Developing the story for Western Australian Honey

CRCHBP
FOR HONEY BEE PRODUCTS

ISBN
ISSN
TITLE: Australian Honey batch numbering systems: Desktop review
Publication No.
Project No.

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Electronically published by CRC for Honey Bee Products at www.CRChoneybeeproducts.com in June 2022

Foreword

This work was commissioned by the CRC for Honey Bee Products to link the honey bee product traceability and product assurance to developing new markets for honey bee products.

As you will see in this report, the export of honey from WA was steadily growing, with the main emphasis on China. This collapsed with China closing the import of honey.

So this project focussed on other export markets for our honey and to test what WA packers need to do to grow each of these markets. We know that we have a relatively small amount of honey compared to the production mega-countries of China and India, but what we have is some of the purest in the world with high bioactivity. The good news is that the honey price increase has been retained and this report is to investigate how this trajectory can continue with delivering focussed marketing campaigns for each of the countries of interest.

Dr Liz Barbour
CEO
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ACKNOWLEDGEMENTS

The research team would first like to acknowledge that this work was completed on the unceded lands of the Wadjuk and Wardandi people. We appreciate that the West Australian honey industry is inexorably linked with the ancestral lands, skies and waterways of Aboriginal people and we thank them for their ongoing care, respect and understanding of country. We pay our respects to the generations of elders past and present who managed and maintained the forests in which we work and we recognise the continued importance of native species to the culture, knowledge and spirit of Aboriginal people.

We would also like to thank all of the participants who took part in our interviews and surveys for their time and kind assistance to this study.

Our special thanks to the Bee Industry Council of Western Australia for their enthusiasm and undertaking to continue this work together with the continued support of the Department of Primary Industries and Regional Development.

The authors also thank Dr Liz Barbour, CEO of CRCHBP, as well as our colleagues at the University of Western Australia Marketing Department, in particular Dr Fang Liu and Kenneth Ho.

Funding: This study was funded by Australia's Cooperative Research Centre for Honey Bee Products (CRC Funding Agreement 20160042).

EXECUTIVE SUMMARY

Seasonal variation in honey yields in Australia provides significant challenges for companies to consistently supply the market with honey varieties. Currently, there is low consumer awareness or ability to differentiate between varieties; and the price paid for Australian honey does not reflect its quality, unique characteristics, the community of apiarists, or the physical environment in which it was collected. Thanks to the digitisation of B-QUAL (for the commercial beekeeper) and B-Trace (for smaller beekeeper under 50 hives) to meet Australia's beekeeping standards, biosecurity and HACCP as well as traceability, and a new analytical technique, High-Performance Thin Layer Chromatography (HPTLC), it is now possible to confirm the dominant nectar source of honey, as well as the location and date of extraction of each batch to confirm honey authenticity, providing evidence to substantiate marketing narratives that communicate these selling points to consumers.

This report investigates the marketing strategies currently used within the West Australian (WA) industry, how they align with labelling requirements and how these messages are received by consumers in six target international markets (India, Japan, Malaysia, Saudi Arabia, United Kingdom and United States).

To accomplish this objective, we first conducted preliminary qualitative analyses of current marketing strategies and carried out in-depth interviews with honey industry stakeholders. Subsequently, we conducted preliminary qualitative focus groups with consumers from the six target countries, which informed a quantitative experimental study to test the effectiveness of different marketing narratives (Health, Production, Flavour, Terroir and varying specificity of Product Origin (Region, State and Country level). Experimental data showed that there are differences amongst consumers, both for honey products and for marketing narratives.

This report concludes with marketing strategy recommendations for honey producers and packers wishing to export their products into these six target markets and the price premium that exporters may be able to achieve. The recommendations include:

1. Supporting greater communication between stakeholders (including government and industry professionals), to hold regular meetings to improve collective brand building and overcome inconsistent or insufficient consumer awareness of Australian honey. This also includes:
    a) Determining industry priorities for funding, market entry and government policy positions
    b) Coordinating and developing a consistent and cohesive value proposition for monofloral honey varieties
    c) Maintaining internal consistency of core flavour profiles for honey varieties

2. Displaying certification labels on product packaging bound for foreign markets, particularly for Saudi Arabia, Malaysia and India. This may improve consumer confidence that the honey is:
    a) Genuine (the HPTLC test can be used to indicate the nectar source, HMF level and moisture content)
    b) Authentic (batch code information can be provided through the BQUAL and B-Trace system to authenticate honey provenance and extraction date)

3. Educating consumers and supply chain stakeholders on the relevance of provenance and the value of 'terroir'. In future, consider formal avenues of legal protection such as Geographical Indications for unique honey production regions (such as the production of Leatherwood honey in Tasmania, or Jarrah honey in the South West of Western Australia).

4. Target each export market using demographic and behavioural segmentation data identified in the report based on consumer preferences and usage and explore further market-specific opportunities (e.g. gift-giving in Saudi Arabia).

5. Developing and resourcing a consistent inbound social media strategy at the industry level that prioritises content which:
    a) resonates with their audience and develops a genuine social connection with consumers from other cultures and countries
    b) is authentic to the values and beliefs of the Australian beekeeping community
    c) fosters the perception of honesty and authenticity representative of the industry
    d) focuses on education and entertainment as opposed to sales and product promotion

6. When using health narratives, ensure claims fall within the regulations set by all relevant authorities.

Academic outputs

Feddema, K, Schepis, D, Tarabashkina, L and Purchase, S (2021), 'Developing the Story for WA Honey Products', Australian and New Zealand Marketing Academy (ANZMAC) Conference.

Feddema, K, Schepis, D, Tarabashkina, L and Purchase, S (2021), 'Developing the Story for WA Honey Products', Australasian Honey Bee Conference.

Schepis, D, Feddema, K, Tarabashkina, L and Purchase, S (2021), 'Developing the Story for WA Honey Products', Società Italiana Marketing Conference.

Industry outputs

Industry workshop breakfasts presented to the Bee Industry Council of Western Australia (BICWA) on 6th November 2021 and 25th February 2022.

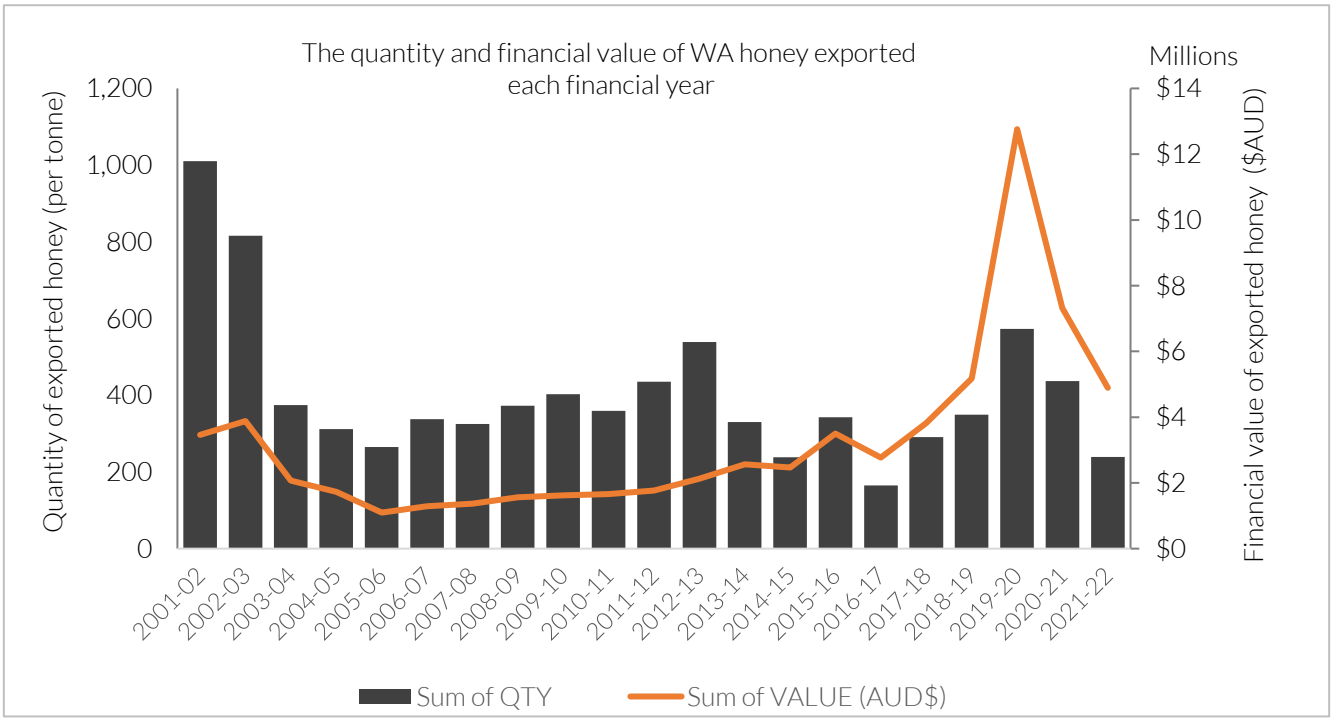
Development and implementation of a social media campaign using Facebook, Instagram and the BICWA website blog (25th of February – ongoing).

Development and collation of still images and video content into a media repository for industry marketing.

INTRODUCTION

Growing health consciousness among consumers has increased demand for premium honey over the past five years, particularly within the Asian market (Jeswanth, 2022). This growth is projected to increase the overall revenue for the Australian Bee industry to $169.2 million, if export volumes increase to supply this growing market (Jeswanth, 2022). However, there is a concern amongst beekeepers that nectar flow is declining, and with it monofloral honey supply, limiting the opportunity to meet rising domestic and global demand. Between 1962 and 2000, commercial honey production in Western Australia declined from 3,628 tonnes to 1,596 tonnes (from 18% to 7% of Australia's total production) (Clarke & LeFeuvre, 2021) – a trend which continues to this day (Figure 1). Additionally, the price received for locally produced honey does not match the quality of Australian honey given its unique characteristics of being sourced from natural forests with a high bioactivity potential. At the same time, exporters face many barriers to exporting honey including the complex and oftentimes expensive requirements to chemically test honey to confirm it abides by both national and international quality standards.

Figure 1: WA honey export statistics as of April 2022. Data provided by the Department of Primary Industries and Regional Development.



To help meet these challenges, The Cooperative Research Centre for Honey Bee Products (CRC-HBP) together with BQUAL Pty Ltd Australia has developed an electronic traceability system that enables honey to be traced from site to packer, giving assurance to consumers that the honey they purchase has been extracted at a specific location and time. Additionally, HPTLC can analyse both the sugars and the non-sugars honey content to reveal the dominant source of the nectar and detect if the honey has been adulterated to further confirm it is genuine monofloral honey (Islam et al., 2020). Since each plant species produces a separate and distinct chemical profile, it is now possible to create a 'nectar fingerprint' that can be compared against samples to confirm species of plant identity that have contributed to the honey (Islam et al., 2021). Therefore, enabling industry professionals to submit their samples to chemically confirm that their honey is authentic, unadulterated, and is Australian in origin to legally support monofloral claims. This presents an opportunity to increase revenue through alignment with strategic, evidence-based marketing campaigns that communicate product quality and increase consumer trust.

This project aims to assess stakeholder and consumer responses to different marketing strategies that align with the chemical analyses and communicate value delivering a premium price point for Australian monofloral honeys. The Western Australian (WA) honeybee industry was identified as a case study for this report to represent a diverse

industry that produces a large range of monofloral varieties of honey from hardwood tree species and wildflowers endemic to the local area. The state has a substantial community of apiarists, with 4,407 beekeepers registered with the state authority as of April 2022, representing over 50,000 total hives (DPIRD, pers. comm, 2022). The commercial WA honey industry is currently primarily composed of owner-operated businesses that have their own brand histories, strategies, financial capabilities and brand identities (Jeswanth, 2022).

The first section of the project analysed the marketing strategies that are currently used in the existing marketing campaigns within the WA industry to examine what qualities are currently associated with honey products and how consumer messaging is framed for WA honey. This was then supplemented with in-depth interviews with stakeholders to identify narratives that are prevalent at the state level. From this data, four key narratives were identified, which were deemed to authentically represented the WA honey market and could potentially be used to create targeted marketing strategies. These narratives were: Terroir, Health, Production and Flavour. Narratives were tested with consumers to examine how they were received in the six target markets (India, Japan, Malaysia, Saudi Arabia, United Kingdom and United States) and enticed consumers to pay higher prices for WA honey.

Objective(s)

As per Project Agreement

The overarching aim of this project was to develop different marketing strategies that could be aligned with chemical analyses to communicate value in export markets and deliver a premium price point for Australian monofloral honeys. More specific objectives were as follows:

Aim 1: Identify the current branding of WA honey bee products

Aim 2: Review and assess how labelling parameters constrain export marketing strategies

Aim 3: Develop and test marketing narratives with consumers in export markets

Aim 4: Review current pricing strategies

Aim 5: Develop, implement and analyse an evidence-based social media marketing campaign

Key activities

As per Project Agreement

1. A review on how honey products are currently being marketed as per literature and web sites from local packers and sellers of WA honey bee products. This required collating an extensive list of packers and a summary of current marketing narratives, branding and market focus.

2. Assessment of how the Food Standards Australia and New Zealand (FSANZ) changes in labelling laws and requirements regarding health claims, may impact the legality of marketing narratives that WA beekeepers and packers are currently using, or could potentially use, to target their customers. For example: New Zealand honey, through the Mānuka honey marketing program has normalised messages for bioactive honey, and this has clashed with the recent changes made to the labelling laws. This report reviewed and collated legislation implications in relation to product health claims (for additional detail please see Project 23).

3. Investigation of current honey import and export statistics (bulk and packaged) to identify main export and new potential markets. This led to the identification of Malaysia, India, Japan, Saudi Arabia, United Kingdom (hereafter UK) and the United States of America (hereafter USA) as potential six export markets.

4. Consumer research in the selected markets to assess the impact of the identified marketing narratives on consumers' willingness to pay for WA honey, in addition to developing a detailed understanding of consumer behaviour and attitudes towards Australian honey more generally. This quantitative phase also examined pricing strategies that may be achieved for honey depending on different narratives in each export market.

5. Delivery of two workshops with honey industry stakeholders to present research results. The first workshop was used by the research team to communicate with packers and sellers of WA honey bee products and

confirm their agreement on the chosen narratives to be include into the experimental phase. The second workshop communicated the preliminary quantitative results from the experimental study, which was used to identify the analyses to include in the final report and elicit industry feedback for the subsequent creation of the social media marketing campaign.

6. Design and implementation of a three-month marketing program to promote WA honey based on the data collected in both the qualitative and quantitative phases of this project. The experimental narratives formed the base of the campaign. Additional content was also created in collaboration with BICWA. Accounts were created on three social media platforms for the campaign and content was produced and uploaded approximately once per day. Analytics from these platforms were then used to assess the level of consumer engagement throughout the project to present back to industry.

METHODOLOGY

Aim 1: Identify the current branding of WA honey bee products

Qualitative methodology was chosen to address this aim and to develop a ground-up understanding of how producers and packers portray their brand positioning, personal values and beliefs to consumers by analysing the websites and social media platforms. This process helped identify patterns and overlaps where WA stakeholders had shared meanings that could form the basis of an authentic territorial brand representing WA Honey industry sellers. Additionally, semi-structured interviews with 15 industry stakeholders (honey producers, packers, government representatives and distributors) were conducted. These interviews identified patterns in producers' perceptions about the WA honey industry, the brand-state congruence and consumers preferences (see Appendix A for interview protocol). All work was completed with the approval of the UWA Human Research Ethics Office.

Aim 2: Review and assess how labelling parameters constrain export marketing strategies

A desktop study was undertaken to collate the current labelling parameters and export requirements for each targeted country. If using this document as a basis for future decision making, please consult current resources to ensure you meet the most up-to-date federal and international guidelines.

Aim 3: Develop and test marketing narratives with consumers in export markets

Export market testing was conducted in two phases, first with preliminary qualitative focus groups and then a quantitative experimental study. This allowed to develop both a breadth and depth of insights regarding consumer perceptions in the six target markets.

Focus Groups

Focus groups were conducted with expatriates from the six target markets residing in WA to investigate their familiarity with, and knowledge of, WA honey products and honey more generally. Prior to the focus group participants were asked to complete two collages – one depicting their ideal honey, and one depicting their perceptions of WA honey. Collages were deployed to complement focus group discussions by providing visual data and facilitate the conversation (Costa et al. 2003). An interview protocol used to guide the focus groups discussions is shown in Appendix A. Findings from this study helped inform the questionnaire used in the quantitative experimental study.

Quantitative Experimental Study

An online experimental study was developed to examine consumers' current purchasing behaviour, honey usage and preferences. The experiment protocol is attached in Appendix B. Participants were exposed to one of the seven narratives identified during the preceding research phases. These narratives were: 1) Honey Origin: Made in Australia; 2) Honey Origin: Made in Western Australia 3) Honey Origin: Made in South West Australia; 4) Production; 5) Health; 6) Terroir; 7) Flavour. Figure 2 illustrates all narratives used as experimental conditions. Each experimental condition used a consistent core image (a jar of honey on a table), but had different background and text, designating each narrative. Participants were asked to complete questions about their perceptions of the origin of the honey; product perceptions; willingness to pay premium; and demographic information. The experiment aimed to identify the most effective narrative(s) that would appeal to consumers in each export market.

An Australian panel provider was used to randomly recruit consumers from each country (N_{total}=5,250; N_{USA}=884, N_{UK} = 891, $N_{Saudi\ Arabia}$ = 839, $N_{Malaysia}$ = 877, N_{Japan} = 867, N_{India} = 892). The experiment was created in Qualtrics and administered in English for India, Malaysia, United States and United Kingdom. It was translated by the panel provider into Arabic and Japanese for Saudi Arabia and Japan. Participants were representative of each nation in terms of age and gender, and were required to be 18 years or over and be honey consumers. To ensure data accuracy, participants

were screened through an attention check (Paas & Morren, 2018) and two manipulation checks. Participants who failed the attention and manipulation checks were screened out, leaving a total sample of 3,272 participants ($N_{United\ States}$=621, $N_{United\ Kingdom}$ = 591, $N_{Saudi\ Arabia}$ = 531, $N_{Malaysia}$ = 590, N_{Japan} = 541, N_{India} = 398).

Due to the highly diverse nature of the United States honey market, all participants were recruited from the state of California. The decision to reduce the sample to this state was motivated by the following two factors: 1) California is the most populated state within the United States; and 2) represents one of the highest importers of foreign honey compared to the other states (Flexport, 2022).

Aim 4: Review current pricing strategies

A series of questions were included in the experimental survey to determine the spending habits of consumers in each target market. Participants were asked what they typically spend on 250 g (9 ounces) of honey and what was the maximum price they had ever paid for the same quantity of honey. The latter was compared to the amount participants indicated they would be willing to pay for the Australian honey that they saw in the experimental condition. The two price points tied with experimental marking narratives were used to identify pricing and marketing strategies to maximise profit in each export market.

Aim 5: Develop, implement and analyse an evidence-based social media marketing campaign

The final phase of this project involved the creation of a social media campaign using the strategies identified in phases 3 and 4. Using three different social media platforms (Facebook, Instagram and a blog page), we created social media content targeted towards the sampled six countries. Accounts were created in collaboration with BICWA. A content repository was developed to organise still images and video content to streamline future marketing strategies and ensure that all content had been cleared by the appropriate intellectual property/health claim laws. User engagement data was collected using the inbuilt Meta Business Suite analytics and Wix analytics. This was used to determine the most effective marketing strategies for each platform and each narrative to make recommendations for further continuation of the campaign.

Figure 2: The seven experimental conditions. a) Honey Origin: Made in Australia; b) Honey Origin: Made in Western Australia; c) Honey Origin: Made in South Western Australia; d) Honey Origin: Made in South Western Australia with a Terroir narrative; e) Honey Origin: Made in South Western Australia with a Production narrative; f) Honey Origin: Made in South Western Australia with a Health narrative; g) Honey Origin: Made in South Western Australia with a Flavour narrative.

RESULTS

Aim 1- Identify the current branding of WA honey bee products

Website Analyses

The analysis of company websites and social media platforms examined the overall branding of WA honey companies and their marketing messaging. Content analysis focused on attributes most heavily promoted by industry revealing that the main themes were around the natural and unique taste of honey, the Western Australian bee-industry, and the purity of the honey. This provided insights into what information consumers currently receive about WA honey, allowing us to identify narratives that are commonly used by individual brands. The Leximancer output, shown below in Figure 3, summarises key insights and commonly used topics - it should be read as a heatmap in which the warmer (darker red toned) bubbles indicate more salient topics, and the cooler (blue and purple toned) bubbles indicate themes that were discussed less frequently (Wilk, Soutar and Harrigan, 2019). The most common themes were 'Honey', followed by 'Industry', 'Production' and 'Bees,' respectively. The terms included within each theme bubble indicate the terms most closely related to the theme. For example, 'honey' is most often used with 'taste', 'natural' and 'unique,' indicating that within current marketing materials these terms are the most frequently used to differentiate the product.

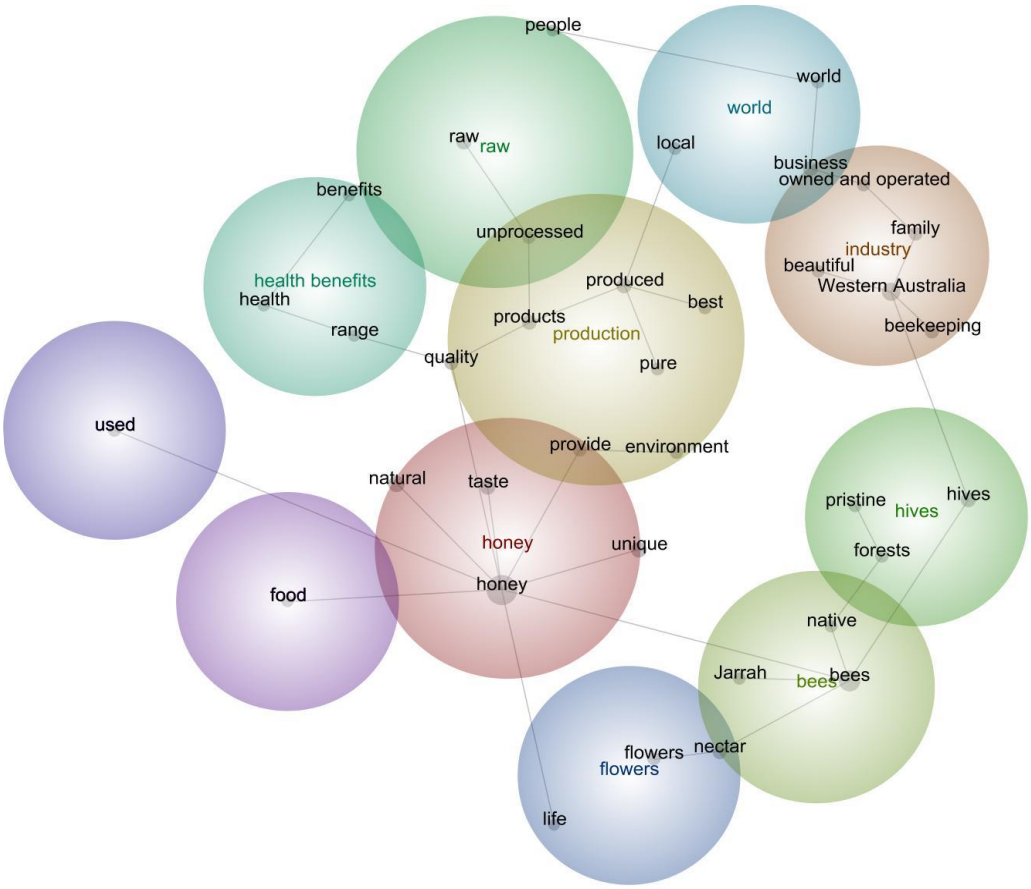


Figure 3: Heat map output from Leximancer.

Furthermore, website data showed honey products were diversified into a number of categories depending on filtration and pollen content, bioactivity levels, infusion of other ingredients and processing techniques. Production methods were the third most salient theme in the content analysis (Figure 3). In marketing terms, this means that individual honey brands can have diverse product ranges and honey products can be considered by consumers to fulfil a plethora of uses, including topical application for skin conditions, wound healing, cooking, eating on its own or use as an alternative sweetener.

Concept prominence scores were also derived from Leximancer, and indicate how likely words are to co-occur within sentences (Table 1). It is generally accepted that any prominence value over 3 is satisfactory, however note that this is not related to the salience of the terms themselves and the relevance of these occurrences should be interpreted alongside the heat map (Wilk, Soutar & Harrigan, 2019). Looking at the terms which were included in the most salient theme, terms such as 'unique' and 'taste' were frequently used together, indicating that 'unique' is specifically used to designate the flavour of honey, as opposed to environmental or production aspects. Similarly, within the Industry theme, the most frequently co-occurring terms were 'family' and 'owned', indicating that companies market themselves as small, family owned independent businesses. This reflects the 'cottage industry' status of the industry, highlighting the small-medium enterprises (SMEs) nature of the industry.

Table 1: Co-occurrences and prominence of values from website analyses

Co-Occurrence	Prominence	Co-Occurrence	Prominence
Family & Owned	9.25	World & People	4.84
Owned & Business	8.44	Health & Food	4.80
Health & Benefits	7.98	Nectar & Flowers	4.55
Native & Forests	6.21	Jarrah & Flowers	3.91
Family & Business	6.19	Unique & Taste	3.91
Beautiful & Owned	5.34	Beekeeping & Owned	3.74
Jarrah & Forests	5.24	Environment & Food	3.67
Native & Jarrah	5.04	Unprocessed & Raw	3.60
Pristine & Environment	5.02	Environment & Provide	3.59
Pristine & Forests	4.86	WA & Owned	3.56

Figure 3 and Table 1 also highlight the relative importance of Jarrah (Eucalyptus marginata) in current marketing materials, as it is the only tree species identified as a prominent topic featured in highly prominent co-occurrences. Jarrah is most frequently associated with the terms 'Forests', 'Native', 'Flowers', respectively. Interestingly, Jarrah did not show a strong co-occurrence with either 'health' or 'flavour,' indicating that it is not heavily promoted as having these specific characteristics.

