



# 2020 Industry Report: Mango

December 2020

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*Written by*

**Market Intelligence Team**

# Executive Summary

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## Consumption

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- The consumption of mangoes has been increasing substantially due to health awareness movements. The major importers are the US and EU and their per capita consumption have increased from 1 kg to 1.5 kg (50% increase) and from 0.4 kg to 0.8 kg (100% increase) respectively between 2009 to 2018. Pandemic times have also contributed to the increase in the intake of fresh fruits as a result of a healthier diet and will to uptake a higher amount of vitamins and minerals.
  - In 2020, fresh and dried Peruvian mangoes to Japan increased by 60.9% within the first four months of the year. According to APEM, this market will keep growing while the Kent variety gets more known among Japanese consumers. Another market recently opened last year was the South Korean market, where Peruvian mangoes entered the market with a 30% discount to promote high-quality Peruvian Kent mangoes.
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## Production & Exports

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- The global exports of mangoes, guava, and mangosteen have been increasing at a yearly pace of 3~4% up to 2018. However, the growth in 2019 was 23% in this category, with a growth of 2 million MT. This is especially due to Thailand's exports on mangosteen to China which has increased by 90%. With this move, Thailand overthrown Mexico in the first position in the exports of the 3 products-combined HS code category. But if considered only the mangoes exports, Mexico is still the first.
  - India and Thailand witnessed a lower domestic and export demand along with plummeting prices. On the other hand, Mexico's mango export volume increased by 15% compared to the number recorded in 2020. Mexico also struggled with a lack of adequate monsoon, which reduced the quality and size of the mango, which was not fit for exports.
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## Imports

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- The main importers of mango continue to be the USA, EU and China, with the main varieties being Tommy Atkins, Ataulfo and Kent produced mainly in Mexico, Brazil and Peru. Mexico have just finished their season. Brazil, Peru, Ecuador season is on season at the moment, but Peruvian volumes are expected to be about 15% lower than last season and might push prices up.

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## Part I

# Product Information (HS: 080450)

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- 1.1 Varieties
- 1.2 Grade classification under UNECE parameters
- 1.3 Quality Aspects
- 1.4 Supply Chain

# Product Information (HS: 080450)

Mangoes are originally from South Asia with countless varieties. They were taken to Americas by 1800s, where it had a rapid growth and with the development of new varieties that had a great yield in the region enabled the exports from these regions to become the largest in recent years. The main world producer is India by far, but the main exporter is Mexico.

## Varities

Mango Varieties and main producing countries	Characteristics
Tommy Atkins Producers of Tommy Atkins: Brazil, Belize, Colombia, Costa Rica, Ecuador, Gambia, Ghana, Guatemala, Israel, Jamaica, Kenya, Mexico, Peru, Puerto Rico, South Africa, St. Lucia, Uganda, Venezuela, Zimbabwe.	A Floridian variety with medium to large fruits (450 to 700 g), ovoid in shape, with a rounded apex. Green-red coloration, numerous large green-yellow lenticels. Firm orange juicy flesh, containing fibres. A productive and fairly hardy variety. Medium taste quality. Highly widespread in Latin America.
Kent Producers: Costa Rica, Brazil, Ivory Coast, Ecuador, Egypt, Gambia, Ghana, Guatemala, Israel, Jamaica, Mexico, Morocco, Puerto Rico, South Africa, Venezuela.	A Floridian variety with large fruits (up to 800 g), round in shape. Green-red coloration, sometimes with yellow-orange areas, which varies considerably between production zones. Firm yellow-orange flesh. Thick, tough skin. A productive and hardy variety. Good taste quality. Kent has gradually become the benchmark. A mid-season variety, it is produced in most Latin American and African exporter countries.
Keitt Producers: Colombia, Costa Rica, Brazil, Ivory Coast, Dominican Republic, Egypt, Ghana, Guatemala, Israel, Kenya, Mexico, Morocco, Peru, South Africa, Uganda, Venezuela, Zimbabwe.	A Floridian variety with medium to large fruits (500-700 g), oblong in shape. Green yellow-pink coloration, with a pastel tinge. Numerous small yellow lenticels. Firm, juicy orange flesh, with thin unobtrusive fibres. Good taste quality. A productive end-of-season variety. Widespread in Latin America and Africa. It often tops up the export campaigns after Kent.

