

Marketing and Pricing in the U.S. Fruit and Vegetable Industry

October 4, 2024

Congressional Research Service

<https://crsreports.congress.gov>

R48213



R48213

October 4, 2024

Renée Johnson
Specialist in Agricultural
Policy

Marketing and Pricing in the U.S. Fruit and Vegetable Industry

Pandemic-era supply chain disruptions and higher input and operating costs have contributed to increased market volatility and higher consumer and producer prices for fruits and vegetables since 2020. While conditions have moderated and overall price inflation has slowed, prices for most fruits and vegetables have remained elevated compared with pre-2020 levels; for some products, prices have continued to trend upward since 2022. The U.S. Department of Agriculture (USDA) continues to report increases in the advertised prices by major retail supermarket outlets for some fruits and vegetables in 2024. Producer prices for U.S. fruits and vegetables have also remained higher. Sustained higher prices reflect, in part, continued production and distribution challenges within some fruit and vegetable markets.

The U.S. fruit and vegetable industry is a dynamic and highly complex and diverse market covering hundreds of different types of fruits and vegetables, including fresh, frozen, and dried products, each with its own unique set of supply-and-demand conditions. Retail and consumer markets also have multiple marketing and distribution channels. Complexity within the U.S. fruit and vegetable market complicates efforts to draw general conclusions about the industry's current and ongoing market and pricing challenges. The existence of limited publicly available and timely retail and producer price data across individual sectors further complicates such analysis. The industry includes a broad mix of participants spanning input suppliers, growers, processors, food services, grocers and other retail outlets, direct-to-consumer markets, and importer-exporters. Fruit and vegetable growers contributed \$62.4 billion to farm-level production in 2022, according to USDA. Available data suggest that contributions by other participants throughout the value chain resulted in total consumer sales of fruit and vegetable products between \$160 billion and \$190 billion annually. Within the overall U.S. market for food consumed at home, fruit and vegetable products represent about one-fifth of the total food market value annually.

Sustained higher grocery prices are a concern among U.S. policymakers. In March 2024, the Federal Trade Commission (FTC) released the findings of its investigation of continued high prices throughout the U.S. retail food industry. FTC concluded that “large market participants accelerated and distorted the negative effects associated with supply chain disruptions” and that “grocery retailer profits rose and remain elevated.” In August 2024, FTC and the Department of Justice announced plans to launch a new investigation. These investigations broadly stem from President Biden’s Executive Order 14036, *Promoting Competition in the American Economy*, which focuses on “lowering food prices for consumers and increasing earnings for farmers and ranchers” in the U.S. food and agriculture industry.

In the 118th Congress, bills have been introduced and changes proposed in annual appropriations that would address food prices and supply chain resiliency broadly across the U.S. food sectors. Congress continues to consider a range of broader agricultural supply chain resiliency measures, both in introduced legislation (e.g., H.R. 763, H.R. 4873/S. 4099, H.R. 8833, H.R. 9226) and in annual appropriations actions (e.g., H.Rept. 118-583, S.Rept. 118-193). One bill, H.R. 8898, would require the U.S. Government Accountability Office (GAO) to conduct a study of the Consumer Price Index for all food consumed at home over the past two decades. Other introduced legislation would address *shrinkflation* or “product downsizing, occurs when a company decreases the amount or size of a consumer product and charges the same price, or a higher price, for such smaller product” (H.R. 7825/S. 3819), and other bills would generally address *price gouging*, or excessive price increases for any good or service (H.R. 7390/S. 3803). Other introduced legislation would address fruit and vegetable markets specifically, with a focus on impacts from imports (e.g., H.R. 9240/S. 498, H.R. 6712). In addition, some Members are calling on certain federal agencies to address rising food prices under their existing authorities related to anticompetitive behavior in the U.S. market. Some industry and advocacy groups have called for congressional hearings in response to FTC’s investigation.

Further legislative and administrative actions might not address the U.S. fruit and vegetable sectors only but would broadly apply to the sector as part of the overall U.S. food system. Other potential actions could be considered specific to the U.S. fruit and vegetable sectors. Existing statutory and regulatory requirements govern the buying and selling of U.S. fruits and vegetables under the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. §§499a-499t; 7 U.S.C. §499(b)(4)) and could provide a means to address specific needs of U.S. fruit and vegetable growers. Existing market data collection programs, such as USDA’s Specialty Crops Market News and other data collection efforts at USDA, could be expanded to improve price transparency for fruits and vegetables in the U.S. marketplace.

Contents

Fruit and Vegetable Marketing	1
Farm-Level Production	3
U.S. Consumer Sales (Post-harvest)	5
Processors and Manufacturers	6
Food Service Establishments	7
Grocers and Other Retail Outlets	7
Direct-to-Consumer Markets	8
Imports and Exports	8
COVID-19 Pandemic Market Disruptions	9
Fruit and Vegetable Pricing	11
Retail-Level (Consumer Price Index)	13
Farm-Level (Producer Price Index)	16
Administrative and Legislative Activities	17
Executive Orders and the White House Competition Council	17
Strike Force on Unfair and Illegal Pricing	18
Federal Pandemic-Era Relief	19
Existing Authorities and Program Support	20
Protections for Sellers	20
Price and Market Data	22
Specialty Crops Market News	22
Selected ERS Data Products	23
Other Federal Support	23
Considerations for Congress	24
U.S. Food Industry (Industry-Wide)	24
U.S. Fruit and Vegetable Sectors	25

Figures

Figure 1. U.S. Fruit and Vegetable Value Chain and Marketing Channels	2
Figure 2. Share of Farms Primarily Growing Specialty Crops, by County, 2022	5
Figure 3. Changes in Selected CPI Data, January 2014-August 2024	13
Figure 4. CPI for Selected Fruits and Vegetables, January 2014-August 2024	14
Figure 5. Changes in Selected PPI Data, January 2014-August 2024	15
Figure 6. PPI for Selected Fruits and Vegetables, January 2014-August 2024	16

Contacts

Author Information	26
--------------------------	----

Retail and producer prices for U.S. fruit and vegetable products have increased since 2020, driven by increased costs and supply chain disruptions during the COVID-19 pandemic and associated inflationary pressures throughout the economy.¹ Although conditions have moderated and overall price inflation has slowed in 2024, prices for most fruits and vegetables have remained elevated. Prices for some fruit and vegetable products have continued to trend upward. The U.S. Department of Agriculture (USDA) reports continued increases in the advertised prices by major retail supermarket outlets for some fruits and vegetables during 2024.² Producer prices for U.S. fruits and vegetables have also remained higher. Sustained higher prices reflect, in part, continued production and distribution challenges within some product markets.

Sustained higher grocery prices remain a concern among U.S. policymakers. In the 118th Congress, legislation has been introduced and changes proposed in annual appropriations bills that would address food prices and supply chain resiliency across the U.S. food sectors. Some Members are calling on certain federal agencies to address rising food prices under their existing authorities related to anticompetitive behavior in the U.S. market. Some industry and advocacy groups have called for congressional hearings in response to recent and ongoing investigations by the Federal Trade Commission (FTC).³ In addition, President Biden's Executive Order (E.O.) 14036, *Promoting Competition in the American Economy*, and activities of the White House Competition Council include a focus on the U.S. food and agriculture industry.⁴ As part of its oversight responsibilities, Congress may decide to review the executive branch's ongoing activities or could initiate its own investigation of U.S. fruit and vegetable consumer and/or producer prices.

While such actions would likely be geared toward the U.S. food industry as a whole, they could broadly apply to the fruit and vegetable sectors as well. Other potential policy actions could involve existing statutes and regulations specific to the fruit and vegetable sectors. Efforts to draw general conclusions about the causes of or factors contributing to continued higher fruit and vegetable prices are difficult given that the U.S. fruit and vegetable industry is complex and highly diverse—covering hundreds of different types of products, each with its own unique set of supply-and-demand conditions. Retail and consumer markets for fruits and vegetables also have multiple marketing and distribution channels. Limited publicly available and timely retail and producer price data across individual sectors further complicate such analysis.

Fruit and Vegetable Marketing

Figure 1 broadly depicts the value chain and marketing channels for U.S. fruits and vegetables, reflecting the process from production to marketing required to produce a consumer food product at retail. Additional background follows related to U.S. fruit and vegetable production and the value chain post-harvest. **Figure 1** also shows some of the raw material inputs and packaging supplies required for farm-level fruit and vegetable production; however, it does not fully reflect

¹ Specific definitions of what constitutes a fruit or vegetable can vary by agency and specific context.

² U.S. Department of Agriculture (USDA), *Advertised Prices for Specialty Crops Products at Major Retail Supermarket Outlets* (various weeks), <https://www.ams.usda.gov/mnreports/fvwretail.pdf>.

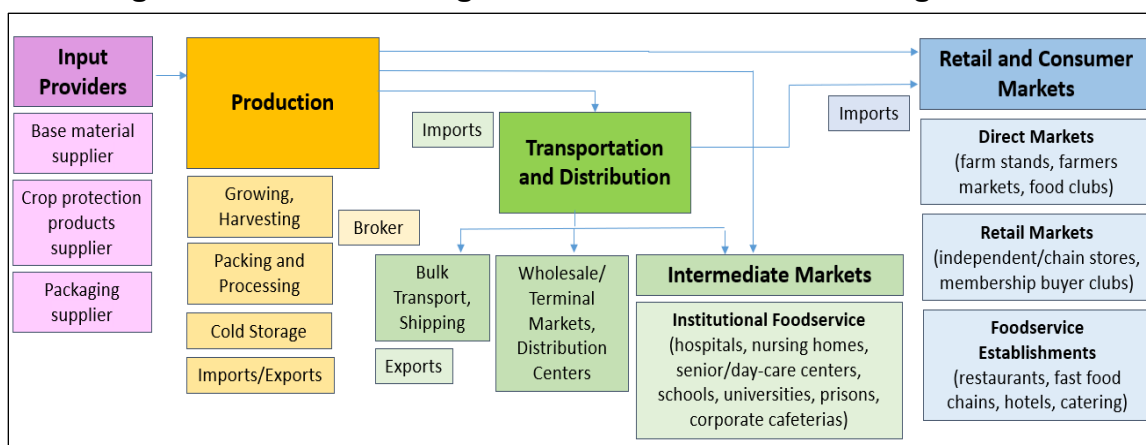
³ Federal Trade Commission (FTC), "FTC Releases Report on Grocery Supply Chain Disruptions," press release, March 21, 2024, <https://www.ftc.gov/news-events/news/press-releases/2024/03/ftc-releases-report-grocery-supply-chain-disruptions>. See also FTC, "Strike Force on Unfair and Illegal Pricing," press release, August 1, 2024, <https://www.ftc.gov/news-events/events/2024/08/strike-force-unfair-illegal-pricing>.

⁴ The White House, "White House Competition Council," <https://www.whitehouse.gov/competition/>. See also Executive Order 14036 (E.O.) at Executive Office of the President, "Promoting Competition in the American Economy," 86 *Federal Register* 36987, July 14, 2021.

the network of potential individual transport and distribution steps throughout the supply chain in the manufacture and sale of such products.

As shown in **Figure 1**, U.S. produce growers rely on both retail and food service establishments to market and distribute their products. Some produce growers sell nearly all of their production to some combination of the food service market and larger retail chain stores. Fruits and vegetables also are sold to wholesale distributors and produce markets that serve independent grocery stores and restaurants. The federal government is an institutional buyer of U.S. fruits and vegetables for use in domestic nutrition and international food assistance programs.⁵ Precise estimates of the value of produce sales through the U.S. retail and food service sectors are not available given the sheer number of fruit and vegetable crops, as well as diversity across the industry and other characteristics that vary by subsector and growing region.

Figure 1. U.S. Fruit and Vegetable Value Chain and Marketing Channels



Source: CRS from U.S. Department of Agriculture (USDA), *U.S. Fresh Produce Markets: Marketing Channels, Trade Practices, and Retail Pricing Behavior*, AER-825, September 2003; Roberta L. Cook, "Fundamental Forces Affecting U.S. Fresh Produce Growers and Marketers," *Choices*, Quarter 4, 2011; National Policy & Legal Analysis Network to Prevent Childhood Obesity, *Providing Fresh Produce in Small Food Stores*, 2014; and GSI, *Fresh Fruit and Vegetable Traceability Guideline*, February 2021, <https://ref.gsl.org/guidelines/fruit-veg/>.

USDA data provide an indication of the relative contributions by the farm production, wholesale, processing, and retail marketing channels as a share of the U.S. food dollar for fresh fruits and vegetables. USDA fresh fruit and vegetable data indicate that, combined, these market channels account for about 70%-80% of the U.S. food dollar and consist of retail (about 20%), wholesale (about 17%), processing (about 1%), and farm production (ranging from 30% to 40% for fruit and vegetables, respectively).⁶ The remaining roughly 20%-30% share of the U.S. fresh produce dollar is attributable to transportation, energy, packaging, agribusiness, finance and insurance, advertising, legal and accounting, and food services (contributions ranked largest to smallest).

For the purposes of this report, U.S. consumer sales of fruit and vegetable products are estimated to range between \$160 billion and \$190 billion annually, based on CRS analysis of limited

⁵ For more background, see CRS Report R48141, *Trends in USDA Procurement of U.S. Food and Agricultural Products*. In FY2023, for example, USDA procured \$1.9 billion in U.S. fruit, tree nut, and vegetable products.