Industry Interviews

A content analysis of the industry stakeholder interviews identified five main characteristics used by the industry to differentiate brands: 1) values, 2) history, 3) commitment to quality, 4) growth strategies and 5) relationship to place (summarised in Table 2). These characteristics were fundamental to the creation of individual brands' marketing strategies as they shaped business value propositions. It is critical that a successful collective marketing strategy is authentic to the lived experiences of the state's beekeepers and representative of their overall values and preferences (Gundlach & Neville, 2012; Napoli, Dickinson-Delaporte & Beverland, 2015). What follows below is a brief summary of these characteristics, which was used to inform the next stages of this project (i.e., our marketing approach).

Table 2: Main brand characteristics identified through interviews.

Brand Characteristics	Examples
Personal Values	Integrity and trust Passion for bees Lifelong learning Supporting local industry Representing the local community Environmental protection and sustainability
Business History	Hive site locations History of agricultural land-use and conservation of bushland History of the land and relationship to Traditional Owners* Family history and legacy Development of skills Assistance for new apiarists Competition for resources
Relationship to place	Understanding flowering times and quality of bush requires a long-term relationship with apiary sites Producing honey aligns with environmental ethos of protecting the place apiarists live and work Connection to place, strengthened by its ability to produce a livelihood Distance travelled increases connection to landscape Biodiversity is valued for the varieties of the honey it can produce Concern for changes in climate and reliability of production Natural biosecurity due to isolation
Commitment to Quality	Artisanal techniques for honey collection and filtering Selection of quality sites and understanding bloom times Maintaining monofloral varieties to ensure flavour quality Honey that connects the stories of the environment Scientific research on the chemical differences between honey from tree species Scientific programs to maintain and improve bee health
Growth Strategies	Uncertainty around market acceptance of seasonality and the number of varieties Difficulty in maintaining heterogeneity of the product and producing sufficient volume Growth limited by resource scarcity and unpredictable yields Some beekeepers preferencing 'value-add' strategies over expansion Preservation of native bushland sites would enable further growth

*Please note that although this concept was mentioned by both Indigenous and Non-Indigenous brands, it may be considered inappropriate to use in marketing materials of Non-Indigenous companies or entities without permission (Janke and Sentina, 2018).

Personal Values

Brands present customers with information and narratives around who they are, what they stand for and what they are associated with. In order to develop a cohesive regional brand identity that consumers perceive to be authentic it must align with the core personality and values of the producers (Gundlach & Neville, 2012). The content analysis of website allowed to examine brand positioning of each individual brand and identify how brands communicate their core values and value propositions to consumers, which highlighted the diversity of identities, values and relationships practiced by individual brands within WA.

Overall, stakeholders' industry approaches were in alignment with one another, with a particular focus on caring for the environment, producing high quality honey and being an authentic reflection of the local community (illustrated in the quotes below). Therefore, when developing a marketing strategy for the state of WA, a territorial brand identity could be rooted in the values of environmental protection and the integrity of production.

> *"Passion about the bees, really, that's really what started it. We wanted something to, I guess a business and something that we could see some future growth and obviously something for the environment. We thought it was time to give something back". Interviewee 1*
>
> *"They're killing, killing species of trees and animals and stuff like that flat out and that will have a bigger impact on the environment and the community than it will on my business. Long term it will have a big effect on my business - but I think it will affect the community and the environment a lot worse." Interviewee 2*
>
> *"So credibility and integrity are two of my personal main values. And I like to think that our that our business and our brand reflects that as well, is that we're credible and we do everything we do with integrity and with a holistic approach. And that's why I always refer back to the environment. That's that integrity." Interviewee 3*

Business History

As part of one's brand imagery, a company may choose to associate itself with its heritage and history, which is particularly relevant for artisanal and small producers. Overall, there was a strong split between beekeepers who were new to the industry with little previous apiculture experience, and those who were multigenerational honey producers passing along apiary sites and techniques over a few generations. Hence, it may be difficult to create a brand identity based purely upon history and heritage of production techniques for WA honey as this aspect is variable across the industry. That being said, using traditional methods and participation in shared programs, such as the Rottnest Island Queen Bee Breeding program and the CRC for Honey Bee Products has the potential to associate new businesses with the heritage of older businesses.

> *"Here in WA in particular the dominant beekeeping families are multigenerational families. The biggest problem that these new beekeepers have when they come into the industry is that the old beekeepers make it look too easy." Interviewee 4*

During the interviews, stakeholders identified a lack of collaboration across the industry. A number of interviewees indicated that there was a lack of willingness within the industry to share information with one another. This lack of information sharing highlights the dynamics at an individual brand level, indicating that the 'collective will for terroir' influences industry's commitment for cooperation and the long-term viability of a regional strategy (Castelló, 2021; de San Eugenio-Vela et al., 2020).

"I think a lot of the old guard are a little bit of a closed book. They all keep to themselves. They don't seem to like to share any information. It's just all secret squirrel" Interviewee 5

"I think some people are scared to talk because they think they have something that someone else doesn't know about and it's it just seems to be the bee industry all over. It's a very secretive bunch of people sometimes." Interviewee 6

Growth Strategies

A brand that has already expanded into foreign markets and is associated with the region may contribute more to customer's awareness of a regional brand than a smaller brand that only sells within the local region (Pappu et al., 2007). It may therefore be true that a small brand stands to gain more from a collective strategy that allows it to leverage the success of its former competitors compared to a larger, already established brand (Anselmsson et al., 2007). If a small business lacks an ability to export products, then it will not be able to fully take advantage of a marketing strategy that focuses on international customers. Understanding these power dynamics is a critical aspect for creating a territorial brand because depending on the industry scale and existing history within industry bodies, it may be difficult to create a cohesive brand identity that balances the needs of all stakeholders (Brodie & Benson-Rea, 2016). Additionally, growth strategies for individual brands are constricted by a number of factors that are consistent for a number of brands (such as resource scarcity), but also unique to individual brands (such as business's capital or relationships with international wholesalers).

"you've also got to be realistic [with] where you're at with your production levels in that at the moment, you know, we wouldn't have the capacity to supply, you know, a store in, in the Asia Pacific region, let alone a market." Interviewee 7

"So for us... it's like, do we grow and put more loads of bees on so that we can produce more honey in a climate where there's less and less land and less and less vegetation, that we can do that? So that we essentially end up running around in circles because we're trying to manage more bees on less resource, or do we just keep at the same scale and just really concentrate on maximising what we've got?" Interviewee 3

Commitment to Quality

Growth strategies were often described as a juxtaposition to quality maintenance in website content and interviews. As with many SMEs, honey businesses must balance their limited time and funding with their brand development goals. Referencing the resource scarcity and uncertainty discussed above, interviewees often emphasised their commitment to prioritising product quality over expansion or investment in marketing materials/promotional activities.

You can't really market yourself as a highly premium product without a lot of legwork and a lot of money. So I've kind of taken the other approach and kind of gone, hey, you know, our jars and labels may not be the best, but the product you're getting is straight from the hive." Interviewee 8

"Quality over quantity is our mantra. We believe our honey should be as pure and as natural as possible...Nothing else. Just raw, unprocessed goodness - from the flowers of the ancient landscapes of Western Australia, to happy, healthy bees, to you." Excerpt from company website

Relationship to Place

Interview data showed that honey producers had a strong relationship and emotional connections to local flora, fauna and landscape. However, the scale of production meant that specific production sites were quite varied. The relationship that producers have with place, and their understanding of how it influences their product, is primarily characterised by their emotional and financial connection to specific land on which they live, work and travel, rather than perceptions of the state in general. Apiarists therefore have deep individual connections to land that can provide unique and genuine stories of the WA region. By leveraging the symbolic and philosophical meanings that apiarists have of floral species, farming traditions and environmental stewardship, the WA honeybee industry can ensure consumers in export markets experience an authentic representation of WA honey products, further reinforcing the concept of 'terroir'.

"For us personally, we definitely feel a link to the whole Southwest or even the Southwest Australia eco region, which is essentially Shark Bay to Esperance, because when people talk 'the south west' to me, that's what I think of. I look at it - because of my outlook on environment, and that's what underpins everything that we do." Interviewee 3

"When we go into the forest, well we've been using the same sites for 30 odd years now...we might do 50 or 60 thousand kilometres and produce somewhere between 100, 150 tonne of honey for the effort." Interviewee 2

Perceptions of Western Australia

Finally, all Interviewees were asked about their perceptions of WA as a state and how they felt it shaped their industry's marketing potential. Many of the interviewees referenced specific geographical and botanical characteristics of WA, such as its geographical isolation and unique plant biodiversity. They recommended that any collective marketing strategy could leverage these natural features to distinguish the state industry from both interstate and international competitors. This highlighted that, physical and geographical features of the state were intrinsically linked with the value that beekeepers placed on the honey they produce. Several interviewees also felt that the state had a reputation as a 'clean and green' producer of high quality agricultural produce and that increasing the emphasis on the honey's provenance and quality of production would be advantageous for the whole industry.

"Western Australian products...are generally well regarded internationally. We have a good foundation...we just need to take it to the next level and prove that to a standard where these countries, or these consumers, go "oh yeah, I am very confident that you are, you are clean, green, sustainable. You have great food safety practises"". Interviewee 9

"I think particularly from an export point of view, that's where we, WA as a whole, need to be focussing in on quality and selling the story of the provenance and the clean and green side of things - and clean and green and also pest free, you know, honey bees that are that that are pest free and those sorts of things as well." Interviewee 7

Aim 2. Review and assess how labelling parameters constrain export marketing strategies

In order to create an effective international marketing strategy, it is critical to ensure that all legal barriers, marketing regulations and export tariffs are well-documented and understood. To this end, a desktop study of both Australian law and the import and distribution laws of the target six countries was undertaken. Using publicly available data from the Department of Foreign Affairs and Trade (DFAT), the Australian Trade and Investment Commission (AUSTRADE) and the Western Australian International Investment and Trade Office Network, the following summary sheets were created for each of the six export markets. Please be advised that this information is subject to change and can only be verified as accurate when this report was prepared (e.g., March, 2022).

United States of America

United States International Trade Commission (USITC), 2022

Label Regulations

Label must state-

a) Name and brand of the product- The word 'honey' must be visible on the label, the name of a plant or blossom may be used if it is the primary floral source for the honey.

b) The net weight of the product (excluding packaging), both in pounds/ounces and in metric weight (grams) must be included in the lower third of your front label panel in easy-to-read type]
(e.g Net Weight. 16 oz. (454 g).

c) The use of a label in conjunction with packaged honey must declare legibly and permanently the one or more names of the one or more countries of origin of the lot or container of honey, preceded by the words 'product of' or other words of similar meaning. Country of origin labeling is required by the Tariff Act of 1930, 19 U.S.C. 1304(a), and is enforced by U.S. Customs and Border Protection (CBP) under regulations (19 CFR Part 134). The Tariff Act requires that every imported item be conspicuously and indelibly marked in English to indicate its country of origin to the ultimate purchaser.

Special Requirements

No special requirements.

Tariffs

Under the United-States Free Trade Agreement tariffs are set at 0%.

Chemical Testing Requirements

a) American Foulbrood
b) Maximum Residue Limits (termed 'tolerances') set by the USDA –

-Coumaphos	Not more than 150 parts per billion (ppb)
-Amitraz	Not more than 200 ppb
-Tau-Fluvalinate	Not more than 20 ppb
-Sulfonamides, tetracyclines, streptomycin, fluoroquinolone, chloramphenicol, nitrofurans and tylosin	Not permitted

c) Water insoluble solids must be not more than 0.5 gram (g) per 100 g for pressed honey and not more than 0.1 g per 100 g for other than pressed honey
d) The Moisture/refractive index must be less than 21.0 g per 100 g.
e) The sum of both the fructose and glucose content must be not less than 60.0 g per 100 g
f) Sucrose of Menzies Banksia, Red Gum, Leatherwood or Eucryphia milligani must be not more than 10.0 g per 100 g
g) Not filtered to less than 1.0 µm
h) pH must be between 3.4 - 6.1

United Kingdom

United Kingdom Department for International Trade, 2022

Label Regulations

Label must state-
a) Name and brand of the product
b) The Country-of-origin
c) Net Weight (In metric units)
d) Best Before date
e) Name and address of the producer
f) A 'lot' number- (The lot number is preceded by the letter 'l' to distinguish it from other indicators)

Product Name-
1) The product name of a relevant honey may be supplemented by information relating to its floral or vegetable origin but no person may trade in a relevant honey for which such supplemental information is provided unless the product comes wholly or mainly from the indicated source and possesses the organoleptic, physico-chemical and microscopic characteristics of the source.
2) The product name of a relevant honey may be supplemented by information relating to its regional, territorial or topographical origin but no person may trade in a relevant honey for which such supplemental information is provided unless the product comes entirely from the indicated origin.
3) The product name of a relevant honey may be supplemented by information relating to its specific quality criteria.

Special Requirements
Although honey will keep in good condition for many years if it is kept in an airtight container at a constantly low temperature a 'Best before' date must be given. 2 years from the date of bottling is reasonable - if this specifies day month and year- a lot number is not required.
A manufacturer's declaration is required to confirm that the honey is 100% Australian origin and unblended with imported honey.

Tariffs
The current rate is 16% VAT, however, under the new Australia-United Kingdom Free Trade Agreement (A-UKFTA), which was signed virtually on 17 December 2021, it **will drop to 0% as of 31 December 2022** (DFAT, 2022).

Chemical Testing Requirements
a) Moisture content must not be more than 20%
b) Fructose: Glucose must not be less than 60g/100g
c) Carbohydrate content must be 70 - 80%
d) Water insoluble content must not be more than 0.1g/100g
e) For all Australian honeys except for Leptospermum spp. Electrical conductivity must not be more than 0.8mS/cm
f) Free acid content must not be more than 50 milli-equivalents acid/kilogram (kg)
g) Diastase Activity must not be less than 8
h) Hydroxy-methyl-furfural (HMF) must not be less than 40mg/1kg

Saudi Arabia

Saudi Food and Drug Authority (SFDA), 2022

Label Regulations

Labelling on foods must indicate, in both English and Arabic:

a) Name of product
b) Contents
c) Net weight (in metric)
d) Production and expiry dates (in Arabic only)
e) Name of company and country of manufacture

All animals, animal products, plants and plant products (including seeds and grains) require health certification issued by the approved authority in the country of origin.

Special Requirements

Honey processing establishments wishing to export honey and/or edible apiculture products (honey products) to Saudi Arabia must be listed on the Department's Establishment Register (ER) and listed on the SFDA List of approved Establishments for the Export of Honey and its products to the Kingdom of Saudi Arabia. The list of Australian honey processors approved to export to Saudi Arabia can be found on the SFDA's website. Consignments of honey and apiculture products from processors not listed by the SFDA will not be allowed entry into Saudi Arabia.

1) Products of animal origin should be sourced from establishments approved and listed by a country's relevant competent authority.
2) Honey for human consumption exported to Saudi Arabia must continue to be accompanied by a HSA1 (manual certificate) with endorsement 5148.
3) Honey and bee products shall comply with maximum residue limits for residues of pesticides and veterinary drugs for honey established by Codex Alimentarius Commission or, in the absence of a Codex MRL, conforms to the Australia New Zealand Food Standards Code.
4) The honey either comes from apiaries situated in a country or zone free from Aethina tumida; the free zone is an area of at least 100km radius, which is not subject to any restrictions associated with the occurrence of the small hive beetle (A. tumida); or has been strained through a filter with a pore size of between 0.2mm and 0.42mm to ensure the destruction of A. tumida; or has been frozen at a core temperature of minus 12 degrees Celcius or less for at least 24 hours.

As of January 1, 2020, the Saudi Food and Drug Authority (SFDA) banned the use of added sugar or its sources (honey, glucose syrup) artificial flavors, colour additives and energy drinks in 'fresh and mixed juices'.

Tariffs

Effective as of 14/12/2020 there is a 5% Tariff on Natural Honey.

Chemical Testing Requirements

1. American Foulbrood
2. Maximum residue limits for residues of pesticides and veterinary drugs for honey established by Codex Alimentarius Commission or, in the absence of a Codex MRL, conforms to the Australia New Zealand Food Standards Code.

Malaysia

Food Safety Information System of Malaysia (FSIS), 2022

Label Regulations
a) Single-ingredient products (such as honey) do not have to name that single ingredient when already used in the common or usual name on the front panel.
c) Net Weight
e) Country of Origin
f) Name
g) Address of the manufacturer, packer, importer.
h) Bahasa Malaysia or English - (and may also include translation in any other language)
i) Generally, the word 'pure' is forbidden on any labels but he word 'pure' can be labelled on honey as there is no restriction for the use of word for that food in the regulation.
j) Words to indicate grading, quality or superiority or any other words of similar meaning shall not appear on the label of any package of food unless such description of quality grading conform to those established by the relevant authorities responsible for such grading;
k) The word 'organic', 'biological', 'ecological', 'biodynamic' or words of similar meaning unless the food conforms to the requirements specified in the Malaysian regulations

Special Requirements
For consignments of 100% Australian origin raw and processed honey use Declaration and Certificate as to Condition EX188B with the following endorsement entered in the 'Additional certification' field of the certificate:

"This product is 100% Australian origin honey. No certificate of analysis is required. Based on the registration, approval and compliance activities of the Australian Pesticides and Veterinary Medicines Authority, the certifying authority has no reason to suspect that the above product contains chloramphenicol."

Tariffs
Under a Free Trade Agreement with Malaysia there is a 0% tariff on all agricultural products.

Chemical Testing Requirements
According to Malaysian authorities honey –
(a) Shall contain not less than 60 per cent of reducing sugars calculated as fructose and glucose;
(b) Shall not contain more than –
(i) 20 per cent of water;
(ii) 1 per cent of ash; and
(iii) 80 mg/kg of hydroxymethylfurfural [Sub. P.U(A)169 /2019]
(c) Shall have an apparent sucrose content of not more than 10 per cent; and
(d) Shall have an acidity of not more than 40 miliequivalents acid per 1000 g.

Japan

Consumer Affairs Agency, Government of Japan (CAA), 2022

Label Regulations
a) Name and brand of the product
b) Country-of-origin
c) Ingredients, in descending order of weight percentage - Single-ingredient products (such as honey) do not have to name that single ingredient when already used in the common or usual name on the front panel
d) Food additives in descending order of weight on a separate line from other ingredients
e) Net Weight (In metric units only)
f) Best-before date
g) Storage instructions

Special Requirements
1) All edible apiculture product must comply with Japan's Food Sanitation Act.
2) All label information must be in Japanese.
3) Honey quotas on importation on a first come, first serve basis.
-FY 21/22 the quota is 136 tonnes
-FY 22/23 the quota is 144 tonnes
-FY 23/24 the quota is 152 tonnes
-As of 2024 the quota will be 160 tonnes in perpetuity.

Tariffs
Under the Japanese Australian Economic Partnership Agreement (JAEPA) tariffs are declining at the following rate: **7.0%** as of 1 April 2021; **4.6%** as of 1 April 2022; **2.3%** as of 1 April 2023; **0.0%** as of 1 April 2024

Chemical Testing Requirements
1. American Foulbrood
2. Sugar Analysis
3. Moisture Content
4. Maximum residue limits on the following

Pesticides:

Acynonapyr	Amisulbrom	Ametoctradin,	Benthiavalicarb-isopropyl
Oxathiapiprolin	Kasugamycin	Glyphosate	Chlorantraniliprole
Chlorfluazuron	Cyazofamid	Cyenopyrafen	Cyclaniliprol
Cyflufenamid	Cyflumetofen	Spinetoram,	Zoxamide
Tetraniliprole	Picarbutrazox,	Pyraziflumid	Pyriofenone
Pyroxasulfone	Fenpicoxamid	Fenhexamid	Fluoxastrobin
Fluxametamide	Flutianil	Flutolanil	Broflanilide
Prohexadione-calcium	Hexythiazox	Mandipropamid	Imazapyr
Mandestrobin	Mesotrione	Metyltetraprole	Metrafenone
Mefentrifluconazole			

Veterinary Drugs:

	Etoxazole	Diflubenzuron	Spinosad

Antibiotics (Recommended not mandatory):

	Chloramphenicol	Tetracycline	Macrolide

India

Food Safety and Standards Authority India (FSAAI), 2022

Label Regulations

The said standards are applicable to packaged/processed honey:

a) If the honey is obtained by pressing broodless combs, the honey shall be labelled as 'Pressed Honey'.

b) Honey may be labelled as follows, according to floral or plant source, if it comes from any particular source and has the organoleptic, physicochemical and microscopic properties corresponding with that origin. It shall be in addition to the labelling requirements as given at vii) above:

Monofloral Honey – If the minimum pollen content of the plant species concerned is not less than 45 percent of total pollen content;

Multi Floral Honey – If the pollen content of any of the plant species does not exceed 45 percent of the total pollen content

Special Requirements

1) No specific requirements for honey

2) Exporters must comply with the general food standards of the importing country, particularly in relation to food safety, the use of additives and veterinary medicines.

Tariffs

60% Tariff on Natural Honey. An interim version of the Australia-India Comprehensive Economic Cooperation Agreement (AI-CECA) was signed by both parties on the 2nd April 2022. However, no changes were signed relating to tariffs on natural honey products.

Chemical Testing Requirements

1. American Foulbrood
2. Maximum residue limits as set by the FSSAI on the following antibiotics:

-Chloramphenicol
-Nitrofurans and its metabolites
-Sulphonamides and its metabolites
-Streptomycin
-Tetracycline
-Oxytetracycline
-Chlortetracycline
-Ampicillin
-Enrofloxacin
-Ciprofloxacin
-Erythromycin
-Tylosin

Australian Health Claims

In addition to the export country laws, all marketing and labelling must abide by local Australian regulations. This is of particular importance in regards to health claims that honey packers are able to make about the bioactivity of their honey products. Australian health claims are governed by multiple layers of regulation including Australian Consumer Law Country of Origin Information Standard (ACCC), the Therapeutic Goods Act (TGA), the Australia New Zealand Food Standards Code (ANZFSC) and the Ads Standards set out by the Australian Association of National Advertisers (AANA). Additionally, the relevant state or municipal authorities may have regulatory jurisdiction over health claims (Food Legal, 2022). These authorities' main responsibility is to ensure that the nutritional and health benefits of products are accurately represented, not misleading and based upon scientific evidence (Australia New Zealand Food Standards Code – Standard 1.2.7, 2016). While none of these regulations are legally binding, any complaint by a consumer or competitor may lead to a public review, referral to industry regulators or media investigation.

Health claims can be divided into two types, those that are considered 'therapeutic claims', which fall under the TGA, and 'General' or 'High Level Health Claims' that are governed by FSANZ. A therapeutic claim is considered anything that claims to: prevent, diagnose, cure, or alleviate a disease, disorder or condition or b) influence, inhibit or modify a physiological process in persons. To make such a claim, a food product must be considered to be a "therapeutic good" by the TGA and be in the form of a pill, capsule, tablet or powder as these claims are strictly prohibited for standard food products (Food Legal, 2022). 'General' and 'High Level Health Claims' are available for standard food products and are generally considered to represent "any implied claim that your product or a property of your product can have a health effect on the human body" (ANZFASC 1.2.2-2, 2016). However, it is important to note that these claims can only be promoted by food products that meet a specific ANZFSC nutrient profiling scoring criterion (NPSC). This criterion states that honey products must have an NPSC score of less than 4 to allow companies make health claims. Based upon the average sugar and energy content of honey products, honey does not meet this requirement and health claims can not be made on Australian honey products (ANZFSC Schedule 4 and 5, 2016). Therefore, the Australian honey industry must be careful when creating marketing materials, both at the individual brand level and the state/federal industry level, not to make specific health claims about anti-oxidant, anti-biotic or anti-inflammatory properties.

Aim 3. Develop and test marketing narratives with consumers in export markets

Preliminary data: Consumer focus groups and interviews

To determine which questions should be included in our main studies, preliminary research was conducted with consumers from each of the six target countries currently located in WA using focus groups and interviews. Altogether, seven focus groups and two interviews were conducted to establish any gaps between the currently deployed marketing strategy and the actual perceptions/desires of the target consumers. Overall, each country had specific preferences, not only for the product, but for the marketing strategy, based upon common advertising trends currently deployed in their own countries, as well as on their ideal traits for honey products. Overall, we noted extremely low consumer awareness, not only of WA honey brands and products, but also of WA as a state or geographical location. Consumers stated that prior to arriving in WA, they had no awareness of Western Australia as a state and could not differentiate it from the rest of the country. Many had not heard of WA honey and therefore would not look it up online or try to find out more information on it. While Malaysian participants indicated they were very familiar with Australian honey and felt that it was marketed well in their country, none were aware of WA specifically.

When asked what attributes they associated with Australian honey after they had tried it, responses suggested some potential differences between countries. Malaysia, India and the US had the most consistent views of the honey (premium, pure and natural, native flowers), while Japanese consumers mostly considered honey in relation to marketing imagery (gifts, honey dippers). Middle Eastern consumers had much more negative views of the honey (low quality, high sugar), while the British consumer associated Australian honey with local production.

When asked about the attributes that influenced consumers to purchase honey, there appeared to be, again, some differences between countries. Malaysia, India and the Middle East indicated that they were interested in whether honey was unadulterated and did not contain additives. Similarly, the US and Middle East were interested in honey that was organic and did not contain pesticides. Middle Eastern and Indian participants also noted the importance of using health narratives that showed *explicit evidence* for clinical outcomes and explained to consumers how bioactivity is measured. Additionally, consumers reported different ways of using honey – although the most consistent uses were as an alternative to sugar (most often added to drinks) and as a medical supplement or tonic for coughs and colds.

Participants also mentioned some aspects of honey that they were confused by or unsure of. Japanese participants noted that they always see imagery of dippers but do not know what they are or how to use them. The Middle Eastern and Malaysian participants indicated that they had heard 'myths' (e.g., you must use wooden spoons with honey - metal will kill bioactivity; pure honey forms a honeycomb shape on the bottom of a glass when mixed into cold water; crystallisation occurs when bees are fed sugar) (Figure 4).

Figure 4: Areas of low consumer awareness. 4a) Honey dippers; 4b) Myths around metal spoons; 4c) 'Honey comb' in water as an indicator of pure honey.

Collage Exercise

Participants created collages of what they associate with WA honey (see Figure 5 to the right for a typical collage from each country). Collages included packaged honey, the natural environment and production. Colours were consistently dark, stressing the darker tones of WA honey and the browns and greys of the local landscape. Discussion of the collages yielded further explanations that images of WA honey production did not meet their expectations, often showing open fields or trees where they would instead expect to see flowers. It was not clear to participants that honey was collected from trees as this was not something that they were used to.

