

# **Project Final 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 RESEARCH

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.

#### **Meat Substitutes Market Trends** 4.04<sup>USD BILLION</sup> 1.89 CAGR The meat substitutes market is projected to account for USD 4.0 billion by 2027, growing at a CAGR of 13.5% during the foreca 13.5% period. Market growth in North nerica is attributed to Expansions & investments the rise in demand for attributed to the rising adoption and new product launches plant-based meat in the would offer lucrative players in the next five years. Major food industry pioneers are Market growth in Asia Pacific is planning to invest in and introduce driven by the rising awareness about the environmental impact of animal-based meat. e - Estimated: p - Projected

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

In contrast, the production of plantbased 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.

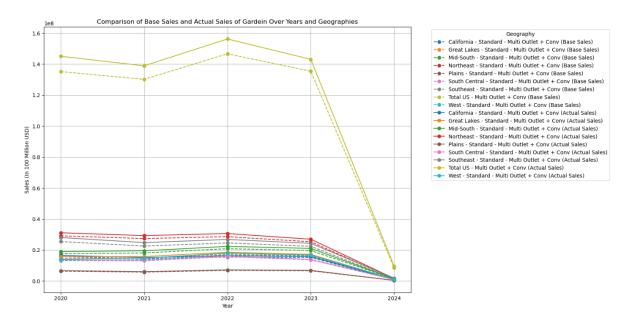
Conagra's commitment to sustainable food solutions is vividly illustrated through Gardein, which caters to the rising consumer trend toward plant-based diets. This move aligns with environmental sustainability efforts and leverages food technology to create meat substitutes that mimic real meat's taste,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

#### MARKET RESEARCH ANALYSIS FOR GARDEIN



This analysis reveals a consistent trend where actual sales frequently surpass expected base sales from 2020 to 2024 across various U.S. regions. Notably, base sales have remained relatively stable, suggesting that the expected performance metrics were well-estimated. However, the actual sales, especially in regions like the Great Lakes, consistently exceed these projections, which may be attributed to successful marketing strategies, effective promotions, or optimal merchandising efforts. External factors such as evolving market trends, economic conditions, and competitive dynamics may also play significant roles in influencing these outcomes.



The top-selling products within Gardein's portfolio, such as the "Burger Patty," "Meat Substitute Ground," and "Breakfast Sausage Patty," lead in sales. These items gain their popularity likely due to their close mimicry of traditional meat products in both taste and texture, coupled with strong branding and extensive distribution networks. To capitalize on these trends and expand market share, Gardein could explore enhancing its product line to include more varieties that replicate the most successful properties of these leading products. This strategic expansion could address consumer demand more effectively and strengthen Gardein's presence in the competitive plant-based food market.

To further understand these dynamics, we are deep diving into these observations by answering all the below strategies through rigorous statistical analysis.

## MAJOR QUESTIONS/STRATEGIES

**Strategy 1:** How can Conagra enhance its Gardein brand's market presence and sales performance across diverse product lines to meet the growing demand for meat substitutes, while adapting to consumer preferences and strengthening its competitive edge?

**Strategy 2:** What are the potential growth areas for Conagra's brand expansion concerning product forms across key regions of the United States? Specifically, which combination of form factors yields the highest unit sales per geographical area among the top 5 manufacturers?

**Strategy 3:** How do different types of promotions impact sales performance and price sensitivity, and how can the company strategically optimize its promotional mix to maximize sales uplift while maintaining a balanced approach that minimizes over-reliance on promotions?

**Strategy 4:** How can Gardein broaden its appeal and increase consumption among lower-income households without diluting its brand value in the eyes of its core higher-income consumers?

**Strategy 5:** What role does digital engagement play in influencing consumer choices in the meat substitutes category, and how can Conagra enhance its online presence to drive sales?

**Strategy 6:** How can Conagra Brands enhance its collaboration with vegetarian/organic and health-focused grocery stores to bolster the market presence and visibility of Gardein's frozen meat substitutes through cobranded marketing efforts and in-store promotions?

#### **ANALYSIS OF STRATEGIES:**

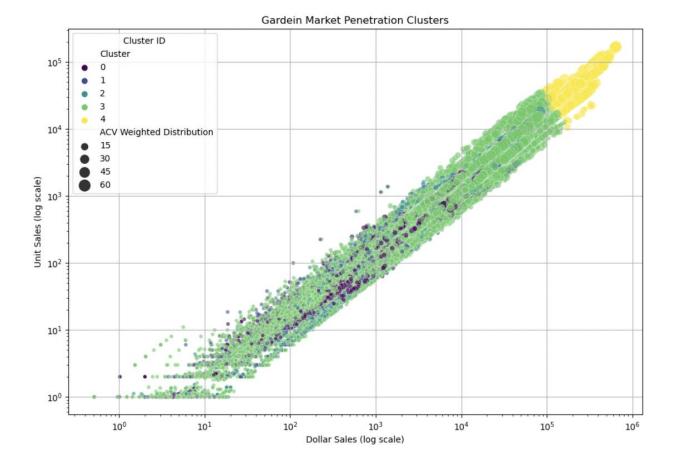
#### **Strategy 1: Expanding Gardein's Market Reach**

How can Conagra enhance its Gardein brand's market presence and sales performance across diverse product lines to meet the growing demand for meat substitutes, while adapting to consumer preferences and strengthening its competitive edge?

The meat substitute market continues to grow, driven by consumer interests in health, environmental sustainability, and ethical concerns. Conagra's Gardein brand has been segmented into clusters based on sales data, distribution metrics, and product performance, allowing for targeted market strategies.