Mango Varieties and main producing countries	Characteristics
<p>Palmer</p> <p>Producers: Brazil, Spain</p>	<p>Medium to large fruits (450-700 g), elongated and oblong in shape, with a slight apical lip. Red to purple coloration. Thick, tough skin. Yellow to yellow-orange flesh, firm. Satisfactory taste quality. Fairly productive late mid-season variety.</p>
<p>Amelie</p> <p>Producers: Brazil, Israel, Morocco, Burkina Faso, West Africa.</p>	<p>A West Indian variety with medium fruits (300-600 g), round in shape, with a more or less pronounced lip. Green to yellow-orange coloration. Intense orange flesh, free from fibres and tender. Good taste quality. An early and mid-season variety, behind the growth in African exports to Europe. Gradually falling out of favour because of its unappealing, mainly green coloration and its sensitivity to sea-freight.</p>
<p>Ataulfo/Honey</p> <p>Producers: Mexico, Peru, Philippines, Thailand and Ecuador.</p>	<p>The Ataulfo mango is also called the "Honey Mango" or the "Champagne Mango" due to its very sweet refreshing flavor.</p> <p>This is one of the smaller varieties of mango and has an oval shape. The yellow mango flesh is protected by thick yellow skin with hints of green and orange. The flesh is creamy, sweet, and fibreless with a small seed. This makes this kind of mango great for using in salads, smoothies, or eating it just as it is. To tell if this variety of mango is ripe and ready to eat, the yellow skin should be slightly wrinkled and give off a sweet aroma. It is usually available from spring until the middle of summer. Other than consuming them fresh, it can be used in chutneys, sorbets, pancakes, or muffins. They are also a deliciously sweet addition to roasted meat and poultry.</p>
<p>Valencia</p> <p>Producer: Valencia.</p>	<p>A variety with medium to large fruits (400-700 g), elongated in shape. Green-yellow coloration with an orange tinge. Yellow-orange flesh. Good taste quality. Fairly early.</p>

Mango Varieties and main producing countries	Characteristics
<b>Haden</b> Producers: Belize, Colombia, Costa Rica, Brazil, Dominican Republic, Gambia, Ghana, Guatemala, Jamaica, Mexico, Peru, Puerto Rico, St. Lucia, Venezuela.	A Floridian variety with medium fruits (350-550 g), rounded in shape. Yellow and red coloration with lenticels. Not very productive. Yellow-orange flesh, slightly sour. Good taste quality.
<b>Irwin</b> Producers: Colombia, Costa Rica, Guatemala, Puerto Rico, St. Lucia.	A Floridian variety with small fruits (200-350 g), ovoid in shape with slightly flattened cheeks. Yellow-orange to intense red coloration. Good taste quality.
<b>Osteen</b> Producers: Spain, Morocco	A variety with medium to large fruits (400-800 g), elongated in shape. Green to purplish coloration. Yellow-orange flesh. Productive. Good taste quality.
<b>Maya/Aya</b>	An Israeli variety with small fruits (200-350 g), oblong in shape. Green to intense yellow coloration. Yellow-orange flesh. Good taste quality.
<b>Kasturi/Omer</b>	An Israeli variety with medium fruits (300-600 g), rounded in shape. Green-yellow to bright red coloration. Yellow-orange flesh.
<b>Alphonso, Chausa, Totapuri</b> Main producers: Costa Rica, India, Iran, Mexico.	Indian varieties with small to medium fruits (200-500 g), elongated in shape, with a more or less pronounced lip. Green to more or less intense yellow coloration. Highly aromatic orange flesh. These varieties are aimed at the fresh market, but are also widely used in processing.
<b>Green Mango</b> Producer: Thailand, Vietnam	One of the main varieties produced in Thailand "This green-skinned mango is characterized by its ability to be eaten before it is ripe and resistant to diseases and insects. The time from flowering to ripening is about 105-110 days. The shape of fruit is oval and long, the head is a little thick, and the average weight is about 350 grams. The flesh of immature fruit is white and delicate, while that of mature fruit is yellow, sweet and delicious"

Mango Varieties and main producing countries	Characteristics
<p>Doran Mei Producer: Thailand</p>	<p>Doran Mei: one of the main varieties produced in Thailand “Dolan mei mango. Doramay mango is one of the most popular mango varieties in Thailand. This mango needs to be perfectly ripe for consumption. This species can be grown all year round. It is also the main type of mango exported from Thailand. For its own good . Many, not only has the meat quality series and tender, fruit itself has a high degree of sweetness and juicy, but also a full range of nutrients and vitamins, so no doubt in the export market by a large number of foreign consumers love and welcome. The fruit is round and long, with a short tail and thin skin. The average weight of each dolamey mango is about 400g. In addition, the Thai people also created a very famous dessert is “mango glutinous rice” and then the dessert is the use of dolan mei mango with glutinous rice, add the coconut milk, resulting in a good taste and taste, sweetness is not high and not greasy, really well received.”</p>
<p>Hundred of flowers Producer: Thailand</p>	<p>Mangoes with hundreds of flowers. This kind of mango has a large fruit yield. Before Thai people are to use mango of 100 flowers to go up with glutinous rice to go up to eat together, but what edible dolan mei mango now is in the majority. The mango is rectangular in shape and small in size. This mango has pale green skin color and yellowish flesh. When ripe, its taste is sweet and mild, containing a lot of fiber. The average mango weighs about 250 grams. The mango is delicious when fully ripe and sells for a high price in the market.</p>

