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# Accessing Supermarket Shelves: Retail Category Managers Advice to Upcycled Food Manufacturers

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**ABSTRACT**

Upcycled food is a new way of communicating to consumers the age-old process of creating new foods from by-products or unmarketable produce. Consumers are open to the idea of purchasing upcycled foods yet the availability of these products in supermarkets is limited. Securing shelf space will help to ensure the growth of this trend. Therefore, this research identified the enabling attributes of upcycled products that category managers approve for retail. Seven semi-structured, qualitative interviews were conducted with retail category managers using the Delphi technique. Category managers assess new products through two lenses, a customer-focused lens where they seek evidence that a new product can meet an identified customer demand, and a vendor-focused lens through which they seek confidence in the manufacturer's marketing plan, pricing structure, and product placement within the relevant category architecture. This research delivers guidance for food industry stakeholders and serves as a call to action for upcycled food manufacturers.

**KEYWORDS**

Food waste; upcycled food; food retailing; food marketing; business-to-business purchasing

## Introduction

The use of food by-products and unmarketable foods to create new food items has been an age-old practice, but the use of the terms upcycling or 'upcycled food' is relatively new to food manufacturing, marketing, and the food waste recovery sector. The Upcycled Food Association in the United States of America (USA) adopted an official definition of upcycled food in June 2020, defining upcycled food as "ingredients that otherwise would not have gone to human consumption, are procured and produced using verifiable supply chains, and have a positive impact on the environment" (Upcycled Food Definition Task Force, 2020). This definition was based on results from a Delphi study analyzing responses from food manufacturers about the importance of different components in a definition for upcycled food (Spratt et al., 2021). To ensure the validity of the upcycled food claims being made by food manufacturers, and to help promote a positive story about the process of upcycling food, the Upcycled Food Association also established the Upcycled Certification Program Standard (Upcycled Food Association, 2020). The Standard is a third-party certification process to ensure that ingredients or products promoting themselves as being upcycled use verifiable supply chains and have a positive impact on the environment. Upcycled ingredients (UI) or products containing upcycled ingredients (PUI) that meet the criteria for the Standard are entitled to use an upcycled food logo for front-of-pack labeling. Products that do not meet the thresholds set by the Standard but whose waste diversion efforts are still worthy of recognition are awarded a 'less than PUI' logo for back-of-pack labeling. Consequently, since 2020, a growing range of certified upcycled foods are being promoted on the

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Upcycled Food Association website such as an effervescent drink made from whey that would otherwise be discarded, high protein flour made from brewery spent grain, and snack foods made from previously discarded cacao fruit (Upcycled Food Association, 2021).

Upcycling or valorizing surplus food for human consumption has been recognized as a strategy for repurposing food waste within the latest revision of the food waste hierarchy pyramid (Lombardi & Costantino, 2021). Through the process of upcycling food, social entrepreneurs or innovators, food manufacturers, and retailers have the potential to repurpose food surplus and waste generated throughout the food supply chain, leading to substantial environmental benefits (Albizzati et al., 2019). Given that upcycled food as a distinct entity for consumers is in its infancy (Bhatt et al., 2017), it is critical to understand the views held by key stakeholders, especially those of food retailers, to help support the growth and sustainability of this new food industry.

## Literature review

While the environmental potential of value-added or 'upcycled' food has been recognized for some time, (Mirabella et al., 2014; O'Donnell et al., 2015; ReFED, 2016; Teigiserova et al., 2019) consumer acceptance of these products has only been researched more recently (Bhatt, Deutsch et al., 2021; Bhatt et al., 2017; Bhatt, Ye et al., 2021; Goodman-Smith et al., 2021). Consumer acceptance of these products is a key component of the commercial success of 'upcycled' food (Bhatt et al., 2017), with research to date suggesting there is an openness by consumers to the idea of purchasing upcycled food (Bhatt, Deutsch, et al., 2021; Bhatt et al., 2017, 2020; Coderoni & Perito, 2021; Goodman-Smith et al., 2021; Grasso & Asioli, 2020). In 2020, a New Zealand study confirmed a positive reception for upcycled food when 1001 frequent shoppers were interviewed about their perceptions of upcycled food (Goodman-Smith et al., 2021). Of the shoppers surveyed, 81% would purchase upcycled food items with some or no hesitation and only 6% of shoppers would not try or buy upcycled food. Furthermore, 35% of participants indicated they were more likely to buy an upcycled food product over a conventional product. Consumers' willingness to pay a premium price for upcycled foods increased when information about the benefits of the upcycled food was provided (Asioli & Grasso, 2021; Bhatt et al., 2020).

