



CBI Product Factsheet: Sunflower oil in Europe

'Practical market insights into your product'

Sunflower oil consumption is increasing at a fast pace in Europe. A growing segment in the European market is high oleic sunflower oil, originating from hybrid sunflower seeds. Demand for high oleic sunflower oil is increasing in Europe, but supplies remain tight. This points toward future opportunities for exporters from developing country.

Product definition

The sunflower plant (*Helianthus annuus*) is native to the North-American continent. The seeds from the sun-shaped flower were originally taken to Europe during the Spanish colonisation of North-America. The crop can be cultivated at cooler temperatures and has spread out through Europe and the Black Sea region. Sunflower seeds are used for direct edible consumption as well as the crushing of the seeds to extract oil. Sunflower oil is used as a food ingredient for frying, cooking, in salad dressings and as an ingredient in products such as margarines, due to its light colour and mild flavour.

HS code	Description
1512 11 91	Sunflower seed oil

Product specification

Quality

General

- Crude sunflower oil is obtained through crushing of the thin and smaller black grade sunflower seeds (crushing grade). The black sunflower seeds have a relatively high oil content (between 39-49%).
- Sunflower oil can be processed by three different methods. 1) cold-pressing: (crude) light yellow oil, 2) hot-pressing: (crude) brown-coloured oil, 3) refined sunflower oil: colourless liquid.
- Sunflower oil should have a maximum acid value of 0.9- 1.1%. Excessive acid values can cause a sour taste and decolourisation of the oil.
- Sunflower oil containing a high level of oleic acid is preferred in the food industry; the oil with a higher linoleic acid content is preferred by paint or fuel industry. High-oleic sunflower oil is naturally stable and does not need to be hydrogenated.
- The main quality problems associated with sunflower oil are contamination and oxidation (rancidity). Sunflower oil has a relatively high oxidative stability (i.e. long shelf life), but this stability is dependent on the extraction method and seed pre-treatment. This makes it crucial that special care is taken in all steps of the production process, from harvesting to distribution.



Source: Seed Oil Press

High-oleic sunflower oil has a higher stability and resistance to rancidity due to the high content of natural Tocopherol and the low level of polyunsaturated fatty acids.

- Make sure that the raw material (i.e. sunflower seeds) is fresh and that there are no long delays between harvesting and extraction. Sunflower seeds should also be free from sand, stalk, plant debris and other foreign materials.
- Some of the most important quality factors concerning sunflower seeds are: odour and flavour, oil content, and damaged/mouldy seeds. Sunflower seeds should also be free from mycotoxins and harmful microbiological activity; this will avoid contamination of the oil. Aflatoxin B1 and ochratoxin contamination are known to be a problem for many producers, and buyers closely monitor these aspects.
- Prevent contamination by keeping facilities and equipment clean.
- Ensure proper storage and transportation (see 'Packaging').

Organic (if relevant)

- Comply with organic standards for the production of sunflower seeds and sunflower oil extraction. Refer to the section on 'Niche requirements' for further details on organic production and labelling.

Labelling

- Ensure traceability of individual batches.
- Use English for labelling purposes, unless your buyer has indicated otherwise.
- Labels must include the following:
 - Product name
 - Manufacturer's lot or batch code
 - Whether or not the product is destined for use in food products
 - Name and address of exporter
 - Product's country of origin
 - Shelf life: Best-before date / use-by date
 - Net weight / volume in metric units
 - Recommended storage conditions



Source: Farinex

Packaging

- Sunflower oil is commonly transported in liquid bulk (in tank containers and flexi tanks) or in intermediate bulk containers (IBC).
- Ensure preservation of quality by:
 - Thoroughly cleaning the barrels or tanks before loading the oil.
 - Filling up the tanks as much as possible to prevent rancidity due to oxygen exposure. Take the possible cubic expansion into consideration (indicated range: 80-95%).
 - Filtering out crystallizing substances out of untreated sunflower oil; crystallization in cold conditions can greatly affect quality.
 - Ensuring the right temperature range (5-26°C) during transport; this is needed to prevent solidification.
 - Protecting the cargo from moisture and humidity to avoid rancidity. Prevent ventilation, rust particles, spoilage, seawater contamination and self-heating due to contact with sawdust.

