HortScience 61(5):924–933. 2026. https://doi.org/10.21273/HORTSCI19203-25

Demand for Blueberries: Exploring US Consumer Preferences

Jeta Rudi-Polloshka and Steven Miller
Agricultural, Food, and Resource Economics Department, Michigan State University, Morrill, Agriculture Hall, 446 West Circle Drive, East Lansing, MI 48824, USA

Mohammed Beroud
Department of Resource Economics and Environmental Sociology, University of Alberta, 515 General Services Building, Edmonton, AB, T6G 2H1, Canada

Dahye Kim
Department of Food and Resource Economics, Korea University, 145 Anam-ro, Seongbuk-gu, Seoul, 02841, South Korea

Sibbir Ahmad
Department of Economics, North South University, Dhaka, Bangladesh, Room 816C, NAC Building, North South University, Dhaka 1229, Bangladesh

Minsu Kim
Northeast Regional Center for Rural Development, Pennsylvania State University, 207A Armsby Building, University Park, PA 16802, USA

Sevval Buse Sariman and Andrea Ramos Bonilla
Agricultural, Food, and Resource Economics Department, Michigan State University, Morrill, Agriculture Hall, 446 W Circle Dr, East Lansing, MI 48824, USA

Keywords. blueberry, consumer, demand, NielsenIQ

***Abstract.* This study analyzes consumer demand for blueberries using recent data from the NielsenIQ Consumer Panel. We summarize blueberry demand in the United States according to demographic factors, including household size, income group, household race and ethnicity, and household geographic region, among others. We also explore trends in the demand for organic blueberries specifically. We estimate the price elasticity of demand for blueberries to understand whether the industry has priced the product to maximize revenues. Research findings suggest that demand for blueberries is mildly inelastic, with an estimated elasticity of demand of −0.96, indicating that current pricing for the product is near maximizing revenues for the blueberry industry. An explanation of elasticities, their relationship with prices and revenues, and our econometric model with results, are also discussed.**

Received for publication 10 Dec 2025. Accepted for publication 23 Feb 2026.
Published online 6 Apr 2026.
Funding for this project was made possible by a grant from the US Department of Agriculture (USDA) Agricultural Marketing Service, via the 2023 MDARD Specialty Crop Block Grant Program. Funding from the Elton R. Smith Chair Endowment and the Homer Nowlin Chair Endowment is gratefully acknowledged. Funding from these two endowments within the Agricultural, Food, and Resource Economics Department at Michigan State University were used to acquire NielsenIQ data subscription.
Researchers' own analyses were calculated (or derived) based in part on data from Nielsen Consumer LLC and marketing databases provided through the NielsenIQ Datasets at the Kilts Center for Marketing Data Center at The University of Chicago Booth School of Business.
The conclusions drawn from the NielsenIQ data are those of the researchers and do not reflect the views of NielsenIQ. NielsenIQ is not responsible for, had no role in, and was not involved in analyzing and preparing the results reported herein.
J.R.P. is the corresponding author. E-mail: rudipoll@msu.edu.
This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/).

Introduction

Supply and demand of blueberries have increased significantly in the last two decades (Hammami et al. 2024). As consumers seek healthier food options, blueberries are an excellent choice because they are a source of vitamins, nutrients, and fiber (Stull et al. 2024). Popular news and health and lifestyle publications that summarized key findings from medical and nutrition research have reached consumers and influenced demand. Health benefits of regularly consuming blueberries include positive impacts on memory and brain health, prediabetes and type 2 diabetes, and cardiovascular health as well as reduced inflammation (Stull et al. 2024). Because demand has increased in all major economies, producers have strived to increase production. In the Americas, production is currently dominated by the United States, Peru, Canada, Chile, and Mexico (Hammami et al. 2024). Economic literature has primarily focused on production and trade volumes (Hammami et al. 2024) and consumer demand for blueberry attributes (Gilbert et al. 2014; Qu et al. 2017; Shi et al. 2011; Yue and Wang 2017). Additionally, health and nutrition literature has focused on health impacts of blueberry consumption (Al Hazaimeh et al. 2025; Stull et al. 2024; Zhang et al. 2024). However, limited research has linked consumer characteristics to blueberry demand. Information regarding consumer choice may help growers facing high competition improve their planning, marketing, and pricing.

In this study, we explored consumer demand for blueberries to inform blueberry growers and the overall industry regarding recent demand trends. In addition to providing demand trends based on consumer characteristics using NielsenIQ Consumer Panel data, we also estimated blueberry price elasticity of demand. In the United States, blueberry demand overall was mildly inelastic (approximately −0.96) in the preferred model. Considering the 95% confidence interval, it is undistinguishable from unitary elastic, indicating that at the national level, blueberries are priced at the level of revenue maximization. However, there are variations by region, with the East North Central region showing an elastic demand and the Pacific region showing an inelastic demand. In addition to contributing to the thin academic literature about this topic, our study provides practical insights for industry stakeholders that may be

Downloaded from https://journals.ashs.org at 2026-07-29 via Open Access. This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/). https://creativecommons.org/licenses/by-nc/4.0/

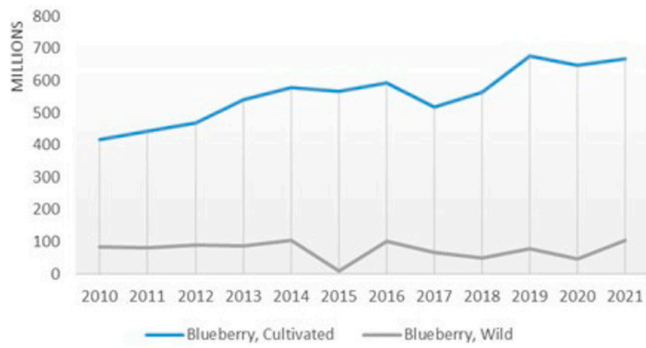

Fig. 1. Blueberry production in the United States. Source: US Department of Agriculture, Economic Research Service using data from the US Department of Agriculture, National Agricultural Statistics Service, Noncitrus Fruits and Nuts Summary (2010–21).

used to plan quantities, pricing, and the overall marketing plan for blueberries in the US market.

Background and literature review

Historical context and industry structure. Blueberries are native to North America, with commercialization dating to 1916 through the collaboration of Elizabeth Coleman White and US Department of Agriculture botanist Frederick V. Coville (US Highbush Blueberry Council n.d.). By the 1990s, US production surpassed 100 million pounds, and the industry has continued to expand (Hammami et al. 2024). The total value of cultivated and wild blueberry production reached $1.1 billion in 2021, which was increased from $640 million in 2010 and $221 million in 2000, and the average US fresh prices per pound were $2.16 in 2021, $1.87 in 2010, and $1.30 in 2000 (Fig. 1).

Production is geographically concentrated in 10 states that account for approximately 98% of US output: Washington, Oregon, Georgia, California, Michigan, New Jersey, North Carolina, Florida, Texas, and Minnesota (US Highbush Blueberry Council, n.d.). In 2021, Washington led cultivated production (180 million pounds), followed by Oregon (151 million pounds), Georgia (86 million pounds), California (74 million pounds), and Michigan (73 million pounds). State-level production values at the farmgate differ with price; for example, the 2021 farmgate value in Washington was approximately $228 million (approximately 21% of the US value), while that in California reached $223 million because of higher fresh prices (US Department of Agriculture, National Agricultural Statistical Services 2022).

Trade and availability. The United States is a net importer of blueberries. Fresh imports were valued at $36 million in 2000, $343 million in 2010, and approximately $1.6 billion in 2022, with Peru, Mexico, and Chile being the dominant suppliers (Morgan 2022; USDA FAS 2021). Exports—both fresh and frozen—are primarily shipped to Canada, South Korea, and Japan (Morgan 2022). The per capita availability has increased steadily. In 2021, the total fresh supply reached 926 million pounds (38% domestic, 62% imports), and the per capita availability was 2.3 pounds, which was increased from 1.0 pound in 2010 and 0.2 pounds in 2000 (USDA ERS, Food Availability Data System) (Fig. 2).

