

# CODEX ALIMENTARIUS COMMISSION



Food and Agriculture  
Organization of  
the United Nations



World Health  
Organization

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Agenda Item 2(a)

CX/FFV 14/18/2-ADD.1

February 2014

## JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FRESH FRUITS AND VEGETABLES

18<sup>th</sup> Session  
Phuket, Thailand, 24 – 28 February 2014

### MATTERS ARISING FROM THE CODEX ALIMENTARIUS COMMISSION AND OTHER CODEX COMMITTEES

#### MATTERS ARISING FROM THE CODEX ALIMENTARIUS COMMISSION

##### 36<sup>th</sup> Session of the Commission (July 2013)

##### *Hydrocyanic acid in cassava and cassava products*

1. The 7<sup>th</sup> session of the Committee on Contaminants in Foods (CCCF) (April 2013) agreed to inform the Codex Alimentarius Commission on discontinuation of work on the establishment of maximum levels for hydrocyanic acid in cassava and cassava products. In taking this decision, the Committee noted that the section on contaminants in the *Standard for Sweet Cassava* (CODEX STAN 238-2003) should be aligned to the corresponding provisions in the *Standard for Bitter Cassava* (CODEX STAN 300-2010) by referring to the national legislation of the importing country as no MLs for HCN in cassava roots could be established by the CCCF at present. The Committee therefore agreed to make a consequential amendment in the section on contaminants in the *Standard for Sweet Cassava* to refer the ML for HCN to the national legislation of the importing country.<sup>1</sup> The Commission adopted the amendment as proposed by the CCCF.<sup>2</sup>

2. The 7<sup>th</sup> session of the CCCF finalized the Code of practice for the reduction of hydrocyanic acid (HCN) in cassava and cassava products which was adopted by the Commission.<sup>3</sup>

3. The Committee is invited to consider whether a specific reference to the *Code of Practice for the Reduction of Hydrocyanic Acid (HCN) in Cassava and Cassava Products* (CAC/RCP 73-2013) should be included in the standards for sweet and bitter cassava.

#### MATTERS ARISING FROM OTHER CODEX COMMITTEES

##### 45<sup>th</sup> Session of the Committee on Food Additives (March 2013)

##### *Food additive provisions for fresh fruits and vegetables*

4. When considering the horizontal approach for food additives in the General Standard for Food Additives (CODEX STAN 192-1995) (GSFA), the Committee on Food Additives (CCFA) held at their current Step provisions for other food additives with function in addition to “emulsifier, stabilizer, thickener” and “acidity regulator” in food categories 04.1.1 “Fresh fruit”, 04.1.1.1 “Untreated fresh fruit”, 04.1.1.3 “Peeled or cut fresh fruit”, 04.2.1 “Fresh vegetables, (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds and nuts and seeds”, 04.2.1.1 “Untreated fresh vegetables, (including mushrooms and fungi, roots and tubers, pulses and legumes (including soybeans), and aloe vera), seaweeds and nuts and seeds”, 04.2.1.3 “Peeled, cut or shredded fresh vegetables, (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds and nuts and seeds” and 04.2.2.1 “Frozen vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds and nuts and seeds”.

5. The Committee could not come to an agreement on whether food additives with a function of “stabilizer” or “thickener” were justified for use in surface-treated vegetables in food category 04.2.1.2 “Surface-treated fresh vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes (including soybeans) and aloe vera), seaweeds and nuts and seeds”. In view of the difference in opinion, the Committee agreed to reconsider the horizontal approach for food category along with food category 04.1.1.2 (Surface-treated fresh fruit) where the use of these additives had previously been determined by the Committee to be justified for use in glaze, coating and decoration.

<sup>1</sup> REP13/CF, paras. 84 and 87, Appendix V.

<sup>2</sup> REP13/CAC, Appendix III-Part 3.

<sup>3</sup> REP13/CF, para. 92, REP13/CAC, Appendix III.

