

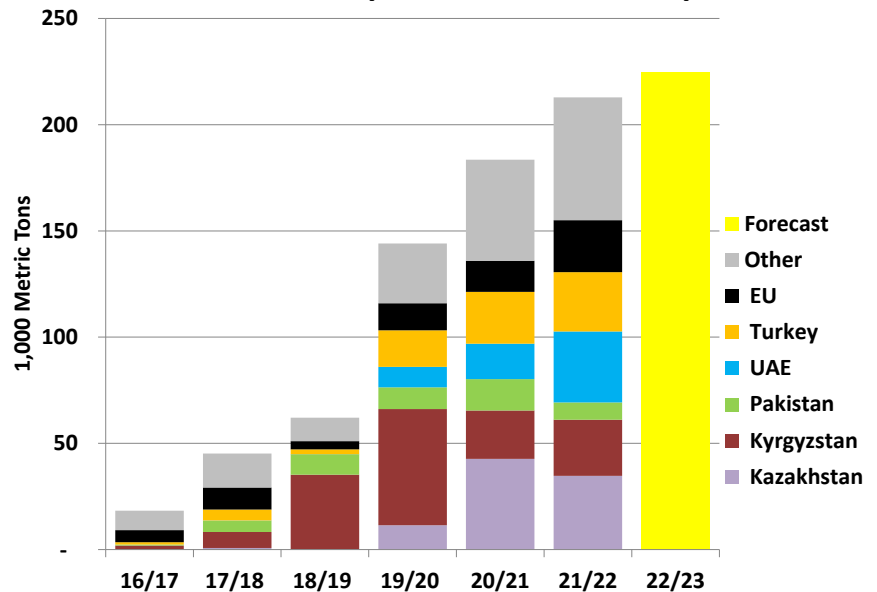
# Tree Nuts: World Markets and Trade

## China: World’s Largest Walnut Producer Turns to Exports

China is forecast to produce 1.4 million metric tons (tons) of walnuts in 2022/23, accounting for over half of world output. Within China, Xinjiang Province accounts for more than half of China’s production followed by Yunnan, Shanxi, and Shaanxi Provinces. Output increased nearly 80 percent in the last decade due in part to a poverty-alleviation program that was implemented in mountainous and hilly areas, which encouraged farmers to invest in new plantings. However, new growers have struggled to implement modern crop management practices such as mechanization, irrigation, pruning, and fertilization. In contrast, most walnut orchards in Xinjiang Province have been planted in flat areas, making it feasible for growers to mechanize the harvest and keep labor costs low. Industry sources indicate that Xinjiang walnut varieties have a much higher kernel content than their counterparts in other walnut-producing countries.

In 2016/17, China was the world’s seventh-largest exporter with shipments of just 18,000 tons. By 2019/20, China became the second-largest exporter behind the United States with shipments of 144,000 tons and is forecast to remain in that position. This impressive growth has been driven by exports to new and neighboring markets Kazakhstan, Kyrgyzstan, and Pakistan where competition is limited. Shipments have also risen to the world’s top markets European Union, Turkey, and United Arab Emirates.

**China Walnut Exports Continue to Expand**



As the world’s largest walnut producer, China is well-positioned to continue expanding trade to border countries. However, it is less certain whether China continues to expand its market share in the world’s top markets European Union, Turkey, and United Arab Emirates because output is dominated by over 50 local walnut varieties characterized as having dark kernels and bitter taste. With an eye to the future, the China Chamber of Commerce (CNFA) is drafting industry standards to differentiate by grade to improve export quality and solidify its position in these markets.

