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Report Highlights:

FAS New Delhi (Post) forecasts marketing year (MY) 2022/23 (August-July) Indian almond imports (shelled-basis) at 148,000 metric tons (MT) a slight decrease from MY 2021/22, as food inflation volatility, rupee depreciation, and global shipping challenges are likely to persist in the near term, impacting price. Nevertheless, India has continued its high demand for almonds, walnuts, and pistachios, as it diversifies its tree nut imports to less price sensitive origins, including Chile (walnuts) and the United States (pistachios). MY2022/23 walnut (in-shell basis) imports are forecast to reach 36,000 MT, a nine percent increase from MY 2021/22 due to continued demand growth, favorable domestic prices, and a predicted drop in domestic production. India's pistachio (in-shell basis) imports are estimated at 30,000 MT, with methodical growth in demand that is projected to reach 50,000 MT by MY 2024/25.

ALMONDS, SHELLED BASIS

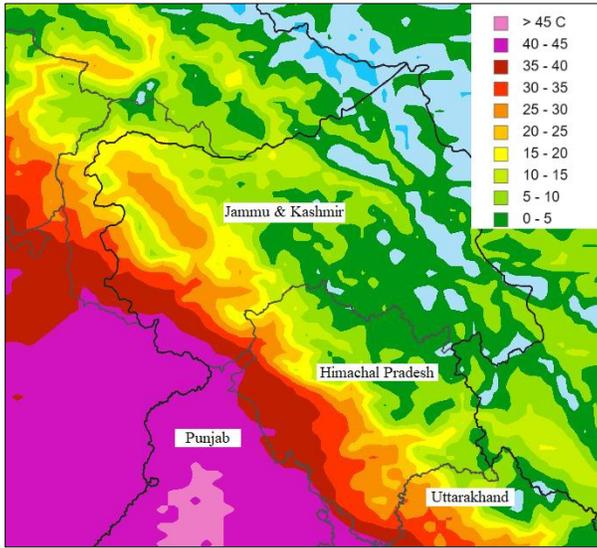
Table 1. India: Commodity, Almond, Production, Supply and Distribution (PSD)						
(Area in Hectares, Quantity in Metric Tons, and Trees in Thousands)						
Almonds, Shelled Basis	2020/21		2021/22		2022/23	
Market Begin Year	Aug-20		Aug-21		Aug-22	
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	0	48000	0	48000	0	48000
Area Harvested	0	45000	0	45000	0	45000
Bearing Trees	0	3000	0	3000	0	3000
Non-Bearing Trees	0	300	0	300	0	300
Total Trees	0	3300	0	3300	0	3300
Beginning Stocks	30650	30650	37470	37270	0	37090
Production	4500	4500	4500	4500	0	4300
Imports	159100	159100	130000	149000	0	148000
Total Supply	194250	194250	171970	190770	0	189390
Exports	0	200	0	880	0	300
Domestic Consumption	156780	156780	140200	152800	0	155000
Ending Stocks	37470	37270	31770	37090	0	34090
Total Distribution	194250	194250	0	190770	0	189390

PRODUCTION

FAS New Delhi forecasts India's MY 2022/23 almond production at 4,300 metric tons (MT) (kernel-weight basis), a four percent drop from last market year. Almond production is concentrated in India's Union Territory of Jammu and Kashmir and in the state of Himachal Pradesh. India's massive heat wave which stretched from mid-March into June 2022 extended into the almond growing regions and during the flowering stages, affecting early blooming almond cultivars (Figure 1).¹ Additionally, an erratic and uneven 2022 monsoon and precipitation fluctuation at the critical growing stages have likely affected almond yields and product quality. Popular varieties include *Shalimar*, *Makdoon*, *Waris*, and *Kagazi* (thin shell cultivars). Most of the almond production is dependent on rainfall for moisture, with minimal irrigation.

