Entering the European market for dried chillies

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Food safety certification combined with reliable and frequent laboratory tests creates a positive image for dried chilli exporters to Europe. Sustainable production and implementation of corporate social responsibility standards will provide additional advantages for emerging suppliers. The strongest competitor to new dried chilli suppliers is China. Chinese companies are combining price competitiveness with investment into safe and high-quality production.

Contents of this page

- 1. What requirements should dried chillies comply with to be allowed on the European market?
- 2. Through what channels can you get dried chillies on the European market?
- 3. What competition do you face on the European dried chillies market?
- 4. What are the prices for dried chillies?

1. What requirements should dried chillies comply with to be allowed on the European market?

In addition to the quality requirements mentioned in the section below, please refer to our study about buyer requirements for spices and herbs for a general overview of buyer requirements in Europe.

What are mandatory requirements?

All foods, including dried chillies, sold in the European Union must be safe, as specified in the General Food Law. This applies to imported products as well. Additives must be approved. Harmful contaminants, such as pesticide residues, and excessive levels of mycotoxins or preservatives are banned. It should also be readily obvious from the labelling whether a food contains allergens.

Official border control for dried chillies imported to the European Union

Official food controls include regular inspections that can be carried out at import or at all further stages of marketing. In case of non-compliance with the European food legislation, individual cases are reported through the Rapid Alert System for Food and Feeds (RASFF), which is freely accessible for the general public.

There were about five notifications in the last two years regarding food safety issues with dried chillies in the RASFF database. The notifications related mainly to aflatoxin contamination.

You should be aware that repeated non-compliance with the European food legislation by a particular country may lead to special import conditions or even suspension of imports from that country. Those stricter conditions include laboratory test results for a certain percentage of shipments from specified countries. Dried chillies are often subject to increased border control for countries failing to comply with the EU food safety requirements.

Dried chillies and dried sweet peppers from the following countries have been subject to stricter import controls:

• China - 20% of all shipments of dried chillies or dried sweet peppers must be officially tested for the

- presence of Salmonella.
- Ethiopia 50% of all shipments of dried chillies or sweet peppers must be officially tested for the presence of aflatoxins.
- India 20% of all shipments of dried chillies or dried sweet peppers must be officially tested for the presence of aflatoxins.
- Sri Lanka 50% of all shipments of dried chilli and sweet peppers must be officially tested for the presence of aflatoxins.
- Pakistan 50% of all shipments of all spice mixes must be officially tested for the presence of aflatoxins.

Contaminant control in dried chillies

The European Commission Regulation sets maximum levels for certain contaminants in food products. This regulation is frequently updated and apart from the limits set for general foodstuffs, there are a number of specific contaminant limits for specific products including dried chillies. The most common requirements regarding contaminants in dried chillies are related to the presence of pesticide residues, mycotoxins, heavy metals, microbiological organisms and food additives.

Mycotoxins

The Presence of mycotoxins (aflatoxins and ochratoxin A) is the main reason for banning dried chillies from the European market. The maximum level of aflatoxin for dried chillies must be between 5 μ g/kg for aflatoxin B1 and 10 μ g/kg for the total aflatoxin content (B1, B2, G1 and G2). For ochratoxin, the maximum level is 15 μ g/kg. To prevent mycotoxin development, sweet peppers should be dried, packaged and stored properly to ensure water activity stays below 0.65.

Pesticide Residues

The European Union has set maximum residue levels (MRLs) for pesticides in and on food products. Products containing more pesticide residues than allowed will be withdrawn from the European market. However, excessive residues of pesticides are not very frequent in dried chillies trade. The European Union regularly publishes a list of approved pesticides that is authorised for use in the European Union. This list is frequently updated. The European Farm to Fork Strategy aims to reduce the use of pesticides by 50% by 2030.

Residues of anthraquinone may be found in smoked dried chillies capsicums as a result of artificial drying with fire. The smoke contains anthraquinone, which can end up in the product if appropriate precautionary measures are not taken.

Microbiological contaminants

The most common type of microbiological contamination and border rejection for dried chillies is the presence of Salmonella. Salmonella is usually transmitted to chillies by the irrigation with unsafe water, use of untreated manure as fertiliser and harvesting of chillies by dirty hands. Also, in some areas the drying process is often performed in the open air (often directly on the ground) which increases the risk of infestation with Salmonella by animals and birds.

Preventive measures should be taken in order to avoid allowing dried chillies to become contaminated with insects and micro-organisms. These could include heat treatment or fumigation. If fumigation is used, only officially approved disinfectants are permitted. The EU has banned methyl bromide and ethylene oxide. Still, European buyers are finding residues of these banned substances (especially ethylene oxide) in imported dried chillies and dried sweet peppers. Heat treating (sterilising) the pepper is therefore strongly recommended, as it is a much safer procedure than fumigation.

Product composition

Buyers and European authorities can reject products if they have undeclared, unauthorised or too high levels of added substances. There is specific legislation for additives (like colours, thickeners) and flavourings that list

what E-numbers and substances are allowed to be used. Additives that are authorised are listed in Annex II to the Food Additives Regulation.