⁶ CRS from USDA data. See USDA, Economic Research Service (ERS), "Food Dollar Series," <https://www.ers.usda.gov/data-products/food-dollar-series/download-the-data/>; and USDA, ERS, "Price Spreads," <https://www.ers.usda.gov/data-products/price-spreads-from-farm-to-consumer/>. Shares are calculated based on USDA nominal data (cents per domestic food dollar).

publicly available data.⁷ The value of farm-level fruit (including tree nuts) and vegetable production totaled \$62.4 billion, based on USDA's 2022 *Census of Agriculture*.⁸

Fruit and vegetable products represent about one-fifth of the U.S. market for food consumed at home.⁹ Overall, the U.S. produce sector is highly streamlined and specialized. Many perishable produce items are presold and packaged in bulk to certain specifications, and producers cannot readily shift such items from one marketing channel to another.¹⁰ Most produce is planted, harvested, packed, and shipped on a precise schedule to replenish inventories “just in time,” which limits the industry’s flexibility to respond to unexpected market disruptions (e.g., if a business’s supplier or buyer defaults on a commitment or is unable to deliver supplies or move outgoing products).¹¹ The highly perishable nature of fruits and vegetables allows for limited storage options. Products grown for the higher-value fresh market might not be easily diverted to processing markets, which often use specific crop species and have their own dedicated market relationship with certain growers. The generally lower-value market for processing fruits and vegetables would likely not allow fresh market growers the ability to cover their costs.

Farm-Level Production

U.S. farmers grow and pack hundreds of different types of fruits and vegetables, including fresh, frozen, and dried products. In 2022, the value of farm-level fruit (including tree nuts) and vegetable production totaled \$62.4 billion, representing nearly one-fourth of the value of U.S. crop production (including nursery and greenhouse production).¹² Among U.S. operations reporting farm-level sales, there were 110,821 farms that sold fruits, berries, and tree nuts and 70,391 farms that sold vegetables, melons, potatoes, and sweet potatoes.¹³ Some producers also engage in processing and manufacturing value-added products, including juices, wines and ciders, jellies and jams, fruit and nut mixes, and other types of fruit and vegetable preparations. These fruit and vegetable products comprise a subset of crops under the statutory definition of *specialty crop* (see the text box titled “Specialty Crops: Fruits and Vegetables”).

As fruits and vegetables comprise the leading crops within the specialty crop category, **Figure 2** roughly reflects the major U.S. fruit- and vegetable-producing areas. Every U.S. state has some commercial fruit and vegetable production. By all measures, California is the largest fruit- and vegetable-producing state, given its size and extended growing season and ability to produce a diverse range of products, compared with other U.S. states. By market value, California’s sales

⁷ See methodology described in “U.S. Consumer Sales (Post-harvest).” Food-at-home spending totaled \$1.07 trillion in 2023 (USDA, ERS, “Food Expenditure Series,” <https://www.ers.usda.gov/data-products/food-expenditure-series/>).

⁸ USDA, National Agricultural Statistics Service (NASS), 2022 *Census of Agriculture*, <https://www.nass.usda.gov/Publications/AgCensus/2022/>.

⁹ Share based on U.S. fruit and vegetable farm-level sales (2022 *Census of Agriculture* data) and CRS-estimated U.S. consumer fruit and vegetable sales as a share of all food from home sales.

¹⁰ For more background, see Roberta L. Cook, “Fundamental Forces Affecting U.S. Fresh Produce Growers and Marketers,” *Choices*, Quarter 4, 2011 (hereinafter Cook, “Fundamental Forces”); and Linda Calvin et al., *U.S. Fresh Fruit and Vegetable Marketing: Emerging Trade Practices, Trends, and Issues*, Agricultural Economic Report (AER) no. 795, January 2011, https://www.ers.usda.gov/webdocs/publications/41227/32247_aer795_002.pdf (hereinafter Calvin et al., *U.S. Fresh Fruit and Vegetable Marketing*).

¹¹ Ellen Bruno, Richard Sexton, and Daniel Sumner, “The Coronavirus and the Food Supply Chain,” *ARE Update*, vol. 23, no. 4 (March/April 2020), <https://giannini.ucop.edu/publications/are-update/issues/2020/>.

¹² USDA, NASS, 2022 *Census of Agriculture*, Table 2. In 2022, the U.S. farm-level value of agricultural products sold totaled \$543.1 billion (of which total U.S. crop sales totaled \$280.6 billion).

¹³ USDA data on fruit and vegetable farms might not be additive, as some operations might grow both. USDA data are not available on the number or value of fruit operations only (i.e., excluding tree nuts). In 2022, the total number of U.S. farms across all crops (including nursery and greenhouse crops) totaled 949,777 operations.

totaled \$34.8 billion in 2022, accounting for 56% of U.S. fruit (including tree nuts) and vegetable sales.¹⁴ By farm acreage, California had 4.1 million bearing and nonbearing orchard acres, accounting for 66% of all U.S. land in orchard production (covering fruits and tree nuts, not including berries). Other leading U.S. states (ranked by orchard acreage) were Florida, Washington, Georgia, Texas, Oregon, Oklahoma, New York, Michigan, and New Mexico. California also had 1.2 million acres of vegetables, potatoes, and melons (28% of U.S. harvested vegetable acres for sale).¹⁵ Other leading states (ranked by acres harvested) were Washington, Idaho, Florida, Wisconsin, Minnesota, Michigan, North Carolina, Oregon, and Arizona.

Specialty Crops: Fruits and Vegetables

Fruits and vegetables represent a subset of crops under the statutory definition of a specialty crop. In statute, a *specialty crop* is defined as “fruits and vegetables, tree nuts, dried fruits, and horticulture and nursery crops (including floriculture)” (7 U.S.C. §1621 note). These include fresh, frozen, dried, and processed products, including juices, wines and ciders, jellies and jams, fruit and nut mixes, and other types of value-added products. Aside from fruit and vegetable products, specialty crops include other edible crops and products, including tree nuts, and consumer products, such as herbs and spices, coffee and tea, and maple syrup and honey. USDA guidance involving processed products specifies that processed specialty crops consist of more than 50% of the crop by weight, exclusive of added water. Specialty crops also include floricultural products (or flowering and ornamental plants), such as cut-flowers and nursery crops.

Source: CRS from USDA, Agricultural Marketing Service (AMS), “What Is a Specialty Crop?,” <https://www.ams.usda.gov/services/grants/scbgp/specialty-crop>; and USDA, AMS, *USDA Definition of Specialty Crop*, <https://www.ams.usda.gov/sites/default/files/media/USDA%20SpecialtyCropDefinition.pdf>. For other related background, see CRS Report R44719, *Defining “Specialty Crops”: A Fact Sheet*.

Across the U.S. agricultural sectors, most farmers and ranchers generally are considered to be *price-takers* who offer similar (homogenous) goods and often must accept the prevailing market price, often within a marketing system characterized by few buyers.¹⁶ Competition among few buyers may limit the ability of individual growers to negotiate higher prices for their crops and to pass on increased costs associated with higher input and/or regulatory costs (such as farm-level compliance with labor and/or environmental standards across growing regions). The highly perishable nature of fruits and vegetables limits storability and the ability of both sellers and buyers to adjust to short-run supply-and-demand disruptions and mitigate negative impacts of price movements. This situation may allow lower-cost producers (including importers) to step in and supply the U.S. market, which, in turn, may exert added pricing pressures on growers and cause some to eventually exit the industry.

Fruits and vegetables are often grown under contract. In agricultural production, growing crops under contract—referring to the use of legal agreements between a grower and a contractor (or integrator) to produce a specific type, quantity, and quality of fruit or vegetable crop—allows producers to manage some income risks.¹⁷ Growers may use contracts to guarantee they are compensated appropriately for higher quality products, to create specific outlets for their

¹⁴ USDA, *2022 Census of Agriculture*, Table 2 (State Level Data), p. 11. Data excluding tree nuts are not available.

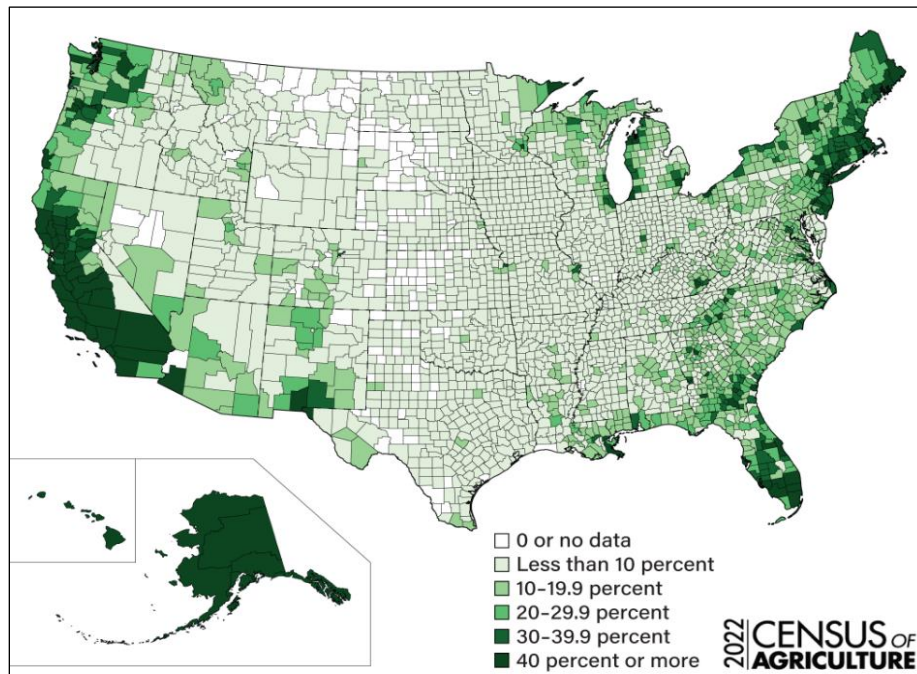
¹⁵ *Ibid.*, Table 30 and Table 29 (State Level Data), respectively. In 2022, U.S. land in orchards totaled 6.2 million acres, and harvested acres in U.S. vegetable production totaled 4.3 million acres.

¹⁶ In contrast, a *price-maker* refers to an entity that has the power to influence the price because the goods it produces do not have perfect substitutes. Competition among few buyers is also referred to as *oligopsony*. See Richard Rogers and Richard Sexton, “Assessing the Importance of Oligopsony Power in Agricultural Markets,” *American Journal of Agricultural Economics*, vol. 76, no. 5 (1994), pp. 1143-1150, <https://doi.org/10.2307/1243407>.

¹⁷ In U.S. agriculture, an *integrator* generally refers to a single specialized company that may control certain successive stages of production or resource use, often through the use of contracts with growers. See James M. MacDonald et al., *Organizing the Production and Use of Agricultural Commodities*, AER-837, USDA, November 2004; and Joy Harwood et al., *Managing Risk in Farming: Concepts, Research, and Analysis*, AER-774, USDA, March 1999.

products, and to provide assurance for debt financing. Contracts may also help guarantee that growers are compensated, regardless of whether their produce is sold to consumers. USDA reports that 53% of the total value of U.S. fruit production and 29% of the value of U.S. vegetable production in 2022 were grown under a marketing contract.¹⁸ Under a marketing contract, ownership of the fruits and vegetables grown remains with farmers during production, and the contract sets a price or pricing formula, product quantities and qualities, and a delivery schedule. Crops grown under contract between a grower and a contractor (or integrator) may limit the ability of growers to modify their production plans as a reaction to market conditions.

Figure 2. Share of Farms Primarily Growing Specialty Crops, by County, 2022



Source: USDA, Economic Research Service (ERS), 2022 *Census of Agriculture*, <https://www.ers.usda.gov/webdocs/charts/109080/CoA-Specialty-Crop-farms.png>.

Notes: The map reflects *specialty crop* production but roughly illustrates the nationwide fruit and vegetable production areas, as fruits and vegetables are among the leading specialty crops. For more background, see the **text box** titled “Specialty Crops: Fruits and Vegetables.”

U.S. Consumer Sales (Post-harvest)

Limited data are available on the total size of the U.S. consumer market for fruit and vegetable products, measured at the retail level.¹⁹ Retail sales may be approximated using publicly available data. For the purposes of this report, U.S. consumer sales of fruit and vegetable products are estimated to range between \$160 billion and \$190 billion annually (see **text box**). The following

¹⁸ Christine Whitt, “Farmers’ Use of Contracts Has Declined Over Last 25 Years,” *Amber Waves*, June 23, 2022. Production contracts are another type of agreement whereby the contractor or integrator contractor (or integrator) typically retains control over the commodity (crops or animals) and most inputs during production. USDA reports that production contracts are not used in U.S. fruit production and rarely used in U.S. vegetable production.

¹⁹ For example, available data sets may measure certain market segments only (e.g., fresh and frozen products only, not including processed or canned products; sales from larger retail establishments only, excluding sales through smaller distribution channels or markets); other reported data may double-count segments attributed to another part of the value chain (e.g., sales attributed to the manufacturing sector that may also be elsewhere counted as part of retail sales).

report sections discuss available data for each of the individual market channel segments of the U.S. fruit and vegetable value chain, including food processors, food service establishments, supermarkets and grocers, direct-to-consumer sales, and imports and exports. Available data for these market segments are reported by U.S. government agencies and private market analysis firms. Data cited for these market segments should not be combined, as they may be undercounted (e.g., if representing a portion of the marketing channel only) or may be double-counted (e.g., if sales attributed to one channel are also attributed to another).

