CBI
Ministry of Foreign Affairs

# Exporting frozen fruit and vegetables to Europe

The increasing consumption of frozen fruit and vegetables is driven by the growing consumer desire for convenient and faster-to-prepare foods. Europe is the largest market for frozen fruit and vegetables in the world, representing nearly 50% of the total world imports. Large importing and consuming markets such as Germany, France, Belgium and the United Kingdom offer opportunities for exporters from developing countries.

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## 1 . Product description

### Product definition

Frozen fruit and vegetables are a range of products prepared by the use of a freezing process on fresh, clean, sound and ripe fruit and vegetables. Apart from freezing in the production process, fruit and vegetables can also undergo operations such as washing, peeling, grading, cutting, blanching/deactivation of enzyme activity and so on, depending on the type of product.

The freezing operation must be carried out in such a way that the freezing process from the surface to the centre of the product occurs quickly. The quick freezing process is finished when the temperature in the centre of the fruit reaches -18 °C.

Quick-frozen fruit and vegetables can be presented as:

- whole and free-flowing (individually quick–frozen, IQF);
- non-free-flowing (in the form of a block);
- crumbled (in the form of crushed fruit);
- cut in different shapes;
- combination of different styles.

Optional ingredients allowed for specific frozen fruit and vegetables are:

- salt (sodium chloride);

- sugars (sucrose, invert sugar, invert sugar syrup, dextrose, fructose, glucose syrup or dried glucose syrup, edible oils);
- aromatic herbs;
- stock or juices of vegetables;
- vegetable garnishes up to a maximum of 10% of the total drained vegetable ingredient.

This study covers general information regarding the market for frozen fruit and vegetables in Europe, which is of interest to producers in developing countries. Please see Table 1 for the products covered and their product codes.

Table 1: Products in the product group of frozen fruit and vegetables

| Combined Nomenclature Number | Product |
| --- | --- |
| 081110 (and corresponding 8 digit codes) | Frozen strawberries |
| 081120 (and corresponding 8 digit codes) | Frozen raspberries, blackberries, mulberries, loganberries, black, white or red currants and gooseberries |
| 081190 (and corresponding 8 digit codes) | Other frozen fruit |
| 0710 (and corresponding 8 digit codes) | Frozen vegetables |

Picture 1: Mixture of frozen berry fruit

*Source: Flickr*

Picture 2: Mixture of frozen vegetables

*Source: Flickr*

Picture 3: Frozen mango cubes

*Source: Flickr*

Picture 4: Frozen spinach cubes

*Source: Public Domain Pictures*

# Product specification

## Quality

The basic quality requirements for frozen fruit and vegetables are:

- good, reasonably uniform colour, characteristic of the type and variety;
- clean, sound and free from extraneous objects;
- free from foreign flavour and odour;
- when presented as free-flowing, fruit and vegetables not attached to each other;
- reasonably free from uncoloured fruit;
- normally developed with the shape typical for the variety in each package;
- for berry types of fruit, reasonably free from berries which are not whole in shape.

Additional requirements for buyer quality:

An important quality indicator for frozen fruit intended for further processing is the Brix level (sugar content of an aqueous solution).

Additional quality specifications regarding grading designation, cutting styles, defects and allowances for frozen vegetables are defined in the [Codex Alimentarius Standard] for carrots, corn on the cob, leeks and whole kernel corn.

In addition to the annexes mentioned, separate standards are defined for:

- peas;
- spinach;
- broccoli;

- cauliflower;
- Brussels sprouts;
- green and wax beans;
- French fried potatoes.

Regarding fruit, specific standards are defined for:

- strawberries;
- raspberries;
- peaches;
- bilberries;
- blueberries.

## Labelling

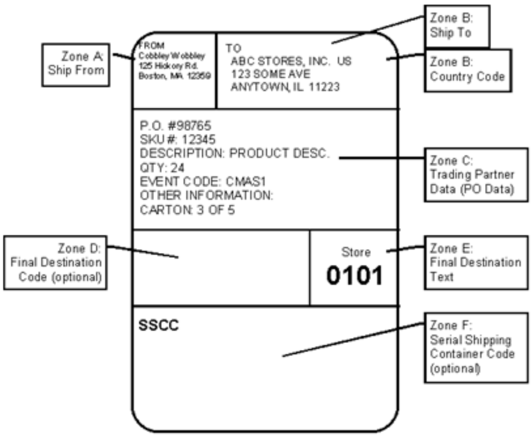
According to Codex Alimentarius standards and industry practice, the name of the food declared on the label shall include the following information:

- “name of fruit or vegetable”;
- the words “quick frozen” or “frozen”;
- the name of the ingredient if used (for example, sugar, salt, spices, and so on);
- the style, as appropriate (for example, “IQF whole”, “block”, “crumble”, sized/unsized);
- the style of cutting, if applicable (for example, diced, halved, julienned, trimmed, ring, chopped, and so on).