¹ According to the India Meteorological Department, Jammu recorded the warmest March since 1945. See: India Meteorological Department, Ministry of Earth Sciences, [March 30, 2022, press release](#).

Figure 1. India, Jammu and Kashmir, and Himachal Pradesh, Extreme Maximum Temperature (Celsius), April 2022.²



Data Source: USDA Global Agricultural and Disaster Assessment System (GADAS), U.S. Air Force 557th Weather Wing (10 km).

The Jammu and Kashmir territorial government, through its Almond Development Program, aims to increase the region’s almond cultivated area by approximately 12,000 hectares and phase-in higher yielding sweet and bitter almond cultivars.

CONSUMPTION

Post revises MY 2022/23 Indian almond consumption to 155,000 MT, one percent above the current year estimate. The market year 2021/22 consumption figure is also revised upward to 152,800 MT because of a still-expanding consumer base. Beginning in 2020, almond consumption saw a dramatic, atypical increase due to the almond’s perceived health benefits during the COVID-19 pandemic. Consumer demand plateaued in the latter half of MY 2020/21, as higher domestic prices and exorbitant shipping costs contributed to uneven supplies.

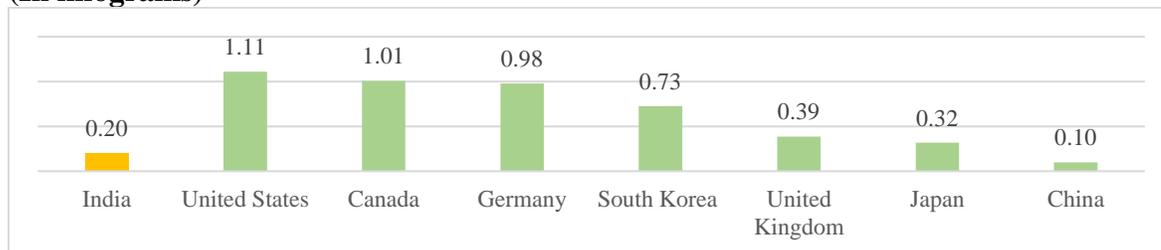
India will likely maintain high almond demand, as a wider consumer base with disposable incomes will incorporate more almonds into their diets based on perceived health benefits and cultural traditions. For years, almond consumption has been largely driven by traditional habits, where eating a small number of almonds each morning is believed to improve health.³ Additionally, traditional consumer activities, festive ceremonies (e.g., Diwali, weddings) will further propel almond consumption in the forecast year. Almond consumption through the end of 2022 is expected to remain strong.

² Extreme maximum daily air temperature is determined by selecting the highest 1-hourly air temperature within each 24-hour period. The extreme maximum temperature data is provided as the maximum value found across the 30-day period.

³ This longstanding ritual has been known to include soaking almonds overnight and removing the skin, with each household member consuming 4-5 almonds every morning.

As a major almond consuming country, India’s per capita almond consumption remains much lower than other markets (Table 2), suggesting there remains significant growth potential.

Table 2. 2020 Almond Per Capita Consumption (Addressable Population) by Select Country (In kilograms)



Data Sources: Market Attractiveness, Statista.

Retail stores and e-commerce will continue to stimulate almond consumption as companies expand their reach in smaller metropolitan areas, including Tier II-III cities.⁴ Additionally, an evolving supply chain, with growing consumer awareness of perceived health benefits, will drive almond consumption in the food processing, and personal care industries. The increased use of almonds as a snacking nut (i.e., salted, and spiced almonds, trail mix, etc.), in addition to flavored and processed beverage products and traditional confectionaries will continue to support demand growth. Further, almond consumption in India’s hotel restaurant, and institutional (HRI) sector is likely to increase, as consumers are dining out at levels similar to before the pandemic, in addition to a rebounding tourism sector.⁵ Bulk sales, associated with business and corporate gift giving, is also a consumption driver.

