

Horticulture Innovation Australia

Final Report

Market research for investigating opportunities for more vegetable meal occasions

Horizon Research Corporation Pty Ltd

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VG14026

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Summary

The objective of this project was to identify new occasions, seasons, or ways to consume vegetables that have the most potential to increase demand.

Lack of confidence and know-how are the main factors that restrict consumers' use of vegetables in meal occasions. More meal occasions for vegetables can be generated in the following ways:

- Linking new ideas for using vegetables to things consumers already do, but which they don't often associate with vegetables.
- Highlighting additional things that consumers can do with vegetables cooked in standard ways.
- Reminding consumers of connections to vegetables that are all too familiar but which might be overlooked.

More than 50 per cent of consumers will do more with vegetables, IF they are guided and motivated at critical points in time.

- Consumers want hard copy information at the point of purchase. Information that they can pick up and take home. A single idea card for a specific vegetable, right at the point of purchase, reaches consumers at a time when they are most likely to consider trying something new.
- Consumers don't need completely new recipes. They have plenty already and can easily access new ones if they so desire. What they need is simple information in concept form that can help them figure out what to do, e.g. "use already cooked vegetables as part of a salad." Consumers are not short of information about cooking. What they are short of is experience, confidence, and knowledge. Presenting simple concepts will give consumers confidence to try something new.
- Give realistic time estimate for different vegetable preparations. Unfamiliar things are usually assumed to take much longer than they actually do.

All 11 of the vegetables focused on in this project, irrespective of their current popularity, have untapped consumption potential. This potential can be unlocked by the 9 simple usage ideas for vegetables developed in this project that take into account consumers' lack of confidence and know-how with vegetables:

1. Add vegetable to popular meals
2. Stuff vegetables
3. Use vegetables in pasta sauces
4. BBQ vegetables along with meat
5. Add vegetables to eggs at breakfast
6. Transform pre-cooked vegetables into a salad
7. Transform pre-cooked vegetables into a soup
8. Cook all of the vegetable at once and plan ahead
9. Make familiar desserts with vegetables

And, due to the broad appeal of these usage ideas, all vegetable industry stakeholders, irrespective of their location, size or the profile of their customers, can utilise them to increase vegetable sales.

Strategies to increase meal occasions vary somewhat according to the vegetable and these are summarised in the "Outcomes" section of this report. While this project has focused on 11 specific vegetables, the findings of this project can easily be extended to vegetables that were not investigated in this research.

Keywords

Increasing vegetable consumption; usage; demand;

More vegetable meal occasions;

carrots;

pumpkin;

capsicum;

broccoli;

cauliflower;

sweet corn;

cabbage;

green beans;

leeks;

eggplant;

beetroot

Introduction

The Australian Vegetable Industry believes demand for vegetables can be increased by expanding consumer knowledge of when and how to eat vegetables. This hypothesis was conceptualised by the Market and Value Chain Development design team during a meeting following the HIA funded Produce Innovation Seminar held in June 2014 and is supported by a variety of factors:

- In Australia, the consumption pattern of many vegetables experience peaks and troughs throughout the year. Previous research indicates often this is driven by traditional eating patterns, which in turn are often associated with seasons, weather or other factors. For example:
 - 'Hard' vegetables such as pumpkin are sometimes seen as having a strong association with winter dishes such as roasts and soups.
 - 'Salad' vegetables such as leafy vegetables experience stronger demand during the warmer months, with consumption falling away in winter.
- Other horticultural industries have had success at increasing demand in low consumption periods, suggesting traditional eating habits in Australia can be challenged successfully. For example:
 - Australia Day was identified by The Australian lamb industry as an occasion that could be used to engage different consumers and drive consumption. This initiative focused on encouraging consumers to cook lamb during the warmer months in a non-traditional way (on the BBQ) and drove new demand during a period that traditionally had lower consumption levels.
- Previous research conducted by HIA has identified an appetite among Australian consumers to increase their vegetable consumption, however a variety of factors act as deterrents and lead to consumers purchasing vegetables less frequently and at lower volumes. For example:
 - Habitual behaviour
 - Many consumers cook the same meals and buy the same vegetables.
 - While many consumers are 'bored' with their vegetable repertoire, unplanned vegetable purchases are rare.
 - To adopt something new, for many, it needs to be easy
 - Perceptions
 - Some vegetables can be seen as 'boring', others 'old fashioned', others 'difficult to prepare'.
 - Smaller sized vegetables may be more practical and increase uptake.
 - Knowledge:
 - Uncertainty surrounding shelf life increase concerns of potential wastage
 - Of how to cook and eat certain vegetables

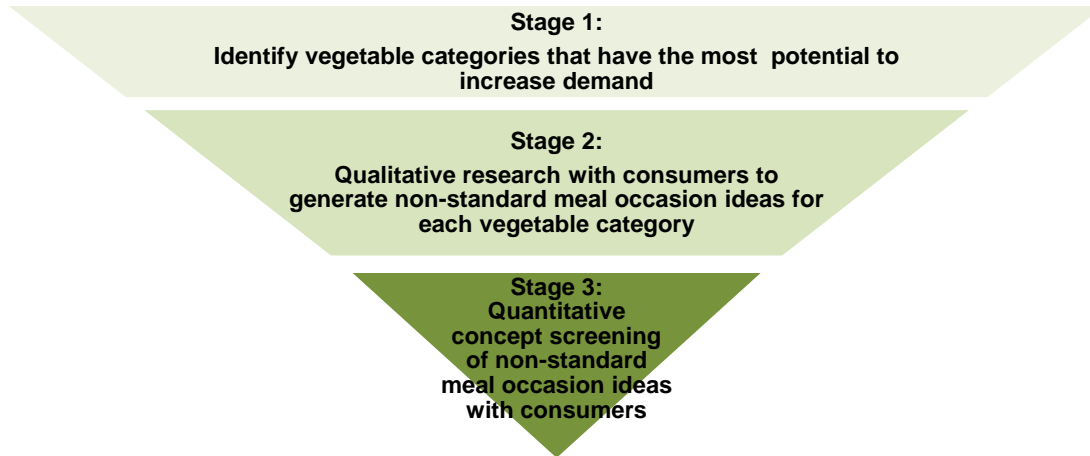
This project provides the Australian vegetable industry as a whole with tangible strategies to significantly increase vegetable consumption, both overall and among specific vegetable categories.

This project aligns to Objective 1 – Consumer Alignment in the Vegetable Strategic Investment Plan – and complements other consumer research funded by HIA in the vegetable industry.

- VG12078 and VG14060 – Project Harvest – investigating consumer perceptions and attitudes to vegetables and providing information on new vegetable launches internationally.
- VG13088 – Baseline demographic research for the vegetable industry – HomeScan data on consumer behaviour and retail performance.
- VG14024 – Market research around the opportunity to create more vegetable snacking options and to quantify market size.

Methodology

The project has been conducted in 3 stages, with each stage informing the next.



Stage 1

The objective of Stage 1 was to identify vegetable categories to focus on in this project, those that have the most potential to increase demand.

A review of relevant data from 'Project Harvest' (VG12078) and 'Baseline demographic research for the vegetable industry' (VG13088) identified 13 vegetable categories with growth potential.

Once the review was complete, Horizon moderated a roundtable discussion with HIA, AUSVEG and industry growers on 6 August 2015. The purpose of the roundtable discussion was to ensure vegetable stakeholder knowledge, and the needs of growers, were utilized with evaluating the consumer data and when selecting vegetable categories to focus on in this project.

A number of factors were taken into account when selecting vegetable categories to focus on in this project.

- Concentration of consumption/cuisine/cooking style/meal occasion – For example, more use in summer vs winter, vegetable is cooked in a limited number of styles, mostly cooked for dinner.
- Purchase barriers – for example, perceived difficulty in preparation/storage, versatility concerns.
- Purchase volume – for example, volume is high enough to justify a focus on the vegetable.
- Relatedness – for example, the applicability of findings for other vegetables categories

A total of 11 vegetable categories were chosen to be investigated with consumers in Stage 2.



Stage 2

The objectives of **Stage 2** were to:

1. Use an assessment of differences between people who tend to use more vegetables in more ways (non-typical users) and those who tend to stick to standard uses of fewer vegetables (typical users) to identify insights that might lead to efficacious ways for growing meal occasions for vegetables.
2. Generate ideas for increasing usage of vegetables at meals that can be validated in the next, quantitative stage of consumer research (Stage 3).

A total of 8 focus group discussions were conducted in Melbourne and Sydney between 31st August and 3rd September 2015.

Group composition	Melbourne	Sydney	TOTAL
"Non-typical" vegetable users	2	2	4
"Typical" vegetable users	2	2	4

Consumers were considered "non-typical" vegetable users if, for at least half of the 11 target vegetables for this project that they regularly buy, they cook/prepare each vegetable in 4 or more different ways. "Typical" vegetable users were defined as consumers who, for all of the 11 target vegetables for this project that they regularly buy, prepare or cook the vegetables in the same or only a few different ways each time.

The sequencing of the focus groups was an important element to the design. First, focus groups were conducted with 'non-typical' vegetable consumers, to provide insight into how they buck the trend, the types of things that make them more versatile with vegetables than other consumers, and things they do with vegetables that could be packaged/marketed to less knowledgeable users.

Armed with insight for what drives the 'non-typical' vegetable users, we then conducted focus groups with 'typical' vegetable users, to:

- Understand what drives the differences between 'typical' and 'non-typical' users
- Identify ideas for vegetables that may increase usage and consumption among 'typical' vegetable users.

By contrasting "typical" and "non-typical" vegetable consumers, we identified general principles through which to increase vegetable meal occasions:

- Link new ideas to existing, safe and familiar ideas to build confidence
- Highlight extra potential in what Typical users are already doing with vegetables
- Remind consumers of connections to vegetables that are all too familiar but which might be overlooked
- Provide information at critical points
- Give realistic time estimates to counter false perceptions

Guided by the abovementioned general principles, a total of 9 ideas to grow vegetable usage were generated that embodied each of these conclusions.

Add Vegetables to Popular Meals



Stuff Vegetables



Use Vegetables in Pasta Sauces



BBQ Vegetables Along with Meat



Add Vegetables to Eggs at Breakfast



Transform pre-cooked vegetables into a salad



Transform pre-cooked vegetables into a soup



Cook All Vegetable At Once and Plan Ahead



Make Familiar Desserts with Vegetables



The usage ideas above were then applied to each of the 11 vegetables focused on in this project.

Stage 3

As qualitative research is based on a small number of consumers, there is no guarantee that any of the ideas that come from it have broad appeal. Thus, the purpose of the quantitative research in Stage 3 was to:

- Validate the conclusions from the qualitative research with a large representative sample of Australian vegetable consumers
- Assess whether any of the usage ideas identified in Stage 2 had potential to increase vegetable meal occasions
- Assess how the ideas apply to each of the 11 vegetable categories

A total of 1518 interviews were conducted online with Australian vegetable users. Quotas were set by state to ensure the total sample was representative of the Australian population (see table). Respondents to the online survey were screened to ensure they were:

- Responsible for at least half of grocery shopping and meal preparation in their household
- Buy fresh when in season (or open to buying in the future), at least 3 of the 11 vegetables of focus for this project
- Are Australian residents aged 18-64

Residence of respondents	Number of interviews
New South Wales	490
Victoria	374
Queensland	307
Western Australia	150
South Australia	116
Tasmania	39
Australia Capital Territory	27
Northern Territory	15
TOTAL	1518

The online survey took approximately 16 minutes to complete. The key element of the survey involved respondents evaluating each of the 9 usage ideas generated from Stage 2.

- Each usage idea was presented in the following way:
 - A sentence to explain the usage idea itself
 - Pictorial examples of how the idea could be achieved with different vegetables
- After viewing the usage idea description and pictorial examples, respondents were asked 4 questions related to the specific usage idea:
 - How appealing to you is this idea of using vegetables?
 - How similar to or different from what you typically do with vegetables is this idea?
 - How likely in the near future are you to employ this idea of using vegetables?
 - Which, if any, of the recipe examples for this idea would you like to make or prepare yourself?

An important step in the analysis of the Stage 3 was to estimate the potential of the usage ideas for increasing vegetable meal occasions among Australian vegetable users. We could have just looked at which of these ideas were appealing. But, if we did, then all we might do is identify things that are already popular, so focusing on them might not result in incremental consumption. Or, we could have focused on things that are different from what people currently do. But, in some interpretations "different" also means unappealing, so by focusing only on "different" we might end up trying to get people do things that they don't find appealing. If we focused on things that are appealing and different we overcome the problem with different, but we potentially then focus on things that people find novel and entertaining, but out of their reach or not fitting into their lifestyle, so they would never do them. However, if we focus on things that are "appealing" and "different", that people are "likely to do", then we are safely identifying things to focus on that will yield increases on consumption.

Outputs

Project outputs include:

1. Start of project communications summary
2. Stage 1 Report, which includes:
 - a. Review of industry data and previous HIA research
 - b. Outputs of the roundtable discussion with HIA, AUSVEG and industry stakeholders
 - c. The 11 vegetable categories chosen to focus on in Stages 2 and 3 of this project and the reasons why they were chosen
 - d. For each vegetable, a list of non-standard meal occasions and/usage ideas identified for exploration in Stage 2
3. Stage 2 Report, which includes:
 - a. Key insights from the 8 focus groups conducted in Melbourne and Sydney.
 - b. Most notably:
 - i. Guiding principles for expanding vegetable usage
 - ii. 9 ideas to grow vegetable usage to be validated for efficacy in Stage 3 with a representative sample of Australian consumers.
4. Stage 3 Report, which includes:
 - a. Key insights from the quantitative survey with 1500 target vegetable consumers
 - b. Identification of usage ideas that have the most potential to increase vegetable consumption overall and for each vegetable category
 - c. Profile of consumers most likely to employ the usage ideas
5. Final Report (this document), providing an overall summary of the project.
6. End of project communications to maximise awareness and uptake of research outputs. These include:
 - An article covering the objective, why the project was undertaken, results of the project, where to get more information, published in *Vegetables Australia* (March 2016)
 - An in-person presentation of the project findings during the Vegetable Consumer Alignment Advisory Meeting (17 March, 2016)
 - VG14026-One-Pager – An overall snapshot of high level findings that are relevant for the entire industry

All outputs are attached as appendices to this report.

Outcomes

Lack of confidence and know-how are the main factors that restrict consumers' use of vegetables in meal occasions. This research project shows that substantially more vegetable meal occasions can be generated through the application of the following general principles:

- Link new ideas for using vegetables to things consumers already do, but which they don't often associate with vegetables. For example, simple variations on common techniques will work, such as making vegetable pasta sauces or adding grated vegetables to hamburger recipes. Or, it might mean linking vegetables with what consumers are already preparing. For example, most vegetables can be combined with eggs, so if eggs are being cooked for breakfast, vegetables can be added easily.
- Highlight additional things that consumers can do with vegetables cooked in standard ways. For example, instead of only cooking enough beans for the meal at hand, cook them all and use those that are not consumed tonight as part of tomorrow's salad for lunch.
- Reminding consumers of connections to vegetables that are all too familiar but which might be overlooked. For example, most consumers can't think of how vegetables might be incorporated into dessert, but most are familiar with carrot cake or zucchini bread. They just don't associate think about the vegetables in these dishes.

When communicating new ideas for vegetables to consumers, it will be important to take into account WHEN consumers are receptive to new ideas and WHAT information they are likely to respond to:



- There are two critical points at which the availability of information about using vegetables in meal occasions in new ways can be helpful – at the point of purchase and when they are looking in the fridge and deciding what to prepare with the vegetables they have.
- Consumers want hard copy information at the point of purchase. Information that they can pick up and take home. A single idea card for a specific vegetable, right at the point of purchase, reaches consumers at a time when they are most likely to consider trying something new.
- Electronic forms of information don't appear to be immediate enough to be considered helpful at this critical point when consumers are making decisions. For example, an app, Youtube video, website.
- Consumers don't need completely new recipes. They have plenty already and can easily access new ones if they so desire. What they need is simple information in concept form that can help them figure out what to do, e.g. "use already cooked vegetables as part of a salad."
- Give a realistic time estimate for different vegetable preparations. Unfamiliar things are usually assumed to take much longer than they actually do.

Guided by the abovementioned general principles, a total of 9 ideas to grow vegetable usage were generated that embodied each of these conclusions:





1. Add vegetable to popular meals
2. Stuff vegetables
3. Use vegetables in pasta sauces
4. BBQ vegetables along with meat
5. Add vegetables to eggs at breakfast
6. Transform pre-cooked vegetables into a salad
7. Transform pre-cooked vegetables into a soup
8. Cook all of the vegetable at once and plan ahead
9. Make familiar desserts with vegetables

More than half (55%) of Australian vegetable consumers are willing to do more with vegetables – at least one of the 9 usage ideas tested in this project is something they like, that is different to what they currently do with vegetables, and, is something they can see themselves doing.




Tailored strategies to increase meal occasions of specific vegetables were also developed:

<p>BEETROOT</p> 	<p>Not only is there potential to increase penetration for beetroot (getting non-buyers to try it), there is strong potential to diversify the ways in which current buyers are using it (59% of current buyers have potential to increase beetroot consumption based on these ideas).</p> <p>Recipes and usage ideas with the most potential to increase beetroot meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. Roasted BEETROOT and walnut salad (pre-cooked vegetables into a salad) 2. Baked BEETROOT chips (popular meals healthier with vegetables) 3. Balsamic BBQ BEETROOT (cook vegetables on the BBQ) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for beetroot 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates
<p>BROCCOLI</p> 	<p>As the majority of Australian consumers already buy broccoli (82%), expanding usage among current users is the primary avenue to increase consumption.</p> <p>Recipes and usage ideas with the most potential to increase broccoli meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. BROCCOLI and pesto pasta sauce (make vegetable pasta sauces) 2. BROCCOLI frittata (add vegetables to eggs at breakfast) 3. Balsamic BBQ BEETROOT (cook vegetables on the BBQ) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for broccoli 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates



Tailored strategies to increase meal occasions of specific vegetables were also developed (continued):

<p>CABBAGE</p> 	<p>There is strong potential to diversify the ways in which current buyers are using cabbage AND get non-buyers to try it. Ideas to increase usage combat perceptions of blandness by pairing cabbage with popular meats and/or convey a sense of freshness</p> <p>Recipes and usage ideas with the most potential to increase cabbage meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. CABBAGE rolls with fillings (popular meals healthier with vegetables) 2. Chicken and CABBAGE salad (pre-cooked vegetables into a salad) 3. Lamb and CABBAGE rolls (stuff vegetables) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for cabbage 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates
<p>CAPSICUM</p> 	<p>Expanding usage among current users is the primary avenue to increase consumption. Recipes and usage ideas with the most potential to increase capsicum meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. Stuffed CAPSICUM (stuff vegetables) 2. CAPSICUM avocado tomato salad (pre-cooked vegetables into a salad) 3. Tomato sausage CAPSICUM pasta (make vegetable pasta sauces) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for capsicum 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates
<p>CARROTS</p> 	<p>Expanding usage among current users is the primary avenue to increase consumption. Interestingly, ideas that offer the most potential to increase are not novel ways of using carrots. Rather, the ideas pair carrots with popular meals or cooking styles.</p> <p>Recipes and usage ideas with the most potential to increase carrot meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. Grated CARROTS with burgers or in patties (popular meals healthier) 2. Balsamic grilled CARROTS (cook vegetables on the BBQ) 3. Bolognese sauce with CARROTS (make vegetable pasta sauces) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for carrots 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates
<p>CAULIFLOWER</p> 	<p>Ideas most likely to increase cauliflower usage are those that add flavour to it through spices and/or cooking styles (for example, roasting/grilling rather than boiling/steaming).</p> <p>Recipes and usage ideas with the most potential to increase cauliflower meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. Grilled spiced CAULIFLOWER (cook vegetables on the BBQ) 2. Roasted CAULIFLOWER salad (pre-cooked vegetables into a salad) 3. Spiced CAULIFLOWER soup (pre-cooked vegetables into a soup) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for cauliflower 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates

Tailored strategies to increase meal occasions of specific vegetables were also developed (continued):

<p>EGGPLANT</p> 	<p>For those that don't cook with eggplant (64% of consumers), eggplant is unfamiliar and intimidating. Ideas most likely to increase usage of eggplant are those that challenge preconceptions that cooking with eggplant is difficult and time consuming.</p> <p>Recipes and usage ideas with the most potential to increase eggplant meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. Bolognese stuffed EGGPLANT (stuff vegetables) 2. Grilled EGGPLANT (cook vegetables on the BBQ) 3. Grilled EGGPLANT rocket fetta salad (pre-cooked vegetables into a salad) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for eggplant 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates
<p>GREEN BEANS</p> 	<p>Consumers question the versatility of green beans. Ideas that are most likely to increase usage are those elevate green beans beyond being a side dish – for example, green beans in pasta, with eggs for breakfast and in a salad.</p> <p>Recipes and usage ideas with the most potential to increase green beans meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. Prosciutto GREEN BEANS pasta (make vegetable pasta sauces) 2. GREEN BEANS omelette (add vegetables to eggs at breakfast) 3. GREEN BEANS nicoise salad (pre-cooked vegetables into a salad) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for green beans 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates
<p>LEEKs</p> 	<p>Leeks tend to be used exclusively for winter dishes like soups/pies/casseroles. Ideas that are most likely to increase usage are those that include leeks in popular meals that are quick to prepare and make leek appropriate all throughout the year.</p> <p>Recipes and usage ideas with the most potential to increase leek meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. Pasta with bacon and LEEKS (make vegetable pasta sauces) 2. LEEK herbed stuffed potatoes (popular meals healthier) 3. LEEK cheese potato tortilla (add vegetables to eggs at breakfast) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for leeks 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates

Tailored strategies to increase meal occasions of specific vegetables were also developed (continued):

<p>PUMPKIN</p> 	<p>Consumers already consider pumpkin to be versatile, so ideas that use pumpkin in novel, but SIMPLE ways, have the most potential to increase usage.</p> <p>Recipes and usage ideas with the most potential to increase pumpkin meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. PUMPKIN fries (popular meals healthier) 2. Roast PUMPKIN creamy pasta (make vegetable pasta sauces) 3. BBQ PUMPKIN with paprika (cook vegetables on the BBQ) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for pumpkin 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates
<p>SWEET CORN</p> 	<p>There is significant potential among non-buyers of sweet corn – 62% of non-buyers have potential to make at least one of the usage ideas. Ideas that offer the most potential to increase usage are those that provide options for using sweet corn outside of dinner - for breakfast, in soup, as part of a light meal or finger food.</p> <p>Recipes and usage ideas with the most potential to increase sweet corn meal occasions because they are APPEALING and DIFFERENT and LIKELY to be done are:</p> <ol style="list-style-type: none"> 1. Chicken and SWEET CORN soup (pre-cooked vegetables into a soup) 2. SWEET CORN with pepper and lime (popular meals healthier) 3. SWEET CORN chorizo frittata (add vegetables to eggs at breakfast) <p>Communication guidelines:</p> <ol style="list-style-type: none"> 1. Provide hard copy information at the point of purchase – a single usage idea card for sweet corn 2. Make recipes simple – steps and ingredients kept to a minimum, realistic preparation time estimates

Evaluation and Discussion

This project has been very effective in addressing the key objective – to identify new occasions, seasons, or ways to consume vegetables that have the most potential to increase demand. The research shows that potential to increase vegetable meal occasions is substantial and that the strategies to unlock this potential are not hard or complicated to execute.