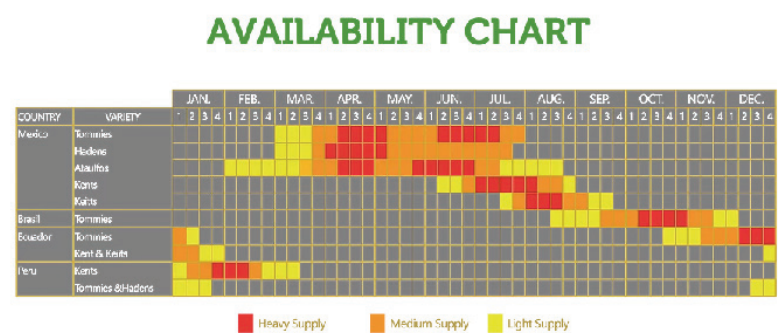


Mango Varieties and main producing countries	Characteristics
Red mango Producer: Thailand	This is a light mango variety, which has strong resistance to the surrounding environment, diseases and insects. It blooms all year round and produces a high yield. The time from blossom to harvest is about 93 days. This kind of mango tastes sour and cannot be eaten alone. It needs to be served with dishes. The overall shape of the fruit is round, with a large head and a small pointed tail. The average weight of each fruit is about 300g.
French mango Producer: Thailand	This mango is a green-skinned mango, which bears a lot of fruits, which are round in shape, with dark green skin and rough skin, white inner flesh, and very delicate.
Mahakano Producer: Thailand	The mango likes a cool climate to enhance its red colour on the skin, and the fruit is oblong in shape with curved and tapering tips. The skin is thick, bright yellow, sometimes pink, the flesh is yellow, juicy and fibrous, with a strong aromatic aroma when ripe, the weight of the fruit is about 350 grams to 400 grams. It is one of the most widely used varieties of processed mangoes. Thailand not only exports fresh mangoes, but also processes and exports mangoes according to factory specifications.
The four season mountain Producer: Thailand	The four seasons mountain. This variety of mango is very popular in Thailand. It grows all year round. So Thai farmers like the mango. Because it produces fruit all year round, bringing income to farmers. It takes about 110 days from flowering to harvest, and its fruit is oval and long. When ripe, it has a light green rind and a light taste. When ripe, the rind is golden or yellow in color, firm and fibrous, sweet or sour, with a pleasant aroma. The average weight of the fruit is between 300g and 400g. And it's also a processed mango.

Mango Varieties and main producing countries	Characteristics
Black and gold Producer: Thailand	This type of mango is very resistant to pests and diseases. It takes about 100-105 days from flowering to ripening. The mango can be eaten both when it is immature and when it is ripe, and it blooms all year round, making it a productive fruit with an average fruit weight of about 350 grams.

\*\*Harvest of Mango in Thailand: main March to June (but can be year round)

### Availability of varieties in Mexico, Brazil, Ecuador and Peru



## Mangoes currently in season



## Grade classification under UNECE parameters

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### (i) "Extra" Class

**Mangoes in this class must be of superior quality.**

They must be characteristic of the variety. They must be free from defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

### (ii) Class I

**Mangoes in this class must be of good quality.**

They must be characteristic of the variety. The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- a slight defect in shape
- slight skin defects due to rubbing or sunburn and suberized stains due to resin exudation (elongated trails included) not exceeding 3, 4, 5, 6 cm<sup>2</sup> for size groups A, B, C, D respectively
- slight bruising
- scattered rust-coloured lenticels
- a yellowing of green varieties due to exposure to direct sunlight, not exceeding 40 per cent of the surface of the fruit, excluding necrotic stains.

### (iii) Class II

**This class includes mangoes that do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified above.**

The following defects may be allowed, provided the mangoes retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape FFV-45: Mangoes – 2017 Date of issue: 8 June 2018 5
- skin defects due to rubbing or sunburn and suberized stains due to resin exudation (elongated trails included) not exceeding 5, 6, 7, 8 cm<sup>2</sup> for size groups A, B, C, D respectively
- bruising
- scattered rust-coloured lenticels
- a yellowing of green varieties due to exposure to direct sunlight, not exceeding 40 per cent of the surface of the fruit, excluding necrotic stains.

## Quality Aspects of fresh Mango under Standard For Mangoes (Codex Stan 184-1993)

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### Minimum requirements:

- whole, firm, fresh in appearance, free of marked bruising;
  - sound, produce affected by rotting or deterioration such as to make it unfit for consumption is excluded, practically free of damage caused by pests;
  - clean, practically free of any visible foreign matter, free of black necrotic stains or trails;
  - free of abnormal external moisture, excluding condensation following removal from cold storage;
  - free of any foreign smell and/or taste, free of damage caused by low temperatures;
  - sufficiently developed and display satisfactory ripeness. When a peduncle is present, it shall be no longer than 1.0 cm.
  - The development and condition of the mangoes must be such as to enable them:
  - to ensure a continuation of the maturation process until they reach the appropriate degree of maturity corresponding to the varietal characteristics;
  - to withstand transport and handling; and
  - to arrive in satisfactory condition at the place of destination. In relation to the evolution of maturing, the colour may vary according to variety.
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## Supply Chain

