What requirements should cocoa meet to be allowed on the European market?

To enter the European cocoa market, you must comply with legal requirements on such matters as food safety, food contaminant levels and consumer labelling. Furthermore, European cocoa buyers increasingly have additional requirements, especially in the field of food safety certification, Corporate Social Responsibility (CSR) and sustainability. Meeting these additional requirements can increase your chances on the market considerably.

1 . Buyer requirements
Buyer requirements can be divided into:
Musts: legal and non-legal requirements you must meet to enter the market.
Additional requirements: those you need to comply with to keep up with the market.
Niche requirements: applying to specific niche markets.

2 . What legal and non-legal requirements must my product comply with?
Here you can find the most important legal and non-legal requirements you must meet when you want to market cocoa products in Europe. These include general requirements for food products (especially food safety) as well as specific legislation for cocoa and chocolate products.

Food safety
Food safety and hygiene are key issues on the European market. If you want to export to Europe, your cocoa products must comply with the European law on food safety and food hygiene that ensure the quality of food products throughout the whole supply chain.
An important aspect to control food safety hazards is defining critical control points (HACCP) by implementing food management principles. Subjecting food products to official controls is another important aspect. Products that are not considered safe will be denied access to Europe.

Tips:
- Make sure your products comply with the General Food Law(Regulation EC 178/2002) and the general rules on Food Hygiene(Regulation EC 852/2004).
- Check the Guidance document of the European Commission for information on certain key questions related to import requirements and the European rules on food hygiene and official food controls.
- Refer to the EU's Rapid Alert System for Food and Feed (RASFF) database to see examples of withdrawals of cocoa products from the market and the reasons behind these withdrawals. Under 'Product', choose the category 'cocoa and cocoa preparations, coffee and tea'. In addition, you can choose your country under 'Country' to see examples of non-compliances. This can be a basis for your own risk management system and to avoid future border rejections.

Food contaminants
Food contamination can occur at different stages of the production process due to environmental contamination, cultivation practices or processing methods. Since many contaminants are naturally occurring, it would be impossible to impose a total ban on them. European Union legislation ensures that contaminants are kept at levels that are as low as possible so that they do not threaten human health. The levels are set on the basis of scientific advice provided by the European Food Safety Authority (EFSA).

Tips:
- You must comply with the regulation on contaminants in foodstuffs (Regulation EC 1881/2006); otherwise your products will not be allowed to enter the European market.

Suppliers to Europe are responsible for ensuring that imported foodstuffs comply with European legislation.

- Check the European Commission's factsheet '<u>Managing food contaminants: how the EU ensures that our food is safe</u>' for further information on food contamination control in the European Union.
- Focus on applying good agricultural practices to reduce the presence of food contaminants. Information on <u>good agricultural practices in cacao production</u> can be found on the website of the Federation of Cocoa Commerce.

The main contaminants likely to be found in cacoa and derived products are:

A) Heavy metals, in particular cadmium:

The European Union has strengthened its regulation on cadmium in cocoa and derived products. <u>The new regulation will become effective in January 2019</u>. Cadmium is found naturally in the soil, but pesticides and chemical fertilisers containing cadmium are also sources of contamination. The presence of cadmium is a particular problem for cocoa from some Latin American countries due to factors like volcanic activity and forest fires. The maximum permitted levels of cadmium are listed in Table 1. Please note that these levels relate to finished chocolate products, but controls of cocoa beans should also take place.

Table 1 Maximum permitted levels of cadmium in cocoa and derived products

Specific cocoa and chocolate products as listed below	Maximum permitted cadmium levels (ppm)
Milk chocolate with <30% total dry cocoa solids	0.10 as from 1 January 2019
Chocolate with <50% total dry cocoa solids; milk chocolate with ≥ 30% total dry cocoa solids	0.30 as from 1 January 2019
Chocolate with > 50% total dry cocoa solids	0.80 as from 1 January 2019
Cacao powder sold to the final consumer or as an ingredient in sweetened cocoa powder sold to the final consumer	0.60 as from 1 January 2019

When translating the cadmium levels of chocolate into levels admitted in **cacoa beans**, European importers will in practice consider <0.5 ppm a good level. This is in accordance with the norm of <0.3 ppm in chocolate that Germany is already applying. Up to 0.8 ppm will still be accepted, but acceptance above 0.8 ppm will depend on the content of cocoa in the chocolate. If the level rises above 1 ppm, chocolate makers will have to blend the cocoa with other cocoa with lower cadmium content. This practice is however quite uncommon for products from certain countries, such as cocoa from Latin America.

