Fighting the Status-quo: How Plant-based Producers Support their Competitive Advantage via Visual and Informative Cues

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Abstract:

In recent years, there has been a substantial growth of plant-based alternatives to meat. This factor represents an opportunity for producers to develop plant-based alternatives. This dissertation aims to understand how plant-based producers decide upon branding cues, specifically visual and informative cues, in order to support competitive advantage. This dissertation has the secondary goal to understand the context of plant-based alternatives in the Portuguese market and provide recommendations for plant-based companies concerning branding cues. By conducting 8 semi-structured interviews to plant-based producers and one focus group with 7 consumers of plant-based product, three themes were identified related to challenges coping with "vegan" products reputation, managing consumer resistance and making favorable branding decisions. It was possible to understand the branding attributes that support competitive advantage in a plant-based product, when it comes to visual and informative cues, and recommendations to companies were provided, as this dissertation aims to help managers of plant-based brands understand how they should apply different branding cues | **Keywords:** Plant-based, Meat Substitutes, Branding, Visual Cues, Informative Cues, Acceptance

Resumo:

Nos últimos anos temo-nos deparado com um crescimento substancial de produtos à base de plantas. Este facto representa uma oportunidade para produtores de produtos à base de plantas. O objetivo desta dissertação é perceber como é que estes produtores tomam decisões sobre os atributos visuais e informativos a aplicar aos seus produtos, de maneira a fomentar uma vantagem competitiva. O objetivo secundário desta dissertação é compreender o contexto das alternativas à base de plantas em Portugal e providenciar recomendações para produtores. Através da realização de 8 entrevistas semiestruturadas a produtores e de um focus group com 7 consumidores de produtos à base de plantas, foram identificados três principais temas relacionados com os desafios com a reputação de produtos "Vegan", gestão da resistência dos consumidores, e com decisões de marca favoráveis. Desta maneira, foi possível concluir sobre atributos de marca que contribuem para a vantagem competitiva dos produtores, tal como providenciar recomendações a marcas de produtos à base de plantas. | **Palavras-chave**: Vegetariano, Substitutos da Carne, Marca, Deixas Visuais, Deixas Informativas, Aceitação

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To my family, my friends, and my colleagues I am deeply grateful for your presence in my life.

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1. Introduction

In Portugal, half of the population doesn't consume their daily dose of fruits and vegetables (Expresso Nudging Conference, 2020). Further, looking at global data, obesity worldwide has nearly tripled since 1975, resulting in 1.9 billion overweight adults, in 2016. Additionally, as per 2020, 39 million children under the age of 5 are reported to be obese or overweight (WHO, 2021). At the same time, the plant-based food industry market, presenting protein alternatives that prove to be better for individuals' health, and the environment is growing in the Western World (WHO, 2021). Nevertheless, this market is still juvenile and there is great opportunity for growth as awareness about these alternatives expands. As younger adults acquire more purchasing power, it's expected that meat substitutes growth could reach 25% per year from 2020 to 2024 (Roland Berger, 2021). However, plant-based producers face several challenges. For instance, reaching the price consumers are willing to pay for plant-based alternatives would not be economically viable (Potter H. K., & Roos E. 2021). To be successful, plant-based alternatives must taste similar to meat, as taste is critical to the motivation to change diets by regular meat consumers (Tuorila & Hartmann, 2020; Bryant, 2019). Further, price is critical into the acceptance of plant-based products (Dibb, S. et al. 2014). At last, other factors such as branding cues, including a variety of visual, written and spoken messages that affect consumer buying behavior may play a role as they influence the perception of plant-based products and may help drive competitive advantage between producers (Sucapane, D. et al. 2021). Factors such as visual and informative cues can have a role into combating challenges producers face when it comes to taste and cost, as there is relevant research measuring the effect of various marketing cues in consumer evaluations of plant-based products (i.e. product descriptors effects: Bryant & Barnett, 2019; Papies, Johannes, Daneva; packaging color: Seo and Scammon (2017); Huang & Lu, 2015). This paper will highlight how producers navigate branding cues, in order to deal with the expressed challenges, as the role branding cues, namely informative and visual cues, play on competitive advantage between plant-based producers is not clear, and there is space for further research (Hartmann, C. et al. 2017). Further, most existing research focuses on one specific branding cue and there are no studies, to current knowledge, taking an integrated approach on branding cues. Additionally, research on the topic related to the Portuguese market does not exist. Thus, in order to fill in this research gap, I propose to answer the following research question:

RQ: How can Portuguese plant-based producers use informative and visual cues to support their competitive advantage?

To answer the research question, I adopted a qualitative approach and conducted a multiple case study on four Portuguese producers: *Green Cook, Plantz, Capim - The Vegan Butcher, and BeatRoot*. Further, a consumer focus group was additionally hosted as there is strong consumer impact into the research topic.

The structure of this thesis is the following. Firstly, factors favoring sustainable food products will be explored, followed by a chapter presenting plant-based products as sustainable food. Secondly, challenges faced by plant-based producers will be exposed, followed by solutions to overcome the challenges. The methodology section comes next, exploring the choice of research, as well as the process behind the collection and treatment of data. Following, the empirical chapter offers an overview of the plant-based market in Portugal, and a description of the participant brands. Further, the finding chapter includes the insights derived from the research. Finally, results are compared to the literature review, and findings are contextualized into answers for the research question, in the discussion and conclusion section. Further, recommendations to plant-based producers are provided.

2. Literature Review

The following chapter portrays an overview and a critical analysis to the literature concerning plant-based food products, addressing specific challenges faced by plant-based producers, as well as the current answers to the problematics.

2.1. Factors Favoring Sustainable Food Products

In this section, factors favoring sustainable food products will be expressed, specifically factors pertaining to health, the environment and animal welfare.

2.1.1. Factors Related to Health

Obesity sits at the top of the political agenda of the World Health Organization and is considered to be a serious public health condition. From a global perspective, obesity and overweight-related illnesses are linked to more deaths worldwide than underweight-related illnesses (WHO, 2021). A High BMI Index, a measure of body fat based on height and weight, represents a major risk factor for noncommunicable diseases such as cardiovascular diseases, musculoskeletal disorders, and some types of cancers (WHO, 2021). Eating habits linked to the promotion of obesity include a current increased intake of energy-dense foods high in fat and sugars and increased physical inactivity related to growing urbanization, different types of work, such as computer-based work, and changing modes of transport (WHO, 2021).

In the western world, which typically includes most countries of Europe, the US, Canada, Australia, and New Zealand, daily calories ingested grew from a daily sum of 2.962 kcal, in 1961, to a daily sum of 3.213 kcal, in 2013 (Roland Berger, 2021). Contributing to healthy eating habits, tools such as the UK Eatwell Guide and the Portuguese Food Wheel demonstrate what to include in a balanced diet, among all the existing food groups: fruits and vegetables, carbohydrates, protein, such as meat and fish, legumes, dairy and oils (NHS, 2019). Nevertheless, when comparing the actual UK diet with the Eatwell Guide Scenario it becomes salient that people eat more dairy products and proteins than they should (Steenson, S. et al. 2020). In opposition, citizens eat fewer fruits and vegetables, and carbohydrates than the ideal proportion (Steenson, S. et al. 2020). Moreover, protein as a food group has been glorified by many, as superior to all the other food groups, and related to health and fitness for its energy-dense and protein-rich properties (World Economic Forum, 2019).

Nevertheless, there is growing awareness of the negative impact of meat, both on the environment, land, and human health (World Economic Forum, 2019). Nevertheless, between 2014 and 2019, the global meat market grew 4% to 1.1 trillion dollars. The main drivers for this increase are a growing population, higher prices, and an increased protein intake by many countries in the Asia-Pacific area. Even if the variable of increased consumption in Asia-Pacific is taken out, meat consumption is still growing in Western countries (Roland Berger, 2020).

The United Nations defined 17 Sustainable Development Goals that pose a universal call to action, that UN member states agreed to achieve by 2030. The goals have a great focus on climate change and the promotion of health and well-being (UN, 2018). Accompanying population growth estimated to 10 billion people globally by 2050, overall food demand is anticipated to increase by 50% (FAO, 2021). In fact, it would be impossible for the 10 million global population to ingest the quantity of meat "typical of diets in North America and Europe and keep within the agreed Sustainable Development Goals for the environment and climate" (World Economic Forum, 2019). This creates a future challenge went it comes to food production, with plant-based food as a possible environmentally friendly solution.

In order to meet this future food demand, there is a need to diversify the global food system into sustainable sources of protein (Roland Berger, 2021). Fruits, vegetables, legumes, nuts, and whole grains are foods linked to a healthy diet (WHO, 2021). These are the same food groups associated with a diet that is more environmentally sustainable. Notably, there is substantial scientific evidence linking healthy diets with environmental sustainability (Institute of Grocery Distribution, 2020). Between the two fields, certain principles are shared such as the increase in the proportion of foods coming from plant-based sources, the reduction of meat and dairy intake, especially red and processed meat, and the reduced intake of foods high in fat, salt, and sugar (Institute of Grocery Distribution, 2020).

2.1.2. Factors Related to the Environment

The year 2020 was the second warmest year on record (National Oceanic and Atmospheric Administration, 2021). This fact is correlated with the phenomenon of climate change which is a consequence of the release of excessive amounts of greenhouse gases by humans into the atmosphere (Worldwide Fund for Nature, 2021). Intensive agriculture, which emits greenhouse gases like methane and nitrous oxide is one of the causes of climate change, together with the increased use of fossil fuels to generate electricity, run cars and other forms of transport, and power manufacturing and industry. In fact, food production is responsible for one-quarter of the world's greenhouse gas emissions (Our World in Data, 2019). Looking into these emissions, 31% of them come from livestock and fish farms and 16% from land used for livestock. In reality, only 18% of the emissions come from the actual supply chain which includes transport and packaging (Our World in Data, 2019). Methane, produced via the digestion of animals, is especially toxic to the environment as it's 80 times more effective at heating the planet than carbon dioxide. The one billion cows used in the global meat and dairy industries, combined with other animals raised for livestock account for around 44% of global anthropogenic methane (TIME, 2021).