The most often used types of food additives in the production of dried chillies are preservatives, colour enhancers (such as Sudan 1 dye) and anticaking agents (in chilli powders). However, keep in mind that European traders and consumers prefer dried chillies which are additive-free which is explained by the clean label trend.

Food Fraud

Dried chillies and sweet peppers are subject to fraud. In the trade of ground chillies and sweet peppers, adulteration includes the mixing of spice powder with flour, plant husks, rice powder, sawdust or stone powder. Fake powders also include dried pulp of various fruits such as wild jujube (*Ziziphus nummularia*). Another type of fraud is the illegal (intentional and undeclared) use of colour or flavour. One method of adulteration is to refer to chillies of inferior quality by the names of high-quality varieties or names with a Protected Designation of Origin.

Dried chillies are among the focus products for the EU-wide survey about herbs and spices authenticity, published in 2021. The goal of the study was to protect consumers from misleading and potentially unsafe products. It looked at six different herbs and spices. The study revealed that the percentage of samples deemed at risk of adulteration for paprika/chilli was lower than for other products, at 6%. By comparison, 17% of the samples for pepper were deemed at risk.

Packaging and labelling requirements

Packaging used for dried chillies and sweet peppers must protect the flavour, colour, and other quality characteristics of the product. The content of the packaging must correspond to the quantity indicated on the label.

In the case of retail packaging, product labelling must comply with the European Union's regulation on the provision of food information to consumers. This regulation defines nutrition labelling, origin labelling, allergen labelling and a minimum font size of 1.2 mm. The text on retail packaging must be written in a language that can be easily understood by consumers in the European target country, which will generally be the country's official language. This explains why multiple languages are often found on the labels of European products.

In addition to this regulation, since 1 April 2020, all food packaged for retail sale in Europe must be labelled with an indication of the country of origin. For example, if dried chillies are imported from China but packed in France, the packaging still needs to indicate the country of origin of the product. This is usually done by indicating 'Packaged in France', for instance, but a simple mark next to the lot number may also be used, such as 'Produce of China/'Origine de la Chine'/'Prodotti dalla Cina'.

Dried chillies and paprika are not on the list of allergens, but they can sometimes come into contact with allergens (such as grains or nuts) if they are grown in the same field, a process referred to as cross-contamination. Allergen contamination can also occur because of shared transportation, storage, or production equipment.

Tips:

Follow Codex Alimentarius Code of practice for the prevention and reduction of mycotoxins in spices (pdf) and Code of Hygienic Practice for Low-Moisture Foods (PDF). Heat (steam) sterilisation was proven to be effective in reducing the mould presence. Also, steam sterilisation is favoured by the European buyers as it is natural and chemical and radiation-free. Also, it is important to store your dried chillies in dry conditions and to prevent excessive moisture accumulation.

Only use services of laboratories that are ISO/IEC 17025 accredited for the control of contaminants in

dried chillies. Presence of aflatoxins must be tested according to the EU regulation on methods of sampling and analysis for the official control of the levels of mycotoxins in foodstuffs.

Read more about MRLs on the European Commission website on Maximum Residue Levels. To be prepared for potential new changes in the MRLs, read the Ongoing Reviews of MRLs in the European Union.

Check the Rapid Alert System for Food and Feed (RASFF) database for examples of dried chillies withdrawn from the market and the reasons behind these withdrawals.

Make sure to provide complete documentation and specifications of your dried chillies to European buyers. This information will allow them to assess the potential of your product in different applications. See the example of a product specification sheet from the Dutch company 12Taste to identify the type of data that can be useful to your potential buyers.

Read the UK Spice and Seasoning Association guidance on authenticity of spices and herbs to learn about measures you can take to prevent fraud in your supply chain.

What additional requirements do buyers often have? Quality requirements

The minimum requirements for dried chillies are that they must be intact (if traded as a whole) and that they must be free from diseases, foreign matters and any other disorders. The maximum moisture content for crushed and ground dried chillies is set to 11%. The maximum moisture content for whole chillies varies depending on the commercial type of chillies from 9% (for De árbol chillies) to 13.5% (for Guajillo and Pasilla chillies) according to the UNECE standard. The Codex Alimentarius Standard committee is currently working on the new standard for dried or dehydrated chili and paprika.

