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Research Article

Metropolitan Consumers: Preferences for Local Food in the Supermarket

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Abstract

This research aims to identify consumers' perceptions and preferences toward local food availability in supermarkets and to develop strategies the grocery industry can use to meet consumer needs and preferences. The questionnaire was developed, and 2,276 panel participants were invited to participate in the online survey. Of these, 1,465 completed at least 85% of the survey and are included in the final data, resulting in a 64.4% response rate. 75% respondents purchased locally grown/produced foods sometimes (52.2%) and always (22.9%) while 14% indicated that they do not know/do not pay attention to where food is locally grown/produced. The most commonly selected reasons were "Support local economy" (73.9%) and "Support farmers" (72.2%). These were followed by "Sustainability" (46.1%) and "Food Safety" (36.6%). Respondents indicated that "Price" (66.3%) and "On Sale" (44.8%) were the most influential factors in their decision making to purchase local foods, followed by the presence of informational signage at 34.5%.

INTRODUCTION

Local food supports the local economy and pushes back against multi-million-dollar, government-supported industrial farms [1]. Local food (food that has traveled only short distances or food that is marketed directly by the producer) [2,3] can aid in the reduction of environmental degradation and the protection of farmland while simultaneously furthering community connections between farmers and consumers. The "local food" movement has been gaining ground over the past decade as consumers become aware of the benefits [4] and are becoming increasingly interested in what they eat and the way their food is produced, distributed, prepared, and served [5].

Local food is seasonal and is therefore perceived as a higher quality, healthy alternative to mass-produced fruits and vegetables that were picked early and had to travel several days before they reached grocery store shelves [6]. It can be noted that retail stores worldwide are increasingly carrying and marketing local foods in response to consumer demand and market potential [7]. This continued consumer preference toward local food has broad implications for the environment, society, and the food system at large [1]. Local food sales can also impact the local economy. Many studies are found related to local food and its impact on local economies however, the accuracy of any type of economic model depends on the model's parameter values. After a thorough review of the literature, it seems apparent that there is ambiguity in the methods used and that establishing the overall level of local food consumption in a region is challenging [8]. Most research reports a small positive impact on the local economy form the sales of local foods however, local food sales may have their greatest influence on a region's economy when there are large metropolitan regions surrounded by available farmland [9] as is this case with this study. Consumers completing the "local food" survey for this research come from the Sacramento Metropolitan Region which is at the outskirts of the Central Valley region of California and is well known as the agricultural hub of the state [10,11].

Grocers and retailers that want to increase sales of these types of products, often for profit, but more recently to garner a consumer connection; by showing support for local farmers and meeting customer's needs for a better understanding of where their food is coming from. Consumer demand can drive the local food movement through increased demands on their local grocers to carry more products from more farms. Furthermore, growth in the volume of American Farm workers can also be indirectly caused by legislative changes in agricultural land protection laws and because of consumer pressure placed on policymakers [12]. To make this happen, it is important to understand consumers' thoughts and feelings for how they want to see local foods being marketed, what will attract them to make that purchasing

decision? What types of products are they most interested in purchasing, and what drives consumers to step out of their box and seek out these types of products, all questions that need to be answered because consumers are the key to the success or failure of this movement.

There are a multitude of research studies focusing on local food for a variety of reasons; most studies to date are more of a literature review and few focus on directly asking consumers about their perceptions and preferences toward locally grown food in the marketplace. This study is significant however, because the authors of this research find immense value in supporting the growth of local food imperatives and are interested in better understanding consumers' preferences and intentions to purchase local foods from a regional perspective. The advancement of the local food movement can be developed and implemented at home then further developed and extended to all communities new and old, around the state, and across the nation. For the U.S. food and nutrition systems to work effectively they need a strong and diverse distribution network that considers the unique needs of different communities, individuals, and families.