6. With regard to the use of food additives in fresh fruits and vegetables, the Codex Secretariat noted that Codex standards for fresh fruits and vegetables did not include a section on food additives and, therefore, remained silent as to the technological justification of food additives in these products. It was also noted that these standards did not differentiate between treated and untreated products and, therefore, it was not possible to determine whether the use of additives was allowed in products within the scope of these standards.<sup>4</sup>

7. The Committee is invited to note this information and to keep it in mind when discussing the food additive section in the layout for Codex standards for fresh fruits and vegetables.

### **1<sup>st</sup> Session of the Committee on Spices and Culinary Herbs**

#### ***New work on spices and culinary herbs***

8. When considering new work on spices and culinary herbs, the 1<sup>st</sup> Session of the Committee on Spices and Culinary Herbs (CCSCH) (February 2014) discussed a proposal for a Codex standard for paprika and agreed to seek clarification from the upcoming sessions of the Committees on Fresh Fruits and Vegetables (CCFFV) and on Processed Fruits and Vegetables (CCPFV) whether paprika was in their workplan. The Committee further agreed to hold the proposal for new work and to reconsider it at its next session in light of the clarification provided by the CCFFV and CCPFV. For ease of reference the project document is annexed to this document.<sup>5</sup>

9. The Committee is invited to consider whether in view of its (i) Terms of Reference, (ii) its work priorities, (iii) the scope of the *Standard for Chilli Peppers* (CODEX STAN 307-2011), which applies to commercial varieties of chilli peppers grown from *Capsicum spp.*, and the (iv) scope of the proposal for new work on paprika (see Annex), it would be possible to take up new work on paprika and if so whether it should be a single standard or a revision of the exiting standard for chilli peppers.

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<sup>4</sup> REP13/FA, paras. 79-85.

<sup>5</sup> REP13/SCH, paras. 58-60.

**ANNEX**  
**PROJECT DOCUMENT**  
**PROPOSAL FOR NEW WORK ON CODEX STANDARD FOR PAPRIKA [*Capsicum annuum* L.].**  
**(Proposal submitted by Argentina)**

### **1. Purpose and scope of the standard**

This document advocates the development of a worldwide standard for paprika [*Capsicum annuum* L.] of the *Solanaceae* family to be supplied as ground paprika to consumers after appropriate preparation.

The purpose of the standard is to consider the identity and quality characteristics of paprika, to be consumed as ground paprika, in the framework of international trade.

### **2. Relevance and timeliness**

In view of the growing production and global trade of paprika, there is a need to determine standards concerning its identity and quality in all aspects, including nutritional value, safety, wholesomeness, hygiene, components, moisture content, particle size, extractable colour, pungency, ash and foreign bodies, thereby providing a frame of reference agreed by worldwide consensus among countries that produce, market and consume this commodity. Moreover, the development of a Codex standard for paprika will help protect consumer health and promote fair trade practices in accordance with current international agreements.

*Capsicum annuum* L. comes from the American continent, more specifically Mexico, Bolivia and Peru, and is today grown in all five continents, although the main producers are India and China which account for approximately 50% of global output.

The countries with demand for paprika are mainly in the American and European continents, accounting for 66% of global imports, led by the United States, Germany, Malaysia, Spain, Japan, Mexico and Sri Lanka. As a bloc, the EU ranks first in terms of demand.

With regard to the international spice trade, first comes pepper, followed by mustard and third is the *Capsicum* complex which includes paprika and chilli peppers, with an annual rate of growth of 4%. (Global exchange of – 090420 – Fruits of the genus *Capsicum* or of the genus *Pimenta*, dried, crushed or ground in 2008: 860 million dollars/year and an annual evolution of imports of 4%. Source <http://www.smartexport.com>).