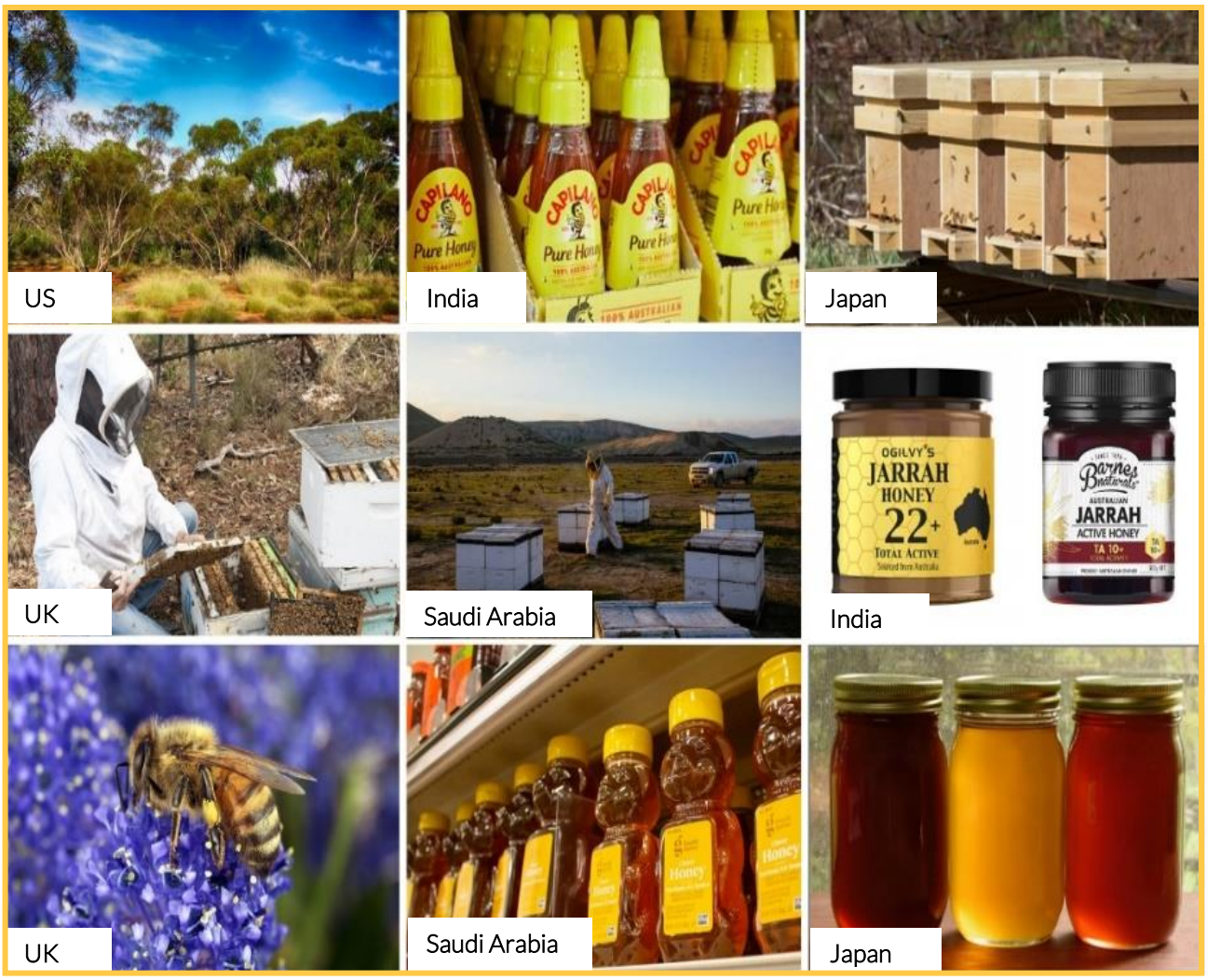


Figure 5: Focus group images of 'WA Honey' [1]

[1] Please note that the brands shown only reflect the style of packaging – squeezy bottles – or a type of honey (Jarrah), and do not represent brand preferences or actual purchasing behaviour.

Participants were also asked to create a collage of their *ideal* honey (Figure 6). What follows below is a representative sample of the images from each country. Overall, the colours were brighter leaning towards more orange spectrum. The collages were also more likely to show the honey in glass jars and in natural settings. Participants commented on what consumers in their home countries would typically expect in honey marketing materials. Indian and Japanese consumers sought images of honey in glass packaging, with Japanese consumers especially interested if it was kawaii (cute). Indian and Middle Eastern consumers stated they would like images that showcased health benefits. Finally, participants discussed what imagery would resonate most with consumers from their home countries for WA honey. Across all countries, the four most consistently suggested imagery styles were native flowers, beekeepers with bees, honey production processes and the WA landscape.

Figure 6: Focus group images of 'Ideal Honey'

Main Results – Quantitative survey results

Based on these preliminary findings we conducted a large-scale experimental study with consumers within each target market. Within the experimental study respondents were asked about their current purchasing and usage habits for honey prior to their exposure to the experimental conditions. We found that the majority of premium consumers across all countries consumed honey with food or drinks (Figure 7). In Malaysia, India and the United States consumers were more likely to consume honey in drinks than in food, whereas in Japan, Saudi Arabia and the United Kingdom it was the reverse.

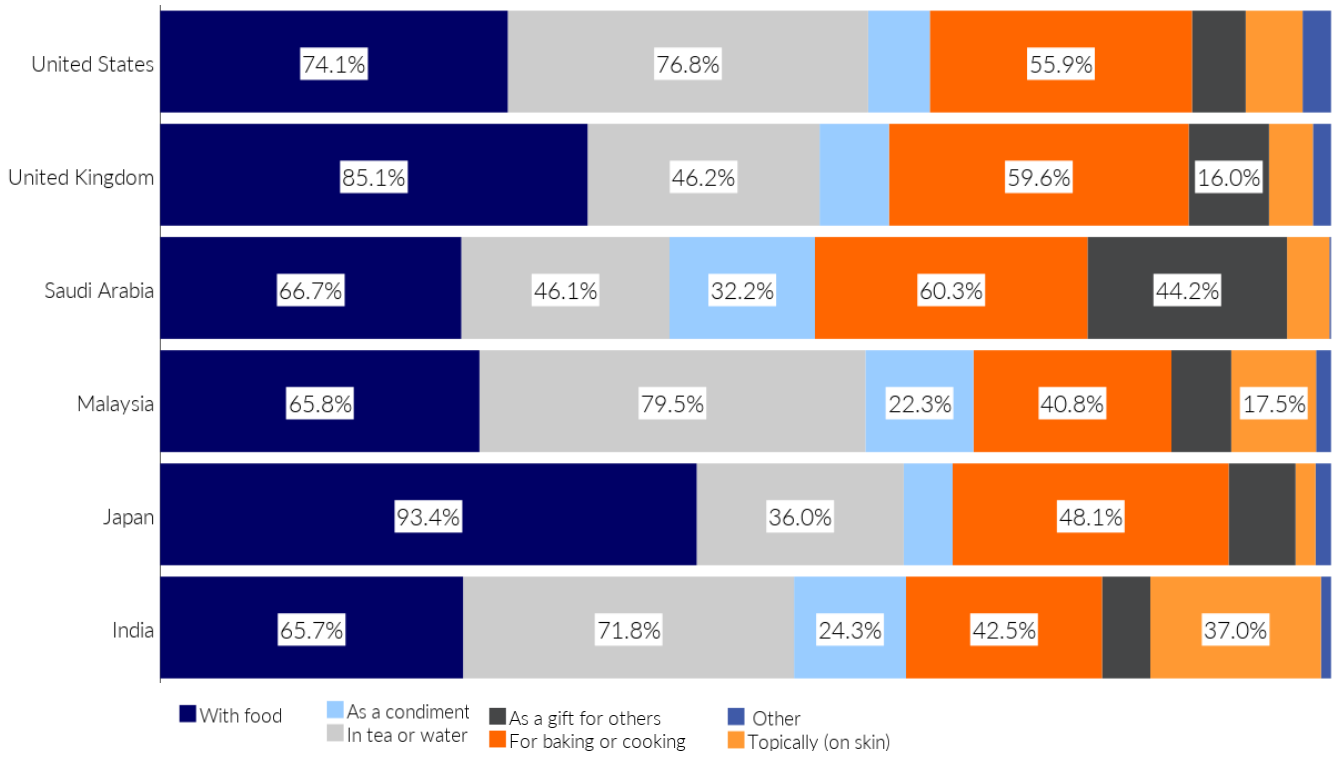


Figure 7: Percentage of respondents indicating the use honey for seven different applications [2]

In Saudi Arabia, 44.2% of respondents stated that they bought honey as a gift to give to friends or family. This was further explored to determine whether honey 'gifting' was associated with any particular attributes. When analysed separately, 21.8% of the respondents who bought honey as a gift bought honey between 501g and 1 kilo, which was 6.8% higher compared to the respondents in the total Saudi sample. Additionally, respondents who purchased honey as a gift preferred honey that was slightly thicker and less sweet than the overall sample (mean sweetness preferred = 59.28, mean thickness preferred = 64.27). There were no demographic differences between consumers who purchased honey as gifts and those who did not.

In India, 37.0% of consumers stated that they used honey 'topically', which was the highest proportion for this type of honey use compared to other five markets. Similar analyses were completed to determine if any specific attributes differentiated the consumers who used honey topically from other consumers – there were no differences between preferences for honey sweetness, thickness or colour between those who used honey topically and those who did not.

[2] Please note respondents could chose multiple items and therefore percentages do not add up to 100%

Overall Country Comparisons

Participants were asked to rate a list of factors that assisted them in identifying a "premium, high quality product" compared to a standard honey offering. In line with the preliminary findings discussed about, several differences were observed between countries, which are shown in in Figure 8.

	United States	United Kingdom	Saudi Arabia	Malaysia	Japan	India
Health Benefits	3		1	1	1	1
Certification		2		2	2	2
Raw	1			3		3
Direct From Hives	2	1				
Glass Jar		3	2			
Monofloral			3		3	

Figure 8: Top three attributes used to identify 'premium' honey in each country. Grey circles designate attributes that did not have mean scores over 4.0, indicating a tendency agreement ('Agree' or 'Strongly Agree'). For full details see section beginning on page 33.

Participants from Saudi Arabia, Malaysia and India and Japan indicated that the presence of 'Health Benefits' represented a cue to identify premium honey products. Participants from the United States showed the strongest agreement that such attributes as 'raw honey' assisted them in determining which products were premium. Finally, participants from the United Kingdom reported that honey 'com[ing] straight from the hives/beekeeper' was the top attribute used to identify honey quality, though it did not reach a level of agreement (a mean score of 4.0 or above).

'Certification' was rated as the second highest attribute in Malaysia, India, and Japan. It specifically referred to a 'rating from a certified organisation'. Because no specific organisations were mentioned so as not to bias the respondents, this may relate to a number of certifications, such as health star ratings, BQUAL certification, halal certification etc. The monofloral attribute was worded as 'a specific flower source (e.g. Clover, Jarrah, Manuka)' since not all respondents could be familiar with this term. This attribute had the third highest agreement in Saudi Arabia and Japan, although we cannot extrapolate which variety these results refer to.

	United States	United Kingdom	Saudi Arabia	Malaysia	Japan	India
Terroir	1	1	2			1
South Western Australia	2	3		2		3
Australia			3	3	3	2
Production				1	2	
Health	3		1			
Western Australia					1	
Flavour		2				

Figure 9: Top three narratives that increase customers' willingness to pay for honey by each country. For full details see section 4 beginning page 45.

Participants from each country were exposed to one of the narratives (see Figure 2) and were asked to indicate the price they would be willing to pay for Australian honey based upon the narrative that they saw. As shown in Figure 8, every narrative resulted in a price increase, but there were three narratives that elicited the highest price increases compared to the baseline price consumers typically paid. While there were some differences across countries, 'Terroir' showed the most consistency, with it resulting in the highest price increase for the US, UK and India and the second highest for Saudi Arabia. 'Production', 'Health' and 'Honey Origin: Western Australia' narratives yielded the highest price increases for Malaysia, Saudi Arabia and Japan respectively.

There were significant differences between India and all other countries in relation to a much higher preference for honey with a low viscosity (i.e. runny) ($p<0.001$).

Saudi Arabia, the United States and Malaysia had no significant difference in preferences for texture. However, all three were significantly lower than India ($p<0.001$) and higher than Japan and UK ($p<0.001$).

Consumers from the UK and Japan preferred significantly thicker honey than all other countries ($p<0.001$).

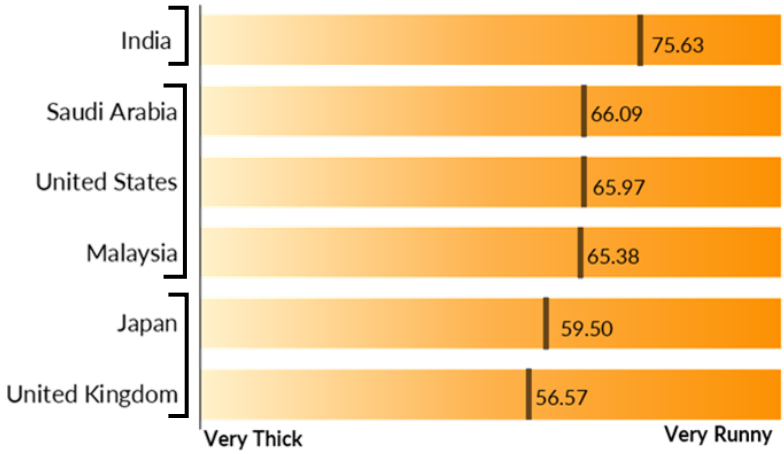


Figure 10: Preferred texture of honey on a 0-100 scale

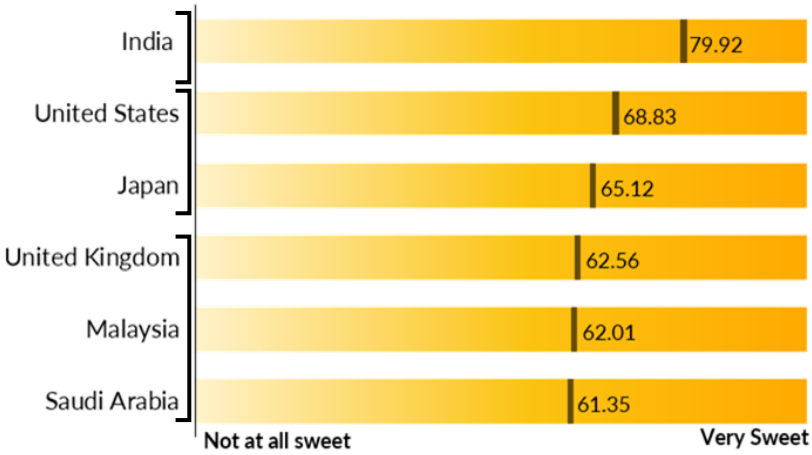


Figure 11: Preferred sweetness of honey on a 0-100 scale

Indian consumers preferred significantly sweeter honey than all other countries ($p<0.001$).

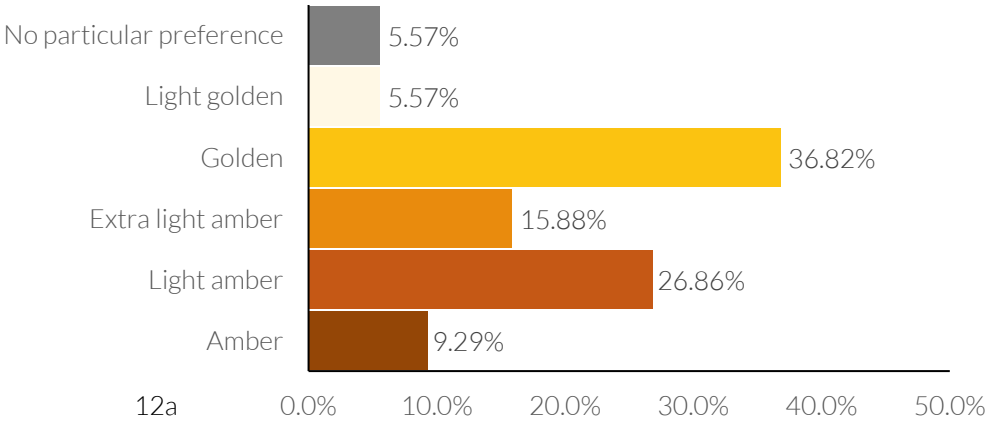
The United States and Japan had similar preferences and were both significantly different to other countries ($p<0.001$).

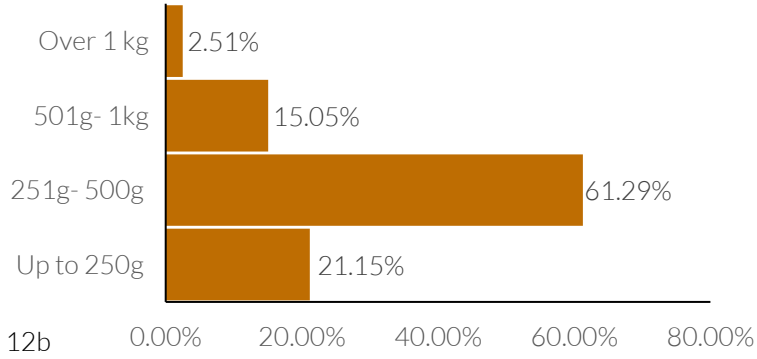
Saudi Arabia, Malaysia and the UK showed similar preferences for sweetness and were significantly lower than India and the United States ($p<0.001$).

Country profiles

In order to test what attributes of honey respondents preferred, they were asked questions regarding their preferred honey colour and texture, as well as what attributes signalled to them that honey was a 'premium' product. What follows below is a summary for each of the six markets of consumer purchasing behaviour emanating from the questions asked prior to consumers exposure to experimental conditions.

United States





For colour (Figure 12a), American consumers showed a preference for 'Golden' coloured honeys (36.82% of consumers), followed by 'Light amber' honeys (26.68% of consumers). The majority of consumers purchased honey in the 251g-500g weight category (61.3%). (Figure 12b). Although no countries yielded statistically significant differences between attributes, practical implications can be inferred from the data. The results for the United States indicate that customers rated 'raw' as the highest attribute indicative of premium honeys. The second and third highest attributes for identification of premium honeys were 'direct from hives' and 'health benefits (Figure 12c).

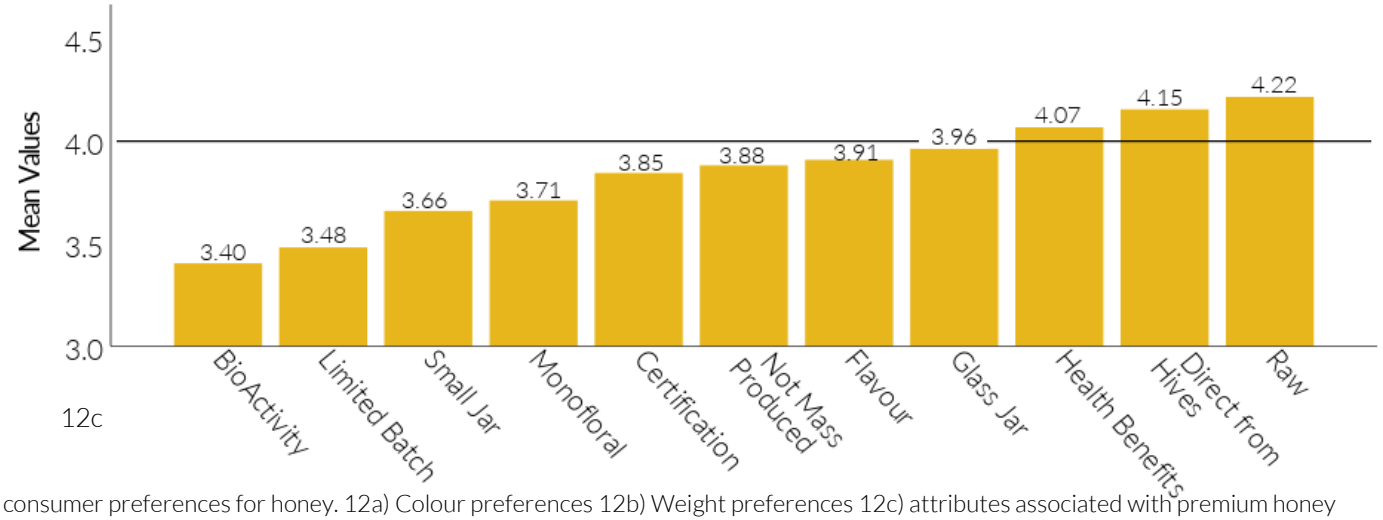


Figure 12: American consumer preferences for honey. 12a) Colour preferences 12b) Weight preferences 12c) attributes associated with premium honey

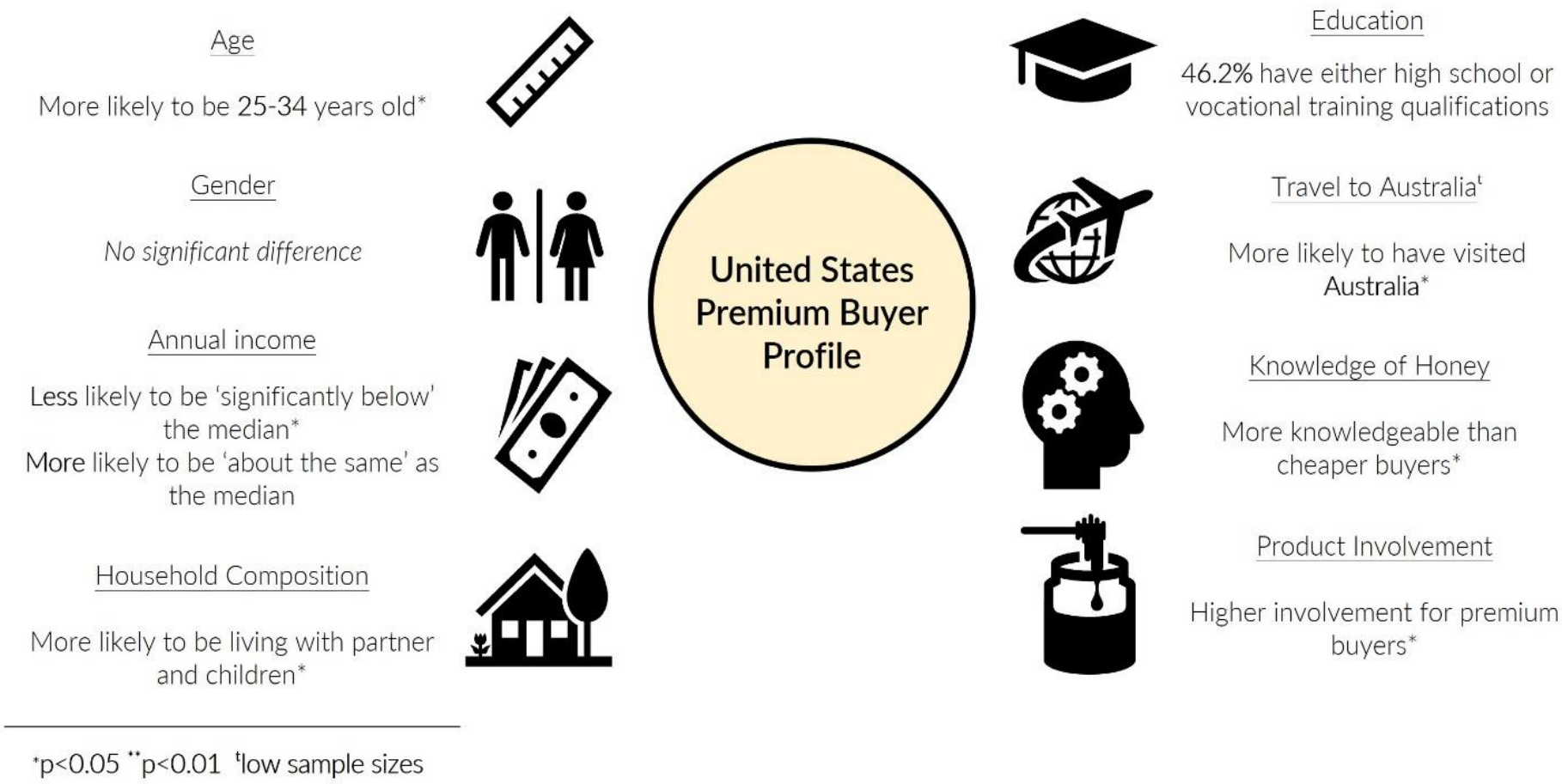
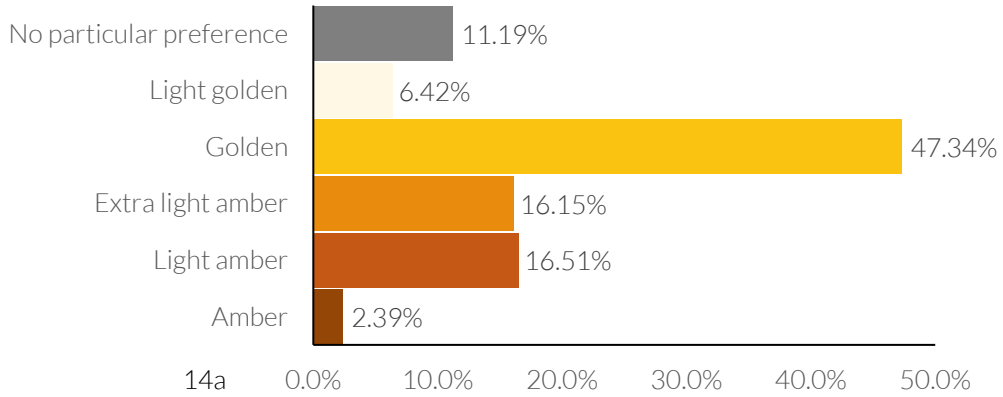
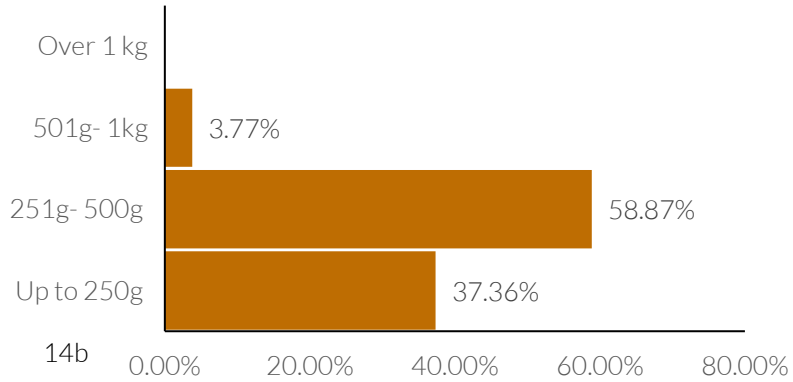


Figure 13: Profile of premium buyers in the United States. The median price that was used to separate premium buyers was $20.27 per 250g of honey. Consumers who were willing to pay above this amount were more likely to be 25-34 years old than 45 years or over.