## Almonds

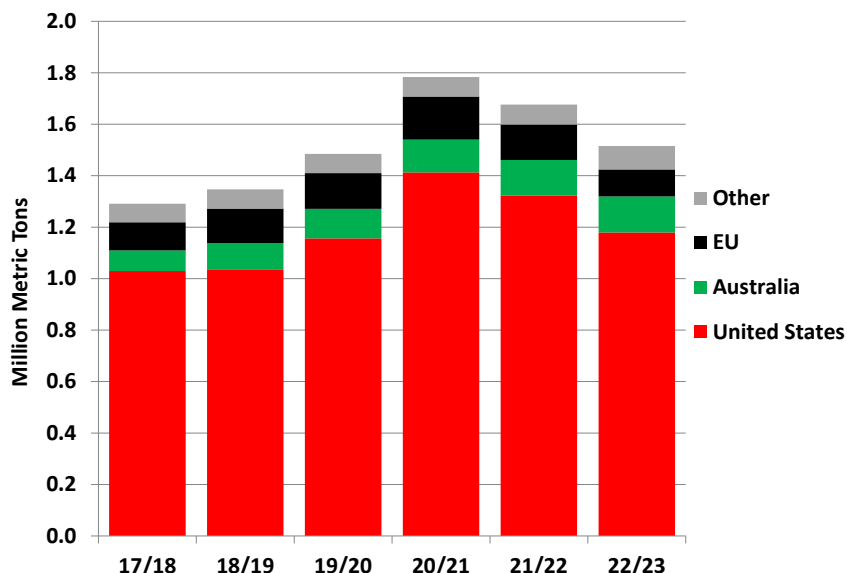
**Global** almond production for 2022/23 is forecast 10 percent lower to 1.5 million metric tons (tons) shelled basis, as losses in the United States and the European Union more than offset gains in other producing countries. Rebounding consumption is expected to draw inventories down nearly one third from last year's record level. Global exports are expected to rise nearly 10 percent to a record 1.1 million tons on strong shipments from the United States and Australia to the European Union and China.

**U.S.** production is forecast down 11 percent to 1.2 million tons as average nut set per tree decreased 12 percent, more than offsetting a 4-percent gain in bearing acres. Although the crop started off with favorable weather for pollination, warm temperatures caused a shorter bloom period than in recent years. Also, some areas were hit by a freeze during the last week of February, with reports that some acres suffered frost damage and were left unharvested because of an inadequate nut set. Water availability became a top concern as drought conditions persisted through the summer. Exports are forecast to rise 9 percent to a record 960,000 tons largely on additional shipments to the European Union and China, drawing U.S. ending inventories down sharply from last year's record.

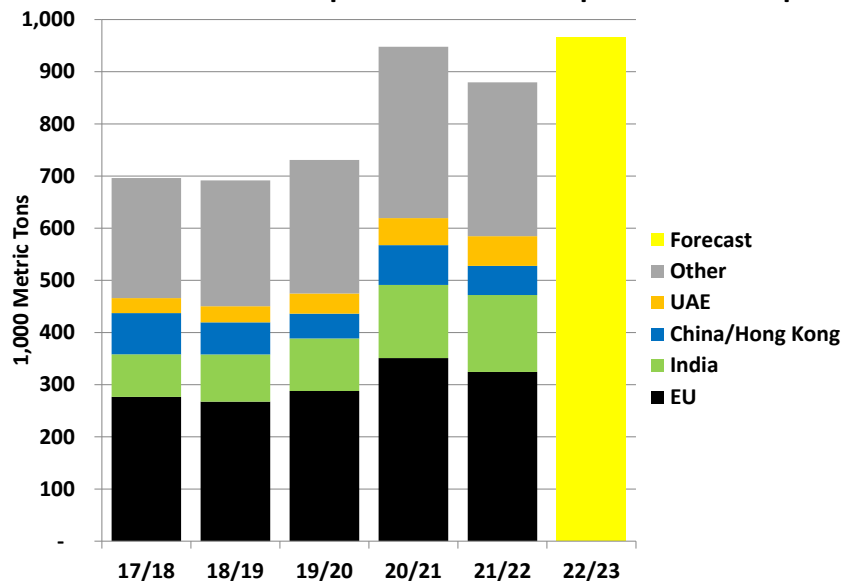
**Australia** production is forecast nearly flat at 140,000 tons on normal growing conditions. With higher total supplies (production plus beginning stocks) as compared to last year, exports are forecast to gain 13 percent to a record 90,000 tons on stronger demand from the European Union and China.