To maximize the project's relevance to the vegetable industry, a project reference group of industry representatives (HIA, AUSVEG, and vegetable growers) was established at the beginning of the project to convene at critical points in the project (at the end of each stage) and provide industry feedback and direction for the project.

For example:

- The objective of Stage 1 was to identify 10 vegetable categories that have the most potential to increase demand and focus on these vegetables in Stage 2 and 3.
- Our review of relevant data from 'Project Harvest' (VG12078) and 'Baseline demographic research for the vegetable industry' (VG13088) identified vegetable categories with the most growth potential.
- It would have been possible to decide which vegetable to focus on based on the data alone. However, to maximize the relevance to the vegetable industry, a roundtable discussion with the project reference group took place. Using the review as a guide, the reference group decided on 11 (rather than 10) vegetable categories to focus on in Stage 2 and 3. The decision process went beyond just the data, and took into account practical considerations like:
 - Choosing vegetables whose findings could be applied to other vegetables
 - Ensuring most vegetable families were represented
 - Choosing both popular and unpopular vegetables. For example, carrots are already very popular while eggplant is less so. Ensuring vegetables of varying popularity enabled us to test the broad applicability of whatever ideas were generated in stage 2.
- After the focus groups in Stage 2, we presented the findings to the project reference group. During this presentation we articulated the rationale for the usage ideas we were proposing to test with consumers in the next stage. The group discussed the merits of each usage idea and how usable they would be for industry. Some tweaks to the ideas were made as a result of these discussions.
- After presenting the Stage 3 summary report, the project reference group provided feedback on how the findings could be best leveraged and presented for industry, providing direction for the communication and extension plan.

The potential long term outcome of this project will be an increase in price or volume of throughput of specific vegetables during a defined period. This will only occur if vegetable value chain stakeholders act on the project findings – vegetable growers, manufacturers, distributors and retailers. Adoption of project findings is facilitated by clear and practical project reports and articles in vegetable industry publications. The project team will liaise with HIA and AUSVEG with regards to the inclusion of project articles, findings and recommendations in vegetable industry publications.

Recommendations

Lack of confidence and know-how are the main factors that restrict consumers' use of vegetables in meal occasions. More meal occasions for vegetables can be generated in the following ways:

- Linking new ideas for using vegetables to things consumers already do, but which they don't often associate with vegetables.
- Highlighting additional things that consumers can do with vegetables cooked in standard ways.
- Reminding consumers of connections to vegetables that are all too familiar but which might be overlooked.

To increase meal occasions for vegetables, leverage the abovementioned guidelines and build on the 9 ideas developed in this research to embody the guidelines:

1. Add vegetable to popular meals
2. Stuff vegetables
3. Use vegetables in pasta sauces
4. BBQ vegetables along with meat
5. Add vegetables to eggs at breakfast
6. Transform pre-cooked vegetables into a salad
7. Transform pre-cooked vegetables into a soup
8. Cook all of the vegetable at once and plan ahead
9. Make familiar desserts with vegetables

When communicating new ideas for vegetables to consumers, we recommend:

- Providing hard copy idea cards for a specific vegetable, right at the point of purchase. Information consumers can pick up and take home.
- Presenting recipes and ideas simply.
 - Minimise steps
 - Use common ingredients
 - Provide realistic estimates of the time it will take a novice to prepare
- Exposing consumers to the ideas over time to maximise their impact.
 - For example, focus on one idea each month for all vegetables in the store. The program could run for at least 9 months (as there are 9 ideas already developed).
 - As lack of confidence and know-how are the main factors that restrict usage of vegetables, consumers need to be given time to adapt to these ideas and build them into their routines. In addition, exposing consumers to all usage ideas at the same time will be overwhelming, so exposure over time to simple ideas is likely to have more impact.
- Consider electronic forms of information (for example, an app) as secondary support only to hard copy information, as a reference point for consumers once a recipe is tried and enjoyed, to either try it again or inspect what other usage ideas there are in the program.

If focussing on a specific vegetable, the following usage ideas are likely to have the most success in increasing meal occasions:

- For BEETROOT, the top three ideas to increase demand are:
 - Roasted BEETROOT and walnut salad (pre-cooked vegetables into a salad)
 - Baked BEETROOT chips (popular meals healthier with vegetables)
 - Balsamic BBQ BEETROOT (cook vegetables on the BBQ)

If focussing on a specific vegetable, the following usage ideas are likely to have the most success in increasing meal occasions (continued):

- For BROCCOLI, ideas that promote usage outside of dinner have the most potential to increase consumption. For example:
 - BROCCOLI and pesto pasta sauce (make vegetable pasta sauces)
 - BROCCOLI frittata (add vegetables to eggs at breakfast)
 - Balsamic BBQ BEETROOT (cook vegetables on the BBQ)
- The best ideas to increase CABBAGE usage combat perceptions of blandness by pairing cabbage with popular meats and/or convey a sense of freshness. For example:
 - CABBAGE rolls with fillings (popular meals healthier with vegetables)
 - Chicken and CABBAGE salad (pre-cooked vegetables into a salad)
 - Lamb and CABBAGE rolls (stuff vegetables)
- For CAPSICUM, ideas that offer the most potential are ideas for creating distinctly different meals and/or to avoid wasting leftover capsicum.
 - Stuffed CAPSICUM (stuff vegetables)
 - CAPSICUM avocado tomato salad (pre-cooked vegetables into a salad)
 - Tomato sausage CAPSICUM pasta (make vegetable pasta sauces)
- Interestingly, for CARROTS, ideas that offer the most potential are not novel ways of using carrots. Rather, the ideas pair carrots with popular meals or cooking styles. For example:
 - Grated CARROTS with burgers or in patties (popular meals healthier)
 - Balsamic grilled CARROTS (cook vegetables on the BBQ)
 - Bolognese sauce with CARROTS (make vegetable pasta sauces)
- For CAULIFLOWER, ideas most likely to increase usage are those that add flavour to cauliflower through spices and/or cooking styles. For example:
 - Grilled spiced CAULIFLOWER (cook vegetables on the BBQ)
 - Roasted CAULIFLOWER salad (pre-cooked vegetables into a salad)
 - Spiced CAULIFLOWER soup (pre-cooked vegetables into a soup)
- For EGGPLANT, ideas with most potential are those that challenge preconceptions that cooking with eggplant is difficult and time consuming. For example:
 - Bolognese stuffed EGGPLANT (stuff vegetables)
 - Grilled EGGPLANT (cook vegetables on the BBQ)
 - Grilled EGGPLANT rocket fetta salad (pre-cooked vegetables into a salad)
- For GREEN BEANS, ideas with the most potential add versatility to green beans, elevating them beyond being a side dish. For example:
 - Prosciutto GREEN BEANS pasta (make vegetable pasta sauces)
 - GREEN BEANS omelette (add vegetables to eggs at breakfast)
 - GREEN BEANS nicoise salad (pre-cooked vegetables into a salad)
- For LEEKS, ideas with most potential are those that include leeks in popular meals that are quick to prepare and make leek appropriate all throughout the year. For example:
 - Pasta with bacon and LEEKS (make vegetable pasta sauces)
 - LEEK herbed stuffed potatoes (popular meals healthier)
 - LEEK cheese potato tortilla (add vegetables to eggs at breakfast)

If focussing on a specific vegetable, the following usage ideas are likely to have the most success in increasing meal occasions (continued):

- For PUMPKIN, ideas that use pumpkin in novel, but SIMPLE ways, have the most potential to increase usage. For example:
 - PUMPKIN fries (popular meals healthier)
 - Roast PUMPKIN creamy pasta (make vegetable pasta sauces)
 - BBQ PUMPKIN with paprika (cook vegetables on the BBQ)

- For SWEET CORN, ideas with the most potential are those that provide options for using sweet corn outside of dinner. For example:
 - Chicken and SWEET CORN soup (pre-cooked vegetables into a soup)
 - SWEET CORN with pepper and lime (popular meals healthier)
 - SWEET CORN chorizo frittata (add vegetables to eggs at breakfast)

Scientific Refereed Publications

None to report.

Intellectual Property/Commercialisation

No commercial IP generated.

Appendices

1. Stage 1 Report
2. Stage 2 Report
3. Stage 3 Report
4. "New meal occasions on the Horizon" *Vegetables Australia* March 2016 – An article covering the objective, why the project was undertaken, results of the project, and where to get more information.
5. "How to increase meal occasions for vegetables" – a one page summary of key findings from the project

HORIZON

CONSUMER SCIENCE

VG14026 - Market research for investigating opportunities for more vegetable meal occasions

This project has been funded by Horticulture Innovation Australia using the vegetable levy and funds from the Australian Government.

Stage 1: Round Table Discussion

6 August, 2015

Prepared by:

Ian Cesa and Michael Feely
HORIZON CONSUMER SCIENCE

Prepared for:

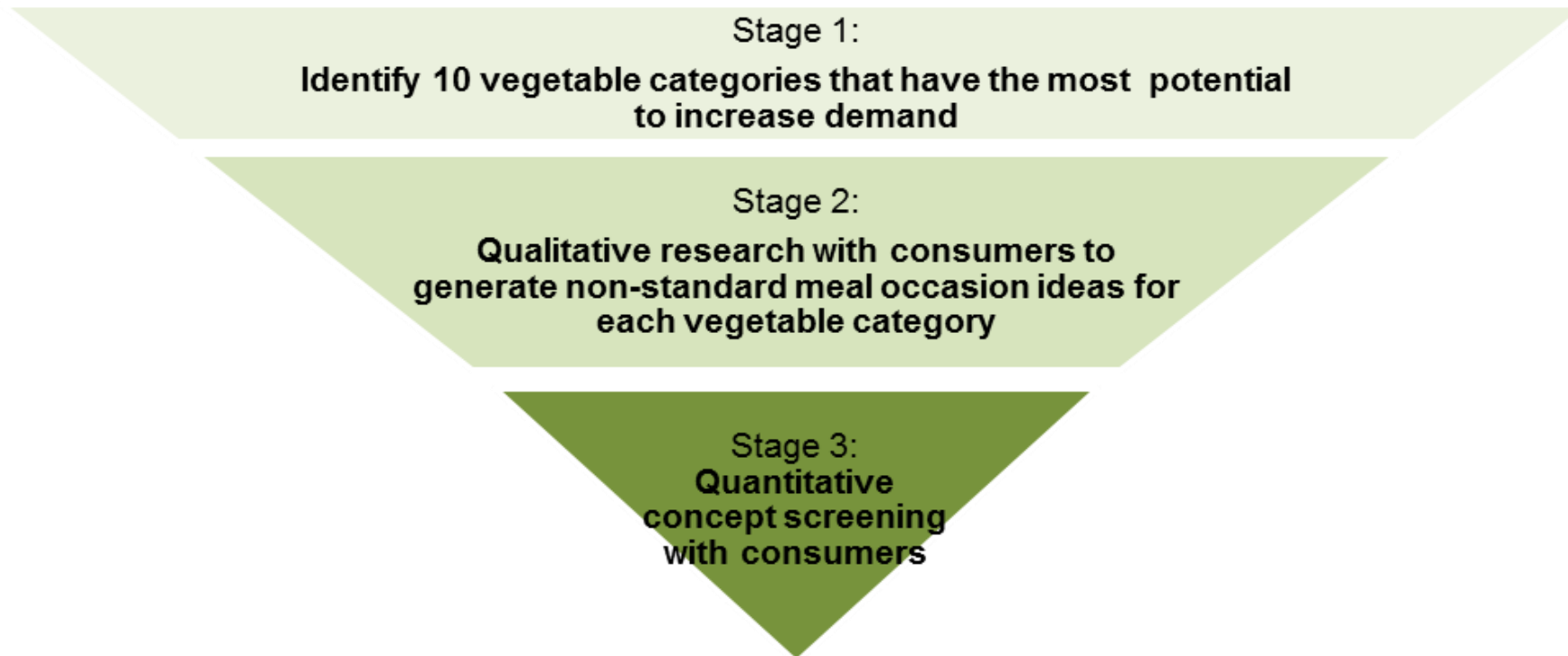
**Horticulture
Innovation
Australia**

Background & Objectives

- The Australian vegetable industry believes demand for vegetables can be increased by expanding consumer knowledge of when and how to eat vegetables.
- The purpose of this research is to identify new occasions, seasons, or ways to consume vegetables that have the most potential to increase demand. The project will be conducted in 3 stages.
- The objectives of **Stage 1** and this round table discussion are to:
 1. Identify 10 vegetable categories that have the most potential to increase demand.
 2. For each vegetable category chosen, identify non-standard eating occasions (for example, low consumption times of the year, perceptions that might be limiting usage occasions, etc.) to explore with consumers in Stage 2.

Background & Objectives

- There are two stages of research with consumers following this round table discussion:



- This project is expected to be completed by the end of January 2016.

Research Methods

- The data presented today are drawn from a review of relevant HIA consumer research.
 - Each of the sources listed below provide insightful information for this project. However, as these studies were not specifically developed with this project in mind, there are some limitations to the data for this specific project.

1. 'Project Harvest' (VG12078) by Colmar Brunton

- Monthly tracking research to monitor and gauge consumer perception of and behaviour in relation to fresh vegetables. Useful information for this project are:



- Barriers to purchase X vegetable
- Typical cuisine cooked for X vegetable
- Consumption occasions for X vegetable
- Cooking styles for X vegetable

2. 'Baseline demographic research for the vegetable industry' (VG13088) by Nielsen

- A Panel of 10,000 Australian households electronically record their household purchases of all take-home grocery goods (fresh and packaged). Useful information for this project are:



- Monthly penetration of X vegetable by household
- How often they buy X vegetable annually

Agenda for today's discussion

Time	Agenda Item	Slides to cover
10:00 – 11:00	Review data on 13 vegetable categories we have identified as offering	6-21
11:00 – 11:15	Review of other vegetables for consideration.	22-23
11:15 – 11:30	Are there other non-standard meal occasions we should consider?	24-26
11:30 – 13:30	Selection of Vegetables to Explore With Consumers (includes short or working lunch)	27-38
13:30 – 14:00	How to maximise industry adoption	39-40



Data Review of 13 vegetable categories

Vegetable to be reviewed

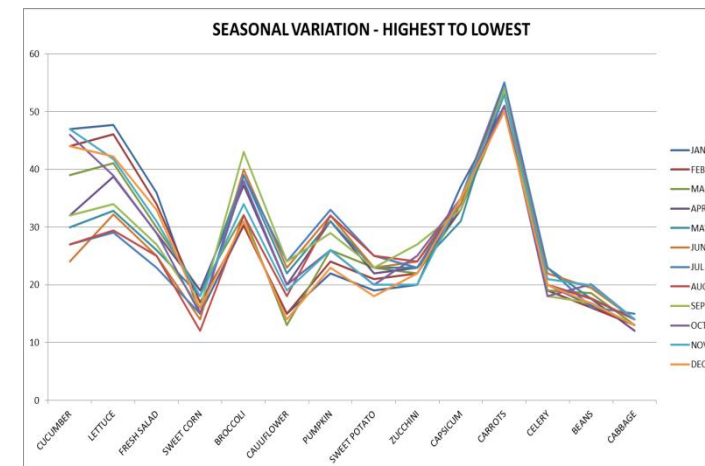
- Based on a review of reports prepared for HIA by Nielsen and Colmar Brunton, we have ranked vegetables by relative growth potential:
 1. Pumpkin
 2. Cauliflower
 3. Broccoli
 4. Sweet Corn
 5. Green Peas
 6. Brussel Sprouts
 7. Eggplant
 8. Beetroot
 9. Sweet Potato
 10. Beans
 11. Cabbage
 12. Capsicum
 13. Carrots

- Vegetables covered by Colmar Brunton/Nielsen research considered to have less growth potential than the above vegetables were lettuce, cucumbers, celery, zucchini, baby spinach, Asian vegetables, and chilli.

How we selected the vegetables

- Vegetables were considered to have growth potential if they exhibited the following in the Colmar/Nielsen data:
 - Seasonal concentration – For example, more use in summer vs winter
 - Cuisine concentration – vegetable recipes relate to a small number of cuisines
 - Cooking style concentration – vegetable is cooked in a limited number of styles
 - Education needs – preparation/storage/versatility concerns
 - Meal occasion concentration – for example, vegetable mostly cooked for dinner
- Vegetables with concentrations in more than one area were considered to have more growth potential than vegetables with only 1 or no areas of concentration.

Vegetable	Relative growth potential	Monthly penetration average June2013-May2014 (Colmar)	Purchase Seasonality - households buying (max-min 2014/min)	Most common meal type	Concentration - Meal Type	Most common cuisine	Concentration - Cuisine	Most common cooking method	Concentration- Cooking Method
Pumpkin	High	50-70	0.48	Weekday dinner (66%)	High	Traditional Australian (68%)	High	Roasting (72%)	High
Cauliflower	High	50-80	1.03	Weekday dinner (62%)	High	Traditional Australian (58%), Modern Australian (41%)	High	Steaming (53%), Boiling (40%)	Moderate
Broccoli	Medium-high	60-80	0.42	Weekday dinner (70%)	High	Traditional Australian (55%), Modern Australian (50%), Chinese (50%)	Moderate	Steaming (65%), Stir frying (50%)	High
Sweet Corn	Medium	40-50	0.48	Weekday dinner (57%)	Moderate	Traditional Australian (56%), Modern Australian (44%)	High	Boiling (54%), steaming (39%), microwave (33%)	High (because these are all variations on the same theme)
Green peas	Medium	30-50		Weekday dinner (64%)	High	Traditional Australian (67%), modern Australian (53%)	High	Stir frying (49%), steaming (43%)	Moderate



Opportunities identified by Horizon from a review of Colmar/Nielsen reports

Vegetable	Seasonal expansion	Cuisine expansion	Style expansion	Prep / storage education	New meal occasions
Pumpkin	Summer	Beyond Aus	Grill / Stir fry	Prep / storage	
Cauliflower	Summer	Beyond Aus	Roast / bake	Storage	
Broccoli	Summer	Beyond Aus/Chi	Bake / slow	Storage / usage	
Sweet Corn	Winter	Beyond Aus	Roast / BBQ		
Green Peas		Beyond Aus/Chi		Storage / usage	
Brussel Sprouts		Beyond Aus	Beyond boil / steam		Other than dinner
Eggplant		Increase versatility per person			
Beetroot		Beyond Aus		Usage / prep	
Sweet Potato		Beyond Aus	Grill / stir fry		Lunch
Green Beans		Beyond Aus/Chi	Soup / stew	Storage	
Cabbage				Storage / usage	
Capsicum		Increase versatility per person			Lunch
Carrots		French/Viet/Mex	Blending		Lunch

Potential for other non-standard meal occasions?

- Are there other non-standard meal occasions we should consider focussing on? For example:
 - Different parts of a meal (thinking about appetizer/entrée, main course, dessert, drinks)
 - Different days (weekday vs. weekend)
 - Different preparations/dishes (centerpiece vs. accompaniment).
 - Special occasions (Christmas, fine dining, parties)

Vegetable lacking consumer data

- Artichoke
- Celeriac
- Chicory
- Chives
- Endive
- Fennel
- Fresh Salad
- Garlic
- Hard Squash
- Jicama
- Kohlrabi
- Parsley
- Parsnips
- Radicchio
- Radish
- Silverbeet
- Spinach
- Sprouts
- Swedes
- Taro
- Turnips
- Witlof



**Vegetables Decided to
Explore With Consumers
in Stage 2 and Stage 3**

Vegetables **SELECTED** to be investigated with consumers in Stage 2

Vegetable	Vegetable
1. PUMPKIN	6. GREEN BEANS
2. CAULIFLOWER	7. CAPSICUM
3. BROCCOLI	8. LEEKS
4. SWEET CORN	9. CARROT
5. BEETROOT	10. EGGPLANT 11. CABBAGE



Exploration Ideas for Each Vegetable in Stage 2

Vegetable 1: _____ PUMPKIN

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion	Summer meals		
2. Cuisine expansion	Indian spices		
3. Style expansion	Grill/BBQ	Stir fry	Versatility of puree
4. Education	Preparation: YES	Storage: Education on ripeness	Versatility: Uses of different varieties
5. New meal occasions		Lunch: Extension of leftover/unused	
6. Different days			
7. Different dishes	Salads / cold (antipasto)		
8. Special occasions	Halloween		
9. Something else?	Freeze/reuse	Outside of main meals - Finger food (fritters, meatballs) Chips	

Vegetable 2: _____ CAULIFLOWER

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion	Summer (salads, pizza base, etc.)		
2. Cuisine expansion	Indian		
3. Style expansion			
4. Education		Storage: Education / planning ahead	
5. New meal occasions		Lunch	
6. Different days			
7. Different dishes	Centrepiece	Accompaniment	
8. Special occasions			
9. Something else?	Rice/pasta substitute (Paleo/health)	Tempura	Enhance flavour of cauli (combinations)

Vegetable 3: _____ BROCCOLI

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion	Summer (salad)		
2. Cuisine expansion	Italian (pizza)		
3. Style expansion	Roasting (breadcrumbs/lemon/garlic, dijon, butter)	Soups	
4. Education			
5. New meal occasions	Breakfast: With eggs/spinach	Lunch: Kids	
6. Different days			
7. Different dishes			
8. Special occasions			
9. Something else?	Using stems more	Combinations with cheese (dessert?)	

