

Attainable Sustainability

By Maya Dakua



01.

Introduction

Attainable Sustainability



Purpose

Social

Economic

Community

Health



How much of an impact does the affordability and accessibility have on the ecological benefits of farmers' markets?



Methodology

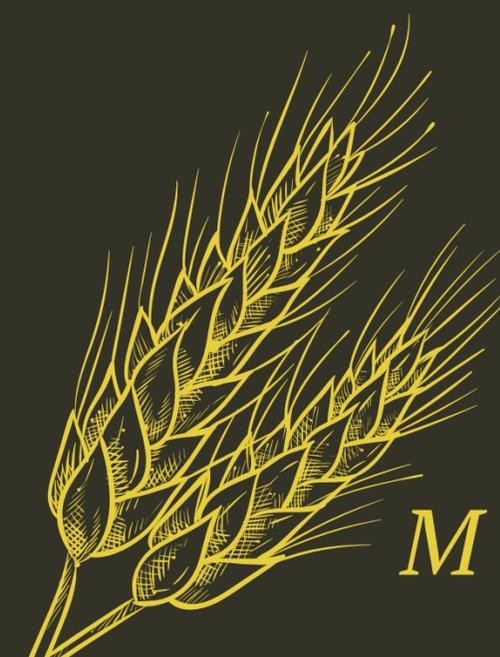
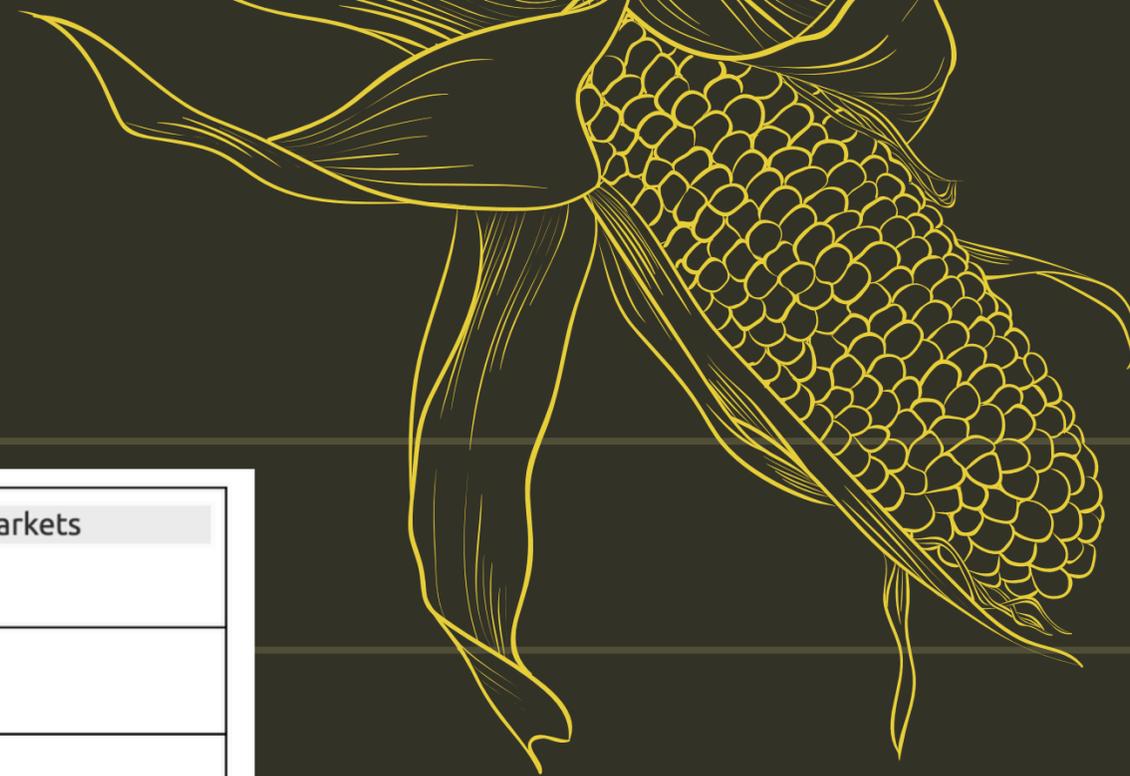
City	Median Income in the Past 12 Months (in 2023 Inflation-Adjusted Dollars)	# of Farmers markets
Cupertino link	231,139	1
Palo Alto link	184,068	2
San Jose link	136,229	9
Oakland link	92,015	4
San Francisco link	126,730	15

