

The European market potential for tropical frozen fruit

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The appeal of frozen tropical fruits in Europe lies in their multifunctionality, nutritional benefits, and the exotic flair they bring to everyday meals and special dishes. The incorporation of these fruits into desserts, breakfast meals and cooking showcases a growing appetite for exotic flavours and culinary exploration. European consumers like to explore exotic smoothie flavours. Industry users (primarily the dairy, ice-cream and bakery industry) are also inventing innovative and healthy products that use frozen tropical fruit as an ingredient.

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1. Product description

Frozen tropical fruits include a range of tropical fruits preserved through a freezing process. Frozen tropical fruits on the European market are often categorised under the international Harmonized System (HS) code 0811, encompassing fruits like guavas, mangoes, mangosteens, papayas, tamarinds, lychees, jackfruit and passion fruit. Frozen tropical fruits in the European market represent a rich and exotic array of species and varieties.

Fresh, clean, sound and ripe fruit is used for freezing. This fruit is native to or grown in tropical regions (climatic zone surrounding the Equator). Due to climatic conditions, tropical fruit is not produced in Europe (except in isolated cases, such as tropical islands belonging to European territories, for example the Canary Islands or Madeira).

Figure 1: Papaya fruit on tree



Source: [papayafruit](#) by [grendelkhan](#) is licensed under [CC BY-SA 2.0](#)

Besides freezing, tropical fruit can also undergo operations such as selection, washing, peeling, grading, cutting and blanching (to deactivate enzymes that can cause changes in flavour and colour during freezing), depending on the type of product. Frozen tropical fruit is used in fruit cocktails, smoothies, ice cream, desserts, jams,

pastries, yogurts and beverages.

The utilisation of frozen tropical fruit in the production of ethnic foods in Europe reflects a growing interest in global cuisines and a desire to infuse authentic, exotic flavours into various dishes. Some tropical fruit is specifically used in the production of ethnic foods such as chutneys and stews (frozen mango, tamarinds and papayas), guacamole (frozen avocado), aguas frescas (frozen soursop and other tropical fruit) and Ponche Navideño (guavas).

Freezing tropical fruits is a delicate process that requires careful attention to preserve the flavour, texture and nutritional value of the fruits. The freezing operation must be carried out at extremely low temperatures so that the freezing process from the product surface to the centre occurs quickly. This minimises the formation of ice crystals that can affect texture. The quick-freezing process is finished when the temperature in the centre of the fruit reaches -18°C.

Quick-frozen tropical fruit can be presented as:

- Individually quick-frozen (IQF). This method freezes individual pieces separately, preventing them from clumping together;
- Block-frozen;
- Frozen crushed fruit;
- Frozen cuts (chunks, dices, slices, halves and so on);
- Combination of different styles; and
- Tropical purees, juices and concentrates are also traded in frozen form.

This study covers general information regarding the market of frozen tropical fruit in Europe, which is of interest to producers in developing countries. Please see Table 1 for the [integrated Tariff of the European Union \(TARIC\)](#) codes for products that are used for statistical analysis. The international Harmonized System (HS) and Combined Nomenclature (CN) codes are an integral part of the TARIC code. Keep in mind that the full range of frozen tropical fruits is wider than shown in statistical analyses.

The term 'Europe' in this study refers to the 27 member states of the European Union (EU), plus the United Kingdom (UK), and EFTA countries (Iceland, Liechtenstein, Norway and Switzerland).

Table 1: Products and relevant TARIC codes in tropical frozen fruit

TARIC codes	Product
08119085	Frozen tropical fruit (guavas, mangoes, mangosteens, papayas, tamarinds, cashew apples, lychees, jackfruit, sapodillo plums, passion fruit, carambola, pitahaya, coconuts, cashew nuts, brazil nuts, areca "betel" nuts, cola nuts and macadamia nuts. Not containing added sugar or sweetening matter.
08119011	Frozen tropical fruit, containing added sugar or other sweetening matter, with a sugar content exceeding 13% by weight
08119031	Frozen tropical fruit, containing added sugar or other sweetening matter, with a sugar content equal to or lower than 13% by weight

Figure 2: Standard tropical frozen fruit mix sold in Europe (frozen banana, mango, papaya and pineapple)



Source: [Autentika Global](#)

Tip:

To explore possible synergies with the dried tropical fruit market, see our [study about exporting dried tropical fruit to Europe](#).