Analyzing the supply chain of different food products, from land use, farming, animal feed, processing, transport, retail, and packaging, it's clear that animal products are the polluters (Our World in Data, 2020). Beef (coming from only beef herds) emits the most greenhouse gases per kilogram of a food product - 60kg of CO_2 per kilogram of food. As a comparison, plant-based food, such as tomatoes and peas emit respectively 1.4kg and 0.9kg of CO_2 per kilogram of food (Our World in Data, 2017). In conclusion, emissions caused by most plant-based products "are as much as 10-50 times lower than most animal-based products" (Our World in Data, 2020). Evidently, a more plant-based diet presents itself as a better alternative for the environment.

2.1.3. Factors Related to Animal Welfare

The negative consequences attached to the meat & dairy industry are not just related to health and the environment. Animal welfare is being impacted by the use of feedlots or by animals being kept indoors as the industry increased its productivity level over the last decades due to technical innovations related to intensive production systems (Meat Atlas, 2021). Actually, animal welfare-related issues fostered an initiative from EU citizens to "End the Cage Age", for a ban on cruel cage farming (Meat Atlas, 2021). Furthermore, 60% of infectious diseases are zoonotic and can be transmitted via animal-human and human-animal (United Nations Environment Program, 2020). In addition, there are also worries about the over-use of antibiotics in animal farming as this can contribute to the formation of super bacteria (World Economic Forum, 2019).

2.2. Plant-based Products as an Option for Sustainable Food

Wealthier countries are searching for alternatives to meat, as they gain awareness about the consequences related to health, sustainability, and animal welfare. Consequently, these countries are turning to plant-based food as product offerings get improved, with market growth rates up to 31% for the plant-based food market (Roland Berger, 2021). Additionally, there is an increase in demand for a protein-rich diet by Asia and Africa, which fosters demand for animal products and new alternatives to protein, since this conversion to Western consumption levels, particularly coming from Asia, is incompatible with maintaining global temperatures from rising (Oxford Martin School, 2019). Overall, plant-based protein alternatives attract consumers who are looking for more sustainable, animal-friendly, and healthy food (Roland Berger, 2021)

These alternatives can take on many formats: plant protein, such as soy-based alternatives; cultured meat meaning meat produced by in vitro cell cultures; fermented proteins, a process that involves breaking down carbohydrates and sugars to create a by-product such as powdered pea protein; and insect protein, which is rated the lowest in terms of acceptability (Vanhonacker F. et al. 2013 & Roland Berger, 2020). Due to availability, familiarity, and acceptance, the focus of this paper will be on plant protein. These alternatives can look like vegetarian sausages, vegetarian burgers, bean burgers, food made of Quorn mycoprotein (derived from fungi), tofu, soy, or texturized vegetable protein, and fermented proteins (Roland Berger, 2020)

Plant-based substitutes account for a small share of the global retail protein market value, only 0.4% of the market as of 2019 (Roland Berger, 2020). Although this market is still juvenile, there is an opportunity for growth, piloted by a strong consumer pull especially among younger generations. (Roland Berger, 2021). Meat substitutes overall growth could reach 25% per annum from 2020 to 2024, although there are different perspectives.

The first plant-based alternative to meat came out in 1985, made by Quorn with rice, vegetables, and cheese, not mimicking the taste of meat (Roland Berger, 2021). Ever since, significant investments in all segments of the value chain are being made, in order to diversify their protein choices in the plant-protein segment. On one hand, these companies consist of standalone players, such as Beyond Meat, that are close to the animal level in terms of taste and texture, as well as nutritional value. On the contrary, FMCGs brands like Quorn benefit from their parent company although they don't leverage on digital marketing to win presence. This study will focus on standalone players in this industry due to higher availability.

2.3. Challenges Faced by Plant-based Producers

In the following section the main challenges faced by plant-based producers will be addressed and solutions offered in the literature will be exposed. Lastly, the detected gap in the literature will be presented as the baseline for this study.

2.3.1. Challenges Related to Distribution

As trends towards eating a plant-based diet are growing consumption habits are nevertheless highly influenced by food availability in retailers. According to a survey conducted by Packaged Facts, 85% of U.S. consumers buy their groceries in supermarkets and retail stores (Packaged Facts via Market Research Blog, 2016). Consequently, consumers considering making healthier, more sustainable food choices, which are less meat-based and more plant-based, are faced with intense stimuli for the wrong options (Expresso Nudging Conference, 2020). In fact, today's "decision environment offers consumers greater choice possibilities and information opportunities than ever before, providing an unprecedented breadth and depth of consumer choice opportunities in a wide range of domains" (Broniarczyk, S. M. & Griffin J. G. 2014). Additionally, when partaking in low-stakes shopping consumers can make decisions about buying a product in as little as a third of a second (Mormann, M. M. et al. 2011). Keeping in mind the immense outlet food retailers are in terms of food consumption, and the variety of food items that can be found in a supermarket, with around 30000 average number of items (The Food Industry Association, 2020) it's undeniable that producers food offer can have an influence on consumer's choices. In conclusion, all stakeholders involved in the value chain can play a role in the daily choices of consumers, by enabling or limiting consumer choices, specifically through their strategic and marketing choices (Gravely, E. et al. 2018).

2.3.2. Challenges Related to Price

To all intents and purposes, the main customer criteria for purchasing food are taste, cost, and convenience (Dibb, S. et al. 2014). Actually, 24% of the respondents in a 2020 study perceive plant-based meat as “too expensive versus normal meat” (Roland Berger, 2020). Additionally, other factors that have influence and power to drive changes in meat consumption are habits, the cultural significance of eating meat, health, awareness of the environmental impact of meat consumption, concern for animal welfare, concern for provenance and traceability of meat-based food and knowledge about alternatives to meat (Dibb, S. et al. 2014). Although the significance of choice criteria varies across consumer segments, the relevance of these three key criteria is foundational and applies to all segments to some extent. Only when these criteria are perceived as positive by a consumer will other variants such as health, environmental, and animal welfare be taken into consideration (Good Food Institute, 2021).

Research proves the massive impact price can have on the adoption of these alternatives, which is a challenging topic for producers, as animal protein is relatively low priced.

2.3.3. Challenges Related to Taste

A study conducted on 30.000 US and European citizens concluded that 25% of participants think improved taste “might convince them to eventually be interested in plant-based meat”. Further, more than half of the respondents state they are not interested in trying plant-based meat because they “don’t feel it will taste good” (Roland Berger, 2021). Research proves that taste is a challenging topic for producers, and a critical one for consumers (Tuorila & Hartmann, 2020) as achieving taste and texture comparable to the original products is hard or involves much processing, which also clashes with the trend for clean labels (Dibb, S. et al. 2014).

2.3.4. Challenges Related to Beliefs

Nevertheless, food habits are very ingrained and generally do not change much (Roland Berger, 2021). Additionally, decisions that regard food, are greatly linked to intrinsic beliefs about what is good and what is bad. This network of belief does not always follow what is logical or scientific. The fact is that even consumers who are aware of the benefits of plant-based alternatives can still choose not to act upon their knowledge and information with their behavior. This marks an attitude-behavior gap and is connected to a psychological phenomenon named Cognitive Dissonance (Carrington M. J. et al. 2010).

Therefore, another phenomenon that contributes to resistance towards plant-based options is related to Cognitive-dissonance theory. According to Festinger L. (1957) individuals search for consistency within themselves, within their opinions and attitudes. Even when a behavior or thought brings an inconsistency in the individual beliefs, this inconsistency is rarely accepted as one by the individual. Thus, there will be a tentative rationalization of the inconsistencies. For example, someone who is a smoker and is aware of the danger of smoking for health might feel that the enjoyment they get from smoking is worth it, or that the health consequences are not that serious. If these tentatives of rationalization fail, there will be psychological discomfort. When discomfort occurs, "in addition to trying to reduce it, the person will actively avoid situations and information which would likely increase the dissonance" (Festinger L. 1957). In conclusion, in order to reduce dissonance, individuals change their behavior or attempt to change their "knowledge" about the behavior, even if this knowledge is not objectively true (Festinger L. 1957). Actually, this phenomenon may produce a polarizing effect, contributing both to the rising in overall per capita meat consumption in the U.S., as well as the rising in the consumption of plant-based products (USDA, 2018). Overall, it can be stated that psychological discomfort "plays a pivotal role in explaining behavioral change intentions" (de Lanauze, G. S. et al. 2019). Thus, plant-based companies branding interact with consumer psyche and can have an effect on consumer choices, thus possibly driving competitive advantage.

2.4. The Role of Choice Architecture

Branding choices can influence consumer decisions by "nudging" them into certain choices. The term "Nudge" or choice architecture is defined as any aspect in the environment that leads to a decision "that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives" (Thaler R. H. & Sunstein C. R. 2008). Nudging interventions trigger consumer responses without requiring much cognitive effort and embrace the freedom of choice of each consumer, basically giving a "push" towards positive choices from consumers (Thaler R. H. & Sunstein C. R. 2008). Nudges are effective since people often make decisions that are not in their best interest, because of several factors such as procrastination, preferring not to make a choice instead of making a possibly more beneficial one; lack of self-control, being influenced by the context where decisions are being made or by overwhelming information (Reisch, L. & Gwozdz, W. 2013). This implies that consumers largely rely on heuristics, mental short-cuts, or biases for their decisions. The role of nudging consumer into plant-based options through branding decisions will be explored in the following section.

2.4.1. The Role of Branding Cues

Factors contributing to stronger intentions to buy sustainable products, such as meat-substitute products, are certainty about sustainability claims, perceived consumer effectiveness: meaning a consumer's belief in being able to bring out outcomes that he or she personally values, raising involvement, social norms, and perceived availability (Vermeir, I. & Verbeke, W. 2006). Moreover, some measures that seem promising towards changing individual consumption, other than improvements in the price, taste and convenience of meat substitutes, include the alignment of environmental and health messages, the existence of a framework of reference for a healthy and sustainable diet and an emphasis on benefits related to animal welfare (Stubbs, R. J. et al. 2018). Additionally, research shows that external motivators, such as focusing on the environmental impact of eating meat, are not as effective as touching upon personally relevant motivators (Macdiarmid J. I. et al. 2016).