While evidence of consumer acceptance of upcycled food is reassuring for manufacturers, gaining retail shelf-space for these products is essential to increase visibility, consumer uptake, and ultimately commercial viability for upcycled foods. Retail category managers oversee the sourcing and procurement of products that align with their organization's strategic goals and therefore, can be viewed as gatekeepers for products stocked on supermarket shelves (Martinez et al., 2018). There is not currently any existing literature exploring category managers' attitudes or decision-making process relating to the stocking of upcycled foods. More broadly, to the researchers' knowledge, there is only limited information outlining food retail category managers' decision-making process for the approval of new food products in-store. In 2018, Martinez conducted in-depth interviews with retail managers about their perceptions of healthy food retail strategies (Martinez et al., 2018). Retail managers expressed a high level of autonomy during the product approval decision-making process, meaning the relative importance of different factors may vary between managers. Customer demand was considered a key factor in the product selection process and consequently, a lack of customer demand served as a barrier to stocking healthier foods. Similarly, a 2011 New Zealand study interviewing supermarket category managers about the influence of a 'buy national' campaign on their decision to stock New Zealand manufactured food products highlighted the strong influence of consumer demand (Insch et al., 2011). Country-of-origin labeling and the New Zealand government's 'buy national' campaign were considered largely irrelevant to customers' in-store purchasing decisions, therefore the campaign did not significantly influence the category managers' decision to stock a product. Factors that positively influenced the category managers' decision to stock a product included a financial return for the supermarket, marketing support for the product offered by the supplier, product fit within the existing product range offered in-store, and available shelf space. 'Fit' with the demographics of the supermarket's customer base was also seen as evidence for the potential success of a new product.

More broadly, there is a larger body of literature relating to business-to-business (B2B) purchasing behavior (Brown et al., 2011; Grewal et al., 2015; Kemp et al., 2018; Pandey & Mookerjee, 2017). Business-to-business purchase decision-making, such as for a food retailer and vendor relationship, differs from consumer buying behaviors in that businesses purchase products they perceive meet their buyers' needs through an approval process that has traditionally been perceived as being driven by a set of objectives and clearly stated criteria (Grewal et al., 2015). More recently, the additional impact of subjectivity and emotions in the B2B decision-making process has been explored (Brown et al., 2011; Kemp et al., 2018; Pandey & Mookerjee, 2017). Discrete positive and negative emotions, such as interest, trust, fear, and frustration throughout the B2B purchasing process have been shown to influence buyers' thought processes, motivations and behaviors (Kemp et al., 2018). The 'customer' experience for the buyer, especially at the initial meeting, also influences the decision-making process and therefore vendors are encouraged to provide a positive experience for buyers at all touchpoints throughout the purchasing cycle (Pandey & Mookerjee, 2017). Positive product brand awareness, reputation, and prior positive purchasing experiences are particularly influential in the decision-making process (Gomes et al., 2016), but most notably in relatively low- or high-risk purchasing situations (Brown et al., 2011).

The existing literature on food retail purchasing and business-to-business purchasing decisions provides some guidance on the general factors influencing a category manager's decisions to stock a new product in-store. However, given that upcycled food is in its infancy, and the term 'upcycled food' was only defined in the literature as recently as 2020 (Spratt et al., 2021), it is critical for existing and future upcycled food manufacturers to have a clearer understanding of the enabling qualities of successfully stocked food products. Therefore, this research aims to explore category managers' opinions on the enabling attributes of the foods they approve to be stocked in-store, especially as these relate to upcycled foods.

## Materials and methods

### Study design

Semi-structured, qualitative interviews were held with members of the category management team for one of New Zealand's leading food retailers to understand the key factors or qualities that enhance a product's potential to be stocked in store, especially as it related to upcycled foods. Delphi methodology was used to facilitate an understanding from research participants about the enabling and limiting qualities of a product. The Delphi method, developed in the 1950s, consists of multiple rounds of questionnaires, interviews, and/or surveys, targeted at a specific group of experts, with the aim of understanding new or emerging concepts within a given field (Spratt et al., 2021). The technique of multiple rounds of interviews and questionnaires focused on the consolidated responses from study participants, allows experts to expand on, alter and hone their opinions about the new topic. Consensus is not required in a Delphi approach. Category B ethical approval was obtained for this project (D20/430).

### Participant recruitment and interview procedure

Initial study participants were recruited after one of the study researchers delivered a presentation about upcycled foods to the category management team for one of New Zealand's leading retail chains. Targeted means were employed to recruit additional participants whereby members of the category management team were approached directly and invited to participate in the study, especially those

**Table 1.** Interview guide for category managers.

| |
|---|
| 1. What was your work experience before taking up a position as a category manager? |
| 2. Can you talk me through the approval process that you work through for the products that you're responsible for? |
| 3. What are some of the key pieces of information you're needing from a new vendor for you to be interested in a product? |
| 4. If you are looking at a new product what are some of the initial things that spark your interest in the product? |
| 5. What other factors would you look for in a new product before you agree to range it? |
| 6. What would rate negatively for a new product? |
| 7. What information or resources do you find helpful to receive from a supplier during that approval process? |
| 8. How much do you know about upcycled food? |
| 9. What would your personal reaction be to consuming upcycled food? |
| 10. How would your personal perception of an item influence your approval process for a product? |
| 11. What do you perceive as the barriers to ranging upcycled foods? |
| 12. What do you perceive as the marketing opportunities for upcycled food? |
| 13. What are your thoughts about the effectiveness of an upcycling food standard or certification program? |
| 14. Is there anything else you would like to add to the mix about the approval process and upcycling foods in general? |

managing product ranges that included or had the potential to include upcycled foods. All potential participants were emailed project information sheets and consent forms before scheduling an interview.