TRADE

Post forecasts India’s MY 2022/23 almond imports at 148,000 MT, a slight drop from MY 2021/22 figures. Post is revising the MY 2020/21 import figures upward to 149,000 MT based on new trade estimates.

U.S.-origin almonds from California accounted for 84 percent of India’s total import volume in MY 2021/22, followed by Australian almonds with eight percent market share (Table 3). Almond imports from the United States and Australia are typically the in-shell nonpareil or Carmel varieties, and are shelled locally (i.e., machine-cracked and hand sorted). Most other origins supply shelled almonds.

Global shipping challenges that first began in 2020, included port delays and congestion in California, longer transit times, high freight costs and container shortages. These issues, combined with rupee depreciation, have contributed to significant price fluctuations and uneven supply. Post sources stated that despite these challenges, importers brought in significant almond quantities beginning in the first half of MY 2021/22 that have ensured adequate supply for the upcoming festive season. However, high consumption during the festive season will result in high prices in the first half of the outyear, due to limited almond inventory and inconsistent trading.

⁴ Classification of Indian cities based on size. Tier II cities include, but are not limited to, Kanpur, Chandigarh, Pune, etc.

⁵ Some companies in the HRI sector anticipate a 10-50 percent growth in sales during this year’s festive season (October-December), as strong consumer spending may push sales to levels not experienced since before the pandemic. See: [Financial Express](#), Consumer goods firms expect festive season sales to grow as high as 50 percent; published September 8, 2022.

Table 3. India: Commodity, Almond, Import Trade Matrix MY 2021/2022 (MT)

Country	In-Shell	Shelled	Total Kernel	% Share
World	223,480	14,699	148,787	100
United States	199,617	5,589	125,359	84
Australia	20,031	341	12,360	8
United Arab Emirates	503	4,664	4,966	3
Afghanistan	2,582	2,502	4,051	3
Iran	0	1,131	1,131	1
Canada	622	0	373	<1
Syria	0	310	310	<1
Singapore	125	34	109	<1
Turkey	0	96	96	<1
Germany	0	20	20	<1
Spain	0	13	13	<1

Source: Trade Data Monitor, FAS New Delhi office research.

Note: In-shell almonds are converted to shelled basis by multiplying by a factor of 0.6. Trade data is for the August 2021-July 2022 period.

At 880 MT in MY 2021/22, India's almond exports are negligible. Yet it is a considerable jump when compared to MY 2020/21 exports of just 200 MT. Primary export destinations included the United Arab Emirates (UAE) (660 MT), Russia (50 MT), and Sri Lanka (28 MT). India's almond exports in the outyear are forecast at 300 metric tons.

POLICY

U.S.-origin almonds are subject to retaliatory tariffs of \$0.52 per kilogram (kg) (Indian rupee [INR] 41/kg) for in-shell and \$1.51 per kg (INR 120/kilogram) for shelled.⁶ The United States' implementation of Section 232 tariffs on imported steel and aluminum in 2018 and the removal of India's GSP privileges in 2019 led to retaliatory duties above the bound rates (Table 4). However, high U.S. market concentration and established market share in India, coupled with India's almond demand, suggest that the impact of the retaliatory tariffs has been limited in terms of U.S. almond trade to India.⁷

Table 4. India: Almonds, Tariffs

Commodity HS Code	Description	Applied Basic Duty Rate	Social Welfare Surcharge
0802.11.00	Almonds In-shell	INR 35/kg	10 percent
0802.12.00	Almonds Shelled	INR 100/kg	Non applicable

Source: FAS New Delhi.

India's non-tariff barriers include narrow almond kernel quality standards prescribed by the Food Safety and Standards Authority of India (FSSAI),⁸ in addition to labeling requirements for bulk products.⁹

⁶ For purposes of this report, \$1.00 = INR 79.50.

⁷ See: Ajibade, A.; Saghaian, S. [U.S. Almond Exports and Retaliatory Trade Tariffs](#). Sustainability, 2022, 14, 6409.