Demand drivers: Health, convenience, value, and sustainability. Increasing health consciousness reinforced by nutrition research has bolstered demand for blueberries, with studies noting potential benefits for cardiometabolic health, glycemic control, cognitive function, and inflammation (Al Hazaimeh et al. 2025; Stull et al. 2024; Zhang et al. 2024). Industry communications amplify these findings by emphasizing phenolic phytochemicals and related bioactivities (US Highbush Blueberry Council n.d.). At the same time, the modern concept of convenience favors freshness, snackable pack sizes, easy-open packaging, and shelf life, which help deliver value without sacrificing nutrition. Off-season imports underpin year-round availability, which elevates quality expectations and intensifies competition in price and sensory attributes (Hammami et al. 2024).

What consumers value in blueberries: Evidence of product attributes. Stated-preference and consumer testing studies have consistently highlighted the importance of intrinsic quality and origin. Consumers prefer fresh and locally produced blueberries, and "grown in the USA" is a salient credence cue that is, in some cases, valued more than the organic attribute (Qu et al. 2017; Shi et al. 2011). Research has shown that producers perform well in terms of freshness, taste, color, and "grown in the USA," but they should improve in terms of price, pesticide-free, and all-natural claims, which have high importance but lower satisfaction (Qu et al. 2017). Packaging descriptors can also shape demand. Claims such as "stay fresh" reduce price sensitivity, even though price remains the primary driver (Ma et al. 2024). Preferences vary across demographics, with younger consumers tending to prefer organic options and higher-income households being less price-sensitive (Yue and Wang 2017).

Evidence of price sensitivity (elasticities). Empirical estimates of own-price elasticity for blueberries are mixed across data sources and time periods. Using revealed-preference retail data, Sobekova et al. (2013) reported elastic own-price demand (−1.49) and substitution among major berries (almost ideal demand system and log–log models). In contrast, Ma et al. (2024) used a stated-preference design and reported inelastic demand (−0.76) and weak complementarity with other berries and fruits. Broader fresh-fruit research has shown that elasticities differ widely by commodity and specification; for example, Lin et al. (2009) found that apples and oranges were near unit elastic, bananas and grapes were more elastic, and strawberries were inelastic in one NielsenIQ Homescan-based study.

Synthesis and remaining gaps. Rapid demand growth, expanded imports supporting year-round supply, and rising quality expectations frame a competitive landscape in which attributes and price matter (US Department of Agriculture, Economic Research Service 2024; US Department of Agriculture, Foreign Agricultural Service 2021; Hammami et al. 2024). Prior work has clarified high-impact traits and the role of marketing claims, but it also revealed heterogeneity across age, income, and other socio-demographics (Gilbert et al. 2014; Ma et al. 2024; Qu et al. 2017; Shi et al. 2011; Yue and Wang 2017). Conflicting elasticity evidence has underscored the need for updated, large-scale revealed-preference estimates that incorporate demographics and regional variation. This study addressed these gaps using NielsenIQ Consumer Panel data between 2015 and 2020 to link household characteristics with observed purchases and estimate own-price elasticities nationally and by region.

Materials and Methods

Data. The trends presented in this study were obtained using NielsenIQ Consumer

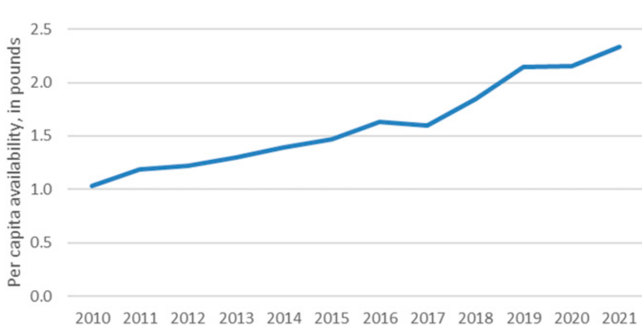

Fig. 2. Fresh blueberry availability in the United States. Source: US Department of Agriculture, Economic Research Service, Food Availability Data System.

Downloaded from https://journals.ashs.org at 2026-07-29 via Open Access. This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/). https://creativecommons.org/licenses/by-nc/4.0/

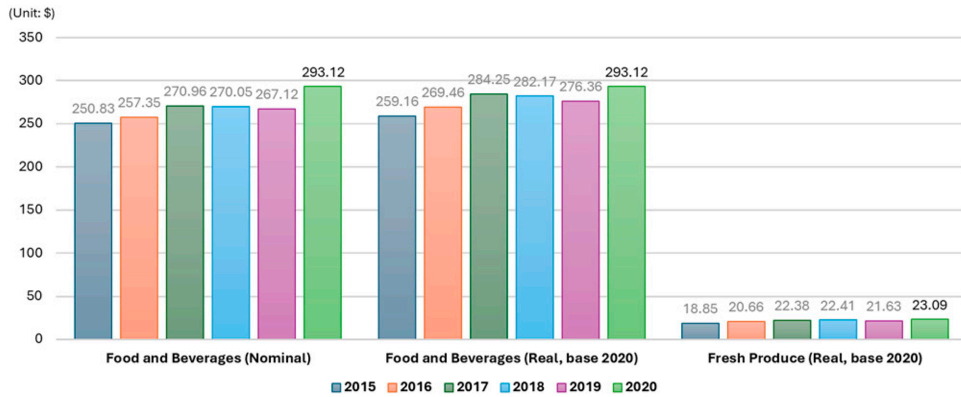

Fig. 3. Average monthly spending on food and beverages (nonalcoholic).

Panel data between 2015 and 2020. This rich dataset contains food purchase information for 40,000 to 60,000 US households and is representative of the United States consumer. The dataset also contains demographic information, including household income range, size, and composition, education level of the heads of household, household race and ethnicity, and geographic location, among other demographics. For shopping trips and food purchases, the dataset contains information such as date of the shopping trip, retail channel, total spent on the shopping trip, products purchased, product size, and price paid per product, among other information (Chicago Booth School, Kilts Center n.d.). The researchers' own analyses were calculated (or derived) based in part on data from Nielsen Consumer LLC and marketing databases provided through the NielsenIQ Datasets at the Kilts Center for Marketing Data Center at The University of Chicago Booth School of Business. The conclusions drawn from the NielsenIQ data are those of the researchers and do not reflect the views of NielsenIQ. NielsenIQ is not responsible for, had no role in, and was not involved in analyzing and preparing the results reported herein.

Trends in consumer demand for blueberries. As a first step in this research, our goal was to understand consumer trends in blueberry purchases, including the correlation between demographics and consumer demand. To set the baseline for our analysis, Fig. 3 shows the average monthly spending on food and beverages (nonalcoholic) for the average household in the dataset for the period 2015–20.

To negate the effects of general price changes, nominal expenditures were converted to real expenditures with a base year of 2020 using the consumer price index for food at home in the United States for all cities from the US Bureau of Labor Statistics. While the average monthly expenditures are lower than expected in the dataset, this may be attributable to panelists failing to report all their shopping trips and underreporting all items purchased. Early research by Einav et al. (2010) showed that as many as 53% to 60% of the shopping trips are not reported by households in the panel, and for the trips that are reported, at least 10% of the items are not reported. The authors argued that the reporting error is in line with that of other datasets; however, it does constitute a limitation of this and other studies using NielsenIQ household panel data (Capps et al. 2023; Davies et al. 2025). Despite this, to the extent that underreporting is random, subsequent analyses still allowed us to compare overall trends.

Figure 4 shows the breakdown of grocery store receipts by each department for the same time period. The data showed that the share of food budgets allocated to fresh produce remained largely unchanged between 2015 and 2020, increasing from 7.3% to 7.9%, respectively.

By focusing on the expenditure shares of berries, we found that expenditures on blueberries were surpassed only by those on strawberries. During the period 2015–20, the share of expenditures on blueberries, compared with that on all berries, ranged from 24.3% to 29.8% (Fig. 5). In comparison, in 2020, the expenditures on strawberries, raspberries, blackberries, and other berries were 40%, 14.2%, 10.6%, and 7%, respectively.

