

The Green Diet Revolution: The Future of Plant-Based Ice Cream from the Case of Oatly

Ran Wen^{1,a,*}

¹*The Ohio State University, Columbus, Ohio, the U.S., 43210*

a. wendyran666@gmail.com

**corresponding author*

Abstract: With the popularization of health knowledge, people are placing more and more emphasis on healthy eating, and plant-based diets are gaining attention as a health trend. This paper examines the trend of shifting from traditional to plant-based diets, with a particular focus on the growing consumer demand for vegan ice cream. By analyzing how Oatly has responded to this megatrend through its product development and marketing strategies, the paper explores the potential of plant-based foods to contribute to environmental sustainability and human health. A SWOT analysis of Oatly reveals the company's brand perception, innovation efforts, market expansion opportunities, and challenges in the face of stiff competition and cost volatility. The significance of this study lies in the fact that it provides valuable insights, consumer behavioral understanding, and market dynamics for the food industry, especially in the vegan dessert segment, through a comprehensive analysis of the shift to plant-based diets, contributing new insights and innovative suggestions for promoting environmental sustainability and human health.

Keywords: Food production systems, Plant-based foods, Frozen desserts, Oatly, Environmental sustainability

1. Introduction

With the popularization of knowledge, people are paying more attention to their health. Especially after the outbreak of COVID-19, many people realized the importance of healthy diets and decided to make changes. Plant-based diets are recognized as "healthy diets" that not only provide basic nutritional requirements but also change the status quo of environmental pollution. Therefore, more companies will consider innovating the production of vegan ice cream where they can develop healthier ice creams such as low sugar, low fat, etc. And experts predict that the global vegan ice cream market is expected to reach \$1.24 billion over the next 10 years [1]. Oatly as one of the major vegan food companies in the market, they are offering new options to the health-seeking masses by using oatmeal as the base of ice cream. Gaining a deeper understanding of how Oatly is following the mega-trend for product development and promotion, which can help with the understanding of healthy eating and the company's development strategy. This paper uses SWOT analysis to examine Oatly's brand perception, innovation efforts, market expansion opportunities, and challenges in the face of stiff competition and cost volatility. The significance of this theme is to examine the health trends in society through Oatly's innovative program and provide guidance and innovative suggestions to the restaurant industry in the market.

2. Importance of dietary transition

2.1. Harms of traditional dietary structures

The most common diet in the United States today is composed of "processed sodium, saturated fat, refined grains, and calories from solid fats and added sugars" [2]. Such food production systems, which produce animal-derived food through animal agriculture, have led to severe terrestrial and aquatic ecosystem degradation, depletion of water resources, and climate change [3,4]. This is certified to be the main cause of the resulting environmental degradation [5]. Nearly 30% of the anthropogenic greenhouse gases are emitted by the production chain, and this also contributes to terrestrial acidification [3]. Similarly, this most prevalent diet is not helpful for human health. Such unhealthy diets that are high in sodium, sugar, and fat and contain less than the recommended intake of whole grains and fruits are the biggest cause of disease [5-7]. Studies have found that the quality of diet is associated with the incidence of several health disorders such as diabetes, cardiovascular disease, gout, and cancer [4,6]. For the sake of environmental sustainability and human health, it is imperative to advance changes in dietary practices.

2.2. Advantages of a plant-based diet structure

In order to promote environmental friendliness while meeting human health needs, plant-based diets are considered to be the optimal solution [5]. Plant-based foods are those "produced from unprocessed or natural and biotechnologically modified plants" [4], which generally include fruits, vegetables, whole grains, and other natural foods that are virtually unprocessed, but exclude animal-based foods such as red meat, dairy products, and eggs [8]. It has been found that a shift in diet reduces greenhouse gas emissions by 49% and acidification by about 50% [3], and such a change is transformative. Plant-based diets also contribute immensely to human health. The high fiber of plants improves gut health, strengthens the immune system, and aids in weight loss [7]. Most importantly, it has been found to improve the incidence of diabetes and cardiovascular disease and reduce other health complications caused by high blood pressure [7]. The benefits of a plant-based diet for the human body and the environment have very high potential and deserve to be emphasized and used.

