



Indo-German Cooperation on **Agricultural Market Development**

*Building sustainable partnerships*



## **Study Report of Requirements (legal, specifications) for Indian exports to Germany / EU markets with focus on Mango and Green Chilli**

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June 3<sup>rd</sup>, 2022

## **a. EU legal & regulative requirements**

All food sold on the European Union (EU) market must be safe. Of course, this also applies to imported products. In order to ensure safety, the EU has laid down numerous requirements, such as the following: harmful contaminants such as pesticide residues and excessive mycotoxin levels are prohibited; additives added to the food must be permitted; label should tell whether a food contains allergens. Additionally, when importing food products, in particular fresh fruits and vegetables, into the EU, protective measures against pests are taken. Products must comply with European legislation on plant health to prevent the introduction and spread of organisms harmful to plants and plant products in Europe. Therefore, imported products will be subjected to official controls.

### **i. General Food Law, Food Hygiene, Packaging, Labelling, Irradiation**

All European regulations are frequently updated. Current versions of regulations are called „consolidated texts“, and they are available here [Advanced search - EUR-Lex \(europa.eu\)](#) .The following rules apply to fruits and vegetables.

#### **General Food Law**

The General Food Law (Regulation (EC) No 178/2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, *O.J. L31, 01.02.2002*) is a legal framework. This regulation addresses amongst others, risk analysis, precautionary principle, food safety requirements and traceability. It is based on the "farm to table" concept. This means that all food must be traceable throughout the supply chain, including products imported into the EU from third countries.

Where it is evident that food imported from a third country is likely to constitute a serious risk to human health, animal health or the environment, and that such risk cannot be contained satisfactorily by means of measures taken by the EU member states concerned, the European Commission will immediately adopt one or more of the following measures, depending on the gravity of the situation:

- Suspension of imports of the food in question from all or part of the third country concerned and, where applicable, from the third country of transit;
- Laying down special conditions for the food in question from all or part of the third country concerned;
- Any other appropriate interim measure.

#### **Food Hygiene**

To achieve food safety, European Union agreed on further details (Regulation (EC) No 853/2004 on the hygiene of foodstuffs, *O.J. L 139, 30.4.2004*). Regarding imported food, the hygiene requirements are applicable for food business operators. They must ensure that all stages of production, processing and distribution of foodstuffs under their control comply with the relevant hygiene requirements.

General hygiene regulations must be observed and specific hygiene measures such as compliance with microbiological criteria, sampling and analysis must be taken. A procedure based on Hazard Analysis of Critical Control Points (HACCP) principles must be established, implemented and maintained.

## **Microbiological contaminants of pre-cut fruit and vegetables**

Microorganisms in food can pose a risk to human health. Pre-cut fruit and vegetables are prone to microbiological hazards such as Salmonella and E. coli. Salmonella must be absent throughout the shelf life of a freshly cut product. E.coli should be practically absent during the manufacturing process. In European Regulation (EC) No 2073/2005 information about analysis methods, sampling plans and measuring limits are supplied.

The microbiological contamination is, at least for frozen pre-cut fruit and vegetables, regularly examined. The official controls focus on pathogenic germs (Salmonella, EHEC, Listeria monocytogenes, etc.) as well as the total germ count and spoilage agents (e.g. yeasts and molds).

## **Labeling and packaging**

European food labelling allows the consumer to make an informed choice that suits both their dietary, food intolerance needs or preferences. Food placed on the EU market must meet the legislation on food labelling. Details are fixed in Regulation (EU) No 1169/2011 on the provision of food information to consumers (*O.J. L304, 22.11.2011*). The EU requires that the text on the label must be written in one of the official languages of an EU Member State and be understandable for the consumer.

Trade packages and cartons of fresh fruit or vegetables must mention the following:

- Name and address of the packer or dispatcher;
- Name and variety of the produce (if the produce is not visible from the outside of the packaging);
- Country of origin;
- Class and size (referring to the marketing standards);
- Post-harvest treatment; for example, anti-moulding agents added in a post-harvest treatment of citrus fruits must be mentioned on the trade package;
- Organic certification, including name of inspection body and certification number (if applicable).

