

# Entering the European market for chlorella and spirulina for health products

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To access the European health market with spirulina or chlorella, it is essential to meet the legal requirements set by the European Union (EU) and also to meet specific buyer requirements. The first steps to entering the European market are ensuring that you can provide products of uniform quality with high product safety and having all the required documentation in order. You can access the EU market through an importer or via formulators and manufacturers. Note that competition is strong, especially for small-scale producers trying to enter the market. You will face fierce competition from European suppliers that offer high-quality products and from suppliers in countries like China who can provide large quantities at very affordable prices.

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## 1. What requirements and certifications must chlorella and spirulina comply with to be allowed on the European market for health products?

You can only export spirulina and chlorella to European Union (EU) members if you meet the relevant EU requirements. For a full overview of these standards, refer to our study on [buyer requirements for natural ingredients for health products](#) or to the specific requirements for your product in [Access2Markets](#) by the European Commission.

Buyer requirements can be divided into:

1. Mandatory requirements: Legal requirements you must meet to enter the market;
2. Additional requirements: Standards you will need to meet to stay relevant in the market;
3. Niche market requirements: Applying to specific niche markets.

### Legal requirements

Chlorella and spirulina must be safe for human consumption in order to enter the European market. The legal requirements therefore mainly relate to [food safety](#), [food hygiene](#), and [traceability](#). Food safety can be compromised by poor water quality, low fertilizer quality, and overall poor cultivation management. In general, you need to avoid certain sources of contamination, namely:

- Pesticides — see the EU [pesticide database for an overview of the maximum residue levels](#) (MRLs) for each pesticide;

- **Contaminants in food** and **microbiological contamination of food**. Note that toxins and heavy metals can easily accumulate in chlorella and spirulina, particularly when they are grown and harvested in natural environments instead of in controlled conditions. The main contaminants found in spirulina and chlorella during the growing stage are heavy metals like lead and **mercury**, along with other strains of algae or bacteria that grow alongside them and get harvested and processed together. Also note that **sulphites occur naturally in spirulina and chlorella**, and that these need to be stated on the product's label or packaging. Undeclared **sulphite in spirulina or chlorella tablets** could result in the product being considered non-compliant with food labelling regulations, and could lead to recalls or other steps to address the issue and ensure consumer safety.
- The use of **extraction solvents** for foodstuffs and food ingredients is regulated by **Directive 2009/32/EC**. Annex I contains a list of the authorised extraction solvents for use in food and the conditions for use. For example, sulphur dioxide extraction is not authorised. Remember that extraction processes can amplify even minimal pesticide residues in your product. It is therefore important to monitor your laboratory tests carefully to ensure you meet the relevant MRLs.

If your chlorella and/or spirulina are sold for use in food supplements, you need to follow **EU food supplement laws** which set requirements on the composition and labelling of supplements.

## Additional requirements

Potential buyers need proof of the safety of your product and that it meets their quality and sustainability requirements before they buy from you. If European companies or authorities find out that the safety of your microalgae cannot be guaranteed, they will remove your product from sale.

## Food safety management

In addition to the required HACCP standard, European food industries increasingly want suppliers to follow more rigorous food safety standards or food safety management systems. **ISO 9001:2015** is an industry (management) standard that sets out the expectations for a quality management system.

Examples of food safety management systems include:

- **ISO 22000**, food safety management system certification;
- **Food Safety System Certification (FSSC22000)**, based on ISO 22000 and aimed specifically at food manufacturers;
- **International Food Safety (IFS)**, with several standards concerning food safety;
- **British Retail Consortium Global Standard for Food Safety (BRCGS)**, technical standards for food safety.

## Quality requirements and documentation

Many buyers have quality requirements that go beyond the relevant legal requirements. It is important to cultivate the microalgae in a standardised way in order to maintain a consistent level of quality, including nutritional content, purity, and other desired characteristics. This will also help you to meet buyer requirements. Drying and milling requires know-how, such as suitable drying equipment to ensure that the nutritional content of the product does not deteriorate during processing.