A semi-structured interview schedule was developed to establish an understanding of the category management team's approval processes as they may relate to upcycled foods. Participants were also asked about their perceptions of the marketing opportunities and barriers for upcycled foods. The interview schedule was reviewed by members of the Upcycled Food Association and minor modifications were made based on this feedback. A trial interview was held before the participant interviews to test the recording technology and the use of a visual resource developed to present a definition and examples of upcycled foods to the interview participants. The final interview guide is presented in Table 1.

### *Data collection and analysis*

Seven semi-structured, in-depth interviews were held with employees involved in the new product approval process including category managers (n = 5), merchandise

managers (n = 1), and category assistants (n = 1). All interviews took place via Zoom and

typically ran for 45 minutes. The interviews were recorded using Zoom's recording and auto-transcription functions. The auto-transcription for each interview was reviewed and corrected non-verbatim, after which the final transcriptions were analyzed using the qualitative analysis software program NVivo Version 12 Pro (QSR International, Melbourne, Australia). To ensure the anonymity of the interviewees, personal details such as name and position of employment were removed and replaced with unique identification numbers ranging from (Int. 1) to (Int. 7).

Inductive thematic analysis, following a six-phase process outlined in Braun and Clarke (Braun et al., 2019), was used to identify and categorize themes relating to the assessment process for potentially ranging new products, especially upcycled food. Modifications were made to the initial coding structures following reviews from the research team. The final coding structure had three key foci; factors that served as enablers that may increase the likelihood of product approval by category managers; the barriers which may limit the potential for upcycled food to be stocked on supermarket shelves and an over-arching piece of advice from participants to do the background research about the product, the target audience, pricing structure, and marketing plan. The enablers and barriers were further subdivided into themes and sub-themes relating to McCarthy's original 'Four P's' of marketing; product, price, promotion, and place (E. J. McCarthy, 1960).

The Delphi survey technique was used to gain a consolidated understanding of the attributes that enabled and limited an upcycled food's potential to be stocked in-store via the summation then cross-referencing individual responses with the other study participants. This was achieved through an iterative multistage process. The initial summation of responses was shared with participants for comment, with the changing status of the participants' collective opinion repeatedly fed back throughout the process until no further changes were suggested (Hasson et al., 2000). In round one of the Delphi process, participants were individually emailed a survey prepared on Google forms asking them to review two visual representations (figures) depicting interview results. One figure was a mind map outlining the three key foci from the interviews broken down into the themes and sub-themes for the enablers and barriers. The second figure was a one-page summary sheet with participants' five key recommendations to manufacturers of upcycled food. An introductory paragraph outlined the aim of the initial survey and questions sought to determine the category managers' perceptions of the five overarching themes derived from participant interviews. Additional questions worked progressively through each theme to ascertain whether the sub-themes and their definitions accurately captured the detail for enablers and barriers to stocking upcycled food (i.e., Within the 'product' category for enablers, do the five sub-categories and their descriptions cover the key product attributes you would be looking for when assessing a new product?). This process was conducted to refine both figures. Six participants completed the survey, after which responses were compiled and assessed to determine any modifications to be made to the draft resources. For round two of the Delphi process, modified figures, based on feedback from participant surveys were emailed to each participant along with a general invitation to re-review the figures and reply with any additional comments on each figure (i.e., the mind map and one-page summary sheet). As no further changes to the figures were suggested by the retail managers after the second round, the Delphi process was stopped at this stage.

## Results

### *Results from round one of the Delphi process*

Following the initial round of the Delphi process, four changes were made to the coding structure based on participant feedback. Two product sub-themes were collapsed into one sub-theme, so that 'uniqueness and innovation' were combined with 'standout product.' Two sub-themes were added to the mind map including the promotion sub-theme 'price promotion' and the place sub-theme 'product placement within the store.' After category manager feedback, greater emphasis was placed on consumers' lack of understanding of the personal benefits upcycled foods can offer. Wording changed from 'consumers are not aware of upcycled food and the value they can offer' to 'consumers are not aware of upcycled food in general or of the value these products offer them personally as consumers.' This potential barrier was further explained with a participant question added to the comments section '[Most] consumers will purchase a product if they feel it will benefit them personally rather than an external benefit (i.e., saving the world). How can upcycled food benefit the consumer?.' Several participants left comments at the end of the survey stating that the resources provided 'clear direct advice' and 'collated the insights well.'

