



Project Papaya New Zealand

Qualitative Research Report

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Background

- The papaya market in New Zealand is small and relatively exclusive.
- Varieties are scarce in traditional supermarkets, leaving Kiwi customers with limited choice.
- Consumption habits and sensory preferences also differ to other markets and countries, making New Zealand a unique but opportunistic market for papaya implementation.

Research Objectives

- Understand triggers and barriers to papaya consumption in New Zealand.
- Identify which Australian and Fijian papaya cultivars show consumer acceptance in New Zealand.
- Explore usage and consumption behaviours of New Zealand consumers.
- Obtain feedback on promotional messages and imagery used by Fijian industry in New Zealand.

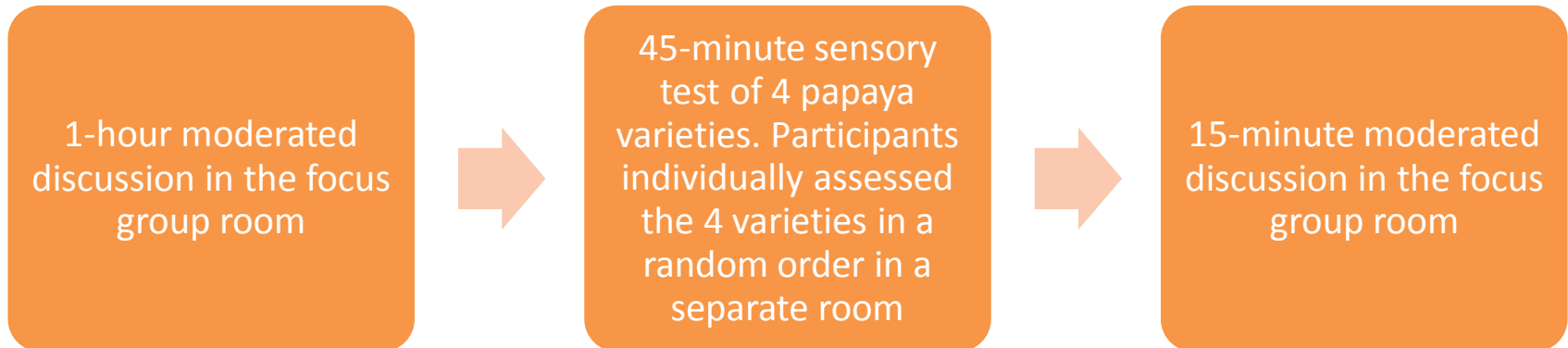
- 3 x 2-hour focus groups with sensory test.
- Focus group were split across papaya consumption as follows:

Regular papaya consumers:
Once per fortnight
N = 9

Irregular papaya consumers:
At least 4 times per year
N = 8

Non-papaya consumers:
But do not reject papaya
N = 8

- A range of age, gender, income and ethnicity was represented in each group.
- All participants met the further criteria of main or joint household shopper, fruit eaters and resident in NZ for at least 1 year.
- The 2-hour session was structured as:



Fieldwork took place at Ipsos NZ offices on 26th, 27th and 28th June.
Participants received an \$80 cash thank you for participation.

Key Findings



The key findings in 6 points:

New Zealanders have an everyday core repertoire of **familiar, convenient, simple** and **versatile** fruit – apples, oranges, bananas – which is expanded upon when seasonality, price and availability allow.

For papaya consumers, papaya fits into this repertoire as a **treat**. Seeing **fresh-looking papaya** in-store that **isn't too expensive** will often **trigger** purchase.

Key **barriers** to purchase for papaya consumers include **price, seasonality, perishability** and the risk of getting a **bad-tasting papaya**.

For non-consumers, a **lack of knowledge** and fear of disappointment present the **greatest barriers** to papaya purchase and consumption.

While unrecognised as a current papaya exporter, **Fiji papaya** benefits from the perception of the idyllic **tropical climate** and small '**traditional**' **agricultural** practices associated with Fiji, which contribute to **taste** expectations.

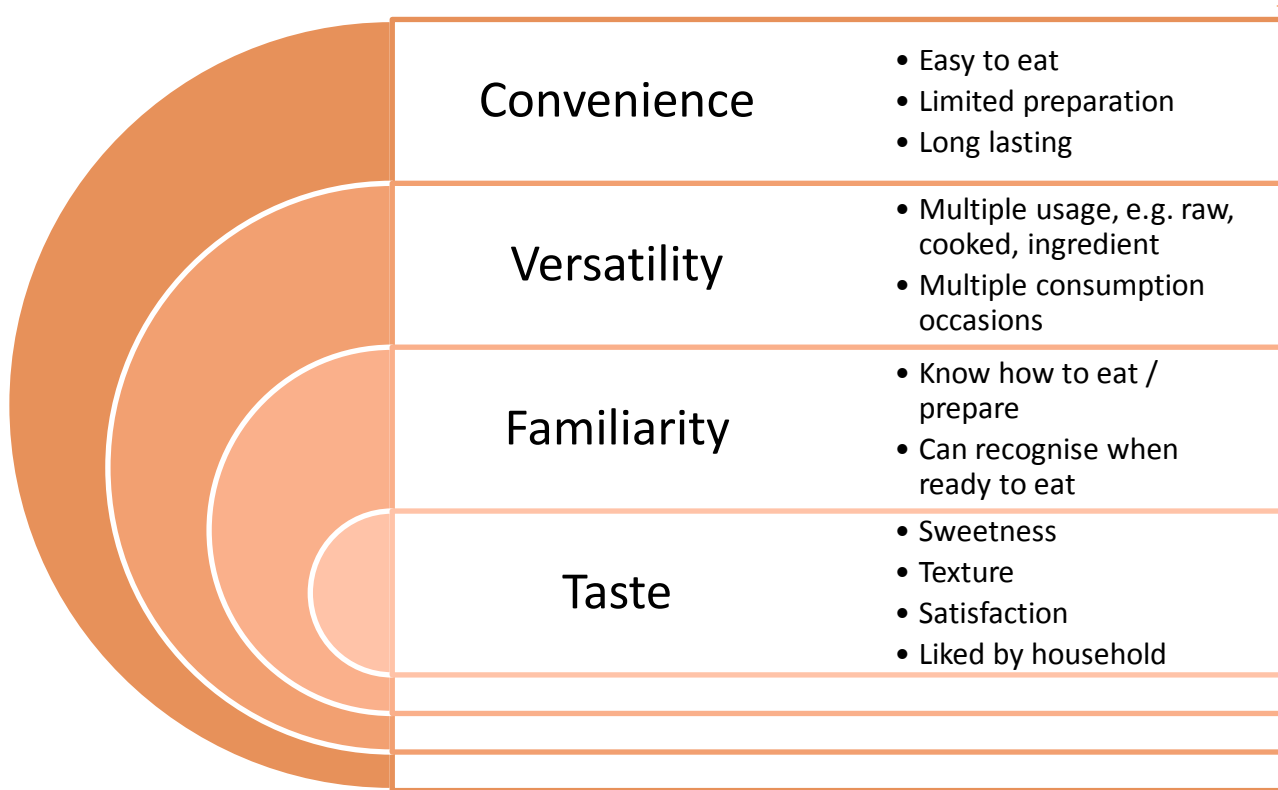
As a hot and dry climate, Australia is not immediately associated with papaya. But when reminded that **Queensland** is actually **tropical**, this, together with assumed **high food standards** and agricultural research capabilities, increases appeal of Australian papaya.

**Fruit Repertoire:
Consumption
&
Purchase**





Convenience drives fruit repertoire. The more effort required in preparation or consumption, the less attractive that fruit is. Versatility, familiarity and taste are other key drivers.