If you add any preservatives to your product, you need to inform your buyer. Indicate this clearly in your product documentation. Buyers may see this as adulteration if you fail to do so.

To show that you meet the specifications of buyers, you need to develop well-structured company and product information. This means you should have the following documentation:

- Technical Data Sheet – TDS (see this [spirulina powder TDS](#))
- Certificates of Analysis – CoA (see this of [chlorella powder CoA](#))
- Safety Data Sheet – SDS (see this [spirulina powder SDS](#))
- GMO certificate (if requested)

- Certificate of Origin – CO (see this [organic spirulina powder CO from Taiwan](#))

## **Sustainable practices**

One of the primary considerations for European buyers when selecting product suppliers is a transparent supply chain that is easy to trace. Buyers want guarantees that the products they buy match the product specifications provided and can be traced back to their source. European buyers are also facing increasing pressure from EU legislation to make sure their supply chains are transparent and can be tracked easily.

This means you should have information on production and labour practices available, as well as environmental issues. You might want to consider applying an environmental management system, such as ISO 14001. This helps companies to improve their environmental performance by using resources more efficiently and reducing waste.

European buyers may also ask you to meet the standards of their code of conduct. Buyers expect their suppliers to provide them with all the necessary information.

## **Labelling requirements**

When labelling your spirulina and/or chlorella, you need to meet the following requirements:

- Set up a registration system for individual batches of your algae, whether they are blends or not. Label them accordingly to ensure traceability.
- Label your products in English, unless your buyer wants you to use a different language.

Your labels must include:

- Product name;
- Batch code;
- Place of origin;
- Name and address of exporter;
- Date of manufacture;
- Best before date;
- Net weight; and
- Recommended storage conditions.

If you supply organic algae, your label needs to include the name/code of the inspection body and certification number.

## **Packaging requirements**

Packaging requirement may differ per buyer. It is always advisable to ask your buyer for their specific packaging requirements.

Some general recommendations, especially given the increased importance of sustainability in the European market, are:

- Re-use or recycle packaging materials. For example, use containers made from recyclable materials (such as kraft paper).
- Package your dried spirulina and/or chlorella (powder) in waterproof material. For example, use paper bags that are lined with plastic. Preferably use an eco-friendly lining (such as a bio-degradable or recyclable lining).
- Store bags or containers in a cool, dry place to prevent quality deterioration.
- If you offer organic-certified chlorella and/or spirulina, physically separate it from products that are not certified.

## Requirements for niche markets

The market for certified spirulina and/or chlorella is very small and specialised, but obtaining special certifications can add value to your product. Organic certification is the most common standard in the EU market for microalgae. Organic certification acts as a quality control system and can help improve your reputation for quality.

In order to market your spirulina and/or chlorella as organic in the European market, it must meet [EU regulations for organic production and labelling](#). [Regulation \(EC\) 2018/848](#) sets down rules on organic production and labelling. Read this information from the international inspection and certification body CERT [to understand how this EU-organic regulation applies to microalgae](#).

Before you can market your product as organic, an accredited certifier must audit your growing and processing facilities. Refer to [this list of recognised control bodies and control authorities](#) issued by the EU and ensure that you always work with an officially recognised accredited certifier. If you wish to become certified as organic, you can expect an annual inspection and audit, with the aims of ensuring that you are complying with the rules on organic production.

Note that all organic products imported into the EU must have the appropriate [electronic Certificate of Inspection](#) (e-COI). These COIs must be issued by control authorities prior to the departure of a shipment. If this is not done, your product cannot be sold as organic in the European Union and will be sold as a conventional product. COIs can be completed by using the European Commission's electronic [Trade Control and Expert System](#) (TRACES).

Figure 1: EU organic logo



Source: [https://agriculture.ec.europa.eu/farming/organic-farming/organic-logo\\_en](https://agriculture.ec.europa.eu/farming/organic-farming/organic-logo_en)

### Tips:

Before deciding to certify your products as organic, find out if there is a market for your products. Can you earn back your investment? Talk to (potential) buyers about whether they are interested in organic-certified spirulina and/or chlorella.

