# **Entering the European market for dried garlic**

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Even though many buyers consider dried garlic as a standardised commodity, suppliers have a few options to differentiate their product on quality. This is particularly useful to prevent direct competition on price with Chinese suppliers, which dominate this market. In terms of segments, the food industry is important in the dried garlic market. While consumers and food service providers such as restaurants mostly prefer fresh garlic over dried garlic, food manufacturers highly appreciate the long shelf life and ease of application of dried garlic.

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# **1.** What requirements must dried garlic comply with to be allowed on the European market?

### What are the mandatory requirements?

When exporting to Europe, you have to comply with the legally binding requirements of the EU. The most crucial requirements are related to food safety and the basis for EU legislation is laid down in the General Food Law. This regulation relates mainly to traceability, hygiene and control. Compliance with this legislation ensures that the spice is safe to eat. Related to this are the legal limits for food contaminants.

### Official border control for dried garlic imported to the European Union

Official food controls include regular inspections that can be carried out at import or at any 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 to the general public.

You should be aware that repeated non-compliance with the European food legislation by a particular country might lead to special import conditions or even suspension of imports from that country. Those stricter conditions include laboratory tests for a certain percentage of shipments from specified countries.

The New Official Controls Regulation will extend its scope to organic products. You will have to use the Common Health Entry Document to notify authorities in Europe before you export your products.

### **Contaminant control in dried garlic**

**European Regulation** on contaminants 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 garlic. The most common requirements regarding contaminants in garlic relate to presence of pesticide residues, mycotoxins, heavy metals, microbiological

organisms and food additives. There were seven notifications of issues with dried garlic in the RASFF database in 2021. The notifications vary, ranging from excessive levels of cadmium and chlorpyrifos in garlic to visible mould.

Contaminant levels shall be kept as low as can reasonably be achieved following recommended good working practices.

- Pesticides: The European Union regularly publishes a list of approved pesticides applicable to specific products (see the maximum levels for garlic) that are authorised for use in the European Union. This list is frequently updated. Note that new specific binding MRLs were set for chlorate in June 2020. Products containing more pesticide residues than allowed will be withdrawn from the European market. However, excessive residues of pesticides are not very frequent in trade with dried garlic.
- Mycotoxins: limits for mycotoxins are set by EC Regulation 1881/2006. For garlic, maximum levels for mycotoxins are set for aflatoxin (between 5.0 μg/kg for aflatoxin B1 and 10 μg/kg for the total aflatoxin content B1, B2, G1 and G2) and for ochratoxin A (the maximum level is 15 μg/kg). For dried garlic for herbal infusions category A, maximum limits for mycotoxins are specified in the European pharmacopeia. The maximum level of aflatoxins is the same as for food, at 5 μg/kg for aflatoxin B1 and 10 μg/kg for the total aflatoxin content. The maximum limit for ochratoxin A is 15 μg/kg.
- Food additives and adulteration: spices and spice blends are rejected by custom authorities for containing undeclared, unauthorised materials or excessive levels of extraneous materials, which is all matter from the specific plant other than the desired part.
- Maximum levels of polycyclic aromatic hydrocarbons (PAHs): contamination with PAHs stems from bad drying practices. Importers usually claim costs of such withdrawals back from their suppliers or discontinue the trade completely.
- Heavy metals: until recently, specific limits for the presence of heavy metals in spices and herbs were not set in the European legislation on contaminants. However, this changed in 2021, following a review process for the maximum allowed levels of cadmium. The new maximum level for lead (in mg/kg) is set at 0.050 for garlic.
- Microbiological contamination: *Salmonella* must be absent in garlic for the European market.

Large European retail chains usually require their suppliers to use steam sterilisation in order to combat the microbiological contamination of dried garlic. Currently, steam sterilisation is the cheapest and safest method to combat microbiological contamination. You could gain access to the most demanding retail chains in Europe if you can supply dried garlic that is sterilised at the source. However, smaller buyers in niche markets for dried garlic will not always require steam sterilisation at the source.