**EU** production is forecast down 24 percent to 105,000 tons mainly due to adverse weather in Spain and Italy, where most of the crop is grown. Despite an expected 6-percent rise in imports to a record 310,000 tons, consumption is forecast down slightly on reduced production. In-shell almonds are mainly

**Global Almond Output Lower on Reduced U.S. and EU Crops**



**Record U.S. Almond Exports Forecast Despite Lower Output**



sold for fresh consumption, while shelled almonds are typically used as a raw material for confectionary and bakery food companies. The food processing and snack industries are the largest buyers of almonds, both as an ingredient (for traditional sweets and pastries) and for processing and re-export. Almonds are mainly used as an ingredient for the manufacturing of marzipan, nougat, and turrón. Shifting eating habits are also affecting the demand for nuts. The increasing popularity of plant-based diets is also helping to drive demand for nuts, as consumers look for alternative forms of protein to meat and fish.

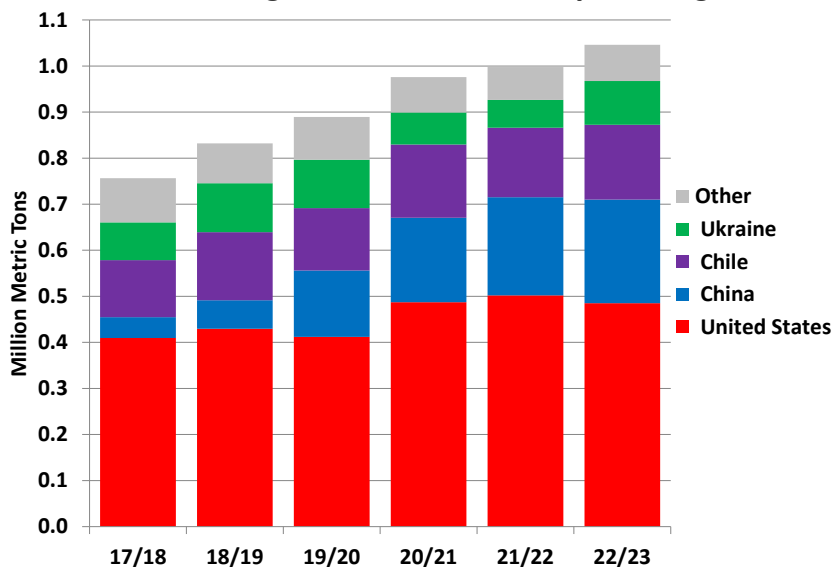
**China** imports are forecast over 15 percent higher to 125,000 tons, driven by rebounding demand from food manufacturers as well as the snack food sector. In March 2020, China’s State Council Tariff Commission (SCTC) launched a tariff exclusion process where importers can apply for tariff exclusions on specific consignments from the United States. If an exclusion application is successfully approved, then the Section 301 tariffs imposed on U.S. products are exempt for a year from the date of approval. However, almonds are still subject to China’s Section 232 retaliatory tariffs, which stand at 15 percent in addition to Most Favored Nation (MFN) duties.

**India** imports are forecast 7 percent higher to a record 160,000 tons. Typically, demand peaks during the September to January festive season, although food processors are using more almonds in a broader variety of product categories such as snack foods, health foods, beverages, and confectionary products. In addition, there is growing demand for lower-quality almond kernels for use in the cosmetic industry for oil extraction.

## Walnuts

Record **global** walnut production and trade are forecast for 2022/23. Production continues to expand to 2.6 million tons in-shell basis as higher production in China more than offsets lower output in the United States. China and the United States account for nearly 80 percent of total output. World consumption is expected to rise nearly 15 percent on the strength of China’s output. World exports are forecast to rise 5 percent to a record 1.0 million tons on strong shipments from Ukraine. World ending stocks are expected 22 percent lower on a sharp drawdown by Ukraine.