Key discussion points from category manager interviews were grouped into three themes, the enabling attributes of upcycled food, the barriers faced by upcycled food manufacturers as potential vendors, and overarching advice that enhances the likelihood of a product being ranged in store.

### *Enablers*

Interview results suggested that each category manager has an individualized approach to their new product assessment process. Products may be more likely to spark the interest of a category manager when they resonate on a personal level. Nevertheless, all category managers agreed they needed to be convinced of a product's commercial viability before approving a product for sale in-store. As one category manager explained,

> I'm probably quite open to [upcycled food], so I mean I like to be environmentally friendly personally, so I try and do my bit, and I believe that if there is something that could benefit the environment, especially given the trend these days, is worthy of looking into. And again, you know it has met all the guidelines that I've previously mentioned (Int. 7).

Factors that broadly captured a product's commercial viability were categorized under the Four Ps of marketing including product, price, promotion, and place, with further details being outlined by the category managers as subthemes for each of these categories. A summary sheet prepared for manufacturers of upcycled food with the key points for each of these themes is presented in Figure 1.

### Product

When assessing the quality of a product, category managers looked for a product that was unique, innovative, and relevant to a customer trend. Being able to capture the attention of the customer in-store where there is significant product choice is a key component for a successful product and to achieve this a product does need to be unique. As one category manager explains *"It has to be is quite an exceptional offer to really break through that noise and be impactful at a store level . . . a product that is different and unique and will capture customers' attention and equally so our store buyers' attention.*

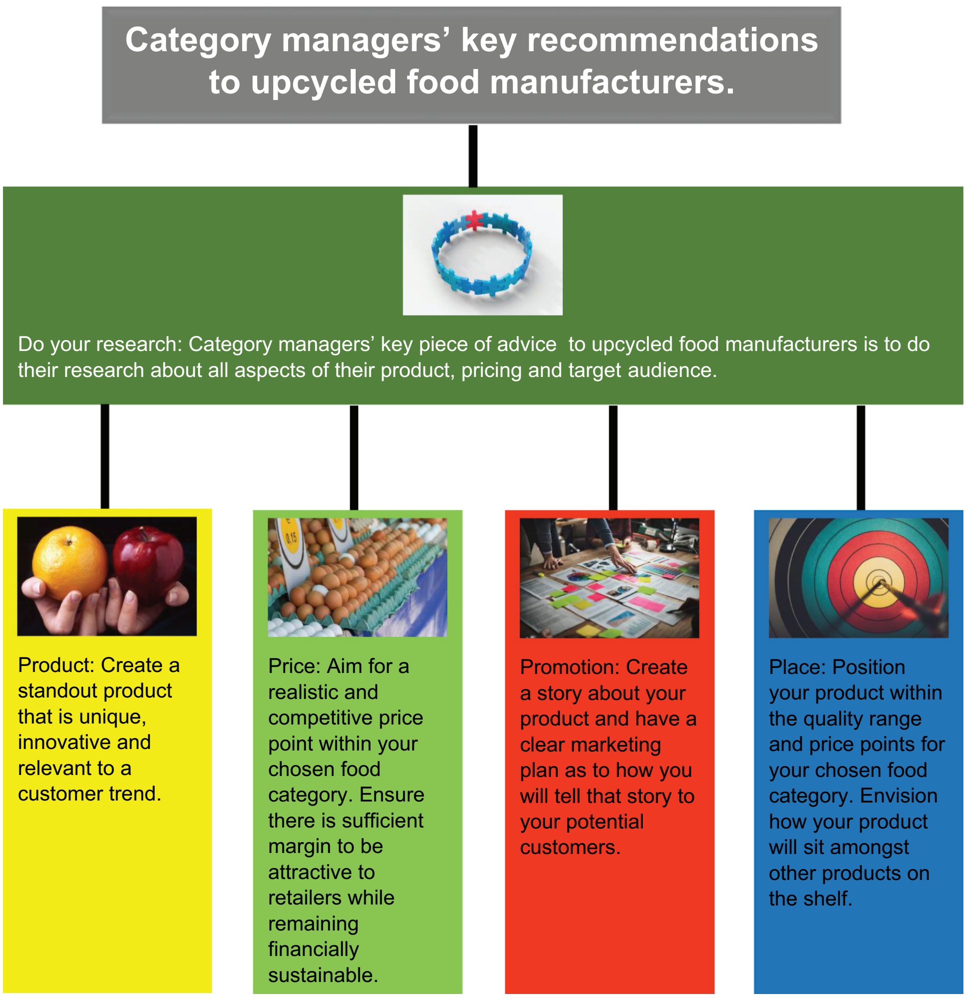


Figure 1. A summary of the key recommendations to manufacturers of upcycled food.

*Something that stands out a little bit."* (Int. 1). It also helped to be linked to a current customer trend. *"If we think it meets a consumer need, because really we're just all about the customer right, if the customer wants it, we want to have it"* (Int 5).