Almost all of these variables can be influenced through brand communication efforts. Thus, plant-based producers can try to influence the named variables (Vermeir, I. & Verbeke, W. 2006). In fact, how brands promote their products, for example via packaging choice and visual and informative cues, can be understood as a "push" for consumers to make better decisions regarding their food products. As Stubbs R. J. (2016) mentioned, together with promoting personally relevant motivators, “changing the contextual cues that favor reduced meat choices and tilting the choice architecture in favor of meat reduction is perhaps more likely to produce individually modest effects on a large scale”. Additionally, these messages should be accompanied by positive reinforcement related to the environment and animal welfare, as well as the right enabling product choices (Stubbs, R. J. et al. 2018).

Choice architecture can have an impact on sustainable food choices such as the consumption of alternative proteins to meat (Lehner M. 2015). Although availability of plant-based options is growing, basic strategies are being used when marketing these products in-store (Gravely, E. & Fraser, E. 2018). Decisions regarding branding can represent “cues” that guide consumers into making choices towards those products, making them stand out from competitors (Thaler R. H. & Sunstein C. R. 2008). In this research, focus will be given to visual and informative branding cues of plant-based products, since there is evidence that cues such as labels, color schemes, the information provided, and product descriptors can have a significant impact on consumer preference.

Regarding information provided, an experiment by Martin, C. et al (2021) concluded that Purchase Preference (PP) and Willingness to Pay (WTP) were consistently higher for meat-based products (comparing meat-based and plant-based sausages). However, when two different informational messages, provided on top of the packaging information, about both the environment and health were provided, consumer preferences changed towards the plant-based option and reached equivalence in PP and WTP. Nevertheless, just the provision of one of these messages was not enough to change consumers WTP. Actually, a review of 24 studies regarding interventions providing health or environmental information about eating meat, as well as animal welfare information, proved neither of these individually had an influence on eating behavior (Rothgerber, H. & Rosenfeld, D. L. 2021). Nevertheless, framing these environmental messages around individuals’ own values can impact their attitudes towards eating meat (Graham T. & Abrahamse, W. 2017). Additionally, according to Martin C., et al. findings, the appropriate way to disseminate the dual environmental and health messages in a real-life setting is still not determined.

Regarding visual cues, Tuorila, et al. (1994) concluded that providing certain verbal information related to the product use, as well as fostering product exposure and the resemblance to more familiar foods reduced the initially negative neophobic response. Further, Sucapane, D. et al. (2021) experiments concluded that a plant-based (versus a meat-alternative) product descriptor increased consumer perceptions of healthiness and eco-friendliness when paired with neutral packaging colors such as brown. Healthiness and eco-friendliness are characteristics shown to be predictors of food choice and consumption (Tobler, C. et al. 2011). Additionally, in behavioral research by Veylinx (2022), it was found that using the words “meatless”, “veggie” and “plant-based” rose demand for plant-based hotdogs when compared to the use of “vegan”. Actually, between “vegan” and “meatless”, there was a 16% rise in demand (with “vegan” baseline). Adding on, an alternative study further concluded that using original animal-based food names, such as “beef” for plant-based alternatives creates a negative reaction from consumers (Van Loo, E. J. 2020). Regarding color cues, neutral packaging color may allow the product descriptor to be more salient, thus having a greater impact on consumers’ perceptions and behaviors. Using stronger colors that already have associations with them such as red and green, respectively linked to “meat” and “plants”, makes product descriptors and packaging colors compete for consumers’ attention, so findings suggest caution from marketeers when choosing both descriptors and packaging colors (Sucapane, D. et al. 2021). In fact, red-colored packaging is strongly associated with the term “meat”, as green-colored packaging is with the term “plants”. Even so, research is not extensive on the topic of packaging colors and their match/mismatch with product descriptors, as well as their influence on the evaluation of meat alternative products (Sucapane, D. et al. 2021). Additional studies on the color of a product state that “green” is perceived as healthier, and better for the environment (versus red, blue, yellow, and grey), and the color red invokes negative associations with the products’ environmental impact (Huang & Lu, 2015. Schuldt’s, 2013; Brunner, Kurz, Bryngelsson, & Hedenus, 2018). In conclusion, both colors and product descriptors can invoke emotions and associations in the consumer’s minds and influence consumer preferences.

2.5. Conclusion: The gap

There is still large potential to reduce the environmental impact of meat consumption (Bellarby, J. et al. 2013), and although there is some evidence on the impact of specific cues in the preference for plant-based alternatives to meat, more research should be conducted to better understand how plant-based consumption could be further encouraged (Hartmann, C. et al. 2017)

In a general perspective, tackling the barriers of both price and taste specifically remains very challenging for plant-based brands. As previously explored, pricing would be crucial for the adoption of plant-based alternatives, as about a third of consumers would consider switching to a plant-based alternative to meat if the price was two-thirds or less than the animal-based option (Carlsson, F. et al. 2022). Thus, price-related policies have to be very strict, which is challenging for producers, or be complemented with other measures to have the ability to change behavior (Potter, H. K. et al. 2021). This highlights the importance of other cues, such as visual and informational cues, to drive the acceptance of these alternatives (Sucapane, D. et al. 2021) and complement other palpable measures related to price, taste, and convenience (Reisch, Sunstein, & Gwozdz, 2017).

It became clear that additional information cues, applied by brands, related to environment and health, can “nudge” consumers into a higher preference for plant-based meat alternatives. However, it’s not clear how these messages should be incorporated in a real-life setting (Martin, C. et al. 2009). Additionally, it’s proven that product descriptors, as well as packaging colors, can have a significant effect on food choice and consumption (Sucapane, D. et al. 2021), although there is no consensus about the ideal interaction between packaging color and chosen descriptors. Moreover, the role of information provision is key to creating moderate psychological discomfort and thus possibly getting consumers to change their buying behaviors (de Lanauze, G. S. et al. 2019).

Therefore, this study will focus on the use of branding elements, specifically informative and visual cues, by plant-based producers, in order to further understand how meat-substitute brands leverage on these characteristics to drive competitive advantage for their products. Further, the focus will be specifically in the Portuguese market.

3. Methodology

The methodology section contemplates the justification of the methodological choices, in the first section, and addresses the data collection and data analysis processes, in the second section.

3.1. Research Design

To answer my research question, I chose a qualitative approach. A qualitative research method is able to provide a deep understanding of micro-processes and contributes to a complex analysis of the interactions between culture and context in the integration of activities (Birkinshaw, J. et al. 2011). Therefore, given the transformative nature of the plant-based food industry, the complexity of branding cues to be used by producers to gain competitive advantage, and the consequently differences in perceptions among consumers, the rich qualitative approach deemed to be appropriate. (Rynes, S. 2004).

The selection of producers followed the choice to contact independent plant-based brands, due to their higher ownership when comparing with brands part of a FMCGs company portfolio. Originally, I contacted 10 brands, including big and small players in the international and national environment, as Beyond Meat, Impossible Foods, Revo Foods, Vivera, Plantz, Green Cook, BeatRoot and Capim – The Vegan Butcher. Brands representatives were contacted via LinkedIn and e-mail, with successful responses from the latter 4 brands, all small players in the Portuguese market. To complement the collected data I chose to organize a focus group in order to add further consumer insights to the brands' statements. The choice of a focus group followed research pointing out the technique as an exceptional way to gather multiple viewpoints on a unique topic and obtaining knowledge about people's shared understanding of everyday life in a group setting (Gibbs, 1997), that naturally increases the depth of the conversation due to the stimulation of thoughts (Côté-Arsenault & Morrison-Beedy, 1999).

3.2. Data Collection

For this research, I collected secondary and primary data. Additionally, I chose to conduct a multiple case study, in order to have stronger results (Stake, 2006). Regarding primary data, I held 8 semi-structured interviews with the mentioned companies' founders and co-founders. Additionally, I hosted a focus group with 7 participants. Concerning secondary data, I consulted articles, conferences, and business reports. All of the collected insights are registered in a research diary.

All the interviewees had a central role in the respective brand operations and strategy, as they were founders or co-founders of the brands. This direct involvement and awareness of the business dynamics brought insightful remarks, as the interviewees also demonstrated great openness. A table with all the inquired brands, interviewees' names, and observations from the **primary research** is listed in **TABLE 1**.

TABLE 1- PRIMARY DATA COLLECTION

Type of Source	Company	Name Interviewee	Length	Position	Date of Evidence
Interview nº 1	Green Cook	Natasha Sousa	60 minutes	Founder	May 18th, 2022
Interview nº 2	Green Cook	Natasha Sousa	30 minutes	Founder	May 25th 2022
Interview nº 3	Plantz	Felipe Souza	60 minutes	Co-founder	May 20th, 2022
Interview nº 4	Plantz	Jorge Boabaid	60 minutes	Co-founder	May 23rd, 2022
Interview nº 5	Capim – The Vegan Butcher	Francisca Neri	60 minutes	Operations Lead	May 20th, 2022
Interview nº 6	Capim – The Vegan Butcher	Francisca Neri	30 minutes	Operations Lead	May 22nd, 2022
Interview nº 7	BeatRoot	Joana Rodrigues	60 minutes	Co-founder & General Manager	May 23rd, 2022
Interview nº 8	BeatRoot	Joana Rodrigues	30 minutes	Co-founder & General Manager	May 26th, 2022

The semi-structured interviews involved broad questioning about the company's history and products, challenges in the market, as well as the informative and visual cues utilized in their different communication channels. This semi-structured way of questioning was premeditated so that participants had space to express their opinions and thoughts, but at the same time representing a reliable source of qualitative data, that was comparable between the different brands. Eight interviews were recorded, transcribed, and translated into a supportive Excel file.