Based on the NielsenIQ Consumer Panel dataset, the amount of fresh blueberry purchases increased by approximately 85% from 2015 to 2020 for all blueberries. Specifically, based on the sample, demand surged from 166.5 million pounds to approximately 307.6 million pounds (Fig. 6). However, growth was more significant for organic fresh blueberries (Fig. 7). According to the dataset, fresh organic blueberry demand nationwide increased by more than 500% during this time period. In terms of quantity, however, organic blueberries made up a small but growing portion of all fresh blueberries, ranging from a demand of 4.59 million pounds in 2015 to 27.59 million pounds in 2020 according to the sample.

An interesting trend emerges from the dataset in terms of the correlation between purchase frequency and the volume purchased. Across all household groups, the frequency of blueberry purchases has increased over time as shown in Table 1. For example, of the households that only purchased blueberries 1 month of the year, the volume of blueberries purchased increased from 16.84 million pounds in 2015 to 17.74 million pounds in 2020 (a 5% increase). However,

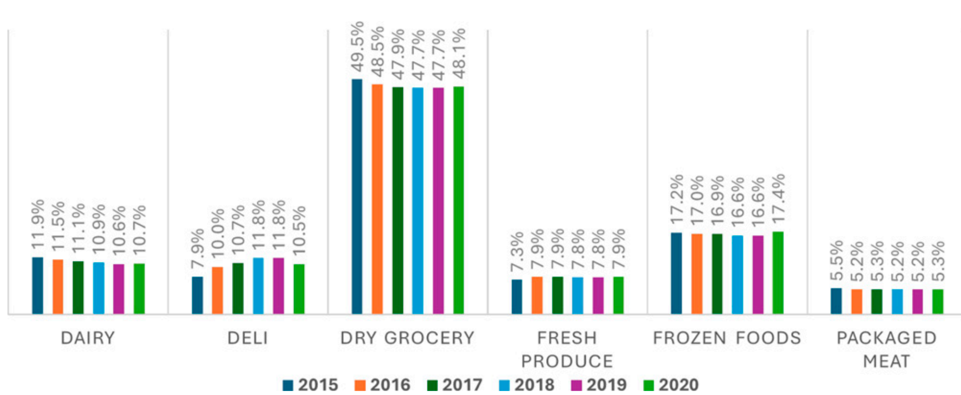

Fig. 4. Proportion of average monthly spending on each department.

Downloaded from https://journals.ashs.org at 2026-07-29 via Open Access. This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/). https://creativecommons.org/licenses/by-nc/4.0/

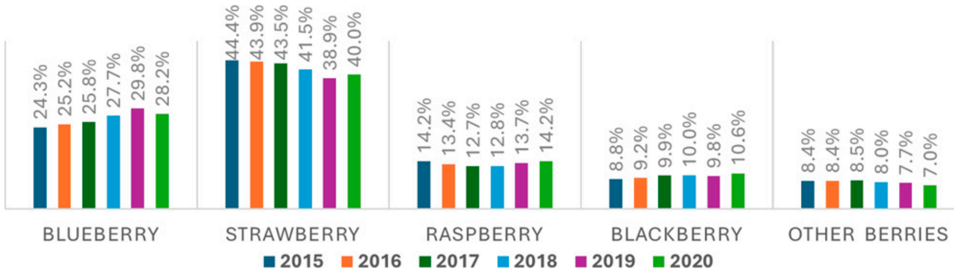

Fig. 5. Share of fresh berry spending on various fresh berries.

the largest 5-year growth in purchase volume was found among frequent buyers who purchased blueberries during 6 months or more throughout the year. For this category, the increase in the volume of fresh blueberries purchased was approximately 169% over 5 years, from 73 million pounds to more than 196 million pounds. This suggests that the industry may focus on increasing purchasing volumes among nonfrequent buyers and/or attracting existing consumers to become frequent buyers. Marketing strategies such as discounts via coupons when purchase is made or "buy one now get one free later" promotions may be implemented to persuade consumer to become frequent buyers.

The NielsenIQ dataset separates the United States into nine regions (Fig. 8). Table 2 shows the total amount of fresh blueberry purchases reported by NielsenIQ by region. For all the regions, demand increased by approximately 100% or more during the course of 5 years (from 2015 to 2020). The South Atlantic region had the highest demand for blueberries by volume based on the sample, followed by the Pacific region.

Prices varied by year and by region in our sample (Table 3). However, no set trend was observed over time. Across geographic regions, the Pacific region experienced the highest price per pound of fresh blueberries at $5.28 in 2020. The East North Central region experienced the lowest price per fresh pound of blueberries at $3.58 in 2020.

Demographics and consumer demand. This study explored the correlation between various demographic factors and consumer demand for fresh blueberries. First, we explored the correlation between household size and demand for blueberries. Approximately half of the households (Fig. 9) with three or more members purchased blueberries at least once per year. The shares were approximately 34% for single-person households and 46.6% for two-member households, however. There was an increase in the share of households purchasing blueberries across all household sizes from 2019 to 2020; however, younger cohorts are choosing to marry and start families later in life, suggesting that, in the medium term, growth in fresh blueberry purchases, although positive, may be suppressed in comparison with that when this generation starts to settle down and start families.

Contrary to the times when blueberries are purchased, the data suggest that the highest volume of purchases occurred in two-member households. Table 4 shows the share of the volume of blueberry purchases by household size throughout the study period. Two-member households accounted for approximately 36% of all blueberry purchases. This indicated that when combining frequency and volume, the largest customer base by household size were the two-member households. Households with five or more members were more likely to purchase blueberries at least once per year, but the overall volume purchased was lower (11.7% of the total). Yet, because smaller households far outnumber larger households, these findings are not surprising. From the industry's perspective, it is important to note that consumption volumes were increasing across all household sizes while the share of blueberry purchases by household size did not change meaningfully during the study period.

The trend is not so evident for household size and the purchase volume of fresh organic blueberry purchases. Rather, we found that organic purchases as a share of total blueberry purchases were growing over time, but such shares remained quite low at less than 10% as of 2020. In terms of the preference for organic blueberries, the increase in demand for this product was more or less uniform across household sizes (Table 5). These findings coupled with the findings shown in Fig. 7 indicated that growth in the organic blueberry section year after year was strong, but it did not vary significantly by household size. Despite this, organic blueberry sales comprised only a small share of total blueberry purchases, with conventional blueberries dominating the market.

While NielsenIQ does not report households' income, it reports an income range

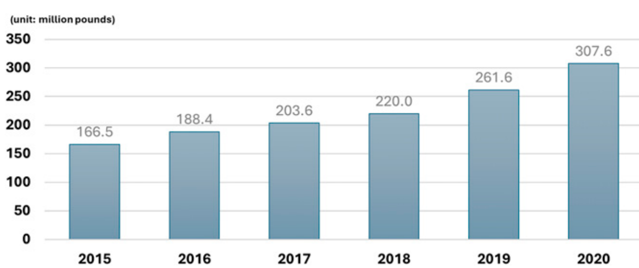

Fig. 6. Total amount of fresh blueberry purchases.

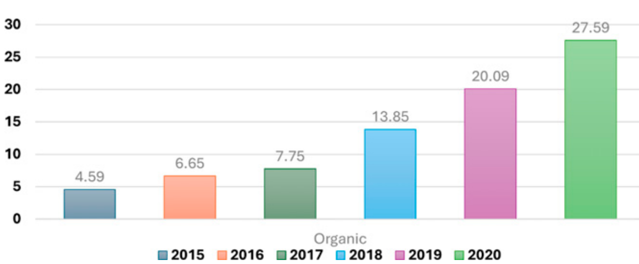

Fig. 7. Total amount of fresh organic blueberry purchases.

Table 1. Fresh blueberry purchases in millions of pounds by the number of months purchased in each year.