2. What makes Europe an interesting market for tropical frozen fruit?

Europe is a large importer of tropical frozen fruit. Imports of tropical frozen fruit by European countries have increased in volume by 4.0% on average per year over the period 2018-2022. Imports from developing countries are dominant and they account for around 62% of total European imports. The term developing countries in this report is used to denote [countries that are listed on the OECD-DAC list of ODA recipients for 2022 and 2023 flows](#) PDF). The annual growth rate is expressed as the cumulative annual growth rate, or CAGR.

European imports of tropical frozen fruit have been rising every year since 2018 and this trend is expected to continue. In the next 3 years, the European market for frozen tropical fruit is likely to grow by around 5% in volume terms, although this could be lower if inflationary and recessionary pressures remain strong. Shorter imports fluxes will mostly be related to crop volumes and prices.

Rising demand for healthy, convenient frozen foods amongst European consumers is expected to drive long-

term growth. Consumer interest in a more diverse menu with exotic fruits and foods is evident. The popularity of smoothies as part of breakfasts and smaller meals is another driver that will sustain the growth of frozen tropical fruit consumption over the longer term.

Source: Autentika Global, GTA, 2023. *tropical frozen fruit products from Table 1

Between 2018 and 2022, European imports of tropical frozen fruit grew every year on average by 11.8% to a value of €212 million in 2022. With an annual average growth rate of 18%, imports from developing countries have increased faster compared to imports from other European countries (average growth of 5%). Internal European trade consists of simple re-exporting of imported tropical frozen fruit. Moreover, frozen tropical fruit with added sugar holds a large share of intra-European trade, meaning that after imports from developing countries, European traders are adding value to imported products.

The trend of rising imports from developing countries is the dominant trend in the European tropical frozen fruit market. While volume imports grew by more than 8% per year from developing countries between 2018 and 2022, imports remained practically stagnant at around 60,000 tonnes in 2022. This can be explained by a period of market consolidation after several sharp increases in imported volumes in preceding years.

Source: Autentika Global, GTA, 2023. *tropical frozen fruit products from Table 1

The largest quantities of tropical frozen fruit are consumed by the fruit processing industry, while smaller shares are taken by retail and foodservice channels. The Netherlands, Germany, France, Belgium, Poland and the United Kingdom are the largest markets for tropical frozen fruit in Europe. However, the Netherlands and Belgium have positioned themselves more as a trade/processing hub. Belgium is home to several large frozen processing companies and most imported tropical frozen fruit is re-exported or processed for further exports.

Official Eurostat statistical data for tariff code 08119011 show that [imports of this category of frozen tropical fruit products](#) by the Netherlands from Germany amounted to 708 tonnes worth €2.4 million in 2020, 764 tonnes worth €2.0 million in 2021 and an extraordinarily high 98,107 tonnes worth just €3.6 million in 2022.

The apparent error in import volumes in 2022 has been officially reported to Eurostat by Autentika Global on 7 August 2023. The European Statistical Data Support (ESDS) department confirmed that the “amount in tonnes seems way too high” and stated they will contact the Netherlands for an explanation.

This report is based on adjusted data that presumes imports by the Netherlands from Germany amounted to a much more plausible 981 tonnes worth €3.6 million in 2022, instead of 98,107 tonnes. The ESDS has indicated that the process of verifying the data with the Netherlands could take time. “Please note that they are not always very responsive. With millions of individual data elements forming their statistics they do not systematically investigate all (potential) errors, especially when they account for < 0.1 of their total trade,” the ESDS stated in an intermediate answer to Autentika Global on 9 August 2023.

Tips:

Read CBI’s [demand study](#) for a broader view of the processed fruit and vegetable market in Europe.

Seek new European market opportunities by consulting CBI’s [study on trends](#) in the processed fruit and vegetable market.

3. Which European countries offer most opportunities for tropical frozen fruit?

Within Europe, the Netherlands and Belgium are important trade hubs with significant re-exports of imported tropical frozen fruit. In 2019, both countries showed a high growth rate. Poland and the United Kingdom are the smallest of the top 6 leading importing countries; however, both showed high growth rates in the past 5 years and hence offer opportunities. Other large European importers of tropical frozen fruit are Germany and France.

The main importers of tropical frozen fruit in Europe are also the leading consumers: the Netherlands, Germany and France. Figure 3 represents apparent consumption. Apparent consumption is expressed as the difference between imports and exports. The data on apparent consumption does not provide direct insight into product stocks. Large stocks in big trading markets, such as the Netherlands and Germany, can influence imports. Most large Dutch and German traders regularly keep stocks of tropical frozen fruit to ensure a stable supply.