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The harvesting of the mangoes are usually done manually to avoid fruit damage. The harvested fruits are transported to the packing house, where they are sorted by ripeness, washed, have the peduncle removed, then they are selected and receive the correct treatment necessary as per the standards of the export destination country. Examples of treatments would be: the fungal control which mandatory for Europe and Canada with hydrothermal treatment by submerging the fruits in 52°C water for 5 minutes to avoid rot; and treatment for fruit flies control where it is mandatory to do hydrothermal treatment by submerging the fruits in 46.1°C for 75 minutes for fruits under 425g or for 90 minutes for fruits over 425g, and the fruit pulp shall be no less than 21°C at the beginning of the process. Soon after the fruits shall be submerged into 21°C water for cooling. After this process, fruits shall be kept in a clean and protected zone to avoid entrance of bugs and fruit flies by screen protection of 25

mesh (treatment under United States Department of Agriculture - USDA) and it is mandatory for exports to USA, Japan and Chile.

The mangoes for exports are then packed into carton boxes, usually around 4kg (depends on destination country preference), and palletized. The mangoes get precooled in tunnels of forced air for 4 to 6 hours to reduce their temperature to drop to 10°C, and the humidity shall be maintained at 85-95% to avoid dehydration. In case the fruits need to be stored before shipping, they shall maintain the humidity levels and temperature.

### Supply chain of mangoes

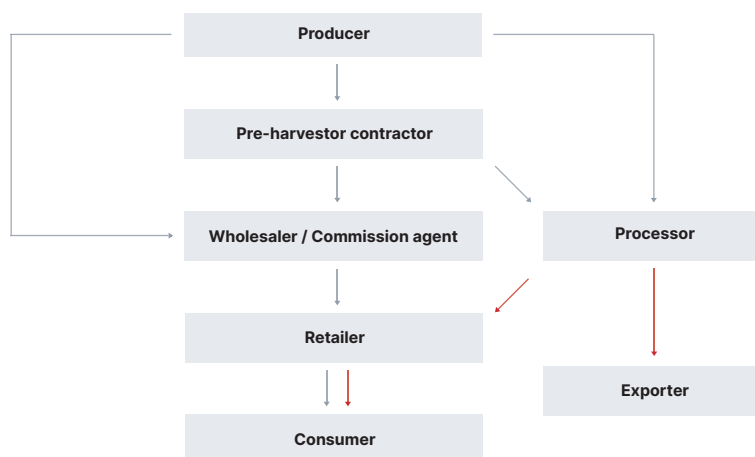


Chart 3. Source: Mysore et al, 2007.

## Part II

# Global Market Dynamics

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2.1 Production, exports and imports

2.2 Recent Developments

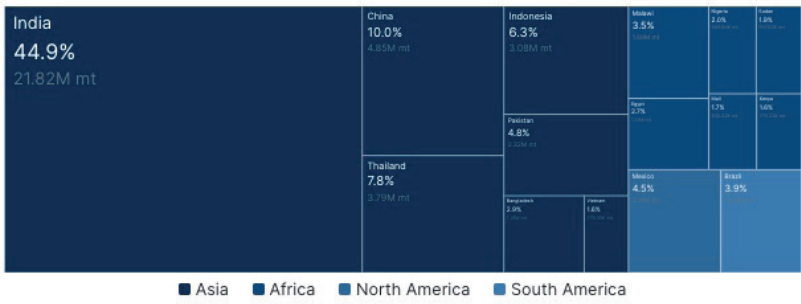
2.3 Prices

# Global Market Dynamics

## Production, exports and imports

Chart 4. Source: Tridge

Top world producers of Mango



List of exporters for Mango, mangoesteen and guava in 2019.

Exporters	Exported value in 2015	Exported value in 2016	Exported value in 2017	Exported value in 2018	Exported value in 2019
World	2153904	2414862	2936807	3059954	1,934,065
Thailand	171622	165822	275809	313321	813,992
Mexico	329743	397735	462432	440964	477,461
Netherlands	222797	291344	314138	348714	129,607
Viet Nam	75215	127480	351109	333495	85,955
Peru	194169	197740	191772	246731	59,690
Brazil	184934	180331	205456	177709	51,834
India	183567	202540	182216	160065	39,148
Pakistan	40901	65835	46398	73888	28,710
Spain	64331	70242	86773	112225	19,441
Ghana	13696	2223	59326	68149	17,008
China	34876	56649	70054	43439	16,900
Philippines	91011	66865	67924	60522	15,820

Table 2. Source: TradeMap

List of Importers for Mango, mangoesteen and guava in 2019.