United Kingdom

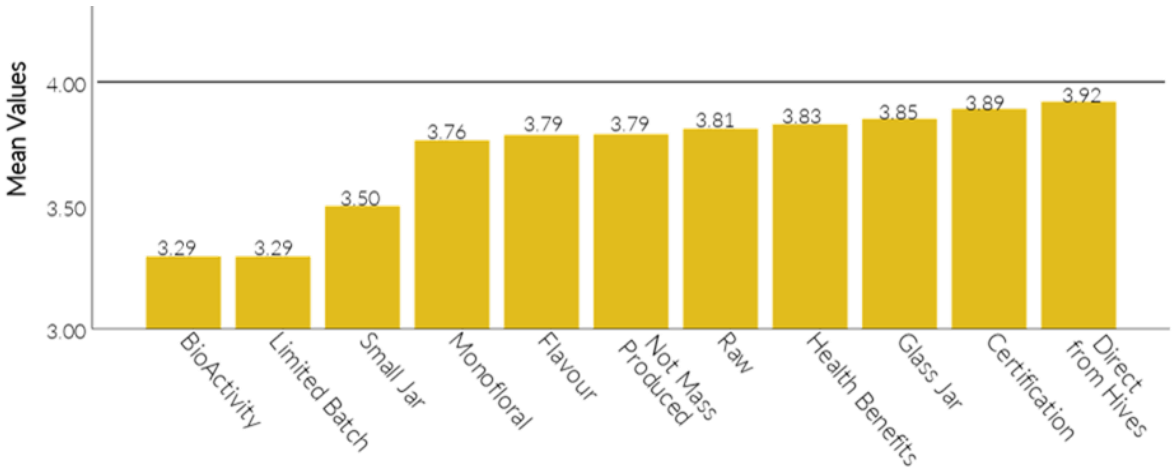


14a



14b

UK consumers showed a strong preference for 'Golden' honeys (47.34% of consumers) compared to other colours (Figure 14). The UK sample also contained the highest proportion of consumers reporting no particular colour preference (11.19%). Further tests showed a possible connection between a preference for 'Light Golden' honey and those who 'somewhat' or 'strongly disagreed' that they used 'direct from the hives' to identify premium honey ($p<0.05$); and those who preferred 'Amber' coloured honeys with those who 'strongly agreed' that 'monofloral' honey was premium or high or quality ($p<0.05$). No consumers purchased honey in volumes over 1 kg and a comparatively large proportion of consumers purchased honey in volumes below 250g when compared to other countries (Figure 14b). Consumer surveys from the UK did not associate any particular attribute with premium offerings (mean score below a cut-off point of 4 on a scale from 1 to 5). This may be because they used a combination of multiple cues to determine premium honey or it may be that they associated premium honeys with an attribute that was not mentioned in this study, such as a particular brand (14c).



14c

Figure 14: British consumer preferences for honey. 14a) Colour preferences 14b) Weight preferences 14c) attributes associated with premium honey

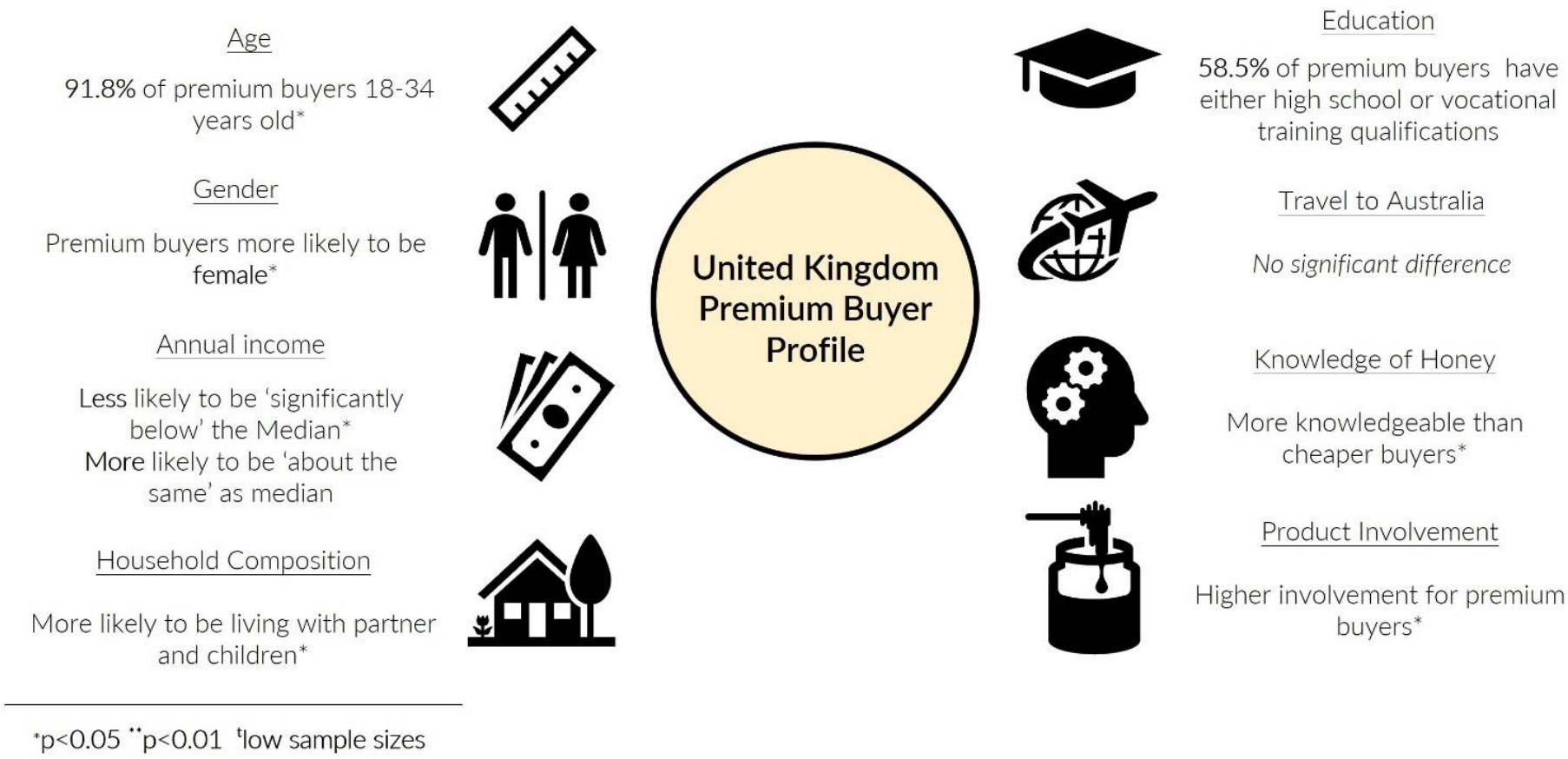
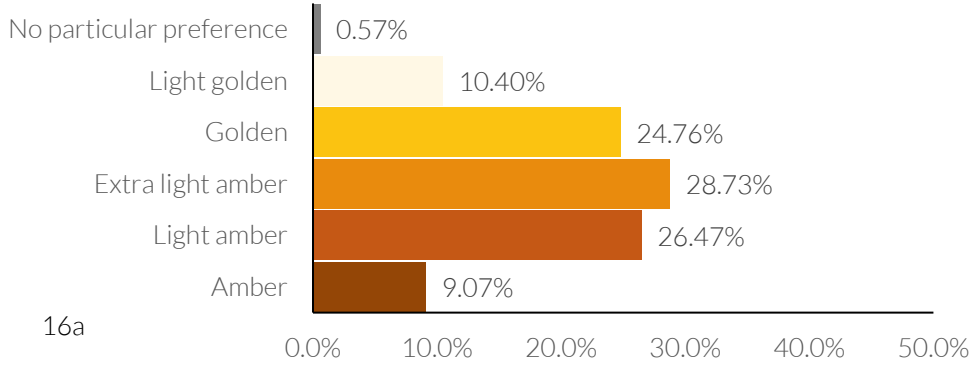
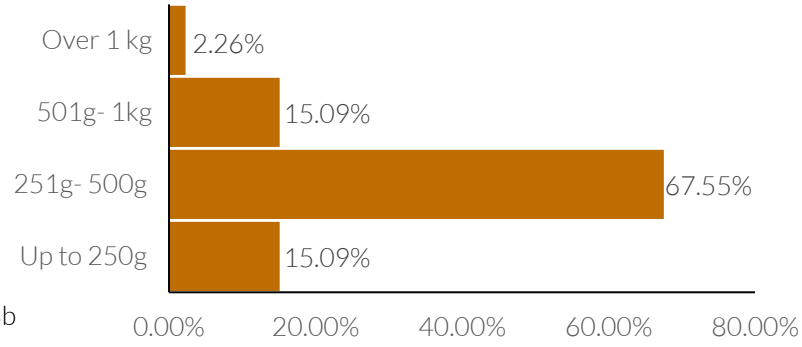


Figure 15: Profile of premium buyers in the UK. The median price that was used to separate premium buyers was $12.35 per 250g of honey. Consumers who were willing to pay above this amount were more likely to be 25-34 years old than consumers over 45 years old.

Saudi Arabia

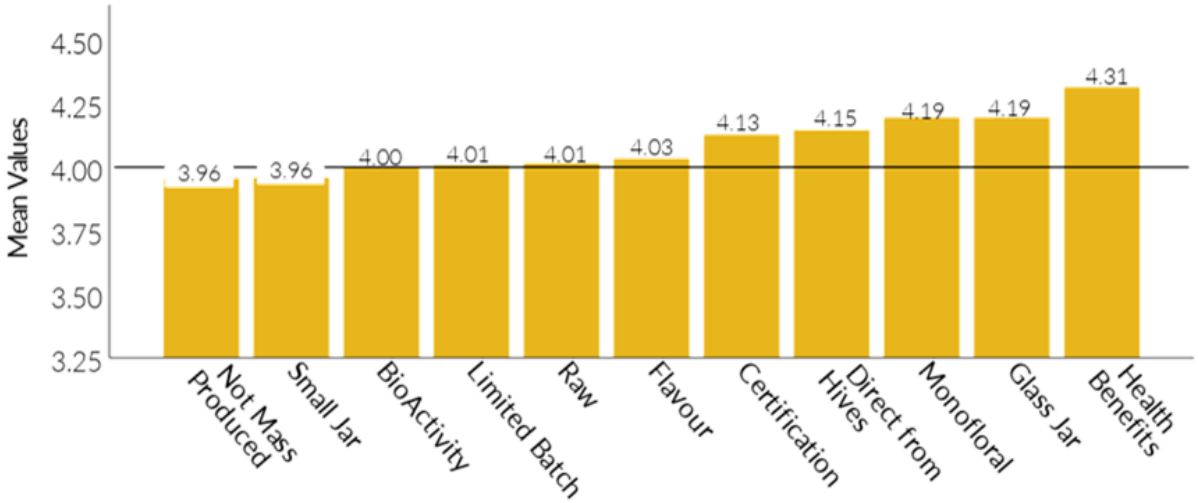


16a



16b

Saudi consumers showed a preference for 'Extra Light Amber' coloured honeys (28.73% of consumers), followed by 'Light Amber' honeys (26.47% of consumers) and 'Golden' honeys (24.76% of consumers) (Figure 16a). Saudi consumers were the only consumers who did not show a strong preference for 'Golden' honeys compared to other colours. The majority of consumers purchased honey between 251-500g (16b).The top four attributes associated with premium offerings by the consumers from Saudi Arabia sample were 'health benefits,' 'glass jars', 'monofloral' and 'direct from hives'. Interestingly, 'bioactivity' was rated as an attribute used in identifying premium honey products (16c). The presence of 'monofloral' honey fits with the current marketing of honey within the Middle East because honey from the Sidr tree (*Ziziphus spina-christi*) is highly sought after and well renowned. The strong association with health benefits may also be influenced by Muslim faith, which reveres honey as a health food as it is referenced within the holy Qur'an (Eteraf-Oskouei & Najafi, 2013).



16c

Figure 16: Saudi consumer preferences for honey. 16a) Colour preferences 16b) Weight preferences 16c) attributes associated with premium honey

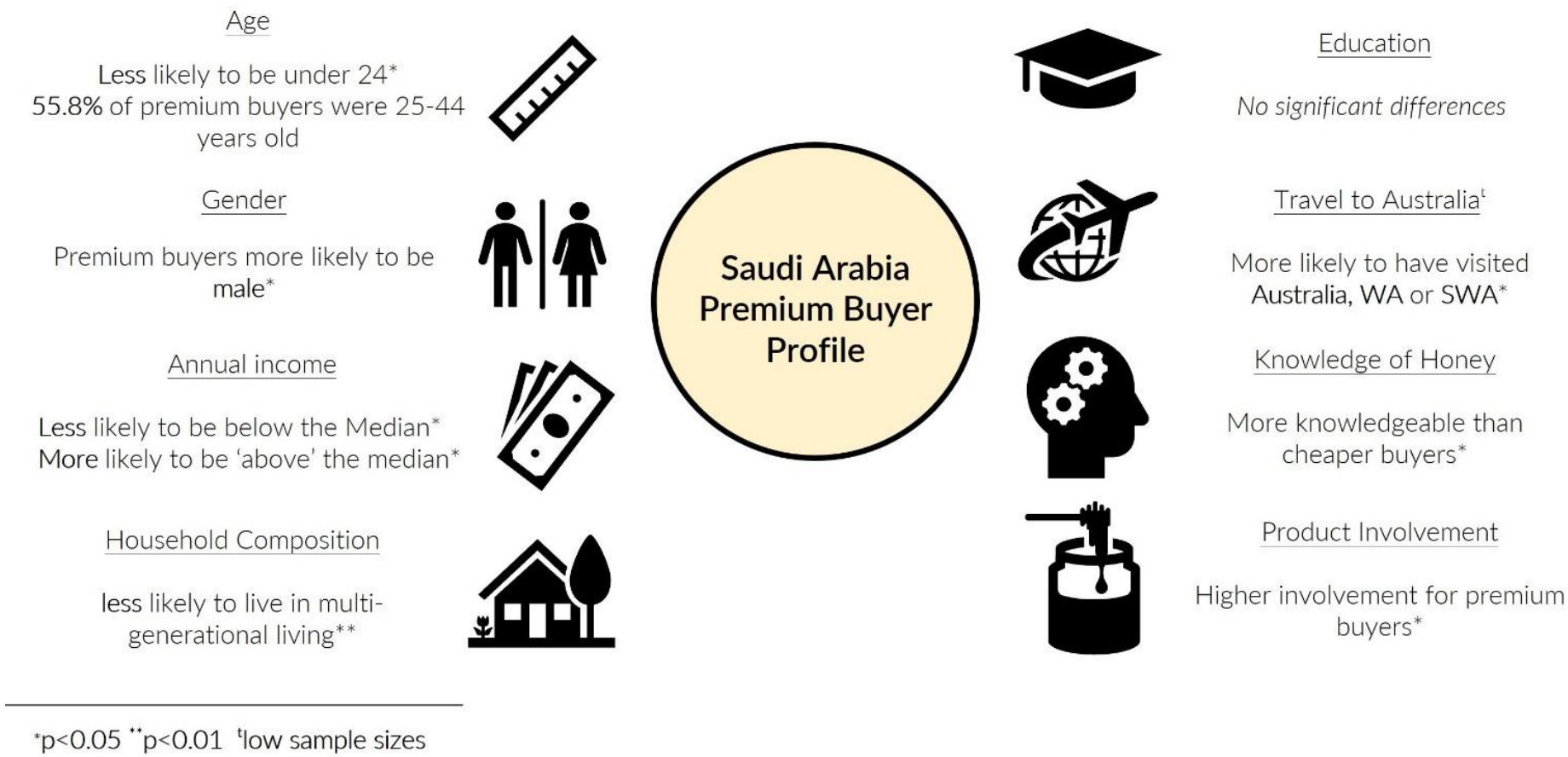
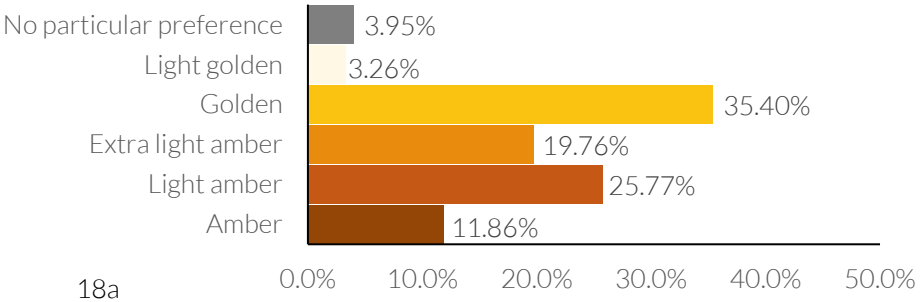
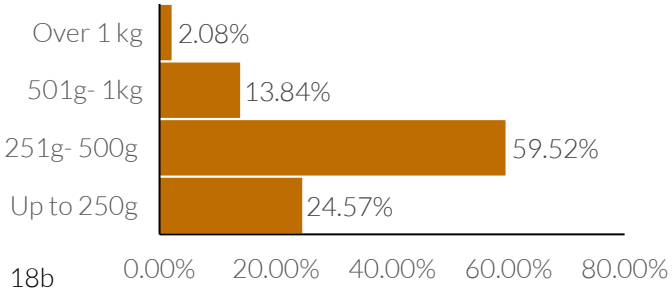


Figure 17: Profile of premium buyers in Saudi Arabia. The median price that was used to separate premium buyers was $54.56 per 250g of honey. Consumers who were willing to pay above this amount were more likely to be 25-34 years old than 45 years old.

Malaysia

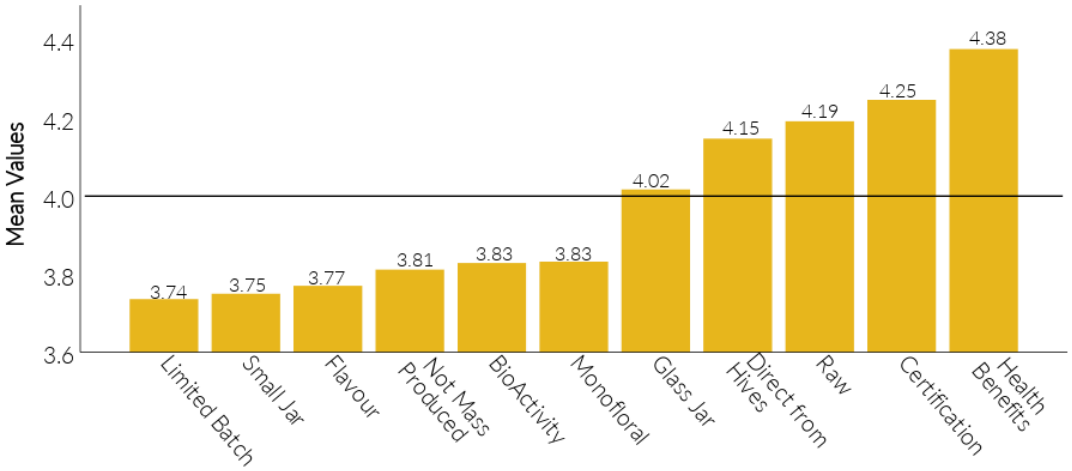


18a



18b

Malaysian consumers showed a preference for 'Golden' coloured honeys (35.40% of consumers), followed by 'Light Amber' honeys (25.77% of consumers) (Figure 18a) while the majority of consumers purchased honey in volumes between 251-500g (Figure 18b). Those consumers who used such attributes as 'bio-activity' or 'raw' to identify premium honey were more likely to prefer 'Amber' honey over 'Light amber' ($p<0.05$). Those who 'strongly agreed' that they considered 'single source' or 'monofloral' honey when determining premium honey preferred 'Amber' coloured honeys over 'Golden' honeys ($p<0.05$) (Figure 18c). The results for Malaysia indicate that the consumers perceived honey that had 'health benefits', 'certification', was 'raw', 'direct from the hives' or in a 'glass jar', as premium when compared to standard offerings. Similarly to Saudi Arabia, this strong association with health benefits may be a result of the high Muslim population, as this is the dominant and official religion of Malaysia. The preference for certification aligned with the results from the preliminary focus groups, which suggested that Malaysian consumers were concerned with the production of honey and wanted honey to be authentic and pure.



18c

Figure 18: Malaysian consumer preferences for honey. 18a) Colour preferences 18b) Weight preferences 18c) attributes associated with premium honey

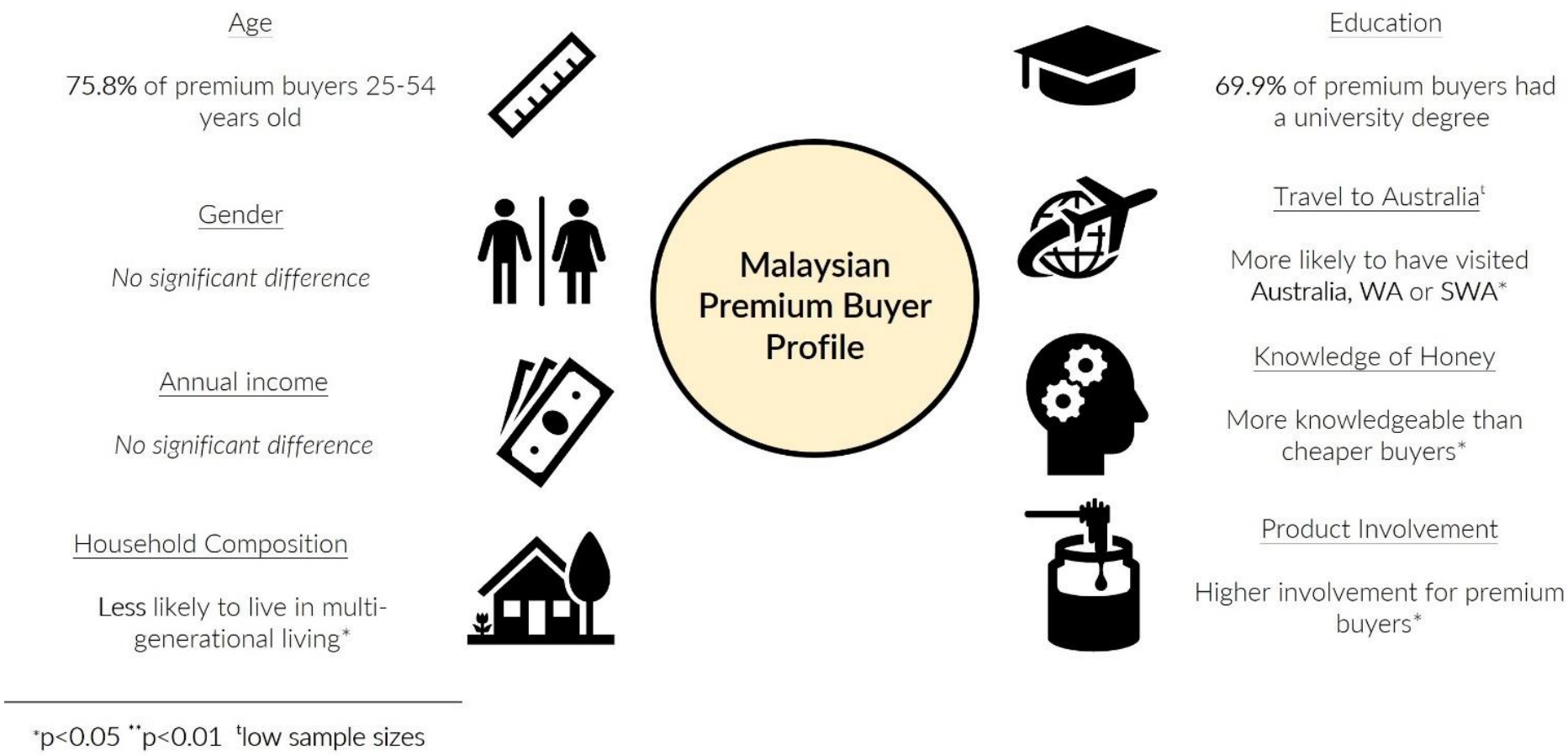
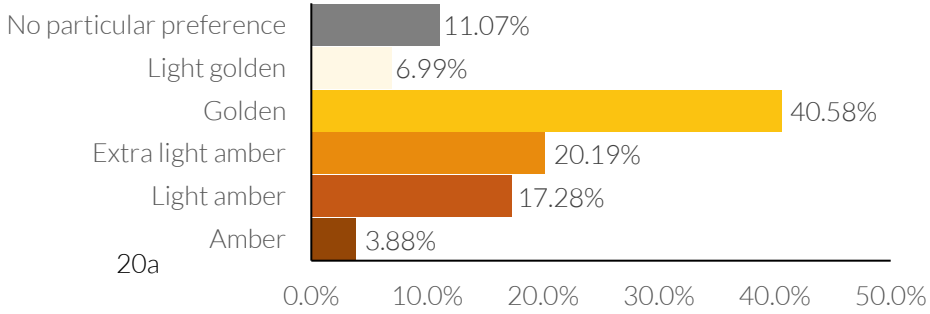
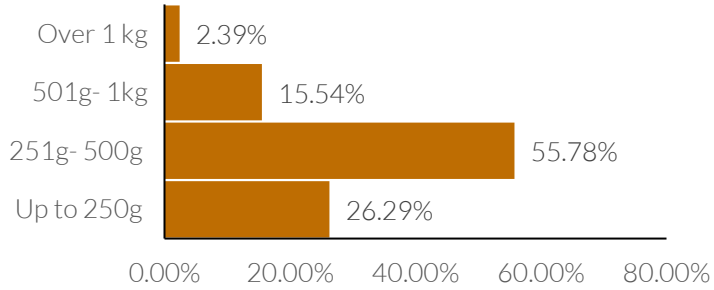


Figure 19: Profile of premium buyers in Malaysia. The median price that was used to separate premium buyers was $24.22 per 250g of honey. Consumers who were willing to pay above this amount were more likely to be 25-34 years old than 45 years or over.