**Ukraine Nudges World Walnut Exports Higher**

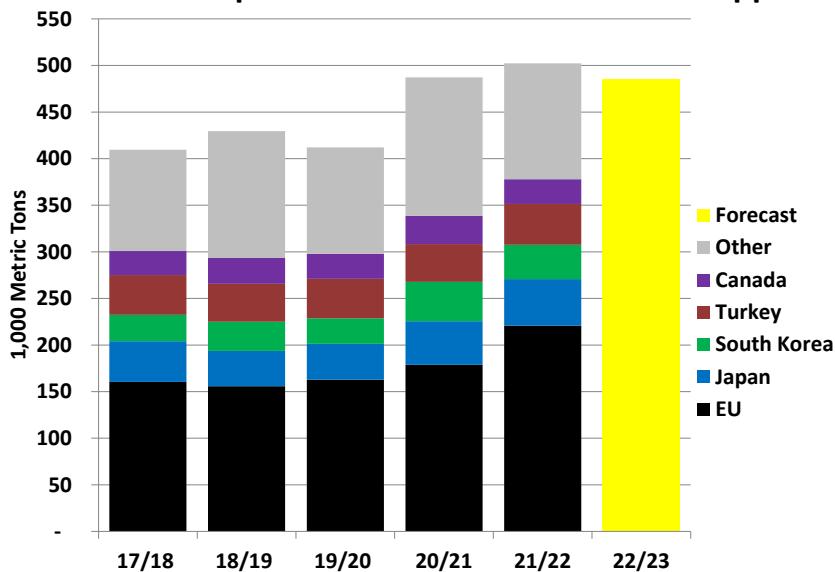


**China** production is forecast up 27 percent to a record 1.4 million tons on favorable growing conditions following last year’s weather-related shortfalls in top producing regions. Exports are expected to reach a record 225,000 tons on rising shipments to top markets Kazakhstan, United Arab Emirates, and Turkey. Imports are expected to remain modest at just 20,000 tons as consumers continue to rely on domestic output. Importers can apply for exclusion from the Section 301 tariffs applied to shipments from the

United States. However, walnuts are still subject to China’s Section 232 retaliatory tariffs, which stand at 15 percent in addition to MFN duties.

**U.S.** production is forecast just 1 percent lower to 653,000 MT as lower yields more than offset greater area. California benefitted from heavy rain and significant snowpack in late 2021, though the state has since experienced hot and dry conditions. As a result, water allocations were significantly reduced in many areas. During the last 2 weeks of February, the Sacramento Valley experienced several nights of freezing temperatures and frost damage was observed. Exports account for a substantial portion of output and are forecast 3 percent lower to 485,000 tons on lower shipments to the European Union, Turkey, and United Arab Emirates. With lower available supply, stocks are expected to drop 5 percent to 52,000 tons.

**U.S. Walnut Exports Forecast Down on Lower Supplies**



**Ukraine** production is forecast down 17 percent to 96,000 tons due to a sharp drop in area harvested in certain areas of the Donetsk, Zaporozhe, Luhansk, Mykolaiv, Kharkiv, and Kherson regions following the Russian invasion in February 2022. Exports are expected to jump nearly 60 percent to 95,000 tons as ending stocks are drawn sharply lower after last year’s build up.

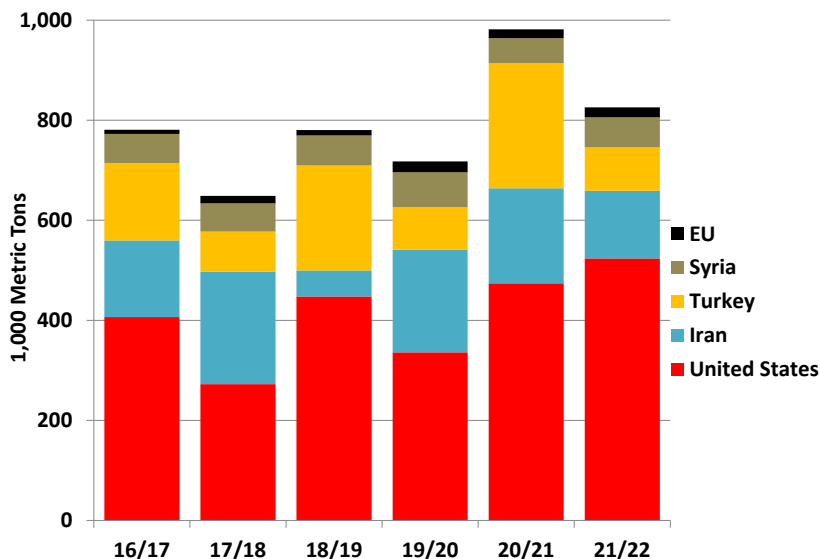
**EU** production is forecast flat at 146,000 tons on normal growing conditions. Imports are expected up 2 percent to a record 325,000 tons on rising demand from both the retail sector (snack foods and cooking ingredients) and industrial sector (pastries).