Standardise and minimise significant variations in the quality of your spirulina and/or chlorella. Always match your approach to the requirements of your buyer. Develop [Standard Operating Procedures \(SOPs\)](#) and train your farm and processing staff. Use incentives to ensure that they follow your specifications on harvesting and post-harvest processes. It is important to monitor these practices to maintain product quality throughout the entire harvesting and post-harvesting stages.

Ensure that you can get an adequate return on your investment in quality improvements. Base quality improvements on your buyer's specifications. Discuss what they are willing to pay extra for.

Consider working with a local or national university to test your spirulina and/or chlorella properties. An example of such a collaboration is [IPB University](#) in Indonesia. Universities such as these can help determine the nutritional content and composition of your product. Look for similar universities in your country and include their analyses in your product documentation.

Put in place a traceability system and keep samples for each of your suppliers to trace the origin of the seaweed just in case a quality problem arises.

## 2. Through what channels can you get chlorella and spirulina on the European health products market?

Spirulina and chlorella have a wide range of applications, but because of the nutritional properties of these products, most opportunities are found in the health food sector.

### How is the end-market segmented?

The European market for spirulina and chlorella can be segmented according to end-user markets. These include the health, food, feed and cosmetics sectors. The main application of spirulina and chlorella are in the health products sector because of their nutritional profiles and potential health benefits. No data are available about the exact size and market share of each specific end market.

The Figure below gives examples of the use of spirulina and chlorella in the European market by end-user segments.

Figure 2: End-market segments for spirulina and chlorella

✘	✘	✘	✘
<p>Health products Spirulina and chlorella are widely used as functional foods or nutritional / dietary supplements, valued for their high protein content, vitamins, minerals &amp; antioxidant properties.</p>	<p>Food &amp; Beverage This segment includes spirulina and chlorella products that are processed and used as ingredients in the food and beverage industry. This includes the use of spirulina extracts that are used as natural colorants.</p>	<p>Cosmetics sector Spirulina and chlorella extracts are used in cosmetics &amp; personal care products for their beneficial properties such as antioxidant, moisturising and anti-ageing effects.</p>	<p>Other Biofuels of algae like spirulina &amp; chlorella are increasingly being used as a renewable and sustainable alternative to fossil fuel. Spirulina &amp; chlorella are also used in animal feed, primarily for aquaculture and poultry.</p>
<p>Example: Chlorella supplements, from Holland &amp; Barrett (UK)</p>	<p>Example: Sparkling spirulina water from Ful (UK)</p>	<p>Example: Blue Algae Vitamin C Dark Spot Correcting Peel from Algenist (France)</p>	<p>Example: Pleco spirulina wafers from Tetra (US) sold in Europe</p>

Source: ProFound, 2023

The end market for spirulina in the health products sector can be further segmented based on:

- **Product Form:** Spirulina and chlorella are available in various forms including as a powder, capsules, tablets, and liquid extracts. On the end market, some consumers prefer the convenience of capsules or tablets, while others may prefer a powder that can be added to smoothies, juices, or other products. The powder segment [accounts for the largest share of the European market](#).
- **Application:** Spirulina and chlorella are used in a wide range of health products, including dietary supplements, functional foods, sports nutrition, and nutraceuticals. Each application targets specific health benefits or consumer needs.

### Tips:

Read the CBI study on [the threats and opportunities in the European natural ingredients for health product markets](#). The study provides useful information about the European health products market as well as helpful advice on how to increase your chances of market access.

Read [our study on exporting seaweed extracts to Europe](#) to better understand the possible applications of spirulina and chlorella as natural food additives.

## Through what channels does a product end up on the end-market?

Figure 3 shows the export value chain for spirulina and chlorella. The figure shows that the processing and exporting of spirulina and chlorella in the country of origin are often combined in the same company. Microalgae processing in producing countries mainly involves drying and grinding/milling to produce a powder.

