



**Economic and Social
Council**

Distr.
GENERAL

ECE/TRADE/C/WP.7/GE.1/2008/5
14 April 2008

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

COMMITTEE ON TRADE

Working Party on Agricultural Quality Standards

Specialized Section on Standardization of Fresh Fruit and Vegetables

Fifty-fourth session
Geneva, 26-30 May 2008
Item 8 of the provisional agenda

EXPLANATORY BROCHURE FOR UNECE STANDARD FOR SWEET PEPPERS

Note by the secretariat^(*)

This document is submitted by the secretariat and contains the textual part of the draft brochure for sweet peppers. The text in normal Times New Roman reproduces provisions of the Standard, the text in *Italics* interprets these provisions.

^(*) The present document has been submitted after the official documentation deadline by the Trade and Timber Division due to resource constraints.

SWEET PEPPERS

I. DEFINITION OF PRODUCE

This Standard applies to sweet peppers of varieties (cultivars) grown from *Capsicum annuum L.* to be supplied fresh to the consumer, sweet peppers for industrial processing being excluded.

The sweet peppers on photos 1–4 photos are all covered by this Standard.

The following peppers are excluded from this Standard:

- *hot or chilli peppers*
- *any peppers with a hot or spicy taste*
- *sweet peppers intended for processing.*

According to their shape, a distinction is made for four commercial types:

- *elongated sweet peppers (pointed) (photo X)*
- *square sweet peppers (blunt) (photo X)*
- *square sweet peppers tapering (peg top) (photo X)*
- *flat sweet peppers (tomato peppers) (photo X).*

II. PROVISIONS CONCERNING QUALITY

The purpose of the Standard is to define the quality requirements for sweet peppers 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
- 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 sweet peppers 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

- fresh in appearance
- firm
- practically free from pests
- free from damage caused by pests affecting the flesh
- well-developed
- free from damage caused by low temperature or frost
- free of sunburn
- with peduncles attached; the peduncle must be neatly cut and the calyx must be intact
- free of abnormal external moisture
- free of any foreign smell and/or taste.

The development and condition of the sweet peppers must be such as to enable them:

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

1. Intact

The peppers must be whole and must have a calyx. The calyx may be slightly damaged according to each quality class. Produce with splits or fresh cuts, caused by bad packing or handling, is only allowed within the tolerance of Class II. Sweet peppers with unhealed injuries or that have holes that expose the interior of the fruit are excluded.

Missing calyx, not acceptable (photo 5).

Bruise exceeding 1 cm² not allowed (photo 6).

Holes in the fruit exposing the interior are not allowed (photo 24).

Excessive cracking or any breakdown within cracks is not allowed (photo 25).

2. Sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded

The peppers must be free of any disease, rots or deterioration which appreciably affects their appearance, edibility or keeping quality. Rots on the non-edible calyx are only allowed in the tolerance of Class II.

Excessive blossom end rot, not acceptable (photo 7).

Very slight rot, not acceptable (photo 8).

Excessive pitting developing into rots or any other signs of rot are not acceptable. Pitting is a physiological defect caused by excess calcium (photos 9, 10).

3. Clean, practically free of any visible foreign matter

The peppers must be practically free of soil, dust, chemical residue or other foreign matter. However, very slight traces of soil or other natural foreign matter are allowed in Class I and slight traces in Class II. Extensive soiling or any traces of inorganic deposits are not allowed.

Excessive calcium deposits from water, not acceptable (photo 11).

Excessive calcium deposits from water on the body of the sweet pepper are not acceptable. Sooty mould left from aphid infestation is not acceptable (photos 12, 13).

Any deposits of a blue, green or other unusual colour indicating the presence of traces of pesticide residues are not acceptable (photo X).

4. Fresh in appearance

The peppers must be of acceptable freshness. They may lack some freshness according to each quality class.

Excessive shrivelling, not acceptable (photo 14).

5. Firm

Add interpretation

6. Practically free from pests

The peppers must be free of pests. However, the odd one or two pests are considered acceptable (photo 15).