In the case of frozen fruit and vegetables in bulk packaging, the information required above must be placed on the container or in accompanying documents. The name of the product as well as the name and address of the manufacturer or packer must always be on the container.

In addition to the type of fruit or vegetable, it is common that the product specification also declares the crop year and variety.

Picture 5: Shipping label example




Source: Integrated Business Communications Alliance

Picture 6: Example of allergen advice on retail packaging


Source: QuickLabel Systems

## Packaging

The most common types of packaging for frozen fruit and vegetables are polyethylene bags, carton boxes layered with folium and paper bags. The carton boxes are packed on EURO pallets (80 x 120 cm), protected by polyethylene foil. Cardboard must be durable enough not to be deformed under the weight on the pallet due to prolonged storage. Cardboard boxes are sealed with tape. The size of the packaging may vary according to the buyers’ requests.

Retail packaging includes plastic bags, carton packaging, plastic containers or foil bags.

### Tip:

- More information on requirements for frozen fruit and vegetables can be found below in this fact sheet.

## 2 . Which European markets offer opportunities for exporters of frozen fruit and vegetables?

Germany, France, Belgium and the United Kingdom offer most of the opportunities for exports of frozen fruit and vegetables on the European market. Germany is the largest European importer of frozen fruit, while France is the largest importer of frozen vegetables. In addition to the largest markets, opportunities can be found on the growing markets of Central and Eastern Europe as well as Ireland. Products with rising demand include frozen berry fruit.

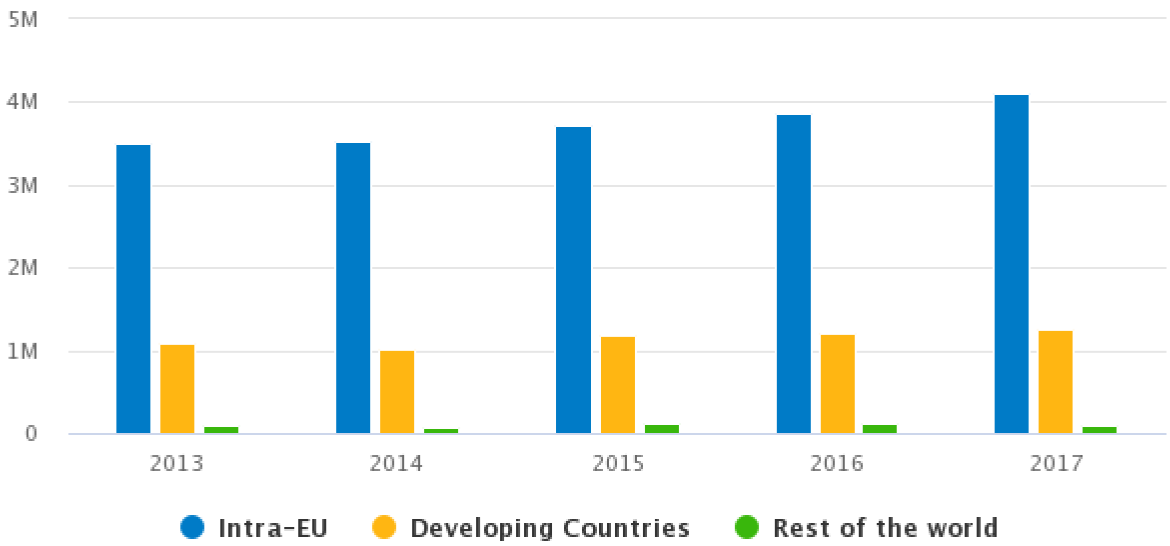
### Imports

#### Import of frozen fruit and vegetables is increasing

- The total European import of frozen fruit and vegetables has grown by an annual average of 5% in value and 3% in volume since 2013, reaching € 5.5 billion or 4.7 million tonnes in 2017.
- Values grew more rapidly than volumes. This fact is mainly because the price of frozen berry fruit increased in recent years due to a slightly higher demand than supply.
- It is expected that imports of frozen fruit and vegetables will continue to increase in the coming years, especially in the segment of frozen fruit. This expected increase will be driven by the increasing demand for berry types of fruit. Frozen berries are increasingly used as ingredients in the fruit processing industry as well as in home preparations of smoothies and similar products. Exporters from developing countries can use this opportunity and plan to increase their production of berry fruit strategically.