Category managers discussed the need for upcycled food manufacturers to provide assurances about the viability of their supply chain. Category managers require confidence in the continuity of product supply especially if there is the potential for an ingredient to be in limited supply. Customers may require reassurance about the quality and safety of a final product made from upcycled food. *"I think when people understand that a lot of wasted food is, as you're saying, because it's ugly, it's the off-cuts, that the food is fine. There's nothing wrong with it. I think, maybe just switching perceptions that it's not food that's about to go off"* (Int 4).

### Price

The price point for an upcycled food product generated a lot of discussion with participants, with one category manager going so far as to say that *"the number one thing is price. So, if you come in and you're just way too expensive I'll say price is going to kill you"* (Int. 5). Discussions around price were divided into three sub-categories, a realistic price (i.e., compared to the full range of prices within the category), a competitive price (i.e., a price that can compete with equivalent products), and an appropriate price margin. Each retail food category has a price pack architecture offering a variable selection of products at a range of different price points. Upcycled food manufacturers may identify a gap, or unmet need, within the price pack architecture, enabling them to create and pitch a product that has a different price point or qualities to other products within the category. However, category managers cautioned against relying on environmental sustainability as the sole point of difference. If an upcycled food is not filling an identified gap in the price pack architecture, then pricing needs to be competitive to similar products within the category. As one category manager explained *"It [An upcycled food product] needs to be either competitive or needs to really, really have a clear proposition, as to why a customer should be paying more. And it's, not just because it's better for the environment"* (Int. 1). The price margin focused on ensuring there was sufficient margin on the product to be attractive to the retailer while still ensuring the financial sustainability of the manufacturer.

### Promotion

Promotion for an upcycled food product focused not only on 'creating a story' for the individual product being sold but about upcycled food in general. A lack of awareness of upcycled food in the New Zealand population was recognized as a potential barrier to successfully marketing upcycled food products but *"once there's a big noise in society about something that will help sell the product"* (Int. 5). Category managers highlighted the need to prepare an effective marketing plan as to how they are going to reach their target audience and the need to use packaging to entice potential customers to pick up and buy their product. A price-promotion offer was also considered an important promotional feature to discuss with category managers due to the high percentage of products purchased on promotion in supermarkets.

Promotional tools such as consumer-facing labels were also discussed by category managers. The potential marketing benefits of the use of an Upcycled Food Certification logo discussed by the category managers included its use as an educational or promotional tool for customers and its ability to build category manager and consumer confidence in an upcycled food product. Nevertheless, there were varying views on the effectiveness of such a logo, depending on the employment background of study participants. Participants with a marketing background were universally supportive of the Upcycled Food Certification logo while those with more technical backgrounds tended to ask more questions. Queries included how meaningful the logo was, whether the price of a product would have more of an influence on a customer's decision-making process than an Upcycled Food Certification logo and finally, one participant argued that the Upcycled Food Certification logo was relatively meaningless because upcycling by-products and surplus produce was an everyday aspect of a new product development role. *"Coming from my world of new product development when you're sitting in a factory, that's the biggest thing you always try to do, is find uses for your waste stream. . . . Okay we're putting it in the bin. Let's try and figure out how to make a good product out of it"* (Int. 2).

### *Place*

Category managers advised manufacturers of upcycled foods to consider where their product sits across the different supermarket departments, visualize how the product will present to customers on the shelf amongst other products, and determine where the product features within the quality and price ranges for the products within the relevant product category. Specifically, it was reported to be *"really helpful to have information around where they think it [a product] does sit in the pack price architecture"* (Int. 4).

## *Barriers*

The barriers to ranging upcycled foods were also categorized into product, price, promotion, and place but category managers did not discuss the barriers to upcycled foods in as much detail as the enabling characteristics and therefore, there were few subcategories for each focus. Barriers included the 'icky factor' whereby customers may have an aversion to purchasing foods made with lesser quality ingredients, a limited range of products, and a tendency for upcycled foods to be produced by smaller, inexperienced vendors who have fewer resources available to them.

> The products that are generally more environmentally friendly are coming from smaller suppliers who don't have that history, who don't understand our business as well, who don't have the same level of profitability, etc. . . . What I mentioned before, about the environmental side going hand in hand with smaller inexperienced vendors, which is quite often a problem, not so much with the product but if you do have those small inexperienced vendors often it's harder to get them to where they need to be successful (Int. 1).

Category managers were concerned that because upcycled foods were considered niche, they would have a higher price point than equivalent traditional products which may limit potential in-store sales and therefore created a barrier to ranging upcycled foods. *"They're [Upcycled foods are] never going to get any volume unless you get the pricing. You need to get products into the mainstream that can compete on the mainstream, with mainstream products" (Int. 6).* Examples of boutique or niche food trends that had successfully been integrated into mainstream product manufacturing were discussed including organics, gluten-free, and cage-free eggs. This successful occurred when product prices were aligned with mainstream products, and when the product concept was easily understood and requested by consumers.