These 4 factors allow the fruit repertoire to meet the most common consumption occasions

- Breakfast – single fruit, combined with yoghurt / cereal
- Morning tea – healthy and nutritious option
- Lunch – as a healthy dessert
- Dinner – dessert either raw or cooked
- Anytime snack – raw or smoothie

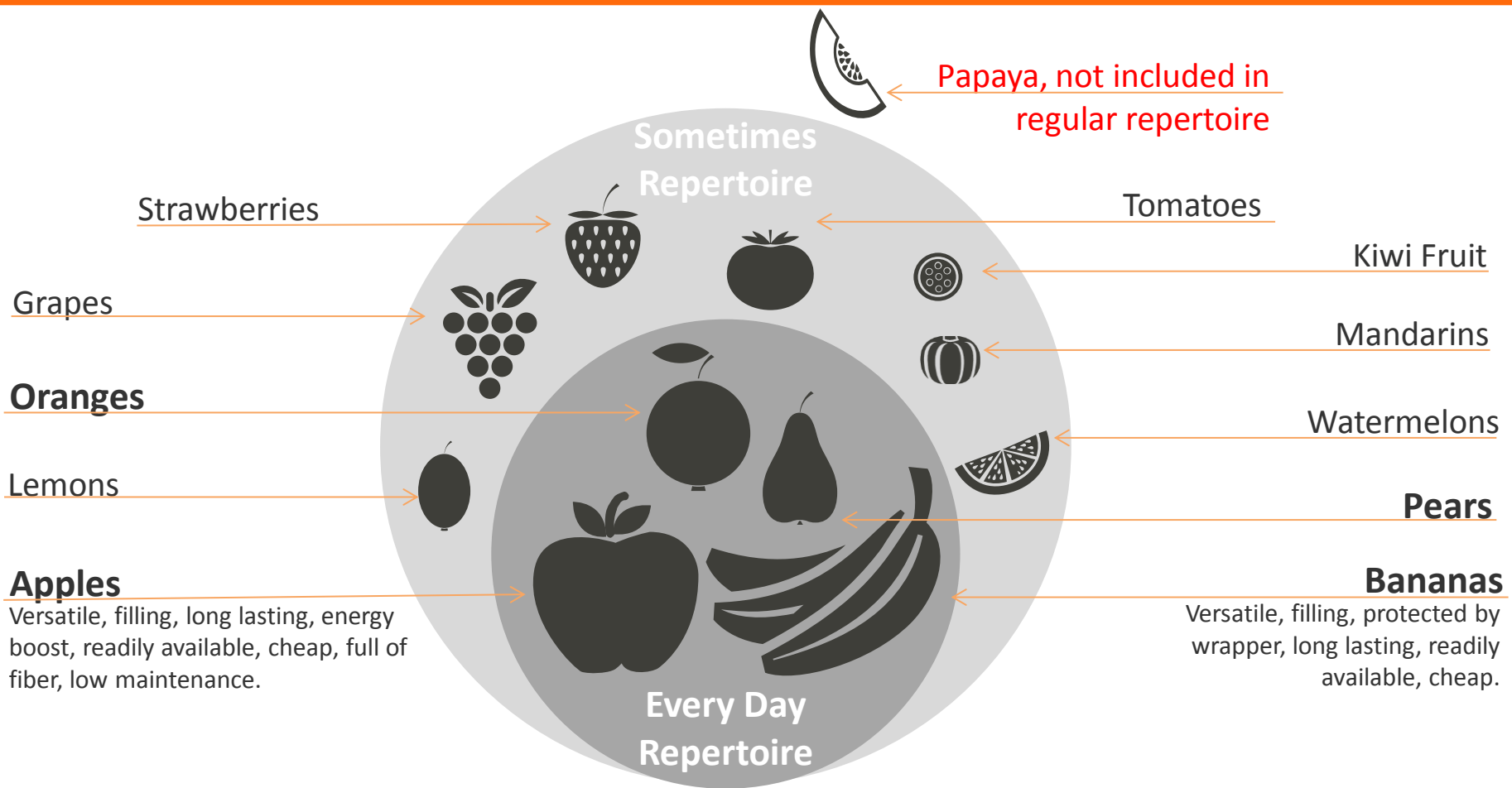
Both in and outside the home



Papaya consumption is not convenient. It usually requires a knife, chopping board, a spoon, waste disposable and a serviette for sticky hands. Other than a smoothie, that requires preparation, it is hard to consume on the go. **A more convenient, e.g. pre-cut, kebabs, pottled papaya offering would help overcome this.**



Papaya is not included in regular fruit repertoire. It is regarded as an occasional treat.



implications

Fruit like apples, oranges and bananas are considered to be convenient, versatile, tasty and familiar. **Like other tropical fruit (mango, pineapple), while tasty, papaya is not considered to be as convenient as other fruits. The fruit consumption repertoire also comes into play during the purchase cycle.**



The fruit repertoire is purchased at various locations – fruit shop, supermarket, market – each with associated benefits and disadvantages.



Fruit & veg shop

- Wide range of fruit
- Cheaper than supermarket
- Can purchase in bulk at lower cost
- Mix of NZ and foreign – availability out of season

Supermarket

- Convenient
- Undamaged fruit
- Mix of NZ and foreign – availability out of season
- Pre-ripened – increased longevity
- Hygienic environment
- Discount pre-cut fruit from damaged / past sell-by produce
- In-store demos and tastings

Market

- Fresh
- Local NZ fruit
- Foreign fruit sourced direct from supplier
- Cheaper than supermarket
- Assumed more natural, i.e. no chemicals or ripening retardants
- Often able to taste before buying

- Lower-quality produce – often damaged and / or close to or just beyond ripeness
- Unhygienic, dirty store appearance

- Range dependent on supermarket supplier
- No gauge of how long fruit has been in storage
- Can be more expensive
- Often imported fruit both in and out of season

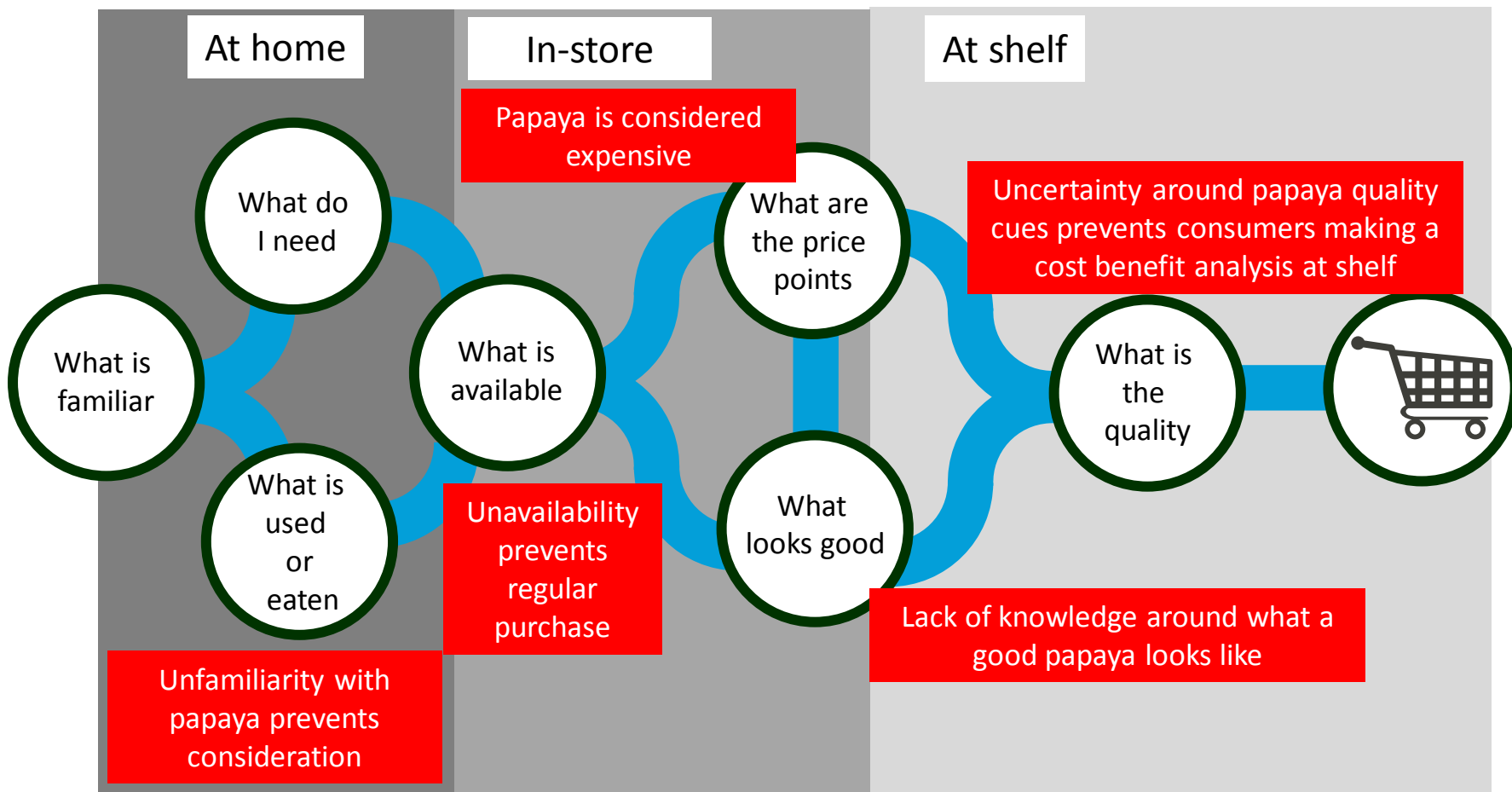
- Seasonal-only fruit available
- Cash-only purchase
- Inconvenient – requires a dedicated shopping trip



The supermarket is the ideal channel for mass market for tastings and purchase of pre-cut smaller sizes (rather than whole fruit) due to the hygienic environment. It can offer a safe & cost effective entry point. The markets are a more suitable channel to deliver authentic island sourced fruit to those who are already consuming papaya.