Quality of dried chillies is determined by several factors where some are subjective such as taste or flavour. Still, several quality product characteristics can be officially measured and included in product specifications. Those include:

- Cleanliness or purity: Chillies must be free of diseases, foreign matter, foreign odours, and any other irregularities. The European Spice Association (ESA) proposes that the quantity of external matter should not exceed 1% of the weight for all spices. The ASTA Cleanliness specification uses more criteria to determine the cleanliness of pepper, such as the presence of dead insects, excreta, foreign matter, and damage by mould or insects. For ground sweet peppers, the presence of insect fragments or rat/mouse hairs is set at a maximum of 75 fragments per 25g.
- Colour: The intensity of colour is one of the most important determinants of the quality of dried chillies, especially for chilli powder. The colour of dried chillies is commonly expressed in units established by the American Spice Trade Association (ASTA). Most commonly colour is determined by standardised laboratory tests (such as ISO 7541) but also by the use of colour charts. It is commonly accepted by the industry that high-quality chilli powder should have ASTA unite value higher than 120.
- Pungency: The hotness (pungency) of dried chillies is an important trade factor. The pungency of paprika powder is determined by its capsaicin content. If the capsaicin content is below 30 μ g/g, dried paprika is not called chilli but sweet. The most preferred method of measuring capsaicin content is high-performance liquid chromatography (HPLC). The pungency level is expressed in Scoville heat units (SHU) and ranging from 900-3000 for mild chillies (such as ancho) to >100000 for extra hot chillies (such as habanero).
- Mesh count: The size of the individual flakes or powder particles is used to describe the physical appearance of dried crushed or ground chillies. The actual size of the powder or flakes is measured by micrometre or mesh count. The mesh count is the number of threads in each centimetre. Larger mesh size indicates smaller particles, while smaller mesh indicates a larger sized particle in the final product. The most common

mesh of crushed flakes is between 5 and 8.

According to physical and chemical specifications crushed and ground dried chillies are typically classified into 4 quality categories. Whole dried chillies are classified into 3 quality categories where the size is set for 9 commercial types of chillies by the UNECE standard. However, according to this standard, sizing of whole dried chilli peppers is mandatory only for 'Extra' Class and Class I.

Food safety certification

Although food safety certification is not obligatory under European legislation, it has become a must for almost all European food importers. Most established European importers will not work with you if you cannot provide some type of food safety certification proof as the basis for cooperation. This is especially the case for dried chillies that have been further processed at origin, such as crushed and ground chillies.

The majority of European buyers will ask for Global Food Safety Initiative (GFSI) recognised certification. For dried chillies, the most popular certification programmes are:

- International Featured Standards (IFS)
- British Retail Consortium Global Standards (BRCGS)
- Food Safety System Certification (FSSC 22000)

Please note that this list is not exhaustive and food certification systems are constantly developing. The majority of food safety certification programmes are based on existing ISO standards like ISO 22000.

Although different food safety certification systems are based on similar principles, some buyers may prefer one specific management system. For example British buyers often require BRC, while IFS is more common for German retailers. Also note that food safety certification is only a basis to start exporting to Europe, but reliable buyers will usually visit your production facilities.

Corporate Social Responsibility

Companies have different requirements for corporate social responsibility. Some companies will require adherence to their code of conduct or the following of common standards including the Supplier Ethical Data Exchange (SEDEX), Ethical Trading Initiative (ETI) or Business Social Compliance Initiative code of conduct (BSCI).

Packaging specifications

Exported dried chillies are commonly exported in bulk and packaged in carton, jute or polypropylene bags. Polythene cannot be used, as the flavour components diffuse through it. The size of the bulk varies according to the buyer's requirements but usually vary between 3 and 40 kg but the most commonly 20 or 25 kg.

Dried chillies should be stored in dried and cool places, protected from the sun, heat, moisture, insects and other animals.

Labelling

Each export package shall declare:

- Name of product, e.g. 'dried whole chilli peppers'
- details of the manufacturer (name and address)
- batch number
- date of manufacture
- product grade
- producing country
- harvest date (month/year)

• net weight.

Other information that exporting and importing countries may require include the bar, producer and/or packager code, as well as any extra information that can be used to trace the product back to its origin.

If your product is organic and/or Fairtrade-certified, the label should contain the name/code of the inspection body and the certification number.

Tips:

Use standardised laboratory tests (such as ISO 7541 and HPLC) for the product specification of dried chillies.

Be sure to declare any addition of allowed ingredients in your dried chilli peppers. Addition of not declared additives can be understood from your buyer as cheating and ruin your image on the European markets. Some examples of undeclared additives to improve low-quality chilli peppers discovered by European laboratories include colour enhancers (such as artificial food colours or tomato powders) or flavour enhancers (such as essential oils or oleoresins).

Read more about transport and storage requirements for dried chillies on the website of Transport Information Services.

Follow the European Spice Association's Quality Minima Document on the chemical and physical parameters that your dried chillies need to comply with.

Do a self-assessment through the producer starter kit from the amfori BSCI website to verify if you comply with social sustainability parameters, and to identify your critical points.

What are the requirements for niche markets? Organic dried chillies

In order to market your dried chillies as organic in the European market, they must comply with the regulations of the European Union for organic production and labelling. Obtaining the EU organic certificate is the minimum legislative requirement for marketing organic dried chillies in the European Union.

Note that all organic products imported to the EU must have the appropriate electronic Certificate of Inspection (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).

Refer to this list of recognised control bodies and control authorities issued by the EU to ensure that you always work with an accredited certifier. To become organic-certified, you can expect a yearly inspection and audit, which aims to ensure that you comply with the rules on organic production.