Tips:
- Focus on complying with the <u>new maximum levels of cadmium in food products</u> (Regulation EU 488/2014). Although the legislation does not come into force until 2019, some European countries such as Germany are already applying the standards.
- Visit the website of the for <u>recommendations on how to reduce cadmium levels in cacoa beans</u>. Provisions for <u>methods of sampling and analysis</u> for the official control of cadmium and other heavy metals will also help you to ensure compliance.

B) Pesticides:

The European Union has set maximum residue levels (MRLs) on the amount of pesticides allowed in food products, including cocoa. The use of pesticides is permitted but should be strictly controlled. This is especially relevant for cocoa farmers using pesticides to fight insect infestation such as mired bugs and the cocoa pod borer.

Tips:
- Check the legislation regarding the control of pesticide residues(Regulation EC 395/2005) for further information on pesticides.
- Consult the EU pesticide database for an overview of the maximum residue levels (MRLs) for each pesticide.
- Focus on reducing the amount of pesticides in your products. A good way to do this is applying Integrated Pest Management (IPM), an agricultural pest control approach that uses complementary crop management strategies and practices to help minimise the use of pesticides. Useful sources are the European Centre for Integrated Pest Management and the Training Manual on Integrated Pest and Disease Management for Sustainable Cocoa Production of the Australian Centre for International Agricultural Research.

C) Mycotoxins:

Mycotoxins such as aflatoxins and ochratoxin A can occur in cocoa as a result of fungal infection of crops. They are a major cause of economic loss in the cocoa sector. The recognition of the health hazards of mycotoxins has led to regulatory limits being set around the world, particularly in the European Union.

Tips:
- Focus on good agricultural, drying, processing and storage practices, for example by adopting Good Agricultural Practices and/or Good Manufacturing Practices. These steps have a significant influence on the development of mycotoxins. Refer to available guidelines on how to reduce mycotoxin contamination at the different levels of the cocoa production chain.
- Read and follow the *Codex Alimentarius'* Code of Practice for the Prevention and Reduction of Ochratoxin A Contamination in Cocoa(CAC/RCP 72-2013).

D) Polycyclic-aromatic hydrocarbons (PAHs):

Polycyclic-aromatic hydrocarbons (PAHs) may also contaminate cocoa during post-harvest or primary processing stages. Smoke is one of the main sources of polycyclic-aromatic hydrocarbons in cocoa beans during drying or storage. The limit for benzo(a)pyrene (which is one of the most common polycyclic-aromatic hydrocarbons) is 5.0 µg/kg of fat and 30 µg/kg for the total sum of polycyclic-aromatic hydrocarbons.

Tips:
- Avoid drying cocoa beans with fire or beside roads, the use of inefficient artificial dryers and storage in the presence of smoke. Sun drying is used in such countries as Ghana where farms are small; under such circumstances, sun drying is a feasible and efficient method.
- Read and follow the *Codex Alimentarius'* Code of Practice for the Reduction of Contamination of Food with Polycyclic Aromatic Hydrocarbons (PAH) from Smoking and Direct Drying Processes(CAC/RCP 68-2009).

E) Microbiological/Salmonella:

Although cacao is considered a low-risk commodity, it may occasionally be subject to microbiological contamination as a result of incorrect harvesting and drying techniques. No microbiological criteria for cacao have been set in the current European legislation. However, food safety authorities can

withdraw imported food products from the market or prevent them from entering the European Union when micro-organisms are found.

Tip:
- Check the legislation regarding the <u>microbiological criteria for foodstuff</u>s (Regulation EC 2073/2005) for further information on micro-organisms.

F) Foreign matter:
Contamination by foreign matter like plastic and insects are a threat when food safety procedures are not carefully followed. For example, <u>mineral oil residues (MOSH and MOAH) have been recently found in chocolate in Germany</u>. These residues can be derived from materials like recycled paper and treated gunny bags. There is, however, no legislation on this so far in the European Union.

Tip:
- Refer to the website of the <u>Transport Information Service</u> for information on safe storage and transport of cacoa.

Extraction solvents
The European Union also sets maximum residue limits on extraction solvents used in the production of foodstuffs and food ingredients. There is for example a limit on the use of Hexane (1 mg/kg), which is used for the production of cocoa butter.

Tip:
Refer to the legislation regarding the <u>restriction of extraction solvents</u>(Directive 2009/32/EC) for further information on the use of extraction solvents.