Japan

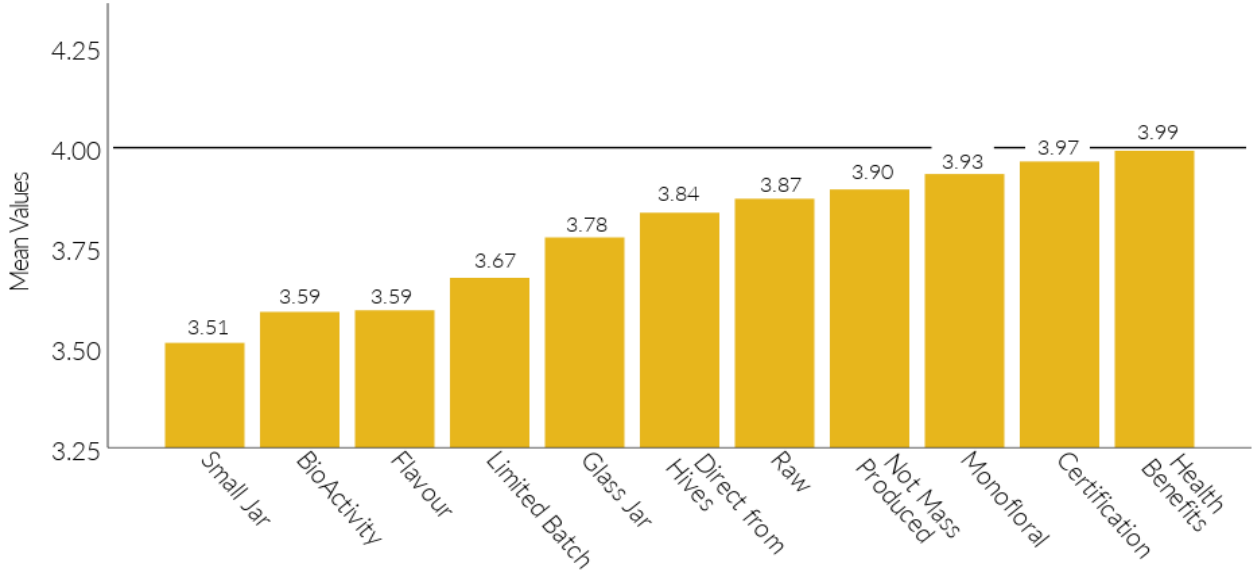


20a



20b

Japanese consumers showed a similar trend, with 'Golden' coloured honeys being the most popular (40.58% of consumers), followed by 'Extra Light Amber' honeys (20.19% of consumers)(Figure 20a). Only 2.40% of consumers purchased honey in volumes over 1 kg, while 55.8% of consumers purchased honey in 251-500g jars, the lowest proportion of any country (Figure 20b). The results for Japan were similar to the UK and suggested that consumers who took part in this study did not perceive any of the presented honey attributes as denoting premium honeys. 'Health benefits' had the highest relative agreement that consumers use those attributes in identifying premium, high quality honey, but it did not reach a score of 4.00 or over (Figure 20c).



20c

Figure 20: Japanese consumer preferences for honey. 20a) Colour preferences 20b) Weight preferences 20c) attributes associated with premium honey

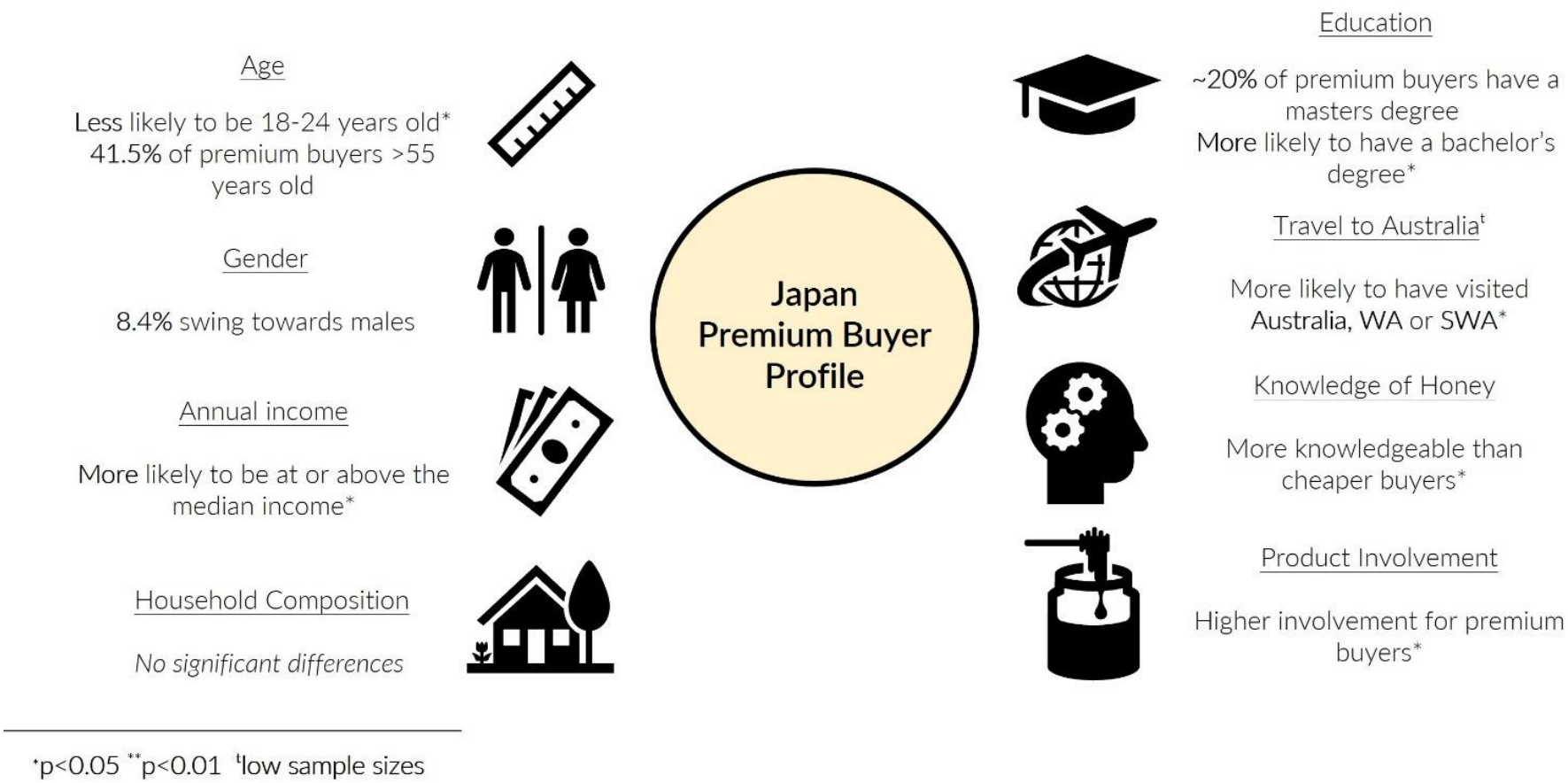
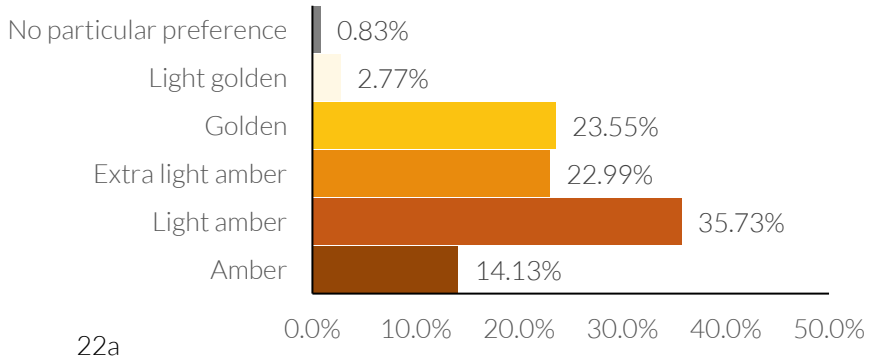
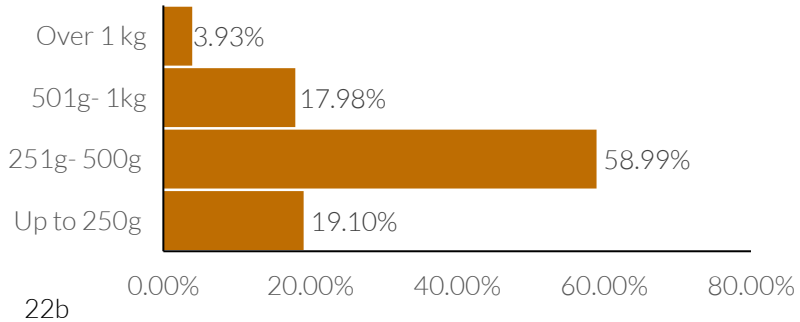


Figure 21: Profile of premium buyers in Japan. The median price that was used to separate premium buyers was $18.34 per 250g of honey. Consumers who were willing to pay above this amount were more likely to be 25-34 years old than 45 years or over.

India

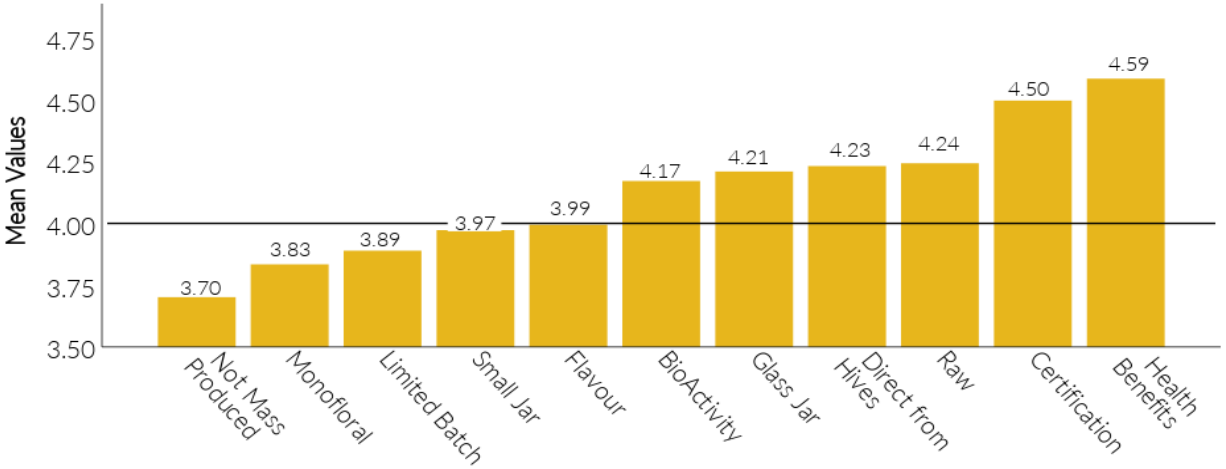


22a



22b

Indian consumers showed a preference for 'Light amber' coloured honeys (35.73%), followed by 'Golden' honeys (23.55%) and then 'Extra light amber' honeys (22.99%)(Figure 22a). This differed from the strong preference for 'Golden' honeys that was observed in other countries. Further analysis suggested that those consumers who strongly agreed that they used 'direct from the hives', or 'raw' to identify premium honey were more likely to prefer 'Amber' honey than 'Light amber' ($p<0.05$), whereas those who somewhat agreed that premium honey comes 'direct from the hives' preferred 'Extra light amber' ($p<0.05$). Indian respondents reported the highest proportion of honey purchased over 1 kg (Figure 22b) The top four attributes associated with premium offerings by Indian consumers who took part in this study were 'health benefits', 'certification', 'raw' and 'direct from hives'(Figure 22c). The strong preference for 'health benefits' may reflect the traditional use of honey within Ayurvedic medicine (Eteraf-Oskouei & Najafi, 2013). The importance of 'certification' may reflect the importance of honey being 'pure and natural' that was mentioned in the preliminary focus groups we conducted.



22c

Figure 22: Indian consumer preferences for honey. 22a) Colour preferences 22b) Weight preferences 22c) attributes associated with premium honey

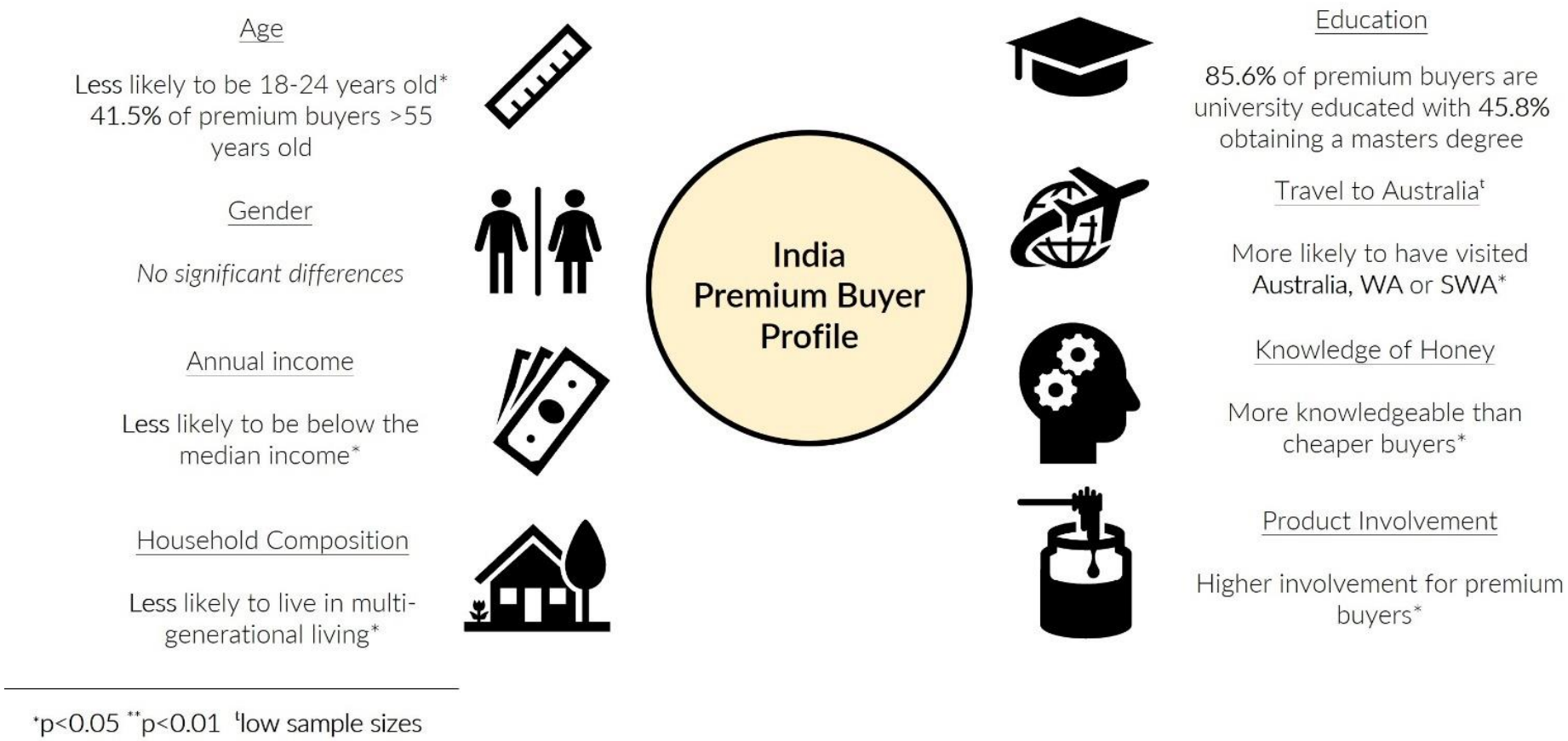


Figure 23: Profile of premium buyers in India. The median price that was used to separate premium buyers was $10.20 per 250g of honey. Consumers who were willing to pay above this amount were more likely to be 25-34 years old than 45 years or over.

Aim 4. Review current pricing strategies

This section focuses on pricing strategies for each country. After being exposed to the experimental narrative condition consumers from each of the six markets were asked: 1) how likely they were to search for more information about Australia honey that saw in the experimental conditions and 2) were asked to specify the price they would be willing to pay for Australian honey that was shown to them. The latter was used to estimate the change in price that could be achieved using each marketing strategy. The results shown in this section refer to the segment of premium buyers who were identified for the purposes of this report as individuals who were willing to pay more than the average (median) consumer when they were asked how much they were willing to pay for the honey that they saw in an experimental condition that they were allocated to. All price data was obtained in the relevant currency for each country and was converted to Australian dollars in this report. We outline consumers' current purchasing and spending habits.

United States

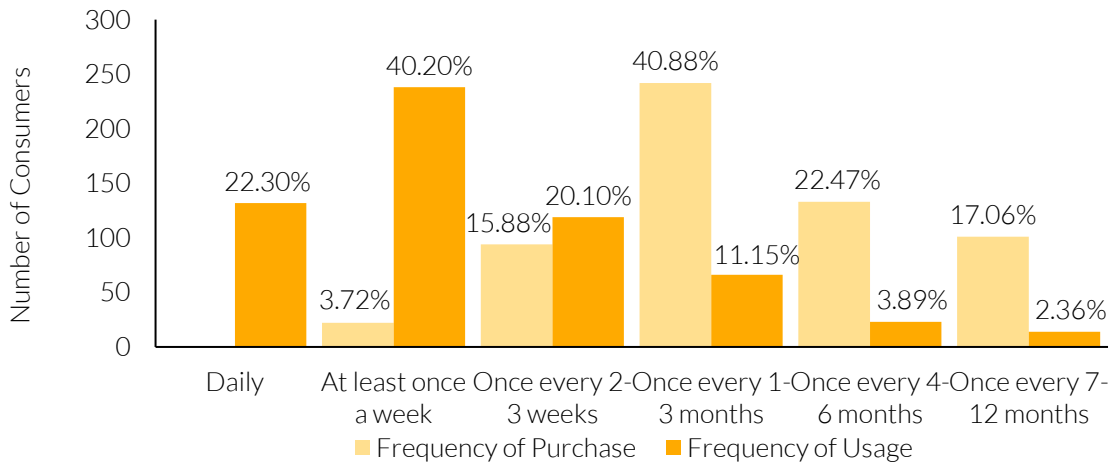


Figure 24: Purchasing and consumption habits of American consumers per 250 g of honey

Our data showed that 62.5% of American consumers surveyed consumed honey at least once a week, with 82.6% of consumers using it at least once every 3 weeks (Figure 20). The majority of respondents purchased honey once every 1-3 months. When consumers were asked about their purchasing of imported honey, 12.12% (n=36) stated that they bought Australian honey, 1% (n=3) indicated they purchased honey from New Zealand. The majority of American consumers typically paid between $5.00-$14.99 per 250g (56.25%) (Figure 21). This data matched our analysis of local honey brands, which had an average price of between $8.83-$15.13 per 250g. The highest amount consumers paid was $70.0.

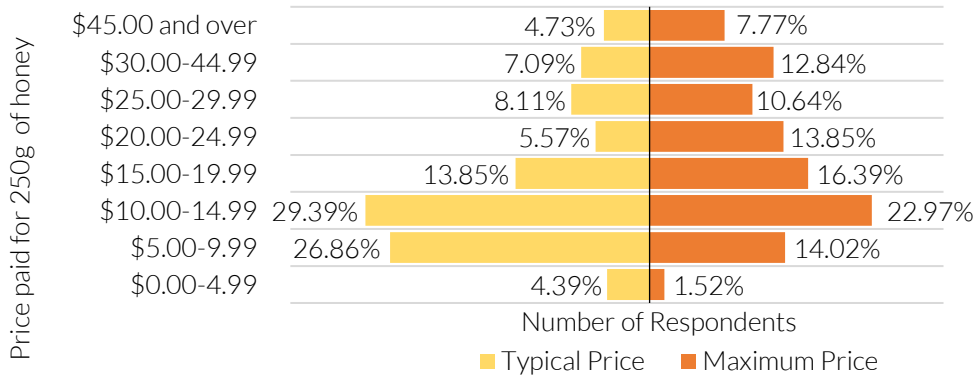


Figure 25: Price distribution of typical and maximum spending by American consumers per 250g of honey

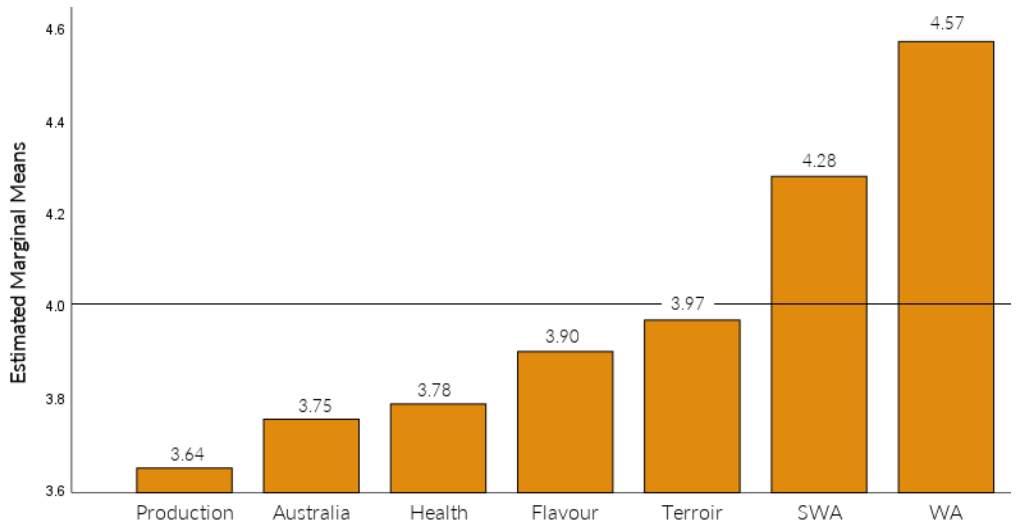


Figure 26: American consumers' willingness to search for more information on the honey advertised as rated on a 1-5 likert scale (1 being not at all likely to search, 5 highly likely to search. Estimated marginal means over 4 denote that the overall responses were skewed towards a willingness to search.

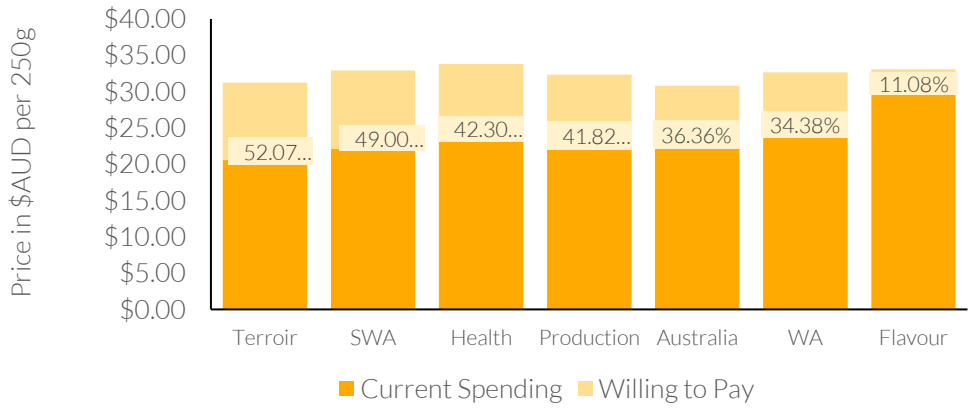


Figure 27: Average price American consumers were willing to pay for honey advertised by each narrative as a percentage increase on their typical spending

Within the American cohort there was no statistically significant effect of narratives on the willingness to search for more information about the honey that they saw in the experimental condition (Figure 22). However, consumers were more likely to say that they were 'somewhat likely' or 'extremely likely' to search for more information when they were exposed to the 'South Western Australia' (Mean= 4.28) and 'Western Australia' (Mean = 4.57) narratives.

Overall, participants were willing to pay more for the honey they saw in the experiment compared to what they currently paid ($p<0.001$). There was a statistical difference between the narratives, providing clear opportunities for profit growth ($p=0.024$). In particular, 'Terroir' and 'South West Australia' created significantly better returns than the 'flavour' narrative ($p=0.24$, Mean diff. = 7.52; $p=0.23$, Mean Diff = 7.39, respectively)(Figure 23). Though this may be due to the fact that those consumers exposed to the flavour narrative already showed a higher willingness to pay in their current purchasing behaviour.

Figure 22 Willingness to search for information

Figure 23 Price premium for each narrative

United Kingdom

The purchasing habits of UK consumers showed that the majority of respondents consumed honey at least once a week (43.30%), with 22.39% consuming it daily. Additionally, 69.73% of consumers purchased honey between once every 2 weeks and once every 3 months. Consumers from the UK showed the highest proportion buying small jars of honey compared to other five countries, with 36% of consumers purchasing honey in jars smaller than 250g. No respondent reported purchasing honey in quantities over 1 kg.

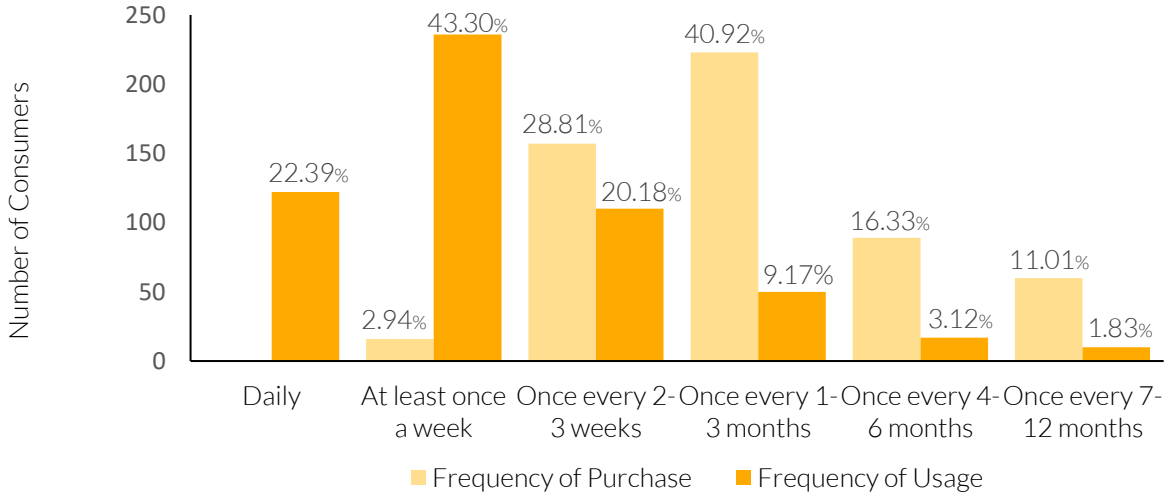


Figure 29 : Purchasing and consumption habits of British consumers per 250g of honey

When consumers were asked about their purchases of imported honey, 18.90% (n=52) stated that they bought Australian honey. Overall, consumers noted that they bought imported honey from 14 different countries, with the most popular countries being New Zealand (5.82%, n=16), Spain (1.45%, n=3) and Greece (1.45%, n=3). The median price that UK consumers typically paid for honey was $7.98 per 250g.