Question

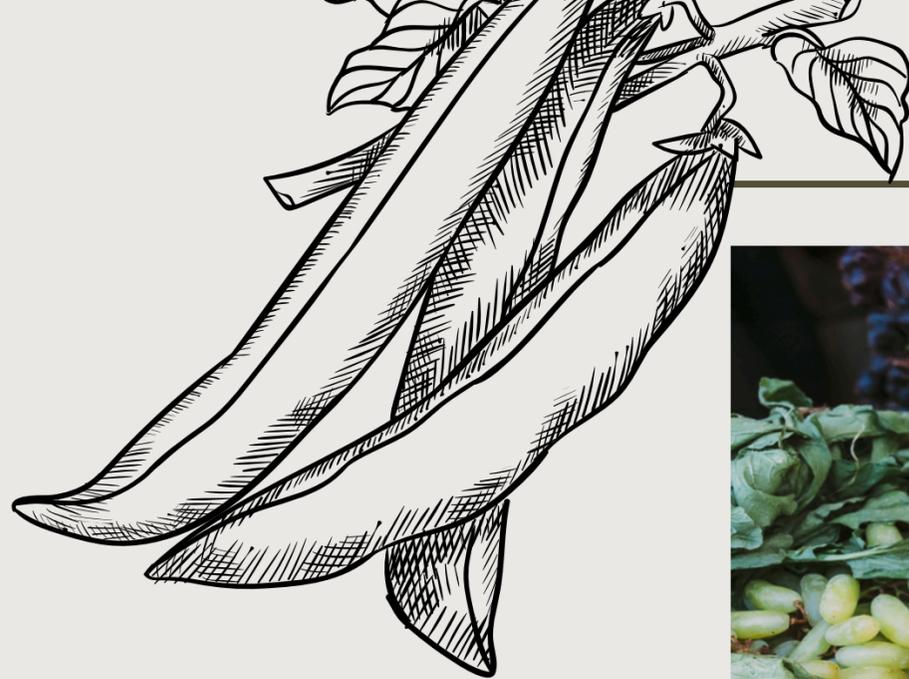
How much of an impact does the affordability and availability of farmer's market's effect its sustainability?

- Relationship between pricing, geographic availability, and consumer behavior, identifying barriers

Addressing Gaps

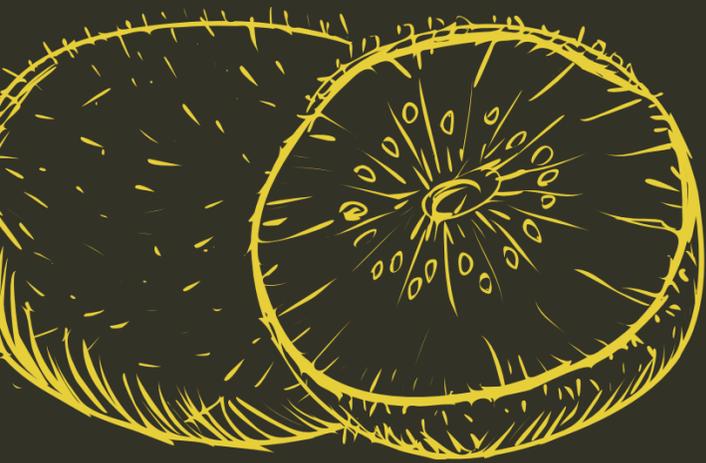


02.