Vegetable 4: _____ SWEET CORN

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion	Summer (BBQ)		
2. Cuisine expansion	Mexican		
3. Style expansion	BBQ	Roast	Soup
4. Education			
5. New meal occasions	Breakfast: Fritters w caps/shallots	Lunch: Kids	
6. Different days			
7. Different dishes	Finger food		
8. Special occasions	Australia Day		
9. Something else?	Off the kernel	Caramelised	Increase health of pastas/meals

Vegetable 5: _____ BEETROOT

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion	Summer (salad)		
2. Cuisine expansion	Beyond Aus/Chinese		
3. Style expansion	Juicing	Boiled/grated (grating perhaps for all veges) – increase ability to enhance flavour	Baking (beet cake) Pickled
4. Education			
5. New meal occasions	Breakfast:	Lunch:	
6. Different days			
7. Different dishes		Accompaniment with avocado	
8. Special occasions			
9. Something else?	Chips	Dehydrated (interest in purchasing like this)	

Vegetable 6: _____ GREEN BEANS

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion	Summer salads nicoise		
2. Cuisine expansion	Beyond Aus/Chinese		
3. Style expansion	Stew/casserole (winter)	Blending/grating as accompaniment to a dish	
4. Education			
5. New meal occasions		Lunch: Kids	
6. Different days			
7. Different dishes			
8. Special occasions			
9. Something else?	Part of a cheese platter/antipasto	Tempura	

Vegetable 7: _____ CAPSICUMS

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion			
2. Cuisine expansion	Indian/Thai/Mexican		
3. Style expansion			
4. Education			
5. New meal occasions	Breakfast: Egg cups/rings	Lunch: Kids (fresh). Salad	
6. Different days			
7. Different dishes	Centrepiece (stuffed)		
8. Special occasions			
9. Something else?	Salads	Use of colour (red, green, yellow)	

Vegetable 8: _____ LEEKS

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion			
2. Cuisine expansion			
3. Style expansion	Soups / Stews	Pies	BBQ
4. Education			Versatility:
5. New meal occasions	Breakfast: Frittata	Lunch:	
6. Different days			
7. Different dishes		Accompaniment (flash fry for soup)	
8. Special occasions			
9. Something else?	Caramelised base for sauces	Onion substitute	

Vegetable 9: _____ CARROT

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion			
2. Cuisine expansion	French/Vietnamese/Mexican/Middle Eastern		
3. Style expansion	Juicing		
4. Education			
5. New meal occasions		Lunch: Kids lunchbox	
6. Different days			
7. Different dishes		Dessert (carrot cake)	
8. Special occasions	Glazed		
9. Something else?	Add health to a popular kids food (meatballs, pasta)	Finger foods (with dips, kebabs)	

Vegetable 10: _____ EGGPLANT

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion			
2. Cuisine expansion	Increase versatility per person		
3. Style expansion	Stir fry	BBQ	
4. Education	Preparation: Salting		
5. New meal occasions	Breakfast:	Lunch:	
6. Different days			
7. Different dishes		Accompaniment (salad)	
8. Special occasions			
9. Something else?	Vegetarian / meat replacement	Chips / ratatouille / Mini pizza	

Vegetable 11: _____ CABBAGE

Non-standard meal occasions themes	Ideas to explore with consumers		
1. Seasonal expansion			
2. Cuisine expansion			
3. Style expansion	Soups		
4. Education		Storage:	Versatility: To avoid wastage
5. New meal occasions		Lunch: (use it as a wrap)	
6. Different days			
7. Different dishes			
8. Special occasions			
9. Something else?	Fermented food (kim chi, coleslaw)	Sauce / use it as a wrap	



How to maximise industry adoption

Open questions

- To maximise industry adoption:
 - What will the results of this project look like?
 - Short, sharp findings (AUSVEG)
 - Pack formats, price points, varieties, marketing messages (things growers can control)
 - Who are the key stakeholders to consider?
 - Growers, retailers, AUSVEG, anyone who is motivated to increase vegetable consumption (mums, schools, etc.).
 - How and where should results be communicated?
 - Growers receive information first (have exclusive access for 6 months?), then distributed broadly and industry provided with a presentation
 - Different presentations to suit the audience
 - Findings need to be catchy/precise



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CONSUMER SCIENCE

VG14026 - Market research for investigating opportunities for more vegetable meal occasions

This project has been funded by Horticulture Innovation Australia using the vegetable levy and funds from the Australian Government.

**Stage 2:
Qualitative research with consumers to
generate ideas to increase demand in non-standard ways**

Summary Report

October, 2015

Prepared by:

Michael Feely and Ian Cesa

HORIZON CONSUMER SCIENCE

Prepared for:



**Horticulture
Innovation
Australia**

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Background & Objectives

- The Australian vegetable industry believes demand for vegetables can be increased by expanding consumer knowledge of when and how to eat vegetables.
- The purpose of this research is to identify opportunities for more vegetable meal occasions.
- The project is being conducted in 3 stages.
- In Stage 1:
 - A review of relevant data from 'Project Harvest' (VG12078) and 'Baseline demographic research for the vegetable industry' (VG13088) identified 13 vegetable categories with growth potential. Vegetables were considered to have growth potential if the data suggested concentration in when and how vegetables were cooked.
 - Once the above review was complete, Horizon moderated a roundtable discussion with HIA, AUSVEG and industry growers on 6 August 2015. Using the review of HIA consumer research as a guide and taking into account knowledge from the industry stakeholders present, the following 11 vegetable categories were chosen to be investigated with consumers in Stage 2:
 - Carrots, capsicum, beetroot, cabbage, eggplant, broccoli, cauliflower, pumpkin, sweet corn, leeks, and green beans.
- This report presents the results of Stage 2.

Background & Objectives

- The objectives of **Stage 2** are to:
 1. Use an assessment of differences between people who tend to use more vegetables in more ways (non-typical users) and those who tend to stick to standard uses of fewer vegetables (typical users) to identify insights that might lead to efficacious ways for growing meal occasions for vegetables.
 2. Generate ideas for increasing usage of vegetables at meals that can be validated in the next, quantitative stage of consumer research (Stage 3).
- We are focusing on 11 vegetable categories in Stage 2 - Carrots, Capsicum, Eggplant, Pumpkin, Leeks, Cauliflower, Broccoli, Beetroot, Green Beans, Sweet Corn, and Cabbage.
 - In Stage 1, a review of HIA consumer research and a roundtable discussion with industry stakeholders, identified the abovementioned target vegetable categories as those that have the most potential to increase demand.
 - While we are focussing on specific vegetable categories, we expect that the insights for these vegetables will apply to other vegetables as well.
- In stage 3, the ideas generated in stage 2 will be validated for efficacy with a representative sample of Australian consumers.
- This project is expected to be completed by the end of January 2016.

Research Methods

- The research in Stage 2 was designed specifically to contrast “typical” and “non-typical” vegetable users in separate focus group discussions.
 - Consumers were considered “non-typical” vegetable users if, for at least half of the 11 target vegetables for this project that they regularly buy, they cook/prepare each vegetable in 4 or more different ways.
 - “Typical” vegetable users were defined as consumers who, for all of the 11 target vegetables for this project that they regularly buy, prepare or cook the vegetables in the same or only a few different ways each time.
- The sequencing of the focus groups was an important element to the design.
 - First, focus groups were conducted with ‘non-typical’ vegetable consumers, to provide insight into how they buck the trend, the types of things that make them more versatile with vegetables than other consumers, and things they do with vegetables that could be packaged/marketed to less knowledgeable users.
 - Armed with insight for what drives the ‘non-typical’ vegetable users, we then conducted focus groups with ‘typical’ vegetable users, to:
 - Understand what drives the differences between ‘typical’ and ‘non-typical’ users
 - Identify ideas for vegetables that may increase usage and consumption among ‘typical’ vegetable users.

Research Methods

- A total of 8 focus group discussions were conducted in Melbourne and Sydney between 31st August - 3rd September.

Group composition	Melbourne	Sydney	TOTAL
“Non-typical” vegetable users	2	2	4
“Typical” vegetable users	2	2	4

- Respondents were screened to ensure they were either ‘non-typical’ or ‘typical’ vegetable consumers for the 11 vegetables of focus for this project and that across the focus groups, the 11 vegetables categories were represented.
 - “Non-typical” vegetable users regularly purchased (when in season) at least 4 of the vegetables of focus for this project and for at least half of the vegetables, consider themselves as someone who “prepares (VEGETABLE) in more ways than most other people do – 4 or more different ways.”
 - “Typical” vegetable users regularly purchased (when in season) at least 4 of the vegetables of focus for this project and for all of these vegetables, consider themselves as someone who “prepares (VEGETABLE) in the same way each time or at maximum 2-3 different ways.”
 - For example, a consumer who regularly purchases and prepares carrots, broccoli and eggplant would be a:
 - “Non-typical” vegetable user if they prepare carrots and broccoli (more than half of the vegetables they use) in 4 or more different ways.
 - “Typical” vegetable user if they prepare carrots, broccoli and eggplant (all the vegetables they use) in the same way each time or only a few different ways.

Research Methods

- Focus group participants were screened to ensure:
 - That they or anyone in their immediate family did NOT work in businesses that would directly influence their vegetable usage – restaurant/café, food service/catering, and commercial farming.
 - That their vegetable usage was not heavily culturally influenced – participants and their parents were required to have been born in Australia. The aim was to:
 - Recruit consumers whose cooking strategies and behaviour with vegetables have developed in a similar traditional Australian environment and upbringing
 - Avoid cultural influences being the defining differences between “typical” or “non-typical” vegetable users.
 - They do most of the grocery shopping, cooking and meal preparation for their household
 - They personally prepare at least 10 different meals throughout the week
 - Aged 25-70
 - A variety of household situations were represented

- Each group discussion lasted about 2 hours and covered the following topics:
 - What makes typical and non-typical users different from each other?
 - Discussion of the frequency and the variety of ways with which the 11 vegetables of focus are used.
 - Discussing meal occasions – breakfast, lunch/light meals, dinner, accompaniments, dessert – and how the 11 vegetables of focus fit into these occasions.
 - New vegetable meal occasion ideas for each vegetable were printed onto cards to spur ideas among the group and enable the group to identify/generate ideas that might expand vegetable usage.
 - See next slide for examples of the cards and an explanation for how the vegetable ideas were chosen.

Research Methods

- Approximately 10 ideas for each of the 11 vegetables were created into cards (see three examples below).
 - The ideas were chosen based on insight generated from Stage 1 of this project that identified non-standard meal occasions and cooking styles for each of the 11 vegetables of focus for this project.

Cauliflower PIZZA BASE
(Gluten alternative)



GRILLED Leek Zucchini Walnuts
(Accompaniment)



Pumpkin FRIES
(Lunch / Quick meals / Accompaniment)





Executive Summary

General Guidelines for Increasing Vegetable Meal Occasions

- To increase vegetable consumption at meals, it will be necessary to...

Guide and motivate consumers at critical points in time with recipes that:

- Simply communicate steps and time required
 - Feel familiar/safe
 - Offer simple strategies to prepare in advance and avoid waste
- Qualitative insight from consumers suggest that these general guidelines are relevant for increasing consumption of all vegetables across all meal occasions.

Recommendations for Stage 3

- We recommend testing vegetable usage concepts with consumers in Stage 3 that centre around two central themes:
 - Vegetable usage concepts that are familiar and/or safe. For example:
 - When cooking **with eggs**, whether it be fried/scrambled/boiled/omelette/frittata, include vegetables you have on hand (raw or pre-cooked) to add extra flavour and depth to the meal
 - Cook vegetables on the **BBQ** at the same time as the meat
 - Make **vegetable sauces for pasta/pizza** rather than meat/tomato sauces every time.
 - Make some of your **favourite meals more healthy** by including vegetables
 - Reminders of **familiar desserts that include vegetables**
 - Vegetable usage concepts that offer simple strategies to prepare in advance and avoid waste. For example:
 - Cook **all of the vegetable at once** for use in many different meals.
 - Transform **pre-cooked vegetables into a soup**
 - Transform **pre-cooked vegetables into a salad**
 - **Stuff vegetables** with leftover sauces/stir fries/casseroles to create a distinctly different meal
- In Stage 3, it will also be important to:
 - Ensure concepts simply communicate steps and time required
 - Assess which communication medium (card at the point of purchase, mobile app, etc.) will have the most chance of success in motivating and guiding consumers at critical points in time.



Potential strategies for increasing usage of vegetables at meals

Add Extra Dimensions to Familiar Ideas to Build Confidence

- Confidence is a key reason why non-typical vegetable users purchase vegetables in larger volumes and use them more broadly than typical users do. This confidence is a by-product of their competence with different cooking styles and methods. Through experience:
 - They know they can repurpose vegetables throughout the week across a variety of meal occasions if required.
 - They know they can adapt to the ingredients they have at their disposal. Recipes don't always need to be followed to the letter and substituting ingredients to suit what is at hand is not a bold decision.
 - New recipes or interpretations are familiar to non-typical users in some ways, providing them with confidence that they can execute them. In addition, this level of competence across cooking styles means that trying something new doesn't mean it will take longer or be more difficult than what they normally do.
- In contrast, Typical vegetable users approach vegetables in a one dimensional way. They lack the confidence and experience to purchase vegetables liberally and prepare them in a variety of ways.
 - *"I tend to put the same veges with the same meat. I have my 3-4 "go to" vegetables. I know how long they are going to cook."* (Typical vegetable user)
 - *"I don't want to buy too much and have to eat the same thing all week!"* (Typical vegetable user)
 - *"I mostly steam my vegetables. Just put them all in together. It's quick."* (Typical vegetable user)
 - *"I can't stand waste, so I tend to buy one portion worth of veges each time to avoid throwing things out."* (Typical vegetable user)
- With confidence so closely tied to experience, it is logical to suggest that if an idea is familiar and close to what consumers already make and like, it has more chance of being done. Thus, successful confidence building strategies will be those that take Typical users basic skillset into account.
 - *"You have confidence to do it if it looks similar to something you already do with other ingredients"* (Typical vegetable user)
 - *"Anything you can put on the BBQ instantly feels easy and you use the BBQ a lot anyway."* (Typical vegetable user)

Provide Information at Critical Points

- There are two critical points that influence whether and how vegetables will be included in a meal:
 1. At the point of purchase (supermarkets)
 2. When deciding what to make/prepare – inspecting the fridge or cupboards, arriving home from work, on the way home from work, etc.
- Typical vegetable users rarely have many ideas in mind for vegetables at these points in time and, even if they do, they aren't confident in their ability to execute anything outside their routine.
- It is not the recipe that is important, because there are plenty of those, it is the knowledge and confidence to execute it at critical points in time.
 - *"A little cheat card in the supermarket would be great, with simple steps. Once you've done it once or twice, you wouldn't need it anymore."* (Typical vegetable user)
 - *"There is always someone in the meat and fish department. The other day I bought a piece of fish because they told me how to prepare it and it was delicious. There is never anyone in the fruit and veg department telling you what you could do with this or that."* (Typical vegetable user)
 - *"I'd love to have these ideas in an app. When you are down at the supermarket or on the way home, you can check what ingredients you need to do it."* (Typical vegetable user)

Give Realistic Time Estimates to Counter False Perceptions


- Typical vegetable users have the perception that things they don't know will take more time. When time is short and energy is low (which is most of the time), they defer to meals/preparations they know, that are simple and quick to achieve.
 - *"You get into a rut and it's easy just to throw everything in a pot and do the same thing each time."* (Typical vegetable user)
- In contrast, non-typical vegetable users' perception of time is less constraining.
 - They believe most recipes don't take a lot of time to prepare, whether they are trying them for the first time or not. And, with a little practice, recipes take even less time.
 - Elapsed time for a meal is not always a deterrent when time is short. A roast may take 90 minutes to complete, but if only 5 minutes preparation is required, it's just as achievable as a stir fry during the week.
- Presenting recipes simply, including realistic estimates of the time it will take a novice to prepare will help to make recipes more approachable for typical vegetable users, thereby giving them more confidence to try.
 - *"If it's more than a few steps or requires special ingredients, it won't happen."* (Typical vegetable user)
 - *"If I had some simple instructions about how to turn leftover vegetables into a soup, I might do it."* (Typical vegetable user)
 - *"The wording can make a recipe sound difficult. "Green beans sprinkled with parmesan" sounds more approachable than the fluffy words of the recipe "Crispy baked parmesan green beans fries" – just say what it is."* (Typical vegetable user)

Link new ideas to existing, safe and familiar ideas

- Typical consumers are not short of information about cooking and they are only moderately short on interest in cooking. What they are short of is knowledge at critical times, experience, and confidence.
- Successful strategies to increase vegetable usage at meals are likely to be those that avoid being perceived as “adventurous”, “experimental” and “too difficult” by typical users.
 - *“I find cooking a bit of a chore, so I rely on things I can do easily and everyone likes. I’m not into experimenting too much.”* (Typical vegetable user)
 - *“You see stuff on TV and it looks really nice but often it needs special equipment or looks difficult.”* (Typical vegetable user)
 - *“I’ve ordered eggplant out and really liked it, but I would need to google how it needs to be cooked and for how long. It’s never been important enough for me to bother doing that.”* (Typical vegetable user)
- Linking vegetables to things consumers already do but don’t often associate with vegetables offer significant potential due to their familiarity. For example:
 - BBQ is a cooking style that consumers are very familiar with. While all the target vegetables for this project can be cooked on the BBQ, consumers rarely consider doing so, primarily out of a lack of knowledge that this option exists.
 - Making vegetable pasta sauce rather than always cooking the same meat/tomato sauce can provide variety to the weekly meal repertoire while staying consistent with a very popular/familiar meal.
 - Vegetables can be added to or be substitutes for less healthy ingredients in popular meals. For example, making chips out of less carbohydrate heavy vegetables than potatoes, substituting vegetables for rice/flour, etc.

Highlight extra potential in what Typical users are already doing with vegetables

- Vegetable ideas that motivate consumers to cook the whole vegetable in one go without concerns that it will go to waste may prompt behaviour change.
 - *"If I cook something once and it ends up being two meals, I'd be really happy with that." (using roasted pumpkin for dinner and turning leftovers into a salad for lunch.)* (Typical vegetable user)
 - *"I think it's a great idea (using leftover roast veg in a salad/soup the next day), but I would need to totally change the way I think."* (Typical vegetable user)
- A significant barrier to purchasing vegetables at all or purchasing vegetables in larger volumes is the concern that it will go to waste. Typical vegetable users will often end up throwing out unused vegetables because the prospect of eating the vegetable the same way for consecutive meals is not appealing.
 - *"The size of vegetables can be a problem. If you buy the whole pumpkin, what are you going to do with it all? I don't want to eat the same thing all week."* (Typical vegetable user)
- Non-typical users are less concerned about wastage as they have a larger repertoire of dishes they prepare with a particular vegetable and strategies for transforming vegetables into distinctly different meals.
 - *"I roast a bunch of vegetables at the same time as I do dinner and mix them with cous cous or something to make a salad for lunch."* (Non-Typical vegetable user)
 - *"Leftover roasted veg you can easily blend them up and turn them into soup. You can even put them into containers and put them into the freezer, so you won't waste it."* (Non-Typical vegetable user)



Increasing vegetable consumption across meal occasions

General guidelines are likely to apply to all meal occasions

- The general principles for increasing usage of vegetables at meals identified in the previous section of this report are relevant across meal occasions.
 - Provide knowledge and confidence at critical points with recipes that:
 - Simply communicate steps and time required
 - Feel familiar/safe
 - Offer simple strategies to prepare in advance and avoid waste
- However, understanding how consumers approach different meal occasions throughout the week is instructive for how best to frame ideas to increase consumption. For example, what is familiar or safe at breakfast isn't the same at dinner, preparing in advance may be more important for lunch than dinner, etc.
- This section explores practical ways to implement the general guidelines across meal occasions:
 - Breakfast
 - Lunch
 - Starters, entrees, light meals
 - Dinner
 - Dessert



Breakfast

The potential for breakfast is limited by practical considerations that have very little to do with vegetables.

- Consumers rarely consider using vegetables for breakfast meals. When asked specifically about the prospects of doing so, consumers point to practical reasons for not doing so.
 - Breakfast is a quick meal, even on weekends.
 - *"What you eat in the morning is impacted by time – it needs to be quick and easy. Vegetables would need to be cut up and cooked. Too time consuming."* (Typical vegetable user)
 - *"I don't put a lot of thought into breakfast, even if it is Sunday. I'm happy with what I have already."* (Typical vegetable user)
 - Breakfast is a light meal. Vegetables aren't perceived as a "light" option.
 - *"It's very hard to accept vegetables for the start of the day."* (Typical vegetable user)
 - *"I don't think I could face pumpkin for breakfast. It's too heavy."* (Typical vegetable user)
 - Breakfast is rarely a time when entertaining takes place, a motivator for taking more time or trying something new.
 - *"I'm not very adventurous with breakfast. Eggs on the weekend is probably as far as I go."* (Typical vegetable user)
 - *"These vegetable ideas for breakfast would be a good way to impress someone, but when do you need to do that for breakfast?"* (Typical vegetable user)
 - *"I can't see myself waking up and having leftover vegetables in the fridge and thinking yes I'll do something with that now."* (Non-Typical vegetable user)
- But, if it is possible to overcome these practical considerations, breakfast may be a substantial opportunity for increasing consumption of vegetables at meals. And, the general principles outlined in the previous section of this report, if followed, offer the best opportunity to increase usage.

Associating vegetables with eggs is the easiest way to expand usage at breakfast

- On the occasions when extra effort is put into breakfast, eggs are usually involved. Vegetables are rarely top of mind to pair with eggs in such dishes.
 - “Eggs fried in capsicum rings” (see photo below) was one of the most powerful eggs ideas, because people could see how easy it was but it was something they were not doing.



- In addition, ideas for adding unused/leftover vegetable to omelettes/frittatas/fried eggs were seen as quick and familiar, but situations where consumers usually wouldn't think to add vegetables to.



- For consumers who create juices for breakfast, adding vegetables won't add any extra time or effort to the process, so this offers some potential. However, for those not already juicing (the majority of consumers) the requirement for equipment will be a significant barrier.