In Argentina, peppers for paprika have almost all been grown and processed for more than 70 years in the region of the Valles Calchaquíes, in the northeast of the country. These valleys run from North to South through the provinces of Salta, Tucumán and Catamarca. The northern limit of these spectacular valleys lies near the boundary of Salta with Jujuy, where they connect with the Quebrada de Humahuaca through the Valle de Lerma. This is a very important crop for regional economies and for the domestic economy of small farmers.

### **3. Main aspects to be covered**

The standard will cover characteristics relating to identity and quality in all aspects, including nutritional value, safety, wholesomeness, hygiene, components, moisture content, particle size, extractable colour, pungency, ash, foreign bodies and labelling, in order to supply a product with the proper characteristics and to protect consumer health. The standard will therefore:

- Establish the minimum requirements for paprika, including quality parameters and other requirements, regardless of class.
- Define classes to classify paprika according to its characteristics.
- Establish quality tolerances.
- Include provisions concerning uniformity of the packaged produce and of the containers used.
- Include provisions on the marking and labelling of the produce in accordance with the *Codex General Standard on the Labelling of Prepackaged Foods*.
- Include provisions on contaminants that refer to the *Codex General Standard for Contaminants and Toxins in Food and Feed*.
- Include provisions that refer to the *Recommended International Code of Practice – General Principles of Food Hygiene*.

### **4. Assessment against the Criteria for the Establishment of Work Priorities**

#### General criterion

Consumer protection from the point of view of health and the prevention of fraudulent practices. The quality of the produce will need to meet consumer needs and the minimum requirements of quality and food safety. The drafting of a standard for paprika would benefit the developing countries as these are the main producers, exporters and also consumers.

Criteria applicable to commoditiesa) Volume of production and consumption in individual countries and pattern of trade between countries.

There are no exact figures for production and consumption volumes in individual countries, but there is sufficient evidence to show that the *Capsicum* complex (paprika and chili peppers) ranks third in importance in terms of world production and trade of aromatic spices, after pepper and mustard. Estimates on these points will obviously become available as the project advances.

Existing information does however indicate that global trade in paprika is trending upwards as consumer habits increasingly prioritize natural, functional and wholesome foods. This can be seen in the following tables:

**Table 1:** Main importing countries for fruits of the genus *Capsicum* or *Pimenta*, dried, crushed or ground. (Source <http://www.smartexport.com>)

	Importing country	USD million	% change
1°	United States of America	217	+ 17.6
2°	Mexico	97	+ 67.2
3°	Malaysia	81	- 30.1
4°	Germany	69	+ 12.9
5°	Japan	48	- 10.3

**Table 2:** Main exporting countries for fruits of the genus *Capsicum* or *Pimenta*, dried, crushed or ground. (Source <http://www.smartexport.com>)

	Exporting country	USD million	% change
1°	China	232	+ 13.5
2°	India	194	+ 11.1
3°	Peru	93	- 2.6

**Table 3:** Performance of exporting countries for fruits of the genus *Capsicum* or *Pimenta*, dried, crushed or ground. (Source <http://www.smartexport.com>)

	Exporting country	Weight in % of exports	% change in exports
1	China	2.3	+ 13.5
2	Spain	1.9	+ 28.4
3	India	1.4	+ 11.1

In Argentina, cultivation and processing occurs mainly in the favourable region of the Valles Calchaquíes, in the northeast of Argentina. The valleys run from North to South through the provinces of Salta, Tucumán and Catamarca. Their northern limit lies close to the boundary between Salta and Jujuy where they connect with the Quebrada de Humahuaca through the Valle de Lerma.