2.3. Demand for vegan ice cream

As the benefits of a plant-based diet become known, more people are becoming vegan or flexi-vegan. For the latter, this means a mostly plant-based diet but does not exclude the occasional consumption of animal foods. The percentage of vegans around the world continues to grow, with a 500% increase in vegans in the United States from 2014-2017; in the United Kingdom, flexitarian vegans make up 21% of the population; and in Italy, 94.4% of the population switched to meatlessness between 2011 and 2016 [9]. In 2018, the European market is expected to grow from €1.5 billion to €2.4 billion by 2025 in the plant-based market. Moreover, North America, Asia Pacific, Latin America, and the Middle East and Africa are also expected to witness a significant increase in the value of plant-based market share [10]. In the American dessert industry, the trend toward plant-based diets being recognized as both healthy and environmentally friendly has spurred a growing desire for vegan desserts among those seeking the perfect blend of indulgence and wellness. The market for vegan desserts is set to see rapid growth, with the market value of plant-based ice cream estimated at a whopping \$1.24 billion [11]. Such a sizable market trend will bring about intense competition from various companies.

3. Research on Oatly

3.1. Background of Oatly

Oatly AB is an example of one of these successful brands. Since its birth in Sweden in the early 1990s, it has been at the forefront of plant-based food innovation. Initially, the company was founded by a team of researchers at Lund University who developed a revolutionary method of converting oats into liquid food, thus laying the foundation for the Oatly brand. With the growing global emphasis on health and sustainability and the gradual shift from a niche choice to a mainstream trend in plant-based diets, Oatly has managed to capture the attention of many consumers with its innovative oat milk products. The company has not only broadened its product line to include a wide range of options from oat milk to ice cream, yogurt, and cream, but has also followed the health trend by offering low-fat, lactose-free, and fiber-rich plant-based foods to meet the needs of consumers seeking a healthier lifestyle. But Oatly has had its share of crises, and in such a competitive plant-based food market, Oatly has used great promotions and products to hold its ground and attract more consumers.

3.2. SWOT analysis of Oatly

3.2.1. Strength

First and foremost, Oatly has a strong brand identity and market-leading position in the market, attracting many loyal consumers with its unique product innovations and sustainability concepts. In the market of non-dairy ice cream, Oatly is already considered the industry leader [12].

Secondly, Oatly offers a wide range of flavors including coffee, chocolate, strawberry, vanilla, caramel, etc., which is enough to encompass consumers' needs.

Thirdly, Oatly's brand positioning is convincing and reassuring. From the beginning, they have been committed to contributing to the protection of the environment by reducing pollution and have shown themselves to be extremely inclusive in giving better choices to those who are vegan or who want to maintain their health. They emphasize the use of as few renewable resources as possible in their packaging, so their packaging is made from renewable and recyclable resources, advancing the execution of their philosophy [13].

Further, their prices are within the acceptable range of the masses. Take Target as an example, among all the non-dairy tubs of ice cream that can be searched on the Target website, the highest price is Talenti's \$5.49, and the lowest is Favorite Food's \$4.89. And Oatly's price is \$4.99, so it is affordable to most people.

Finally, Oatly has become a part of people's lives, with events based on current trends. Whether it is the "Break-fest" breakfast festivals, which organize people who don't drink milk [14], the "Go ahead, eat like a vegan" signs in London and railway stations [15], or "Campaigning like oat punks", it has cemented its image repeatedly and got people to participate in them.

3.2.2. Weakness

First of all, Oatly is an entirely oatmeal-based company, so this can lead to limitations in innovation. Whether it's milk, ice cream, or yogurt, Oatly uses oats in all its products. Even their website description says outright that they don't know about cows or almonds, they only know how to use oats [16]. This indirectly leads to the problem that they can't compete with other companies that utilize multiple bases for their product ideas, because some delicious flavors may require a specific base to achieve, which also leads to a limitation of their product portfolio.

Secondly, Oatly has a certain "punk" spirit, which is often reflected in its brand behavior, which challenges convention and emphasizes individuality. Their marketing strategies and advertisements

are often different and sometimes even provocative, such as in the Oat Punks campaign. This may cause strong reactions from certain consumers, especially those who prefer traditional marketing or have reservations about "punk" culture and limit the speed and scale of their brand's expansion in the marketplace.