Results and Findings

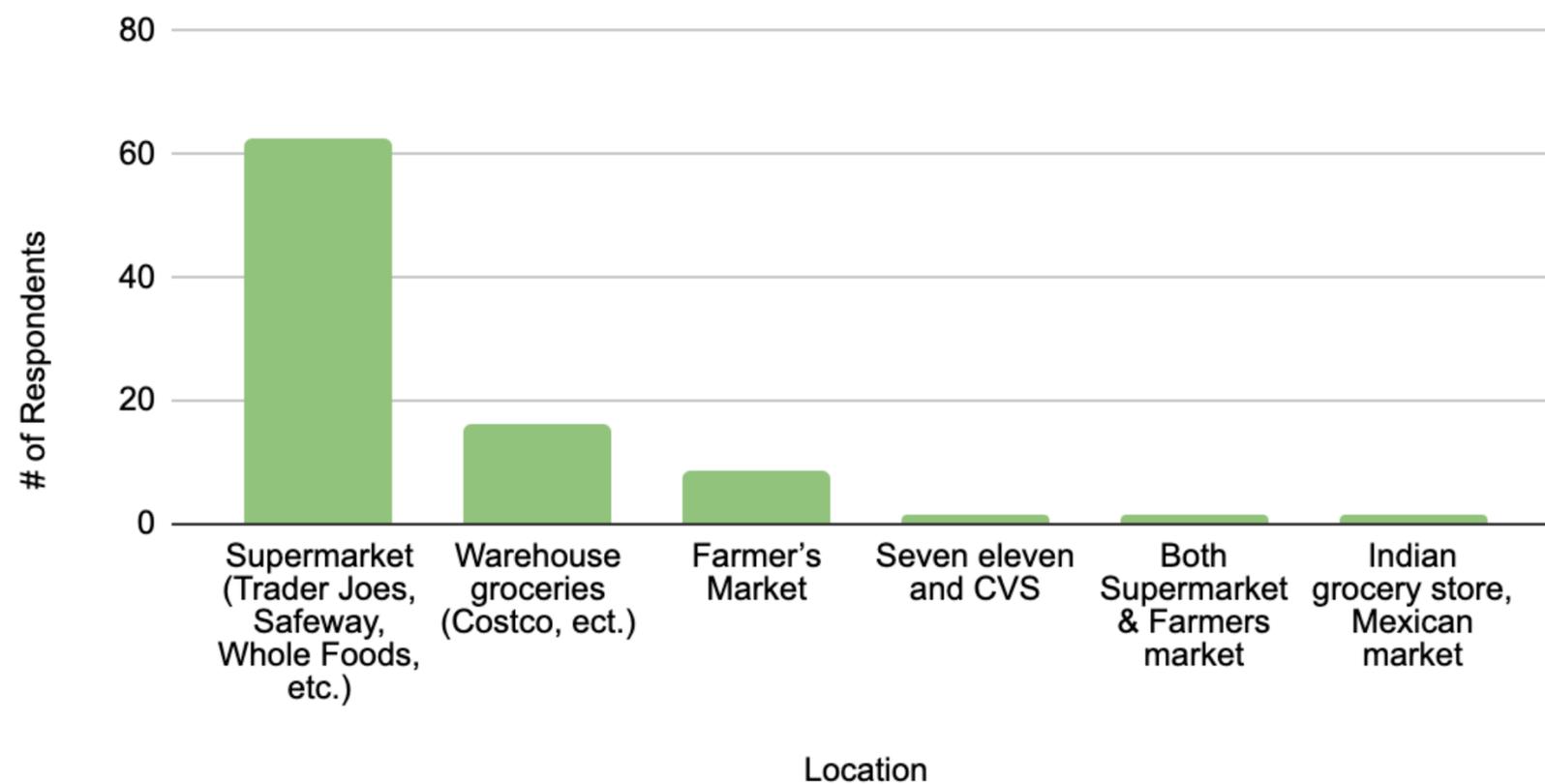




Data 1



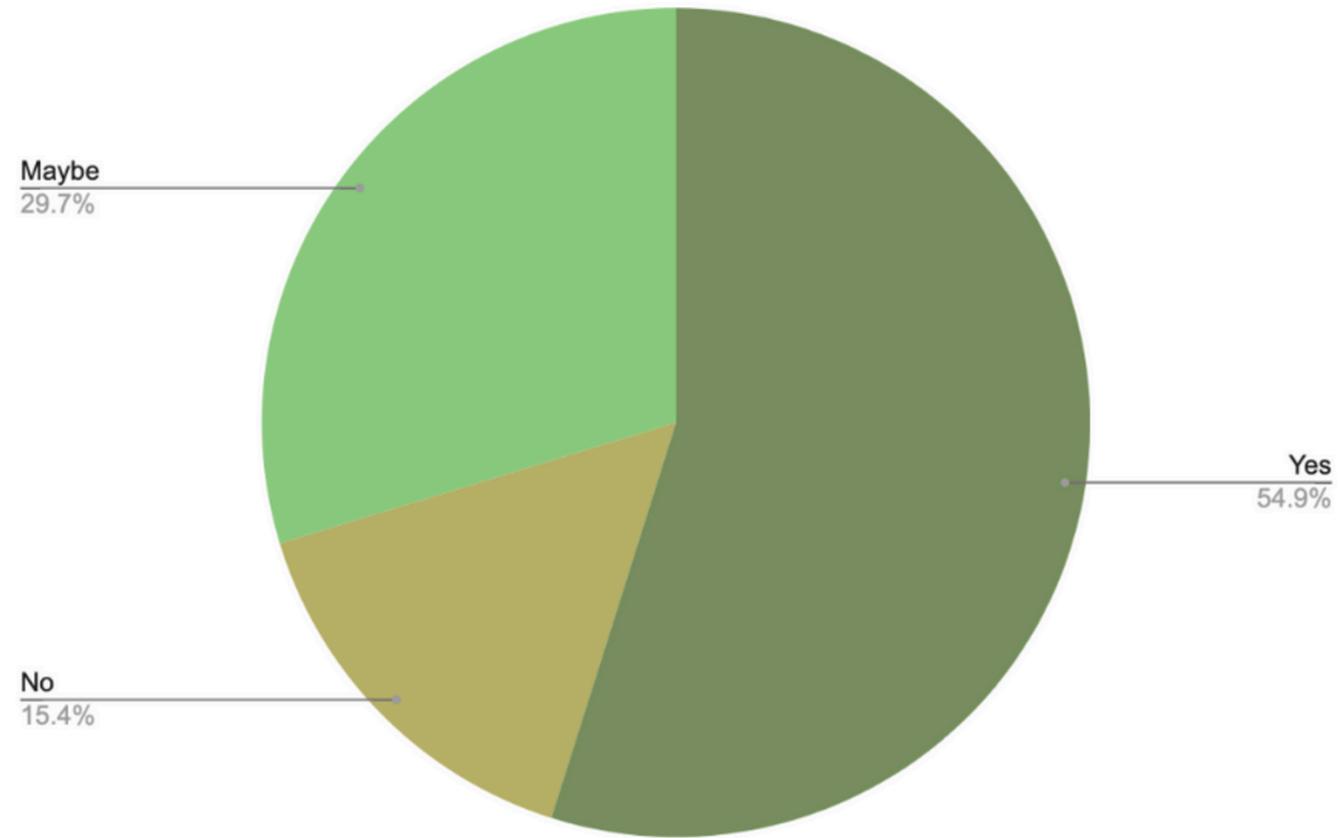
Count of Where Bay Area Residents' Grocery Location Preferences



