Auckland Council
Te Kaunihera o Tāmaki Makaurau

Sustainable, healthy food choices research and development project

Primary research summary report

November 2021

Contents

Executive summary

Context and research method

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan is the region's roadmap to zero-emissions. The Plan outlines the Council's objective to meet a 50% reduction in carbon emissions by 2030, and one important part of achieving this goal will be encouraging individuals to consider more low carbon food choices.

Over 80% of Aucklanders are willing to change their lifestyle to better align with our climate commitments. However, when it comes to the moment of a food choice — individuals often go for meal options based on convenience, price, taste. This is a classic behavioural science challenge which a nuanced understanding of human decision-making can help address.

This report summarises outcomes from Auckland Council's Sustainable, Healthy Food Choices Research and Development Project, a behavioural science study designed to encourage Aucklanders to consider increasing their plant-based food choices.

This Project has been undertaken in two parts. Phase one was focused on available research on the challenge and included a review of academic literature and interviews with national and international Council organisations.

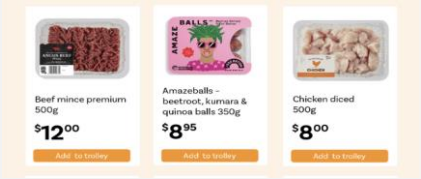
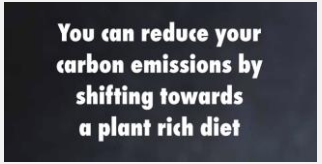
Phase two was the development of a unique behavioural science trial aimed at encouraging plant-based food choices here in New Zealand. This document is focused on outlining the method and results of this second phase.

The team designed an online experiment to test behaviours within a prototype online supermarket experience. More than 1,900 study participants were taken through that online experience, and then asked a series of questions, testing the below specific insights:

1. Integrating plant-based food choices and animal-based products within a purchasing journey will lead to an increase in plant-based choices.
2. Real or perceived tastiness will drive food choice behaviour more than reported environmental benefits.
3. Although taste is a core driver, labelling food with some form of sustainability cue will still lead to an increase in purchases.

These findings will be used to inform a further testing as well as longer-term programmes to encourage increased plant-based food choices and reduce Aucklander's carbon footprint.

What we tested in the prototype online supermarket

	Behavioural insight	Test scenario	
Insight 1	*Integrating plant-based food choices and animal-based products within a purchasing journey could lead to an increase in plant-based choices.*	**Supermarket choice architecture** Whether integrating plant-based with animal-based food choices leads to an increase in plant-based choices.	
Insight 2	*Real or perceived tastiness could drive food choice behaviour more than reported environmental benefits.*	**Marketing messaging** Identify which plant-based marketing message framing people most respond to.	
Insight 3	*Although taste is a core driver, labelling food with some form of sustainability cue could also lead to an increase in purchases.*	**a. Food bundling with sustainable label** If labelling a bundled dinner bag as sustainable leads to an increase in its purchase. **b. Label a treat product as 'sustainable'** If labelling a treat product as sustainable leads to an increase in its purchase.	 

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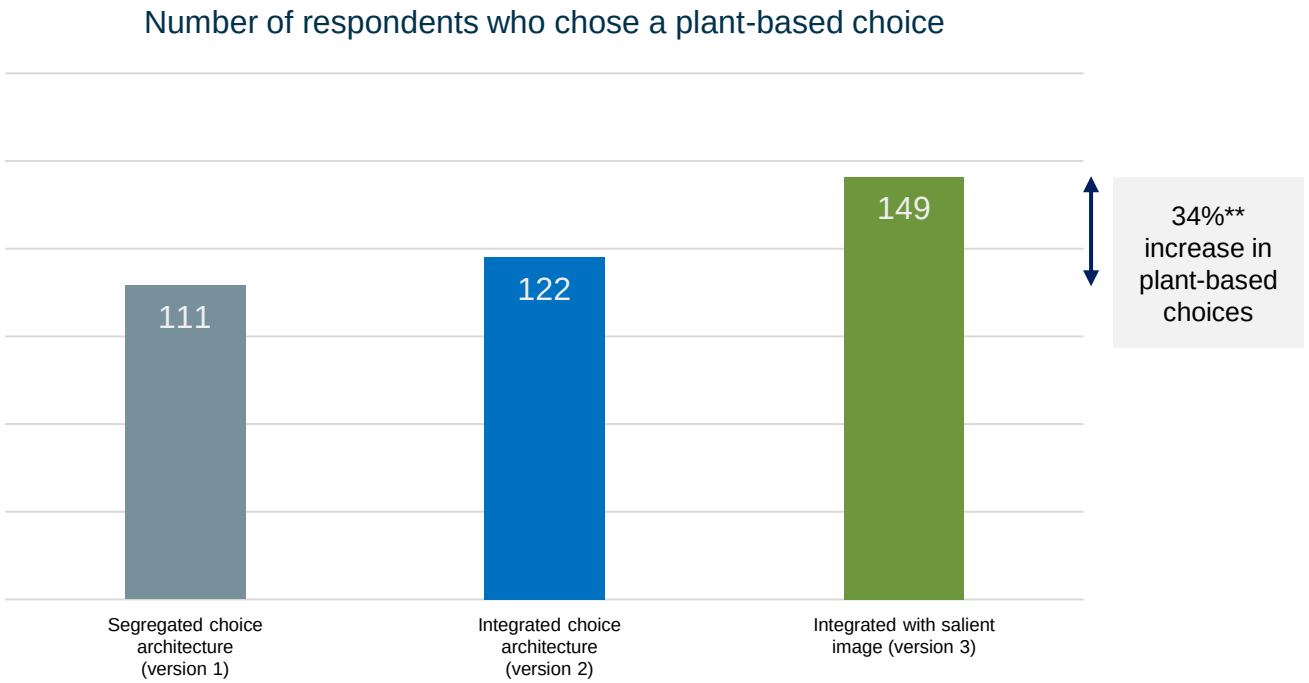
Result 1: Integrating plant-based options led to a 34% increase in plant-based choices

Behavioural Insight 1

Integrating plant-based food choices and animal-based products within a purchasing journey will lead to an increase in plant-based choices.

Result

There was a 34%** increase in respondents choosing a plant-based option when plant-based and animal-based products were integrated, and a salient image of plant-based food was used. An effect to a statistically significant level.



**statistically significant change (.95 confidence). See page 21 for more information on what statistical significance tell us.

N total respondents choosing plant-choices = 382
N total sample of respondents including meat-choices = 1,865
This excludes all survey respondents who classified themselves already as vegan, vegetarian or pescatarian.

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Result 2: Individuals driven to consider plant-based food due to tastiness factors over environmental benefits

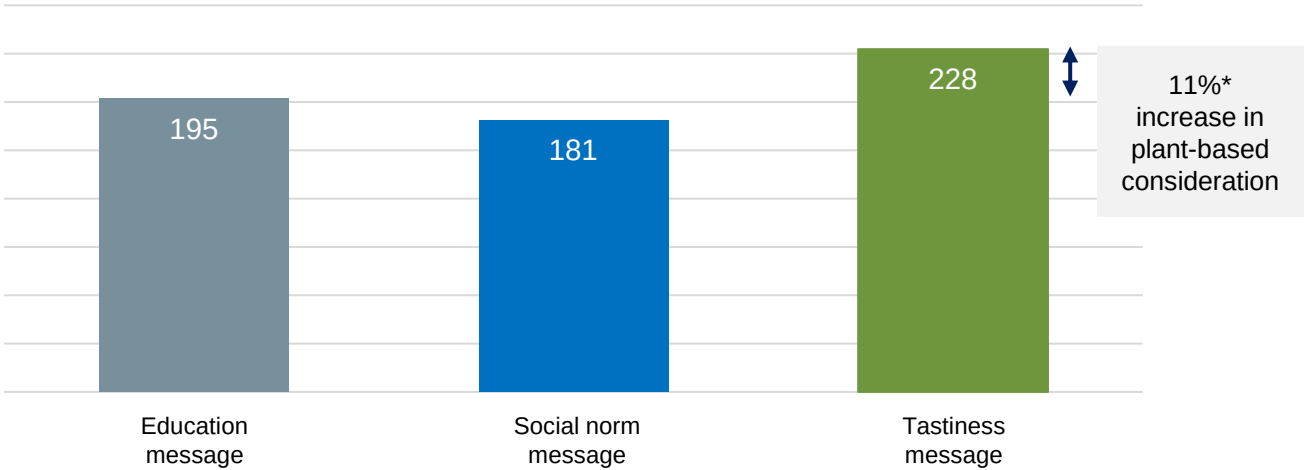
Behavioural Insight 2

Real or perceived tastiness will drive food choice behaviour more than reported environmental benefits.

Result

Different message framing has led to different plant-based preferences. Comparing a traditional education-based message focused on the environmental benefits to a message focused on tastiness — we see a 11%* increase in plant-based consideration.

Number of respondents who stated they'd consider increasing their plant-based meal choices — categorised by which marketing message they were shown



N total respondents choosing plant-choices = 604
N total sample of respondents including meat-choices = 1,930

*statistically significant change (.90 confidence)

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Result 3: Adding a sustainability label leads to an increase in plant-based choices

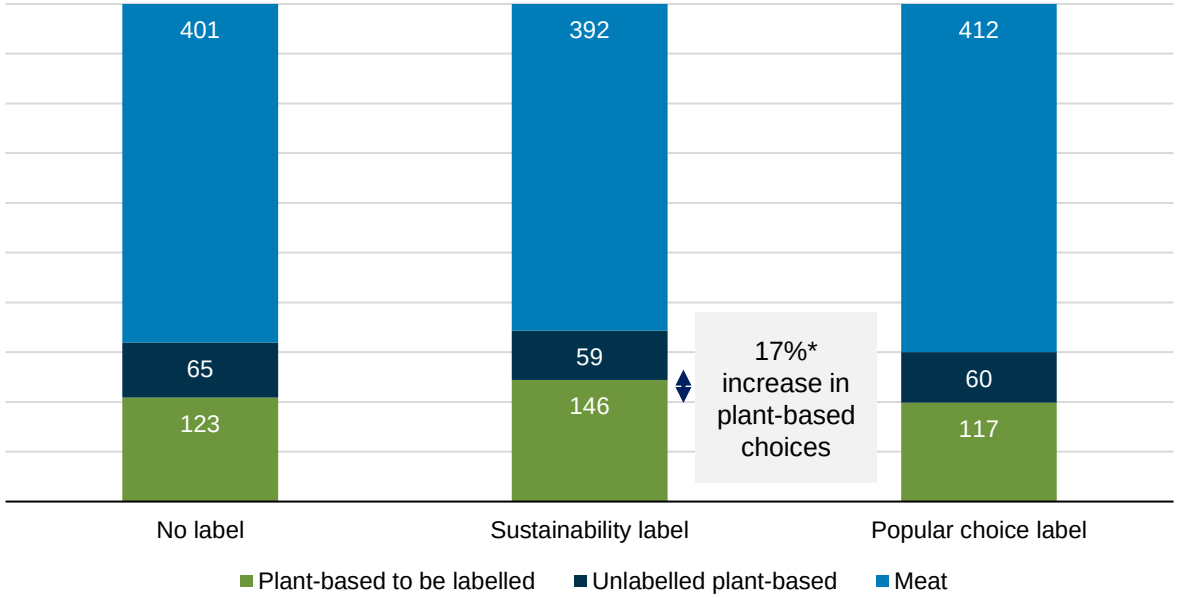
Behavioural Insight 3

Although taste is a core driver, labelling food with some form of sustainability cue will also lead to an increase in purchases.

Result

Without changing any of the options provided, we saw a 17%* increase in respondents choosing options that were labelled 'sustainable', when compared to options without a label. This resulted in an increase from 123 people to 146 people.

Respondent food bag choices in supermarket scenario



*statistically significant change (.90 confidence)

N total respondents choosing plant-choices = 570
N total sample of respondents including meat-choices = 1,771
This excludes all survey respondents who classified themselves already as vegan, vegetarian or pescatarian.

Background

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What is the “The Sustainable, Healthy Food Choices Research and Development Project”?

The document provides the design and results of an online study to test a number of behavioural interventions. These interventions have been designed to encourage low carbon food choices through a series of four behaviourally informed scenarios with over 1,900 Aucklanders.

The purpose of Auckland Council’s Sustainable, Healthy Food Choices Research and Development Project has been to:

“collate and summarise existing insights into how to encourage more sustainable and healthy food purchases, and to use these insights to design a Sustainable Healthy Food Choices Behaviour Change Pilot Project for Tāmaki Makaurau, Auckland.”

This has culminated in two phases of work:

- **Phase one — secondary research**
  Focused on available research on the challenge. The team undertook a review of academic literature, interviews with national and international Council organisations and a survey with select public sector organisation invested in more sustainable consumer food choices here in NZ.
- **Phase two — primary research**
  Taking the learnings from phase one, the team designed a unique behavioural science study aimed at understanding opportunities to encourage plant-based food choices here in NZ. This choice was based on the overwhelming evidence that increasing plant-based food choices leads to carbon emission reductions. Increasing plant-based foods is in line with the Ministry of Health’s health guidelines and the EAT Lancet definition of a healthy and sustainable diet.

The purpose of this report is to summarise the method and findings of the second phase of this project, the unique research.

For more information on the first phase of this work, please contact Rebecca Hayden in Auckland Council’s Low Carbon team on Rebecca.Hayden@aucklandcouncil.govt.nz.

How this study supports the Council's objectives

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan is the Council's roadmap to zero-emissions for the region. It outlines a strategy to: *"rethink our economy to one that is less based on consumption and more focused on ensuring that we do not take more than we can replenish for future generations."*

Now, of course, fundamental to this strategy is guidance within big emitting sectors such as transport, construction, and energy. Yet, when we look at this challenge through the perspective of a typical Aucklander, one of the greatest changes a person can make is increasing their proportion of plant-based food consumption.

Included within the Council's Climate Plan is a goal to build: *"A low carbon, resilient, local food system that provides all Aucklanders with access to fresh and healthy food"*

Proposed potential outcomes from this food choices study:

- Apply learnings within the Council's own infrastructure, such as at the Auckland Art Gallery café and Council cafeteria.
- Maximise potential outcomes from the Council's public facing marketing campaign Live Lightly. Insights from this study could be used to refine the campaign content and ultimately increase its impact.
- Recognising that local supermarkets have reported clear sustainability goals — and have already shown early interest in this work — this study could support long-term supermarket partnerships. Partnerships that could include a pilot to encourage plant-based food choices.
- Predicting that many public sector organisations across the country are likely, at some point, to investigate the benefit in applying sustainability labelling — the results of this study could contribute to inter-agency conversations. Auckland Council is already in conversations with MPI and MfE on this study.

Why this is a challenge of human behaviour change

Behavioural science combines insights from psychology, economics, and neuroscience to understand and map the hidden drivers of human behaviour. Over the past decade, the field of behavioural science has grown rapidly as organisations look to gain a richer understanding of people's behaviour and develop new and effective ways to inspire change.

Behavioural science offers unique tools for understanding behavioural barriers and evidence-based techniques to encourage desired behaviours. These includes mixed-method research to identify the key drivers of behaviour change in the context of low carbon food choices.

Over 80% of Aucklanders are willing to change their lifestyle for climate change and 53% of Aucklanders understand the need to eat food that minimises negative environmental impacts. However, when it comes to the moment of choice — these same people may go for meal options based on taste, convenience, or price.

Having the intention to eat sustainably yet still making unsustainable food choices is a classic example of intention-action gap. This is when an individual has the desire to do something but fails to act on these intentions. Overcoming intention-action gap requires an understanding of human decision making and behavioural science.

Live Lightly . Hīkina te mānuka - Our Challenge. https://livelightly.nz/why-live-lightly
Colmar Brunton. (2019). Hungry for Plant-Based: New Zealand Consumer Insights. Food Frontier & Life Health Foods. Retrieved from: https://www.foodfrontier.org/wp-content/uploads/2019/10/Hungry-For-Plant-Based-New-Zealand-Consumer-Insights-Oct-2019.pdf
The behavioural insights team. (2020). A Menu for Change: Using behavioural science to promote sustainable diets around the world. https://www.bi.team/publications/a-menu-for-change/

Glossary of behavioural science terms used in this report:

Choice architecture: The way options are ordered or arranged can greatly influence decision making e.g. the order that pages are displayed in Google.

Intention-action gap: Despite having the desire or intent to make a change, people often do not follow through e.g. getting fit.

Nudges: Small changes can make a big difference to the decisions people make. Nudges are behavioural science informed changes to encourage behaviour change.

Behavioural barriers: Things that may get in the way of behaviour and habit change.

Research method

Desktop research and interviews to define the challenge

In phase one of this project we used the following sources and methods to understand this challenge and to identify evidence as to what interventions have worked elsewhere.

New Zealand local activity stocktake
We used a combination of desktop research, interviews, and a survey to research how Auckland Council, Council Controlled Organisations, and other organisations are encouraging healthier and more sustainable consumer food choices in Tāmaki Makaurau and Aotearoa.

Review of academic literature and case studies available online
With a focus on key hypothesis statements, we researched findings from both published and soon-to-be published literature.

Interviews with national and international organisations
We hosted six 30-minute interviews with international and national Councils to understand how they are engaging residents in behaviour change projects on climate change and healthy food choices. The Councils we interviewed were: Christchurch City Council, Greater Copenhagen, Greater London Authority, Melbourne City Council, Seattle City Council, and Wellington City Council

For more information on the first phase of this work, please contact Rebecca Hayden in Auckland Council's Low Carbon team on Rebecca.Hayden@aucklandcouncil.govt.nz.

We then applied a behavioural science method

Diagnose

Diagnose the behaviours

Key to the success of any behavioural science programme is true clarity of the challenge and the desired behaviour.

Barriers

Identify the barriers

Decades of research in fields such as psychology and neuroscience shows that people are susceptible to biased decision-making and shortcuts in their thinking.

Design

Intervention design

Once you are clear on the behaviour you are encouraging and the key barriers inhibiting that behaviour, the next step is to design an intervention to overcome those barriers.

Trial

Trial

Recognising that behaviour is context-dependent and that it's challenging to foresee potential unintended consequences, it's important to test your insights and interventions.

Firstly, we prioritised our desired behaviour

Increase your intake of plant-based food

Our research led us to focus on the desired behaviour of individuals incrementally increasing their consumption of plant-based food.

This behaviour will be different for each person, but we would define success as an individual increasing their proportion of plant-based meal choices by at least a meal or two a week.

This choice was based on the overwhelming evidence that increasing plant-based food choices leads to carbon emission reductions.

Framing that behaviour:
Focused on the positive, promoting the benefits of plant-based options and avoiding negative language connected to meat and dairy products.

Encouraging small empowering improvements rather than recommending big life changes that may feel overwhelming for those new to plant-based choices.

"a diet rich in plant-based foods and with fewer animal source foods confers both improved health and environmental benefits." – EAT Lancet

"...doubling in the consumption of healthy foods such as fruits, vegetables, legumes and nuts, and a greater than 50% reduction in global consumption of less healthy foods such as added sugars and red meat" – EAT Lancet

EAT Lancet Summary report https://eatforum.org/eat-lancet-commission/eat-lancet-commission-summary-report/

Then, the key barriers to adopting plant-based choices

The first phase of research highlighted a wide range of barriers and motivations which effect plant-based food eating decisions:

"The lesser option": There's a perception that plant-based meal options don't taste as good as animal-based meals. With taste being the number one driver of food choices, changes are needed to promote how plant-based options can be tasty.

Make it easy: In many areas, especially in lower socio-economic areas, access to sustainable foods can be difficult. Convenience is a major driver of food choices and so making sustainable choices easy is key.