Additional significance for this study is that the researchers are exploring local food offerings from a grocer's perspective and will seek to answer the following questions. How does accounting for an individual's shopping behavior influence associations between the local food environment and retailer's decisions about what types of products will be carried in their stores? Furthermore, to whom does this knowledge benefit? The grocery industry has many tools in their arsenal for meeting consumers needs and preferences but, many of these strategies are focused on a competitive domestic food market, locally sourced foods offer farmers and food companies a means to differentiate themselves from the competition by responding to consumer preferences for local product offerings [14].

Understanding consumers purchasing motivations is one of the important aspects of their buying behavior [9]. Little to no research was found that focused on the local food movement from a grocer's perspective. Therefore, the objectives of this study are to identify consumers' perceptions and preferences toward local food availability in grocery stores and to develop strategies the grocery industry can use to meet consumer needs and preferences. More specifically, this study will help the grocery industry to identify consumers' current purchasing practices of locally grown foods, the likelihood of their intention to purchase, the reason to purchase, and influential factors that impact their local foods purchasing habits. Moreover, understanding the drivers behind consumers decision making in relation to local food/products, may be a catalyst toward increased consumer knowledge and demand for more local products. This manuscript offers new and additional insights and represents an important benchmark that clearly supports the research aims to enhance strategies for identifying consumers' perceptions and preferences toward local food availability in supermarkets and to develop strategies the grocery industry may use to support local food sales and to develop better and more in-depth relationships with their shoppers.

MATERIALS & METHODS

Survey Development

The survey was developed and administered in partnership with the Institute of Social Research (ISR), an interdisciplinary educational research center, which works with organizations and agencies to understand programs, policies, and communities. This research uses Survey Panel Methodology. Survey panels consist of individuals who have agreed to participate in multiple surveys over time. The survey questionnaire was developed to examine Sacramento Metropolitan consumers perceptions and preferences for purchasing local food/products in grocery stores and to identify influential factors that may promote consumers' purchasing local food/products. The field survey included demographics and perception using Likert scale questions, etc. The validity of the questionnaire was verified by experienced ISR professionals, and the questionnaire was approved by the Institutional Review Board at California State University, Sacramento.

Participants

The Institute for Social Research (ISR) fielded the survey through the ISR Regional Panel, the survey panel is a random sample of about 3,000 households consisting of persons living in the Sacramento metropolitan region which includes six counties: El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. ISR uses the Qualtrics Research Suite online survey platform to administer surveys, panelists also had the option of participating via paper surveys. The research team optimized all surveys for completion on mobile phones and tablets and the surveys were administered in English and Spanish, survey data was weighted to ensure the responses were representative of the region.

Data & Statistical Analysis

The research panel uses probability-based sampling methods (defined as a randomized selection process where everyone in the population has a chance of being invited to participate). 2,276 panel participants were invited to participate in the survey (2,105 through email and/or SMS, and 171 through mail). Of these, 1,465 completed at least 85% of the survey and are included in the final data, resulting in a 64.4% response rate. Using a 95% confidence interval, the final data has a 2.6% margin of error. Surveys are analyzed by reporting the percentage of panelists (represented from the Greater Sacramento Region) responding to various questions. Survey results are also often broken down by panelist characteristics, such as gender, income levels, race, and other key demographic information. When the survey responses are broken down by these categories (or disaggregated into cross-tabulations), a statistical test is run to ensure that the differences among these groups are statistically significant (i.e., any differences are not the result of "noise" in the data). The data were analyzed using IBM SPSS Statistics (Version

27). Descriptive statistics were used to capture respondents survey responses based on their demographics.

DISCUSSION

Demographic Characteristics of Respondents

Demographic information is presented in Table 1. Most respondents were women (62.3%), and the age brackets of respondents were fairly distributed among 65+ (26.4%), 51-65 (26.6%), and 31-50 (25.1%). Most respondents (73.4%) identified as white and about one-third of respondents' income was $50,000 - $100,000 (30.9%) followed by $100,000 - $200,000 (26.4%) and $15,000 -$50,000 (21.6%).