The consumption of tropical frozen fruit is less concentrated than the import. The top 6 importers of tropical frozen fruit have an apparent consumption that is slightly less than half of what they import. While the Netherlands, Germany and Belgium are the leading importers, official statistics show that France is a 4 times larger consumer market than Belgium. This means that large quantities are re-exported by Belgium.

Over the last 5 years, a steady and high growth rate of consumption was noted in Poland, while the high variability of apparent consumption in the Netherlands is affected by inventory variations and trade variations, as the country is a major exporter. The Netherlands showed a negative value for apparent consumption in 2019, which reflects large inventories. The general trend in the 2018-2022 period was towards increasing consumption, with the exception of the United Kingdom.

Source: [Autentika Global](#), GTA, 2023. *tropical frozen fruit products from Table 1

Germany: The leading European consumer market

Germany is Europe's largest consumer of tropical frozen fruit in Europe. German imports amounted to 13,803 tonnes in 2022, or 14% of total European imports. German imports contracted annually by 1.9% on average between 2018 and 2022. Apparent consumption spiked upwards to around 12,500 tonnes in 2020 and 2021, then weakened to around 10,600 tonnes in 2022. It is worth keeping in mind that foreign trade statistical data only shows part of the picture, as it does not consider inventory levels inside the country.

Germany's Frozen Food Institute (dti) stated that Germans consumed more frozen food than ever before in 2022. Total sales of frozen foods increased by 3.6% to 3.9 million tonnes in 2022. Although this is cumulative data for all frozen foods, it reveals that the frozen food category is performing strongly.

Figure 6: Frozen tropical fruit mixture containing frozen mango, papaya, kiwi and coconut, sold by Lidl



Source: [Autentika Global](#)

German fruit ingredient companies manufacture a wide range of products with tropical frozen fruit. Those companies supply different market segments, such as dairy, ice-cream, bakery, beverages and other food industries. The frozen food industry in Germany has a turnover of around €18.5 billion and supplies 80 million people with fresh, frozen food every day.

Overall, the latest trends in the German frozen food market show that the 'breakfast & dessert' frozen food category that includes frozen fruits [showed rapid growth in 2022](#). Frozen baked goods and frozen snacks have also experienced double-digit growth according to the dti. Furthermore, the institute has observed a positive trend towards frozen food in the out-of-home market, which bodes well for exporters of tropical frozen fruit.

Table 2: German domestic sales of frozen breakfast and dessert food (in tonnes)

	Retail market		Out-of-home market		Total	
	2021	2022	2021	2022	2021	2022
Frozen bakery products	259,672	248,343	619,460	753,670	957,345	1,076,100
Frozen fruit (including juice)	33,596	27,818	34,396	34,690	67,992	62,508

Frozen dairy products, frozen desserts	5,678	6,212	4,543	5,367	10,221	11,579
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Source: [Autentika Global](#), dti (PDF)

Compared to the Netherlands, Germany's imports of frozen tropical fruit from developing countries are relatively small. Some 62% of the import volume in 2022 was sourced from developing countries. Germany's imports from developing countries have risen by 4.9% on average in the past 5 years, despite a drop in overall imports. This indicates that Germany increasingly imports tropical frozen fruit directly from developing countries instead of through European re-exporting countries such as the Netherlands.

Source: [Autentika Global](#), GTA, 2023. *tropical frozen fruit products from Table 1

The leading developing-country suppliers to Germany in terms of volume are Peru and Vietnam, accounting for a share of 32% and 20% respectively. India and Ecuador follow with a much smaller share. Vietnam is steadily becoming a significant trade partner for Germany in the tropical frozen fruit segment. Vietnam's exports more than doubled in the 5 years between 2018 and 2022. Ecuador's annual exports to Germany also grew at an average pace of 46% between 2018 and 2022.

Figure 8: Frozen mixed fruit product containing frozen mango sold by Lidl



Source: [Autentika Global](#)

The consumption of tropical frozen fruit in Germany is benefiting from greater consumer attention to healthy eating and a desire to introduce variety into the diet. German consumers are increasingly using tropical frozen fruit for home preparation of smoothies and in breakfast cereals/bowls. In order to facilitate home preparation of smoothies, German retailers offer many ready-to-blend mixtures of frozen tropical fruit.

Tips:

Find German traders of tropical frozen fruit on the websites of the specialised trade promotion organisation [Waren-Verein der Hamburger Börse](#) and the German B2B platform [Wer liefert was \(wlw\)](#).