Importers	Imported value in 2015	Imported value in 2016	Imported value in 2017	Imported value in 2018	Imported value in 2019
World	2489445	2578125	2916885	3240229	3759690
China	260190	168818	166745	370644	822329
United States of America	544149	583376	655950	637294	658241
Netherlands	234960	249411	240217	287595	334523
Germany	173674	176579	202296	227083	196124
Viet Nam	69231	97220	235217	188301	181818
United Kingdom	163656	170770	170851	179548	175222
France	101585	127753	133267	145828	152168
Canada	87302	87424	106415	101851	118391
Spain	65727	71861	82763	100586	110054
Hong Kong, China	66774	56165	58097	49207	87177
United Arab Emirates	95158	106209	98370	87266	86503
Korea, Republic of	55563	48263	53891	68827	72355
Russian Federation	9345	11718	24261	50815	70326
Portugal	43273	50208	57352	70329	65005
Belgium	47339	50757	54497	57803	56837
Saudi Arabia	56566	52675	59828	42106	47818
Switzerland	41148	43589	47081	46416	45811

Table 3. Source: TradeMap

The main producers of mangoes are India, China, Thailand, Indonesia and Pakistan. However, they are not the world leaders in exports globally. The main exporters of mango are Mexico, Netherlands, Vietnam, Peru and Brazil. Although Netherlands comes as 3rd in world exports of mangoes, they are actually a great importer and a re-exporter inside the EU, and the main sources are Mexico, Brazil and Peru. China is a great producer, but it is mainly for domestic consumption and they are second in imports to complement their demand. India is the world leader in Mango productions, however, their exports do not follow the same rank, this is due to the strict sanitary and phytosanitary standards set by importing countries that Indian producers have been failing to



comply with. The main importers of mango are: USA, Netherlands, China, Germany and the United Kingdom (Vietnam appears in the top rank, but it reflects the import of mangosteen which is later exported to China).

## Exports

### Thailand

About fresh mango exports in 2019, it accumulated to USD 59 Million, thus making Thailand the 8th largest exporter of this fruit. The main destinations were South Korea (56%), Japan (12%), China (9.3%), Malaysia (7.8%), Vietnam (3.4%) and Laos (3.2%). Although Thailand can produce mangoes during the whole year, the main season for exports is during their high season which is between March to June. The statistics of exports up to September 2020 of mango show that there was a slight increase in the overall exports by USD 1.5 Million (2.9%) compared to the same period in 2019 according to the Ministry of Commerce of Thailand. The ranks of the main importers have changed as a pandemic effect: South Korea (35%), Malaysia (26%), China (11.5%), Japan (7.3%) and Vietnam (7%).

Challenges: The pandemic of COVID-19 has affected the exports of Thai fresh mangoes due to reduction of flights. Cambodia as a new competitor was granted final approval to enter the South Korean market, which is Thailand's main market, and they have started shipment since November, 2019.

Nam Dok Mai is one of the most popular mango varieties in Thailand, both for domestic consumption and export. This variety has a sweet taste and golden color and is often referred to as "Barracuda Mangoes." Ever since the pandemic hit Thailand, mango sales have plummeted due to decreased demand in the global and domestic market. The harvest season of Nam Dok Mai is complete by the end of April, which has increased the availability resulting in an oversupply. In the last six months, mango prices for Nam Dok Mai have plummeted from USD 3.75 per kg in December to USD 0.29 per kg in May as the supply picked up the pace. Since the beginning of the season, the mango industry of Thailand was expected to bear the burden of the pandemic. Only a few export packhouses are buying mangoes from the farmers, forcing them to sell mangoes at low prices in the domestic market and creating a glut.

## Mexico

Mexico is the 6th country on the production of mangoes' rank, however, it is the first in the export of this fruit. The harvest season for mangoes in Mexico starts with Ataulfo variety in February and finishes in late September with the Keitt variety. The Mexican mango season began the first week of January 2021 and is expected to run until the first week of October 2021. However, the mango industry faces a setback due to a lack of irrigation in Sinaloa, one of the main mango-producing regions. The farmers face various challenges due to lack of irrigation and are forced to carry heavy water buckets to the orchards. The lower than average rain has dried up the wells and deprived the mango orchards of water during the main mango growing season. The lack of an adequate amount of irrigation has reduced the quality and size of the mango. The lower quality mango is not fit for exporting and is sold at lower prices in the domestic market.

Despite the setback in one region, Mexico's mango exports remained competitive to the numbers recorded in 2020. The country exported approximately 2,885,060 boxes by the end of week 17 for a total of 22,232,365 boxes for the season. The average mango boxes shipped by the end of week 17, 2021, was 15% more than the number recorded in 2020. It is expected by the end of the season, the mango exports will be 11% more than the number registered in the previous year.

**Challenges:** Mexico is a great producer of mango, but also a great consumer of this fruit, in 2016 the domestic consumption represented approximately 80% of the national production, leaving about 20% for exports. According to Sagarpa, the strategy of the segment to gain more market share and to keep the pace with the yearly global consumption increase is to focus on production expansion. The segment calculates that the production of Mango can have an 42.69% increase in total by 2030 and reach 2.69 million tons in total productions and be able to offer 0.89 million tons for the international market. Another important strategy to be taken by the Mexican government is strengthening international trade by negotiating on reduction of tariffs to Japan, UK, Vietnam and South Korea.