When fruit or vegetables are processed or directly packed for consumption, you must include appropriate labelling for consumers:

- Common name of the product;
- Full name of the country of origin;
- Name and address of the producer, packer, importer, brand owner or seller (retailer) in the EU who places the product on the market, and the wording "Packed for:", if applicable;
- Net content in weight (Details are set in Directive 76/211/EEC on the approximation of the laws of the Member States relating to the making-up by weight or by volume of certain prepackaged products, (*O.J. L46, 21.2.1976*));
- Minimum durability – a best-before date (on all processed fruit and vegetables, such as freshly cut. It doesn't apply for fresh fruit and vegetables, including potatoes, which have not been peeled, cut or similarly treated),
- Producer identification or lot number;

- List of ingredients (if applicable), including additives and post-harvest treatment;
- Allergenic declaration (if applicable);
- Declaration of nutritional value (when mixed with other foodstuffs);
- Packed in protective atmosphere, if applicable;
- Additional information about quality class, size, variety or commercial type and post-harvest treatment on the product labelling or in close proximity (on the shelf) for products with specific marketing standards.

Nutrition: Fresh, unprocessed fruit and vegetables, including potatoes, which have not been peeled, cut or similarly treated do not need to bear a nutrition declaration. Other pre-packed foods must always bear a nutrition declaration, providing the energy value and the amounts of fat, saturates, carbohydrate, sugars, protein and salt of the food (Regulation (EU) No 1169/2011 on the provision of food information to consumers, O.J. L304, 22.11.2011). Information must always be stated in relation to 100 grams (g) and be presented in a legible tabular format on the packaging. This declaration is often provided on the back of food packaging.

Origin: The origin of the essential ingredient (so-called primary ingredient) of a food must always be indicated if it does not correspond to the stated country of origin or place of provenance of the food (Regulation (EU) 2018/775 laying down rules for the application of Article 26(3) of Regulation (EU) No 1169/2011 on the provision of food information to consumers, as regards the rules for indicating the country of origin or place of provenance of the primary ingredient of a food, O.J. L131, 29.05.2018).

Allergen: In the EU, the labeling of the 14 most important substances or products that can trigger allergies or intolerances, such as nuts, soy or sulphur dioxide (preservative) must be listed in the list of ingredients (Regulation (EU) No 1169/2011 on the provision of food information to consumers, O.J. L304, 22.11.2011). There is no legal regulation for allergens that are not used as ingredients, so-called contaminants or "cross-contact", which unintentionally enter the products during the production or processing of food. The so-called "traceability labeling" has so far been voluntary and only linked to the responsibility of the food business operator.

### **Use of Food additives**

Food additives are substances that are added to food to perform certain technological functions, e.g. to color, sweeten or preserve food. In the EU food additives require approval before they can be used in food, including spices. Additives that are authorised in the EU are listed in database [AUTHORISATION OF ADDITIVES \(europa.eu\)](https://ec.europa.eu/food/food/food_additives_database/). For unprocessed fresh fruit and vegetables only a few additives are authorized, they can be found in category 4. All food additives are labeled with E-numbers and must always be indicated on the ingredient list on the packaging of the foods in which they are used. The label must list both the function of the additive in the finished food (e.g., colorant or preservative) and the specific substance used with the corresponding E-number or its name.

### **Genetically modified organisms**

According to Regulation (EC) No 1831/2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms (O.J. L268, 18.10.2003) all foods that are, contain, or are derived from genetically modified

organism (GMO) are subject to mandatory labeling. The import of genetically modified food into the EU is strictly regulated. Genetically modified spices are not allowed to be imported. Nevertheless, food is regularly tested for (unapproved) genetic modifications.

Packaging marketed within Europe must comply with the general requirements, which aim at protecting the environment, as well as with the specific provisions designed to prevent any risk to the health of consumers.

In principle the packaging must not be a source of contamination or migration, should be food grade and must protect the product quality during transportation and storage (Regulation (EC) No 852/2004 on the hygiene of foodstuffs, *O.J. L 139, 30.4.2004*). Concerning materials and articles intended to extend the shelf life of a packaged food product or to preserve or improve its condition are set in Regulation (EC) No 1935/2004 on materials and articles intended to come into contact with food (*O.J. L338, 13.11.2004*). Materials and articles (e.g., tinplate cans, foil composite bags) must be designed in accordance with good manufacturing practice so that, under normal conditions of use, they do not transfer their constituents to food in quantities that could endanger human health or cause an unacceptable change in the composition of the food or an impairment of its organoleptic properties.

