



AVOCADO ANALYSIS 2021

PRODUCTION, PRICES AND EXPORTS



Index

- 3** Overview
- 8** Worldwide production
- 17** Foreign market
- 24** Domestic production
- 37** Avocado production in the United States
- 45** Avocado will be the world's best-selling tropical fruit by 2030
- 49** Information sources



Overview

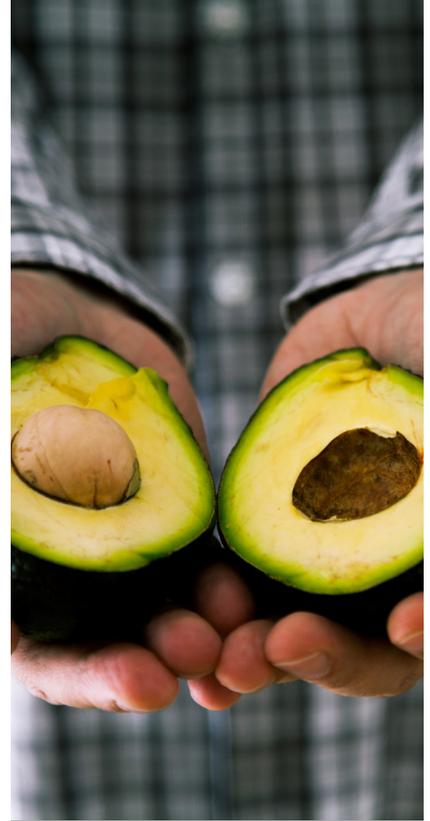
The outlook for avocado production

The avocado boom worldwide is undeniable and production statistics for this crop show the economic importance it is acquiring, both nationally and globally. In fact, avocados are Mexico's second most exported agri-food product, behind only beer, and represent 9.7% of national fruit production.

It should also be considered that national avocado consumption is also increasing, reaching an annual per capita consumption of 8.1 kilograms per person, a situation driven by the large number of typical foods that have avocado as one of their indispensable elements.

According to statistics, in 2019 world avocado production exceeded 7.1 million tons, so the growth trend remains steady, mainly thanks to the fact that the growth rate of the harvested world area follows more or less the same pace, and considering that in the issue of average yields no significant progress is observed in decades.

This aspect is something that attracts a lot of attention, because maintaining world production by increasing the area of this crop is not the best idea for future sustainability, so it is time to focus on increasing yields, something that could happen soon with the implementation of technologies such as drones for more precise applications.



The importance of the avocado in the world is such that 15 countries have already reported a production of over 100,000 tons, and although Mexico is currently the undisputed leader, the truth is that Peru is emerging rapidly, taking advantage of the fact that Chile does not have the conditions to keep up in the competition for a market that, by the way, is becoming more and more demanding.



Another South American country to look at in terms of avocados is Colombia, which is gradually gaining ground.

The great advantage of the avocado is that it is a product that fits in practically all the culinary cultures of the world, not for nothing exports and imports have also presented an upward trend with each passing year; although of course, the largest avocado trade flow in the world occurs between the United States and Mexico, a flow that already represents almost 40% of world avocado trade. Peru is interesting again because it has managed to introduce its product to the Netherlands, from where it is then distributed to other neighboring countries. In addition, Peru is one of the players that wants a larger share of the U.S. market, and with each passing year it is increasing its exports to that country.

And of course, Michoacán continues to lead by a wide margin in avocado production in the country, with Jalisco in second position, although quite far from the figures presented by the Michoacán region, which is made up of several municipalities and is the main avocado producing area worldwide. In fact, such is its leadership in avocado cultivation that the top 10 avocado producers in Mexico are all municipalities in the state of Michoacán.

As far as domestic production is concerned, avocado production in Mexico is in the same scenario as the rest of the world: increasing volume thanks to an increase of surface area, given that yields have also been static for some time and are not expected to increase in the short term.





Despite the fact that national avocado production seems to be well established, the truth is that there are still opportunities for improvement for this crop, one of the main ones being the issue of organic production, which in areas where there is practically a monoculture, organic management becomes very complex, and even more so when there are neighbors that produce conventionally, since the risk of some chemical drift is always latent.

Last but not least, there is the risk of exporting almost all production to a single destination, the United States, which in the first half of 2021 took 80% of national exports, and which, although it is eager to consume Mexican avocados, could also at some point represent a huge risk that must begin to be mitigated by increasing exports to other markets that also want Mexican avocados, such as Japan.

And of course, the fact that Mexico currently dominates the world avocado trade does not mean that this will always be the case, so we must be alert to the production increases that countries such as Peru and Colombia are experiencing. Of course, Mexico will always have the United States as its neighbor, which represents an undeniable advantage and an enormous risk as well, but we should not be confident.

There are many producers who work hard to achieve the necessary quality, get a customer and meet the export requirements, however, we know the typical story of the producer who exports and his customer does not pay him, with the impossibility of acting legally in his country, so producers also need to have a legal and financial structure to protect them.

For this reason, the alliance between **ProducePay** and **Treembo** seeks to connect producers interested in exporting to the USA market with potential clients, financial structures and certifying agencies.

Daily Market Report

If you want to be updated with the prices of avocado in the USA market, subscribe for free to the Daily Market Report offered by **ProducePay**, in which you will also find information on many other agricultural products.



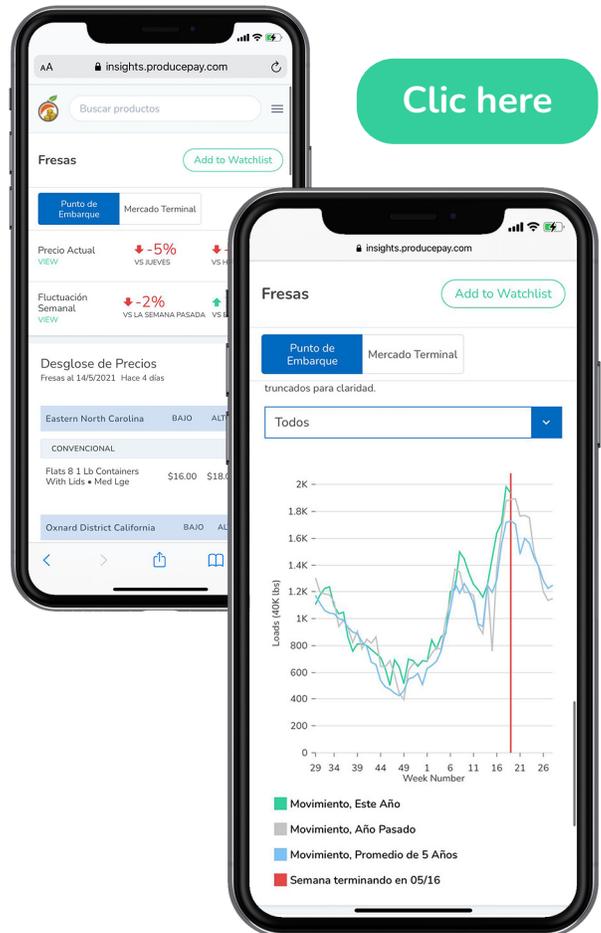
[Clic here](#)



Treembo Fresh

If you are a avocado producer, remember that in **Treembo** you can place your crop on our agrifood map, so you can find technical advisors, input suppliers, potential buyers, news and more.

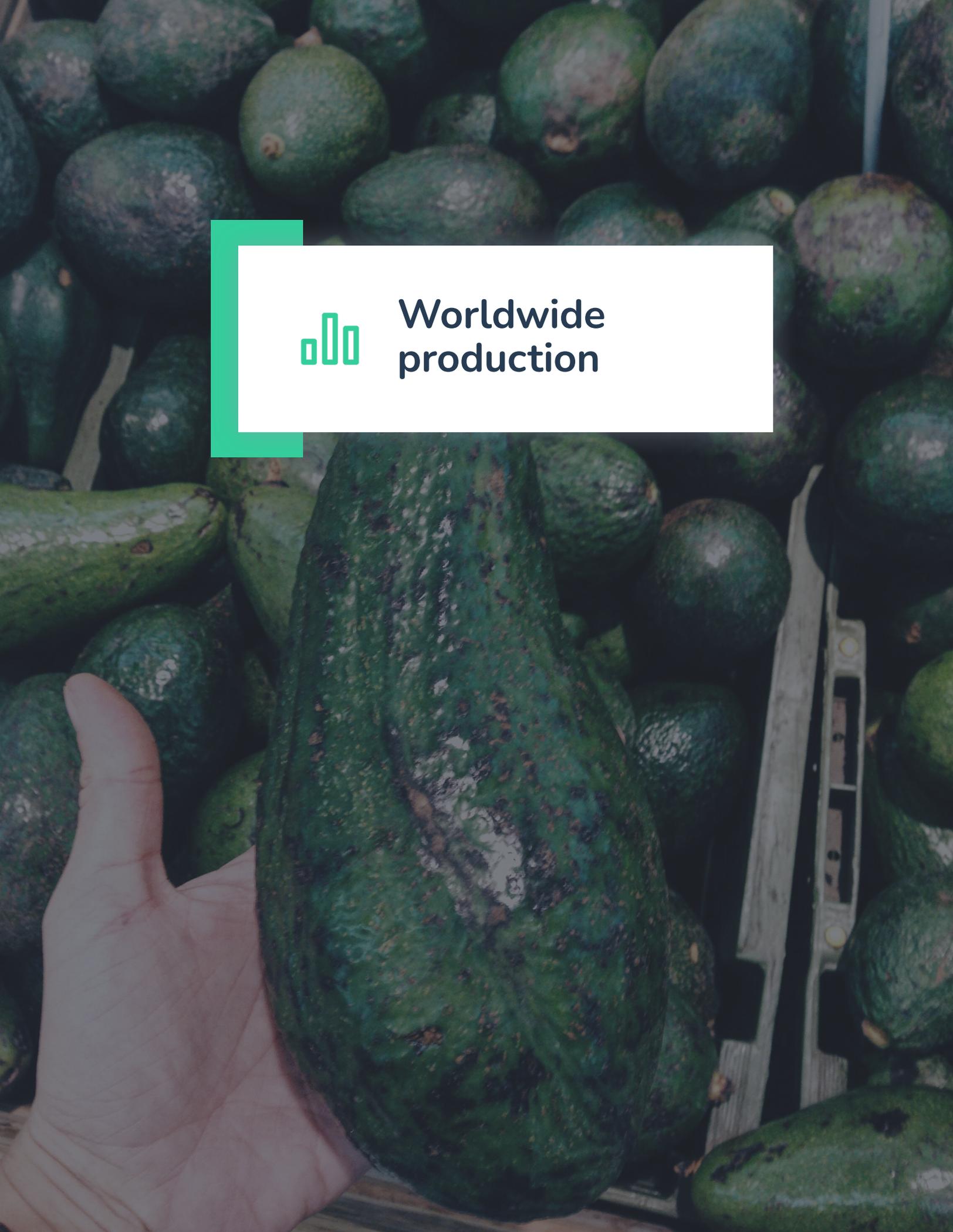
Register for free.



