

Data-driven strategies to help Conagra unlock future growth potential in the Meat Substitutes Market



FINAL REPORT
BUAN 6337.S01

Group 8



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1. INTRODUCTION

Conagra Brands plays a pivotal role in the modern consumer goods landscape, known for its commitment to quality and innovation. As a leader in the food industry, Conagra offers a diverse range of products, from pantry essentials to decadent snacks, through its portfolio of over 100 brands. This versatility allows the company to cater to a wide range of consumer preferences across the globe. With a focus on continuous improvement, Conagra remains a key player in delivering value to both consumers and stakeholders.

Conagra's emphasis on expanding plant-based food aligns with the increasing trend toward sustainability and healthier diets. Plant-based eating has become more popular because it provides a range of health benefits. These diets are loaded with essential nutrients, including vitamins, minerals, and antioxidants, which support overall health. Plant-based foods are also generally lower in saturated fats and cholesterol, reducing the risk of heart disease and improving cardiovascular health. By focusing on these options, Conagra is not only meeting the rising demand for sustainable and ethical food choices but also encouraging healthier lifestyles for consumers.

Gardein, a flagship plant-based brand under Conagra's portfolio, offers plant-based meat substitutes known for their nutrition and close resemblance to traditional meat in taste and texture. What sets Gardein apart from other plant-based brands is its emphasis on delivering a product that closely mimics the flavors and textures of various types of meat.

2. OBJECTIVE

To analyze the historical sales data in the meat substitute category across the US to identify opportunities that will accelerate the growth of Conagra brand (Gardein).

3. ABOUT THE DATASET

The datasets provide extensive qualitative and quantitative information, revealing critical insights into Gardein's and other brand's product sales across various regions of the country. The data captures a range of product attributes, such as UPC, aisle, category, sub-category, manufacturer, brand franchise, brand, package type, total count, total ounces, form, flavor/scent, meat source, product type, type of meat substitute, type of substitute, and cooked info.

These datasets also encompass various measures like dollar sales, unit sales, volume sales, price per unit, price per volume, All Commodity Volume (ACV), base sales, and incremental sales, each offering a unique perspective for analysis and visualization of sales trends and product behavior.

There are 5 datasets for the Frozen Meat Substitute products from the years 2020 to 2024. All the data has been merged together to form a new, unified data set. Since the 2024 dataset contains information of the sales till February, most of the analysis done in this project discards the data related to 2024.

4. MANEGERIAL RECOMMENDATIONS AND STRATEGIES

To further refine our strategies for growth of Conagra's meat substitute market in 2024, below are the recommendations and an in-depth analysis comparing different forms and flavors of Gardein products based on sales and customer preferences regionally. This analysis will help us identify trends and opportunities for product optimization and targeted marketing campaigns.

Recommendations for Gardein which are detailed in the following:

- **Optimizing Gardein's product offering** by removing underperforming products.
- Gap analysis of Gardein and top competing brands in various product forms:
 - Gardein should **diversify its product offering** in specific forms like **Patty, Nugget, Link, Strip and Breakfast Sausage patty** by introducing new flavors or offering multiple package sizes (e.g., smaller and larger) as other brands were successful in doing so.
 - Gardein should consider introducing **transparent packaging** and innovating products by exploring the possibility of using a **colouring agent** to emulate the real meat from the success of Impossible and Beyond in Ground & Burger patty form.
 - Gardein should **increase the distribution** of successful products like that in the **Nugget, Link and Strip** form that currently have relatively lower distribution compared to the best-performing brands in similar categories.
 - **Varying pricing** based on observed trends and comparing with competitors to capture market share and enhance profits specifically in the **Patty form**.
 - Gardein can try exploring **partnerships with leading fast-food brands**, similar to the Impossible-Burger King partnership, to promote growth.

Gardein has huge potential for development:

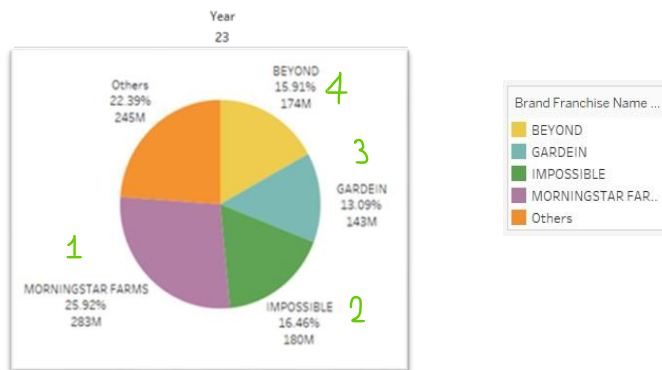
Count of products by each brand in top 20 meat substitute products (\$ sales) across years:



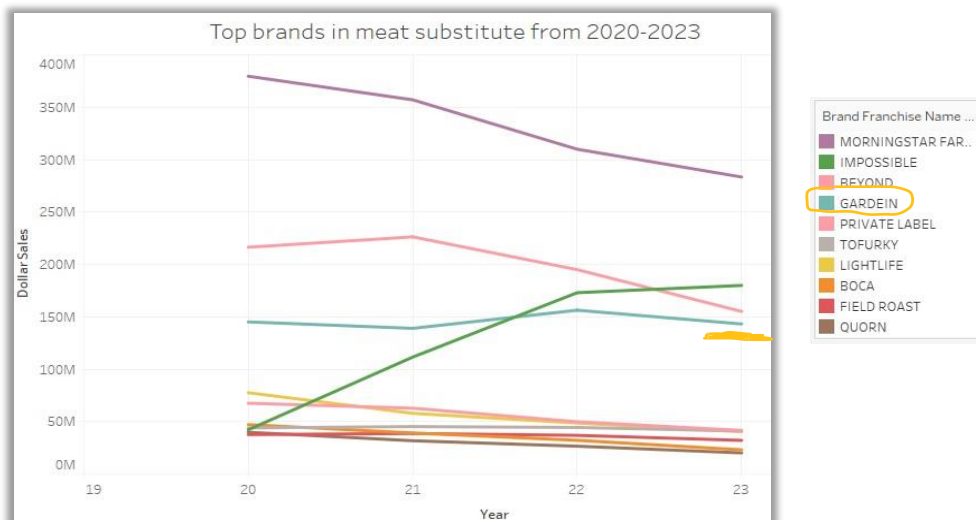
- **Gardein has 3 products in the top 20 bestselling products and has remained the same over the years.** There is a clear scope for improvement and getting many products to feature in top 20 in terms of dollar sales.
- Morningstar farms has the highest count of products in all years though it has seen a decrease over the years.
- Impossible and beyond has shown growth over the years.

Brand analysis of meat substitute products:

Share of top brands (\$ sales) in the year 2023:



Share of top brands (\$ sales) across the year:



Recommendation

One reason for the significant growth of Impossible is its partnership with Burger King on Impossible Whopper burger, which boosted the brand recognition worldwide.

- Gardein could try **partnering with top Burger selling brands** to offer a completely vegan alternative to the traditional meat burgers.
- They can **compete with Impossible-Burger King partnership** as the red colouring agent heme in impossible product has raised questions about being excessively processed.

Gardein's underperforming products identified:

Table representing % of dollar sales and number of unique products offered by top brands in 2023:

Observation:

Brand	Distinct count of form in 2023	Total unique products offered in 2023	% Dollar sales in 2023	% Dollar sale per unique product
MORNINGSTAR FARMS	20	73	30	0.41
BEYOND	12	30	16	0.53
GARDEIN	22	57	15	0.26
IMPOSSIBLE	9	25	19	0.76

The % of dollar sale per unique product offered is **0.26** for **Gardein** which is the **lowest amongst the top brands**. Thus, Gardein is carrying excessive products that aren't contributing well to the revenue.

Recommendation 2:

These **18 low revenues yielding products** need to be improved or if it is not possible, they could be **discontinued**, and the saved cost can be channelled to innovate and expand the products that are moving well.

List of 18 low performing (\$ sales < 20,000, # sales < 10,000) Gardein products in the year 2023:

Gardein product	Form	Flavour	\$ sales	# sales
GARDEIN FROZEN ORIGINAL MEAT SUBSTITUTE BREAKFAST PATTY 8..	BREAKFAST PA..	ORIGINAL	19,168	4,032
GARDEIN FROZEN REGULAR POULTRY SUBSTITUTE PATTY 12.4 OZ - ..	PATTY	REGULAR	13,655	2,435
GARDEIN FROZEN SIZZLING SZECHUAN MEAT SUBSTITUTE STRIP 10...	STRIP	SIZZLING SZ..	9,504	1,597
GARDEIN FROZEN REGULAR POULTRY SUBSTITUTE NUGGET 8.6 OZ - ..	NUGGET	REGULAR	8,147	1,320
GARDEIN FROZEN REGULAR MEAT SUBSTITUTE SLIDER 10 OZ - 0842..	SLIDER	REGULAR	6,739	1,231
GARDEIN FROZEN SPICY MEAT SUBSTITUTE BREAKFAST PATTY 8 OZ ..	BREAKFAST PA..	SPICY	4,632	878
GARDEIN FROZEN GARDEN MEAT SUBSTITUTE BURGER 12 OZ - 0842..	BURGER	GARDEN	3,919	622
GARDEIN FROZEN MAPLE SAUSAGE MEAT SUBSTITUTE BREAKFAST ..	BREAKFAST PA..	MAPLE SAU..	3,141	588
GARDEIN FROZEN REGULAR POULTRY SUBSTITUTE WING 8.4 OZ - 08..	WING	REGULAR	2,625	489
GARDEIN FROZEN CHIPOTLE BLACK BEAN MEAT SUBSTITUTE BURGE..	BURGER	CHIPOTLE B..	1,176	67
GARDEIN FROZEN REGULAR POULTRY SUBSTITUTE WING 8.4 OZ - 08..	WING	REGULAR	906	150
GARDEIN FROZEN ITALIAN SAUSAGE MEAT SUBSTITUTE SLICED 40 O..	SLICED	ITALIAN SAU..	857	60
GARDEIN FROZEN REGULAR MEAT SUBSTITUTE MEATBALL 40 OZ - 0..	MEATBALL	REGULAR	255	20
GARDEIN FROZEN CHIPOTLE BLACK BEAN MEAT SUBSTITUTE BURGE..	BURGER	CHIPOTLE B..	34	2
GARDEIN ULTIMATE PLANT BASED FROZEN CHICKEN PLANT BASED S..	WING	CHICKEN	19	2
GARDEIN FROZEN REGULAR MEAT SUBSTITUTE BURGER PATTY 40 O..	BURGER PATTY	REGULAR	15	1
GARDEIN FROZEN SAVORY POULTRY SUBSTITUTE PIECE 16 OZ - 084..	PIECE	SAVORY	14	2
GARDEIN FROZEN CLASSIC MEAT SUBSTITUTE MEATBALL 15.8 OZ - 0..	MEATBALL	CLASSIC	10	2

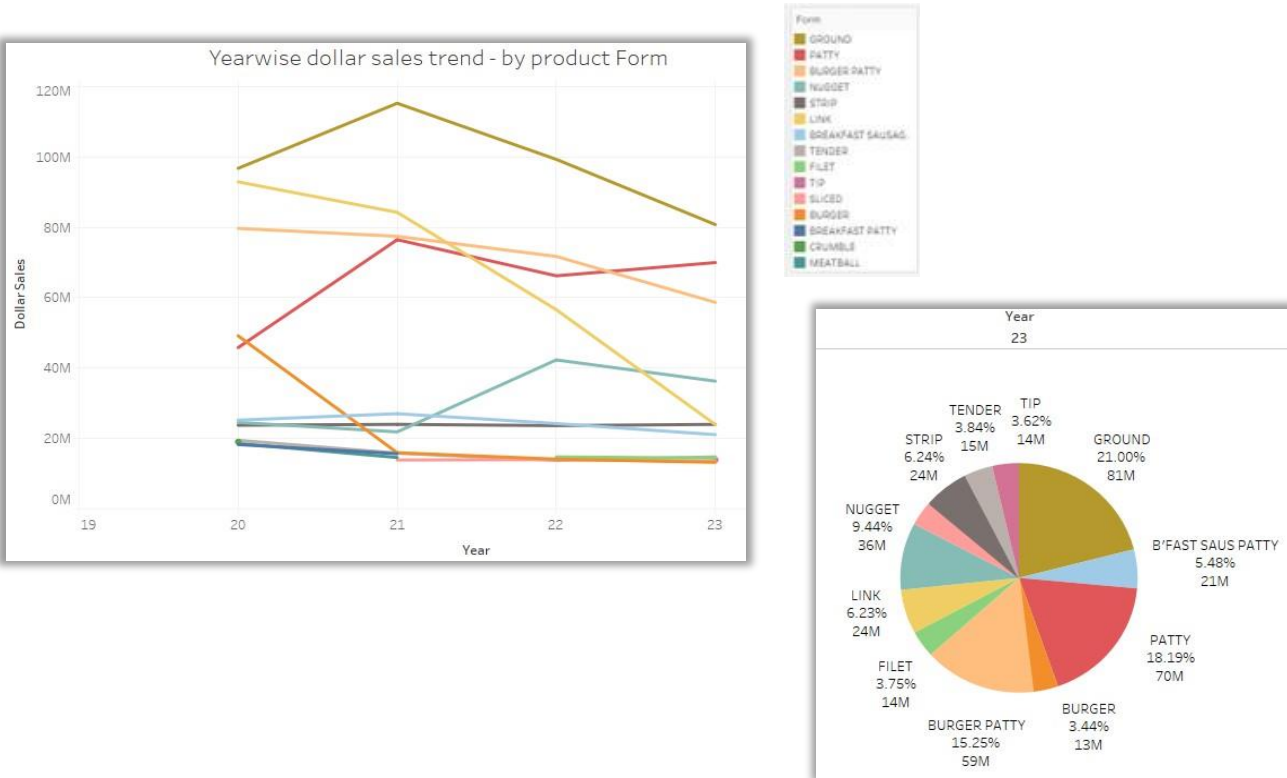
Dollar sales variation of the identified products over the years:



All the identified 18 Gardein products have **diminishing sales trend** over the years.