The majority of consumers paid less than $9.99 per 250g (63.48%). A comparison of five local honey brands showed that the average price range of honey in the UK was between $7.38-$23.88/250g. However, this was influenced by some of the companies selling high MGO Manuka honey for over £88.80 ($AUD 155.50) per kilo. This honey was sold under the local brand but marketed as New Zealand honey.

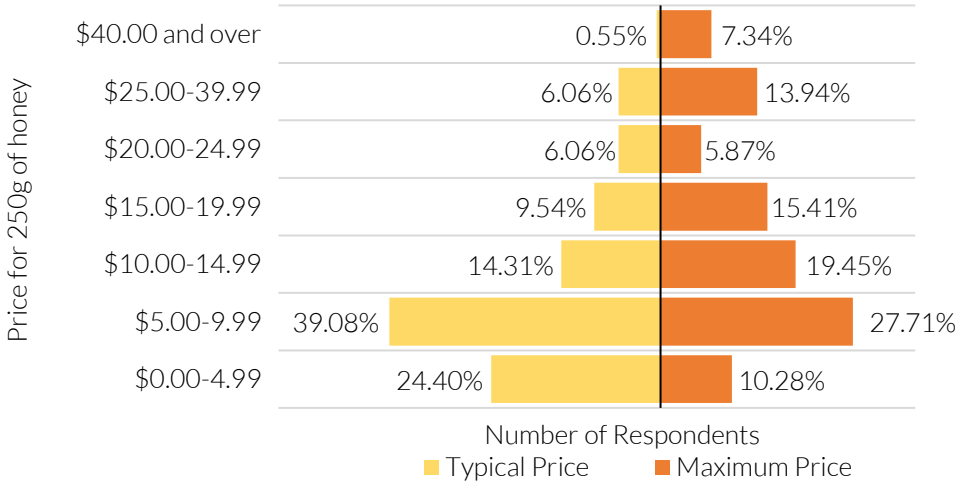


Figure 28: Price distribution of typical and maximum spending by British consumers per 250g of honey

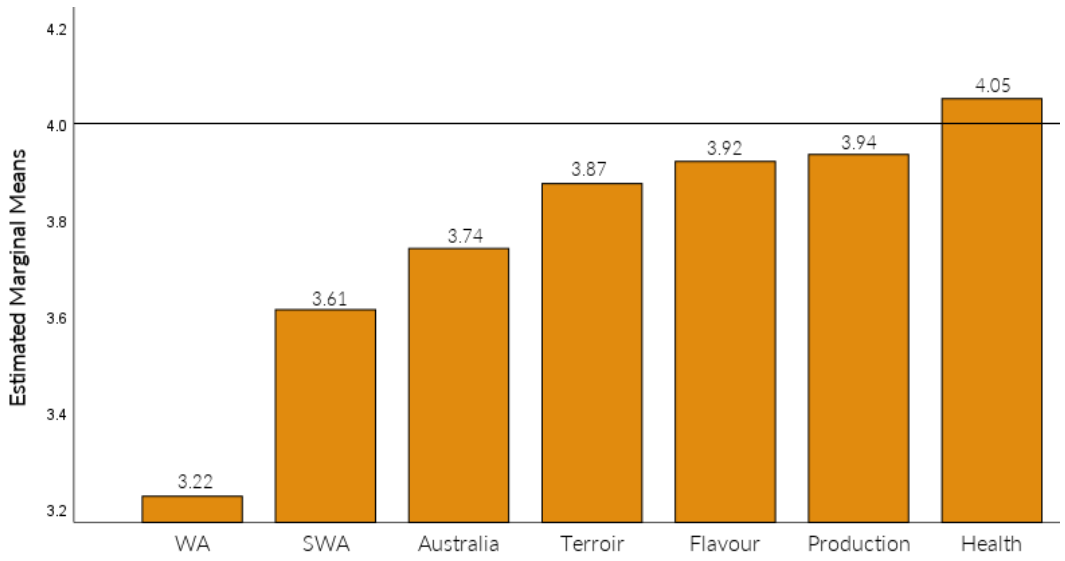


Figure 30: British consumers' willingness to search for more information on the honey advertised as rated on a 1-5 likert scale (1 being not at all likely to search, 5 highly likely to search. Estimated marginal means over 4 denote that the overall responses were skewed towards a willingness to search.

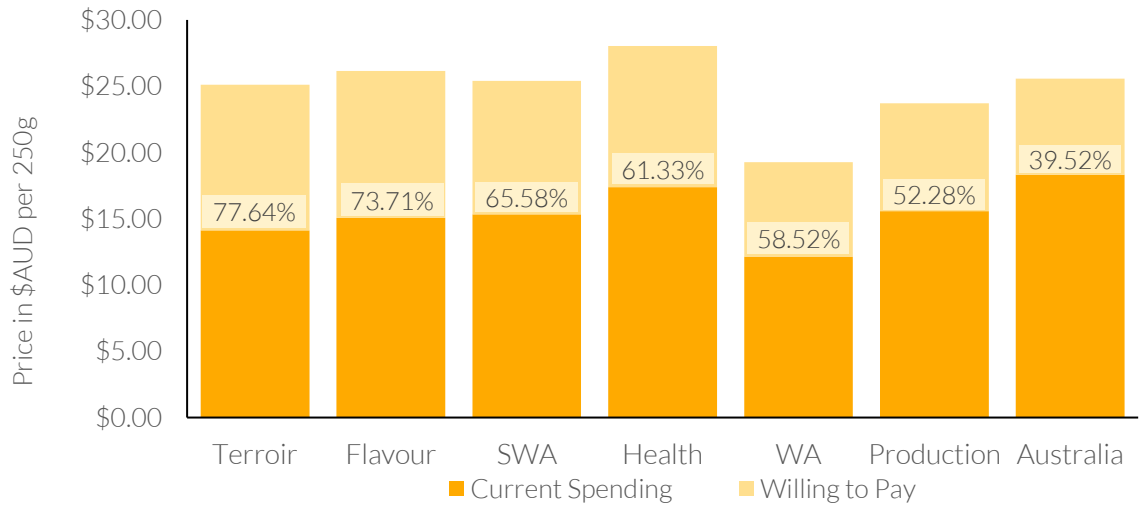


Figure 31: Average price UK consumers were willing to pay for honey advertised by each narrative as a percentage increase on their typical spending

There was no statistically significant effect of narratives on the willingness to search for more information on the honey featured in the experimental conditions. However, consumers were more likely to say that they were 'somewhat likely' or 'extremely likely' to search for more information after seeing the 'Health' narrative (Mean= 4.05) (Figure 26).

As with the United States, participants were willing to pay more for the honey shown in the experiment than what they currently pay ($p<0.001$). Within the UK cohort, there was no statistically significant impact of narratives on the increase in price they were willing to pay. However, consumers who saw the 'Terroir' narrative were willing to pay 77.64% more than their current spending, while those who observed the 'Flavour' narrative showed a 73.71% increase (Figure 27). The 'Health' narrative yielded the highest dollar amount that consumers were willing to pay for honey, although it did not yield the highest proportional increase.

This is quite different to the United States consumers, for whom 'Flavour' appears to be the least successful strategy. Consumers exposed to the 'Western Australia' narrative showed the lowest current spending and the lowest price that they were willing to pay.

Figure 26: Willingness to search for information

Figure 27: Price premium for each narrative

Saudi Arabia

The majority of Saudi respondents consumed honey daily (53.12%), with 36.29% consuming it at least once a week (Figure 28). The purchases were also more frequent compared to other countries with 72.50% of Saudi consumers purchasing honey at least once ever 2-3 weeks. Importantly, this was not associated with a decrease in the quantity of honey bought, with Saudi Arabia showing the lowest proportion of consumers buying honey in jars smaller than 250g (15%).

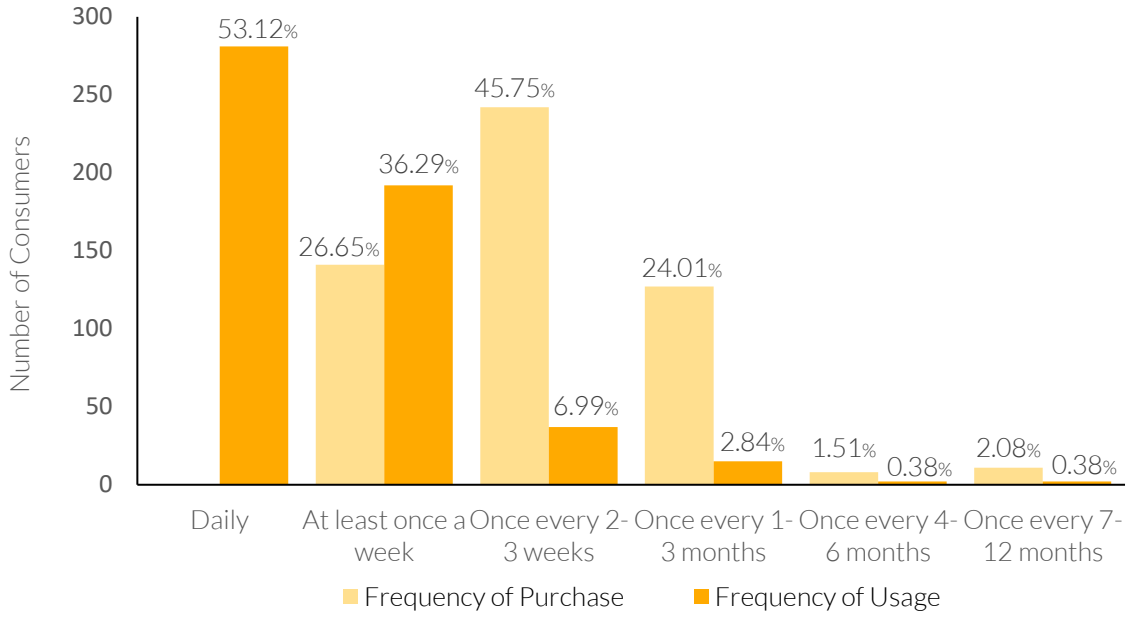


Figure 32: Purchasing and consumption habits of Saudi consumers per 250 g of honey

When consumers were asked about their purchases of imported honey, 64.79% (n=173) stated that they bought Australian honey – this was the highest proportion of all countries surveyed. While consumers overall bought from many different countries, premium consumers only bought from New Zealand, Germany and the Netherlands (n=1 for each). The median price typically paid for honey was $50.23 per 250g and the largest cohort of consumers paid between $50.00-$59.99 per 250g (20.4%) (Figure 29). The maximum amount paid was $92.50 per 250g and the difference between the median values for the maximum spent compared to the price they were willing to pay was $9.42. A comparison of five local honey brands showed that the price range of honey in Saudi Arabia was between $12.34-$48.41/250g. However, the maximum price of honey observed was $226.95 SAR/ 250g ($AUD 81.48), which was for MGO +100 New Zealand Manuka honey repackaged under a local brand.

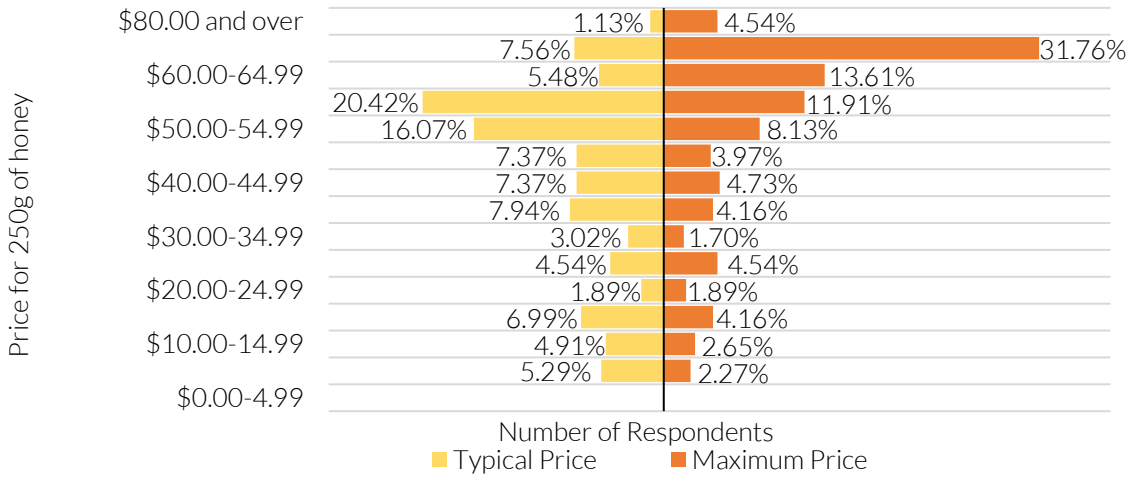


Figure 33: Price distribution of typical and maximum spending by Saudi consumers per 250 g of honey

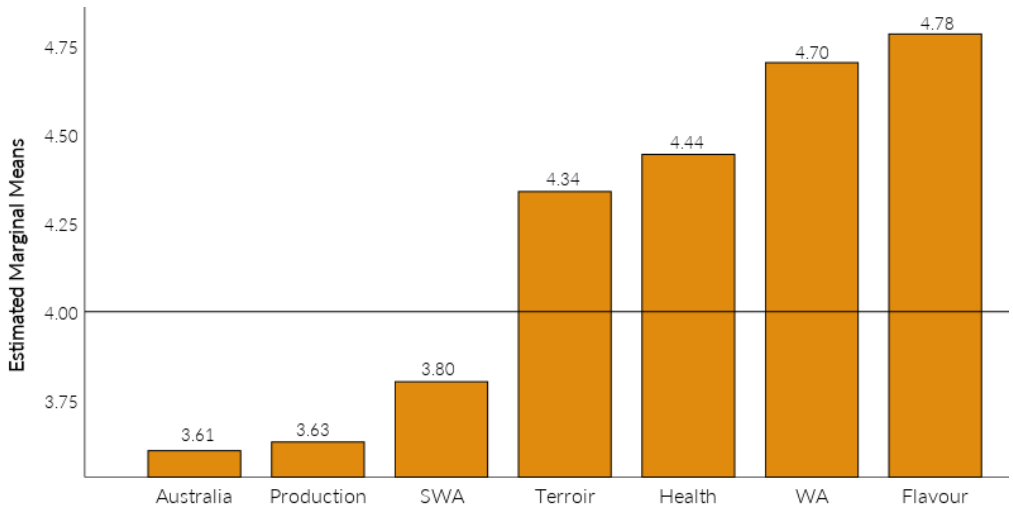


Figure 34: Saudi consumers' willingness to search for more information on the honey advertised as rated on a 1-5 likert scale (1 being not at all likely to search, 5 highly likely to search. Estimated marginal means over 4 denote that the overall responses were skewed towards a willingness to search.

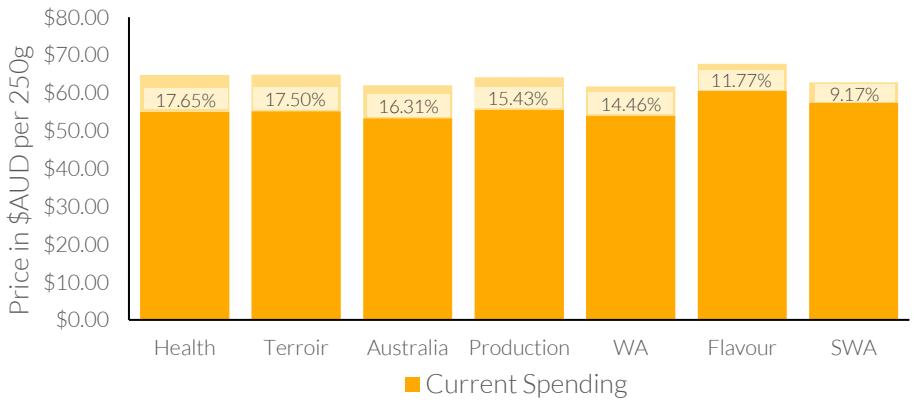


Figure 35: Average price Saudi consumers were willing to pay for honey advertised by each narrative as a percentage increase on their typical spending

There was no statistically significant impact of narratives on Saudi's willingness to search for information. However, 'Flavour', 'Western Australia', 'Health' and 'Terroir' all showed means over 4.0, indicating that all four narratives encouraged participants to 'somewhat agree' or 'strongly agree' that they would search out information (Figure 30).

Overall, Saudi consumers showed less willingness to increase the amount they would pay for Australian honey compared to other countries. It is likely that the already higher price of honey within the country reduced their overall willingness to pay an extra amount as consumers were already paying a premium. Of all narratives, 'Health' and 'Terroir' resulted in the highest price increase of 17.65% and 17.50%, respectively (Figure 31).

Although the 'Australia' narrative resulted in the lowest interest to search out information, it did result in the third highest price premium, after 'Health' and 'Terroir'. This may be due to the existing awareness of Australia as a country that produces high quality agricultural products, improving their wiliness to pay without triggering their curiosity.

Figure 30: Willingness to search for information

Figure 31: Price premium for each narrative

Malaysia

The purchasing habits of Malaysian consumers surveyed showed that 78.01% of respondents consumed honey either daily or at least once a week. The frequency of purchases however was strongly skewed towards purchasing honey at least once every 2-3 weeks (45.70%, see Figure 32).

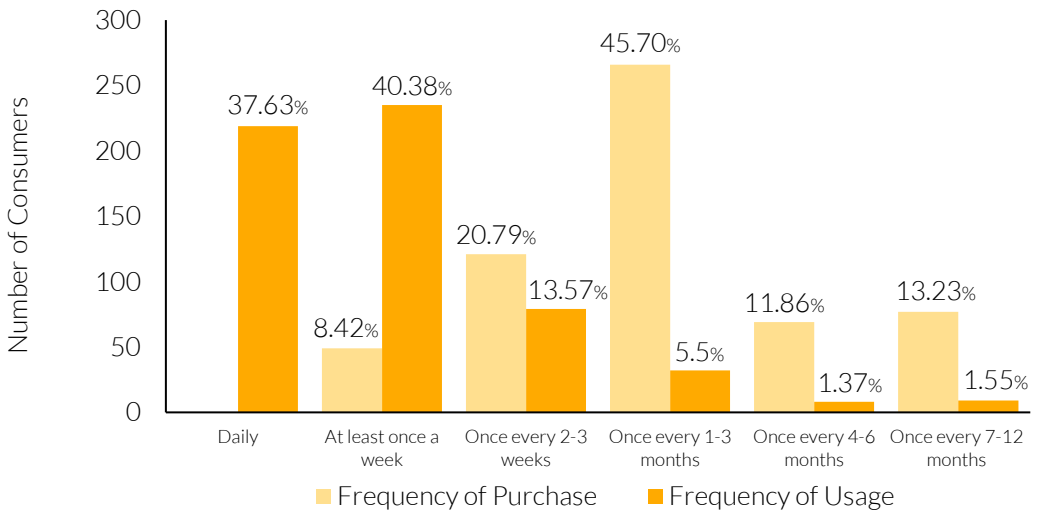


Figure 37: Purchasing and consumption habits of Malaysian consumers per 250 g of honey

When consumers were asked about their purchases of imported honey, 45.89% (n=134) stated that they bought Australian honey. Consumers noted that they bought imported honey from 9 different countries, with the most popular countries being New Zealand (5.14%, n=15) and China (1.03%, n=3). Overall, 1.71% (n=5) of consumers purchased honey from the Middle East. The median price that Malaysian consumers typically paid for honey was $16.75 per 250g with the two largest cohorts of consumers paying between $5.99-9.99 per 250g and between $15.00-19.99 per 250g (Figure 33). The maximum amount paid was $82.50 per 250g and the difference between the median values for the maximum consumers spent compared to the price they were willing to pay was $9.88. A comparison of five local premium honey brands showed that the average price range of honey was between $14.12-$36.10/250g with the most expensive honey being 210.00 Ringgit per 250g ($66.67), which was advertised as a 'concentrate' that had been processed to be "twice the viscosity and density" compared to standard honey, thus advertised as having additional health properties.

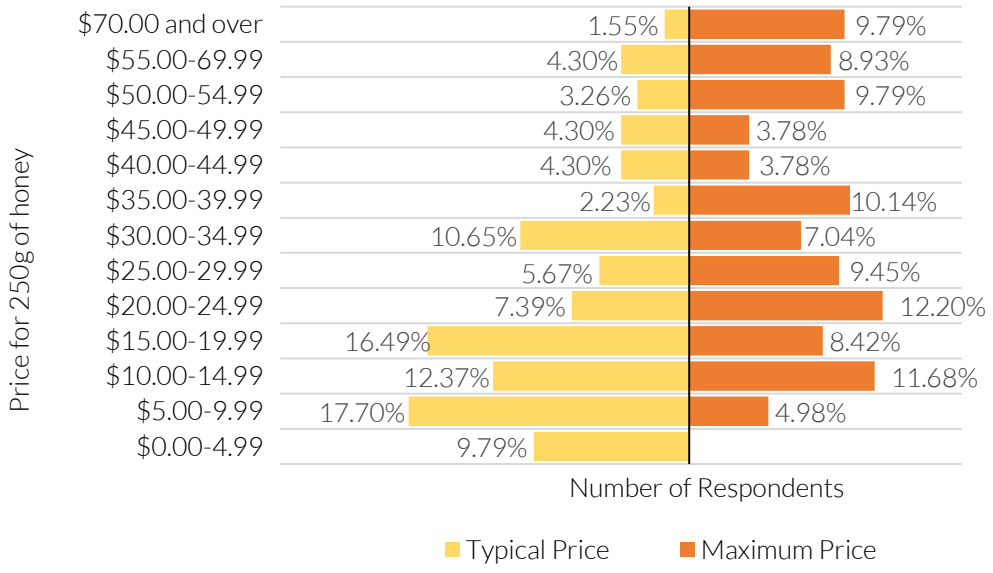


Figure 36: Price distribution of typical and maximum spending by Malaysian consumers per 50g of honey

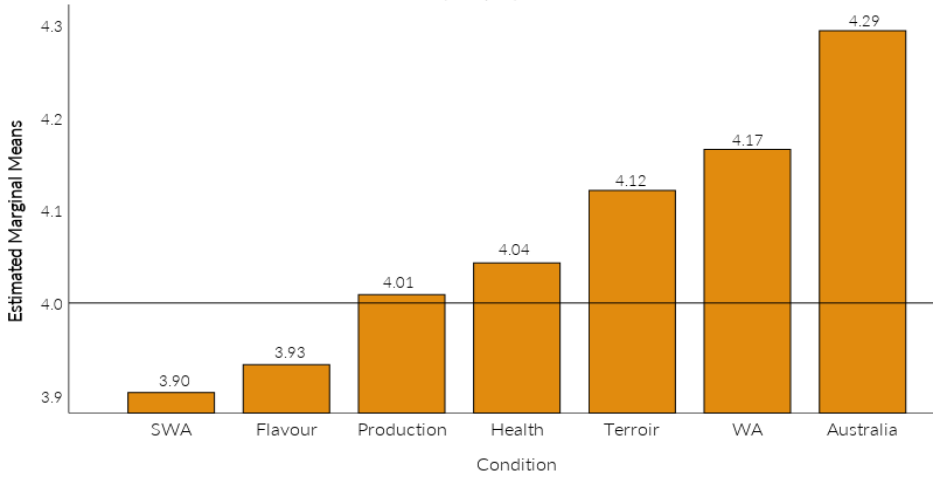


Figure 38: Malaysian consumers' willingness to search for more information on the honey advertised as rated on a 1-5 likert scale (1 being not at all likely to search, 5 highly likely to search. Estimated marginal means over 4 denote that the overall responses were skewed towards a willingness to search.

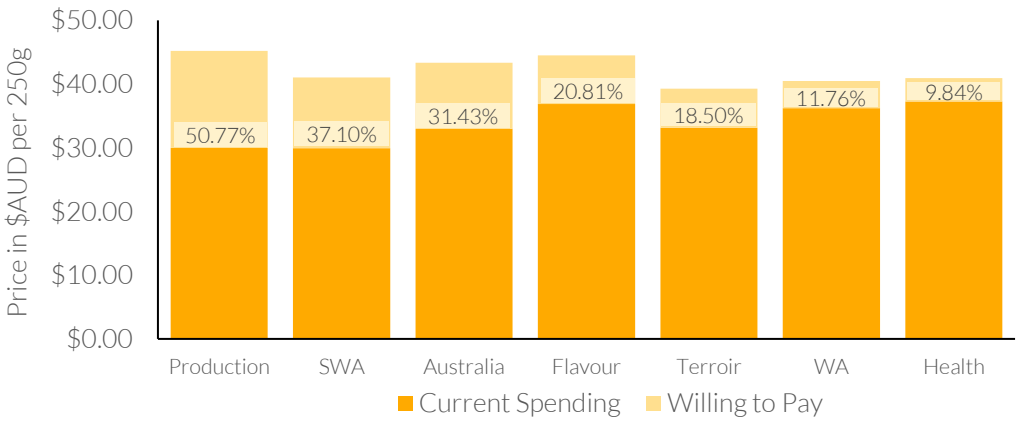


Figure 39: Average price Malaysian consumers were willing to pay for honey advertised by each narrative as a percentage increase on their typical spending

There was no statistically significant effect of narratives on the willingness to search for more information, although 'Australia', 'Western Australia', 'Terroir', 'Health' and 'Production' all yielded intentions over 4.0, suggesting consumers agreed or strongly agreed that they were willing to search for more information (Figure 34).

There was a statistically significant difference in the impact of narratives on the price they were willing to pay ($p<0.001$), with 'Production' providing significantly higher improvements than 'Health' ($p=0.003$, Mean diff. =11.56), 'Terroir' ($p=0.034$, Mean diff. = 9.09) and 'Western Australia' ($p=0.003$, Mean diff = 10.96) (Figure 35). Despite showing a significantly stronger impact on price Malaysian consumers were willing to pay, 'Production' did not elicit a strong desire to search for more information than 'Health' and 'Terroir'. Hence, it is possible that there were differences between the narratives that triggered curiosity and interest, but were not associated with a high price premium in Malaysian consumers.