#### Methodology

The analysis utilizes K-means clustering based on variables including dollar sales, unit sales, and ACV weighted distribution. This segmentation helps identify distinct categories of product performance which can guide strategic decision-making.



K-means clustering

Cluster 0 Key Metrics:

ctuste	Dollar Sales		CV Weighted Distribution	
count	7341.000000		7341.000000	
mean	3728.070514	708.015063	12.107567	
min	0.510000	1.000000	0.001677	
25%	309.030589	49.336757	1.345021	
	1641.623563		6.944529	
75%	4885.382084	920.694766	18.378852	
max	30775.513526		55.615185	
std Top Pr	4978.405115 oducts in Clus		13.385854	
Produc		ter v.		
		AR MEAT SUBSTITU	JTE GROUND 13.7 OZ - 0842234000981	4.284225e+06
			SED CHICKEN SUBSTITUTE TENDER 9 0Z - 0842234000521	
GARDEI	N FROZEN REGUL	AR MEAT SUBSTITU	JTE MEATBALL 12.7 OZ - 0842234000971	2.358203e+06
		dtype: float64		
Cluste	r 1 Key Metric			
100 de 100 d	Dollar Sales		ACV Weighted Distribution	
count mean	8370.000000	8370.000000 1567.609566	8370.000000 13.731412	
min	8186.602637 0.510000	1.000000	0.000502	
25%	480.861295	68.490606	0.472887	
50%	3144.529478	601.148986	7.542603	
75%	10823.704222	2074.094025	21.248898	
max	72980.770996	17013.015445	63.029011	
std	11202.755697	2287.384392	16.339142	
	oducts in Clus	ter 1:		
Produc		AD MEAT CURCTITE	ITE CROUND 12 7 07 8942224888881	0 40103000
			JTE GROUND 13.7 OZ - 0842234000981 JTE MEATBALL 12.7 OZ - 0842234000971	8.491830e+06 6.659360e+06
			SED CHICKEN SUBSTITUTE TENDER 9 OZ - 0842234000521	
		dtype: float64	THE CHICKEN SUBSTITUTE TEMPER S OF TOTAL STORY	012413330.00
	r 2 Key Metric			
	Dollar Sales		ACV Weighted Distribution	
count	8756.000000		8756.000000	
mean		1823.582890	13.386075	
min	1.020000	1.000000	0.000492	
	1029.972637	175.788300	1.154296	
50% 75%	3702.495608 11681.844542	569.594432 2242.241399	5.733749 20.718435	
max	98351.681057		65.005185	
std	13573.898867	2788.195218	16.241512	
Top Pr	oducts in Clus	ter 2:		
Produc				
			JTE GROUND 13.7 OZ - 0842234000981	1.177175e+07
			JTE MEATBALL 12.7 OZ - 0842234000971	8.206651e+06
		dtype: float64	SED CHICKEN SUBSTITUTE TENDER 9 0Z - 0842234000521	7.239181e+06
	r 3 Key Metric			
Clubic	Dollar Sales		ACV Weighted Distribution	
count		48374.000000	48374.000000	
mean	13004.406889	2466.714651	13.890534	
min	0.510000	1.000000	0.000235	
25%	957.027228		0.927957	
50%	5300.769575		7.489886	
75%	17121.190251		20.621816	
max std	18767.878462	32978.212850 3829.021759	74.962706 16.248546	
	oducts in Clus		10.240540	
Produc		ter 5.		
		AR MEAT SUBSTITU	JTE GROUND 13.7 OZ - 0842234000981	5.054302e+07
GARDEI	N FROZEN SEVEN	GRAIN PLANT BAS	SED CHICKEN SUBSTITUTE TENDER 9 0Z - 0842234000521	4.087528e+07
			JTE MEATBALL 12.7 OZ - 0842234000971	4.063540e+07
		dtype: float64		
Cluste	r 4 Key Metric		ACU III A DE LA COMPANIA DE LA COMP	
12	Dollar Sales			
count	1606.000000 235126.409555		1606.000000 42.379170	
min	91104.964807			
25%	161651.238710			
50%	224025.245783		43.426874	
75%	295393.696286		52.034376	
max	646809.540447	171244.618008		
std	88291.548050		10.766625	
	oducts in Clus	ter 4:		
Produc		AD MEAT CURCETT	ITE CDOUND 12 7 07 0042224000004	7 704002 - 27
			JTE GROUND 13.7 OZ - 0842234000981 JTE MEATBALL 12.7 OZ - 0842234000971	7.704962e+07
			SED CHICKEN SUBSTITUTE TENDER 9 0Z - 0842234000521	5.853006e+07 5.706791e+07
		dtype: float64	SED CHICKEN SUBSTITUTE TEMPER S UZ - W042234000321	3.700/316+0/

### **General Cluster Recommendations & Product Specific Recommendations**

## **Cluster 0: Emerging Products**

- Market Research: Conduct targeted research to uncover preferences and behaviors of potential customers.
- Test Marketing: Experiment with marketing strategies and placements in select markets to refine approaches.

## **Product 1: Gardein Seven Grain Crispy Tenders**

- Increase Brand Visibility: Amplify online and offline marketing campaigns focusing on the unique selling points of the product, such as health benefits and taste.
- Enhance Retail Presence: Expand placement in both conventional grocery stores and health food stores with strategic shelf positioning and point-of-sale displays.

#### Product 2: Gardein Golden Fishless Filet

- Niche Marketing Initiatives: Target marketing campaigns at seafood lovers and those seeking plant-based alternatives, especially during Lent and other seafood-heavy seasons.
- Collaborative Promotions: Partner with marine conservation organizations to promote sustainability aspects, increasing product credibility and appeal.