Comparative analysis of top performing brands by bestselling product forms:

Top meat substitute product forms year wise:

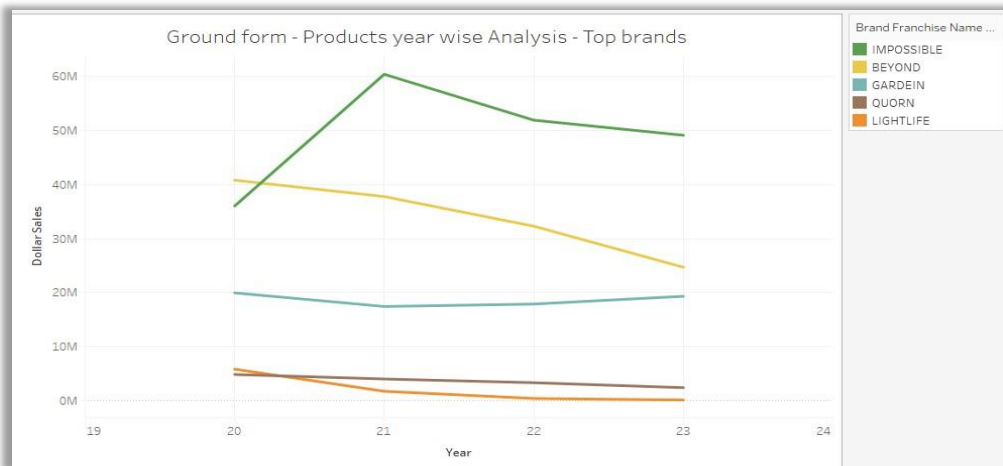


Top forms of meat substitute sales in the year 2023:

Form	% of Total Dollar Sales	Dollar Sales
GROUND	21%	81M
PATTY	18%	70M
BURGER PATTY	15%	59M
NUGGET	9%	36M
STRIP	6%	24M
LINK	6%	24M
B'FAST SAUS PATTY	5%	21M
TENDER	4%	15M
FILET	4%	14M
TIP	4%	14M
SLICED	4%	14M
BURGER	3%	13M

Gardein's position in each of the top selling form is explored and compared with that of the competitors to identify opportunities for improvement in the following sections.

Analysis of Ground form:



Observation:

Impossible is highly successful in the ground form of meat substitute product.

Success factor of Impossible and beyond could be attributed to **close mimicking of real ground form of meat** in their packing and color.

Real ground meat:



Meat substitute ground form package of top of products:



The highlighted products are sold in transparent packing.

Recommendation 3:

- **Gardein** can try offering a **refrigerated product** in the ground form. The top 2 products in this category both are in refrigerated form.
- Introduce a new product on **trial basis** and **change the packaging to a transparent one** and add a coloring agent to emulate the real red ground meat.

- Non-resealable pack could force customers to use all the contents at one go and increase buying frequency. Gardein can **explore the effect of a non-resealable pack** on an experimental basis.

Patty form analysis across brands:

Brand	No. of patty products with sales > 1M \$ (2023)
MORNINGSTAR FARMS	5
IMPOSSIBLE	4
BOCA	2
BEYOND	1
ALPHA	1
GARDEIN	1

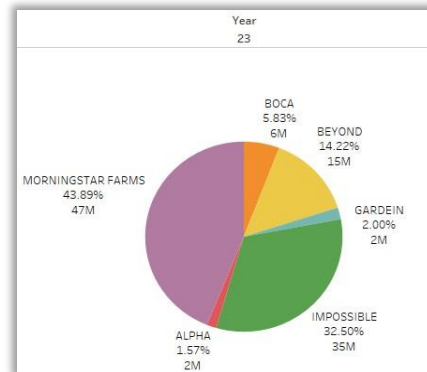
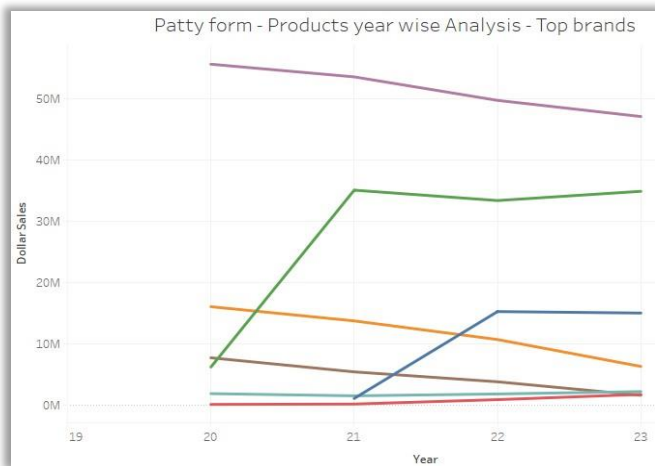


Table showing top patty form of products in 2023:

Year	Product x	Brand Franchise Name	Flavor / Scent	Dollar Sales	Price	Unit Sales	Weight	Distribution
23	PRIVATE LABEL FROZEN REGULAR MEAT SUBSTITUTE PATTY 10 OZ - 406770071	PRIVATE LABEL	PATTY REGULAR	10,43,117	3	3,17,549	1	
23	MORNINGSTAR FARMS FROZEN BUFFALO PLANT BASED SUBSTITUTE PATTY 10 OZ - 0028989101041	MORNINGSTAR FARMS	PATTY BUFFALO	176,19,441	5	37,75,923	54	
23	MORNINGSTAR FARMS FROZEN ORIGINAL PLANT BASED SUBSTITUTE PATTY 10 OZ - 0028989101021	MORNINGSTAR FARMS	PATTY ORIGINAL	162,36,221	5	34,66,611	51	
23	MORNINGSTAR FARMS FROZEN ORIGINAL POULTRY SUBSTITUTE PATTY 20 OZ - 0028989102891	MORNINGSTAR FARMS	PATTY ORIGINAL	92,78,620	8	11,29,136	31	
23	MORNINGSTAR FARMS FROZEN SAUSAGE MEAT SUBSTITUTE PATTY 32 OZ - 0028989094451	MORNINGSTAR FARMS	PATTY SAUSAGE	20,64,162	13	1,56,872	1	
23	MORNINGSTAR FARMS FROZEN CHICKEN POULTRY SUBSTITUTE PATTY 40 OZ - 0028989100571	MORNINGSTAR FARMS	PATTY CHICKEN	19,27,238	12	1,61,020	1	
23	IMPOSSIBLE REFRIGERATED REGULAR MEAT SUBSTITUTE PATTY 8 OZ - 0816697021011	IMPOSSIBLE	PATTY REGULAR	211,50,173	6	36,47,300	36	
23	IMPOSSIBLE FROZEN REGULAR POULTRY SUBSTITUTE PATTY 13.5 OZ - 0816697020431	IMPOSSIBLE	PATTY REGULAR	63,60,787	8	8,21,625	26	
23	IMPOSSIBLE FROZEN SAVORY MEAT SUBSTITUTE PATTY 12.8 OZ - 0816697020191	IMPOSSIBLE	PATTY SAVORY	42,46,973	8	5,37,975	16	
23	IMPOSSIBLE FROZEN SPICY MEAT SUBSTITUTE PATTY 12.8 OZ - 0816697020251	IMPOSSIBLE	PATTY SPICY	14,49,985	8	1,83,968	6	
23	IMPOSSIBLE FROZEN SPICY PLANT BASED CHICKEN SUBSTITUTE PATTY 13.5 OZ - 0816697020621	IMPOSSIBLE	PATTY SPICY	12,54,413	8	1,55,887	6	
23	GARDEIN ULTIMATE PLANT BASED FROZEN BREAKFAST SAUSAGE MEAT SUBSTITUTE PATTY 7.4 OZ - 0842234002471	GARDEIN	PATTY BREAKFAST SAL	13,23,736	5	2,47,150	10	
23	BOCA FROZEN REGULAR POULTRY SUBSTITUTE PATTY 10 OZ - 0759283600071	BOCA	PATTY REGULAR	29,95,712	4	6,82,697	16	
23	BOCA FROZEN SPICY CHIKN POULTRY SUBSTITUTE PATTY 10 OZ - 0759283600081	BOCA	PATTY SPICY CHICKEN	25,26,788	4	5,75,923	13	
23	BEYOND MEAT BEYOND BURGER FROZEN REGULAR MEAT SUBSTITUTE PATTY 39.8 OZ - 0810057290121	BEYOND MEAT	PATTY REGULAR	149,87,035	16	9,51,294	4	
23	ALPHA FROZEN CHICKEN PLANT BASED CHICKEN SUBSTITUTE PATTY 20 OZ - 0810070350251	ALPHA	PATTY CHICKEN	13,78,803	6	2,49,888	1	

Observation :

- Current market share by dollar sales of Gardein in 2023 in Patty form is 2%.
- Beyond is selling only one product in regular flavour and its dollar sales in 2023 is ~15 million \$.
- Morningstar farms offers 5 products in Patty form across the flavours: Buffalo, Original, Sausage & Chicken – Their market share is 44%, 47 M \$ in 2023.

- Impossible offers 5 products in Patty form across the flavours: Regular, spicy & Savory – Their market share is 32%, 35 M \$ in 2023. There is no overlap in the forms between Impossible and Morningstar farms.

Recommendation 4:

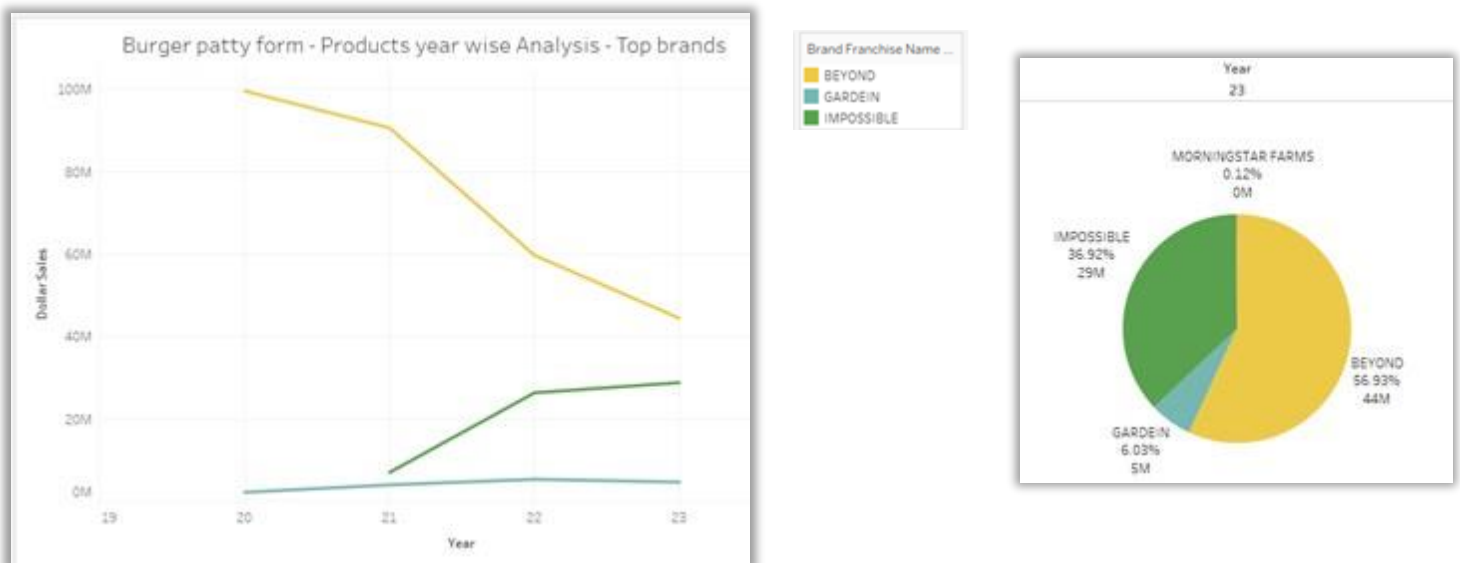
- Gardein should **diversify** and can introduce new products in the **Patty form in the flavour of original, regular or even Buffalo** than the current product that it is offering namely 'Breakfast sausage meat substitute patty'.
- Gardein can try **varying the size of offering** like that of Morningstar farms patty products (10, 20, 32 & 40 OZ)
- Boca's two products (10 OZ) are similar to Gardein (7.4 OZ) and both have recorded higher sales than Gardein as their price per unit is 1 dollar less than that of Gardein. Gardein can try **decreasing the price by 1 dollar** in for the next year to enhance its sales.

Varying package type is observed in this form too.



The highlighted products are sold in transparent packing.

Burger patty form analysis across brands:

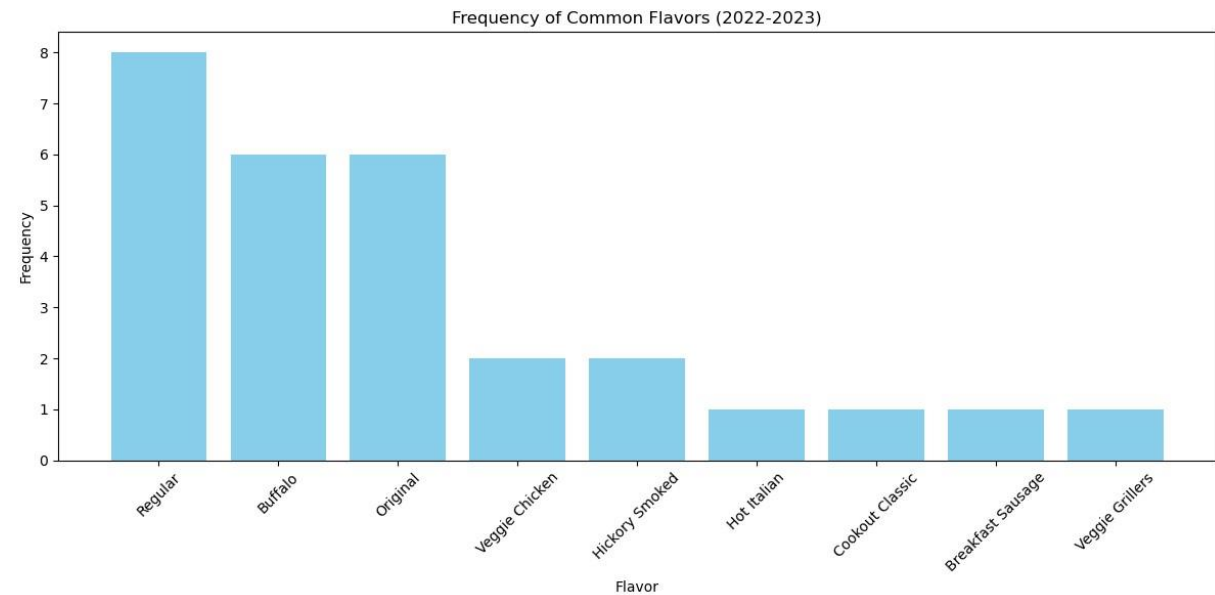


Impossible has successfully captured a fair share of market in Burger patty.