[Clic here](#)



Worldwide production



| World production overview



In 2019, world avocado production was 7,179,689 tons,

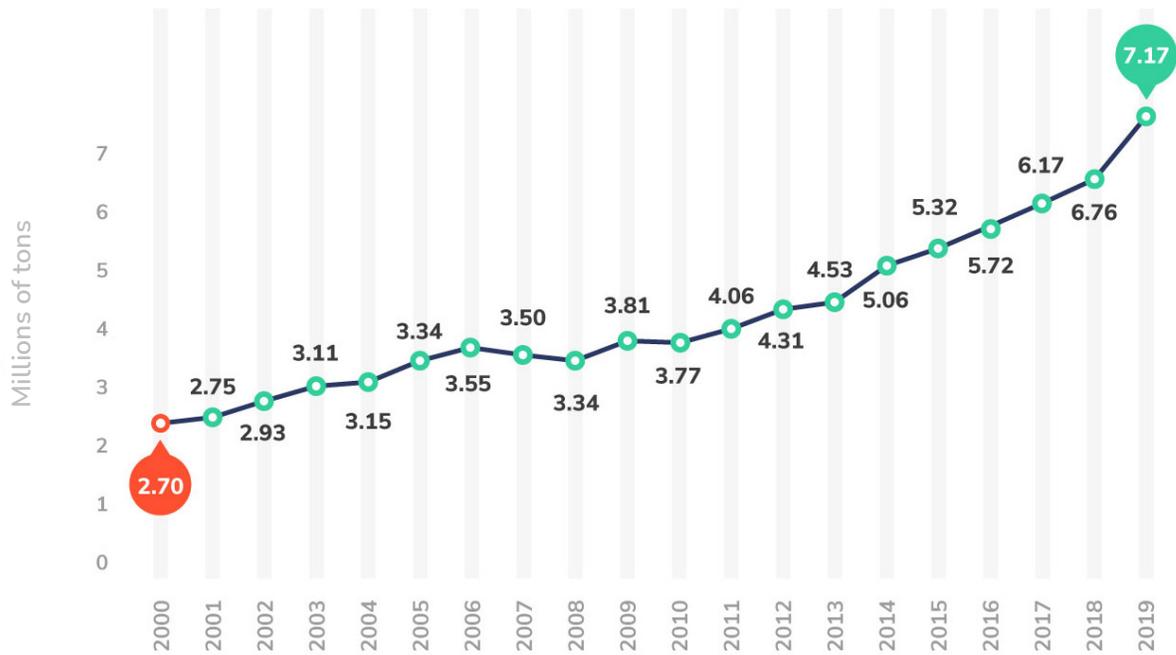
which were harvested on 726,660 hectares, so the average world yield was at 9.9 tons per hectare.

The increase in production obtained in 2019 compared to 2018 was 413,205 tons, or 6.1% more, mainly due to a 5.2% increase in harvested area, which translated into 35,839 hectares more, given that the average yield increased only from 9.8 to 9.9 tons per hectare.

In fact, average annual world avocado yields have not increased considerably, remaining between 8.0 and 10.0 tons since 1980, implying that the considerable increase in world production in the last two decades (1980-2019) is due only to the increase in harvested area.

Avocado production obtained in the world

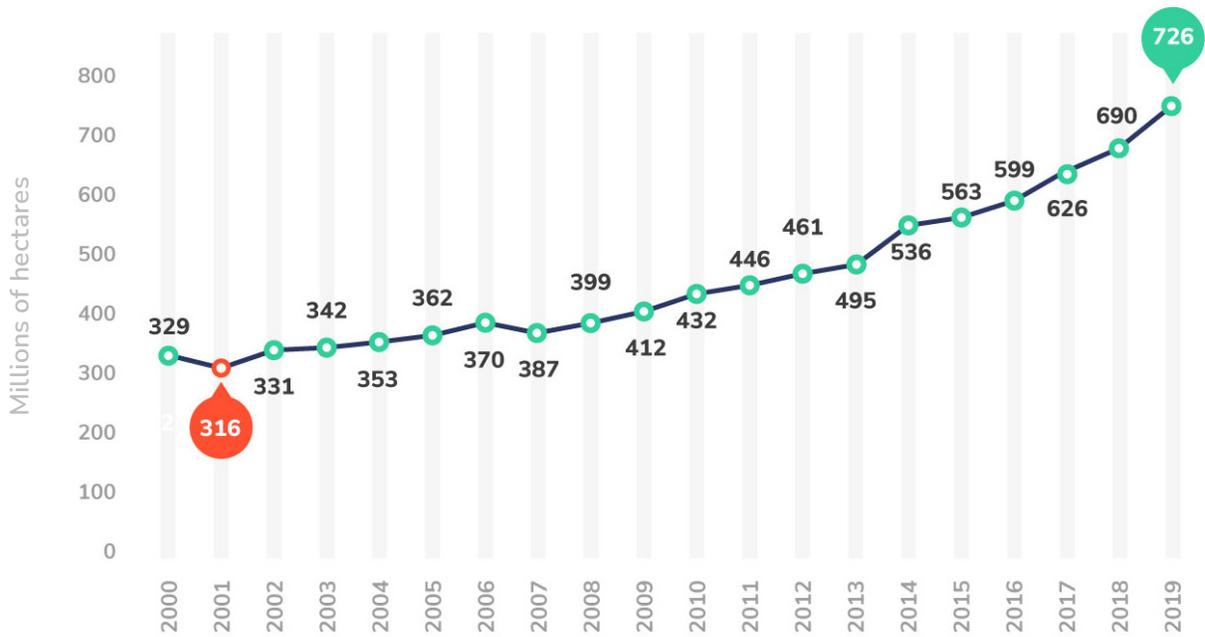
Source: FAOSTAT



From 1980 to 2019, world avocado production increased considerably, from 1,577,867 to 7,179,689 tons, which represented an increase of 355.0%, with an annual growth rate of 4.4%. However, it was in the last decade (2010-2019) when production presented a remarkable growth rate, with an average annual increase of 6.6%, from 3,778,010 tons in 2010 to 7,179,689 tons in 2019, that is, an increase of 90% during that period.