Keep up-to-date with the German frozen food market by following [news from the German Frozen Food Institute](#) (dti). The news is in German language only (use Google Translate to read it).

The Netherlands: The largest importer and a re-exporting country

With imports of more than 23,000 tonnes in 2022, the Netherlands is Europe's largest importer of frozen tropical fruit. The country is responsible for 24% of total European imports. In the past 5 years, Dutch imports grew at an average annual rate of 6.7%. Imported volumes peaked at almost 26,000 tonnes in 2021, but then slightly weakened to 23,185 tonnes in 2022. The value of Dutch imports of tropical frozen fruit between 2018 and 2022 grew at an average yearly rate of 21.6%. Over the next 3 years, imports of tropical frozen fruit could continue increasing by around 5% per year.

The largest part of tropical frozen fruit is sourced directly from developing countries (90%). This is one of the highest shares compared to the other leading importing countries. In 2022, the leading supplier to the Netherlands was Peru, followed by Vietnam, India and Brazil. Vietnam has seen a sizeable increase in exports after shipments to the Netherlands rose from 1,838 tonnes in 2018 to 4,977 tonnes in 2022.

Although the Netherlands is a large importer, the country is not a large consumption market as the majority of imported quantities are re-exported to other destinations. As such, the Netherlands is an important hub for tropical frozen fruit. Tropical frozen fruit coming from the Netherlands is responsible for 10% of the total European imports.

In the Netherlands, the consumption of tropical frozen fruit is boosted by a [trend towards healthier eating](#) and the popularity of smoothie and juice bars across the country. Exporters of tropical frozen fruit to the Netherlands can benefit from other important trends. These include a [switch to more plant-based foods](#) and consumer openness [to international flavours and unique, exotic products](#), according to Rabobank.

Longer-term (2026 and beyond) prospects for frozen food exports to the Netherlands are strong, according to a recent report by FoodService Institute Netherlands (FSIN). In 2023, the Dutch food market will [grow to a turnover of €68.9 billion \(PDF\)](#); that is an increase of 3.9%. Consumers also eat and drink out more often and are opting more and more for luxury and convenience products in the supermarket. The FSIN expects these trends of stronger food sales to continue.

Tip:

Keep an eye on current trends in the Dutch food market by periodically consulting [the news page](#) (in Dutch; use Google Translate to read it) of the FSIN association.

France: Limited direct imports from developing countries

In 2022, French volumes totalled almost 11,000 tonnes in total in 2022, or 11% of total EU imports. This makes France Europe's fourth-largest importer of tropical frozen fruit, ahead of fifth-ranked Poland. French imports increased annually by 0.7% in value between 2018 and 2022.

Figure 9: Häagen-Dazs mango ice cream made in France by British-French ice cream manufacturer Froneri



Source: [Autentika Global](#)

As opposed to the Netherlands and Belgium, France only sources 27% of its tropical frozen fruit from developing countries. In fact, France's largest suppliers are Belgium, with a 34% share, and the Netherlands, with a 24% share. These 2 European countries account for more than half of France's tropical frozen fruit imports. This dominance of Belgian and Dutch exporters has not weakened in the past 5 years, in fact it has even strengthened.

The third-largest supplier to France is Vietnam with a 9% share, followed by fourth-ranked Madagascar with 7%. Spain, India and Germany follow as the next most important suppliers to France, although their share is much smaller varying from 4.2% to 7.0%.

French exports to Europe increased from 630 tonnes in 2018 to 1,044 tonnes in 2022, indicating that France is becoming a more important player in the tropical frozen fruit market in Europe.

Tropical frozen fruit is increasingly used for the home preparation of smoothies. As a result of that trend, producers are increasingly making ready-to-blend smoothie mixtures, such as the [smoothie mixtures](#) of the leading French retailer Carrefour. Private-label products dominate French retail sales.

A large consumer of tropical frozen fruit is the bakery industry that uses tropical fruit preparations as fillings for pastries, cakes and other products. Those fruit preparations are made by specialised companies, such as [Valade](#)

Groupe, Capfruit and Ponthier.

The frozen foods market in France has an estimated annual turnover of €9 billion. Short-term and longer-term (2026 and beyond) prospects for exports to France remain strong. The average annual growth rate of the frozen food market is projected to reach 5.1% between 2019 and 2023, according to [France's association of frozen and ice cream product companies](#) (Les EGS). Data published by the association shows that 98.6% of French people consume frozen products every year.

With a well-developed market for frozen fruit, the French market for tropical frozen fruit is likely to continue growing at a pace of 1% per year in the short-term.