Months	2015	2016	2017	2018	2019	2020	5-year growth
1	16.84	16.18	16.02	15.96	16.18	17.74	5.3%
2	19.94	20.56	17.82	18.25	17.02	21.81	9.4%
3	20.28	21.13	19.71	20.69	22.15	23.39	15.3%
4	19.77	20.25	20.18	20.82	21.27	25.18	27.4%
5	16.68	19.03	20.41	19.1	21.98	23.44	40.5%
6 or more	72.97	91.27	109.39	125.07	161.01	196.02	168.6%

Downloaded from https://journals.ashs.org at 2026-07-29 via Open Access. This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/). https://creativecommons.org/licenses/by-nc/4.0/

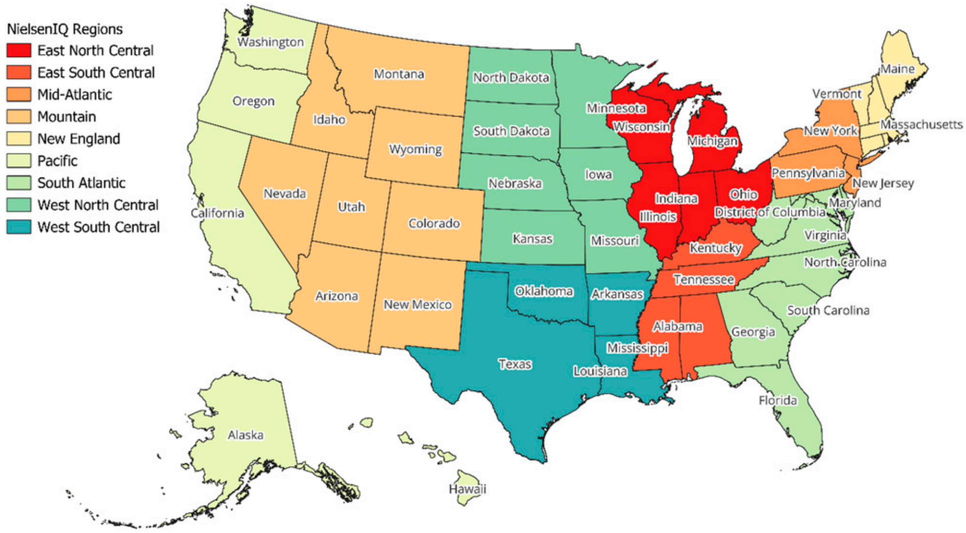

Fig. 8. Nine regions of the United States according to NielsenIQ Consumer Panel Data.

for households participating in the sample. Figure 10 summarizes the correlation between household income range and blueberry purchases. As expected, there was a positive relationship between household income and purchases of fresh blueberries. In the lower income range of less than $25,000 per year, only approximately 28% of households report purchasing blueberries at least once per year. In the higher income range of $100,000 per year or more, approximately 58% of households reported purchasing blueberries. Across all income groups, there was an increased trend of overall blueberry purchases between 2019 and 2020.

A more detailed analysis of the data showed that households earning more than $100,000 per year purchased the largest volume of blueberries, ranging from 38% of the total in 2015 to approximately 47% of the total in 2020 (Table 6). As the share of the total volume of purchases has increased for consumers in this income range, the share for other income groups has necessarily decreased. However, households across all income groups have increased the total volume of purchases over time. For example, in 2015, households earning less than $25,000 per year purchased 19.64 million pounds of fresh blueberries (11.8% of the total volume of 166.48 million pounds). In 2020, households in that same category purchased only 8.9% of the total. However, that translated to 27.37 million pounds, which was an increase of close to 8 million pounds over 5 years. For the high-income group of over $100,000 per year, the increase was much more substantial at 80.38 million pounds. In 2015, this group purchased 38% of the 166.48 million pounds (approximately 63.26 million pounds). In 2020, this group purchased 46.7% of the 307.57 million pounds (143.64 million pounds). This difference is 80.38 million pounds.

Similarly, according to the breakdown by household income, the demand for organic fresh blueberries has increased over time across all income groups (Table 7). In 2020, the highest demand for organic fresh blueberries was observed among the highest income group (10.5%). The middle-income categories, from $25,000 to $49,000 per year, exhibited the lowest demand for organic fresh blueberries (7% of the total blueberry demand).

In this analysis, we also sought to understand the correlation between race and ethnicity and the demand for blueberries. Figure 11 shows the share of households by each race/ethnicity category that reported purchasing blueberries at least once during a given year. Asian American households in the sample constituted the group with the highest incidence of purchasing blueberries in a given year (more than 56%). However, Black American households in the sample constituted the group with the lowest share of households purchasing blueberries in a given year (approximately 35%).

White households purchased the highest volume of fresh blueberries across all years (Table 8). This was expected because they comprised the largest racial group in both the sample and the population. However, while White households still buy the most fresh blueberries, their share of total purchases declined from 82% in 2015 to 78.8% in 2020. The share of blueberry purchases by all other racial groups increased during this period. Finally, Hispanic households of any race exhibited increased blueberry purchases from 2019 to 2020.

For fresh organic blueberry purchases, however, the data showed an extraordinary increase for Asian American households (Table 9). Specifically, the data from our sample suggested that Asian Americans increased their share of organic fresh blueberry purchases from 4.3% in 2015 to 18% by 2020. While other households also increased their share of organic blueberry

Table 2. Total amount of fresh blueberry purchases by region.

Unit: millions of pounds	2015	2016	2017	2018	2019	2020
New England	13.36	14.74	16.04	15.38	19.37	22.15
Middle Atlantic	25.90	28.27	29.17	31.66	39.98	46.08
East North Central	27.27	30.45	32.68	34.64	40.72	44.89
West North Central	11.01	12.25	14.09	15.46	18.20	20.98
South Atlantic	32.54	36.20	38.90	44.38	52.77	61.99
East South Central	6.39	7.21	7.67	8.75	10.55	13.77
West South Central	13.66	17.35	18.58	19.95	23.43	29.91
Mountain	10.96	13.39	14.41	14.39	16.09	19.36
Pacific	25.39	28.58	32.01	35.39	40.48	48.44
Total	166.48	188.43	203.55	220.00	261.60	307.57

Table 3. Average price paid for fresh blueberries by region.

Unit: US$/pound	2015	2016	2017	2018	2019	2020
New England	4.99	4.83	4.82	5.10	4.49	4.19
Middle Atlantic	4.94	4.99	5.06	4.98	4.50	4.17
East North Central	4.09	4.09	4.12	4.21	3.67	3.58
West North Central	4.70	4.76	4.78	4.72	4.19	4.21
South Atlantic	4.68	4.65	4.60	4.63	4.25	4.15
East South Central	4.35	4.46	4.47	4.76	4.15	3.88
West South Central	5.24	5.48	5.08	5.35	4.48	4.46
Mountain	5.39	5.23	5.28	5.60	5.15	5.24
Pacific	5.70	5.67	5.52	5.63	5.31	5.28
Total	4.89	4.90	4.85	4.96	4.46	4.36

Downloaded from https://journals.ashs.org at 2026-07-29 via Open Access. This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/). https://creativecommons.org/licenses/by-nc/4.0/

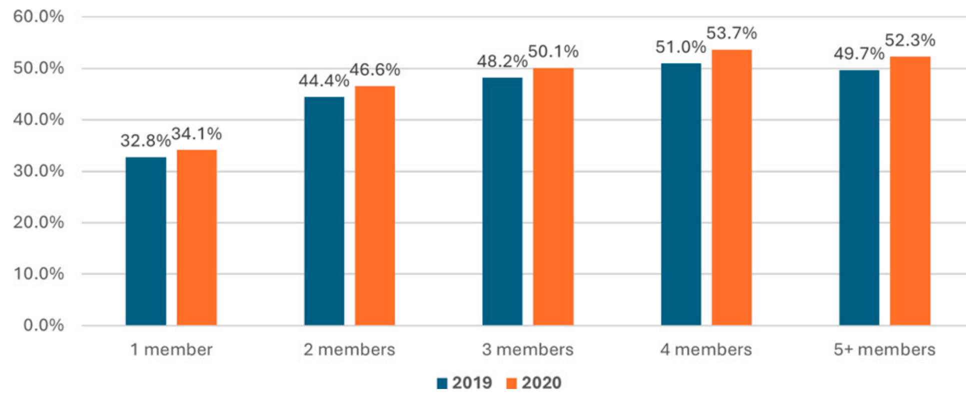

Fig. 9. Share of households that purchase fresh blueberries by household size.