Figure 1: European imports of frozen fruit and vegetables by main origin 2013-2017

in € thousand




Source: ITC Trademap

#### Germany is the largest importer of frozen fruit and vegetables

- European imports are concentrated and the three largest importers (Germany, France and the

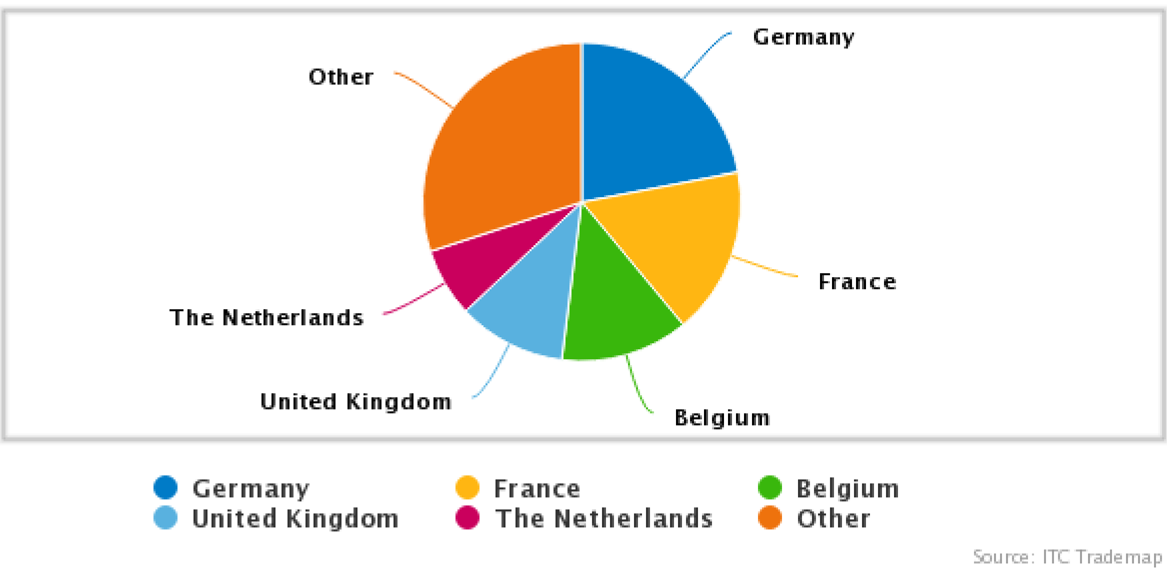
United Kingdom) account for more than half of the total imports.
- The highest average growth of annual import in quantity over the last five years was found in Romania (23%), followed by Poland (11%) and Bulgaria (11%)

## Frozen berries increasingly popular

- The largest part of imports are made up of various frozen vegetables, dominated by frozen broccoli and courgettes (30%) or frozen non-berry fruit (20%).
- Over the last five years, the highest growth in import value was in frozen vegetables and mixtures of vegetables (12% annual growth rate). Although the highest quantities of frozen berries are traditionally supplied from south-east European countries and Poland, there is a continual development of production in developing countries such as South American countries, China and Mexico.