Negative perceptions of protein alternatives: Although there is a growing interest in plant-based food in New Zealand, there are still concerns about taste and health. People with a high meat intake tend to have negative perceptions towards adopting alternative proteins, such as concerns around the protein content, taste, satisfaction, and health effects.

Unfamiliarity aversion: People are averse to unfamiliarity. We tend to stick to what we already know and avoid the unknown, even if the outcome is potentially negative. When it comes to food choices, people have a preference for familiar foods. Because of this, people are unlikely to purchase and cook with foods that they have not cooked with before.

Choice overload: Making food choices based on multiple factors like health, climate impact and sustainability can overwhelm consumers and lead to choice paralysis.

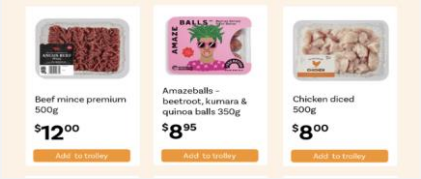
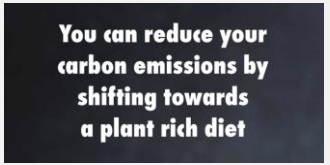
Habits: The majority of the actions people take are habitual and this is especially true for food decisions. Carefully designed behaviour change programmes are required to break habits people have already developed, such as cooking a particular animal product based meal on a certain night of the week.

The behavioural insights team. (2020). A Menu for Change: Using behavioural science to promote sustainable diets around the world. https://www.bi.team/publications/a-menu-for-change/
Colmar Brunton. (2019). Hungry for Plant-Based: New Zealand Consumer Insights. Food Frontier & Life Health Foods. Retrieved from: https://www.foodfrontier.org/wp-content/uploads/2019/10/Hungry-For-Plant-Based-New-Zealand-Consumer-Insights-Oct-2019.pdf
Skov, L., Lourenço, S., Hansen, G., Mikkelsen, B., & Schofield, C. (2013). Choice architecture as a means to change eating behaviour in self-service settings: a systematic review. Obesity Reviews, 14(3), 187-196.
Wellington City Council interview

This lead us to behavioural insights to test

Insight 1	**Integrating plant-based food and animal-based choices within a purchasing journey will lead to an increase in plant-based choices.** • The way choices are arranged can impact the food choices people make. There have been a number of studies which show that placing alternative meat options alongside meat options increases the uptake of plant-based choices. • Focusing on the majority of consumers who don't label themselves as vegan or vegetarian, this group are much less likely to visit the dedicated plant-based substitute sections. Therefore, we are recommending looking for opportunities to integrate.
Insight 2	**Real or perceived tastiness will drive food choice behaviour more than reported environmental benefits.** • The challenge with sustainability initiatives is often that it's very difficult for individuals to relate to the impact of their actions. Asking themselves: "Does it really matter if I do this one small thing" when considering adopting (sometimes inconvenient) pro-environmental behaviours. • To save coming-up against this barrier, we recommend working with human nature and focusing on what people love… food that tastes good. With our literature review highlighting that taste is often the number one driver of food choice.
Insight 3	**Although taste is a core driver, labelling food with some form of sustainability cue will also lead to an increase in purchases.** • Increase the purchase of certain products by helping to make sustainability more salient in decision making. • Modelled off findings from Melbourne. The local council was able to increase the purchase of healthy foods by using a traffic light system of red, amber and green on menus to highlight healthy options.

We designed scenarios to test these insights

	Behavioural insight	Test scenario	
Insight 1	*Integrating plant-based food choices and animal-based products within a purchasing journey could lead to an increase in plant-based choices.*	**Supermarket choice architecture** Whether integrating plant-based with animal-based food choices leads to an increase in plant-based choices.	
Insight 2	*Real or perceived tastiness could drive food choice behaviour more than reported environmental benefits.*	**Marketing messaging** Identify which plant-based marketing message framing people most respond to.	
Insight 3	*Although taste is a core driver, labelling food with some form of sustainability cue could also lead to an increase in purchases.*	**a. Food bundling with sustainable label** If labelling food with a sustainability signal leads to an increase in plant-based choices. **b. Treat product choice with sustainable label** If labelling a treat product with a sustainability signal leads to an increase in plant-based choices.	 

More details on the design of our online trial

Design

We created a prototype online supermarket shopping experience and asked a panel of more than 1,900 people to go through scenarios outlined on the previous page and answer a series of questions. These online experiences were designed to test the behavioural insights outlined in this study.

As is outlined in the following slides, we used four different interventions to test the three behavioural insights. With three of these, a respondent was randomly assigned between three different versions of the intervention. With the fourth (chocolate bar labelling intervention page 37), each participant was shown the same interventions but in a different order.

Survey distribution

Our respondents were from the Auckland Council research panel. The panel was sent an invitation to participate within a restricted time period, and offered the chance to win one of three $100 prizes.

Respondent representativeness

We have ensured to have responses from citizens from across all five geographies in Auckland (North, South, East, West, Central).

Partial responses

We have included results from participants who left the survey before completing it to maximise the sample size. This will lead to slightly different sample sizes for different questions.

Survey completion rates

Total responses: 1,935
Total responses excluding those who categorised themselves as vegan, vegetarian or pescatarian: 1,865

Statistical significance test

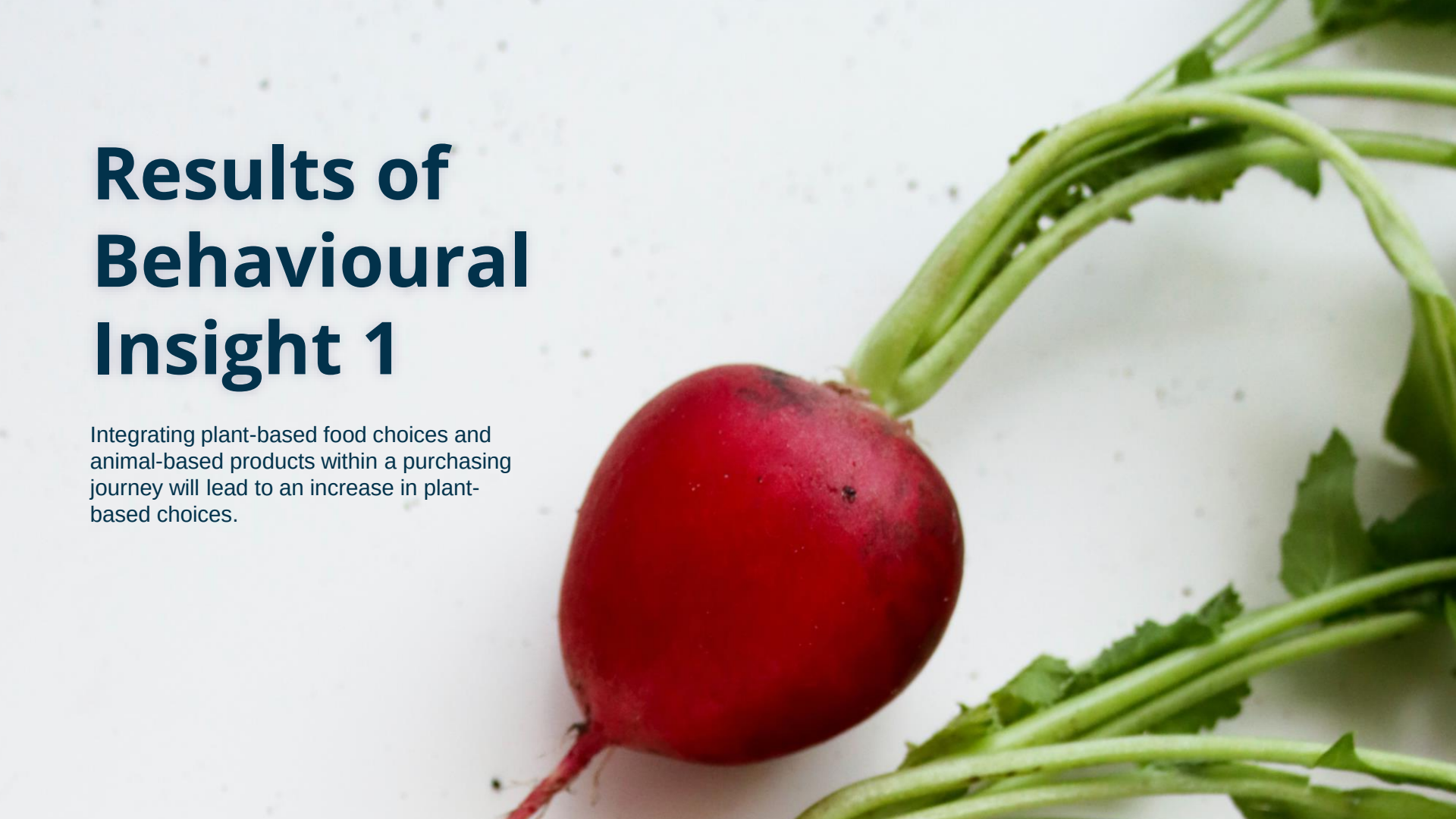
This is a mathematical technique to measure the likelihood of a result to be true. For example a 95% (or .95) significance level means you can be 95% confident that the observed results are real, and not caused by randomness. Researchers are often comfortable reporting results at a 90% or 95% level.

Control considerations

A true control could not be used for any of our tests as we were not representing the real-life brand of a supermarket. However we tried to make it realistic of a ‘typical’ online shopping environment and included a number of other elements so it wasn't obvious to participants what we were testing.

Results of Behavioural Insight 1

Integrating plant-based food choices and animal-based products within a purchasing journey will lead to an increase in plant-based choices.



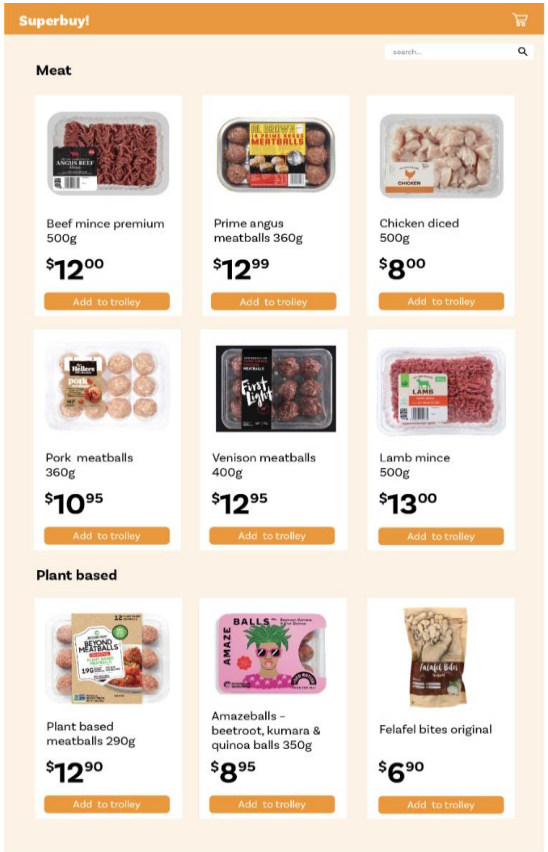
Online choice architecture intervention design

The way choices are arranged can impact the food choices people make. There have been a number of studies which show that placing alternative meat options alongside meat options increases the uptake of plant-based choices.

Respondents were asked to picture themselves in a typical shopping experience, in which they were asked to pick a filling for a pita pocket.

Each respondent was presented with one of three (randomised) potential online shopping journeys. The first (shown opposite) represents a typical current state, with meat options and plant-based options provided separately.

Segregated choice architecture (version 1)



Online choice architecture intervention design

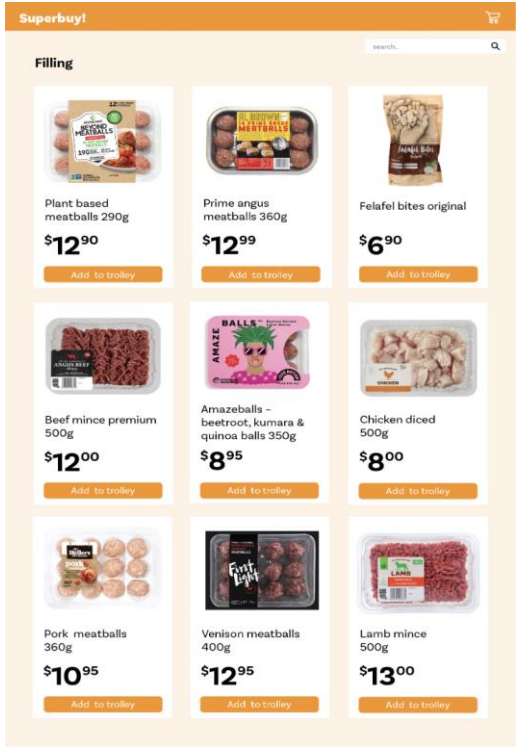
The second version of the online shopping experience integrated the plant-based and animal-based options.

The third integrated the options, and also included an image of falafel — attempting to subtly encourage respondents to be reminded of a plant-based option.

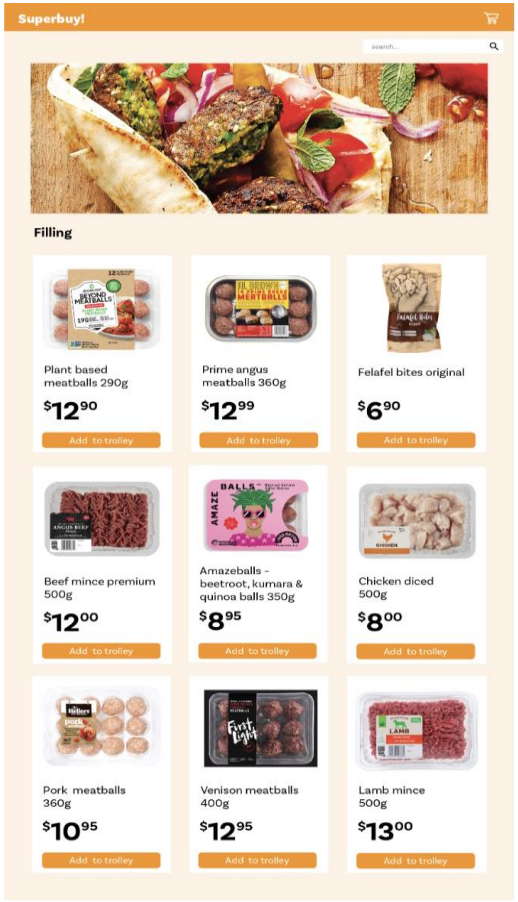
The test of this behavioural insight involved comparing the number of plant-based choices between the three versions.

All product options and prices are the same, the only change was the positioning of the products.

Integrated choice architecture (version 2)



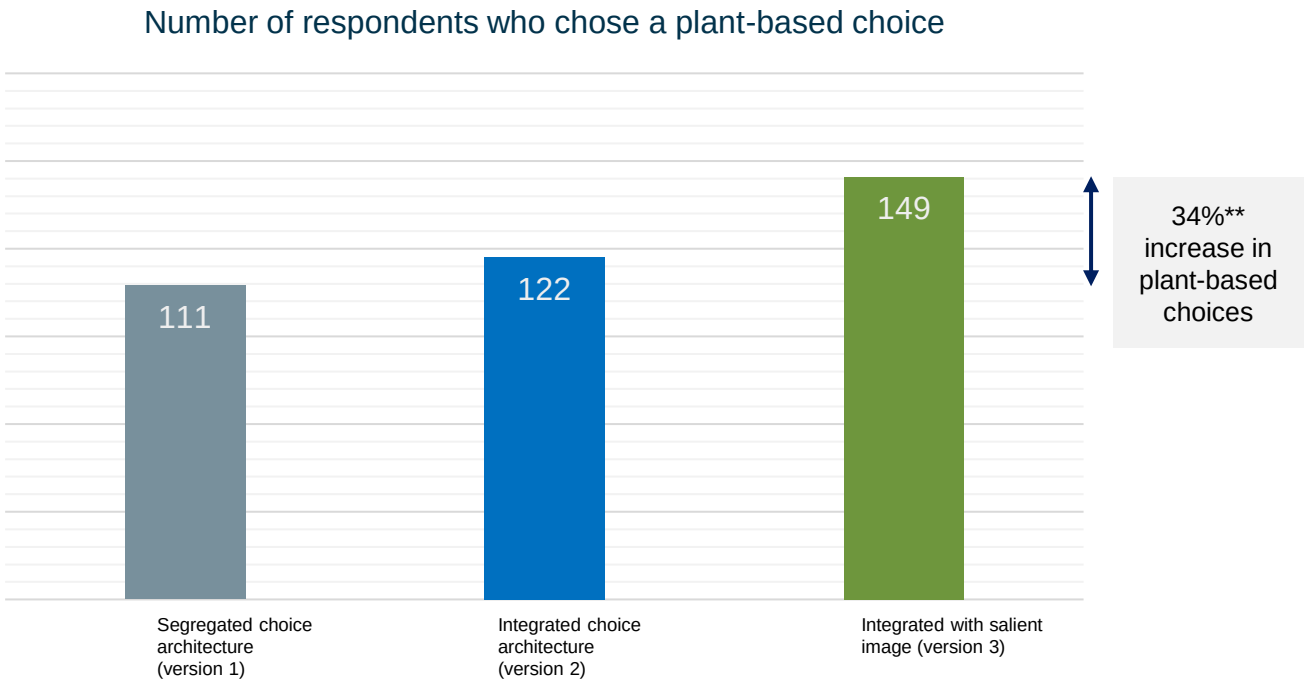
Integrated with salient image (version 3)



Result: Integrating plant-based options with salient image led to a 34% increase in plant-based choices

There was a 34%** increase in respondents choosing a plant-based option when plant-based and animal-based products were integrated and a salient image was used. An effect to a statistically significant level.

All product options and prices are the same, the only change was the positioning of the products.



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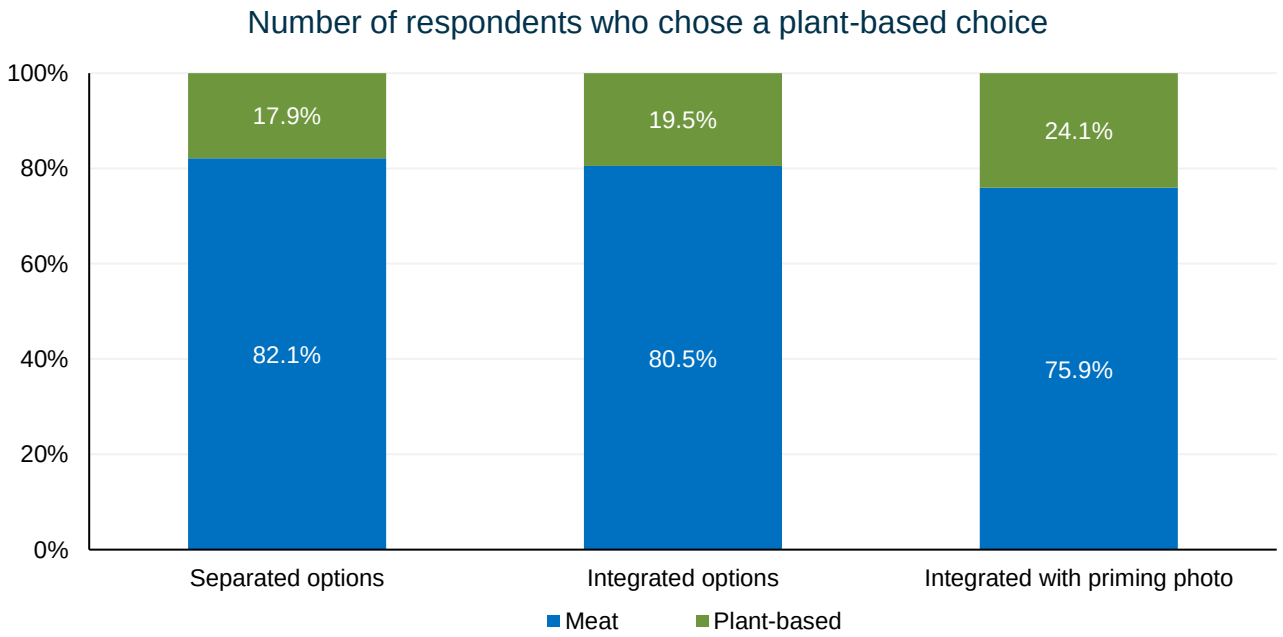
Result: Integrating options led plant-based choices to make up 24.1% all choices, up from 17.9%

The proportion of choices that were plant-based, changed from 17.9% to 24.1%** by integrating choices and including a salient image.