Additionally, I conducted a Focus Group with 7 participants. Given that the focus of this dissertation is the Portuguese market, the session was hosted with Portuguese nationals for 60 minutes. Within this group, participants were fairy homogeneous when it comes to their interest in plant-based products, as all of the participants were interested in consuming more plant-based and often shopped for alternatives with a degree of variation (from rarely to frequently shopped for options) although no participants were strictly vegetarian or vegan. Additionally,, some degree of demographic similarity was kept ensuring a comfortable environment. (Côté-Arsenault & Morrison-Beedy, 1999). I organized the focus groups in order to understand participants' habits on plant-based consumption, their main challenges when looking for options in the market, and their opinion on the participant producers branding versus a more traditional player in the plant-based market (*Vegin*). A resume of the posed questions is available in **APPENDIX 1**.

3.3. Data Analysis

Semi-structured interviews and the focus group were analyzed using different methods, as will be exposed in this section.

3.3.1. Semi-structured Interviews

For the data analysis I applied a coding method with the final goal to answer the research question. Original codes were defined through the research question and the theory surrounding the study's topic (pre-defined codes) as well as through primary research collected through the 8 semi-structured interviews (data-based codes). Original codes are listed in **TABLE 2**:

TABLE 2 PRE-DEFINED AND DATA-BASED CODES

Pre-defined Codes	**Data-based Codes**
Branding Decisions	Taste is First
Nudging Cues	Variety
Competitive Advantage	For Anyone
Informative Cues	Sustainability in Website
Visual Cues	Extra Information in Social Media
Health Information	Product Recipes
Sustainability Information	Labels Communicate for Themselves
Animal-Welfare Information	Too Much Information is Negative
Plant-based Food	Convenient
Cognitive Dissonance	Attract Lost Customers
Packaging	Health as Critical
Website	Protein Rich
Colors	Simplify Choice
Labels	Safe Choice
Vegan Words	Traditional Dishes
Communication	Informative Flyers
	Bright Colors Related to Indulgence
	Appealing Packaging
	Curiosity
	Contrast Between Terms
	Recyclable
	Familiarity
	Resistance to Animal Welfare
	Sustainability in Packaging
	No Extremism
	Vegan Words
	Demystify Taste Vegan Food
	Differentiation
	Modernization

I merged these initial codes into first-order codes, that represent the main ideas present in the research question and the primary research. Further, these codes were grouped into second-order codes and eventually organized by themes that represent general ideas behind different groups of codes. These themes turned out to be the key elements into developing the findings. As an example, the code “Colorful Branding” emerged both in the primary research as well in the literature. I merged this code with other similar mentions such as “Fun Elements”, as well as the “Use of Contrast” into a second-order code that pertained to “Visual Cues”. This latter code ultimately pertains to a larger theme regarding “Favorable Branding Decisions”. At the end of the coding process, from 35 codes, 5 second-order codes were formed, and in the end, 3 themes were considered: “Coping with “Vegan” Reputation”, “Managing Consumer Resistance” and “Favorable Branding Decisions”. These themes have interconnections with each other as portrayed and further explained in the findings section.

To conclude, an overview of the evolution of the codes is now provided in **TABLE 3**.

TABLE 3: CODING TREE

First-Order Codes	Second-Order Codes	Final Codes
Taste as a priority and door opener	Goals	Coping with Vegan Reputation
Willigness to attract anyone		
Driving consumers curiosity		
Focus on the flexitarian population		
Capture the "buuying for others" population		
Frozen products as a chance to have a lower price		
Differentiation from the classical vegan options	Challenges	
Demystify taste of vegan food		
"Vegan" word is important for SEO		
"Vegan" and "plant-based" labels decisions		
The associations with "vegan" are unwanted		
Posting recipes involving the product	Action	Managing Customer Resistance
Leveraging on popular dishes for familiarity		
Try-on in store, get that TRY to pull consumer		
Having a visualy familiar product		
Bright colors are related to indulgence	Visual Cues	Favorable Branding Decisions
Color of the product itself has influence (red burgers sell more)		
Appealing packaging stands out		
Use of unexpected contrast ("vegan" and "butcher")		
Colorful branding gets the most attention in social media		
Adding "fun" elements		
Simple packaging information descomplicates choice in a "busy" enough world	Informative Cues	
Health information is a critical factor		
Providing a choice for "lost" consumers, as family		
Providing safe choices for the consumer (simple, burger)		
The consumer is not very interested in sustainability		
Chosing not to address animal welfare		
Animal welfare can create resistance ("us" versus "them")		
Sustainability information to be leveraged		
Communication occours more on Instagram		
First health, then sustainability		
Labels communicate for themselves		
Communicate extra information & facts on social media, blogs, website		
Too much package information goes by unoticed		
Use of informative flyers for consumers that want more information		

3.3.2. Focus Group

I held an additional Focus Group with consumers in order to complement the qualitative data collected from the perspective of producers, since the research topic is connected to consumer preferences and motivations. I chose Focus Groups since they represent a well suited medium for collection of multiple viewpoints on a single topic, as explained by Gibbs (1997). Participant demographics are exposed in **APPENDIX 2** in the appendices. I analyzed data by using a classical content analysis (Onwuegbuzie, Anthony J. et al. 2009), which involves dividing smaller pieces of the data and placing a code within each piece. In the process, I identified 21 codes. The codes were placed into similar groups and were counted by the identification of all references of a given code (Onwuegbuzie, Anthony J. et al. 2009), creating 4 broader concepts: Branding (74 hits), Sustainability (31 hits), Nutrition (29 hits) and Product (28 hits). Following this process, descriptions of the formulated codes will be further explored in the findings section.

4. Empirical Setting

4.1. The Plant-based Food Industry in Portugal

The plant-based food industry in Portugal is definitely growing, which can be seen through the substantial offer of plant-based meat alternative brands. Actually, in Portugal, the number of vegetarian and vegan establishments grew to be six times bigger in 2018, versus 2008 (Associação Vegetariana Portuguesa, 2021). However, there is still great potential for growth in the market, since the offer is not exhaustive. Moreover, according to the Veggie Guide for Startups, 72% of consumers are still unhappy with the quantity and variety of plant-based products in Portugal. Regarding vegan and vegetarian individuals, it is estimated that Portugal has about 180 thousand people that identify as such, which shows a growth of 300% in 4 years. The demographics of these groups are mostly women in the age group from 18 to 24 years old, followed by the 25 to 34-year-old group. However, the target audience of plant-based food and product is not only the vegan and vegetarian population. In fact, there is a growing group that shows intentions to reduce their meat consumption and adopt a mostly plant-based diet: the flexitarian population. Actually, over half of the Portuguese population (50,6%) shows an intention to eat more vegetarian products (Institute of Social Sciences, 2021). Frequent motivators for the adoption of a plant-based diet in the Portuguese flexitarian population are health-related concerns, the main driver for 68% of consumers, followed by worries related to animal welfare (30%), and environmental concerns (29% of consumers), as stated by the Portuguese Vegetarian Association (2021).

4.2. Presentation of cases

The chosen plant-based producers for this research are all based in Portugal, and are available just in the Portuguese market. A key aspect that involves all of the studied brands is their openness to change, their willingness to innovate, and their drive to create great solutions meant to be enjoyed by anyone. The fact that all the brands are small-sized is also a positive quality since they were open into sharing details about their products and respective strategy. Another common point shared by producers is the fact that they try to differentiate themselves from the traditional plant-based meat alternative brands.

Given that the goal of this study is to explore how plant-based producers decide upon informative and visual cues in order to foster competitive advantage, it is crucial explored brand's presentation and communication choices. Nevertheless, an overview of the brand's history and products will be now offered.

4.2.1. Green Cook

"Da Horta para o Prato" (From the Garden to the Plate)

Born in 2019, Green Cook produces three types of plant-based options for the consumers: 4 types of plant-based burgers (for example, a pea, spinach, and oats burger) and the Portuguese "rissóis" (3 varieties) and croquettes (1 variety). These products are frozen, thus presenting themselves as a good option for food waste concerns, as well as for the business margin, since there is a lot of waste within food production. Regarding price, Green Cook sells two plant-based burgers for 3.99€, at a rounded 2€ per burger. The brand invests in healthy options, given that none of their products have preservatives. Green Cook sells their products online and is present in 26 points of sale, mainly in Porto and Lisboa. An overview of Green Cook's product assortment can be found in **FIGURE 1**, in the appendices.

4.2.2 Plantz

"Saborosas, Nutritivas e 100% feitas de plantas" (Tasty, Nutritive and 100% made of plants)

Plantz was founded in 2022 and offers ready-to-eat frozen vegan meals, such as vegan lasagna and vegan "feijoada". Currently, they offer 9 different meals and a blueberry cheesecake. Further, like Green Cook, Plantz doesn't use preservatives and other additives in their meals. On the contrary, the brand focus is to assemble tasty ready-to-eat meals for all types of people that want a quick, healthy, and sustainable solution. The cost of all meals is 6.9€, lower than other similar alternatives in the market. Plantz is present only in the region of Porto and delivers their meals through their website, and delivery services. An overview of Plantz's product assortment can be found in **FIGURE 2**, in the appendices.

4.2.3. Capim Talho Vegan

"Receitas do passado. Pratos do Futuro" (Recipes from the Past. Meals from the Future)

Capim is the name of the Lisbon-based meat substitute brand. O "Talho Vegan" means the vegan butchery. With a homemade product assortment, with "real" ingredients and a more accessible price than similar offers in the market, Capim was born at the start of 2020. Currently, the brand offers 19 butchery items that resemble the traditional meat options as meatballs and meatloaf, 5 vegan cheese options, as well as 5 sauces. As with the other participant brands, Capim does not try to produce a meaty taste in their products (in terms of flavor) but instead uses simple vegetables to recreate the practicality and tradition of the original meat products. The pricing of the brands' core butchery products ranges from 8.4€ for 4 burgers, at 2.1€ per burger to 18.9€ for a big Wellington. Capim sells its products online with delivery in the Lisbon area and is also present in three points of sale in the same district. An overview of Capim's product assortment can be found in **FIGURE 3**, in the appendices.