#### **Cluster 1: Moderate Performance Products**

- Distribution Expansion: Broaden distribution to include online platforms and specialty stores, enhancing consumer access.
- Enhanced Promotions: Deploy targeted promotional efforts during key sales periods to boost visibility and engagement.

#### Product 1: Gardein Mandarin Orange Crispy Chick'n

- Leverage Cultural Events: Introduce promotions and limited-time offers during cultural festivals like Chinese New Year to boost sales.
- Cooking Demonstrations: Organize live cooking shows and online cooking classes to demonstrate the versatility of the product in various recipes.

#### **Product 2: Gardein Barbecue Wings**

- Event Marketing: Promote at outdoor events and festivals with live cooking demos to increase consumer trials.
- Retail End-Cap Displays: Secure end-cap displays in supermarkets during key sports events (e.g., Super Bowl) to increase product visibility and sales.

## **Cluster 2: Established Products with Expansion Potential**

Product Innovation: Regularly introduce new flavors and product variations to maintain interest and attract new customers.

International Expansion: Enter international markets to tap into growing demand for plant-based foods.

#### Product 1: Gardein Chipotle Black Bean Burger

- Expand Restaurant Distribution: Partner with national and regional fast-food chains to include the burger as a vegetarian option on their menus.
- Target Health-Conscious Consumers: Focus marketing efforts on the health benefits of the burger through fitness and wellness platforms.

## **Product 2: Gardein Szechuan Beefless Strips**

- Enhance Ethnic Food Aisles: Position this product prominently in the ethnic foods aisle and near Asian cooking ingredients.
- Recipe Integration Campaigns: Partner with food bloggers and chefs to create and share Asian-inspired recipes using the product.

#### **Cluster 3: High Performance Products**

- Brand Consolidation: Enhance brand loyalty with consistent quality and engaging loyalty programs.
- Market Saturation Analysis: Monitor market trends to adjust product placements and avoid saturation.

#### **Product 1: Gardein Beefless Ground**

- Meal Kit Partnerships: Include as a staple in meal kit deliveries, particularly those focused on health or vegan diets.
- Expand Cooking Content: Produce a series of quick recipe videos featuring the product for social media to engage busy consumers seeking convenient meal solutions.

#### Product 2: Gardein Teriyaki Chick'n Strips

- Promote for Quick Meals: Highlight the quick and easy preparation in marketing campaigns to appeal to busy families and young professionals.
- Cross-Merchandise: Place next to stir-fry vegetables and sauces in stores to encourage impulse buys and meal solution marketing.

#### **Cluster 4: Market Leaders**

- Advanced Marketing Techniques: Leverage personalized advertising and innovative experiences to keep the brand engaging.
- Sustainability Initiatives: Strengthen sustainability efforts to appeal to eco-conscious consumers and maintain market leadership.

#### **Product 1: Gardein Meatless Meatballs**

- Enhanced Loyalty Programs: Create a loyalty program that rewards frequent purchases with discounts or exclusive recipes.
- Sustainable Branding: Emphasize the environmental benefits of choosing plant-based meatballs over traditional meat in all communications.

#### **Product 2: Gardein Ultimate Beefless Burger**

- Flavor Innovations: Regularly introduce new flavors or limited edition versions to maintain consumer interest and excitement.
- Global Market Expansion: Identify and target international markets where plant-based diets are becoming more popular, ensuring compliance with local tastes and dietary preferences.

## **Monitoring and Evaluation**

- Performance Metrics: Track sales growth, market share, customer acquisition rates, and promotional effectiveness.
- Feedback Mechanisms: Regular consumer surveys and retailer feedback sessions.
- Quarterly Reviews: Assess the progress of implemented strategies and adjust plans as necessary.

By addressing both cluster-wide trends and individual product strengths, Conagra can strategically enhance its position and performance in the competitive landscape of meat substitutes. The recommended strategies are designed to boost overall brand growth, market penetration, and customer satisfaction.

## **Strategy 2: Regional Expansion Opportunities**

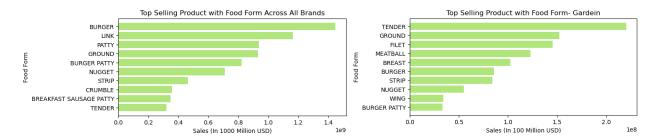
What are the potential growth areas for Conagra's brand expansion concerning product forms across key regions of the United States? Specifically, which combination of form factors yields the highest unit sales per geographical area among the top 5 manufacturers?

#### Methodology

Our team will initially conduct a comprehensive regression analysis to pinpoint the regions in the U.S. where Conagra's sales are exclusively concentrated, focusing specifically on their top-performing product forms in terms of total unit sales. Following this, we will extend our analysis to include a broader regression encompassing the top five manufacturers, identifying potential regions and product forms that are increasingly influenced by sales from Conagra's main competitors. This approach will help contextualize Conagra's performance by comparing regional market trends and product offerings of leading industry players.

The regression coefficients for Conagra will exclusively reflect the influence of various independent variables on Conagra's sales. Conversely, the coefficients for the other manufacturers will capture the effects of these variables on the combined sales of all included manufacturers. This distinction allows you to isolate the specific impact on Conagra's sales and assess the overarching influence on the market as a whole.

Furthermore, by comparing the magnitude and direction of these coefficients between Conagra and its competitors, you can derive insights into the dynamics of market interactions and the influence of independent variables on total unit sales. This analysis will assist Conagra in refining its market strategies to enhance competitiveness with leading industry players.