Estimated Retail and Consumer Sales of U.S. Fruits and Vegetables

For the purposes of this report, U.S. consumer sales of fruit and vegetable products are estimated to range between \$160 billion and \$190 billion annually. These estimates approximately track previous estimates by researchers at the University of California-Davis, who estimated that consumer sales of U.S. fruits and vegetables totaled \$122.2 billion in 2010 (or \$170 billion measured in 2023 dollars). These 2010 estimates are the most recently available estimates from authoritative sources.

Two USDA data sets are used to approximate total U.S. retail and consumer sales of fruits and vegetables: (1) USDA's 2022 *Census of Agriculture* and (2) USDA-reported data on the farm-value share of the retail fruit and vegetable consumer dollar in the United States. Accordingly, as reported by USDA, farm-level sales of U.S. fruits, tree nuts, and berries totaled \$34.2 billion in 2022, and sales of vegetables, melons, potatoes, and sweet potatoes totaled \$28.2 billion in 2022. (Data excluding tree nuts are not available.) USDA-reported data indicated that the farm-value share of the retail fruit and vegetable consumer dollar in 2022 was 39% and 28%, respectively, across a basket of selected fresh fruits and vegetables.

Total U.S. consumer sales may be approximated by calculating the total consumer value for U.S. fruits and vegetables from USDA-reported farm-level data in 2022. This approach yields estimated U.S. consumer sales of roughly \$190 billion in 2022 (calculated as $\$34.2/0.39 + \$28.2/0.28 = \$188.3$ [multiplied by one billion]). Accordingly, for the purposes of this report, an estimated \$190 billion is assumed to reflect an approximate upper limit of retail produce sales. This estimate could be overstated, as it includes high-value tree nut sales and fresh fruit and vegetable basket data and excludes processed fruit and vegetable products. Other data are available from Statista (a private market research firm) but are limited: Statista reports that fresh, frozen, and processed fruits (excluding nuts) and vegetables were valued at \$74.2 billion and \$89.8 billion, respectively, in 2023 (or a combined total of \$164.0 billion). For this report, an estimated \$160 billion is assumed to reflect an approximate lower limit of retail produce sales, likely a low-end estimate when compared with University of California-Davis's 2010 estimates adjusted for inflation (\$170 billion in 2023 dollars).

Other available data track portions of the industry only. For example, IBISWorld indicates that the U.S. retail market for most fruit and vegetable products was valued at about \$109 billion in 2023. These reported data include \$102.1 billion in supermarket sales of fresh and frozen fruits and vegetables plus another \$6.5 billion in fruits and vegetables sold through smaller local vendors. These data cover fresh and frozen fruits and vegetables only and do not include processed and dried products; however, these data could include some sales sold through food service establishments and may be double-counted elsewhere.

Source: CRS from USDA data (USDA, NASS, 2022 *Census of Agriculture*, Table 2, and Price Spreads from Farm to Consumer) and Statista data, excluding nuts (available at <https://www.statista.com/outlook/cmo/food/fruits-nuts/united-states#revenue>, <https://www.statista.com/outlook/cmo/food/vegetables/united-states#revenue>). Estimates from University of California-Davis researchers from 2010 are from Roberta L. Cook, "Fundamental Forces Affecting U.S. Fresh Produce Growers and Marketers," *Choices*, Quarter 4, 2011, <https://www.choicesmagazine.org/choices-magazine/submitted-articles/fundamental-forces-affecting-us-fresh-produce-growers-and-marketers>.

Processors and Manufacturers

Limited data are available on all U.S. fruit and vegetable processors and product manufacturers. The U.S. Census Bureau reports that, in 2021, there were 1,923 fruit and vegetable preserving and specialty food manufacturers that "freeze food" or "use preservation processes, such as pickling, canning, and dehydrating" under North American Industry Classification System (NAICS) 3114

(Fruit and Vegetable Preserving and Specialty Food Manufacturing).²⁰ Such establishments reported sales, shipments, receipts, and production totaling \$72.3 billion in 2017.²¹ These data do not include sales to fresh fruit and vegetable markets. These data likely are included as part of other reported retail data and statistics and may not be additive, as they may double-count data reported elsewhere. Official U.S. Census Bureau data vary from other available industry information from private market analysis firms. For example, IBISWorld reports that total revenue from the canned fruit and vegetable sectors in the United States was \$50.3 billion in 2023.²² Statista reports that processed and frozen fruits were valued at \$9.0 billion and that processed and frozen vegetables were valued at \$30.5 billion in 2023.²³ Information is not available to reconcile these data differences across all the various sources.

Food Service Establishments

The U.S. produce industry relies on intermediate markets, including institutional food service (e.g., hospitals, nursing homes, senior/day-care centers, schools, universities, prisons, corporate cafeterias) and other food service establishments (e.g., restaurants, fast food chains, hotels, catering). Data are not readily available on the current size of the food service channel specific to the sales of U.S. fruits and vegetables and may vary by product and market. An estimated 40%-50% of all produce industry sales are to food service distributors (e.g., Sysco Corporation, U.S. Foods).²⁴ Proportions may vary by individual product sectors.

Grocers and Other Retail Outlets

The U.S. produce industry relies on sales to grocers and other retail outlets. Data are not readily available on the current size of the food service channel specific to the sales of U.S. fruits and vegetables and may vary by product and market. An estimated 50%-60% of all produce industry sales are to the retail grocery sector, mostly to larger retail chain stores (e.g., Walmart or membership clubs such as Costco) but also to smaller regional grocers.²⁵ Proportions may vary by individual product sectors.

FMI-The Food Industry Association (FMI, a food industry trade association) estimates there are 45,575 supermarkets in the United States.²⁶ FMI asserts that U.S. supermarkets “historically operates on very slim” 1%-2% profit margins and that “competition in the grocery sector is fierce,

²⁰ U.S. Census Bureau data for Fruit and Vegetable Preserving and Specialty Food Manufacturing (NAICS 3114), https://data.census.gov/profile/3114_-_Fruit_and_vegetable_preserving_and_specialty_food_manufacturing?n=3114&g=010XX00US.

²¹ Ibid. This figure is based on the most recent data available.

²² See, for example, Arielle Rose, *Canned Fruit & Vegetable Processing in the US*, IBISWorld, January 2024, p. 88.

²³ Statista data, available at <https://www.statista.com/outlook/cmo/food/fruits-nuts/united-states#revenue> and <https://www.statista.com/outlook/cmo/food/vegetables/united-states#revenue>.

²⁴ Cook, “Fundamental Forces.” Food service establishments were estimated to account for \$51.2 billion in consumer sales based on 2010 data, accounting for 42% of the total consumer value. See also comments by former California Agricultural Commissioner A.G. Kawamura, “Challenges & Opportunities for Agriculture in a Post-Pandemic World,” at Farm Foundation webinar, April 28, 2020, <https://www.farmfoundation.org/forums/virtual-forum-challenges-opportunities-for-agriculture-in-a-post-pandemic-world/>.

²⁵ Ibid.

²⁶ FMI-The Food Industry Association (FMI), “Food Industry Facts,” 2024, <https://www.fmi.org/our-research/food-industry-facts>. This number includes conventional supermarkets, limited assortment groceries, supercenters, warehouse groceries, conventional membership clubs, natural/gourmet stores, and military commissaries. Of this total, FTC claims that there are approximately 25,000 conventional supermarkets and 15,000 grocery retail stores.

and the battle for market share helps keep prices down for shoppers.”²⁷ Industry representatives assert that retailers continue to face supply chain challenges, including high labor, energy, and utility costs; shortages due to adverse weather events; and costs associated with increased regulatory burden.²⁸

A 2023 USDA study reports “significant increases in food retailing market concentration” from 1990 to 2019 at the national, state, metropolitan statistical area (MSA), and county levels.²⁹ USDA reports that four grocery chains now account for 34% of U.S. food sales nationwide, compared with less than 15% in 1990.³⁰ (Concentration ratios of the top 4 [CR-4] firms within an industry is a common measurement of concentration for market power.) FTC claims that “much of the consolidation is attributable to larger, national firms acquiring smaller regional chains.”³¹ USDA’s report further concludes that food retailing market concentration at the county level is “considerably higher” than at the national, state, and MSA levels.³² The Institute for Local Self-Reliance (an advocacy group) claims that Walmart and Sam’s Club account for about one-half of grocery sales across more than 200 regional markets, mostly in the Midwest and South.³³

Direct-to-Consumer Markets

Some produce growers sell fruits and vegetables directly to retail markets, institutions, and food hubs for local or regionally branded products. USDA data indicate that the value of all food and agricultural products sold through direct-to-consumer markets accounted for roughly 3% of the value of all U.S. production in 2022.³⁴ No specific data are available relating to fruits and vegetable products only. Previous estimates suggest that farm and public markets accounted for about \$2 billion annually, or about 1% of the total consumer value for U.S. produce.³⁵

Imports and Exports

The United States has been a net importer of fresh and processed fruits and vegetables since the 1990s.³⁶ In 2023, U.S. imports of fresh and processed fruits and vegetables (excluding nuts and bananas) totaled \$45.3 billion, while U.S. exports globally totaled \$9.3 billion, resulting in a trade deficit of \$36.0 billion in these products.³⁷ A decade ago, this trade deficit totaled \$14.2 billion, when U.S. imports were lower at nearly \$30 billion in 2014 and U.S. exports were higher at

²⁷ FMI, “The Fundamentals of Food Prices: Costs, Consumer Demand, and COVID-19,” fact sheet, September 2023, https://www.fmi.org/docs/default-source/industry-topics-doc/fmi-food-prices-fact-sheet_sept23.pdf. See also National Grocers Association (NGA), “A Statement from NGA President & CEO Greg Ferrara on the Proposed Price Gouging Ban for Grocery Stores,” August 16, 2024, <https://www.nationalgrocers.org/news/a-statement-from-nga-president-ceo-greg-ferrara-on-the-proposed-price-gouging-ban-for-grocery-stores/>.

²⁸ “Harris Plan to Lower Grocery Costs Receives Pushback,” *The Hagstrom Report*, August 16, 2024. Comments are attributed to Leslie Sarasin, president and CEO of FMI-The Food Industry Association.

²⁹ Eliana Zeballos, Xiao Dong, and Ergys Islamaj, *A Disaggregated View of Market Concentration in the Food Retail Industry*, ERR-314, USDA, January 2023 (hereinafter *Market Concentration in the Food Retail Industry*).

³⁰ *Market Concentration in the Food Retail Industry*, Figure 1.

³¹ FTC, *Feeding America in a Time of Crisis*, p. 3, March 2024.

³² *Market Concentration in the Food Retail Industry*, p. 1.

³³ Institute for Local Self-Reliance, “Walmart’s Monopolization of Local Grocery Markets,” June 26, 2019, <https://ilsr.org/articles/walmarts-monopolization-of-local-grocery-markets/>.

³⁴ USDA, NASS, 2022 *Census of Agriculture*, Table 2. In 2022, direct-to-consumer sales totaled \$14.2 billion.

³⁵ Cook, “Fundamental Forces.”

³⁶ See CRS In Focus IF11701, *Seasonal Fruit and Vegetable Competition in U.S.-Mexico Trade*.

³⁷ CRS from data in the U.S. International Trade Commission’s Trade DataWeb database. These data include fresh and processed fruits and vegetables. Tree nuts are outside of this report’s focus. Bananas are not grown in the United States.

nearly \$12 billion (2023 dollars, adjusted for inflation).³⁸ The U.S. trade deficit for fruits and vegetables in 2023 is nearly twice that in 2014 (adjusted for inflation).

America's large consumer market and relatively favorable prices for high-value goods make it an attractive export destination for foreign suppliers. Some U.S. trading partners and foreign investors have made capital and technology investments (e.g., in greenhouse and shade production systems) in order to better supply the U.S. market. Some suppliers have certain comparative advantages that allow them to grow fruits and vegetables more efficiently or at lower cost, among other competitive factors (e.g., lower input or operating costs; access to land, labor, and government support; different regulatory regimes; and favorable growing conditions). Sustained U.S. consumer demand for year-round low-cost produce also influences import levels.

COVID-19 Pandemic Market Disruptions

The U.S. food industry faced significant challenges during the COVID-19 pandemic across all food and agricultural sectors and spanning all marketing segments—including input suppliers, growers, processors, food service, grocers and other retail outlets, direct-to-consumer markets, and importer-exporter markets. USDA reports that “farm businesses experienced disruptions to production because of lowered availability of labor and other inputs, and output prices were affected by changes in demand for commodities in certain market segments.”³⁹

Fruit and vegetable markets were impacted by multiple interrelated factors, including general price inflation, higher input costs (such as energy, packaging, and fertilizers), labor shortages, supply chain disruptions (freight costs and shipping delays), and consumer demand.⁴⁰ Overall, transportation and distribution challenges during the pandemic created difficulty for producers trying to access U.S. retail markets. In particular, a near complete shutdown of U.S. food service and other institutional markets left fruit and vegetable growers with fewer marketing options for their crops. Given the highly perishable (non-storable) nature of most fresh produce, many growers were unable to pivot quickly to other marketing channels. Global supply disruptions due to the pandemic made it difficult for produce growers to obtain base materials and inputs. Labor shortages also posed challenges to growers in meeting planting and harvesting schedules, as fruit and vegetable production is labor-intensive and few automation/mechanization options are available for handling perishable crops. Early responses to the pandemic indicated that some growers resorted to plowing under their fields, and others reported plans to reduce acreage due to the loss of food service demand.⁴¹

A retrospective study found fruit and vegetable sales revenue losses of 40% from March 2020 to mid-May 2020 in Florida, among other reported supply chain disruptions that impacted growers.⁴² A study of labor force disruptions in U.S. fruit and vegetable production suggests associated revenue losses were concentrated in some large fruit- and vegetable-producing states, such as California, Arizona, and Washington, and in the lettuce, apple, grape, and strawberry

³⁸ CRS adjusted this figure for inflation using the gross domestic product (GDP) deflator.