Consumer labelling
European Union food labelling rules ensure that consumers receive essential information to make an informed choice when purchasing their food. Uniform labelling facilitates consumer choice. All food labels for **pre-packaged products (not applicable to labelling of bulk products like cocoa beans)** must therefore display the following information:

- The name under which the product is sold
- The list of ingredients (including additives)
- The net quantity of pre-packaged foodstuffs
- The "best before" date with the day, month and year in that order
- Any special storage or usage conditions
- The name or business name and address of the manufacturer or packager, or of a seller established in the European Union
- Place of origin or provenance, where failure to give such particulars might mislead the consumer
- Lot marking on pre-packaged foodstuffs with the marking preceded by the letter 'L'.

These indications must appear on the package or on a label attached to pre-packaged cocoa products sold to consumers (example: chocolate). The label must be visible, legible, indelible and easy to understand, and must be in a language that is easily understood by consumers. This usually means the official language or languages of the European country where the product is marketed. The use of foreign terms or expressions that are easily understood by the purchaser may be allowed.

In the case of **cocoa beans**, which is not a pre-packaged product, labelling is not subject to specific legislation, but at a minimum should include the:

- product name

- grade
- lot or batch code
- country of origin
- net weight in kg.

If your cocoa is organic or fair-trade certified, the labels should list the name/code of the inspection body and certification number.

Tips:
- Refer to the legislation regarding the labelling and packaging for more information on general labelling rules for foodstuffs.
- Also check the specific rules for cocoa and chocolate products(Directive 2000/36/EC) which complement the legislation applicable to foodstuffs.
- The Trade Helpdesk by the European commission gives a complete overview of (legal) requirements on the European cocoa market. Here, you can select your country and the European country you want to export to. The Product Code for cocoa products is 18.

Packaging requirements
Cocoa beans are traditionally shipped in jute bags, which can weigh between 60 and 65 kg.

On the mainstream market, bulk shipment of cocoa beans has become more popular. This means cocoa beans are loaded directly into the ship's cargo hold or transported in shipping containers containing a flexi-bag. This mega-bulk method is often adopted by larger cocoa processors, which handle cocoa beans of standard qualities.

In the fine flavour & speciality cocoa segment, jute bags are still commonly used. For very high-quality micro-lots (i.e. small quantities), vacuum-sealed GrainPro packaging can be used.

Tip:
- Read more about the trading and shipping of cocoa beans on the website of the International Cocoa Organization.

Quality criteria
If you want to access the European market for cocoa beans, you will have to meet international quality standards. They are particularly high within the speciality segment for fine-flavour cocoa beans. Cocoa of Excellence mentions the following factors defining the quality of cocoa.

- Good trees (genetics)
- Well cared for and grown in a suitable environment
- Pods correctly harvested
- Good practices to keep the trees healthy and free of pests and diseases
- Optimum fermentation and drying protocols specific to the type of beans
- Know-how for processing cocoa beans and for chocolate making
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High-grade (fine flavour) cocoa beans are generally of higher quality than common-grade cocoa beans, as their distinctive flavour is popular among manufacturers of high-quality chocolate. Fine flavour beans are usually produced from trees that contain the genetics of *Criollo* and/or *Trinitario* cocoa-tree varieties. Common grade (bulk) cocoa beans for mass production are genetically derived from *Forastero* trees.

Harvesting and processing techniques are also important in harnessing the "fine" qualities of fine flavour cocoa beans. During harvesting, ensure you only take the ripe fruits. During processing, ensure all cocoa beans are fermented and dried homogenously. Cocoa beans should be shipped shortly after

harvest because extended storage (> 6 months) may result in losses due to the relatively high humidity in tropical environments.

To moderate the initially bitter cocoa flavour and to develop the typical cocoa flavour, the beans are fermented. Cocoa grading differs across producing and consuming countries. Standard practices have been set by the international cocoa trade associations. The grading of cocoa depends on the <u>fermentation process</u>.

- Well fermented cocoa beans: less than 5% mould, less than 5% slate and less than 1.5% foreign matter.
- Fairly fermented cocoa beans: less than 10% mould, less than 10% slate and less than 1.5% foreign matter.
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There are currently no standardised procedures, nor is there specific terminology for assessing cocoa bean quality and its direct relation to high-quality chocolate, which buyers and consumers can use, as is the case in the <u>Q Coffee System</u>. To address this issue, an informal Working Group was set up in September 2015 during the World Cocoa Foundation (WCF) Annual Seminar on Cocoa in the Americas. This Working Group (established and coordinated by the <u>Cocoa of Excellence Programme</u>) aims to explore the development of international standards for assessing cocoa quality. The members of the Working Group represent the range of stakeholders, from cocoa producers' associations, to traders, to chocolate manufacturers and research organisations. The first consultations took place in September 2017, in Managua (Nicaragua).