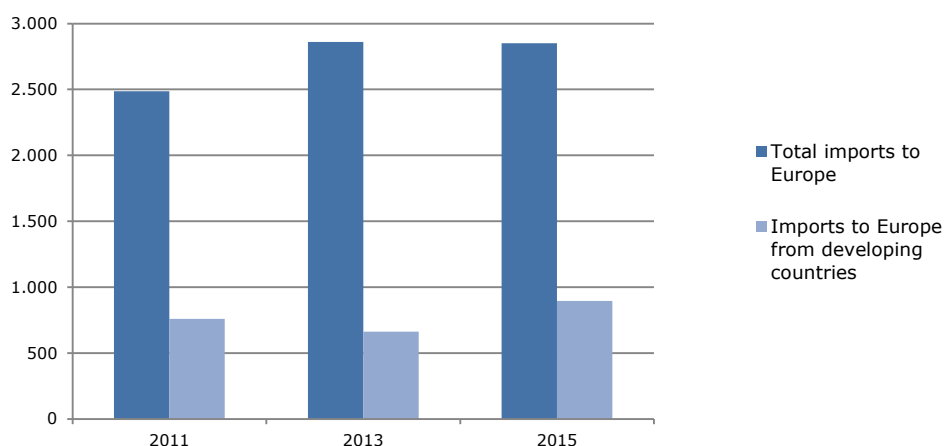


Source: Elburg Global

Trade statistics

Imports

Figure 1: Total imports of sunflower oil to Europe, in 1,000 tonnes.

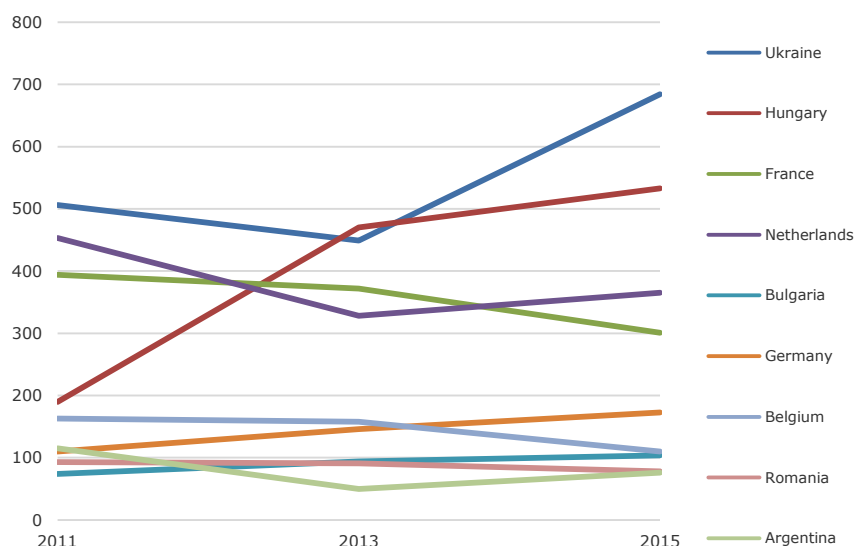


Source: Eurostat, 2016

- Total imports of sunflower oil in Europe reached 2.9 million tonnes (€ 2.8 billion) in 2015. Since 2011, the total amount of imports increased at an annual average rate of +3.5% in volume and decreased annually at a rate of -1.6% in value.
- In the period 2011-2015, the Netherlands has become the largest importer of sunflower oil in Europe (16% share in volume), recording an average annual growth of +9% in volume and +5.3% in value. In 2015, Dutch imports amounted to 465 thousand tonnes (€ 386 million). The port of Rotterdam is an important trade hub for vegetable oils, re-exporting significant volumes of sunflower oil to other European countries. The Netherlands also has a prominent cluster of refining companies, mainly located around the Zaandam area.
- Italy has also increased its importance as importer of sunflower oil since 2011. In 2015, Italy accounted for a share of 12% in volume, after having registered a sharp annual growth of +16% in volume and +8.5% in value.
- Spain, Belgium and Germany are other large European importers of sunflower oil. In 2015, Spain accounted for a share of 12% of the total imported volume in Europe, Belgium for 11% and Germany for 10%.
- Belgium's significant role as a trade hub reflects the importance of the port of Antwerp in this sector.
- About a third of all Europe's sunflower oil imports originates from developing country suppliers, reaching 895 thousand tonnes (€ 733 million) in 2015. The share of developing countries has registered an average annual growth of +4.2% in volume and +0.3% in value since 2010.