> They bought organics into the mainstream. Only a little bit more [expensive], only a slight premium over mainstream and people bought into them. And then 10 years on, every man and their dog are bringing out organic products. As you start to get volumes, the prices have dropped and it's more mainstream. It's gone from growth to growth (Int. 6).

> We've never ever had to educate anybody on the concept of organic or the concept of gluten-free, or the concept of cage-free because actually New Zealanders have . . . So, I suppose I'll flip it . . . We don't need to do the educate piece if it's basically just something that Kiwis care about and talk about (Int. 5).

Finally, a lack of consumer awareness of upcycled food in general or the value these products offer them personally as consumers may limit the demand for upcycled foods. One category manager highlighted, *"It's [upcycled food is] not really in the mindset of the Kiwi consumer and they don't understand it. The barrier is not in ranging upcycled food products but selling them. It's people's lack of understanding. Is this actually even a thing?"* (Int. 5).

### *Overarching advice*

Access to shelf space in the retail sector is highly competitive, category managers have pointed out that an upcycled food product must be an amazing overall proposition to be able to justify the shelf space they occupy. To help achieve this, all seven category managers emphasized the need for upcycled food manufacturers to do their research about every aspect of the product they are pitching.

> You come in and meet me, and you tell a story, and you show you've researched the market, you've researched our business, you found what you think is a niche or opportunity to get into. That's great. Anything else is a negative. If you walk in, then you haven't done any of that, straight off that's a negative (Int. 6).

Research topics touched on by category managers were broad-ranging from product development, the target audience, the pricing structure, and marketing plans. If a product is promoted as an upcycled food or contains an upcycled ingredient then category managers look for evidence of that claim. *"There's a company that's doing upcycled grain. How's it upcycled? Where's it coming from? Prove that big claim to me"* (Int. 2).

Category managers are also looking for evidence of other research undertaken, particular market research such as focus group testing, customer surveys, or evidence from overseas markets. As one category manager stated, *"I need to have the confidence that the vendor has done their research"* (Int. 1).

## Discussion

Category managers have been recognized as gatekeepers for the products available to customers in a retail food setting (Insch et al., 2011), selecting from the wide array of products presented to them, the more limited range of products made available in-store. While evidence of customer demand for upcycled food exists, manufacturers of upcycled foods need to ensure their products are accessible to the market on supermarket shelves. Therefore, the main purpose of this research was to explore retail category managers' opinions on the enabling attributes of the products they approve to be stocked in-store, especially as this relates to upcycled foods.

A high degree of autonomy when making product-ranging decisions was applied by the category managers interviewed for this study, which is consistent with findings from similar studies (Insch et al., 2011; Martinez et al., 2018). Category managers did tend to focus on aspects of the product being pitched that were influenced by their professional background or personal interests. Therefore, suppliers of products that help address an environmental concern, such as upcycled food reducing food waste, may be able to effectively secure an initial appointment with a category manager that has a personal interest in environmental sustainability. However, there were notable similarities in the approval criteria used by all category managers, with key discussion points raised by the category managers broadly grouped into the Four Ps of marketing; product, price, promotion, and place (McCarthy, 1960). Sub-themes within each of these groups provide depth to the detail category managers are seeking from manufacturers. These sub-themes also suggest that category managers are viewing potential products through two lenses; a customer-focused lens whereby the category managers are seeking to understand the customer's wants and needs, then how these may be met with a particular product; and secondly through a vendor-focused lens which seeks to interpret how well the relationship with the manufacturer will work with regards to product pricing, supply, and marketing requirements. The current small, niche business model for many upcycled food manufacturers may create challenges in meeting the expectations for both of these two lenses. Individual upcycled food manufacturers, may not be able to market the general concept of upcycled food broadly enough amongst the general public to drive meaningful demand in the retail setting; while the business's operating capacity may not be able to satisfy the vendor's relationship expectations for pricing, supply capacity and marketing support. Nevertheless, evidence exists for other niche food trends that have evolved to become mainstream products within the food retail sector such as organics, gluten-free, and cage-free eggs. Understanding the two lenses category managers are using for the product approval process enables upcycled food manufacturers to focus their attention on aspects of their product development and marketing that will help move upcycled food from niche to mainstream, therefore ensuring the sustainability of the industry.