Generally, the packaging must protect the product against contamination, leakage, and dehydration. The document [Recommended International Code of Practice for Packaging and Transport of Tropical Fresh Fruits and Vegetables](#) is a good resource for instructions on handling, packaging and transport. What also needs to be considered is, that occupational health and safety laws in some EU countries allow workers to lift a maximum of 20 kg.

## **ii. Contaminants & Pesticides Residues**

The European Union set contaminants at levels which are toxicologically acceptable in order to protect public health. Regarding fresh fruit and vegetables maximum levels for, heavy metals (lead, cadmium) and nitrate (green leafy vegetables) specified. Uniform EU-wide maximum levels for pesticide residues in or on food and feed of plant and animal origin have also been fixed. Compliance within the framework of official food controls includes regular inspections, which can be carried out at all stages of marketing in the EU. They also apply to imports. In the event of violations of European food law, individual cases are reported via the Rapid Alert System for Food and Feed (RASFF), which is freely accessible to the interested public ([RASFF Window - Search \(europa.eu\)](#)). During the first five months of 2020, several batches of fruit and vegetables with Indian origine were rejected due to unacceptable residues of pesticides (chlorpyrifos, fluopyram and unauthorized substances detected (methamidophos, permethrin, monocrotophos, tolfenpyrad, ethion, dimethoate, omethoate) or contamination with salmonella on frozen fruits.

### **Contaminants**

The maximum levels for contaminants are laid down in Regulation (EC) No 1881/2006 setting maximum levels for certain contaminants in foodstuffs, *O.J. L 364, 20.12.2006*. They are regularly

adapted to the latest scientific findings. It is therefore important that the current version of the regulation is observed. The following table shows maximum levels for contaminants in fresh fruit and vegetables, the rules for fruit and vegetables that are processed (for example, dried fruit or juices) differ.

<b>Contaminant</b>	<b>Maximum Level</b> (valid May 2022)
Lead in vegetables and fruits	<p>0,10 mg/kg (wet weight) for Vegetables excluding leafy brassica, salsify, leaf vegetables&amp; fresh herbs, fungi, seaweed, and fruiting vegetables</p> <p>0,30 mg/kg (wet weight) for Leafy brassica, salsify, leaf vegetables excluding fresh herbs and the following fungi Agaricus bisporus (common mushroom), Pleurotus ostreatus (Oyster mushroom), Lentinula edodes (Shiitake mushroom)</p> <p>0,10 mg/kg (wet weight) for sweetcorn</p> <p>0,05 mg/kg (wet weight) for fruiting vegetables other than sweetcorn</p> <p>1,0 mg/kg (wet weight) for fruit, excluding cranberries, currants, elderberries and strawberry tree fruit</p> <p>0,20 mg/kg (wet weight) for Cranberries, currants, elderberries and strawberry tree fruit</p>
Cadmium in vegetables and fruits	<p>0,05 mg/kg (wet weight) for vegetables and fruit, excluding root and tuber vegetables, leaf vegetables, fresh herbs, leafy brassica, stem vegetables, fungi and seaweed</p> <p>0,1 mg/kg (wet weight) for root and tuber vegetables (excluding celeriac, parsnips, salsify and horseradish), stem vegetables (excluding celery). For potatoes the maximum level applies to peeled potatoes</p> <p>0,2 mg/kg (wet weight) for leaf vegetables, fresh herbs, leafy brassica, celery, celeriac, parsnips, salsify, horseradish, and the following fungi: Agaricus bisporus (common mushroom), Pleurotus ostreatus (Oyster mushroom), Lentinula edodes (Shiitake mushroom)</p> <p>1 mg/kg (wet weight) for other fungi</p>
Nitrate in vegetables	<p>3500 mg NO<sub>3</sub>/kg for fresh spinach (<i>Spinacia oleracea</i>)</p> <p>2000 mg NO<sub>3</sub>/kg for preserved, deep-frozen or frozen spinach</p> <p>5000 mg* NO<sub>3</sub>/kg for fresh Lettuce (<i>Lactuca sativa</i> L.) (protected and open-grown lettuce) excluding lettuce 'Iceberg' type</p> <p>2500 mg NO<sub>3</sub>/kg Iceberg' type lettuce</p>

	7000 mg* NO <sub>3</sub> /kg Rucola ( <i>Eruca sativa</i> , <i>Diplotaxis</i> sp., <i>Brassica tenuifolia</i> , <i>Sisymbrium tenuifolium</i> )
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\* Maximum value stated. Lower values might apply depending on harvest time of the year and whether grown under cover or open air.