Tariffs applied to Mexican Mangoes

TABLA 1. RÉGIMEN ARANCELARIO APLICADO A MÉXICO DE LOS MERCADOS META DE MANGO*			
País	Tratado / Acuerdo**	Arancel aplicado a México*	Participación en las importaciones mundiales 2016***
Estados Unidos	TLCAN	0%	29.2%
Países Bajos	TLCUEM	0%	10.2%
Vietnam	OMC	25%-NMF 25%	0.9%
Reino Unido	TLCUEM	0%	5.4%
Alemania	TLCUEM	0%	5.5%
China	OMC	15%-NMF 15%	3.1%
Francia	TLCUEM	0%	6.5%
Canadá	TLCAN	0%	3.6%
Arabia Saudita	OMC	0%-NMF 8%	0.8%
Malasia	OMC	13.2%-NMF 5% + 440.90/ton	0.6%

\* Análisis mediante la subpartida 0804.50 del sistema armonizado la cual contempla mangos, guayabas y mangostanes.  
\*\* SIAVI, 2017.  
\*\*\* ITC, 2017.

Chart 5. Source: Sagarpa

International consumption and production of Mexico

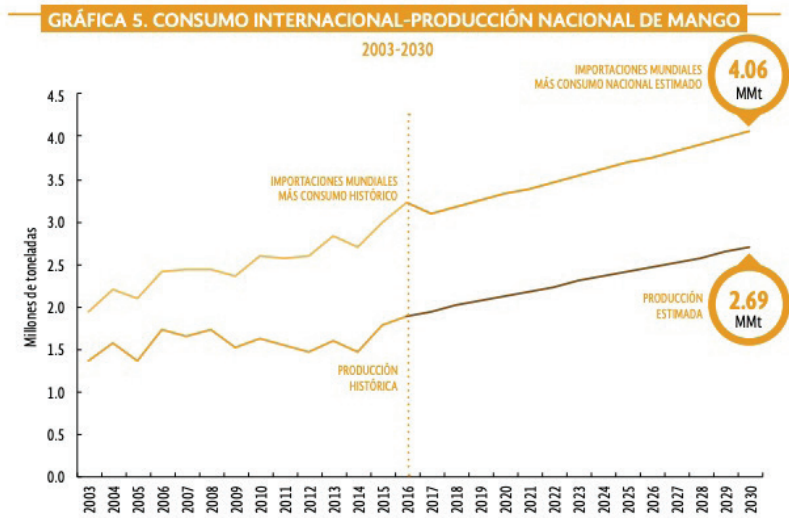


Chart 6. Source: FreshFruit

Fuente: Elaboración propia con datos del SIAP y el SIAVI, 2017.

## Peru

Peruvian mangoes exports are mainly of the Kent variety and of Ataulfo. The main importers from Peruvian mangoes in 2019 were the Netherlands (37%), USA (23%), Spain (9%), South Korea (7%) and UK (6%) in value. In comparison with 2018 and 2019 volumes, South Korea has nearly doubled the imports of mangoes from Peru, and the reason behind is that more packing houses received approval from South Korea since Peru was first allowed to export to them in 2015.

### Peru's 2021 Campaign

The Peruvian mango campaign was marked by a slow start to this season due to dry weather during the early stages of the harvesting period in Piura. Mango production has been hit by La Niña and suffered from severe droughts, affecting production yield and quality, and fruit sizes, which directly impacted export volumes and prices. According to the Peruvian Association of Mango Producers and Exporters (APEM), exports for the 2021 campaign have dropped by about 21% from the previous 2020 campaign, where fresh mango shipments reached USD 271 million, a growth of 11.5% compared to the same period in 2019.

The production issue had a direct impact on sizes and thus the export prices. As a result, Mango prices in Peru went from USD 0.7 per kg in April 2020 to USD 1.46 per kg in April 2021. According to Manuel Diaz Chavez, a mango expert in Peru, the harvest for the new campaign late this year shouldn't present any damage or delays. He has mentioned Tridge, "Production level for next year is expected to be normal as there no weather issues forecasted. Therefore, the price is expected to be lower than last year and should go back to 2019 price levels as there won't be any sizing impacts."

Mango exports for next season are expected to recover in volume. APEM has an early projection to ship around 250,000 tons for the next season, representing an increase of about 12% of this year's season. With high-quality Kent variety representing 90% of Peruvian mango shipments abroad, Peru will likely recover its share in the European and US markets. However, despite the high quality of the production of this national fruit, the Peruvian mango distribution chain still faces problems for its export.

### Challenges

The main destinations for Peruvian mangoes are the European Union, with 60% of the total, and the US, with 35%; while the remaining 5%

is distributed among relatively new markets such as Chile, China, and Japan, with which Peru has trade agreements with. The Peruvian mango sector is clearly committed to commercial diversification, which is why it has its sights set on the Asian market, although these markets present more significant logistic challenges. In order to face these challenges, Peru will have to have much better coordination among all the players in the supply chain that participate in the mango export sector.