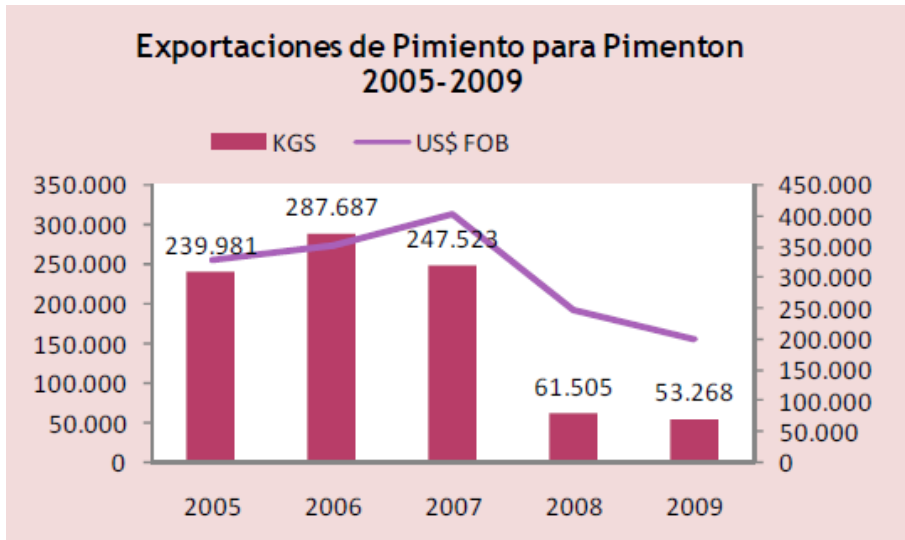
Within the valleys, cultivation and production of paprika occurs almost exclusively in the departments of Cachi, Molinos and San Carlos in Salta; Santa María and Belén in Catamarca; and Amaicha del Valle in Tucumán. There are virtually no paprika farms in other provinces. The country has some 1 500 producers mostly operating on small surface areas.

The cultivation zone offers excellent agro-ecological conditions for paprika production, including: appropriate difference between day and night temperatures to avoid flower drop, luminosity and ambient relative humidity favourable to natural drying, characteristic smell and sweet taste and intense red visual and extractable colour, prolonged frost-free period, high daily temperature range, low number of pests which permits wholesome healthy products, clearly differentiated areas with appropriate edaphological conditions and loose soil textures. Water for irrigation comes from melt-water rivers and streams, the subsoil or embankments and reservoirs. Paprika from the valleys is an ancestral crop with centuries of cultivation experience passed down the generations.

Exports of peppers for paprika and paprika correspond to subheading 09.04.2 "Fruits of the genus *Capsicum* dried, crushed or ground" of the Mercosur Common Nomenclature.

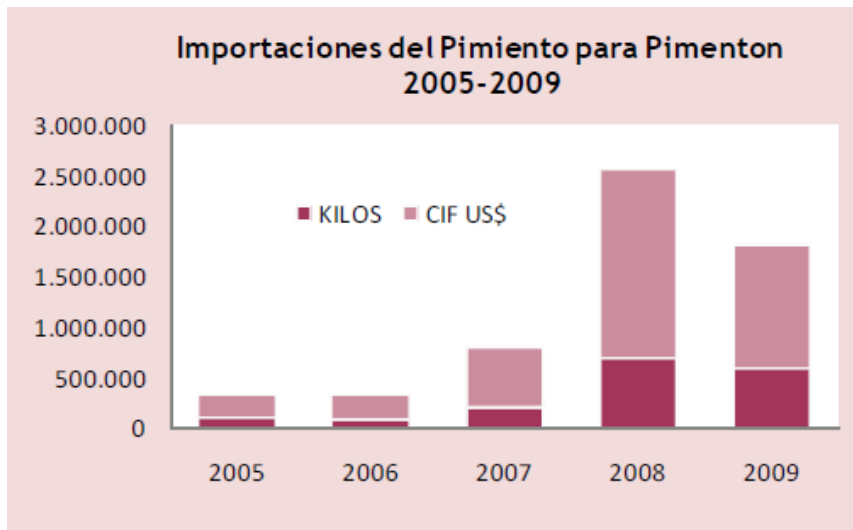
Data on exports of peppers for paprika and paprika in 2009 indicate a volume of 53.3 tonnes with an FOB value of USD 198,026.