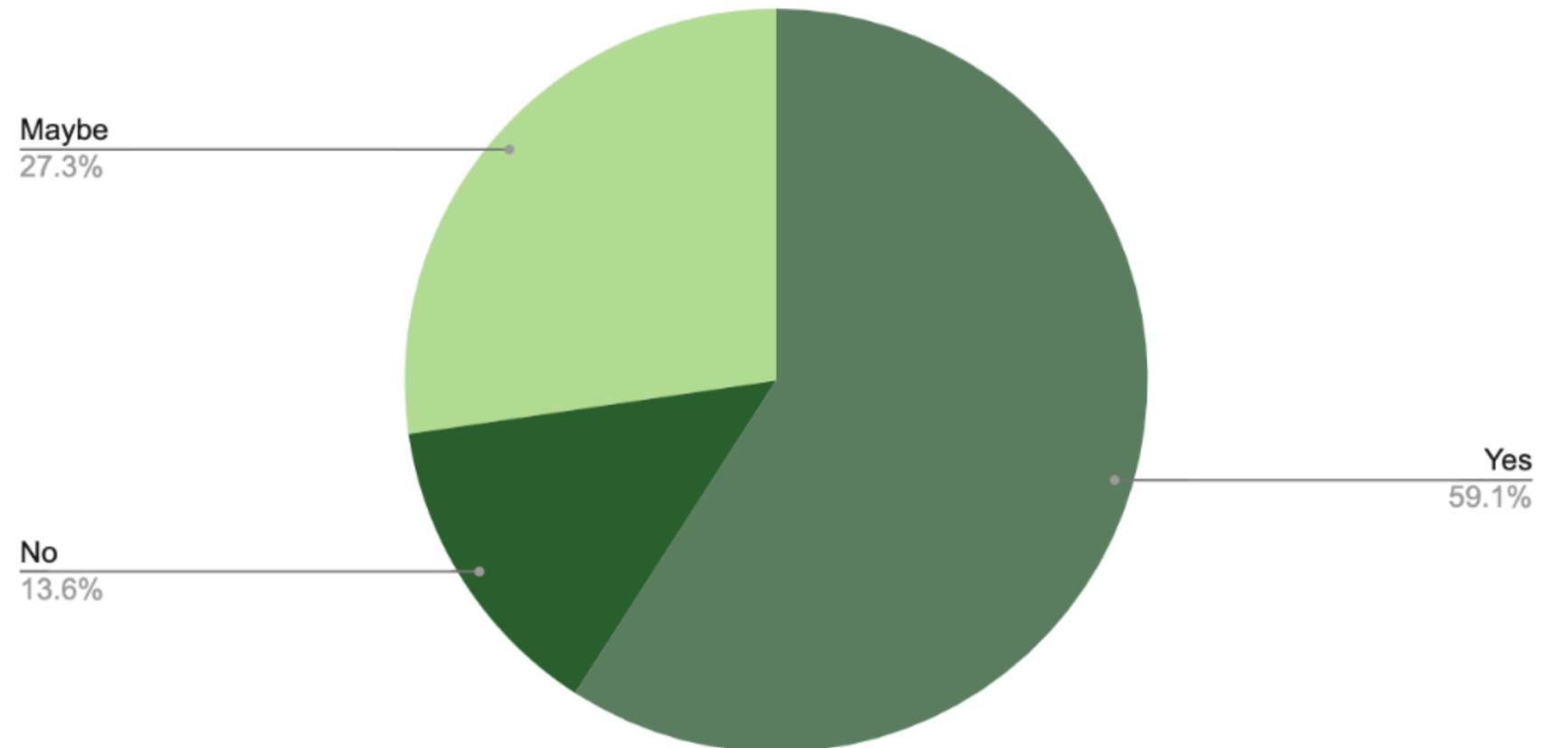
Question: “Where would you consider to be the place you buy your groceries from regularly/the most?”