When it comes to fruit purchasing, consumers follow a fairly simple path to purchase. Unfortunately there are barriers to papaya at each stage.



implications

Consumers often have an idea of what they'll buy based on usual repertoire or a specific need (recipe), but will ultimately be driven by what is available in store, what looks good, what's the quality and at what price. **Due to seasonality, papayas are not as consistently available as other fruit and, when available, are considered expensive.**





In store consumers look for what fruit is **available** at what **price** and does it **look good** (i.e. at first glance does it represent value for the price asked).

What is available

Seasonality for NZ fruit

Determined by supply chain and purchasing power for foreign fruit

Is my purchase repertoire available – if not, what are my alternatives?

What are the price points

For smaller fruit this is price per kilo

For larger fruit (including papaya) price per unit

Can also depend on overall size / spend for this shopping trip

What looks good

Overall appearance of fruit displays – does it look enticing?

Appearance is first indicator of perceived freshness and ripeness



In-store availability and display is not always in your control, whereas **price** is something you can influence. It is not necessarily about being the cheapest, but representing **good value for money** – determined by **quality** of the fruit (the taste promise is worth the price), **condition** of the fruit (for gauging longevity) and versatility of the fruit.



Consumers approach purchasing papaya the same way as purchasing other fruit.

What is available

- If it's not in store, they can't buy it!
 - Mango is a common substitute

Purchase limited by availability

What are the price points

- Does it fit into my fruit budget?
- Should I take the risk on an expensive item?

Limits to treat or special purchase. Too much of a cost risk for non-consumers

"the price is the first factor, because you're taking a risk on what you're buying; so the more you're paying, the higher the risk"

What looks good

- Is the display clean?
- Are there any flies?
- Are they the right colour?
- Do they look like they've been damaged in transit?

Fruit needs to be displayed and stocked adequately to provide reassurance of quality

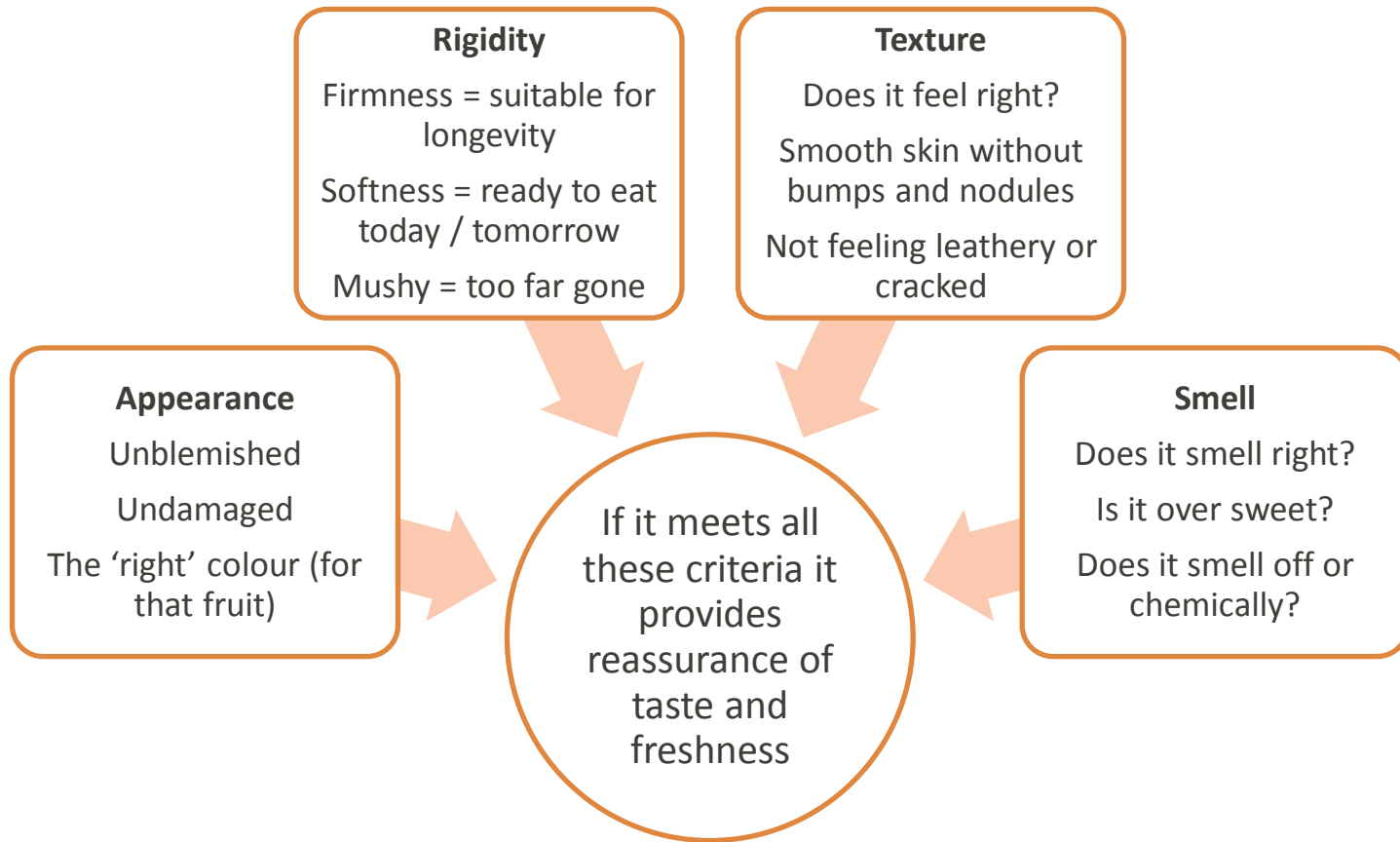
How much control do you have over this?



Availability, cost and appearance in store can prevent purchase before consumers even get to the sensory assessment of quality.

What in-store environment can you control to get consumers over these barriers?

Once fruit has passed the availability / price / display test, consumers take a closer look at the chosen fruit to **assess quality** by using the senses of sight, touch and smell.



This is easy for familiar fruits but more of a risk for less familiar fruits, as consumers do not know how to recognise and translate the sensory cues to taste and freshness expectations. Papaya is not familiar, **some guidance, e.g. POS posters for teaching how to recognise the sensory cues for papaya would help overcome these.**



Origin is not a key consideration for purchase, but can be used to gauge both the ‘safety’ and taste of the fruit. Airmiles do not have a major impact, but distance travelled can affect flavour.

New Zealand

- NZ-produced fruit is preferred where possible, as it both provides assurance of adherence to food standards, e.g. use of ‘safe’ chemicals, hygienic handling and storage, and consumers like to support the local economy
- Familiar taste profile and know how to recognise ‘good’ fruit
- However, NZ fruit can be more expensive than imported fruit both in and out of season

Bigger ‘western’ countries, e.g. USA, Australia

- Fruit will also adhere to similar food standards as NZ, so are considered ‘safe’
- Often cheaper due to scale of industrialised farming in larger countries
- Also research and development produces a consistent quality of fruit in terms of appearance and taste

Bigger ‘non-western’ countries, e.g. China

- While usually cheaper, there are concerns around agricultural practices, food production and handling standards not being on par with NZ
- Particular concern around the use of ‘unapproved’ chemicals

Smaller countries, e.g. Fiji

- Assume minimal use of chemicals, potentially fully organic
- Small locally owned farms – so feel they are supporting people rather than companies
- Grown is the place where the fruit originates so closer to the real, authentic tasting product than a fruit grown in a different climate and soil type

“typically when countries are trying to harvest specifically for export, they harvest them slightly under ripe so that they ripen either on the journey or at country of destination and that can impact on the flavour”



New Zealand does not have the climate or soil conditions to grow papaya, the perception is that papaya is imported from the Philippines, Latin America (Ecuador) and the Pacific islands. **Fiji is a credible source for papaya, but customers do not actively check stickers for origin, so Fiji awareness needs to be raised by other communication channels.**





In terms of **fruit production**, consumers understand organic and the implications on quality, taste and price, but are ignorant around GMO and irradiation.