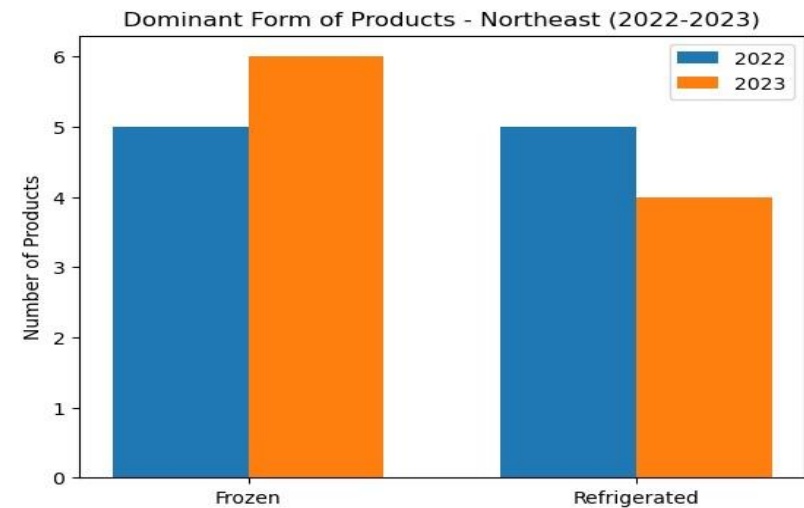
Table showing top patty form of products in 2023:

Year	Product x	Brand Franchise Name	Package	Dollar Sales	Avg. Price per Unit	Unit Sales /eighted Distributi	
23	BEYOND MEAT BEYOND BURGER REFRIGERATED REGULAR MEAT SUBSTITUTE BURGER PATTY 8 OZ - 081005	BEYOND MEAT	PLASTIC CONTAINER IN SLEEVE	249,65,437	5	52,60,762	45
23	BEYOND MEAT COOKOUT CLASSIC FROZEN REGULAR MEAT SUBSTITUTE BURGER PATTY 32 OZ - 081005	BEYOND MEAT	BOX	163,83,044	15	11,36,696	24
23	BEYOND MEAT COOKOUT CLASSIC FROZEN REGULAR MEAT SUBSTITUTE BURGER PATTY 32 OZ - 081005	BEYOND MEAT	BOX	16,54,595	16	1,05,265	4
23	BEYOND MEAT BEYOND BURGER REFRIGERATED REGULAR MEAT SUBSTITUTE BURGER PATTY 16 OZ - 081005	BEYOND MEAT	PLASTIC WRAP TRAY	14,81,763	8	1,83,595	3
23	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE BURGER PATTY 24 OZ - 0842234007031	GARDEIN	BOX	44,21,523	12	3,79,616	17
23	IMPOSSIBLE FROZEN REGULAR MEAT SUBSTITUTE BURGER PATTY 24 OZ - 0816697021071	IMPOSSIBLE	RESEALABLE PLASTIC BAG	173,34,559	14	12,29,895	24
23	IMPOSSIBLE FROZEN REGULAR MEAT SUBSTITUTE BURGER PATTY 24 OZ - 0816697023011	IMPOSSIBLE	RESEALABLE PLASTIC BAG	115,13,189	13	8,53,534	20
23	PRIVATE LABEL FROZEN GRILLED MEAT SUBSTITUTE BURGER PATTY 10 OZ - 291016169	PRIVATE LABEL	BOX	11,45,162	3	3,65,518	1

Reginal Opportunity - Northeast



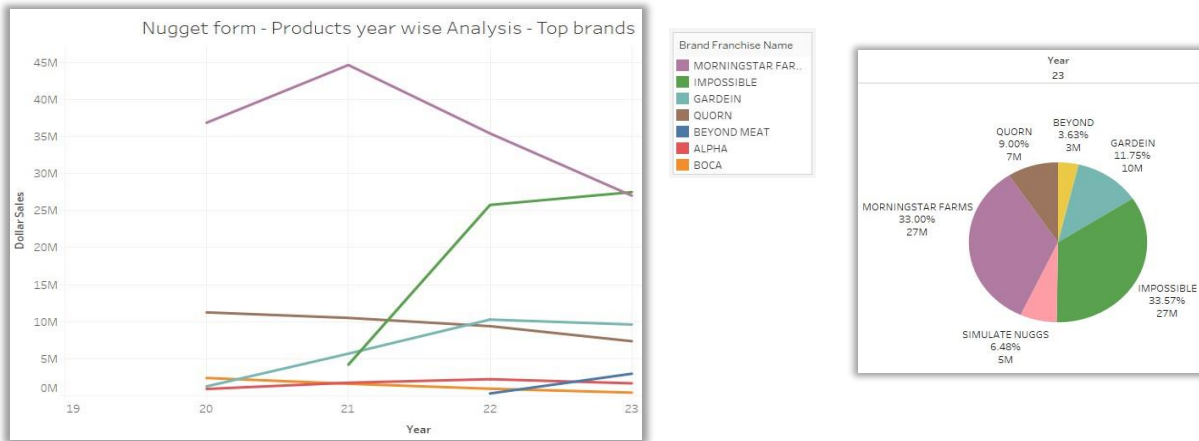
Introduce new flavors to compete with Beyond Meat Burger Patty form, which is dominant in this region. Focus on flavors that are popular in the Northeast, such as regular meat substitutes. There is room to capture market share, especially with frozen products with considerable expansion with new flavors or variants flavor of original, regular or even Buffalo.



Recommendation 5:

- **Gardein and Impossible** products in Burger patty have the **same size** but **Impossible dollar sales are 7 times compared to Gardein**. **Transparent packing** has a huge impact on sales for both Beyond and Impossible.
- **Beyond's 8 OZ pack** in Burger patty which is refrigerated is super successful having **11 times the dollar sales of Gardein**. Owing to a smaller sized pack, its price is low, it looks more affordable. Gardein can try offering a **small sized pack** which will commensurately have lower price.

Nugget form analysis across brands:



Morningstar farms was a market leader once but impossible has entered the market in 2021 and captured an equal share by 2023.

Top selling (\$) nugget products in 2023:

Year	Product x	Flavor / Scent	Dollar Sales	Price per	Unit Sales	Weighted Distribution
23	IMPOSSIBLE FROZEN CHICKEN PLANT BASED SUBSTITUTE NUGGET 13.5 OZ - 0816697021141	CHICKEN	193,37,519	8	24,64,557	41
23	MORNINGSTAR FARMS FROZEN VEGGIE CHICKEN PLANT BASED SUBSTITUTE NUGGET 10.5 OZ - 0028989101081	VEGETABLE CHICKEN	169,61,367	5	36,15,887	54
23	GARDEIN ULTIMATE PLANT BASED FROZEN CHICKEN PLANT BASED SUBSTITUTE NUGGET 14.7 OZ - 0842234002331	CHICKEN	96,08,592	8	11,45,420	34
23	MORNINGSTAR FARMS FROZEN REGULAR POULTRY SUBSTITUTE NUGGET 21 OZ - 0028989102911	REGULAR	86,07,960	9	10,14,721	20
23	IMPOSSIBLE WILD NUGGIES FROZEN CHICKEN PLANT BASED CHICKEN SUBSTITUTE NUGGET 13.5 OZ - 0816697020391	CHICKEN	63,46,769	8	8,20,739	23
23	QUORN FROZEN CHICKEN POULTRY SUBSTITUTE NUGGET 32 OZ - 0833735001961	CHICKEN	45,18,791	14	3,33,959	11
23	BEYOND MEAT FROZEN CHICKEN PLANT BASED CHICKEN SUBSTITUTE NUGGET 10 OZ - 0810057290611	CHICKEN	29,75,827	5	6,09,821	20
23	QUORN FROZEN REGULAR POULTRY SUBSTITUTE NUGGET 10.6 OZ - 0833735000061	REGULAR	26,54,585	5	5,36,656	14
23	SIMULATE NUGGS FROZEN SPICY CHIKN PLANT BASED SUBSTITUTE NUGGET 10.4 OZ - 0850015437031	SPICY CHICKEN	26,46,069	6	4,62,574	16
23	IMPOSSIBLE FROZEN SPICY PLANT BASED CHICKEN SUBSTITUTE NUGGET 13.5 OZ - 0816697020611	SPICY	16,83,756	8	2,07,441	7
23	SIMULATE NUGGS FROZEN ORIGINAL PLANT BASED SUBSTITUTE NUGGET 10.4 OZ - 0850015437001	ORIGINAL	16,17,898	6	2,61,985	8
23	HODO REFRIGERATED REGULAR PLANT BASED SUBSTITUTE NUGGET 8 OZ - 0853404002691	REGULAR	15,18,697	6	2,45,456	6
23	ALPHA FROZEN REGULAR POULTRY SUBSTITUTE NUGGET 10.9 OZ - 0855099007561	REGULAR	11,81,030	6	2,13,660	6
23	JACK & ANNIES FROZEN REGULAR POULTRY SUBSTITUTE NUGGET 10.1 OZ - 0859806003831	REGULAR	10,98,995	5	2,15,364	6
23	YUMMY DINO BUDDIES FROZEN CHICKEN PLANT BASED SUBSTITUTE NUGGET 19 OZ - 0064563450011	CHICKEN	10,74,828	7	1,60,567	5
23	SIMULATE NUGGS FROZEN REGULAR PLANT BASED SUBSTITUTE NUGGET 10.4 OZ - 0850015437251	REGULAR	10,38,283	5	2,01,351	7

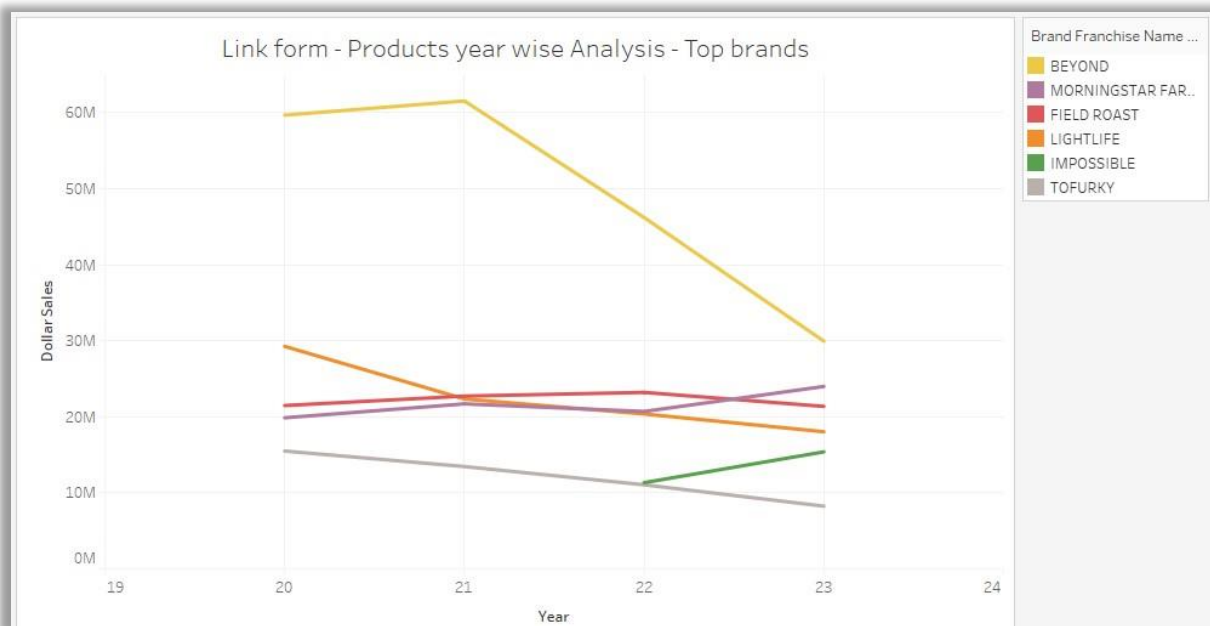
Observations :

- Nugget form is very competitive and there are a lot of products across various brands whose annual sales are more than 1 M \$.
- Chicken and regular flavors are most successful in Nugget form.
- Gardein's product is the 3rd bestselling in nugget form in 2023.

Recommendations 6:

- **ACV for Gardein product** ('GARDEIN ULTIMATE PLANT BASED FROZEN CHICKEN PLANT BASED SUBSTITUTE NUGGET 14.7 OZ) is **lower relative top performing products**. This can be increased as **Gardein is third bestselling**.
- **Impossible (Normal & Wild nuggies, Chicken/Spicy)** and **Morningstar farms (10.5 OZ, 21 OZ)** are having more type of products that are performing well in Nugget form. **Gardein** should **diversify** their offering in the Nugget form. Gardein can try introducing 8.6 OZ and 21 OZ in the chicken flavour than just having 14.7 OZ pack.
- **'GARDEIN FROZEN REGULAR POULTRY SUBSTITUTE NUGGET 8.6 OZ'**, sales and ACV has diminished over the years. It looks like Gardein intentionally **discontinued** this product. But the **success of multiple products** of top performing brands in Nugget form **suggests otherwise**.

Link form analysis across brands:



Gardein product sales in Link form:

Year	Product x	Flavor / Scent	Dollar Sales	Avg. Price per Unit	Unit Sales	Avg. ACV Weighted ..
22	GARDEIN ULTIMATE PLANT BASED FROZEN REGULAR MEAT SUBSTITUTE LINK 14 OZ - 0842..	REGULAR	1,026,386	8	133,562	8
23	GARDEIN ULTIMATE PLANT BASED FROZEN REGULAR MEAT SUBSTITUTE LINK 14 OZ - 0842..	REGULAR	3,370,475	8	414,639	19

Gardein product is picking pace. It's sale has increased from **1M \$ in 2022** to **3.3M \$ in 2023**.