4.2.4. BeatRoot

"Real Food made Simple"

BeatRoot was founded in 2018 by Joana Rodrigues with the goal to inspire and contribute to a change in paradigm by promoting the concept of "eat wisely". BeatRoot's "real" and minimally processed product assortment consists of 5 frozen vegan burger options, all with dynamic names, like a curry chick-pea burger named "Curry On", a falafel assortment, as well as veggie meatballs, and croquettes. An overview of BeatRoot's product assortment can be found in **FIGURE 4**, in the appendices. The brand advertises its products as a quick and easy way to prepare plant-based food for conscious consumers that care about what ingredients are placed in their products, that want to contribute to a Portuguese brand and don't mind paying a premium. BeatRoot delivers its products in the Lisbon area and is present in 139 points of sale in Portugal. As a reference, the price positioning of the star products, the burgers, is 4.89€ per pack of two, at around 2.45€ per single burger.

5. Findings

In this chapter, inputs collected via interviews, secondary research and the focus group will be presented in a way that allowed the author to conclude the established research question for this study, concerning branding decisions that allow plant-based producers to gain competitive advantage in the plant-based market. Firstly, findings from the consumer focus group will be exposed, divided by the three main concepts found: Branding, Sustainability and Nutrition. Secondly, the global findings of the research will be presented.

First of all, in the global findings, challenges producers face coping with the reputation of plant-based products will be addressed, followed by the topic of consumer resistance to plant-based products. This section represents the **"What"** of the research question, as brands' challenges will be explored. Following, the **"How"** will be addressed; i.e. what visual and informative cues producers chose in order to foster competitive advantage, and ultimately how they tackled the challenges expressed in the first section via branding choices. Lastly, a summarizing table with an overview of the key takeaways collected through the findings section will be presented.

5.1. The Challenges of Customers Navigating Plant-based Products

In order to understand customers perception on plant-based branding, as well as the challenges faced when considering plant-based products, a Focus Group was held. This section of the research is relevant to the study due to the topic natural closeness to the consumers perspective. Following the focus group, the most common codes were identified. The concepts explored relate to Branding, Sustainability, Nutrition and Product, and will be now introduced.

5.1.1. Branding (84 hits)

The most relevant topic lifted in the Focus Group is Branding, being the one with more related codes and more cited throughout the focus group. This happened since consumers opinion on plant-based brands, concerning the interviewed brands visual and informative cues, with comparison to other plant-based brands that represented a more traditional branding were asked for. Consumers valued the interviewed brands colorful and youthful branding, the presence of cooking information in the packaging, and a smaller vegan label since there is a belief this fosters a more inclusive atmosphere. Additionally, customers commented that certain ingredients listed can be too complex and reduce the sense of familiarity with the product, and that some of the packaging had too much information, creating feelings of confusion. Further, consumers valued when product pictures seemed more natural, with the visibility of certain simple ingredients, as well as the visual resemblance with animal products, as in the case of burgers. Lastly, consumers appreciated unexpected visual stimuli, such as the use of unusual color (not green), although the color green invokes healthiness for them.

5.1.2. Sustainability (44 hits)

The concept "sustainability" is mentioned several times as consumers state it's their main concern when opting for a plant-based product, specifically environment and animal welfare concerns. Health is sometimes not associated with plant-based products, since there are many pre-made products that don't represent a healthy choice in the market. Therefore, when opting for pre-made products, consumers drives are mostly sustainability, as well as practicality. There is a consensus that homemade plant-based food is healthier than these alternatives. Additionally, there was some confusion surrounding the sustainability impact of plant-based food. Nevertheless, consumers don't believe these brands should be communicating deeply upon these issues, since they see this communication as more important in animal-based food. Lastly, some of the participants stated they prefer small independent brands when opting for a sustainable product, value local production labels and sustainable packaging.

5.1.3. Nutrition (34 hits)

The concept of "nutrition" came up several times, as participants declared the importance of clear nutritional statements on plant-based food. For example, consumers believe protein content should be highlighted. Further, consumers showed interest towards the use of whole ingredients by producers, and shy away from soy/tofu-based alternatives. The importance of nutrition tips was also discussed, as consumers suggested having a consumption "idea" for optimum nutrition would be valued. Moreover, it became clear that frozen products have an unhealthy reputation. Nevertheless, consumers stated the importance of price, taste and appearance of the product as main decision makers when option for a plant-based product.

5.2. The Strategies of Producers Fighting Industry Challenges

In the following section, the global findings for the present research will be exposed, with the goal to answer the established research question: "How can Portuguese plant-based producers use informative and visual cues to support their competitive advantage?" derived from the encountered gap in the available literature. In fact, existing research on how plant-based consumption could be encouraged is limited, and research focused on the Portuguese market in non-existing. Additionally, research proved the importance of visual and informative cues into the competitive advantage of plant-based producers: since higher impact factors such as price and taste are difficult to address, these cues can provide a "push" in the right direction, for a small cost for producers and are proved to have a significant impact, especially when used together with other policies. Even though there is some research proving the positive effect of certain product descriptors and packaging into the research topic, as well as the important role of information provision, it's unclear how these different attributes engage with each other towards supporting competitive advantage via the existing literature.

That being said, the following Findings section is divided into the different themes derived from the data collection: Coping with "Vegan" Reputation, Managing Consumer Resistance and Favorable Branding Decisions. The sections address the challenges faced by plant-based producers into gaining competitive advantage, as well as the strategies used by them to fight the expressed challenges.

5.2.1. Coping with "Vegan" Reputation

Results show that one of the biggest challenges for plant-based producers are negative connotations that are still commonly associated with "classical" plant-based food, due to the presence of not-so healthy processed options in the market.

"When I created BeatRoot I realized there was a gap in the market. The plant-based offer was often quite processed, and not that healthy. There was a need for cleaner products, that consciously thought about the nutrition of the customer"

(Interview, BeatRoot founder)

All of the participant producers classified themselves as a “modernized” plant-based option and stated that they wanted to position themselves as a healthy, inclusive, “fun”, stress-free option for consumers, helping them navigate through the challenging topic of diet.

“*There are still many negative associations with the word vegan, and we want to challenge and modernize that. Our goal is to demystify the vegan concept”*
(Interview, Plantz co-founder)

Reputational challenges faced by plant-based producers relate to taste, positioning, and use of “vegan” descriptors, and will be explored in the following sub-section.

I) Fighting Taste Pre-conceptions

Regarding the demystification of plant-based food taste, results show producers work hard into developing products that anyone - not just vegetarians and vegans - would enjoy eating, and fight preconceptions about plant-based products’ taste and texture.

“We want customers to look at our products and want to buy them because they seem tasty. And they will recognize they are very flavorful. This opens to door into the plant-based alternative world” (Interview, Plantz co-founder)

In fact, they realize that the most important attribute is the products’ plant-based quality. However, their goal is to draw in consumers by the taste dimension, which was considered a priority and a “door-opener”, regardless of the vegan attribute. In fact, the main target group for all the interviewed brands is the flexitarian segment.

“The most important attribute of our product is the vegan quality, but I want to capture the flexitarian group, so I don’t give big relevance to this quality (more than what’s necessary). I truly want people to substitute meals with plant-based products, and to feel that these alternatives are for everyone” (Interview, Green Cook founder)

Nevertheless, results show that consumers are attracted to plant-based products mostly by their sustainability characteristics, as well as practicality, and not taste since that is not the attribute mostly associated with these alternatives.

"Cooking at home is a way healthier option than buying plant-based already made products, although it can be a lot more practical to just grab something simple to cook" (Focus Group, Participant 2)

"When I choose to buy plant-based products my main drive is to make a more sustainable choice, so I am not looking for the tastiest product. Maybe my expectations are already low, since I would always appreciate a better tasting alternative" (Focus Group, Participant 6)

II) Differentiating from Traditional Players

There is a wish for differentiation from traditional players that goes beyond the taste factor. In fact, plant-based products often have a reputation of being boring and even based on extremist lifestyle ideas. Results show producers focus on conveying a lighthearted, simple, and "fun" image of their product assortment, thus shying away from these preconceptions.

"Our products are colorful, and their names are fun since we want to bring a certain lightness to the whole plant-based diet topic" (Interview, BeatRoot founder)

Nevertheless, they still wanted to build healthy, clean ingredient products, which is also a differentiating factor from many existing and older players in the industry, since the use of preservatives and other additives was a great driver for the creation of all the participant's brands.

"In Portugal, meat alternatives were full of preservatives and additives and did not use great quality ingredients. Capim was born with "homemade", real ingredient products, that don't incorporate the use of additives" (Interview Capim, co-founder)

Results show producers plan to attract new consumers by raising curiosity about their products and transpiring inclusivity to non-vegan or non-vegetarian groups. Moreover, keeping in mind the differentiator factor, they aspired to create "cool" brands. Nevertheless, keeping a simple image was crucial to attempt to capture "lost" consumers, that don't have much knowledge about these alternatives, and consumers buying products for their kids or their friends.

"I wanted to move away from the typical vegetarian product-neutral and natural packaging, I wanted something simple. I want to be a safe choice for people that comprehend these products, or just want an alternative for their friends" (Interview, Green Cook co-founder)

Additionally, the choice of a simple and understandable product such as a burger can already simplify the choice for the consumer, and that was the path for both Green Cook and BeatRoot. Moreover, results show that consumers value simple products, with a clear list of ingredients.

"It can get confusing when brands develop these complex products with so many vegetables, spices and other fancy products. It's hard to imagine what the taste of the food itself will be like. In this case I think less is more, especially for people like me that don't consumer plant-based alternatives every day" (Focus Group, Participant 7)

Another factor that was pointed out by Plantz, as a key advantage in their business models, is the price point. Traditionally, plant-based food has a reputation for a higher price point, and price is key into consumers decision making. This player challenged this topic and offered its products at a lower value than the market average.