Practices and Likelihood of Purchasing Locally Grown Food

The perception statements regarding locally grown foods are presented in Table 2. Many respondents (75.1%) purchased locally grown/produced foods sometimes (52.2%) and always (22.9%) while 14% responded "I don't know/I do not pay attention to whether food is locally grown/produced." The participants were asked to rate their agreement with two statements about purchasing locally grown foods on a five-point Likert scale (5 = Strongly Agree, 1=Strongly Disagree).

39.2% of respondents agreed that "During the past 30 days, my grocery store has had a variety of fresh, locally grown/produced foods that meet my needs" while 13.6% indicated that they do not know or do not pay attention to whether food is locally grown/produced. If the respondents were informed of the availability of locally grown/produced foods, 73.3% indicated they would be somewhat likely (41.1%) and very likely (32.2%) to purchase locally grown/produced foods. This aligns with similar research found in literature which indicates growing consumer interest in locally produced food and products. As far back as the late 1990's, studies comparing organic foods to local foods began to find that consumers placed greater importance on purchasing local rather than organic foods and that they perceived local foods as being better for society [15]. Research from 2010 summarized that consumer demand for food that is locally produced, marketed, and consumed is generating increased interest in local food throughout the United States [16]. Lastly, a study conducted in 2014 found that both social (support for the local community) and personal preferences (e.g., product quality) were the main motivators for consumers to shop at farmers' markets where most local food was offered at the time [17].

Table 1: Demographic Information of Respondents[a]

Characteristics		Frequencies n	Percentages %
Gender	Female	912	62.3
	Male	553	37.7
Age	<35	320	21.8
	36-50	368	25.1
	51-65	390	26.6
	>65	387	26.4
Region	City	659	45
	Suburb	522	35.6
	Small Town	179	12.2
	Rural Community	104	7.1
Race& Ethnicity	White	1,075	73.4
	Hispanic	239	16.3
	Asian	184	12.6
	Black	82	5.6
Income	<15K	56	3.8
	$15-$50K	316	21.6
	$50-$100K	452	30.9
	$100-$200K	387	26.4
	>$200K	102	7.0

[a] N = 1465

Reasons to Purchase Locally Grown/Produced Foods

Figure 1 depicts the reasons why people prefer buying locally grown food. Respondents were asked to select their top three choices. The most commonly selected reasons were "Support local economy" (73.9%) and "Support farmers" (72.2%). These were followed by "Sustainability" (46.1%) and "Food Safety" (36.6%).

For many consumers, a sense of direct linkage to the producer and a desire to support the local economy is important. This sense of connection can be difficult to maintain when a product moves to the consumer through wholesale and retail intermediaries in mainstream supermarket channels [9]. One of the important social determinants of well-being is a sense of community connectedness and belonging. Social connectedness and a sense of belonging—the feelings of being a part of a larger group of individuals—are thought to be basic human needs [18].

Table 3 presents the respondent's top reasons to purchase locally grown foods by demographic characteristics. Among all demographics, males (24.5%) and those aged 51-65 (26.7%) ranked "supporting local economy" as the top reason, while "Support Farmers" was the top reason for all other demographics except Black respondents. The top reason Black respondents prefer to purchase locally grown foods is "Food Safety" (22%). Respondents with incomes of <$15,000 (19.6%) and $15,000-$50,000 (21.5%) also prioritize "Food Safety" after "Supporting farmers."

On the other hand, only 7.8% of those aged >65 cited "Health Concerns" as the reason to buy locally grown foods, while "Sustainability" was the least selected reason for Hispanics (5.9%) and Asians (11.0%).