³⁹ USDA, ERS, “Farms and Farm Households During the COVID-19 Pandemic,” November 2023, <https://www.ers.usda.gov/covid-19/farms-and-farm-households/>. USDA's available analyses are not specific to the U.S. fruit and vegetable industry.

⁴⁰ S&P Global, Analysis: Fresh Fruit and Vegetable Prices Inflation, 2023 (requires subscription).

⁴¹ See, for example, Jeffrey Goettsch, “How Coronavirus Broke the Agricultural Supply Chain,” California Agricultural Issues Lab, April 23, 2020, <https://cail.ucdavis.edu/2020/04/24/the-great-potato-giveaway/>.

⁴² Christa D. Court et al., “Pandemic Produce: Impacts of COVID-19 on Florida's Fruit and Vegetable Industries,” *Journal of Agricultural & Food Industrial Organization*, vol. 21 (May 2023), <https://doi.org/10.1515/jafio-2022-0025>.

sectors.⁴³ Other studies conclude, for example, “greater amounts of fresh fruit and vegetables were consumed post-peak pandemic,” in part associated with an increase in more meals being cooked at home.⁴⁴ Another study suggests that local and regional food systems “innovated during COVID-19” and were more flexible in responding to market demand and policy changes, as compared with national response to food supply chain disruptions.⁴⁵

According to U.S. food retailers, among the factors contributing to higher grocery prices during the pandemic were increased operating costs and lost revenue related to pandemic response actions (e.g., sanitation and plexiglass barriers, shutdown of revenue centers, such as salad bars and hot food delis); higher wholesale and logistics costs to acquire goods (e.g., due to stockpiling and expedited orders); higher costs for some inputs, such as packaging materials; the need to increase inventories as consumers shifted to eating more meals at home; and general price inflation.⁴⁶ Pandemic-era disruption combined with other supply shocks resulted in global food inflation and historic price volatility for food and energy commodities.⁴⁷ USDA reports that spending on food purchased for at-home consumption increased during the COVID-19 pandemic, and prices for such food increased at a slower rate than spending on food consumed away from home.⁴⁸ USDA reports that prices for some types of food purchased for home consumption increased faster than others, reflecting changes in production costs, levels of processing, industry concentration, and consumers’ willingness to pay.⁴⁹

Post-pandemic, food retailers claim “grocery prices continue to show some volatility, especially as consumer demand has not abated,” citing continued high grocery demand as consumers have gradually returned to eating outside the home, as well as continued supply chain bottlenecks and labor shortages (especially truck drivers) and cost and availability of raw materials (including packaging materials), in part, exacerbated by severe weather events and geopolitics, such as the war in Ukraine “disrupting global energy and commodity markets.”⁵⁰ Episodic and longstanding plant (and animal) pest and disease outbreaks can also affect production across the supply chain.⁵¹

⁴³ William Ridley and Stephen Devadoss, “The Effects of COVID-19 on Fruit and Vegetable Production,” *Applied Economic Perspectives and Policy*, vol. 43, no. 1 (March 2021), pp. 329-340, <https://doi.org/10.1002/aep.13107>.

⁴⁴ Eckton Chinyanga et al., “Did COVID-19 Influence Fruit and Vegetable Consumption?,” *Appetite*, vol. 201 (October 2024), <https://doi.org/10.1016/j.appet.2024.107574>.

⁴⁵ Dawn Thilmany et al., “Local Food Supply Chain Dynamics and Resilience During COVID-19,” *Applied Economic Perspectives and Policy*, vol. 43, no. 1 (March 2021), pp. 86-104, <https://doi.org/10.1002/aep.13121>.

⁴⁶ FMI, “The Fundamentals of Food Prices: Costs, Consumer Demand, and COVID-19,” <https://www.fmi.org/foodprices> (hereinafter FMI, “The Fundamentals of Food Prices”); and Consumer Brands Association (CBA, formerly the Grocery Manufacturers Association), “Explainer: What’s Driving Grocery Inflation?,” <https://consumerbrandsassociation.org/blog/explainer-whats-driving-grocery-inflation/>.

⁴⁷ U.S. Government Accountability Office (GAO), *Food Prices: Information on Trends, Factors, and Federal Roles*, GAO-23-105846, March 28, 2023. See also S&P Global, *Food Prices and Inflation: Lessons from the Last 50 Years*, June 16, 2023 (requires subscription).

⁴⁸ Eliana Zeballos and Wilson Sinclair, “U.S. Consumers Spent More on Food in 2022 than Ever Before, Even After Adjusting for Inflation,” *Amber Waves*, USDA, ERS, September 2023, <https://www.ers.usda.gov/amber-waves/2023/september/u-s-consumers-spent-more-on-food-in-2022-than-ever-before-even-after-adjusting-for-inflation/>.

⁴⁹ Megan Sweitzer et al., “ERS Data Products Show Food-At-Home Price Inflation from Producers to Consumers,” *Amber Waves*, USDA, ERS, July 2023, <https://www.ers.usda.gov/amber-waves/2023/july/ers-data-products-show-food-at-home-price-inflation-from-producers-to-consumers/>.

⁵⁰ FMI fact sheet, September 2023, https://www.fmi.org/docs/default-source/industry-topics-doc/fmi-food-prices-fact-sheet_sept23.pdf; and FMI, “Russia-Ukraine Crisis and its Impact on Food Prices,” March 2022, <https://www.fmi.org/docs/default-source/industry-topics-doc/ukraine-invasion-food-impact-talking-points-v3-3.9.22.pdf>. See also Kelly Lester, *Sowing Resilience: Securing Our Food Supply from Farm to Table*, John Locke Foundation, August 12, 2024, <https://www.johnlocke.org/research/sowing-resilience/>.

⁵¹ GAO, *Food Prices: Information on Trends, Factors, and Federal Roles*, GAO-23-105846, March 28, 2023.

The U.S. Chamber of Commerce further cites the contribution of “higher wages for workers along the food supply chain,” among other inflationary pressures and supply-and-demand dynamics.⁵² Others assert that higher grocery costs have shifted consumer buying behaviors, further influencing market conditions.⁵³ Changes in retail food prices may also depend on pricing strategies and how various industries pass on higher costs to customers along the food supply chain.⁵⁴ Others point to the potential role of *financialization*—or the increasing role of financial motives, markets, actors, and financial institutions in the food systems.⁵⁵

Fruit and Vegetable Pricing

Pandemic-era supply chain disruptions and higher costs contributed to increased volatility in both consumer and producer prices across all U.S. food and agricultural product categories.⁵⁶ From 2020 to 2024, consumer and producer prices for U.S. fruit and vegetable products increased and remain higher. Although conditions have improved and food and general price inflation have slowed, consumer prices for fruits and vegetables have remained elevated compared with pre-pandemic levels (**Figure 3, Figure 4**). Producer prices also have remained higher (**Figure 5, Figure 6**).

As previously noted, the U.S. fruit and vegetable industry is a dynamic and highly complex market, characterized by a complicated suite of supply-and-demand factors covering hundreds of different types of fruits and vegetables, including fresh, frozen, and dried products.⁵⁷ Accordingly, no one single factor might explain why prices are rising or why prices have remained high compared with pre-pandemic levels. When multiple factors are involved, it can be more difficult to determine the extent to which any one factor affects the retail price of a given product.⁵⁸

Data limitations further complicate such an analysis. Fruits and vegetables generally are not traded on global exchanges, and product pricing is not always transparent. Retail and producer price reporting is complicated, as there are hundreds of different types of crops and differentiated markets in the U.S. produce industry. Price differences for crops produced for the higher-value fresh market versus the generally lower-value processing sector and price differences based on variety, size, origin, and grade also complicate price reporting. Growth in the ready-to-eat produce market and introduction of more convenient consumer packaging (e.g., bagged leafy greens) and other value-added and branded product lines further complicate price reporting. Pricing varies also by geographical area (both domestic and foreign) and by type of production systems used (e.g., conventional versus products certified for specific attributes, such as USDA-organic). Determining how various production factors may influence retail prices for products that undergo processing or involve additional steps along the value chain (e.g., processed or canned fruits and vegetables or mixed food products) can be more difficult compared with less-

⁵² U.S. Chamber of Commerce, “Five Times the Administration Wrongly Blamed Business for High Prices,” March 6, 2024, <https://www.uschamber.com/economy/five-times-the-administration-wrongly-blamed-business-for-high-prices>.

⁵³ Caleb Wilson, “Grocery Prices Nearing Pre-Pandemic Affordability,” *Food Business News*, March 14, 2024.

⁵⁴ CRS Insight IN11945, *U.S. Food Price Inflation and Agriculture Policy*; and GAO, *Food Prices: Information on Trends, Factors, and Federal Roles*, GAO-23-105846, March 28, 2023.

⁵⁵ Jennifer Clapp and S. Ryan Isakson, *Speculative Harvests: Financialization, Food, and Agriculture*, 2021, <https://practicalactionpublishing.com/book/2046/speculative-harvests>.

⁵⁶ Bureau of Labor Statistics (BLS), “The Impact of the COVID-19 Pandemic on Food Price Indexes and Data Collection,” August 2020, <https://www.bls.gov/opub/mlr/2020/article/the-impact-of-the-covid-19-pandemic-on-food-price-indexes-and-data-collection.htm>.

⁵⁷ See “Fruit and Vegetable Marketing” section.

⁵⁸ GAO, *Food Prices: Information on Trends, Factors, and Federal Roles*, GAO-23-105846, March 28, 2023.

processed products (e.g., fresh or frozen fruits and vegetables). The use of proprietary forward contracting arrangements and various wholesaler/retailer pricing techniques and promotional impacts also complicates aggregate price reporting.

This report bases retail- and farm-level pricing data on the regularly updated U.S. Department of Labor's Bureau of Labor Statistics (BLS) indexes.⁵⁹ The BLS index includes the following data:

- **Consumer Price Index (CPI).** CPI is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.⁶⁰ Aside from available CPI index data for aggregate baskets of fresh, frozen, processed, or canned fruits and vegetables, indexes are also available for some individual fruits and vegetables. These include fresh apples, bananas, and citrus fruits; fresh potatoes, tomatoes, and lettuce; aggregate "other" fresh fruits and vegetables; and aggregate data for dried beans, peas, and lentils. For this analysis, the CPI for All Urban Consumers (CPI-U) is used, as it represents the largest population coverage area calculated by BLS, representing more than 90% of the total U.S. population and based on the expenditures of all families living in urban areas.⁶¹
- **Producer Price Index (PPI).** PPI is a measure of the average change over time in the selling prices domestic producers receive for their output.⁶² Prices included in the PPI are from the first commercial transaction for many products and some services. Indexes are available for an aggregate basket of fruits and vegetables and selected individual fruits and vegetables for the United States. Aside from available PPI index data for an aggregate basket of fresh fruits and vegetables (including aggregate "other" fruits and berries) and dry vegetables (including selected varieties of peas, beans, and lentils), indexes are also available for some individual fruits and vegetables. These include selected varieties of fresh apples, berries, citrus fruits, melons, and table and wine grapes and individual indexes for avocados, pears, and pineapples. These also include potato and leafy greens varieties (including spinach and cabbage) and indexes for artichokes, asparagus, beets, broccoli, carrots, cauliflower, celery, cucumbers, dry onions, green peppers, eggplant, beans, squash, sweet corn, sweet potatoes, and tomatoes.⁶³

This report looks at available CPI and PPI aggregate and selected fruit and vegetable categories representing certain major product categories. USDA similarly analyzes CPI and PPI data to produce food price analyses and forecasts.⁶⁴ Other available price data from various USDA data products were deemed unsuitable for the purposes of this report's analysis.⁶⁵

⁵⁹ BLS data were deemed to be best suited for this analysis based on their comprehensiveness.

⁶⁰ BLS, <https://www.bls.gov/cpi>. Data are available at <https://data.bls.gov/PDQWeb/cu>. Data track fresh and processed fruits and vegetables across selected retail establishments, including grocery stores, supermarkets, supercenters, convenience stores, drug stores, and liquor stores.

⁶¹ BLS, "Consumer Price Index Frequently Asked Questions," <https://www.bls.gov/cpi/questions-and-answers.htm>.

⁶² BLS, "Producer Price Indexes," <https://www.bls.gov/ppi>. Data are available from Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/release/tables?rid=46&eid=142105#snid=142107>.

⁶³ Available index data are at Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/release/tables?rid=46&eid=142105#snid=142107>.