Tips:

Find a list of French frozen fruit and ice cream companies on the [member directory](#) of Les EGS (under the "Les adhérents Les E.G.S" subheading).

Get in touch with Les EGS to explore possibilities for participating in their campaigns to promote tropical frozen food products to restaurants, distributors, professionals and the general public. You can use [a contact form on the website](#) of its parent association Adepale.

If you are not from a French-speaking country, consider investing in French-speaking staff for an easier penetration into the French market for frozen fruit.

Belgium: European trade hub for tropical frozen fruit

Similar to the Netherlands, Belgium does not consume the majority of tropical frozen fruit imports locally, but instead re-exports them to other destinations. Belgium is a very concentrated market for frozen food, as the country is home to a small number of very large importers and European market leaders, for example [Crops](#), [Greenyard Frozen](#) (Penguin Foods) and [Ardo](#). These specialised Belgian frozen food companies act as re-exporters, processors and suppliers of food retail, food service and industry segments across Europe.

Amongst the 6 largest importers, Belgium had the fastest growth rate of imports in 2018-2022. Belgium's imports rose consistently between 2018 and 2022. Tropical frozen fruit imports rose by an above average rate of 12% in 2022. On average, Belgium's imports of tropical frozen fruit increased annually by 11.0% in volume during the past 5 years. Growth of tropical frozen fruit imports is likely to continue at a slightly slower pace of 7-8% per year in the short term. Long-term prospects for growth, beyond 2026, remain strong, thanks to Belgium's strategic trade position and developed industry.

Belgium has a very high (85%) share of imports from developing countries. Volume growth from these countries was high between 2018 and 2022, as imports increased 9.3% per year. Imports from Peru are driving most of this growth, as Peruvian frozen food imports increased by 16.8% per year. Peru is the number 1 supplier to Belgium, having almost doubled its annual export volumes from 3,500 tonnes in 2018 to 6,600 tonnes in 2022. Imports from second-ranked Vietnam rose by 43.5% per year, while imports from India declined by 4.6% per year.

As for exports to other European destinations, Belgium's export volume increased from 6,982 tonnes in 2018 to 10,438 tonnes in 2022 (an average growth of 9.9%). More than 40% of these exports are destined for France.

One of the drivers for the increased consumption of tropical frozen fruit is the home preparation of smoothies and the development of smoothie and juice bars. One of the leading suppliers of frozen smoothie solutions in Belgium is [Crops](#). Crops is even organising lectures to produce innovative smoothie flavours in their

development centre in Ooigem (the so-called “Smoothie Academy”).

Tip:

Keep an eye on current trends in the Belgian food market by periodically consulting [the news page](#) (in French, use Google Translate to read it) of the Federation of the Belgian Food Industry (FEVIA).

Poland: The market with a strong consumption growth

Poland is a very interesting market for exporters as it showed a very high average growth of consumption in volume over the last 5 years. Imports of tropical frozen fruit have increased from 1,678 tonnes in 2018 to almost 4,000 tonnes in 2022. This is an average annual increase of 24%. This is the only country that has showed continued growth each year. This trend of growing imports of frozen tropical fruit is in line with Poland’s development in the last decade into one of Europe’s processing hubs for food and fruit products, such as juices and jams.

Some 72% of Polish imports come from developing countries. Although this share is not as high as Belgium and the Netherlands, it is noteworthy because the average annual growth has been high. Imports from developing countries have increased by 23.7% per year on average in the past 5 years. On the other hand, Polish imports of tropical frozen fruit from EU suppliers have fallen from almost 5,000 tonnes in 2018 to 2,660 tonnes in 2022.

With a volume of 3,470 tonnes and a share of 33%, Peru is the largest supplier of tropical frozen fruit to Poland. However, the fastest growing supplier to Poland is Vietnam. Vietnamese exports increased by 121% per year between 2018 and 2022. As a result, the country now accounts for one-fifth of Poland’s tropical frozen food imports. The interests of frozen fruit companies in Poland are represented by the National Association of Fruit and Vegetable Processors ([KSPOiW](#)).

Tip:

Check out the local competition by consulting a list of Polish frozen fruit companies on the [member directory](#) page of KSPOiW (in Polish).

The United Kingdom

The United Kingdom’s imports of tropical frozen fruit fell from 6,985 tonnes in 2018 to 5,247 tonnes in 2022. This represents an average annual contraction of 7% in this period. The country is responsible for 5.5% of total European imports. However, the general outlook for the frozen foods market in the United Kingdom seems to be improving in 2023. Frozen food sales [have returned to growth](#) in the first quarter of 2023, according to the British Frozen Food Federation (BFFF).