Data 2

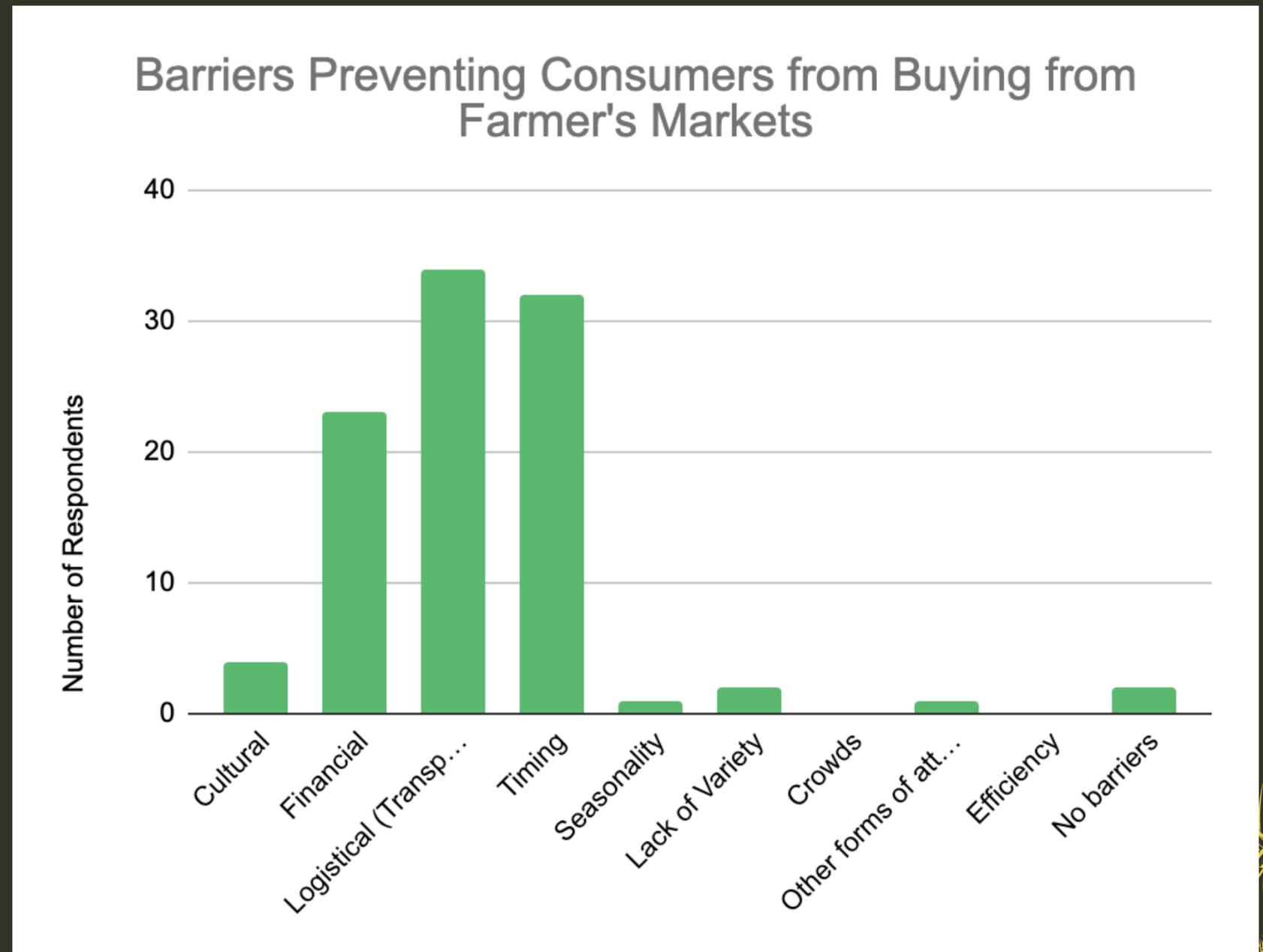
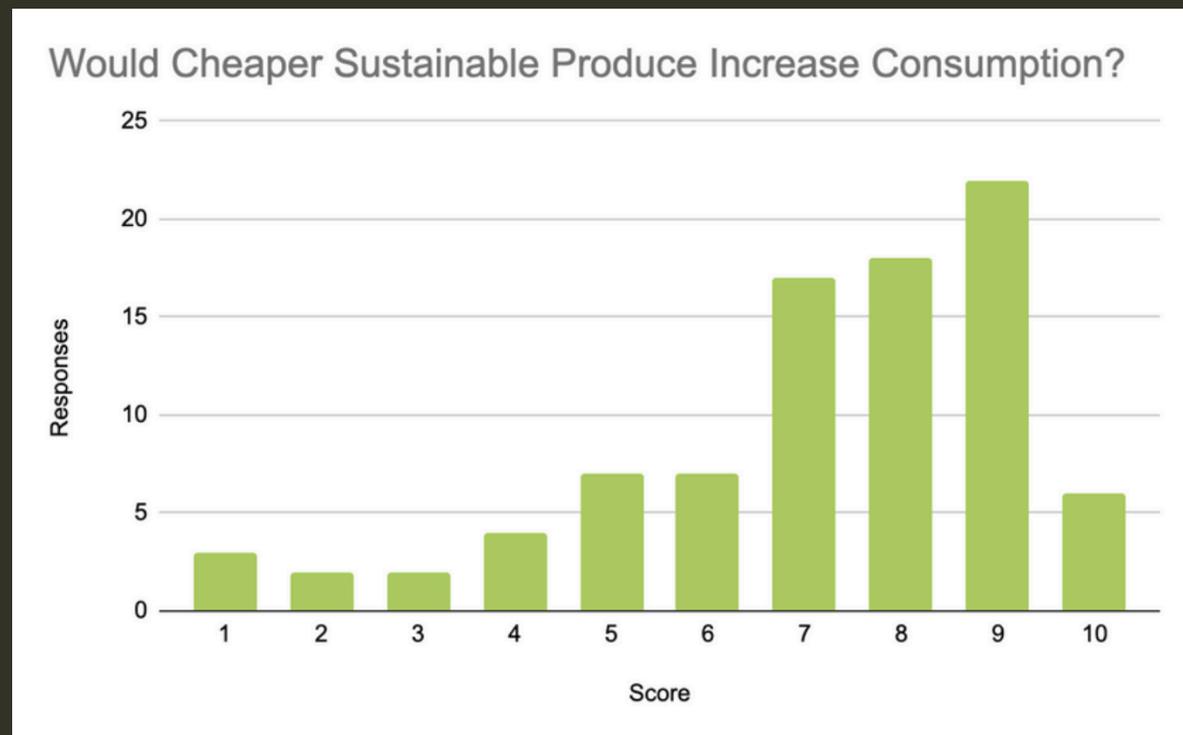