**Irradiation**: this process is legally allowed in many EU countries under restrictive conditions. However, in practice irradiation is not applied on garlic for the European market, as consumers do not always accept this treatment and irradiation has to be mentioned on the product label. Only discuss this option with your buyer when other types of treatment such as fumigation and steam sterilisation are not possible.

#### **Food additives**

Buyers and European authorities can reject products if they have undeclared, unauthorised or excessive levels of extraneous materials. There is specific legislation for additives (like colours and thickeners) and flavourings that list which E-numbers and substances are allowed for use. Authorised additives are listed in Annex II to the Food Additives Regulation.

Although you might consider using food additives in the production of dried garlic, keep in mind that European traders and consumers prefer spices that are additive-free.

#### Tips:

For a complete overview of requirements, refer to our study on buyer requirements for spices and herbs or consult the specific requirements for dried garlic on the European Commission website of Access2Markets.

Apply the general guidelines for Good Agricultural Practices (GAP) on spices & culinary herbs of the International Organisation of Spice Trade Associations (IOSTA) to produce good-quality dried garlic that does not require food additives for preservation or other functionality.

To understand food safety risks for dried garlic, check the Rapid Alert System for Food and Feed (RASFF) database for examples of dried garlic withdrawn from the market and the reasons behind these withdrawals.

Always discuss with your potential buyers whether they want steam sterilisation. If your buyer requires steam sterilisation, look for local sterilisation companies that can provide this service for you. Sterilisation at your own facility is very expensive. Investments in the necessary equipment can cost up to €1 million.

Comply with food safety requirements during drying, storage, processing (such as sieving, mixing, grinding or crushing), packaging and transport. This will help prevent contamination with mycotoxins and other contaminants. Not even steam sterilisation can fully remove these substances.

# What additional requirements do buyers often have? Quality Minima

The European Spice Association represents the interests of the European spices industry and has established non-legal minimum quality requirements for spices, including dried garlic, in their Quality Minima Document. While these requirements are not legally binding and non-compliance will not result in rejections by border controls, compliance is expected by most European buyers and often enforced through purchasing contracts which include product specifications.

Table 1: Minimum quality requirements for dried garlic

| Chemical/physical parameter                  | Value   |
|--|---|
| Ash (% Weight for Weight Max)                | 6.0   |
| Acid insoluble ash (% weight for weight max) | 0.5   |
| Moisture (% weight for weight max)           | 6.5 (Due to the hygroscopic nature of these products, lower moisture content may be required) |
| Volatile oil ml/100G Min                     | Not defined   |

| Water activity   | Water activity is a key parameter that<br>affects microbiological growth, therefore<br>ESA recommends a target value of max.<br>0.65 (aw).                                    |
|--|---|
| Microbiology   | The product shall be free from<br>microorganisms at such levels which may<br>represent a hazard to health. Specific<br>requirements to be agreed between buyer<br>and seller. |
| Adulteration   | Must be free from   |
| Infestation  | Should be free in practical terms from live<br>and/or dead insects, insect fragments and<br>rodent contamination visible to the naked<br>eye                                  |
| Extraneous matter (all matter from the specific plant other than the desired part) | Spices max. 1% by weight  |
| Sensory properties   | Must be free from off-odour or off-flavour  |

Source: European Spice Association

The ESA has not developed cleanliness specifications. As a result, European buyers often use the specifications for cleanliness stated by the American Spice Trade Association (ASTA).

### Taste

The taste of dried garlic depends on variety, growing conditions and processing methods. Buyers usually have preferences for a certain taste profile. For example, some buyers want a strong dried garlic whereas others prefer a mild dried garlic. For the latter buyers, dried garlic from which garlic oil was extracted may be attractive, while buyers that prefer strong garlic will not accept this dried garlic. For this reason, buyers will often require a sample to taste the product before placing an order.