The charts highlight the popularity of various food forms across all brands, revealing that burgers are the leading category industry-wide. However, within Gardein's lineup, the tender form sells the best, with ground and fillet forms also strong. Given the broader market trends, Gardein could expand its burger offerings, which currently show lower sales compared to industry leaders, to capture a larger market share in the booming plant-based burger segment.

#### **Presumptions for Regression Analysis**

The analysis includes seven food forms, identified as top-sellers among Gardein (Conagra Foods) and other manufacturers: Ground, Burger Patty, Burger, Filet, Link, Tender, and a collective category of Other forms, this has been encoded as 'Other forms' for statistical analysis purpose.

#### A. General Linear Regression Model 1 Exclusively for Conagra

First, we defined the dummy variables for the regression model and executed a General Linear Model (GLM) only for Conagra. Below is the output.

## **Conagra's Regression Analysis Interpretation:**

#### **Key Insights:**

- 1. **Intercept:** A significant positive intercept indicates a strong baseline level of sales across all regions and forms.
- Negative Coefficients for Burger Forms: The coefficients for both BURGER and BURGER PATTY are notably negative across several regions, suggesting these forms are currently underperforming relative to the baseline category. This might indicate market saturation or ineffective marketing strategies for these products.
- 3. Positive Performances in Specific Regions:
  - **Filet in California:** Shows a positive boost in sales, suggesting this product form is well-received in this region.
  - Tender across Multiple Regions: Exhibits consistent positive sales impacts, particularly in California and Plains, indicating a strong market presence and acceptance.
  - 'Link' in Plains: Also shows a positive relationship, suggesting regional preference or effective distribution.

G	Generalized Linear Mod	el Regress	ion Results					
	Total_Unit_Sales	No. Obser	vations:		61262			
Model:		Df Residu			61204			
Model Family: Link Function:	Gaussian	Df Model:			57			
	Identity	Scale:		4.876				
Method: Date:	IRLS	Log-Likel	ihood:	-5.585				
Date: Time:	Wed, 01 May 2024 17:29:08				06e+11 98e+11			
No. Iterations:					98e+11 0.5099			
No. Iterations:	nonrobust	Pseudo K-	squ. (CS):	*	0.5099			
	HOH ODUSE							
							[0.025	
Intercept			1.107e+04 -6883.1891 -7203.8955 -4426.3423	159.517	69.386	0.000	1.08e+04	1.14e+04
Form_upd[T.BURGER	PATTY]		-6883.1891	187.288	-36.752	0.000	-7250.266	-6516.112
Form_upd[T.BURGER]			-7203.8955	163.862	-43.963	0.000	-7525.059	-6882.732
Form_upd[T.FILET]			-4426.3423	180.496	-24.523	0.000	-4780.107	-4072.577
Form_upd[T.LINK]			-6258.6112 -4479.1619 -6923.0076	277.899	-22.521	0.000	-6803.284	-5713.939
Form_upd[T.TENDER]			-4479.1619	171.025	-26.190	0.000	-4814.364	-4143.960
Form_upd[T.Other F			-6923.0076	152.079	-45.522	0.000	-7221.077	-6624.938
Geo_upd[T.Californ			-2130.5469 3108.3229	209.706	-10.160	0.000	-2541.564	-1719.530
Geo_upd[T.Mid-Sout			3108.3229	209.469	14.839	0.000	2697.770	3518.875
Geo_upd[T.Northeas	itj		4173.7747		19.925	0.000	3763.212	4584.338
Geo_upd[T.Plains]			-4085.5362				-4499.837	
Geo_upd[T.South Ce			1052.6048					1465.480
Geo_upd[T.Southeas Geo_upd[T.West]	it]		-1027.8075				7482.148 -1443.578	
	ia]:Form_upd[T.BURGER	DATTVI	1841.1852				1314.231	
	:h]:Form_upd[T.BURGER		-3092.7046				-3608.882	
	t]:Form_upd[T.BURGER		-3846.9515				-4358.761	
	Form_upd[T.BURGER PAT				14.985		3498.224	
	entral]:Form upd[T.BUR						-1531.908	
	t]:Form_upd[T.BURGER		-7400.7539				-7917.459	
	orm_upd[T.BURGER PATTY		974.3083					
	ia]:Form_upd[T.BURGER		1653.2729		7.080	0.000	444.934 1195.573	2110.973
	h]:Form_upd[T.BURGER]		-2706.2185		-11.763	0.000	-3157.146	
	t]:Form_upd[T.BURGER]		-3407.1650				-3856.238	
	Form_upd[T.BURGER]		3339.0190				2880.594	
	entral]:Form_upd[T.BUR	(GER)	-1372.4128	233.355	-5.881	0.000	-1829.780	-915.046
Geo_upd[T.Southeas	t]:Form_upd[T.BURGER]		-7149.1552			0.000	-7604.337	-6693.973
Geo_upd[T.West]:Fo			721.7147	235.092	3.070	0.002	260.942	
	ia]:Form_upd[T.FILET]		1828.3673		7.181		1329.310	
	h]:Form_upd[T.FILET]		-2957.7720	253.823	-11.653		-3455.256	
	t]:Form_upd[T.FILET]		-3658.1325				-4155.534	
Geo_upd[T.Plains]:			1996.3050	256.374	7.787		1493.822	
	entral]:Form_upd[T.FIL	ET]	-1504.9314	255.724 255.278	-5.885		-2006.142	
	t]:Form_upd[T.FILET]			255.278	-28.251	0.000	-7712.314	-6711.641
Geo_upd[T.West]:Fo			814.7989	256.945	3.171	0.002	311.195	1318.402
	ia]:Form_upd[T.LINK]			390.907	4.390	0.000	949.822	2482.150
	th]:Form_upd[T.LINK]		-3251.1315 -4198.3712	390.777 393.160	-8.320 -10.679	0.000	-4017.041 -4968.951	-2485.222 -3427.792
Geo_upd[T.Plains]:	t]:Form_upd[T.LINK]					0.000		
	entral]:Form_upd[T.LINK]	121	3535.2567 -1344.0093	392.581	9.005	0.000	2765.813 -2114.237	-573.782
	t]:Form_upd[T.LINK]	IK]	-7976.4457	392.980	-3.420	0.001	-8747.441	-7205.450
			-/3/0.443/	353.372	2.432	0.015	185.180	
Geo_upd[T.West]:Fo	orm_upd[T.LINK] nia]:Form_upd[T.TENDER		953.8996		11.369	0.000	2296.052	3252.628
	h]:Form_upd[T.TENDER]		2774.3403 -2734.3114	239 631		0.000	-3203.979	
	t]:Form_upd[T.TENDER]		-2266.5738				-2735.316	
	Form_upd[T.TENDER]		2011.2359			0.000	1528.028	
	entral]:Form_upd[T.TEN	IDER1	-1091.6229	245.096	-4.454	0.000	-1572.001	
	t]:Form_upd[T.TENDER]		-6634.3575				-7108.351	
Geo_upd[T.West]:Fo			1177.1166					1659.622
	ia]:Form_upd[T.Other	Forms]	2376.6175				1956.360	
	h]:Form_upd[T.Other F		-3006.3728	213.907	-14.055	0.000	-3425.622	-2587.123
	t]:Form_upd[T.Other F		-3006.3728 -3481.2003 3443.3043	213.738	-16.287	0.000	-3900.118	-3062.282
Geo upd[T.Plains]:	Form upd[T.Other Form	is l	3443.3043	216.241	15.923	0.000	3019.479	3867.130
Geo upd[T.South Ce	entral]:Form upd[T.Oth	er Formsl	-1279.8293	215.543	-5.938	0.000	-1702.285	-857.373
Geo upd[T.Southeas	entral]:Form_upd[T.Oth t]:Form_upd[T.Other F	orms]	-6896.9376	216.059	-31.922	0.000	-7320.406	-6473.470
Geo_upd[T.West]:Fo	orm_upd[T.Other Forms]	1	1098.5352	216.763	5.068	0.000	673.687	1523.384
Price per unit			-705.0752	17.000	-41.475	0.000	673.687 -738.395 26.231	-671.756
np.power(Price_per	unit, 2)		28.1576	0.983	28.639	0.000	26.231	30.085