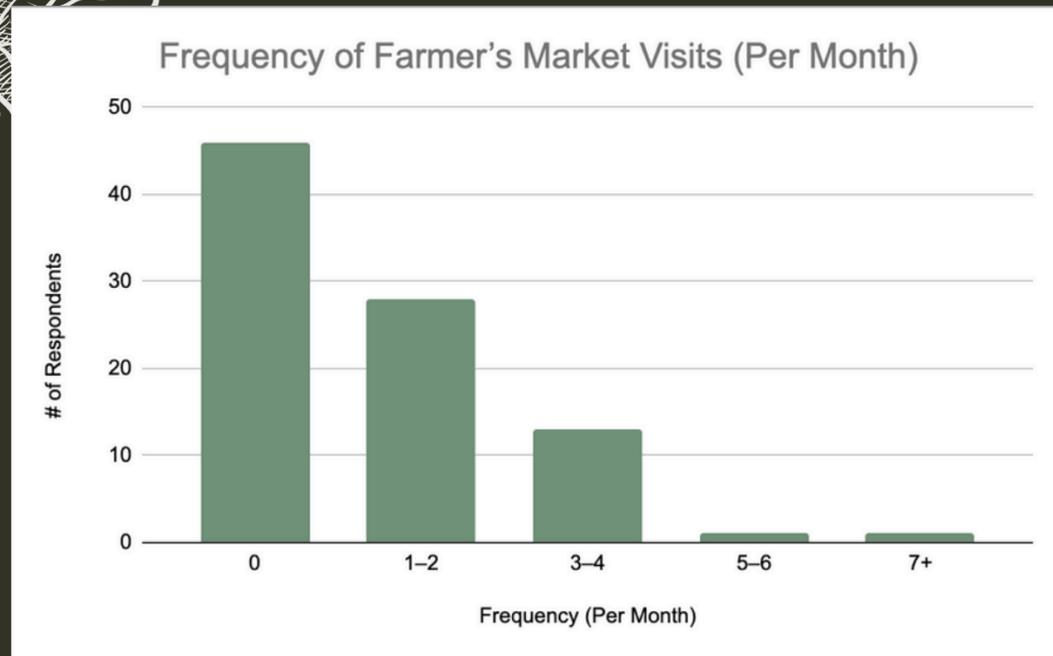
Evaluation of Affects of Price on Consumer Purchasing Decisions