Lunch

Increasing usage of vegetables at lunch can best be achieved by planning ahead

- Preparing and cooking vegetables in the middle of the day is impractical for most vegetable users, as they often aren't at home at this time of the day. The key difference is how typical and non-typical users deal with this practical limitation.
- Non-typical vegetable users have strategies that utilise dinner the night before to create the base for distinctly different lunch meals that can be prepared quickly the next day. For example:
 - *"I roast a bunch of vegetables at the same time as I do dinner and mix them with cous cous or something to make a salad for lunch."* (Non-Typical vegetable user)
 - *"Leftover roasted veg you can easily blend them up and turn them into soup. You can even put them into containers and put them into the freezer, so you won't waste it."* (Non-Typical vegetable user)
- In contrast, for "Typical" vegetable users, lunches are often the same as dinner when they involve vegetables – either leftovers from dinner the night before or part of a large batch cooked in advance to supply multiple lunch or dinner meals throughout the week.
 - *"I generally only use vegetables for lunch if I have leftovers from the night before."* (Typical vegetable user)
 - *"I often do a cook-up on the weekend for my lunches and dinners during the week, whether it be a soup or quiche, which involves vegetables."* (Typical vegetable user)

Simple strategies for preparing in advance may increase vegetable usage at lunch

- “Typical” vegetable users purchase roasted pumpkin/beetroot/cauliflower salads/soups for lunch instead of making them themselves, as they look too time consuming or difficult, even though they regularly roast these vegetables for dinner.
 - *“I’ve done roasted cauliflower/pumpkin for dinner, but I’ve never made it into a salad for lunch the next day. That would be the next step.”* (Typical vegetable user)
- When “Typical” vegetable users hear these meals could be made in conjunction with dinner the night before without adding much time OR be made from dinner leftovers, sentiment changes – prep time is minimal, they are not cooking in a way that is foreign to them, and they are transforming the dinner into a different meal entirely. And, it plays into the perception of time – either real or perceived.
 - *“If I cook something once and it ends up being two meals, I’d be really happy with that.”* (using roasted pumpkin for dinner and turning leftovers into a salad for lunch.) (Typical vegetable user)
 - *“I think it’s a great idea (using leftover roast veg in a salad/soup the next day), but I would need to totally change the way I think.”*
 - *“If I had some simple instructions about how to turn leftover vegetables into a soup, I might do it.”* (Typical vegetable user)
- The barriers to uptake are having all the ingredients required to make the transformation, meaning salad ideas should include common ingredients and be prompted at the point of purchase.
 - *“It would be great if there were some recipe cards that said for leftover pumpkin or any other vegetable, here are 10-12 suggestions. If you have it where the pumpkin is or online, that would be great.”* (Typical vegetable user)
 - *“When I’m buying food for dinner, I would need to have the salad in mind as well so I have the ingredients for the extra meal.”* (Typical vegetable user)





Appetisers, entrees, and light meals

Consumers Will Go to Extra Effort with Vegetables for Appetisers When Entertaining

- It is important to make a distinction between appetisers/entrees/light meals for entertaining and normal appetisers/entrees/light meals. Consumers will go to extra effort to entertain, which represents an opportunity for vegetables.
 - *"When I have people over, I'll make these special little frittata things that include vegetables and are great, but it's time consuming, so I only do it for special occasions."* (Typical vegetable user)
- When not entertaining, preparation time is key. Vegetables are usually uncooked when used on these occasions.
 - *"Raw carrots, beans, celery, broccoli with dips."* (Typical vegetable user)
 - *"To me, a light meal is something I want to eat right now. I don't want to cook it."* (Typical vegetable user)
 - *"I think the dips you can buy these days are great, so there isn't much need to do it yourself."* (Typical vegetable user)
- Perceived preparation time required is a barrier even when entertaining, so recipes that clearly communicate steps and time required and feel familiar/safe will be important.
 - *"All these chips and fritters sound really good. I think most people would like it, but I'd be a little worried about the time they'd take. I like to be able to enjoy myself when I have people over rather than stressing about cooking."* (Typical vegetable user)

Vegetable ideas that closely resemble popular finger foods may expand vegetable usage

- Vegetable appetisers, entrees, and light meal ideas that resemble popular snacks like chips or burgers immediately generate interest because they are safe (most people like them) and familiar (people already make these things just with different ingredients).
 - *"I'd eat all the chips there. My family loves chips so I think it would be popular."* (Typical vegetable user)
 - *"I wish vegetables were cooked this way when I was a kid. I'd love them much more!"* (Typical vegetable user)
 - *"It looks hard because it goes against what you'd normally do or think vegetables are. But, when you explain them they sound simple."* (Typical vegetable user)



- While many of these ideas are likely to be considered for entertaining only, consumers with children may experiment more broadly with these as a way to increase vegetable consumption among their children.
- Vegetable ideas that are unlikely to expand usage in appetisers, entrees, and light meals are those that look complex, time consuming or unfamiliar. For example, meals that require pickling, deep frying, batters/fritters, making bread, using pastry, etc.



Dinner

There is an openness to using vegetables more broadly in dinner meals, but a lack of knowledge or ideas about how to do so easily

- Vegetables are already heavily involved in dinner meals. The key to expanding usage will be in expanding consumer thinking about the roles and versatility of vegetables. These could involve:
 - Making vegetables more prominent at dinner
 - Changing the pairing combinations with meat so it is not always meat dictating the vegetables that are purchased
- Vegetarians and “non-typical” vegetable users recognise that vegetables are flexible and can completely change the taste/texture of a meal, but this comes about through effort and experimentation with vegetables.
- Typical vegetable users are unlikely to go to this effort on their own, so guidance and simplicity is essential. Expanding knowledge in simple ways may increase vegetable usage in dinner meals.
 - *“We do what we know, because we want quick and fast things. And no one has ever showed us how to make things other ways.”*
 - *“The veges that I cook are what I grew up with, mostly carrots and broccoli, so education about the less used vegetables would be great.”*
 - *“Vegetables have become more prominent with me. They used to be just a side, but now I’m using vegetables more often.”*
 - *“Need some instructions and perhaps cards like this. They look a little bit fancy, but if you know all you do is step 1,2,3 you might do it.”*
 - *“If the recipes don’t require special ingredients and include the stuff that’s already in the fridge or cupboards, that would be great.”*

Simple variations of familiar dinner meals or cooking techniques have potential to expand usage

- The vegetable ideas on this slide are not revolutionary. In fact, these recipes are readily available and many consumers have eaten them and enjoyed them before. However, typical vegetable users aren't doing these things much at all now because:
 - Knowledge of how to achieve them is not being provided to them at critical points (point of purchase/when deciding on what to include in the meal)
 - Confidence is lacking because the recipes aren't communicated simply or in a way to make them feel familiar or safe

1. Transform dishes you already make

- Stuff vegetables with any sauces/stir fries/curries/casseroles you are comfortable with to create a distinctly different meal.



2. BBQ vegetables as well when you have meat on the BBQ.

- "Anything you can put on the BBQ instantly feels easy and you use the BBQ a lot anyway."



3. 'Healthier' versions of meals you already make

- Vegetable sauces instead of meat sauces for meals consumers like already and are confident making (pasta/pizza). In the example below, mix cooked broccoli with pesto from a jar as a pizza/pasta sauce alternative.



- Substitutes for carbohydrates (rice/pizza bases) generate interest from a health perspective, and sound easy enough for people to try.



Cook the whole vegetable with confidence

- A communication piece for any vegetable at the point of purchase that included simple ideas for how to use cooked vegetables may increase the volume of vegetables that consumers purchase.
- For example, for broccoli, if you like to steam your broccoli for dinner, rather than just cooking what you think will be consumed over dinner, cook the whole head. With whatever steamed broccoli isn't eaten, here are some simple ideas for what to do with it:
 - Mix with eggs in an omelette the next morning
 - Add cold to any salad ingredients you have and eat for lunch the next day
 - Blend the broccoli up and add to a soup or freeze for the next time you are doing a soup
 - Mix with pesto (from a jar) and use it as a pasta/pizza sauce the next night for dinner
- The same list of ideas would work for broccoli that is boiled, stir fried, roasted, etc.



Dessert

Reminders of familiar/popular desserts that involve vegetables may increase usage

- Even for non-typical vegetables users, integrating vegetables into dessert is rare.
 - *"Vegetables would be too heavy for dessert."*
 - *"When I make my own desserts, I don't use vegetables."*
 - *"I don't really see vegetables as being interesting for dessert. I prefer fruit and simple deconstructions that avoid baking and long preparations."*
- Desserts are generally considered fiddly to make yourself, time consuming and easy to get wrong. Many consumers don't cook/prepare desserts at all, only using premade options.
 - *"I'd only bake for a special occasion, but even then, I may not."*
- Despite this, consumers still make desserts.
- The primary issue for vegetables is the perception that they aren't suitable in desserts.
- Moreover, despite the fact that they already know about the use of some vegetables in desserts, e.g. everyone knows carrot cake, they don't associate the dessert with the vegetable.
 - It is as if "carrot cake" is classified mentally as "cake" but not as "carrot" and therefore not as "vegetable."
 - *"I love carrot cake, but I didn't even think it was made out of real carrots!"*
- Simple communication of classic dessert dishes that involve real vegetables may increase usage.



**Increasing Consumption of
the 11 Vegetables
of focus for this project**

General guidelines are likely to apply to all vegetables

- The first section in this report highlighted a number of general principles for increasing usage of vegetables at meals.
 - Provide knowledge and confidence at critical points with recipes that:
 - Simply communicate steps and time required
 - Feel familiar/safe
 - Offer simple strategies to prepare in advance and avoid waste
- These principles are likely to apply to all vegetables. For example, on the surface, a comparison of carrots and eggplant would suggest distinctly different vegetables.
 - Carrots are much more likely to be purchased than eggplant.
 - Broadly speaking, consumers are much more comfortable cooking with carrots than they are with eggplant.
 - All the data from research studies commissioned by HIA supports the contention that carrots are one of the most popular vegetables while eggplants are much less popular.
 - However, even for carrots, usage is limited.
 - Typical vegetable users purchase carrots in small volumes.
 - Typical vegetable users primarily cook and prepare carrots the same way each time.
 - Typical vegetable users often end up throwing out carrots.
- Thus, these guidelines are as relevant for increasing usage and consumption of carrots as they are for eggplant and other vegetables (even those not focussed on specifically in this project).

Eggplant

- Eggplant is a vegetable that divides opinion.
- For those that cook with it, it is an extremely flexible and versatile vegetable.
 - *"Eggplant can go Mediterranean and Asian. There are so many recipes for it."*
 - *"You can do a lot with eggplant. You can make wonderful curries with eggplant and even throw it in a salad."*
- *For those that don't cook with eggplant (the majority), eggplant is unfamiliar and intimidating.*
 - *"I'm really unfamiliar with eggplant. I really like it eating out, but don't buy or cook it myself."*
 - *"Eggplant it seemed to take a long time to prepare and looked difficult when I saw someone else cook it"*
 - *"You get eggplant wrong and it's horrible."*
 - *"I wouldn't know off the top of my head what the best way to cook eggplant is"*
- For many, preparation and cooking education would be required to provide confidence.
 - *"There is a stigma attached to eggplant in prepping them"*
 - *"People need to be educated about how to cook eggplant"*

- Eggplant ideas that generated the most interest were those that:
- Teamed eggplant with dishes or cooking styles consumers are already confident with and enjoy. And, challenged preconceptions that cooking with eggplant is difficult and time consuming
 - Bolognese stuffed eggplant – familiar dish, strategy to avoid wasting leftover sauce and simple transformation into a different meal.
 - Eggplant pizza base – healthy alternative to flour bases that looks easy to achieve.
 - Eggplant chips – look easy to make and perhaps a healthier option than potatoes.
 - Eggplant stir fry – a quick/easy way to prepare eggplant in a cooking style that most are comfortable with.



- Are easily achievable with simple preparation in advance
 - Grilled eggplant salad – different to how you'd usually think to use eggplant and a simple preparation.



Leeks

- While there is a general appreciation of the flavour leeks add to a meal, it's rarely used, and primarily associated with soups/pies/casseroles.
 - *"Leek has a great flavour and is good for soups"*
 - *"We may put it in a soup but that's about it"*
- On many occasions onions are used in the place of leeks due to ease and consumers having more confidence cooking with onions.
 - *"Preparing it can be annoying with the grit in it"*
 - *"I always tend to put onion in instead of leeks"*
 - *"I don't know how to cook leeks"*
- Leek ideas that generated the most interest were those that provide confidence that leek can be used in the same way as onion or team leek with popular and simple dishes to prepare:
 - Knowledge that leek can be used in the same way as an onion might provide consumers with more confidence to buy leeks in the first place.
 - Grilled leek + walnuts salad – unusual way to prepare leeks that looks interesting and easy to achieve (mostly to non-typical users)
 - Leek herb stuffed potatoes – easy to achieve and familiar
 - Quiche – Adding leftover leek into a quiche for lunch the next day



Beetroot

- While beetroot is broadly appealing, the prospect of buying a beetroot in its raw form is intimidating. For most, they only have experience of beetroot from a can. And, there is little knowledge of how to deal with beetroot if purchased raw.
 - *"I've never ever cooked beetroot. I grew up in a household of canned beet which I can't stand and assumed cooked beetroot would be the same."*
 - *"I find beetroot is a bit intimidating, I just go with the can."*
 - *"People think of beetroot as the stuff in the tins"*
 - *"I wouldn't know off the top of my head what the best way to cook beetroot is"*
- For those that do buy beetroot raw and cook it, they really enjoy it but there are drawbacks to cooking it in combination with other things.
 - *"I love roasted beetroot and cook it all the time. It is my favourite"*
 - *"I enjoy cooking beetroot but I don't mix it in with other veg as the colour takes over. I love it but it isn't versatile for that reason."*
 - *"The mess factor, the staining of everything puts me off. It's beautiful and eat it out but feels like a lot of work for home."*

- Ideas for beetroot that generated the most interest were those that:

- Familiar and easily achievable with simple preparation in advance (Roast beetroot salad).



- Simple and appealing if juicing already (ABC juice)



- Interesting idea to make a popular food more healthy (Beetroot brownies). More likely to be taken up by non-typical users though.



Sweet Corn

- Sweet corn is enjoyed by most, but is rarely purchased on the cobb due to a perception that it lacks versatility and, if kernels are required, requires too much effort to prepare.

- *"Corn is great, but I usually use the tins as its harder to deal with on the cobb"*
- *"I love sweetcorn but I can't think of much to do with it, so rarely buy on the cobb."*
- *"There is not much else you can do with corn on the cobb other than boil it"*
- *"Corn is easy to cook and tastes great, but you can't do many things with it."*
- *"The husk in the corn can be annoying"*

- Sweet Corn ideas that generate the most appeal are those that utilise the whole cobb. Recipes requiring the kernels only are unlikely to prompt purchases of corn on the cobb.

- Mexican street corn uses a familiar cooking technique and is different to the standard corn with butter.



- BBQ corn – people already BBQ regularly, so including corn in such a meal is a simple adjustment to make.



- Including corn or leftover corn in frittatas/omelettes the next day is a simple strategy to avoid waste.



Green Beans

- Green beans are looked on favourably by consumers because of the speed and ease with which they can be cooked and the ability to eat them hot and cold.
 - *"You can eat green beans hot and cold and add them to a salad."*
 - *"Green beans are safe"*
- However, green beans are not considered as versatile as other vegetables, because they aren't perceived as suitable across a large cross section of dishes.
- Ideas for Green Beans that generated the most interest were those that:
 - Make popular dishes more healthy and seem easy to achieve – Crispy parmesan baked green beans fries.
 - Add green beans into familiar slower cooked curries and stews that consumers don't usually consider adding green beans into.



Cauliflower

- Typical vegetable users that primarily steam or boil vegetables struggle to generate interest in the flavour of cauliflower.
 - *"Cauliflower doesn't have any flavour when you steam or boil it"*
- Consumers that use cauliflower and enjoy it are those that cook it in different ways and use other ingredients to add flavour to it.
 - *"It's lovely when you roast it."*
 - *"When it's crumbed with egg, cheese and breadcrumbs it is beautiful"*
- There is some sense that cauliflower is primarily a winter vegetable.
 - *"I tend to use cauliflower in winter."*

- Ideas for cauliflower that generated the most interest were those that :
 - Add flavour to cauliflower in simple/familiar ways of cooking (baked/roasted, crumbed or with sauce/spices)



- With simple preparation in advance, can create a distinctly different meal from the night before.



- Are healthy substitutes for familiar meals that are high in carbohydrates or gluten (cauliflower pizza base and cauliflower rice) AND good uses of leftover cauliflower.



Broccoli

- In the minds of consumers, broccoli is one of the more versatile vegetables as it cooks quickly and can be included in many different meals.

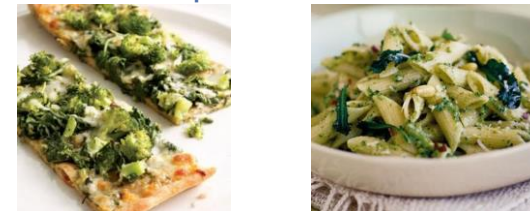
- *“Broccoli is one of those traditional vegetables that almost everyone knows and knows how to cook it. It is very difficult to get it wrong.”*
- *“Broccoli is great for stir fries”*
- *“You can eat broccoli hot and also include it cold in salad”*

- Ideas for broccoli that generated the most interest were those that include broccoli in familiar dishes/cooking styles that most don't associate broccoli with.

- Roasted broccoli / broccoli bakes – consumers regularly bake/roast other vegetables but never think to include broccoli



- Mixing broccoli with pesto for a pasta sauce or pizza topping – simple ingredients (may be in the fridge already) and a good alternative to meat sauces. Preparation in advance is also possible.



- Pre-cooked or fresh broccoli in a frittata/omelette



Cabbage

- Consumers find it hard to get excited about cabbage. It is often seen as a “filler” more than anything else and as having limited uses.
 - *“I don’t really like it. Its just a filler.”*
 - *“Why would you buy cabbage other than for coleslaw”*
- The size of cabbage can be a challenge for some and many are unsure of how to cook with it.
 - *“Cabbage is too large. What am I going to do with it?”*
 - *“I’m not very familiar with cabbage. I’d need to look up how to cook it.”*

- Ideas for cabbage that generated the most interest were those that include cabbage in familiar dishes/cooking styles and make cabbage look more interesting than it is perceived to be.

- Roasted cabbage wedges – Generate interest from most as something different, that looks easy, and is something people already do with other vegetables.



- Spicy stir fry cabbage – looks easy and a way to make cabbage more interesting/tasty.



- Lamb and cabbage rolls – interesting way to use leftover sauces.



Pumpkin

- Pumpkin is considered versatile by most consumers but the drawback is preparation as cutting can be laborious. In addition, the size is often too large for consumers and leads to perception that is might go to waste.
 - *"Pumpkin is so versatile, but it can be bulky and difficult to cut up"*
 - *"I can do so much with it, so I put up with the difficulty of preparing it"*
 - *"I buy the pre cut up pumpkin to avoid the cutting"*
- Pumpkin is more likely to be considered a winter vegetable.
 - *"Pumpkin is more seasonal than other vegetables. I tend to use it more in winter."*

- Ideas for pumpkin that generated the most interest were those where pumpkin is included in familiar dishes or, with some preparation in advance, transformed into a different meal.

- Pumpkin and paprika BBQ – consumers regularly BBQ so this could be added to the repertoire and provide a use for pumpkin in summer.



- Pumpkin salad – With familiar preparation in advance, easy to prepare.



- Pumpkin fries – look easy to do and a change from standard chips.



- Pumpkin omelette/ frittata – With familiar preparation in advance, easily adding to frittata or omelettes.



Capsicum

- Capsicum is considered very versatile by consumers that use it because it can be eaten raw and it integrates well in quick meals like stir fries.

- *"Capsicum is fabulous for stir fries"*
- *"It's so versatile. You can eat it hot or cold and add it to a salad."*
- *"You can use it as a container, you can eat it raw, it's great"*

- However, this perceived versatility is primarily based on capsicum's suitability for quick and easy meals. Usage of capsicum beyond such dishes is much less common, so there is plenty of scope to increase consumption and usage of capsicum.

- Ideas for capsicum generated the most interested were those that teamed capsicum with familiar dishes in unexpected ways.

- Capsicum egg rings – simple, easy, interesting inclusion in breakfast.



- Stuffed capsicum – alternative way to use leftover Bolognese or sauces from a previous meal



- Added into a tortilla for breakfast/lunch



Carrots

- Carrot are considered the most versatile vegetable by all consumers.
 - *"You can steam them, roast them, mash them, have them raw."*
 - *"Carrots are safe. You know how to cook them."*
 - *"Carrots are very traditional, everyone has grown up with them and knows them."*
- Despite the high level of comfort with carrots, consumers still find themselves using/cooking carrots the same ways and throwing carrots out, so are cognisant of the volume they purchase.
- Conflicting behaviour (feeling carrots are versatile but preparing them in only a few ways) suggests that habits become ingrained and guidance and prompting at critical decision making points will be required to expand consumer repertoires.

- Recipe ideas for carrots that generated the most interest were those where the inclusion of carrots made familiar dishes that consumers already make healthier.

- Grated carrots with burgers or within burger patties



- Including carrots in spaghetti Bolognese or any meat based sauce



- Carrot cake – when prompted consumers are reminded of how much they enjoy carrot cake. Some are unaware actual carrots are in the cake.





