

Developments in the Avocado Sector and Their Implications for California Producers and Consumers

James E. Sayre

Avocado consumption per capita in the United States has tripled in twenty years, yet California has decreased its bearing acreage over the last decade. One state in Mexico has primarily fulfilled this surge in demand, but newer importers may compete more directly with California producers and drive down consumer prices.

It is almost unthinkable now to imagine fancy coffee shops without avocado toast, or a Super Bowl party without copious amounts of guacamole. However, the widespread popularity of avocados in the United States is a recent phenomenon. According to the U.S. Department of Agriculture (USDA) Economic Research Service (ERS), the quantity of avocados consumed per person in the United States tripled from 2000 to 2021; the average person now consumes more than eight pounds per year.

The proliferation of imports in the U.S. market has been a substantial reason for the rapid increase in avocado consumption. The USDA ERS reports that imports (almost 90% of which are from Mexico) now account for 90% of domestic consumption, whereas in 2000, they accounted for only 40% of consumption. With this increase in imports came the rise of marketing boards designed to preserve high domestic prices for producers. In a 2019 *ARE Update* article, Hoy F. Carman describes the development of the Hass Avocado Board (HAB), which imposes a fee on both domestic and foreign producers in order to fund U.S. avocado promotion programs designed to support greater domestic demand. Carman, Saitone, and Sexton also show that the HAB has

been successful in expanding domestic demand amongst rising imports and achieves benefits for domestic producers several times larger than its costs.

Prior to 1970, avocados consumed in the United States came almost entirely from domestic sources, primarily California and Florida. Consumption was predominantly local and seasonal, with less supply in the winter. During this time, the Hass avocado became popular relative to other varieties—crucially, it had a thicker and darker skin, allowing for transport over longer distances without visible damage. Imports of Hass avocados increased in 1985, when Chile began exporting to the United States. Chile, whose harvest season ranged from August to January, had a growing season that complemented the U.S. growing season, and consumers began to have consistent year-round access.

In 1914, the USDA imposed a phytosanitary quarantine on Mexican avocados to prevent the introduction of seed weevils, stem borers, and other pests. Due to this rule, Mexico was left out of the U.S. market for around 80 years. In the *California Avocado Society Yearbook*, Bender and Shepherd note that while pest concerns were legitimate initially, the quarantine remained in effect to protect California avocado growers from potential competition from Mexico.

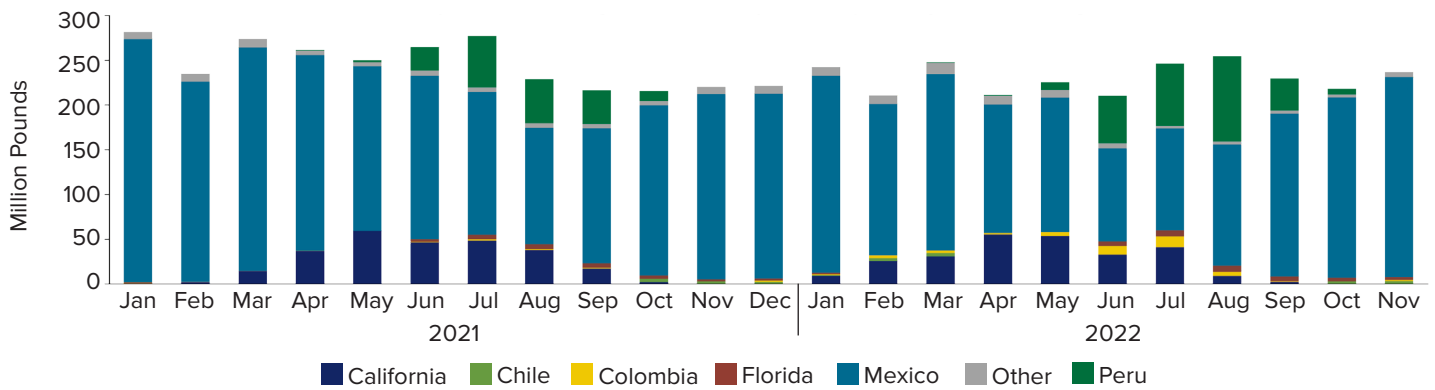
In 1972, large farm owners in Michoacán and Sinaloa petitioned the USDA Animal and Plant Health Inspection Service (APHIS) for approval to export avocados. Field surveys performed in both areas found no evidence of pests, and the success of Mexican growers seemed so likely that newspapers in the state of Sinaloa prematurely reported that exports would

be allowed into the United States. However, opposition towards potential imports mounted from California growers, and the industry was able to successfully lobby to forestall their introduction, according to Orden and Roberts in their article on phytosanitary restrictions on U.S. avocado imports.