## **Strategic Recommendations for Conagra:**

- **Reevaluate Burger Strategies:** Given the underperformance of burger forms, Conagra might need to investigate the product attributes or market strategies contributing to these results.
- Capitalize on Strong Performers: Enhance focus on Filet in California and Tender forms in the Northeast and Mid-South, possibly by increasing marketing efforts or expanding distribution.
- Explore New Market Strategies for Links in the Plains, potentially through localized marketing campaigns or special promotions.

## B. General Linear Regression Model 1 for Top 5 Manufacturers

## **Competitors' Regression Analysis Interpretation:**

## **Comparative Insights:**

- **Burger Forms Show Varied Performance:** Unlike Conagra, burger forms among competitors have a mix of negative and positive coefficients across regions, suggesting that while some competitors are struggling with these forms, others might be capitalizing on them effectively.
- **Strong Positive Impact of Link and Tender:** These forms consistently show positive coefficients across multiple regions, indicating strong market demand and effective positioning by competitors.

Dep. Variable:	Total_Unit_Sales	No. Observ	/ations:	2	61928			
Model:		Df Residua		2	61870			
Model Family: Link Function:	Gaussian			4 000	57			
Method:	Identity	Scale: Log-Likeli	boods	1.866 -2.564	9e+0/			
nethod: Date:	Hed 04 May 2024	Dowienser	indod:	4.888	3e+60			
Date: Time:	Wed, 01 May 2024 17:52:35 3	Deviance:	42.	4.000	9e+12			
No. Iterations:	17:32:33	Pseudo R-s	inu. (CS):	4.0	96+12 05595			
Covariance Type:	nonrobust	rseddo K-s	iqu. (cs).	0.	03393			
							[0.025	
Intercept			3787.2928					
Form_upd[T.BURGER			-1066.4852				-1316.136	
Form_upd[T.BURGER]			-1665.3989				-1883.719	
Form_upd[T.FILET] Form_upd[T.LINK]			-981.4445 -793.9316		-4.798 -6.171		-1382.341 -1046.109	
Form_upd[T.TENDER]			-1863.7282				-2137.212	
Form_upd[T.TENDER] Form_upd[T.Other Fo	opms 1		-1711.4010				-1907.930	
Geo_upd[T.Californ:			1539.7325				1263.738	
Geo_upd[T.Mid-Sout			481.6629				212.927	
Geo_upd[T.Northeas			2803.8207				2528.807	
Geo_upd[T.Plains]	-1		-2370.9428				-2643.309	
Geo upd[T.South Cer	ntrall		-1093.0617				-1374.256	
Geo_upd[T.Southeas			2288.6730				2005.087	
Geo_upd[T.West]	-1		1395.5470				1120.698	
	ia]:Form upd[T.BURGER	PATTY	-670.7806				-1035.782	
	h]:Form upd[T.BURGER			182.384		0.119		
	t]:Form_upd[T.BURGER		-1636.1173				-1989.954	
	Form upd[T.BURGER PAT		800.1279				435.435	
	ntral]:Form_upd[T.BUR						-355.568	
Geo_upd[T.Southeas	t]:Form_upd[T.BURGER	PATTY]	660.5394	194.233	3.401	0.001	279.849	1041.
Geo_upd[T.West]:For	rm_upd[T.BURGER_PATTY	()	-1228.0545	185.842	-6.608	0.000	-1592.299	-863.
Geo_upd[T.Californ:	ia]:Form_upd[T.BURGER	2]	-1823.2881	167.803	-10.866	0.000	-2152.176	-1494.
Geo_upd[T.Mid-Sout	h]:Form_upd[T.BURGER]	]	-878.7309	156.828	-5.603	0.000	-1186.108	-571.
Geo_upd[T.Northeas	t]:Form_upd[T.BURGER]	1	-2964.6469	157.614	-18.810	0.000	-3273.564	-2655.