Figure 2: European imports of frozen fruit and vegetables by country 2017

in share of imported quantity

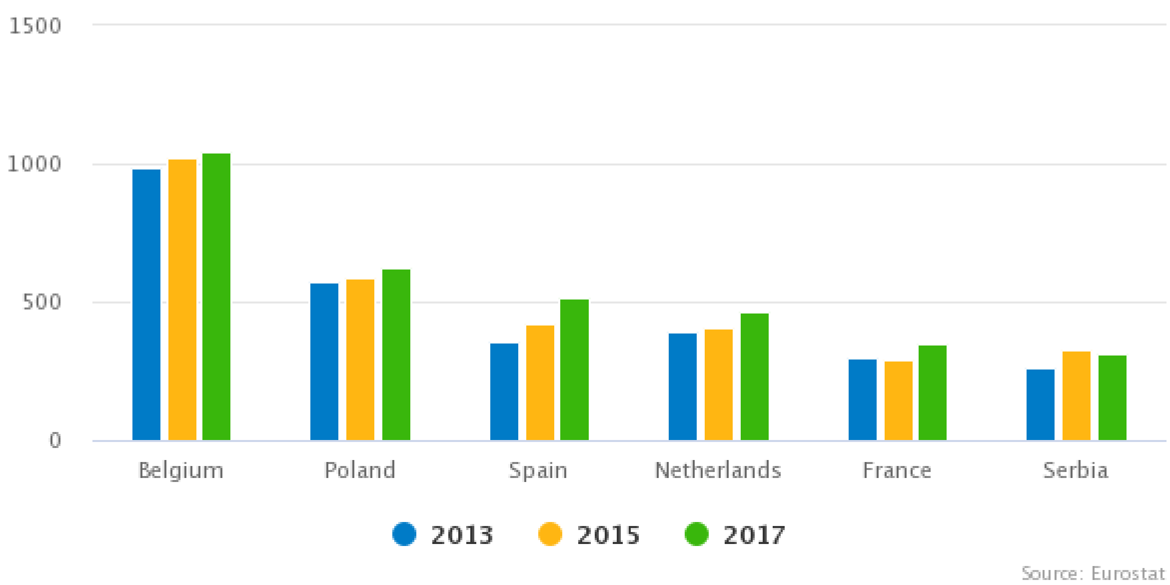



## Frozen fruits and vegetables mainly imported from within Europe

- Belgium, Poland and Spain are the leading suppliers of frozen fruit and vegetables to Europe.
- Among the top 20 suppliers from developing countries, the highest annual growth in value of imports to Europe was from Costa Rica (28%, mainly frozen non-berry tropical fruit), Guatemala (25%, frozen non-berry fruit and vegetable mixtures), Bosnia and Herzegovina (32%, mainly frozen raspberries) and the Philippines (20%, mainly frozen pineapples and other tropical fruit).

Figure 3: Leading suppliers of frozen fruit and vegetables to Europe 2013-2017

in € million




## Tips:

- Identify who the largest importers of your product are on selected large or fast-growing markets. You can start with an internet search or read more about supply chains in Europe in our study of Market channels and segments for processed fruit and vegetables. Also read more about specific frozen fruit and vegetable products in our studies of Frozen products.
- Apart from aiming to export to the largest European importers, consider countries that are seeing growth in imports, such as Lithuania, Croatia or Ireland.
- Learn from exporters in developing countries who are gaining a share on the European market, such as India, Morocco or Serbia.

## Exports

### European export of frozen fruit and vegetables is also growing

- Since 2013, exports of frozen fruits and vegetables from Europe have grown by 3% in value and by 2% in volume. Exports reached € 4.9 billion or 4.5 million tonnes in 2017.
- The majority of European exports are frozen vegetables. Frozen vegetables account for 68% of the whole sector's exports.
- It is expected that exports of frozen vegetables will continue to increase at a low rate in the next several years.

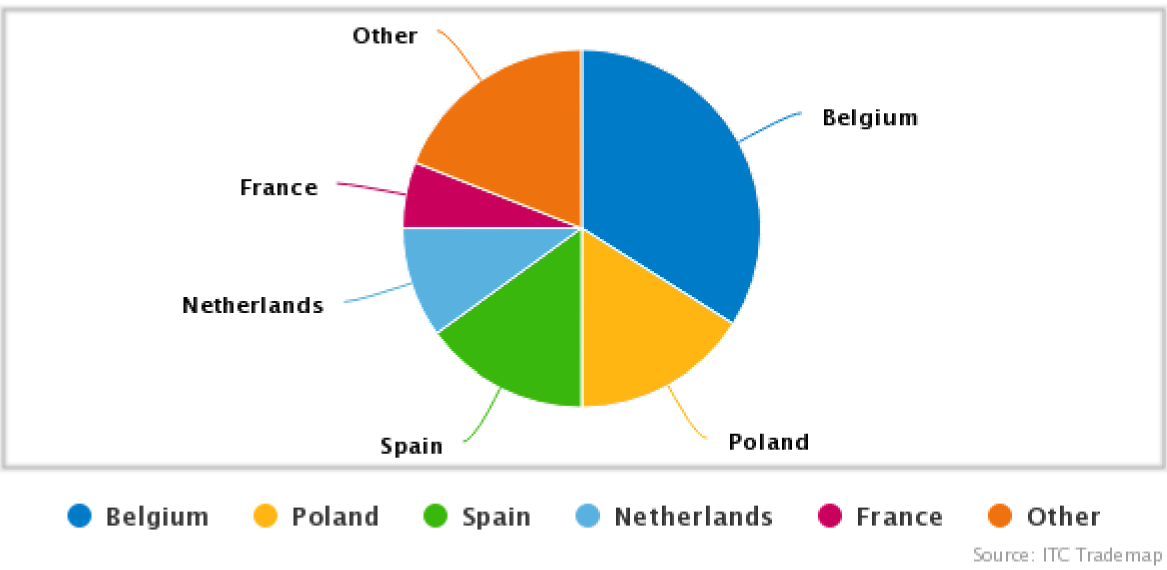
## Belgium and Poland largest European exporters

