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Specialized Section on Standardization of Fresh Fruit and Vegetables

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Item 6(b) of the provisional agenda

NEW UNECE STANDARDS

Fresh Chilli

This document, submitted by Mexico, presents the revised draft Standard for Fresh Chilli.

UNECE STANDARD FFV-

concerning the marketing and commercial quality control of

FRESH CHILLI (aji, pepper)

I. DEFINITION OF PRODUCE

This Standard applies to fresh chilli (*Capsicum* spp.) of varieties (cultivars) grown from *Capsicum annuum* and *Capsicum frutescens*, to be supplied fresh to the consumer, chilli for industrial processing being excluded.

According to their variety they may be classified as:

- Ancho
- Chilaca
- Habanero
- Jalapeño
- Manzano
- Serrano

II. PROVISIONS CONCERNING QUALITY

The purpose of the Standard is to define the quality requirements of fresh chilli at the export-control stage, after preparation and packaging.

However, if applied at stages following export, products may show in relation to the requirements of the Standard:

- a slight lack of freshness and turgidity
- for products graded in classes other than “Extra” Class, a slight deterioration due to their development and their tendency to perish.

The holder/seller of products may not display such products or offer them for sale, or deliver or market them in any manner other than in conformity with this Standard. The holder shall be responsible for observing such conformity.

A. Minimum requirements

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

- intact
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded
- clean, practically free of any visible foreign matter

- practically free from pests
- free from damage caused by pests affecting the flesh
- free of abnormal external moisture
- free of any foreign smell and/or taste
- of the form, colour, flavour, heat¹ and smell characteristic of the variety
- with or without peduncle

The development and condition of the fresh chilli must be such as to enable them:

- to withstand transportation and handling
- to arrive in satisfactory condition at the place of destination.

B. Maturity requirements

The produce must be sufficiently developed and display satisfactory ripeness.

C. Classification

Fresh chilli is classified in three classes, as defined below:

(i) "Extra" Class

Fresh chilli in this class must be of superior quality. They must be characteristic of the variety and/or commercial type as regards development, shape and colour.

They must be free from defects with the exception of very slight superficial defects provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

(ii) Class I

Fresh chilli in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- scars, healed injuries and fractures when they do not affect more than 0.5% of the surface of the fruit
- cracks, scratches and bruises when they affect more than 0.5% and up to 1.0% of the surface
- sunburns when they do not affect more than 0.5% of the surface of the fruit

¹ Pungency classification is optional. See section D.

- defects in shape and development when they do not exceed 3.0% of the surface of the fruit.

(iii) Class II

This class includes fresh chilli that do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified above.

The following defects may be allowed, provided the fresh chilli retain their essential characteristics as regards the quality, the keeping quality and the presentation:

- scars, healed injuries and fractures when they affect more than 0.5% and up to 1.0% of the surface of the fruit
- cracks, scratches and bruises when they affect more than 1.0% and up to 3.0% of the surface
- sunburns when they affect more than 0.5% and up to 1.0% of the surface of the fruit
- defects in shape and development when they exceed 3.0% and up to 6.0% of the surface of the fruit.

D. Pungency

Verification of pungency is optional. Pungency must be analysed in the Scoville scale by the method of high resolution liquid chromatography (HPLC) complying with the next parameters:

Variety	Heat (Scoville units)
Ancho	1 000 – 1 500
Chilaca	1 000 - 1 500
Habanero	100 000 – 350 000
Jalapeño	2 500 – 5 000
Manzano	30 000 – 60 000
Serrano	5 000 – 15 000

III. PROVISIONS CONCERNING SIZING

Size, for each variety, is mandatory, size being a commercial differentiation parameter. Size is determined by diameter, length and weight, as set out in table 1.

(Length and diameter in centimetres; weight in grams)

ANCHO (poblano/mulato also grown in the United States and Canada)

	Small	Medium	Large	Extra large
Length	< 10.0	10.0 – 11.9	12.0 -14.0	> 14
Diameter	< 6.0	6.0 - 6.9	7.0 – 8.0	> 8
Weight	80.0 – 110.0	110.0 -129.9	130 - 150	> 150

CHILACA (Similar to Anaheim and chillies from the Baltic countries)

	Small	Medium	Large	Extra large
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Length	12.0 -14.9	15.0 – 24.9	25 – 30	> 30
Diameter	2.0 – 4.0	2.0 – 4.0	2.0 – 4.0	2.0 – 4.0
Weight	35.0 – 49.0	50.0 – 74.9	75.0 – 100.0	> 100

DE ÁRBOL (serranito, criollo soledad. Similar to some Asian chillies)

	Small	Medium	Large	Extra large
Length	< 6	6 – 7.9	8.0 – 10.0	> 10
Diameter	0.7 - 1.0	0.7 - 1.0	0.7 - 1.0	0.7 - 1.0
Weight	4.0	5.0	6.0	7.0

HABANERO

	Small	Medium	Large	Extra large
Length	< 2	2 – 3.9	≥ 4	

JALAPEÑO

	Small	Medium	Large	Extra large
Length	3.0 – 4.9	5.0 – 7.5	7.6 – 9.0	> 9.0
Diameter	2.5 – 2.9	3.0 – 4.5	3.0 – 4.5	3.0 – 4.5
Weight	< 15	15.1 – 24.9	25 – 35	< 35

MANZANO

	Small	Medium	Large	Extra large
Length	< 6	6 - 8.5	> 8.5	Not applicable
Diameter	3.8 - 4.5	4.6 – 5.5	> 5.5	
Weight	< 36	36 – 56	> 56	

SERRANO

	Small	Medium	Large	Extra large
Length	3.5 – 5.0	5.0 – 7.5	8.0 – 10.0	Not applicable
Diameter	1.3 – 1.5	1.5 – 2.0	1.5 – 2.2	
Weight	5 – 7	6 – 9	8 – 14	

IV. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated.