Organic



- Would choose organic produce if it fits within their budget (assume it's expensive)...
 - to avoid sprays and pesticides on fruit
 - to support local or small producers
- Question if there really is a noticeable difference between organic and non-organic in terms of taste
 - Some concerns around longevity due to lack of sprays / pesticides, etc.

Irradiation



- Papaya consumers dislike the idea of this, even when benefits are explained
- Non-papaya consumers can see the benefits as a way to make the fruit better

GMO



- Papaya consumers find the idea of having people 'play with your fruit' off-putting
- Non-consumers were openly receptive to the idea of GMO fruit as they believe it has been bred to be the best.



implications

Consumers are very open to organic produce, but price is a barrier unless superior taste or quality can be proved. Irradiation and GMO are associated with perceptions of manipulating fruit in both good and bad ways. **Linking these to the good things – taste, consistency, quality at a good price – will overcome the bad associations.**

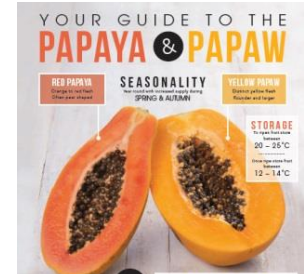


Papaya In-Depth



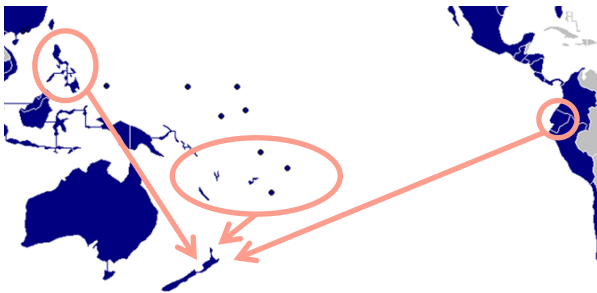
Consumer knowledge of papaya is limited.

- Papaya consumers couldn't confidently discern between papaya and papaw.
 - Is it to do with geography?
 - Is it due to shape?
 - Are they the same thing?
 - Isn't pawpaw what it's called in the islands?
- Non-consumers had no idea and didn't actually know what a papaya / papaw looked like, let alone how it would taste.



✓ This helped explain the difference

"I thought the papaya were the long, the skinnier one that's a darker orange ...and the papaws from Rarotonga were just fatter and, and yellower"



- The Philippines, Latin America (particularly Ecuador) and the Pacific Islands are often thought of where NZ gets its papayas from.
- Following this logic any Pacific island is a credible source of papaya.



implications

Any marketing and communications around Fiji and Australian papaya must include an 'educating the consumer' piece. The danger is that you do a product awareness campaign that also benefits your competition. **Fijian and Australian papayas have to also communicate benefits of taste, quality and value for money superior to other papaya.**



Price and seasonality mean papayas are often seen as a “treat”, setting high expectations when they are bought.

- Cost and seasonality makes papaya a “**treat**” rather than a staple fruit like apples and bananas
- The treat associations are also amplified as people were often introduced to papaya while they were in a **tropical place** or **through family from a tropical place**
- Because it’s a “treat”, buyers will take the time and effort to **find that perfect papaya** when shopping
- And increases the importance of freshness and ripeness

* Non-eaters saw papaya as an unfamiliar fruit and struggled to make any associations beyond tropical

“It’s like a real treat... you can’t normally have it all the time... I’d be fighting to have one a fortnight or something like that”


“Probably the better memory would be when we go on holiday to one of the islands and, and it’s so plentiful there, and that, yeah, you eat it just about every day sort of thing”

“I guess with papaya, though, it’s an expensive fruit, so when I look at it I always choose, like go for the best one”

“The ones we get over here, like sometimes you buy it...you keep it and you’re waiting for it to ripe and it doesn’t ripe, its outside seems ripe but inside is still hard or the colour is not as orange as you would want it to be when you cut it and it’s still hard”



If Papaya were available more consistently and at a lower price point purchase would increase amongst existing Papaya consumers. The Australian variants are well placed to do this. In terms of ‘treating’ the tropical associations with Fiji, means that Fiji Red can be positioned as an authentic taste of the islands.

Papaya likes are all about consumption, as it is liked for taste and texture. 

20

- Often introduced to papaya in a place where it's more readily available
 - Want to recreate that pleasant memory of its taste and texture
- Sweet, but not too sweet
- Satisfaction is derived from the firm and juicy texture
- Refreshing when just ripe
- It is also viewed as a healthier sweet snack
- It offers nutritional and health value
- When not raw, papaya can be used in many ways

"It's so natural too, I think, you know, it ripens there and take it off the tree, and just tastes so good"

"It's just the tropical... almost a little bit exclusive, not like an apple and a banana"

"When it ripens to a certain stage it becomes really sweet and nice"

"When it's ripe it's really juicy and just refreshing... [quenches] your thirst"

"For me, eating good fruit is like my sugar fix"



Papaya consumers know what they are looking for. Further communication emphasising the consistent taste delivery of both Australian and Fiji papaya is required. The 'easiest' way to achieve this is through in store tasting supported with POS material.

Amongst consumers, Papaya is a versatile fruit that is used in many ways for many consumption occasions. Introducing non-consumers to this versatility would help overcome the barrier of 'I don't know what to do with Papaya'.

'ingredient'

As a smoothie, in a fruit salad, in an 'Asian' salad, in a curry/stew
Less risk as the taste enjoyment is not solely based on the taste & texture of the papaya



'raw'

Spooned straight from the fruit, cut with yoghurt or lemon
Fruit needs to be at perfect ripeness for maximum enjoyment
Can be eaten as a snack, for breakfast, as a dessert



Communicate Papaya as an ingredient in a familiar dish e.g. salad, smoothie, curry/stew it has less risk of ruining the dish or taste experience as the papaya is not the hero of the piece. This would also extended usage amongst existing consumers out of treat and into an everyday meal component.



Dislikes about papaya are around ripeness, taste uncertainty and value for money.

- Ripeness
 - Under-ripe are too firm, an unpleasant texture and taste
 - Over-ripe are too sweet and mushy
- Taste uncertainty
 - Inconsistency of imported fruit
 - Not easy to choose in store, as appearance may not correspond to taste and texture
- Value for money
 - Risk of picking a bad one
 - Don't last long – need to eat them quickly, as they go off fast
 - Large core – the bit you eat is relatively small

“...the slightly soapy taste you can, you can get with it, that’s not properly ripe”

“I really don’t like when papayas are too ripe, it’s sort of mushy, I kind of like all my fruit firm”

“I think it’s also a fact of consistency... if you buy 2 papayas from the same lot, they’re gonna taste different, they’re gonna smell different”

“The price is the first factor, because you’re taking a risk on what you’re buying; so the more you’re paying, the higher the risk”