- Exports of frozen fruit and vegetables are highly concentrated. The two largest exporters (Belgium and Poland) account for half of all European exports. Belgium is the leading exporter of frozen vegetables, while Poland is the leading exporter of frozen fruit.
- Over the last five years, countries with the highest growth of annual exports in quantity were

Cyprus, the United Kingdom and Spain.

Figure 4: Exports of frozen fruit and vegetables from the European Union by country 2017

in share of exported quantity




## United States main export destination for frozen fruit and vegetables from Europe

- The main destinations for exports from the European Union in 2017 were the United States (mostly frozen vegetables), Switzerland (mostly frozen fruit), Norway (frozen fruit and vegetables) and Australia (mostly frozen vegetables and mixtures of vegetables).
- Among the largest export destinations outside Europe, the highest annual growth in value since 2013 was found in Morocco (95%, mainly frozen vegetables) and the United States of America (24%, frozen vegetables).
- The largest exporting country in Europe is Belgium. The main European destinations for Belgian exporters of frozen fruit and vegetables are Germany, France and the United Kingdom. The highest growth of exports over the last five years from Belgium was to Morocco.

### Tips:

- Learn from European exporters about destinations which are increasing imports. Many countries in northern Africa and the Middle East are increasingly importing frozen vegetables from Europe. You can start by looking up statistics and signing up for a subscription on specialised trade portals such as IEGVu.
- Learn more about your competitors in our study of Competition in processed fruit and vegetables.

## Production

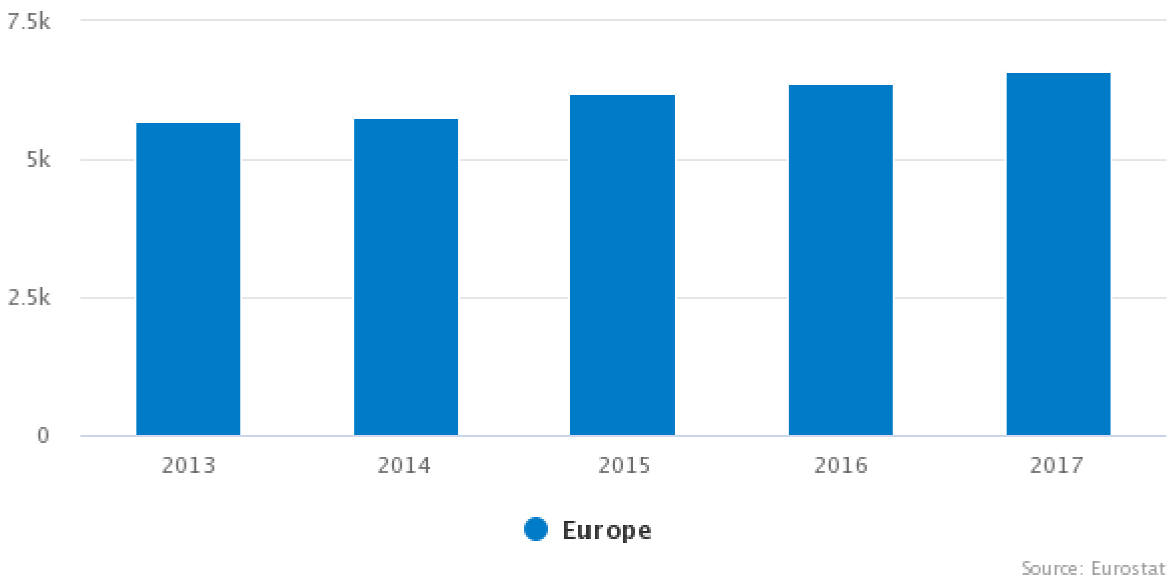
### Chances for products not commonly produced in Europe