Top selling (\$) link form of products in 2023:

Year	Productx	Flavor / Scent	Package	Dollar Sales	Price per Unit	Unit Sales	Weighted Distribution
23	MORNINGSTAR FARMS FROZEN BREAKFAST SAUSAGE MEAT SUBSTITUTE LINK 8 OZ - 0028989971101	BREAKFAST SAUSAGE	BOX	239,77,045	5	50,91,615	56
	LIGHTLIFE SMART DOGS REFRIGERATED HOT DOGS MEAT SUBSTITUTE LINK 12 OZ - 0043454100802	HOT DOG	VACUUM PACKED	122,83,949	5	26,85,049	49
	BEYOND MEAT BEYOND SAUSAGE REFRIGERATED HOT ITALIAN MEAT SUBSTITUTE LINK 14 OZ - 08526290	HOT ITALIAN	PLASTIC WRAP TRAY	122,56,806	8	16,45,172	21
	FIELD ROAST REFRIGERATED SMOKED APPLE SAGE MEAT SUBSTITUTE LINK 12.95 OZ - 0638031612171	SMOKED APPLE SAGE	PLASTIC WRAPPED IN CARDBOARD	111,89,530	6	18,18,751	41
	BEYOND MEAT BEYOND SAUSAGE REFRIGERATED ORIGINAL MEAT SUBSTITUTE LINK 14 OZ - 0852629004	ORIGINAL	PLASTIC WRAP TRAY	97,92,731	7	13,48,976	22
	FIELD ROAST REFRIGERATED ITALIAN MEAT SUBSTITUTE LINK 12.95 OZ - 0638031612151	ITALIAN	VACUUM PACKED IN SLEEVE	69,69,693	6	10,95,471	25
	TOFURKY REFRIGERATED ITALIAN SAUSAGE MEAT SUBSTITUTE LINK 14 OZ - 0025583006022	ITALIAN SAUSAGE	VACUUM PACKED IN SLEEVE	65,94,268	6	11,17,383	24
	IMPOSSIBLE REFRIGERATED BRATWURST MEAT SUBSTITUTE LINK 13.5 OZ - 0816697020321	BRATWURST	PLASTIC CONTAINER IN SLEEVE	64,52,829	8	8,48,250	16
	LIGHTLIFE SMART DOGS REFRIGERATED HOT DOGS MEAT SUBSTITUTE LINK 13.5 OZ - 0043454100122	HOT DOG	VACUUM PACKED	53,38,942	5	10,81,686	22
	IMPOSSIBLE REFRIGERATED SPICY SAUSAGE MEAT SUBSTITUTE LINK 13.5 OZ - 0816697020351	SPICY SAUSAGE	PLASTIC CONTAINER IN SLEEVE	48,82,466	8	6,10,791	13
	BEYOND MEAT BEYOND BREAKFAST SAUSAGE FROZEN REGULAR MEAT SUBSTITUTE LINK 8.3 OZ - 08500	REGULAR	PLASTIC CONTAINER IN SLEEVE	44,20,043	5	8,67,555	13
	IMPOSSIBLE REFRIGERATED ITALIAN SAUSAGE MEAT SUBSTITUTE LINK 13.5 OZ - 0816697020341	ITALIAN SAUSAGE	PLASTIC TRAY IN CARDBOARD SLEEVE	40,52,850	8	4,89,853	9
	BEYOND MEAT BEYOND SAUSAGE REFRIGERATED SWEET ITALIAN MEAT SUBSTITUTE LINK 14 OZ - 08526	SWEET ITALIAN	PLASTIC WRAP TRAY	34,75,959	8	4,55,380	7
	GARDEIN ULTIMATE PLANT BASED FROZEN REGULAR MEAT SUBSTITUTE LINK 14 OZ - 0842234007171	REGULAR	BOX	33,70,475	8	4,14,639	19
	FIELD ROAST REFRIGERATED MEXICAN CHIPOTLE MEAT SUBSTITUTE LINK 12.95 OZ - 0638031612161	MEXICAN CHIPOTLE	PLASTIC WRAPPED	24,54,588	7	3,74,616	10

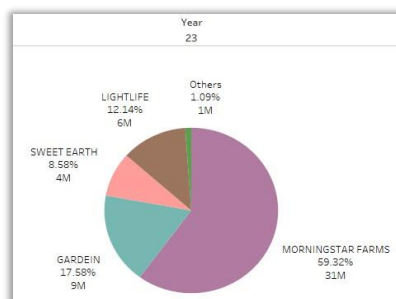
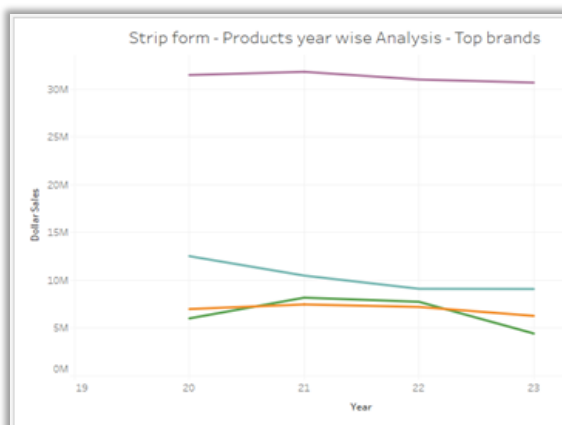
Recommendation 7:

- **Beyond and Gardein** have similar weight of the package, ACV but **beyond sales is 3 * Times that of Gardein**. This could again attribute this to the type of packing. Gardein should try to offer in **transparent package**.
- Also, most of the **top selling brands** have **specialized flavour** like Italian or selling it under a catchier name like **Hot dog**. Gardein can adopt similar strategy.
- Morningstar just offers one product in this category but is highly successful. This product has very high ACV. Gardein should **increase ACV** of '**GARDEIN ULTIMATE PLANT BASED FROZEN REGULAR MEAT SUBSTITUTE LINK 14 OZ**' because the product has shown good growth from 2022 to 2023.

Some of the top link products from top brands:



Strip form analysis across brands:



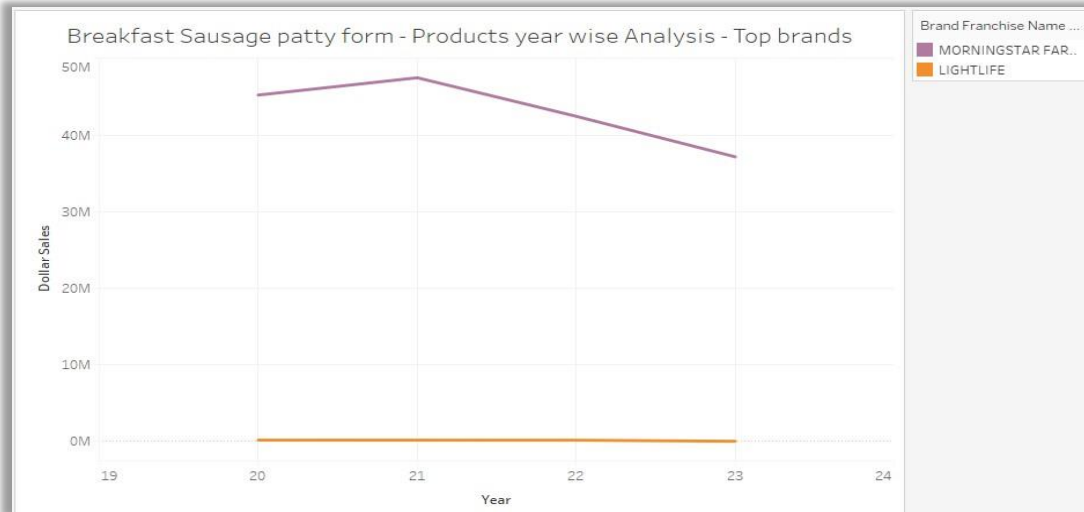
Morningstar is a dominant player in the strip form of meat substitute having 60% (31M \$) dollar sales for the year 2023. Gardein is second with 18% market share a total dollar sales of 9M \$.

Recommendations 8:

- **Gardein** sells strips only in **Chicken flavour**. But the **top 2 selling flavours** in the year 2023 is **Pork/Bacon**. **Gardein** can try **introducing a strip product in Bacon flavour**.
- The **ACV for the Gardein products** is **much lower** compared to the market leader. The distribution can be increased.

Breakfast Sausage Patty form analysis across brands:

Morningstar Farm is only one brand selling meat substitute in the Breakfast Sausage patty form.



Top selling (\$) breakfast sausage form of products in 2023:

Year	Product x	Flavor / Scent	Type Of Meat S	Dollar Sales	Price per	Unit Sales	CV Weighted Distri
20	MORNINGSTAR FARMS FROZEN ORIGINAL SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 16 OZ - 0028989100901	ORIGINAL SAUSAGE	PORK	252,10,278	7	35,87,406	49
20	MORNINGSTAR FARMS FROZEN MAPLE SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 8 OZ - 0028989100921	MAPLE SAUSAGE	PORK	132,69,558	4	33,59,066	49
20	MORNINGSTAR FARMS FROZEN HOT & SPICY SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 8 OZ - 0028989100941	HOT & SPICY SAUSAGE	PORK	62,73,222	4	16,13,276	29
21	MORNINGSTAR FARMS FROZEN ORIGINAL SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 16 OZ - 0028989100901	ORIGINAL SAUSAGE	PORK	270,49,673	7	37,54,478	52
21	MORNINGSTAR FARMS FROZEN MAPLE SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 8 OZ - 0028989100921	MAPLE SAUSAGE	PORK	132,60,543	4	32,89,699	48
21	MORNINGSTAR FARMS FROZEN HOT & SPICY SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 8 OZ - 0028989100941	HOT & SPICY SAUSAGE	PORK	65,85,219	4	16,38,262	31
22	MORNINGSTAR FARMS FROZEN ORIGINAL SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 16 OZ - 0028989100901	ORIGINAL SAUSAGE	PORK	242,54,208	8	30,96,921	51
22	MORNINGSTAR FARMS FROZEN MAPLE SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 8 OZ - 0028989100921	MAPLE SAUSAGE	PORK	119,33,999	4	27,57,809	46
22	MORNINGSTAR FARMS FROZEN HOT & SPICY SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 8 OZ - 0028989100941	HOT & SPICY SAUSAGE	PORK	59,12,881	4	13,84,535	30
23	MORNINGSTAR FARMS FROZEN ORIGINAL SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 16 OZ - 0028989100901	ORIGINAL SAUSAGE	PORK	210,93,622	8	25,26,409	48
23	MORNINGSTAR FARMS FROZEN MAPLE SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 8 OZ - 0028989100921	MAPLE SAUSAGE	PORK	109,66,651	5	23,41,651	42
23	MORNINGSTAR FARMS FROZEN HOT & SPICY SAUSAGE MEAT SUBSTITUTE BREAKFAST SAUSAGE PATTY 8 OZ - 0028989100941	HOT & SPICY SAUSAGE	PORK	48,25,331	5	10,45,301	24

Total dollar sales in 2023: **37M \$**.

Morningstar Farm has 3 different products in this category each having a different flavour but all of them are Pork substitutes.

Recommendation 9:

- **Gardein** currently has **no product offering in the breakfast sausage patty** in this segment where **Morningstar** has earned **37 M\$ in sales in 2023**. **Gardein** should **venture in breakfast sausage patty** and they could do what Impossible did to Beyond in Burger patty form in the year 2021 & 2022.

Promotion sensitive Gardein Products:

Percentage share of dollar sales due to promotion for each Gardein product across each year was calculated and used as a metric to identify those products that respond well to promotions. To consider the significance of the product, only those with annual sales exceeding 1 M \$ were considered.

The following two products have >20% dollar sales due to merchandizing every year and has > 1 M \$ sales in the year 2023 and both belong to Burger form.

Recommendation 10:

Therefore, merchandising can be used to strongly enhance the sales of these products.

Gardein products that perform well on promotion	
Gardein Ultimate Plant Based Frozen Regular Meat Substitute Burger 8 OZ – 0842234007121	
Gardein Frozen Regular Meat Substitute Burger 12 OZ - 0842234000821	

Table listing the Gardein products that respond well to promotions across years:

Gardein products that respond better to promotions			
Year	Product x	Dollar Sales	Dollar Sales Any Merch%
20	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE BURGER 12 OZ - 0842234000821	5,307,797	25%
	GARDEIN FROZEN ORIGINAL MEAT SUBSTITUTE BREAKFAST PATTY 8 OZ - 0842234003311	4,578,442	24%
	GARDEIN FROZEN NASHVILLE HOT POULTRY SUBSTITUTE TENDER 8.1 OZ - 0842234403501	3,742,009	23%
	GARDEIN FROZEN CHIPOTLE BLACK BEAN MEAT SUBSTITUTE BURGER 50.8 OZ - 0842234001191	3,413,007	26%
	GARDEIN ULTIMATE PLANT BASED FROZEN REGULAR MEAT SUBSTITUTE BURGER 8 OZ - 0842234007121	2,349,748	32%
	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE SLICED 9 OZ - 0842234401021	1,795,076	24%
	GARDEIN FROZEN REGULAR SEAFOOD SUBSTITUTE CAKE 8.8 OZ - 0842234002111	1,697,352	25%
	GARDEIN FROZEN REGULAR POULTRY SUBSTITUTE NUGGET 8.6 OZ - 0842234403491	1,269,577	32%
	GARDEIN FROZEN SWEET AND TANGY POULTRY SUBSTITUTE WING 9 OZ - 0842234000791	1,195,460	29%
	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE MEATBALL 40 OZ - 0842234007111	867,597	19%
21	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE BURGER 12 OZ - 0842234000821	3,893,133	27%
	GARDEIN ULTIMATE PLANT BASED FROZEN REGULAR MEAT SUBSTITUTE BURGER 8 OZ - 0842234007121	3,857,497	30%
	GARDEIN FROZEN ORIGINAL MEAT SUBSTITUTE BREAKFAST PATTY 8 OZ - 0842234003311	3,753,104	27%
	GARDEIN FROZEN NASHVILLE HOT POULTRY SUBSTITUTE TENDER 8.1 OZ - 0842234403501	3,330,945	27%
	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE SLICED 9 OZ - 0842234401021	1,707,415	30%
	GARDEIN FROZEN REGULAR SEAFOOD SUBSTITUTE CAKE 8.8 OZ - 0842234002111	1,535,613	27%
	GARDEIN FROZEN REGULAR POULTRY SUBSTITUTE NUGGET 8.6 OZ - 0842234403491	1,237,432	37%
	GARDEIN FROZEN CHIPOTLE BLACK BEAN MEAT SUBSTITUTE BURGER 50.8 OZ - 0842234001191	1,234,185	43%
	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE MEATBALL 40 OZ - 0842234007111	1,163,446	36%
	GARDEIN ULTIMATE PLANT BASED FROZEN REGULAR MEAT SUBSTITUTE BURGER 8 OZ - 0842234007121	3,767,612	25%
22	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE BURGER 12 OZ - 0842234000821	2,729,236	25%
	GARDEIN FROZEN ORIGINAL MEAT SUBSTITUTE BREAKFAST PATTY 8 OZ - 0842234003311	2,114,789	31%
	GARDEIN FROZEN NASHVILLE HOT POULTRY SUBSTITUTE TENDER 8.1 OZ - 0842234403501	1,803,187	25%
	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE SLICED 9 OZ - 0842234401021	1,111,235	33%
	GARDEIN FROZEN REGULAR SEAFOOD SUBSTITUTE CAKE 8.8 OZ - 0842234002111	1,058,624	24%
	GARDEIN FROZEN CHIPOTLE BLACK BEAN MEAT SUBSTITUTE BURGER 50.8 OZ - 0842234001191	842,477	39%
	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE MEATBALL 40 OZ - 0842234007111	806,522	46%
	GARDEIN ULTIMATE PLANT BASED FROZEN REGULAR MEAT SUBSTITUTE BURGER 8 OZ - 0842234007121	2,527,099	23%
	GARDEIN FROZEN REGULAR MEAT SUBSTITUTE BURGER 12 OZ - 0842234000821	1,189,942	24%
	GARDEIN FROZEN REGULAR SEAFOOD SUBSTITUTE CAKE 8.8 OZ - 0842234002111	634,869	25%

Recommendation 11:

Capitalize on the Popularity of Frozen Products – Leveraging Promotional Activities and Product Features for Regional Sales Growth

- **Why Conagra Should Do It:**
 - **Capitalizing on Market Trends:** Leveraging promotional activities and product features aligns with current market trends where consumers are increasingly drawn to value-added products and special offers.
 - **Competitive Edge:** Implementing these strategies can help Conagra stay ahead of competitors by offering unique and appealing product propositions.

- **What Conagra Can Get by Doing That:**

- **Increased Sales Revenue and Market Expansion:** By driving sales growth through promotions and unique product features, Conagra can significantly increase its revenue in the targeted regions and expand its market reach.
- **Enhanced Brand Loyalty and Competitive Advantage:** Offering promotional activities and unique product features can help build stronger relationships with consumers, leading to increased brand loyalty and a competitive advantage in the market.