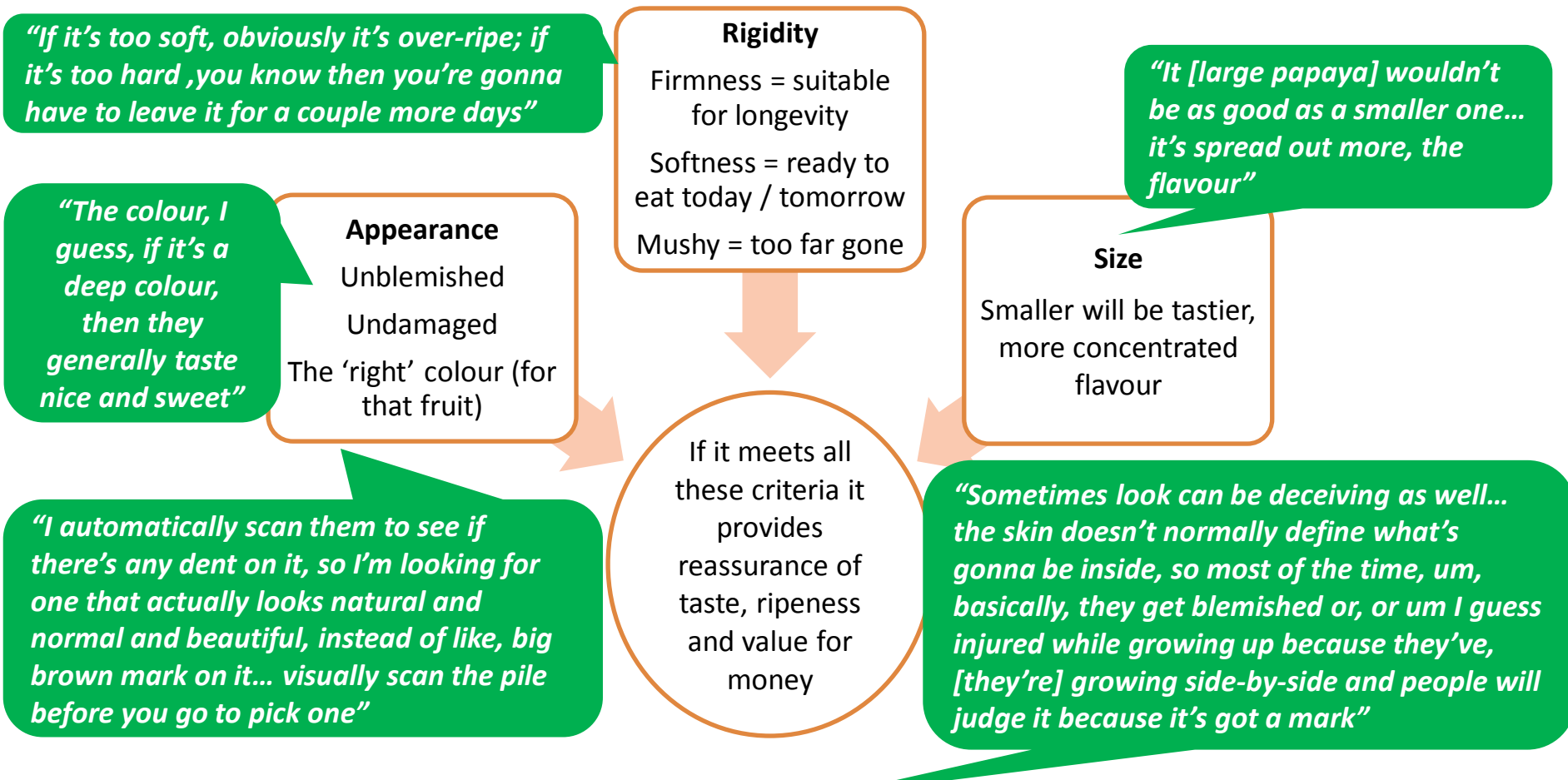
“They’re hollow inside so you have to get a big one to get your money’s worth because they’re expensive”



Being a “treat” sets high expectations among eaters, and a disappointing experience risks putting someone off papayas in favour of substitutes. **To differentiate their papayas, Australian and Fijian producers must deliver on all the things consumers like, while managing dislikes regarding ripeness and helping to choose the right papaya.**



Papaya consumers go about shopping for papaya the same way as for other fruit, using sight and touch to gauge ripeness / freshness, but these are not always reliable.



When buying a papaya there is a risk factor associated with it. **"...buying papaya or pawpaw is not something you do every day, as you are not getting a definitive answer"**

In-store selection is hard because consumers can never be sure if they will get value for money.

The Australian papaya, while liked for its taste profile, does not have an attractive appearance!



Unfamiliarity with papaya that may result in a waste of money prevents non-consumers from purchasing papaya.

- Tendency to stick with what is familiar and liked
- Unsure if they'll like the taste
- Fear of disappointment and missing out on something they like the taste of
- Don't know how to gauge the freshness/ripeness of an unknown fruit
- Cost of purchasing an unknown item, which is disliked or unused is a waste of money

"I wouldn't even know how to use it or eat it, so why would I get it?"

"Then if it's bad you just feel like annoyed with yourself... 'cause then you're just like I could be eating something I want to be eating and like, but I'm not 'cause I'm eating this new thing I tried and I stuffed up"

"...when it's not something that you buy often, you're not always sure what to look for as signs that it's ripe... or you know, the best way to eat it, so, you know, we know what to look for in bananas when we think they'll be about the right ripeness for us to eat, but as something new, do we want it to be hard or are we wanting it to be soft or are we wanting it to be... bright colour"



Instruction on how to eat and how to recognise ripeness would help overcome the fear of purchasing the unknown and wasting money. The information **"A, how to know when it's ripe and B, how to eat it; like the basics, so it's ready to be eaten when the skin is golden and cut it in half and eat it"** could be taken from the Fiji Red brochure and placed in a POS poster.

Is pre-cut wrapped presentation of papaya the answer to reassuring consumers?

On one hand this is a good thing

Smaller portions of pre-cut papaya takes the risk factor out

- For non-consumers...
 - It is less challenging than buying a whole unknown fruit that you don't know what to do with
 - Lower price than a whole fruit, so less money wastage if they don't like it
- For consumers...
 - Can visually assess the quality and taste of the fruit
 - Convenient and ready to eat
 - Affordable portion size would allow more regular purchase

On the other hand this is a bad thing

"I know as long as it's cut, it, it means it's no longer fresh"

Pre-cut fruit is automatically less fresh than a whole unit

- Freshness is integral to the enjoyment of papaya

Consumers associate pre-cut pre-packaged fruit with damaged or over-ripe fruit...

- So will still have the inferior taste and texture of a blemished papaya

"The reason they cut it is because, probably a big blemish on one side and they cut it off"



It's a risk. While useful to encourage low-risk trial and offering convenience and value to existing papaya consumers, the minute the papaya is cut it undermines freshness and taste cues.

Packaging cues, e.g. cut on date, eat by date would be needed to provide reassurance of freshness and quality.

What Do Consumers Think of Fiji & Australia as a Source for Papaya?

These are the responses from
BEFORE they saw or tasted the
fruit



Based on Fiji's imagery associations, Fijian growers enjoy a relatively strong starting point to develop a **taste-based brand platform** among New Zealand consumers.



- Fiji enjoys positive imagery, being seen as an idyllic, clean, sunny, tropical holiday destination
 - It's also relatively close to NZ, so the fruit will spend longer on the tree developing flavour before it's picked and packed.



- Fijian fruit was associated with being naturally grown on smaller farms where they are hand-picked
 - Minimal / no use of chemicals or industrialisation
 - Feel-good factor from supporting the Fiji economy



- Fijian papayas were expected to be tastier than their Australian and Philippine rivals, as they are native to the climatic conditions
 - Supported by experience of great-tasting papaya on the islands

"I think Fiji. just because of the mentality that it came from Fiji, so you have this mindset and when you're eating it, you're like 'mmm...'... I think where it comes from sets that kind of tone in your mind"

"I wouldn't say Fijians would use pesticides and stuff like that because they seem to be, I don't know, just that you know, straight from the earth type of people"

"It feels nicer to support like, a small farmer than a big corporation that doesn't like, benefit anyone other than the man"

"Because it's not as far away as some of these other destinations, they don't have to pick it, um, as, as soon... and then if you pick it too soon, then it doesn't actually develop those flavours"

"I lived there for like 4 months in Fiji... if you get fruit from the local markets down there it's amazing!... it's delicious"



Communicating the tropical climate and small-scale production methods would build superior taste expectations for Fijian papaya, that would not be compromised during travel due to Fiji's relative proximity to New Zealand. **An authentic experience and natural taste of the islands.**



Australia is not immediately thought of as a source of papaya, despite being recognised for having good-quality fruit due to R&D and scale of production.



“You think of being quite dry... not really ideal growing conditions”

“It wouldn’t be as juicy...just the growing conditions”

- Australia is associated with a dry climate and soil not well-suited to growing papayas
 - Which would negatively impact the taste profile
- But when tropical North Queensland is brought up, Australia as a papaya producer is completely credible
- Australia is also assumed to have food and production standards similar to NZ
 - Any pesticides / chemicals or agricultural techniques used would be safe



“I’d imagine that Queensland would have about the right sort of climate if they wanted to grow them”



- Australian fruit was associated with large-scale industrial farming, which in the context of food standards is a positive, reassuring attribute
 - R&D would be undertaken to produce consistently good fruit
 - Economies of scale would keep the unit price down
 - Proximity to NZ allows ideal shipping conditions

“They do have good produce though, don’t they”



Queensland growers can leverage their climate, Australia’s food standards and farming scale to increase attractiveness of their papaya on a **platform of taste consistency at a good price.**



Individual Papaya Assessment



Individual information on the
three samples tried



Fiji Red was liked for its colour, aroma and appearance. However, size can devalue price even if selected as a favourite.



- In a blind test of all four papayas, 645 was most likely to buy due to:
 - Numbers, first pick;
 - However, due to size, not prepared to pay more than \$4.