If you want to export to countries outside of the European Union (EU), check the required legislation per country. For instance, Switzerland has its own Swiss Organic Law and the United Kingdom has its Organic Products Regulations 2009.

In addition to the EU organic standard, most European countries also have their own voluntary organic standards, like Bio-Siegel (Germany), AB mark (France) and the Ø logo (Denmark). Some countries also have private standards or labels, like Naturland (Germany), Soil Association (United Kingdom), Bio Suisse

(Switzerland) and KRAV (Sweden). But note that having the EU organic standard is usually sufficient for most buyers.

Sustainability and Corporate Social Responsibility (CSR) certification

Sustainability is a broad term involving many aspects and there is still no recognised sustainability certification covering all of them. Until recently, sustainability certification was aimed at special niche buyers on the market, but it is now becoming a mainstream demand, similar to organic certification. The publication of CO2 emission rates on products is becoming increasingly common, but it is difficult to reliably confirm those claims. However, some private certification schemes are under development. The most widely known certification schemes currently focus on environmental impact and ethical (CSR) aspects.

Companies have different requirements for corporate social responsibility. Some companies require adherence to their code of conduct, or one or more of the common standards, such as the Supplier Ethical Data Exchange (SEDEX), Ethical Trading Initiative (ETI), and the Business Social Compliance Initiative's code of conduct (BSCI).

At present, the most widely known sustainability certification schemes are Fairtrade, which focuses on ethical practices, and Rainforest Alliance, which focuses on environmental impacts. Fairtrade International has developed a specific standard for herbs, herbal teas and spices for small-scale producers. This standard defines issues related to traceability, management and production practices, and labour conditions. According to this standard, a premium price of 15% over and above the negotiated price between producer and seller must be established.

As of July 2022, there were 27 Fairtrade-certified dried chilli producers in Egypt (3), India (5), Indonesia (1), Sri Lanka (2), Thailand (5), and Zimbabwe (1). In addition to producers/processors, there are 36 other Fairtrade-certified traders of dried chillies.

In August 2022, there were 14 Rainforest Alliance-certified farmer groups for chilli pepper worldwide. These groups are spread around the globe, mainly in India, but also in Tanzania, Thailand and Mexico. Together, these groups produce nearly 15,000 tonnes of chillies.

To improve sustainable production and sourcing of spices and herbs, a group of mainly European companies and organisations formed the Sustainable Spice Initiative in 2012. The main objective of this initiative is to achieve fully sustainable spice production and trade in the sector. For an overview of sustainable initiative developments in the European spices market, see our study on Trends in the European Spices and Herbs Market.

Ethnic certification

The Islamic dietary laws (Halal) and the Jewish dietary laws (Kosher) propose specific restrictions in diets. If you want to focus on Jewish or Islamic ethnic niche markets, you should consider implementation of Halal or Kosher certification schemes.

Tips:

Consult the Standards Map database for sustainability labels and standards

Check the publication by Open Trade Gate Sweden on the new European rules regarding organic production and certification (PDF) to familiarise yourself with the requirements to supply organic-certified products to Europe.

2. Through what channels can you get dried chillies on the European market?

How is the end market segmented?

The largest user of dried chillies in Europe is the food processing industry, followed by retail, foodservice and food ingredients (additive segments).

Figure 1: End market segments for dried chillies in Europe



Source: Autentika Global

Food processing segment Food-processing industry

The European food industry uses ground chillies in significant quantities, especially in the manufacturing of meat products like sausages, salamis and pâtés. These are also used as an ingredient in spice mixtures, sauces, soups and ready meals.

The food-processing segment is roughly estimated to account for 60-70% of the usage of dried chillies on the European market. The largest users within the food-processing segment include spice mixture producers, the meat industry and the sauces and seasonings industry.

Spice mixture producers are companies specialised in the production of spices and seasonings for different applications. Those companies are constantly investing in research to develop custom formulations for food-processing companies and help launching new attractive tastes. They produce either dried or liquid spice ingredients. Some examples of spice mixtures and ingredients companies are AVO (German producer, part of the European group), Meat Cracks, Kerry Ingredients, IFF, Farevelli Group, Food Ingredients Group, Kalsec, EHL Ingredients or Ion Mos.

The meat industry is the most important user of dried chillies but very often not supplied directly but through spice and food ingredient companies. However, some larger groups of companies may import dried chillies directly. An example of such a group includes OSI Food Solutions. Dried chillies are used in the production of sausages and other meat specialities. However customised mixtures (with chillies as the ingredient) are more commonly used by meat processors.

The European sauces and condiments industry is also an important user of dried chillies. However the market is dominated by international brands such as Kraft Heinz, McCormick, Maggi (Nestle).

An interesting development in the food-processing industry, particularly in dried chillies, is the increasing level of vertical integration. In order to maintain constant supply and stable prices when sourcing dried chillies, many European companies have started to invest in production sites in developing countries.