Avocado harvested area in the world

Source: FAOSTAT



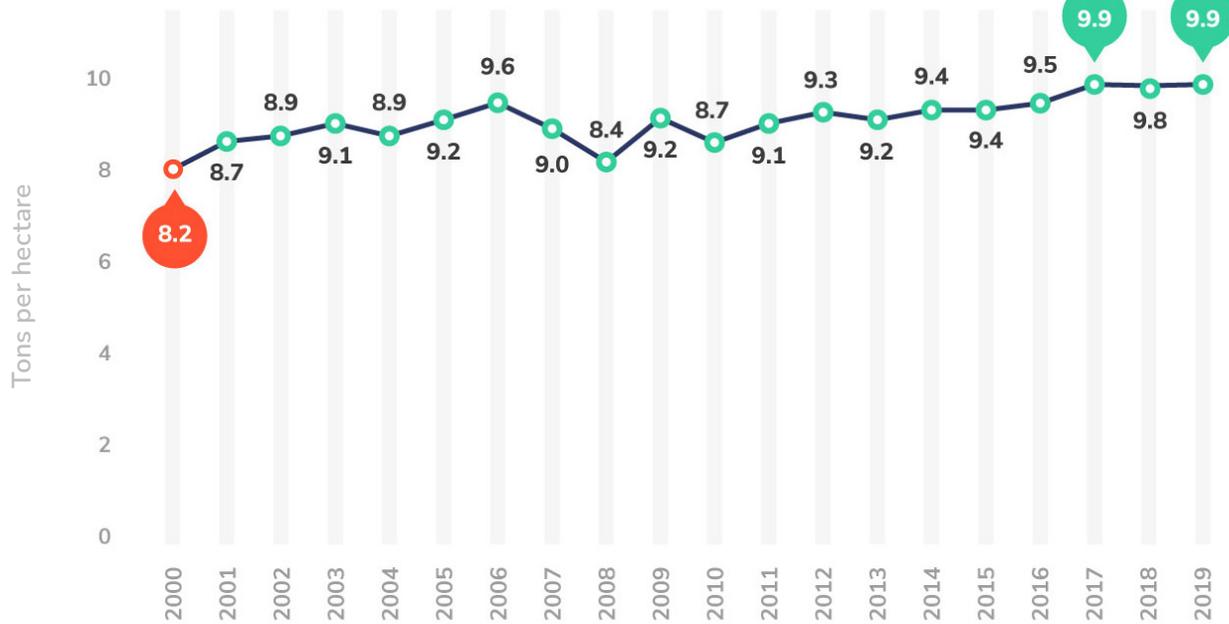
The increase in world avocado production is mainly due to the increase in harvested area, which between 1980 and 2019 presented an average annual increase of 3.7%, from 188,389 hectares in 1980 to 726,660 hectares in 2019, an overall increase of 285.7%. However, it is in the last 5 years (2015-2019) when the area has increased the most, with a 6.3% annual increase, from 563,948 hectares in 2015 to 726,660 hectares in 2019.





Average avocado yield in the world

Source: FAOSTAT



Regarding the average avocado yield worldwide, between 1980 and 2002, the barrier of 9.0 tons per hectare was not exceeded, although until 2019 the maximum average yield obtained was 9.9 tons per hectare, which means that average annual yields have not increased considerably and have not exceeded the barrier of 10.0 tons per hectare, so the average yield is not a factor that is influencing the increase in production worldwide.

| Main producing countries

In 2019, 64 countries reported avocado production, of which only 15 produced more than 100,000 tons, leaving these countries with 87.3% of world production.



Mexico leads the world in avocado production, with an increase of 1,193,754 tons from 2010 to 2019, from 1,107,135 tons produced in 2010 to 2,300,889 tons in 2019.



Peru is increasing its avocado production in an interesting way, going from 184,370 tons in 2010 to 535,911 tons in 2019, an increase of 290.7% in just a decade.



Colombia is another country that is greatly developing its avocado sector and its production increase of 260.4% between 2010 and 2019 proves it, going from 205,443 tons to 535,021 tons.



Countries with the highest production of avocado obtained

Mexico undisputedly leads avocado production in the world, obtaining 32% of production in 2019, a figure that translated into 2,300,889 tons, which equaled the production obtained from the next 5 countries in the list of the main producing countries, which together obtained 35.6% of the world total.

Countries with the highest avocado production in 2019

Source: FAOSTAT



| | Country | Production obtained (t) | % |
|---|--------------------|-------------------------|------|
| ① | Mexico | 2,300,889 | 32.0 |
| ② | Dominican Republic | 661,626 | 9.2 |
| ③ | Peru | 535,911 | 7.5 |
| ④ | Colombia | 535,021 | 7.5 |
| ⑤ | Indonesia | 461,613 | 6.4 |
| ⑥ | Kenya | 364,935 | 5.1 |
| ⑦ | Brazil | 242,932 | 3.4 |
| ⑧ | Haiti | 231,719 | 3.2 |
| ⑨ | Chile | 162,988 | 2.3 |
| ⑩ | Israel | 138,766 | 1.9 |

Countries with the largest avocado harvested area in 2019

Source: FAOSTAT



| | Country | Production obtained (t) | % |
|---|---|-------------------------|------|
| ① |  Mexico | 215,942 | 29.7 |
| ② |  Colombia | 63,534 | 8.7 |
| ③ |  Peru | 42,788 | 5.9 |
| ④ |  Haiti | 39,916 | 5.5 |
| ⑤ |  Indonesia | 35,136 | 4.8 |
| ⑥ |  Chile | 29,224 | 4.0 |
| ⑦ |  Kenya | 23,298 | 3.2 |
| ⑧ |  China | 22,561 | 3.1 |
| ⑨ |  United States | 21,420 | 2.9 |
| ⑩ |  Ethiopia | 20,908 | 2.9 |

Mexico ranks as the world's leading avocado producer thanks to the fact that it is the country with the largest harvested area of this crop, having in 2019 a total of 215,942 hectares, that is, 29.7% of the world total, which was equivalent to the harvested area of the 5 countries that follow in this section, which together had 29.0% of the total.

Countries with the highest average avocado yields in 2019

Source: FAOSTAT



| | Country | Tons per hectare | % |
|---|--|------------------|-------|
| ① |  Dominican Republic | 46.6 | 371.9 |
| ② |  Samoa | 30.4 | 207.5 |
| ③ |  Rwanda | 30.0 | 203.7 |
| ④ |  El Salvador | 26.4 | 167.5 |
| ⑤ |  Brazil | 15.9 | 60.5 |
| ⑥ |  Kenya | 15.7 | 58.5 |
| ⑦ |  Palestine | 15.3 | 55.0 |
| ⑧ |  French Polynesia | 14.8 | 49.3 |
| ⑨ |  Cuba | 13.9 | 41.1 |
| ⑩ |  Israel | 13.2 | 33.5 |

In 2019, the Dominican Republic led the way in average avocado yields, with 46.6 tons per hectare, an increase of 371.9% over the world average of 9.9 tons per hectare. For its part, Mexico ranked 21st, with an average yield for the same year of 10.7 tons per hectare, an increase of 8.1% over the world average.

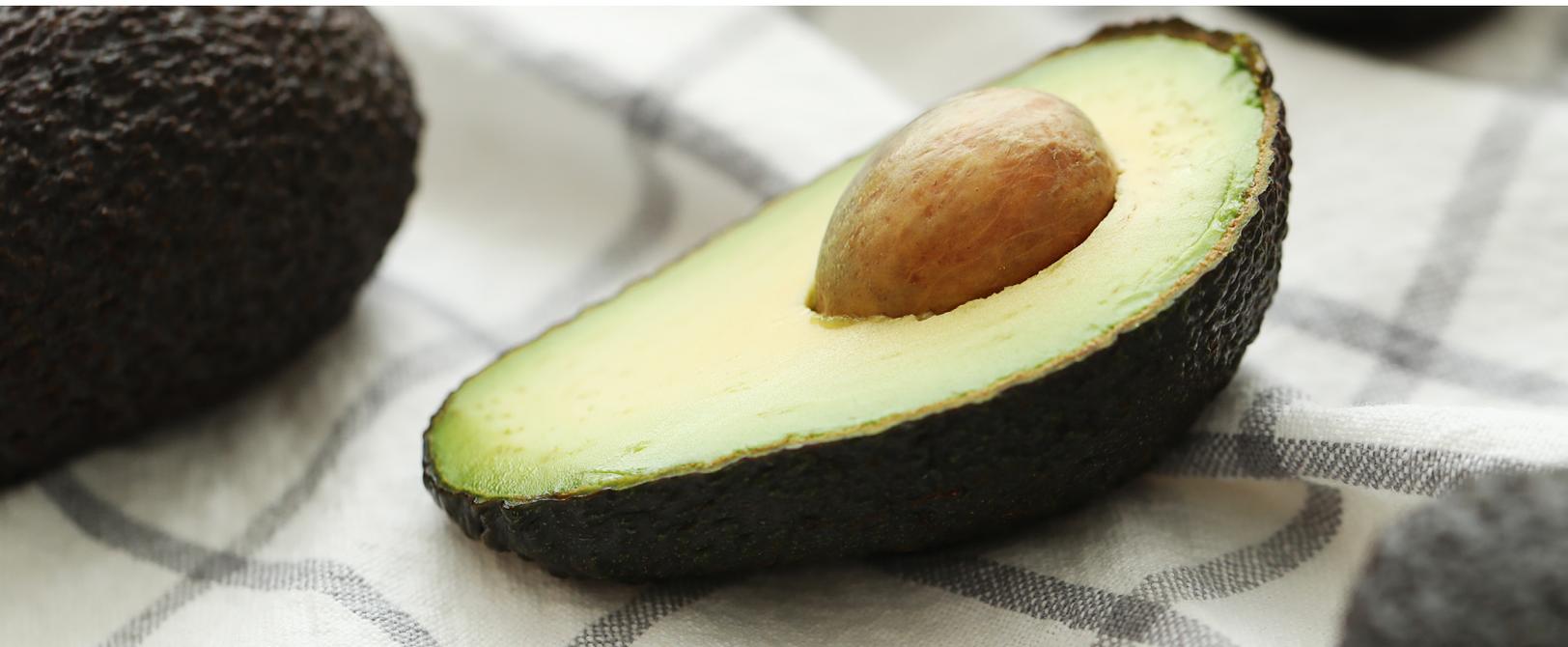


**Foreign
market**

Historical world trade

Global figures on avocado trade reaffirm that it is of growing economic importance, since over the last 4 decades the figures have only increased, and even in the last decade they have increased even more considerably.