### Colour

Most buyers, and particularly dried garlic powder buyers, prefer a white colour. As food manufacturers use dried garlic as an ingredient to be mixed with other ingredients, they prefer if the dried garlic's effect on the colour of the final product is as limited as possible. This gives them more control over the colour of the final product by using other colouring foodstuffs or additives.

### Sizes

Dried garlic can be offered to buyers in flakes, granules or powder. Many importers in Europe prefer to purchase dried garlic in flakes or granules. One of their concerns with powdered garlic and other spices is adulteration. Flakes and granules allow for easier detection of potential adulterants. Another concern is that the friction of the

pulverisation process can affect the properties of the product when inferior equipment is used. Last, many European importers have the capacity to make powders themselves and prefer to have control over this process and add value themselves.

Many buyers require a specific particle size. Inconsistency in particle size is a major buyer concern as it affects the product's suitability for certain applications. To achieve consistency in particle size, you must use high-quality equipment and apply strict sorting and grading.

### Additional food safety requirements

Only very few garlic buyers require suppliers to implement an advanced food safety management system that is recognised by the Global Food Safety Initiative – like the Food Safety System Certification (FSSC 22000), British Retail Consortium (BRCGS), International Featured Standards (IFS Food) and Safe Quality Food programme (SQF) – and obtain a certificate from an accredited certifier. Implementation and certification of these standards usually costs hundreds of thousands of euros and is only recommended for large-scale processors targeting large European retail chains. For those processors, such a certificate shows professionalism. Smaller buyers in niche markets for dried garlic are likely to have more relaxed food safety requirements, as they prioritise other aspects such as authenticity.

### Labelling

Clear labelling of your garlic is important for both bulk and pre-packed consumer products. The European labelling legislation applies to pre-packed consumer products. This regulation (EU No 1169/2011) relates to labelling, presentation and advertising of foodstuffs as well as providing information on nutritional content. The information must be in the language of the country you are selling to. You can also use multi-language labels if you sell your product in more than one country. Regulation (EU) 341/03 sets out the guidelines on the labelling of foodstuffs using Protected Geographical Indications (PGI).

For bulk garlic, your product label must include:

- Product name
- Details of the manufacturer (name and address)
- The name of the protected geographical indication (PGI) (only allowed when GI is registered with the EU)
- Batch number
- Date of manufacture
- Expiry date
- Weight of contents
- Other information required by the exporting and importing countries, e.g. producer and/or packer code, as well as all 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.

### Packaging requirements for dried garlic in bulk

Dried garlic is packaged in new, clean and dry multi-wall laminated bags made of food-grade material such as polypropylene. Do not use polythene bags, as they result in loss of flavour. The size of the packaging can range from 1 to 25 kg and must be agreed with the buyer.

### **Tips:**

When you aim to excel in food safety management or need to improve the trust of buyers in your food safety management, choose a food safety management system that is approved by the Global Food Safety Initiative.

Always ask your buyer for their specific packaging requirements.

Add website links and QR codes to your packaging to provide more information about the product.

### What are the requirements for niche markets? Packaging requirements for dried garlic in retail packaging

Requirements for consumer-packaged garlic are more demanding than for dried garlic in bulk. The most common types of consumer packaging for spices are:

- Glass bottles with metal or plastic caps. These bottles often have additional features to dispense or grind garlic. This packaging is popular among consumers that are looking for convenience.
- Printed plastic pouches. Polyester and polypropylene laminate are especially popular in this type of packaging, as they are lightweight and hygienic, can be heat/sealed and are easily available.
- Printed tinplate containers, which may include a dispensing system.
- Plastic and composite containers. These often contain ground or cut garlic. This packaging includes a seal that shows if the packaging has been tampered with.
- Lined cartons, which usually contain small quantities of whole garlic cloves.

Consumer packaging usually ranges from 5 to 100 grams but can reach up to 2 kilograms. Packaging needs to be functional (to protect the product from infestation, spoilage, and quality loss) and of high quality to enhance the sales appeal of the product. The design and feel of the product are just as important as the quality of the packaging material.