Influential Factors toward Respondents' Purchasing Decision

Respondents were asked to choose the top three factors that would influence their purchasing decision. Figure 2 presents the overall results indicating that "Price" (66.3%) and "On Sale" (44.8%) were the most influential factors, followed by the presence of informational signage (e.g., flyers, shelf talkers, QR codes) at 34.5%. When compared by demographic characteristics, respondents residing in rural areas (42.3%) and those with an income greater than $200,000 (50%) indicated that "Informational Signage" is the factor that influences their

Table 2: Overall Perception about purchasing locally grown/produced foods[a]

Perception Statement	n (%)					
	Positive		Neutral	Negative		Other
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
During the past 30 days, my grocery store has had a variety of fresh, locally grown/produced foods that meet my needs.	49 (21.8%)	575 (39.2%)	183 (12.5%)	138 (9.4%)	49 (3.3%)	199[b] (13.6%)
I would likely purchase local food items if I was provided the information about the products and/or producers.	472 (32.2%)	602 (41.1%)	281 (19.2%)	68 (4.6%)	41 (2.8%)	

[a] N = 1465
[b] I don't know/I do not pay attention to whether food is locally grown/produced

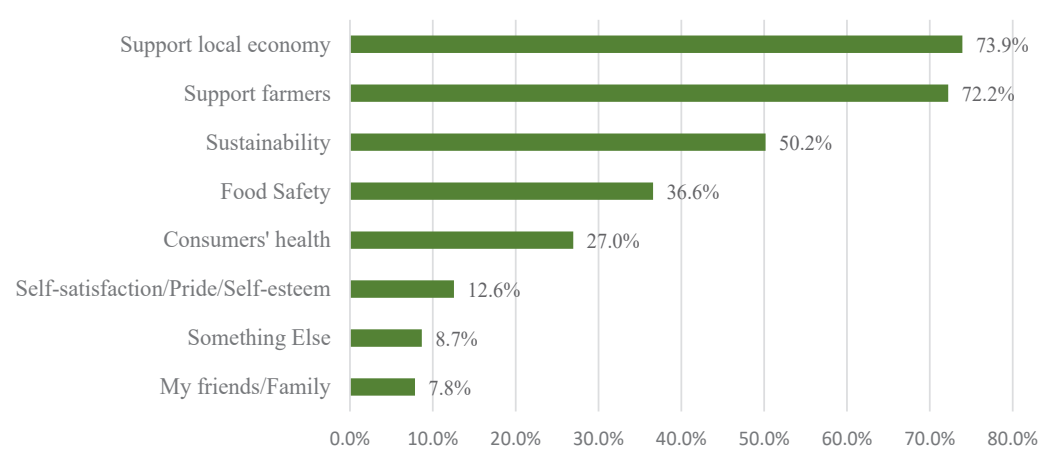

Figure 1 Reasons to Purchase Locally Grown/Produced Foods. *Total percent value does not equal 100 as multiple responses were given.