Figure 34: Willingness to search for information

Figure 35: Price premium for each narrative

Japan

The majority of Japanese respondents consumed honey either daily or at least once a week (59.02%, Figure 36). The most common frequency of purchase was once every 1-3 months (Figure 36). Japan also showed the highest proportion of infrequent honey purchases with almost a third of respondents purchasing honey only once or twice per year.

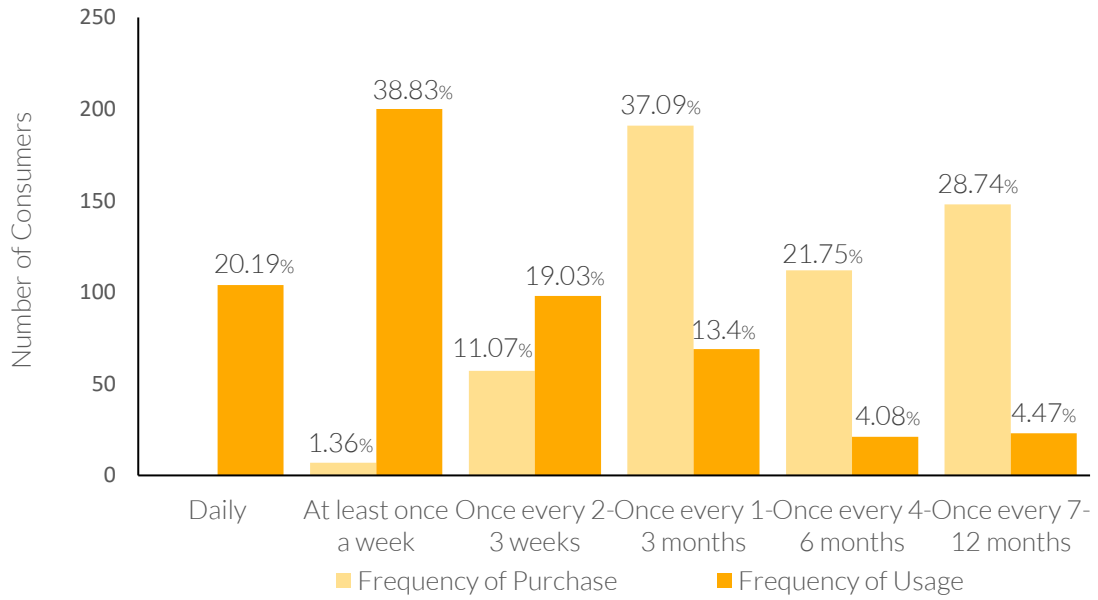


Figure 40: Purchasing and consumption habits of Japanese consumers per 250 g of honey

When consumers were asked about their purchases of imported honey, 36.05% (n=93) stated that they bought Australian honey. Consumers noted that they bought imported honey from 11 different countries with the most popular countries being China (5.43%, n=14), Canada (4.26%, n=11) and Argentina (3.88%, n=10). The median price that Japanese consumers typically paid for honey was $10.39 per 250g with the largest cohort of consumers paying between $5.99-9.99 per 250g (33.9%) (Figure 37). The maximum amount paid was $120.00 per 250g and the difference between the median values for the maximum consumers spent compared to the price they were willing to pay was $4.56. A comparison of five local premium honey brands showed that the average price range of honey was between $15.83.-$155.12/250g with the most expensive honey being ¥11,990.00 ($66.67) for 90g, which was advertised as a "medical grade" 400+ MGO honey imported from New Zealand and sold under a local brand.

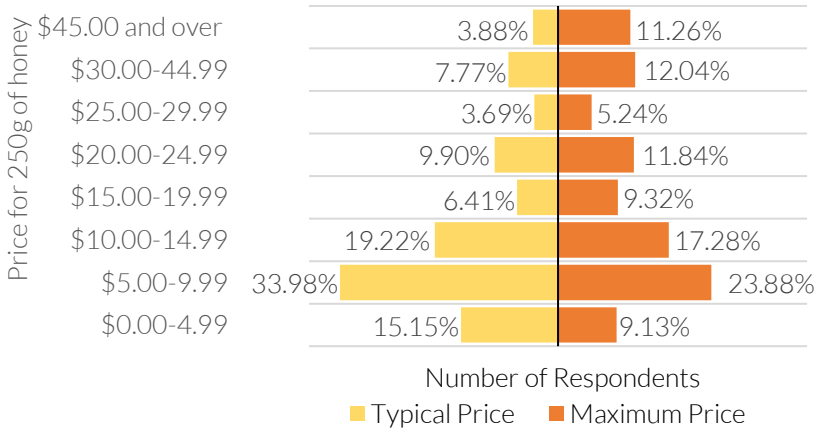


Figure 41: Price distribution of typical and maximum spending by Japanese consumers per 50g of honey

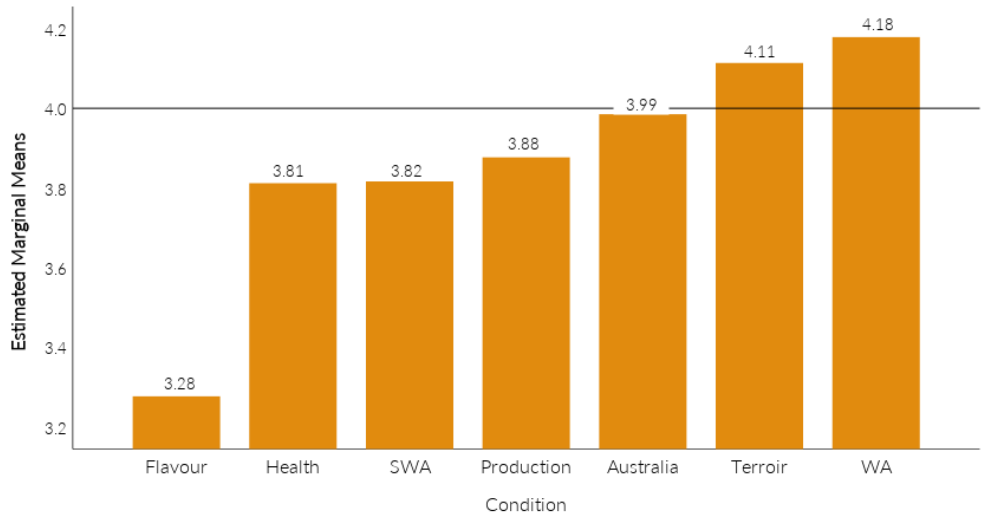


Figure 42: Japanese consumers' willingness to search for more information on the honey advertised as rated on a 1-5 likert scale (1 being not at all likely to search, 5 highly likely to search. Estimated marginal means over 4 denote that the overall responses were skewed towards a willingness to search.

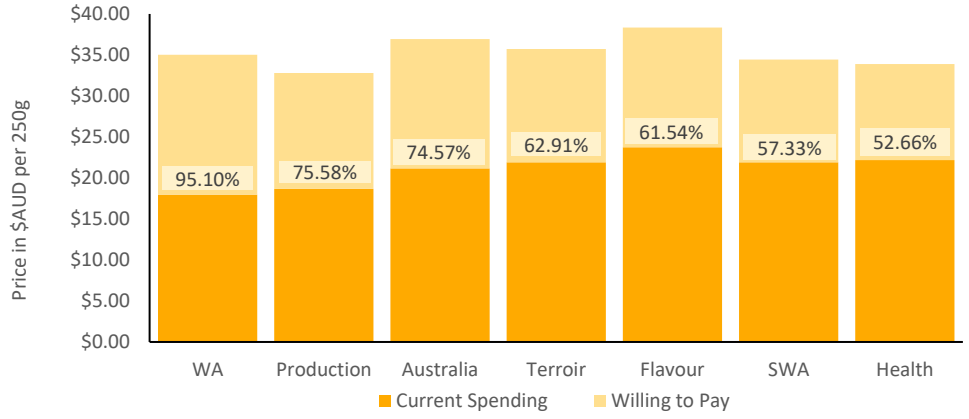


Figure 43: Average price Japanese consumers were willing to pay for honey advertised by each narrative as a percentage increase on their typical spending

Consumers exposed to the 'Western Australia' (Mean = 4.18) and 'Terroir' (Mean = 4.11) narratives showed a stronger tendency to agree they would search for more information about Australian honey they saw in the experimental condition (Figure 38).

There was no statistically significant impact of narratives on the price Japanese premium consumers were willing to pay. However, there was a clear increase in price premium for all narratives compared to the price currently paid (p<001), suggesting any narrative or combination of narratives should be able to prompt an increase in price.

The highest price increase was evident for the 'Western Australia' narrative, which resulted in a 95.1% price increase (Figure 39). The lowest price increase respondents reported was for the 'Health' narrative, matching the results from the information search results, which showed health was not as effective to stimulate information search as the other tested narratives.

Figure 38: Willingness to search for information

Figure 39: Price premium for each narrative

India

A significant majority of Indian respondents consumed honey ever day (65.37 %, Figure 40). The most common frequency of purchase was once every 1-3 months (Figure 40). Overall, data was skewed towards frequent consumers with 90.86% of respondents purchasing honey at least once every 1-3 months. This is particularly interesting when considered alongside the data reported earlier in the report that Indian consumers also showed the highest propensity towards buying honey in larger quantities, with 18% of consumers purchasing honey in 501g – 1 kg containers and 4% purchasing containers over 1 kg.

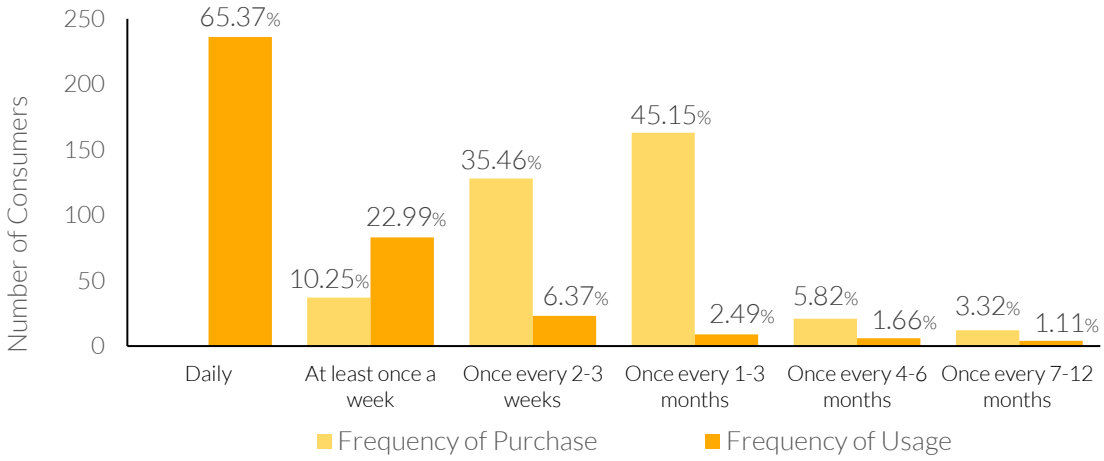


Figure 45 : Purchasing and consumption habits of Indian consumers per 50g of honey

When consumers were asked about their purchases of imported honey, 23.076% (n=43) stated that they bought Australian honey. Premium consumers only stated that they bought imported honey from Bangladesh (n=1) and the European Union (n=1). Indian consumers overall paid the lowest prices for their honey products with the majority of consumers typically paying under $10.00 for their honey (67.59%) (Figure 41). A comparison of five local honey brands showed that the average price per 250g for honey was between $3.35 and $4.73. Thus, the typical price paid appears to match the expected price range of honey products available to these consumers. Additionally, we noted that honey was often sold in packs with up to 5 kg of honey, or as a 'buy one get one free' offer on multiple kg, so this is likely to influence the overall price per weight compared to the other countries.

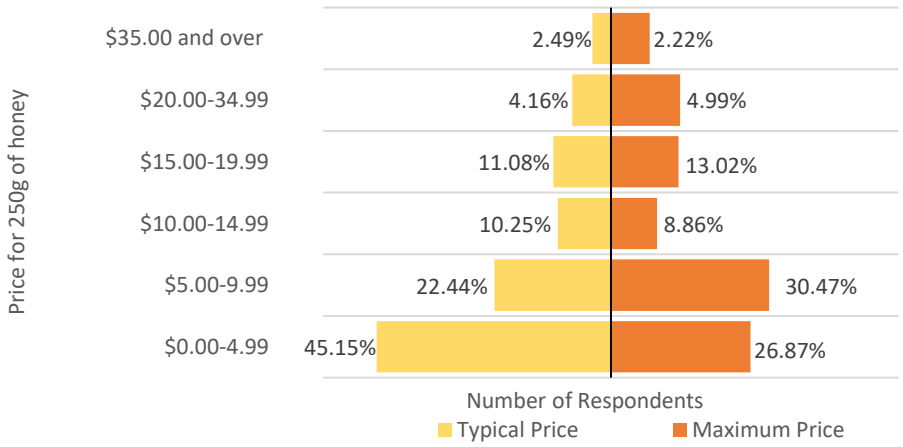


Figure 44 Price distribution of typical and maximum spending by Indian consumers per 250g of honey

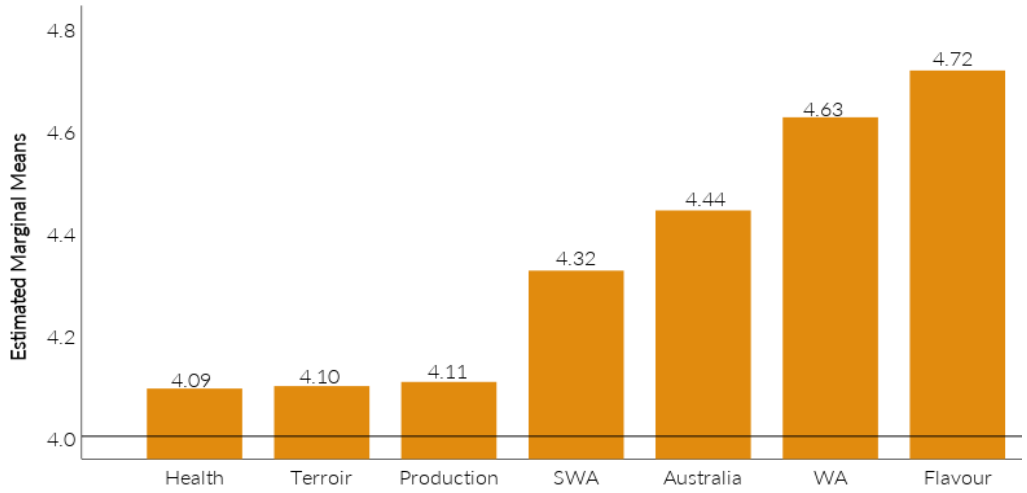


Figure 46: Willingness to search for more information on the honey advertised as rated on a 1-5 likert scale (1 being not at all likely to search, 5 highly likely to search. Estimated marginal means over 4 denote that the overall responses were skewed towards a willingness to search.

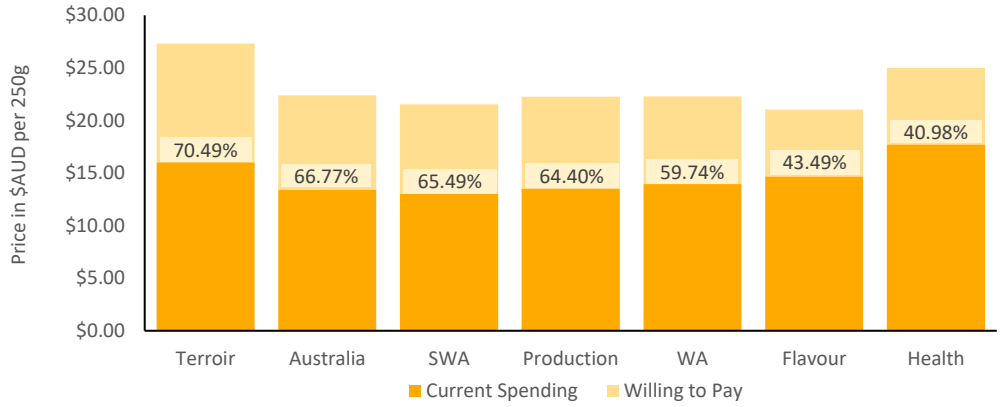


Figure 47: Average price consumers were willing to pay for honey advertised by each narrative as a percentage increase on their typical spending

There was no statistically significant effect of narratives on the willingness to search for more information, with all conditions returning a mean of over 4, indicating they were 'likely' or 'highly likely' to search out information (Figure 42). While flavour did not result in a strong increase in willingness to pay, it did result in the most interest to search for more information.

There was no statistically significant impact of narratives on the price respondents were willing to pay. However, from a managerial perspective, there were clear effects on the premium price consumers were willing to pay based on the narrative. Specifically, 'Terroir' and 'Australia' created the best returns (70.49% and 66.77% increases respectively) (Figure 43). In contrast, 'Health' and 'Flavour', while still increasing the price by over 40%, returned the lowest overall increase in willingness to pay more. This might reflect a low level of consumer knowledge about flavours, which triggered consumers' curiosity, but did not yield an increase in willingness to pay more.

Figure 42: Willingness to search for information

Figure 43: Price premium for each narrative

Aim 5. Develop, implement, and analyse an evidence-based social media marketing campaign

The social media program accomplished two objectives in this project. First, it allowed us to test the impact of the narratives used in the experiment in a real world context. Second, social media engagement itself has significant potential to improve brand performance and increase consumer purchase intention and willingness to pay (Barger et al., 2016; Ndhlovu & Maree, 2022). Based upon the results of the experimental study, we prioritised creating content, which predominantly focused on the 'Terroir' and 'Country of Origin' narratives, which appealed to the broadest audiences, while also targeting 'Flavour' content to the United Kingdom, 'Production' to Malaysia and 'Health' to Saudi Arabia across both social platforms. These narratives were used to build posts based on an 'inbound marketing' approach, which uses content styles designed to attract, engage, educate and delight viewers to create a relationship and build brand loyalty. This approach differs from the traditional 'outbound approach', which prioritises the mass production of content with broad appeal that explicitly advertises products or brands (i.e. messages designed to reach as large an audience as possible) (Holliman & Rowley, 2014).

Two social media profiles were created for the project, one on Facebook and one on Instagram. These platforms were chosen based on their ability to provide significant insights into consumer engagement for targeted posts and advertisements, as well as their ability to provide access to the appropriate audience demographics. Both accounts were created with the assistance of BICWA and were called "West Australian Honey". They were designed to act as customer-facing accounts representing commercial beekeepers and honey packers within WA to market honey from across all brands. The accounts were launched on 25/2/2022 and all analytics were collected on 2/6/2022

Facebook

In the initial phases of the campaign, it was necessary to simultaneously focus on building general brand awareness in each of our target markets. To facilitate this, a paid advertisement using a combined terroir and flavour narrative was run for 14 days, between 6th April and 20th April, specifically targeted at our primary audiences (Figure 48). As this was not designed to compare the impact of narratives, it was not deemed necessary to restrict the content design to a single narrative. The advertisement was selected to run to an audience of Facebook users between 18-65 years of age living within the six target countries whose interests matched the following criteria, as provided by the Meta algorithm, "Organic food, Kitchen, Agribusiness, Eating, Agronomy, Healthy Habits, Desserts, Baking, Natural product, Health & wellness, Local food, Food, Yoga, Recipes, Farm, Tea, Foodie, Honey, Cooking, Natural foods, Agriculture, Organic product or Well-being".

This advertisement campaign achieved 54,019 impressions (the number of times the ad was viewed), reached 35, 613 individual Facebook accounts and had 1,480 page likes. The current audience for the 'West Australian Honey Facebook page (as of 2nd June) consists of a total of 2041 likes and 2099 followers. By country, our Facebook followers were predominantly from Malaysia (30.5%), Saudi Arabia (28.3%), followed by India (27%). Additionally, page followers are currently highly skewed towards males (70.1%) and those aged between 25 and 44 years (57.0% of followers).

Figure 48: Facebook advertisement that was run by the West Australian Honey account

To date, the most successful organic post that has been run on Facebook (i.e. not including paid advertising) was a post featuring an 'Australian Country-of-Origin' narrative, educating consumers about how they can identify Australian made honey using origin labels featured on products (Figure 49). This post was uploaded prior to the ad increasing our audience size and organically reached 5,580 people, with 115 likes and reactions, 25 shares and 25 comments. The second most successful post used a 'Terroir' narrative and highlighted the work by the CRC-HBP about the use of chemical honey signatures to market honey using aesthetic labels that represented HPTLC outputs. This post organically reached 8,968 people, with 82 likes and reactions, 14 shares and 11 comments.

Figure 49: The most successful post on the West Australian Honey page to date.

Instagram

Table 3. Summary of metrics for the Instagram and Facebook[3]

Metrics (as of 2/6/2022)	Facebook	Instagram
Posts uploaded	55	44
Stories uploaded (Instagram only)		7
Reels uploaded (Instagram only)		24
Page Likes (Facebook only)	1938	
Followers	2022	98
Reach	1 720 586	1 526 552
Impressions	2 270 633	3 717 613
Profile Visits	978	1718
Follower Demographics		
Age 18-24	16.5%	16.4%
25-34	**34.9%**	20.8%
35-44	22.1%	27.4%
45-54	13.1%	**28.5%**
55-64	8.1%	5.4%
65+	5.3%	0%
Male	70.1%	47.6%
Female	29.1%	52.3%

The Instagram account currently has 98 followers, significantly fewer than Facebook. Although we did run a paid advertising campaign between the 11th and 25th of May to increase the reach of our content and drive Instagram users to our page to view our content, Instagram has yet to enable ad targeting to gain followers on this platform. The Instagram account is used both to mirror the content of the Facebook account and post more video content using the Reels and Stories functions (Summary of account metrics in Table 3). As Instagram is a more visual platform, we also featured shorter captions with a lesser focus on educational messages communicated through text with more attention paid to vivid visual imagery and video content to communicate ideas.

[3] Reach refers to the number of individual Facebook accounts that viewed the content. Impressions refers to the number of times that ad was viewed (including by the same account); Profile Visits refers to the number of times an account clicked through to view the Instagram or Facebook profile.

The current trends on the Instagram account show that the highest performing piece of content was a video reel of honey sommeliers discussing the flavours of distinct monofloral honey varieties, which combines both 'flavour' and 'terroir' narratives and received 312 likes and reached 1779 accounts. Over the total campaign, our uploaded Instagram posts have reached 1, 455, 665 accounts and, excluding results from paid advertising we have had 797 content reactions (e.g. likes), 14 comments and 4 shares and reached 8007 different Instagram accounts. The most engaged consumers on Instagram, i.e. those who interact with our content, came from India (75.7%) and Japan (12.6%) and were between 18-24 years of age (69%) and 25-34 years of age (14.5%). This suggests that our content is reaching and connecting with accounts that are not our followers through our use of hashtags, as well as through the Instagram algorithm. Our approach on this platform has been to use repeated hashtags in each post including #WestAustralianHoney, #Honey in English and the word honey in the relevant languages, including: # عسل (Arabic), # शहद (Hindi), # 蜂蜜 (Japanese Kanji), # はちみつ (Japanese Hiragana), # madu (Bahasa Malayu).

Experimental testing

The final aspect of our social media campaign was to run an experimental advertising test that directly compared the engagement on posts containing each narrative (Table 4). To achieve this, we used the A/B Testing function within the Meta business account. This option enables business accounts to compare multiple versions of the same ad to separate sections of their audience to determine which is the most cost effective way of gaining consumer engagement. For each country, we divided the audience into four sections and displayed one of the narratives to both the Facebook and Instagram feeds at a budget of $5.00 per narrative per day. The results of these tests are displayed in the table below as the cost per post engagement for each narrative (Table 4). Meta also provides a level of confidence for each result based upon a simulation of future performance that predicts the percentage chance that the most effective narrative would out-perform the others again if the experiment were repeated. These results show that the majority of tests had a high likelihood of accuracy, although we would recommend conducting extended testing of the United States to differentiate between the production and terroir narratives specifically. It's important to note that these data should not be considered to represent beliefs outside of social media (i.e. they do not necessarily reflect actual purchasing or spending behaviour), rather, they reflect the narratives that are most likely to drive brand awareness and brand engagement online. Therefore, they should be considered supplemental to the narrative information reported in prior results sections.

Table 4: Cost per engagement and engagement rate for each narrative per each country.

	Cost per Engagement				Likelihood of Repeated Success
	Production	Terroir	Flavour	Health	
United States	**$0.062**	**$0.059**	$0.082	$0.070	49% chance of Production 48% chance of Terroir
United Kingdom	$0.043	**$0.039**	$0.059	$0.063	85% chance of Terroir
Saudi Arabia	**$0.008**	$0.009	$0.014	$0.013	>95% chance of Production
Malaysia	**$0.009**	$0.013	$0.019	$0.011	>95% chance of Production
Japan	$0.009	**$0.008**	$0.010	$0.012	>95% chance of Terroir
India	$0.0015	**$0.0013**	$0.0022	$0.0014	>95% chance of Terroir

In addition to using the cost results as presented by Meta, further tests were conducted to calculate engagement rate for the different posts and identify any differences due to user demographics (Table 5). These show different narratives as driving the highest engagement rates and these may differ from the narratives indicated as the most cost effective. This is largely due to the Meta algorithm and the proportion of Facebook users in each demographic that the content is able to reach. For example, although Indian users below 34 years old or over 65 years old had more engagement with 'Health' narratives, these are the lowest proportion of followers on the accounts and as such, the 'Terroir' and 'Production' narratives are likely to be more cost effective for these accounts.