Figure 3: Market channels for microalgae



Source: ProFound, 2023

### Importer/Distributor

Importers typically trade in a large number of different ingredients, sometimes up to 500. They focus on establishing and maintaining a relationship with their suppliers, and on ensuring a consistent and reliable supply of raw materials. In addition, they carry out quality control measures to ensure that imported ingredients meet the required standards and meet the relevant regulations. Importers may conduct laboratory testing. They handle the necessary documentation, including specifications, certifications, and compliance records, ensuring accurate and up-to-date documentation for each ingredient imported. Importers also take care of sales to processors and end-product manufacturers.

Spirulina and chlorella for health products mainly enter the European market in dried and ground form. Because spirulina and chlorella are commonly sold on the market as tablets containing powder, further processing in Europe is limited. Examples of natural ingredients importers/distributors handling spirulina and/or chlorella on the European market are [Bio Import Europa](#) (Germany), [Nexira](#) (France) and [Aplantis](#) (Germany).

## Processor/Manufacturer

European processors / manufacturers sometimes work through importers, while at other times they import directly from origin. After sourcing the raw material, they typically process the powder into capsules for use as a food supplement. They then package the microalgae under their own label or under the label of their customer.

[Fit Ingredients](#) from Germany is an example of a company which imports spirulina and chlorella directly from origin. They finish the formulations with probiotic bacteria, and they offer contract service filling for food supplements. Another example is [Nutriphys](#) (Belgium), which imports chlorella and manufacturers food supplements.

## Agent

An export agent is a firm or an individual that undertakes most of the exporting activities on behalf of an exporter, usually for a commission. You can search for commercial agents in special online business directories such as [Europages](#) and [GlobalTrade.net](#). You could also contact your local chamber of commerce. They often have directories or can provide guidance on connecting with agents with experience in your target market.

## What is the most interesting channel for you?

Importers and distributors will be your most important entry point into the European market. If you are a small exporter and new to the European market, entering the market is very challenging. Doing so through these conventional distribution channels can be difficult due to volume and quality requirements. As a small producer, you could consider working with an agent to represent you in the market.

### Tips:

Visit or participate in trade fairs to find out whether the market would be open to your product, get market information and find potential buyers. The most relevant trade fairs in Europe are [SANA](#), [Health Ingredients Europe](#), [Biofach](#) (for organic products) and [Vitafoods](#).

Find buyers that match your business philosophy and export capacities in terms of quality, volume and certifications. For more tips on finding the right buyer for you, [see our study on finding buyers in Europe](#).

## 3. What competition do you face on the European chlorella and spirulina market for health products?

Spirulina and chlorella are found almost everywhere in the world. They thrive naturally in various regions, using sunlight and carbon dioxide to grow. Spirulina is also increasingly grown in completely closed systems in laboratories, ensuring high-quality ingredients. Europe is expanding its presence on the microalgae market. Nevertheless, Asia still stands out as the main supplying region. China, Taiwan, India and Japan have the most established spirulina and/or chlorella industries, with years of experience and expertise in cultivation and processing. In addition, Asian exporters tend to have larger-scale production capabilities, enabling them to offer competitive prices. This makes it difficult for small-scale producers in emerging market economies to enter the market.

## Which countries are you competing with?

Your main competitors on the European market include China, Taiwan, Japan, India and the United States. You can also expect competition from European seaweed producers. In Africa, there are currently no major

commercial spirulina export companies. However, the continent has over [65 small-scale spirulina farms across 25 countries](#). These farms have often received support from humanitarian and non-governmental organisations. Their primary goals are to address malnutrition among underserved populations, and they typically serve a local or regional market.

## **China: large volumes, competitive prices**

China is the world's largest producer of spirulina and chlorella. Spirulina and chlorella imported from China is traded at high volumes and competitive price levels. China's extensive experience in microalgae cultivation, processing, and research has given it a strong position in the industry. Chinese producers offer a diverse range of spirulina and chlorella products, including powders, capsules, tablets, and extracts.