**Recommendations for
the next stage of research
(Stage 3)**

Vegetable Usage Concepts that adhere to the general guidelines

- Throughout this report, we have suggested that a set of general guidelines are relevant for increasing consumption of all vegetables across all meal occasions. That, to increase vegetable consumption at meals, it will be necessary to:
 - Guide and motivate consumers at critical points (purchase / when deciding what to make) with recipes that:
 - Simply communicate steps and time required
 - Feel familiar/safe
 - Offer simple strategies to prepare in advance and avoid waste
- With the abovementioned guidelines in mind, we recommend testing vegetable usage concepts with consumers in Stage 3 that centre around two central themes:
 - Vegetable usage concepts that are familiar and/or safe. For example:
 - When cooking **with eggs**, whether it be fried/scrambled/boiled/omelette/frittata, include vegetables you have on hand (raw or pre-cooked) to add extra flavour and depth to the meal
 - Cook vegetables on the **BBQ** at the same time as the meat
 - Make **vegetable sauces for pasta/pizza** rather than meat/tomato sauces every time.
 - Make some of your **favourite meals more healthy** by including vegetables
 - Reminders of **familiar desserts that include vegetables**
 - Vegetable usage concepts that offer simple strategies to prepare in advance and avoid waste. For example:
 - Cook **all of the vegetable at once** for use in many different meals.
 - Transform **pre-cooked vegetables into a soup**
 - Transform **pre-cooked vegetables into a salad**
 - **Stuff vegetables** with leftover sauces/stir fries/casseroles to create a distinctly different meal

Concepts will be communicated simply, using vegetables familiar to each survey respondent

- While the concepts outlined on the previous slide are clear, easy to understand and likely to apply across vegetables, it will be important to frame the concepts in a way that is relevant for each survey respondent in Stage 3.
 - One of the guiding themes for the concepts surrounds familiarity, so it will be important for consumers to evaluate the concepts in the context of vegetables they purchase and prepare regularly when in season.
 - In the appendix of this report, potential recipe ideas for each concept and vegetable are suggested.
 - Further, some concepts may apply equally well across vegetables while others might suit a certain type of vegetable. To assess how broadly each concept can be applied, we will need to assess appeal of each concept for each of the 11 vegetables of focus for this project.
- To adhere to the guideline of recipes that simply communicate steps and time required, each concept will be presented to consumers in the following way within the survey:
 - A general statement about the concept (similar to statements on the previous slide)
 - A specific recipe for a vegetable of focus for this project that the respondent purchases and prepares regularly when in season.
 - Preparation and cooking time will be clearly noted
 - Chosen recipes will utilise well known/familiar cooking styles and will be restructured (if required) to make them easier to execute. For example:
 - If a recipe includes a some uncommon ingredients, these will be removed from the recipe
 - Where possible, recipes will be no more than 3 steps
 - A photo of the dish

A variety of communication medium concepts tested for suitability and appeal






- As noted by the general guidelines, to change consumer behaviour with vegetables, guidance and motivation will be required at critical points in time (point of purchase / when deciding what to make, etc.).
- With this guideline in mind, it will also be important to assess which communication medium would have the most chance of success in increasing vegetable usage.
- After evaluating the various vegetable usage concepts outlined on slide 45, respondents will be presented with a number of communication medium concepts and asked to rate the ideas for appeal. For example, the list of concepts could include:
 - A pocket sized card at the point of purchase for a specific vegetable that communicates one usage concept for that vegetable. The concept statement and picture of recipe is on the front side of the card and the time and steps required are on the back. The card can be taken home to follow along with.
 - A booklet at the point of purchase for a specific vegetable that includes all of the usage concepts and ideas for that vegetable. The booklet can be taken home to use as a reference.
 - A booklet in the vegetable section in the supermarket that includes all of the concepts and has ideas across all of the vegetables. The booklet can be taken home to use as a reference.
 - A person in the vegetable section in the supermarket explaining the concepts and how to achieve
 - Including the vegetable usage ideas in the recipe/specials magazine produced by the supermarket that is available on arrival and at the checkout.
 - A mobile phone/device app that consumers could consult for all vegetables.
 - A Youtube "channel" dedicated to providing guidance for increasing usage of vegetables in meals



**Appendix:
Potential Recipe Ideas
For each Concept and Vegetable**












Recipes for Concept 1:

When cooking with eggs, include vegetables you have on hand (raw or pre-cooked)

Carrots	Capsicum	Eggplant	Broccoli
Carrot omelette 	Fried eggs in capsicum rings 	Eggplant/tomato hash with eggs 	Broccoli frittata 
Pumpkin	Cauliflower	Leek	Green Beans
Pumpkin/fetta/bacon frittata 	Cauliflower/fetta omelette 	Cheese/leek/potato tortilla 	Green beans omelette 
Sweet Corn	Cabbage	Beetroot	
Chorizo/corn frittata 	Stir fry cabbage with eggs 	Beetroot hash with eggs 	











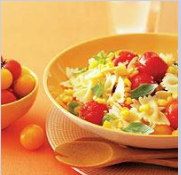
Recipes for Concept 2:

Cook vegetables on the BBQ with meat

Carrots	Capsicum	Eggplant	Broccoli
Balsamic grilled carrots	Grilled capsicum salad	Grilled eggplant	Grilled parmesan broccoli
			
Pumpkin	Cauliflower	Leek	Green Beans
BBQ pumpkin/paprika	Grilled spiced cauliflower	Grilled leek/walnut salad	Green beans on the grill
			
Sweet Corn	Cabbage	Beetroot	
Mexican street corn	BBQ cabbage with bacon	Balsamic BBQ beets	
			








Recipes for Concept 3:

Make vegetable sauces for pasta/pizza

Carrots	Capsicum	Eggplant	Broccoli
<p>Spaghetti bolognese (with carrot)</p> 	<p>Tomato, sausage, capsicum pasta</p> 	<p>Eggplant and bacon pasta</p> 	<p>Broccoli and pesto pasta/pizza</p>  
Pumpkin	Cauliflower	Leek	Green Beans
<p>Creamy roast pumpkin pasta OR Pumpkin/spinach/ricotta pizza</p>  	<p>Cauliflower, bacon, parmesan pasta</p> 	<p>Pasta with bacon and leeks</p> 	<p>Prosciutto and green bean pasta</p> 
Sweet Corn	Cabbage	Beetroot	
<p>Summer corn and tomato pasta</p> 			










Recipes for Concept 4:

Make some of your favourite meals healthier

Carrots	Capsicum	Eggplant	Broccoli
<p>Grated carrots with burgers or within burger patties</p> 	<p>Raw capsicum with dips?</p>	<p>Eggplant pizza base or chips</p> 	<p>Would probably use brocc options from the previous concept here as well...</p>
Pumpkin	Cauliflower	Leek	Green Beans
<p>Pumpkin fries</p> 	<p>Cauliflower pizza base or "rice"</p> 	<p>Leek herb stuffed potatoes</p> 	<p>Crispy baked parmesan green beans fries</p> 
Sweet Corn	Cabbage	Beetroot	
		<p>Baked beet chips</p> 	

Recipes for Concept 5:

Reminders of vegetable desserts/sweets

Carrots	Capsicum	Eggplant	Broccoli
Carrot cake 	Capsicum sorbet 	Eggplant, ricotta and chocolate 	Chocolate chip broccoli brownies 
Pumpkin	Cauliflower	Leek	Green Beans
Pumpkin pie 	Honey roasted cauliflower 	Leek cheese muffins 	
Sweet Corn	Cabbage	Beetroot	
Sweet corn and coconut pudding 		Beetroot brownies 	












Recipes for Concept 6:

Cook all the vegetable at once for use in many different meals

- For each of the 11 vegetables:
- Rather than just cooking what you think will be consumed over dinner, cook all the X (vegetable) you have on hand at one time. With whatever isn't eaten, here are some simple ideas for what to do with what remains:
 - Mix (vegetable) with eggs in a omelette the next morning
 - Add (vegetable) cold to any salad ingredients you have and eat for lunch the next day
 - Blend (vegetable) up and add to a soup or freeze for the next time you are doing a soup
 - Mix (vegetable) with pesto (from a jar) and use it as a pasta/pizza sauce the next night for dinner












Recipes for Concept 7:

Transform pre-cooked vegetables into a soup

Carrots Roasted carrot and potato soup 	Capsicum Capsicum and beans soup 	Eggplant Roasted eggplant soup 	Broccoli Roasted broccoli soup 
Pumpkin Thai pumpkin soup 	Cauliflower Spiced cauliflower soup 	Leek Potato leek bacon soup 	Green Beans Cream of green bean soup 
Sweet Corn Chicken and sweet corn soup 	Cabbage Cabbage bacon potato soup 	Beetroot Beetroot and carrot soup 	






Recipes for Concept 8:

Transform pre-cooked vegetables into a salad

<p>Carrots</p>	<p>Capsicum</p>	<p>Eggplant</p>	<p>Broccoli</p>
<p>Carrot and kale salad</p> 	<p>Capsicum/avocado/tomato salad</p> 	<p>Grilled eggplant/rocket/goats cheese salad</p> 	<p>Broccoli salad</p> 
<p>Pumpkin</p>	<p>Cauliflower</p>	<p>Leek</p>	<p>Green Beans</p>
<p>Roasted pumpkin salad</p> 	<p>Roasted cauliflower salad</p> 	<p>Grilled leek and walnut salad</p> 	<p>Nicoise salad</p> 
<p>Sweet Corn</p>	<p>Cabbage</p>	<p>Beetroot</p>	
<p>Sweet corn salad wrap</p> 	<p>Chicken and cabbage salad</p> 	<p>Beetroot and walnut salad</p> 	

Recipes for Concept 9:

Stuff vegetables with leftover sauces/stir fries/casseroles

Carrots	Capsicum	Eggplant	Broccoli
Baked stuffed carrots 	Stuffed capsicum 	Bolognese stuffed eggplants 	
Pumpkin	Cauliflower	Leek	Green Beans
Baked stuffed pumpkin 			
Sweet Corn	Cabbage	Beetroot	
	Lamb and cabbage rolls 		

HORIZON

CONSUMER SCIENCE



VG14026 - Market research for investigating opportunities for more vegetable meal occasions
This project has been funded by Horticulture Innovation Australia using the vegetable levy and funds from the Australian Government.

Stage 3:

Quantitative concept screening to identify which non-standard meal occasions concepts are most likely to drive demand

Summary Report

29 January, 2016

Prepared by:

Michael Feely and Ian Cesa
HORIZON CONSUMER SCIENCE

Prepared for:

**Horticulture
Innovation
Australia**

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Executive Summary

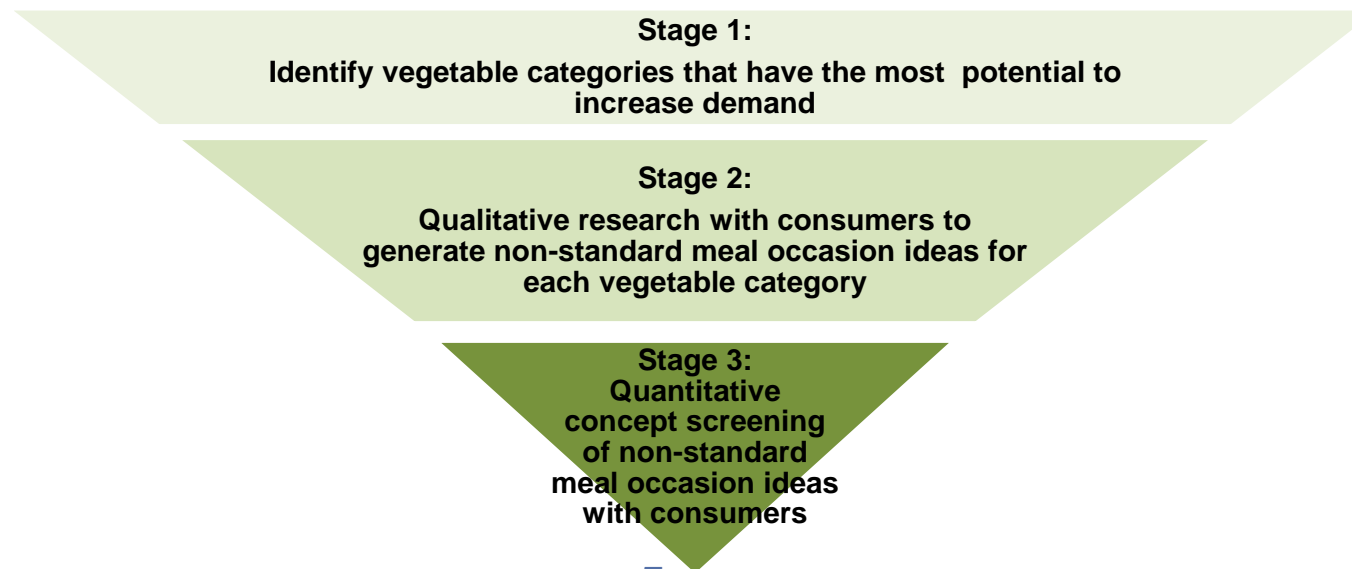
- **More than half (55%) of Australian vegetable consumers are willing to do more with vegetables** – at least one of the usage ideas tested in Stage 3 of this project is...
 - Something they like
 - That is different to what they currently do with vegetables
 - And, is something they can see themselves doing
- **All vegetables, irrespective of their current popularity, have significant untapped consumption potential.**
- **Potential exists broadly across demographic groups** – The usage ideas have appeal that is fairly broad and is not concentrated in any specific demographic group.
- With such broad appeal, **all vegetable retailers and industry players in Australia, irrespective of their location, size or the profile of their customers, could utilise these usage ideas to increase vegetable sales.**

Executive Summary

- The 9 usage ideas all offer decent potential to increase vegetable consumption and are likely to be more powerful if **employed as a collective over time**.
- The ideas are likely to be effective for all vegetables, not just the 11 focussed on in this project.
- When communicating these ideas with consumers, the following guidelines should be adhered to:
 - **Link to the Familiar** – If an idea is familiar and close to what consumers already make and like, it has more chance of being done.
 - **Make Recipes Simple** – Typical vegetable users have the perception that things they don't know will take more time. Presenting recipes simply, including realistic estimates of the time it will take a novice to prepare will help to make recipes more approachable for typical vegetable users, thereby giving them more confidence to try.
 - **Consumers want information at the point of purchase** – A single usage idea card for a specific vegetable, right at the point of purchase, reaches consumers at a time when they are most likely to consider trying something new.

Background & Objectives

- The Australian vegetable industry believes demand for vegetables can be increased by expanding consumer knowledge of when and how to eat vegetables.
- The purpose of this research is to identify opportunities for more vegetable meal occasions.
- This report is the final report for this project and presents the results of Stage 3.
 - The objective of Stage 3 is to identify which of vegetable usage ideas generated in Stage 2 have the most potential for increasing/expanding vegetable usage and in so doing, develop a strategy to increase/expand vegetable usage in Australia.
 - While we have focussed on 11 specific vegetable categories in this project, we expect that the insights for these vegetables will apply to other vegetables as well.
- The project has been conducted in 3 stages, with each stage informing the next.



Stage 1 Recap

- In Stage 1, a review of relevant data from 'Project Harvest' (VG12078) and 'Baseline demographic research for the vegetable industry' (VG13088) identified 13 vegetable categories with growth potential.
- Once the above review was complete, Horizon moderated a roundtable discussion with HIA, AUSVEG and industry growers on 6 August 2015.
- A number of factors were taken into account when selecting vegetables for stage 2. For example:
 - Seasonal concentration – For example, more use in summer vs winter
 - Cuisine concentration – vegetable recipes relate to a small number of cuisines
 - Cooking style concentration – vegetable is cooked in a limited number of styles
 - Education needs – preparation/storage/versatility concerns
 - Meal occasion concentration – for example, vegetable mostly cooked for dinner
 - Volume of the vegetable is high enough to justify focus on it
 - The applicability of findings for other vegetables categories
- Using the review of HIA consumer research as a guide, and taking into account knowledge from the industry stakeholders present, 11 vegetable categories were chosen to be investigated with consumers in Stage 2:

Carrots, capsicum, beetroot, cabbage, eggplant, broccoli, cauliflower, pumpkin, sweet corn, leeks, and green beans.

Stage 2 Recap

- The purpose of the research at this stage was to explore what differentiates those who use vegetables a lot from those who don't and, thereby, to identify strategies that might be employed to help grow usage.
- Key insights from the Stage 2 qualitative research were:
 - To increase vegetable consumption at meals, it will be necessary to:
 - Guide and motivate consumers at critical points in time (point of purchase / when deciding what to prepare) with recipes that:
 - Simply communicate steps and time required
 - Feel familiar/safe
 - Offer simple strategies to prepare in advance and avoid waste
 - A total of 9 ideas to grow vegetable usage were identified to be validated for efficacy in Stage 3 with a representative sample of Australian consumers. The vegetable usage ideas centred around two themes:
 - Vegetable usage ideas that are familiar and/or safe.
 1. When cooking **eggs for breakfast**, think about adding vegetables to add extra flavour/depth to the meal
 2. Cook **vegetables on the BBQ** at the same time as the meat
 3. Make **vegetable sauces for pasta** rather than meat/tomato sauces every time.
 4. Make **popular meals healthier** with vegetables
 5. **Familiar desserts that include vegetables**
 - Vegetable usage ideas that offer simple strategies to prepare in advance and avoid waste.
 6. Cook **all of the vegetable at once** for use in different meals.
 7. Transform **pre-cooked vegetables into a soup**
 8. Transform **pre-cooked vegetables into a salad**
 9. **Stuff vegetables** with leftover sauces/stir fries/casseroles to create a distinctly different meal

Stage 3 Research Methods

- A total of 1518 interviews were conducted online with Australian vegetable users.
 - Quotas were set by state to ensure the total sample is representative of the Australian population (see table).
- Respondents to the online survey were screened to ensure they were:
 - Responsible for at least half of grocery shopping and meal preparation in their household
 - Buy fresh when in season (or open to buying in the future), at least 3 of the 11 vegetables of focus for this project
 - Are Australian residents aged 18-64
- The survey was designed and hosted using Horizon's proprietary online survey system, for which we have developed a variety of quality control measures to identify respondents who are cheating or not paying attention. For example:
 - Multiple completes from the same IP address
 - Over-consistency of response – responding the same for everything (we write our surveys to enable us to clearly identify if a respondent is paying attention or answering consistently)
 - Survey duration – we time test our surveys and identify reasonable time frames to complete the survey. If a survey is completed too quickly, the respondent is removed.
- The sample of Australian vegetable users who responded to the survey was drawn from the ResearchNow Australian consumer panel, which has AMSRO Trustmark endorsement and ISO 20252 certification.

Residence of respondents	Number of interviews
New South Wales	490
Victoria	374
Queensland	307
Western Australia	150
South Australia	116
Tasmania	39
Australia Capital Territory	27
Northern Territory	15
TOTAL	1518

Stage 3 Research Methods

- The online survey took approximately 16 minutes to complete and covered the following topics:
 - The regularity of including vegetables in meals and the variety of ways vegetables are prepared.
 - Usage idea evaluation
 - Respondents evaluated each of the following 9 vegetable usage ideas separately:
 - When cooking **eggs for breakfast**, think about adding vegetables to add extra flavour/depth to the meal
 - Cook **vegetables on the BBQ** at the same time as the meat
 - Make **vegetable sauces for pasta** rather than meat/tomato sauces every time.
 - Make **popular meals healthier** with vegetables
 - **Familiar desserts that include vegetables**
 - Cook **all of the vegetable at once** for use in different meals.
 - Transform **pre-cooked vegetables into a soup**
 - Transform **pre-cooked vegetables into a salad**
 - **Stuff vegetables** with leftover sauces/stir fries/casseroles to create a distinctly different meal
 - See next slide for an example of how each idea was presented and the questions that respondents were asked about it.
 - Level of appeal of 4 different ways the usage ideas could be made available to consumers
 - Where you select a vegetable in the supermarket, there is a card with a single usage idea for that vegetable.
 - Vegetable usage ideas are linked to weekly special in the supermarket magazine.
 - A free app can be downloaded to your smartphone, where you can select a vegetable and type of meal (breakfast, lunch, etc.) and the app will suggest a number of usage ideas for that vegetable.
 - A YouTube channel or Facebook page where you can view instructional videos from vegetable growers about different ways of using that vegetable for that meal occasion.
 - Recipe characteristics that would increase the likelihood of the respondent trying new ways of using vegetables
 - Simple, familiar, challenging, educational, different.
 - Meal preparation in the past 7 days by meal occasion (breakfast, etc.) and the number of meals that included vegetables.
 - Demographic characteristics – age, gender, household composition/income, employment status, and highest level of education obtained.

Stage 3 Research Methods

- Usage Idea Evaluation:
- A total of 9 usage ideas were evaluated separately.
- Each usage idea was presented in the following way:
 - A sentence to explain the usage idea itself
 - Pictorial examples of how the idea could be achieved with different vegetables
 - The image on this slide is an example of how the “eggs and vegetables” idea was presented to online survey respondents.
- After viewing the usage idea description and pictorial examples, respondents were asked 4 questions related to the specific usage idea:
 - How appealing to you is this idea of using vegetables?
 - How similar to or different from what you typically do with vegetables is this idea?
 - How likely in the near future are you to employ this idea of using vegetables?
 - Which, if any, of the recipe examples for this idea would you like to make or prepare yourself?
- Please see the appendix to see how each of the 9 usage ideas was presented to respondents.

VEGETABLE USAGE IDEA

When cooking **eggs for breakfast**, think about adding vegetables to add extra flavour/depth to the meal.

Here are some examples for how this idea could be achieved with different vegetables.



Stage 3 Analytical Methods

- The key piece of analysis in Stage 3 is to estimate the potential for increasing consumption of each usage idea among Australian vegetable users.
- First, we want to make sure that the usage idea is appealing to consumers, that they actually like the idea. However, even if they like it, it is possible that the usage ideas are not new. They may be ones they are already employing. So, we want to identify ones that they like but that offer something different to what they currently do because these are the ideas that are most likely to lead to increased usage of vegetables. Among those ideas that consumers like and that are different from what they currently do there may be some that they will not be likely ever to employ. We want to eliminate those, so that what is left is those ideas that consumers consider to be:
 - Appealing (very/somewhat)
AND
 - Different (completely/very/somewhat) to what they typically do with vegetables
AND
 - Likely (certain/very) to be employed in future
- The table below illustrates how Australian vegetable users rate each usage idea on these three characteristics.
 - For example, for the 'Eggs+Veg for breakfast' usage idea, 55% of the sample found this idea appealing, 72% found it different from what they currently do for breakfast, but only 37% believed it was something they would actually do.
 - When these are combined we come up with a potential to increase vegetable usage of 23%. This means that for 23% of vegetable users, this is an idea that they are likely to employ that is appealing and different from what they currently do with vegetables.
 - It is worth noting that in most cases, the usage ideas tested are different to what 2/3 or more of Australian vegetable users typically do with vegetables.

Potential of usage ideas to increase vegetable usage

	Vegetable usage ideas								
	Eggs + Veg for breakfast	Cook veg on the BBQ	Veg pasta sauces	Popular meals healthier with veg	Veg desserts	Cook all veg at once for use in different meals	Transform pre-cooked veg into a SOUP	Transform pre-cooked veg into a SALAD	Stuff veg
Full Base: Respondents	1518	1518	1518	1518	1518	1518	1518	1518	1518
Appeal of the idea (% saying 'very/somewhat appealing')	55%	61%	60%	63%	34%	51%	64%	61%	57%
Difference of the idea (% saying 'completely/very/somewhat different')	72%	68%	64%	68%	85%	69%	57%	62%	75%
Likely to employ the idea (% saying 'certain to do so/very likely')	37%	41%	44%	43%	21%	34%	42%	45%	37%
Potential of usage idea to <u>increase vegetable meal occasions</u>	23%	24%	24%	27%	17%	20%	21%	23%	24%



Increasing Meal Occasions for Vegetables

More than Half of Consumers Willing to do More With Vegetables.

For over half (55%) the vegetable users in Australia, at least one of the usage ideas tested has the potential to increase their usage.

- This is good news. It suggests that there is plenty of potential if a variety of options are offered.

