

## Organic Citrus Fruits

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### Organic production area

While organic citrus fruit production may not reach the levels seen in other organic sectors, such as olives, coffee, or cocoa, there has been significant growth in the number of hectares dedicated to organic citrus production over the past 20 years. Between 2004 and 2022, the organic citrus acreage expanded by more than 86'000 hectares. In 2022, over 115'000 hectares of citrus fruits were grown organically worldwide, constituting 1.1 percent of the world's total citrus area of 10.6 million hectares (according to FAOSTAT).

However, in 2022, there was a decline in organic citrus production, with a decrease of 3.3% (-3'955 hectares) in organic acreage compared to 2021. These declines in organic citrus production areas have been observed since 2005, particularly following a peak increase. One potential factor contributing to this trend could be the impact of citrus greening disease, which has been devastating for citrus trees.

In essence, this decline may represent an attempt to offset reduced tree productivity or tree mortality, aimed at meeting the demand for fresh citrus fruit, particularly in the juice markets of the European Union and the United States (see Table 15, page 97).

In 2022, the organic citrus production landscape included oranges (comprising over 27 percent of organic citrus fruit), lemons and limes (accounting for 21 percent), tangerines (more than 5 percent), grapefruit, and pomelos (2 percent). For 45 percent of the organic citrus area, no crop detail was available (see Figure 30).

However, when considering different production regions, Europe remained the primary hub for organic citrus production, boasting over 61'200 hectares in total. Notably, Italy (with 31'218 hectares) and Spain (with 25'821 hectares) emerged as dominant players in this region. Following closely was Latin America, covering 28'565 hectares, where Mexico took the lead with over three-thirds of the total hectares (21'492 hectares), followed by Argentina (3'342 hectares) as the second-largest contributor by 2022. Despite having favourable climatic conditions for organic citrus cultivation, Africa lagged behind with only 6'534 hectares in 2022. Notable African producers of organic citrus included Morocco (with 1,935 hectares), Egypt (with 1'303 hectares), and South Africa (with 1'099 hectares).

### Tables and Figures

- Figures on organic citrus fruit can be found on page Figure 30: Citrus fruit: Organic area 2022
- Tables on organic citrus fruit can be found from page 296

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## Exports to the EU and US

### *Fresh organic citrus fruits*

In 2022, a substantial quantity of over 54,000 tons of fresh organic citrus fruits found their way to export destinations in the European Union and the USA. Among the organic citrus fruits sent to these markets, lemons and acid limes took the lead with an impressive 38'948 metric tons, followed by oranges at 11'894 tons. Additionally, there were exports of pomelo and grapefruits totalling 1'993 tons, along with tangerines amounting to 1'491 tons. These exports of fresh organic citrus fruits serve as valuable supplements to local production when domestic citrus is out of season (Table 14).

**Table 14: Citrus exports by crop to EU and US 2022**

Crop	Export in metric tons 2022
Clementines	84
Lemons and acid limes	38'948
Oranges	11'894
Pomelos and grapefruit	1'993
Tangerine	1'491
Citrus fruit, no details	98
<b>Total</b>	<b>54'509</b>

Sources: Traces/European Commission 2023, USDA 2023. The US data do not cover all organic imports.

**Table 15: Exports of fresh organic citrus to the EU and US by country 2022**

Countries with exports of more than 1'000 metric tons of citrus fruit

Country	Crop	Exports in metric tons
<b>South Africa</b>	Oranges	10'402
	Lemons and acid limes	5'861
	Pomelos and grapefruit	1'684
	Tangerine	896
	Clementines	20
<b>South Africa total</b>		<b>18'863</b>
<b>Mexico</b>	Lemons and acid limes	8'542
	Pomelos and grapefruit	202
<b>Mexico total</b>		<b>8'744</b>
<b>Colombia</b>	Lemons and acid limes	7'485
	Citrus fruit, no details	22
	Oranges	18
<b>Colombia total</b>		<b>7'524</b>
<b>Brazil</b>	Lemons and acid limes	4'777
<b>Brazil total</b>		<b>4'777</b>
<b>Peru</b>	Lemons and acid limes	4'716
<b>Peru total</b>		<b>4'716</b>
<b>Argentina</b>	Lemons and acid limes	2'930
<b>Argentina total</b>		<b>2'930</b>
<b>Chile</b>	Lemons and acid limes	2'336
	Oranges	34
	Tangerine	9
<b>Chile total</b>		<b>2'379</b>
<b>Egypt</b>	Oranges	1'291
	Lemons and acid limes	5
<b>Egypt total</b>		<b>1'296</b>
<b>Morocco</b>	Tangerine	586
	Lemons and acid limes	349
	Oranges	100
	Clementines	64
	Citrus fruit, no details	55
<b>Morocco total</b>		<b>1'154</b>

Sources: Traces/European Commission 2023 and USDA 2023

South Africa, Mexico, Colombia, Chile, Brazil, Peru, and Argentina played pivotal roles in the export of fresh organic citrus fruits to both the European Union and the USA (Table 15), particularly catering to demand during the off-season periods. South Africa, a well-established supplier of fresh fruit to the European Union, stands out as a significant exporter, having shipped the largest quantity of citrus fruits in 2022, totalling 18'863 metric tons.

Mexico's export focus is primarily directed toward the US market, with a notable demand for acid limes and, in recent years, oranges, within the European Union. Importers in Europe increasingly look to countries like Colombia, Chile, Brazil, Peru, and Argentina for off-season supplies.