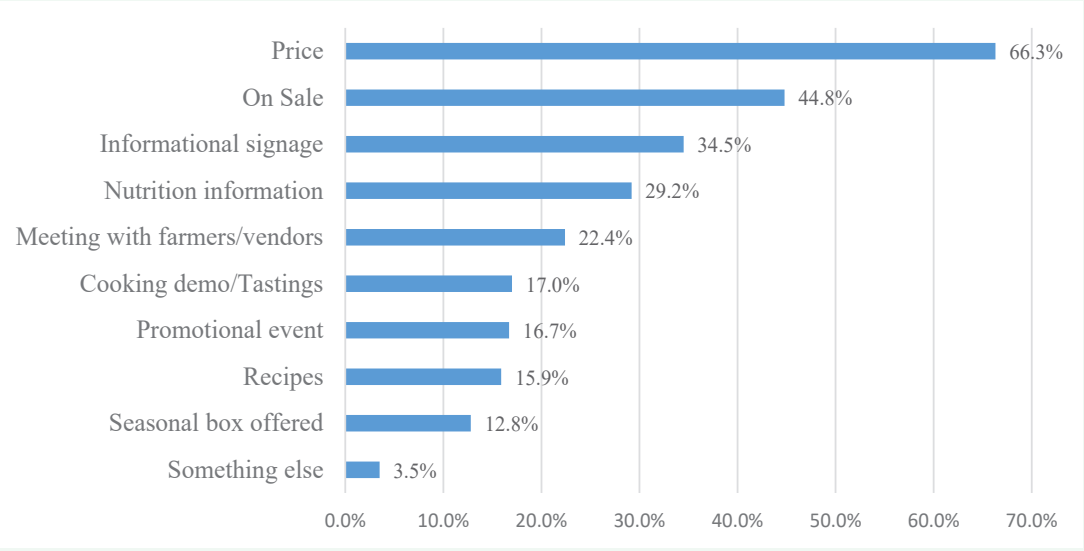

Figure 2 Influential Factors toward Respondents' Purchasing Decision. *Total percent value does not equal 100 as multiple responses were given.

Table 3: The most frequently selected five reasons to purchase locally grown/produced foods by demographic characteristics

		Support Farmers	Support Local Economy	Food Safety	Sustaina-bility	Health Concerns
		Frequencies (Percentage)[a]				
Gender	Female	**255(28.2%)**	168 (18.6%)	147 (16.3%)	108 (12.0%)	105(11.6%)
	Male	129 (23.5%)	**134 (24.5%)**	76 (13.9%)	69 (12.6%)	71(13.0%)
Age	<35	**65 (20.3%)**	51 (15.9%)	58 (18.1%)	**58 (18.1%)**	43 (13.4%)
	36-50	**92 (25.0%)**	69 (18.8%)	59 (16.0%)	47 (12.8%)	58 (15.8%)
	51-65	96 (24.6%)	**104 (26.7%)**	52 (13.3%)	42 (10.8%)	47 (12.1%)
	>65	**134(34.6%)**	80 (20.7%)	56 (14.5%)	32 (8.3%)	30 (7.8%)
Region	City	**153 (23.2%)**	127 (19.3%)	110 (16.7%)	83 (12.6%)	84 (12.7%)
	Suburb	**138 (26.4%)**	109 (20.9%)	76 (14.6%)	70 (13.4%)	66 (12.6%)
	Small Town	**56 (31.3%)**	45 (25.1%)	24 (13.4%)	20 (11.2%)	17 (9.5%)
	Rural Community	**39 (37.5%)**	23 (22.1%)	15 (14.4%)	11 (10.6%)	6 (5.8%)
Race & Ethnicity	White	**268 (28.9%)**	201 (21.7%)	127 (13.7%)	129 (13.9%)	96 (10.3%)
	Hispanic	**65 (27.2%)**	49 (20.5%)	40 (16.7%)	14 (5.9%)	**42 (17.6%)**
	Asian	**41 (23.8%)**	28 (16.3%)	28 (16.3%)	19 (11.0%)	22 (12.8%)
	Black	8 (9.8%)	15 (18.3%)	**18 (22.0%)**	12 (14.6%)	14 (17.1%)
Income	<15K	**14 (25.0%)**	6 (10.7%)	11 (19.6%)	9 (16.1%)	**10 (17.9%)**
	$15-$50K	**78 (24.7%)**	52 (16.5%)	68 (21.5%)	9 (16.1%)	**47 (14.9%)**
	$50-$100K	**123 (27.2%)**	96 (21.2%)	66 (14.6%)	55 (12.2%)	50 (11.1%)
	$100-$200K	**110 (28.4%)**	96 (24.8%)	34 (8.8%)	57 (14.7%)	48 (12.4%)
	>$200K	**27 (26.5%)**	24 (23.5%)	14 (13.7%)	15 (14.7%)	11 (10.8%)

[a] Total number and percent value do not equal N and 100, respectively, as other least selected reasons (self-satisfaction/pride/self-esteem, other reasons, and my friends/family) were not presented.

decision-making after "Price." These findings will enable grocers to better develop promotional strategies including merchandising, signage, and recipes to impact consumers' purchasing decision related to local foods.