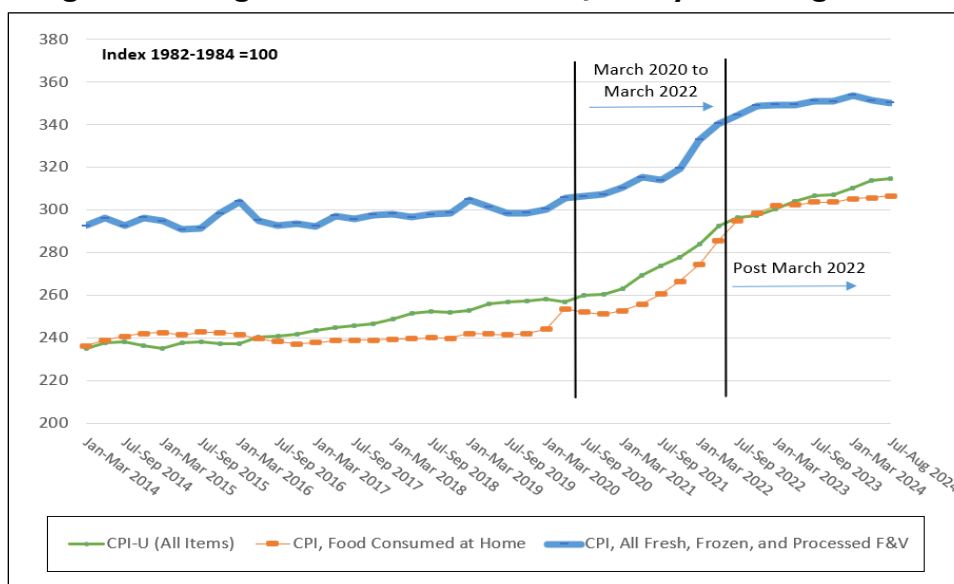
⁶⁴ See, for example, USDA, ERS, "Food Price Outlook," <https://www.ers.usda.gov/data-products/food-price-outlook/>.

⁶⁵ For additional background, see "Price and Market Data."

Retail-Level (Consumer Price Index)

Figure 3 shows monthly CPI data for All Items, all Food Consumed at Home (excluding food consumed away from home, such as in restaurants), and Fruits and Vegetables (aggregated across all fresh and processed products) from 2014 to 2024. These data show that U.S. consumer price increases for fruits and vegetables from 2020 to 2022 rose in line with consumer price increases for CPI-Food at Home and CPI-All Items. In general, aggregate CPI-Fruits and Vegetables reflect seasonal market patterns and increased at a slightly slower rate compared with that for general prices across the economy and for all food consumed at home (**Figure 3**). Overall, consumer prices for all food consumed at home and for aggregate fruits and vegetables have remained elevated above pre-2020 levels, but the annual rate of increase flattened out in 2023 and 2024 while general price inflation has continued to rise at a slightly faster rate. **Figure 4** shows monthly CPI data for other fruit and vegetable aggregate categories (including all fresh fruits; all fresh vegetables; and all frozen, processed, and canned products) and for selected individual crops, such as citrus fruits, potatoes, tomatoes. USDA reports that advertised prices for some individual fruit and vegetable products have continued to increase in some retail outlets in 2024.⁶⁶

Figure 3. Changes in Selected CPI Data, January 2014-August 2024



Source: CRS from official U.S. Bureau of Labor Statistics (BLS) data, <https://data.bls.gov/PDQWeb/cu>. Consumer Price Index (CPI) for All Urban Consumers (CPI-U), U.S. City Average (not seasonally adjusted). Reported data are monthly but calculated by CRS as a three-month rolling average. Index 1982-1984=100. F&V = Fruits and Vegetables.

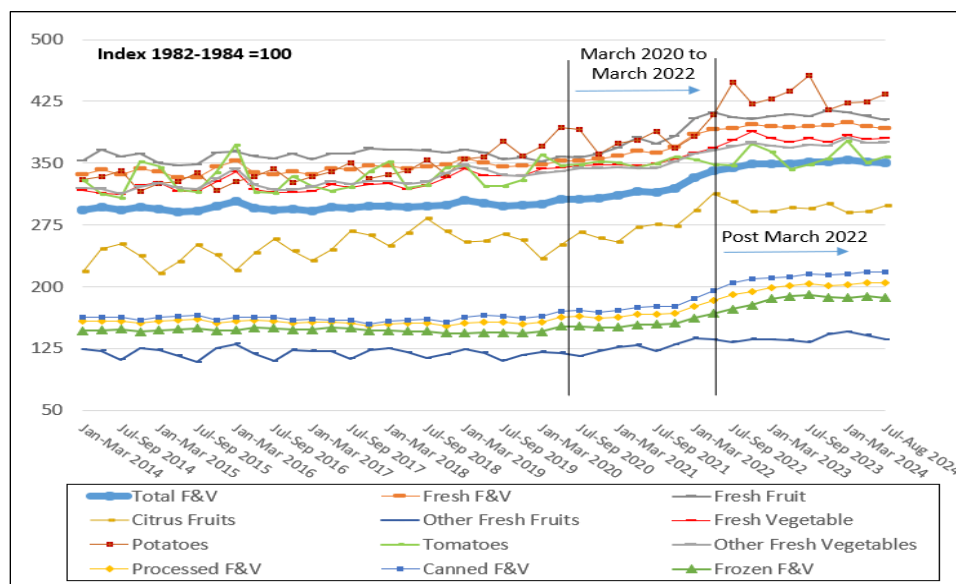
Note: CPI-All Items (Series ID, CUUR0000SA0); CPI-Food at Home (Series ID, CUUS0000SAF11); and CPI-Fruits and Vegetables (Series ID, CUUS0000SAF113).

Consumer price inflation as measured by the aggregate CPI-Fruit and Vegetable category was 14.8% from 2020 to 2023, up from 1.5% from 2016 to 2019. From 2020 to 2023, the rate of increase for the CPI-Food at Home (21.1%) and CPI-All Items (17.7%) categories outpaced

⁶⁶ See, for example, USDA, *Advertised Prices for Specialty Crops Products at Major Retail Supermarket Outlets*, various weeks, <https://www.ams.usda.gov/mnreports/fvwretail.pdf>; and USDA, "Selected Weekly Fresh-Market Vegetable Movement and Price," <https://www.ers.usda.gov/data-products/vegetables-and-pulses-data/selected-weekly-fresh-market-vegetable-movement-and-price/>. USDA-reported weekly shipping and advertised retail data for fresh-market fruit have not been updated since 2023.

increases in aggregate fruit and vegetable consumer prices.⁶⁷ This suggests that overall conditions throughout the economy and within the broader U.S. food industry may have been more impacted than U.S. retail markets for fruits and vegetables. Expressing these data as year-over-year changes yielded similar results. From 2020 to 2023, consumer price increases as measured by the aggregate CPI-Fruit and Vegetable category rose 3.9% annually, below average increases for CPI-Food at Home (5.9%) and CPI-All Items (4.5%).

Figure 4. CPI for Selected Fruits and Vegetables, January 2014-August 2024



Source: CRS from official BLS data, <https://data.bls.gov/PDQWeb/cu>. CPI-U, U.S. City Average (not seasonally adjusted). Reported data are monthly but calculated by CRS as a three-month rolling average. Index 1982-1984=100. F&V = Fruits and Vegetables.

Note: Available data cover Fruits and Vegetables (CUUS0000SAFI13); Fresh Fruits and Vegetables (CUUS0000SAFI131); Fresh Fruits (CUUS0000SEFK); Citrus Fruits (CUUS0000SEFK03); Other Fresh Fruits (CUUS0000SEFK04); Fresh Vegetables (CUUS0000SEFL); Potatoes (CUUS0000SEFL01); Tomatoes (CUUS0000SEFL03); Other Fresh Vegetables (CUUS0000SEFL04); Processed Fruits and Vegetables (CUUS0000SEFM); Canned Fruits and Vegetables (CUUS0000SEFM01); Frozen Fruits and Vegetables (CUUS0000SEFM02); and Other Processed Fruits and Vegetables including Dried (CUUS0000SEFM03).

In the years prior to 2020, food and produce price inflation rose at a slower rate than general price inflation levels (**Figure 3**), which effectively made food cheaper for U.S. consumers. In general, factors contributing to low or decreasing food and produce price inflation include improvements in agricultural productivity and manufacturing technology, expansions in international trade, and input cost decreases (e.g., lower energy prices).⁶⁸ In 2022, food inflation rose to the highest levels globally in decades.⁶⁹ For 2024, USDA predicts food-at-home prices could increase 1.2%, which is consistent with recent BLS reports of lowered rates of inflation.⁷⁰ While inflation rates have

⁶⁷ CRS from official BLS data, <https://data.bls.gov/PDQWeb/cu>.

⁶⁸ FMI, *The Fundamentals of Food Prices: Costs, Consumer Demand, and COVID-19*, 2020.

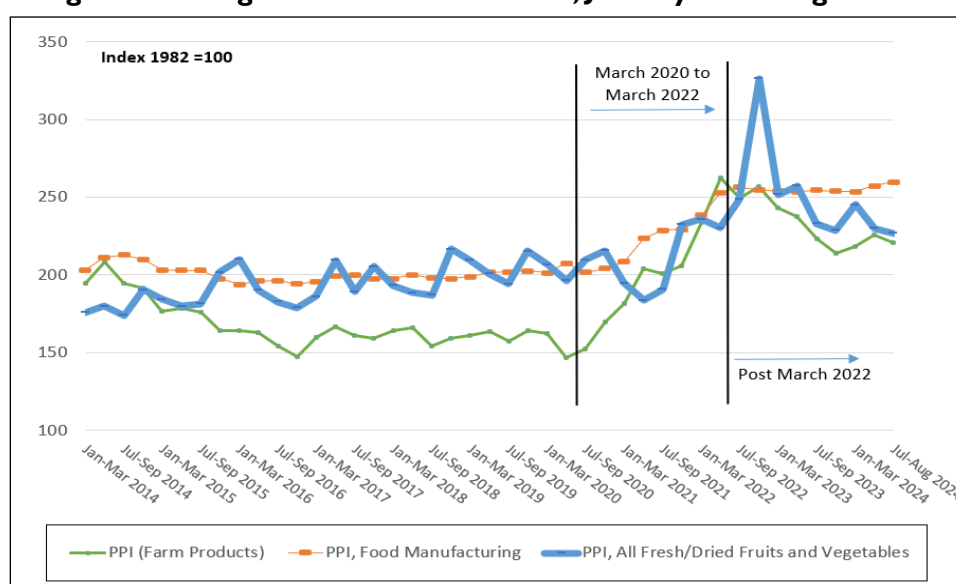
⁶⁹ S&P Global, "Food Prices and Inflation: Lessons from the Last 50 Years," June 16, 2023 (subscription required); and Lee Bridgett, "Mixed Impacts Across the Food Sector as Inflation Hits Consumer Spending," S&P Global, August 1, 2022, <https://www.spglobal.com/commodityinsights/en/ci/research-analysis/mixed-impacts-across-the-food-sector-as-inflation-hits.html>.

⁷⁰ See USDA, "Summary Findings: Food Price Outlook, 2024 and 2025"; and BLS, "Consumer Price Index Summary," <https://www.bls.gov/news.release/cpi.nr0.htm>.

cooled, supply chain challenges remain, in part, due to higher energy prices, geopolitical tensions, and weather-related issues.⁷¹

Sustained higher prices reflect, in part, continued production and distribution challenges within some fruit and vegetable markets. While general inflationary pressures contributed to rising retail prices across all food categories, other factors—such as production delays, product unavailability, price/cost spikes, and global supply chain shocks—also had an impact.⁷² These supply chain shocks tracked general inflationary pressures throughout the U.S. economy.⁷³ Other factors influencing pricing and overall supply-and-demand conditions include slower productivity growth, market structure changes, pricing techniques and promotional impacts, weather-related supply shocks (both boom and bust conditions), availability of substitute products and use of seed varieties with improved buyer and consumer traits, international trade volumes (both imports and exports), and population growth (e.g., increasing consumer demand).⁷⁴

Figure 5. Changes in Selected PPI Data, January 2014-August 2024



Source: CRS from official Federal Reserve Economic Data (FRED), <https://fred.stlouisfed.org/searchresults/>. Producer Price Indexes (PPI) by Commodity: Farm Products (not seasonally adjusted). Reported data are monthly but calculated by CRS as a three-month rolling average. Index 1982=100 (except PPI-Industry, Food Manufacturing, index 1984=100). F&V = Fruits and Vegetables. Reported data are monthly but calculated by CRS as a three-month rolling average. F&V = Fruits and Vegetables.

Notes: Available data cover PPI-Commodity, Farm Products (WPU01); PPI-Industry, Food Manufacturing (PCU311311); and PPI-Commodity, Fresh/Dried F&V, Nuts (WPU011). The PPI spike in 2022 for certain vegetable categories is attributable to pulses (beans, peas, chickpeas, and lentils).

⁷¹ The Food Institute, “Inflation’s Economic Impact: What It Means for the F&B Industry,” webinar, September 17, 2024, <https://foodinstitute.com/reports/2024/09/Inflations-Economic-Impact-What-It-Means-for-the-FB-Industry.pdf>.

⁷² GAO, *Food Prices: Information on Trends, Factors, and Federal Roles*, GAO-23-105846, March 28, 2023.

⁷³ General comments during the U.S. Department of Commerce’s Supply Chain Summit, September 10, 2024.