South Africa's export portfolio comprises various products, including oranges, lemons and acid limes, grapefruits, and smaller quantities of tangerines. Importantly, due to the seasonal nature of supply, South African citrus does not directly compete with locally sourced seasonal citrus production. This distinction also applies to other southern hemisphere countries, such as Chile, Brazil, Peru, and Argentina. Meanwhile, Mexico and Colombia predominantly focus their exports on lemons and acid limes.

### ***Organic citrus juices***

In 2021, the European market witnessed a projected 1% annual growth in the import of citrus and tropical fruit juices, encompassing (both conventional and organic). This growth occurred against the backdrop of an overall decline in fruit juice and nectar consumption across Europe, attributed to concerns about calorie and sugar intake among consumers. However, citrus and tropical fruit juices found a unique role as ingredients in low-calorie beverages, smoothies, and flavoured waters, helping maintain stable import demand. Import opportunities in Europe were particularly evident in countries such as France, Germany, the United Kingdom, Spain, Italy, Switzerland, and the Netherlands, as highlighted in CBI's 2021 report.

Organic citrus juices encompass a range of fruit types, including orange, lemon, lime, grapefruit, and tangerine juices. Most of these juices are produced in either "Not from Concentrate" (NFC) or "From Concentrate" (FC) forms. Notably, the organic market typically favours NFC juice due to its superior taste quality, allowing it to command a premium price.

Key citrus-producing nations like the United States, Spain, Italy, Brazil, and Mexico have played significant roles in the global production of organic citrus juice. The driving force behind the growth of the organic citrus juice market has been consumer demand for organic products, including juices. Consumers who prioritize organic and natural products actively seek out organic citrus juice, which can be found in both mainstream grocery stores and specialized health food outlets.

The expanding organic food and beverage market has led to increased availability of organic citrus juices in supermarkets, health food stores, and specialty markets. This greater visibility enhances consumer access and awareness. Many juice producers have responded to the rising demand for organic citrus juices by diversifying their product offerings to include organic options, either as standalone products or blended with

other juices (such as orange juice + carrot juice or in smoothie combinations). This diversification allows companies to tap into the growing organic market and meet the evolving preferences of consumers.

### **Market development trends and outlook**

Organic citrus production has gained significant traction due to the rising consumer demand for organic products. Consumers often opt for organic citrus products, including fresh fruits and juices, driven by perceived health benefits, environmental considerations, and a desire to support sustainable and pesticide-free farming practices. As highlighted earlier, organic citrus cultivation is practiced in diverse regions worldwide, with countries like Spain, Italy, Mexico, and the Dominican Republic emerging as major contributors. Commonly grown organic citrus fruits include acid limes, lemons, oranges, and grapefruits, catering to both the fresh fruit and juice markets.

Countries with robust organic citrus production often export their products to satisfy demand in regions less suited for citrus cultivation or to bridge the gap in local production during off-seasons. Consequently, the organic citrus market has exhibited steady growth, with increased availability of juices and fresh fruits in supermarkets and specialized organic retailers.

Nevertheless, organic citrus farming presents several challenges:

- Lower yields: Organic methods, which exclude chemical fertilizers and inputs for pest and disease management, may result in potentially lower yields compared to conventional citrus farming.
- Nutrition and resilience: Ensuring proper nourishment and resilience of organic citrus orchards in the face of climatic variations remains a significant challenge.
- Pest and disease management: Organic citrus farming relies on the integration of various pest and disease management strategies, often demanding more labour, costs, and expertise from growers.
- Citrus greening disease: The emergence of citrus greening disease in various regions worldwide has had adverse effects, initially reducing tree productivity, impairing citrus fruit quality (flavour and sweetness), and ultimately leading to the demise of large citrus orchards.
- Awareness gap: There is generally low awareness within the citrus sector about the proactive measures needed to counter the potential threat of citrus greening.

As long as these challenges persist, despite the continuous expansion of organic citrus production areas driven by the increasing demand for organic citrus and, potentially, as a response to replacing areas affected by citrus greening disease, the development of organic citrus farming may remain limited compared to other perennial crops. This could lead to a decline in the global citrus fruit acreage, as many producers might shift back to conventional production methods or transition to different crops.

### **Acknowledgements**

Since 2011, Coop, the Swiss supermarket chain, has been collaborating with the Research Institute of Organic Agriculture FiBL and local partners to support Mexican

citrus producers in their efforts to combat citrus greening, a devastating disease. To advance this crucial initiative, financial backing from the Coop Sustainability Fund has enabled FiBL to expand its activities in Mexico. This expansion includes the implementation of a research program focused on the "integrated management of Huanglongbing (HLB) in organic citrus orchards." This initiative underscores the commitment of Coop and FiBL to sustainable agriculture and the well-being of citrus producers in Mexico.

### **References**

CBI (2021) [Online]: The European market potential for citrus and tropical juices. The CBI website, available at <https://www.cbi.eu/market-information/processed-fruit-vegetables-edible-nuts/citrus-and-tropical-juices/market-potential>

### **Web links**

- › Website of the Coop-FiBL citrus project: <https://citrus-greening.fibl.org>
- › YouTube.com: FiBLFilm: Video Citrus Greening – Disease and Symptoms (English) - <https://www.youtube.com/watch?v=W5mg3lv9sTI>
- › YouTube.com: FiBLFilm: Citrus Greening – Alternate Cutting, <https://www.youtube.com/watch?v=aqwWVf6rpWU>