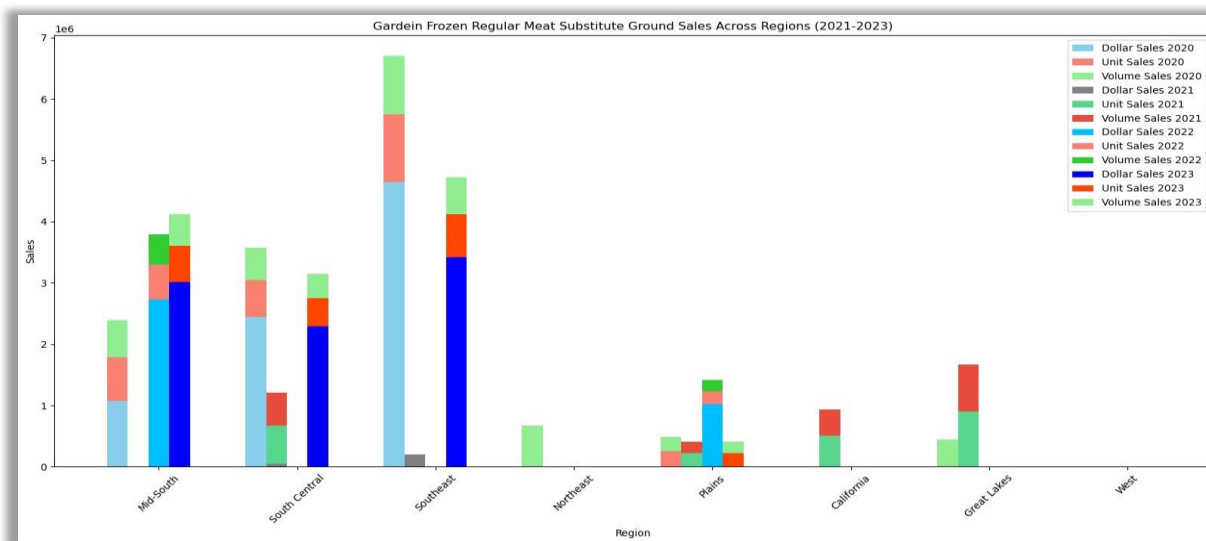
Detail: Conagra should focus on expanding Gardein's frozen product line in regions where this form has shown a strong preference, such as the SouthEast and South-Central regions. By introducing new flavors and variants in the frozen category, Conagra can capitalize on the existing market demand and maintain growth momentum. This strategy aligns with consumer preferences for convenience and variety, ultimately leading to increased market share and revenue growth. Additionally, expanding the frozen product line enhances Gardein's competitive edge and strengthens its position in the Meat Substitutes category.

In the evolving landscape of meat substitute products, understanding regional consumer preferences is key to unlocking market potential. The data paints a vivid picture of nuanced trends, revealing not just what consumers are buying, but **WHY?**

The data suggests that consumer preferences for meat substitute products vary significantly across regions and remain relatively consistent over the years. Across all regions, there is a clear preference for certain brands and flavors, with specific forms (such as refrigerated or frozen) also playing a role in consumer choices. This indicates a stable pattern in consumer behavior that can be leveraged for strategic product optimization and marketing efforts.

To delve deeper into the analysis, we can explore how these trends have evolved over the years and identify key factors driving consumer preferences in each region. By understanding these dynamics, we can develop targeted strategies to optimize Gardein's product offerings and capitalize on market trends.

Regional Sales Analysis



- **Regional Focus:**
 - a. Southeast: Strong market with consistent high sales, ideal for growth strategies.

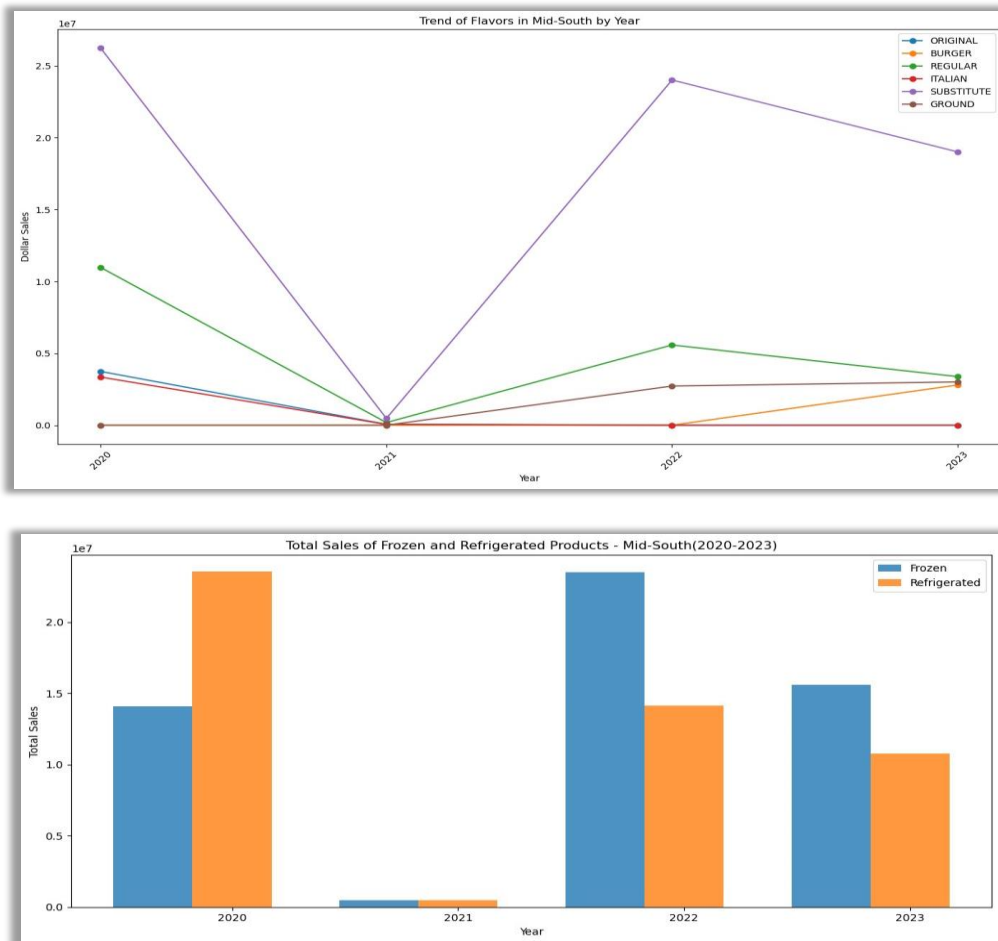
- b. South Central: Moderate to high sales, indicating growth opportunities.
- c. Mid-South: Consistent sales, suggesting growth potential with targeted campaigns.
- Forecasting for 2024:
 - a. Continued growth expected in Southeast, with potential growth in Mid-South and South Central.
 - b. Strategies like targeted marketing and diversifying product lines can drive growth.

Based on the data analysis, Gardein should focus on the following strategies for each region, form, and flavor preferences:

Form: Emphasize frozen products, as they have performed well across the region. Consider expanding the frozen product line with new flavors or variants flavour of original, regular or even Buffalo.

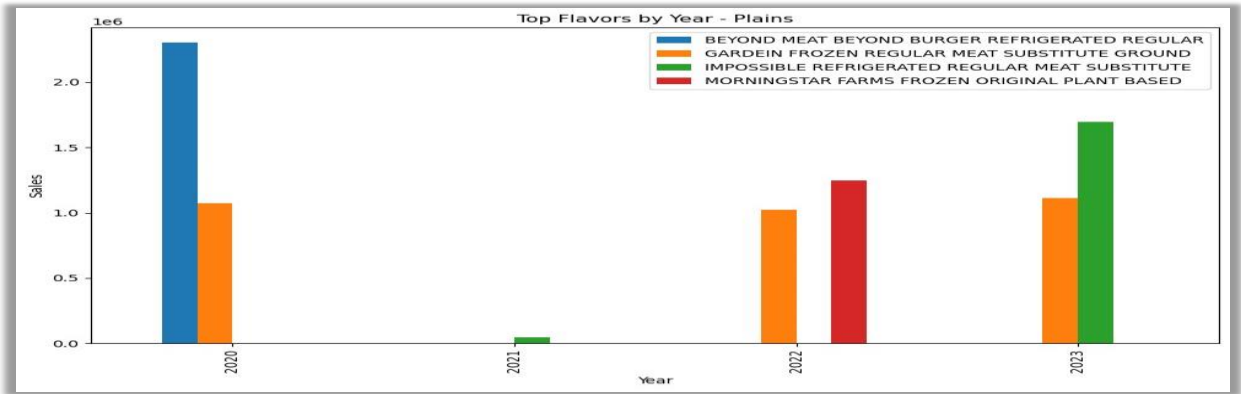
Flavor: Introduce new flavors to compete with Beyond Meat, which is dominant in this region. Focus on flavors that are popular in the Northeast, such as regular meat substitutes. **Regional Opportunities:** There is room to capture market share, especially with frozen products.

Mid south:



The Mid-South prefers brands like Beyond Meat, Impossible Foods, and Gardein, focusing on burger patties, more specifically on **meat substitute** available in **frozen** forms.

Plains

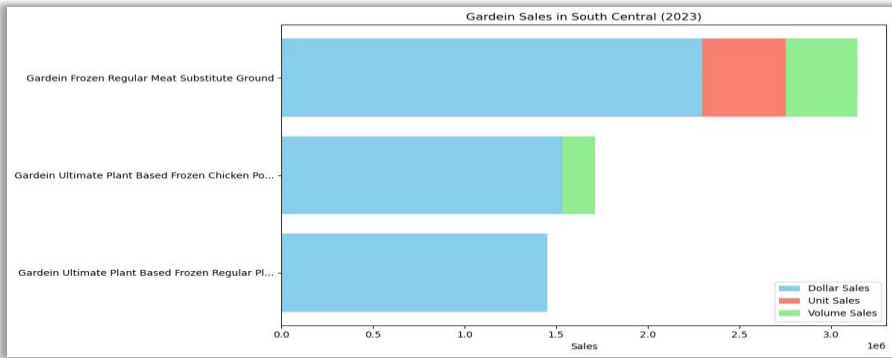
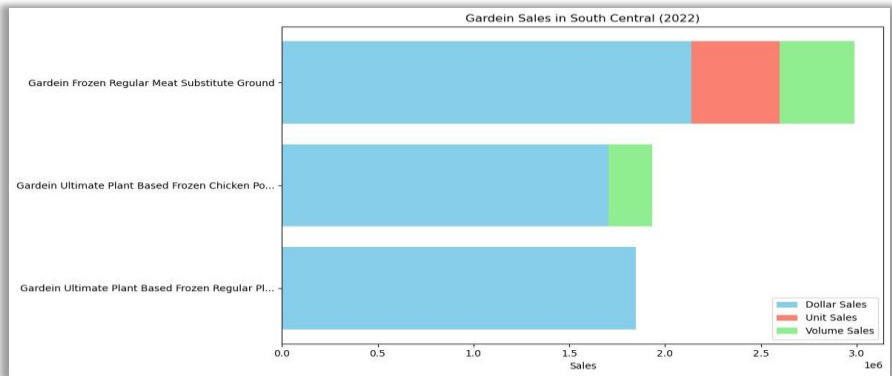


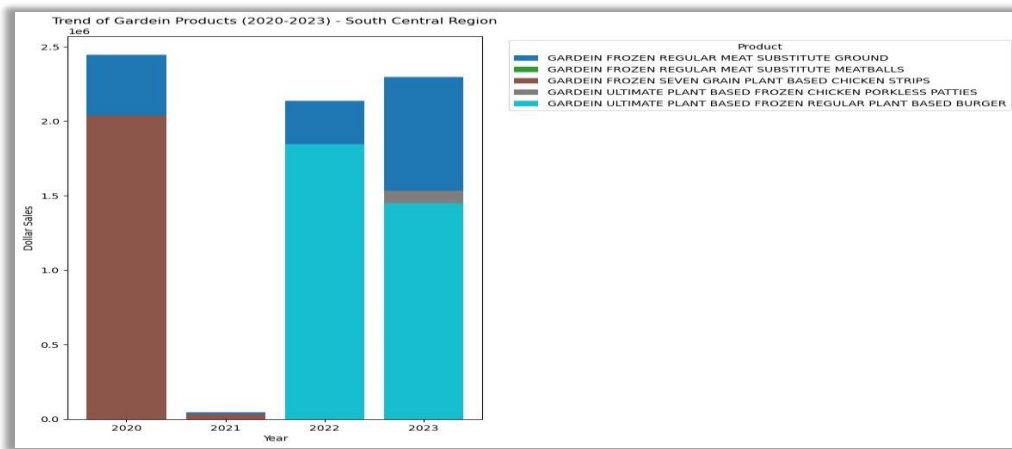
Form: Continue to focus on frozen products, which have shown strong potential for growth. Consider introducing new forms or packaging options to maintain growth in this region.

Flavor: Continue to promote flavors that have performed well, such as regular meat substitutes. Introduce new flavors or variants to cater to evolving consumer preferences.

Regional Opportunities: The success of products like "GARDEIN FROZEN REGULAR MEAT SUBSTITUTE GROUND" indicates a strong potential for further growth. Focus on innovation and new product development in this region.

South Central:





Form: Innovate and expand the frozen product line, focusing on products like "GARDEIN REGULAR MEATSUBSTITUTE GROUND" which have shown strength in this region.

Flavor: Introduce new flavors or variants to maintain growth. Focus on flavors that resonate with consumers in the South Central region.

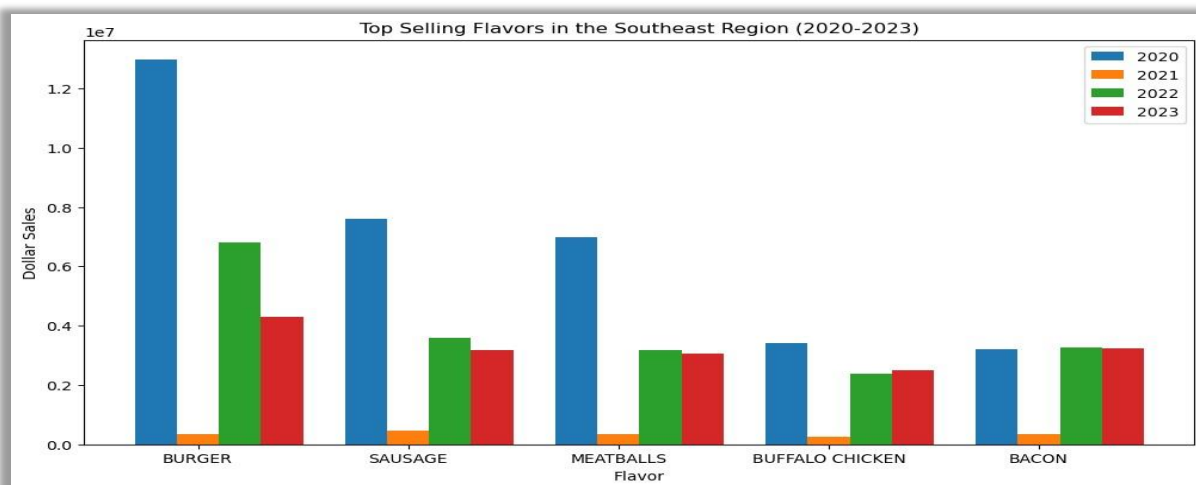
Regional Opportunities: Gardein has shown strength in this region, indicating opportunities for further growth. Enhance marketing efforts and expand distribution channels to capitalize on this potential.