All product options and prices are the same, the only change was the positioning of the products.



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Results of behavioural insight 2

Real or perceived tastiness will drive food choice behaviour more than reported environmental benefits.

Marketing messaging intervention design

The framing of messaging is just as important as the message itself. In this intervention, we are comparing the self-reported likelihood of increasing plant-based choices based on how a marketing message is framed.

Respondents were shown one of three mock marketing messages and then asked to answer the below question. The first marketing message (shown opposite) is a simple educational message. Education is a tool commonly used by policy makers who aim to shift behaviours, however, in behavioural science, we recommend avoiding relying solely on education to inspire change, so other framing opportunities are important to test.

After seeing this sign, how likely are you to consider eating a plant-based dinner at least 1-2 nights a week?

- ◯ I already do
- ◯ Very likely
- ◯ Likely
- ◯ Neutral
- ◯ Unlikely
- ◯ Very unlikely

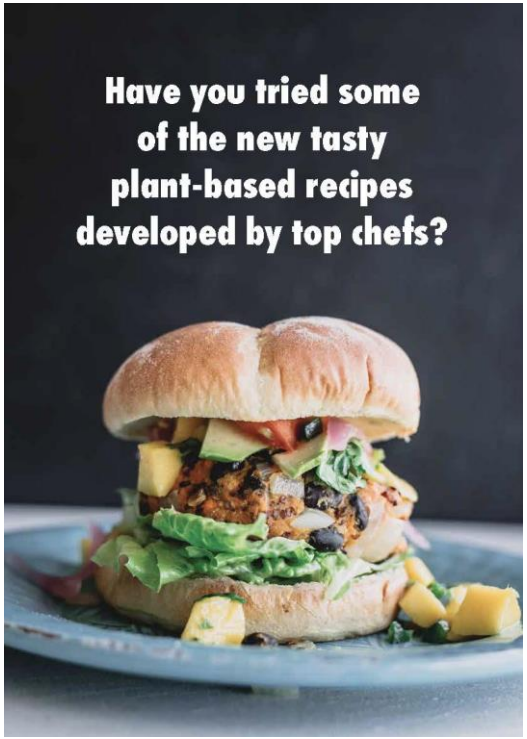
Education marketing message (version 1)

Marketing messaging intervention design

The second marketing message highlighted how plant-based food is tasty. Aligned with our second behavioural insight, we were looking to identify how tastiness would drive plant-based choice motivations, compared with educational messaging.

Version three tested a social norm – the idea that we like to follow the actions of others. Social norm has been effective in lots of contexts, including trials in NZ. The idea that the message is designed with what could be described as a surprising norm, aimed to encourage individuals to consider joining the others already trying plant-based options.

Tastiness marketing message (version 2)



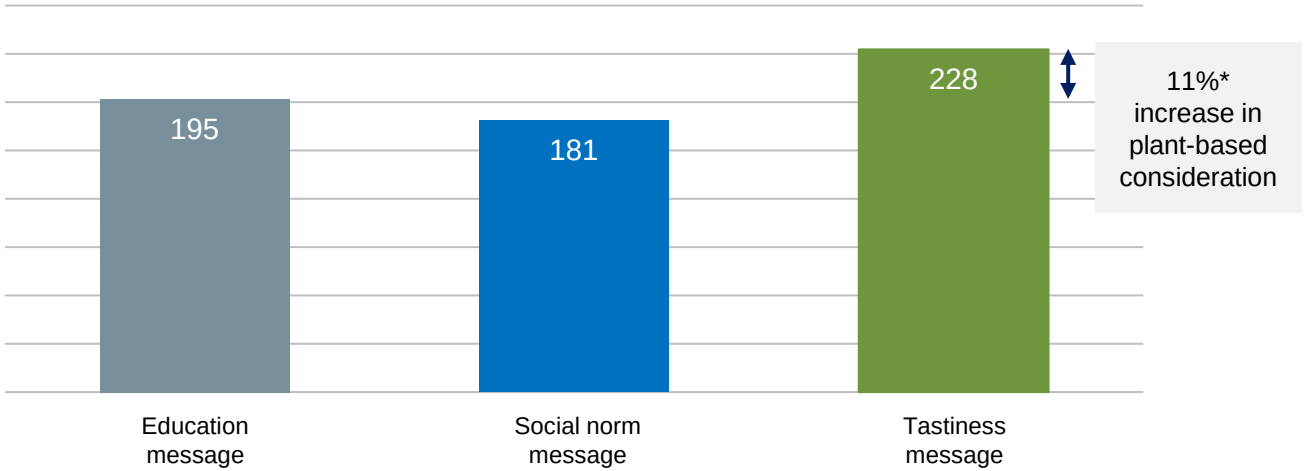
Social norm marketing message (version 3)

Result: Individuals are driven to consider plant-based food options due to tastiness over environmental factors

Different message framing has led to different plant-based preferences. Comparing a traditional education-based message focused on the environmental benefits to a message focused on tastiness, we see a 11%* increase in people likely to increase the number of plant-based meals in a week.

The social norm framing had no positive effect.

Number of respondents who stated they'd consider increasing their plant-based meal choices — categorised by which marketing message they were shown



N total respondents choosing plant-choices = 604
N total sample of respondents including meat-choices = 1,930

*statistically significant change (.90 confidence)

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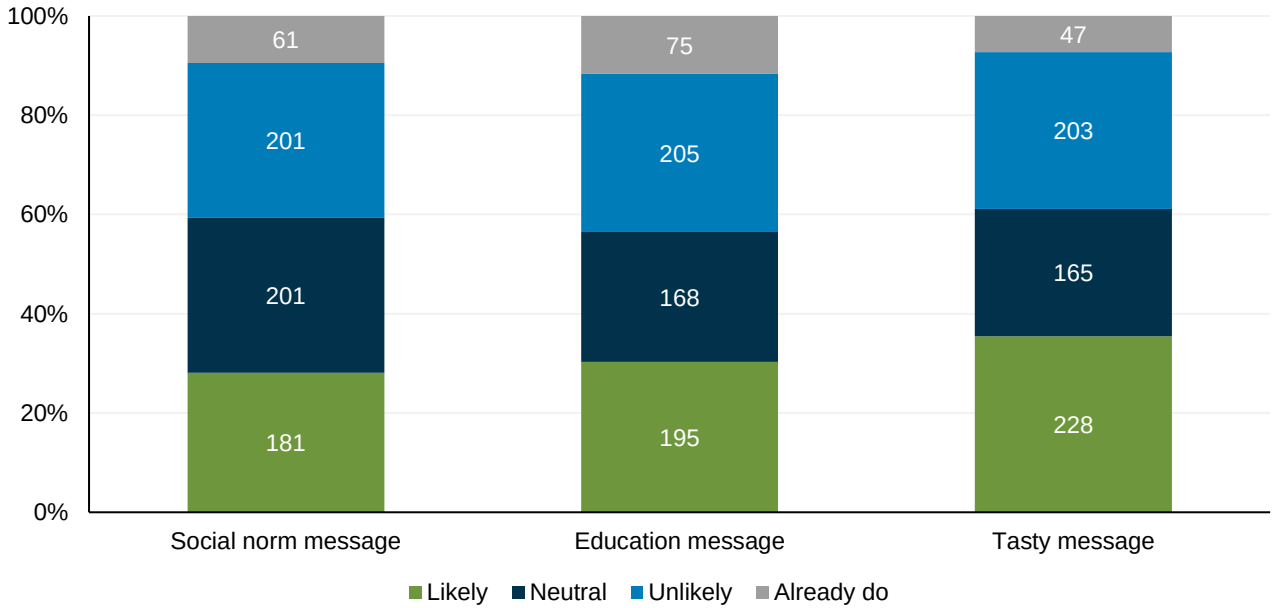
Result: Individuals are driven to consider plant-based food options due to tastiness over environmental factors

The proportion of respondents who said they would consider adding an extra plant-based meal a week, went from 30.3% to 35.5%* when comparing a more traditional education-based message to a tastiness framed message.

How likely an individual is to add 1 extra plant-based meal a week



*statistically significant change (.90 confidence)

N total of aggregate sample = 1,930
Aggregate of all respondents

Auckland Council

Reasons people give for considering increasing their plant-based food consumption

After we asked people if they'd be open to eating one more plant-based meal, we asked why they'd answered as they did. Below are some of the answers people gave who agreed to eat more plant-based meals. Key themes that came through was a recognition of the health benefits, environmental benefits and enjoying the taste.

It's better for the environment

Because it is better for the planet and the product taste has improved

Worth helping environment and trying different plant-based food

It looks tasty

Burger looks good

It looks really yummy

I'm interested in eating more plant based

We are a family of meat eaters however I could be convinced to have a meat free night.

It's something I have been wanting to do for a while and have been flirting with it on and off without committing to it.

I'm keen on more plant-based meals, but I have to persuade my husband to do too

We eat a lot less meat than a few years ago and are slowly reducing it already

It's healthier

No harm in trying to get healthy

I am interested in making food choices that are good for my health

I want to try it but don't know how

I want to eat plant based but lack knowledge and money to do so.

I have been on and off plant based and always looking for new recipes

Reasons people give for not wanting to consider increasing their plant-based food consumption

After we asked people if they'd be open to eating one more plant-based meal, we asked why they'd answered as they did. Below are some of the answers people gave who'd said they'd not consider eating more plant-based meals. Key themes included loving meat, disbelief in climate change or related scientific evidence and wanting to as an individual but family members (predominantly male) not wanting to. The image we'd shown people was of a plant-based alternative, rather than vegetables, therefore a number of comments focused on wanting to avoid processed food.

Health/nutrition factors

Meat is good for you and family likes it.

Plant-based diets do not provide optimal nutrition.

I am already on quite a restrictive diet - being vegetarian is tricky.

Plant based have more additives. Also, it depends on how they are grown i.e. sustainably.

Cost

Plant based is expensive.

Don't believe in climate change

I reject climate pseudo-science.

Taste

Plant based meals hold no appeal for my family and I, mainly due to lack of texture and flavour.

Because it looks disgusting.

Family is against it

While I would be happy eating an extra plant-based meal, my husband and son wouldn't.

Unfamiliarity

I eat what I am used to.

Don't want to give up meat

I enjoy meat.

Negative connotations

I extremely dislike pushy vegans.

Results of behavioural insight 3

Although taste is a core driver, labelling food with some form of sustainability cue will still lead to an increase in purchases.

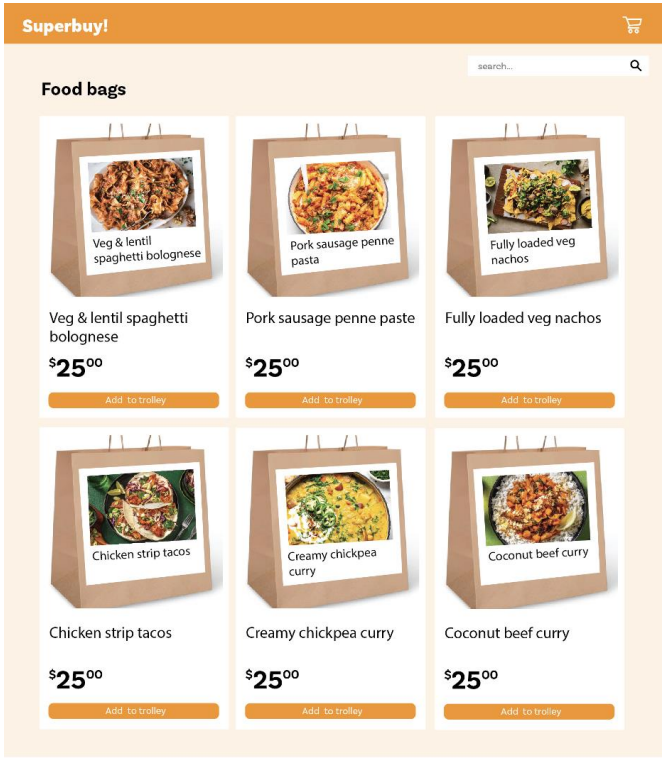
Food bundling with labelling intervention design

The moment of purchase is a critical opportunity to encourage an individual's food choices. The team was interested to understand whether labelling food choices as sustainable would encourage more plant-based food choices.

This intervention was modelled on a similar system in Melbourne. Using a traffic light system of red, amber, and green on menus to illustrate healthy foods, Melbourne City Council were able to increase the purchase of healthy foods. While Melbourne used a traffic light system, this intervention design looks only at positive framing, making the issue of sustainability salient at the point of purchase.

Respondents were shown one of three potential mock online shopping experiences. This first one provides a number of plant-based and animal-based meal options integrated with no labels. Respondents were asked to select their meal of choice.

Food bag no label (version 1)

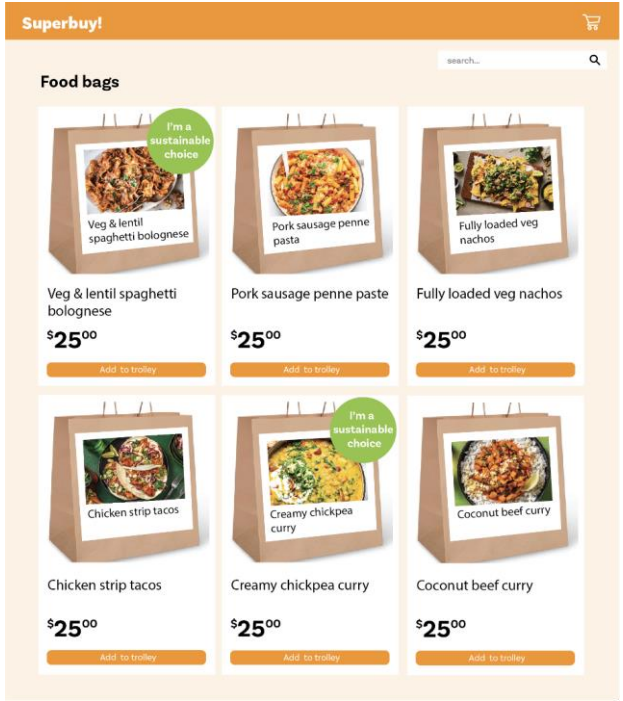


Food bundling with labelling intervention design

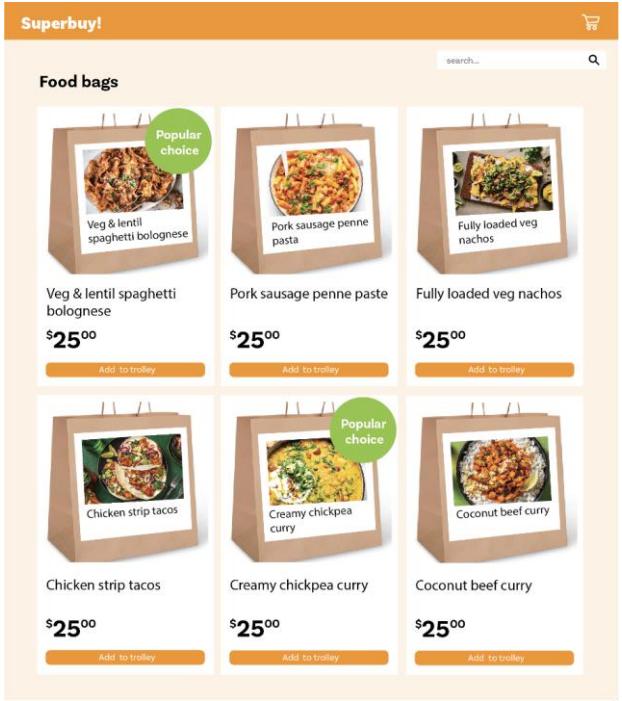
The second version of the online shopping experience included a small label saying “I’m a sustainable choice”.

As we had a testing opportunity with a third intervention group, we also tested a third message framing — focused on the concept of social norm.

Food bag sustainability label (version 2)



Food bag social norm label (version 3)



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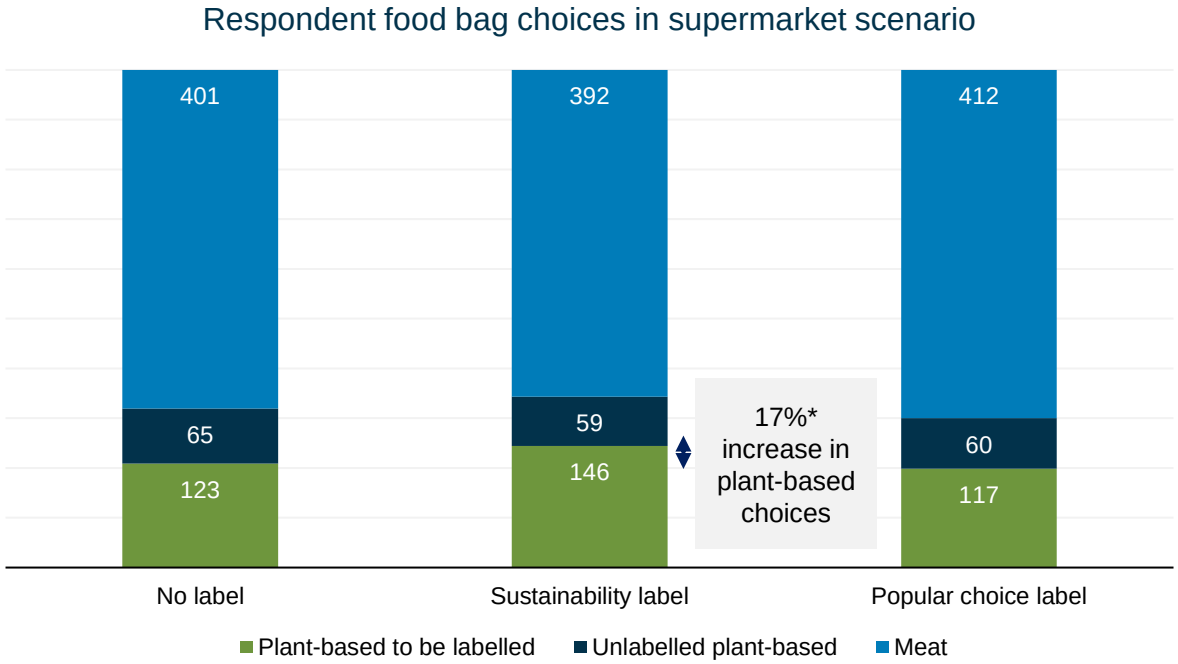
Result: Adding a sustainable label to select plant-based options increased the likelihood of individuals choosing those options

Without changing any of the options provided, we saw an 17%* increase in respondents choosing options that were labelled 'sustainable', when compared to options without a label. This resulted in an increase from 123 people to 146 people.



*statistically significant change (.90 confidence)

N total respondents choosing plant-choices = 570
N total sample of respondents including meat-choices = 1,771
This excludes all survey respondents who classified themselves already as vegan, vegetarian or pescatarian.

Chocolate bar labelling intervention design

The last of our testing scenarios looked at what framing on a chocolate bar would most attract respondents.

Each respondent was presented with three chocolate bars (shown opposite) and asked which they'd choose.