Tips: Keep track of developments in the European trade for sunflower oil and identify developments, such as the emergence of new suppliers and decline of established ones. A good source for analysing European trade dynamics yourself is the [Eurostat Statistics Database](#). Another interesting source is the website of [Fediol](#) (Federation of the European Vegetable Oil and Protein Meal Industry).

Figure 2: Imports of sunflower oil to Europe; the largest markets (in terms of 2015 volume) exporting sunflower oil to Europe, 2011-2015 in 1,000 tonnes



Source: Eurostat, 2016

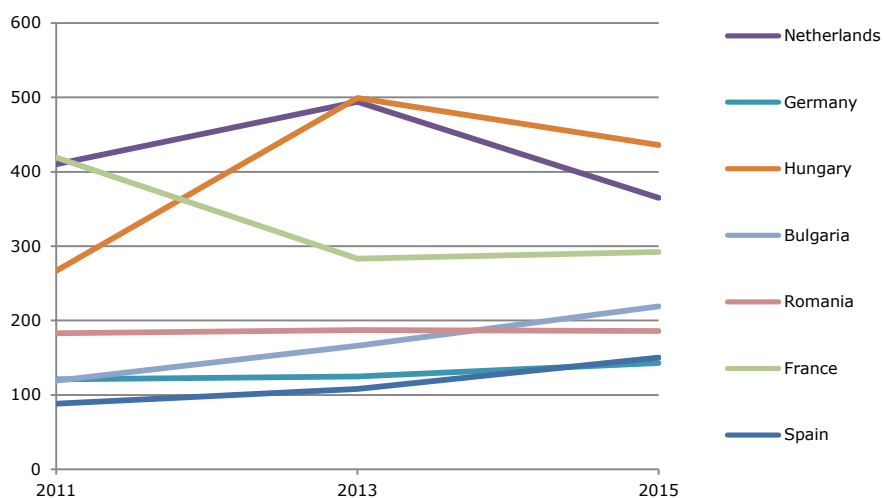
- The large European crushing industry in countries such as France, the Netherlands and Hungary contributes to the relatively low volume of sunflower oil imports sourced from developing countries. A high share of imports from developing countries happens in the form of raw material (sunflower seeds), to be crushed in Europe.
- The Black Sea region has the largest contribution in terms of sunflower oil sourced from developing countries. Ukraine is the largest developing country supplier of sunflower oil to Europe (24% share in volume), amounting to 684 thousand tonnes (€ 523 million). Other developing country suppliers are Moldova (2.4 %), Argentina (2.7 %) and Romania (2.7%).
- Ukraine recorded an annual growth of +7.8% in volume and +2.8% in value. While the ongoing political crisis in Ukraine did not seem to have affected the oilseed and vegetable oil trade in a major way in 2014, there have been reports of some disturbances. Ukraine has set to increase their sunflower production in 2015, due to a higher sowing area in 2015 ([The Public Ledger, 2015](#)).
- On the other hand, Europe adopted a proposal (April 2014) to remove Ukrainian import tariffs on certain agricultural commodities, among which crude and refined sunflower oil, in the framework of the free trade agreement between Europe and Ukraine. The new 0% tariff is expected to improve the position of Ukraine as a supplier to the European Union, which represents a threat to other potential developing country suppliers.
- Since 2011, Hungary and Germany recorded a significant growth. Germany recorded a growth of +11.9% in volume and +5.6% in value, while this was +29.4% and +13.7% for Hungary.
- The production of high-oleic sunflower oil in Ukraine, Russia and Argentina remains limited; production is largely focused on linoleic oil. High-oleic oil equates high costs in supply chain segregation from traditional crops. France has made headway in growing high-oleic hybrid sunflower crops and is transitioning into a large acreage destined for this niche segment.

Tips: The [FAOSTAT](#) is an interesting source to keep up-to-date on the statistics of sunflower seed and sunflower oil-producing countries. Identify your potential competitors and learn from them in terms of:

- Marketing: website, social media, trade fair participation, etc.
- Product characteristics: origin, quality, taste, etc.
- Value addition: certifications, processing techniques

Exports

Figure 3: Exports of sunflower oil from Europe market; largest countries exporting sunflower oil to Europe (in terms of 2015 volume), 2011-2015 in 1,000 tonnes.