This is due to the fact that the avocado is an agri-food product that combines with a large number of elements of the cuisine of various parts of the world.



World avocado imports

Until 2011 the amount of world avocado imports was increasing steadily, but without large increases, at an average annual rate of 10.7% for the period from 1980 to 2011; however, between 2012 and 2018 imports increased, leaving the average annual yield at 15.3%. In addition, it should be mentioned that in 2019 compared to 2018 there was only an increase in the amount of tons imported of 3.6%, being the lowest growth in the last 9 years.

Regarding the value of imports, there was a considerable increase between 2018 and 2019, of 17.4%, bringing the average annual growth of the last 10 years (2010-2019) to 16.2%; for the same period, the highest increase occurred in 2011 with respect to 2010, with 30.5%.

Main importing countries



In 2019 there were 143 countries that imported at least 1 ton of avocado, although only 5 of them imported more than 100,000 tons: the United States, the Netherlands, France, Spain and the United Kingdom, which together bought 70.6% of the avocado traded in the world.

Countries with the highest avocado imports

Source: FAOSTAT

| | Country | Quantity (t) | % | Value (Million dollars) | % |
|---|--|--------------|------|-------------------------|------|
| ① |  United States | 1,105,375 | 41.8 | 2,864 | 39.4 |
| ② |  Netherlands | 349,750 | 13.2 | 1,020 | 14.0 |
| ③ |  France | 165,172 | 6.2 | 515 | 7.1 |
| ④ |  Spain | 136,833 | 5.2 | 340 | 4.7 |
| ⑤ |  United Kingdom | 110,819 | 4.2 | 334 | 4.6 |
| ⑥ |  Germany | 95,330 | 3.6 | 340 | 4.7 |
| ⑦ |  Canada | 94,963 | 3.6 | 238 | 3.3 |
| ⑧ |  Japan | 77,287 | 2.9 | 240 | 3.3 |
| ⑨ |  Russia | 35,631 | 1.3 | 91 | 1.3 |
| ⑩ |  China | 32,564 | 1.2 | 92 | 1.3 |

In 2019, the United States was the leading avocado importing country, taking 1,105,375 tons, or 41.8% of the world total, which is equivalent to the amount imported by the following 9 countries combined. Canada was in 7th position, with 94,963 tons (3.6% of the total), which had a value of 238 million dollars.

World avocado imports

Source: FAOSTAT

| Year | Quantity (t) | Value (Million dollars) |
|------|--------------|----------------------------|
| 2000 | 346,364 | 414 |
| 2001 | 323,649 | 417 |
| 2002 | 406,555 | 471 |
| 2003 | 432,298 | 679 |
| 2004 | 492,896 | 706 |
| 2005 | 665,593 | 1,007 |
| 2006 | 614,180 | 976 |
| 2007 | 780,372 | 1,390 |
| 2008 | 752,167 | 1,558 |
| 2009 | 901,895 | 1,731 |
| 2010 | 902,790 | 1,697 |
| 2011 | 950,232 | 2,214 |
| 2012 | 1,127,815 | 2,173 |
| 2013 | 1,283,314 | 2,776 |
| 2014 | 1,552,085 | 3,387 |
| 2015 | 1,795,710 | 3,846 |
| 2016 | 1,997,740 | 4,968 |
| 2017 | 2,143,304 | 6,303 |
| 2018 | 2,553,286 | 6,197 |
| 2019 | 2,646,236 | 7,274 |

World avocado exports

World avocado exports

Source: FAOSTAT

Between 1980 and 2019 the amount of world avocado exports presented an average annual value of 11.0%, a figure that shows that avocado trade has been increasing with each passing year. Between 2000 and 2019 the figure was 12.4%, although 2019 only saw an increase of 2.0% over 2018, the lowest figure during the period from 2011 to 2019.

If we talk about money, in 2019 the export of avocado in the world left an economic spill-over of 6,499 million dollars, which implied an increase of 13.8% over the 5,709 million dollars of 2018.



| Year | Quantity (t) | Value (Million dollars) |
|------|--------------|-------------------------|
| 2000 | 361,807 | 331 |
| 2001 | 322,122 | 320 |
| 2002 | 426,848 | 452 |
| 2003 | 416,095 | 546 |
| 2004 | 490,711 | 605 |
| 2005 | 651,249 | 845 |
| 2006 | 579,516 | 847 |
| 2007 | 766,894 | 1,282 |
| 2008 | 703,484 | 1,279 |
| 2009 | 837,246 | 1,508 |
| 2010 | 829,565 | 1,466 |
| 2011 | 950,232 | 1,971 |
| 2012 | 1,052,904 | 1,972 |
| 2013 | 1,216,993 | 2,479 |
| 2014 | 1,444,313 | 3,084 |
| 2015 | 1,667,205 | 3,342 |
| 2016 | 1,926,993 | 4,485 |
| 2017 | 2,055,873 | 6,014 |
| 2018 | 2,516,757 | 5,709 |
| 2019 | 2,567,800 | 6,499 |

Main exporting countries

In 2019 there were 102 countries that exported at least 1 ton of avocado, although only 5 of them exported more than 100,000 tons: Mexico, Netherlands, Peru, Chile and Spain, which together came 79.7% of the avocado traded in the world.

Countries with the highest avocado exports

Source: FAOSTAT

| | Country | Quantity (t) | % | Value (Million dollars) | % |
|---|--|--------------|------|-------------------------|------|
| ① |  Mexico | 1,152,977 | 44.9 | 2,913 | 44.8 |
| ② |  Netherlands | 318,115 | 12.4 | 1,014 | 15.6 |
| ③ |  Peru | 312,258 | 12.2 | 755 | 11.6 |
| ④ |  Chile | 144,621 | 5.6 | 330 | 5.1 |
| ⑤ |  Spain | 119,567 | 4.7 | 386 | 5.9 |
| ⑥ |  Kenya | 63,356 | 2.5 | 102 | 1.6 |
| ⑦ |  United States | 59,377 | 2.3 | 154 | 2.4 |
| ⑧ |  South Africa | 47,948 | 1.9 | 71 | 1.1 |
| ⑨ |  Colombia | 44,570 | 1.7 | 89 | 1.4 |
| ⑩ |  Dominican Republic | 41,825 | 1.6 | 69 | 1.1 |

Mexico is the world reference in terms of avocado exports, remaining in 2019 with 44.9% of world exports, which translated into 1,152,977 tons, with which it exported the same amount of avocado as the next 9 countries on the list. In terms of export value, it managed to obtain 2,913 million dollars.



Main trade flows

The main avocado trade flow in the world occurs between Mexico and the United States.

FAOSTAT figures indicate that in 2019 the United States imported 976,613 tons from Mexico, which accounted for 37.0% of world avocado imports, thus far exceeding other existing trade flows involving the Netherlands, Peru, Canada and Germany.

Canada also imports avocado from Mexico, being the third largest flow with 89,048 tons, only surpassed by imports by the Netherlands from Peru, which amounted to 95,019 tons. In addition, Peruvian avocados also reach the United States, being the fourth largest flow of this agri-food product, with 85,174 tons..

In economic terms, U.S. imports of Mexican avocados amounted to 2,527 million dollars, or 34.8% of the total value of world imports; furthermore, it is expected that this trade flow between the two countries will continue to increase in the coming years, although there are always risks for the export of Mexican avocados that could affect bilateral trade in this crop at some point, especially if all the requirements requested by the U.S. government are not met..