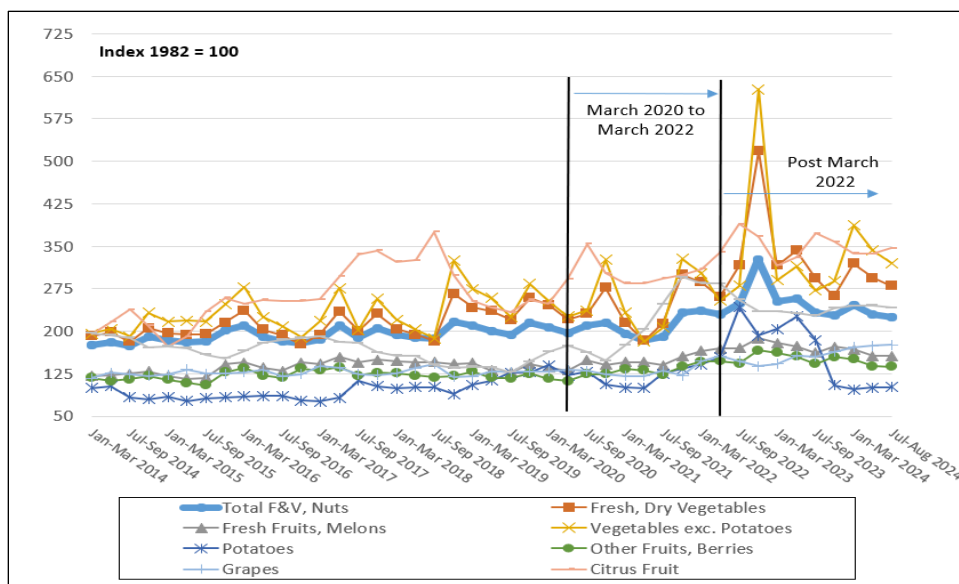
⁷⁴ Cook, “Fundamental Forces”; Calvin et al., *U.S. Fresh Fruit and Vegetable Marketing*; Edward McLaughlin, “The Dynamics of Fresh Fruit and Vegetable Pricing in the Supermarket Channel,” *Preventive Medicine*, vol. 39, supp. 2 (September 2004), pp. 81-87, <https://doi.org/10.1016/j.ypmed.2003.12.026>; and FMI, “The Fundamentals of Food Prices.”

Farm-Level (Producer Price Index)

Farm-level producer prices for U.S. fruits and vegetables as measured by the aggregate PPI-Fruits and Vegetables (fresh and dried, including tree nuts) remain slightly higher compared with pre-2020 levels. **Figure 5** shows monthly PPI data for All Farm Products, all Food Manufacturing, and aggregate PPI-Fruits and Vegetables (fresh and dried, including tree nuts) from 2014 to 2024. In 2020, aggregate PPI data show initial decreases in farm-level fruit and vegetable prices, followed by overall price increases throughout 2021-2022. Since early 2023, producer prices have generally trended downward throughout 2023-2024, and PPI-Food Manufacturing has remained elevated to slightly increasing.

Figure 6 shows these trends for other aggregate categories (including all fresh fruits and all fresh vegetables) and for selected individual fruits and vegetables, such as citrus fruits, grapes, berries and other fruits and potatoes. Available PPI data highlight month-to-month seasonal variability across most fruit and vegetable categories, which could mask certain changes when examining average cumulative changes over time (**Figure 6**). Seasonality in the available data complicates a simple analysis. USDA's quarterly outlook reports provide detailed information for individual crops.⁷⁵ Additional data and analysis are needed to determine whether reported producer price changes for fruits and vegetables have been commensurate with growth rates in retail prices.

Figure 6. PPI for Selected Fruits and Vegetables, January 2014-August 2024



Source: CRS from official FRED, <https://fred.stlouisfed.org/searchresults/>. PPI by Commodity: Farm Products (not seasonally adjusted). Reported data are monthly but calculated by CRS as a three-month rolling average. Index 1982=100 (except Potatoes, index December 2011=100). F&V = Fruits and Vegetables.

Notes: Available data cover Fresh F&V, Nuts (WPU011), Fresh and Dry Vegetables (WPU0113), Fresh Fruits, Melons (WPU0111), Vegetables except Potatoes (WPU011302), Potatoes (WPU011306), Other Fruits, Berries (WPU011102), Grapes (WPU01110228), Citrus Fruits (WPU011301), and Dry Vegetables (WPU011301). The PPI spike in 2022 for certain vegetable categories is attributable to pulses (beans, peas, chickpeas and lentils).

Cumulative fruit and vegetable producer price inflation as measured by the aggregate PPI-Fruit and Vegetable category was 17.2% from 2020 to 2023, up from 7.6% from 2016 to 2019. From

⁷⁵ USDA, ERS, *Fruit and Tree Nuts Outlook* reports and *Vegetables and Pulses Outlook* reports, available at <https://www.ers.usda.gov/publications/>.

2020 to 2023, the increase in prices for the PPI-Farm Products (45.3%) and PPI-Food Manufacturing (24.7%) categories outpaced increases in aggregate fruit and vegetable producer prices.⁷⁶ This suggests that other food producers and general price inflation throughout the economy may have been more affected than U.S. fruit and vegetable growers during this time. Expressing these data as year-over-year changes yielded similar results. From 2020 to 2023, consumer price increases as measured by the aggregate PPI-Fruit and Vegetable category rose 5.2% annually, on average, below that for PPI-Farm Products (10.3%) and PPI-Food Manufacturing (6.1%).

Administrative and Legislative Activities

Executive Orders and the White House Competition Council

In 2021, President Biden issued E.O. 14036, *Promoting Competition in the American Economy*, and established the White House Competition Council to address anticompetitive concerns in selected U.S. markets. E.O. 14036 partly focuses on “lowering food prices for consumers and increasing earnings for farmers and ranchers” in the U.S. food and agriculture industry, among other goals.⁷⁷ This work is ongoing.

In addition, E.O. 14017, *America’s Supply Chains*, directed federal agency actions to secure and strengthen America’s supply chains.⁷⁸ E.O. 14017 required the Secretary of Agriculture to submit a report to the President assessing the supply chains for the production of agricultural commodities and food products. USDA’s report identifies six “priority vulnerabilities” for the U.S. food and agriculture supply chains, including (1) concentration and consolidation in agri-food production, manufacturing, and distribution; (2) labor needs; (3) ecological and climate risks to crops; (4) livestock and poultry disease threats; (5) transportation bottlenecks; and (6) trade disruptions.⁷⁹ Others have noted the importance of improving agricultural productivity growth, in general, as a way to improve the efficiency of inputs and resource use in agricultural production.⁸⁰

In response to E.O. 14017, in 2022, USDA announced its Food System Transformation framework, which partly focuses on “building a more resilient food supply chain” and creating a “fairer food system that combats market dominance and helps producers and consumers gain more power in the marketplace,” among other goals.⁸¹ CRS is not able to assess the status of USDA’s progress toward its stated goals.

⁷⁶ CRS from official Federal Reserve Economic Data (FRED), <https://fred.stlouisfed.org/searchresults/>.

⁷⁷ The White House, “White House Competition Council,” <https://www.whitehouse.gov/competition/>. See also E.O. 14036 at Executive Office of the President, “Promoting Competition in the American Economy,” 86 *Federal Register* 36987, July 14, 2021.

⁷⁸ Executive Office of the President, “America’s Supply Chains,” 86 *Federal Register* 11849-11854, 2021.

⁷⁹ USDA, *USDA Agri-Food Supply Chain Assessment: Program and Policy Options for Strengthening Resilience*, February 2022, <https://www.ams.usda.gov/sites/default/files/media/USDAAgriFoodSupplyChainReport.pdf>.

⁸⁰ Comments by Elise Golan, USDA director for Sustainable Development, at the Food and Nutrition Board of the National Academies of Sciences, Engineering, and Medicine (NASEM), “Food Systems: Impact on Food Security Domestically and Globally,” June 25, 2024, https://www.nationalacademies.org/event/42959_06-2024_food-and-nutrition-board-summer-meeting-open-session.

⁸¹ USDA, “Transforming the U.S. Food System Making It Better for Farmers and Families,” June 23, 2022, <https://usda.exposure.co/transforming-the-us-food-system>.

Strike Force on Unfair and Illegal Pricing

At a March 2024 meeting of the White House Competition Council, President Biden announced the launch of the Strike Force on Unfair and Illegal Pricing (Strike Force) to “strengthen interagency efforts to root out and stop illegal corporate behavior that hikes prices on American families through anticompetitive, unfair, deceptive, or fraudulent business practices.”⁸² The Strike Force is led by FTC and the Department of Justice (DOJ).⁸³

In March 2024, FTC released a report on the practices and responses to supply chain disruptions by the grocery retail industry across all foods products. FTC’s investigation concluded that “large market participants accelerated and distorted the negative effects associated with supply chain disruptions” that “disproportionally impacted smaller firms, as larger companies sought to protect market share, power.”⁸⁴ Although FTC’s investigation does not specifically address individual agricultural sectors, such as that for fruits and vegetables, its findings may broadly apply to the U.S. fruit and vegetable sectors.

As noted by FTC, pandemic-era supply chain disruptions included labor supply disruptions, transportation/trucking disruptions, disruptions to availability of inputs and raw materials, and shifts in consumer demand (e.g., fewer meals consumed at restaurants and more meals consumed at home contributed to higher grocery prices).⁸⁵ These market disruptions, along with labor shortages and transportation bottlenecks, affected producers, wholesalers, and retailers simultaneously. According to FTC, this resulted in the following competitive impacts:⁸⁶

- **Retailer revenues exceeded cost increases, and profits remain elevated.** As documented in FTC’s report, food and beverage retailer revenues increased more than 6% over total costs in 2021, higher than that recorded in prior years.
- **Some larger purchasers use “on time in full” policies that provide a competitive advantage in accessing products in shortage.** As documented in FTC’s report, there were cases where some large buyers used certain product delivery policies to pressure their suppliers to favor them over rivals for products in short supply.
- **Companies identified risks associated with excessively concentrated supply chains, leading some to diversify and others to explore vertical integration.** As documented in FTC’s report, during the pandemic, retailers struggled to maintain adequate stock levels of certain goods, causing some to examine

⁸² FTC, “FTC and Justice Department Host First Strike Force on Unfair and Illegal Pricing Meeting,” press release, August 1, 2024, <https://www.ftc.gov/news-events/news/press-releases/2024/08/ftc-justice-department-host-first-strike-force-unfair-illegal-pricing-meeting>.

⁸³ The Department of Justice (DOJ) and FTC share responsibility for enforcing antitrust laws, which prohibit certain practices in the food industry that can contribute to higher retail food prices. See GAO, *Food Prices: Information on Trends, Factors, and Federal Roles*, GAO-23-105846, Table 1, March 28, 2023.

⁸⁴ FTC, “FTC Releases Report on Grocery Supply Chain Disruptions,” press release, March 21, 2024, <https://www.ftc.gov/news-events/news/press-releases/2024/03/ftc-releases-report-grocery-supply-chain-disruptions>.

⁸⁵ FTC, *Feeding America in a Time of Crisis, The United States Grocery Supply Chain and the COVID-19 Pandemic*, March 2024, pp. 9-13, https://www.ftc.gov/system/files/ftc_gov/pdf/p162318supplychainreport2024.pdf (hereinafter FTC, *Feeding America*). FTC’s report is a review of nine companies (three grocery retailers, three grocery wholesalers, and three grocery producers).

⁸⁶ FTC, *Feeding America*, March 2024, pp. 13-20.

alternatives (e.g., directly manufacturing these products rather than buying them from outside suppliers).⁸⁷

- **Supply disruptions reduced trade promotions, affecting retailers differently based on their pricing strategies.** Producers often pay retailers to get their goods on the retailers' shelves to obtain prominent placement, among other strategies. As documented in FTC's report, the pandemic led to a reduction in producer-funded promotions due to shortages and challenges among producers to meet all outstanding orders, which impacted retailers.

In August 2024, FTC and DOJ announced plans to launch a new Strike Force investigation into continued high grocery prices.⁸⁸

Federal Pandemic-Era Relief

In April 2020, USDA announced a Coronavirus Food Assistance Program (CFAP) to provide direct relief to producers who faced price declines and additional marketing costs in response to COVID-19-era agricultural supply chain disruptions.⁸⁹ Of the total \$19 billion for CFAP, \$6.5 billion was from USDA's discretionary use of Commodity Credit Corporation (CCC) authority (with the rest from multiple COVID-19-related supplemental appropriations); the second round of CFAP payments (CFAP-2) was authorized with up to \$14 billion in direct support using the discretionary authority of the CCC Charter Act.⁹⁰ CFAP included the Farmers to Families Food Box program (F2F Food Box) to facilitate the distribution of in-kind foods to households during the pandemic.⁹¹ USDA further established the USDA Pandemic Assistance for Producers (USDA-PAP) program in an effort to use unspent CFAP dollars.⁹² USDA-PAP targeted a more diverse set of producers, including specialty crop and organic farmers, among others that traditionally are not eligible for most USDA commodity support programs, as well as general support for the food supply chain.

At the time, the produce industry was active in asserting its need for support in response to produce supply chain disruptions. For example, some industry stakeholders asserted that payment limits per entity were insufficient for the produce industry's high-value crops.⁹³ Under CFAP-1,

⁸⁷ Vertical integration refers to a coordination strategy reflecting differing degrees to which a firm at one stage of production exerts control over the quality or quantity of output at other stages. For related background, see Joy Harwood et al., *Managing Risk in Farming: Concepts, Research, and Analysis*, AER-774, USDA, March 1999.

⁸⁸ FTC, "Strike Force on Unfair and Illegal Pricing," press release, August 1, 2024, <https://www.ftc.gov/news-events/events/2024/08/strike-force-unfair-illegal-pricing>. See Timothy Inklebarger, "FTC to Launch Inquiry into High Grocery Prices," *Supermarket News*, August 1, 2024. FTC's announcement was made at a public Strike Force meeting.

⁸⁹ USDA, "USDA Announces Coronavirus Food Assistance Program," press release, April 17, 2020.

