost effectiveness	Long fresh shelf-life	Nutritional value	Ease of preparation	Versatility
5	Meal kits	Cost effectiveness	Consumer desirability	Nutritional value	Shorter preparation and cooking time	Versatility
6	Catering	Cost effectiveness	Consumer desirability	Nutritional value	Standard of quality needed	Versatility
7	Airlines	Long fresh shelf-life	Retain shape and textural integrity	Nutritional value	Ease of preparation	Retain taste and flavours
8	Tourism	Cost effectiveness	Consumer desirability	Nutritional value	Ease of preparation	Versatility
9	Cafes	Menu compatibility	Consumer desirability	Nutritional value	Standard of quality needed	Hardy
10	Restaurants	Cost effectiveness	Consumer desirability	Versatility	Standard of quality needed	Hardy

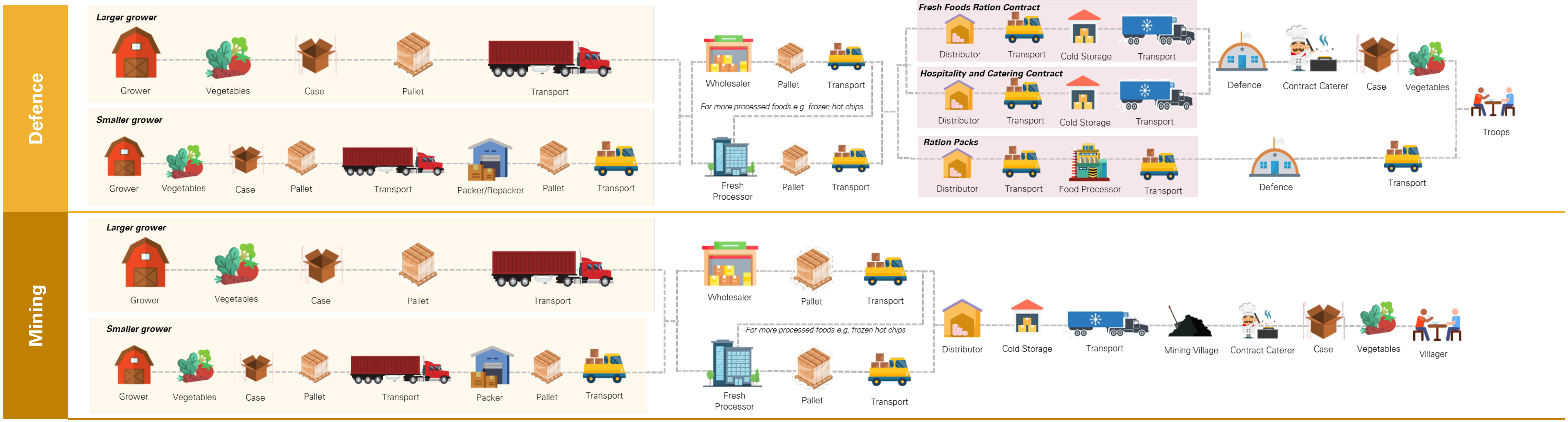
Hort Innovation
Strategic levy investment

Ability to fulfil foodservice channel requirements key	Low	Medium	High

Please refer to page 5 to support interpretation and insight derived from the above table and page 6 for attribute definitions

Scores were informed by stakeholder consultation insights. Greater detail of foodservice channel values regarding key attributes can be found in the Segmentation Report.

Vegetables are being increasingly incorporated in the mining and Defence channels due to a focus on improving nutrition in diets



Key nuances to be considered along the chosen value chains by the vegetable industry

Format preference

Vegetables are typically desired pre-prepared (sliced, peeled, mixed etc.) and packaged by Defence and mining channels as they both require large volumes. Value added vegetables help reduce preparation time, effort and OH&S risks.

Order frequency

Vegetables are a fundamental component of the menus offered in Defence and mining due to both sectors having an industry-led focus on improving nutritional content. Consequently, ordering frequency is weekly, and is limited by on-site storage.

Menu incorporation

Vegetables are widely incorporated into the menu offerings of Defence and mining for breakfast, lunch and dinner for Defence and mining. Potatoes, tomatoes, spinach, carrots, lettuce and cucumber are the most widely used vegetables in these channels.

Logistical arrangements

Cold chain management and transport is particularly important for mining villages as they are located in rural areas. Consideration must be given to total transit times to ensure fresh produce remains of an acceptable standard for Defence and mining.

Insights have been informed by desktop research and stakeholder consultations.

Increasing advocacy efforts in promoting the cost effective, versatile, health and sustainable attributes of vegetables will help boost demand for vegetables in foodservice

Practical commercial decisions and opportunity considerations for the vegetable industry

Adapting to foodservice channel changes in a timely manner when menus are updated
Knowing the menu modification requirements for foodservice channels will help growers adapt more flexibly due to an understanding of what is desired from the vegetables industry.

Increasing advocacy efforts
Increasing advocacy efforts in promoting attributes that are desired by consumers and foodservice channels i.e. cost effectiveness, versatility, nutritional benefits will help boost demand for vegetables in foodservice.

Understanding preferred vegetable product formats
Gaining a more refined understanding of what product formats are most commonly desired of vegetables will allow greater leverage for expansion of value-adding opportunities.

Enhance marketing and communication on ESG practices
Showcasing how the vegetables industry has responded to environmental, social and governance principles will enable growers to leverage the sustainability value proposition.

Improving processes along the value chain to preserve vegetable shelf-life
Decisions surrounding efficient transport and effective cold chain management are particularly important in order to preserve the shelf-life of vegetables such as lettuce, spinach and tomato where freshness is more visibly apparent.

Understanding the quality standards required for each foodservice channel
As the standard of vegetable quality desired differ between each foodservice channel, gaining a more refined understanding on the nuances will allow greater leverage of lower grade produce and reduce food waste.

Insights have been informed by desktop research and stakeholder consultations.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