- The production of frozen fruit and vegetables in Europe has been gradually increasing since 2013. In 2017, the production of frozen fruit and vegetables in Europe reached a value of € 6.5

billion.
- Belgium is the leading European producer of frozen vegetables, whereas Poland is the leading European producer of frozen fruit. Production quantity varies due to climatic conditions.
- For now, the structure of the production of the main frozen fruit and vegetables in Europe is not changing much, and it is predicted that the situation will remain stable in the following years. This means that exporters from developing countries will face strong competition if they aim to export major continental types of fruit and vegetables such as peas, apricots or peaches. On the other hand, it provides a lot of opportunities for products not commonly produced in large quantities in Europe, such as frozen mushrooms, sweet peppers, artichokes and asparagus.
- Key players dominating the European market for frozen fruit and vegetables include Greenyard Foods, Ardo Group, Bonduelle, Findus Sweden AB, Gelagri Bretagne SA, PinguinFoods, Unilever and Vivartia S.A.

Figure 5: Total European production of frozen fruit and vegetables 2013-2017

in € million




Note that the figures above display the production of manufactured goods, which include intermediate goods as well as final goods. This implies that it is possible that there is overlap in production data and import data, since raw materials may be imported and further processed.

## Tips:

- Regular information about crops, processing and the market situation can be found on the leading European information service for processed fruit and vegetables IEGVu.
- Feel free to contact the largest producing companies, as they very often complement their offer with imported frozen fruit and vegetables. Frozen vegetables and fruit companies in Europe offer a lot of different products, but in many cases do not produce everything that they offer, so this provides an opportunity for long-term cooperation to suppliers from developing countries.
- More information on the production of frozen fruits and vegetables in Europe can be found on the website of the European Association of Fruit and Vegetable Processing Industries (PROFEL).

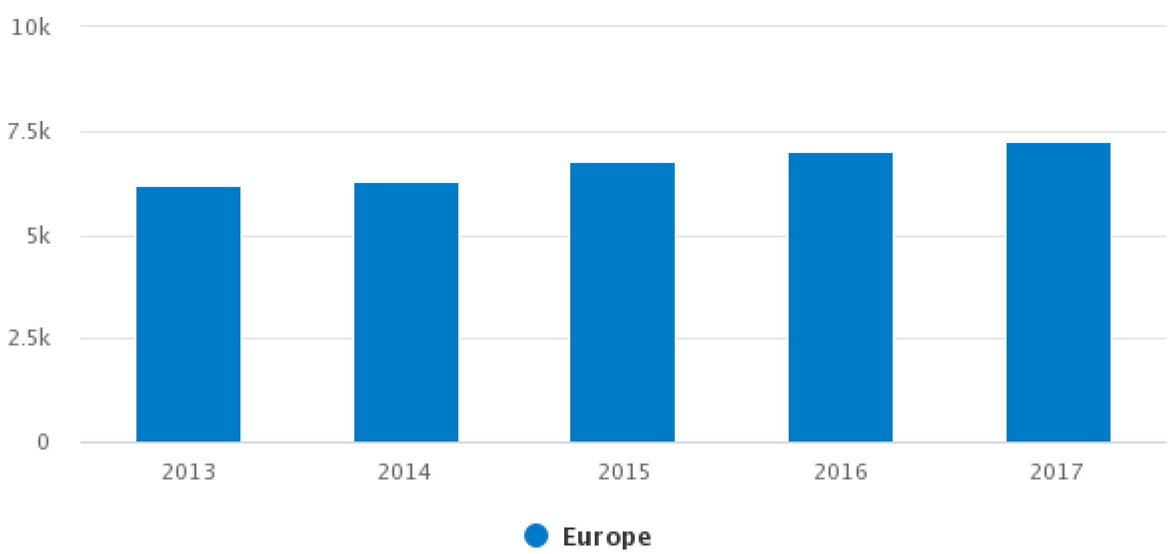
## Consumption

### Consumption of frozen fruit and vegetables will continue to grow

- The apparent consumption of frozen fruit and vegetables has increased significantly since 2013. Almost half of the imported products are aimed at the industry, such as the frozen pizzas, juices, jams, ready meals, dairy (ice cream and milk-based drinks), smoothies, and bakery and cakes industry. Increasing home consumption is additionally driven by the growing consumer desire for convenient and faster-to-prepare foods, especially following the trend of smoothies in home preparation.
- One of the most important trends influencing the increased consumption is the demand for frozen berry fruit (raspberries, blackberries, blueberries, and so on), which is increasingly used for the production of smoothies.
- The largest consumers of frozen fruit and vegetables are Italy, Germany and France, accounting together for more than half of the total European consumption.
- It is expected that the consumption of frozen fruit and vegetables will continue to grow, especially in the segment of frozen berry fruit.