There are great opportunities for suppliers from developing countries, as the share of tropical frozen fruit supplied by European exporters has fallen dramatically. The UK’s imports from European suppliers fell by 25.5% per year between 2018 and 2022. Developing countries now account for 87.1% of UK imports.

The largest suppliers to the United Kingdom are Vietnam (32%), India (2%) and Peru (16%), together accounting for a share of more than two-thirds in volume. In terms of direct imports, the United Kingdom sources the largest part from Peru (14%) and Vietnam (11%).

Consumption of tropical frozen fruit is driven to a large extent by the consumption of smoothies in the United Kingdom. The retail segment is almost entirely dominated by private label brands, as there is hardly any independent brand with a significant market share. As a result, innovation in the shelves comes from the private label brands, such as “ready to blend” mixtures by [Pack’d](#). The British retail chain Waitrose has also developed [LoveLife](#) smoothie mixtures in cooperation with frozen food company Ardo UK.

One of the best-known smoothie brands in Europe, [Innocent](#), is from the United Kingdom. Innocent is also a leading brand in British food retail. [Naked smoothies](#), manufactured by Naked Juice, is another important brand in the UK market.

The cost-of-living crisis has promoted more Brits to change their shopping behaviours. More consumers are shopping at ALDI and Lidl, rather than Morrisons, as they look to reduce the cost of their shopping basket. The BFFI stated in June 2023 that [more shoppers are choosing frozen food](#) during the cost-of-living crisis due to its value for money, convenience and high quality. This offers new opportunities for exporters from developing countries.

Tips:

Learn more about the United Kingdom’s frozen fruit market by reading the [latest news](#) on the BFFF website. Also keep an eye on Brexit-related developments impacting the frozen fruit sector on the BFFF’s [Brexit Hub](#).

Search for potential UK partner companies that are active in the frozen fruit import segment by [filtering through the membership list](#) of the BFFF.

See our study on [demand for processed fruit and vegetables](#) for more information about general trade developments within the European market.

4. Which trends offer opportunities on the European tropical frozen fruit market?

Healthy and unprocessed food is very popular amongst European consumers. They increasingly demand healthy and plant-based foods that are convenient, such as smoothies for breakfast and small or in-between meals. There is an increasing demand for non-dairy, vegan, convenient and easy-to-prepare food. High food inflation reduced the purchasing power of European consumers in 2022 and 2023, which is a trend that generally favours increased consumption of frozen fruit.

Below is a summary of the most important trends specifically for tropical frozen fruit. To find out more about general trends, read our study on [trends in the European processed fruit and vegetables market](#).

Food inflation and cost-of-living crisis

The ongoing cost-of-living crisis in many parts of Europe, where inflation has been exceptionally high in 2022 and early 2023, has seen consumers migrate away from more expensive fresh fruit to greater value for money options, such as frozen fruit. Officials from the British Frozen Food Federation revealed in May 2023 that high inflation has had a significant impact on consumer spending habits over the winter months. This resulted in a strong boost for sales of frozen food in early 2023. Similar trends have been seen in Germany and Poland.

However, growth is not uniform across the entire frozen food palette. For example, more indulgent products such as ice cream and confectionery [saw a drop in sales volume](#) in the same period. On the other hand, consumers may find it more cost-efficient to buy tropical frozen fruit mixtures to make smoothies at home

instead of buying costlier ready-to-go tropical fruit smoothies. This shift towards increased consumption of frozen fruit could mean consumers could build new habits and return to the frozen aisle during their weekly shop.

The switch towards frozen fruit also aligns with a wider food industry desire to reduce food waste and its environmental impact. In the United Kingdom, for example, every year, [the food industry wastes 3.6 million tonnes of food](#), with a market value of £1.2 billion at farm gate prices. Blast freezing maintains the quality of the fruit at the highest standard whilst extending the shelf life. This provides a great opportunity for exporters of frozen tropical fruit to help address important issues in Europe, such as food waste and a longer shelf-life of fruits.

The European Union's [annual inflation was 6.1% \(PDF\)](#), measured in July 2023, down from 6.4% in June. A year earlier, inflation was 9.8%. However, the highest contribution to the annual euro area inflation rate came from services and food, alcohol and tobacco. The annual inflation in the food segment of the European economy was 10.8%, which indicates there is significant pressure on consumer spending.