These investments are likely to increase due to global climate change, in order to stabilise sourcing. Production of dried chillies includes Germany's Fuchs Gruppe investment in China (with a production unit in Anqiu city and a technology centre in Shanghai), Spain's Paprimur production in China, Spain's Sabater sourcing location in China, the UK's JLP Food Processing Facility in China, and Poland's Saran Enterprises office in Vietnam.

Ingredients industry

The ingredients industry is composed of ingredient formulators that serve various end-using industries such as

food, cosmetics and health. Ingredient formulators are often large-scale companies operating globally, like Givaudan, Firmenich (now part of DSM), Symrise, Naturex and Oterra. These companies focus on cutting-edge technology and usually source from various global suppliers. They have very strict sourcing protocols for quality control and consistency, as well as sustainability.

Retail

The retail and foodservice segments are dominated by European (often national) brands, such as Fuchs, Verstegen, Euroma, Santa Maria (Scandinavian countries, part of Paulig group) and multinational brands such as McCormick, Kraft Heinz etc. Also, some strong brands are developing in south Eastern Europe such as Prymat Group.

Private label (supermarket) brands are important as well. Production for all these brands is conducted by European spice packers and blenders. Since supermarkets often require large quantities and have very specific requirements regarding packaging, it is very difficult to supply them directly. Products already packed in origin countries are mainly found in European ethnic markets.

The retail sector can be further segmented into supermarkets, independent grocers and specialty shops. Most retailers sell individually packed spices or herbs, or they sell specific mixtures. Overall, spice and herb mixtures are becoming more popular in the retail segment, partly due to the increasing interest in ethnic food.

Leading supermarket chains in Europe include Tesco, Carrefour, Lidl, Metro, Aldi, Delhaize, Rewe, Edeka, Auchan and Albert Heijn.

Food service

The foodservice segment (hotels, restaurants and catering) is usually supplied by specialised importers (wholesalers). The foodservice segment often requires specific packaging of dried chillies, which is different from bulk or retail packaging (for example from 1 to 5 kg) packs.

World cuisines, healthy food and food enjoyment are the major driving forces in the foodservice channel in Europe. The fastest-growing business types are likely to be new (healthier) fast food, street food, pop up restaurants, international cuisines and sandwich bars.

Tip:

To find potential buyers for your dried chillies within the food ingredient segment search the list of exhibitors of the specialised trade fair Fi Europe.

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

The most important channel for dried chillies in Europe is represented by the specialised spice importers. However, sometimes dried chillies can be placed on the market through agents or directly supplied to food processors or food service companies. Some wholesalers also have packing facilities and usually supply private label dried chilli brands.

Importers / Wholesalers

Importers and wholesalers can be general spice importers or further specialised in specific roles. Some now exclusively deal with ingredients aimed at the processing industry while others pack dried chillies for retail chains. Some importers also deal with a broader range of products apart from spices, such as beans or seeds.

The position of the importer and food manufacturers are put under pressure by retail. The higher requirements from the retail industry determine the supply chain dynamics from the top down the chain. Pressure is translated into lower prices but also added value aspects such as 'sustainable', 'natural', 'organic' or 'fair trade' products. Transparency in the supply chain is needed. To achieve this, many importers develop their own codes of conduct and build long-lasting relationships with preferred developing-country suppliers.

Examples of bulk importers of dried chillies in Europe include Albarracin (Spain), Nedspice (the Netherlands, specialises more in the sourcing of dried sweet peppers), European Spice Services (Belgium), Husarich (Germany) or Saran Enterprises (Poland).

Examples of specialised importers which are using chillies in different spice mixtures include Culinar (Sweden), Epos (the Netherlands), Colin Ingredients.

An example of a spice importer which is supplying several different segments includes ISFI Spices (Belgium).

Processors / packers

Large spice processors source their dried chillies and other spices directly from producing countries. Since these companies often have large portfolios and work with several spice origins, they tend to have designated departments for sourcing. In most cases, they will have more than one supplier per spice, so as to spread their risks for product consistency, quality and availability. These companies process spices by cleaning, sterilisation, grinding, blending and packaging.

Spice processors may supply dried chillies both as an ingredient or as a finished product, under their own brand or under a private label. Large-scale processors in Europe include Euroma (Netherlands), which opened its new factory in 2019, and Fuchs (Germany), which has a product line for retail and another one focusing on the industrial sector.

Figure 2: Trade channels for dried chillies in Europe



Source: Autentika Global

Agent/broker

Brokers and agents are intermediaries who bring buyers and sellers together. They charge a commission for their services. European buyers can be trading companies, but they are mostly processors. Agents and brokers are interesting in the event that you have a specialised product (such as high quality or sustainable) for which buyers are harder to find. The role of the agent is slowly diminishing due to the increased transparency demanded by the market. Agents/brokers usually charge 3 to 10% for their services.

Tips:

Search through the members list of the European Spice Association to find buyers from different channels and segments.