Table 4. Percent of fresh blueberry purchases by household size.

	2015	2016	2017	2018	2019	2020
1 member	19.4%	19.0%	18.7%	19.1%	19.8%	19.4%
2 members	36.9%	36.4%	35.2%	35.1%	35.9%	36.0%
3 members	16.8%	17.3%	17.6%	17.2%	17.1%	17.3%
4 members	15.4%	15.8%	16.3%	15.9%	14.9%	15.6%
≥5 members	11.4%	11.5%	12.1%	12.7%	12.3%	11.7%
Total (millions of pounds)	166.48	188.43	203.55	220.00	261.60	307.57

Table 5. Fresh organic blueberry purchases as a share of total blueberry purchases by household size[i].

	2015	2016	2017	2018	2019	2020
1 member	2.4%	2.9%	3.5%	6.1%	7.7%	8.8%
2 members	2.6%	3.2%	3.4%	6.5%	7.4%	8.9%
3 members	3.2%	3.7%	4.4%	5.9%	7.5%	9.3%
4 members	2.8%	4.8%	4.4%	6.1%	8.0%	9.0%
≥5 members	3.2%	3.5%	3.8%	6.9%	8.2%	9.0%

[i]Based on the volume of fresh organic blueberry purchases.

purchases over time, the range for other groups remained at 8% to 12.6% by 2020 compared with 18% for Asian Americans.

Elasticity of demand

Price elasticity of demand measures how responsive consumers are to changes in price. A product is considered inelastic if a 1% increase in price reduces quantity demanded by less than 1%, elastic if it reduces quantity demanded by more than 1%, and unit elastic if the change is proportional. These distinctions matter for industry revenues: when demand is inelastic, higher prices can increase revenue; however, when demand is elastic, lowering prices may increase revenue.

Elasticity varies across products for many reasons, including the availability of substitutes, consumers' willingness to switch products, and the share of a product in household budgets. Regarding blueberries, prior literature has provided mixed evidence. Sobekova et al. (2013) found elastic demand for several fresh berries, including blueberries, using revealed-preference data. In contrast, Ma et al. (2024) used stated-preference survey data and found that blueberry demand was inelastic and complementary to that of many other fruits. These conflicting results highlight the need for updated elasticity estimates using large-scale purchase data.

Our analysis used NielsenIQ Consumer Panel data between 2015 and 2020to estimate blueberry demand elasticities based on actual household purchases. We focused on fresh blueberries only and generated consistent price and quantity measures across diverse universal product codes and package sizes. Because blueberries account for a small share of household food budgets, we used a reduced-form, double-log demand model, which is commonly used in similar applications.

This framework allowed us to estimate national and regional own-price elasticities while controlling for household demographic characteristics. These estimates provided insight into whether the industry is currently pricing near revenue-maximizing levels and whether consumer responsiveness differs across US regions.

Literature review. The US Department of Agriculture, Economic Research Service database of elasticities and the existing economics literature of consumer demand lists a multitude of estimation approaches, from single equation approaches to flexible form demand systems that conform with consumer demand theory. The choice of using a single equation approach or a systems-wide approach largely rests on the intended application of estimates. Specifically, estimating welfare effects of changes in consumer goods prices requires full accounting of how consumers allocate their income across consumer goods

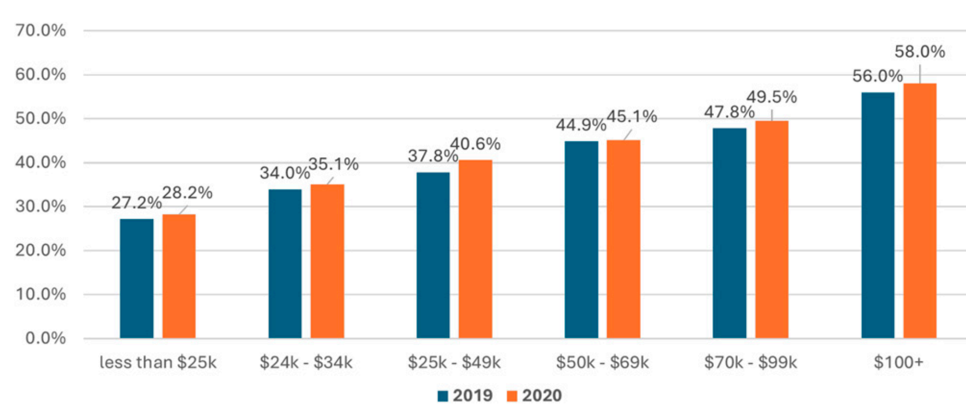

Fig. 10. Share of households that purchase fresh blueberries by household annual income range.

Downloaded from https://journals.ashs.org at 2026-07-29 via Open Access. This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/). https://creativecommons.org/licenses/by-nc/4.0/

Table 6. Percent of fresh blueberry purchases by household income.

	2015	2016	2017	2018	2019	2020
<$25,000	11.8%	12.0%	11.1%	9.9%	9.5%	8.9%
$25,000–$34,000	6.8%	6.5%	6.2%	5.5%	5.2%	5.3%
$35,000–$49,000	11.0%	10.6%	10.3%	10.4%	9.5%	9.1%
$50,000–$69,000	13.9%	13.8%	13.8%	13.0%	13.0%	12.8%
$70,000–$99,000	18.5%	18.3%	17.9%	17.3%	17.3%	17.2%
≥$100,000	38.0%	38.8%	40.6%	43.9%	45.5%	46.7%
Total (millions of pounds)	166.48	188.43	203.55	220.00	261.60	307.57

Table 7. Fresh organic blueberry purchases as a share of total blueberry purchases by household income[i].

	2015	2016	2017	2018	2019	2020
<$25,000	2.3%	2.5%	2.8%	4.5%	5.9%	7.3%
$25,000–$34,000	1.7%	2.0%	2.7%	3.6%	5.1%	7.0%
$35,000–$49,000	1.6%	2.3%	2.5%	4.6%	4.7%	7.0%
$50,000–$69,000	2.6%	3.4%	3.0%	4.7%	6.7%	7.8%
$70,000–$99,000	2.8%	3.4%	3.2%	6.3%	6.5%	8.2%
≥$100,000	3.5%	4.6%	5.1%	7.9%	9.7%	10.5%

[i] Based on volume of fresh organic blueberry purchases.

and services, before and after changes in prices, and how such changes impact individual welfare. Accordingly, a flexible form demand system is preferable when estimating welfare effects of policies or taxes. Alternatively, determining how consumers are likely to respond to a change in a set of targeted commodity prices may be derived from approximations to more complex flexible demand systems (Alston et al. 2002). The double-log demand model is easier to estimate than the host of flexible function form demand systems in the literature and generally exhibit a superior fit to more theoretically rigorous functional forms (Taylor and Houthakker 2010).

Demand systems estimation uses expenditure shares as measures of quantity of purchases, and the choice of the total budget is a subject of debate. The economic rationale model forming the basis of estimation is indirect utility function as the solution to the following:

$$\max_{X} U = f(\mathbf{X}|\mathbf{P})$$
$$s.t. \sum_{i} x_i p_i \leq m$$

where X and P are vectors of purchase items x_i at prices p_i. Consumers are price takers and can only influence the quantity purchased of item x_i. Consumers are also bound by their resources m, such that they select purchases up to their budget m. The solution to this problem solved for the vector of quantities by commodity X is the Walrasian demands, for which one commodity should be blueberries. The functional form of the utility function, *f*(), largely determines the functional form for estimating the demand system across all commodities. For systems estimation, all commodity categories expenditures must be measured as shares of the overall budget. Additionally, systems estimation requires that constraints are placed on coefficient estimates consistent with theoretical underpinnings. Specifically, homogeneity, symmetry, and summing constraints. Other second-order constraints may apply. Such constraints often come with costs. Mathematical and statistical limitations often result in theoretically inconsistent assumptions imposed on the estimated relationships (Barten 1969; Christensen et al. 1975; Deaton and Muellbauer 1980). Additionally, the validity of the structure implied by economic theory is imposed on estimates, thus precluding statistical tests of the validity of such constraints on the functional relationship, even when the imposed constraint is consistent with consumer demand theory. Accordingly, while such restrictions allow the system of estimates to conform with economic theory, they also bias the estimates relative to more parsimonious specifications, like that of the double-log demand model.