We focused on keeping all branding and colouring the same to best ensure it was the framing, and not other factors, that would influence an individual's choice.

Decadent (version 1)

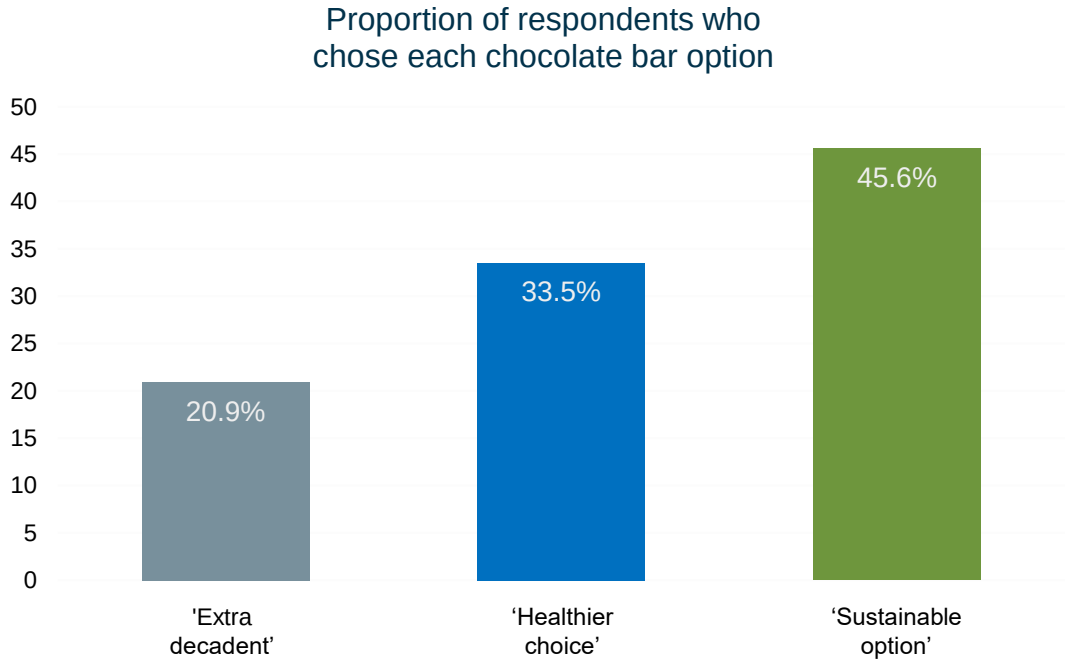
Healthier choice (version 2)

Sustainable (version 3)

Result: When other factors are considered equal, like taste, then a 'sustainability' label could encourage product choice

We found that labelling the chocolate as sustainable led to more than double the respondents choosing it, when compared to a bar labelled 'Extra Decadent'.

Our behavioural insight as to why sustainable in this instance is more successful than taste framing, is that people may assume that all the chocolate options taste the same.



N total sample of respondents = 1,935

Next steps on results

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Next steps based on results

The findings of this report suggest that behavioural interventions, such as carefully designed choice architecture, can increase low carbon food choices by a meaningful amount, and potentially play an important role in supporting Auckland Council to halve Aucklander's carbon emissions by 2030. To maximise impact these findings will be shared more widely with central government agencies and councils doing similar work and research.

The results will inform a long term pilot to encourage plant-based food choices and reduce Aucklander's carbon footprint. Auckland Council will continue conversations with supermarkets and grocery stores who align with this kaupapa to build a partnership for the implementation of a long term pilot trial to increase low carbon food choices, most likely around choice architecture.

As well as the pilot, Auckland Council would like to test an in-person ingredients stand within a supermarket, another intervention detailed in the secondary research report to understand if people will eat plant-based meals if it is made convenient.

The results of this test suggest there is value in a country-wide labelling programme. A long term application of the 'green' labelling initiative tested in this project, this would be a recognisable labelling across Auckland/the country to identify low carbon options. Auckland Council will continue conversations with MPI and MfE to explore long term policy applications for this programme and a pilot trial.

This is a stand-out and unique study with useful results. It's recommended this study is shared widely as a unique piece of actionable thought leadership for the Council.

Finally, any new Live Lightly marketing will be informed by the insights that people respond better to messages focussed on tastiness.

Study risks and confines

Simulation of real-life rather than being real-life
This study simulates a real-life experience for customers but ultimately is not real-life. Participants have not chosen to visit a supermarket and then spent their own money on a product in that supermarket. Due to our intentions sometimes being more pro-healthy or pro-environmental compared to our real-life behaviour this could lead to a slight bias in participants' choices.

One way we've helped to overcome this is by testing a number of design elements to make the research focus less obvious to participants. We also focused on observational questions, looking at how people behaved rather than too much focus on participant's reflections.

Using online simulations of a real-life experience is a well-used technique in the field of behavioural research.

A feeling of being watched
The pure fact that people know that they are respondents in a study, and someone will see what they are doing can lead to a slight bias in results.

Auckland Council's own research panel
The study sample has come from Auckland Council's research panel. There could be an element of bias that is introduced based on the survey sample, as a certain personality types or people with a particular interest may be more likely to sign-up to the panel.

Control considerations
A true control could not be used for any of our tests as we were not representing the real-life brand of a supermarket. However we tried to make it realistic of a 'typical' online shopping environment and included a number of other elements so it wasn't obvious to participants what we were testing.

Due to the robust design of the online experiment, we can feel confident that these results reflect real-life inclinations, but the next stage of this work would preferably include, if possible, some form of real-life experiment.

Appendix 1:

Insight on people's reported food choice behaviours

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Respondents self-report food choice behaviours

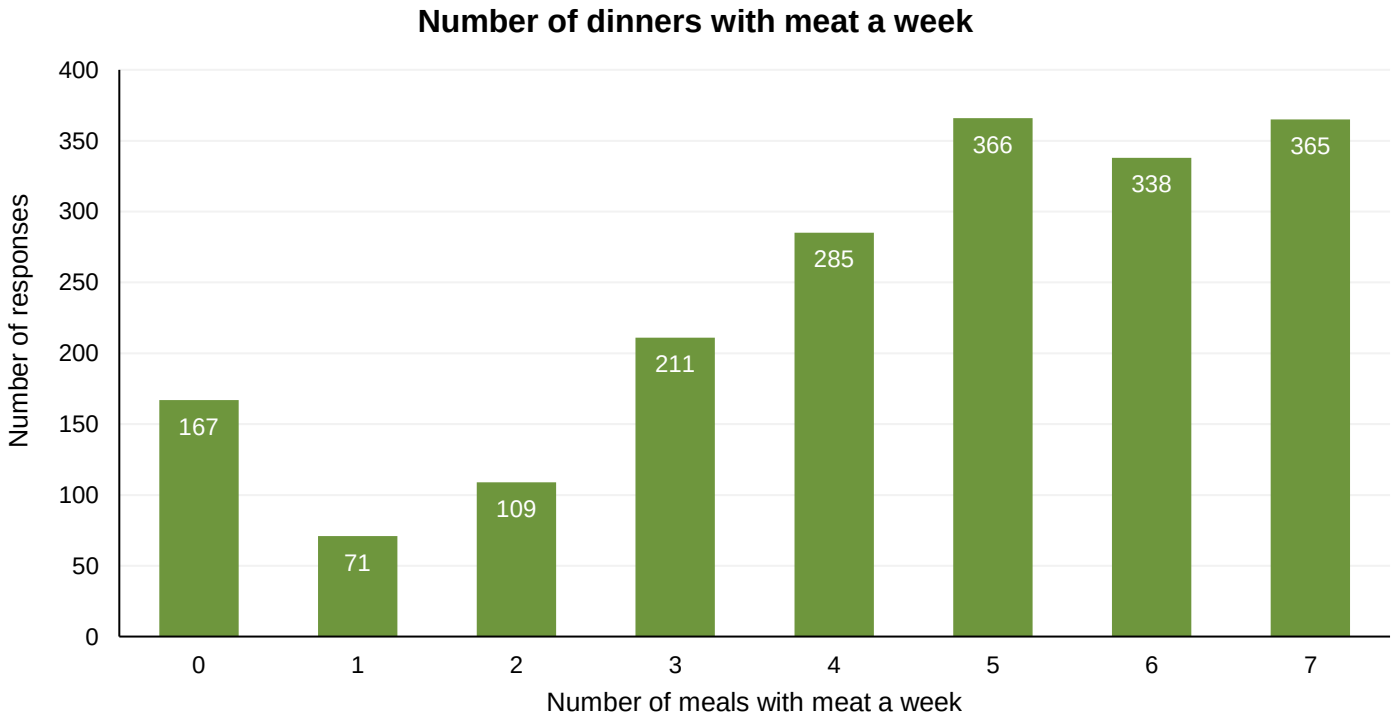
As part of our online scenario test, we included a select number of questions asking respondents about their typical eating behaviours.

The purpose of these questions was predominantly to support the analysis of our tests, such as being able to exclude people who already only eat plant-based food. Yet, the answers to these questions also give us some insight into a typical group of Aucklanders' behaviour and perceptions.

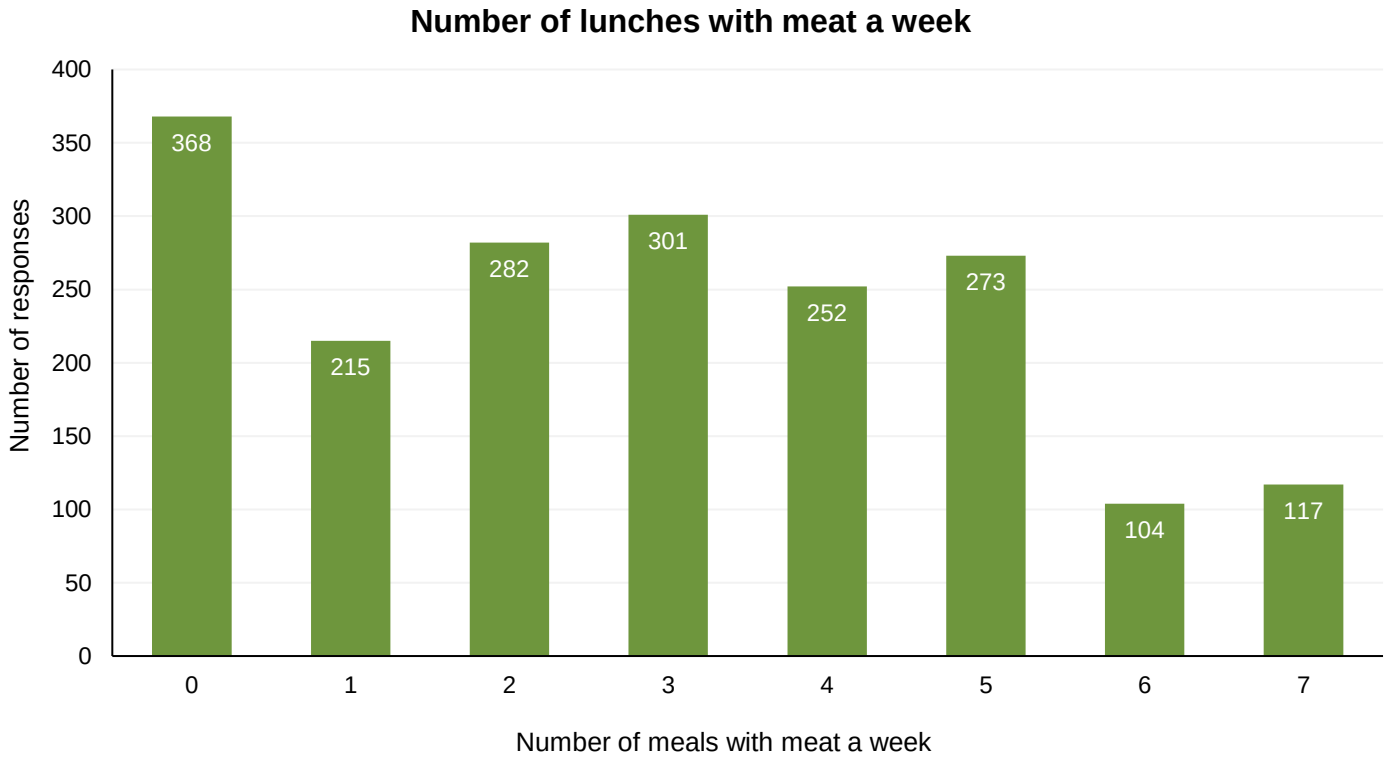
Key findings:

- People eat plant-based markedly more at lunch, compared to at dinner
- 69% of people categorised themselves as predominantly 'meat-eaters', 18% flexitarian, 4% vegetarian and 2.2% vegan
- We asked people about the language and labels they are drawn to and found that 19% of people would be drawn to vegetarian labelled food, 21% flexitarian, and 18.5% plant-based (the rest reported not being drawn to non-meat options).

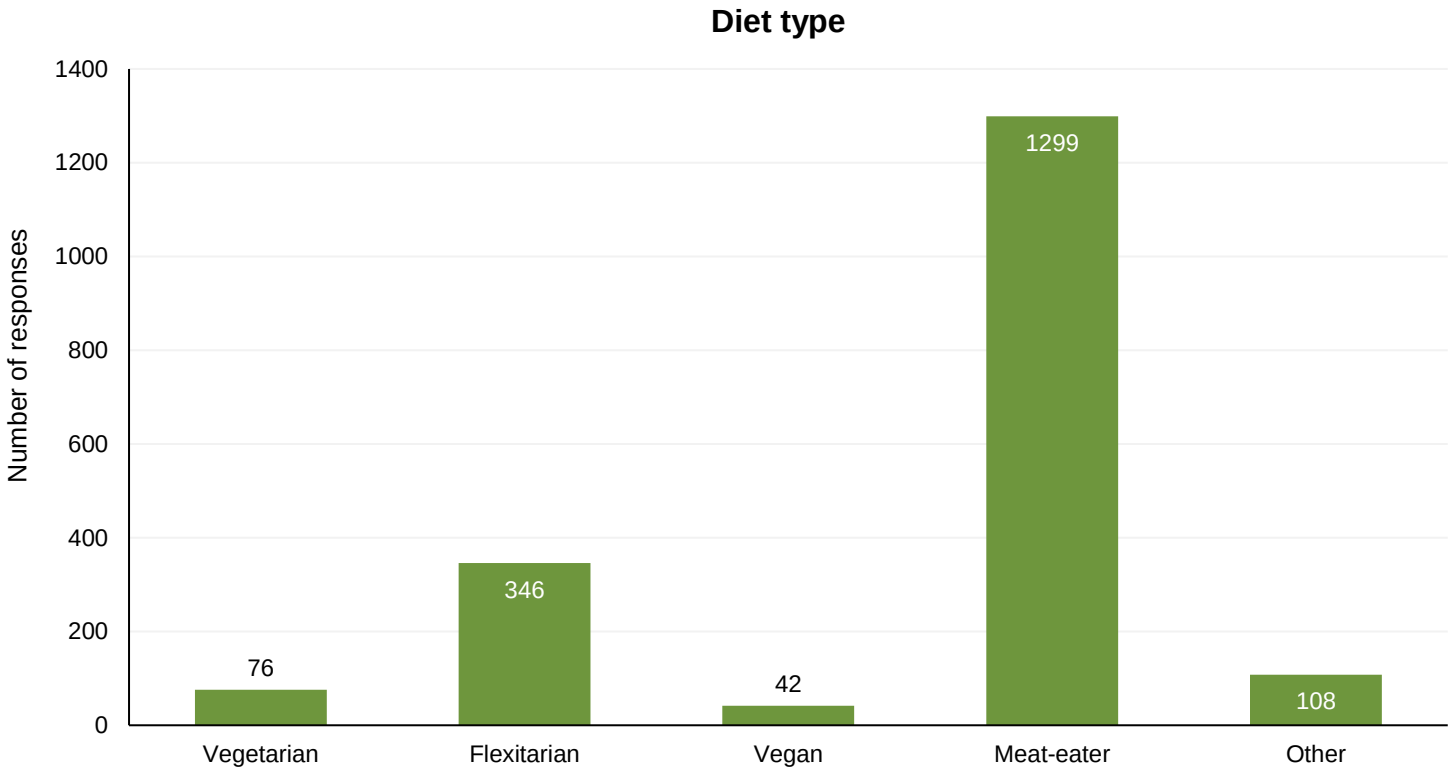
Respondents' self-report meat-eating habits



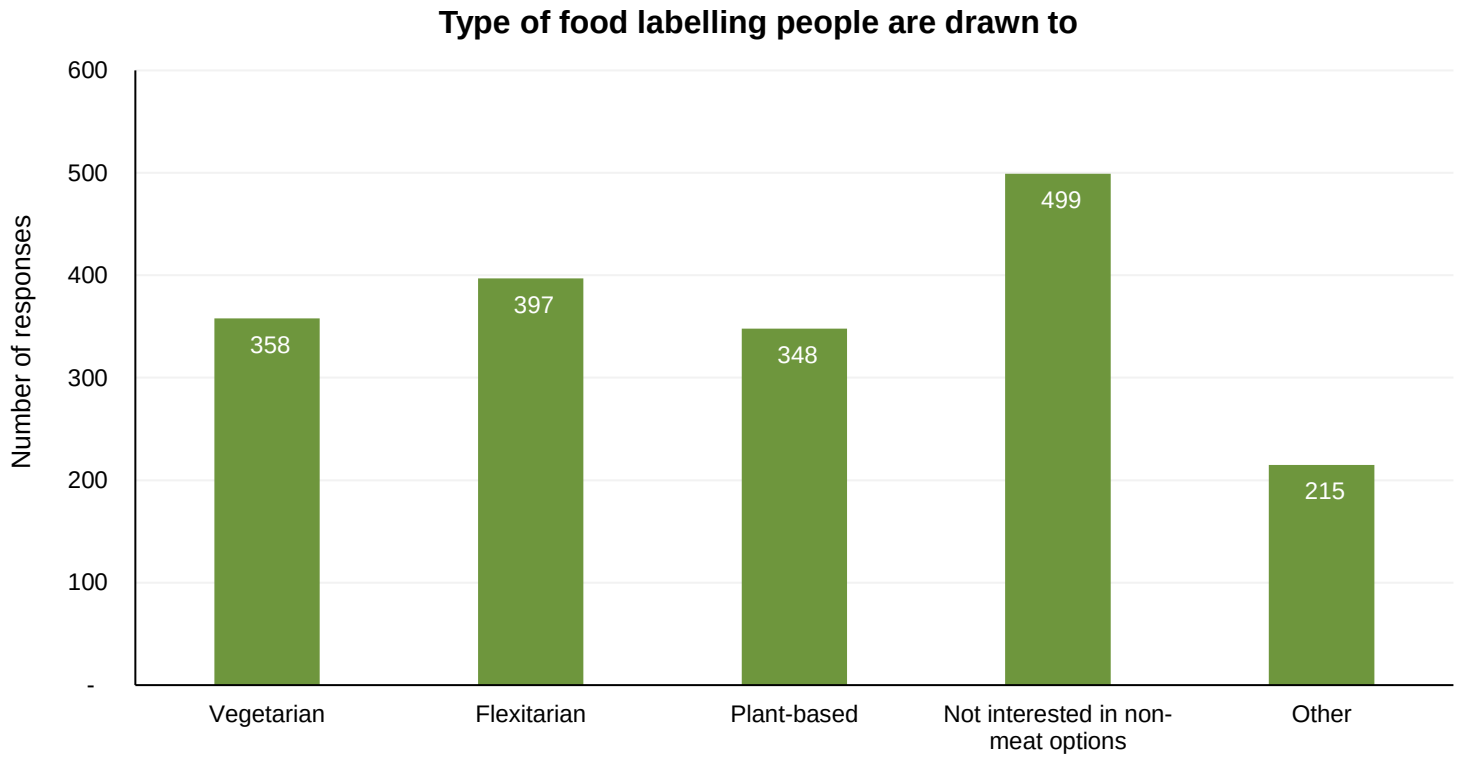
Respondents' self-report meat-eating habits



How respondents described their typical diet



Diet labels individuals report being most drawn to



Reasons people chose the label ’vegetarian’

We asked people which food label they were most drawn to. The following themes summarise the key reasons people chose the label ‘vegetarian’.

