



Project Phase 1 Report

Project Title: Create data-driven strategies to help Conagra unlock future growth potential in the Meat Substitutes category.

BUAN 6337 - Section S24

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INTRODUCTION

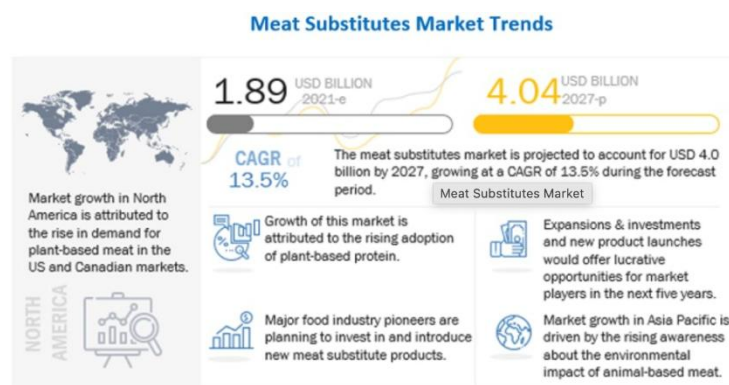
It is encouraging to see that there has been a significant shift in dietary preferences towards health and sustainability in recent years. This trend has led to the emergence of meat substitutes as a notable industry trend. Consumers are increasingly opting for plant-based diets, as they are known to offer health benefits and reduce environmental impact.

Scientific research supports this movement, revealing that plant-based diets are linked to lower greenhouse gas emissions and land use compared to traditional meat consumption. Meat substitutes are playing a vital role in catering to this growing demand for sustainable food options. They not only serve the increasing number of vegans and vegetarians but also appeal to meat-eaters who are looking to make more sustainable choices.

The food industry's response to this trend has been commendable, with innovations in taste, texture, and variety in meat substitutes. This has helped them gain mainstream acceptance and become a part of many people's regular diets. The trend toward sustainable and healthy food consumption patterns is a positive development, and it is essential that we continue to support it.

MARKET OVERVIEW

The global meat substitute market was valued at \$1.89 billion in 2021 and is anticipated to reach more than \$4 billion by 2030, with a compound annual growth rate (CAGR) of 13.5% from 2021 to 2030. Compared to meat products, meat substitutes carry lower risks of food poisoning or contamination. With its complexities involving animal waste management and slaughtering, livestock production often poses contamination risks throughout the supply chain, particularly in regions with unreliable power supplies and expensive refrigeration. This heightened risk of foodborne illnesses linked to meat products has contributed to rising health concerns among consumers.



e - Estimated; p - Projected

Source: Secondary Sources, Publications, Articles, and MarketsandMarkets Analysis

In contrast, the production of plant-based foods presents fewer opportunities for contamination or spoilage, while cultured meat production offers meticulous control over the entire process in laboratory settings. These factors have positively influenced the growth of the meat substitute market. Additionally, there is a growing trend towards clean

eating, where consumers prioritize products with transparent labels and recognizable ingredients. Manufacturers are responding by incorporating simple, minimally processed ingredients sourced from natural foods, such as fibers, starches, and gums, alongside plant-based proteins, into their meat substitute products.

The increasing demand for innovative products has spurred development across various segments, including chilled, ambient, and frozen. This innovation not only offers consumers a wider selection of products and brands but also enhances the visibility and recognition of meat substitute products on store shelves. Supermarkets have responded to this growing market by expanding the shelf space allocated to meat substitute products. Moreover, established industry players, particularly multinational food and beverage companies, are increasingly recognizing the potential of small-scale startup brands driving innovation in the meat substitute market.

CONAGRA BRANDS OVERVIEW

Conagra Brands, Inc., with origins dating back to 1919 as Nebraska Consolidated Mills in Grand Island, Nebraska, has evolved into a leading player in the packaged foods industry. Initially focused on grain milling, Conagra transitioned over the decades into a diversified food conglomerate, reflecting its adaptability to changing consumer preferences and market trends. The company, now headquartered in Chicago, has strategically expanded through acquisitions, notably focusing on brands that align with a growing demand for healthier and more sustainable food options.