- Once made aware of each papaya and their sample numbers:
 - Favourite among irregular papaya eaters;
 - Amounts of seeds were ok;
 - Colour and the smell were desirable being sweet and so full of flavour.

"I look at it like it is two Moro bars and that is a healthier option." "



Price Point
\$2.50 - \$4.00

645

Fiji Red was a clear favourite among participants. Its small size was liked by those not looking to feed a family, and its sweetness and colour were consistently mentioned.



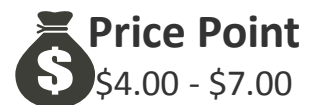
Skybury was selected by many as a favourite due to its taste and size, which gave it a moderate price point.



- In a blind test of all four papayas, 361 was:
 - Desirable due to large size;
 - Expected to cost more due to size but also expected to get great taste for what you pay for.



- Once made aware of each papaya and their sample numbers:
 - 361 was the favourite among regular papaya eaters, but they were surprised by this, as it is not aesthetically appealing to the eye due to blemishes;
 - Suggestions a taste test would be needed in order to try, as appearance does not represent the taste inside. Want to see inside before buying;
 - Large amounts of seeds;
 - Bang for buck. Perception that Australia is close and therefore should be cheap;
 - Perception that a perfect taste must be GMO for irregular eaters.



361

Skybury was another favourite in terms of taste and size. Barriers to purchase are around the issue that the outside appearance of the papaya does not represent the taste and appearance of the inside.

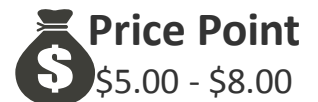
Although not ranked the highest, Australian Red was a liked for its size and for the additional wrapping, giving it the highest price point.



- In a blind test of all four papayas, 194 was most likely to be bought due to:
 - With Australian Red being the largest in size, the price point was higher;
 - Expected to cost more due to size, but also expected to get great taste for what you pay for;
 - Large size gives ideas for family use, i.e. a family fruit salad;
 - Unprompted awareness of the protective wrapping was mentioned and liked.



- Once made aware of each papaya and their sample numbers:
 - Most popular for non-eaters due to taste, texture, smoothness, colour and sweetness.



194

Although third in taste and flavour, 194 was desirable due to its large size, and the protective wrapping was liked in order to protect the papaya.

Advertising Material



An insight into perceptions for
the papaya poster and leaflet

Perceptions of poster advertising materials were positive, but many commented on how lack of time in a shop is a barrier to reading.

Likes Suggestions



✓ Educational

✗ What is the flavour difference?

? Honest education to inform potential buyers

✗ Preference for fruit type on sticker

? Descriptive words to help inform about taste and smell

✓ Useful distinctions

✗ Outside skin looks too good compared to shop produce



implications

It seems participants didn't mind the outside of the blemished papayas when they tasted good. However, if it is not communicated to them the outside is supposed to look this way, they form negative perceptions of the inside of the fruit. They thought being honest in posters and advertising would help them understand that papayas may be ugly on the outside, but they are delicious on the inside.

Perceptions of the leaflet advertising materials were positive, but many commented on how lack of time is a barrier to reading.

Likes Suggestions

- ✓ Nutrition information
- ✗ Small print hard to read
- ✓ How to pick a good papaya

? Could have link to website with more information if wanted

- ✓ Nice, educational facts
- ✗ Too much information
- ✗ Story is too long



- ✓ Picture lets us know what it is
- ? Could have a real picture
- ✓ Location
- ✗ What does it taste like?
- ✗ What fruit does it taste similar too?

- ✓ Bullet points
- ? Could have a recipe to back up these eating suggestions
- ✓ Information on how to use



Overall participants liked the leaflet but felt that there was too much information to guarantee they would read it. It was commonly suggested that taste testings or a recipe would increase the likelihood to take this brochure home and read it.

What Does This All Mean?

Conclusions &
Recommendations

Among non-eaters, the lack of knowledge presents the greatest barrier to papaya consumption.

Non-eaters
don't know
enough about
papaya

- What does it taste like?
- What do I do with it?
- How do I choose a good one?
- How nutritious is papaya compared to the fruit I usually buy?

Fear of
disappointment
discourages trial

- Sampling was suggested, but non-eaters still weren't enthusiastic about buying papayas after their taste tests.



As the barriers among those unfamiliar with papaya are high, a more appropriate use of the marketing budget should focus on enabling the triggers and breaking down the barriers to greater papaya consumption among those already familiar with papaya.

Addressing barriers related to seasonality and freshness may help differentiate Australian and Fijian papayas from rivals.

Papayas are a seasonal fruit

- Growers need to make the most of the season to remind consumers when to buy through in-store advertising.

Papayas don't last long, so they must be eaten quickly to avoid waste

- The smaller Fijian papaya facilitates trial and can be finished in less time.
- Large Australian papaya would need to be cut to facilitate trial.

An under-ripe papaya can taste bad

- Australian and Fijian producers can inform consumers that their papaya is fresher and picked at the optimum time, relative to rival papaya which has to travel longer distances.



A concise, yet informative display to help consumers understand why Australian and Fijian papayas are fresher and taste better than rival papayas may help stimulate consumption and differentiate their produce.

Promotion should focus on justifying the purchase in the minds of consumers.

Consumers like papaya for its **taste, texture, nutrition and versatility**

- Succinctly comparing the benefits of papaya with staple fruits may remind consumers why papaya is a good buy.

Papaya is a **“treat”** rather than a staple

- Remind shoppers when is the best time to buy through in-store ads.
- Sharing recipes and other ways to enjoy papaya may give buyers a reason to enjoy this “treat” more often.

Price and the availability of a fresh-looking papaya are common triggers to buy

- Use in-store ads to help consumers choose the right papaya.
- At \$3-4 each, Fijian papaya may seem less expensive.
- At \$7-8 each, showing price / kg may help communicate Australian papaya’s value-for-money.



The goal of enabling the triggers is to succinctly make buying Australian and Fijian papaya an easy choice for consumers when shopping.