Evaluation of Affects of Location of Consumer Purchasing Decisions



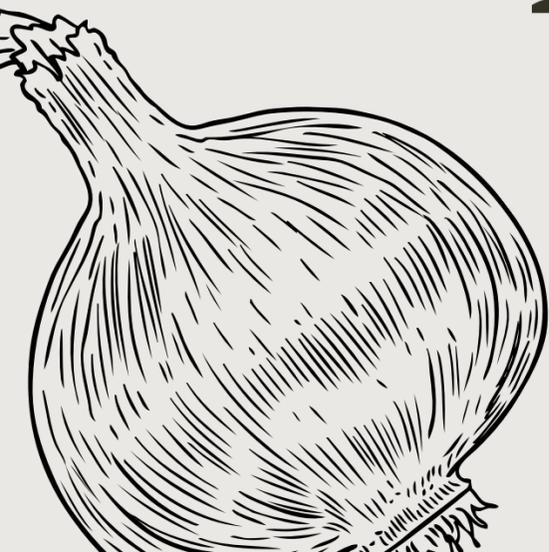
Additional Collected Data



03.



Analysis and Conclusion





Changes

Conventional Shipping:
1,500 miles from farm to
plate

20% Shift

swapping 1 lb of produce to
sustainable → saves .5 lbs CO₂
emissions

*1,080 lbs of CO₂
per year*



Changes

*Reduced Plastic
Packaging*

*Support
sustainable
agricultural
practices*

*Fresher Foods
requiring less
refrigeration*





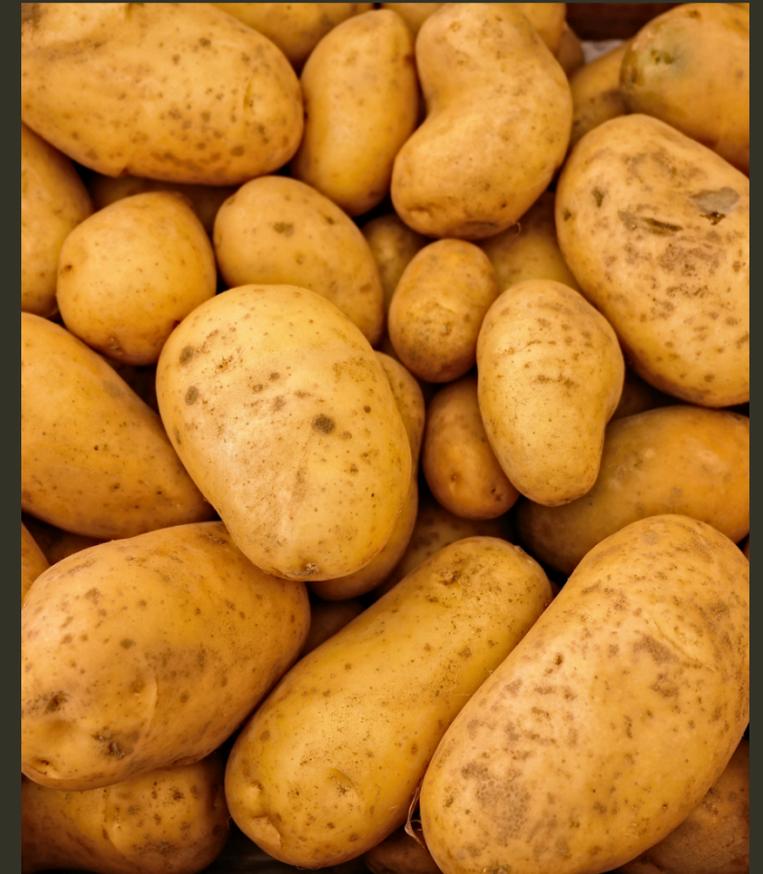
Next Steps

Solutions

- Co-op farming
- Subsidies
- Tax-Breaks
- Online sales/delivery
- Urban Farming
- Educational Campaigns
- Food hubs
- Reduced Waste

Current Effects

- small-scale production
- Labor intensive practices
- Transportation and market costs
- No government subsidies that industrial agriculture typically receives
- Perishability
- Living wages.