**Pistachios**

**Global** production for 2021/22 was down 16 percent to 826,000 tons as declines in Iran and Turkey more than offset record U.S. output. As a result of lower available supplies, world consumption and trade declined.

**Iran** production, reported by the Iranian Pistachio Association, dropped 29 percent to 135,000 tons as frost damage in many growing regions lowered yields despite being

**Global Pistachio Output Lower Despite Record U.S. Production**



the on-year of the alternate bearing crop cycle. As a result of the smaller harvest, exports were halved to 115,000 tons.

**U.S.** production gained 11 percent to a record 524,000 tons due to a combination of high yields and increased bearing area. The last time output increased in 2 consecutive years was 2010/11 when high yields also combined with additional acreage. Exports were 40 percent higher to a record 328,000 tons on strong shipments to top markets China and European Union. Despite record shipments, ending stocks continued to climb to a record 180,000 tons.

**Turkey** production plunged 65 percent to 87,000 tons due to low yields from the alternate bearing crop cycle. Lower production had limited effect on trade as almost the entire harvest is consumed domestically.

**China** imports slipped 7 percent to 144,000 tons as shipments leading up to the Lunar New Year were down from previous years. Shanghai and Beijing are key markets for U.S. pistachios, whereas other cities prefer more competitively-priced imports from Iran. With lower output from Iran, shipments from the United States increased. Importers can apply for exclusion from the Section 301 tariffs applied to shipments from the United States. However, pistachios are still subject to China's Section 232 retaliatory tariffs, which stand at 15 percent in addition to MFN duties.

**EU** production was up 2,000 tons to 20,000 on slight gains in Spain and Italy. Imports were nearly unchanged at 120,000 tons as increased shipments from the United States were offset by reduced trade from Iran.

#### **NOTES TO USERS:**

**European Union definition:** includes 27 countries in the customs union (Austria, Belgium/Luxembourg, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden).

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**Almond Summary**  
**Metric Tons, Shelled Basis**