With respect to China's reputation on the European market, the country is recognised as an important supplier. However, concerns about quality control and environmental practices affect some European buyers' perceptions, who as a result may prioritise products from other regions (often within Europe) known for stricter quality standards.

## **Taiwan: high-quality products**

Taiwan is one of the world's largest producers of microalgae. One of Taiwan's key strengths is its positive safety records. Many Taiwanese producers offer organic-certified chlorella and spirulina and the quality of Taiwanese microalgae is considered high. Over the years, the Taiwanese government and private sector have invested in research and technology to enhance the efficiency and quality of microalgae production.

## **Japan: long-standing expertise in cultivation, processing and research**

Japan is known for its stringent quality control measures and safety standards in the production and processing of microalgae. Japanese spirulina and chlorella products have a long-standing presence in the global market, and the country is recognised for its expertise in the industry. The country invests in research and technology for microalgae cultivation and processing, resulting in advanced production methods.

## **India: a growing microalgae industry**

India is another important supplier of chlorella and spirulina. The country has emerged as an important player in the spirulina and chlorella market, and the industry is developing rapidly. India's competitive advantage lies in its favourable climate, vast cultivation area and cost-effective production, allowing it to price its spirulina and chlorella products competitively. Perceptions of the country are generally positive due to its large-scale production capacity and availability of microalgae.

## **USA: well-established cultivation and export industry**

The USA has a well-established spirulina and chlorella industry, with numerous producers, manufacturers, and suppliers. Producers in the USA emphasise stringent quality control measures and adhere to safety standards, and their high-quality products have a good reputation. Providing high-quality products is key as the cost of production in the USA is higher than in some other countries, affecting the competitiveness of its products in price-sensitive markets.

US companies have a strong export capacity, supplying spirulina and chlorella products to various global markets. The domestic market for spirulina and chlorella products is also important, supported by health-conscious consumers seeking natural nutritional supplements.

## **Europe: high-quality products which meet sustainability requirements**

Asian countries, particularly China, Japan, Taiwan and India, are major producers and exporters of spirulina and chlorella. These countries have established expertise, competitive pricing, and significant production capacities.



However, they face strong competition from European suppliers who can cater to the demands of the European market.

European suppliers, mainly located in France, Germany, Italy and Spain, have several advantages that make them more competitive. First, European suppliers tend to produce high-quality products that meet the highest safety standards. Second, they prioritise sustainable practices, conforming to new European legislation as well as the increasing demand for environmentally friendly ingredients. Third, their proximity to the market means that European companies know the market best and enables them to distribute their products more quickly and cost-effectively.

### **Tips:**

Find out if your country has programmes helping exporters to improve harvest, cultivation, processing and exporting of spirulina and/or chlorella. You can do this by contacting your local chamber of commerce or the ministry of trade in your country.

Include pictures when promoting the origin of your chlorella and/or spirulina, such as the clear blue seas, the rich biodiversity of your home country, or the vibrant colours of your seaweed.

## **Which companies are you competing with?**

Many established companies export spirulina and/or chlorella to the European market. For new suppliers aiming to access the European market, it is important to observe and learn from the success of these companies.

### **Chinese companies**

[Zhejiang Binmei Biotechnology](#) is the largest blue spirulina factory in China, with an annual output of more than 200 tons. The company has independent intellectual property rights for blue spirulina extraction. It holds a patented technology for phycocyanin purification. The company has organic certification and its quality control system is FSSC22000 certified. Its products are sold to the food, health, cosmetics, and pharmaceuticals industries. The company has an extensive global presence, serving markets across the United States, Germany, Japan, South Korea, and other countries.

Another Chinese company that exports spirulina is [Basic Nutrition](#), which develops, markets and distributes ingredients and products for nutraceuticals, supplements and functional food & beverage industries from its primary manufacturing facilities in China, Japan and Korea. The company is engaged in contract manufacturing exclusive for food supplements and is GMP-certified.