Due to the exploratory nature of this piece of research, the small number of study participants, and given that the initial concept of marketing principles proposed by McCarthy in 1960 has evolved considerably since then (Goi, 2009; Rafiq & Ahmed, 1995), the recommendations from the category managers should not be taken as a definitive list. Nevertheless, results are broadly consistent with other food retailer and B2B literature suggesting that evidence of customer demand is critical (Grewal et al., 2015; Insch et al., 2011; Martinez et al., 2018), however other factors that influence the purchasing decision may include financial return for the retailer and marketing support provided by the vendor (Insch et al., 2011). This research provides new theoretical insight into food retail category managers' decision-making process for products to stock in-store, highlighting the concept of the two lenses applied by category managers when assessing a potential product, namely the customer-focused and vendor-focused lenses. In doing so, it emphasizes the challenges for small, niche food manufacturers in meeting the expectations from these lenses. To help upcycled food manufacturers overcome these challenges, criteria outlined by category managers provide practical guidance for upcycled food manufacturers to work through to move the concept of upcycled food from niche to mainstream. This study highlights the necessity to thoroughly research and address all aspects of the upcycled food being pitched, focusing in general on the Four Ps of marketing; product, price, promotion, and place and not rely solely on the environmental advantages of repurposing food waste.

Given the customer-focused lens that category managers are applying to the product approval process, evidence of customer demand or trend is an important quality for successful products (Andreyeva et al., 2011; Chkanikova & Mont, 2015; Houghtaling et al., 2019; Insch et al., 2011; Martinez et al., 2018). Upcycled food manufacturers need to be able to show evidence of customer demand for this innovative food trend and could leverage the small but growing body of research supporting the customer demand for upcycled food products (Bhatt et al., 2017; Goodman-Smith et al., 2021; Grasso & Asioli, 2020; B. McCarthy et al., 2020). While there is evidence for customer demand for upcycled food, some research suggests that the concept of 'upcycling' or valorizing food surplus or waste may be perceived negatively or that the final product is considered of lower value due to its association with waste by some potential customers (Aschemann-Witzel & Stangherlin, 2021; Bhatt, Deutsch, et al., 2021). Therefore, from a promotional perspective, upcycled food manufacturers would benefit from not only promoting a positive story about their product but promoting a positive story about upcycling food in general (Aschemann-Witzel & Peschel, 2019; Aschemann-Witzel & Stangherlin, 2021; Bhatt et al., 2020). In doing so, manufacturers will help overcome the potential barrier identified by category managers that upcycled food could be seen as *"icky"* by some customers and instead present their product and the broader upcycled food trend in a positive light. This would also serve to increase customer awareness of upcycled food in general. Furthermore, manufacturers may start creating the *"noise"* recommended by one of the category managers that tends to move a product in a retail setting.

Through a vendor-focused lens, category managers were seeking confidence in the relationship they would be establishing with a food manufacturer about a particular product. Upcycled food manufacturers need to reassure category managers' that they will be able to successfully deliver on a presented marketing plan, pricing structure, positioning within the relevant category, and ultimately, deliver on sales targets. In doing so, manufacturers will increase the opportunity for innovative upcycled food products to become mainstream in the retail sector.

Presentation of a well-constructed marketing plan was one of the key recommendations from category managers for building confidence in the vendor-manufacturer relationship. Previous research on marketing upcycled food recommends a targeted approach to consumers from different generations (Zhang et al., 2020). Baby Boomers, Gen Y, and Gen Z consumers perceive upcycled foods favorably, however, Gen X consumers have a lower perception of quality for upcycled foods and consequently have the lowest intentions of purchasing upcycled foods. Younger generations (Gen

Z and Gen Y) were also shown to shop for food online more frequently than the older generations. Therefore, targeting positive in-store messaging, especially toward Gen X consumers, about the quality and benefits of upcycled foods may increase consumer awareness of, and willingness to purchase, upcycled foods. Similarly, online marketing channels may be necessary to connect with Gen Y and Gen Z consumers (Zhang et al., 2020). Marketing plans being presented to category managers need to show how the manufacturers propose to reach potential customers through relevant channels such as those suggested by category managers including influencers on social media, an app or QR code, in-store sampling, competitions, and flyers, or more traditional channels such as radio and television. As one category manager highlighted *"even if it's a well-established brand, if they're not able to outline a marketing strategy for that variation, then you would park it"* (Int. 7).

Category managers' confidence in a product can also be established by presenting a carefully considered pricing structure for upcycled food products. In general, consumers' willingness to pay a premium for eco-branded products is low, with price having a stronger influence on product choice than environmental quality (Chkanikova & Mont, 2015; Grasso & Asioli, 2020; Gunn & Mont, 2014). It has been suggested that only 12% of retail customers would pay more for upcycled food than conventional food and of those customers that were negative or undecided about the attractiveness of upcycled food, 56% indicated they would find an upcycled product more attractive if it had a lower price (Goodman-Smith et al., 2021). Higher prices for some sustainable products have resulted in insufficient consumer demand, which in turn has limited the expansion of sustainable product ranges in a retail setting (Chkanikova & Mont, 2015). Therefore, upcycled food manufacturers are wise to heed the advice from category managers to carefully consider the pricing structure for their products. Specifically, category managers recommended setting a price point that is realistic for the relevant product category and competitive with similar products within the category, which may help remove price barriers when introducing novel upcycled foods to the market.