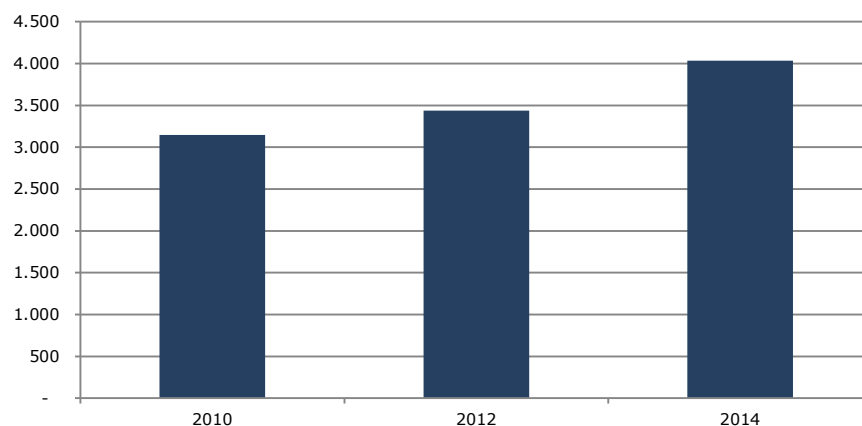


Source: Eurostat, 2016

- In 2015, total European exports of sunflower oil amounted to 2.1 million tonnes (€ 1.9 billion). Since 2011, the annual share volume of sunflower oil exports increased at +2.3%, while the annual share value decreased at -2.9%.
- Hungary and the Netherlands are the largest exporters of sunflower oil in Europe. In the period 2011-2015, Hungary has seen a significant annual increase in average volume of +13% and 4.9% in value, making it the largest exporter in Europe, with a respective share of 20% in volume. The Netherlands recorded an average annual decrease of -2.9% in volume and -6.6% in value in the same period.
- Other important exporters of sunflower oil in Europe are France (14% share in volume), Bulgaria (10%) and Romania (8.8%).
- The largest export destinations are the Netherlands, Belgium and Germany, each accounting for a 13% share in volume. Other destinations for sunflower oil exports are the United Kingdom (7.2%) and Spain (5.4%).

Consumption

Figure 4: Consumption of sunflower oil in Europe, in 1,000 tonnes*



Source: FEDIOL, 2016

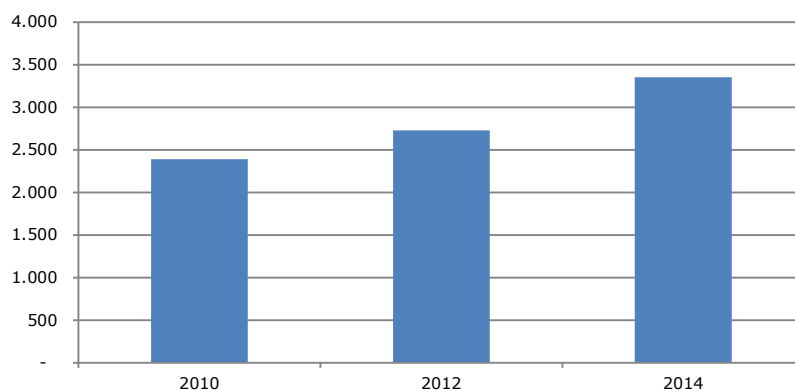
* Figures cover EU-27, excluding Luxembourg, Cyprus and Malta

- Total consumption of sunflower oil in Europe amounted to nearly 3.2 million tonnes in 2014. In the period 2010-2014, consumption of sunflower oil increased with an average rate of +2.0% annually.
- Sunflower oil is used extensively in Europe as a cooking oil. In many of the producing countries such as France, sunflower oil has become the most commonly used oil in recent years. In addition, sunflower oil is increasingly replacing palm oil in specific industrial applications (for more information on this trend, refer to the 'Market Trends' section).
- The largest consumption market in Europe by far is Spain, reaching 776 thousand tonnes. Since 2010, Spanish sunflower oil consumption increased slightly with +4%. Use of both sunflower and olive oil is high in Spanish and other Mediterranean dishes.
- In 2014, Italy and the Netherlands consumed the significant amounts of 521 and 432 thousand tonnes of sunflower oil. Other large consumption markets are France (412 thousand tonnes), Germany (317 thousand tonnes) and the United Kingdom (291 thousand tonnes).
- Consumer preferences can vary between countries. In France, consumers prefer a strong yellow colour with a medium to high sunflower-like taste, where Italians and Germans favour a nutty and grain-like flavour to accompany the taste. In comparison, Dutch consumers prefer their sunflower oil with a neutral taste and odour.