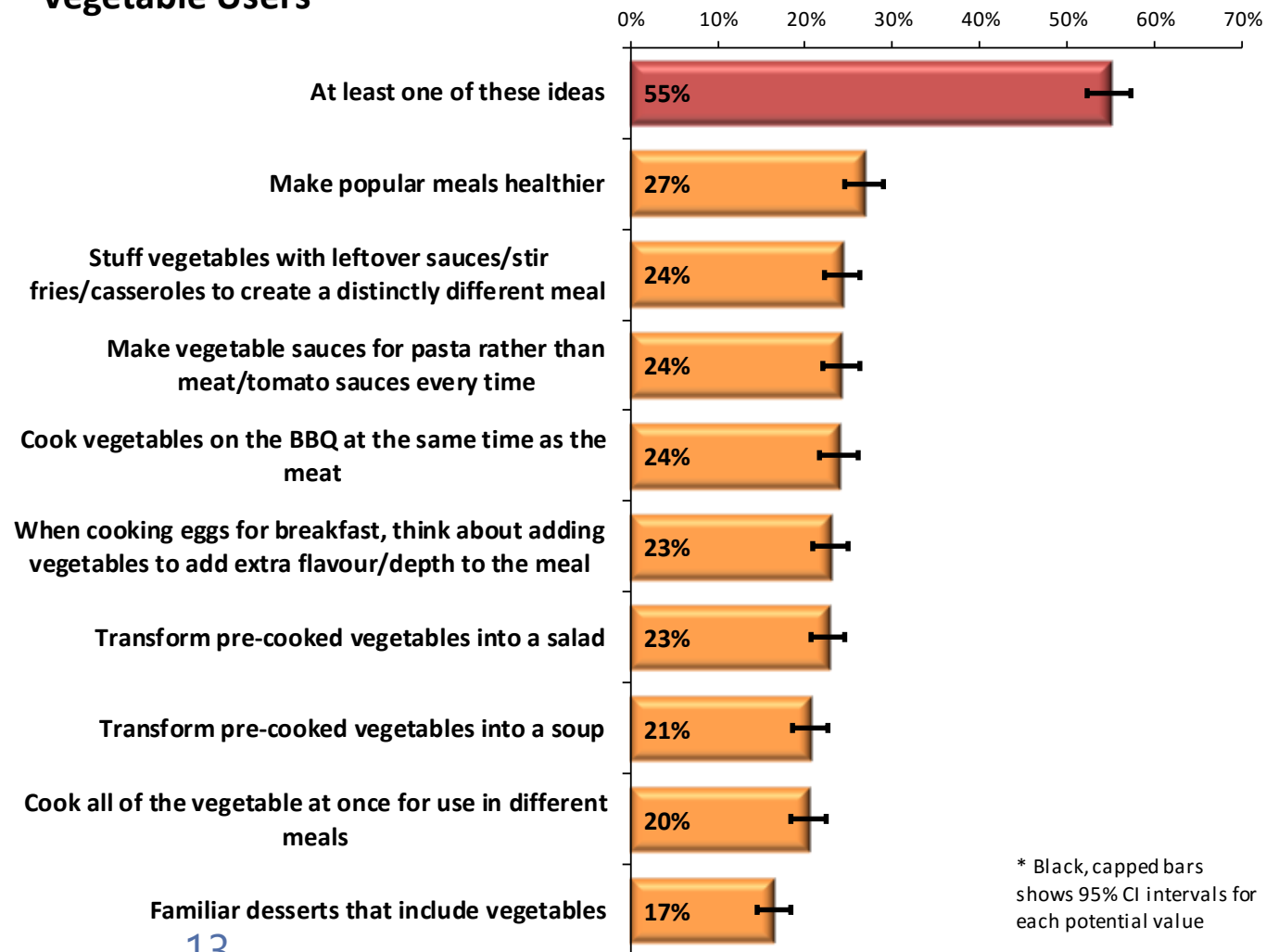
Or, to put another way, at least 1 of these usage ideas is...

- Something they like (it's very/somewhat appealing)
- That is different to what they currently do with vegetables
- And, is something they can see themselves doing

Of the usage ideas tested, the potential to increase vegetable usage varies from 17% for using vegetables in desserts to 27% for making popular meals healthier.

- What this means is that each of these concepts has a strong potential for increasing consumption with between 17 and 27% of today's consumers.

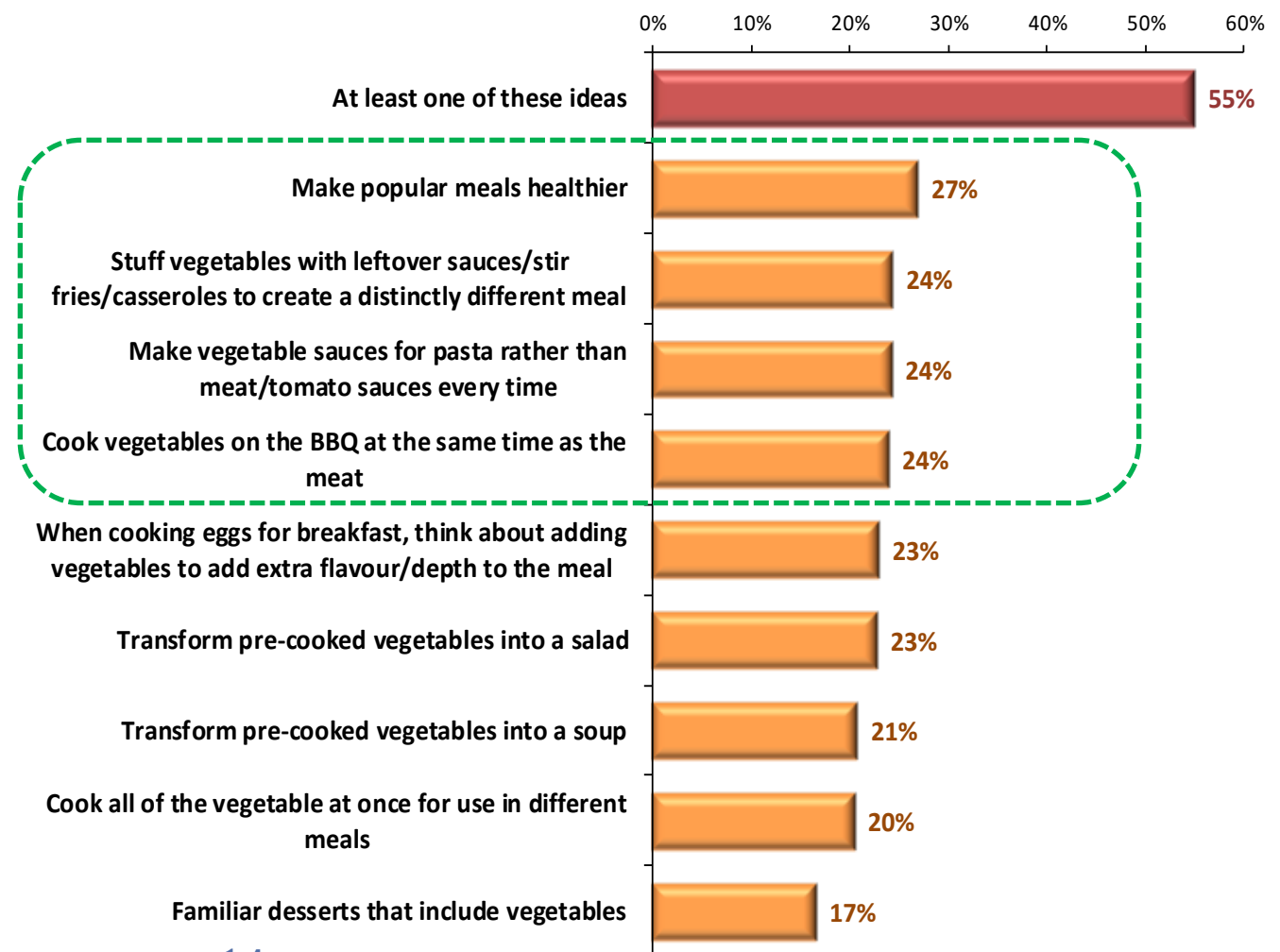
Potential to Increase Vegetable Usage among Australian Vegetable Users



Ideas linked to familiar dishes/cooking styles most likely to increase vegetable usage

- Usage ideas that link to familiar, safe and easy to achieve dishes have the most potential for increasing vegetable usage.
- The top 4 ideas offer similar potential (24-27%) to increase vegetable usage, suggesting the ideas are reasonably interchangeable and may offer more power if employed as a collective over time, rather than excluding one idea in favour of others.

Potential to Increase Vegetable Usage among Australian Vegetable Users



Ideas Offering Less Potential Still Should Be Considered

The ideas that offer the least potential to increase vegetable usage are either:

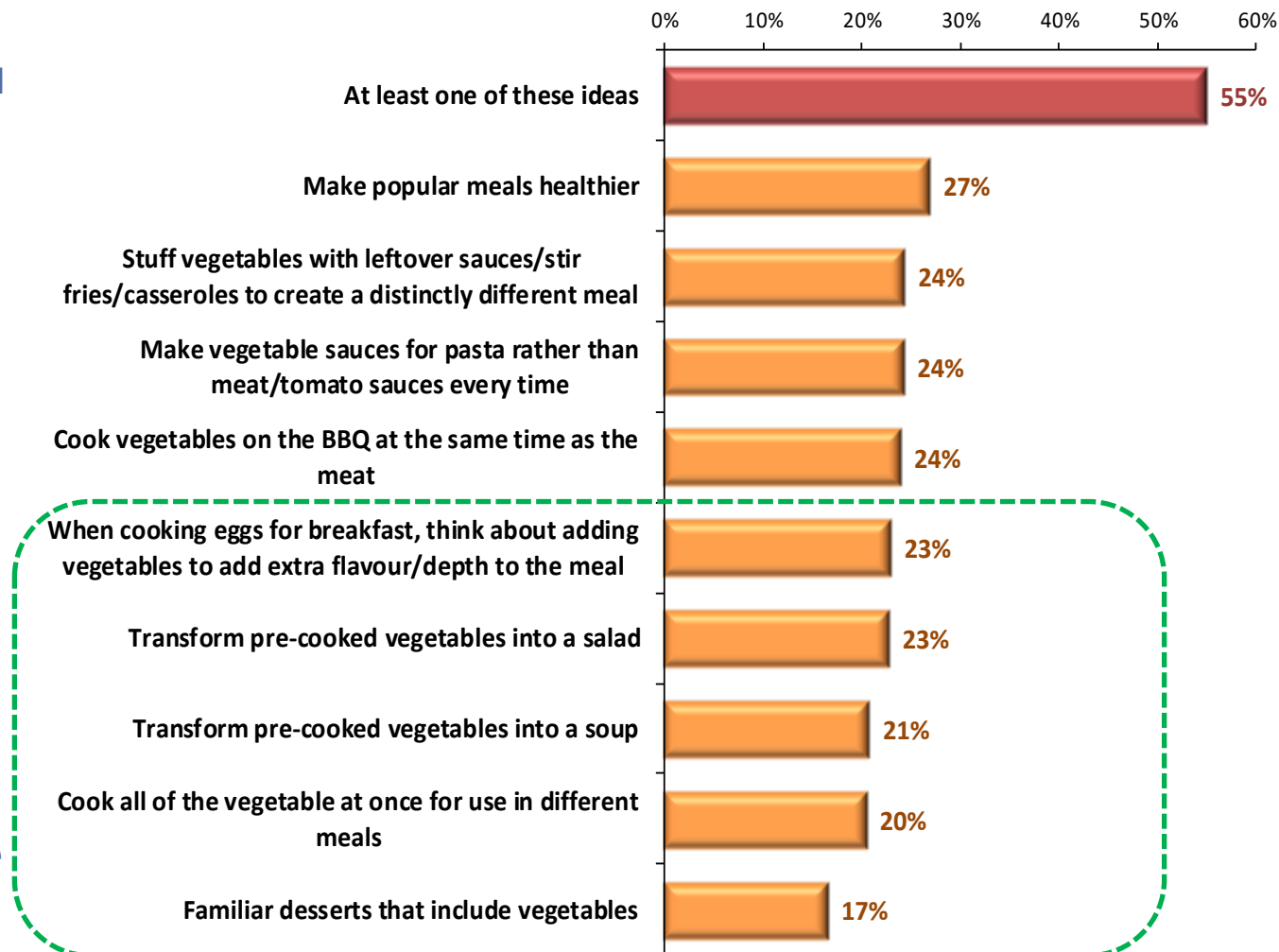
- Very different to what consumers typically do with vegetables (using vegetables for breakfast or dessert)
- Or, require consumers to think ahead and consider more than 1 meal occasion at the same time. For example:
 - Transforming pre-cooked vegetables (1st meal) into a 2nd meal (soup or salad)
 - Cooking all the vegetable at once for use in different meals

Success with these types of ideas is likely to correspond with a more dramatic increase of vegetable usage by prompting consumers to:

- Consider including vegetables in meals (breakfast/dessert, for example) that they don't usually make at all
- Have more than 1 meal in mind at the same time and to use vegetables in each one.

Success is not quite as obvious as for some other usage ideas. These require that consumers be familiarized more with the idea before it can have an impact.

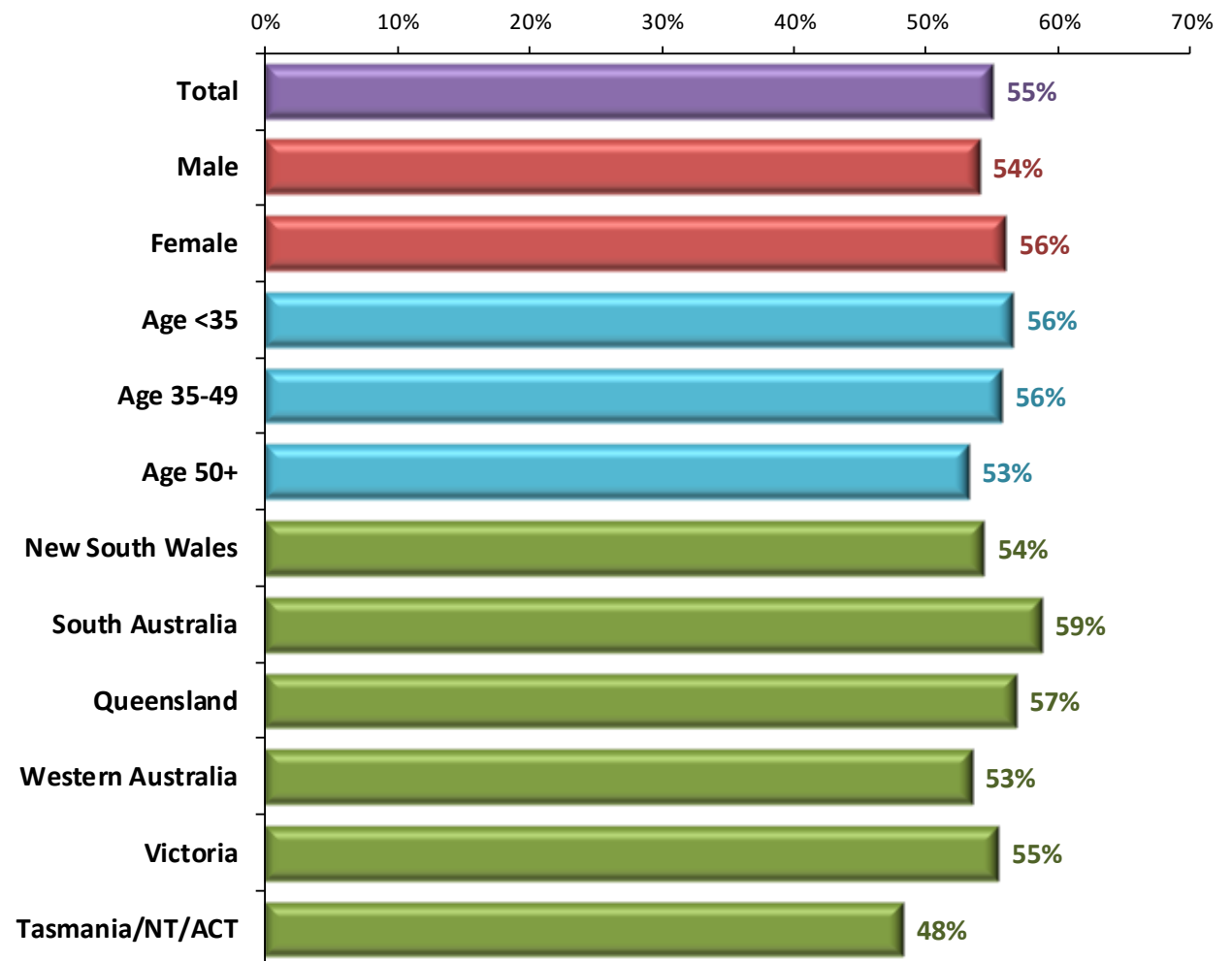
Potential to Increase Vegetable Usage among Australian Vegetable Users



Potential Exists Broadly Across Demographic Groups

- The usage ideas have appeal that is fairly broad and is not concentrated in any specific demographic group.
 - South Australia has the strongest potential as a % of population and Tasmania and the territories the weakest, but the concentration of potential by state is not strong.
 - Similarly, women have a bit more potential than men, and younger people are more open to experimentation than older people.
- With such broad appeal, all vegetable retailers and industry players in Australia, irrespective of their location, size or the profile of their customers, could utilise these usage ideas to increase vegetable sales.

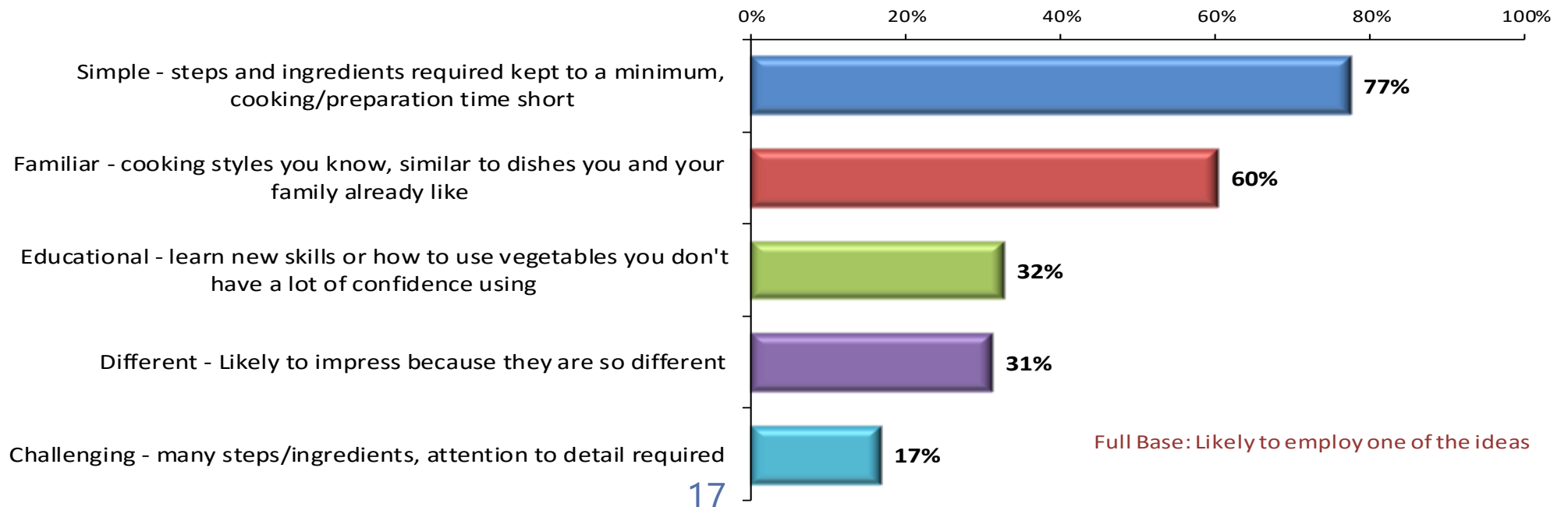
Potential for at least 1 of the 9 the usage ideas to increase vegetable usage



Make Recipes Simple. Link to the Familiar

- As noted in the qualitative research in Stage 2 of this project:
 - Linking vegetables to things consumers already do but don't often associate with vegetables offers significant potential due to familiarity. Five of the usage ideas tested in Stage 3 have been developed with this characteristic in mind.
 - Typical vegetable users have the perception that things they don't know will take more time. Presenting recipes simply, including realistic estimates of the time it will take a novice to prepare will help to make recipes more approachable for typical vegetable users, thereby giving them more confidence to try.

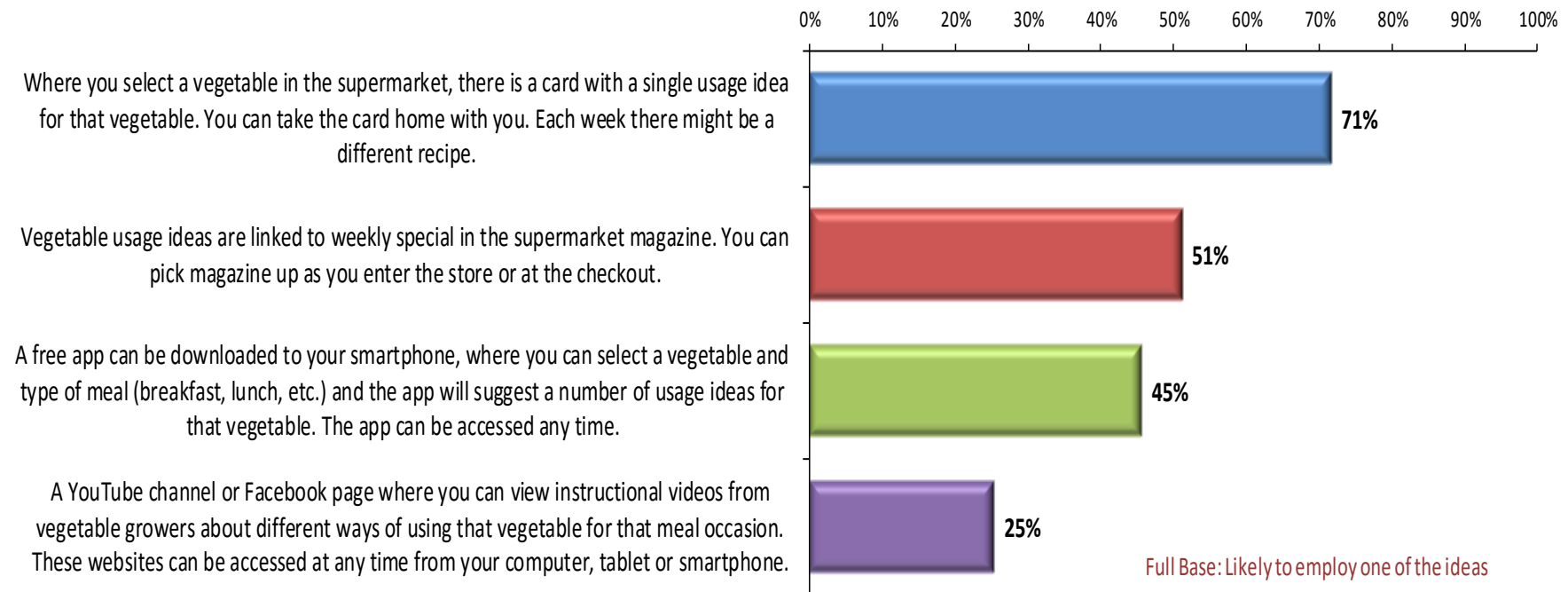
Here are some characteristics that vegetable usage recipes might have. Which, if any, of these vegetable usage recipe characteristics would increase the likelihood of you trying new ways of using vegetables?