### **Taiwanese companies**

The world's largest and first producer of chlorella is based in Taiwan: [Taiwan Chlorella Manufacturing Company \(TCMC\)](#). TCMC produces chlorella in the form of powder, tablets and extracts, and spirulina in the form of powder and tablets. TCMC is [USDA organic certified](#) and holds various ISO quality management system certificates, in addition to being Halal and Kosher certified.

Another example is the [Far East Microalgae Ind Co. \(FEMICO\)](#). This company houses 100,000 tons of microalgae in production ponds and manufacturing facilities. It boasts an annual production capacity of 1,000 tonnes for chlorella and 200 tonnes for spirulina. FEMICO offers organic spirulina, which is certified by the German [Naturland](#). Most of the company's products are exported to the United States, Europe, Japan, Korea, and other markets in southern Asia. Their facilities are ISO-9001:2000 and GMP-certified.

## Japanese companies

[Sun Chlorella](#) is one of the prominent Japanese companies to capitalise on the potential health benefits of chlorella by developing a wide range of chlorella-based health products. Overseas affiliates are [Sun Chlorella USA Corporation](#), Sun Chlorella (Shanghai) and [Sun Chlorella Corporation London Branch](#).

In addition, [DIC Corporation](#) is a Japanese company engaged in microalgae. The company specialises in developing and producing a wide range of products, such as pigments, inks, coatings and adhesives, but also microalgae-based products like spirulina. It offers spirulina in the form of powder and tablets, through its subsidiary companies Earthrise (USA) and Hainan DIC Microalgae (China). The company is committed to innovation and sustainability, and caters to various markets and industries worldwide.

## Indian companies

One successful microalgae company in India is [Parry Nutraceuticals](#), which is part of the [Murugappa Group](#) conglomerate. Parry grows spirulina and chlorella in southern India and holds various ISO and GMP certifications, as well as USDA, Naturland and EU organic certification. The company offers high-value products through ongoing research and innovation processes. Parry is part of a strong distribution network in over 40 countries, giving it a strong global presence. The company's sales revenue in 2020 was approximately \$540 million.

Another example is [Evergreen Agro Creations](#), which specialises in cultivating, manufacturing and marketing organic spirulina. The company has 30,000 square meters of growing ponds, is organic certified and holds several ISO quality management certificates.

## USA companies

[Cyanotech](#), based in Hawaii, specialises in cultivating and manufacturing high-quality microalgae products, including spirulina, for health and dietary supplements. Cyanotech offers a range of products, including spirulina in powder and tablet forms. The company has a strong distribution network, enabling them to serve global markets including Europe.

Another important supplier of spirulina in the USA is [Earthrise](#). It was the first spirulina farm in North America, and today it is the largest in the world. Earthrise is a subsidiary of the Japanese company [DIC](#) and focuses on developing microalgae for various applications, including food, biochemicals, and pharmaceuticals.

## European companies

Examples of European companies that offer spirulina and/or chlorella are: [Algomed](#) (Germany), [Algalimento](#) (Spain), [Spiruline La Capitelle](#) (France), [Aliga Microalgae](#) (Denmark) and [Necton](#) (Portugal).

### Tips:

If you can only produce spirulina and/or chlorella on a small scale, engage with local processors to sell your products. You can also work with other farmers to share the costs of investment in processing equipment or to achieve adequate scale to export the product in powder for health.

Ensure proper harvesting, post-harvesting and processing and proper documentation in order to make the most of opportunities to add value to your product. You can use this to show (potential) buyers that you are a reliable supplier of spirulina and/or chlorella for health and can ensure a good and stable quality.

Ensure that you have an online presence and that your website is up-to-date. This is because European buyers frequently use the internet to find and assess exporters for natural health products before doing business with them.