	Form_upd[T.BURGER]		1109.3633				788.601	
	ntral]:Form_upd[T.BUR		457.9454			0.007		
	t]:Form_upd[T.BURGER]		-2048.1054				-2371.998	
Geo_upd[T.West]:For			-1427.9606				-1753.601	
	ia]:Form_upd[T.FILET]		-1833.1523				-2407.664	
	h]:Form_upd[T.FILET]		-397.4245				-965.549	
	t]:Form_upd[T.FILET]		-2461.0160				-3033.664	
Geo_upd[T.Plains]:			570.3742					
	ntral]:Form_upd[T.FIL		770.6231					
	t]:Form_upd[T.FILET]		-1684.6794				-2259.605	
Geo_upd[T.West]:For			-1627.1265				-2201.889	
	ia]:Form_upd[T.LINK]		-292.6225				-664.848 -882.494	
	h]:Form_upd[T.LINK] t]:Form_upd[T.LINK]		-522.0577				-882.494 -1823.570	
Geo_upd[T.Plains]:			-1453.6827 112.2535				-254.060	
Sec_upd[T.Plains]:	rorm_upu[1.Link] ntnall:Eorm und[T LTN	IV1	-902.9752	180.898	-4.754		-1275.269	
Seo_upd[T.South Cel	ntral]:Form_upd[T.LIN t]:Form_upd[T.LINK]	IK]	-2152.1130				-2526.104	
Geo_upd[T.West]:Fo			-894.0786				-1263.190	
	ia]:Form_upd[T.TENDER		-1294.6580				-1704.789	
	h]:Form_upd[T.TENDER]		-323.9890				-714.869	
Geo_upd[T.Northeas	t]:Form_upd[T.TENDER]		-1784.5566				-2181.233	
Geo.und[T.Plains]:	Form_upd[T.TENDER]	•	1059.4159				661.054	
	ntral]:Form_upd[T.TEN	IDER 1	711.6997			0.001		
	t]:Form_upd[T.TENDER]		-1983.1733				-2382.145	
Geo_upd[T.West]:For			-1145.9329				-1554.694	
	ia]:Form_upd[T.Other						-1792.650	
	h]:Form_upd[T.Other F	opped 1	-349 F216	142 702	-2.369	0.010	-622.349	
	t]:Form_upd[T.Other F	orms]	-2301.4865	146.666	-15.692	0.000	-2588.946	
	Form_upd[T.Other Form	ns]	1053.0051	146.213	7.202	0.000	766.433	
	ntral]:Form_upd[T.Oth						81.253	671.
	t]:Form_upd[T.Other F						-1829.344	
	rm_upd[T.Other Forms]		-1286.5463	147.184	-8.741	0.000	-1575.022	-998.
Price_per_unit				11.560		0.000	83.459	
rrace_per_unae								

#### **Strategic Opportunities for Conagra:**

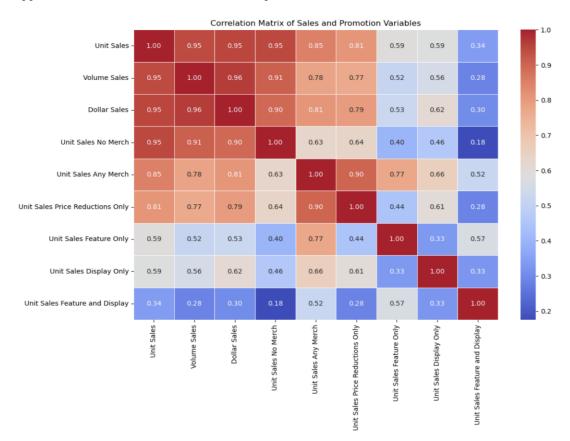
- **Benchmark Against Successful Competitors:** Identify competitors with positive coefficients for burger forms and analyze their strategies to understand what might be contributing to their success.
- **Invest in Market Research in Underperforming Regions** for burgers to understand consumer preferences and potentially reposition or reformulate products.
- Leverage Insights from Competitors' Success with Link and Tender: Apply successful elements from competitors' strategies to Conagra's corresponding products, such as adapting product features or enhancing promotional tactics.

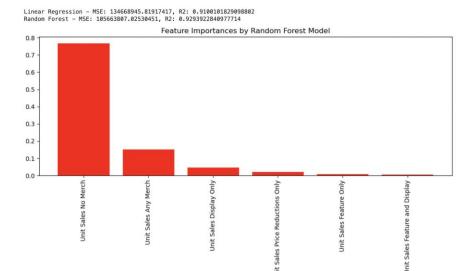
#### **Conclusion:**

The regression analysis highlights significant differences in performance across product forms and regions for Conagra and its competitors. For Conagra, focusing on enhancing underperforming product lines like Burgers and leveraging strengths in popular forms like Tender and Filet can lead to improved market share and competitive positioning. Simultaneously, understanding competitors' successes offers valuable lessons that Conagra can incorporate into its strategic planning to boost overall brand expansion and market penetration.