To help you enter the market, consider working with an agent or representative with a good reputation. You can look for commercial agents on the website of Internationally United Commercial Agents and Brokers (IUCAB). The IUCAB website lists all its national member organisations; you can use the services of these organisations to find an agent or representative in a specific country.

What is the most interesting channel for you?

Importers are the best contact for placing dried chillies in the European market. This is specifically relevant for new suppliers, as supplying the retail segment directly is very demanding and requires a lot of quality and logistical investments.

Importing wholesalers source large amounts of chillies, often from different origins, and break these bulk imports into smaller amounts for the smaller end users, including spice companies and other food industry players. Although many exporters from developing countries often aim to supply European smaller industrial users directly so as to obtain higher margins, this bulk-breaking function can contribute to an increase in trade volumes and eventually higher profits.

However, packing for private labels can be a good option for well-equipped and price competitive producers. Still, private label packing is often done through importers that are making contracts with retail chains in Europe. As the cost of the workforce in Europe is increasing importers of dried chillies sometimes search for the opportunities to pack brands in developing countries if they can assure full traceability and quality control. High volume and consistent availability, high quality consistency and high food safety will be very important here. Industrial buyers are expected to be very strict in the implementation of food safety certifications like FSSC 2000, BRCGS and IFS.

3. What competition do you face on the European dried chillies market?

Which countries are you competing with?

China by far the leading supplier of dried chillies to Europe

China is the second-largest exporter and producer of dried chillies in the world (after India) but the leading European supplier. Most of the Chinese dried chillies production goes for export. Chillies have reached production of more than 300 thousand tonnes of which almost 70% is exported. China is focusing its exports on high-quality products, suffering shortages in low and medium quality due to labour shortages and unfavourable weather.

Over the last five years, China has continuously increased the export of dried chillies by an average annual growth rate of 5%, but experienced a slight decline in 2021. In 2021, Chinese exports of dried chillies and dried sweet peppers reached 211 thousand tonnes, and 32% of this quantity was exported to Europe. Chinese exports of dried chillies are focused mainly on Spain. Spain accounts for around 80% of all Chinese exports to Europe. One of the reasons for this high percentage is the investment in processing facilities in China by Spanish companies (such as Sabater or Paprimur).

China is the most competitive dried chilli supplier to Europe in terms of prices. Chinese export prices of dried chillies are much lower compared to suppliers from other countries. In addition, Chinese laboratory controls for contaminants seem to be more reliable compared to those performed by Indian laboratories (especially when it comes to measuring levels of aflatoxins). Additionally, many Chinese processors have introduced steam sterilisation to minimise contamination risks.

Major production areas of chillies in China are Shandong, Xinjiang, Henan, Shanxi, Hebei and Gansu. Also, the province Guizhou specifically started to promote Chinese chilli production by the organisation of the annual International Chilli Expo. Chinese chilli production is mostly confined to low heat ones. Very popular chilli cultivars used for drying in China include 'chaotian' ('facing heaven chilli'), more used for grounding into powder, and 'yidu' which is more used for crushing into flakes. Other varieties include Jinta, Tieban, Xian and Er Jing Tiao.

Apart from the competitive prices, Chinese companies are successful in international promotion. The majority of

Chinese dried chilli producers actively participate in international trade fairs on the national pavilions. Also, many of them are efficient in terms of delivery (such as reaching the import destination within two weeks from signing the contract) or payment (asking only for partial advance payments). However, this image of logistical efficiency completely changed with the arrival of the COVID-19 pandemic. Since 2020, delays have become frequent, and in 2021/22 shipping rates increased more than tenfold.

Tip:

Read more about promotional activities of Chinese chilli suppliers on the website of the World Chilli Alliance.

Spain, the leading processor and trader of dried chillies within Europe

For developing country suppliers, it is important to understand that many Spanish dried chilli processors should not be seen as competitors but as potential partners as they import chillies from other countries, but mostly from China.

Spain's production of dried chillies is neither self sufficient nor price competitive in comparison to other agricultural sectors. Domestic production in Spain is facing difficulties to be profitable as farmers are requesting higher prices (currently around €3/kg) to cover production costs and to pay workers. Workers are frequently hired from East European countries as the domestic workforce seems to be too expensive for competitive production. Decreasing domestic production is supplemented with imports thus offering opportunities for developing-country suppliers.

Tips:

In order to meet Spanish dried chilli traders and processors, visit the Alimentaria expo which is held every two years in Barcelona.

Refer to the CBI webinar on dried chillies, conducted in 2021, to learn more about the European market for this product.

India, world leader in dried chilli production

India is the world's largest producer, consumer and exporter of chillies in the world. However, due to increased control for aflatoxins presence by European authorities, Europe is currently not seen as a priority market for Indian dried chilli exporters. Instead, Indian export of dried chillies focuses on Southeast Asian countries (an export share of nearly 90% in 2021), with China as main destination (a share of 40%), followed by Thailand, the USA, Indonesia and Sri Lanka. Exports to Europe account for a share of only 3.0%, with the UK as the leading target market.