### Additional liability requirements for retail products

When you supply dried garlic in retail packaging through a legal representative in Europe, such as a distributor, your buyer can pass claims related to product defects and injuries to consumers on to you, especially if you are supplying retailers directly. You will then have to reach an agreement with the consumer about compensation. You need to have logistics in place to resolve such issues. For example, make an agreement with your buyer that they will act as your agent. If there are problems, they can act on your behalf and transfer the costs of compensation and product recalls back to you.

### Tips:

Visit the website of the European Commission for additional information on food labelling legislation. Note that this requirement only applies to final products that are sold directly to consumers.

Obtain insurance for product liability if the risk of liability claims is big, for example when you supply directly to retailers or when you have a valuable brand or reputation. In other situations, European importers will often be held liable.

### **Organic certification**

Certification of sustainability in the dried garlic market is still a niche. However, the interest in sustainability in the spices market is stimulated by initiatives such as the Sustainable Spices Initiative, which has identified the use of high levels of chemicals such as pesticides as a major area of concern.

As the use of chemicals is restricted in organic farming, organic certification addresses this concern of buyers. To market your garlic as organic in the European market, you must obtain the EU organic certificate. 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.

Note that all organic products imported into 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. This requires you to get necessary information, such as importer address and TRACES number, first consignee, seal and vessel number of your container. 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), where you will also have to register as organic exporter.

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). It is only relevant to look into these certification schemes when your buyer specifically requests it.

### **Fairtrade certification**

Fairtrade International (FLO) is the leading standard-setting organisation for fair trade certification. Fairtrade International has developed a specific standard for herbs, herbal teas and spices for small-scale producer organisations. According to this standard, a premium price of 15% over and above the negotiated price between producer and seller must be established. FLOCERT is the accredited certifier for Fairtrade. Refer to this full guidance to learn more on how to become a Fairtrade producer.

Note that there is not a high demand for Fairtrade-certified dried garlic. Getting certified would mainly be a branding strategy, to distinguish your product from your competition and attract more conscious consumers. Fairtrade finds its largest market in the United Kingdom.

Fair for Life (by IMO/Ecocert) and Fair Choice (by Control Union) are other fair trade certifications available to producers and other operators. Although less recognised in the European market, Fair for Life and Fair Choice have the advantage that the control bodies Ecocert and Control Union can combine the fair trade audit with, for instance, organic or Rainforest Alliance audits. However, always check demand and interest for a specific certification with your potential buyer.

### Tips:

When you aim to provide transparency about your business to potential buyers, you can provide such information on your website and through company documentation, or you can consider the Supplier Ethical Data Exchange (SEDEX), which enables you to declare that you do business in a responsible way in a uniform format that is acceptable to many larger buyers, like retail chains.

Refer to the Basket of Sustainability Standards of the Sustainable Spice Initiative for an explanation and comparison of sustainability standards.

If you have more than one certification, try to combine audits to save time and money. Also investigate the possibilities for group certification with other producers and exporters in your region.

Use this cost calculator to estimate what costs will be involved for your organisation to get Fairtradecertified.

Familiarise yourself with the range of organisations and initiatives that offer technical support to help you convert to organic farming. Start your search at the organic movement in your own country and ask if they have their own support programmes or know about existing initiatives. Refer to the

database of affiliates of IFOAM Organics to search for organic organisations in your country.

If you are interested in the organic market, try to visit trade fairs for organic products, like **Biofach** in Germany. Check out their website for a list of exhibitors, seminars and other events at this trade fair. Here you will also find booths of the organic certification bodies.

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

### How is the end market segmented?

The food industry accounts for around 50-80% of global demand for dried garlic. Consumers account for the other 20-50%. For industrial users, the long shelf life of dried garlic and the ease of application are strong arguments to use dried garlic instead of fresh garlic. Major industrial users of dried garlic include manufacturers of spice mixtures, soups and sauces, ready-to-eat meals, savoury snacks and meat products.