Consumers Want Information at the Point of Purchase

- Raising awareness of usage ideas at the point of purchase is likely to have the most success at increasing meal occasions. A single usage idea card for a specific vegetable right at the point of purchase has two benefits:
 - The presentation of the usage idea is simple and focussed
 - It reaches consumers at a time when they are most likely to consider trying something new. As noted in the qualitative research in Stage 2 of this project, there are two critical points that influence whether and how vegetables will be included in a meal - the point of purchase (supermarkets) and when deciding what to make/prepare (inspecting the fridge, arriving home from work, etc.)
- Linking usage ideas to weekly specials in supermarket magazines also offers some potential to increase meal occasions, but is less likely to reach consumers at a critical decision making point than cards at the point of purchase.
- A mobile app offers some appeal, but is unlikely to significantly increase meal occasions on its own, as consumers already have significant access to usage ideas online that they aren't currently utilising. It's more likely a mobile app would provide good long term support to the usage ideas (as a reference point once a recipe is tried and enjoyed, to either try it again or inspect what other usage ideas there are).

Here are some potential ways the vegetable usage ideas could be made available to you. Which, if any, of these would help to increase your vegetable usage?





Vegetable Usage Ideas

“Make popular meals healthier with vegetables”

Top 3 recipes

PUMPKIN fries



Grated CARROTS with burgers or in patties



LEEK herbed stuffed potatoes



- “Make popular meals healthier with vegetables” offers the most potential to increase vegetable usage of all the ideas tested – It has potential with 27% of consumers:

 - “PUMPKIN fries” and “grated CARROTS on burgers/in patties” recipes have the most potential to expand the usage of current users of those vegetables.
 - “LEEK herbed stuffed potatoes” has strong potential to increase usage among current leek users AND generate totally new users of leek.
- Many of the recipes for this usage idea are applicable for light meals and finger food, more so than main meal occasions. Vegetable users for whom this usage idea is likely to increase their usage are:

 - More likely to prepare light meals/finger food than other consumers. And, only ¼ currently include vegetables when preparing these meals.
 - More likely to live with children (33% as opposed to 26%), for whom “hiding” healthy ingredients is often a priority.

“Make popular meals healthier” recipes and their potential to increase vegetable usage

	Potential to increase	
	usage OVERALL	pene-tration
Full Base: Respondents	1518	1518
<u>Potential of the usage ideas as a whole to increase vegetable usage</u>	27%	0%
PUMPKIN fries	23%	3%
LEEK herbed stuffed potatoes	20%	11%
Grated CARROTS with burgers or in patties	20%	1%
CABBAGE rolls with fillings	19%	6%
SWEET CORN with pepper and lime	19%	5%
Baked BEETROOT chips	18%	10%
BROCCOLI and pesto pizza	16%	2%
CAULIFLOWER pizza base or 'rice'	16%	4%
Raw Red CAPSICUM dip	15%	1%
Parmesan GREEN BEANS fries	13%	3%
EGGPLANT pizza base OR EGGPLANT chips	13%	5%

“Stuff vegetables with leftover sauce/stir fry/casseroles to create a distinctly different meal”

Top 3 recipes

Stuffed CAPSICUM



Bacon stuffed mushroom with SWEET CORN



Chicken stuffed with LEEK



- Stuffing vegetables with leftover sauces provides consumers with the possibility of creating distinctly different meals from one night to the next, without spending much on the secondary meal (just purchasing the vegetable that requires stuffing). It has potential to increase usage with 24% of consumers.
- Of the individual vegetable recipes:
 - “Stuffed CAPSICUM” has potential to expand the usage of 18% of capsicum users.
 - “Bacon stuffed mushroom with SWEET CORN” and “Chicken stuffed with LEEK” have strong potential to increase usage among current users AND generate totally new users of leek/sweet corn.
- Vegetable users for whom this usage idea is likely to increase their usage have a lower household income (\$77k vs \$85k) than other consumers, which suggests that this usage idea may appeal to the economy minded.

“Stuff vegetables with leftover sauces/stir fries/casseroles to create a distinctly different meal” recipes and their potential to increase vegetable usage

	Potential to increase	
	usage OVERALL	pene-tration
Full Base: Respondents	1518	1518
<u>Potential of the usage ideas as a whole to increase vegetable usage</u>	24%	0%
Stuffed CAPSICUM	18%	1%
Bacon stuffed mushroom with SWEET CORN	18%	5%
Chicken stuffed with LEEK	17%	9%
Baked stuffed PUMPKIN	17%	2%
Bolognese stuffed EGGPLANT	16%	7%
BROCCOLI fritters	16%	2%
Lamb and CABBAGE rolls	16%	4%
Baked stuffed CARROTS	15%	1%
Stuffed roll of Chicken with GREEN BEANS	14%	3%
Stuffed CAULIFLOWER	13%	2%
BEEETROOT fritters	11%	5%

"Make vegetable sauces for pasta rather than meat/tomato sauces every time"

Top 3 recipes

Pasta with
bacon and LEEKS



Roast PUMPKIN
creamy pasta



BROCCOLI
and pesto sauce



- Potential to increase usage with this idea is relatively high – it has potential with 24% of consumers. Of the individual vegetable recipes:
 - Pasta sauces for PUMPKIN, BROCCOLI and CARROT have the most potential to expand the usage among current users of these vegetables.
 - Pasta sauces for LEEK, EGGPLANT and BEETROOT have the most potential generate totally new users.
- Vegetable users for whom this usage idea is likely to increase their usage are more likely to live with children (34% vs 26%) than other vegetable users, which suggests parents might think children are more likely to tolerate vegetables when they are combined with pasta.

"Make vegetable sauces for pasta rather than meat/tomato sauces every time" recipes and their potential to increase vegetable usage

	Potential to increase	
	usage OVERALL	pene-tration
Full Base: Respondents	1518	1518
<u>Potential of the usage ideas as a whole to increase vegetable usage</u>	24%	0%
Pasta with bacon and LEEKS	21%	13%
Roast PUMPKIN creamy pasta	19%	3%
BROCCOLI and pesto sauce	18%	3%
Bolognese sauce with CARROT	18%	1%
Tomato sausage CAPSICUM pasta	16%	3%
SWEET CORN tomato pasta	16%	5%
Pasta & Potato with CABBAGE	16%	5%
Prosciutto GREEN BEANS pasta	15%	4%
CAULIFLOWER bacon parmesan pasta	15%	4%
EGGPLANT and bacon pasta	14%	7%
Roasted BEETROOT pasta sauce	13%	7%

“Cook vegetables on the BBQ at the same time as the meat”

Top 3 recipes

Balsamic grilled CARROTS



BBQ PUMPKIN with paprika



Grilled spiced CAULIFLOWER



- Cooking vegetables on the BBQ at the same time as the meat is appealing to both men and women, suggesting using the BBQ for everything related to the meal is appealing from an efficiency and cooking style perspective.
 - This idea has potential to increase usage with 24% of consumers.
- Of the individual vegetable recipes:
 - BBQ recipes for CARROTS, PUMPKIN, and CAULIFLOWER have the most potential to expand the usage among current users of these vegetables.
 - BBQ recipes For BEETROOT, EGGPLANT and LEEK have the most potential generate totally new users.

“Cook vegetables on the BBQ at the same time as the meat” recipes and their potential to increase vegetable usage

	Potential to increase	
	usage OVERALL	pene-tration
Full Base: Respondents	1518	1518
<u>Potential of the usage ideas as a whole to increase vegetable usage</u>	24%	0%
Balsamic grilled CARROTS	19%	1%
BBQ PUMPKIN with paprika	19%	3%
Grilled spiced CAULIFLOWER	18%	4%
Balsamic BBQ BEETROOT	17%	10%
Mexican street CORN	17%	5%
Grilled EGGPLANT	15%	7%
Grilled CAPSICUM salad	15%	1%
Grilled LEEK and walnut salad	13%	7%
Grilled parmesan BROCCOLI	12%	1%
GREEN BEANS on the grill	12%	3%
BBQ CABBAGE with bacon	12%	3%

“When cooking eggs for breakfast, think about adding vegetables to add extra flavour/depth to the meal”

Top 3 recipes

LEEK cheese potato tortilla



SWEET CORN chorizo frittata



BROCCOLI frittata



- Potential to increase usage with this idea is relatively high – 24% of consumers consider this idea to be appealing AND different AND something they are likely to employ themselves.
 - Vegetable users for whom this usage idea is likely to increase their usage are unlikely to currently include vegetables in their breakfast meals (57%). Compared to other vegetable users, these consumers are a little younger (33% aged under 35) and more likely to have children in the household (34% vs 26%). The higher incidence of children in the household could be an indicator of consumers who are home more often and have more time to cook/prepare at breakfast.
- The vegetable recipes for breakfast that have the most potential tend to be frittatas, suggesting this style of cooking with eggs is considered simpler / more appealing than omelettes or hash.

“When cooking eggs for breakfast, think about adding vegetables to add extra flavour/depth to the meal” recipes and their potential to increase vegetable usage

	Potential to increase	
	usage OVERALL	penetration
Full Base: Respondents	1518	1518
<u>Potential of the usage ideas as a whole to increase vegetable usage</u>	23%	0%
LEEK cheese potato tortilla	19%	11%
SWEET CORN chorizo frittata	18%	7%
BROCCOLI frittata	16%	2%
PUMPKIN fetta bacon frittata	16%	3%
GREEN BEANS omelette	15%	4%
CAULIFLOWER fetta omelette	14%	3%
Fried eggs in CAPSICUM rings	14%	1%
Carrot Omelette	14%	1%
Stir fry CABBAGE with eggs	11%	3%
EGGPLANT tomato hash with eggs	11%	5%
BETROOT hash with eggs	10%	5%

“Transform pre-cooked vegetables into a salad”

Top 3 recipes

Roasted BEETROOT and walnut salad



Roast PUMPKIN salad



Chicken and CABBAGE salad



- Transforming pre-cooked vegetables into a salad is equally appealing for both men and women, which leads to this idea having a relatively high potential to increase usage – 23% of consumers consider this idea appealing AND different AND something they are likely to employ themselves.
- Of the individual vegetable recipes, salad recipes for BEETROOT, PUMPKIN, and CABBAGE have the most potential to expand the usage overall, while salad recipes for EGGPLANT and LEEK have good potential generate totally new users.

“Transform pre-cooked vegetables into a salad” recipes and their potential to increase vegetable usage

	Potential to increase	
	usage OVERALL	pene-tration
Full Base: Respondents	1518	1518
<u>Potential of the usage ideas as a whole to increase vegetable usage</u>	23%	0%
Roasted BEETROOT and walnut salad	20%	13%
Roast PUMPKIN salad	17%	3%
Chicken and CABBAGE salad	17%	6%
CAPSICUM avocado tomato salad	17%	3%
SWEET CORN salad wrap	16%	5%
Roasted CAULIFLOWER salad	16%	4%
Grilled LEEK walnut salad	16%	9%
GREEN BEANS nicoise salad	15%	4%
Grilled EGGPLANT rocket fetta salad	14%	7%
BROCCOLI salad	13%	1%
CARROT and kale salad	12%	1%

“Transform pre-cooked vegetables into a soup”

Top 3 recipes

Chicken and SWEET CORN soup



LEEK potato bacon soup



Thai PUMPKIN soup



- Of all the usage ideas tested in this project, transforming pre-cooked vegetables into a soup is the least novel idea, which leads to a relatively lower potential for this idea to increase vegetable usage – it has potential with 23% of consumers.
- Consumers for which this idea offers potential to increase their usage are more likely to be men (53% vs 48%), suggesting women are those most likely to already be employing this idea.
- Soup recipes utilising sweet corn, leek, and pumpkin, have the most potential to increase vegetable usage overall.

"Transform pre-cooked vegetables into a soup" recipes and their potential to increase vegetable usage

	Potential to increase	
	usage OVERALL	pene-tration
Full Base: Respondents	1518	1518
<u>Potential of the usage ideas as a whole to increase vegetable usage</u>	21%	0%
Chicken and SWEET CORN soup	19%	8%
LEEK potato bacon soup	19%	12%
Thai PUMPKIN soup	17%	3%
Roasted CARROT and potato soup	16%	1%
Spiced CAULIFLOWER soup	16%	5%
CABBAGE bacon potato soup	13%	4%
Roasted BROCCOLI soup	12%	1%
BEETROOT carrot soup	11%	6%
Roasted EGGPLANT soup	11%	5%
Cream of GREEN BEANS soup	10%	3%
CAPSICUM and beans soup	10%	1%

“Cook all of the vegetable at once for use in different meals”

- Relative to other ideas, “cooking all of the vegetable at once” offers lower potential to increase vegetable usage – 20% of consumers consider this idea to be appealing AND different AND something they are likely to employ themselves.
- Lower potential may be driven by the usage idea:
 - Requiring consumers to think in advance about more than one meal.
 - Being communicated in a more complex way than the other ideas (more text, less pictures, and providing 4 alternatives for what to do with the pre-cooked vegetable).

VEGETABLE USAGE IDEA

Cook all of the vegetable at once for use in different meals.

For any vegetable, rather than just cooking what you think will be consumed over dinner, cook all the vegetable you have on hand at one time. With whatever isn't eaten, here are some simple ideas for what to do with what remains:

- Mix the vegetable with eggs in an omelette the next morning
- Add the vegetable cold to any salad ingredients you have and eat for lunch the next day
- Blend the vegetable up and add to a soup or freeze for the next time you are doing a soup
- Mix the vegetable with pesto (from a jar) and use it as a pasta/pizza sauce the next night for dinner

“Familiar desserts that include vegetables”

Top 3 recipes

CARROT cake



PUMPKIN pie



BEETROOT brownies



- Of the vegetable usage ideas tested in this project, this is the only one specifically for dessert, a meal occasion that half (47%) of consumers don't make at all. And, if they do, only 12% include vegetables in the desserts they make. It's reasonable to suggest that this usage idea speaks to a much smaller potential population than the other usage ideas tested, which are applicable across multiple meal occasions and likely speak to the full population.
- With this in mind, the potential of this idea to increase usage (16% of all consumers), while it is lower than other usage ideas, is reasonably successful considering the smaller population.
- Vegetable recipes that offer the most potential to increase usage are well known desserts such as carrot cake, pumpkin pie and beetroot brownies suggesting consumers may need reminders that desserts can be made with vegetables.
- Vegetable users for whom this usage idea is likely to increase their usage tend to be a little younger (36% vs 27% aged under 35) and more likely to live with children (35% vs 26%).

"Familiar desserts that include vegetables" recipes and their potential to increase vegetable usage

	Potential to increase	
	usage OVERALL	pene-tration
Full Base: Respondents	1518	1518
<u>Potential of the usage ideas as a whole to increase vegetable usage</u>	16%	0%
A CARROT cake	13%	1%
PUMPKIN pie	12%	2%
BEETROOT brownies	11%	6%
LEEK cheese muffins	10%	4%
Honey roasted CAULIFLOWER	9%	2%
Choc chip BROCCOLI brownies	9%	1%
SWEET CORN coconut pudding	9%	2%
CAPSICUM sorbet	6%	1%
Red CABBAGE cake with oats and yoghurt	6%	2%
EGGPLANT ricotta chocolate	5%	2%



Increasing Meal Occasions for Individual Vegetables

How we estimated potential for specific vegetables

- After rating a usage idea for appeal, difference and likelihood to employ in future, respondents were asked:
 - Which, if any, of the recipe examples for this idea would you like to make or prepare yourself?
 - Each of the 11 vegetables was represented each time.
- To estimate potential to increase usage of a specific vegetable, buyers and non-buyers required slightly different treatment.
- If we take the “veg + eggs for breakfast” usage idea as an example, the “**BROCCOLI frittata**” recipe was considered to offer potential to increase broccoli usage if:
 - Consumers who already buy broccoli fresh when in season
 - Considered the “veg + eggs for breakfast” idea to be appealing AND different AND something they are likely to employ
 - Selected **BROCCOLI frittata** as a recipe they would like to make or prepare themselves
 - Consumers who do NOT buy broccoli fresh when in season
 - Considered the usage idea to be appealing AND something they are likely to employ.
 - Select **BROCCOLI frittata** as a recipe they would like to make or prepare themselves
- For broccoli non-buyers, it is NOT essential that the usage idea itself (cooking eggs and vegetables for breakfast) is different to what they typically do, because by selecting **BROCCOLI frittata**, they are using a vegetable they don't usually buy and thus, increasing broccoli penetration.

VEGETABLE USAGE IDEA

When cooking **eggs for breakfast**, think about adding vegetables to add extra flavour/depth to the meal.

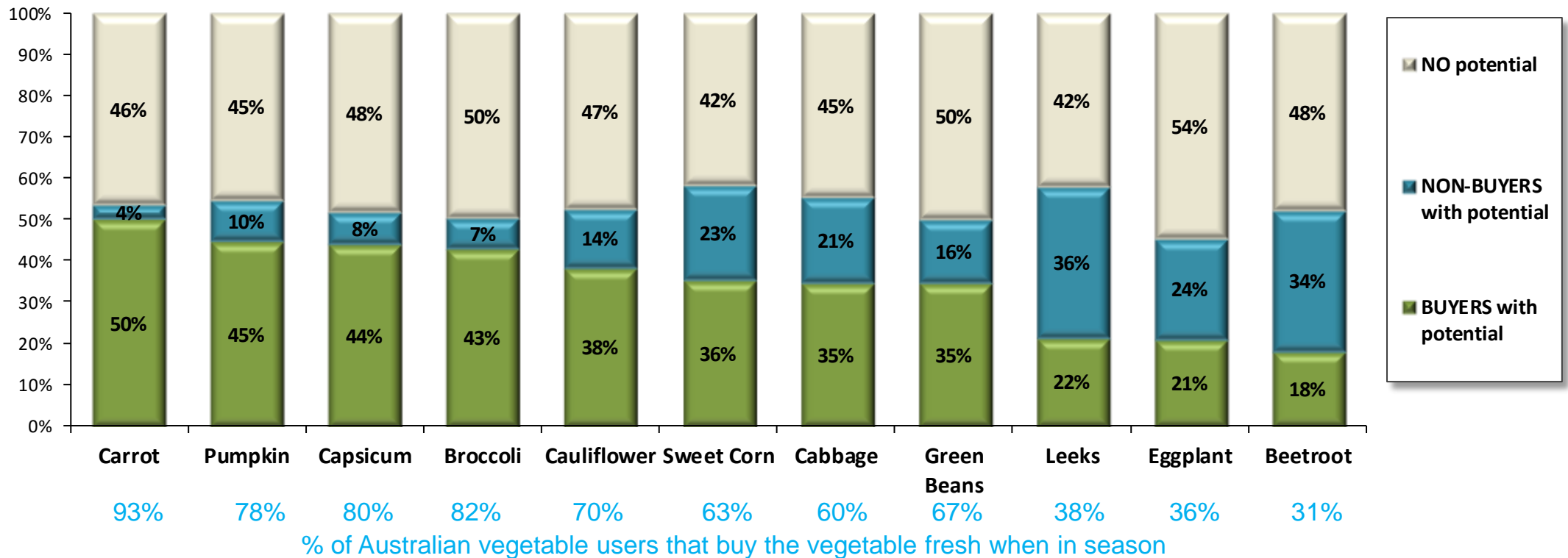
Here are some examples for how this idea could be achieved with different vegetables.



For many vegetables, the usage ideas have potential to increase usage among current users AND get non-users to try

- High penetration vegetables such as carrots/broccoli/capsicum/pumpkin have small non-buyer populations, so increasing usage among current buyers is really the only way to drastically increase consumption of these vegetables.
- However, for all other vegetables of focus for this study, potential to increase consumption exists among current buyers AND non-buyers.
 - Most notably, in the case of low penetration vegetables such as leeks/eggplant/beetroot, the usage ideas have significant potential to generate new buyers. So much so, that if the potential of the usage ideas is maximised for non-buyers of leeks, eggplant and beetroot, per capita usage of these vegetable would double.

For each vegetable, the potential to increase usage among buyers and non-buyers



BEETROOT usage ideas have potential to get half of all non-buyers to try it

Top 3 BEETROOT usage ideas

Roasted **BEETROOT** and walnut salad



Baked **BEETROOT** chips



Balsamic BBQ **BEETROOT**



- Not only is there potential to increase penetration for beetroot (getting non-buyers to try it), there is strong potential to diversify the ways in which current buyers are using it (59% of current buyers willing to increase usage of beetroot).
- Usage ideas that offer the most potential to increase beetroot usage are the same among both buyers and non-buyers :
 - Transforming pre-cooked beetroot into a salad
 - Popular meals healthier with beetroot
 - Cook beetroot on the BBQ

BEETROOT Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy BEETROOT fresh when in season	
		Yes	No
Full Base: Respondents	1518	473	1045
At least one of these ideas	52%	59%^{+†}	49%⁻
TRANSFORM PRE-COOKED VEG INTO A SALAD - Roasted beetroot and walnut salad	20%	22%	19%
POPULAR MEALS HEALTHIER WITH VEG - Baked beetroot chips	18%	25% ⁺	15% ⁻
COOK VEG ON THE BBQ - Balsamic BBQ beetroot	17%	22% ⁺	15% ⁻
VEG PASTA SAUCES - Roasted beetroot pasta sauce	13%	20% ⁺	11% ⁻
TRANSFORM PRE-COOKED VEG INTO A SOUP - Beetroot carrot soup	11%	16% ⁺	9% ⁻
VEG DESSERTS - Beetroot brownies	11%	17% ⁺	9% ⁻
STUFF VEG - Beetroot fritters	11%	19% ⁺	7% ⁻
EGGS + VEG FOR BREAKFAST - Beetroot hash with eggs	10%	16% ⁺	7% ⁻
None of these	48%	41%⁻	51%^{+†}

Tested to 0.950 significance level.

+/- Indicates significantly higher/lower value from the comparison.