In August 2023, the Bank of England warned that [inflation in the UK is still too high](#). In June, prices were 7.9% higher than the year before, well above the bank's target of 2%. Food price inflation has remained extremely high, falling from just under 20% in March 2023 to 17.3% in June 2023. "Evidence from the Bank's agents suggests that food price inflation is likely to continue to slow, albeit only gradually. Industry contacts expect annual food inflation to fall to around, or a little below, 10% by the end of the year," the Bank said in August 2023.

Tips:

Monitor major economic data in the UK, EU and EFTA countries. High inflation, especially in the food sector, will probably lead to lower consumer purchases and a shift in consumer patterns. Check out [Eurostat's free monthly inflation reports](#).

If you are interested in the latest economic data for the UK, consult the Bank of England's monthly monetary policy reports and inflation attitudes surveys. Both are available for free from the [Bank's publications web page](#).

Keep an eye on events in the ongoing war in Ukraine that is now (2023) in its second year. Food inflation has been affected by wider developments in global agricultural commodity prices, which also reflect Russia's invasion of Ukraine and wider pressures along the supply chain.

Sourcing of sustainably produced tropical fruit

Global production and trade of tropical fruits have grown dramatically in recent years. Tropical fruits are also part of a healthy diet for millions of people and contribute to development in producer countries. The United Nations Food and Agriculture Organization (FAO) states that companies need to address business risks related to sustainability [to ensure continued success in these value chains](#).

New research shows that [significant opportunities exist](#) for producers of tropical fruit to improve the sustainability of their produce. This can be done by adopting a waste-to-value approach. Amongst other things, this can improve local employment, preserve natural resources, allow favourable use of side-streams in local energy production, promote the use of environmentally-friendly packaging material for transport, and add health functionalities to the end products.

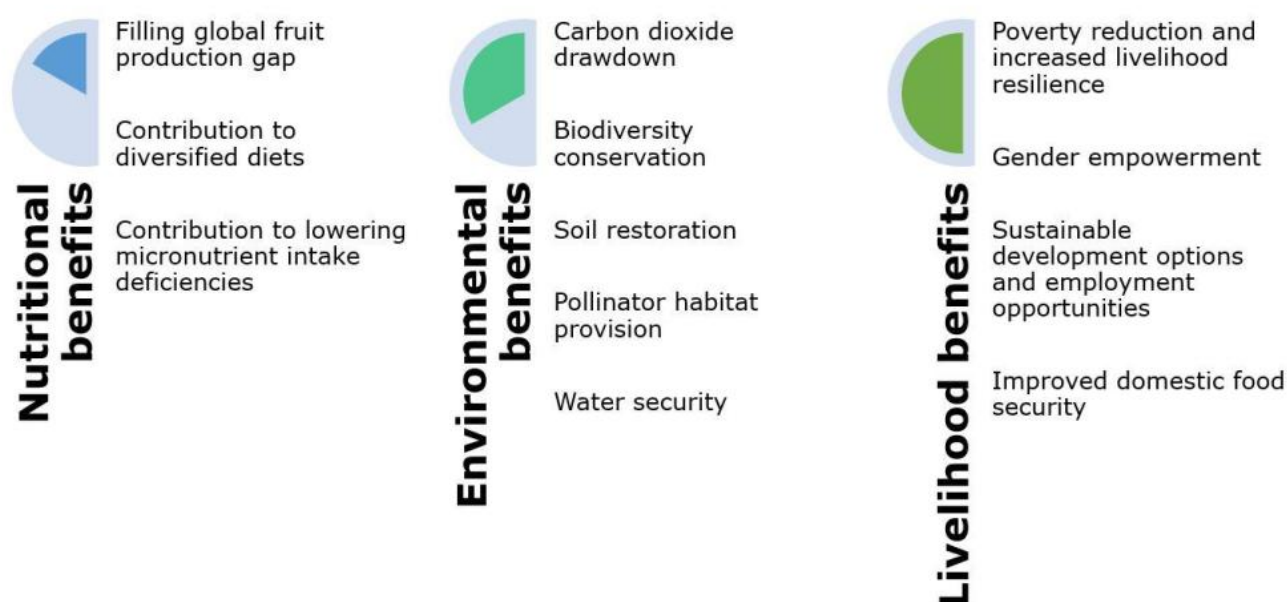
Tropical fruits such as mango, papaya, durian, lychee, banana, tamarind and rambutan are tree-grown fruits.

The trees grow vertically and are perennial crops, which means producing tropical fruit requires less land than the production of many other foods and soil disturbance is not as frequent. Research shows that [tropical fruit production offers an excellent opportunity](#) to simultaneously transform food systems and contribute to landscape restoration in developing tropical countries.