Besides the food industry, the pharmaceutical industry also uses small amounts of garlic. The European Medicines Agency (EMA) recognises garlic powder and extracts of garlic as a traditional herbal medicine. The herbal monograph for garlic contains two uses: adjuvant for the prevention of atherosclerosis and relief of symptoms of the common cold. Garlic contains the substance allicin, which is generally regarded as one of the key players in herbal medicine. See the CBI studies on natural ingredients for health products for more information on this market.

### Low-end segment

The low-end segment comprises cheap, mass-produced garlic of a quality that just meets minimum requirements. These are usually produced on a large scale, mostly in China. While prices in the low-end segments are low, the quality of the garlic meets all food safety requirements and is consistent.

These low-end retail products are often not certified and are packed in cheap materials, such as plastic jars or paper bags, to lower the retail price. Low-end garlic is mostly sold as powder, allowing producers to sell the smallest particles and waste material of the cutting of garlic cloves into flakes and granules. In addition, garlic mixed with other spices and salt can also be found in this section.

Garlic for the low-end segment is often sold in supermarkets and by the food service industry. Private labels of retail chains play a large role in the low-end segment. Private labels are brands owned by the retail chains themselves.

Table 2: Product and price examples in the low-end market segment, in 2022

| Product | Picture | Retail price<br>(€/kg) |
|---------|---------|------------------------|
|---------|---------|------------------------|

| Low-end | Ostman (Granulated, 100-gram<br>package)             | Costmann<br>Knoblauch<br>Diener<br>Soog  | 34.90 |
|---------|--|--|-------|
|         | Badia (Minced garlic, 1.5 pound package (680 grams)) |  | 26.15 |
|         | HES (Garlic flakes, 45-gram<br>package)              | H-E-S<br>H-OBLAUC <sup>4</sup><br>ROCKEN | 26.40 |
|         | Edora (Granulated garlic, 110-<br>gram package)      | Endedandi<br>Endedandi<br>Visitati       | 36.30 |

### **High-end segment**

More unique, specialty dried garlic products can be found in the high-end segment of the garlic market. These garlic products are sold at higher prices. For example:

- Dried garlic with a geographical indication (GI) such as the Spanish Ajo Morado de Las Pedroñeras, Aglio Rosso di Nubia, the French Ail rose de Lautrec and the Chinese Cangshan garlic. The GI protects its unique methods of production and quality aspects specifically found in that location.
- Products made from unique varieties of garlic.
- Black garlic as shown in the table below, which has undergone a unique type of processing.
- Toasted garlic.

|          | Product  | Picture  | Retail<br>price<br>(€/kg) |
|----------|--|--|---------------------------|
| High-end | Trader Joe's (black ground,<br>fermented garlic, 29-gram<br>package) | The second secon | 101.04                    |
|          | Ostmann (freeze-dried garlic, 70-<br>gram package)                   | <b>Stman</b><br>Knoblauch  | 58.40                     |
|          | Schwartz (roasted garlic<br>granules, 35-gram package)               | Schwartz<br>RDASTED<br>GARLEL<br>GARNELES  | 63.14                     |



## Through what channels does a product land on the end market? Food industry

Large industrial users mostly source their dried garlic directly from producers. These users include Unilever, known for many brands like Knorr, and Nestlé, known for many brands like Maggi. These companies need relatively large volumes, which allows them to skip intermediaries with a bulk-breaking function. Smaller industrial users with smaller volume needs often make use of importing wholesalers in Europe to source their dried garlic, as the import of small amounts of dried garlic is relatively expensive and adds a lot of cost to the final product for consumers.