Packaging Innovation: Gardein could consider innovative packaging designs that highlight the product's key features, such as flavor, form, and type. Eye-catching packaging can attract consumers' attention and differentiate Gardein products from competitors on the shelves.

SouthEast

Product Innovation: Considering the success of Beyond Meat's Beyond Burger and Beyond Sausage, which have been consistently popular, Gardein could focus on innovation in its burger and sausage products. Introducing new flavors or plant-based meat substitutes that mimic traditional meat products could appeal to a broader audience and drive growth.

Focus on Ground Meat Substitute: Gardein's Frozen Regular Meat Substitute in Ground form has consistently performed well across all years. Investing in this product category, potentially expanding the product line or enhancing marketing efforts, could help Gardein maintain its strong position and possibly move up in rankings.



The magnitudes of these coefficients are also higher than in the South Central region, indicating that these factors may have a stronger influence on sales in the Southeast region.

The analysis using a linear regression model for Gardein products in 2023, focusing on the Southeast region, revealed valuable insights. The model's performance was quite good, as indicated by the low Mean Squared Error (MSE) of 1195042.14 and the high R-squared value of 0.899.

The coefficients from the model provide further insights into the impact of different factors on sales:

Mean Squared Error: 19602061.590908475		
R-squared: 0.27816479726951737		
	Feature	Coefficient
0	Price per Unit	-5,427
1	Price per Unit Feature Only	5,498
2	Price per Unit Display Only	-4,236
3	Price per Unit * Price per Unit Feature Only	-1,258
4	Price per Unit * Price per Unit Display Only	853
5	Price per Unit Feature Only * Price per Unit D...	87

2023

Mean Squared Error: 1195042.1405537955		
R-squared: 0.8991531828826226		
	Feature	Coefficient
0	Price per Unit	327
1	Price per Unit Feature Only	16,067
2	Price per Unit Display Only	821
3	Price per Unit * Price per Unit Feature Only	-2,966
4	Price per Unit * Price per Unit Display Only	-131
5	Price per Unit Feature Only * Price per Unit D...	-164

Model Fit: The R-squared value of 0.899 indicates that the model fits the data well for 2023 than 2022, and it could be useful for predicting unit sales based on the given features.

Price Impact: The positive coefficient for "Price per Unit" suggests that higher prices are associated with higher unit sales, which is a common finding in many markets.

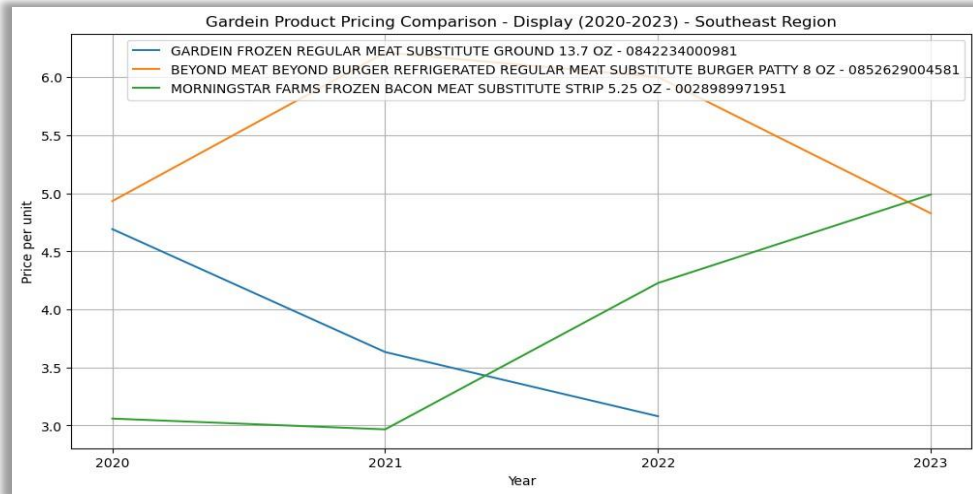
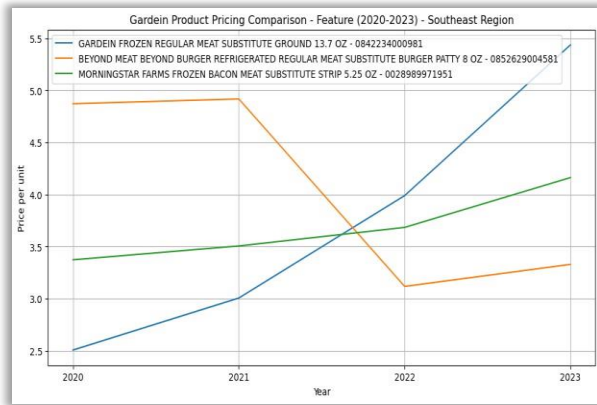
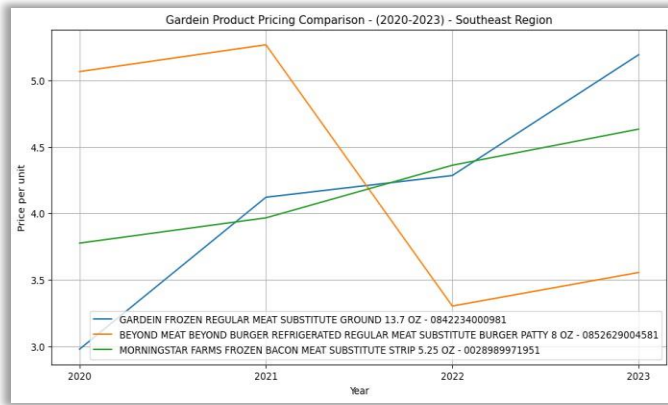
Recommendation 12:

Recommendation for 2024 Pricing Strategy

Based on the model results, it is recommended to focus on the "Price per Unit Feature Only" component, as it has the highest coefficient and thus the most significant impact on sales.

Consideration should also be given to the interaction effects, particularly the negative interaction between "Price per Unit" and "Price per Unit Feature Only," which suggests a potential saturation point in pricing strategy.

Impact of Features and Display: The positive coefficients for "Price per Unit Feature Only" and "Price per Unit Display Only" suggest that these factors are associated with higher unit sales. This indicates that promotional activities or special features may positively influence sales.



In summary, based on the coefficients and average prices, the company might consider slightly increasing the price per unit and price per unit feature only, while strategically using promotions or discounts (display only) to drive sales in the Southeast region.

Result:

These findings can be valuable in devising pricing strategies for Gardein products in 2024, with a focus on optimizing the "Feature Only" pricing component to maximize sales.

Recommendation 13:

Regional Flavor Strategy for Market Expansion

Based on our study, we have come out with the following recommendations and strategies Gardein can implement. **1. Strengthen Chicken Flavor Presence:**

- Gardein should increase marketing and distribution in the Northeast and West to maintain and grow their leadership in the chicken flavor market.

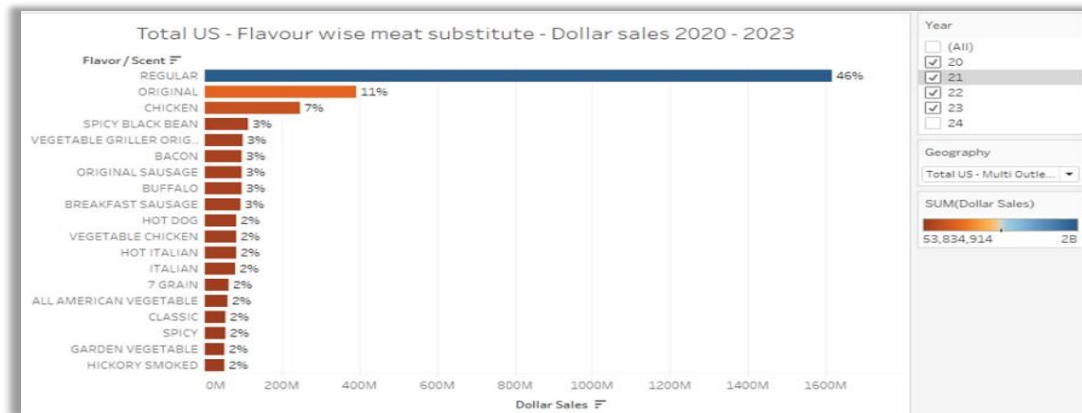
2. Innovate Based on Leading Flavors:

- Gardein could introduce new chicken products tailored to local preferences in the Northeast and West, and test limited edition flavors to attract customers.

3. Address Underperformance:

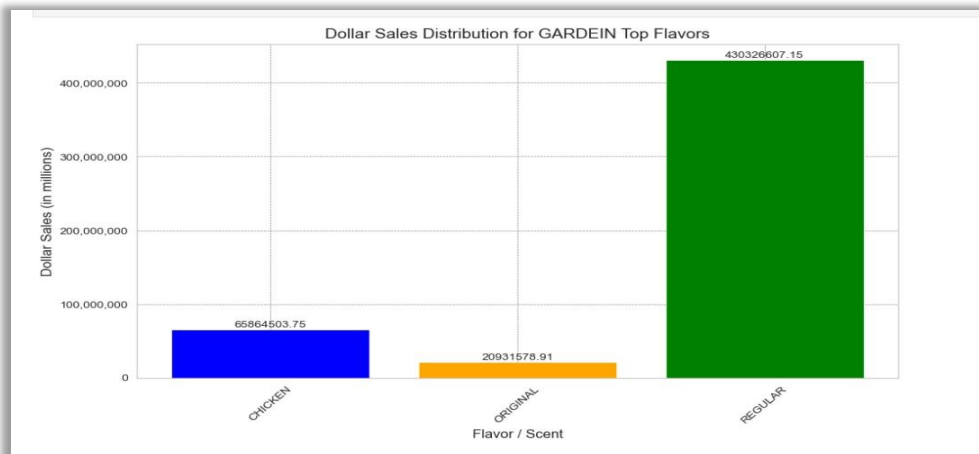
- In the Great Lakes region, where Gardein is behind in all flavors, particularly Original, the company should enhance marketing and partner with local celebrities to improve brand visibility and sales.

In our previous report, we identified the top-performing flavors and brands. The subsequent graphs reveal that **Regular**, **Original**, and **Chicken** are the leading flavors in terms of revenue, while Morningstar Farms, Impossible, and Gardein are the dominant brands.

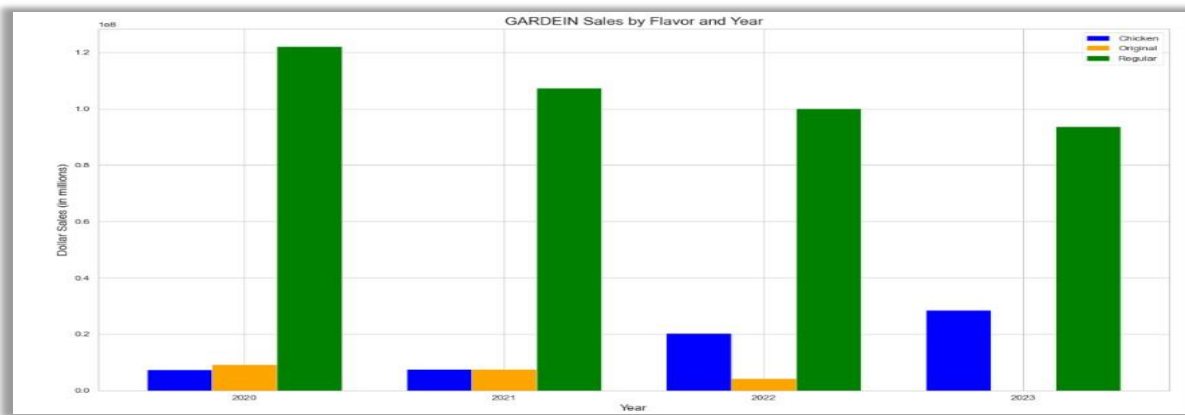


Moving forward, we will concentrate this part of our analysis on these specific brands and flavors, particularly examining Gardein's performance and exploring strategies to enhance its competitive standing.

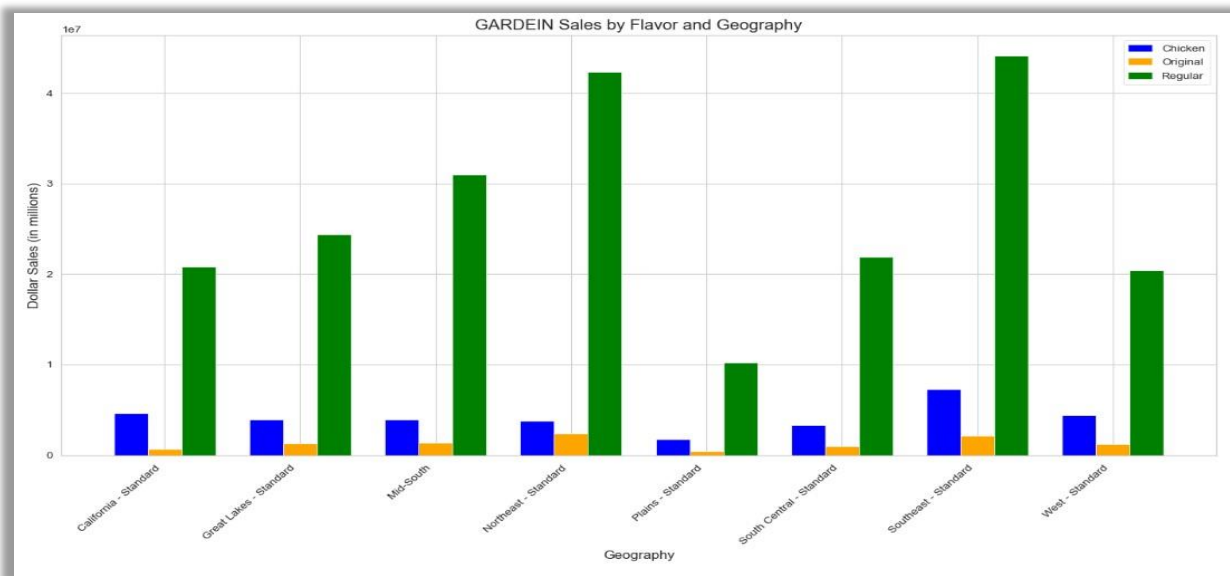
Flavor Popularity: Regular flavor is the top seller, bringing in \$403 million, followed by Chicken at \$66.6 million and Original at \$29 million, indicating a clear preference for the Regular flavor.