According to FAOSTAT data, Indian production of dried chillies and dried sweet peppers is estimated to exceed 2 million tonnes. Around 30% of this production is exported, while the remaining 70% is consumed domestically. In 2021, Indian exports of dried chillies to Europe exceeded 9.0 thousand tonnes.

In India, major chilli producing states are Andhra Pradesh, Telangana, Tamil Nadu, Karnataka and Madhya Pradesh. There are many dried chilli varieties grown in India which are usually characterised by a higher

pungency level compared to Chinese chillies. The most demanded variety by European buyers is Guntur Sannam S4 (also known as S-334) with a pungency level of 18,000-22,000 Scoville Units. Some other varieties include Dhani, Byadagi, Hindpur, Jwala, Kanthari White and Kashmir chilli.

Production and export of spices, including dried chillies, is monitored and supported by the Spice Board of India. The Spice Board of India is one of the most famous spice industry organisations in the world which is organising a World Spice Congress every second year. The Spice Board of India is also responsible for the mandatory testing of spices before exporting to the EU.

Peru, dried chillies exporter with a strong promotion

Peru is the sixth-largest exporter of dried chillies in the world, but exports have been fluctuating in the last couple of years. In 2021, total exports of dried chillies from Peru reached 39 thousand tonnes; 22% of exports, or around 9.0 thousand tonnes, went to Europe. Nearly all exports of Peruvian dried chillies to Europe go to Spain (98% of the country's exports to Europe).

Peru, one of the original producers of chilli, is producing and drying (and even collecting from the wild) different types of chilli varieties. The most famous Peruvian varieties used for drying are Panca (low heat variety), charapita (collected from the wild and more expensive than others), rocoto, arnaucho and cherezo. Recently, the Mexican ancho variety is also increasingly produced in Peru. The most popular chilli variety in Peru is Amarillo, but it is more commonly used as fresh and less for drying.

Due to its specific offer, Peru mostly exports dried whole chillies, reaching very high prices on the European market compared to other competitors (on average €2.5/kg in 2021, although the prices of exports to Europe were lower compared to exports to the USA).

The Peruvian region of Piura, followed by the regions of Lambayeque and La Libertad account for 65% of Peruvian chilli exports. Peru is very strong in export promotion supported by the national export promotion organisation, PromPeru. PromPeru has created a national brand 'Superfood from Peru', which is promoted on all leading international trade fairs. Additionally, the Peruvian Association of Exporters (ADEX) actively promotes Peruvian chillies and it organised the International Capsicum Conference in 2018. There is also 'the National Day of Peruvian Peppers'.

Thailand, emerging exporter

There was a steady increase in exports of dried chillies from Thailand until 2019, reaching 20 thousand tonnes, but exports decreased sharply to 9.2 thousand tonnes in 2020, with a slight recovery to 12 thousand tonnes in 2021. Despite this decrease, exports to Europe in particular have seen much growth, with the Netherlands as main target destination. In 2021, the Netherlands imported around 6.8 thousand tonnes of dried chillies from Thailand, representing over 90% of the total supply from Thailand to Europe. Thai dried chillies are mostly exported in the form of dried powder or fine flakes. Popular chilli varieties in Thailand are phrik khi nu (birds eye chilli of the *Capsicum Frutescens* species) and prik num.

Mexico, traditional dried chilli supplier

Mexico is increasing its export of dried chillies at a stable rate, but only a very small share accounts for export to Europe. Around 99% of all exported dried chillies actually goes to the United States. The export share to Europe is insignificant, amounting to less than 100 tonnes in 2021.

The state of Chihuahua is the main producer of chilli in Mexico. Strong regions in producing dried chillies are Sinaloa, Zacatecas, Aguascalientes, Guanajuato, Puebla, San Luis, Potosí and Querétaro. Mexico is famous for the production of whole dried chilli varieties. Famous varieties used for drying and related to Mexico include ancho, arbol, chilhuacle, chipotle, guajillo, morita, mulato, pasilla and cascabel. Habanero (very hot) and jalapeño (very mild) peppers are very famous varieties but mostly used fresh or pickled.

Which companies are you competing with? Chinese companies

Some examples of Chinese dried chillies exporters to Europe include: Qingdao Taifoong Foods, Qiang Da Foods, Neihuang Xinglong Agricultural Products, Qingdao Boon Foods, Qingdao Johnson Foods, Hennan Sunny and Qiubei Yunnong Agro Products. Several European companies, including Fuchs, Paprimur, Sabater's and JLP, also have processing facilities in Spain.

Just for illustration, good examples of successful promotion include Qingdao Taifoong Foods and Qiang Da Foods. Both companies regularly participate in leading international trade fairs, cooperate with local farmers, supervise traceability and quality, and use recognised food safety certification schemes. Also, they use advanced technologies such as processing equipment and steam or microwave sterilisation lines. Another strong point is cooperation with well-known control bodies or laboratories such as Eurofins or SGS to guarantee their quality.