	2017/18	2018/19	2019/20	2020/21	2021/22	Oct 2022/23
<b>Production</b>						
United States	1,029,650	1,034,190	1,161,160	1,412,940	1,322,220	1,179,340
Australia	80,000	104,000	114,400	127,000	139,000	140,000
European Union	109,500	134,200	139,100	168,000	137,500	105,000
China	43,000	43,000	45,000	44,000	42,000	52,000
Turkey	15,000	16,000	15,000	16,500	20,000	22,500
Other	13,500	15,500	14,500	15,200	15,500	16,400
<b>Total</b>	<b>1,290,650</b>	<b>1,346,890</b>	<b>1,489,160</b>	<b>1,783,640</b>	<b>1,676,220</b>	<b>1,515,240</b>
<b>Domestic Consumption</b>						
European Union	354,462	364,100	389,600	442,800	410,200	394,000
United States	366,193	375,664	382,470	403,101	348,577	375,000
China	126,300	148,200	113,800	170,900	148,500	177,000
India	92,100	111,600	112,350	156,780	153,880	168,000
United Arab Emirates	38,200	36,300	40,800	56,200	61,200	65,000
Australia	27,000	33,750	37,000	42,000	46,000	50,000
Japan	36,400	37,800	38,600	38,800	45,800	50,000
Turkey	29,300	28,400	36,000	32,500	39,500	42,500
Korea, South	23,700	25,600	24,700	35,900	31,900	35,000
Canada	29,400	29,600	29,700	31,100	30,500	32,000
Other	151,300	147,200	165,050	196,550	169,900	196,700
<b>Total</b>	<b>1,274,355</b>	<b>1,338,214</b>	<b>1,370,070</b>	<b>1,606,631</b>	<b>1,485,957</b>	<b>1,585,200</b>
<b>Ending Stocks</b>						
United States	162,846	144,387	204,172	275,847	379,998	234,338
Australia	5,250	7,300	16,500	22,200	37,700	40,200
India	36,000	35,000	30,650	37,470	37,090	34,090
European Union	18,000	18,000	18,000	18,000	18,000	18,000
Chile	500	500	450	800	500	500
Other	400	400	300	300	500	500
<b>Total</b>	<b>222,996</b>	<b>205,587</b>	<b>270,072</b>	<b>354,617</b>	<b>473,788</b>	<b>327,628</b>
<b>Exports</b>						
United States	696,200	691,629	730,844	947,970	879,571	960,000
Australia	56,900	71,300	70,700	81,400	80,000	90,000
European Union	31,800	37,000	29,300	22,900	21,100	21,000
Turkey	11,900	10,100	12,100	16,600	17,300	20,000
Chile	7,700	10,200	6,500	7,700	8,000	8,300
Other	0	0	0	0	0	0
<b>Total</b>	<b>804,500</b>	<b>820,229</b>	<b>849,444</b>	<b>1,076,570</b>	<b>1,005,971</b>	<b>1,099,300</b>
<b>Imports</b>						
European Union	276,762	266,900	279,800	297,700	293,800	310,000
India	100,600	106,100	103,500	159,100	149,000	160,000
China	83,300	105,200	68,800	126,900	106,500	125,000
United Arab Emirates	38,200	36,300	40,800	56,200	61,200	65,000
Japan	36,400	37,800	38,600	38,800	45,800	50,000
Turkey	26,100	22,500	33,000	32,600	37,000	40,000
Korea, South	23,700	25,600	24,700	35,900	31,900	35,000
Canada	29,400	29,600	29,700	31,100	30,500	32,000
Morocco	1,700	4,100	11,800	25,300	19,800	23,000
United Kingdom	23,800	22,000	23,500	23,300	18,400	23,000
Kazakhstan	9,200	8,300	9,400	16,700	10,200	15,000
Mexico	11,500	11,400	11,900	14,400	14,500	15,000
Saudi Arabia	9,800	9,700	10,900	12,900	11,400	14,000
Switzerland	11,000	10,300	10,800	10,300	11,100	12,000
United States	14,752	14,644	11,939	9,806	10,079	10,000
Other	86,200	83,700	85,700	93,100	83,700	94,100
<b>Total</b>	<b>782,414</b>	<b>794,144</b>	<b>794,839</b>	<b>984,106</b>	<b>934,879</b>	<b>1,023,100</b>

Marketing year begins in August of the first year of the split year for the United States and other Northern Hemisphere countries. Southern hemisphere countries are on a calendar year basis indicated as the second year of the split year.