"When I think of these colorful modern plant-based options it's hard not to imagine a high price behind the product" (Focus Group, Participant 6)

This advantage was driven by the choice of a frozen product, which implied less waste in the supply chain, and thus, allowed margins to be higher. Alternatively, BeatRoot and Green Cook also developed a frozen product but acknowledge their customers are willing to pay a price premium when compared to other alternatives.

"Our strategy is to have a lower price point. Selling a frozen product allows us to grow our margin, and therefore lower the price point. This allows us to get to more tables, than other more high-end options" (Interview, Plantz co-founder)

III) Leveraging "Vegan" Label Associations

Keeping the previous topic in mind, it's clear that there must be a lot of divergent opinions on the use of "vegan" and "plant-based" words to market the brand's products. Results can diverge since some participants felt that v-words can be threatening and others believed stating "vegan" clearly indicates that animal products are not present.

"I communicate with the vegan word since it indicates clearly the composition of the product. For me, plant-based can be deceiving since it may be indicating that there can be animal products in a lower quantity" (Interview, Green Cook co-founder)

"I believe vegan labels should be kept small, since it fosters a more inclusive atmosphere. Nevertheless, I understand that vegan consumers would value the label more" (Focus Group, Participant 4)

However, results show there is a common understanding of the importance of using the "vegan" world for a better SEO.

"I prefer to focus on the terms "real food" and "real ingredients" since I believe in eating consciously, and not necessarily just plants. Nevertheless, I always use the word vegan since this is what consumers search for when looking for plant-based alternatives" (Interview, BeatRoot Founder)

Although Green Cook and BeatRoot shared their acceptance of the word vegan, and use it on their social media and website, they still chose the name "veggie" for the product packaging and communicate the vegan attribute by the presence of the official vegan label. In fact, this label sends a message, as the Portuguese Vegetarian Association (2021) shared that 80% of consumers believe they are more likely to buy a product if it had a vegan certification.

"The international V-label certification is a seal of quality, that is easily recognizable, and a guaranty that our product is 100% vegetable-based" (Interview, Green Cook co-founder)

"We chose to incorporate the word vegan instead of plant-based or vegetable in the name of our company since we believe this contrast (vegan and butcher) draws attention and curiosity and also helps breaking vegan preconceptions" (Interview, Capim Talho Vegan)

To conclude, the "vegan" denomination can be more relevant to plant-based customers that want to be sure of the plant-based quality of the product, as noted by the Portuguese Vegetarian Association. Nevertheless, flexitarians find the denomination quite threatening and prefer other more inclusive denominations.

5.2.2. Managing Consumer Resistance

The topic of consumer resistance to plant-based products is largely connected to the previous themes. Nevertheless, in this section of the findings, results will be exposed with more concrete and actionable steps for plant-based producers.

Firstly, results prove there is a consensus on the relevance of price, taste, convenience and appearance into consumers choice for a plant-based product.

"For me the most important attribute is price, it has to be comparable to similar meat options. But of course, taste is key. Nevertheless, a good-looking product is what convinces me to give the option a try. If it looks bad I will most likely never try it" (Focus Group, Participant 1)

In order to fight consumer resistance, results show that making products similar to existing familiar dishes drives the acceptance of the new product. The goal is to bring elements of familiarity into the plant-based dishes.

"We chose our dishes based on traditional and popular meals consumers are familiar with, for example, our vegan lasagna and the typical "feijoada" (beans meal typical in Portugal and Brazil). This helps us to simplify the choice for those who are not vegetarian" (Interview, Plantz co-founder)

Secondly, results show the importance of presenting a visually appealing product. This topic will be further explored in the "Favorable Branding Decisions" section.

"Some of my points of sale tell me that often people just choose my products because they are visually appealing to them" (Interview, Green Cook co-founder)

Additionally, Capim addressed the importance of in-store trying options, such as sampling. Although other participants didn't engage in product sampling, awareness of the importance of tasting the product was high among all.

"The main difficulty is getting people to try our products since once they do try them, they are normally pleasantly surprised. For this reason, we hosted some tastings in small grocery stores" (Interview, Capim Talho Vegan)

Finally, results show the presence of recipes or consumption suggestions are positive.

"A consumption idea, or a user guide for optimum nutrition is a great nice to have and reassures you that the meal you are eating is healthy" (Focus Group, Participant 4)

Naturally, results show that participant brands use branding choices to differentiate themselves and attract consumers. In the next section, these branding decisions will be further explored.

5.2.3. Favorable Branding Decisions

The following section of the findings presents itself as a **"How"** into the challenges of coping with vegan products' reputational remarks. Thus, the following section expresses the results derived from research, that stress the importance of branding decisions into gaining competitive advantage.

I) Leveraging Visual Cues

When it comes to visual branding cues, results show producers aim to create a visually appealing package, using bright colors, both in the packaging as well as on social media and websites. There is a belief that these colors grab attention and curiosity towards the products. Additionally, these colors contribute to the sought-after "fun" characteristic stated in the sections above.

"I wanted to escape the typical neutral packaging on plant-based products, so I tried to get something simple but appealing. I believe I could reach this goal through the use of color. It's a stand-out from my competitor, and more appealing to anyone"
(Interview, Green Cook founder)

For instance, both BeatRoot and Green Cook have naturally colored burgers, from the vegetables in the recipe, and Green Cook specifically coordinates the burger color with the packaging color. Other brands, namely Plantz and Capim, use known colors, related to indulgence, like red and orange, and try to move away from bland colors.

"In our social media it's clear from our advertised posts that the ones that get more traction are the colorful, bright ones"
(Interview, Capim Talho Vegan co-founder)

BeatRoot embraces more natural colors since they intend to clearly communicate the naturalness of their ingredients. Even so, they have dynamic typography and illustrations in the packaging. Further, they choose irreverent names for each burger, such as "Heart Beet" and "Lentilicious".

"We want to bring a more fun vibe! We chose to incorporate nice illustrations and creative names for the products. I believe color has a great influence: even my most sold burgers are the beet and curry ones, which are pink and yellow. I think people associate red and pink with meat; and the yellow is also more engaging (versus brown)" (Interview, BeatRoot founder)

Regarding packaging, results show keeping it simple is key. Actually, Capim previously had a "fuller" packaging, with lots of elements, and realized consumers didn't pay attention to overwhelming information.

"In the beginning, we added a lot of details to the packaging and even included an extra card with a nice message, but our clients did not appreciate it. Now we keep it simpler, with fewer details" (Interview, Capim Talho Vegan co-founder).

Results show that consumers highly value colorful branding and sustainable packaging although there is a sense that too much information can create feelings of confusion.

"It's refreshing to see packaging with unique colors, and unexpected stimuli. There is always a connection to health from the color green but it's nice to see less traditional packaging. I believe there has to be a balance, if there is too much going on then I get a bit overwhelmed" (Focus Group, Participant 6)

Packaging information opens up for the next topic, regarding the choice of informative cues.

II) Leveraging Informative Cues

As previously mentioned, results show brands believe their most important attribute is their plant-based features. Being that it's clear that consumers' motivation for plant-based eating is related to health, the environment, and animal welfare, how far should brands go communicating these attributes to the consumer?

There is an overall belief that sustainability information is indeed relevant to the consumer, and should be addressed due to its relevance when it comes to plant-based diets.

"On the packaging, we want to address the topic of recycling, and sustainability related to the dish itself by having a type of chronometer that indicates savings in water, land, and CO2 emissions by the substitution of a meat-based meal with a plant-based meal" (Interviewof Plantz co-founder)

Other producers think it's better to keep the packaging information simple when it comes to informative cues, and address these characteristics on other platforms, such as social media, blogs, and the company's website. Additional information about health and the environment can have a relevant role, especially among the consumer groups that want to be involved and informed. Nevertheless, results show other consumer groups that are more skeptical of plant-based substitutes may create resistance when presented with these facts.

"On the packaging of our products we chose not to communicate health and environment topics, to not overwhelm consumers. That additional information is on our website and social media, for those who want to get informed" (Interview, Green Cook founder)

"In my opinion information about health and protein is always welcomed as it can be uncertain with some of these products. When it comes to sustainability it can be positive that brands express some facts in their packaging, I like to be educated! But I believe it can be too much when animal welfare is brought up, this information is more important in animal-based foods" (Focus Group, Participant 3)

"We want to communicate sustainability elements, but we believe consumers are not very interested in this topic. They mostly search for health advantages" (Capim, Interview co-founder)

Additionally, related to animal welfare, there is also consensus on this topic, as there is an agreement that this topic might divide consumers and create an environment where consumers that are not plant-based feel threatened.

"I never communicate animal welfare: a lot of our consumers eat meat, fish, or eggs, in a conscious way. I believe talking about this topic in a way that can come across as critical is a mistake and can push away some of these consumers" (Interview, BeatRoot founder)

To conclude, results show plant-based producers should keep salient packaging information related to health and sustainability to a minimum, using indirect communication channels as the means to discuss these topics further, such as the "history" section in their websites. Closing the findings chapter, a summary of the results collected is presented in **TABLE 2.**

TABLE 2: FINDINGS SUMMARIZING TABLE

Themes	Conversion Points	Divergence Points

Coping with Vegan Reputation	Modernizing traditional plant-based products: - Positioning as "fun" and inclusive - Demystification of taste, taste attributes as a priority - Building healthy products, free of preservatives and additives - Visually appealing products (ex, bright colors) to attract "lost" consumers and bring attention - Simplifying the choice, easy understandable products (ex, burgers, simple packaging) - Focus on flexitarians	- Manage higher price point reputation (for Plantz this was part of their strategy. Other brands such as BeatRoot embraced the higher price point and targeted conscious consumers that are willing to pay for naturalness) - Navigating v-words: there was general agreement, but some brands had a stronger preference to use "vegan" for good SEO
Managing Consumer Resistance	- Choosing familiar dishes remade, as lasagna and butchery items - Visually appealing products for customers to be curious - In-store tying options to push trial and recipes	- Only Capim used in-store trials; with BeatRoot they both explored the use of recipes

	- Leverage informational cues (next topic) with consumption suggestions and protein information	
Favorable Branding Decisions – Visual and Informative Cues	- Bright colors (red, pink), move away from bland - Dynamic visual presentation, illustrations, creative names - Low informational level (just the essential) - Communicating health benefits first - Sustainability and health information as additional information provided in website, blogs, social media - Not addressing animal welfare, even as additional information	- Sustainability information was considered relevant to be present in the packaging for Plantz; all other brands preferred to expose this as additional information - Green Cook communicated animal welfare in their website

6. Discussion

In this section, the findings will be further analyzed in line with what was exposed in previous literature. Concerning challenges with “vegan” products' reputation, results show negative connotations in the consumer’s minds towards plant-based food, which was confirmed by consumer insights stating “unhealthy”, “processed”, and “boring” associations with vegan food. In order to stand out, producers complement the existing offer with healthier, less processed alternatives. This proved to be relevant as 30% of respondents of a 2020 study stated the processing of plant-based products as a concern (Roland Berger, 2020). Further, brands aim to portray an image of modernity and fun, in order to keep “harsh” associations with the sensitive topic of diet light, as diets are ingrained in an individual’s culture, and meat consumption can have an emotional bond with the individual (Dibb, S. & Fitzpatrick, I. 2014). Further, results show preference for young, creative and light marketing choices.