Tips: Study your target market(s) in order to make an educated decision when exporting sunflower oil. It is important to understand factors such as product application, taste preferences, competing suppliers and potential buyers in the specific destination countries. A general sources for learning more about specific countries in Europe include [CIA 's World Factbook](#).

Production

Figure 5: Production of sunflower oil in Europe, in 1,000 tonnes*



Source: *FEDIOL, 2016*

* Figures cover EU-27, excluding Luxembourg, Cyprus and Malta

- Total production of sunflower oil in Europe amounted to 3.3 million tonnes in 2014. In the period 2010-2014, sunflower oil production recorded an annual average growth of +6.0%.
- The two largest producers of sunflower oil in Europe are Hungary and France, both accounting for 18% of total production. In 2013, France was the single largest producer but Hungary has grown with +17% between 2009 and 2014 and now has the same share as France.
- Spain, accounting for 17% (554 thousand tonnes) of total production, is also a large producer of sunflower oil in Europe.
- Other large sunflower oil producers in Europe are Romania (11% share, at 381 thousand tonnes) and Bulgaria (11% share, at 361 thousand tonnes), also having experienced growth in sunflower oil production since 2010.

Tips: Find out more about production of sunflower in Europe through the statistics provided by [FAOSTAT](#) and [Fediol](#) (Federation of the European Vegetable Oil and Protein Meal Industry).

Market trends

Healthy diets

The overall demand in Europe for healthy ingredients in food processing is growing rapidly. According to the European Food Safety Authority (EFSA), the high content of linoleic acid, essential fatty acids and vitamin E in sunflower oil provides, have positively-assessed health claims that contribute to healthy blood cholesterol concentrations, children's growth (omega 3 and 6), and other protective qualities ([FEDIOL](#)). With the end-consumer becoming aware of these characteristics, European food processors are increasingly opting for the use of sunflower oil for frying and cooking purposes. For more information, please refer to [our study on trends for vegetable oils in Europe](#).

High oleic sunflower oil (HOSO)

The traditional sunflower oil seed has a 65% linoleic acid and 20% oleic acid content, and can therefore be categorised with oilseeds such as soybean, cottonseed corn and peanuts, containing 18-carbon fatty acids.

In the last 20 years, breeders have made progress in making hybrid sunflowers that produce high-oleic seeds ranging from 60% to 90% in oleic acids, increasing the oil's oxidation stability. This has opened applications for high oleic

sunflower oil as a 'stabilising' food ingredient, increasing shelf life as ingredient and spray oil. The lower concentration of saturated fats in high-oleic sunflower oil is often preferred as a healthy ingredient, opening up space in niche markets for health foods as well.

In France and other West European countries, the market has been slowly switching to high-oleic sunflower oil, stimulating growers to do the same. In addition, European importers report that the demand for high-oleic sunflower oil surpasses its current availability, which can be translated into prospective market opportunities for exporters who can fill in this gap.

Tips: Promote the various applications and health properties of sunflower oil. Make sure to provide your buyer with accurate product specifications and composition.

Make sure your product characteristics and quality match your target market and end-user in terms of:

- Taste, odour and colour
- Linoleic, oleic acid content and oxidative stability

Create partnerships with your buyer in product development and Research & Development (R&D), which will allow you to incorporate technologies such as the production of high-oleic sunflower oil.

Sunflower oil as a palm oil substitute

A growing concern for European palm oil importers / end-user industries is the negative image of this oil by consumers, especially regarding the highly-publicised impact of palm production in Southeast Asia, which is strongly associated to deforestation and bad working conditions.

In the last decade, several large companies (e.g. Lays) have switched to sunflower oil in food processing due to the negative image of palm oil. Casino, a large French supermarket chain, has explicitly advertised non-palm oil products in TV commercials. Palm oil production has especially received bad publicity in France and Belgium.

In addition, the European Parliament and the Council of the European Union approved a new regulation on 25 October 2011 which includes re-labelling of vegetable oils and fats on food products. Therefore, by 13 December 2014, all products containing palm oil will have to be labelled accordingly, instead of simply stating vegetable oil. This will bring more emphasis to the presence of palm oil in specific products, and might influence the purchasing behaviour of consumers towards alternative vegetable oil products.

It is important to mention, however, that palm oil remains a vital vegetable oil to the food industry in Europe. Total European consumption of palm oil amounted to around 6 million tonnes in 2012, having increased with an annual average rate of 8.5% since 2008. Despite the sustainability and bad publicity issues pointed out above, the palm oil industry is mainstreaming sustainability efforts through the Roundtable on Sustainable Palm Oil (RSPO), which is a multi-stakeholder initiative dedicated to promoting sustainable production of palm oil worldwide. Read more about the palm oil market in the [CBI Factsheet Palm Oil in Europe](#).