7. Free from damage caused by pests affecting the flesh

The peppers must be free of internal and external damage caused by pests. However, slight damage affecting the skin only is allowed within the defect areas allowed within each class.

External pest damage, not acceptable (photo 16).

*Internal pest damage, commonly caused by the cotton bollworm (*Helicoverpa armigera*), not acceptable (photo 17)*

Excessive damage caused to the calyx by pests. Smaller amounts of pest damage are allowed in the classes (photo 18).

8. Well-developed

Excessive defects of development are not acceptable. Slight defects of development may be allowed in Class II.

Excessive defect of development, not acceptable (photo 19).

Excessive blemish/cracking, not acceptable (photos 20, 21).

9. Free of damage caused by low temperature or frost

Damage caused by freezing is not allowed. However slight sunken glassy spots caused by low temperatures (slight surface pitting) may be allowed in Class II.

Excessive sunken glassy spots on the surface of sweet peppers are not allowed (photo 22).

10. Free of sunburn

Excessive sunburn, not acceptable. However, slight sunburn not exceeding 1 cm² is allowed in Class II.

Excessive sunburn, not acceptable (photo 23).

11. With peduncles attached; the peduncle must be neatly cut and the calyx must be intact

The peduncle must be present but it can be cut off at the level of the calyx. The calyx may be slightly damaged, but the majority of the calyx must be present.

Acceptable amounts of damage to peduncle and calyx (photos 26, 27)

12. Free of abnormal external moisture

For example, free water lying inside the package. Does not include condensation on produce following release from cool storage or a refrigerated vehicle.

13. Free of any foreign smell and/or taste

For example, any abnormal smells and/or tastes as a result of poor storage or transport.

B. Classification

Sweet peppers are classified in three classes, defined below:

(i) “Extra” Class

Sweet peppers in this class must be of superior quality. They must be characteristic of the variety and/or commercial type.

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

[Remark: There is no pressing need to introduce an “Extra” Class, but the requirements for Class I should be aligned to the Standard Layout.]

(ii) Class I

Sweet peppers 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:

- a slight defect in shape
- a slight defect in development
- slight defects in colouring covering not more than 1/3 of the total surface area
- slight skin defects such as pitting, sunburn, pressure marks covering in total not more than 2 cm for defects of elongated shape, and 1 cm² for other defects
- slight dry superficial cracks covering in total not more than 1/8 of the total surface area.

The peduncle may be slightly damaged.

1. A slight defect in shape/a slight defect in development

In Class I the shape and development of the sweet peppers must be sufficient for them to be filled during preparation by the consumer. Sweet peppers that are pinched or misshapen in some other way that filling is not possible are excluded from Class I.

Limit of Class I. Still possible to be filled during preparation by the consumer (photos 28, 29).

2. Slight defects in colouring covering not more than 1/3 of the total surface area

A slight silvering covering up to 50 per cent of the surface area caused by lack of calcium during growth of the sweet peppers, is not considered a defect (photos 30, 31).

A slight brown or black colouration covering up to 50% of the surface area caused by excess of calcium during growth of the sweet peppers, is not considered a defect (photos 32, 33).

3. Slight skin defects such as pitting, sunburn, pressure marks covering in total not more than 2 cm for defects of elongated shape, and 1 cm² for other defects

Pitting: Slight surface spotting, up to 2 slight spots is allowed in Class I. Spots must be sound and showing no form of deterioration on the inside. This defect is not allowed at the packing stage (photo 34).

4. Slight dry superficial cracks covering in total not more than 1/8 of the total surface area

Slight scratching: Slight surface scratching. Limit allowed in Class I (photo 35).

Practically free of blemishes, "russeting" or fine cracking.

Fine surface cracking. Limit allowed in Class I (photo 36).

Bruising: Very slight surface bruising. Limit allowed in Class I. The damage must not have penetrated into the centre of the pepper. This defect is not allowed at the packing stage (photos 37. 38).

Very slight thrip damage caused by thrips (photo 39). Limit allowed in Class I.