Two significant acquisitions exemplify this strategy:

- **Gardein (2014)**, a plant-based protein brand, marking Conagra's foray into the burgeoning plant-based food sector for approximately \$154 million.
- **Pinnacle Foods (2018)**, for about \$10.9 billion, adding established brands like Birds Eye and Duncan Hines to its portfolio, thereby enhancing its presence in the frozen foods and snacks segments.

Conagra's commitment to sustainable food solutions is vividly illustrated through Gardein, which caters to the rising consumer trend toward plant-based diets. This move aligns with environmental sustainability efforts and leverages food technology to create meat substitutes that mimic real meat's taste, texture, and nutritional value.

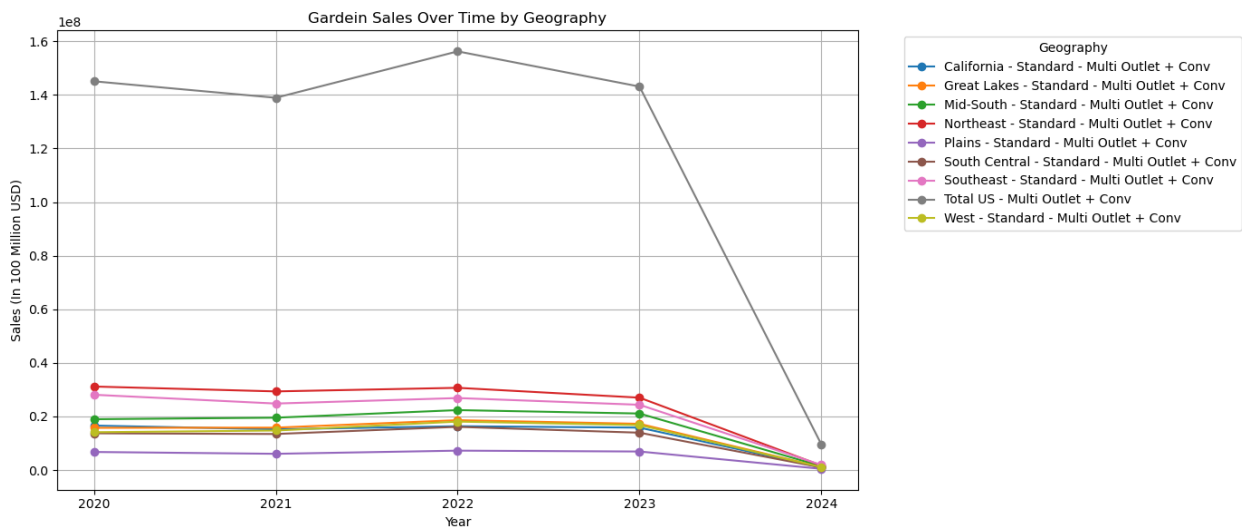
Today, Conagra Brands (NYSE: CAG) stands as a testament to innovation and growth in the food industry, boasting:

- 42 manufacturing facilities
- Approximately 18,600 employees
- Revenue of about \$12.3 billion

The company envisions leading the food industry with an impactful, energized, and inclusive culture, backed by a portfolio of both iconic and emerging brands such as Birds Eye®, Duncan Hines®, Healthy Choice®, and Gardein™. Conagra aims to drive shareholder value and adapt to the ever-changing landscape of consumer preferences and sustainability through its strategic focus on modernizing food brands and tapping into new opportunities.