BROCCOLI recipes that promote usage outside of dinner most likely to increase consumption

Top 3 BROCCOLI usage ideas

BROCCOLI
and pesto pasta sauce



BROCCOLI frittata



BROCCOLI fritters



- As the majority of Australian consumers already buy broccoli (82%), expanding usage among current users is the primary avenue to increase consumption.
- With this in mind, it's logical that the recipe ideas that have the most potential are those that take broccoli out of its usual context (dinner and/or cooked simply on its own).
 - Making a pasta sauce with broccoli
 - Including broccoli in breakfast with eggs
 - Making broccoli fritters that can be utilised as a light meal of finger food

BROCCOLI Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy BROCCOLI fresh when in season	
		Yes	No
Full Base: Respondents	1518	1248	270
At least one of these ideas	50%	52%^{+/-}	41%⁻
VEG PASTA SAUCES - Broccoli and pesto sauce	18%	18%	17%
EGGS + VEG FOR BREAKFAST - Broccoli frittata	16%	18% ⁺	10% ⁻
STUFF VEG - Broccoli fritters	16%	17% ⁺	9% ⁻
POPULAR MEALS HEALTHIER WITH VEG - Broccoli and pesto pizza	16%	17% ⁺	11% ⁻
TRANSFORM PRE-COOKED VEG INTO A SALAD - Broccoli salad	13%	14% ⁺	6% ⁻
TRANSFORM PRE-COOKED VEG INTO A SOUP - Roasted broccoli soup	12%	13% ⁺	7% ⁻
COOK VEG ON THE BBQ - Grilled parmesan broccoli	12%	13% ⁺	8% ⁻
VEG DESSERTS - Choc chip broccoli brownies	9%	10% ⁺	6% ⁻
None of these	50%	48%⁻	59%^{+/-}

Tested to 0.950 significance level.

+/- Indicates significantly higher/low er value from the comparison.

CABBAGE recipes that are light and pair with meat have the most potential to increase consumption

Top 3 CABBAGE usage ideas

CABBAGE rolls with fillings



Chicken and CABBAGE salad



Lamb and CABBAGE rolls



- While a little over half (60%) of Australian consumers currently buy cabbage, there is strong potential to diversify the ways in which current buyers are using it (58% of current buyers willing to increase usage of cabbage). In addition, approximately half of non-buyers are willing to try it.
- In stage 2 of this project, consumers suggested that cabbage was quite a boring vegetable, without much taste, and usually used purely as a filler. The recipes with the most potential to increase usage pair cabbage with popular meats but also convey a sense of freshness:
 - Cabbage rolls – light and can act as a gluten replacement
 - Cabbage and chicken salad – a fresh and light meal

CABBAGE Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy CABBAGE fresh when in season	
		Yes	No
Full Base: Respondents	1518	905	613
At least one of these ideas	55%	58%⁺	51%⁻
POPULAR MEALS HEALTHIER WITH VEG - Cabbage rolls with fillings	19%	22% ⁺	15% ⁻
TRANSFORM PRE-COOKED VEG INTO A SALAD - Chicken and cabbage salad	17%	19% ⁺	14% ⁻
STUFF VEG - Lamb and cabbage rolls	16%	19% ⁺	11% ⁻
VEG PASTA SAUCES - Pasta & Potato with cabbage	16%	18% ⁺	12% ⁻
TRANSFORM PRE-COOKED VEG INTO A SOUP - Cabbage bacon potato soup	13%	15% ⁺	11% ⁻
COOK VEG ON THE BBQ - BBQ cabbage with bacon	12%	14% ⁺	8% ⁻
EGGS + VEG FOR BREAKFAST - Stir fry cabbage with eggs	11%	14% ⁺	8% ⁻
VEG DESSERTS - Red cabbage cake with oats and yoghurt	6%	7% ⁺	4% ⁻
None of these	45%	42%⁻	49%⁺

Tested to 0.950 significance level.

+/- Indicates significantly higher/lower value from the comparison.

CAPSICUM recipes that utilise pre-cooked ingredients offer the most potential to increase usage

Top 3 CAPSICUM usage ideas

Stuffed CAPSICUM



CAPSICUM avocado tomato salad



Tomato sausage CAPSICUM pasta



- As the majority of Australian consumers already buy capsicum (80%), expanding usage among current users is the primary avenue to increase consumption.
- The recipe ideas that offer the most potential to increase capsicum usage tend to relate to ideas for how to avoid waste.
 - Stuffing capsicum with leftover sauces to create a distinctly different meal offers the most potential to increase usage. This idea is appealing as it's simple to prepare and a way to avoid waste.
 - Using pre-cooked or unused capsicum in a salad or pasta is another easy way to avoid wasting capsicum.

CAPSICUM Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy CAPSICUM fresh when in season	
		Yes	No
Full Base: Respondents	1518	1208	310
At least one of these ideas	52%	55%^{+†}	38%⁻
STUFF VEG - Stuffed capsicum	18%	21% ⁺	7% ⁻
TRANSFORM PRE-COOKED VEG INTO A SALAD - Capsicum avocado tomato salad	17%	17%	13%
VEG PASTA SAUCES - Tomato sausage capsicum pasta	16%	17% ⁺	12% ⁻
COOK VEG ON THE BBQ - Grilled capsicum salad	15%	17% ⁺	6% ⁻
POPULAR MEALS HEALTHIER WITH VEG - Raw Red capsicum dip	15%	17% ⁺	5% ⁻
EGGS + VEG FOR BREAKFAST - Fried eggs in capsicum rings	14%	15% ⁺	7% ⁻
TRANSFORM PRE-COOKED VEG INTO A SOUP - Capsicum and beans soup	10%	11% ⁺	5% ⁻
VEG DESSERTS - Capsicum sorbet	6%	7% ⁺	3% ⁻
None of these	48%	45%⁻	62%^{+†}

Tested to 0.950 significance level.

+/- Indicates significantly higher/lower value from the comparison.

Recipes that link CARROTS to popular meals or cooking styles have the most potential to increase usage

Top 3 CARROT usage ideas

Grated CARROTS with burgers or in patties



Balsamic grilled CARROTS



Bolognese sauce with CARROTS



- As the majority of Australian consumers already buy carrots (93%), expanding usage among current users is the primary avenue to increase consumption.
- Interestingly, recipes that offer the most potential to increase are not novel ways of using carrots. Rather, these recipes pair carrots with popular meals or cooking styles:
 - Increasing the health of burgers by including carrots either raw or within patties
 - Cooking carrots on the BBQ
 - Including carrots in Bolognese pasta sauce.

CARROT Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy CARROT fresh when in season	
		Yes	No
Full Base: Respondents	1518	1413	105
At least one of these ideas	54%	54%	52%
POPULAR MEALS HEALTHIER WITH VEG - Grated carrots with burgers or in patties	20%	20%	16%
COOK VEG ON THE BBQ - Balsamic grilled carrotS	19%	20%+	12%-
VEG PASTA SAUCES - Bolognese sauce with carrot	18%	18%	17%
TRANSFORM PRE-COOKED VEG INTO A SOUP - Roasted carrot and potato soup	16%	17%	13%
STUFF VEG - Baked stuffed carrots	15%	15%	12%
EGGS + VEG FOR BREAKFAST - Carrot Omelette	14%	14%	12%
VEG DESSERTS - A carrot cake	13%	13%	11%
TRANSFORM PRE-COOKED VEG INTO A SALAD - Carrot and kale salad	12%	12%	10%
None of these	46%	46%	48%

Tested to 0.950 significance level.

+/- Indicates significantly higher/lower value from the comparison.

Recipes that “spice up” CAULIFLOWER have the most potential to increase usage

Top 3 CAULIFLOWER usage ideas

Grilled spiced CAULIFLOWER



Roasted CAULIFLOWER salad



Spiced CAULIFLOWER soup



- In stage 2 of this project, consumers struggled to generate interest in cauliflower, noting its lack of flavour.
- With this in mind, it’s not surprising that the recipes most likely to increase cauliflower usage are those that add flavour to it through spices and/or cooking styles (roasting/grilling rather than boiling/steaming).

CAULIFLOWER Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy CAULIFLOWER fresh when in season	
		Yes	No
Full Base: Respondents	1518	1058	460
At least one of these ideas	53%	55%^{+†}	47%^{-†}
COOK VEG ON THE BBQ - Grilled spiced cauliflower	18%	19% ⁺	14% ⁻
TRANSFORM PRE-COOKED VEG INTO A SALAD - Roasted cauliflower salad	16%	18% ⁺	13% ⁻
TRANSFORM PRE-COOKED VEG INTO A SOUP - Spiced cauliflower soup	16%	17%	15%
POPULAR MEALS HEALTHIER WITH VEG - Cauliflower pizza base or 'rice'	16%	17%	13%
VEG PASTA SAUCES - Cauliflower bacon parmesan pasta	15%	16%	13%
EGGS + VEG FOR BREAKFAST - Cauliflower fetta omelette	14%	15%	12%
STUFF VEG - Stuffed cauliflower	13%	15% ⁺	8% ⁻
VEG DESSERTS - Honey roasted cauliflower	9%	11% ⁺	6% ⁻
None of these	47%	45%^{-†}	53%^{+†}

Tested to 0.950 significance level.

+/- Indicates significantly higher/lower value from the comparison.

Simple recipes have most potential to increase EGGPLANT usage

Top 3 EGGPLANT usage ideas

Bolognese stuffed EGGPLANT



Grilled EGGPLANT



Grilled EGGPLANT rocket fetta salad



- For those that don't cook with eggplant (64% of consumers), eggplant is unfamiliar and intimidating.
- The recipes most likely to increase usage of eggplant are those that challenge preconceptions that cooking with eggplant is difficult and time consuming:
 - Bolognese stuffed eggplant – familiar dish and simple transformation into a different meal.
 - Grilled eggplant recipes – different to traditional uses of eggplant and a simple preparation.

EGGPLANT Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy EGGPLANT fresh when in season	
		Yes	No
Full Base: Respondents	1518	542	976
At least one of these ideas	46%	59%^{+†}	38%^{-†}
STUFF VEG - Bolognese stuffed eggplant	16%	27% ⁺	11% ⁻
COOK VEG ON THE BBQ - Grilled eggplant	15%	22% ⁺	11% ⁻
TRANSFORM PRE-COOKED VEG INTO A SALAD - Grilled eggplant rocket fetta salad	14%	20% ⁺	11% ⁻
VEG PASTA SAUCES - Eggplant and bacon pasta	14%	21% ⁺	10% ⁻
POPULAR MEALS HEALTHIER WITH VEG - Eggplant pizza base OR eggplant chips	13%	21% ⁺	8% ⁻
EGGS + VEG FOR BREAKFAST - Eggplant tomato hash with eggs	11%	17% ⁺	7% ⁻
TRANSFORM PRE-COOKED VEG INTO A SOUP - Roasted eggplant soup	11%	15% ⁺	8% ⁻
VEG DESSERTS - Eggplant ricotta chocolate	5%	10% ⁺	2% ⁻
None of these	54%	41%^{-†}	62%^{+†}

Tested to 0.950 significance level.

+/- Indicates significantly higher/lower value from the comparison.

Simple recipes that add versatility to GREEN BEANS have the most potential to increase usage

Top 3 GREEN BEANS usage ideas

Prosciutto GREEN BEANS pasta



GREEN BEANS omelette



GREEN BEANS nicoise salad



- In Stage 2 of this project, consumers questioned the versatility of green beans, suggesting they aren't as suitable as other vegetables across a large cross section of dishes. For the most part, consumers cooked green beans as a side dish.
- Recipes that are most likely to increase usage are those that add versatility to green beans, elevating them beyond being a side dish – green beans in pasta, for breakfast and in a salad.

GREEN BEANS Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy GREEN BEANS fresh when in season	
		Yes	No
Full Base: Respondents	1518	1017	501
At least one of these ideas	50%	52%	47%
VEG PASTA SAUCES - Prosciutto green beans pasta	15%	16%	13%
EGGS + VEG FOR BREAKFAST - Green beans omelette	15%	16%	12%
TRANSFORM PRE-COOKED VEG INTO A SALAD - Green beans nicoise salad	15%	16%+	12%
STUFF VEG - Stuffed roll of Chicken with green beans	14%	17%+	9%-
POPULAR MEALS HEALTHIER WITH VEG - Parmesan green beans fries	13%	16%+	8%-
COOK VEG ON THE BBQ - Green beans on the grill	12%	13%+	8%-
TRANSFORM PRE-COOKED VEG INTO A SOUP - Cream of green beans soup	10%	11%	10%
None of these	50%	48%	53%

Tested to 0.950 significance level.

+/- Indicates significantly higher/lower value from the comparison.

Recipes that link LEEKS to popular and easy meals have the most potential to increase usage

Top 3 LEEKS usage ideas

Pasta with bacon and LEEKS



LEEK herbed stuffed potatoes



LEEK cheese potato tortilla



- While consumers like the flavour of leeks, leeks tend to be used exclusively for soups/pies/casseroles.
- The recipes that are most likely to increase usage are those that include leeks in popular meals that are quick to prepare – pasta, stuffed potatoes, tortilla – and make leek appropriate all throughout the year.
- Most notably, 59% of non-buyers of leek have the potential to start buying it.

LEEK Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy LEEKS fresh when in season	
		Yes	No
Full Base: Respondents	1518	583	935
At least one of these ideas	58%	56%	59%
VEG PASTA SAUCES - Pasta with bacon and leeks	21%	21%	21%
POPULAR MEALS HEALTHIER WITH VEG - LEEK herbed stuffed potatoes	20%	23%+	18%-
EGGS + VEG FOR BREAKFAST - LEEK cheese potato tortilla	19%	20%	18%
TRANSFORM PRE-COOKED VEG INTO A SOUP - LEEK potato bacon soup	19%	17%	20%
STUFF VEG - Chicken stuffed with LEEK	17%	20%+	15%-
TRANSFORM PRE-COOKED VEG INTO A SALAD - Grilled LEEK walnut salad	16%	17%	15%
COOK VEG ON THE BBQ - Grilled LEEK and walnut salad	13%	16%+	11%-
VEG DESSERTS - LEEK cheese muffins	10%	14%+	7%-
None of these	42%	44%	41%

Tested to 0.950 significance level.

+/- Indicates significantly higher/lower value from the comparison.

Recipes that use PUMPKIN in novel, but simple ways, have the most potential to increase usage

Top 3 PUMPKIN usage ideas

PUMPKIN fries



Roast PUMPKIN creamy pasta



BBQ PUMPKIN with paprika



- In Stage 2, consumers noted how versatile pumpkin was. As a result, it is not surprising that the recipes most likely to increase pumpkin usage are those that are simple but also relatively novel for pumpkin:
 - Making fries out of pumpkin
 - Cooking pumpkin on the BBQ
 - Making a pasta sauce out of leftover roast pumpkin

PUMPKIN Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy PUMPKIN fresh when in season	
		Yes	No
Full Base: Respondents	1518	1183	335
At least one of these ideas	55%	57%+	47%-
POPULAR MEALS HEALTHIER WITH VEG - Pumpkin fries	23%	25%+	15%-
VEG PASTA SAUCES - Roast pumpkin creamy pasta	19%	20%+	13%-
COOK VEG ON THE BBQ - BBQ pumpkin with paprika	19%	20%+	14%-
TRANSFORM PRE-COOKED VEG INTO A SALAD - Roast pumpkin salad	17%	19%+	13%-
TRANSFORM PRE-COOKED VEG INTO A SOUP - Thai pumpkin soup	17%	18%	15%
STUFF VEG - Baked stuffed pumpkin	17%	19%+	9%-
EGGS + VEG FOR BREAKFAST - Pumpkin fetta bacon frittata	16%	18%+	12%-
VEG DESSERTS - Pumpkin pie	12%	13%+	9%-
None of these	45%	43%-	53%+

Tested to 0.950 significance level.

+/- Indicates significantly higher/lower value from the comparison.

Strong potential to generate new buyers of SWEET CORN

Top 3 SWEET CORN usage ideas

Chicken and SWEET CORN soup



SWEET CORN with pepper and lime



SWEET CORN chorizo frittata



- Sweet corn is enjoyed by most, but is rarely purchased on the cobb due to a perception that it lacks versatility. There is significant potential among non-buyers of sweet corn – 62% of non-buyers are willing to buy it.
- Recipes that offer the most potential to increase usage are those that provide options for using sweet corn outside of dinner - for breakfast, in soup, as part of a light meal or finger food.

SWEET CORN Usage Idea Potential: The % of Australian vegetable users that consider the usage ideas appealing, different and likely to be used in the future

	Total	Buy SWEET CORN fresh when in season	
		Yes	No
Full Base: Respondents	1518	960	558
At least one of these ideas	58%	56%⁻	62%⁺
TRANSFORM PRE-COOKED VEG INTO A SOUP - Chicken and sweet corn soup	19%	18%	21%
POPULAR MEALS HEALTHIER WITH VEG - Sweet corn with pepper and lime	19%	21% ⁺	15% ⁻
EGGS + VEG FOR BREAKFAST - Sweet corn chorizo frittata	18%	19%	18%
STUFF VEG - Bacon stuffed mushroom with sweet corn	18%	20% ⁺	15% ⁻
COOK VEG ON THE BBQ - Mexican street CORN	17%	19% ⁺	13% ⁻
TRANSFORM PRE-COOKED VEG INTO A SALAD - Sweet corn salad wrap	16%	18% ⁺	13% ⁻
VEG PASTA SAUCES - Sweet corn tomato pasta	16%	17% ⁺	13% ⁻
VEG DESSERTS - Sweet corn coconut pudding	9%	11% ⁺	6% ⁻
None of these	42%	44%⁺	38%⁻

Tested to 0.950 significance level.

+/- Indicates significantly higher/low er value from the comparison.

Story for Vegetables Australia – March/April

New meal occasions on the Horizon

Opportunities for more vegetable meal occasions have the potential to increase overall vegetable consumption in Australian households. Vegetables Australia spoke with Horizon Consumer Science about their project investigating the untapped potential of fresh vegetables.

Australian consumers have an appetite for fresh vegetables. Unfortunately, research has found that their own eating habits are holding them back – and a lack of knowledge about convenient ways to incorporate vegetables into their meals is acting as a deterrent to adding more vegetables into their diet.

In project VG14026 *Opportunities for more vegetable meal occasions*, Horizon Consumer Science set out to consult with consumers and find out the potential for new occasions and ways to consume vegetables that could increase demand among Australian consumers.

Consumer consultation

For the first stage of the project, Horizon reviewed relevant data from previous consumer research to identify vegetables with growth potential. Working with a reference group including HIA, AUSVEG and grower representatives, they selected 11 vegetables to investigate in-depth.

Using focus groups in Melbourne and Sydney, Horizon then analysed the differences in habits between “typical” and “versatile” vegetable consumers to try and find uses for vegetables which could be marketed to Australians who may be less knowledgeable about how to find new ways of incorporating vegetables into their diets.

Horizon took the ideas generated from these focus groups and conducted over 1,500 online interviews with Australian vegetable users to identify those with the best potential for increasing or expanding vegetable usage among consumers.

This research took broad concepts for adding vegetable meal occasions (such as stuffing vegetables with leftovers, or making vegetable-based versions of popular meals) and presented ideas for specific vegetables (such as stuffed capsicum, or pumpkin fries).

Untapped potential

Michael Feely, Vice President of Horizon Consumer Science, gave *Vegetables Australia* a breakdown of the key points to come out of the project.

“For growers, the most important finding from this project is that all vegetables, irrespective of their current popularity, have significant untapped consumption potential,” said Mr Feely.

“This project identified which usage ideas offer the most potential to increase usage for each vegetable. Growers can utilise these insights for their specific crops to convince retailers of the merits of employing these strategies in their stores.”

According to Mr Feely, the ideas with the highest chance to increase consumption are those which link vegetables to things consumers already do, but which they don’t often associate with vegetables.

“For example, barbeque is a cooking style that consumers are very familiar with. While many vegetables can be cooked on the barbeque, consumers rarely consider doing so, mostly out of a lack of knowledge that this option exists.”

Communicating clearly

Horizon’s research found that more than 50 per cent of respondents think that at least one of the nine novel concepts has the potential to increase their vegetable usage.

“While we’ve focussed on 11 specific vegetable categories in this project, we expect that the insights for these will apply to other vegetables as well, so the information can be useful to all growers,” said Mr Feely.

To capitalise on the findings of the research, however, it’s vital that industry present the new ideas in ways which will ensure consumers feel encouraged to try out something new.

“Consumers are not short of information about cooking. What consumers are short of is experience, confidence, and knowledge about new ideas at critical points in time,” said Mr Feely.

“Presenting recipes simply, including realistic estimates of the time they’d take a novice to prepare, will help to make usage ideas more approachable. This will give consumers more confidence to try out something new.”

Most importantly, communicating these ideas in a way that will translate them into increased vegetable consumption means targeting consumers at the right time: in the supermarket aisle.

“Consumers want this information at the point of purchase. A single usage idea card for a specific vegetable, right at the point of purchase, reaches a consumer at the time when they are most likely to consider trying something new.”

The final report for project VG14026 will be made available on the InfoVeg database at <http://www.ausveg.com/infoveg>. Summary findings from this research will also be distributed to vegetable levy-payers.

How to Increase Meal Occasions for Vegetables

VG14026: Market research for investigating opportunities for more vegetable meal occasions

The nine vegetable usage ideas developed in this project:

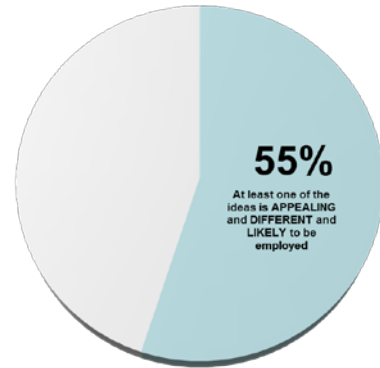
- Have the potential to increase vegetable usage of 55% of Australian consumers
- Apply to all vegetables AND appeal broadly across demographic groups.

When communicating these ideas with consumers:

- Link to familiar dishes and cooking styles
- Make recipes simple
- Provide hard copy information at point of purchase.

All vegetable industry stakeholders, irrespective of their location, size or the profile of their customers, could utilise these nine usage ideas to increase vegetable sales.

Proportion of Australian consumers for which these ideas have the potential to increase vegetable usage



Nine Usage Ideas to Increase Vegetable Meal Occasions

Add Vegetables to Popular Meals



Stuffed Vegetables



Use Vegetables in Pasta Sauces



BBQ Vegetables Along with Meat



Add Vegetables to Eggs at Breakfast



Transform Pre-cooked Vegetables into a Salad



Transform Pre-cooked Vegetables into a Soup



Cook All Vegetable At Once and Plan Ahead

**SUPER SIMPLE
MEAL PLANNING**
GET MORE VEGETABLES IN YOUR DAY!

Make Familiar Desserts with Vegetables