**Walnut Summary**  
**Metric Tons, In-shell Basis**

	2017/18	2018/19	2019/20	2020/21	2021/22	Oct 2022/23
<b>Production</b>						
China	1,000,000	850,000	1,000,000	1,100,000	1,100,000	1,400,000
United States	571,527	615,979	594,206	716,676	657,709	653,173
Chile	126,000	150,000	140,400	161,000	153,000	165,000
European Union	121,000	130,000	125,411	139,500	146,000	146,000
Ukraine	108,660	127,190	125,900	113,320	115,400	95,500
Turkey	58,000	63,000	65,000	67,000	68,000	67,000
India	32,500	34,000	35,000	35,000	36,000	34,000
Other	55,300	45,200	50,000	43,200	38,600	43,000
<b>Total</b>	<b>2,072,987</b>	<b>2,015,369</b>	<b>2,135,917</b>	<b>2,375,696</b>	<b>2,314,709</b>	<b>2,603,673</b>
<b>Domestic Consumption</b>						
China	980,000	809,900	884,700	944,100	903,700	1,195,000
European Union	365,818	368,169	392,425	414,700	449,800	454,000
United States	171,700	187,427	187,411	200,814	193,290	175,000
Turkey	129,200	137,900	145,400	138,900	129,400	132,000
United Arab Emirates	28,700	59,100	46,300	61,100	72,400	75,000
India	45,100	44,900	61,800	76,700	66,700	66,000
Japan	46,800	43,400	41,900	46,900	50,800	55,000
Kazakhstan	800	2,000	14,200	45,100	37,100	45,000
Korea, South	28,800	30,800	27,000	40,500	34,600	40,000
Kyrgyzstan	7,600	37,700	56,100	23,500	26,400	30,000
Other	238,249	262,214	242,600	291,400	287,100	297,500
<b>Total</b>	<b>2,042,767</b>	<b>1,983,510</b>	<b>2,099,836</b>	<b>2,283,714</b>	<b>2,251,290</b>	<b>2,564,500</b>
<b>Ending Stocks</b>						
United States	57,493	59,915	57,930	89,087	54,774	51,947
European Union	40,000	40,000	40,000	40,000	40,000	40,000
India	13,600	14,400	14,400	14,000	14,000	14,000
Ukraine	7,000	500	540	11,168	36,118	6,643
Chile	400	300	3,200	3,300	3,100	3,200
Other	3,800	1,800	2,800	1,300	1,300	1,300
<b>Total</b>	<b>122,293</b>	<b>116,915</b>	<b>118,870</b>	<b>158,855</b>	<b>149,292</b>	<b>117,090</b>
<b>Exports</b>						
United States	409,564	429,442	412,067	487,153	502,239	485,000
China	45,200	62,100	144,100	183,500	212,800	225,000
Chile	123,700	147,900	135,400	158,800	151,000	162,500
Ukraine	82,000	106,100	105,000	69,800	60,500	95,000
Turkey	23,200	28,900	32,700	30,400	32,600	35,000
European Union	21,182	21,531	20,286	17,600	16,200	17,000
Moldova	37,200	26,300	29,800	18,200	11,300	15,000
Other	14,500	9,900	10,000	10,500	11,200	11,400
<b>Total</b>	<b>756,546</b>	<b>832,173</b>	<b>889,353</b>	<b>975,953</b>	<b>997,839</b>	<b>1,045,900</b>
<b>Imports</b>						
European Union	266,000	259,700	287,300	292,800	320,000	325,000
Turkey	91,400	101,800	114,100	100,800	94,000	100,000
United Arab Emirates	28,700	59,100	46,300	61,100	72,400	75,000
Japan	46,800	43,400	41,900	46,900	50,800	55,000
Kazakhstan	800	2,000	14,200	45,100	37,100	45,000
Korea, South	28,800	30,800	27,000	40,500	34,600	40,000
India	16,100	15,900	29,800	44,200	35,200	36,000
Canada	27,200	28,900	28,800	31,300	27,700	30,000
Kyrgyzstan	7,600	37,700	56,100	23,500	26,400	30,000
Iraq	15,400	24,600	21,900	18,700	23,600	25,000
United Kingdom	23,200	25,500	25,400	26,100	25,400	25,000
Israel	11,200	18,000	10,400	16,900	20,300	23,000
China	25,200	22,000	28,800	27,600	16,500	20,000
Russia	6,700	11,500	16,300	21,100	20,400	20,000
Mexico	9,700	10,500	9,900	10,100	17,300	18,000
Other	112,675	103,536	97,027	117,256	103,157	107,525
<b>Total</b>	<b>717,475</b>	<b>794,936</b>	<b>855,227</b>	<b>923,956</b>	<b>924,857</b>	<b>974,525</b>

Marketing year begins in September of the first year of the split year for the United States and other Northern Hemisphere countries. Southern hemisphere countries are on a calendar year basis indicated as the second year of the split year.