## **Strategy 3: Optimizing Promotional Impact**

How do different types of promotions impact sales performance and price sensitivity, and how can the company strategically optimize its promotional mix to maximize sales uplift while maintaining a balanced approach that minimizes over-reliance on promotions?





#### **Insights from the Correlation Matrix:**

- Strong Sales without Promotions: The correlation matrix reveals that 'Unit Sales No Merch' strongly correlates with all sales metrics (Unit, Volume, Dollar Sales). This indicates that a significant portion of sales occurs naturally without promotions, underscoring the strength of the brand and the inherent appeal of the products.
- Moderate Influence of Price Reductions: 'Unit Sales Price Reductions Only' also shows significant correlations, especially with dollar sales, suggesting that price sensitivity is an important factor in consumer purchasing behavior. This implies that tactical price promotions can effectively drive sales.
- Low Effectiveness of Combined Promotions: The correlations for 'Unit Sales Feature and Display' are relatively low across all sales types, suggesting that these promotional strategies are less effective at driving sales compared to other methods.

#### **Insights from Regression and Random Forest Models with Feature Importance:**

- **Dominance of 'Unit Sales No Merch':** The feature importance from the Random Forest model highlights that sales without any merchandising promotions are the most significant predictor of sales performance. This underscores that the brand's core product offerings are strong enough to drive sales without additional promotional incentives.
- Limited Impact from Feature and Display Promotions: Despite the use of feature and display promotions, their low impact as indicated by the feature importance suggests these strategies may not be efficiently contributing to sales growth and might require reevaluation or enhancement.
- Effectiveness of Price Reductions: Although not the highest in feature importance, the moderate impact of price reductions on sales underscores their role in influencing consumer decisions, especially in competitive or price-sensitive market segments.

## **Detailed Strategic Recommendations:**

- 1. Enhance Product and Brand Value:
- **Action:** Invest in marketing strategies that highlight the quality, sustainability, and unique selling points of the products. Focus on strengthening the brand's reputation through quality improvements and sustainability practices.
- **Rationale:** Leveraging the inherent product appeal that drives 'Unit Sales No Merch' will enhance customer loyalty and support premium pricing strategies.
- 2. Optimize Promotional Pricing:
- **Action:** Implement dynamic pricing strategies that respond to market conditions and consumer demand, using targeted price promotions to drive sales during strategic periods.
- **Rationale:** Given the effectiveness of price reductions in stimulating sales, smarter pricing can maximize revenue while attracting price-sensitive customers.
- 3. Revamp Ineffective Promotions:
- Action: Reassess and innovate the current feature and display strategies to increase their impact.
  Explore interactive and digital promotions that engage consumers more effectively at the point of sale.
- **Rationale**: Improving the effectiveness of underperforming promotional strategies will ensure marketing budgets are invested in tactics that directly contribute to sales growth.
- 4. Leverage Data Analytics for Decision Making:
- **Action**: Use advanced analytics to continuously monitor and evaluate the effectiveness of different promotional strategies and adjust them based on real-time data.
- **Rationale**: Data-driven decision-making will help Conagra adapt to changing market conditions and consumer preferences more swiftly and effectively.
- 5. Strengthen Consumer Engagement and Feedback:
- **Action**: Develop a comprehensive consumer feedback system to gather insights from various customer segments. Utilize this data to refine product offerings and tailor promotions to better meet consumer needs.
- **Rationale**: Understanding and responding to consumer preferences will enhance product relevance and market fit, boosting customer satisfaction and sales.

These strategic recommendations are designed to leverage both data-driven insights and market trends, positioning Conagra to capitalize on its existing strengths while addressing areas of improvement for sustained growth in the competitive meat substitute market.

## **Strategy 4: Market Penetration in Different Income Segments:**

How can Gardein broaden its appeal and increase consumption among lower-income households without diluting its brand value in the eyes of its core higher-income consumers?

#### All HH Income



From this data, we can infer that Gardein products have a strong appeal among higher-income households. This could be due to various factors such as pricing, product placement, consumer lifestyle choices, brand perception, and availability.

## **Strategies and Recommendations:**

- ✓ **Price Sensitivity:** Understanding the price sensitivity of lower-income segments and considering pricing strategies that could make the products more accessible to them, such as smaller pack sizes or value offerings.
- ✓ **Distribution Channels:** Expanding into stores frequented by lower-income consumers, which might not currently stock Gardein products.
- ✓ **Marketing and Branding:** Crafting marketing campaigns that resonate with lower-income households, emphasizing the value and nutritional aspects of the products.
- ✓ **Product Development:** Introducing new products or variations tailored to the preferences and needs of lower-income consumers.
- ✓ **Promotional Offers:** Leveraging discounts, coupons, and promotions to encourage trial among lower-income consumers.

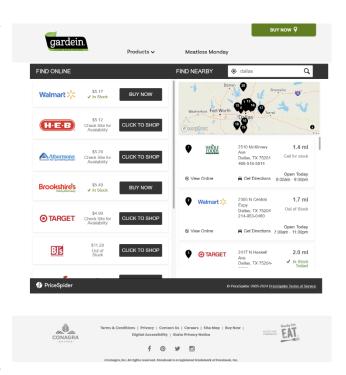
By addressing the needs and preferences of lower-income consumers while maintaining the qualities that attract higher-income consumers, Gardein could potentially increase its overall market share and strengthen its brand across the income spectrum.

## Strategy 5: The Influence of Digital Engagement on Consumer Choices

What role does digital engagement play in influencing consumer choices in the meat substitutes category, and how can Conagra enhance its online presence to drive sales?