The primary destinations for the Argentine market are the countries of MERCOSUR: Uruguay accounts for 69% of the exported volume, followed by Brazil with 14%. However, Argentine paprika is also exported to a further 16 countries, including Spain, United States, Cuba, France and Mexico.



Imports for the period 2005-2009 amounted to 1 089 tonnes with a CIF value of USD 2.9 million.

The main sources of peppers for paprika and paprika are Chile (48%), China (20%) and Spain (10%).



b) Diversification of national legislations and resultant or potential impediments to international trade.

At the moment there are no known impediments to the trade of paprika in the world, although there are increasing requirements concerning quality and safety parameters for all foods. This work will provide recognized specific regulations that will help boost the international trade of this commodity which originates in South America.

The interest shown by countries in seminars and other events in obtaining genuine products of good quality, in terms of smell, taste and other characteristics and the resulting benefits to nutrition and health point to a strong future increase in their consumption and trade.

Importing country requirements include the application of Good Practices for all products of plant origin that are supplied to them from third countries.

Given that there exists an international standard for chilli peppers as well as work undertaken by other organizations [International Standard ISO/FDIS 7540 Ground paprika (*Capsicum annuum* L.)], a Codex standard is considered necessary and timely in order to integrate the criteria into a single internationally acceptable standard.

This would reduce possible barriers to trade and would provide a comprehensive legal framework stipulating the minimum internationally acceptable requirements for paprika.

c) International or regional market potential

There has been a noticeable increase in trade on international markets in recent years, as illustrated in Tables 1, 2 and 3 above.

International demand for paprika has grown, both from the food industry and from non-food sectors. Paprika oleoresin will continue to grow for a wide range of foods and for the processed food industry, because of the advantages it offers in terms of shipping, storage and longer lifespan.

d) Amenability of commodity to standardization

The characteristics of paprika from cultivation to harvest, the characteristics of peppers for paprika (its raw material), the cultivar varieties, composition, quality and packing are conducive to the establishment of appropriate parameters for standardization of the commodity. The standard will include a definition of the product in terms of classes, smell, taste, extractable colour, moisture, ash, ether extract, fibre, particle size, foreign matter, contaminants, packaging and presentation.

e) Coverage of the main consumer protection and trade issues by existing or proposed general standards

There is no general standard specifically covering paprika. The new work will strengthen consumer protection and will facilitate trade in paprika by establishing an internationally agreed and recognized quality standard.

f) Number of commodities which would need separate standards including whether raw, semi-processed or processed.

A single standard for paprika will cover all varieties traded worldwide. Paprika derivatives such as oleoresin or other value added paprika products will be examined.

g) Work already undertaken by other international organizations in this field

There are national standards for paprika and International Standard ISO/FDIS 7540 Ground paprika (*Capsicum annuum* L.).

**5. Relevance to the Codex strategic objectives**

The development of a Codex standard for paprika reflects the strategic objective of promoting the maximum application of Codex standards by countries in their national legislations, and of facilitating international trade. This proposal is based on scientific considerations and helps stipulate minimum quality requirements for paprika (*Capsicum annuum* L.) destined for human consumption, with the intention of protecting consumer health and ensuring fair practices in the food trade. The proposal corresponds to activity 1.2 (Review and develop Codex Standards and related texts for food quality) of the Strategic Plan 2008 – 2013.

**6. Information on the relation between the proposal and other existing Codex documents.**

This proposal is for a new global standard and has no relation to any other existing Codex text on this item, except that this standard will make reference to relevant standards and related texts developed by general subject committees. In fact, there is no comparable standard for paprika developed by any global body.

**7. Identification of any requirements for and availability of expert scientific advice.**

For the preparation of this project document, the information generated by the research working group charged at national level with the characterization of paprika has been used as reference. Should additional information be required during the course of drafting this standard, this group or other groups of experts could be consulted.