Farmers near Uruapan, Michoacán, formed growing associations in the early 1990s to fulfill the requirements of USDA APHIS. The largest growers' association—the Association of Avocado Exporting Producers and Packers of Mexico (APEAM)—submitted a petition to export avocados to the United States but gained entrance only to Alaska. In the wake of NAFTA, the USDA proposed a rule that only allowed imports in from the Mexican state of Michoacán—despite the existence of exporters to other countries in the states of Guanajuato, México, Nayarit, Puebla, and Sinaloa. This agreement helped protect U.S. growers but concentrated production within Michoacán and decreased avocado production elsewhere in Mexico. Growers in other Mexican states to this day voice frustrations with the lingering implications of this rule and how it has hindered them from producing avocados for the U.S. market.

In 1997, the United States allowed imports to a limited number of states during the winter, and imports continued to expand. By 2005, Mexico surpassed Chile as the largest exporter of avocados to the United States. Finally, by 2007, imports were allowed into all states year-round, cementing the status of Mexico as the largest U.S. supplier. The United States is now the largest market for Mexico, accounting for 40% of its exported avocados.

Figure 1. Domestic and Imported Monthly Avocado Shipments in the United States, January 2021 Through November 2022



Source: USDA, Agricultural Marketing Service, *Market News*, movement data. Available at: <https://www.ams.usda.gov/market-news>.

In the California market, the increased popularity of avocados led to an increase in the bearing acreage of avocados from around 20,000 acres in 1960 to a high of 75,000 acres in 1990. Then, in the early 1990s, competition from Chile, combined with fears of (even healthy) high-fat foods, resulted in a market crash and a subsequent avocado acreage reduction. According to the California Avocado Commission, the bearing acreage of avocados has fallen by 15,000–20,000 acres between 2005 and 2022. Despite this decrease, the production value of the California crop has remained mostly constant over the last decade, largely due to the increasing prices of avocados.

New Developments in the Mexican Avocado Sector

Rising demand from East Asian countries opened the door for states other than Michoacán (namely Jalisco) to import avocados to the United States. Jalisco, more famous for its distilled agave production, produced few avocados before 2007, but good infrastructure and sophisticated growers allowed it to quickly enter the export market. The avocado industry in Jalisco was organized and productive, allowing it to fulfill the export requirements limiting other regions. This nascent industry in Jalisco opposed the rule that only permitted avocados from Michoacán to enter the United

States and began a campaign to export there as well.

In 2016, given increasingly high prices for avocados, as well as increased recognition of Jalisco, the USDA APHIS allowed all Mexican states to import into the United States. Despite this, it took six more years for Jalisco to access the U.S. market; they first reached the U.S. market in late July 2022 and are expected to export between 175 and 220 million pounds this year. However, other states interested in exporting to the United States must undergo a complex process to apply for export certification. As of writing, no other regions appear poised to follow suit, despite the presence of avocado producers and exporters in those regions.

Due to the state-by-state restrictions on the exportation of avocados to the United States, production in Mexico outside of Jalisco and Michoacán has not experienced the same growth (and Michoacán has seen a recent decrease in the acreage of new avocado plantings). Since the United States is the largest export market for Mexico, these restrictions have likely diminished the role of Mexico in worldwide production relative to a counterfactual world without restrictions. In particular, this may have created space for new competitors such as Colombia and Peru, who may compete more directly with California producers.

Competition on the Rise

Researchers at the French Agricultural Research Center for International Development (CIRAD) project that from 2022 to 2025, the worldwide total of planted avocado acreage will increase by around 21%. CIRAD researchers found that the average world price for traded avocados has declined in the last six years, which is likely to continue. By 2027, CIRAD researchers estimate exportable production will double the 2020/21 levels, outstripping projections for demand. As North American and European markets account for 81% of current imports, these markets are expected to receive much of this supply.