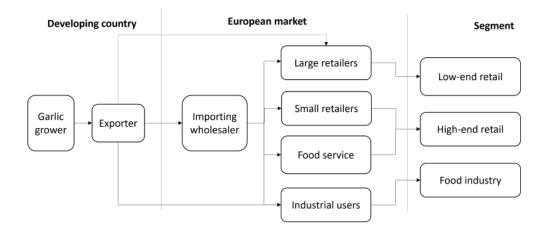
Importing wholesalers – like Nedspice, Jost Bauer and Colin Ingredients – source large amounts of garlic and break these bulk imports into smaller amounts for the smaller industrial users. Although many exporters from developing countries often aim to supply European industrial users directly to obtain higher margins, this bulk-breaking function can contribute to an increase in trade volumes and eventually higher profits.

### Retail

Large retail chains like Tesco and Sainsbury's in the United Kingdom, Edeka and Lidl in Germany, and Carrefour in France, dominate the retail market segment in Europe, especially the low-end retail segment. Besides their physical shops, they increasingly have webshops where consumers can order products online and have them home-delivered. The retail chains are increasingly selling products, including dried garlic, under their own private labels. They source almost all their garlic from large importers like British Pepper & Spice and Bart Ingredients in the United Kingdom.

Smaller independent retailers such as delicatessen and foodservice providers (hotels, restaurants and catering) like Metro Chef are the other retail channels. They mostly serve the high-end retail segment. By offering unique and exclusive products they avoid direct competition on price with the retail chains.

Figure 1: Market channels for dried garlic



Source: ProFound

### What is the most interesting channel for you?

Importing wholesalers are the most interesting channel for most dried garlic exporters. They provide access to all the different segments in Europe and are interested in a wide variety of dried garlic products. As they are usually more open to new suppliers than industrial users and retailers, they are relatively easy to find. Examples of these importers are Verstegen and Schwartz.

As the main function and added value of importing wholesalers is the import and bulk-breaking of large amounts of spices, their purchasing processes are well-organised and efficient. At the same time, they have a large network of suppliers from all over the world and can switch relatively easily to other suppliers, which gives them a lot of negotiating power. They are up-to-date on current price levels in the global market and provide little room for margins unless you can prove that your product is unique and is worth a price premium.

To connect yourself to the buyers highlighted in Figure 1, you may also make use of agents. Agents who look for buyers on your behalf are particularly interesting if you lack sales capacity. However, once you have established a trade relationship through an agent you cannot establish a direct relationship with the buyer anymore. The sales network of the agent is protected by law.

#### **Tips:**

Benefit from the experience, knowledge and bulk-breaking function of specialised European importers instead of approaching retailers or industrial users directly.

Look for importing wholesalers in the member lists of the national spice associations in Europe. Go to the member section of the European Spice Association (ESA) for an overview of associations.

One website where you can find agents is that of the Federation of German Commercial Agents and Distributors (CDH).

# **3. What competition do you face on the European dried garlic market?**

### Which countries are you competing with?

In general, the degree of competition on the market for dried garlic is high. This market is dominated by Chinese

suppliers, who are able to deliver large quantities at a low price. It is difficult for small and medium-sized companies, for example those exporting a few containers per year, to compete in this market. Nonetheless, many European companies aim to diversify their sources in order to mitigate risks of supply problems in one single source country. In fact, some suppliers express concerns that China will need more of its dried garlic for domestic consumption in the medium- or long-term. This would leave less dried garlic available for exports. For this reason, many buyers of Chinese dried garlic are still interested in offers from alternative sources.

Smaller exporters will generally find more opportunities in the niche markets for dried garlic where volumes are smaller. In these niches, the focus lies more on unique quality aspects and sustainability.

# China: the world's largest garlic producer also supplies a large share of the dried garlic market

China supplies an estimated 80% of the global market for dried garlic. It plays a leading role in markets for both fresh and dried garlic. In 2022, exports of fresh garlic were expected to amount to 4.5 million tonnes. The large scale of the garlic production, particularly in Jinxiang county in the Shandong province, results in economies of scale and allows Chinese suppliers to offer low prices. China is by far the largest supplier of dried garlic to Europe, as can be seen in the figure above.

Despite the low prices, not all European buyers are interested in Chinese products. Some of them mistrust Chinese suppliers due to poor transparency in supply chains and rumours about poor management of quality management systems. Still, the quality of the dried garlic entering Europe is generally considered good.