**8. Identification of any need for technical input to the standard from external bodies so that this can be planned for.**

There is not expected to be any need for technical input from external bodies on this matter.

**9. Proposed timeline**

DATE	ADVANCE AND PROCEDURES
July 2013 to March 2104	Prepare draft agenda along with work proposals. These proposals will be prepared through electronic consultation with members to initiate the work of the Commission.
June/July 2014	Critical review of the new work proposals by the Executive Committee. Approval of the work proposals by the Commission.
First half of 2015	Committee to hold its first session and consider new work items at Step 3. Committee also to consider work priorities.
Second half of 2016	Consider draft standard at Step 5 with the possibility of recommending its adoption at Step 8.
CAC 2017	Adoption of the standard at Step 8.

**PROPOSED DRAFT CODEX STANDARD FOR PAPRIKA (*Capsicum annuum* L)****(Proposal submitted by Argentina)****1. DEFINITION OF PRODUCE**

This standard applies to the ground powder obtained from different varieties and cultivars of fruits of *Capsicum annuum* L. of the *Solanaceae* family, after processing, preparation and packaging.

**2. PROVISIONS CONCERNING QUALITY****2.1 Minimum requirements**

In all classes, subject to the special provisions for each class and the tolerances allowed, the paprika must be:

- genuine and of characteristic appearance, taste and smell; and be:
- sound; produce affected by rotting, mould or deterioration such as to make it unfit for human consumption is excluded;
- clean and practically free of any visible foreign matter;
- free or practically free of pests that affect the general appearance of the produce;
- free of additives or foreign substances;
- free of added products/by-products from the *Capsicum annuum* L. extraction process;
- free of abnormal moisture;
- free of any foreign smell and/or taste;
- prepared/packaged in such a way as to avoid loss of organoleptic qualities.

1.1.1. Peppers for paprika, the raw material of paprika, that are to be used for the manufacture of paprika must have reached an appropriate level of physiological development, taking into account the characteristics of the variety and the area in which they are grown.

The development and condition of the paprika must be such that it can:

- withstand transport and handling, and
- arrive at the place of destination in satisfactory condition.

**2.2. Classification**

Paprika is classified into three classes, as defined below.

**2.2.1. "Extra" Class**

Paprika in this class must be of superior quality. It must be free of defects, with the exception of very slight defects provided these do not affect the general characteristics of the produce, its quality, keeping quality and presentation in the package.

**2.2.2. Class "I"**

Paprika in this class must be of good quality. Slight defects may however be allowed, provided these do not affect the general characteristics of the produce, its quality, keeping quality and presentation in the package.

On no account may the defects affect the genuineness or safety of the produce.

**2.2.3. Class "II"**

This class includes paprika which does not qualify for inclusion in the above classes, but which satisfies the minimum requirements specified in Section 2.1. Some defects may however be allowed, provided the paprika retains its essential characteristics as regards quality, keeping quality and presentation.

On no account may the defects affect the genuineness or safety of the produce.

**3. PROVISIONS CONCERNING QUALITY CLASS****CLASSIFICATION OF DIFFERENT CLASSES OF PAPRIKA QUALITY**

Paprika is classified into THREE (3) quality classes on the basis of the following parameters:

PARAMETERS	CLASSES			OBSERVATIONS
	EXTRA	CLASS I	CLASS II	
Moisture (maximum %)	12.0	12.0	12.0	At 50°C and in vacuum
Total ash (maximum %)	8	8.5	9	Ash at 500-550 C°, in dry matter
Insoluble ash (maximum %)	1.0	1.0	1.0	In HCl at 10%
Ether extract (maximum %)	15	18	20	In dry matter
Crude fibre (maximum %)	23	26	31	In dry matter
ASTA colour (minimum)	120	90	70	ASTA scale
Extraneous matter (maximum %)	1.0	1.0	1.0	m/m
Foreign parts (maximum %)	0.1	0.1	0.1	m/m