Tips: Consider the country-specific image of palm oil and follow the latest news on European policies which impact the vegetable oil sector such as the implementation of [Regulation \(EU\) No 1169/2011](#), on the provision of food information to consumers.

If you have the sufficient quality and volume capacities, target end-user industries which are gradually shifting from palm oil to sunflower oil.

The importance of food safety

The database of Europe's Rapid Alert System for Food and Feed (RASFF) indicates that import of sunflower oil can be [alerted and/or rejected](#) for numerous reasons, for example, because of improper health certificates, benzopyrene contamination or the presence of mineral oil. Although a relatively limited amount of notifications has been identified in the last years, food safety alerts can have severe consequences.

In 2008, French authorities discovered high mineral contaminated sunflower oil in originating from Ukraine. The oil had been re-exported to different European export countries. In reaction Europe blocked all imports from Ukraine until extra sampling procedures had been installed.

Tips: On the website of the [Rapid Alert System for Food and Feed \(RASFF\)](#), you can browse through various border rejections and alerts for 'sunflower oil' under category 'fats and oils'. In this manner, you can learn about common problems faced by suppliers during border controls and adopt appropriate measures to avoid them.

What legal requirements must my product comply with?

Maximum level for erucic acid in oils and fats: European Union legislation fixes a maximum level of erucic acid in oils and fats intended for human consumption.

Tips: Check out the maximum levels for [erucic acid in the European Union Export Helpdesk](#).

Extraction solvents for food: There are European rules for the marketing and application of extraction solvents used in the production of foodstuffs and food ingredients.

Tips: Find out which [Extraction solvents for food](#) you can use and the conditions for use.

Contaminants in food: The European Union has laid down maximum levels of contaminants in food, including ingredients such as vegetable oils.

Tips: Read more about [contaminants in the European Union Export Helpdesk](#) and check the European Commission's factsheet on food contaminants [Managing food contaminants: how the EU ensures that our food is safe](#).

Maximum Residue Levels (MRLs) of pesticides in food: EU legislation has been laid down to regulate the presence of pesticide residues (MRLs) in food products.

Tips: If the agricultural raw material (sunflower seed) for your oil has been treated with pesticides, verify that residues remain within limits. For more information, read about [MRLs](#) in the EU Export Helpdesk.

Additives, enzymes and flavourings in food: The European Union has set a list of permitted flavourings and requirements for their use in foodstuffs intended for human consumption, which includes vegetable oils. This is particularly relevant to food manufacturers. However, insight into this legislation can help you to understand their requirements.

Tips: Familiarise yourself with the concerns of the end-users of your products by checking European Union legislation on [Additives, enzymes and flavourings in food](#).

Hygiene of foodstuffs: Food business operators shall put in place, implement and maintain a permanent procedure, or procedures, based on the Hazard Analysis and Critical Control Points (HACCP) principles. This also applies to the import of food to Europe and export from Europe.

Tips: Ensure compliance with European Union legislation on [Hygiene of foodstuffs \(HACCP\)](#).

Labelling: In case you are supplying consumer labelled products (in for example bottles and containers) you will have to take into account labelling requirements laid down in [European Union Regulation 1169/2011](#).

Tips: Read more about food labelling in the [European Union Export Helpdesk](#).

What additional requirements do buyers often have?

Food safety management: Buyers commonly require their suppliers that they have a quality/food safety management system in place. These systems require companies to demonstrate their ability to control food safety hazards in order to ensure that food is safe at the time of human consumption.

Tips: Suppliers can apply a basic HACCP system. However, if they aim to supply food manufacturers more directly, it is necessary to have a certified food safety management system recognised by the Global Food Safety Initiative, such as ISO 22000, British Retail Consortium (BRC) or International Featured Standards (IFS) Food. Visit the website of the [Global Food Safety Initiative](#) for more information.

What are the requirements for niche markets?

Regulation (EC) 834/2007 on organic agriculture: The European Union has established requirements on the production and labelling requirements with which an organic product of agricultural origin **must** comply in order to be marketed in Europe as "organic".

Tips: In general, the market for organic sunflower oil is still a niche segment. If you do choose to obtain a certificate for organic production, refer to the [European Union Regulation](#) for organic production and make sure your organic certification is harmonised with the [European legislation](#).