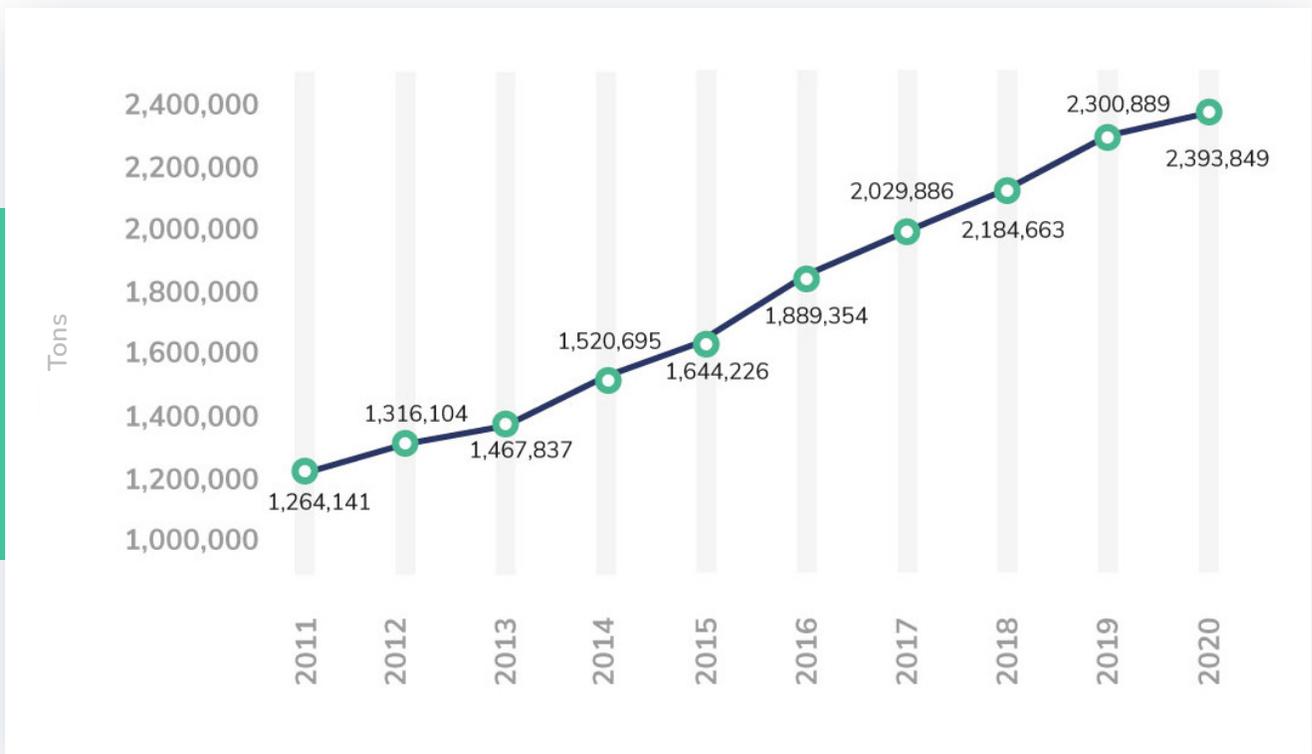
**Domestic
production**



Historical domestic production

Avocado production obtained in the world

Source: SIAP

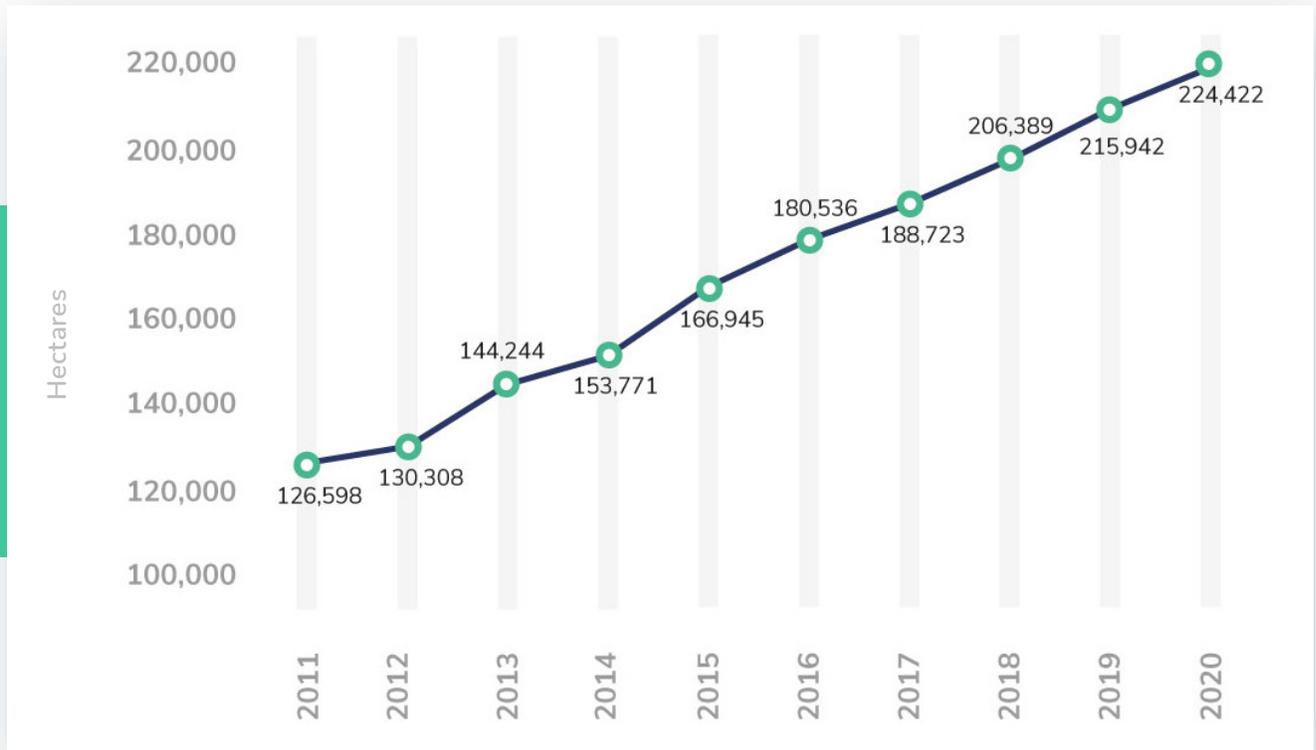


In 2020, the national avocado production was 2,393,849 tons, which were obtained thanks to a harvested area of 224,422 hectares, so the national average yield was 10.7 tons per hectare.

In addition, the value of production was 49,369 million pesos, so the national average price per ton was 20,623 pesos per ton.

Harvested area of avocado in Mexico

Source: SIAP



Between 1991 and 2008, the increase in avocado harvested area has only had a slight increase of 2.2% per year on average, while from 2009 to 2020 the annual average was 6.0%, indicating more area for this crop.

In fact, in the last 10 years (2011-2020), it went from 126,598 hectares to 224,422 hectares, an increase of 97,824 hectares, which in turn represented 77.3% more, and will possibly increase even more in the coming years.





Average avocado yield in Mexico

Source: SIAP



Between 2000 and 2020 the minimum average avocado yield was 9.0 in 2010 and the maximum average was 10.8 in 2017, both in tons per hectare, so it is striking that, despite being a crop of high economic value, yields do not increase.

In fact, between 2011 and 2020, the average annual increase was 1.8%, which indicates a lack of growth in the issue of yields of this crop, which could be improved with the introduction of some technologies to increase production.

Value of avocado production in Mexico

Source: SIAP



In 2020, the value of Mexican avocado production stopped, remaining at 49,369 million pesos, with a minimal decrease of 0.2% compared to 2019, when 49,481 million pesos were obtained.

Despite this, in the last 5 years (2016-2020), the average annual growth remained at 17.8%, a figure that indicates the importance that this crop has had in recent years, especially in the section of exports to the United States.



Main avocado producing States in Mexico

For the year 2020, 27 states reported avocado production and the Agrifood and Fisheries Information Service (SIAP) indicates that the state of Michoacán produced 75.2% of the national total, followed by Jalisco with 10.4% and completing the first 3 positions the State of Mexico, with 4.9%. In other words, these states accounted for 90.5% of the avocado produced in Mexico.

The fact that Michoacán leads the production of this crop is mainly due to the fact that it has the largest area, 166,063 hectares, which translates to 74.0% of the national area, although in terms of yield it was in 8th position, with 10.8 tons per hectare, an aspect led by the state of Yucatán with 24.9 tons per hectare, although this state only had 400 hectares harvested.

Main avocado producing States in 2020

Source: SIAP

| | State | Production obtained (t) | Harvested area (ha) | Average yield (t/ha) | Production value (million pesos) |
|---|---|-------------------------|---------------------|----------------------|----------------------------------|
| ① |  Michoacán | 1,800,021 | 166,063 | 10.8 | 39,623 |
| ② |  Jalisco | 248,193 | 20,920 | 11.9 | 4,187 |
| ③ |  México | 118,268 | 9,930 | 11.9 | 2,140 |
| ④ |  Nayarit | 69,985 | 6,882 | 10.2 | 1,106 |
| ⑤ |  Morelos | 50,410 | 5,579 | 9.0 | 789 |
| ⑥ |  Guerrero | 19,997 | 2,897 | 6.9 | 216 |
| ⑦ |  Puebla | 16,910 | 2,348 | 7.2 | 208 |
| ⑧ |  Chiapas | 16,220 | 2,306 | 7.0 | 324 |
| ⑨ |  Oaxaca | 12,782 | 2,560 | 5.0 | 254 |
| ⑩ |  Yucatán | 9,977 | 400 | 24.9 | 85 |





Main avocado-producing Municipalities

According to SIAP, in 2020, 598 municipalities reported avocado production, but it is several neighboring municipalities in the state of Michoacán that top the list of the main producing municipalities, as together they constitute the main avocado production area in the world. In fact, the first municipality on the list that is not from Michoacán ranks 13th and is the municipality of Zapotlán el Grande, Jalisco, with 53,375 tons.

The 10 municipalities with the highest avocado production accounted for 58.9% of total national production, with Tancítaro having the largest area in 2020, with 22,940 hectares (10.2% of

the total), followed not so far behind by the municipalities of Ario, Salvador Escalante, Uruapan and Peribán.

The average avocado yield for the 10 municipalities with the highest production in Mexico was 11.1 tons per hectare, only slightly higher than the 10.7 tons per hectare national average yield.