Spanish companies

There are many traders and processors of dried chillies within Spain. It is not possible to list all of them but just a few illustrative examples including Juan José Albarracin (one of the oldest Spanish dried capsicum companies), El Clarin (famous grinding company with sourcing in Africa and Peru), Ramón Sabater (a 100-year-old company with processing facilities in China), Evesa (producer of food ingredients based on capsicum), Juan Navarro García (producers of chillies and oleoresins), Herbo Spice, Paprimur, Pimursa, La Chinata, Dani, La Barraca and Chiquilin.

Indian companies

According to the Spice Board of India, there are more than 5 thousand exporters of spices in total and more than 200 exporters to Europe. Therefore it is difficult to make an illustrative list of selected exporters among many but there is a published list of exporters selected for certificates of merit.

Peruvian companies

Examples of Peruvian dried chillies exporters include Holguin, S&M Foods and Consorcio del Valle. Peruvian dried chilli exporters are investing into traceability and control of the whole supply chain in order to achieve high quality of the end product. In order to maintain the full control of the supply chain Peruvian dried chilli companies often produce chillies by themselves or closely cooperate with farmers and farmers' associations.

Thai companies

Thai dried chilli exporters include Nithi Foods, Penta Impex and Global Food. Leading Thai dried chilli exporters have recognised the importance of food safety and corporate social responsibility, so they are investing in modern production processes and recognised certification schemes.

Which products are you competing with?

The main substitute products for dried chillies are fresh chillies, pickled chillies and food additives based on chillies such as chilli extracts or chilli oleoresins.

Tips:

In order to successfully penetrate the European dried chilli market you need to study the different strategies of your competitors. You may either offer competitive prices and safe products (like Chinese companies do), or offer unique high-quality chillies (like South American producers do) or customise your product to specific segments, such as organic. It is very important to learn from the Chinese companies, which strongly emphasise food safety control.

Use the services of your national export promotion agency and actively participate in the creation of export strategies. Good examples include PromPeru in the promotion of the superfood country brand.

Learn more about Indian dried chilli companies from the exhibitor list of the World Spice Congress.

Regularly visit leading European trade fairs such as ANUGA, SIAL, Food Ingredients or Alimentaria to meet your competitors. Biofach is especially interesting if you are exporting organic chillies.

Fresh chillies

European consumers are becoming more familiar with ethnic cuisines, which contributes to the consumption of fresh chilli peppers. The European market for fresh chilli peppers is still a specialised market, supplied primarily by producers in southern Europe (especially Spain), Turkey and northern Africa. To find out more about fresh chillies competition refer to our study on Exporting fresh chilli peppers to Europe.

Pickled chillies

Pickled chillies are a relatively weak competitor to dry chillies as pickled chillies are used in a slightly different way and by different market segments compared to dried chillies. Pickled chillies are mainly used in the retail segment and by foodservice companies but commonly not by strong dried chilli sectors such as meat processing companies.

The largest supplier of pickled chillies to Europe is Turkey (with a 45% share) followed by Mexico, Peru, South Africa and India. The largest importer of pickled chillies in Europe is Germany, followed by the United Kingdom and the Netherlands. The leading producers of pickled chillies within Europe are Greece and Spain.

Food additives based on chillies

Paprika oleoresin (which includes sweet and chilli extracts) is manufactured by solvent extraction of the dried capsicum pods, followed by solvent removal. To learn more about usage of chillies for the production of food colours and pungency additives read our study about Exporting paprika oleoresin to Europe.

The seasonings and sauces industry sometimes uses chilli extracts instead of dried or fresh chillies in the product compositions. The base for many chilli sauces on the European market is often tomato paste with the addition of different spices. Although the name of many chilli sauces indicates the high presence of chillies in reality sometimes chilli extracts are used in combination with other spices and flavour enhancers (such as monosodium glutamate), stabilisers, acidity regulators and preservatives. Sometimes chilli paste is used too.

Tip:

Consider a diversification of your offer to health and food ingredient industries with the production of ingredients such as capsaicin or oleoresins. Prepare a good business plan as this diversification requires additional technology investments. Read more about those market segments in the CBI study on paprika oleoresin.

4. What are the prices for dried chillies?

When exporting dried chillies to Europe, it is not possible to give precise information when showing the margins each actor in the supply chain receives as it depends on many factors. However, targeting the retail segment the rough estimation is that cost, insurance and freight (CIF) for chillies in bulk price represent up to a maximum of 10% of the final retail price (usually less) of the retail packed branded product. This is because of the high margins of the packing operations and retail stores. Commonly, one retail package of dried chillies is weighted between 20 and 40 grams.

Tips:

To be regularly and timely updated about dried chillies export prices, consider subscribing to the IHS Markit portal or to Mintec, which are some of the most respected market information services for food ingredients including spices.

Monitor average weekly prices for dried chillies from the website of the Spices Board of India. Those prices are based on the reports of the USA based spice broker A.A. Sayia &Co. Inc.Hoboken.

This study was carried out on behalf of CBI by Autentika Global and updated by Gustavo Ferro.

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