In recent years, Chinese exporters faced difficulties arranging shipment of their dried garlic due to the COVID pandemic, resulting in lesser availability of transportation, and due to shortages in containers for transport. Shipping rates reached record levels of US\$10,000 for a container.

### Egypt

Egypt can compete on price with China and benefits from proximity to the European market. However, volumes of Egyptian dried garlic are far smaller and there are no indications that quality of Egyptian dried garlic is higher.

### Serbia

Serbia is the third-largest exporter to Europe, after China and Egypt. Serbia has a significant dried vegetables industry that offers a range of dried vegetables, including garlic. As Serbia borders teh EU, it benefits from close proximity to European buyers, including Hungary. Hungary has a relatively high per capita consumption of garlic, and accounts for about one third of Serbia's exports of dried garlic to the EU.

### India

India is Asia's second-largest supplier of garlic, after China. Although India is Asia's second-largest supplier, it lags behind China. China exports about 20 times as much garlic to Europe as India. India's largest exporting markets are Germany, Spain, Poland, the Netherlands and the United Kingdom.

### Uzbekistan

Uzbekistan has become the fifth-largest exporter of garlic to Europe since 2018. Last year, it supplied the region with 1053 MT of garlic. Over 80% of all Uzbekistan's export goes to Germany. In 2021, Germany imported 856.9 MT of dried garlic from Uzbekistan, out of Uzbekistan's total export of 1053.8 MT.

### USA

According to FAO, the Americas are the second-largest garlic producing continent (5.2%), after Asia (90.5%). Of the Americas, the USA is the largest exporter of garlic to Europe, with a total of 543 MT in 2021 – a steep

decrease compared to its 1036 MT of export to Europe in 2017. Since 2017, Uzbekistan has taken over the USA's position as fourth-largest exporter of garlic to Europe. On a global scale, the USA is a fairly large producer of garlic yet it uses most of its production domestically, so it plays only a small role in the supply to Europe.

### Which companies are you competing with?

New entrants to the market will face competition from already-successful dried garlic exporters, especially due to their already-established long-term relationships with buyers. Entering the market as a newcomer requires you to have extensive knowledge of your product assortment, stable quality and volumes, and good communication skills to start building your own new relationships with buyers.

Most of your competitors come from China. Chinese exporters include Jining Land Trading Co. and Jining Fenduni Foodstuff Co. Olam, the world's largest dried garlic producer, also has a factory in China. In this video of their factory you can get an impression of the size of their production and the technology they apply.

AMD Verde is a dried garlic exporter in Egypt. This company has specialised in the supply of organic spices and herbs, and their main strength is the vertical integration. They control the entire production from farm to factory. Another strength is their wide product offer, which enables buyers to source different products from them and combine shipments to reduce transport and administrative costs.

ACM INT is a competitor from Serbia. ACM's strengths are their expertise in drying technology and the large size of their drying capacity. By using their equipment for a variety of fruits and vegetables, they use their drying capacity optimally and can keep costs low.

### Competition for consumer-packaged dried garlic

The European end market for consumer-packaged dried garlic is extremely competitive, with many established European brands that offer a whole range of spices. The big European brands mainly get their products from importing wholesalers, which usually add value to the dried garlic through strict quality control, blending and packaging.

Small European brands are particularly strong in the niche markets for dried garlic, with unique properties. They use their own brand to show their customers that each of their products has been carefully sourced by them and meets their stringent requirements for that high-end market segment. Their uniform packaging for all their products shows consumers that all their products belong to the same brand. European companies and brands thus constitute serious competition for dried garlic exporters that directly target the market with consumer-packaged dried garlic.

Other competitive advantages of European companies over dried garlic exporters are knowledge about the domestic markets in terms of consumer taste preferences and buyer requirements, proximity to their buyers, and a strong reputation among buyers of unadulterated products that comply with European food safety requirements.