It is more common to find elasticity estimates derived from reduced-form, single-equation models (Martin and Porter 1985; Piggott et al. 1996). Single equation approaches provide point estimates without imposing rigid functional relationships conforming with consumer demand theory. The log-log or double-log model estimated with ordinary least squares is commonly found among the records of the Economic Research Service database, and it is best applied when estimating single commodity demand relationships comprising a small share of the overall household budget (Ulubasoglu et al. 2016).

Numerous studies have examined consumer demand sensitivities across various products. This is particularly true for agrifood products, as documented in the Economic Research Service database of elasticities (US Department of Agriculture, Economic Research Service 2024). However, despite extensive research of commodities, relatively few studies have specifically estimated consumer price sensitivities for blueberries. This gap in research extends to most commercial berry species.

Data. This analysis used NielsenIQ Consumer Panel data from 2015 to 2020 to estimate consumer price sensitivity for blueberries. This required upending many data challenges presented when aggregating up from individual records to regional and national values, including how blueberry products were selected from the universe of products with blueberries or derivatives of the word "blueberry" used in the name. Only fresh blueberries were considered for blueberry demand, thus excluding products copackaged with fresh blueberries (salads and multiberry packages, for instance), juices consisting of blueberries, and processed foods with blueberries in the ingredients or in the name. After establishing which universal product code items would be considered fresh blueberries, a unit-consistent measure of price had to be established across multiple sizes. Other receipt data issues required further processing. The absence of a purchase on a receipt precipitated the record of a price for the blueberries not purchased. In those cases, we used average blueberry prices for that region and time period,

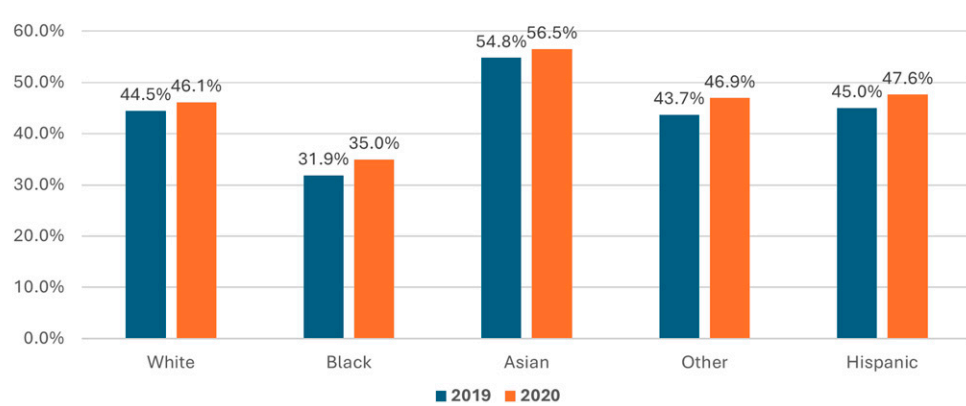

Fig. 11. Share of households that purchase fresh blueberries by race and ethnicity.

Downloaded from https://journals.ashs.org at 2026-07-29 via Open Access. This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/). https://creativecommons.org/licenses/by-nc/4.0/

Table 8. Percent of fresh blueberry purchases by race.

	2015	2016	2017	2018	2019	2020
White	82.0%	80.8%	80.0%	80.2%	78.6%	78.8%
Black	6.6%	6.9%	7.3%	7.1%	7.7%	7.7%
Asian	5.1%	5.3%	5.6%	6.0%	6.4%	6.3%
Other	6.3%	6.9%	7.1%	6.7%	7.2%	7.1%
Total (millions of pounds)	166.48	188.43	203.55	220.00	261.60	307.57

which is reported in the literature (Wang and Capps 2025).

The resulting dataset was structured at the household/month unit. During the 60-month period of analysis, our dataset included 107,938 unique households across the nation. The weaknesses of using the NielsenIQ dataset for demand analyses are well-documented in the economic literature, and any results should be interpreted in light of such data limitations. All results presented used NielsenIQ projection factors; therefore, the analysis was representative of the US population.

Econometric methods. The conceptual model for estimation augments the demand for blueberries with additional household and demographic variables described as follows:

$$q_{blueberries} = f(\mathbf{P}|\mathbf{X})$$

where $q_{blueberries}$ is the quantity of blueberries purchased, P is a vector of prices of the set of commodities that either compete with or complement blueberries, including that of blueberries, and X is a vector of individual household characteristics, including the resource constraint m. The choice of functional form for estimation was informed by the low share of total household expenditures represented by the subset of commodities for inclusion and the vast number of observations afforded by the NielsenIQ Consumer Panel data. The log-log or double log function was specified as follows:

$$\ln q_{it} = \alpha + \gamma \ln \mathbf{P}_{it} + \beta \ln \mathbf{X}_{it} + \delta_i t + e_{it}$$

where q_{it}, P, and X were as assigned as previously mentioned, the scalar coefficients α and δ control for the scale and time trend of demand, respectively, and the vectors of coefficients γ and β measure the relationship between price and demographic factors and quantity purchases. Six years of NielsenIQ Consumer Panel data were analyzed and reflected in the suffix t. The coefficients were to be estimated based on fit with observed data, and the e_{it} was the fit error term. This reduced-form representation of the Walrasian demand function in logs can be estimated with ordinary least squares, where the resulting estimation coefficients γ are estimates of the uncompensated demand elasticities.

Results

Following the study by Lin et al. (2009), we first reported the summary statistics by dividing our sample into blueberry buyers and nonbuyers. We defined buyers as the households that reported purchasing blueberries at least once during the entire study period. We defined nonbuyers as the households that reported zero blueberry purchases throughout the study period. The covariate means and standard deviations are reported in Table 10.

National models were estimated for all blueberry purchases as well as models for blueberries across all nine NielsenIQ regions (Fig. 8). The national model coefficient estimates are shown in Table 11. In model 1, we did not include any controls. In model 2, we controlled for household income, purchase month, and purchase year. In model 3, we added additional controls, namely various household demographics and a binary variable to indicate COVID-19. In model 4, our preferred model, we also controlled for prices of related berries, namely blackberries, strawberries, and raspberries. The regression results in terms of the correlation with demographic factors were largely in line with the summary statistics results presented in Table 10. Namely, household income, presence of children, and the age and education levels of the head of household were all positively correlated with demand. Asian American households and white households showed a higher demand for blueberries and Black households showed a lower demand for blueberries in comparison with the control group of "other" races. Hispanic ethnicity was correlated with higher demand for blueberries in comparison with non-Hispanic ethnicity; however, this was only statistically significant in model 3. Being married and employed full-time also increased the demand for blueberries. Finally, as expected, the coefficient of the COVID-19 binary variable was also positive, indicating an increase in demand for blueberries since the onset of the global pandemic in Mar 2020.

The own-price elasticity estimates by model are shown in Table 12. All own-price elasticity estimates suggested an inelastic demand. In our preferred model, estimates indicated a mild own-price elasticity less than 1 (−0.950). The 95% confidence intervals showed an own-price elasticity range of −0.76 to −1.16. Thus, this estimate was statistically undistinguishable from unitary elastic, indicating that the product was priced efficiently in terms of revenue maximization.

Table 13 shows estimated elasticity estimates for all blueberries and some variation according to NielsenIQ regions. The Mountain region exhibited a positive association, but with high standard errors. This likely reflected a high degree of randomness in the measures and low rates of observed transactions for this region. The West South Central and Pacific regions showed distinctly low rates of elasticity (inelastic blueberry demand), suggesting that increasing prices in these regions would likely result in increased industry revenues. Two regions showed a statistically significant degree of own-price elastic coefficients: the East North Central and South Atlantic regions appeared to have relatively soft demands as well as decreasing prices that may result in an increase in industry revenues. Although the estimated relationships found in this analysis are valid, they were derived in a macro context. Industry decision-makers should also review further field testing results before drawing directives.