Sales Trend: While Regular flavor sales have declined over the years, Chicken flavor sales have been increasing, suggesting a growing popularity or availability of the Chicken flavor.



Regional Preference: Chicken flavor performs exceptionally well in the Southeast-Standard region, where it might be preferred or marketed effectively, highlighting an opportunity for focused marketing efforts in that area.



Detailed Statistical Analysis:

- Analyzed each flavor's performance across regions to identify consumer preferences and brand penetration.
- Utilized statistical tools to understand market trends and inform targeted strategies for growth and product development.

Market Share Analysis:

- Evaluated brand and flavor market share in each region based on percentage share.
- Focused on the leading brand in each region and flavor to understand market dynamics and competitive positioning.

Appendix: Full Table of Brand and Flavor Market Share Across Regions

The SAS System							
The MEANS Procedure							
Geography	N Obs	Variable	N	Mean	Std Dev	Minimum	Maximum
California - Standard	100427	Unit_Sales	100427	1264.98	3351.17	1.0000000	91694.88
		Dollar_Sales	100427	6472.06	17607.83	0.5100000	558656.34
		Volume_Sales	100427	845.5317632	2151.12	0.0625000	45847.44
Great Lakes - Standard	108770	Unit_Sales	108770	1173.81	2607.37	0.0100670	54698.94
		Dollar_Sales	108770	5865.45	13345.11	0.0280856	282637.04
		Volume_Sales	108770	813.6267891	1727.78	0.0059770	27349.47
Mid-South-	117463	Unit_Sales	117463	1105.38	2716.63	1.0000000	94078.16
		Dollar_Sales	117463	5670.26	14077.03	0.5100000	384926.55
		Volume_Sales	117463	772.0230601	1789.73	0.0686980	47039.08
Northeast - Standard	133861	Unit_Sales	133861	1406.60	3515.12	0.0232410	123606.99
		Dollar_Sales	133861	7660.14	19707.86	0.1624530	643688.54
		Volume_Sales	133861	992.6651779	2361.55	0.0174310	61803.50
Plains - Standard	89760	Unit_Sales	89760	454.9876455	992.1907784	1.0000000	14094.18
		Dollar_Sales	89760	2311.38	5007.55	0.0103444	75946.74
		Volume_Sales	89760	317.7939740	676.3667517	0.2600530	7921.98
South Central - Standard	84411	Unit_Sales	84411	832.3785506	1702.41	1.0000000	18995.03
		Dollar_Sales	84411	3996.96	8106.64	0.5100000	85815.12
		Volume_Sales	84411	584.3026506	1226.53	0.2230630	13375.89
Southeast - Standard	89677	Unit_Sales	89677	1610.49	3854.92	0.0101590	266635.20
		Dollar_Sales	89677	8127.31	18125.21	0.0334229	852003.00
		Volume_Sales	89677	1127.29	2515.91	0.0050790	133317.60
Total US - Multi Outlet + Conv	167413	Unit_Sales	167413	5652.38	16361.16	0.0101590	720358.99
		Dollar_Sales	167413	29020.83	86499.65	0.0334229	3094897.10
		Volume_Sales	167413	3920.90	10831.34	0.0050790	360179.50
West - Standard	99998	Unit_Sales	99998	1179.16	2705.96	0.0100000	64124.95
		Dollar_Sales	99998	6053.93	14534.67	0.0783000	284711.51
		Volume_Sales	99998	804.9633344	1788.97	0.0109380	32062.47

Note: Rename “Leading_Brand” column to “Brand” as it does not indicate the leading brand in a region and flavor; the leading brand is determined by the percentage share column.

Brand Share and Dollar to Unit Ratio for Each Flavor Across Geographies						
Geography	Flavor	Leading_Brand	Total_Dollar_Sales	Total_Unit_Sales	Brand_Percentage	Dollar_to_Unit_Ratio
California - Standard	CHICKEN	GARDEIN	\$11,000,182.68	1,567,111.16	47.91%	\$7.02
California - Standard	CHICKEN	IMPOSSIBLE	\$8,466,678.39	1,050,001.77	36.88%	\$8.06
California - Standard	CHICKEN	MORNINGSTAR FARMS	\$3,492,403.89	742,298.12	15.21%	\$4.70
California - Standard	ORIGINAL	GARDEIN	\$899,474.28	188,064.35	2.44%	\$4.78
California - Standard	ORIGINAL	MORNINGSTAR FARMS	\$35,950,102.94	6,456,853.36	97.56%	\$5.57
California - Standard	REGULAR	GARDEIN	\$25,175,550.65	5,114,165.45	25.74%	\$4.92
California - Standard	REGULAR	IMPOSSIBLE	\$57,470,643.60	7,720,656.32	58.75%	\$7.44
California - Standard	REGULAR	MORNINGSTAR FARMS	\$15,174,728.82	2,946,894.26	15.51%	\$5.15
Great Lakes - Standard	CHICKEN	GARDEIN	\$12,100,501.93	1,658,546.29	47.12%	\$7.30
Great Lakes - Standard	CHICKEN	IMPOSSIBLE	\$8,141,387.97	1,139,309.27	31.70%	\$7.15
Great Lakes - Standard	CHICKEN	MORNINGSTAR FARMS	\$5,438,633.91	1,108,001.03	21.18%	\$4.91
Great Lakes - Standard	ORIGINAL	GARDEIN	\$1,586,117.47	327,769.45	4.11%	\$4.84
Great Lakes - Standard	ORIGINAL	MORNINGSTAR FARMS	\$36,989,464.21	6,880,485.69	95.89%	\$5.38
Great Lakes - Standard	REGULAR	GARDEIN	\$31,516,994.07	6,188,951.19	31.51%	\$5.09
Great Lakes - Standard	REGULAR	IMPOSSIBLE	\$48,149,435.15	6,888,639.59	48.14%	\$6.99
Great Lakes - Standard	REGULAR	MORNINGSTAR FARMS	\$20,352,084.29	4,033,236.71	20.35%	\$5.05
Mid-South-	CHICKEN	GARDEIN	\$13,859,215.21	1,918,758.50	52.58%	\$7.22
Mid-South-	CHICKEN	IMPOSSIBLE	\$7,993,592.80	1,104,040.77	30.33%	\$7.24
Mid-South-	CHICKEN	MORNINGSTAR FARMS	\$4,503,736.23	824,034.98	17.09%	\$5.47
Mid-South-	ORIGINAL	GARDEIN	\$1,906,716.81	384,450.17	4.23%	\$4.96
Mid-South-	ORIGINAL	MORNINGSTAR FARMS	\$43,148,064.60	7,904,395.63	95.77%	\$5.46
Mid-South-	REGULAR	GARDEIN	\$39,989,450.32	7,847,757.67	36.48%	\$5.10
Mid-South-	REGULAR	IMPOSSIBLE	\$48,543,504.34	6,738,137.54	44.29%	\$7.20
Mid-South-	REGULAR	MORNINGSTAR FARMS	\$21,073,704.53	4,080,633.73	19.23%	\$5.16
Northeast - Standard	CHICKEN	GARDEIN	\$14,770,237.16	1,996,932.03	44.75%	\$7.40
Northeast - Standard	CHICKEN	IMPOSSIBLE	\$9,908,712.01	1,259,083.97	30.02%	\$7.87
Northeast - Standard	CHICKEN	MORNINGSTAR FARMS	\$8,329,826.32	1,099,313.56	25.24%	\$7.58
Northeast - Standard	ORIGINAL	GARDEIN	\$2,638,208.39	559,326.60	5.20%	\$4.72
Northeast - Standard	ORIGINAL	MORNINGSTAR FARMS	\$48,124,099.10	8,886,111.52	94.80%	\$5.42
Northeast - Standard	REGULAR	GARDEIN	\$52,240,950.19	9,629,302.29	34.54%	\$5.43
Northeast - Standard	REGULAR	IMPOSSIBLE	\$69,469,169.14	9,428,170.27	45.94%	\$7.37
Northeast - Standard	REGULAR	MORNINGSTAR FARMS	\$29,519,109.61	5,408,038.34	19.52%	\$5.46

Gardein faces tough competition from brands like Morningstar Farms and Impossible in the Original and Regular flavors across regions like California and the Great Lakes. However, Gardein excels in the Chicken flavor market, leading in California and capturing a significant share in regions like South-Central

Standard and Southeast-Standard. To boost revenue and market share, Gardein should enhance sales of its Original and Regular flavors in regions where it currently lags behind.

Statistical tests to confirm the results:

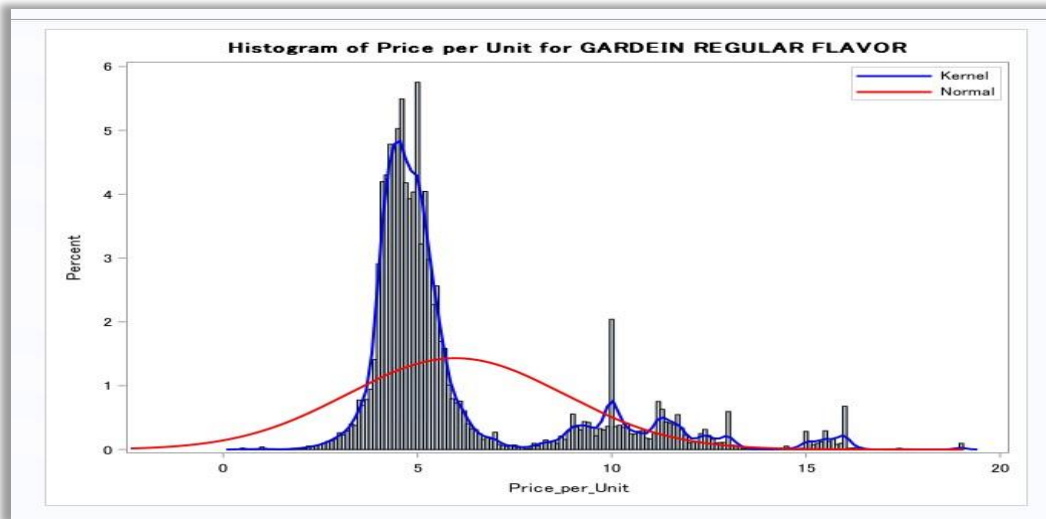
Location has a statistically significant but weak effect on prices, with less than a 3% chance that price differences are random. The spread of prices per unit is not typical, resembling a normal distribution only for prices below \$6.70. Higher prices likely indicate special or premium products, considered as outliers in our analysis.

The ANOVA Procedure					
Dependent Variable: Price_per_Unit					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	59.24662	7.40583	2.25	0.0211
Error	5455	17920.91208	3.28523		
Corrected Total	5463	17980.15870			

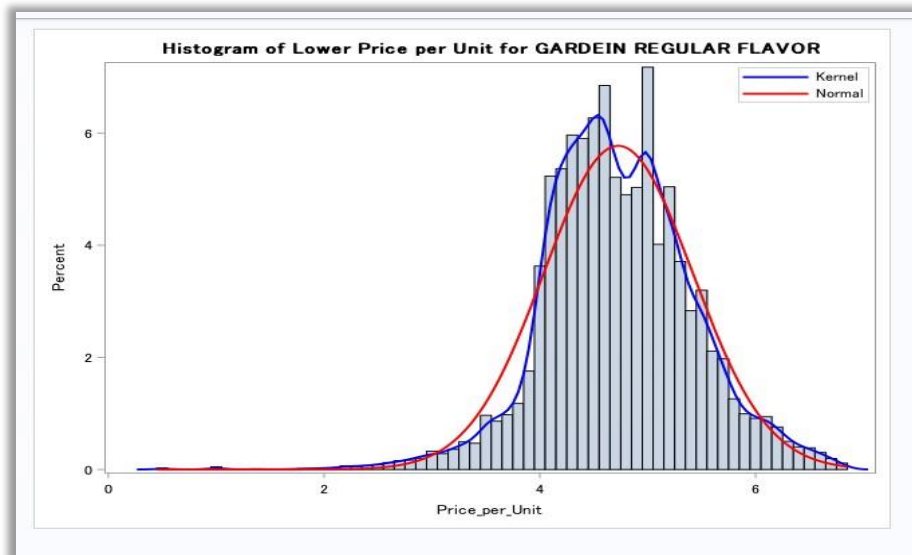
R-Square	Coeff Var	Root MSE	Price_per_Unit Mean
0.003295	30.80989	1.812519	5.882914

Source	DF	Anova SS	Mean Square	F Value	Pr > F
Geography	8	59.24662012	7.40582752	2.25	0.0211

The histogram of the regular prices of Gardein does not follow a normal distribution shape.



If we consider the normal regular prices of that flavor, we can see that it's very close to a normal distribution shape and the assumptions for normal distribution can be applied.



Looking at the results, we're trying to figure out if we can predict how well Gardein's Regular flavor will sell.

We started things off by checking the correlation between the potential predictors we want to use in the model. Our main goal is to predict the **dollar sales** based on the predictors. We found that some predictors are closely correlated. For example, the number of units sold, and the total sales volume have a super high match-up, with a correlation score of **0.97**. This means they often move in the same direction—when one goes up, so does the other. However, in our prediction model, we aim to use predictors that are not highly correlated to avoid **multicollinearity**, which can bias the results of the model.

The ANOVA Procedure

The CORR Procedure

5 Variables: Dollar_Sales Price_per_Unit Volume_Sales Unit_Sales Year

Simple Statistics						
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
Dollar_Sales	5464	12702	21117	69401516	4.99000	166077
Price_per_Unit	5464	5.88291	1.81418	32144	2.83194	9.74506
Volume_Sales	5464	1616	2692	8831248	0.62500	24780
Unit_Sales	5464	2210	3772	12072852	1.00000	39647
Year	5464	2022	1.10956	11047449	2020	2024

Pearson Correlation Coefficients, N = 5464 Prob > r under H0: Rho=0					
	Dollar_Sales	Price_per_Unit	Volume_Sales	Unit_Sales	Year
Dollar_Sales	1.00000	0.17944 <.0001	0.98091 <.0001	0.92249 <.0001	0.12223 <.0001
Price_per_Unit	0.17944 <.0001	1.00000	0.08001 <.0001	-0.04339 0.0013	0.64278 <.0001
Volume_Sales	0.98091 <.0001	0.08001 <.0001	1.00000	0.97611 <.0001	0.05024 0.0002
Unit_Sales	0.92249 <.0001	-0.04339 0.0013	0.97611 <.0001	1.00000	-0.01527 0.2590
Year	0.12223 <.0001	0.64278 <.0001	0.05024 0.0002	-0.01527 0.2590	1.00000

We developed a prediction model using price per unit, units sold, and year to estimate sales in dollars. The model indicates that for every dollar increase in price per unit, sales increase by \$302. Additionally, each additional unit sold corresponds to a sales increase of \$6.63, and sales increase by \$1,583.25 annually. The low p-values (all under 0.0001) indicate the importance of these factors in predicting sales. The model can explain 93% of the variance in sales, suggesting a good fit, although such a high fit might not generalize well to new data. Our

attempts to modify the model did not significantly impact its performance, indicating its potential accuracy in making predictions.