Main avocado-producing Municipalities in 2020

Source: SIAP

| State | Municipality | Production obtained (t) | Harvested area (ha) | Average yield (t/ha) | Production value (million pesos) |
|-----------|-----------------------|-------------------------|---------------------|----------------------|----------------------------------|
| Michoacán | Tancítaro | 225,420 | 22,940 | 9.8 | 5,398 |
| Michoacán | Ario | 191,350 | 15,858 | 12.1 | 3,484 |
| Michoacán | Salvador Escalante | 188,760 | 16,205 | 11.6 | 3,642 |
| Michoacán | Uruapan | 184,276 | 17,490 | 10.5 | 4,511 |
| Michoacán | Tacámbaro | 178,737 | 16,969 | 10.5 | 3,421 |
| Michoacán | Peribán | 139,040 | 11,705 | 11.9 | 3,312 |
| Michoacán | Nuevo Parangaricutiro | 92,804 | 8,940 | 10.4 | 2,169 |
| Michoacán | Los Reyes | 74,031 | 6,314 | 11.7 | 1,680 |
| Michoacán | Turicato | 67,737 | 6,045 | 11.2 | 1,273 |
| Michoacán | Tingüindín | 66,696 | 5,336 | 12.5 | 1,771 |

Domestic production breakdown

Analyzing the breakdown of national avocado production for the year 2020, presented by the Agrifood and Fisheries Information Service (SIAP), we can realize that production is focused on the conventional system, which leaves a huge opportunity area for organic production, since organic prices are higher than conventional prices.

However, the challenge is in the management of pests and diseases, especially in areas where avocado is a single crop and there are adjacent neighbors with conventional management, a situation in which there is a risk of pesticide drift.

Avocado production technologies in Mexico during 2020

Source: SIAP

| Technology | Production obtained (t) | Area harvested (ha) | Average yield (t/ha) | Production value (million pesos) |
|------------|-------------------------|---------------------|----------------------|----------------------------------|
| Open sky | 2,393,817 | 224,420 | 10.7 | 49,369 |
| Greenhouse | 32 | 2 | 16.0 | 1 |
| Total | 2,393,849 | 224,422 | 10.7 | 49,369 |

Because it is a crop with large trees, practically all production is carried out in the open, with only a small area of 2 hectares produced under greenhouses in some parts of Mexico.

The fact that avocado is grown in the open implies that growers try to avoid the months of frost, in areas where they occur, while in very rainy areas the management must contemplate preventive fungicides.

However, as avocados can be kept on the tree (without cutting) for a long period of time, growers have the possibility of not cutting if weather conditions are not the most suitable.

Types of avocado production in Mexico during 2020

Source: SIAP

| Production | Production obtained (t) | Area harvested (ha) | Average yield (t/ha) | Production value (million pesos) |
|--------------|-------------------------|---------------------|----------------------|----------------------------------|
| Conventional | 2,313,918 | 216,447 | 10.7 | 46,912 |
| Organic | 79,931 | 7,975 | 10.0 | 2,458 |
| Total | 2,393,849 | 224,422 | 10.7 | 49,369 |

According to SIAP, in 2020, 96.7% of national avocado production was conventional, which means that only 3.3% of production was organic, equivalent to 79,931 tons.

However, considering that the average yield was similar for conventional and organic production, it is surprising that there is not more organic production, whose prices are higher.

The national average price in 2020 was 20,274 pesos per ton for conventional avocados, while an average of 30,747 pesos per ton was paid for organic avocados.

Markets for avocado production in Mexico

SIAP does not present information to differentiate between domestic and export production, but various sources indicate that around 85% of avocados from the state of Michoacán are exported to the United States, the main market for this crop.

It is worth mentioning that Michoacán is the only state that has permission to export Hass avocado to the United States, so exports of this crop by other states are made to other destinations. For example, avocados from the state of Morelos are being sent to countries such as Holland, Canada, Spain, Arab Emirates, Singapore and Taiwan.

Monthly domestic production

Monthly avocado production in Mexico

Source: SIAP



Avocado production in Mexico is fairly stable throughout the year, with a very slight increase from April to December, the latter month being the one with the highest production, reaching up to 10% of production. The only month in which production drops is January, when only 6% of production is usually obtained, mainly because the cold winter days delay the ripening of the fruit.

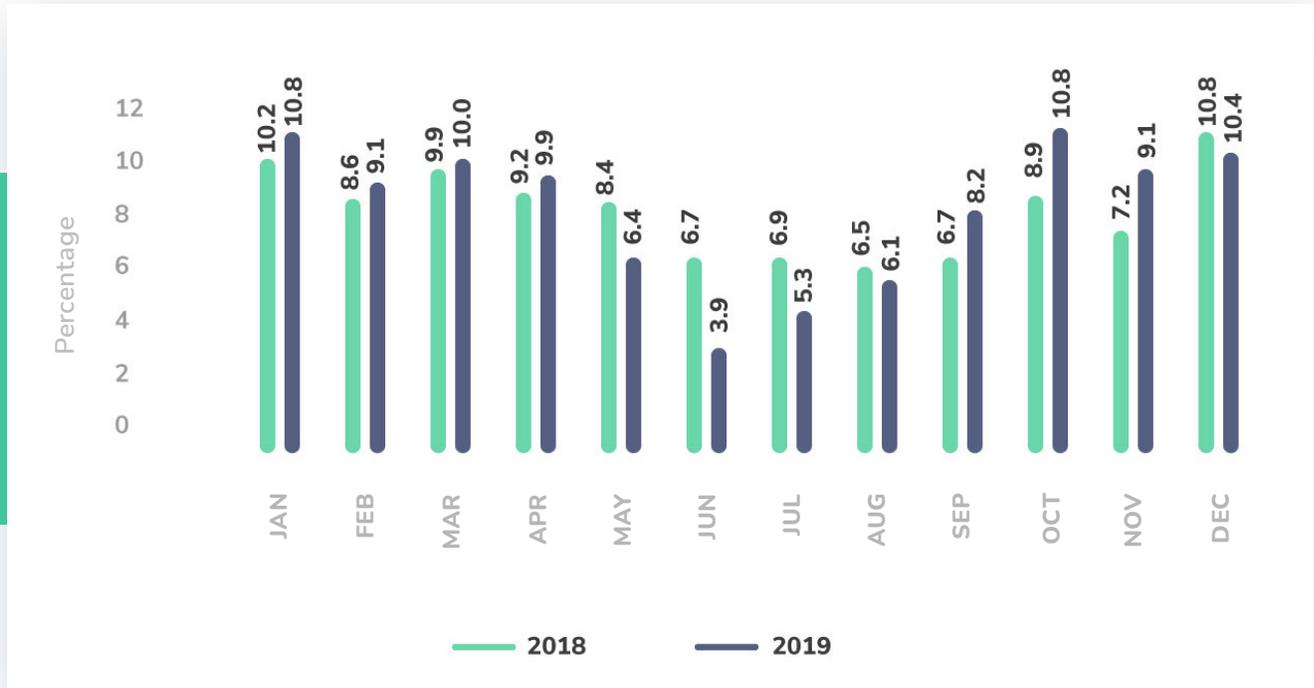
In addition, the soil and climate conditions in the main avocado-producing municipalities located in the state of Michoacán allow for quality production practically all year round.



Domestic exports per month

Monthly avocado exports in Mexico

Source: SIAP



The high season for avocado exports, mostly to the United States, occurs between the months of October and January, while May, June, July and August are the months in which historically less is exported, a period during which there is a greater amount of product available for domestic consumption.

It is worth mentioning that January, despite being the month with the lowest production, is the month with the highest exports, due to the fact that during this month the demand that there will be at the beginning of February is supplied, as the Super Bowl game represents the highest peak of avocado consumption in the United States, mainly because it is used to make guacamole.

In 2018, 1,196,837 tons were exported and in 2019 there were 1,280,369, which represented an increase of 7.0% in the volume section, although in terms of export value, in 2018 and 2019 there were 2,744 and 3,201 million dollars, respectively, that is, an increase of 16.7%, which indicates that the price of Mexican avocado was higher in 2019.

Countries to which exports are made

According to information presented by the Tariff Information System via Internet (SIAVI), during the first half of 2021 Mexican avocados were exported to 39 different countries, of which the United States took 80.2%, Canada 6.5% and Japan 4.5%, which translated into 595,738, 48,239 and 33,670 tons, respectively. The remaining 99,175 tons were destined for various countries in Central and South America, Europe and Asia.

The 743,151 tons exported between January and June 2021 translated into an income of 1.6 billion dollars, of which 80.5% came from the United States, 6.6% from Canada and 4.5% from Japan, while the rest, 8.8%, was distributed among the other 36 countries.



Main destinations of Mexican avocado (First Semester 2021)

Source: SIAVI

| Country | Quantity (t) | % | Value (Million dollars) | % |
|---|--------------|------|-------------------------|------|
|  United States | 595,738 | 80.2 | 1,288.6 | 80.5 |
|  Canada | 48,239 | 6.5 | 105.1 | 6.6 |
|  Japan | 33,670 | 4.5 | 72.5 | 4.5 |
|  Spain | 11,009 | 1.5 | 22.0 | 1.4 |
|  Honduras | 10,137 | 1.4 | 21.6 | 1.4 |
|  El Salvador | 7,588 | 1.0 | 15.9 | 1.0 |
|  France | 7,319 | 1.0 | 14.8 | 0.9 |
|  Netherlands | 4,897 | 0.7 | 9.8 | 0.6 |
|  China | 3,357 | 0.5 | 6.8 | 0.4 |
| 30 other countries | 21,196 | 2.9 | 6.0 | 0.4 |



Monthly Mexican avocado exports

Source: SIAP

| Month | Volume (t) |
|----------|------------|
| January | 149,123 |
| February | 132,675 |
| March | 156,195 |
| April | 104,455 |
| May | 106,373 |
| June | 94,329 |

As spring ends and summer begins, production in Mexico decreases, mainly due to the rainy season, and in the meantime local production in California supplies a good part of the market demand.