When it comes to taste, results highlight the importance of having a flavorful product, in order to draw consumers’ interest. Both taste, cost, and convenience are foundational and need to be met for customers to take other variables in consideration, such as the environment, when making food choices (Good Food Institute, 2021). Results prove that, by investing in the taste dimension, producers have a better shot at attracting customers, namely from the flexitarian segment.

Further, results show there are divergent opinions about the use of “v-words”. On one hand, using the word “vegan” is a clear sign of the plant-based quality of the product and drives good SEO. On the other hand, there is a belief the word can be threatening, since being vegan implies an often novelty set of beliefs. Research has found that using the words “veggie”, “meatless” or “plant-based” increase demand when compared to “vegan” (Veylinx, 2022). Results show producers generally prefer to use the word “veggie” or “100% made of plants” in their products, even if they accept and use the “vegan" world in other channels. Further, having a “vegan certification” communicates for itself, with 80% of consumers believing they are more likely to buy a product with this certification (Portuguese Vegetarian Association, 2021). Nevertheless, results show the irrelevance of Vegan official labels for those not strictly vegan, and towards the preference of non - “vegan” product descriptors.

Furthermore, in order to foster differentiation, brands focus on gathering curiosity towards their products, keeping a simple yet colorful and young image, and well as bringing some "coolness" attributes to plant-based eating while providing a simple understanding of products, with simplification of ingredients. As mentioned previously, price is essential, as one-third of those who prefer meat should consider switching to a plant-based alternative if the price was two-thirds of that of meat (Carlsson, F. et al. 2022), which underlines the relevance of investing in branding cues, that can complement other price focused campaigns, in order to differentiate plant-based producers. Moreover, fighting resistance from consumers, brands mostly replicate traditional meals, a choice supported by research pointing out that the resemblance to more familiar foods reduces the initial negative neophobic response from consumers and can simplify choice (Tuorila, H. et al. 1994). Recipe sharing in the packaging was a common practice for two of the brands, which is consistent with Tuorila, et al. (1994) that stated the importance of providing information related to product use, as results show consumers value the use of instructions in packaging as well as consumption recommendations.

Focusing on branding alone, specifically regarding visual and informative cues, results show the importance of using bright and appealing packaging: some participants achieve this by the use of solid colors, as pink, yellow, green, and blue, or by the use of fun illustrations and product names if using softer colors. Some of the brands chose colors like orange and red, which are related to indulgence. Since colors communicate attributes, namely, red tones are linked to "meat", and green tones to "plants", and healthier products, as well as sustainability (Huang L. & Lu, J. 2015. Schuldt, J. P. 2013) they should be used based on brands' objectives, although care must be taken since strong colors make packaging colors and descriptors compete for consumers' attention (Sucapane, D. et al. 2021). From the point of view of consumers, the color green is related to health and is seen as positive, although the use of less traditional colors is seen as progressive.

Addressing information provided, participants kept information simple, and moved away from animal welfare topics, as they believe this could create resistance. This insight can be true since dissonant behaviors can surface when consumers are faced with the knowledge that clashes with their beliefs (Festinger, L. 1957), as results show consumers value simple communication as animal welfare properties are already derived from the plant-based status of the product. Nevertheless, results show less informed consumers might benefit from some information on these benefits. Most producers communicated both health and sustainability, although more relevance was given to health as results show consumers value this the most. Further, research proposes external motivators, such as the environment, are not as effective as personally relevant motivators (Stubbs R. J. et al. 2016). However, results prove that consumers main driver to adopt plant-based meals is sustainability, since they don't have a great impression of nutrition in plant-based food. That being said, results underline the importance of providing information regarding nutrition, protein intake, as well as cooking information and meal suggestions. Actually, research shows the use of a dual health and environment message had an impact on consumers purchase preference although there was no conclusion on where to disseminate these messages in real-life settings (Martin, C. et al. 2019). That being said, results show producers should consider to frame these messages into claims that reflect individual value, and advertise both health and sustainability in small portions of the packaging, or as additional information on the brands' website, blogs, and social media to not clutter informational space.

In conclusion, when it comes to eating animals, and the psychology behind it, Rothgerber, H. & Rosenfeld, D. L. (2021) speculated that what will truly boost the acceptance and consumption of plant-based items are technological advances happening in plant-based substitutes and lab-grown meat. Although more than half of consumers are already thinking about changing their diets (IDG, 2020), improving the topic of taste and pricing, via innovation, could drive competitive advantage for plant-based producers. Nevertheless, as challenges related to the consumption of excess meat, both on the environment, land, water, and health are growing awareness, the demand for plant-based options will grow, namely in Western countries (Our World in Data, 2020). This fact itself presents a challenge to producers, as they need to be ready to communicate effectively with consumers, attempting to be salient in today's busy decision environment (Espresso Nudging Conference, 2020), while possibly directing consumers' choices towards those more positive for themselves, and the environment (Gravely, E. et al. 2018). In conclusion, while waiting for awareness to grow and innovation to develop better products in the taste and cost dimension, producers branding can be designed in order to change the contextual cues that favor their plant-based option (Stubbs, R. J. 2016).

7. Conclusion

This research aimed to further collect insights into branding decisions of plant-based food, namely respecting visual and informative cues, in order to foster competitive advantage. Research on the specific topic of visual and informative cues, to the current knowledge, is very limited. Further, research covering the plant-based market and branding decisions for the Portuguese market is even less prominent. Therefore, in this research, a qualitative analysis was developed in order to explore the complex branding decision environment surrounding Portuguese plant-based brands. Four small-scale players in the Portuguese plant-based food market were analyzed, as main market challenges and chosen branding elements were discussed. Furthermore, a Focus Group has held with the intention to understand consumer interpretation of branding cues in the plant-based market. Lastly, gathered insights were exposed and benchmarked to existing research on the topic. Obtained insights are in line with existing results from studies addressing plant-based branding cues but add depth to existing knowledge since it brings more a more comprehensive overview of branding cues in real-life products. Additionally, this study brings a more integrated perspective of branding, not studying branding cues in isolation. This research is also of use to players in the Portuguese plant-based industry, as there are no studies to present knowledge that focus on this specific market.

Recommendations derived from this study for plant-based brands branding when it comes to visual and informative product cues are labeled in **TABLE 3:**

TABLE 3: RECOMMENDATIONS TO PLANT-BASED PRODUCERS

Category	**Sub-category**	**Recommendation**
Product	Product	Invest on less processed, healthier and tasty products to face health and taste concerns. Options that are familiar such as burgers, or options containing vegetables provide consumers more understanding, and simplify choice. Traditional products reproduction reduces neophobic responses.

Branding	Packaging	Modern, creative, young and fun image to face “boring” and “harsh” reputational concerns of product category. As an example, illustrations and fun naming can be used.
	V-Words	Prefer the use of “plant-based”, “100% plants” or other wording not including “vegan” terminology. The presence of a Vegan label speaks for itself.
	Labels	Consumers appreciate seeing a “vegan” label/seal since it inspires confidence. Less worried consumers don’t value this label as much but appreciate “made in X” and “biological” labels.
	Colors	Use colorful options, such as green to invoke health sentiments and red/orange to invoke indulgence. Nevertheless, other bright colors can be used to add a differentiating factor from traditional classical colors.
	Information	Include product instructions and consumption recommendation for a clear use. Consider highlighting protein content to convince skeptic consumers. Keep available health and sustainability information simple, and a short and simple ingredient statement. Complement health and sustainability measures in social media and other channels and shy away from promoting animal welfare concerns since it’s clear to informed consumers that no animals are involved, and less informed consumers can be threatened by the information.

This study presents limitations due to its focus on small-scale brands, since branding components are not measured in depth before implementation. Nevertheless, a consumer focus group was held in order to add further relevance to brands' statements. However, sample size is limited to four brands, 7 consumers, and to the Portuguese plant-based environment, which shapes the obtained results via the respective culture and values of the sample. Moreover, focus groups represent a challenge in terms of building a representative sample of the population, and may lead to certain members not feeling comfortable expressing opinions. Therefore, future research on the topic could bring further insights from different nationalities and backgrounds, when it comes to focus groups participant as well as interviewed brands. Additionally, sample sizes could be bigger, especially when it concerns to consumer opinions and different methods could be applied in order to gather deeper insights, such as observations and a combination of quantitative and qualitative research.

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Appendices

APPENDIX 1: FOCUS GROUP QUESTIONS

- Do you consider yourself open to having a plant-based diet? How often do you buy plant-based options?
- Are you aware of health and environmental benefits of a plant-based diet?
- How do you generally perceive plant-based brands?
- What are the factors that lead you to buy a plant-based option (versus meat)?
- Do you appreciate plant-based brands informing you about health topics? How about sustainability? And animal welfare?
- Do you like the "vegan" denomination or prefer other options (ex, 100% plants)?