⁹⁰ USDA, "[Archived] Coronavirus Food Assistance Program," <https://www.farmers.gov/archived/cfap2>. For CFAP funding, see Coronavirus Aid, Relief, and Economic Security Act (CARES Act; P.L. 116-136); the Commodity Credit Corporation (CCC) Charter Act (P.L. 80-806; 15 U.S.C. §§714 et seq.); Consolidated Appropriations Act, 2021 (CAA 2021; P.L. 116-260); and American Rescue Plan Act of 2021 (ARPA 2021; P.L. 117-2). See CRS In Focus IF11764, *U.S. Agricultural Aid in Response to COVID-19* and CRS Report R44606, *The Commodity Credit Corporation (CCC)*.

⁹¹ USDA, Agricultural Marketing Service (AMS), "USDA Farmers to Families Food Box," <https://www.ams.usda.gov/selling-food-to-usda/farmers-to-families-food-box>. Funding was authorized under the Families First Coronavirus Response Act (FFCRA; P.L. 116-127); the CARES Act, and the CAA 2021. See CRS Report R46681, *USDA Nutrition Assistance Programs: Response to the COVID-19 Pandemic*. USDA regularly procures a range of U.S. food and agricultural products for distribution in USDA domestic nutrition and international food aid programs (see CRS Report R48141, *Trends in USDA Procurement of U.S. Food and Agricultural Products*).

⁹² USDA, "USDA Farmers to Families Food Box," <https://www.farmers.gov/coronavirus/pandemic-assistance>.

⁹³ For example, in March 2020, the United Fresh Produce Association (UFPA) sent two separate letters to House and (continued...)

specialty crop producers—consisting mostly of fruits, vegetables, tree nuts, herbs, honey and maple sap—received \$944.5 million in direct assistance (roughly 8% of total CFAP1 payments).⁹⁴ For CFAP-2, specialty crops were included under the “Sales Commodities” category, which includes specialty crops and some animal products. Data are not available that break out assistance for specialty crop producers from other producers across the overall product category.⁹⁵ Data also are not available on assistance levels for specialty crop producers under another CFAP round (CFAP-AA).⁹⁶

Under the F2F Food Box program, USDA allocated approximately \$6 billion on five separate rounds of contracts and deliveries. The program provided fresh fruits and vegetables as well as dairy and meat products to public and nonprofit organizations, such as food banks, schools, tribal organizations, and faith-based organizations. The program operated from May 2020 to May 2021. Data are not available that separate fruit and vegetable purchases from purchases for other food and agricultural products.

Existing Authorities and Program Support

Protections for Sellers

The Perishable Agricultural Commodities Act of 1930 (PACA; 7 U.S.C. §§499a-499t; 7 U.S.C. §499(b)(4)) exclusively serves the U.S. produce industry to prevent unfair and fraudulent conduct in the marketing and selling of perishable agricultural commodities.⁹⁷ PACA was enacted at the request of the fruit and vegetable industry to regulate the buying and selling of fruits and vegetables by establishing and enforcing a code of fair business practices for fresh and frozen fruits and vegetables, facilitating interstate and foreign commerce, promoting fair trade and prompt pay of covered products, and helping companies resolve business disputes.⁹⁸ Covered products include any *perishable agricultural commodity*, defined as fresh fruits and fresh vegetables whether or not frozen or packed in ice, and certain cherries in brine.⁹⁹ USDA notes the need for PACA given the “extreme perishable nature” of fruits and vegetables, as well as the ability of “unscrupulous dealers” who might engage in misbranding or misrepresentation or be

Senate leadership and the Secretary of Agriculture with recommendations to address the produce supply chain. Background on these letters is discussed in *FleetOwner* (see “UFPA: Congress Must Act to Protect Produce Industry,” March 24, 2020, <https://www.fleetowner.com/refrigerated-transporter/reefer-operations/article/21232636/ufpa-congress-must-act-to-protect-produce-industry>). Later, in April 2020, two separate House and Senate letters were sent to President Trump led by Members from California (Rep. Panetta and Sen. Feinstein).

⁹⁴ USDA, CFAP-1 data, <https://www.farmers.gov/data/cfap1>. CFAP-1’s application period ended September 11, 2020.

⁹⁵ USDA, CFAP-2 data, <https://www.farmers.gov/data/cfap2>. CFAP-2’s application period ended October 12, 2021. Across the entire “Sales Commodities” categories, producers received \$3 billion in direct assistance.

⁹⁶ USDA, “USDA Offers Additional Assistance for Certain Producers Through Coronavirus Food Assistance Program,” press release, January 15, 2021.

⁹⁷ PACA (P.L. 71-325, as amended; 7 U.S.C. §§499a-499t; 7 C.F.R. Part 46), Produce Agency Act (7 U.S.C. §§491-497, involving the destruction or dumping of produce received in interstate commerce); 7 C.F.R. Part 46 (SAM.gov #10.165). Although not discussed here, the Agricultural Marketing Agreement Act of 1937 (P.L. 75-137, as amended; 7 U.S.C. §§601-602, 608a-e, 612, 614, 624, 671-674) (SAM.gov #10.155) authorizes AMS to facilitate and oversee the operation of marketing orders and agreements for a range of fruits and vegetables, usually at the request of industry.

⁹⁸ USDA’s PACA website, <https://www.ams.usda.gov/rules-regulations/paca>; and USDA AMS, *Industry PACA Training Workbook*, <https://www.ams.usda.gov/sites/default/files/media/PACA%20Training%20Workbook.pdf>.

⁹⁹ 7 U.S.C. §499a(b)(4).

slow to pay sellers or provide no pay at all and to otherwise protect fruit and vegetable sellers.¹⁰⁰ PACA is administered by USDA's Agricultural Marketing Service (AMS).

PACA prohibits certain types of "unfair conduct" by commission merchants, dealers, and brokers.¹⁰¹ For example, it is unlawful for a commission merchant, dealer, or broker "to engage in or use any unfair, unreasonable, discriminatory, or deceptive practice in connection with the weighing, counting, or in any way determining the quantity of any perishable agricultural commodity received, bought, sold, shipped, or handled in interstate or foreign commerce" (7 U.S.C. §499b(1)). It is also unlawful for "any dealer to reject or fail to deliver in accordance with the terms of the contract without reasonable cause any perishable agricultural commodity bought or sold or contracted to be bought, sold, or consigned in interstate or foreign commerce by such dealer" or for "any commission merchant to discard, dump, or destroy without reasonable cause, any perishable agricultural commodity received by such commission merchant in interstate or foreign commerce" (7 U.S.C. §§499b(2)-(3)), among other types of conduct prohibitions, including failure to promptly pay fruit and vegetable sellers.

PACA requires that all commission merchants, dealers, and brokers obtain a mandatory license from USDA, subject to certain licensing and recordkeeping requirements and penalties for violations.¹⁰² Other entities that are required to obtain a license include grower's agents (i.e., an agent acting on behalf of a grower), shippers, wholesalers, processors, retailers, and many e-commerce firms.¹⁰³ Entities exempt from obtaining a license are growers who handle only their own product and truckers who haul "for hire" only.

Other PACA provisions and USDA services provide for dispute resolution and mediation, reparations, and enforcement proceedings. In addition, in 1984, Congress amended PACA to create a statutory trust for the benefit of unpaid sellers in the event a buyer fails to make full payment (due to bankruptcy, for example) so that fruit and vegetable sellers can recover money owed to them before trust assets are made available to general creditors, among other provisions.¹⁰⁴ Overall, USDA's PACA-related activities are funded by fees charged for obtaining licenses and for filing complaints.

According to USDA, common complaints submitted under PACA include failure to pay, failure to ship or deliver, ineffective or wrongful product rejection, misunderstood contract terms, disagreement with inspection results, unauthorized deductions, and bankruptcy.¹⁰⁵ USDA reports that in the past three years (2022-2024), USDA has handled more than 2,340 PACA cases valued at \$126.3 million and assisted over 5,600 inquiries involving PACA-related issues.¹⁰⁶

¹⁰⁰ USDA AMS Fruit and Vegetable Program, *Introduction to the Perishable Agricultural Commodities Act (PACA)*, https://www.ams.usda.gov/sites/default/files/media/Presentation_-_Intro_to_PACA%5B1%5D_0.pdf.

¹⁰¹ 7 U.S.C. §499b. *Commission merchants, dealers, and brokers* are defined at 7 C.F.R. §§46.2(r), (m), and (n), respectively.

¹⁰² 7 U.S.C. §§499c-d, h-i, and p.

¹⁰³ USDA, AMS, "PACA - Your Partner in the Produce Industry," <https://www.ams.usda.gov/rules-regulations/paca>. See also USDA, AMS, *Growers' Agents' Responsibilities Under the PACA*, <https://www.ams.usda.gov/sites/default/files/media/PACAGrowersAgentResponsibilities.pdf>.

¹⁰⁴ P.L. 98-273. See also University of Arkansas, National Agricultural Law Center, "The Perishable Agricultural Commodities Act - An Overview," <https://nationalaglawcenter.org/overview/paca/>.

¹⁰⁵ USDA AMS Fruit and Vegetable Program, *Introduction to the Perishable Agricultural Commodities Act (PACA)*.

¹⁰⁶ As periodically reported in USDA PACA-related press releases found at https://www.ams.usda.gov/press-releases?field_term_programs_offices_target_id=All&date&keys=PACA. Recent administrative decisions under PACA are at USDA, "Agriculture Decisions under PACA (Part Three, PACA Decisions) from 2013-2020," available at <https://www.usda.gov/oha/services/agriculture-decisions-publications>.

Price and Market Data

Various USDA data products are available from USDA. These include Specialty Crops Market News (SCMN) and other Market News data administered by USDA AMS, as well as various data products compiled by USDA's Economic Research Service (ERS).

Specialty Crops Market News

SCMN is administered by USDA's AMS, along with other AMS-posted price and market data through USDA's MyMarketNews (MMN) Homepage.¹⁰⁷ In general, these data cannot be readily aggregated and contain reporting gaps and therefore may not be comprehensive for generalizing nationally or for reporting consistently over time.

SCMN provides detailed information on "marketing conditions for hundreds of agricultural commodities at major domestic and international wholesale markets, production areas, and ports of entry."¹⁰⁸ SCMN reflects spot market price data—or the price paid in the physical market and not a futures/contract price or paper transaction—covering 785 fruit and vegetable categories across major domestic and international wholesale markets, production areas, and ports of entry.¹⁰⁹ SCMN data are collected by MMN reporters "using direct contacts with sales persons, suppliers, brokers, and buyers" to "collect, validate, analyze, and organize unbiased data on price, volume, quality and condition" at no cost to data users.¹¹⁰ The SCMN Portal, which includes organic and locally sourced products (such as farmers' markets), provides standard and custom reports, as well as selected reports covering terminal, retail, and international markets, shipping points, product movement, and truck rates.¹¹¹ There are about 50 state and federal MMN reporters covering domestic and international markets for specialty crops. Authorized appropriations through FY2024 for SCMN data collection are about \$9 million annually.¹¹²

According to USDA, SCMN covers 1,453 markets and interviews 4,000 buyers and sellers across 785 commodities, including 141 organic commodities. SCMN-reported prices represent open (spot) market sales by first handlers on products of generally good quality and condition unless otherwise stated and may include promotional allowances or other incentives.¹¹³ Price data cover terminal/wholesale, retail, selected international markets, and farmers' markets and farmers' auctions. Price data cover wholesale market prices, shipping point prices, and prices for the wholesale and retail markets; selected international markets; and farmers' markets and farmers' auctions. (SCMN no longer reports product volumes coming into the U.S. market.) Data cover a range of product categories, including fruits and vegetables, onions and potatoes, herbs, tree nuts,

¹⁰⁷ 7 U.S.C. §1622b, 5925c. Accessible at USDA, AMS, MyMarketNews homepage, <https://mymarketnews.ams.usda.gov/filerepo/reports>.

¹⁰⁸ See USDA, AMS, "Specialty Crops," <https://www.ams.usda.gov/market-news/fruits-vegetables>.

¹⁰⁹ SCMN data are accessible through USDA, AMS website, <https://www.ams.usda.gov/market-news/fruits-vegetables>. Market News was enacted as part of the Agricultural Marketing Act 1946, as amended (7 U.S.C. §§1621 et seq.). For more background, see "Price and Market Data."

¹¹⁰ *Ibid.*

¹¹¹ SCMN data are available at <https://marketnews.usda.gov/mnp/FVDataDownload>. Shipping points and terminal market reports are available at <https://www.ams.usda.gov/market-news/fruit-and-vegetable-shipping-point-market-price-reports> and <https://www.ams.usda.gov/market-news/fruit-and-vegetable-terminal-markets-standard-reports>.

¹¹² P.L. 110-246, §10107; 7 U.S.C. §1622b), as amended.

¹¹³ For related background, see H. Leek and D.A. Sumner, "Measuring and Understanding the Pattern of Margins between Farm and Retail Prices for California Specialty Crops to Increase Growers Returns," California Department of Food and Agriculture. For other information, see USDA, AMS, *Fruit and Vegetable Market News User Guide*, April 2012, <https://assets.documentcloud.org/documents/526894/usda-food-def.pdf>.

ornamental plants, and honey.¹¹⁴ Other value-added products include, for example, apple juice concentrate, grape cold storage, and apples for processing. Data are collected at shipping points in several states.¹¹⁵ Wholesale market reports are available for several states.¹¹⁶ Where available, prices are differentiated by the commodities' growing origin, variety, size, package, and grade.

USDA is working on expanding its SCMN data collection, for example, to collect advertised retail prices and to capture conditions across different markets and some additional international markets. USDA also has implemented a Market Analysis Reporting System (MARS) and an Automated Commercial Environment (ACE) system for improved data collection and distribution and to upgrade its overall Market News system.