GARDEIN'S MARKET POSITION

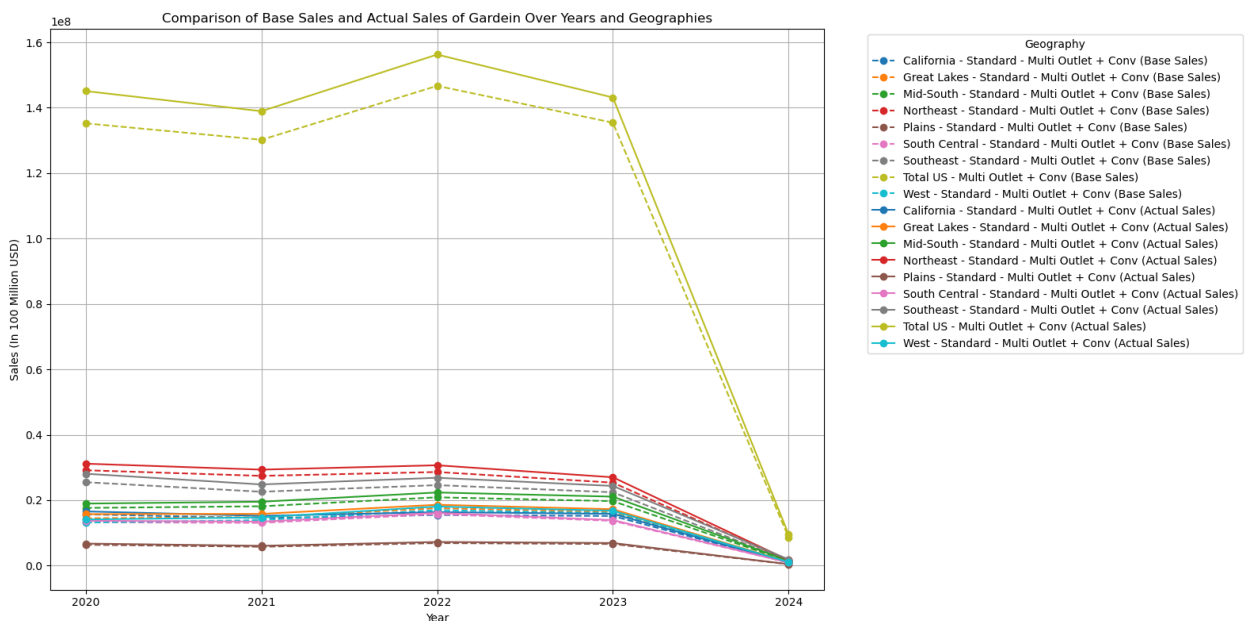
Gardein Sales Trends by Geography from 2020 to 2024



Before delving into the trends observed in Gardein sales across different US regions over the years, it's important to address a notable decline in 2024. This drop, however, is not indicative of a year-long trend but is attributed to the fact that data for 2024 covers only the first quarter, representing three months of sales figures.

Ignoring the incomplete data for 2024, the graph of the Gardein Sales Over Time by Geography shows sales trends from 2020 to 2023 across different US regions. Through these years, the Great Lakes region consistently leads in dollar sales, indicating a robust market performance in that area. The other regions—California, Mid-South, Northeast, Plains, South Central, Southeast, and West—display sales that, while lower than the Great Lakes, are fairly stable without significant variances, suggesting steady market conditions. Overall, apart from the outlier of the Great Lakes region, the geographies seem to be maintaining a steady state of sales performance. To optimize sales performance, it may be beneficial for Gardein to concentrate efforts on the other regions, leveraging marketing strategies and distribution channels to enhance visibility and drive growth in those areas.