Table 5: Engagement rate for each narrative by country, gender and age [44]

		18-24	25-34	35-44	45-54	55-64	65+		Male	Female
United States	Production	0.99	1.38	1.28	1.51	1.36	1.95		1.29	1.53
	Terroir	1.43	1.50	1.46	1.57	1.19	1.52		1.65	1.36
	Flavour	1.65	1.60	1.66	1.46	1.50	2.80		1.85	1.76
	Health	1.38	1.45	1.94	2.11	1.50	0.91		1.31	2.24
United Kingdom	Production	1.15	1.65	1.60	1.56	1.37	2.10		1.46	1.74
	Terroir	1.61	1.66	1.60	1.72	2.30	2.18		1.76	1.90
	Flavour	1.71	1.68	1.29	2.05	2.56	2.69		1.75	2.14
	Health	1.24	1.25	1.03	1.02	1.64	1.76		1.23	1.47
Saudi Arabia	Production	1.18	1.12	0.94	1.05	0.86	0.86		0.97	1.20
	Terroir	1.11	0.98	0.94	0.82	0.74	1.04		0.92	1.13
	Flavour	1.04	1.22	1.12	0.99	1.39	1.25		1.12	1.42
	Health	1.20	1.11	1.17	1.15	1.13	1.47		1.13	1.62
Malaysia	Production	1.16	1.38	1.38	1.61	1.35	1.25		1.32	1.52
	Terroir	0.94	1.11	1.22	1.31	1.17	0.95		1.06	1.20
	Flavour	1.43	1.58	1.17	1.78	1.69	1.55		1.53	1.56
	Health	1.47	1.71	2.00	1.24	1.87	1.53		1.58	1.73
Japan	Production	2.29	3.06	3.27	3.42	3.38	3.56		3.14	3.19
	Terroir	2.97	2.84	2.99	2.96	2.97	2.90		2.86	3.16
	Flavour	3.58	2.97	3.49	3.57	4.12	3.70		3.70	3.42
	Health	2.78	3.52	3.36	3.54	3.81	3.34		3.35	3.54
India	Production	1.87	1.93	1.81	1.70	2.14	1.85		1.89	1.91
	Terroir	1.59	1.90	2.01	2.14	1.63	1.45		1.77	1.84
	Flavour	1.46	1.83	1.97	2.07	1.71	1.62		1.73	1.92
	Health	2.09	2.17	2.01	1.73	1.62	2.04		1.93	2.06

[4] Engagement rate is calculated as engagement /impressions*10 and are reported as mean values for each demographic.

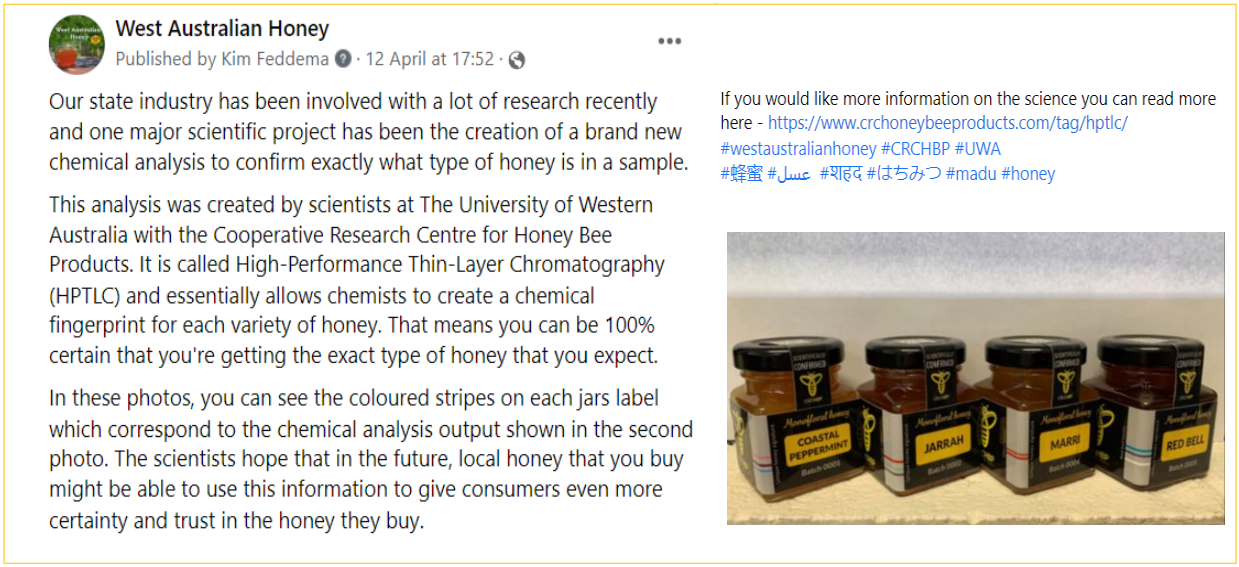
IMPLICATIONS

Industry level

The industry interviews conducted during the qualitative phase of this research suggested that an increase in cooperation and organisation amongst the industry would increase the ability to meet the quantity requirements of export markets and facilitate a more coordinated approach to marketing to increase brand awareness in both domestic and export markets. An industry cooperative was formerly in place within the WA industry, however this is not the current structure and, as such, there is currently no overarching strategy for the marketing of WA honey. Collaboration between state and federal industry bodies (BICWA and AHBIC) would facilitate a strategic targeted approach to marketing narratives focusing their collective efforts on creating a strong brand identity and recognition of the Australian honey brand, as well as the brand of each state or honey production region, in export markets (Brodie and Benson-Rea, 2016). Marketing content at this level could be coordinated with the BQUAL and B-TRACE systems to achieve a consistent online communication to signal authenticity and provenance of monofloral honeys. By synthesising and aligning the B-TRACE, chemical analysis, the digital content and marketing, the Australian honey industry should be able to present a clear, unified and consistent message that supports all marketing narratives ('Country of Origin', 'Terroir', 'Health', 'Flavour' and 'Production').

Such a strategy would require industry bodies, as well as honey brands, to initially invest time and expenses into testing honey, producing labels and creating digital and traditional content to build consumer awareness and understanding of the new strategy. It has the potential to build a strong visual indicator of quality, authenticity and origin, potentially influencing consumers' decision making and likelihood of purchase (Aichner et al., 2017; Gundlach & Neville, 2015). It has been shown that the success of labels depends on the 'collective reputation of a product' wherein, if fingerprint labels are applied to premium honey varieties and the perception of Australian honey is generally positive, they may work as effective quality cues for consumers (Loureiro & McCluskey, 2000, p 318). As previously mentioned, one of the most successful posts to date on Facebook illustrated the potential for such a system (see Figure 50)

Figure 50: Facebook post illustrating a cohesive strategy



To provide certification of origin and style consistency, the industry may seek to gain formal recognition and legal protection through Geographical Indication labels (Van der Lans, 2001). Certifications, such as the European Union's Protected Designation of Origin (PDO) or the French Appellation d'Origine Contrôlée (AOC), can indicate the origin of products to consumers and act as a cue of quality and authenticity (Taplin, 2015). The impact of geographical indications on rural industry profits represents a key factor for commercial sustainability of small businesses and has been floated as a mechanism for rural development and improved livelihoods in developing countries (Cleary & Van Caenegem, 2017; Marie-Vivien & Biénabe, 2017). The results shown in this report suggest that in all countries customers were prepared to pay more for the narratives presented to them in the experimental study compared to their currently purchased honey. This suggests that irrespective of the marketing strategy used by each brand, there is scope to increase the end-price of honey in these six markets. In the qualitative interviews industry stakeholders frequently mentioned businesses "undercutting" prices in the market by pricing honey below a sustainable level to improve their market share – such generally low price charged for Australian honey may reflect this phenomenon. For each country, the report discussed the percentage increase in the end-price that may be accepted by consumers depending on each narrative.

In summary –

United States - The narratives that return an increase in price premium were 'Terroir' and 'South West Australia'

United Kingdom - All narratives return an increase in willingness to pay, but there is no statistical difference between the narratives, suggesting any narrative or combination of narratives should be able to support a price increase. The highest price increases were observed for 'Terroir' and 'Flavour'

Saudi Arabia - 'Health' and 'Terroir' resulted in the highest price increases respectively.

Malaysia - The narrative most likely to return the highest price premium was 'Production', which resulted in significantly higher increases in price than 'Health', 'Terroir' or 'WA'

Japan - There was no statistically significant impact of narratives on the price Japanese premium consumers were willing to pay. There was a clear increase in price premium for all narratives compared to the current price consumers paid, suggesting any narrative or combination of narratives should be able to support a price increase.

India - No statistically significant difference in the impact of each narrative. 'Terroir' and 'Australia' created the best returns while 'Health' and 'Flavour' returned the lowest overall increase in willingness to pay.

At an industry level, social media accounts can be created to produce content as part of an 'inbound' marketing strategy to educate and engage current and potential consumers about the unique qualities of Australian honey (Holliman & Rowley, 2021). To be successful, this type of content should enhance trust by illustrating that the accounts:

1) share values (with the customer);
2) have interdependence (mutual value in the relationship);
3) display quality communication; and
4) display non-opportunistic behaviour (Pepper & Rogers, 2011).

Content could be used to address consumer concerns that were identified in the preliminary qualitative focus groups, such as adding further scientific evidence about health claims (within the boundaries of the legal regulations stated; see page 26), making suggestions for how honey can be incorporated into cooking/baking in other cuisines, and address myths (e.g., the 'wooden spoon' myth).

Individual Brand Level

As each brand differs in the products it sells and countries it exports to, not all insights discussed in this report will be applicable to all brands. Hence, Australian honey packers and producers are encouraged to take information from this report based on its relevance to their business. It is understood that each company wants to maintain its own brand positioning and marketing strategies while actively promoting the wider industry through the creation of industry level social media accounts or industry events. This would enable them to present themselves to consumers (individuals and wholesalers), as a single, united industry. A similar inbound content strategy focusing on education and engagement can be applied at an individual brand levels. Such an inbound content strategy can use the same overarching approach as the industry strategy, but with a more micro-approach to content communicating each company's individual branding and value propositions including their a strong brand identity and position. This strategy helps to communicate each brand's point-of-difference and the strength of their performance across aspects that may be more or less relevant to each consumer (Keller, 2020). This is key to building consumer loyalty and a strong brand resonance (i.e. how well a consumer relates to a brand or product)(Keller, 2020).

Segmentation can also be carried out at the brand level to optimise content design by creating a 'buyer persona' for their target customers (an example persona for an American consumer based upon data in Figure 9 is presented in Figure 48). Understanding a buyer persona helps businesses understand the motivations, expectations and preferences of their target audience to create engaging, relevant and entertaining content (Lehnert et al., 2020). The demographic data collected in the premium buyer profiles (shown in section beginning page 34) can be used to selectively segment the target audience for advertising. By narrowing down a target audience, content can be crafted to better engage and educate premium consumers in a way that does not require it to have a broad appeal (An et al. 2018). These persona profiles can be used to target social media content using paid content advertising, such as advertisements or 'boosted' posts (in which posts are selectively shown to a target audience of Facebook accounts that do not currently follow the page. This can be accomplished by using Meta's audience targeting software, which allows you to target content to audiences based on demographic and psychographic attributes.

Finally, depending on the colour, texture and sweetness of different honey varieties that beekeepers produce, decisions can be made about which varieties to market towards the most effective target market that is likely to pay a premium price for it.

Figure 51: Example buyer persona created from demographic data collected

SANDRA

30 YEAR OLD, AMERICAN HONEY CONSUMER

BACKGROUND

30 year old woman who works as a nurse. She lives in Sacramento with her husband and their 4 yr old daughter.

IDENTIFIERS

Active on Facebook and mostly uses social media for keeping up with friends and family and Instagram for looking at wellness and lifestyle content. She uses Facebook marketplace and is likely to 'like' pages but not actively engage.

INTERESTS

Uses Facebook socially to keep up with local community events as well as to consume news and short stories. Is a member of several groups that share tips for living healthy lifestyles.

CONSUMER NEEDS AND WANTS

-Create a dialogue between her and the Australian honey through educational content Reassure her through 'behind the scenes' (BTS) style posts about the production of honey that it is 'raw' and 'direct from hives'

-Provide factual information on honey as well as recipes and ideas about how to consume it as part of an active lifestyle

-Offer educational posts on the benefits of honey

CONTENT TYPES

-Reference content from 'reliable', 'recognisable' sources such as the USDA

-Provide educational content on production

-Provide easy links to websites and ensure DMs are quickly answered

-Highlight the 'community' of apiarists to build trust in the people behind the industry

-Show relevance of honey to her and her family

RECOMMENDATIONS

The data presented in this report offers insights into the branding and marketing of West Australian honey for six foreign markets. By combining both qualitative and quantitative analyses, this report provided in-depth information on consumer preferences in each of the six target export markets, as well as the performance of the selected narratives using a social media campaign.

What follows below are the recommendations based upon the results from these studies:

1. Supporting greater communication between stakeholders (including government and industry professionals) to hold regular meetings to improve collective brand building and overcome inconsistent and insufficient consumer awareness of Australian honey.
   This can be achieved by -
   a) Determining industry priorities for funding, export market strategy and government policy positions.
   b) Coordinating and developing a consistent and cohesive value proposition for monofloral honey varieties.
   c) Maintaining internal consistency of core flavour profiles for each monofloral honey.

2. Displaying certification labels on packaging of products bound for foreign markets, particularly for Saudi Arabia, Malaysia, and India. This will improve consumer trust that the honey is:
   a) Authentic – using the HPTLC test to indicate the nectar source, HMF level and moisture content.
   b) Verifiable – providing transparent batch code information through the BQUAL and B-Trace system to indicate honey provenance and extraction date.

3. Further educating consumers and stakeholders throughout the supply chain on the relevance of provenance and the value of 'Terroir'. In future, consider formal avenues of legal protection such as Geographical Indications for unique honey production regions (such as the production of Leatherwood honey in Tasmania, or Jarrah honey in the South West of Western Australia).

4. Targeting each export market using demographic and behavioural segmentation data based on buyer expectations and explore identified opportunities (e.g. gift-giving in Saudi Arabia).

5. Developing and resourcing a consistent inbound social media strategy at the industry level that prioritises content that –
   a) relates to their audience and develops a genuine social connection with consumers from other cultures and countries,
   b) is authentic to the values and beliefs of the Australian beekeeping community,
   c) fosters the perception that content is honest and authentically represents the industry,
   d) emphasises inbound marketing content focusing on education and entertainment as opposed to exclusively advertising sales and product promotion.

6. When using health narratives, ensure claims fall within the regulations set by all relevant authorities.

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APPENDICES

Appendix A: Industry Stakeholder Interview Protocol

Questions		*Probes*
1.	Can you please check that these data on your business are correct?	Demographics, years in operation, scale of production etc.
2.	Why did you first get into the industry?	
3.	How would you describe your company's brand?	Product offerings Price ranges Taste Point of difference
4.	What do you think your customers are looking for?	Level of Consumer Knowledge Consumer preferences Perception of brand Local, National, International
5.	What are your current marketing activities?	Segmentation? Social Media Platforms? Past strategies that were (un)successful
6.	How would you describe the state of WA as a geographic location?	As a place to visit As a place to live As a place to work Differences between regions
7.	How would you describe the WA honey bee industry?	As a community As a representative body As competitors
8.	Are there any characteristics that differ between honey companies within WA?	The honey itself How it's produced How it's sold
9.	Are there any characteristics that are consistent between honey companies within WA?	See above
10.	Of those, which do you consider the primary factor(s) that differentiate(s) WA honey from that produced elsewhere?	Nationally Internationally Mānuka/NZ?
11.	What is the current extent of your export activities?	Countries Profitability
12.	What are your growth strategies?	General Approach? New markets?

Appendix B: Focus Group Semi-Structured Interview Protocol

Pre-focus group task – complete two digital collages with words and images depicting (1) Their ideal honey (2) Western Australian honey

Topic	*Questions*	
Honey as a product	1.	How do you use honey?
	2.	How often do you use honey?
	3.	Has this changed since you came to Australia? If so, how?
	4.	What are your favourite/least favourite attributes of honey? Why?
	5.	What do you know about how honey is made?
	6	How would you describe the flavour of honey?
Australian Honey	7.	Were you familiar with Australian honey before you came to Australia?
	8.	How would you describe Australian honey? What associations or perceptions come to mind when you think of Australian honey?
	9.	How do you think Australian honey differs from what is available in your home country?
	10.	Do you think honey is made differently in Australia than in your home country? Why?
WA Honey	11.	Let's now talk about WA honey. Were you familiar with WA honey before you came to WA?
	12.	How would you describe WA honey? What associations or perceptions come to mind when you think of WA honey?
	13.	Do you think WA honey differs from what is available in other Australian states?
	14.	Do you think honey is made differently in WA than in your home country? Why?
Honey Marketing	15.	When you think about Australian honey, which brands come to mind?
	16.	What factors are the most important to you when choosing what honey to buy?
	17.	What would you like to know about a jar of honey before choosing to buy it?
	18.	What do you think marketers should include in their messages to entice you to purchase their honey? Why?
	19.	Probe in depth for reasons, attributes they look for or Appeals; *cross check if these messages are possible to be utilised in social media.*
	20.	Would social media honey promotion appeal to them? Why? Why not?

Appendix C: Experimental Survey Protocol (United States Version)

You are invited to participate in a 20-minute survey about honey consumption. This study is conducted by Dr. Daniel Schepis, Prof. Sharon Purchase and Dr. Liudmila Tarabashkina at the University of Western Australia. This survey is confidential and all data collected is not identifiable. Data will be stored on a secure server at UWA for 7 years. The collected data may be used in journal article publications, book chapters or conference papers. There are no foreseen risks to this study and your responses will help us to understand your honey preferences. You can exit at any time if you no longer wish to take part in this survey and your responses will be excluded from the analyses.

Approval to conduct this research has been provided by the University of Western Australia, in accordance with its ethics review and approval procedures. Any person considering participation in this research project, or agreeing to participate, may raise any questions or issues with the researchers at any time. In addition, any person not satisfied with the response of researchers may raise ethics issues or concerns, and may make any complaints about this research project by contacting the Human Ethics Office at the University of Western Australia on (08) 6488 3703 or by emailing to humanethics@uwa.edu.au. All research participants are entitled to retain a copy of any Participant Information Form and/or Participant Consent Form relating to this research project. If you have any questions about this project, please feel to email Dr. Tarabashkina at: liudmila.tarabashkina@uwa.edu.au.

Screener
I have read the information provided and any questions I have asked have been answered to my satisfaction. I agree to participate in this research project, realizing that I may withdraw at any time without reason and without prejudice, however, I understand that withdrawal is not possible once my survey responses are submitted.

Screener1: **Have you read and understood the purpose of this research?**
Yes (1)
No (2)

Screener2: **Are you over the age of 18?**
Yes (1)
No (2)

Screener3: **Do you buy honey?**
Yes (1)
No (2)

Start of Block: Actual Behaviour

How often do you <u>buy</u> honey?
At least once a week (1)
Once every 2 to 3 weeks (2)
Once every 1 to 3 months (3)
Once every 4 to 6 months (4)
Once every 7 to 12 months (5)

What is the typical weight per bottle when you buy honey?
Up to 250g (9oz) (1)
251g-500g (9-18oz) (2)
501g - 1kilo (18-35 oz) (3)
More than 1 kilo (more than 35 oz) (4)
Don't know (5)

How much do you typically pay for 250g (9oz) of honey? If unsure, please check the price of the honey you most recently purchased.

Amount in US Dollars

	0	10	20	30	40	50
Amount per 250g/9oz ()						

What is the highest amount you have ever spent on 250g (9oz) of honey?

Amount in US Dollars

	0	10	20	30	40	50
Amount per 250g/9oz ()						

How often do you typically use honey?
Daily (6)
At least once a week (1)
Once every 2 to 3 weeks (2)
Once every 1 to 3 months (3)
Once every 4 to 6 months (4)
Once every 7 to 12 months (5)

How do you typically use honey? Select all that apply
With food (spread over a toast, as a sweetener for cereal) (1)
In tea or water (2)
For baking or cooking as an ingredient (3)
On its own (a spoonful of honey) (4)
As a gift for others (8)
As a salad dressing (5)
Topically (on skin) (6)
Other (7) _____

Where does the honey you buy/consume typically come from? Select all that apply
Your home country (1)
Australia (2)
Other countries (please specify) (3) _____
Not sure (4)

What is your typical preference for sweetness when you consume honey:

	Not at all sweet	Very Sweet
()		

What is your typical preference for texture when you consume honey:

	Very runny	Very Thick
()		

What is your typical preference for honey colour:
Amber (1)
Light amber (2)
Extra light amber (3)
Golden (4)
Light golden (5)
No particular preference (6)

Start of Block: Food Choice Items

Please indicate how much you agree with the following statements.
It is important to me that the food I eat on a typical day:

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither (3)	Somewhat Agree (4)	Strongly Agree (5)
Is healthy (1)					
Helps me regulate my mood (i.e. a good feeling or coping with stress) (2)					
Is convenient to buy and prepare (3)					
Provides me with pleasurable sensations (smell, texture, taste and appearance) (4)					
Is natural (10)					
Is affordable (11)					
Helps me control my weight (12)					
Is familiar (13)					
Is environmentally friendly (14)					
Has not violated animal welfare (15)					
Is fairly traded (i.e. produced without exploitation, labour conditions are good) (16)					
Has the country of origin clearly marked (17)					
Has the region of origin clearly marked (18)					

Please indicate how much you agree with the following statements.

I am able to tell the difference between a 'premium, high quality honey' and a standard offering, because it is/has:

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither (3)	Somewhat Agree (4)	Strongly Agree (5)
A bio-activity measurement (1)					
Health benefits (2)					
Come straight from the hives/beekeeper (3)					
Raw honey (4)					
A specific flower source (eg. Clover, Jarrah, Mānuka) (5)					
Limited edition/ batch (6)					
Not mass produced (7)					
Packaged in a glass jar (8)					
Smaller size packaging (9)					
A specific flavour (different tasting notes) (10)					
A rating from a certified organisation (11)					

Please take a few moments to carefully look at this image before answering the next set of questions -
(Please note participants were randomly allocated one of the following seven images)

Start of Block: Manipulation Check

To what extent do you agree with the following statements?

The image shown to me referred to -

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither (3)	Somewhat Agree (4)	Strongly Agree (5)
Health Properties (1)					
Honey Production (2)					
Honey Flavours (3)					
The Unique Native Landscape: (4)					
Place of Origin (5)					

Please select the correct answer. The text in this image mentioned -

Health Properties (1)
Honey Production (2)
Honey Flavour (3)
The Unique Landscape (4)
Place of Origin (5)
None of the Above (6)

Start of Block: Country of Origin

CI - Cognitive In your perception, the place described in this image is/has

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither (3)	Somewhat Agree (4)	Strongly Agree (5)
Affluent (1)					
Economically well developed (2)					
High Living Standards (3)					
Advanced Technology (4)					
Good Standard of Life (5)					

Based on your feelings, the place described in this image is

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither (3)	Somewhat Agree (4)	Strongly Agree (5)
Peace Loving (1)					
Friendly towards us (2)					
Cooperative with us (3)					
Likeable (4)					

When you think about products made in this place, you generally perceive their image as

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither (3)	Somewhat Agree (4)	Strongly Agree (5)
High Quality (1)					
Having global brand presence (2)					
High Workmanship (3)					
Reliable (4)					
Well-designed (5)					

Please rate how similar or different you believe your home country is to the place where this honey is produced on the following attributes -

	Very Different (1)	Somewhat Different (2)	Neither (3)	Somewhat Similar (4)	Very Similar (5)
Level of economic and industrial development (1)					
Communications infrastructure (2)					
Marketing infrastructure (3)					
Technical requirements (4)					
Market competitiveness (5)					
Legal regulations (6)					

Please rate how similar or different you believe the people in your community are to the place mentioned in this image on the following attributes -

	Very Different (1)	Somewhat Different (2)	Neither (3)	Somewhat Similar (4)	Very Similar (5)
Per-capita income (1)					
Purchasing power of consumers (2)					
Lifestyles (3)					
Consumer preferences (4)					
Levels of literacy and education (5)					
Language (6)					
Cultural values, beliefs, attitudes and traditions (7)					
Please select 'Somewhat Different' (8)					

To what extent do you agree the honey shown to you in the image is/has the following characteristics -

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither (3)	Somewhat Agree (4)	Strongly Agree (5)
Is healthy (1)					
Helps me regulate my mood (i.e. a good feeling or coping with stress) (2)					
Is convenient to buy and prepare (3)					
Provides me with pleasurable sensations (smell, texture, taste and appearance) (4)					
Is natural (10)					
Is affordable (11)					
Helps me control my weight (12)					
Is familiar (13)					
Is environmentally friendly (14)					
Has not violated animal welfare (15)					

Is fairly traded (i.e. produced without exploitation, labour conditions are good) (16)	
Has the country of origin clearly marked (19)	
Has the region of origin clearly marked (21)	

How much would you be willing to pay for 250g (9oz) of the honey shown to you in this image?

	Amount in US Dollars					
	0	10	20	30	40	50
Amount per 250g/9oz ()						

To what extend do you agree with the following statement,
I will search for more information on the honey I saw earlier in the survey?

Strongly Disagree (1)
Somewhat disagree (4)
Neither (5)
Somewhat Agree (8)
Strongly Agree (9)

Please rate the following statements on your feelings towards honey:

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither (3)	Somewhat Agree (4)	Strongly Agree (5)
I like to eat honey (1)					
I believe that it does not have to be a special occasion to eat honey (2)					
Honey is very important for me (3)					
Eating honey is something that my best friends also enjoy (4)					
I take pleasure in choosing honey (7)					
Buying honey is an important decision for me (5)					
I choose honey very carefully – I take my time to choose it (6)					

The flavour of honey is very important for me (8)	
I take pleasure in choosing honey flavours (9)	

Please rate the following statements on your knowledge of honey.

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither (3)	Somewhat Agree (4)	Strongly Agree (5)
I know a lot about honey (1)					
I do not feel very knowledgeable about honey (2)					
Among my circle of friends I am one of the "experts" on honey (3)					
Compared to most other people, I know less about honey (4)					
When it comes to honey, I really do not know much (8)					

Have you ever visited the following places?

	Yes (1)	No (2)
Australia (1)		
Western Australia (2)		
South Western Australia (4)		

What age group do you belong to?

18 – 24 years (1)
25 – 34 years (2)
35 – 44 years (3)
45 – 54 years (4)
55 - 64 years (5)
65 years or over (6)

To which gender do you most identify?

Female (1)
Male (2)
Gender Variant/Non conforming (3)
Unlisted (5)
Prefer not to say (4)

What best describes your living situation?

Living alone (1)
Living with partner (2)
Living with friends (3)
Living with partner and children (4)
Single and living with children (8)
Multi-generational living (5)

What is your highest educational qualification?

High school (1)
Bachelors degree (university) (2)
Vocational training (3)
Masters degree (4)
Doctorate degree (PhD) (5)
Other (please specify) (6) _____

The median household income in United States is $ 99, 999.00 Please answer whether your household income is approximately the same, above, or below the American average?

Significantly Below (1)
Below (2)
About the Same (3)
Above (4)
Significantly Above (5)
Prefer not to say

Thank you for completing this survey! Please click on arrow button to submit your response.

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