FINDINGS

This study revealed that cost was the most influential factor in consumers' selection of local food/products, which is different than previous research on the topic. One of the key challenges of Efficient Consumer Response is to formulate effective promotions that do not entail costly price cuts. Informed consumers are not affected by promotions with price cuts [9]. Consumers who rely on the environment are influenced by promotions even without a price cut. Similarly, forty-three percent of mid-west respondents were willing to pay at least 10% more for local food items [1]. On average, Colorado consumers were willing to pay 9.37% more for local foods [18]. The researchers for this study determined that price may be an influential factor at this time due to the current economic environment in which the cost of groceries has increased significantly post-COVID, cost is therefore perceived as the most influential factor at this time.

CONCLUSIONS, LIMITATIONS & RECOMMENDATIONS

Based on the results of this study, owners and managers of conventional grocery stores should be willing to experiment with the retailing process. Local governments, universities and other higher educational institutions, and non-governmental organizations that have an interest in changing the structure of the food system should commit resources to facilitating the development of linkages among diverse kinds of locally owned and operated food businesses. Community food security activists in the US, Canada, and Europe have found that mainstream conventional grocery stores can be key allies in their quest to increase or maintain access to affordable nutritious foods [19]. Local food systems have the potential to make local food available, support the local food economy, educate people about food and agriculture, and build community [1], and the mainstream supermarket distribution system can be as effective in delivering products and product information for local brands as it is for national or international brands [9].

The local food movement seems poised to become a mainstream offering in national grocery chains. Several national supermarket chains—including Walmart and Whole Foods Market – have initiated efforts to source and sell local foods. Asserting that these local sourcing efforts are yielding not only cost savings but also environmental benefits and positive impacts on local economies [20]. Whole Foods has also instituted a "Local Producer Loan Program" designed to foster growth in the supply of local food products. This is exciting news for the grocery industry and implies that the future of local foods and products will see an increase in demand and that encourages support for small farmers that grow their products with respect for the earth and the soil which provides the nutrients necessary for quality fruit and vegetable products. These products should be offered as an alternative to large-scale farm production which erodes the soil leaving less nutrient uptake available for the plants. Based on the results from this study consumers are purchasing local foods because they feel it supports their community and the farmers that provide local food followed by sustainability and food safety. The main barrier for these consumers to buy more local foods and products is typical in that "price" constitutes the biggest

threat to increasing sales and acceptance for most consumers. Previous research indicates 47% of urban, better-educated, high-income strata of conscious consumers, are willing to pay extra for local food [21], we found this to align with our findings due to most participant's demographics (Table 1) being characterized as urban and better educated with higher levels of income.

Overall, most consumers in this study from all demographically diverse backgrounds currently purchase some local food items intend to purchase more local products but stop short due to higher prices for these goods. Therefore, the efforts of large-scale grocers to feature local food and products need to focus on ways to educate their consumers as to the importance and benefits of local food and find ways to keep prices in line with national offerings, an increase in demand may help in this effort. These efforts will help to support a community of shoppers that applaud the efforts of their local market to invest in their communities and support the" little guy," to bring shoppers closer to the products they purchase and the stores that supply them.

1) The study is limited due to convenience sampling that involves respondents who voluntarily registered as panelists. Also, the participants in this research were residents from a limited geographic region, reducing the study's generalizability. Based on the findings from this study and a comprehensive literature review, the researchers have identified three practical applications that can benefit grocerGrocers need to provide information to consumers about the local products they carry and the producers (farmers) that supply these products.

2) Grocers should create marketing strategies that focus on: Supporting farmers; Sustainability; Food Safety; and Health.

3) Grocers should create strategies to attract more Hispanic, Asian, and Black consumers toward local food products that focus on food safety and health concerns.

Additional research may be necessary to focus more specifically on what type of local foods/products consumers would like to see in their supermarket as another marketing strategy for increasing sales. This study will benefit grocers and the businesses that offer local products because sharing common attitudes, interests, and goals around a topic such as local food can bring about "store loyalty" that all retail operations seek to obtain.

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