Gardein Base Sales vs Actual Sales Trends by Geography from 2020 to 2024

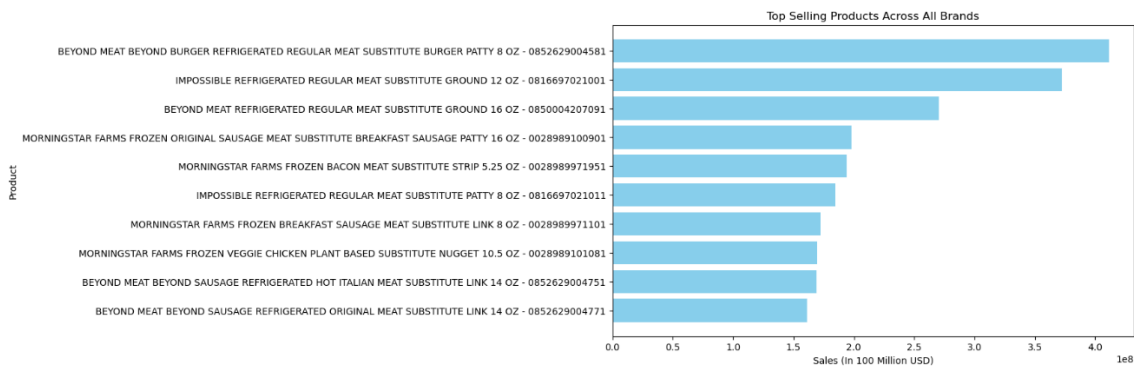


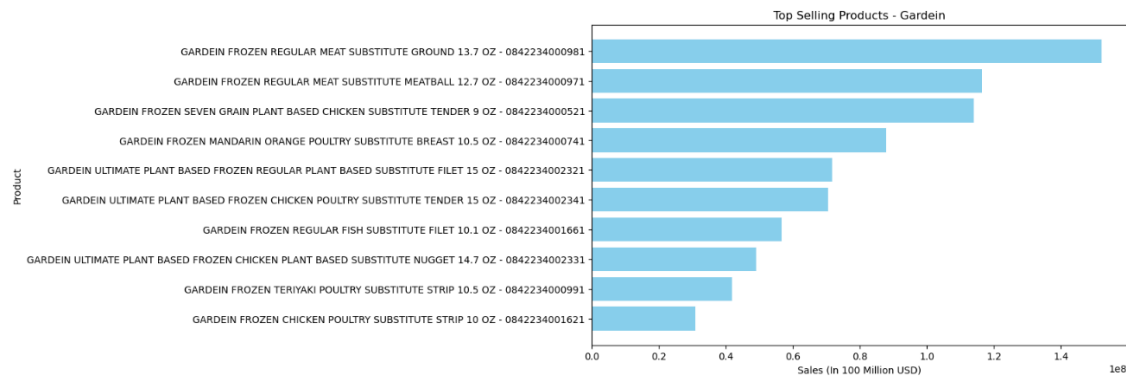
The chart titled "Comparison of Base Dollar Sales and Dollar Sales Over Years and Geographies" contrasts expected (base) sales with actual sales from 2020 to 2024 across various US regions. Base sales are relatively stable across all regions, indicating consistent expected performance. Actual sales, however, often surpass base sales, especially noticeable in the Great Lakes region, suggesting the possibility of impacting factors such as effective promotions or merchandising. Other factors that could influence actual sales include market trends, economic conditions, and competitive activity.

MARKET LEADERSHIP ANALYSIS:

Top-performing Meat Substitute options and growth opportunities for Gardein

- Top selling products in the Meat Substitute Market

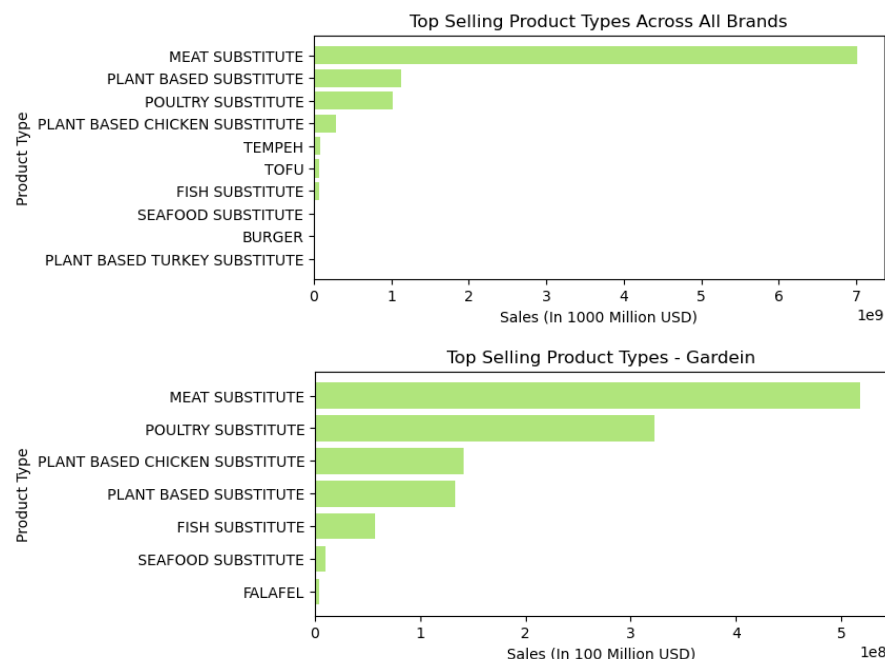




The top-selling products in the above bar charts are with items like the "Burger Patty", "Meat Substitute Ground" and "Breakfast Sausage Patty" leading in sales. These products are likely popular due to their similarity to traditional meat products in taste and texture, as well as effective branding and widespread distribution.

For Gardein to grow their sales, they could consider expanding their product line to include items that closely mimic the properties of leading products, like burger patties or ground meat substitutes.

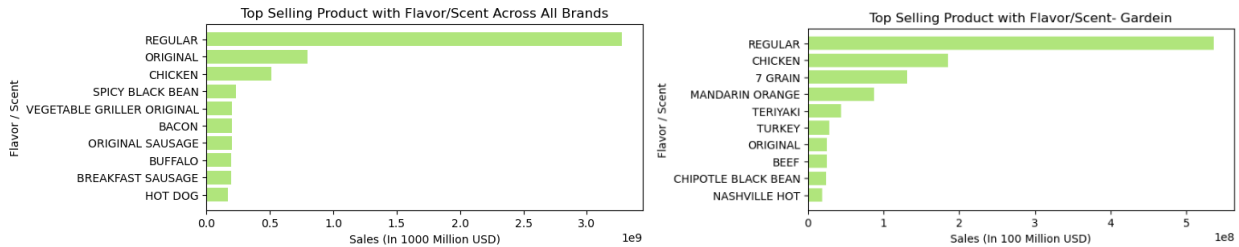
- **Top Selling Product Types in the Meat Substitute Market**



The charts illustrate the sales hierarchy of various plant-based product types across all brands and specifically for Gardein. Generic "meat substitutes" and "plant-based substitutes" dominate the market, with Gardein performing well in "meat substitute" and "poultry substitute" categories.

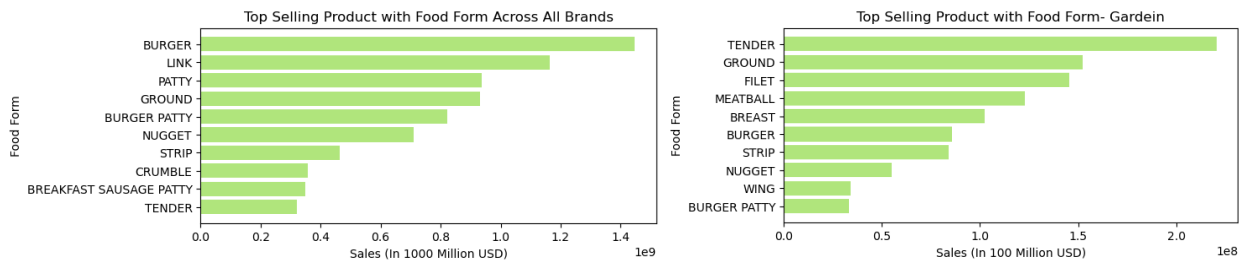
To capitalize on market trends, Gardein might benefit from focusing on the broader "plant-based substitute" category, potentially exploring new products like plant-based burgers, which reflect a significant sales volume industry-wide. Tailoring their product development to align with these high-demand areas could help Gardein expand its market share.