Avocado production in the United States

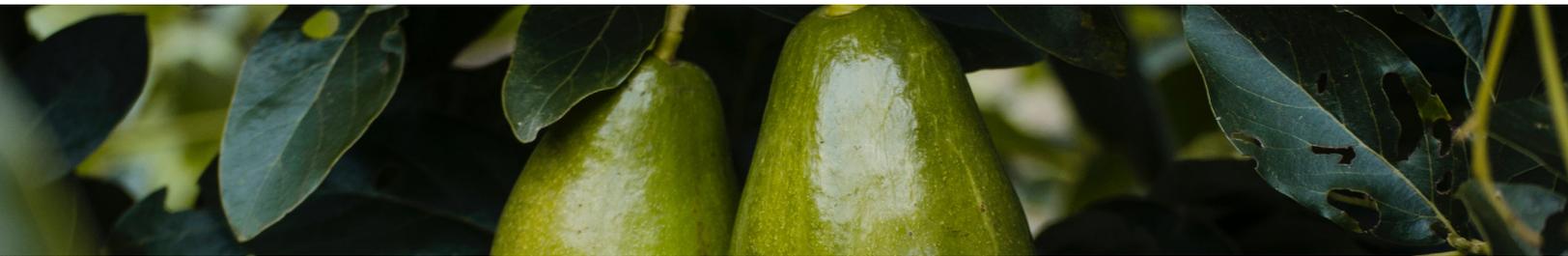


Avocado production in the United States

In 2020, 71,390 more tons of avocado were produced in the United States compared to 2019, going from 135,220 to 206,610 tons, which indicates an increase of 52.8%, quite considerable, especially considering that the harvested area decreased by 0.4% between 2019 and 2020, so the increase in production

was due to the increase in the average yield, which went from 6.33 to 9.69 tons per hectare (+53.1%).

However, in the last 8 years the production peak was reached in 2015, with 228,990 tons, mainly due to a national average yield of 9.49 tons per hectare.



Avocado production in the United States

Source: USDA ERS

| State | Production obtained (t) | Harvested area (ha) | Average yield (t/ha) | Production value (million pesos) |
|-------|-------------------------|---------------------|----------------------|----------------------------------|
| 2013 | 182,920 | 24,868 | 7.36 | 361 |
| 2014 | 172,940 | 23,978 | 7.22 | 326 |
| 2015 | 228,990 | 24,140 | 9.49 | 434 |
| 2016 | 138,050 | 23,350 | 5.91 | 372 |
| 2017 | 187,680 | 23,528 | 7.98 | 392 |
| 2018 | 185,770 | 21,707 | 8.55 | 400 |
| 2019 | 135,220 | 21,416 | 6.33 | ND |
| 2020 | 206,610 | 21,335 | 9.69 | ND |



U.S. avocado exports

Source USDA ERS

| Year | Fresh | |
|------|--------|-----------------|
| | t | Million dollars |
| 2017 | 7,605 | 29 |
| 2018 | 16,989 | 54 |
| 2019 | 7,941 | 27 |
| 2020 | 13,336 | 45 |

The United States exports a small amount of avocados, reaching 13,336 tons in 2020, a volume that left an economic flow of 45 million dollars. This export volume was only 1.2% of the import volume in the same year.

U.S. avocado imports

Source: USDA ERS

| Year | Fresh | | Prepared or preserved | |
|------|-----------|-----------------|-----------------------|-----------------|
| | t | Million dollars | t | Million dollars |
| 2017 | 900,197 | 2,640 | 84,820 | 304 |
| 2018 | 1,037,797 | 2,348 | 103,507 | 376 |
| 2019 | 1,105,190 | 2,761 | 111,838 | 434 |
| 2020 | 1,116,498 | 2,443 | 99,738 | 386 |



In 2020, the United States imported 1,116,498 tons of fresh avocado and 99,738 tons of prepared or preserved avocado, so the ratio is 11 to 1, that is, for every ton of prepared or preserved avocado imported, 11 tons of fresh avocado are imported.

Between 2017 and 2020, the import of fresh product increased 24.0%, from 900,197 to 1,116,498 tons, while the import of prepared or preserved product decreased 10.8%, going from 111,838 to 99,738 tons.

United States exports to Mexico

Source: USDA Border Crossing Data



Main avocado purchasing companies

Source: USDA Border Crossing Data

| | Company | No. of shipments | Shipping weight (kg) |
|---|---|------------------|----------------------|
| ① |  Mission Produce Inc. | 1,949 | 45,157,861 |
| ② |  Nature S Pride BV | 1,048 | 24,640,222 |
| ③ |  Index Fresh | 1,010 | 23,809,755 |
| ④ |  Del Rey Avocado Co. | 968 | 22,265,499 |
| ⑤ | Jose Luis Montosa S.L. | 546 | 20,779,049 |
| ⑥ |  Calavo Growers Inc. | 617 | 14,568,965 |
| ⑦ |  Lgs Specialty Sales Ltd. | 605 | 14,270,725 |
| ⑧ | Cool Control | 508 | 12,455,190 |
| ⑨ | Qpi BV | 513 | 10,997,015 |
| ⑩ |  Westfalia Fruit Marketing USA Llc | 409 | 94,89,026 |





Main avocado supplying companies

Source: USDA Border Crossing Data

| | Company | No. of shipments | Shipping weight (kg) |
|---|---|------------------|----------------------|
|  | Avocado Packing Co. S.A.C. | 17,485 | 212,575,798 |
|  | Camposol S.A. | 9,831 | 182,467,454 |
|  | Agrícola Cerro Prieto S.A. | 6,123 | 145,908,861 |
|  | Sociedad Agrícola Drokasa S.A. | 5,260 | 126,461,515 |
|  | Westfalia Fruit Peru Sac | 3,967 | 91,338,311 |
|  | Viru S.A. | 3,709 | 87,093,118 |
|  | Consortio De Productores De Fruta S.A. | 3,666 | 86,685,584 |
|  | Corporacion Fruticola De Chincha S.A.C. | 2,641 | 63,323,091 |
|  | Camet Trading S.A.C. | 2,446 | 52,857,124 |
| | Asr Trading Sociedad Anónima Cerrada | 2,049 | 49,203,200 |



Avocado prices in the U.S. market*

Source: Daily Market Report de ProducePay



* Fresh Hass avocado 2-layer 48s Avocado Crosses from Mexico through Texas added per month

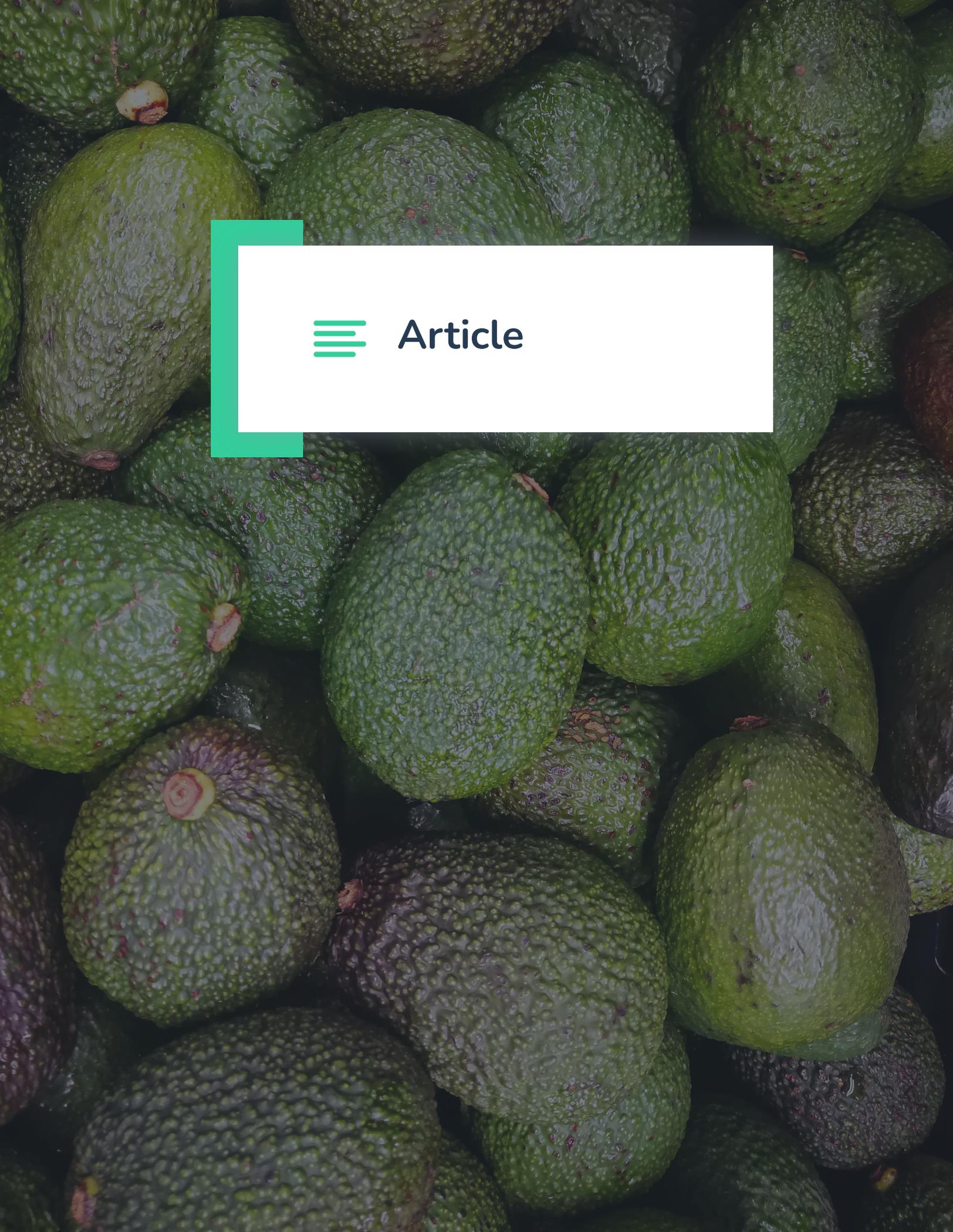
Avocado prices in the U.S. market*

Source: Daily Market Report de ProducePay



* Fresh Hass avocado 2-layer 60s Avocado Crosses from Mexico through Texas added per month