Figure 6: European apparent consumption of frozen fruit and vegetables 2013-2017

in € million




Source: Eurostat

### Tips:

- In targeting your markets, make a distinction between countries that import frozen fruit and vegetables for their own consumption on the one hand and countries that import products and re-export them on the other. In the first category, more attention should be paid to developments in the retail sector and local consumption trends.
- Consider exporting to the Netherlands or to the main Dutch trading partners in Europe, especially if you are exporting frozen tropical fruit and vegetables. The Netherlands is the main trading hub for imports of frozen tropical fruit and by exporting to Dutch trade companies, your products can reach all European countries.

# 3 . What trends offer opportunities on the European market for frozen fruit and vegetables?

Increasing consumer interest in vegan, gluten-free and natural food offers opportunities for exporters from developing countries.

Food safety certification supported with frequent laboratory tests and joined with corporate social responsibility standards can additionally provide a great advantage for suppliers to the European market.

Other opportunities exist in low-sugar and “superfood” products. Low-sugar products are in demand on the European market. This trend is favourable for frozen vegetables due to the low concentration of sugar in the majority of products.

Other major factors driving growth in the market include:

- innovation in freezing technologies;
- development of cold chain logistics;
- developments in retail distribution;
- developments in social factors such as fast-paced lifestyles and lack of time for cooking elaborate meals.

The consumption of superfruit is likely to increase. Among all superfruits, it seems that the consumption of frozen berries is increasing the most quickly.

The frozen berries market is growing under the strong influence of the trend towards at-home juicing and smoothie preparation.

A very specific trend in the last year was found in the increasing demand for frozen kale, which is used for the production of kale chips.

## Tips:

- With respect to frozen fruit and vegetables, an extensive study of European market trends is already available. See our study of Trends for processed fruit and vegetables.
- To find out more about product- and country-specific trends in the sector, read our studies of frozen vegetables in Belgium, frozen berries in Europe and frozen strawberries in Europe.

# 4 . What requirements must frozen fruit and vegetables comply with to be allowed on the European market?

General information on buyer requirements for processed fruit and vegetables is given in our study of Buyer requirements on the European processed fruit and vegetable market. The section below deals with specific requirements applying to frozen fruit and vegetables in Europe.

## Legal requirements

### Food safety

In January 2016, the European Union announced four changes in regulations concerning maximum residue levels in fruit and vegetables. The specific increases of the maximum residue levels are set for chlorpyrifos, fosetyl and several other pesticides.

### Labelling requirements

In the case of retail packaging, product labelling must be in compliance with the European Union

Regulation on food information to consumers. This regulation more clearly defines nutrition labelling, origin labelling, allergen labelling and legibility (minimum font size for mandatory information). The regulation came into effect on 13 December 2014, but the obligation to provide nutrition information will apply from 13 December 2016.

Allergens have to be highlighted in the list of ingredients (see example in Picture 6). Requirements for labelling the information on allergens are also obligatory for non-prepacked foods, including those sold in restaurants and cafés.

### Packing requirements

Repacking of quick-frozen fruit and vegetables under controlled conditions is permitted. This repacking must be done quickly under a temperature between 0 °C and 5 °C. After repacking, products are returned into freezing chambers under the regular temperature of -18 °C.

## Common and niche requirements

- Environmental protection, Organic and Fairtrade certification schemes are becoming more and more popular in Europe. For organic production, you can consider IFOAM standards.
- The European Union regulates organic food and drink produced and/or processed within Europe as well as organic goods from elsewhere (Commission Regulation (EC) No 1235/2008, with detailed rules concerning imports of organic products from third countries).

Organic products can readily be imported from non-European countries whose rules on organic production and control are equivalent to Europe’s. However, this is not the case for most developing countries, with the exception of Argentina, Costa Rica and Tunisia.

For all other non-European countries, importers can have their organic products certified for import into the European Union by independent private control bodies approved by the European Commission.

### Tips:

- Specifically for frozen fruit and vegetables, consult the EU Trade Helpdesk, where you can find European Union legislation for your selected products under the corresponding 2009 codes.
- For information on commonly requested standards, check the International Trade Centre's Sustainability Map, an online tool which provides comprehensive information on over 210 voluntary sustainability standards and other similar initiatives covering issues such as food.
- Refer to the Codex Alimentarius for the Code of Practice for the Processing and Handling of Quick Frozen Foods. By following recommended schemes for good manufacturing practices, you can fulfil the requirements for European legislation on food safety.