• **Top Selling Products with Flavor/Scent**



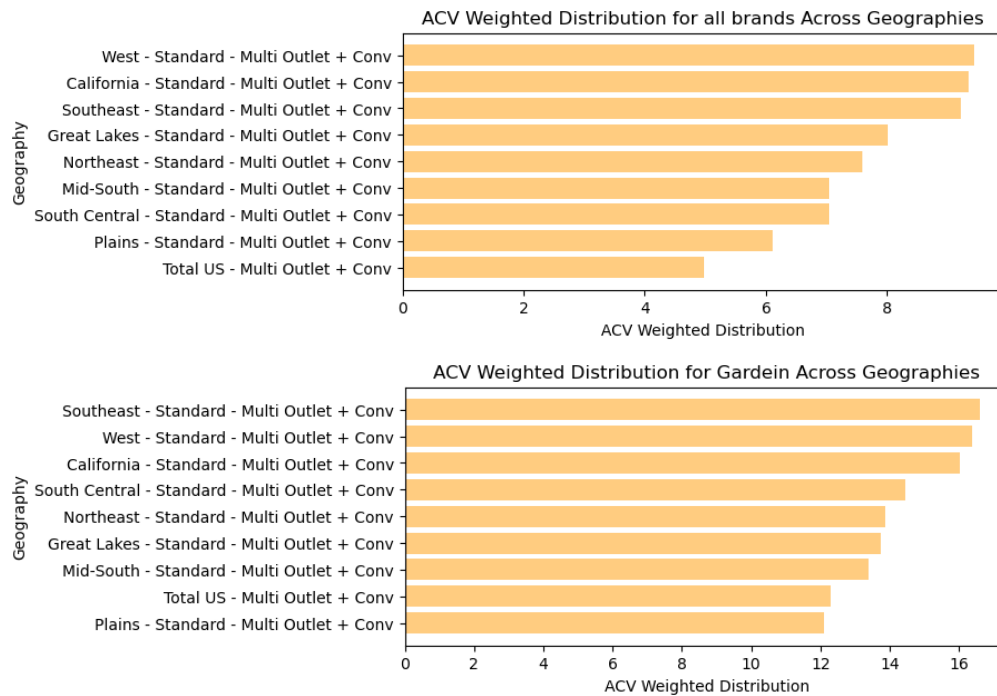
Reviewing the top-selling Gardein products by flavor, "Regular" and "Chicken" are the most popular, indicating a strong consumer preference for familiar and traditional tastes. Comparatively, across all brands, "Regular" also leads, suggesting a market-wide trend for classic flavors. Gardein might consider expanding their line-up in these preferred flavor profiles or developing new products that align with the successful "Original" flavor, as seen broadly in the market. Additionally, exploring niche flavors like "Spicy Black Bean" that perform well market-wide could attract a new customer segment and drive growth.

• **Top Selling Products in Food Form**



The charts showcase the popularity of different food forms across all brands versus Gardein's specific lineup. Burgers are the standout category industry-wide, but Gardein's top seller is in the tender form, with ground and fillet forms also performing strongly. To align with market trends, Gardein could benefit from increasing their focus on burgers, potentially investing more in their burger patty offerings, which shows lower sales compared to industry leaders. Expanding in this category could help Gardein capture a larger market share, tapping into the strong consumer demand for plant-based burgers.

- **Geographic ACV Distribution: Gardein vs. Competitors**

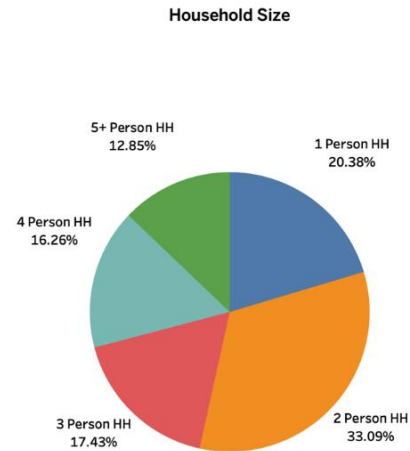


The charts compare the ACV (All Commodity Volume) Weighted Distribution for all brands against Gardein specifically across different geographies. The ACV indicates the percentage of stores selling a particular item relative to the total number of stores that sell any item. Gardein has its highest ACV Weighted Distribution in the Southeast, which could indicate a strong market presence or favorable consumer acceptance in that region. Gardein's presence is notably less in the Plains. To enhance market penetration, Gardein may focus on areas with lower ACV, adapting marketing strategies to increase brand visibility, and negotiating with retailers to expand their product listings, especially in regions where they are underrepresented compared to the total US distribution.