It’s easy to understand

I know what vegetarian is!

Because at least I know what I'm getting

Because I know what a vegetarian is but unclear about the rest

It seems less fussy, just plain old veg explains what I need to know. No fancy terminology

It’s a good middle option

It’s a good step into vegan for meat eaters

I feel like that one sums up what I would purchase. Vegan is a bit too extreme and I don’t really understand what flexitarian is.

It isn’t as snobby as the other labels. Feels more inclusive

It’s healthier

It feels less processed

Vegetarian sounds more healthy.

Vegan meals seem like they lack certain nutrients, compared to vegetarian

The other options sound like ‘fake meat’

I don't like the concept of "fake-meat". And making up new words to describe a vegetarian who occasionally eats meat is just stupid

I'll happily have a vegetarian meal. I'm not really interested in meat replacements.

Plant based options sometimes make the product taste like meat

It matches my diet

That's nearest to my dietary preference

I am vegetarian

Reasons people chose the label 'flexitarian'

We asked people which food label they were most drawn to. The following themes summarise the key reasons people chose the label 'flexitarian'.

It matches my diet

This already aligns with my current eating style. I like the idea of being flexible with my diet rather than saying I can NEVER have something.

I want to eat less meat but not exclude completely.

I'm interested in recipes which use smaller amounts of meat.

I'm familiar with it

I've purchased flexitarian options in the past.

It's less restrictive than the other options

Feel it's most "open" non-restrictive.

That's the most inclusive 'label' for me.

I guess it seems less regimented

I still would want to eat meat as a source of protein and iron.

It's the best of the options

Because it is not shrouded in cultish tendencies

Vegan screams "overpriced and for pretentious jerks"; vegetarian usually means "expensive and not tasty"; and "plant-based" usually means the same as vegetarian, but more dramatically so. Flexitarian, however, might just be worth trying.

The term was misunderstood (more education is needed)

Because I enjoy a bit of fish or meat to go with my salads or vegetable

Reasons people chose the label ’plant based’

We asked people which food label they were most drawn to. The following themes summarise the key reasons people chose the label ‘plant based’.

Less negative connotations

It’s less gimmicky language

Non-judgmental

It’s an approachable word

It's nice and neutral compared with the others which have become culturally loaded

Vegan and vegetarian have negative connotations and Flexitarian just sounds stupid

It doesn’t put you in a box

It doesn't classify you as something.

Not labeling self but just the food

I am interested in trying it

I've heard good things about being plant based and if I knew more would try

I would like to try it some time.

It matches my eating habits

Because I am mainly a plant based eater.

It’s clear what it is

More specific and less unknown.

Plant based is clear and a good indicator of what the product is

Healthier

Plant based implies a healthier option. Vegetarian has many connotations.

Plant based sounds healthier than vegetarian

Reasons people chose the label ’vegan’

We asked people which food label they were most drawn to. The following themes summarise the key reasons people chose the label ‘vegan’.

You know what you are getting

You can't always trust vegetarian labelling. Vegan is vegan.

I detest the flexitarian label. If it has meat, do not label the food as flexible. Vegetarian also has a lesser environmental impact and plant based is more vague.

I also like plant based but there isn’t any clear limitation to understand what that really means for the ingredients used in the food item. So I prefer vegan, but I understand that many brands believe plant based sells better to the non vegan crowd too, and I want as many people to eat sustainably as possible.

Vegan you are sure there is no meat but would read ingredients list for the others and buy if no meat

If something is labelled as vegan or vegetarian I immediately know what is (or isn't) in it. Other terms are often a bit fluffy and require me to read ingredients.

It’s simple to understand

I think vegan is more to the point and not trying to dress up non-meat. I am not personally offended by the term vegan as a meat eater unlike more sensitive

To avoid dairy

It is nice knowing something is dairy free.

Dairy allergy so knowing that vegan does not contain dairy makes it a go to without having to read ingredient lists

It matches my eating habits

Because I'm vegan.

I cook for vegans

I have vegan friends who I like to cook for occasionally

Appendix 2:

Result graphs by gender and location

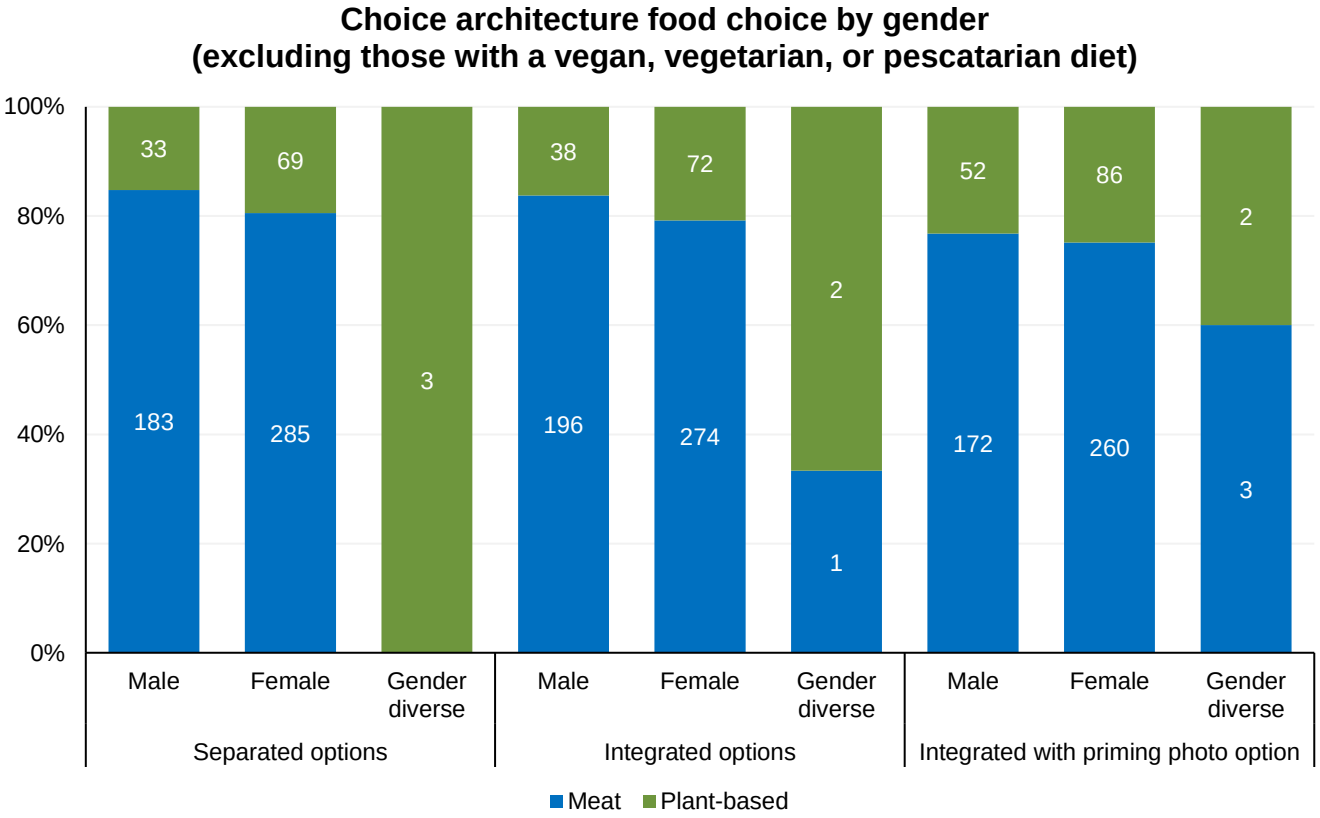
Auckland Council
Te Kaunihera o Tāmaki Makaurau

Result graphs by gender and location

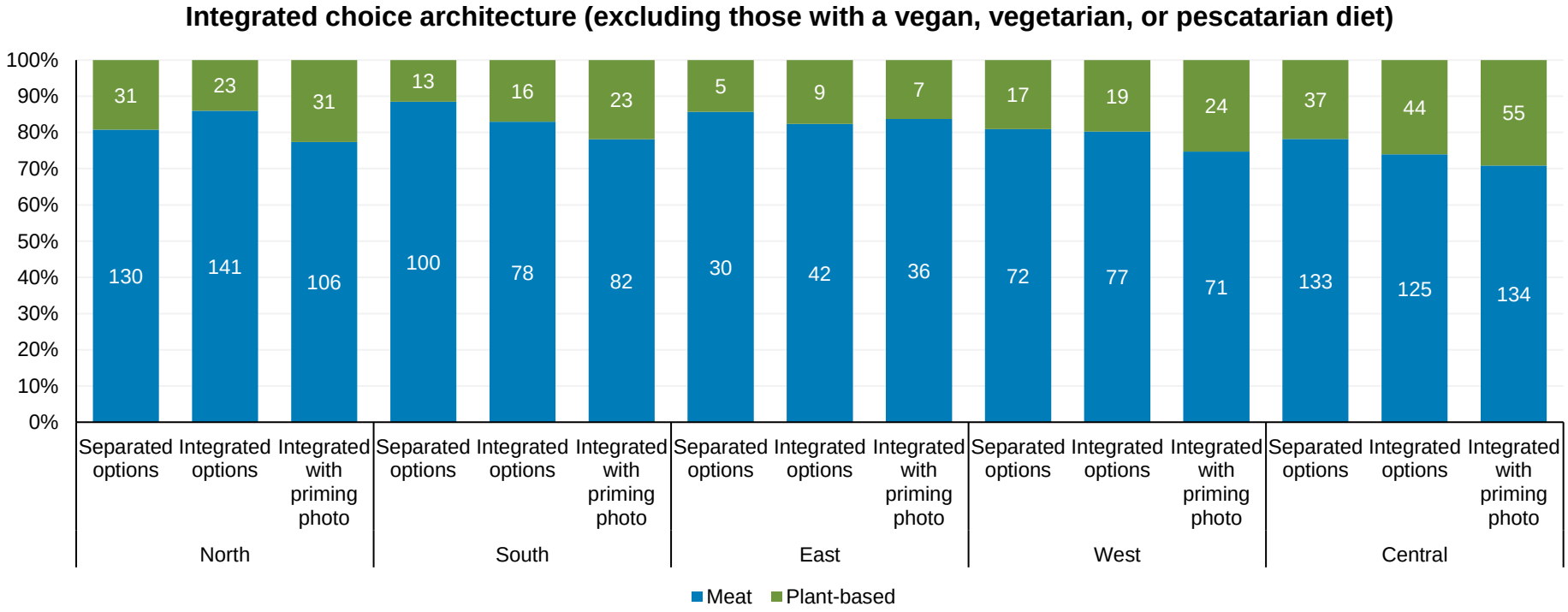
The following slides display the respondent behaviour and choices by gender and their geographic location (North Auckland, South Auckland, East Auckland, West Auckland).

It's out of scope for this report to go into detail analysing these results. These graphs are being provided for Auckland Council's reference and interpretation.

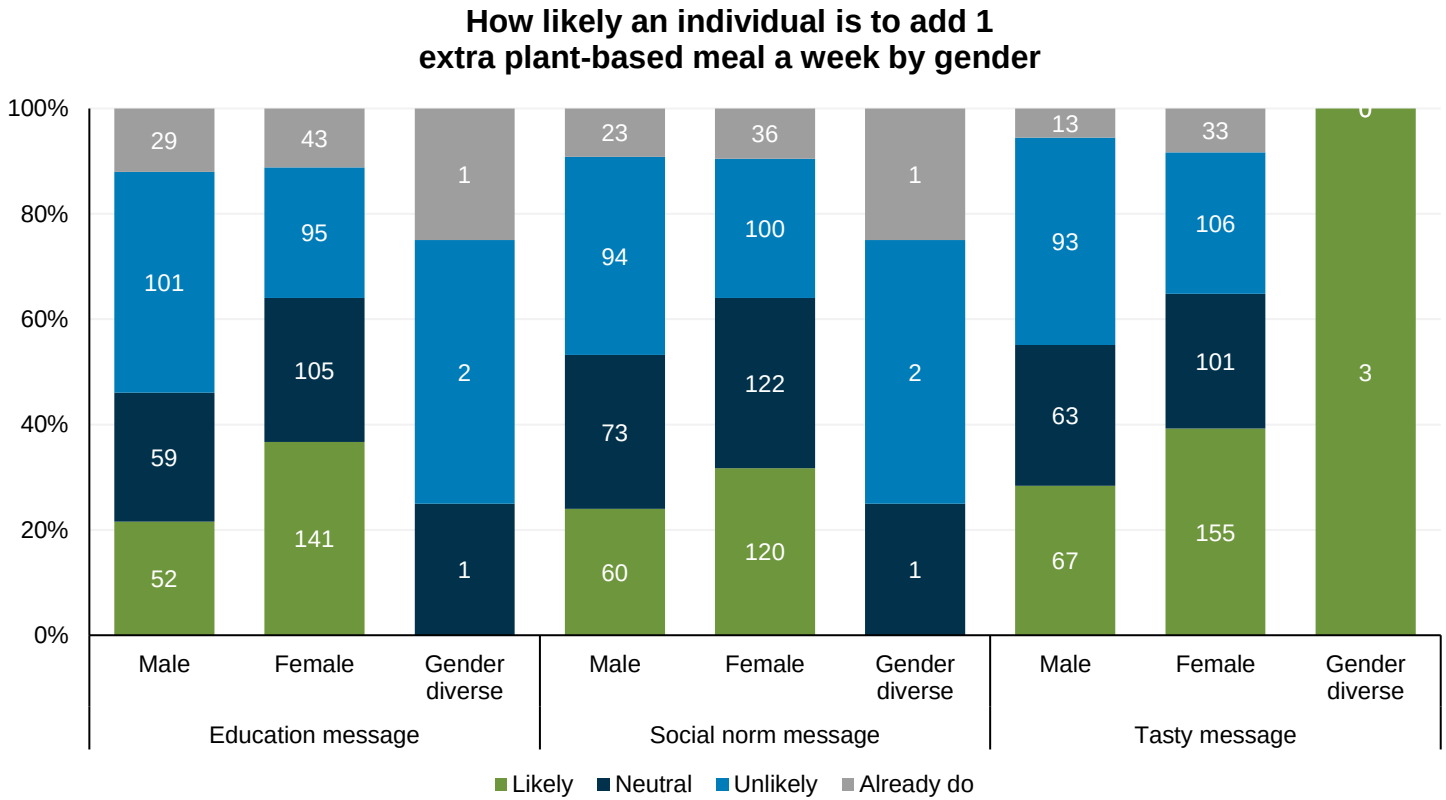
Supermarket choice architecture — by gender



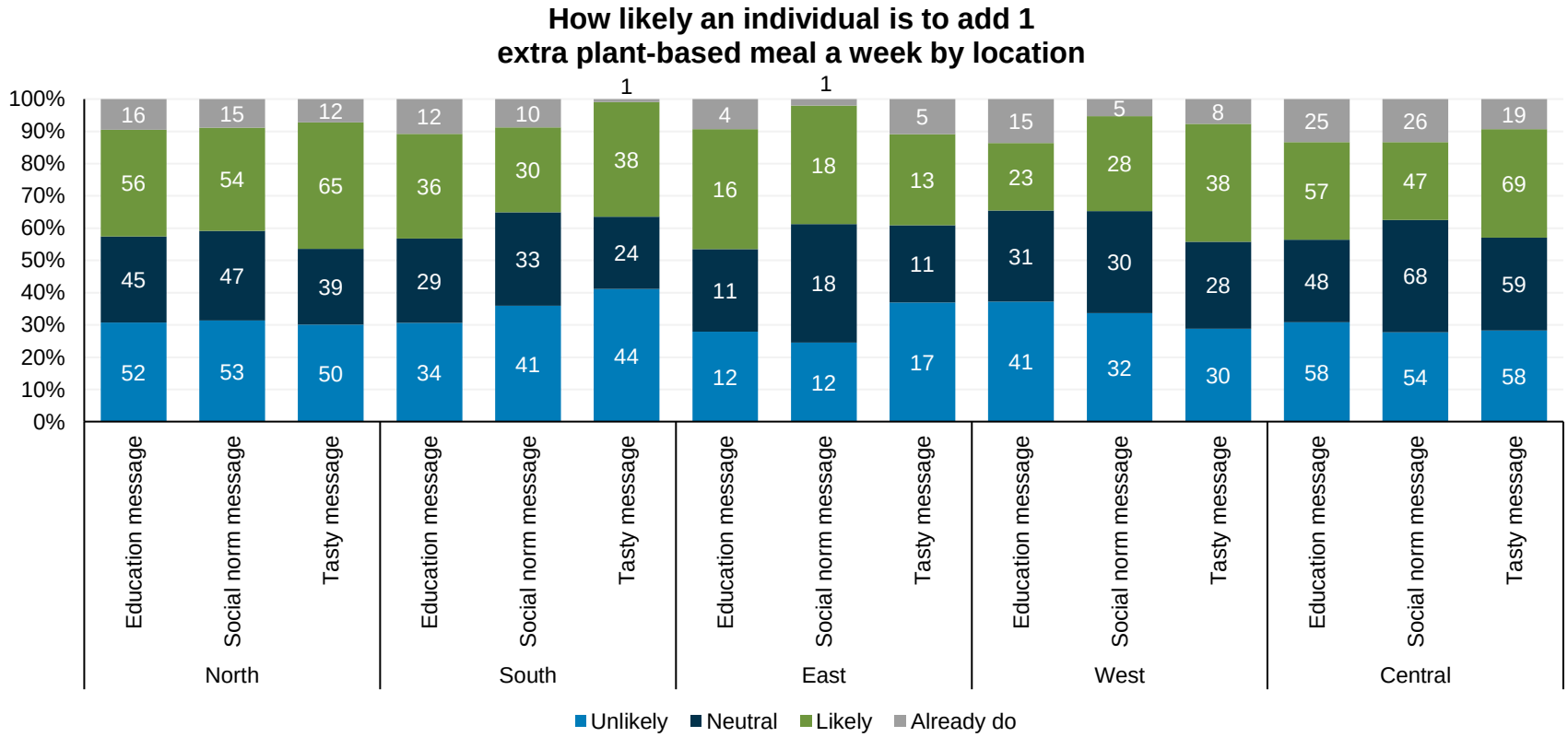
Supermarket choice architecture — by location