Sensory

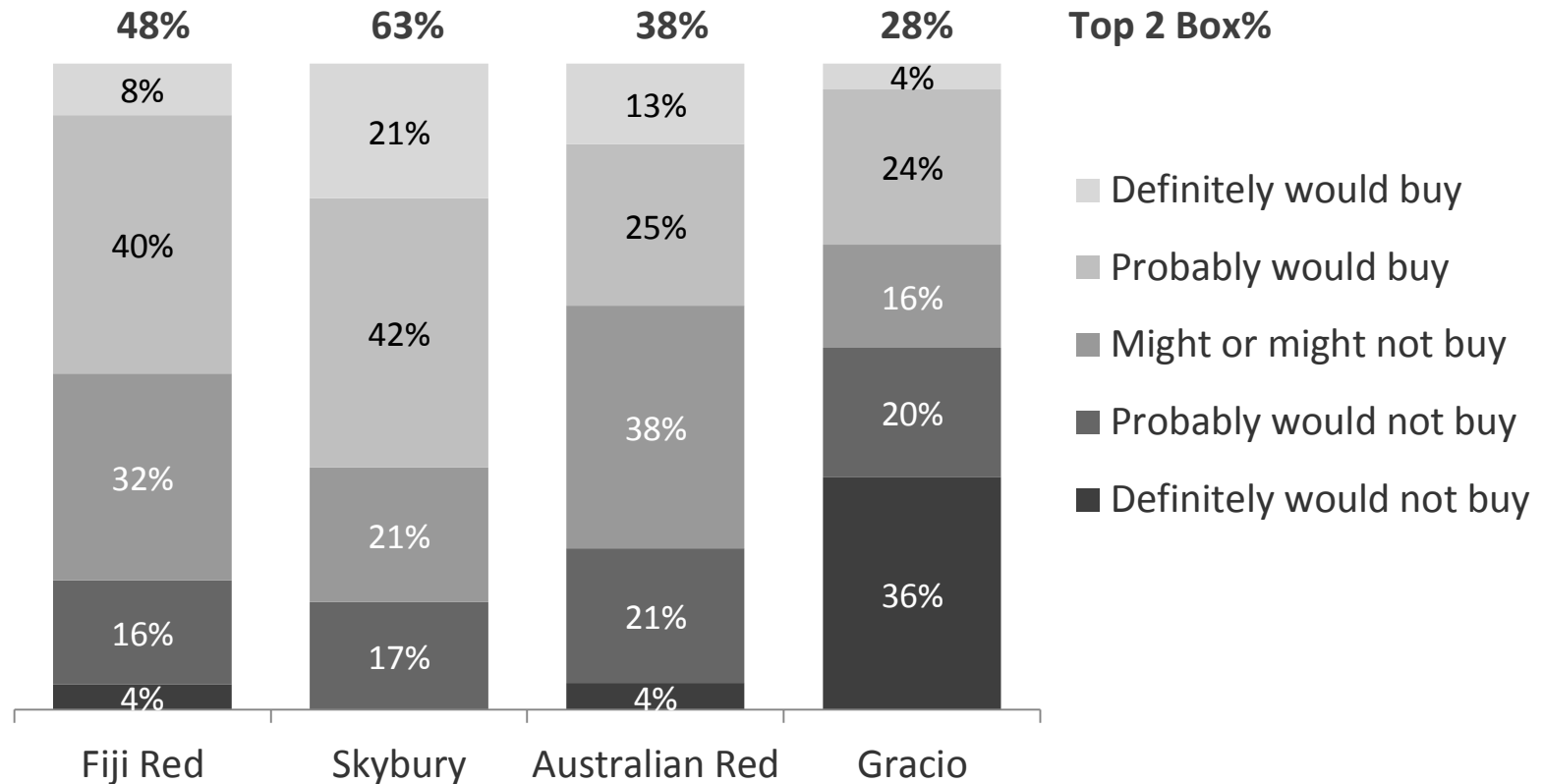


Results from the sensory testing of the 4 papaya

Purchase intent is highest for Skybury, despite Fiji Red having higher ratings on most aspects than Skybury.

Purchase Intent Scale

Papaya Purchase Intent



Top 2 Box%

- Definitely would buy
- Probably would buy
- Might or might not buy
- Probably would not buy
- Definitely would not buy

Q: If you saw this papaya in a supermarket at a similar price to ones you buy already, how likely would you be to buy it?

Base: n=25





Fiji Red is reporting 'too little' on size and appearance. This could explain why it has a lower purchase intent than Skybury.

Collapsed Just Right Scales With Penalty Analysis

Fiji Red

Measure	Penalty Score	Too Little	Just Right	Too Much	Penalty Score
Size	-1	72%	24%	4%	32
Colour		8%	60%	32%	
Aroma	11	63%	33%	4%	40
Flavour Strength		16%	56%	28%	
Sweetness		28%	60%	12%	
Softness / Firmness		32%	56%	12%	
Juiciness		20%	68%	12%	
Smoothness / Graininess		12%	60%	28%	



Penalty Scores are calculated for areas of interest where an item has a large amount of 'too little' or 'too much' compared to other measures. It measures how much unfavourable scores influence overall liking, so impacting areas can be addressed. For example, 'small size' is having no effect on overall liking and 'too much aroma' is having some effect on overall liking.

Base: n=25



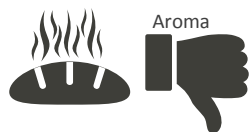


Skybury has only softness and aroma below 50% for 'just right', which helps to explain its high purchase intent.

Collapsed Just Right Scales With Penalty Analysis

Skybury

Measure	Penalty Score	Too Little	Just Right	Too Much	Penalty Score
Size		4%	50%	46%	
Colour		33%	58%	8%	
Aroma	13	38%	42%	21%	5
Flavour Strength		21%	75%	4%	
Sweetness		29%	63%	8%	
Softness / Firmness	12	42%	38%	21%	18
Juiciness		33%	54%	13%	
Smoothness / Graininess		13%	71%	17%	



Penalty Scores are calculated for areas of interest where an item has a large amount of 'too little' or 'too much' compared to other measures. It measures how much unfavourable scores influence overall liking, so impacting areas can be addressed. For example, 'too soft' is affecting overall liking and 'too firm' is affecting overall liking by decreasing it by nearly 2 points on a 9-point scale. 'Not enough aroma' is having a similar effect of 1 point on overall liking.

Base: n=25



Around 2 in 5 people rated Australian Red 'too little' on colour and sweetness, but over 70% rate its smoothness / graininess as 'just right'.

Collapsed Just Right Scales With Penalty Analysis

Australian Red

Measure	Penalty Score	Too Little	Just Right	Too Much	Penalty Score
Size		8%	54%	38%	
Colour	9	46%	42%	13%	5
Aroma		38%	38%	25%	
Flavour Strength		29%	54%	17%	
Sweetness	19	42%	42%	17%	10
Softness / Firmness		29%	63%	8%	
Juiciness		29%	54%	17%	
Smoothness / Graininess		4%	71%	25%	



Penalty Scores are calculated for areas of interest where an item has a large amount of too little or too much compared to other measures. It measures how much unfavourable scores influence overall liking, so impacting areas can be addressed. For example, 'little colour' is having some effect on overall liking and 'too little sweetness' is changing people's overall liking scores by decreasing it by an average of nearly 2 points on a 9-point scale.

Base: n=25

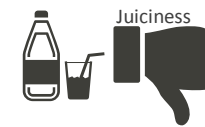


The Gracio fruit was rated as 'too pale', it lacked aroma, sweetness and juiciness. These ratings help to explain its low purchase intent.

Collapsed Just Right Scales With Penalty Analysis

Gracio

Measure	Too Little	Just Right	Too Much
Size	44%	56%	
Colour	64%	36%	
Aroma	56%	24%	20%
Flavour Strength	40%	8%	52%
Sweetness	72%	20%	8%
Softness / Firmness	28%	52%	20%
Juiciness	64%	28%	8%
Smoothness / Graininess	20%	60%	20%



Fiji Red and Skybury are generally more acceptable in most of their sensory attributes, which explains their high purchase intent. Generally, the Gracio fruit was significantly less acceptable than the other 3 fruit.

Mean Scores for Liking Scales

	Fiji Red	Skybury	Australian Red	Gracio	
	645	361	194	718	Significance
Appearance	6.1	5.8	5.3	4.9	> .05
Aroma	6.3	5.7	4.9	4.7	< .05
Flavour	6.9	6.2	5.9	3.6	< .001
Pleasantness of Aftertaste	4.9	4.6	4.6	3.2	< .001
Texture	6.6	6.0	5.9	4.9	< .001
Overall	6.9	6.1	6.0	3.9	< .001
Purchase Intent	3.7	3.3	3.2	2.4	< .001

Base: n=25

<.05 indicates significant differences amongst fruit at the 5% level
 <.001 indicates significant differences amongst fruit at the 0.1% level



Q: How much do you LIKE or DISLIKE the APPEARANCE of this papaya? **Q:** How much do you LIKE or DISLIKE the AROMA of this papaya? **Q:** How much do you LIKE or DISLIKE the FLAVOUR of this papaya? **Q:** How PLEASANT or UNPLEASANT is the AFTERTASTE of this papaya? **Q:** How much do you LIKE or DISLIKE the TEXTURE of this papaya? **Q:** OVERALL, how much do you LIKE or DISLIKE this papaya?