Tips:
- Read more about the quality requirements of the European industry for cocoa beans on the <u>Cocoa Quality website</u>.
- Learn more about maintaining the quality of your cocoa during transportation on the website of <u>the Transportation Information Service</u>.
- Keep up to date on the development of <u>international standards for assessing cocoa quality</u> on the Cocoa of Excellence website.

3 . What additional requirements do buyers often have?

Some buyers have requirements that go beyond existing legislation, in particular regarding food safety, environmental impact and social responsibility. Western and North-European countries generally have stricter additional requirements than South and East-European countries.

Food safety certification

As food safety is a top priority in all EU food sectors, you can expect many players to request extra guarantees from you, such as the implementation of product-specific quality standards and Quality Management Systems (QMS) regarding the production and handling processes. A distinction may be made between certifications applying to processers and those for producer organisations and exporters.

Processors

Many European buyers, such as importers, food processors and retailers, require the implementation of an (Hazard Analysis Critical Control Point <u>HACCP</u>-based) food-safety management system.

The most important food safety management systems in Europe are:

- <u>BRC Global Standard for Food Safety</u> (BRC: British Retail Consortium)
- <u>International Food Standard</u> (IFS)
- <u>Food Safety System Certification 22000</u> (FSSC 22000)
- <u>Safe Quality Food Program</u> (SQF).

All these food-safety management systems are recognised by the Global Food Safety Initiative (GFSI), which means that any of them should be accepted by major retailers.

Tips:
- Read more about HACCP in the guidance document 'Implementation of procedures based on the HACCP principles and facilitation of the implementation of the HACCP principles in certain food businesses'.
- Familiarise yourself with food safety management systems, as European market entry preparation often includes implementing one of these systems.
- Different buyers may have different preferences for a certain food safety management system. You should therefore check which one is preferred by buyers in your main European target markets before considering applying for certification. British retailers, for example, often require British Retail Consortium certification, whereas the International Featured Standards: Food is more commonly required by buyers in continental Europe. In any case, choose for a management system that is Global Food Safety Initiative (GFSI) approved.

Producer organisations and exporters
It is very important for producers to follow good agricultural practices to ensure food safety. The main standards in this area are provided by GLOBALG.A.P. They are voluntary standards for the certification of agricultural production processes that provide safe and traceable products.

GLOBALG.A.P. has a special standard for fruit and vegetables, and products derived from them (including cocoa) which covers all stages of production from pre-harvest activities such as soil management and plant protection product application to post-harvest produce handling, packaging and storage.

Tip:
- Ask your buyers or potential buyers exactly what type of certification they require from you. Certain certification schemes such as UTZ (see Sustainability certification below) are aligned with GLOBALG.A.P. If you are UTZ certified, there is no need for separate GLOBALG.A.P. certification.

Corporate Social Responsibility
European buyers are increasingly addressing social and environmental issues. Sometimes they become involved in local social and environmental projects. Sometimes they develop their own Corporate Social Responsibility (CSR) policies or codes of conduct. Suppliers are required to adhere to their codes of conduct, which generally includes health and safety, business ethics and social responsibility requirements.

Besides individual company codes, there are also industry codes to guarantee and communicate social compliance. Business Social Compliance Initiative (BSCI) and SA 8000 are the most common ones.

Tips:
- Study the codes of conduct of European buyers and see how your business practices match them. Adapt your business practices to these codes to increase your chances on the European market.
- Consider developing and implementing your own CSR policy or code of conduct. This is not always required by buyers, but may be a good way to show potential buyers your views on social responsibility. This may furthermore help you to stand out when your buyer has to choose between several suppliers.
- Ensure that your suppliers also have responsible businesses practices in place. Many social and environmental issues take place at farm level, which may not be a part of direct (handling and processing) activities.

Sustainability certification

Sustainability has social, environmental and economic aspects. Many European companies have formulated minimum sustainability requirements for their suppliers that address key issues such as child labour, healthy and safe working conditions, deforestation and pesticide use. However, European companies, especially those in Northern and Western European countries, increasingly also adhere to sustainability certification schemes. This trend is largely driven by the commitment of major confectioners such as Mars, Ferrero and Hershey's.

There are several sustainability certification schemes that focus on different aspects of sustainability, and whose popularity may vary from one country or segment to another.

UTZ and Rain Forest Alliance are the most commonly used mainstream certification schemes for cocoa. In 2017, these two organisations announced a merger into a single organisation and certification body named Rainforest Alliance. This organisation will utilise the respective strengths of the current Sustainable Agriculture Network (SAN) and UTZ standards, while creating a single auditing process for certificate holders. The new single standard will be launched in 2019.