**Pesticides Residues** No 396/2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin, *O.J. L70, 16.03.2005*. MRL also apply to imported goods. As other plant protection products are legally applied to foodstuffs produced outside the EU and this may lead to different pesticide residues, deviating MRL can be set for imported products, so-called import tolerances. Requests for import tolerances are to be submitted to individual EU member states. Maximum residue levels (MRL) are laid down in annexes of Regulation (EC)

MRL are regularly adapted to the latest scientific findings. It is therefore important that the current MRL is observed. They can be found in EU Database [EU Pesticides Database \(europa.eu\)](http://europa.eu). If no MRLs are set in the database for processed and/or composite foods, the MRLs apply first to the raw commodity. Specific concentration or dilution factors for certain processing operations may be taken into account in the evaluation of identified pesticide residue. The European Commission has compiled initial processing factors (PF) for pesticides in a variety of processed foods in a publicly available database: [European database of processing factors for pesticides in food | Zenodo](https://zenodo.org/record/1000000). PF are specified for individual raw material/process/active ingredient combination.

In several Member States including Germany, the Netherlands and Austria, many buyers use MRLs which are stricter than the MRLs laid down in European legislation. Supermarket chains maintain the highest standards and generally demand 33% to 100% of the legal MRL. The German discounter Lidl is one of the strictest, with a limit of 33% of the EU legal standard for single active substances.

### iii. Plant health and phytosanitary regulations

The European Union has laid down sanitary and phytosanitary requirements to prevent the introduction and spread of organisms harmful to plants and plant products in Europe. These requirements are managed by the competent food safety authorities in the importing and exporting countries. Most importantly, the country wants to export to Europe needs to have phytosanitary agreements with the European Union in place. Otherwise, it will not be allowed to export.

Most fresh fruit and vegetables are subject to health inspections and require phytosanitary certificates prior to shipping. This group includes leafy vegetables, tomatoes, peppers, citrus fruit, stone fruit, berry fruit, apples, pears, mangoes, and avocados, among many other fruits. Annex V of EU No 2019/523 amending to Council Directive 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community *O.J. L86, 28.03.2019* states their Latin names. Fresh fruits that do not require a phytosanitary certificate are pineapple, banana, coconut, durian, and dates.

The phytosanitary certificates are provided by plant health authorities and must guarantee that a product is properly inspected, free from pests and is in line with phytosanitary requirements - laid down in Regulation (EU) 2019/2072.

#### **iv. Marketing standards**

In order to guarantee a minimum quality of fresh fruit and vegetables, the EU legislation sets general and specific marketing standards for the minimum quality of fresh fruit and vegetables in No 543/2011 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors, *O.J. L157/1*, 07.06.2011.

A marketing standard determines the characteristics of "Extra Class", Class I and Class II products, the minimum maturity, the different size codes, and the allowed tolerances in quality and size. The number of specific standards has been reduced from 36 to 10, applied to those fruits and vegetables: Apples, Citrus fruit, Kiwi fruit, Lettuce, curly and broad-leaved endives, Peaches and nectarines, Pears, Strawberries, Sweet peppers, Table grapes and Tomatoes. These products must be accompanied with a certificate of conformity for each consignment. These certificates can be issued by the European control bodies and by the country of origin in some cases (Example certificate of conformity in [Annex III to EU Regulation No 543/2011](#)).

Fresh products that are not covered by a specific marketing standard have to comply with the general marketing standards in Regulation No 543/2011 or with the Minimum Quality Specifications (MQS) for fresh Fruit and Vegetables of the United Nations Economic Commission for Europe (UNECE).

Imports of products intended for processing are not subject to compliance with the EU marketing standards. However, they must be clearly marked on the packaging with the words "intended for processing" or other equivalent wording.

#### **v. Organic Production**

In recent years, the purchase of organic food in Germany has increased significantly. The results of the [Ökobarometer 2021 \(oekolandbau.de\)](#), regularly commissioned by the Federal Ministry of Food and Agriculture, see a continuing trend towards more organic in the coming years. According to this survey, 38% of respondents said they regularly buy organic products. Looking ahead, 47% of respondents estimate that they will purchase organic food frequently (41%) or exclusively (6%). Demand for organic products in Germany is highest for vegetables, fruits and eggs.