#### CLASSIFICATION OF PAPRIKA PUNGENCY LEVELS

Levels of pungency: Paprika is classified into FOUR (4) levels of pungency according to its capsaicin content ( $\mu\text{g}$  capsaicin/gram of paprika, dry weight)

PUNGENCY (1):	CAPSAICIN ( $\mu\text{g/g}$ )	Scoville
Mild	Under 20	Under 300
Medium	Between 20 and 40	Between 300 and 600
Hot	Between 40 and 67	Between 600 and 1400
Extra hot	Over 67	Over 1400

(1) Measurement of pungency can be in Scoville units whereby FIFTEEN (15) Scoville units are equivalent to ONE (1) microgram of capsaicin per gram of paprika.

#### 4. PROVISIONS CONCERNING TOLERANCES

For all classes, the packaged produce must be uniform in particle size, with a tolerance of 5% larger or smaller particles.

##### 4.1. Quality tolerances

###### 4.1.1. "Extra" Class

Five percent, by number of packages or weight, of paprika not satisfying the requirements of this class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

###### 4.1.2. Class I

Ten percent, by number or weight, of paprika not satisfying the requirements of this class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

###### 4.1.3. Class II

Ten percent, by number or weight, of paprika satisfying neither the requirements of this class nor the minimum requirements, with the exception of produce affected by rotting or any other form of deterioration such that it is unfit for consumption.



## 5. PROVISIONS CONCERNING PRESENTATION

### 5.1. Uniformity

The contents of each package must be uniform in shape and only contain paprika of the same class of quality and pungency. The visible part of the package must be representative of the entire contents.

### 5.2. Packaging

The paprika must be packed in such a way that the produce is properly protected. The materials used inside the package must be new, clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, in particular paper or stamps bearing trade specifications, is allowed provided the printing or labelling is done with non-toxic ink or glue.

#### 5.2.1. Description of containers

The containers must meet the quality, hygiene, ventilation and resistance characteristics needed to ensure the appropriate handling, shipping and preservation of the paprika. The containers must be free of all foreign matter and smell.

## 6. MARKING OR LABELLING

### 6.1. Consumer packages

In addition to the requirements of the *Codex General Standard for the Labelling of Prepackaged Foods* (CODEX STAN 1-1985), the following specific provisions shall apply:

#### 6.1.1. Nature of produce

Each package must indicate the name of the produce and may bear the name of the variety or cultivar.

### 6.2. Non-retail packages

Each package must bear the following information in letters grouped on the same side, legibly and indelibly marked and clearly visible from the outside and on the documents accompanying the shipment.

#### 6.2.1. Identification

Name and address of the exporter and/or dispatcher.

Identification code (optional).

#### 6.2.2. Nature of produce

Name of produce and name of the variety or cultivar (this latter is optional).

#### 6.2.3. Origin of produce

Country of origin and, optionally, name of place, district or region of production.

#### 6.2.4. Commercial specifications

- Class.
- Pungency.
- Net weight.

#### 6.2.5. Official inspection mark

Optional.

## 7. CONTAMINANTS

7.1. The produce covered by the provisions of this standard must comply with the maximum levels of the *Codex General Standard for Contaminants and Toxins in Food and Feed* (CODEX STAN 193-1995).

7.2. The produce covered by the provisions of this standard must comply with the maximum residue limits (MRLs) established by the Codex Alimentarius Commission.

## 8. HYGIENE

8.1. It is recommended that the produce regulated by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the *Recommended International Code of Practice – General Principles of Food Hygiene* (CAC/RCP 1-1969), the *Code of Hygienic Practice for Spices and Dried Aromatic Plants* (CAC/RCP 42-1995 under Rev.) and other relevant Codex texts, such as codes of practice and codes of hygienic practice.

8.2. The produce must comply with microbiological criteria established in accordance with the Principles for the *Establishment and Application of Microbiological Criteria Related to Foods* (CAC/GL 21-1997).