A. Quality tolerances**(i) “Extra” Class**

5 per cent by weight of fresh chilli not satisfying the requirements of the class, but meeting those of Class I is allowed. Within this tolerance no more than 0.5 per cent in total may consist of produce satisfying the requirements of Class II quality.

(ii) Class I

A total tolerance of 10 per cent by weight, of fresh chilli not satisfying the requirements of the class but meeting those of Class II is allowed. Within this tolerance not more than 1 per cent in total may consist of produce neither satisfying

the requirements of Class II quality nor the minimum requirements. Produce affected by rotting or any other deterioration rendering it unfit for consumption is excluded.

(iii) Class II

A total tolerance of 10 per cent by weight of fresh chilli not satisfying the requirements of the class nor the minimum requirements is allowed. Produce affected by rotting or any other deterioration rendering it unfit for consumption is excluded.

In fresh chilli peppers, the percentage that does not correspond to the declared designation will be evaluated by weight.

B. Size tolerances

(i) "Extra" Class

5 per cent by weight of fresh chilli not satisfying the requirements for sizing, but meeting those of Class I is allowed.

(ii) Class I

10 per cent by weight not satisfying the requirements for sizing, but meeting those of Class II or "Extra" Class is allowed.

(iii) Class II

10 per cent by weight not satisfying the requirements for sizing is allowed.

In fresh chilli peppers, the percentage that does not correspond to the declared designation will be evaluated by weight.

V. PROVISIONS CONCERNING PRESENTATION

A. Uniformity

The contents of each package must be uniform and contain only fresh chilli of the same variety, origin, quality and size.

The visible part of the contents of the package must be representative of the entire contents.

B. Packaging

Fresh chilli must be packed in such a way as to protect the produce properly.

The materials used inside the package must be clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications, is allowed, provided the printing or labelling has been done with non-toxic ink or glue.

Stickers individually affixed on the produce shall be such that, when removed, they neither leave visible traces of glue nor lead to skin defects.

Packages (or lots for produce presented in bulk) must be free of all foreign matter.

VI. PROVISIONS CONCERNING MARKING

Each package² must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:

A. Identification

Packer) Name and physical address (e.g. street/city/region/postal code and,
and/or) if different from the country of origin, the country) or
Dispatcher) a code mark officially recognized by the national authority.³

B. Nature of produce

- Name of the produce if the contents are not visible from the outside
- Name of the variety.

C. Origin of produce

- Country of origin and, optionally, district where grown, or national, regional or local place name.

E. Official control mark (optional)

² According to the Geneva Protocol, footnote 2, "Package units of produce prepacked for direct sale to the consumer shall not be subject to these marking provisions but shall conform to the national requirements. However, the markings referred to shall in any event be shown on the transport packaging containing such package units".

³ The national legislation of a number of countries requires the explicit declaration of the name and address. However, in the case where a code mark is used, the reference "packer and/or dispatcher (or equivalent abbreviations)" has to be indicated in close connection with the code mark, and the code mark should be preceded by the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.

For fresh chilli transported in bulk (direct loading into a transport vehicle), these particulars must appear on a document accompanying the goods, and be attached in a visible position inside the transport vehicle.

Adopted ...

Annex II. Description of defects by their origin

Defect group	Description
Mechanical	<ul style="list-style-type: none"> - <i>Mechanical cracks</i>: fissures on the fruit's pericarp caused by handling or mechanical actions. - <i>Scratches</i>: lesions on the pericarp of the fruit, caused by rubbing. - <i>Bruises</i>: softening or spots in the pericarp or in the skin caused by knocks or compressions.
Entomological and biological	<ul style="list-style-type: none"> - <i>Scars</i>: caused by some pests, e.g. thrips, that scratch the surface of the fruit. - <i>Fractures</i>: caused by some worms that feed from the fruit's pericarp. - <i>Stings and/or punctures</i>: wounds that can be more or less deep, carried out by pests and birds, mainly.
Microbiological	<ul style="list-style-type: none"> - <i>Spots and dots of rotting caused by fungi, bacteria or viruses</i>. One of the most common diseases is anthracnose, a fungal disease that in attacking the fruits causes typical brown or sometimes darker necrotic lesions that can cover wide surfaces. It is caused by fungi belonging to the genera <i>Colletotrichum (Glomerella)</i>, <i>Gloeosporium</i>, <i>Gnomonia</i>, <i>Marssonina</i>, <i>Mycosphaerella</i>, <i>Neofabrae</i> and <i>Pseudopeziza</i>. - <i>Rot of the peduncular extreme</i>: rot caused by fungi or bacteria that attack the fruits in the base of the peduncle and, in many cases, may penetrate the flesh and the seeds. - <i>Fumagina</i>: caused by the fixation, in film form, of the fungus mycelium <i>Capnodium</i> sp., which forms spots with the appearance of layers of soot. It affects the surface of the fruit.
Meteorological and climate-related	<ul style="list-style-type: none"> - <i>Sunburns</i>: the change of colour of some areas in the surface of the fruits, caused by excessive exposure to the sun.
Genetic-physiological	<ul style="list-style-type: none"> - <i>Deformations</i>: alterations of the fruit's form in relation to the ones corresponding to the species or variety. - <i>Physiological cracks</i>: fissures on the pericarp of the fruit, caused by the effect of the ripeness process. - <i>Softening</i>: the softening of the fruit mainly caused by the ripening process or because the fruit was harvested "tender", before it reached physiological maturity.