#### **New Regulation**

According to the new Regulation (EU) 2018/848 on organic production and labelling of organic products, *O.J. L150*, 14.6.2018), whose specifications do not have to be applied until 2022 due to the pandemic, inspection of organic production and organic products will be stricter to prevent fraud. To market fruit and vegetables as organic in Europe, they must now be grown using organic production methods according to European legislation. Growing and processing facilities must be audited by an accredited certifier before they can put the EU's organic seal on their products.



## **Labelling**

Goods from non-EU countries (third countries) that have been produced and certified according to a standard recognized by the EU can be labeled with the organic seal. The use of the organic label is voluntary and free of charge for all market participants. Products that are labeled with the organic seal (Bio-Siegel) by the importer must be reported to the Bio-Siegel Information Office before they are used for the first time.

## **Pesticide residues**

In organic farming, the use of chemical or synthetic fertilizers or pesticides is prohibited. Some EU countries tolerate no residues of pesticide active ingredients at all, while other countries do not apply this zero tolerance, but decide specifically on a case-by-case basis whether or not the product may be sold as organic food in the event of a residue finding or contamination. In Germany, measures and sanctions additionally differ at the state level. For importers and traders, the inconsistent approach may be very disadvantageous because it lowers the profitability of Europe-wide trade in organic products if organic products are not allowed to be traded due to different limit value situations in some member states.

## **Import regulation**

Companies trading in organic food have to take part in the control procedure under EU legislation for organic farming. All importers have to follow specific rules when they wish to market a product as organic in the EU. These procedures depend on where the goods have originated. For products which originate in India, inspection and certification is the responsibility of 'control bodies or authorities'. These are independent bodies appointed by the European Commission to ensure that organic producers in their area of responsibility follow standards and control measures equivalent to the EU ones. If an European company wants to import a product from India and market it as organic within the EU, it must contact the appropriate national control body.

Each consignment of organic products must be accompanied by the appropriate electronic certificate of inspection (e-COI), which is only issued electronically by selected certifiers via the Trade Control and Expert System (TRACES) central platform. In addition, EU importers must submit an application form for the import of organic products from exporters in third countries such as India. This application must include company details, the name of the certifier and the date of the last inspection.

Furthermore, the importer must provide confirmation from a third party that the certifier meets the requirements of ISO standard 65/EN 45011.

## **b. Further Specifications for export of mangoes and green chillis from India to the EU**

Great resources for the import of fruit and vegetables to the EU are supplied by the Centre for the Promotion of Imports from developing countries (CBI) of the Ministry of Foreign Affairs of the Netherlands. Specific details for both [mangoes](#) and [chillies](#) to enter the European market are available in English.

According to EU No 2019/523 amending to Council Directive 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community O.J. L86, 28.03.2019 both Mangoes and peppers need a phytosanitary certificate prior to shipping. In the past bans for the export of mangoes from India to the EU have been put in place after mangoes have been found to be infested with certain fruit flies.

Regarding phytosanitary requests, the contact person of the National Plant Protection Organisation and International Plant Protection Convention (IPPC) Official Contact Point for India is:

Mr. Atish Chandra

Email: [jspp-dac@gov.in](mailto:jspp-dac@gov.in) ; [catish@ias.nic.in](mailto:catish@ias.nic.in)

Address: Department of Agriculture, Cooperation & Farmers Welfare

Room No. 247, Krishi Bhawan, Dr. Rajendra Prasad Road, New Delhi, 110001, India

### **Additional comments and resources**

What species of chili will be imported might influence which rules apply, there are several rules (residues, packaging, marketing, labeling, processing) for sweet peppers (*capsicum annum*), Cayenne, jalapenos, Thai peppers, chiltepin are all varieties of *capsicum annum*, while other chilies can be varieties of *capsicum frutescens*, *capsicum chinese*, *capsicum pubescens* genus or *capsicum baccatum* genus.

By filling in export details in My Trade Assistant of Access2Markets <https://trade.ec.europa.eu/access-to-markets/en/home> the contact details of the relevant official authorities, for example for marketing standards and the specific import requirements, can be found.

### **Annexes**

Appendix I Mango MRLs (from [EU Pesticide Database](#), 05/18/2022)

Appendix II Sweet Peppers MRLs (from [EU Pesticide Database](#), 05/18/2022)

Appendix III Other fruiting vegetables Solanaceae and Malvaceae MRLs (from [EU Pesticide Database](#), 05/18/2022)