### Which products are you competing with?

Dried garlic mainly competes with garlic preserved through other methods, such as garlic in oil or brine. This garlic usually has a stronger taste than dried garlic, as the latter loses taste during cutting and drying. The advantage of dried garlic compared to garlic in oil or brine is that it is easier to apply. This is particularly important for food manufacturers that need to work fast and with automated processes.

Garlic oil is extracted from garlic and is an alternative to dried garlic for some food manufacturers that are looking for a garlic flavour in wet products. Compared to garlic oil, dried garlic is easier to handle and has the advantage that it is a visible ingredient for consumers.

#### Tips:

If you are a new producer, demonstrate to your potential buyer that you can offer a continuous supply of good-quality dried garlic that complies with food safety requirements.

Develop long-term partnerships with your buyer. This implies always complying with buyer requirements and keeping your promises. This will provide you with a competitive advantage, more knowledge, and stability on the European market.

Actively promote your company on your website and at trade fairs. Quality competitions also provide good opportunities to share your dried garlic with a wider audience. For instance, refer to the Sofi Awards, Superior Taste Award and the Great Taste Awards.

### 4. What are the prices for dried garlic on the European market?

Between 2019 and 2022, prices for dried garlic fluctuated between US\$1,500/tonne and US\$2,600/tonne Free on Board (FOB). In 2020, prices were lowest at US\$1,500/tonne and in 2022 prices were highest at US\$2,600/tonne. Prices for dried garlic depend strongly on size and quality of harvests in China.

End-market prices for dried garlic vary depending on the targeted market segment.

| Actor       | Price point   | Price in<br>€/kg | Share of<br>actor in<br>final retail<br>price |
|-------------|---|------------------|---|
| Exporter    | Export price from China (full container load of ~20 tonnes)                     | 2                | 7%  |
| Transporter | Full container load delivered to<br>Europe                                      | 2.5              | 2%  |
| Importer    | Wholesale price in Europe for bulk (~1 tonne order)                             | 5                |   |
| Importer    | Wholesale price in Europe for bulk (~1<br>kg order)                             | 15               |   |
| Importer    | Wholesale price for retail packaged garlic                                      | 15               | 41%   |
| Retailer    | Retail price at large retail chain (~50<br>gr packaging) before Value Added Tax | 25               | 33%   |

\*VAT will vary per European country Source: interviews and various webshops

Table 5: Rough price indications for dried garlic powder for the high-end organic retail segment

| Actor           | Price point  | Price in<br>€/kg | Share of<br>actor in<br>final retail<br>price |
|-----------------|--|------------------|---|
| Exporter        | Export price from Egypt (full container load of ~20 tonnes)                            | 4                | 7%  |
| Transporter     | Delivery of full container load to<br>Europe   | 4.2              | 0-1%  |
| Importer        | Wholesale price in Europe (~1 tonne order)   | 8                |   |
| Importer        | Wholesale price in Europe (~1 kg<br>order)   | 25               |   |
| Importer        | Wholesale price for retail packaged garlic   | 25               | 35%   |
| Retailer        | Retail price at small specialised shop<br>(~50 gr packaging) before value<br>added tax | 50               | 42%   |
| Tax authorities | Price after value added tax (21%)*   | 60               | 17%   |

\*VAT will vary per European country Source: interviews and various webshops

Special types of garlic, such as black and pink garlic, fetch higher prices than ordinary garlic, partly due to limited supply and demand. Garlic with geographical indications that can only be produced in certain regions and in limited volumes can also fetch large price premiums.

As garlic powder is made of waste material from the production of flakes and granules, prices for flakes and granules are around 5-10% higher. Organic dried garlic fetches a premium of around 30% compared to conventional dried garlic. Last, pricing of garlic in retail depends on the packaging of the product.

Check the market reports by Nedspice for the latest price developments and a price outlook

This study was carried out on behalf of CBI by Kasper Kerver of ProFound – Advisers In Development and Gustavo Ferro.

Please review our market information disclaimer.