In the rapidly evolving food industry, having a direct online sales channel can be a significant competitive advantage, particularly for brands like Gardein in the meat substitute category. While Gardein currently leverages third-party retailers like Walmart for its online distribution, the absence of its own ecommerce platform represents a missed opportunity for direct customer engagement and sales. Developing an exclusive online purchasing portal could not only streamline the customer experience but also offer valuable data insights, enhance brand loyalty, and potentially increase profit margins by cutting out intermediary costs.

To boost online sales through Gardein's own website, Conagra can implement several strategies to create a direct-to-consumer



channel that offers convenience and strengthens brand loyalty.

## **Strategy and Recommendations:**

- ✓ Launch an E-commerce Platform: Develop Gardein's website into a fully functional e-commerce platform, allowing consumers to purchase products directly.
- ✓ Exclusive Online Products: Offer special products or bundles only available through the Gardein website to entice consumers to shop directly.
- ✓ **Subscription Services:** Introduce subscription-based purchasing options for regular deliveries of favorite Gardein products.
- ✓ **Loyalty Programs:** Create a loyalty program that rewards repeat customers with discounts or exclusive content, encouraging continual direct purchases.
- ✓ **Digital Advertising:** Use targeted digital ads to drive traffic to Gardein's online store, focusing on the convenience and exclusivity of buying direct.
- ✓ **Seamless Integration:** Ensure the website offers a seamless, user-friendly purchasing experience, with high-quality product imagery, easy navigation, and fast checkout.

By prioritizing a shift towards a direct-to-consumer model, Conagra can increase Gardein's market share in the meat substitutes category and cultivate a more direct relationship with their customers.

## Strategy 6: Enhancing Collaboration with Health-Focused Retailers

How can Conagra Brands enhance its collaboration with vegetarian/organic and health-focused grocery stores to bolster the market presence and visibility of Gardein's frozen meat substitutes through co-branded marketing efforts and in-store promotions?

## **Strategies and Recommendations:**

Retail Branding Partnership: Establish branding partnerships with health-conscious grocery stores to create dedicated Gardein sections within the frozen aisle, emphasizing the brand's alignment with health and sustainability.

- ✓ **In-Store Promotions:** Launch in-store promotions such as discounts, buy-one-get-one-free offers, or bundled deals specifically in vegetarian and health-focused stores to drive sales.
- ✓ **Co-Marketing Campaigns:** Develop joint marketing campaigns with retail partners, combining online and offline advertising efforts to highlight the availability of Gardein products in these select stores.
- ✓ **Sampling Stations:** Set up branded sampling stations in partner stores, allowing customers to taste Gardein products and engage with the brand directly.
- ✓ **Loyalty Incentives:** Work with retailers to include Gardein products in their loyalty programs, offering points or rewards for repeat purchases.
- ✓ Exclusive Retailer Products: Introduce special product lines or limited-edition flavors exclusive to partner health-focused grocery stores to create a sense of exclusivity and buzz.

By focusing on these strategies, Conagra can capitalize on the growing demand for frozen plantbased options and forge stronger connections with consumers through health-oriented retail environments.

#### **SUMMARY**

The increasing shift towards plant-based diets for health and environmental reasons has spurred the growth of the meat substitutes industry, with Gardein by Conagra Brands positioned as a key player. The global market for meat substitutes is projected to reach over \$4 billion by 2030, driven by consumer demand for sustainable and healthy food options. Conagra's strategic acquisitions, such as Gardein and Pinnacle Foods, have strengthened its portfolio, allowing it to tap into the expanding market of health-conscious consumers and those seeking sustainable dietary options.

## Market Research Analysis for Gardein

Gardein has shown promising growth, outperforming base sales projections across various U.S. regions from 2020 to 2024, particularly in the Great Lakes area. This success is likely attributed to effective marketing strategies, promotions, and the broad appeal of products that mimic traditional meat in taste and texture. The analysis suggests potential for expanding product lines and increasing market share by enhancing existing successful products and exploring new market strategies based on detailed segmentation and targeted consumer research.

## Strategic Overview

Conagra has explored multiple strategies to enhance Gardein's market presence and appeal:

- Market Presence Enhancement: By diversifying product lines and adapting to consumer preferences, Gardein aims to meet the rising demand for plant-based products while maintaining a competitive edge.
- **Regional Expansion**: Analysis indicates opportunities for expanding specific product forms in key U.S. regions, with a focus on adapting strategies based on regional sales performance and competitor activity.
- **Promotional Optimization**: Insights suggest a reevaluation of promotional strategies, particularly emphasizing the effectiveness of price reductions and rethinking less effective promotional tactics like feature and display strategies.
- **Broadening Consumer Base**: Strategies to penetrate lower-income segments without compromising the brand value perceived by higher-income consumers include price adjustments, targeted marketing, and expanded distribution channels.
- **Digital Engagement**: Enhancing Gardein's digital presence through the development of an e-commerce platform and digital marketing strategies can significantly impact consumer choices and drive sales.
- **Health-Focused Retail Collaboration**: By partnering with health-oriented retailers, Conagra can enhance the visibility and availability of Gardein products, leveraging co-branded marketing efforts and in-store promotions.

#### **CONCLUSION**

Conagra Brands has successfully positioned Gardein to capitalize on the growing demand for meat substitutes through strategic acquisitions, innovative product development, and targeted marketing strategies. Continued focus on expanding market reach, optimizing promotional activities, and enhancing consumer engagement across various income segments will be crucial. By leveraging both data-driven insights and a nuanced understanding of market trends, Conagra can sustain and enhance its growth in the competitive landscape of plant-based foods, ensuring long-term success and brand loyalty among a diverse consumer base.

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