Perennial crops, such as tropical fruit trees, have a long lifespan and do not require annual soil tilling, which means that they have a greater ability to protect soil carbon than many other plants. Tree plantation crops, such as mango and papaya, are especially useful as carbon reservoirs because trees hold on to significantly more carbon per unit area than other types of vegetation. This means that there is great potential for the suppliers to promote the crop's positive effect on the carbon footprint and its greater resilience to climate change

2 recognised environmental benefits of an increase in tropical tree-based food production and consumption are its potential contributions to atmospheric carbon dioxide drawdown and biodiversity conservation. Currently, trees contribute to more than 75% of global carbon storage on agricultural land.

Figure 10: Overview of the nutritional, environmental and livelihood benefits that can be obtained with increased tree-sourced food consumption and production



Source: [Food for thought: The underutilized potential of tropical tree-sourced foods for 21st century sustainable food systems](#), Authors: [Merel Jensen](#) et al., Licence: CC BY 4.0

Some tropical fruits, such as pineapple, are grown on a low-lying plant. Other, not tree-based, tropical fruits include passion fruit and kiwi that are grown on a vine and dragon fruit/pitaya that is grown on a type of cactus. Commercial production of non-tree tropical crops can be intensive, requiring high planting densities, significant water resources and frequent application of agrochemicals to prepare for planting. The conversion of forests or native lands into farms can lead to habitat loss, impacting biodiversity.

The pineapple industry specifically has important labour issues, such as contracting and outsourcing to third-party companies, rather than direct hiring by pineapple-processing and exporting firms. There are also concerns about worker health and safety when exposed to agrochemicals.

Numerous new sustainability concerns in tropical fruit value chains have impacted supply, demand, logistics,

and worker health and safety, according to an [FAO report \(PDF\)](#) from 2021. However, these difficulties can be used to create both business possibilities and more sustainable communities.

The International Tropical Fruits Network (TFNet) is actively involved in supporting tropical fruit companies and producer organisations in making their operations more sustainable and resilient. TFNet is an independent and self-financing global network originally established under the auspices of the FAO. It is an international organisation with the mandate and role to promote sustainable global development of the tropical fruit industry in relation to production, consumption and trade. TFNet is an expanding network with 283 members from 45 countries.

Improving the sustainability of tropical fruit production destined for European markets is important, as Europe is increasingly focused on sustainable production of food and other products. The European Union has implemented a set of policies and actions called the [European Green Deal](#). The aim of this Green Deal is to make the European economy more sustainable and climate-neutral by 2050. The action plan also includes a [Farm to Fork Strategy](#) aimed at making food systems fairer and more environmentally friendly.

However, sustainability is a broad issue. On some sustainability parameters, tropical frozen fruit production can gain a competitive edge against fresh tropical fruits. For example, there is potential for much lower waste, better utilisation of cheaper transport solutions, such as sea cargo instead of air cargo, and a lower CO2 footprint.

More than half of surveyed Europeans confirmed they ate more sustainably since the COVID-19 pandemic, according to new market research. The research by Kerry Group also showed that 51% of consumers in foodservice said [they were happy to pay more for sustainable options](#).

[Compañía Frutera La Paz](#), a Costa Rica-based supplier of IQF tropical fruits, produces its products under high quality standards, always taking care to preserve the environment. The company prides itself on a [ten-point sustainability plan](#). Furthermore, the company has been certified as carbon neutral according to the PAS 2060 standard by EcoAct Espana, an international climate consultancy. The company exports a range of frozen fruits, including pineapple, melon, banana and papaya.

Tips:

EcoVadis, a leading provider of business sustainability ratings, offers free [videos about how to make your supply chain more sustainable](#).

Join the [FAO's Responsible Tropical Fruits](#) project. To learn more about the project, [download the flyer \(PDF\)](#) and write to the project team at Responsible-Fruits@fao.org. There is no cost to participate.

Follow news from the [AGRINFO programme](#). Launched in 2023, it is designed to keep low- and middle-income countries up to date on new EU policies, regulations and standards with potential impacts on all agri-food value chains.

Consider investing in sustainable certification schemes such as [Rainforest Alliance](#), [Fairtrade](#), [Fair for Life](#) and [Fair Trade Certified](#) to ensure a stable production and better access to European markets.

Follow [news and upcoming event announcements](#) from the International Tropical Fruits Network (TFNet).

[Autentika Global](#) carried out this study on behalf of CBI.

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