### **Brazil**

Brazil has exported a total of 153 thousand tons of mangoes in 2019, with the main buyer being Netherlands (41.8%), US (19.7%), Spain (16.5%), Portugal (5.5%) and Canada (3.6%). Brazilian mango export had a poor performance in the first semester of 2020, which was 21% lower than the same period of 2019 specially due to restrictions in airshipping and the preference to other fruits such as citrus during the pandemic. However, the second semester has started very strong with the first 2 months showing an increase of 53% compared to the same period in 2019. This is due to Ivory Coast and Senegal season being shorter than usual, given Brazil an entrance to supply earlier for this demand.

Brazil exported 15.3 thousand tons of mangoes between January and February 2021, which is about 5% more than the volume recorded during the same period in 2020. According to Francielle Rozzatti, Engagement Manager at Tridge Brazilian mango market, has high expectations from this season as Côte d'Ivoire experiences shipping issues, which supplies mango to the European market between April and June. Many contracts were canceled last year in Europe to import from Côte d'Ivoire, which have not been renewed this season. It is expected that the Brazilian mango may have greater penetration in the European market for the upcoming season.

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## Imports

### Applicable tariffs to main exporters

TABLA 3. MATRIZ DE ARANCELES 0804.50 Y TRATADOS QUE RIGEN LA RELACIÓN COMERCIAL (% APLICADO)								
SUBPARTIDA 0804.50	México	Brasil	Costa de marfil	Países Bajos	Perú	Filipinas	España	Tailandia
Estados Unidos	0.0 (TLCAN)	0.0	0.0	3.0	0.0	0.1	3.0	0.0
Reino Unido	0.0 (TLCUEM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alemania	0.0 (TLCUEM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Francia	0.0 (TLCUEM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Canadá	0.0 (TLCAN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malasia	13.2 (OMC)	13.2	13.2	13.2	13.2	5.0	13.2	5.0
España	0.0 (TLCUEM)	0.0	0.0	0.0	0.0	0.0	-	0.0
Bélgica	0.0 (TLCUEM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Suiza	0.0 (TLC-AELC)	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Corea del Sur	30.0 (OMC)	30.0	30.0	16.0	16.9	30.0	16.0	30.0
Italia	0.0 (TLCUEM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chile	0.0 (TLCCHM-AP)	0.0	6.0	0.0	0.0	6.0	0.0	6.0

Chart 7. Source: Mango.org

## China

China has become the world leader on the imports of this category of products since 2019, which was led previously by the USA. The Chinese growth was from USD 370 Million to USD 822 Million in 2019 and 2020 respectively. This huge growth is mainly because of the huge growth in the mangosteen imports from Thailand which alone accounted for USD 376.8 million.

The main suppliers of guava, mango, mangosteen Fresh or Dried to China mainland in 2018 by weight were Thailand (77%), Myanmar (8.2%), and Indonesia (4%).

China has a gradual increase in domestic production of mangoes in the Hainan area, and even though the tariffs for this category is 15%, the imported mango pressures the domestic mangoes. The Vietnamese mangoes are specially appreciated by consumers and covers the end of the season in Hainan. The Cambodian mangoes which have already entered the South Korean market, have received approval for exports to China this year and conversations with supplies have begun, the first export is to be expected in the coming months.

The pandemic has decreased the imports of fresh fruits by China, specially from Thailand who is their main supplier of fresh fruits, the decreased demand for the Thai mango has resulted in a drop in its price domestically in the first semester.

## USA

The main suppliers of mango to the USA are Mexico (66%), Ecuador, (11%), Peru (10%), Brazil (7%), Guatemala (3%) and Haiti (2%) from the 2018 data. The main varieties are the Tommy Atkins (79%), Ataulfo (14%) and Kent (3%). The usually accepted sizes are: Ataulfo/Honey: Large = size 16 and larger, Small = size 18 and smaller. Round mangos: Extra Large = 7 and larger, Large = sizes 8 and 10, Small = 12 and smaller.

Mexican mangoes have just sent out their last shipment in October as their season has just finished, and now the US market is being supplied by the Brazilian and Ecuadorian mango, soon to be followed by the Peruvian mango. The US market is expected to receive 78.5 million boxes from Mexico, 9,2 million boxes from Brazil and 2.6 million boxes from Ecuador this season. Overall this will represent a 3% decrease from Mexico, 12% increase from Brazil and 14% increase from Ecuador. Peru is facing serious droughts in the production areas and it is expected to have an decrease of almost 20% in the exports to the US alone according to Mango.org. The gap left by the Peruvian mango will be hard to fill and a rise in prices is expected in the coming months.

## Applicable tariffs to main exporters

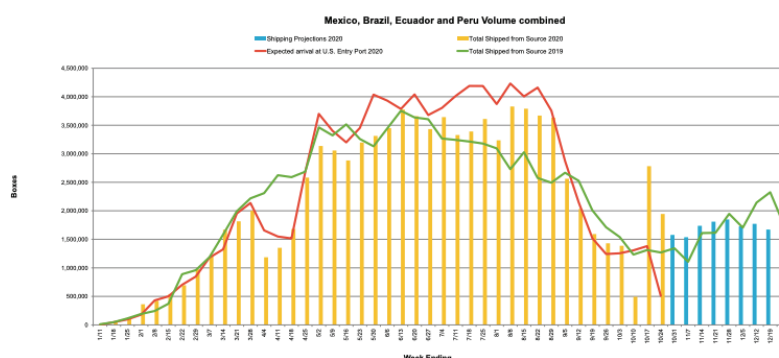


Chart 8. Source: Mango.org

## EU

The Spanish and Mediterranean countries are having smaller volumes than expected and causing a rise in the price. The heat waves and unfavourable weather conditions have affected the outcome of the production of this season of mangoes in the region and might be as low as half of the expected volume. Spain's main varieties are Osteen, Kent, Keitt and Palmer. There is a preference for the Osteen variety that accounts for 50% of the Spanish producers, however, the profitability of late varieties such as Keitt and Palmer is starting to become more interesting to producers.