For information on organic certification in Europe, visit the website of [Organic Farming](#) in the European Union.

Fair Trade: Fairtrade Labelling Organisations International (FLO) is the leading standard-setting and certification organisation for Fairtrade. Products which carry the Fairtrade label indicate that producers are paid a Fairtrade Minimum Price. FLO has a minimum price for sunflower seeds (raw material for sunflower oil). Other fair trade standards available in the European market are Fair Trade Ecocert and the Institute for Marketecology's Fair for Life.

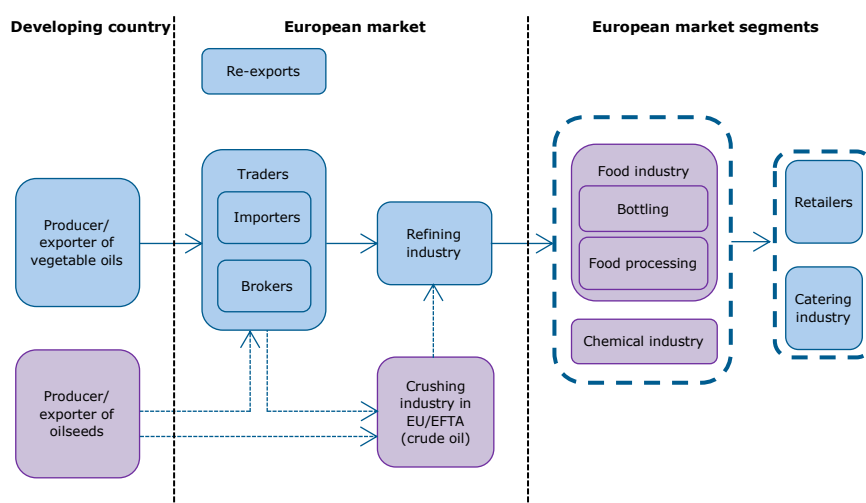
Tips: Before jumping into Fairtrade certification, make sure to assess (in consultation with your potential buyer) if this label has sufficient demand in your target market and whether it will be cost beneficial for your product.

Although [FLO](#) certification is the leading fair trade certification scheme in Europe, you can also check out other schemes such as IMO's [Fair for Life](#) and [Ecocert Fair Trade](#).

Market channels and segments

Market channels

Figure 6: Trade channels for sunflower oil in Europe



The trade channels for sunflower oil do not deviate from the general structure for vegetable oils as described in [our study covering channels and segments for vegetable oils in Europe](#).

In general, the following margins can be expected:

- **Brokers:** ranging from approximately 0.5 to 2%, or fixed price per tonne
- **Importers:** will depend on whether the oil is simply being forwarded (5-10%), or whether the importer has to re-sell specific quantities (10-20%).
- **Refiners** charge a fixed amount per tonne of oil refined, approx. € 200-300/tonne.
- The margins charged by other industry players such as food manufacturers, bottlers and retailers will highly depend on the nature of the final product. Figure 7 provides an overview of the main segments for sunflower oil.

Tips: If you are able to supply directly to food processors or crushers in terms of volume, as well as consistent delivery and quality, make sure you have adequate quality control systems. The different systems available are described under 'Common requirements'. Make sure to consult your (potential) buyer on the certifications which are required by them.

If you are dealing with smaller volumes or specialised sunflower oil (e.g. high-oleic, organic), importers are quite certainly the most suitable entry point.

If you are a starting exporter, brokers can be your entry point into Europe as they are trusted by the European edible oil sector, which can make up the lack of reputation of a starting developing country exporter.

Market segments

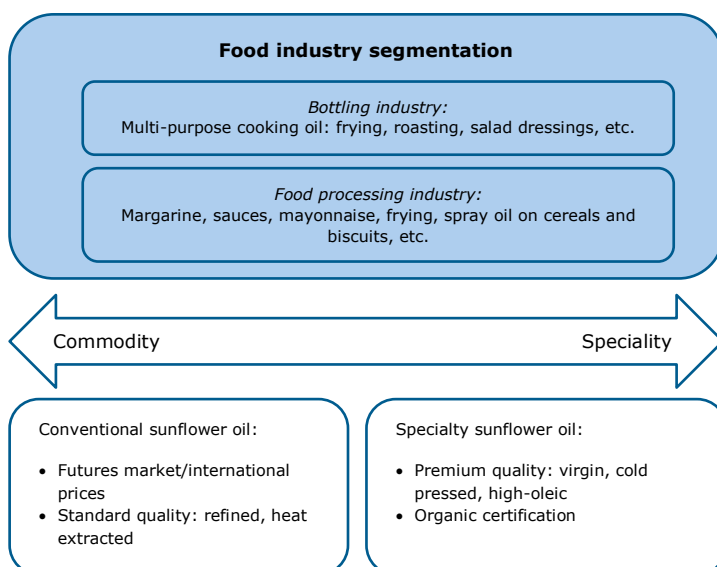
Sunflower oil is mostly used in the food industry, where it can be segmented into:

- Food processing industry: ingredient to manufacture semi-finished or final food products
- Bottling industry: bottled as a final product

Figure 7 describes the main uses of sunflower oil in Europe within these two segments.

Sunflower oil can be further segmented into commodity and speciality oil. The main differences between commodity and speciality sunflower oil are described in Figure 7, and further elaborated (at a more general level for vegetable oils) in [our study covering channels and segments for vegetable oils in Europe](#).

Figure 7: Segmentation of sunflower oil in Europe



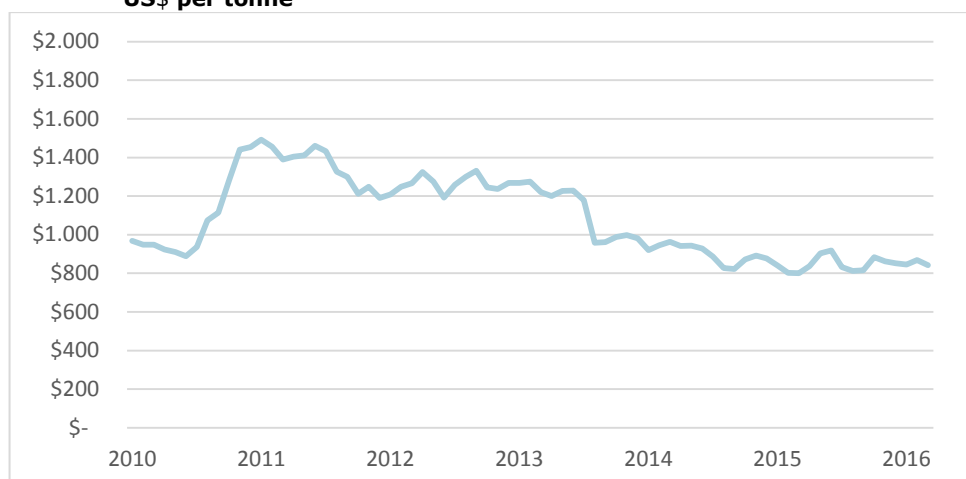
Tips

Comply with sustainability standards required by your specific segment and stay up-to-date on developments in this respect. For information on the various sustainability standards visit the [ITC](#) website on the voluntary standards that are available for exporters.

Price

Figure 8 shows export prices for sunflower oil sourced in the United States. Sunflower oil prices from other origins are either incomplete or non-existent in the sources consulted. For this reason, the prices presented below are discussed as reference prices for exporters from other origins. Other supply-demand dynamics for sunflower oil, and their influences on prices, are presented in textual form.

Figure 8: Sunflower oil prices, 2010-2016 (Q1), monthly averages in US\$ per tonne



Source: World Bank Pink Sheet, 2016

Since 2011, sunflower oil prices have been fluctuating, but have generally decreased to prices below US\$ 900 / tonne since 2014. Sunflower oil prices have been dragged lower by record-low global palm and soy oil prices ([Public Ledger, 2014](#)). This trend has continued in 2015 and the first quarter of 2016.

Tips: More information on developments in other supplying countries and their effect on global prices, can be found on websites such as [Index Mundi](#), [The World Bank](#) and [Public Ledger](#).

Develop sustainable, trust-based, relationships with new buyers in order to profit from the current international scenario for groundnuts in the long run.

Develop good market information systems so as to be aware of market movements in groundnuts worldwide.

Interesting Sources

- The EU Vegetable Oil and Protein meal Industry - [FEDIOL](#)
- The Food and Agriculture Organisation of the United Nations has a variety of agricultural databases - [FAOSTAT](#)
- For information on the latest market developments in the Oils and seeds sector, visit [The Public Ledger](#)
- National Sunflower Association – [Market News](#)

This survey was compiled for CBI by ProFound – Advisers In Development in collaboration with CBI expert Joost Pierrot

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