Regression Analysis with Interaction Terms for GARDEIN Brand?fs REGULAR Flavor

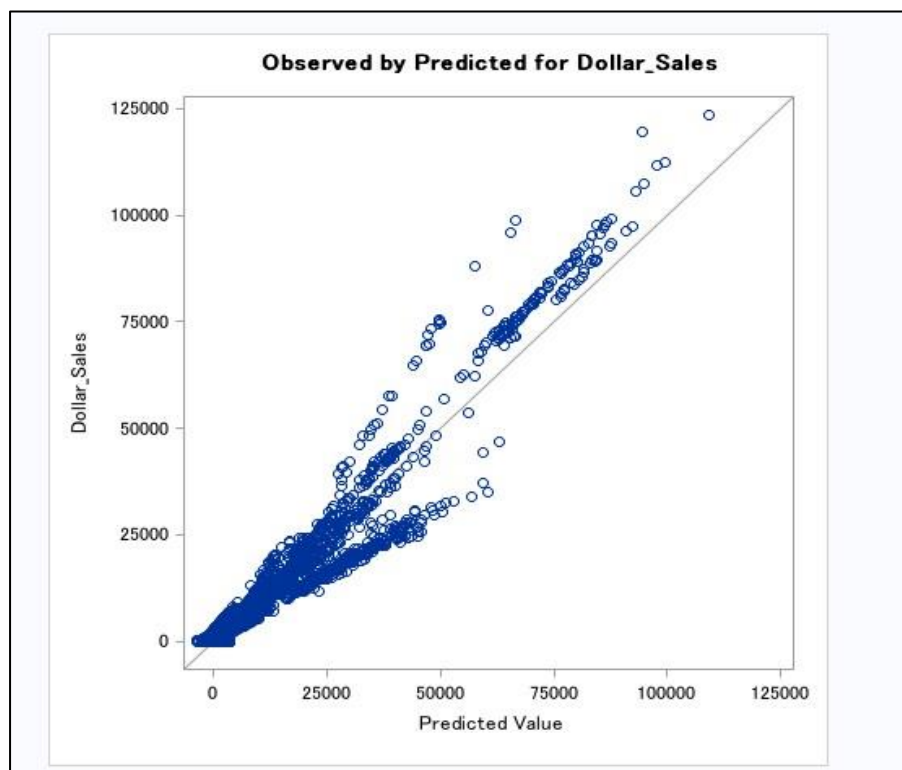
The REG Procedure
Model: MODEL1
Dependent Variable: Dollar_Sales

Number of Observations Read	4658
Number of Observations Used	4658

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	9.654415E11	3.218138E11	20884.0	<.0001
Error	4654	71716231165	15409590		
Corrected Total	4657	1.037158E12			

Root MSE	3925.50504	R-Square	0.9309
Dependent Mean	9278.71971	Adj R-Sq	0.9308
Coeff Var	42.30654		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	1	-3203950	107893	-29.70	<.0001
Price_per_Unit	1	302.07300	25.65218	11.78	<.0001
Volume_Sales	1	6.62740	0.02725	243.22	<.0001
Year	1	1583.25816	53.33943	29.68	<.0001



5. CONCLUSION

Our analysis of historical sales data in the meat substitute category across the US has provided valuable insights and opportunities to accelerate the growth of the Conagra brand, Gardein. Through a comprehensive examination of the market landscape and consumer trends, we have formulated a series of strategic recommendations aimed at optimizing Gardein's product offering and expanding its market presence.

- By optimizing Gardein's product portfolio through the removal of underperforming products and diversifying its offerings in specific forms such as Patty, Nugget, Link, Strip, and Breakfast Sausage Patty, we aim to capitalize on emerging consumer preferences and market trends.
- The introduction of new flavors, transparent packaging, and innovative product formulations will enable Gardein to emulate the success of industry leaders like Impossible and Beyond in key product categories.
- Furthermore, by increasing the distribution of successful products and implementing strategic pricing strategies tailored to observed market trends, Gardein can effectively capture market share and enhance profitability.
- Exploring partnerships with leading fast-food brands and expanding Gardein's frozen range in high-demand regions will further facilitate growth opportunities and market penetration.
- In addition, the introduction of new frozen flavors and variants, prioritization of "Price per Unit Feature Only" for pricing strategies, and strategic promotional initiatives will contribute to sustained sales growth and brand visibility.

Overall, by implementing these recommendations and maintaining a focus on understanding regional consumer preferences, Gardein can position itself as a leading player in the meat substitute category, driving continued growth and success in the dynamic US market landscape.

6. APPENDIX

Brand Share and Dollar to Unit Ratio for Each Flavor Across Geographies						
Geography	Flavor	Leading_Brand	Total_Dollar_Sales	Total_Unit_Sales	Brand_Percentage	Dollar_to_Unit_Ratio
California – Standard	CHICKEN	GARDEIN	\$11,000,182.68	1,567,111.16	47.91%	\$7.02
California – Standard	CHICKEN	IMPOSSIBLE	\$8,466,678.39	1,050,001.77	36.88%	\$8.06
California – Standard	CHICKEN	MORNINGSTAR FARMS	\$3,492,403.89	742,298.12	15.21%	\$4.70
California – Standard	ORIGINAL	GARDEIN	\$899,474.28	188,064.35	2.44%	\$4.78
California – Standard	ORIGINAL	MORNINGSTAR FARMS	\$35,950,102.94	6,456,853.36	97.56%	\$5.57
California – Standard	REGULAR	GARDEIN	\$25,175,550.65	5,114,165.45	25.74%	\$4.92
California – Standard	REGULAR	IMPOSSIBLE	\$57,470,643.60	7,720,656.32	58.75%	\$7.44
California – Standard	REGULAR	MORNINGSTAR FARMS	\$15,174,728.82	2,946,894.26	15.51%	\$5.15
Great Lakes – Standard	CHICKEN	GARDEIN	\$12,100,501.93	1,658,546.29	47.12%	\$7.30
Great Lakes – Standard	CHICKEN	IMPOSSIBLE	\$8,141,387.97	1,139,309.27	31.70%	\$7.15
Great Lakes – Standard	CHICKEN	MORNINGSTAR FARMS	\$5,438,633.91	1,108,001.03	21.18%	\$4.91
Great Lakes – Standard	ORIGINAL	GARDEIN	\$1,586,117.47	327,769.45	4.11%	\$4.84
Great Lakes – Standard	ORIGINAL	MORNINGSTAR FARMS	\$36,989,464.21	6,880,485.69	95.89%	\$5.38
Great Lakes – Standard	REGULAR	GARDEIN	\$31,516,994.07	6,188,951.19	31.51%	\$5.09
Great Lakes – Standard	REGULAR	IMPOSSIBLE	\$48,149,435.15	6,888,639.59	48.14%	\$6.99
Great Lakes – Standard	REGULAR	MORNINGSTAR FARMS	\$20,352,084.29	4,033,236.71	20.35%	\$5.05
Mid-South–	CHICKEN	GARDEIN	\$13,859,215.21	1,918,758.50	52.58%	\$7.22
Mid-South–	CHICKEN	IMPOSSIBLE	\$7,993,592.80	1,104,040.77	30.33%	\$7.24
Mid-South–	CHICKEN	MORNINGSTAR FARMS	\$4,503,736.23	824,034.98	17.09%	\$5.47
Mid-South–	ORIGINAL	GARDEIN	\$1,906,716.81	384,450.17	4.23%	\$4.96
Mid-South–	ORIGINAL	MORNINGSTAR FARMS	\$43,148,064.60	7,904,395.63	95.77%	\$5.46
Mid-South–	REGULAR	GARDEIN	\$39,989,450.32	7,847,757.67	36.48%	\$5.10
Mid-South–	REGULAR	IMPOSSIBLE	\$48,543,504.34	6,738,137.54	44.29%	\$7.20
Mid-South–	REGULAR	MORNINGSTAR FARMS	\$21,073,704.53	4,080,633.73	19.23%	\$5.16
Northeast – Standard	CHICKEN	GARDEIN	\$14,770,237.16	1,996,932.03	44.75%	\$7.40
Northeast – Standard	CHICKEN	IMPOSSIBLE	\$9,908,712.01	1,259,083.97	30.02%	\$7.87
Northeast – Standard	CHICKEN	MORNINGSTAR FARMS	\$8,329,826.32	1,099,313.56	25.24%	\$7.58
Northeast – Standard	ORIGINAL	GARDEIN	\$2,638,208.39	559,326.60	5.20%	\$4.72
Northeast – Standard	ORIGINAL	MORNINGSTAR FARMS	\$48,124,099.10	8,886,111.52	94.80%	\$5.42
Northeast – Standard	REGULAR	GARDEIN	\$52,240,950.19	9,629,302.29	34.54%	\$5.43
Northeast – Standard	REGULAR	IMPOSSIBLE	\$69,469,169.14	9,428,170.27	45.94%	\$7.37
Northeast – Standard	REGULAR	MORNINGSTAR FARMS	\$29,519,109.61	5,408,038.34	19.52%	\$5.46

Northeast – Standard	REGULAR	IMPOSSIBLE	\$69,469,169.14	9,428,170.27	45.94%	\$7.37
Northeast – Standard	REGULAR	MORNINGSTAR FARMS	\$29,519,109.61	5,408,038.34	19.52%	\$5.46
Plains – Standard	CHICKEN	GARDEIN	\$4,693,817.52	682,899.75	50.19%	\$6.87
Plains – Standard	CHICKEN	IMPOSSIBLE	\$3,358,736.26	470,438.14	35.92%	\$7.14
Plains – Standard	CHICKEN	MORNINGSTAR FARMS	\$1,299,051.18	264,274.89	13.89%	\$4.92
Plains – Standard	ORIGINAL	GARDEIN	\$530,317.92	112,786.70	3.48%	\$4.70
Plains – Standard	ORIGINAL	MORNINGSTAR FARMS	\$14,718,430.79	2,756,504.64	96.52%	\$5.34
Plains – Standard	REGULAR	GARDEIN	\$13,003,560.37	2,462,509.24	36.31%	\$5.28
Plains – Standard	REGULAR	IMPOSSIBLE	\$14,995,537.50	2,025,529.07	41.87%	\$7.40
Plains – Standard	REGULAR	MORNINGSTAR FARMS	\$7,811,823.82	1,565,603.94	21.81%	\$4.99
South Central – Standard	CHICKEN	GARDEIN	\$10,042,438.07	1,503,794.29	59.01%	\$6.68
South Central – Standard	CHICKEN	IMPOSSIBLE	\$4,983,223.60	725,875.55	29.28%	\$6.87
South Central – Standard	CHICKEN	MORNINGSTAR FARMS	\$1,992,813.95	399,426.87	11.71%	\$4.99
South Central – Standard	ORIGINAL	GARDEIN	\$1,181,266.46	262,318.78	4.76%	\$4.50
South Central – Standard	ORIGINAL	MORNINGSTAR FARMS	\$23,628,534.02	4,311,880.73	95.24%	\$5.48
South Central – Standard	REGULAR	GARDEIN	\$28,236,904.22	5,712,394.29	48.16%	\$4.94
South Central – Standard	REGULAR	IMPOSSIBLE	\$19,058,988.98	2,632,716.63	32.50%	\$7.24
South Central – Standard	REGULAR	MORNINGSTAR FARMS	\$11,340,786.00	2,370,071.87	19.34%	\$4.78
Southeast – Standard	CHICKEN	GARDEIN	\$16,430,561.96	2,586,884.44	59.54%	\$6.35
Southeast – Standard	CHICKEN	IMPOSSIBLE	\$7,184,614.39	1,046,153.90	26.04%	\$6.87
Southeast – Standard	CHICKEN	MORNINGSTAR FARMS	\$3,979,535.80	654,932.42	14.42%	\$6.08
Southeast – Standard	ORIGINAL	GARDEIN	\$2,418,061.99	552,687.01	5.83%	\$4.38
Southeast – Standard	ORIGINAL	MORNINGSTAR FARMS	\$39,047,092.12	7,268,656.56	94.17%	\$5.37
Southeast – Standard	REGULAR	GARDEIN	\$51,247,164.31	10,662,497.89	41.35%	\$4.81
Southeast – Standard	REGULAR	IMPOSSIBLE	\$48,767,828.75	6,807,308.98	39.34%	\$7.16
Southeast – Standard	REGULAR	MORNINGSTAR FARMS	\$23,935,032.54	4,774,578.53	19.31%	\$5.01
Total US – Multi Outlet + Conv	CHICKEN	GARDEIN	\$94,523,606.32	13,540,256.40	50.62%	\$6.98
Total US – Multi Outlet + Conv	CHICKEN	IMPOSSIBLE	\$58,763,001.78	7,977,835.33	31.47%	\$7.37
Total US – Multi Outlet + Conv	CHICKEN	MORNINGSTAR FARMS	\$33,444,915.28	6,057,524.04	17.91%	\$5.52
Total US – Multi Outlet + Conv	ORIGINAL	GARDEIN	\$12,709,972.64	2,709,221.43	4.39%	\$4.69
Total US – Multi Outlet + Conv	ORIGINAL	MORNINGSTAR FARMS	\$276,496,700.07	51,199,730.80	95.61%	\$5.40
Total US – Multi Outlet + Conv	REGULAR	GARDEIN	\$268,288,804.04	52,837,437.57	34.77%	\$5.08
Total US – Multi Outlet + Conv	REGULAR	IMPOSSIBLE	\$360,706,019.87	49,943,667.13	46.75%	\$7.22

Total US – Multi Outlet + Conv	CHICKEN	GARDEIN	\$94,523,606.32	13,540,256.40	50.62%	\$6.98
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Total US – Multi Outlet + Conv	REGULAR	IMPOSSIBLE	\$360,706,019.87	49,943,667.13	46.75%	\$7.22
Total US – Multi Outlet + Conv	REGULAR	MORNINGSTAR FARMS	\$142,606,757.56	28,009,732.01	18.48%	\$5.09
West – Standard	CHICKEN	GARDEIN	\$11,626,651.79	1,625,329.93	46.95%	\$7.15
West – Standard	CHICKEN	IMPOSSIBLE	\$8,726,056.35	1,182,931.96	35.24%	\$7.38
West – Standard	CHICKEN	MORNINGSTAR FARMS	\$4,408,914.01	965,242.19	17.81%	\$4.57
West – Standard	ORIGINAL	GARDEIN	\$1,549,809.32	321,818.37	4.25%	\$4.82
West – Standard	ORIGINAL	MORNINGSTAR FARMS	\$34,890,912.31	6,734,842.67	95.75%	\$5.18
West – Standard	REGULAR	GARDEIN	\$26,878,229.92	5,219,859.55	28.43%	\$5.15
West – Standard	REGULAR	IMPOSSIBLE	\$54,250,912.41	7,702,508.74	57.39%	\$7.04
West – Standard	REGULAR	MORNINGSTAR FARMS	\$13,399,487.94	2,830,674.63	14.18%	\$4.73

Fit Diagnostics for Dollar_Sales