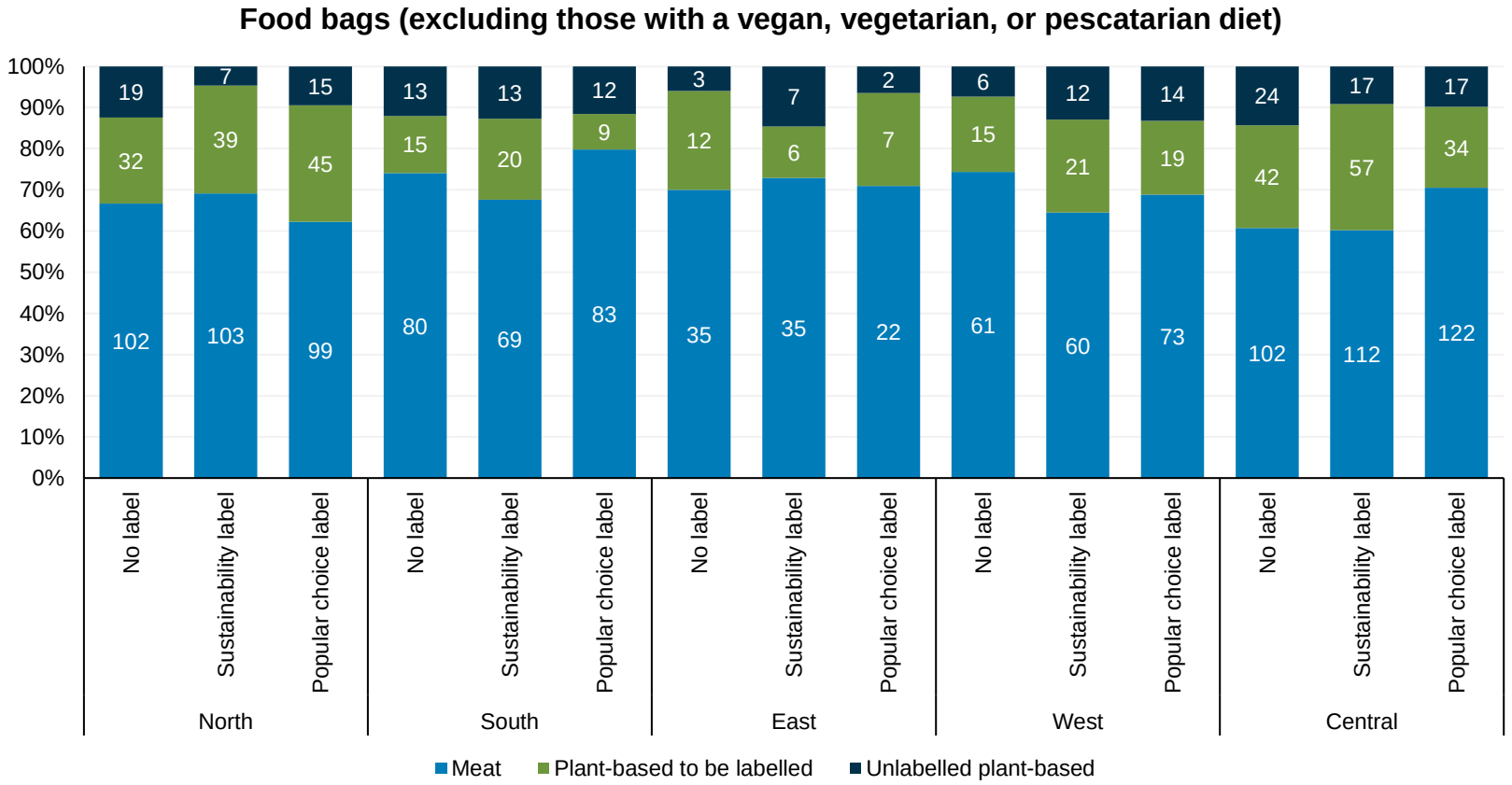
Marketing messaging — by gender



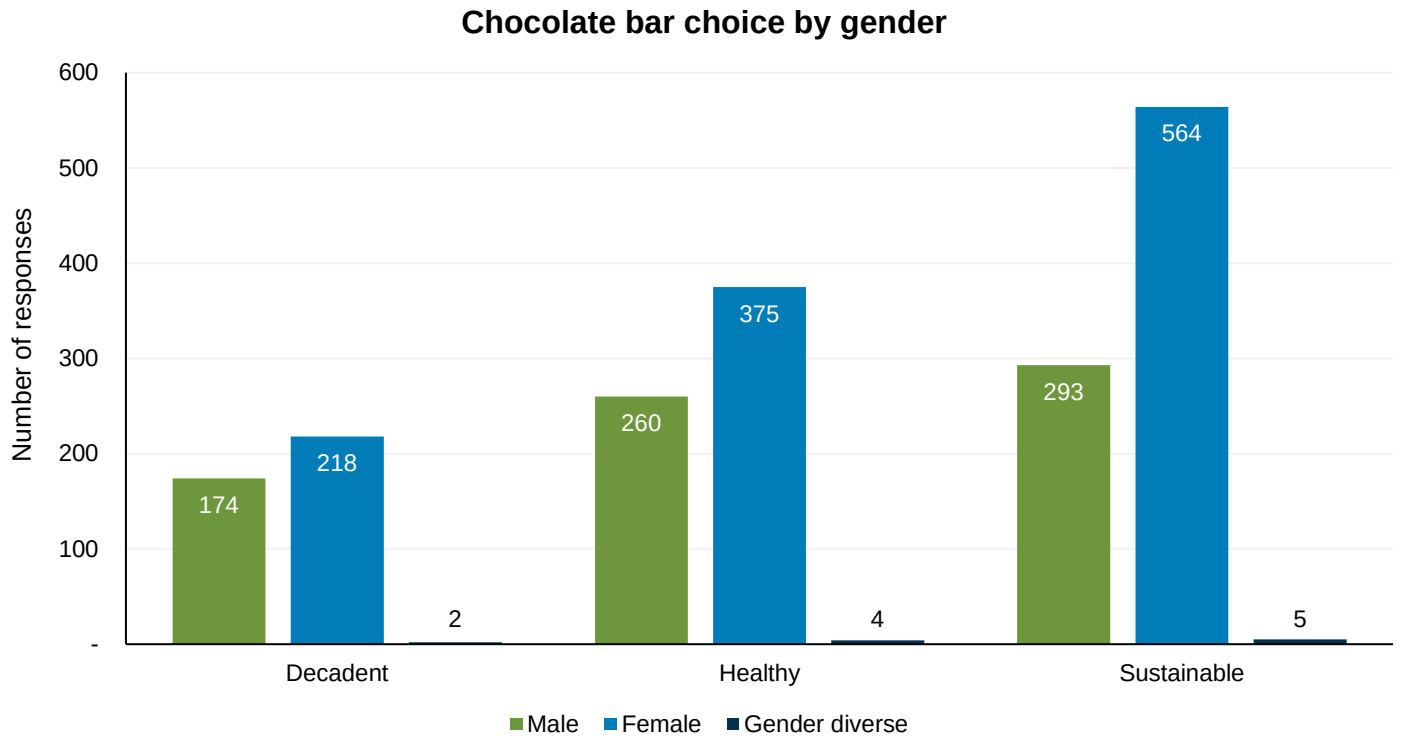
Marketing messaging — by location



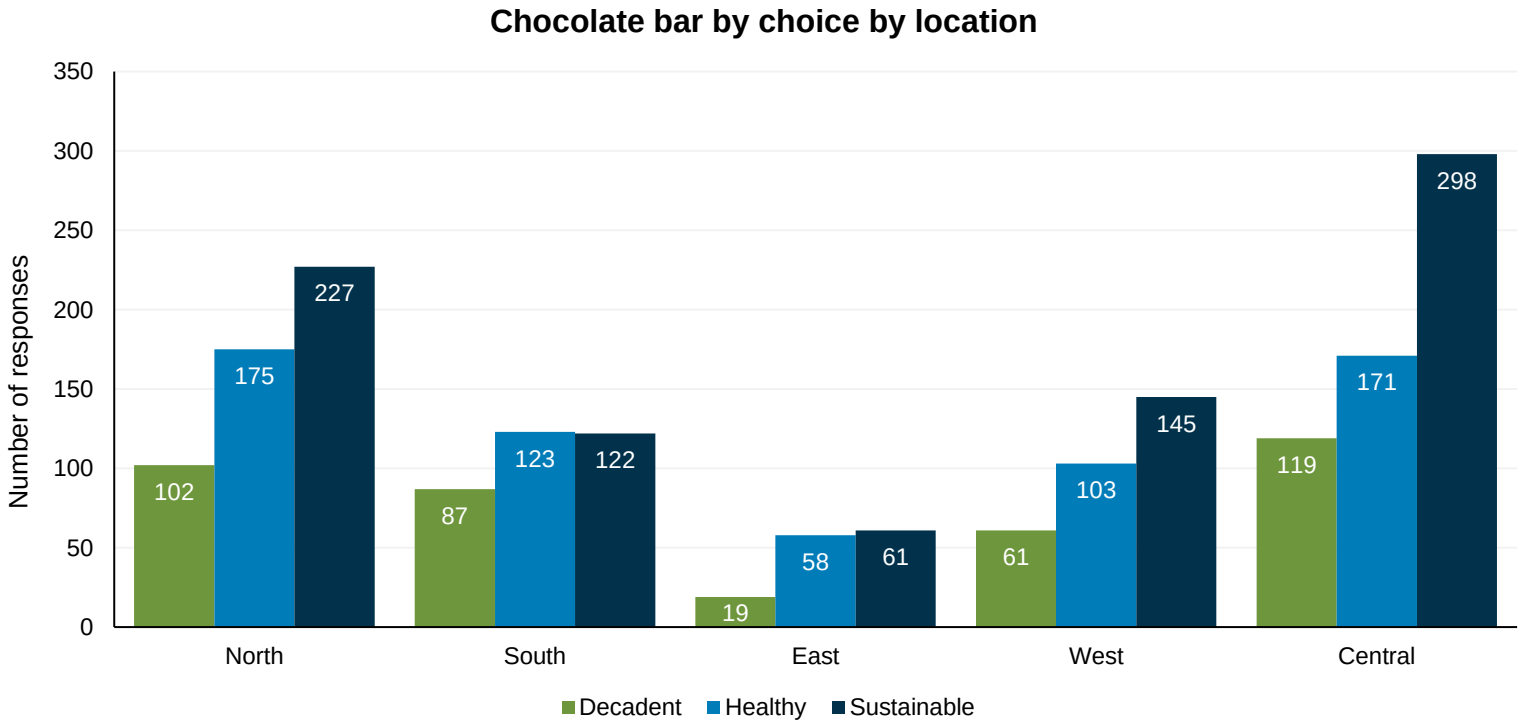
Food bag choice — by location



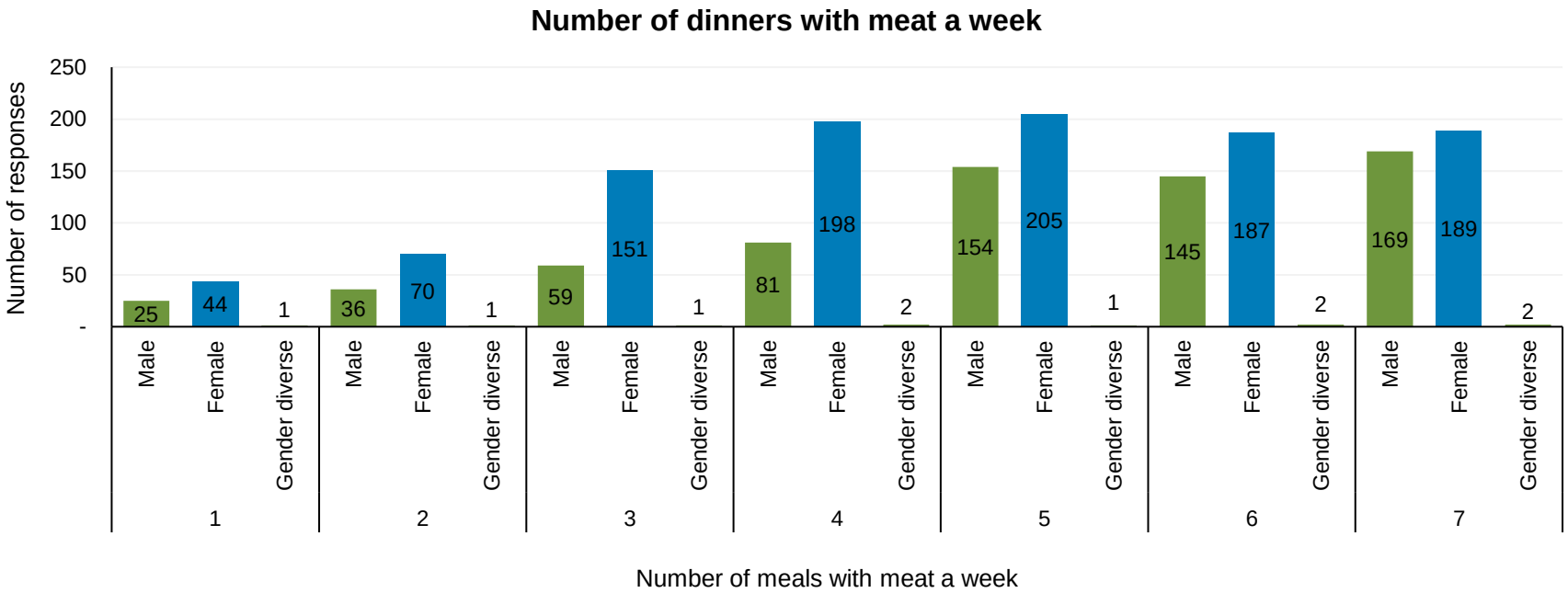
Chocolate bar choice — by gender



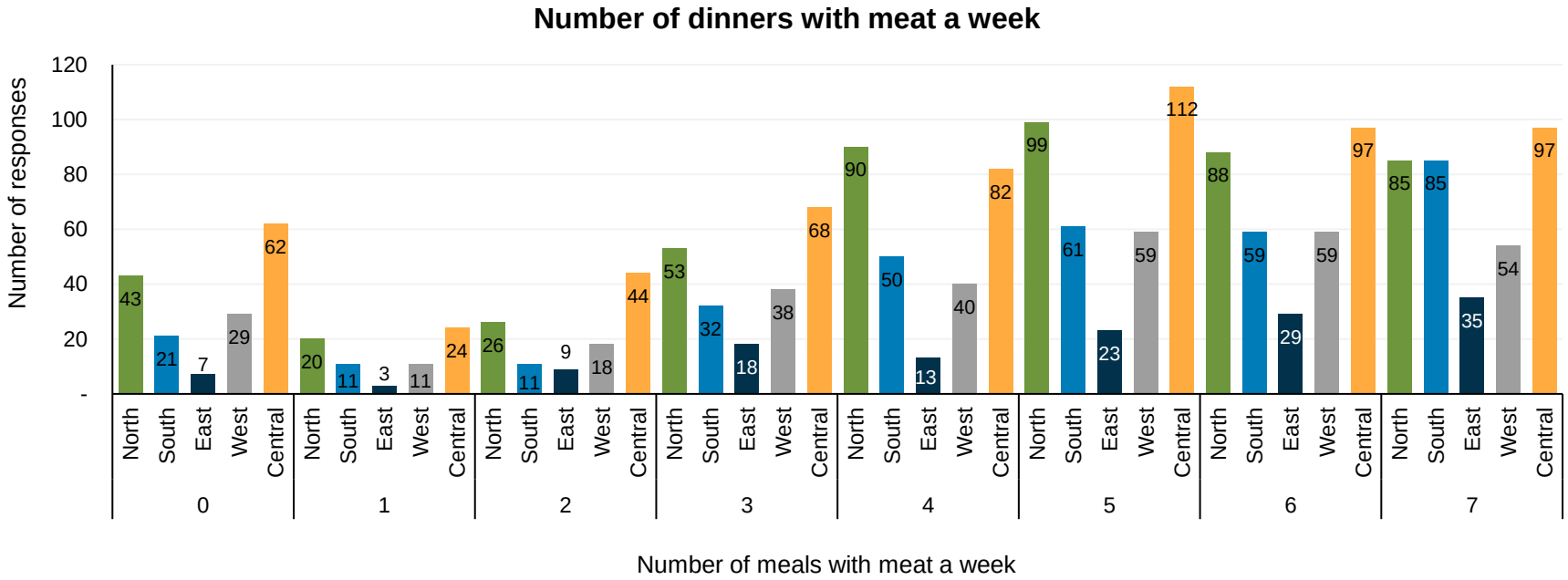
Chocolate bar choice — by location



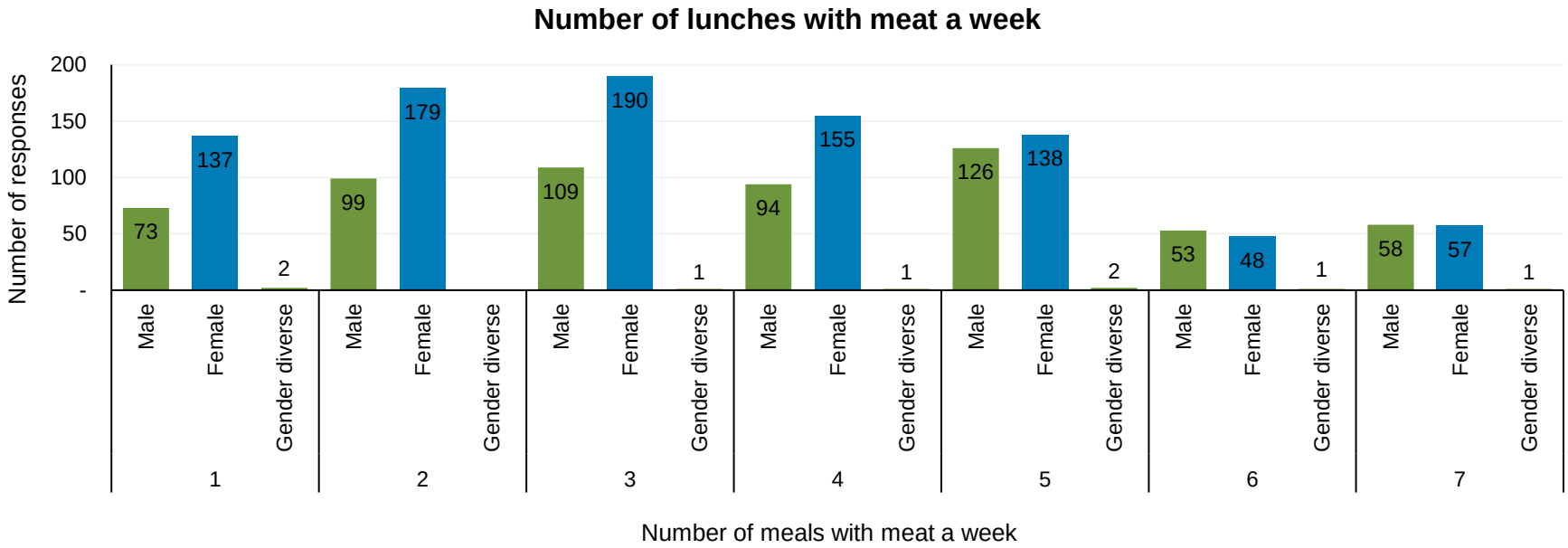
How many dinners with meat respondents have by gender