Finally, category managers recommend carefully considering new product placement within the relative product category in-store. Each food and beverage category will have a variety of quality and price bands within the range, often referred to as the 'architecture' of the category. Upcycled food manufacturers can approach the placement of their product within the category architecture in two ways. Evidence has shown that if all things are equal such as quality, size and price then the highest proportion of consumers will consider purchasing a product using upcycled ingredients (Goodman-Smith et al., 2021). Therefore, upcycled food manufacturers could target a particular product within their relevant category and match that product for quality, size, and price. In this situation, the environmental benefit of using upcycled ingredients can serve as the defining point of difference.

Alternatively, new products may target a gap in the category architecture where there may be unmet customer demand. Category managers have advised upcycled food manufacturers that while a 'sustainability' selling point and the inclusion of upcycled ingredients is commendable and taps into a current customer trend, it should not be relied upon as the only selling point for a product. Upcycled food manufacturers may be able to identify a quality within the category architecture, in addition to the sustainability component of the upcycled food item, that has previously been unmet, such as portion size, price point, or quality including texture, flavor, or nutritional benefits which they can leverage to create a unique selling point for their upcycled food product.

To ensure the integrity of products marketing themselves as upcycled, the Upcycled Food Association established the Upcycled Certification Program Standard. Involvement with the Upcycled Certification Program, and the use of the corresponding logos, was seen as a positive promotional tool by many of the category managers. Category managers viewed an audited upcycled certification program as a form of consumer education, a quality assurance tool, and potentially as a mechanism to encourage product development to include upcycled ingredients in existing products so they could gain upcycled certification. The importance of an upcycled certification program as an assessment tool for category managers to avoid the equivalent of 'greenwashing' was also emphasized.

> Hopefully, we'll get to a point, I'm sure, I hope, where we'll have hundreds of people presenting us upcycled foods. And we need to rely on certification to say yes, I trust it. Otherwise, it could be 1% upcycled material and 99% virgin and actually not doing any good anyway (Int. 5).

Although the certification program is currently only available in North America, by certifying their product as upcycled, manufacturers of upcycled foods are linking into a growing network of companies that are sending clear, positive messages about the concept of upcycled foods, the quality of these products and the positive impact they have on the environment. Research suggests that certifications of ingredients and manufacturing processes can help reduce uncertainty about the quality of upcycled food (Zhang et al., 2020). Bhatt et al., suggest that consumers have an increased willingness to buy, and perceive a higher level of quality for, upcycled foods when advertised with an appropriately designed upcycled food logo (Bhatt, Ye et al., 2021). Furthermore, 50% of retail customers who were negative or unsure about the attractiveness of upcycled products believed that clearly labeling that products contained upcycled ingredients would increase their attractiveness (Goodman-Smith et al., 2021).

When category managers are assessing a potential product through a vendor-focused lens, they are looking for evidence of a well-constructed marketing plan and the use of the Upcycled Certification logo is one tool manufacturers can use. From a customer-focused lens, the Upcycled Certification logo can be reassuring for category managers, as it has the potential to provide confidence to customers about the validity of the upcycled food claims being made by the manufacturers and the food safety standards of the final product.

The short-term nature of the study, conducted in partnership with only one New Zealand retailer was a key limitation of this exploratory research. Therefore, the results may not be entirely applicable to the food retail sector for other nations or when the retailer's business model is notably different. The researchers are also aware that while price, product, promotion, and placement are still relevant components of product marketing, there are more contemporary factors that have not been explored in this study. Future research is required to expand on the findings from this study including the involvement of category managers from several different major food retailers, especially those that have different business models, and a more detailed focus on category managers' decision-making processes as they relate to contemporary marketing theory and practice. An opportunity to research the barriers and enablers for producing upcycled food from a food manufacturer's perspective was also identified and would provide a valuable addition to the upcycled food literature.

## Conclusions

This research provides a theoretical contribution to the body of knowledge about the food retailer's product approval process, and in doing so, highlights the challenges faced by small, niche food manufacturers seeking to stock products in a retail setting. Practical guidance is provided for upcycled food manufacturers aiming to see upcycled food products stocked in retail food outlets. It also serves as a call to action given that the upcycled food industry is in its infancy and can help in the transformation of upcycled food from a niche to mainstream industry.

Category managers assess the viability of a potential product through two lenses, a customer-focused lens and a vendor-focused lens whereby they are determining a product's ability to meet a customer demand or trend and seek to establish confidence in a manufacturer's ability to ultimately, deliver on sales targets based on the market plan, pricing structure and product positioning with the relevant category. Therefore, upcycled food manufacturers need to thoroughly research all aspects of the product being pitched, establish a marketing plan focusing in general on the Four Ps of marketing, as well as show evidence of customer demand for not only their individual product but for upcycled food as a whole. Furthermore, manufacturers of upcycled foods need to work at establishing confidence in the category manager to ensure the viability of their product and to help open the door for other innovative upcycled food products to become mainstream in retail outlets.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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