⁸ See: USDA GAIN - India Almond Kernel Standards and other Various Food Products Published in the Indian Gazette; [IN2020-0103](#).

Traders continue to maintain that there is a need for flexibility in grades to account for varying commercial situations, including varietal differences, crop quality variability, and pricing differentials, as opposed to physical parameters like damage and the presence of foreign material as required by FSSAI.

WALNUTS, IN-SHELL BASIS

Table 5. India: Commodity, Walnuts, Production, Supply and Distribution (PSD)						
(Area in Hectares, Quantity in Metric Tons, and Trees in Thousands)						
Walnuts, In-Shell Basis	2020/21		2021/22		2022/23	
Market Begin Year	Sept-20		Sept-21		Sept-22	
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	0	0	0	0	0	0
Area Harvested	0	0	0	0	0	0
Bearing Trees	0	0	0	0	0	0
Non-Bearing Trees	0	0	0	0	0	0
Total Trees	0	0	0	0	0	0
Beginning Stocks	14400	14400	14000	14000	0	14700
Production	35000	35000	36000	36000	0	34000
Imports	31000	44000	30000	33000	0	36000
Total Supply	80400	93400	80000	83000	0	84700
Exports	2800	2900	3000	4300	0	4500
Domestic Consumption	63600	76500	63000	64000	0	66000
Ending Stocks	14000	14000	14000	14700	0	14200
Total Distribution	80400	93400	80000	83000	0	84700

PRODUCTION

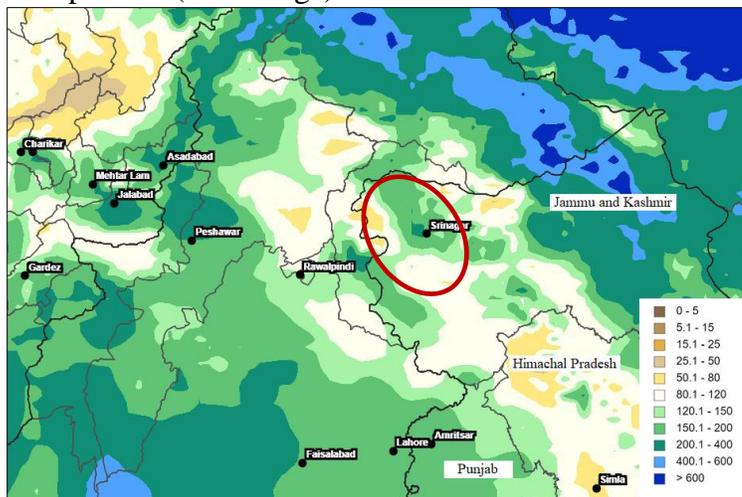
FAS New Delhi forecasts India's MY 2022/23 (September-August) walnut production at 34,000 MT (in-shell basis), down nine percent over last year on account of temperature extremes during the flowering season. Indian walnut production is cyclical, and yields can vary up to 20 percent depending on weather conditions during the flowering (February to April) and harvesting stages.

Walnuts are grown as a plantation crop in the northwestern Himalayan belt, extending through India's northern region. Production is mostly concentrated to Jammu and Kashmir where popular varieties include *Lake English*, *Drainovsky*, *Opex Caulchry*, which combined, account for 90 percent of the overall production area. However, Himachal Pradesh (*Gobind*, *Eureka*, *Placentia*, *Wilson*, *Franquetfe*, *Kashmir Budded*); Uttarakhand (*Chakrata* varieties); and the northeastern states of Sikkim and Arunachal Pradesh do contribute limited volumes.

⁹ See: USDA GAIN - India's FSSAI Confirms Labeling Requirements for Primary Bulk Foods Remain Subject to 2012 and 2016 Guidelines; [IN2021-0074](#).