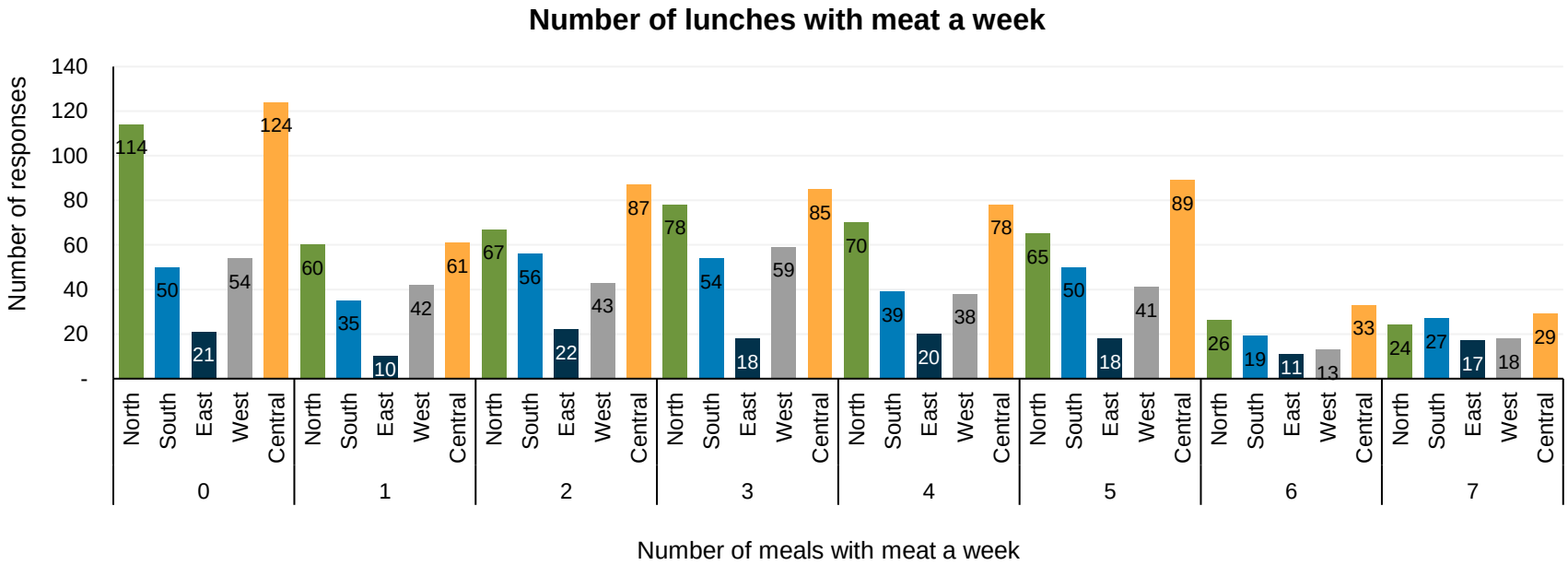
How many dinners with meat respondents have by location



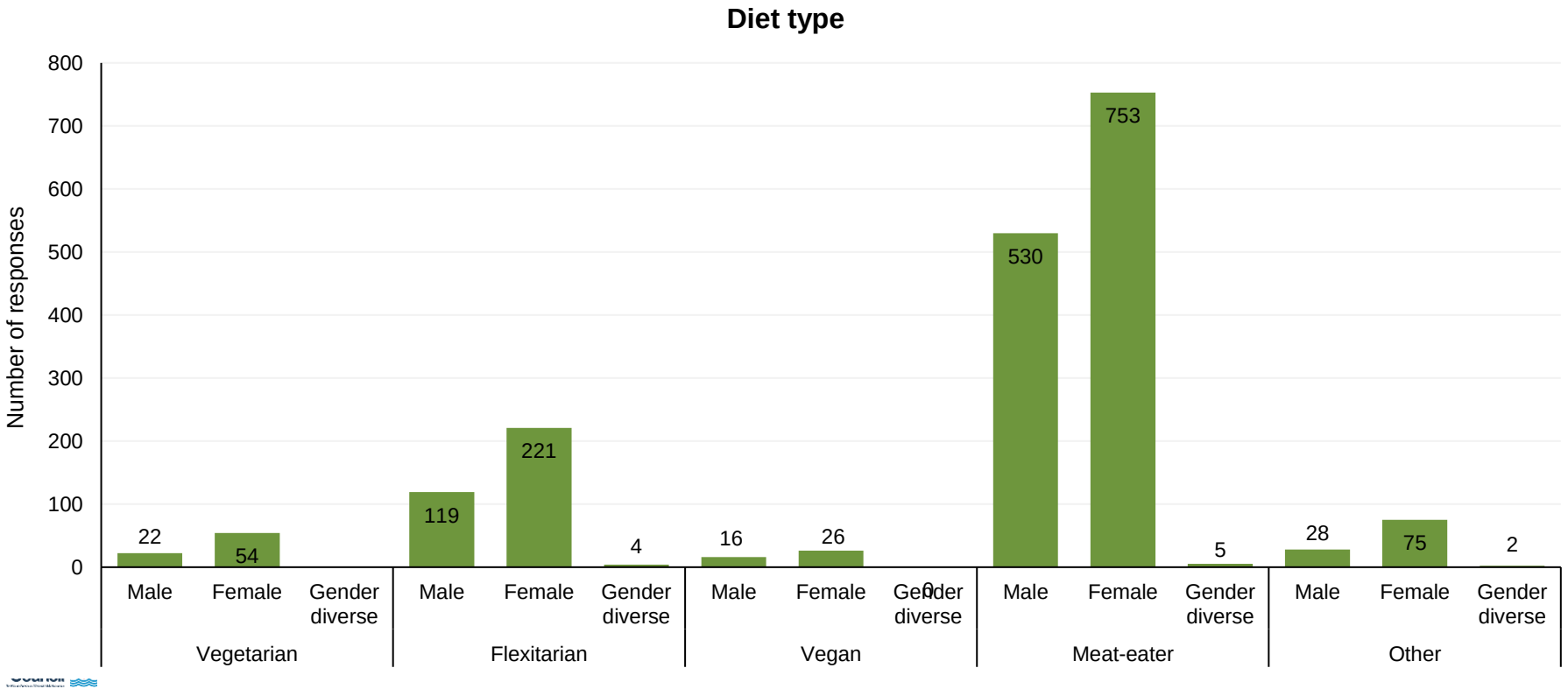
How many lunches with meat respondents have by gender



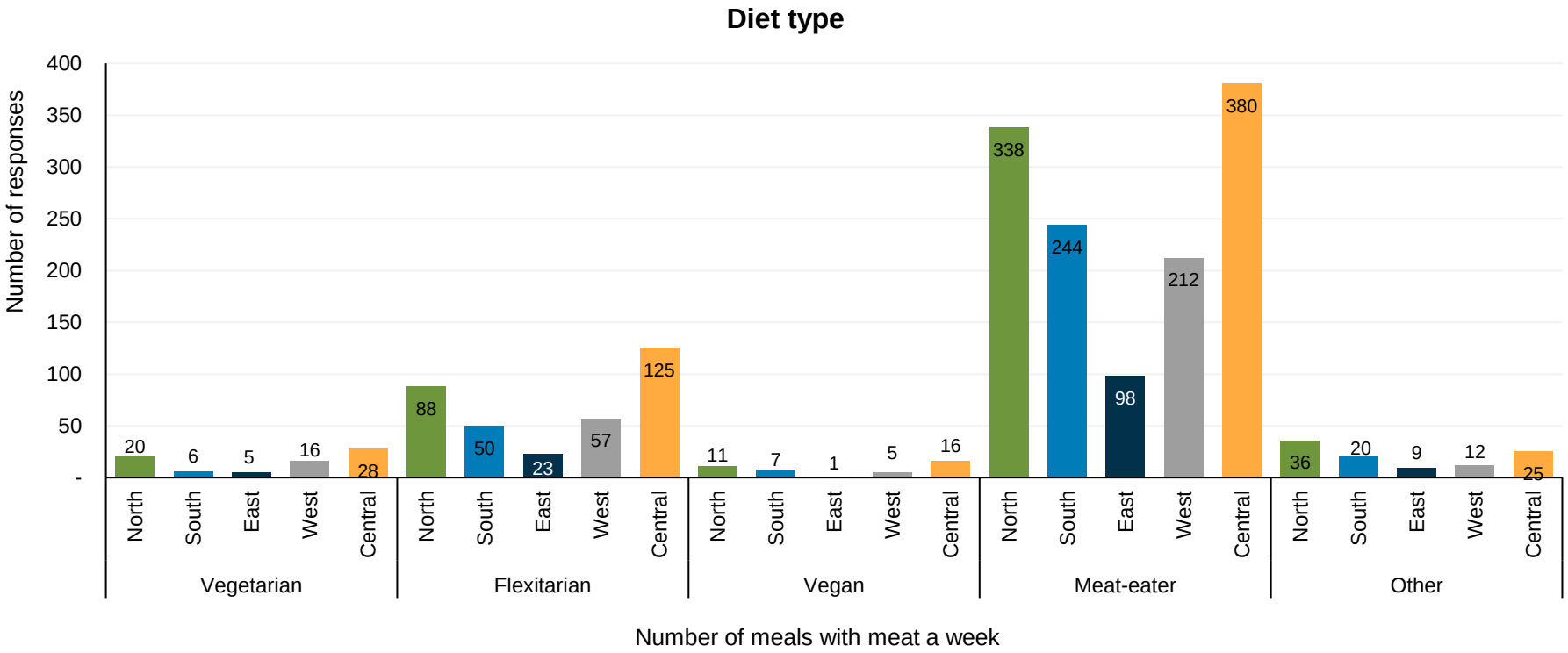
How many lunches with meat respondents have by location



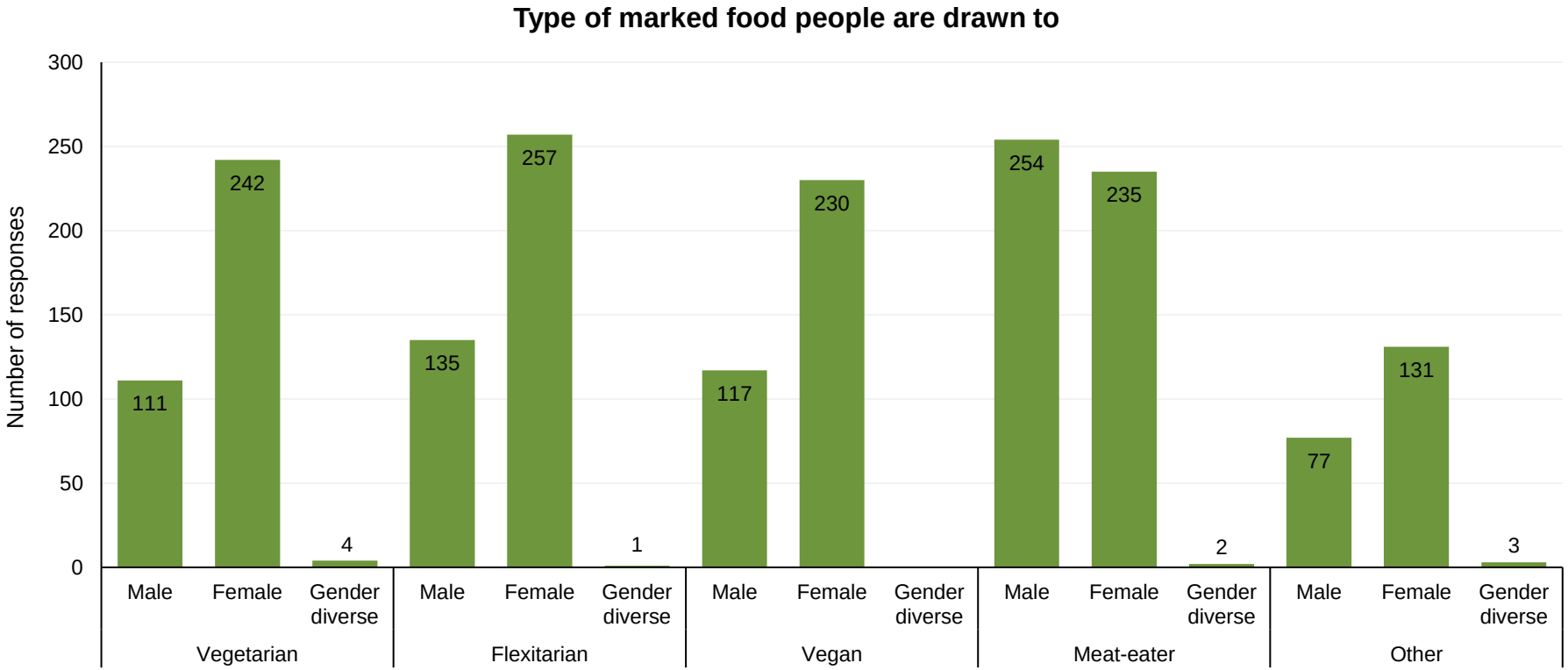
How respondents described their diet — by gender



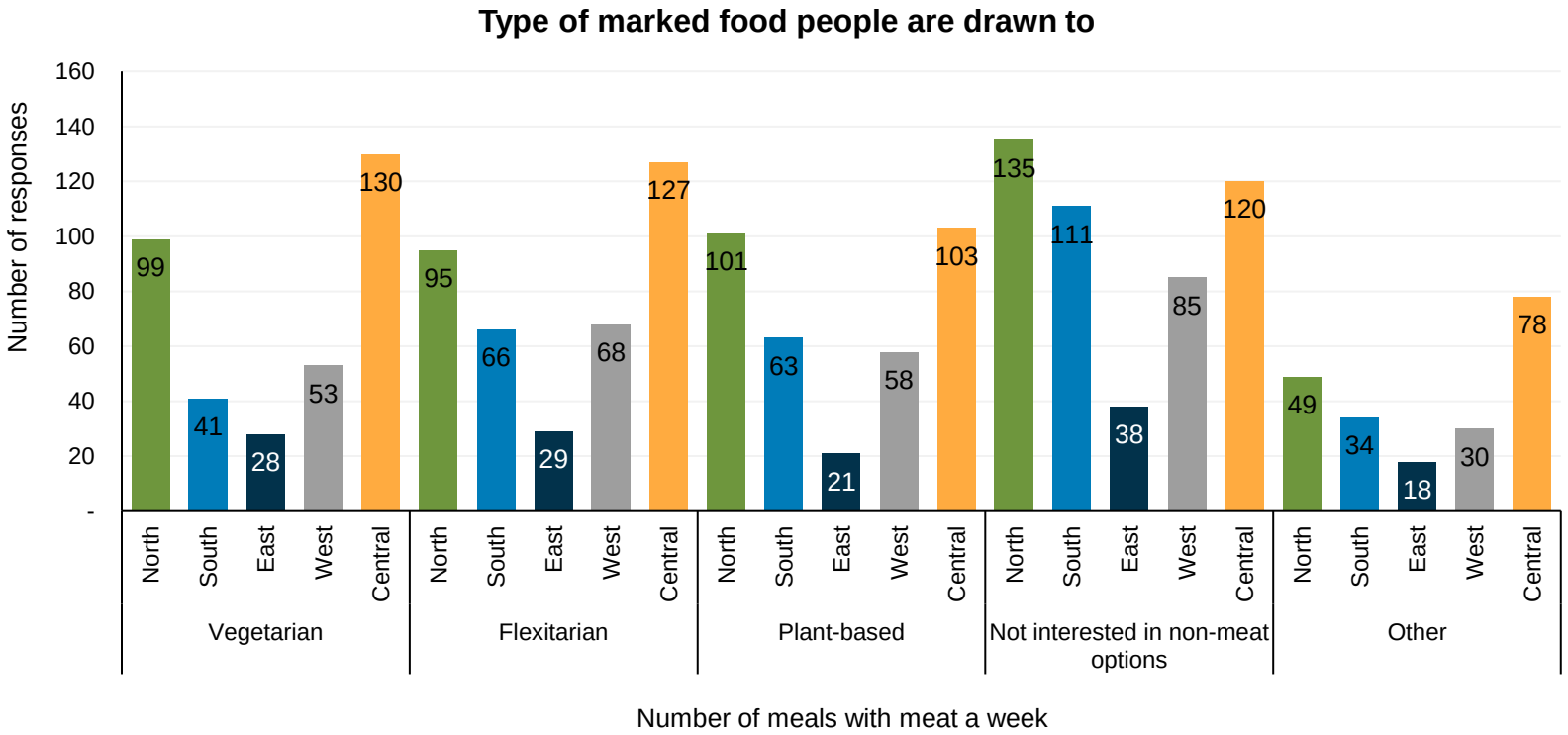
How respondents described their diet — by location



Diet labels individuals are drawn to — by gender



Diet labels individuals are drawn to — by location

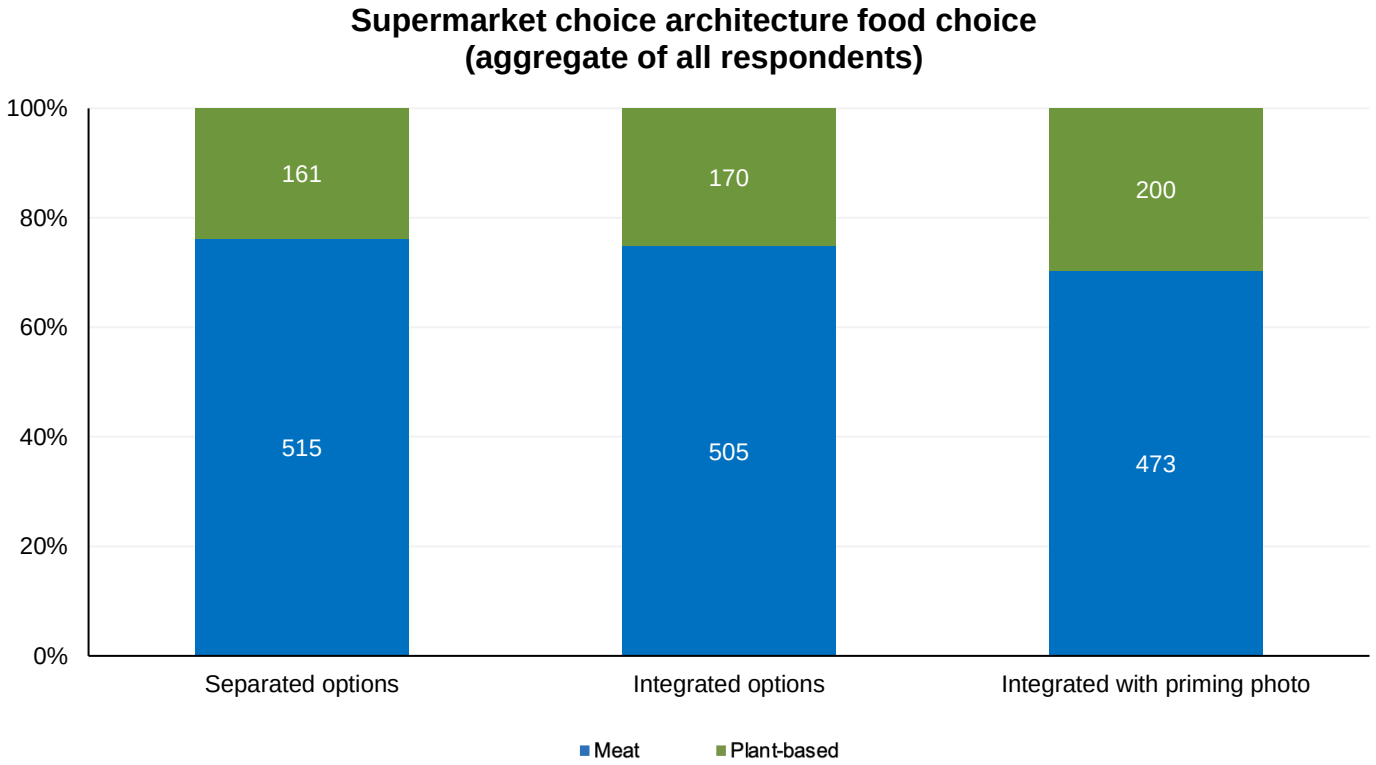


Appendix 3:

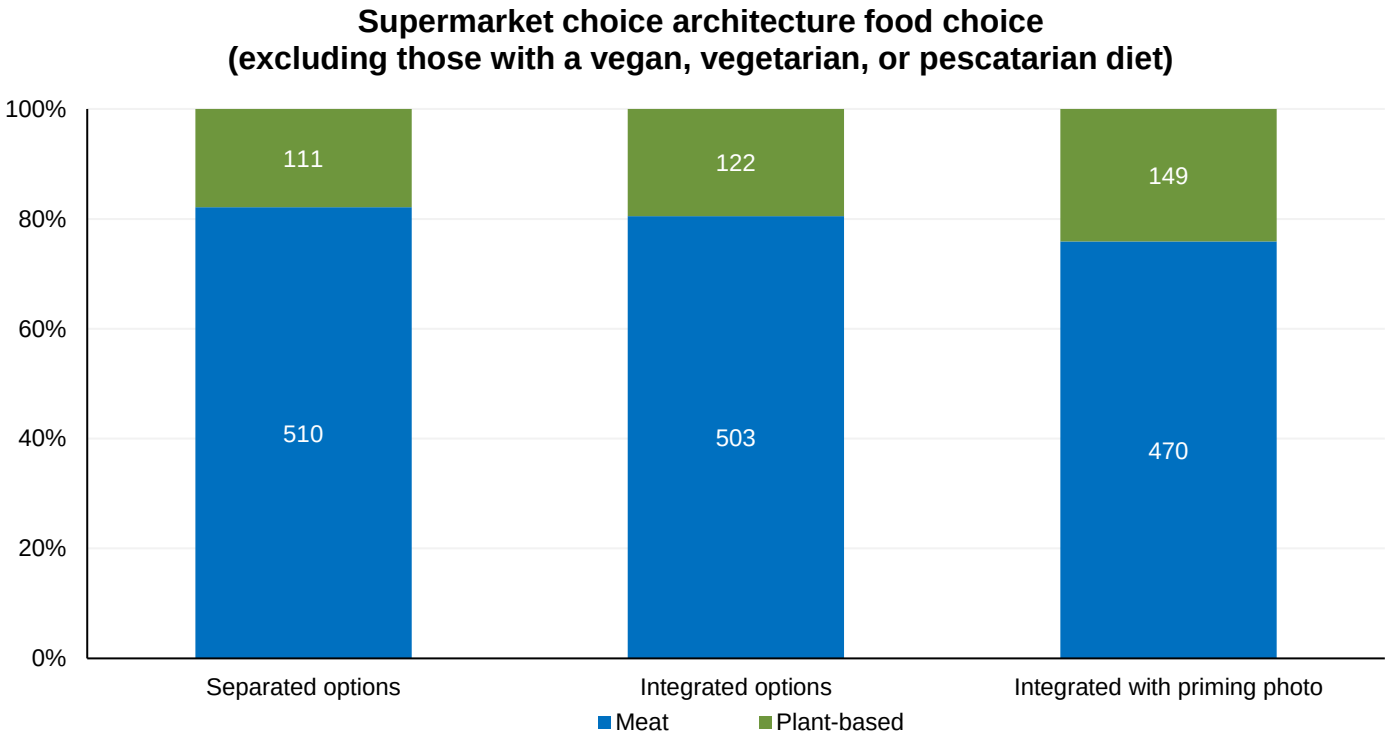
Further supporting graphics from the experiments

Auckland Council
Te Kaunihera o Tāmaki Makaurau

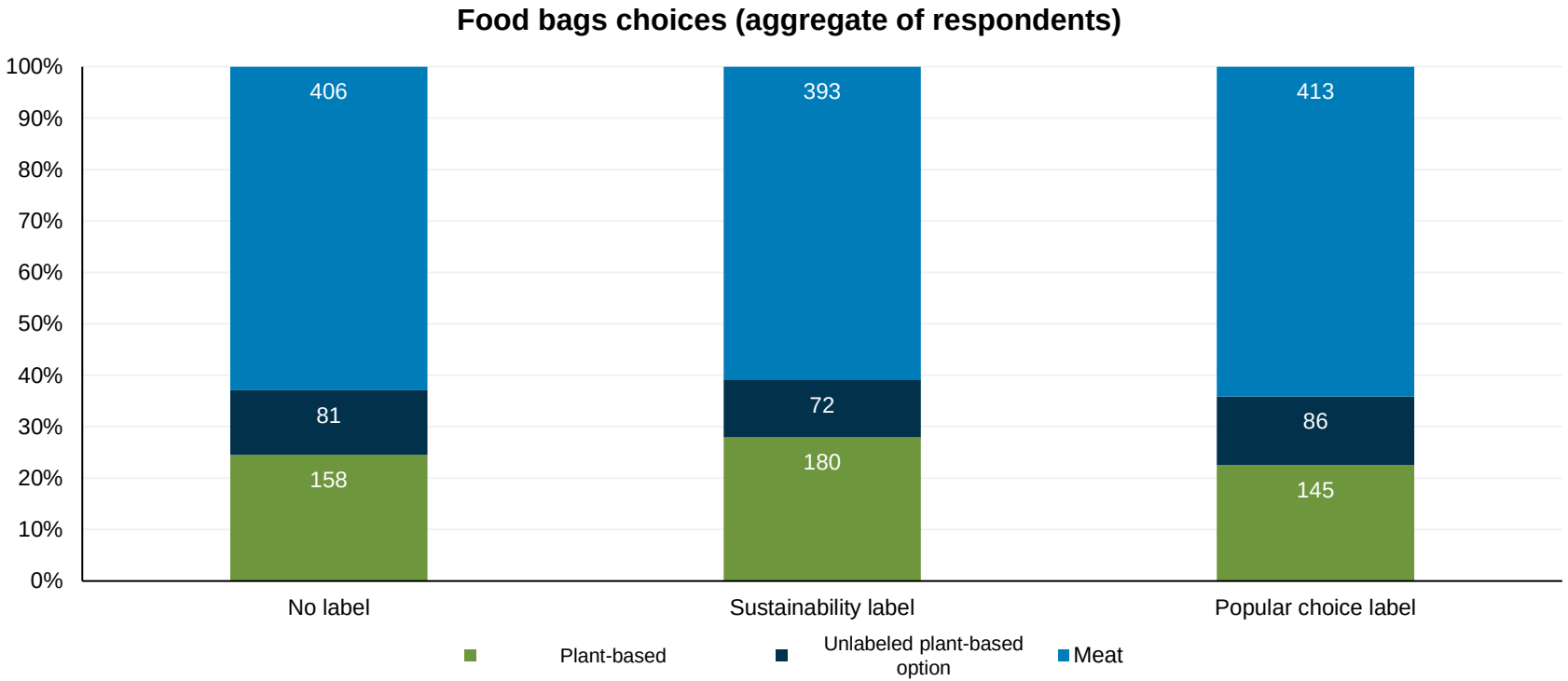
Supermarket choice architecture



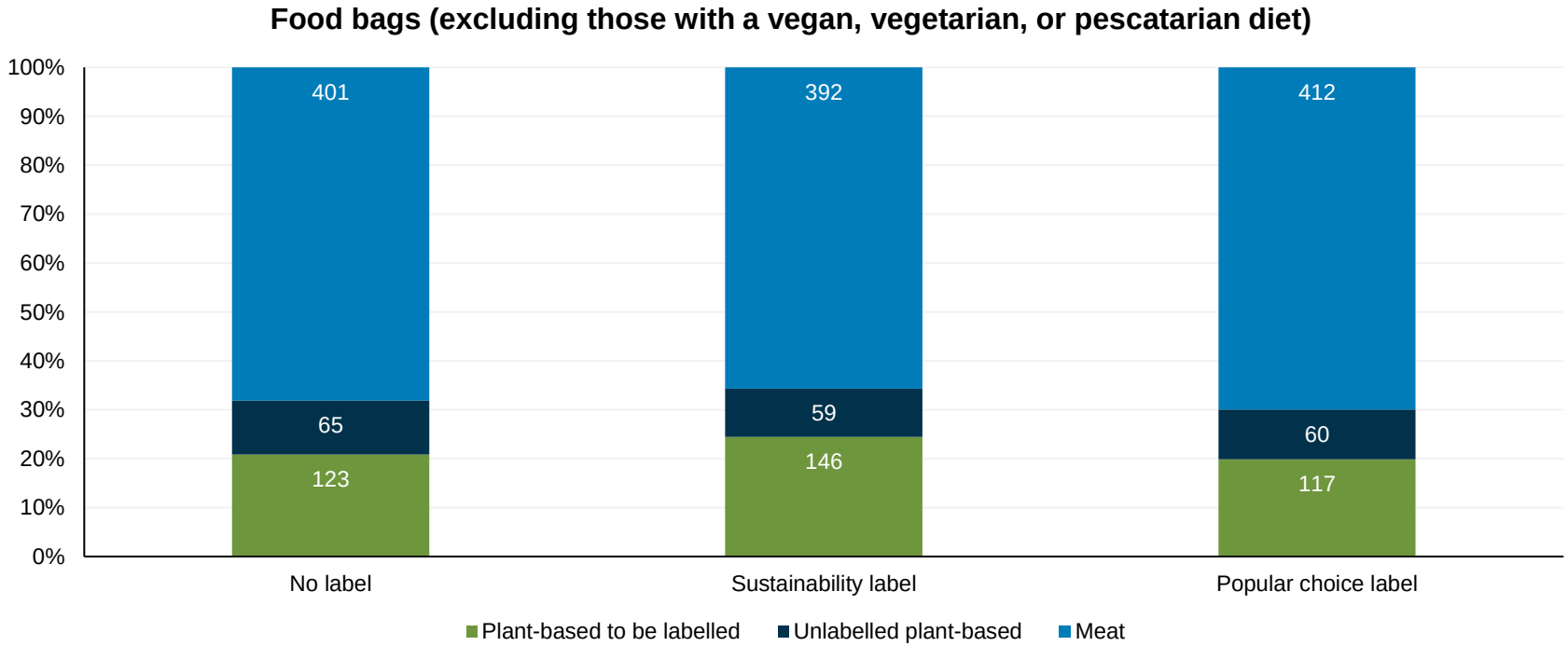
Supermarket choice architecture



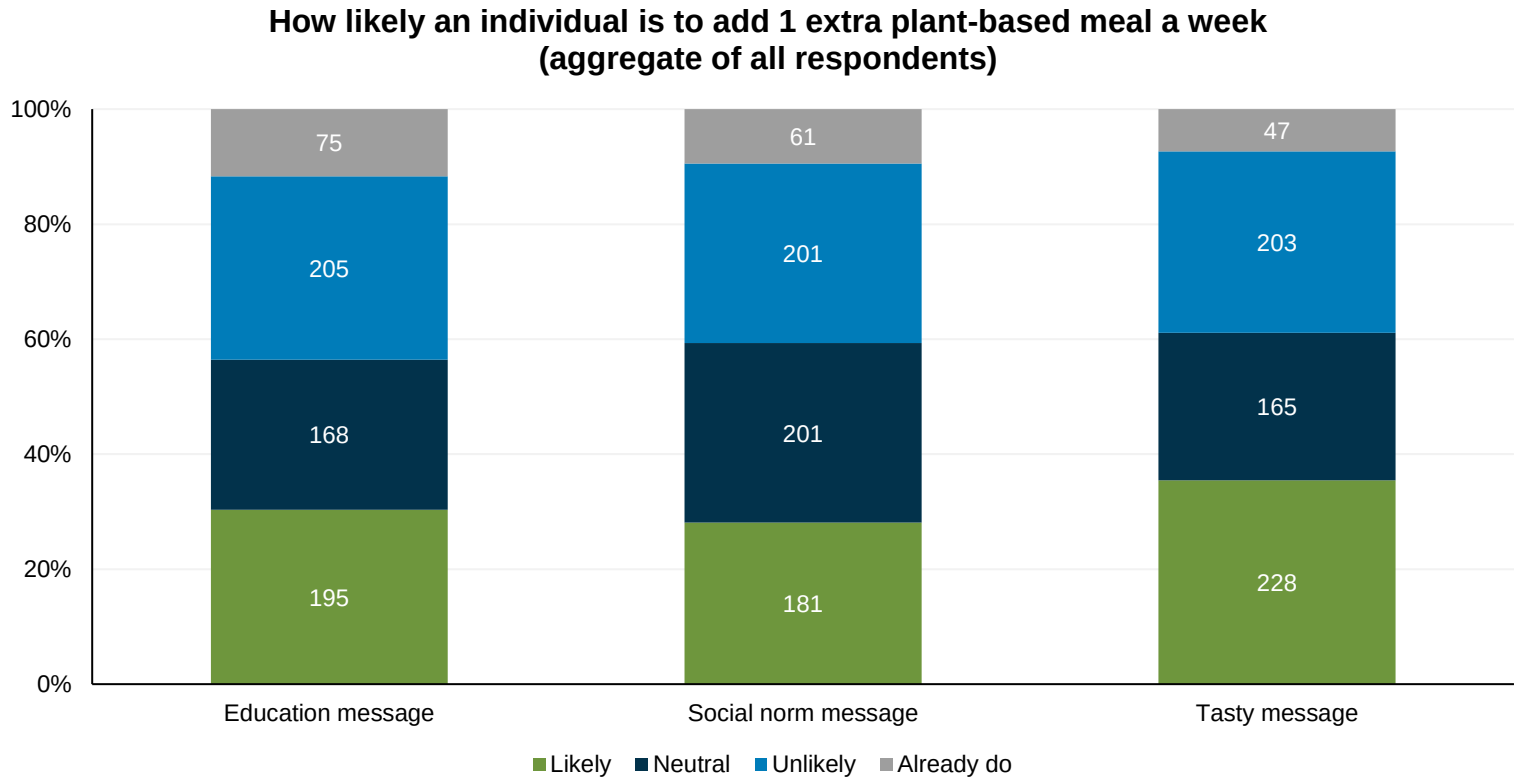
Food bag labelling



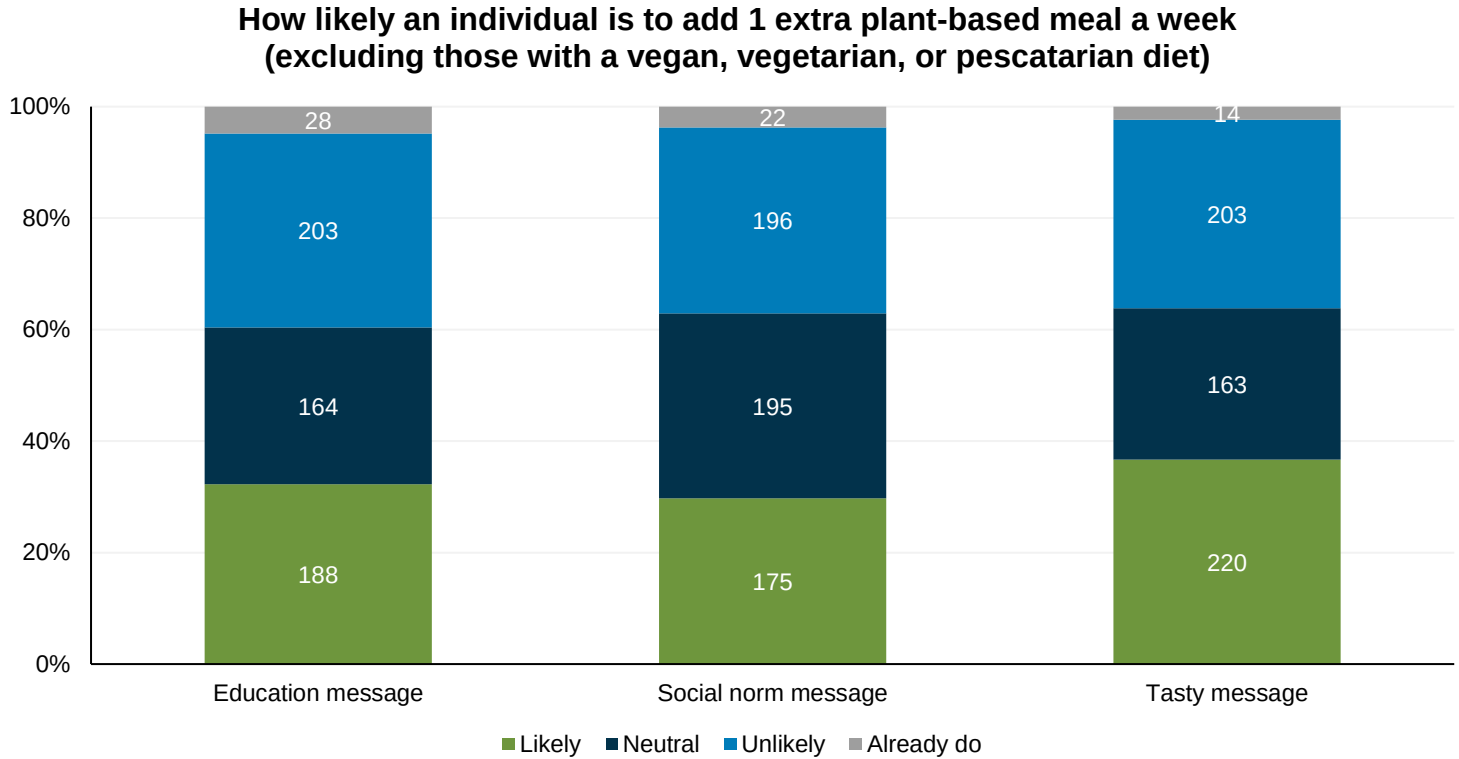
Food bag labelling



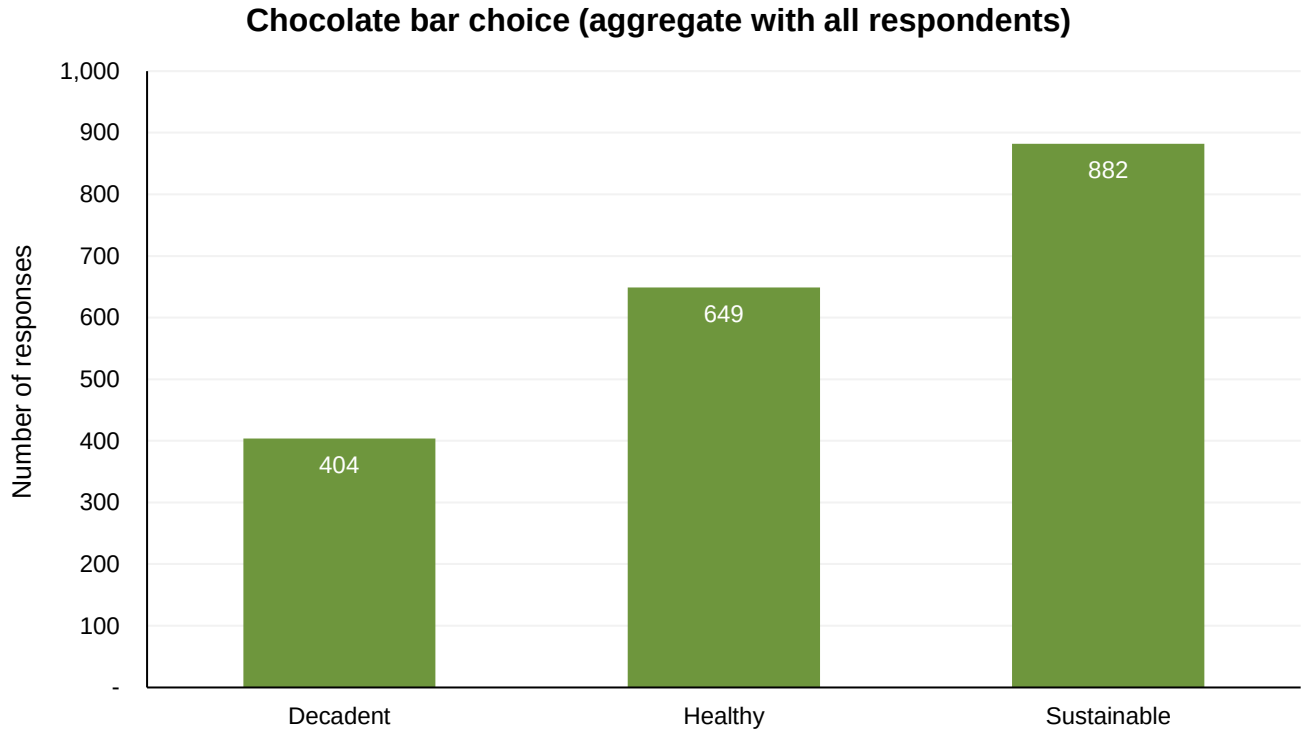
Marketing messaging



Marketing messaging



Chocolate bar choice



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