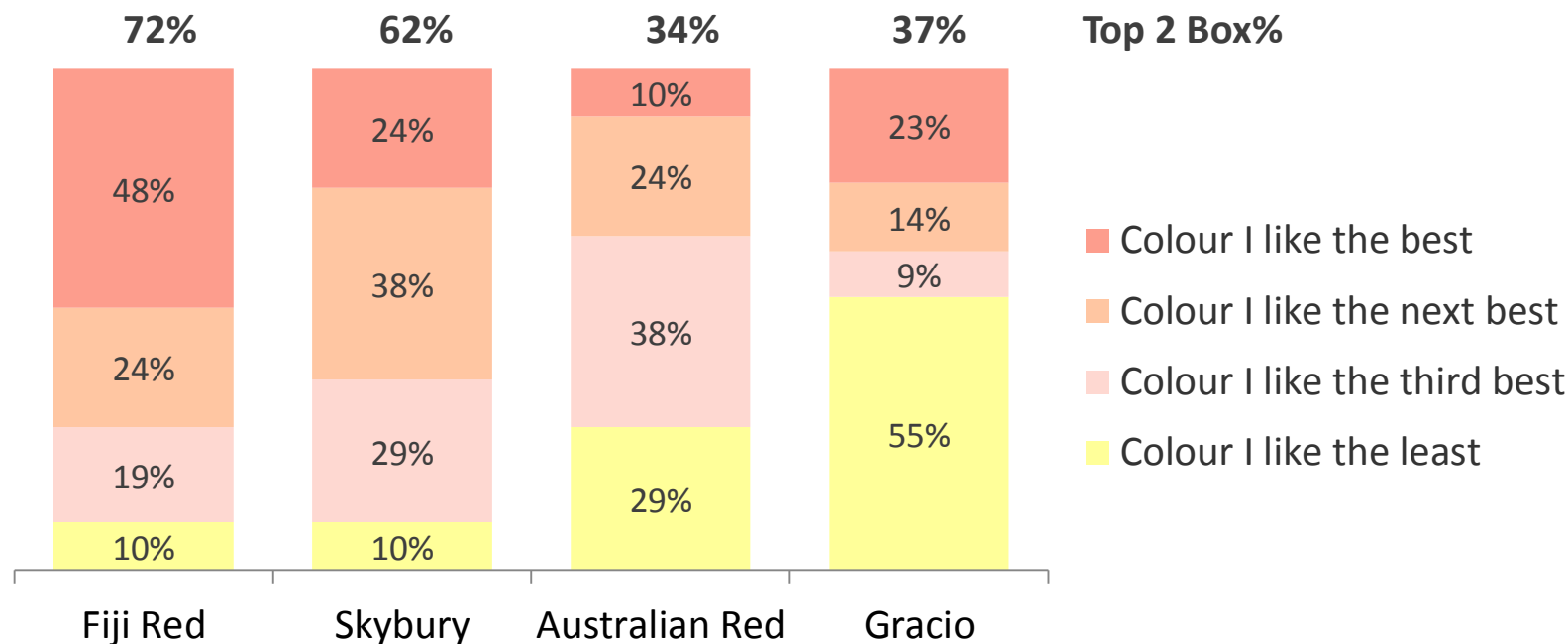
Q: You have LOOKED at FOUR different papayas. Thinking about the COLOUR of these papayas, put them order from the fruit COLOUR you liked BEST, to the fruit COLOUR you liked least. **Q:** FINALLY, now that you have TASTED all FOUR papayas, please put them order from the one you liked BEST OVERALL to the one you liked LEAST. **Q:** If you saw this papaya in a supermarket at a similar price to ones you buy already, how likely would you be to buy it?



Fiji Red was the most preferred papaya in terms of colour, followed closely by Skybury. Surprisingly, Gracio had a higher preference than Australian Red.

Ranked totals informed us that Fiji Red is significantly preferred over Gracio at the 5% level.

Overall Colour Preference



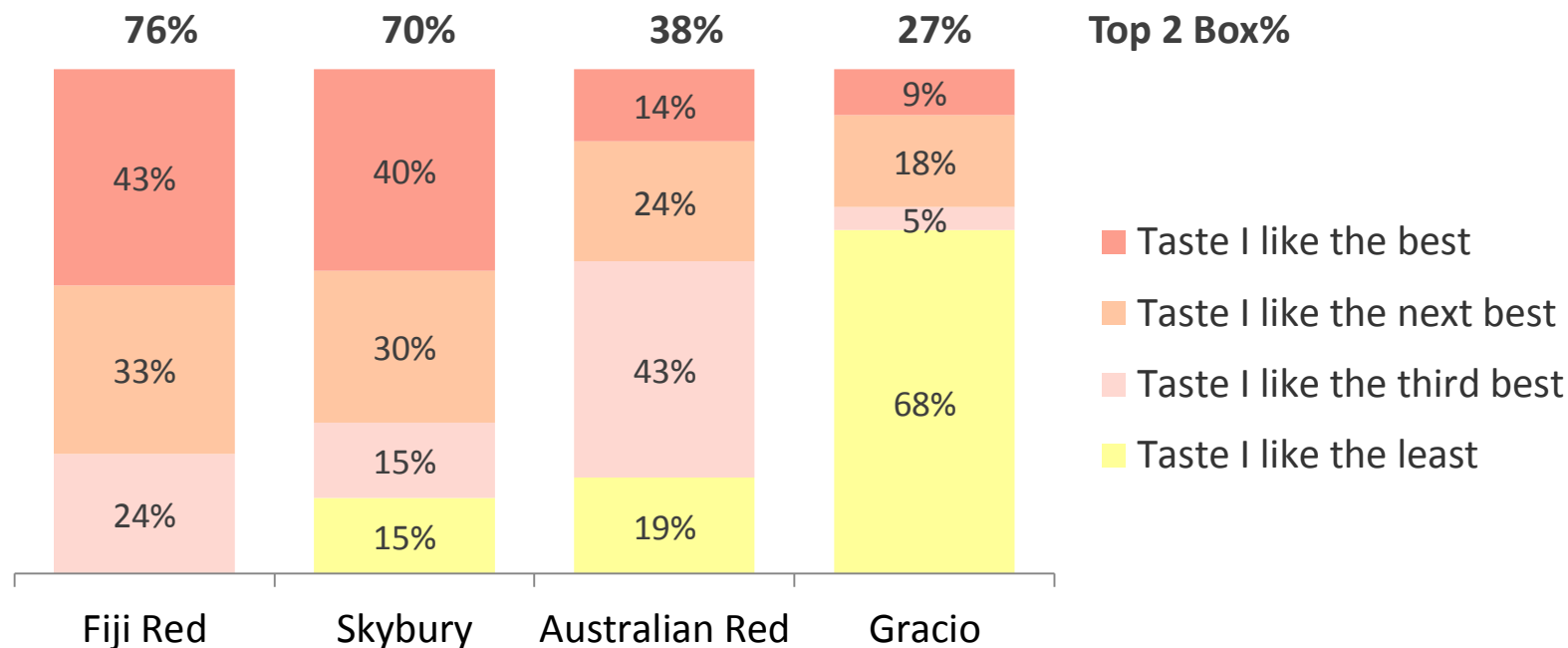
Q: You have LOOKED at FOUR different papayas. Thinking about the COLOUR of these papayas, put them order from the fruit COLOUR you liked BEST, to the fruit COLOUR you liked least.

Base: n=25

With 7 in 10 people liking the taste of Fiji Red and Skybury, there was a clear overall taste distinction between these papayas and Australian Red and Gracio.

Ranked totals informed us that Gracio is significantly less preferred at the 1% level. Fiji Red and Skybury are significantly more preferred than Gracio at the 5% level.

Overall Taste Preference



Q: FINALLY, now that you have TASTED all FOUR papayas, please put them order from the one you liked BEST OVERALL to the one you liked LEAST.

Base: n=25



Verbatims of Australian Red, Skybury and Fiji Red give brief insight into reportings of sensory measures.

LIKES

"The flavour is just right. It has the right level of sweetness and a pleasant aftertaste. The shape is not appetizing at all!" – Australian Red

*"It was ripe and full of flavour. The colour was pretty."
– Australian Red*

"Juicy and not too sweet, liked the colour, similar to what I ate when I lived In Rarotonga." – Skybury

"It's big, it's beautiful, it lacks the negative papaya aftertaste, almost tasting like a melon." – Skybury

"Perfect aroma on the outside, tasted lovely, soft and juicy, very nice." – Fiji Red

*"The fruit looks very nice, great flavour and texture."
– Fiji Red*

DISLIKES

"Slight odd aromatic perfumy aftertaste. A bit too green. Needs to be a little riper." – Australian Red

*"It was slightly too sweet and looked like it needed to be eaten straightaway. It would not keep."
– Australian Red*

"The outside skin appearance isn't very appealing. Very spotty and patchy." – Skybury

"Most of the character of the aroma has disappeared, it lacks personality." – Skybury

"Smell lets it down unfortunately." – Fiji Red

"Too small. The size would probably put me off from initial purchase." – Fiji Red





Q: What do you LIKE about this papaya?


Q: What do you DISLIKE about this papaya?


Base: n=25


Moving forward

 Fiji Red was clearly a “winner” in all its taste and texture characteristics. It was particularly liked for its **flavour** and **juiciness**.

 However, the fruit assessed by consumers lacked **aroma** characteristics (this had a greater effect on the Overall Liking scores than the **small size**). The **small size** may have impacted on Purchase Intent (fruit are sold in NZ on a “per piece” basis, and **size** becomes part of the value proposition).

 Skybury was not as acceptable as the Fiji Red, but it rated well for its **aroma** and **size**. This may explain its high Purchase Intent (from a consumer perspective it was a better-value proposition).

 Although the Australian Red rated well for its **texture**, it was consistently less acceptable than other fruit in terms of its **aroma** and **flavour**.

 Gracio, which is currently sold in most New Zealand supermarkets, rated poorly for all its sensory characteristics. This indicates a clear opportunity for fruit with more acceptable sensory characteristics to enter the market.



Currently, the New Zealand papaya market is dominated by Gracio and similar fruit. **The sensory results show a clear opportunity for fruit which have much higher acceptance than Gracio amongst target consumers.**

For any further information or questions please feel free to contact us

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