CONCLUSION



Reflection

- Original plan → research producers and consumers
 - Lack of connections
 - inconsistencies
- Timing → consider more aspects of barriers
- Researched more on solutions
 - e.g. food waste
- Collecting Consumer data
- Research
 - Finding Gaps
 - Existing data was lacking
 - gave me a lead
- IRB submissions
- Data correlation
 - FM → Environment



Thanks!

References

Bell, E. M., & Horvath, A. (2020, March 3). *Modeling the carbon footprint of fresh produce: effects of transportation, localness, and seasonality on US orange markets*. IOP Publishing Ltd. Retrieved December 9, 2024, from <https://iopscience.iop.org/article/10.1088/1748-9326/ab6c2f/meta>

Esrich, Shannon K., "Gone to Market: Perceptions, Motivations, and Values of Farmers Market Participants in Burlington, Vermont" (2015). *UVM College of Arts and Sciences College Honors Theses*. 4. <https://scholarworks.uvm.edu/castheses/4>

Giampietri, E., Koemle, D. B. A., Yu, X., & Finco, A. (2016). Consumers' Sense of Farmers' Markets: Tasting Sustainability or Just Purchasing Food? *Sustainability*, 8(11), 1157. <https://doi.org/10.3390/su8111157>

This reliable information holds an objective/factual sentiment toward research surrounding produce consumption. The audience is targeted towards researchers/scientists wanting to dive deeper into the minds of consumer psychology and the impact local gatherings like farmers' markets have on communities. The readability of the text was fairly easy, well organized, and used professional language. The source helped introduce me to new terms like "short food supply chains", WTP, and other economic aspects that impact environmental economics but DID NOT provide me with the information I needed. It mainly just covered research processes and didn't go in-depth into positives and negatives but rather policy. ONLY talks about what research people have done (is more of like a review)

Golsteijn, Laura. "Life Cycle Assessment (LCA) Explained." PRé Sustainability, 14 May 2024, pre-sustainability.com/articles/life-cycle-assessment-lca-basics/.

Govindasamy, R., Zurbruggen, M., Italia, J., Adesoji, A. O., Nitzsche, P., & Richard, V. (1998). *Farmers Markets: Consumer Trends, Preferences, and Characteristics*. AgEconSearch. Retrieved December 11, 2024, from <https://ageconsearch.umn.edu/record/36722/?v=pdf>

Hartling, X. (. (2019). A quick guide to building a local food system and reducing carbon footprint. *E - Journal of Social & Behavioural Research in Business*, 10(2), 1-9. Retrieved from <https://www.proquest.com/scholarly-journals/quick-guide-building-local-food-system-reducing/docview/2307081119/se-2>

Shindelar, R. (2015). The Ecological Sustainability of Local Food Systems. *RCC Perspectives*, 1, 19–24. <http://www.jstor.org/stable/26241302>

Török, Á., Kovács, S., Maró, G., & Maró, Z. M. (2024). Understanding the relevance of farmers' markets from 1955 to 2022: A bibliometric review. *Journal of Agriculture and Food Research*, 16, 101108. <https://doi.org/10.1016/j.jafr.2024.101108>

Vermeir, I., Weijters, B., De Houwer, J., Geuens, M., Slabbinck, H., Spruyt, A., Van Kerckhove, A., Van

Lippevelde, W., De Steur, H., & Verbeke, W. (2020). Environmentally Sustainable Food Consumption: A Review and Research Agenda From a Goal-Directed Perspective. *Frontiers in Psychology, 11*, 520238. <https://doi.org/10.3389/fpsyg.2020.01603>

This information is extremely well organized and well written. The journal belongs to Frontiers in Physiology which is known for its physiology journals "the most cited physiology journals". The journal is written by a series of researchers and professors all within the related field of environmental economics and environmental sciences along with various peer editors. This journal is easily readable for intermediate readers interested in researching data about topics like carbon footprints, ecological conditioning, nutrition, environmental nutrition, etc. This source was extremely helpful to me since it displayed various data referring to carbon footprints, food consumption,

Warsaw, P., Archambault, S., He, A., & Miller, S. (2021). The Economic, Social, and Environmental Impacts of Farmers Markets: Recent Evidence from the US. *Sustainability, 13*(6), 3423.

<https://doi.org/10.3390/su13063423>

Text is unbiased and presents information in an informative way that states facts, and data, and has proper in-text citations. The journal is targeted toward researchers wanting to know about the general scope of the systems of farmer's markets in America and their place in the economy. The source was extremely helpful and provided a lot of insight, especially on policy, organizations, sustainability, etc.