Table 9. Fresh organic blueberry purchases as a share of total blueberry purchases by race.

	2015	2016	2017	2018	2019	2020
White	2.6%	3.2%	3.4%	5.6%	6.9%	8.0%
Black	2.3%	3.2%	3.7%	6.9%	6.7%	8.0%
Asian	4.3%	7.5%	7.5%	13.3%	16.5%	18.0%
Other	3.8%	5.1%	5.6%	7.2%	9.7%	12.6%

Table 10. Summary of statistics for blueberry buyers and nonbuyers[i].

	Buyers	Nonbuyers
Household size	2.58 (1.36)	2.45 (1.42)
Household income	$71,440 ($37,530)	$55,860 ($35,840)
Head of HH age	55.22 (14.58)	53.63 (14.48)
Head of HH some college or more	0.86 (0.35)	0.78 (0.41)
Children younger than 18 years in the HH	0.29 (0.45)	0.26 (0.44)
White	0.82 (0.39)	0.77 (0.42)
Black	0.09 (0.28)	0.14 (0.35)
Asian	0.04 (0.20)	0.03 (0.17)
Other race	0.05 (0.22)	0.06 (0.24)
Hispanic origin	0.08 (0.27)	0.08 (0.28)
Head of HH married	0.69 (0.46)	0.57 (0.50)
HH employed full-time	0.07 (0.25)	0.07 (0.26)
HH total monthly expenses for food and nonalcoholic beverages	$294.43 ($226.94)	$210.45 ($187.23)

[i]Data are presented as mean (standard deviation). Household income is reported as categorical in the NielsenIQ data; therefore, we converted it into a continuous variable using midpoint of the range for each category. NielsenIQ projection factors are not used in generating summary statistics.
HH = household.

Downloaded from https://journals.ashs.org at 2026-07-29 via Open Access. This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/). https://creativecommons.org/licenses/by-nc/4.0/

Table 11. Coefficient estimation results for the double-log model of demand for blueberries.

Variables	Model 1 Ln(Q)	Model 2 Ln(Q)	Model 3 Ln(Q)	Model 4 Ln(Q)
Ln(P)	−33.31***	−32.74***	−32.04***	−31.39***
	(0.0985)	(0.0969)	(0.0949)	(0.333)
$Ln(P)^2$	10.85***	10.67***	10.41***	10.11***
	(0.0314)	(0.0309)	(0.0303)	(0.0888)
HH size			−0.0855***	−0.0769***
			(0.00211)	(0.00499)
HH income		0.00670***	0.00411***	0.00355***
		(4.10e-05)	(4.76e-05)	(0.000143)
HH head age			0.00432***	0.00416***
			(0.000127)	(0.000384)
HH head, some college			0.109***	0.113***
			(0.00389)	(0.0111)
HH head, college or more education			0.336***	0.308***
			(0.00421)	(0.0128)
HH children			0.210***	0.187***
			(0.00555)	(0.0144)
White			0.0746***	0.0703***
			(0.00722)	(0.0195)
Black			−0.134***	−0.130***
			(0.00791)	(0.0234)
Asian			0.141***	0.115***
			(0.0115)	(0.0379)
Hispanic			0.0328***	0.0103
			(0.00616)	(0.0182)
Married			0.0523***	0.0682***
			(0.00402)	(0.0118)
HH head employed			0.0452***	0.0370**
			(0.00646)	(0.0162)
Total food expenses			0.00188***	0.00169***
			(1.01e-05)	(3.28e-05)
COVID-19			0.230***	0.217***
			(0.0130)	(0.0138)
Prices of other berries included	No	No	No	Yes
Purchase month included	No	Yes	Yes	Yes
Purchase year included	No	Yes	Yes	Yes
Constant	16.92***	15.99***	14.88***	34.95***
	(0.0776)	(0.0768)	(0.0768)	(0.640)
Observations	4,389,032	4,389,032	4,389,032	4,389,032
R^2	0.326	0.342	0.361	0.373

Robust standard errors in parentheses.
*, **, *** Significant at the $P < 0.1$, 0.05, or 0.01, respectively.
HH = household.

Discussion

This research contributes to the literature by providing in-depth information regarding the correlation between consumer demographics and their demand for blueberries. We found that while demand has increased overall, certain groups of the population, including high-income households and Asian American households, were the groups with the highest increase in demand during the study period (2015–20). Similarly, we found that demand for conventional blueberries increased by approximately 85% in the 5-year study period; however, demand for organic blueberries increased by over 500% over the same study period. However, despite the significant increase in the demand for organic blueberries, they remained a small fraction of the overall demand for fresh blueberries. A regression analysis showed that demand for blueberries was significantly higher for households with children and mildly higher for households with heads of household who were married and households in which at least one head was employed full-time. The regression analysis also showed that demand for blueberries increased significantly following the onset of the COVID-19 because consumers sought to increase the consumption of healthful foods.

Table 12. Estimated own-price elasticities of demand for blueberries.

	Model 1	Model 2	Model 3	Model 4
Own-price elasticity	−0.660	−0.631	−0.693	−0.959
Standard error	0.013	0.013	0.013	0.102
t	−49.69	−48.60	−53.27	−9.35
$P > \|t\|$	0.000	0.000	0.000	0.000
95% CI (upper)	−0.686	−0.656	−0.718	−1.161
95% CI (lower)	−0.634	−0.606	−0.667	−0.757

CI = confidence interval.

Table 13. Estimated own-price elasticities for blueberries by NielsenIQ region (model 4).

	Elasticity	*SE*	t-Stat	$P>\|t\|$	95% CI, upper	95% CI, lower
New England	−1.39	0.197	−7.07	0.000	−1.81	−0.97
Mid-Atlantic	−1.02	0.099	−10.29	0.000	−1.22	−0.82
East North Central	−1.79	0.080	−22.23	0.000	−1.94	−1.63
West North Central	−0.83	0.134	−6.18	0.000	−1.09	−0.56
South Atlantic	−1.62	0.078	−20.70	0.000	−1.77	−1.46
East South Central	−1.56	0.139	−11.27	0.000	−1.84	−1.29
West South Central	−0.59	0.096	−6.13	0.000	−0.78	−0.40
Mountain	0.26	0.360	0.71	0.481	−0.46	0.97
Pacific	−0.55	0.125	−4.43	0.000	−0.80	−0.30

CI = confidence interval; *SE* = standard error.

We used NielsenIQ Consumer Panel data to estimate the own-price elasticity of demand while controlling for demographic factors and found that overall demand was mildly inelastic (−0.96) but not statistically different from −1. This indicated that, at the national level, prices were at the revenue-maximizing level. Prior literature regarding blueberry price elasticities is limited; therefore, our study helps fill an important gap. Our estimates were between those of two studies that found blueberries to be elastic (−1.49) and inelastic (−0.76), respectively (Ma et al. 2024; Sobekova et al. 2013). However, it is worth noting that these studies used different datasets, considered different population groups, and used different methods than ours.

By recognizing the diversity of the US population's preferences and budget constraints, we also estimated blueberry elasticities by region, and we showed important variations. Certain regions, namely the Pacific, West South Central, and West North Central regions, showed inelastic demand for blueberries, thus providing the industry opportunities to increase prices to maximize revenues. Other regions, such as the East North Central, South Atlantic, and New England, showed fairly elastic demand for blueberries; therefore, a strategy of reducing prices in those regions may increase industry revenues. Limitations of our research included the limited study period of 6 years as well as the documented challenges with underreporting observed in NielsenIQ Consumer Panel data. Future research may focus on extending the study. However, the structure of the dataset has changed in more recent years, thus making long-term comparisons using NielsenIQ challenging. Additionally, it may be of interest to industry stakeholders and policymakers to understand whether consumer price sensitivity changes by product attribute, country of origin, and retail outlet, among other factors.