Jammu and Kashmir recorded near normal rainfall during the 2022 southwest monsoon (June-September) (Figure 2), which would support adequate yields. The region’s walnut production relies heavily on rainfall with limited irrigation infrastructure. However, the sustained heatwave starting in mid-March affected the critical flowering period, where daily temperatures averaged approximately 8.4 degrees Celsius above normal in the region, which would negatively impact walnut yields and reduce kernel quality.

Figure 2: India: India, Jammu and Kashmir, and Himachal Pradesh, March-August 2022, Normal Precipitation (Percentage)¹⁰



Data Source: USDA GADAS, U.S. Air Force 557th Weather Wing (10 km).

Note: Oval indicates approximate growing area for most Jammu and Kashmir walnut production.

India’s walnuts come in various sizes and with varying characteristics and are sorted into paper-shelled, thin-shelled, medium-shelled, and hard-shelled categories. The walnut harvest typically occurs from late August through September.

India’s walnut production lacks advanced horticultural practices that are often found in other walnut growing countries. In Jammu and Kashmir, walnut trees are largely cultivated in an unorganized manner. The region does not engage in high-density planting, improved orchard management practices, stable yields, faster fruiting periods, drip irrigation, and lacks sufficient, modern post-harvest infrastructure facilities.¹¹

Most walnut trees are aged 40 years old or more, and producers have claimed production has shrunk in addition to reduced market value from the lack of established dry fruit markets.¹² Sources indicate that higher-yielding varieties, using high-quality grafted plants, are needed to increase domestic production and produce high quality kernels.

¹⁰ Percent normal precipitation indicates regions where rainfall was above or below the 30-year normal for the given period, expressed as a percent.

¹¹ The Indian army has reportedly established a walnut processing plant near the Line of Control, but it is unknown how much value addition the plant will bring. See: [The Print](#); “J-K: Indian Army establish walnut processing plant near LoC.” Published on March 20, 2022.

¹² See: [Money Control](#), “Kashmir’s walnut industry is cracking under pressure. Here’s why.” Published on September 13, 2022.

CONSUMPTION

Post estimates MY 2022/23 Indian walnut consumption at 66,000 metric tons. Additionally, market year 2021/22 consumption is revised to 63,000 MT, reflecting adjusted trade estimates. Indian consumers demand walnuts due to the nut's perceived health benefits and typically favor lighter skin kernels which are often blanched. Improved packaging and storage (i.e., vacuum-packed bags) will contribute to greater year-round consumption. Traditional and modern retail stores, including India's e-retail sector, are contributing to greater consumer demand. Since the COVID-19 pandemic, walnuts have remained popular with consumers who perceive the nut as having significant health benefits. In-shell walnuts remain in high demand and are sold predominantly in traditional markets and retail. However, shelled walnut kernels are gaining in popularity with its wide use as a snacking nut and use in household cooking.

Industry sources indicate that approximately 70-75 percent of India's walnut consumption takes place at the household level, with more than half of consumption occurring during the festive season (October-November). Additionally, walnuts are used in the food processing and personal care industries. For years, the HRI sector has used walnuts for baking and the manufacturing of traditional snacks (namkeen) and sweets (mithai) but are gaining in popularity due to support by targeted marketing campaigns in print and online media.

TRADE

Post forecasts MY 2022/23 Indian walnut imports at 36,000 MT, nine percent higher than the previous MY, resulting from improved pricing, reduced domestic production and steady demand. This increase is anticipated as Chile, the larger supplier of walnuts to India in MY 2021/22, is expected to expand domestic production and available supply in the outyear.¹³

Post is revising its import estimates for MY 2020/21 to 44,000 MT and MY 2021/22 to 33,000 MT based on the latest trade data. From September 2021 to July 2022, Chile was the main supplier with 65 percent market share, followed by the United Arab Emirates and the United States, each at 10 percent. India is primarily an in-shell walnut market, with most demand-pull occurring from imports as compared to domestic production.