Now I will show you images of different plant-based branding, either plant-based products packaging or brands' website (all brands were the interviewed companies plus Vegin, an old school player in the plant-based market, common in Portuguese grocery stores, that represents a benchmark for the industry)

- How would you describe this product? (Image 1)
- How would you classify your acceptance towards this product? (Image 1)
- How would you describe this product? (Image 2)
- How would you classify your acceptance towards this product? (Image 2)
- Overall what is your perception of both brands? Which brand do you believe stands out and why?

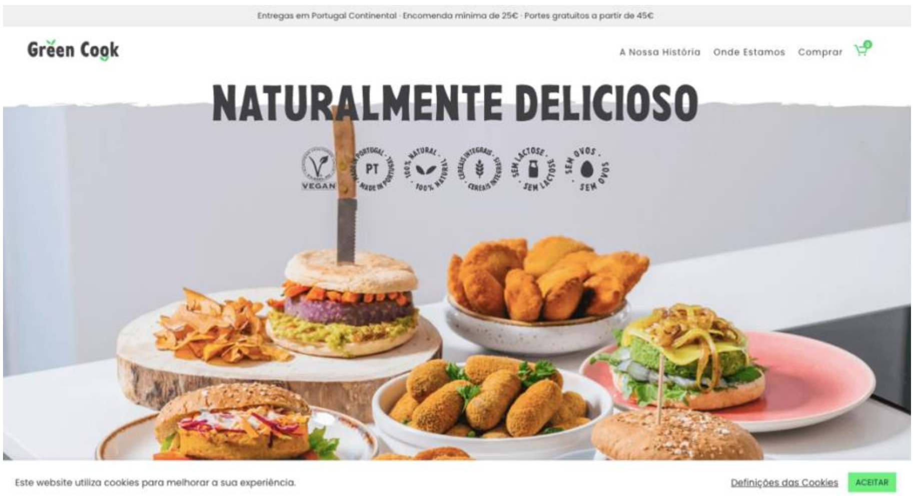
(Repeat questions for all plant-based brands – 5 brands in total: Green Cook, BeatRoot, Platz, Capim and Vegin)

Sample from one of the representations (Green Cook versus Vegin):

APPENDIX 2: FOCUS GROUP DEMOGRAPHICS

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7
Age	23	27	31	20	22	34	23
Gender	Male	Female	Female	Female	Male	Female	Male
Education	Master's Degree	Bachelor's Degree	MBA	Master's Degree	Master's Degree	Bachelor's Degree	Master's Degree
Employment type	Engineer	Marketing Executive	Marketing Manager	Student	Student	Banking Administrator	Public Relationship Manager
Plant-based consumption	Monthly	Weekly	2 times per Week	Weekly	Monthly	Monthly	Monthly

FIGURE 1: GREEN COOK PRODUCT ASSORTMENT



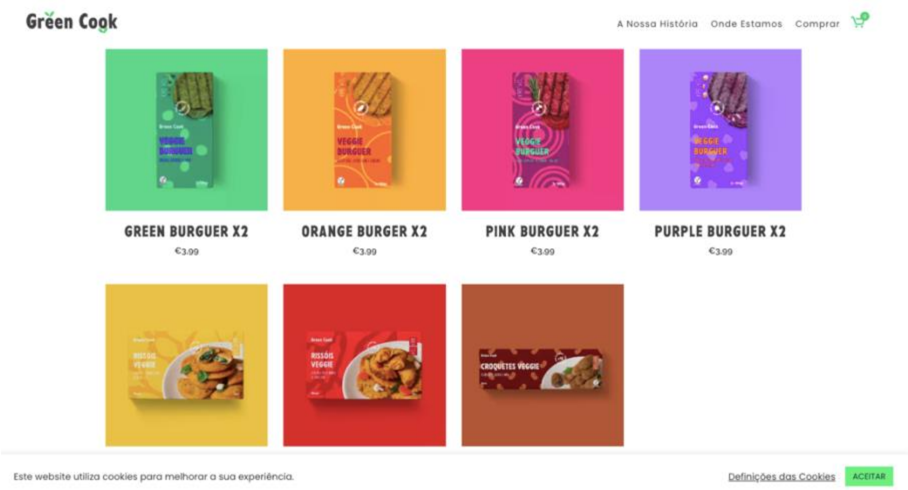


FIGURE 2: PLANTZ PRODUCT ASSORTMENT

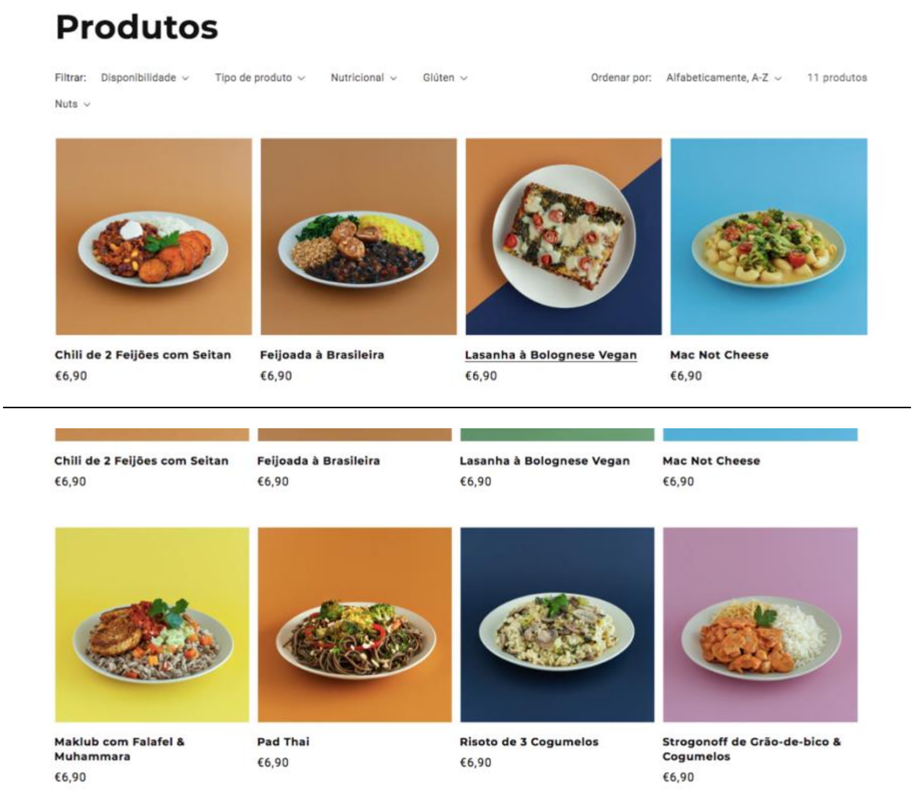


FIGURE 3: CAPIM PRODUCT ASSORTMENT

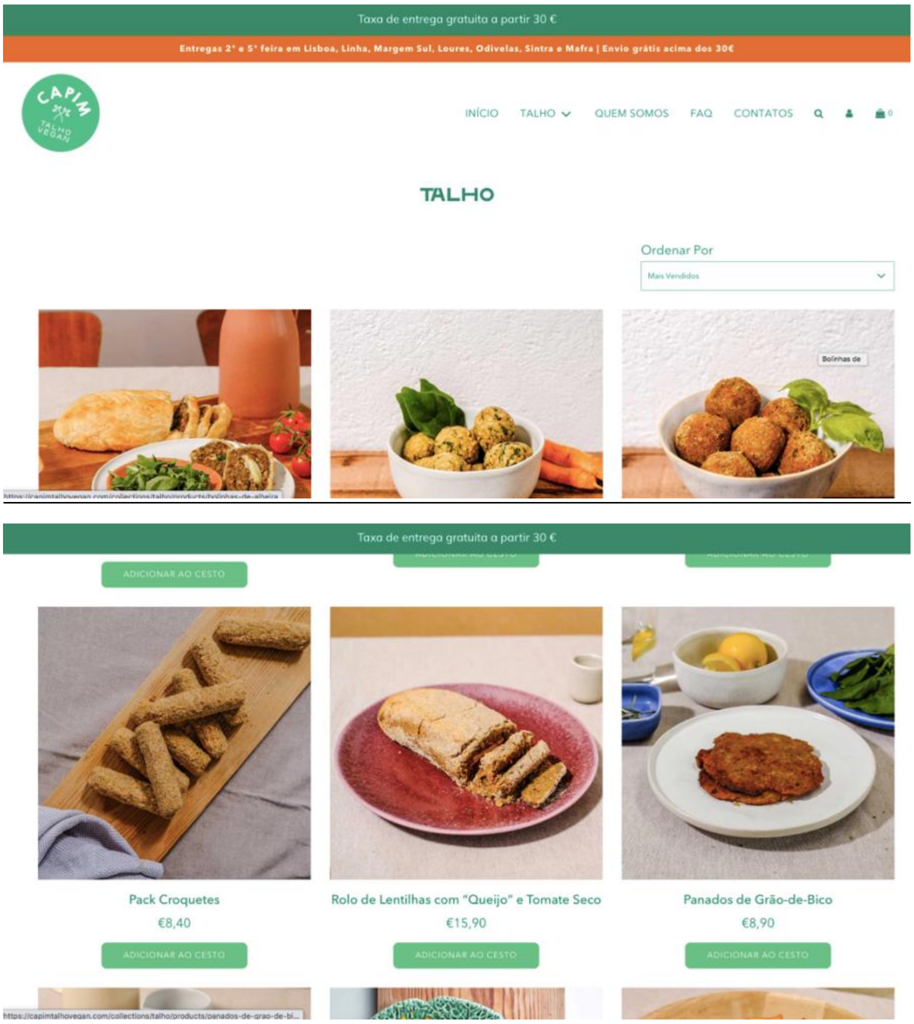


FIGURE 4: BEATROOT PRODUCT ASSORTMENT