Selected ERS Data Products

USDA's ERS posts various data products, some of which report retail price data for fruits and vegetables. One data product provides retail scanner data subject to availability, covering selected years only (2013, 2016, 2020, and 2022) and not suitable for year-to-year comparisons.¹¹⁷ Another data product tracking selected weekly fresh-market fruit and vegetable movement and prices is currently under development and not yet fully available for historical analysis.¹¹⁸ Other ERS data collections instituted in May 2020 tracking weekly retail food sales and prices, including for fresh-market fruits and vegetables, were discontinued in May 2023.¹¹⁹ These various ERS data products rely, in part, on proprietary scanner data collected by Circana (formerly Information Resources, Inc.) and provide a nationally representative sample of prices among retail food establishments.

Other Federal Support

As a specialty crop, fruits and vegetables are among the crops eligible for support across a range of existing USDA programs, including marketing and promotion programs, crop insurance and disaster assistance, plant pest and disease protections, trade assistance, and research and extension services, among other types of miscellaneous support.¹²⁰ Overall USDA program spending on all specialty crops remains a fraction (less than 1%) of that spent on all commodity crops, even when considering both mandatory and discretionary funding.¹²¹ The industry also benefits from fruit and vegetable purchases by USDA under various domestic nutrition and international food assistance programs.¹²² Support under some USDA programs is available to all U.S. producers,

¹¹⁴ Value-added products include, for example, apple juice concentrate, grape cold storage, and apples for processing.

¹¹⁵ For a list of shipping points, see USDA, AMS, "Specialty Crops Shipping Point Market Price Reports," <https://www.ams.usda.gov/market-news/fruit-and-vegetable-shipping-point-market-price-reports>. States include Arizona, California, Florida, Georgia, Idaho, Michigan, North Carolina, South Carolina, Virginia, Washington, and West Virginia.

¹¹⁶ For a list of terminal markets reports, see USDA, AMS, "Specialty Crops Shipping Point Market Price Reports," <https://www.ams.usda.gov/market-news/fruit-and-vegetable-terminal-markets-standard-reports>. National summary data also are reported. States include California, Florida, Georgia, Illinois, Maryland, Massachusetts, Michigan, Missouri, New York, Pennsylvania, South Carolina, and Texas.

¹¹⁷ USDA, ERS, "Fruit and Vegetable Prices," <https://www.ers.usda.gov/data-products/fruit-and-vegetable-prices/>.

¹¹⁸ Data are available at USDA, ERS, <https://www.ers.usda.gov/data-products/fruit-and-tree-nuts-data/selected-weekly-fruit-movement-and-price/> (fruits); and USDA, ERS, <https://www.ers.usda.gov/data-products/vegetables-and-pulses-data/selected-weekly-fresh-market-vegetable-movement-and-price/> (vegetables).

¹¹⁹ Available data are accessible at USDA, ERS, <https://www.ers.usda.gov/data-products/weekly-retail-food-sales/>.

¹²⁰ For more background, see CRS Video WVB00525, *Horticulture (Title X)*.

¹²¹ See, for example, Figure 2 in CRS Report RS22131, *What Is the Farm Bill?*.

¹²² See, for example, CRS Report R48141, *Trends in USDA Procurement of U.S. Food and Agricultural Products*.

and access to these programs is competitive. Specialty crop producers are not eligible for the federal commodity price and income support programs that benefit some other commodity crop producers (e.g., grains and cotton).

Considerations for Congress

U.S. Food Industry (Industry-Wide)

In the 118th Congress, bills have been introduced and changes proposed in annual appropriations that would address food prices and supply chain resiliency broadly across the U.S. food sectors.¹²³ The National Grocers Association (NGA) has asked Congress to conduct hearings in response to FTC’s investigation.¹²⁴ Some in Congress are calling on certain federal agencies to address rising food prices under their existing authorities related to anticompetitive behavior in the U.S. market.¹²⁵ While such actions would be geared toward the food industry as a whole, they would broadly apply to the U.S. fruit and vegetable sectors. Other potential actions could involve existing statutory and regulatory requirements specific to the fruit and vegetable sectors.

As part of its oversight responsibilities, Congress may decide to review the executive branch’s ongoing activities or could initiate its own investigation of U.S. retail and/or producer prices across the U.S. food and agriculture industry. NGA further recommends the federal government examine “anticompetitive behaviors, including price discrimination” that impact independent grocers.¹²⁶ The Mainstream Competition Coalition is urging FTC to “investigate anticompetitive vertical conduct between retailers and suppliers to determine whether monopolistic behavior of dominant firms has led to economic discrimination and harm to smaller rivals and consumers.”¹²⁷ Some in Congress are calling on certain federal agencies to address rising food prices and take any necessary enforcement action under their existing authorities related to anticompetitive behavior in the U.S. market, among other actions.¹²⁸ Such authorities include the Robinson-Patman Act (15 U.S.C. §13) and Section 5 of the Federal Trade Commission Act (15 U.S.C. §45), which prohibits unfair or deceptive acts or practices in or affecting commerce. Some in Congress claim rising corporate profits are the result of some food companies raising prices they charge U.S. consumers;¹²⁹ some cite consolidation and mergers and acquisitions among U.S.

¹²³ See, for example, H.R. 8898, H.R. 763, H.R. 4873/S. 4099, H.R. 8833, H.R. 9226, H.Rept. 118-583, and S.Rept. 118-193.

¹²⁴ Letter from NGA to leadership of the House and Senate Judiciary Subcommittees, March 21, 2024, https://ci.criticalimpact.com/user/31823/image/3.21.24_NGA_Hearing_Request_re_6b_FINAL.pdf.

¹²⁵ Letter from 40 Members of Congress to President Joseph R. Biden, Jr., May 13, 2024, <https://www.warren.senate.gov/imo/media/doc/2024.05.13%20Letter%20to%20Biden%20Admin%20on%20Food%20Prices1.pdf>.

¹²⁶ NGA statement, August 16, 2024, <https://www.nationalgrocers.org/news/a-statement-from-nga-president-ceo-greg-ferrara-on-the-proposed-price-gouging-ban-for-grocery-stores/>.

¹²⁷ Main Street Competition Coalition, <https://www.mainstreetcompetition.com/>.

¹²⁸ See, for example, Letter from 40 Members of Congress to President Joseph R. Biden, Jr., May 13, 2024, <https://www.warren.senate.gov/imo/media/doc/2024.05.13%20Letter%20to%20Biden%20Admin%20on%20Food%20Prices1.pdf>; Letter from several Members of Congress to FTC Chair Lina Khan, March 28, 2024, <https://www.warren.senate.gov/imo/media/doc/2024.03.28%20Letter%20to%20FTC%20re%20Robinson%20Patman%20Act1.pdf>; and Letter from more than 60 academics and organizations to Vice President Kamala Harris, September 24, 2024, https://farmaction.us/wp-content/uploads/2024/09/Price-Gouging-Letter-to-V.P.-Harris_9.24.24.pdf.

¹²⁹ See, for example, Robert P. Casey, Jr., *A Special Report on Greedflation*, November 2023, <https://www.casey.senate.gov/imo/media/doc/greedflation1.pdf>; and Letter from Senator Robert P. Casey, Jr., to David (continued...)

supermarkets and grocers.¹³⁰ Introduced legislation would address *shrinkflation* or “product downsizing, occurs when a company decreases the amount or size of a consumer product and charges the same price, or a higher price, for such smaller product” (H.R. 7825/S. 3819); other bills would generally address *price gouging*, or excessive price increases for any good or service (H.R. 7390/S. 3803).

Bills and proposed changes in annual appropriations in the 118th Congress would address food prices and supply chain resiliency broadly across the U.S. food sectors. One bill, H.R. 8898, would require the U.S. Government Accountability Office (GAO) to conduct a study of CPI for all food consumed at home over the past two decades. Congress also continues to consider a range of broader agricultural supply chain resiliency measures, both in introduced legislation (e.g., H.R. 763, H.R. 4873/S. 4099, H.R. 8833, H.R. 9226) and in annual appropriations actions (e.g., H.Rept. 118-583, S.Rept. 118-193). Other introduced legislation would address fruit and vegetable markets more specifically with a focus on impacts from imports (e.g., H.R. 9240/S. 498, H.R. 6712).

Related legislation was introduced in previous Congresses. In the 117th Congress, H.R. 8275 would have directed USDA to submit to Congress a “report on improving supply chain shortfalls and infrastructure needs at wholesale produce markets”; H.R. 8658 would have created a Sub-Task Force on Emergency Price Stabilization under the White House Supply Chains Disruption Task Force to monitor prices of essential goods and services. Several bills were introduced in the 116th Congress in an effort to contain price gouging, support businesses during the pandemic (e.g., H.R. 6472, H.R. 6450, H.R. 6379, and H.R. 6800), or both. While some of these legislative and administrative activities might not specifically address U.S. fruit and vegetable markets only, such actions would broadly apply to the sector. As previously noted, fruits and vegetables represent about one-fifth of the U.S. market for foods consumed at home.

U.S. Fruit and Vegetable Sectors

Higher retail prices for fruits and vegetables could have certain adverse implications on the U.S. industry. Higher prices may partially account for USDA’s observation that per capita fruit and vegetable consumption in the United States has declined compared with pre-2020 levels, as some American consumers may have switched to lower-cost food items.¹³¹ Sustained higher U.S. prices may attract foreign suppliers looking for high-value markets for their products, exacerbating the growing U.S. trade deficit in fruits and vegetables.¹³² Import competition, coupled with reduced domestic demand, could eventually exert downward pressure on domestic producer prices and adversely impact U.S. fruit and vegetable revenue and income.

Options for Congress to support the U.S. produce industry, if it so chose, could involve existing statutory and regulatory requirements specific to the U.S. fruit and vegetable sectors. For example, Congress might review existing PACA authorities to determine if additional amendments are needed to improve the federal government’s support of U.S. fruit and vegetable growers. Congress might also consider other options, including those intended to improve

Chavern, president and CEO of the Consumer Brands Association, December 13, 2023, https://www.casey.senate.gov/imo/media/doc/consumer_brands_associated_greedflation_letter.pdf.

¹³⁰ Letter from Senators Elizabeth Warren and Robert P. Casey, Jr., to Rodney McMullen, chairman and CEO of The Kroger Company, August 5, 2024, https://www.warren.senate.gov/imo/media/doc/warren_casey_letter_to_kroger_re_electronic_shelving_and_price_gouging.pdf.

¹³¹ See USDA data, “Food Availability (Per Capita) Data System,” <https://www.ers.usda.gov/data-products/food-availability-per-capita-data-system>. Based on reported “Fruit” and “Vegetable” across “All Uses.”

¹³² See CRS In Focus IF11701, *Seasonal Fruit and Vegetable Competition in U.S.-Mexico Trade*.

agricultural supply chain conditions, more broadly, in support of U.S. growers and other businesses throughout the value and supply chains. Alternatively, Congress might consider actions that support other businesses throughout the supply and value chains. Such actions might include addressing continued supply chain resiliency concerns, including expanding support for input suppliers, food processors, and/or food service providers. Another option could be to increase federal procurement of U.S. fruits and vegetables through USDA purchasing programs.¹³³

Congress might review existing AMS Market News data collection programs to better track market and pricing dynamics between growers and others throughout the value chain (e.g., wholesalers, processors, shippers, retailers) or weekly retail sales; alternately, Congress could support other data collection efforts in USDA, such as efforts to better track weekly fresh-market fruit and vegetable movement and prices.¹³⁴ Improved data collection at USDA and industry access to improved real-time price reporting could help assess whether changes are needed to improve price discovery and transparency for U.S. fruits and vegetables. For example, data collection under SCMN is voluntary, and access to its data was considered to be “important during the pandemic” given market volatility and transportation bottlenecks “to help establish policy for new programs.”¹³⁵ Some have suggested that additional participation under SCMN could “make that data set more robust.”¹³⁶ Some concerns about SCMN include sampling size, data accuracy, ability to adapt to a changing marketplace, availability of other privately sourced pricing data (e.g., Nielsen Data), how USDA might collect data more efficiently given available limited resources, whether user fees should be charged in order to improve data collection and reporting services, and whether such data collection should become mandatory.

Author Information

Renée Johnson
Specialist in Agricultural Policy

¹³³ For background, see CRS Report R48141, *Trends in USDA Procurement of U.S. Food and Agricultural Products*.

¹³⁴ See discussion of USDA data products in the section titled “Price and Market Data.”

¹³⁵ USDA, Fruit and Vegetable Industry Advisory Committee meeting transcript, p. 38, April 19, 2023, https://www.ams.usda.gov/sites/default/files/media/FVIAC_April23_MeetingMinutes.pdf.

¹³⁶ *Ibid.* Comments attributed to Bruce Summers, USDA’s AMS administrator.

Disclaimer

This document was prepared by the Congressional Research Service (CRS). CRS serves as nonpartisan shared staff to congressional committees and Members of Congress. It operates solely at the behest of and under the direction of Congress. Information in a CRS Report should not be relied upon for purposes other than public understanding of information that has been provided by CRS to Members of Congress in connection with CRS's institutional role. CRS Reports, as a work of the United States Government, are not subject to copyright protection in the United States. Any CRS Report may be reproduced and distributed in its entirety without permission from CRS. However, as a CRS Report may include copyrighted images or material from a third party, you may need to obtain the permission of the copyright holder if you wish to copy or otherwise use copyrighted material.