## Which products are you competing with?

There is a wide variety of products that you are competing with, depending on what your ingredient will be used for. If your spirulina and/or chlorella will be used as:

- A plant-based protein supplement, your product competes with other plant-based protein supplements like pea protein, hemp protein, and soy protein.
- An ingredient for general health or immune system support, your product competes with a wide range of other natural ingredients that are high in vitamins, minerals and antioxidants. Commonly used plants for immune support include Echinacea (*Echinacea purpurea*), Ginseng (*Panax quinquefolius* and *P. ginseng*), Green tea (*Camellia sinensis*), Ginger (*Zingiber officinale*) and Eleuthero (*Eleutherococcus senticosus*). Other 'superfood' powders also pose strong competition, such as Baobab fruit powder (*Adansonia digitata*), Moringa (*Moringa oleifera*), Barley grass powder (*Hordeum vulgare*) or Wheat grass (*Triticum aestivum*).
- Direct competition from other microalgae: Tetraselmis is a recently approved EU novel food, and a rich source of protein, iron, vitamin B, fatty acids and antioxidants. It has [great potential as a plant-based substitute for sea food](#), such as lobster. However, it is important to note that the cultivation of this microalgae is more demanding than spirulina and chlorella. Also, given that it is so new to the market, it is not yet widely known to the public.

Build a marketing story for your spirulina or chlorella that shows how it is different from competing products. This is particularly important when targeting the food supplements market. You can base this on the nutritional content, by referring to studies and the results of clinical trials or the provenance of your chlorella or spirulina. Use a literature study on the potential of microalgae in immune support and general health to support your story. For example, see the [PureSea ingredients](#) from Seaweed and Co (the United Kingdom). This company backs up the benefits of their products using independent university research.

### Tips:

Conduct market research into the potential substitute products mentioned above. For instance, find out how your spirulina or chlorella compares with other products in terms of nutritional profile, price, supply security/sustainability and ease/costs of substitution. Make sure that you have these results ready when talking to potential buyers so that you can answer their questions.

Diversify your product portfolio to reduce risks. Products marketed as [superfoods](#) have a higher risk of being 'replaced' by other superfoods. Sales of these products are highly dependent on what is currently in fashion, and this can change when a new superfood comes along.

## 4. What are the prices for chlorella and spirulina on the European market?

Prices for chlorella and spirulina for health depend on several factors, including:

- The type of product you sell;
- The country of origin;
- Whether you produce a dried powder or process it further into extracts of specific components;
- Who you sell to (an end user or intermediary); and
- The quality of your raw material.

FOB prices will depend on the factors listed above, but as an example, [organic spirulina powder from India](#) sells

at around €7-€13 for a 1-kg package and [chlorella powder \(25-kg packaging size\)](#) for €16-€23/kg. [Organic spirulina powder \(1-kg package\) from China](#) is sold for prices ranging from €7-€12/kg and [organic chlorella powder \(25-kg packaging\)](#) between €12-€22/kg.

Wholesale prices of spirulina and chlorella also differ depending on the variables listed above. Examples of wholesale prices on the European market are: [organic spirulina powder from China](#) sold for €316 for 20 kg (=€15.8/kg), or [organic chlorella powder from China](#) for €653 for 20 kg (=€32.7/kg).

Retailers, processors and final product manufacturers all add a margin to the powder that they use. The following table shows examples of retail prices for powder or food supplements on the European market containing spirulina or chlorella:

Species	Final product	Brand	Packaging size	Price per kg
Organic spirulina	Powder	Biotona	200 gr	€ 65
Organic chlorella	Powder	Biotona	200 gr	€ 100
Spirulina	Tablets	Holland & Barrett	500 mg, 240 tablets	€ 56
Organic chlorella	Tablets	Holland & Barrett	500 mg, 240 tablets	€ 60

Source: [Holland & Barrett](#)

### Tips:

Calculate your production costs using a detailed cost breakdown. Do not forget to include additional costs such as customs, loading/unloading, marketing, samples for chemical analysis and internal transport. Add your profit margin to the cost breakdown result to achieve the selling price.

Monitor harvests in major production countries like China. This will help you to anticipate price developments for your microalgae. You can request such information from importers.

Gustavo Ferro and Lianne Groothuis of [ProFound – Advisers In Development](#) carried out this study on behalf of CBI.

Please review our [market information disclaimer](#).