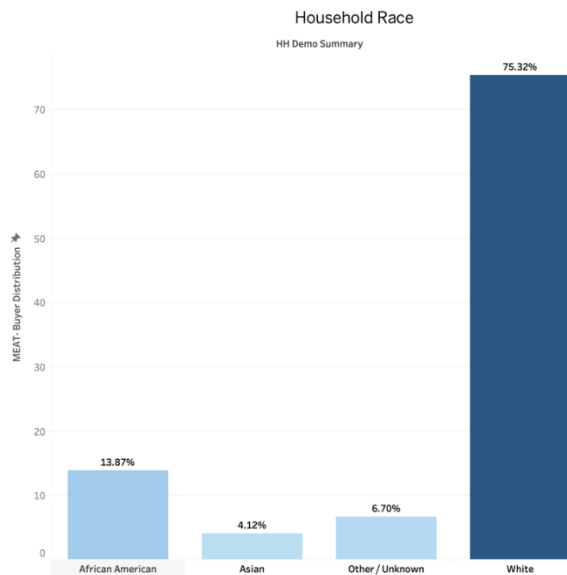
GARDEIN CONSUMER DEMOGRAPHIC BREAKDOWN

Household Sizes Among Gardein Meat Substitute Consumers

The pie chart shows the breakdown of Gardein's meat substitute products' consumer base by household size. Two-person households form the majority at 33.09%, with single-person households also being a significant portion at 20.38%. Households with three members represent 17.43%, those with four members make up 16.26%, and households of five or more are the smallest segment at 12.85%. This data is indicative of the varied family structures purchasing Gardein products.