References Cited

Al Hazaimeh R, Shackelford L, Boateng J. 2025. Mixed fruits and berries counteract the detrimental effects caused by the obesogenic cafeteria/western diet in adolescent rat model of obesity.

Downloaded from https://journals.ashs.org at 2026-07-29 via Open Access. This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/). https://creativecommons.org/licenses/by-nc/4.0/

J Funct Foods. 126:106693. https://doi.org/10.1016/j.jff.2025.106693.
Alston JM, Chalfant JA, Piggott NE. 2002. Estimating and testing the compensated double-log demand model. Appl Econ. 34(9):1177–1186. https://doi.org/10.1080/00036840110086003.
Asanica A. 2018. Sensorial evaluation of 26 highbush blueberry varieties in Romania. Scientific Papers Series B Horticulture. LXII.
Barten AP. 1964. Consumer demand functions under conditions of almost additive preferences. Econometrica. 32(1/2):1–38. https://doi.org/10.2307/1913731.
Barten AP. 1969. Maximum likelihood estimation of a complete system of demand equations. Eur Econ Rev. 1(1):7–73. https://doi.org/10.1016/0014-2921(69)90017-8.
Capps O, Cheng M, Kee J, Priestley SL. 2023. A cross-sectional analysis of the demand for coffee in the United States. Agribusiness. 39(2):494–514. https://doi.org/10.1002/agr.21779.
Chicago Booth School, Kilts Center. n.d. NielsenIQ. https://www.chicagobooth.edu/research/kilts/research-data/nielseniq. [accessed Aug 2025].
Christensen LR, Jorgenson DW, Lau LJ. 1975. Transcendental logarithmic utility functions. Am Econ Rev. 65:367–383.
Davies T, Saxena A, Wu JH, Marklund M. 2025. Food price elasticity estimates in Australia. Nat Food. 6(7):725–732. https://doi.org/10.1038/s43016-025-01184-1.
Davis GC. 1997. Product aggregation bias as a specification error in demand systems. Am J Agric Econ. 79(1):100–109. https://doi.org/10.2307/1243946.
Deaton A, Muellbauer J. 1980. An almost ideal demand system. Am Econ Rev. 70:312–326.
Einav L, Leibtag E, Nevo A. 2010. Recording discrepancies in Nielsen Homescan data: Are they present and do they matter? Quant Mark Econ. 8(2):207–239. https://doi.org/10.1007/s11129-009-9073-0.
Gilbert JL, Olmstead JW, Colquhoun TA, Levin LA, Clark DG, Moskowitz HR. 2014. Consumer-assisted selection of blueberry fruit quality traits. HortScience. 49(7):864–873. https://doi.org/10.21273/HORTSCI.49.7.864.
Hammami AM, Guan Z, Cui X. 2024. Foreign competition reshaping the landscape of the U.S. blueberry market. Choices. https://doi.org/10.22004/ag.econ.344736.
Lin BH, Yen ST, Huang CL, Smith TA. 2009. U.S. demand for organic and conventional fresh fruits: the roles of income and price. Sustainability. 1(3):464–478. https://doi.org/10.3390/su1030464.
Ma X, Gallardo RK, Canales E, Iorizzo M. 2024. Quality-related descriptors to increase fresh blueberries purchase—evidence from a basket-based choice experiment. J Agric App Econ Assoc. 3(2):376–395. https://doi.org/10.1002/jaa2.118.
Martin WJ, Porter D. 1985. Testing for changes in the structure of the demand for meat in Australia. Aust J Agric Econ. 29(1):16–31. https://doi.org/10.1111/j.1467-8489.1985.tb00438.x.
Mittelhammer RC, Shi H, Wahl TI. 1996. Accounting for aggregation bias in almost ideal demand systems. J Agric Resour Econ. 247–262.
Morgan KL. 2022. Market trends for US berry crops: Implications for Florida blueberry, blackberry, and raspberry producers. EDIS 2022(6). https://doi.org/10.32473/edis-fe1123-2022.
Piggott NE, Chalfant JA, Alston JM, Griffith GR. 1996. Demand response to advertising in the Australian meat industry. Am J Agric Econ. 78(2):268–279. https://doi.org/10.2307/1243701.
Pollak RA, Wales TJ. 1978. Estimation of complete demand systems from household budget data: The linear and quadratic expenditure systems. Am Econ Rev. 68:348–359. https://doi.org/10.2307/1243701.
Qu S, Lamm AJ, Rumble JN. 2017. Marketing power berries: An importance-performance analysis of blueberry. Journal of Applied Communications. 101(3) https://doi.org/10.4148/1051-0834.1842.
Schnettler B, Miranda H, Sepúlveda J, Denegri M, Mora M, Lobos G. 2011. Preferences for berries among consumers in southern Chile: Blueberries are produced but are they consumed? J Food Sci. 76(7):S458–S464. https://doi.org/10.1111/j.1750-3841.2011.02334.x.
Shi L, House LA, Gao Z. 2011. Consumer structure of the blueberry market: a double hurdle model approach. AgEcon Search.
Sobekova K, Thomsen MR, Ahrendsen BL. 2013. Market trends and consumer demand for fresh berries. APSTRACT. 7(2–3):11–14. https://doi.org/10.19041/APSTRACT/2013/2-3/1.
Stone R. 1954. Linear expenditure systems and demand analysis: An application to the pattern of British demand. The Economic Journal. 64(255):511–527. https://doi.org/10.2307/2227743.
Stull AJ, Cassidy A, Djousse L, Johnson SA, Krikorian R, Lampe JW, Mukamal KJ, Nieman DC, Porter Starr KN, Rasmussen H, Rimm EB, Stote KS, Tangney C. 2024. The state of the science on the health benefits of blueberries: A perspective. Front Nutr. 11:1415737. https://doi.org/10.3389/fnut.2024.1415737.
Taylor LD, Houthakker HS. 2010. Consumer demand in the United States: Prices, income, and consumption behavior. Springer Science & Business Media, New York, NY, USA.
Theil H. 1965. The information approach to demand analysis. Econometrica. 33(1):67–87. https://doi.org/10.2307/1911889.
US Department of Agriculture, Economic Research Service. 2024. Demand elasticities from literature: USDA.
US Department of Agriculture, Foreign Agricultural Service. 2021. Blueberries around the globe – past, present, and future. https://www.fas.usda.gov/data/blueberries-around-globe-past-present-and-future. [accessed Aug 2025].
US Department of Agriculture, National Agricultural Statistical Services. 2022. Noncitrus fruits and nuts 2021 summary.
US Highbush Blueberry Council. n.d. History of blueberries. https://blueberry.org/about-blueberries/history-of-blueberries/. [accessed Aug 2025].
US Highbush Blueberry Council. n.d. New research explores blueberries' positive effects in men with type 2 diabetes. https://ushbc.blueberry.org/newsroom/new-research-explores-blueberries-positive-effects-in-men-with-type-2-diabetes/. [accessed Mar 2025].
Ulubasoglu M, Mallick D, Wadud M, Hone P, Haszler H. 2016. Food demand elasticities for Australia. Aus J Agri & Res Econ. 60(2):177–195. https://doi.org/10.1111/1467-8489.12111.
Wang L, Capps O Jr. 2025. Unit value imputation methods using household scanner data: A case study of milk purchases. J Agric Appl Econ. 57(3):480–489. https://doi.org/10.1017/aae.2025.16.
Yue C, Wang J. 2017. Consumer preferences for fresh blueberry attributes. Acta Hortic. 1180(1180):1–8. https://doi.org/10.17660/actahortic.2017.1180.1.
Zhang L, Muscat JE, Chinchilli VM, Kris-Etherton PM, Al-Shaar L, Richie JP. 2024. Consumption of Berries and Flavonoids in Relation to Mortality in NHANES, 1999–2014. J Nutr. 154(2):734–743. https://doi.org/10.1016/j.tjnut.2024.01.002.

Downloaded from https://journals.ashs.org at 2026-07-29 via Open Access. This is an open access article distributed under the CC BY-NC license (https://creativecommons.org/licenses/by-nc/4.0/). https://creativecommons.org/licenses/by-nc/4.0/