Netherlands has become the center of re-exporting goods and services inside Europe and became the 6th in merchandise export in the world by 2018. This is no different when it comes to fresh fruits and vegetables, the favourable geographical location of the country, the number of sea ports and airports available with their infrastructure have made Netherlands the center of distribution of Europe. The main suppliers of guava, mango, mangosteen fresh or dried to the Netherlands in 2018 by weight were Peru (37.8%), Brazil (34%), Ivory Coast (3.8%), and Dominican Republic (3.3%). The main importers from the Netherlands are Germany (44%), France (10%), Belgium (6%), Russia (4%), and Switzerland (4%) in value in 2019.

The challenge for Netherlands is the gradual growth in direct imports, but the small amounts each country buys on a regular basis still limits big transactions with competitive prices with the suppliers which leaves Netherlands in a comfortable position for now.

### **Canada**

Canada mainly imported mangoes from Mexico, Taiwan, Dominican Republic, and India during this period. On top of this, Mango imports volume hit the record-high number since 2018 and is mainly led by Mexican mango imports. Mexico alone, represented 68.08% between January and May 2021.

#### **Mexican farmers are concerned about losing their share**

Even though Canada's mango imports have increased during the first five months of 2021, heavy rains that started in July can change the import dynamics in the coming months. The defect ratios of picked mangoes stand at 5% however the acceptable tolerance level for quality defects like hot water damage, skin burns, and black spots should be less than 1% for exporting to countries like Canada. Mexican farmers are concerned about their export opportunities as countries like the U.S and Canada focus on the quality measures of the imported fruit.

As concerns increase regarding the availability of export quality mangoes in Mexico, Canada should start looking for other options. Given the high logistic costs and even higher shipping time, the logical choice would be to source mangoes from relatively neighboring or nearby countries. Countries like Taiwan, India, and Thailand offer juicy and succulent mangoes, but given the current logistic constraints, it might not be cost-effective to import from Asian tropical countries.



## Recent Trends

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According to recent projections by FAO, if recent growing trends follow the expected patterns, the demand for mangoes globally might increase by an accumulated 26% by the year 2030, this increase in the demand is connected to the population awareness on the benefits of fruits consumption, the will for healthy habits, and an overall increase in the population income especially in Asia (India and China). Although India is a leader producer, it is also a big consumer of mangoes, and with an increase in income, the demand will be even greater. The fastest growing market of mango imports between 2013 to 2018 are: in Poland (27%), Republic of Korea (22%), Oman (19%), Russia (17%) and Italy (15%).

The South Korean market has shown a very high increase in the demand for quality exotic fruits, with high marketed prices, which is very interesting for the producing countries. The main suppliers of mango have been Peru (42%) and Thailand (40%) for 2019, Cambodia has entered their market since 2019 and is gaining popularity fast.

The US market will also be affected by the decrease of supply from Peruvian mango in the second semester. The country consumption is expected to rise in 4% which the Mexican mango will not be able to cover, specially because its season has finished at the end of October causing a rise in its price.

In 2020, fresh and dried Peruvian mangoes to Japan increased by 60.9% within the first four months of the year. According to APEM, this market will keep growing while the Kent variety gets more known among Japanese consumers. Another market recently opened last year was the South Korean market, where Peruvian mangoes entered the market with a 30% discount to promote high-quality Peruvian Kent mangoes.

As the mango season in Pakistan has started, Iran has become one of the top importers of Pakistani mango this year. After 2020 saw exports significantly decrease due to pandemic restrictions and air freights stoppages, Pakistani mangoes have started this season with high optimism to recover their international market demand.

# Sources

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CustomNews: Thailand mangosteen, durian, longan re-exported to China through Vietnam

Diazteca

FAO

FreshFruit

Freshplaza

FnBnews: India world's leading mango producer, but exports of Pak mangoes higher

Fruitnet

HFBrazil: Revista Horti Fruti

Mango.org

Mysore, 2007

Opportimes: Las Exportaciones de mango de Mexico crecen 7.1%

Sagarpa: Planeacion Agricola Nacional

Resource Trade:

ITC Trade Map

Trade Report Thailand

UNECE Standard

UN: Mango Value Chain in Mekong River Delta...

Vietnam Plus: Fruit, vegetable exporters need to focus on policy changes

Extra:

Research on competitiveness of export trade and strategy of Thai Mango