# 5 . What competition do I face on the European market for frozen fruit and vegetables?

For more information about competition on the European market for frozen fruit and vegetables, see our study of Competition.

# 6 . Through which channels can you get frozen fruit and vegetables

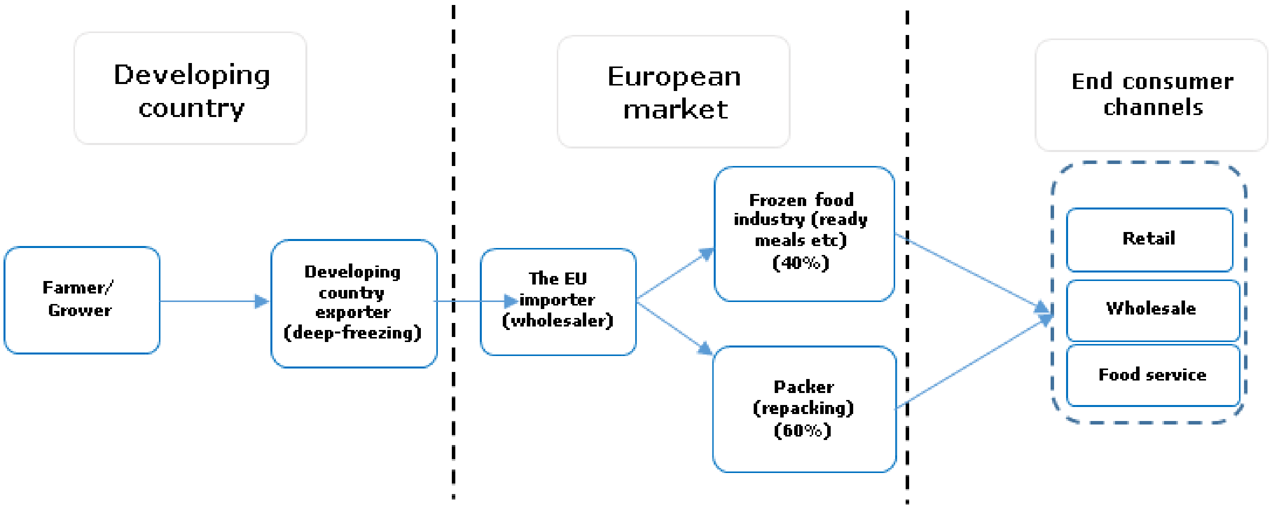
## on the European market?

The specialised importer is the preferred channel for market entry in this sector.

Many importers are also packers, and in addition conduct trading and wholesale activities.

In some cases, exporters from developing countries can also supply to the different segments directly, especially to companies which use frozen fruit and vegetables as ingredients for final products.

Chart 1: European Union channels for frozen fruit and vegetables




Source: Market researcher insights from industry sources

### Tips:

- Customise products strategically when choosing a preferred channel. For packers, the shape, colour and taste of IQF products are more relevant. On the other hand, for the food industry channel, the chemical composition of the frozen product is more important.
- For more information, see our extensive study of Market channels and segments for processed fruit and vegetables.
- Read our tips for Doing business with European buyers of processed fruit and vegetables.
- Also read our tips for Finding buyers on the European market for processed fruit and vegetables.

## 7 . What are the end-market prices for frozen fruit and vegetables on the European market?

Indications of margins according to the final retail prices for frozen fruit and vegetables are not very precise, as the whole sector contains many different products. The prices are also different between producing countries regarding the type, fruit or nut variety and the quality of products. Therefore, it is only possible to give a very rough general overview of the price development.

Very roughly, it can be estimated that the Cost, Insurance and Freight (CIF) price represents around 25% of the retail price for a retail pack of frozen fruit or vegetables.

The best option to monitor prices is to compare your offer with the offer from the largest competitors.

A very rough breakdown of the prices is shown in the table below.

Table 2: Price breakdown for frozen fruit and vegetables

| Steps in export process | Type of price | Average share of the retail price |
|---|---|---|
| Production of fruit or vegetables | Raw material price (farmers' price) | 5-20% |
| Handling, processing and selling bulk product | FOB or FCA price | 20-30% |
| Shipment | CIF price | 35-50% |
| Import, handling and processing | Wholesale price (value added tax included) | 60% |
| Retail packing, handling and selling | Retail price (for average packaging of 250g) | 100% |

Please note that the share of the retail price paid to farmers varies a lot between producing countries and the type of product. For example, the price paid to farmers for berry fruit has a much higher share in the retail price than the price paid for the majority of vegetables.

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