Table 6. India: Commodity, Walnut, Import Trade Matrix 2021/2022

Partner Country	In-Shell	Shelled	Total Kernel	% Share
World	24,237	5,420	36,920	-
Chile	17,690	581	19,050	52%
United Arab Emirates	2,579	487	3,719	10%
United States	3,416	115	3,685	10%
Iran	0	1,557	3,643	10%
Afghanistan	80	1,102	2,659	7%

¹³ See: USDA GAIN, Chile: Tree Nuts Annual; [CI2022-0017](#).

Vietnam	135	930	2,311	6%
Turkey	70	575	1,416	4%
Australia	199	0	199	1%
Sri Lanka	0	39	91	<1%
Germany	0	32	75	<1%
Singapore	40	0	40	<1%
Hong Kong	18	0	18	<1%
Ukraine	10	0	10	<1%
China	0	2	5	<1%

Note: Shelled walnuts are converted to in-shell basis by multiplying by a factor of 2.34. Trade data is from September 2021-July 2022.

Source: Trade Data Monitor, FAS New Delhi research.

Post forecasts MY 2021/22 Indian walnuts exports at 4,500 MT, up two percent from the previous market year. Post is revising its export estimate for MY 2020/21 to 2,900 MT and MY 2021/22 to 3,800 MT based on the latest trade data. In the current market year, France was the largest market for Indian walnuts at 1,000 MT, (24 percent share), followed by the UAE and the United Kingdom at 875 MT and 640 MT, respectively. India also increased walnut export volumes to its traditional markets in Germany and New Zealand.

Over 95 percent of India’s walnut exports are shelled kernels in vacuum packs, with 35-40 percent classified as “light halves,” 35-40 percent “amber halves/light broken,” and the balance as “amber halves.” According to market sources, Indian walnuts are competitively priced against other origins, including the United States, Chile, Turkey, and China.

POLICY

India’s Open General License program permits walnut imports without quantitative restrictions. Both in-shell and shelled walnut imports are subject to a 100 percent tariff (effective February 2020). India continues to apply a retaliatory tariff on U.S.-origin in-shell walnuts at 20 percent above the applied basic customs duty (BCD) of 100 percent.

Table 7. India: Walnuts, Tariffs

Commodity HS Code	Description	Applied Basic Duty Rate	Social Welfare Surcharge
0802.31.00	Walnuts In-Shell	100 Percent	Not Applicable
0802.32.00	Walnuts Shelled	100 Percent	Not Applicable

Note: The Social Welfare Surcharge of ten percent on the BCD exempts goods falling under HS codes 0802.31.00 and 0802.32.00.

Some traders are said to be under-invoicing walnuts, including Chilean-origin walnuts. This practice would make walnuts from other origins less competitive and depress domestic prices.¹⁴ Post sources

¹⁴ According to Post sources, the Government of India has drastically lost millions of rupees in excise due to this under-valuation practice. Source: [Hindu Business Line](#), “J&K walnut industry says under-invoiced imports hurting local livelihoods.” Published July 25, 2022.

suggest that revising the BCD calculation to a quantity-based (per/kg basis) tax similar to almond imports would eliminate this practice, improve demand, and benefit the entire walnut industry.

On July 30, 2021, FSSAI published the Food Safety and Standards (Food Product Standards and Food Additives) Third Amendment Regulations (2021) which cite the final standards for walnut kernels with an implementation date of February 1, 2022.¹⁵ India’s walnut kernel standards apply to fresh products and include a 15 percent permissible variation for color uniformity. The FSSAI also changed the damage limit from two to four percent based on the number of damaged units and on a percent-by-mass parameter.