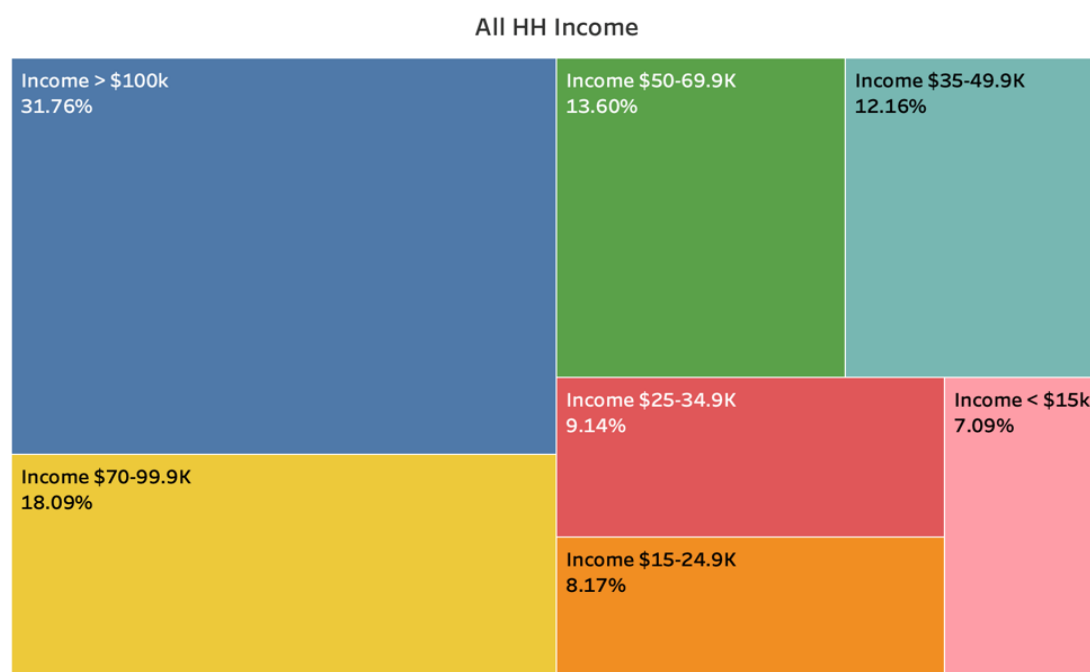


Racial Composition of Gardein Product Consumers by Household



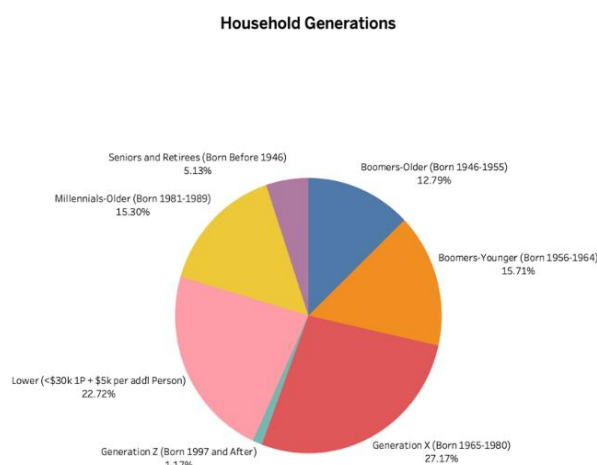
The bar chart depicts the racial composition of households consuming Gardein products, with White households constituting the majority at 75.32%. African American households follow at 13.87%, with the smallest represented group being Asian households at 4.12%. Households categorized as Other/Unknown make up 6.70%, indicating potential areas for market expansion or further demographic research.

Income Distribution Among Gardein Meat Substitute Consumers



The treemap highlights the income distribution of Gardein's consumer households. The largest segment earns above \$100k, representing 31.76% of households. The next significant group earns between \$70-99.9k at 18.09%. Households earning \$50-69.9k and \$35-49.9k are somewhat equally distributed at 13.60% and 12.16%, respectively. Lower income brackets of \$25-34.9k and \$15-24.9k households have smaller representations at 9.14% and 8.17%, while the least represented are those earning below \$15k at 7.09%. The conclusion that can be drawn from the treemap is that Gardein's products are most popular among higher-income households.

Generational Breakdown of Gardein Product Consumers



The pie chart illustrates the generational distribution of households that consume Gardein products. Generation X (born 1965-1980) is the predominant consumer group at 27.17%. The category labeled "Lower" which could refer to a lower-income bracket, is the second-largest segment at 22.72%. Younger Boomers (born 1956-1964) and Older Millennials (born 1981-1989) follow closely at 15.71% and 15.30% respectively. Older Boomers (born 1946-

1955) make up 12.79%, while Seniors and Retirees (born before 1946) have a smaller share at 5.13%. Generation Z (born 1997 and after) represents the smallest portion at 1.17%. This demographic breakdown can be insightful for targeted marketing and product development strategies for Gardein.

SUMMARY AND STRATEGY

Data Source:

The dataset utilized for all the visualizations presented in this project report 1 was provided by Conagra Brands Inc for the years 2020 – 2024.

Project Report 1 Objective:

This report aims to carry out an analysis of FZ Meat Substitutes' sales patterns and consumer behavior focusing on thoroughly understanding the market forces at play within this particular segment.

The purpose of this analysis is to yield insights that will benefit stakeholders of the Conagra Brands, supplying data pertinent to decision-makers, retailers, and customers. Through exploring sales trends, our main goal is to provide recommendations for marketing tactics, product innovation, and engaging consumers more effectively in the continuously changing marketplace.

The key steps involved in this analysis include:

- Data Processing & Cleaning: Data merging, tackling missing values and anomalies to guarantee data integrity and quality.
- Descriptive Analysis and Data: Analyzing and summarizing the data to uncover insights about its features, including measures of central tendency, dispersion, and distribution.
- Data Visualization: We used different platforms such as Python and Tableau to visually stand for relationships and patterns within the data. This may include Line plots, histograms, Pie chart, Treemap etc.,
- Correlation Analysis: Examining the relationships between various variables to identify possible interdependencies.

Potential Hypothesis:

By tackling the objectives and challenges outlined in the Market Leadership Analysis of this report, Conagra can not only boost its growth in the Meat Substitutes category but also establish itself as a frontrunner in offering innovative, sustainable, and tasty plant-based options to conventional meat products.