The increases in North American-oriented supply are expected to come primarily from Colombia, Jalisco, and Peru. However, the degree to which each competes with California varies based on their growing seasonality. Although farmers can leave fruit on their trees for months and adjust their harvest to maximize revenues, the growing period tends to be relatively fixed by climatic conditions.

Jalisco, in particular, may have a more symbiotic relationship with California growers than some might expect. Although Mexico grows avocados year-round, harvesting in Michoacán

peaks in April, and to a smaller degree in August, according to the Mexican Service of Agrofood and Fisheries Information (SIAP). In contrast, harvesting in Jalisco tends to peak between February and April, with a smaller peak in October. California production has historically peaked in June, so these growing seasons leave room for California producers to sell their output when production from Mexico is relatively lower.

Due to a lack of increased Mexican supply, distributors have sought new sources for avocados—namely Colombia and Peru. Although Chile used to be a large importer to the United States, Chilean imports have fallen to less than 1% of U.S. imports, shifting instead to Western Europe and domestic consumption. In contrast, Peru's imports have risen rapidly.

Peruvian imports went from 220 tons in 2010 to 134,000 tons in 2022 and now represent 7% of total U.S. imports. Importantly, the seasonality of Peruvian avocado production appears to be very similar to the seasonality in California, peaking in July, according to the Peruvian Ministry of Agrarian Development and Irrigation (MIDAGRI). This year California growers reported needing to sell their output earlier to receive higher prices before Peruvian supply picked up. Given the far distance, Peruvian fruit must be picked earlier than the California crop, and it trades at a discount due to its quality. Despite lower quality perceptions, importers have felt compelled to expand supply from Peru, given growing consumer demand.

Despite representing less than 1% of U.S. imports in 2021, Colombia has made big advances in imports this year (see Figure 1). This stems from investments in its nascent avocado industry, with more on the way—large numbers of export-oriented orchards will come into maturity after 2025.

Colombian imports this year have arrived slightly earlier than most of Peru's crop, further pushing California growers to bring their fruit to market before the competition.

Implications for California Consumers and Producers

Although foreign competition has arguably reduced avocado acreage in California, it has also more than tripled domestic per-capita consumption. The year-round availability of avocados has contributed to greater consumption, and the complementary growing seasons of Mexico and the United States have protected California growers who have benefited from the change in consumer preferences. Place-based restrictions on avocado supply from Mexico have created space for newer avocado producers such as Columbia and Peru. While the two countries' rise bears the potential to lower prices for consumers, they are also in more direct seasonal competition with California growers. Although the HAB has successfully maintained demand growth among consumers in the United States, the United States alone cannot bear all the increase in world supply.

However, local and export markets hold potential for California growers. Despite much higher input prices, the California crop is known for its high quality, and industry participants have noted that exporters have tended to ship California avocados first to new markets to establish a reputation for taste and quality among consumers. This suggests there is potential for marketing credence attributes for California avocados, such as organic and quality labeling, fair labor, sustainability, and traceability practices. In particular, California provides more organic avocados to the U.S. market than any other supplier.

Export markets, particularly in East Asia, also hold promise for

the California avocado industry. From 2009–2020, California exports increased more than fivefold. China, Japan, and Korea account for much of the recent export growth. Although demand has not increased greatly in recent years, these countries hold high potential for increased marketing. These markets are also known for high quality standards, which California is well positioned to fulfill. And, just as the supply of Mexican avocados has helped increase demand domestically by supplying avocados year-round, California has the opportunity to supply avocados to these new markets when other countries' exports are not seasonally available.

Suggested Citation:

Sayre, James E. 2022. "Developments in the Avocado Sector and Their Implications for California Producers and Consumers." *ARE Update* 26(2): 9–11. University of California Giannini Foundation of Agricultural Economics.

Author's Bio

James E. Sayre is a Ph.D. candidate in the Department of Agricultural and Resource Economics at UC Berkeley. He can be reached via his webpage at: <http://jaysayre.com>.

For additional information, the author recommends:

Carman, Hoy F. 2019. "The Story Behind Avocados' Rise to Prominence in the United States." *ARE Update* 22(5): 9–11. Available at: <https://bit.ly/3Yu2gls>.

Imbert, Eric. 2022. "Avocado—About to Embark on a Balancing Act: World Market Prospects for the Medium/Long Term (2021–2028)." CIRAD. Available at: <https://bit.ly/3hhmEFW>.