PISTACHIOS, IN-SHELL BASIS

Table 8. India: Commodity, Pistachios, Production, Supply and Distribution (PSD)						
(Area in Hectares, Quantity in Metric Tons, and Trees in Thousands)						
Pistachios, In-Shell Basis	2020/21		2021/22		2022/23	
Market Begin Year	Sept-20		Sept-21		Sept-22	
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	0	0	0	0	0	0
Area Harvested	0	0	0	0	0	0
Bearing Trees	0	0	0	0	0	0
Non-Bearing Trees	0	0	0	0	0	0
Total Trees	0	0	0	0	0	0
Beginning Stocks	0	0	0	0	0	0
Production	0	0	0	0	0	0
Imports	36700	36700	30000	27000	0	30000
Total Supply	36700	36700	30000	27000	0	30000
Exports	0	0	0	0	0	0
Domestic Consumption	36700	36700	30000	27000	0	30000
Ending Stocks	0	0	0	0	0	0
Total Distribution	36700	36700	30000	27000	0	30000

PRODUCTION

There is no commercial production of pistachios in India. Limited, unorganized production is found in Jammu and Kashmir.

CONSUMPTION

India’s MY 2022/23 (September-August) pistachio consumption is forecast at 30,000 MT, 11 percent above the current year estimate. Traditionally a market for in-shell pistachios, India’s demand occurs from October through February, with peak sales achieved during the festive season. Organized retail and

¹⁵ See: USDA GAIN - India’s FSSAI Issues Final Standards Walnut Kernels and Other Various Food Products, [IN2021-0097](#).

online e-commerce are expanding and account for a growing share of pistachio demand. Post sources indicate that India’s market for pistachios could reach 50,000 MT by MY 2024/25.

Traditionally, the Indian consumer has preferred Iranian and Afghanistan-origin pistachios due to the familiarity with the taste, texture, color, and shape of the nut. Conversely, U.S.-origin pistachios are relatively different in taste, have a distinct greenish tint, and are larger in size with a different texture, but have become more familiar to Indian consumers in recent years. California’s U.S. grade 21-25 No. 1 pistachio is the preferred American variety.

India’s mithai sector utilizes lower quality (i.e., broken/chipped kernels) pistachios as a food ingredient primarily due to cheaper pricing. In the last decade, California pistachios were utilized for food processing, due to perceived inconsistent product quality and a different flavor profile. However, Post sources note that recent improvement in pistachio quality has contributed to higher demand for California pistachios, which are consumed more widely as a snacking nut and for use in the HRI sector.

TRADE

India’s MY 2022/23 pistachio imports are projected to total 30,000 MT, approximately 11 percent above MY 2021/22. From September 2021 to July 2022, Iran was the largest supplier of pistachios to India, followed by the United States, UAE, and Afghanistan. As neither the UAE, nor Hong Kong produce pistachios, they transship from other origins, primarily the United States. FAS New Delhi forecasts that the United States will be the primary supplier to India in the outyear. Post sources indicate this will result from competitive pricing, reduced production in Iran, and an adequate harvest in California, the combined effect of which would be higher exports from the United States.

In market year 2021/22, Iran, the United States, and the UAE were the largest suppliers of pistachios to India (Table 9). India’s exports of pistachios remain insignificant.

Table 9. India: Commodity, Pistachios, Import Trade Matrix 2021/2022

Partner Country	In-Shell	Shelled	Total Kernel	% Share
World	12,057	5,490	23,037	-
Iran	5,349	1,860	9,069	39%
United States	4,583	5,40	5,663	25%
United Arab Emirates	2,106	1,054	4,214	18%
Afghanistan	0	1,841	3,682	16%
Turkey	0	180	360	2%
Kyrgyzstan	0	16	32	<0%
Hong Kong	20	0	20	<0%
Uzbekistan	0	1	2	<0%

Note: For pistachio trade tables, shelled pistachios are converted to an in-shell basis by multiplying by a factor of 2.0. Trade data is for the September 2020-May 2021 period.

Source: Trade Data Monitor, FAS New Delhi office research.

POLICY

India levies a 10 percent BCD on raw pistachios (in-shell and shelled), and 30 percent on roasted pistachios. Additionally, a Goods and Services Tax of 12 percent is applied on the customs and freight value, along with a Social Welfare Surcharge of 10 percent of the customs duty.

Attachments:

No Attachments