**Pistachio Summary**  
**Metric Tons, In-shell Basis**

	2017/18	2018/19	2019/20	2020/21	Feb 2021/22	Oct 2021/22
<b>Production</b>						
United States	272,292	447,696	336,112	474,004	523,227	523,899
Iran	225,000	52,000	205,000	190,000	135,000	135,000
Turkey	80,000	210,000	85,000	250,000	87,000	87,000
Syria	56,500	60,000	70,000	50,000	60,000	60,000
European Union	15,000	10,610	21,600	17,667	23,330	19,700
Other	0	0	0	0	0	0
<b>Total</b>	<b>648,792</b>	<b>780,306</b>	<b>717,712</b>	<b>981,671</b>	<b>828,557</b>	<b>825,599</b>
<b>Domestic Consumption</b>						
United States	127,238	157,869	144,256	179,735	209,554	146,819
China	111,400	104,800	98,400	155,000	140,000	143,600
European Union	100,500	108,110	119,200	135,467	154,330	136,600
Turkey	93,800	176,800	105,300	170,000	135,000	127,500
Syria	55,300	56,500	65,400	42,600	53,000	56,300
India	20,500	23,700	20,900	36,700	30,000	26,600
Egypt	100	400	3,200	27,200	15,000	22,500
United Arab Emirates	18,300	15,800	21,200	18,800	13,000	21,000
Iran	37,800	9,100	18,184	11,016	5,000	17,500
Russia	4,900	6,000	8,900	11,700	12,000	11,600
Other	91,800	73,300	81,400	94,400	83,000	71,000
<b>Total</b>	<b>661,638</b>	<b>732,379</b>	<b>686,340</b>	<b>882,618</b>	<b>849,884</b>	<b>781,019</b>
<b>Ending Stocks</b>						
United States	47,456	59,926	65,349	128,827	155,000	180,451
Turkey	500	22,500	500	68,100	15,100	15,100
Iran	35,000	22,000	55,016	1,000	5,516	3,000
European Union	1,500	1,500	1,900	1,500	1,500	1,500
Afghanistan	0	0	0	0	0	0
Other	0	0	0	0	0	0
<b>Total</b>	<b>84,456</b>	<b>105,926</b>	<b>122,765</b>	<b>199,427</b>	<b>177,116</b>	<b>200,051</b>
<b>Exports</b>						
United States	214,902	278,810	188,252	234,302	290,000	328,250
Iran	155,200	55,900	153,800	233,000	135,000	115,500
Turkey	19,700	28,200	21,400	32,800	25,000	36,400
Syria	2,300	4,600	5,600	7,900	8,000	4,700
European Union	5,400	3,600	4,100	4,700	4,000	3,100
Other	0	0	0	0	0	0
<b>Total</b>	<b>397,502</b>	<b>371,110</b>	<b>373,152</b>	<b>512,702</b>	<b>462,000</b>	<b>487,950</b>
<b>Imports</b>						
China	111,400	104,800	98,400	155,000	140,000	143,600
European Union	90,900	101,100	102,100	122,100	135,000	120,000
India	20,500	23,700	20,900	36,700	30,000	26,600
Turkey	24,000	17,000	19,700	20,400	20,000	23,900
Egypt	100	400	3,200	27,200	15,000	22,500
United Arab Emirates	18,300	15,800	21,200	18,800	13,000	21,000
Russia	4,900	6,000	8,900	11,700	12,000	11,600
Iraq	10,100	6,700	17,800	18,800	15,000	11,000
Saudi Arabia	10,100	9,800	11,900	15,900	15,000	11,000
United Kingdom	5,500	6,900	4,900	7,000	7,000	7,900
Other	68,997	52,453	49,619	56,711	49,500	44,894
<b>Total</b>	<b>364,797</b>	<b>344,653</b>	<b>358,619</b>	<b>490,311</b>	<b>451,500</b>	<b>443,994</b>

The marketing year begins in September of the first year of the split year.