There are also sectoral initiatives that aim at a sustainable base for cocoa production and trade. The International Cocoa Organisation, for example, developed the International Cocoa Agreement 2010, which has been signed by leading industry players. The European Standardization Committee (CEN) is also developing a European standard for traceable and sustainable cocoa, which is expected to be finalised by the end of 2016.

Tips:
- Check whether you can adhere to the guidelines laid down in industry agreements such as the International Cocoa Agreement 2010. Some governing bodies such as the World Cocoa Foundation (WCF) and the International Cocoa Organization (ICCO) also have programmes aimed at helping producers to implement sustainable practices. They can be a good starting point if you want to make your business practices more sustainable.
- Familiarise yourself with the requirements of sustainability certification. Most certification schemes have trainings, tools or other types of assistance to help you understand the criteria and educate you on how to become certified.
- Consider applying for certification. Certification can provide participating producers with opportunities such as training, more efficient agricultural practices and becoming independent of outside synthetic chemicals for fertilisation. In addition, certification can lead to access to new markets for exporters and cooperatives.
- When opting for certification, consider multiple certification schemes. For example, investigate the accessibility of certification programmes in your country or region, the credibility and recognition of the available certification programmes, the costs of certification and the type of certification preferred by buyers in your main European target markets. For more information about considerations on certification and differences between certification schemes check the 'Study on the costs, advantages and disadvantages of cocoa certification'.
- Look into the different operators worldwide which handle UTZ and Rainforest Alliance certifications. This will provide you with insight into the countries where these certifications are most demanded, and the players which can be your potential buyers.

4 . What are the requirements for niche markets?

Organic certification
Organic-certified products are increasing rapidly in popularity in Europe. Organic cocoa is produced and processed through natural techniques such as crops rotation, biological crop protection, green manure and compost. On the one hand, implementing organic production and becoming certified can be expensive, especially for small holders, and the return on investment may not be high. On the other hand, it could increase yields and improve quality.

If you comply with the organic production methods that are laid down in European legislation regarding products from organic production (which are voluntary) and an accredited certifier has approved your growing and processing facilities, you are allowed to place the European Organic Farming logo on your products, as well as the logo of the standard holder (for example, in the United Kingdom the Soil Association and Organic Farmers and Growers and in Germany the BCS Öko-Garantie).

The popularity of organic certification for cocoa in specific countries follows the general market for organic products in Europe. The organic market in Europe experienced strong growth of 13% between 2014 and 2015.

The largest national markets for organic food products are Germany (29% of the European market), France (18%) and the United Kingdom (9%). In per capita consumption, the leading countries are Switzerland, Denmark, Sweden and Luxembourg. The complete figures for the organic segment are available on the FiBL and in the IFOAM report The World of Organic Agriculture 2017.

Tips:
- Check the legislation concerning organic products (Regulation EC 834/2007) for further information on organic production methods.
- Familiarise yourself with the requirements of organic certification, for example the standard of the International Federation of Organic Agriculture Movements (IFOAM).
- If you offer fine-flavour cocoa, consider applying for organic certification. Demand for fine flavour cocoa with organic certification is rapidly growing, making this an interesting niche market.

Fair trade certification
Fair Trade certification is the proven way to substantiate your business' social performance along the supply chain. Certification by an independent third party will enable you to place the Fairtrade logo on your product. In general, prices for fair trade products consist of a minimum price plus a premium.

The Fairtrade Labelling Organisations International (FLO) is the leading standard-setting and certification organisation for Fairtrade. Products which carry the Fairtrade label indicate that producers are paid a Fairtrade Minimum Price. The current minimum prices and premiums for cocoa, whether organic-certified or conventional, can be found in the Fairtrade Minimum Price and Fairtrade Premium Table.

Other fair trade standards available in the European market are Fair Trade Ecocert and Fair for Life. Fair trade certification is most popular in North-Western Europe. For example, market figures for FLO certification indicate that the United Kingdom is by far Europe's main buyer of FLO-certified cocoa beans from producers, followed by the Netherlands, Ireland and Switzerland.

Tips:
- Check the ITC Standardsmap for an overview of non-legal standards relevant to the European cocoa market.
- Before engaging in a Fair Trade or other sustainability certification programme, make sure to check (in consultation with your potential buyer) that this label has sufficient demand in your target market and whether it will be cost beneficial for your product.
- Next to certification, transparency of the supply chain is an asset in the specialty segment. Communicate a traceable and clear, direct link between producer and consumer.