3.2.3. Opportunity

First, Oatly fits very well with the societal megatrends mentioned above. As consumers around the world become more aware of health and environmental issues, more and more people are turning to plant-based foods as a healthier and more sustainable dietary option. Oatly, as one of the pioneers of plant-based milk, can capitalize on this trend by deepening consumer awareness of the benefits of a plant-based diet through education and marketing campaigns, thereby increasing the appeal and sales of its products. And by deeply publicizing the choices they've made in environmentally friendly packaging materials, the masses can see them in action and be infected.

Second, Oatly's can be well positioned to expand the success of plant-based milk into a broader product line. For example, they could develop plant-based buttercream cakes, catering to vegans and lactose-intolerant individuals and appealing to consumers looking for healthier dessert options. Additionally, croissants and other pastries could also be innovated through the use of Oatly's plant-based ingredients, which not only maintains the traditional texture and flavor of the food but also adds a healthy and sustainable element. Additionally, Oatly could consider introducing vegetable-based butter alternatives that can be used in a variety of cooking situations, from simple sautéing to complex baking, to provide superior flavor and texture while meeting consumers' desire for healthy eating. With innovations such as these, Oatly will expand its market presence and further strengthen its position as a leader in plant-based foods.

Finally, Oatly can also collaborate with other companies for a win-win situation. For example, it can hire famous punk singers as spokespersons or co-brand with cartoon quests, such as SpongeBob, which is popular for its optimistic and carefree character and fits with Oatly's lively brand image. Co-branding could develop SpongeBob-themed oatmeal drinks or snacks to appeal to younger consumers.

3.2.4. Threat

This plant-based health megatrend is geared towards the entire community, which means that many businesses will seize this moment to enter the market and become Oatly's competitors. In the face of an increasing number of market players and a highly competitive environment, Oatly needs to continue to consolidate its market leadership position. This will require the company to continue to capitalize on its core strengths, such as its choice of materials, strong brand recognition, and commitment to sustainability, as well as the need for constant product and market innovation.

Second, because Oatly utilizes oats exclusively as the main ingredient in its products, its supply chain is relatively narrow compared to other multi-ingredient companies. This reliance on a single crop strategy makes Oatly particularly vulnerable to natural disasters such as droughts, floods, or disease outbreaks, all of which can have a severe impact on oat crop yields. As a result, any issues affecting the supply of oats could have a direct impact on Oatly's production capacity and cost structure.

3.2.5. Aggregation

The Oatly brand has a strong brand identity in the marketplace, attracting loyal consumers through its innovative and sustainable products and wide selection of flavors. The company has effectively utilized its "punk" spirit in marketing, successfully positioning itself as an environmentally conscious and inclusive alternative. This brand positioning was effectively reinforced through a variety of

events and advertising campaigns in line with contemporary trends. However, challenges faced by Oatly include limited product diversity due to the exclusive use of oats as an ingredient. In addition, its unique brand style may exclude certain traditional consumers, potentially slowing market expansion. Despite these challenges, Oatly has a significant opportunity to increase its market presence by expanding its plant-based product line amidst the growing global trend toward healthy and sustainable diets.

4. Conclusion

This paper provides an in-depth look at the rise of plant-based diets in the context of healthy eating trends, especially in the wake of the COVID-19 outbreak, and its impact on the food industry, particularly the vegan ice cream market. By examining the case of Oatly, the paper reveals how plant-based foods are meeting consumer demand for healthy, sustainable dietary choices and how the company is strengthening its market position through innovative product development and marketing strategies. The study shows that the shift to a plant-based diet not only contributes to improved personal health, but also has a positive impact on environmental protection.

However, there are some shortcomings in this study. First, there is still room for improvement in the breadth of data and depth of current literature. Future research can enrich the understanding of the plant-based food market and consumer behavior by including more diverse data sources and interdisciplinary research methods. In addition, in the future, research could focus on exploring the impact of plant-based diets on specific health issues, such as the prevention and management of chronic diseases, as well as the specific contribution of plant-based foods to environmental sustainability. Also, exploring new plant-based food innovations and marketing strategies will be an important direction for future research as technology advances and consumer preferences change.

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