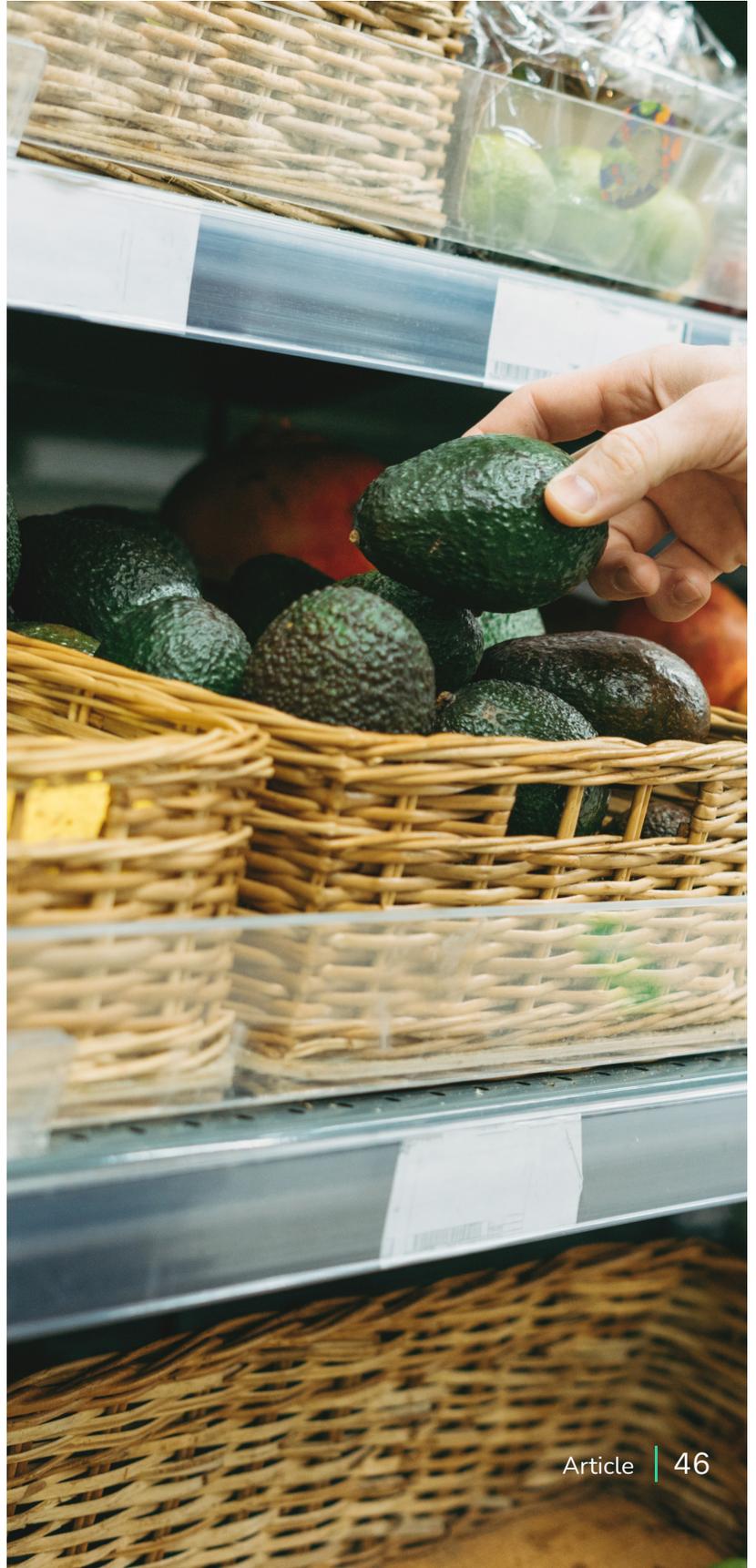
Article

Avocado will be the world's best-selling tropical fruit by 2030

Source: El Financiero

Although Peru, Colombia and Kenya, three emerging avocado exporters are increasing their sales of the fruit, Mexico is not giving up on the market and as the world's largest producer and exporter, is expected to increase its production by 5.2 percent annually over the next ten years and its share of world exports to grow to 63 percent by 2030, according to the OECD and FAO Agricultural Outlook 2021-2030 in which avocado is expected to become the most traded tropical fruit by that year.

"Production in Mexico, the world's largest producer and exporter, is expected to grow 5.2 percent annually over the next ten years due to continued growth in demand in the United States, Mexico's leading importer of avocados. Therefore, and despite increasing competition from emerging exporters, Mexico is expected to expand its share in world exports even further, to 63 percent by 2030," indicates the Monday report.



Following a 0.6 percent contraction in world imports in 2020, to 2.1 Mt (million metric tons), the health benefits of avocados are anticipated to be a driver of consumer demand in the United States and the European Union over the next decade, so they are expected to remain the world's leading importers of the fruit in 2030, with 40 percent and 30 percent, respectively.

In response to rapidly growing global demand, avocados are expected to become the most traded tropical fruit by 2030, reaching 3.9 Mt of exports and overtaking both pineapples and mangos in terms of quantity.

"Production is forecast to reach 12 Mt by 2030, more than three times its 2010 level. Wide global demand and lucrative export unit prices remain the main drivers of this growth, stimulating substantial investments in area expansion in both mainstream production and emerging areas," it states.





COVID-19 did affect avocado exports

The COVID-19 pandemic did not spare the world's avocado sales in 2020, restaurant closures were a setback to demand, as well as disruptions in global supply chains and a poor harvest in Mexico, the world's largest supplier of avocados. The report jointly developed by the Organization for Economic Cooperation and Development (OECD) and the Food and Agriculture Organization of the United Nations (FAO), estimates that Mexico experienced an 8.1 percent drop in exports in 2020, to 1.3 Mt and world avocado exports declined by 0.8 percent compared to 2019, at a total amount of approximately 2.3 Mt.

Meanwhile, favorable weather and successful investments in production expansion stimulated significantly higher supply from Peru, Colombia and Kenya, all three suppliers were able to achieve double-digit export growth in 2020, and together accounted for about 25 percent of total world exports.

Imports from the United States, the world's largest importer of avocados, decreased by an estimated 14.3 percent in 2020, due to a combination of lower demand from the hotel sector and lower supply from Mexico. Imports into the European Union, decreased 2.5 percent in 2020 due to the impact of COVID-19.



Information sources



EL FINANCIERO. **Aguacate será la fruta tropical más vendida en el mundo en 2030: OCDE.** <https://www.elfinanciero.com.mx/economia/2021/07/05/aguacate-sera-la-fruta-tropical-mas-vendida-en-el-mundo-en-2030-ocde>

FAOSTAT. **Cultivos y productos de agricultura y ganadería - Producción**
<http://www.fao.org/faostat/es/#data/QCL>

FAOSTAT. **Cultivos y productos de agricultura y ganadería - Comercio**
<http://www.fao.org/faostat/es/#data/TCL>

FAOSTAT. **Matriz detallada del comercio.**
<http://www.fao.org/faostat/es/#data/TM>

ProducePay. **Reporte de Mercado Diario de Aguacates Hass.**
<https://insights.producepay.com/commodity-varieties/63/shipping-point>

SIAP. **Datos abiertos de la estadística de producción agrícola.**
http://infosiap.siap.gob.mx/gobmx/datosAbiertos_a.php

SIAVI. **Fracción arancelaria Aguacates (paltas) 08.04.40.01.00.**
<http://www.economia-snci.gob.mx/>

USDA NASS. **Quick stats (Avocados).**
<https://quickstats.nass.usda.gov/>

USDA ERS. **Data by Commodity – Imports and Exports (Avocados).**
<https://www.ers.usda.gov/data-products/fruit-and-tree-nuts-data/>

USDA AMS. **Specialty Crops Fruits (Avocados)**
<https://www.marketnews.usda.gov/mnp/fv-nav-byCom?navClass=FRUITS&navType=byCom>

DOCUMENT BY
PRODUCEPAY

RESEARCH, ANALYSIS AND DESIGN

 **treembo**

INTERVENTIONS

Yair López, Treembo CEO
M.C. Olmo Axayacatl,
Director of Professional Agriculture