Very slight soiling around calyx only. A fine layer may cover a large part of the area around the calyx. Deposits may not be thick and can only be white or grey in colour left over from the evaporation of water. Limit allowed in Class I (photo 40).

5. The peduncle may be slightly damaged

The peduncle may be cut off at the level of the calyx but the calyx must remain largely undamaged. The peduncle, if present, may be damaged or torn (photos 41, 42).

(iii) Class II

This class includes sweet peppers which do not qualify for inclusion in Class I but satisfy the minimum requirements specified above.

The following defects are allowed provided the sweet peppers retain their essential characteristics as regards the quality, the keeping quality and presentation

- defects in shape
- defects in development
- defects in colouring covering not more than 1/2 of the total surface area
- skin defects such as pitting, sunburn, slight bruising, slight healed injuries covering in total not more than 4 cm in length for defects of elongated shape, and 2.5 cm² of the total area for other defects
- dry superficial cracks covering in total not more than 1/4 of the total area of the fruit
- slight defects due to diseases provided they are not progressive and do not affect the flesh.

The sweet peppers may be less firm without being withered.

The peduncle and calyx may be damaged, provided the flesh remains intact and protected.

1. Defects in shape and development

Defects of shape and development are allowed. Provided the sweet peppers are free of any rots, damage or deterioration that will affect their keeping quality. Acceptable in Class II (photos 43, 44, 45).

2. Defects in colouring covering not more than 1/2 of the total surface area

Defect of colour caused by virus. Limit allowed in Class II (photo 46).

3. Skin defects such as pitting, sunburn, slight bruising, slight healed injuries covering in total not more than 4 cm in length for defects of elongated shape, and 2.5 cm² of the total area for other defects

Slight scarring or scratching on body of sweet pepper may slightly exceed the limit of 4 cm in length for defects of elongated shape, and 2.5 cm² of the total area for other defects. Provided the overall appearance is not affected (photos 47, 48).

4. Dry superficial cracks covering in total not more than 1/4 of the total area of the fruit

Cracking: Slight scarring or scratching around neck of sweet pepper may slightly exceed the limit of 4 cm in length for defects of elongated shape, and 2.5 cm² of the total area for other defects. Provided the overall appearance is not affected. Any cracks should be shallow and not discoloured (photo 49).

Pitting: Slight surface spotting, up to 5 slight spots is allowed in Class II. Spots must be sound and showing no form of deterioration on the inside (photo 50). Not allowed at the packing stage.

Bruising: Slight bruising not exceeding 1 cm² is allowed as long as there is no rot affecting the flesh. Limit allowed (photo 51). Not allowed at the packing stage.

5. Slight defects due to diseases provided they are not progressive and do not affect the flesh

Slight blossom end rot, not exceeding 1 cm². Limit allowed (photo 52).

Slight damage: Small punctures caused by the stalk from an adjacent pepper or cuts caused during picking are allowed as long as they are healed and dry and will not cause further deterioration. Maximum limit allowed (photos 53, 54). Not allowed at the packing stage.

Russeting or fine cracking: Maximum limit allowed on one face of the sweet pepper (photo 55).

6. The sweet peppers may be less firm without being withered.

Slight shrivelling or lack of turgidity covering up to one face of the sweet pepper is allowed, as long as the sweet pepper remains reasonably firm. Maximum area allowed (photos 56, 57). Not allowed at the packing stage.

7. The peduncle and the calyx may be damaged, provided the flesh remains intact and protected

The peduncle may be damaged, cut or torn, but the base must remain. Parts of the calyx may be missing, due to pest damage or handling damage, but at least 50 per cent of the calyx must be present (photos 58, 59, 60).

III. PROVISIONS CONCERNING SIZING

Size is determined by the maximum equatorial diameter of the sweet peppers.

To ensure uniformity in size, the difference in diameter between sweet peppers in the same package shall be limited to:

- 10 mm, if the largest fruit is under 40 mm
- 20 mm, if the smallest fruit is over 40 mm.

For sized produce, elongated sweet peppers should be sufficiently uniform in length.

Uniformity in size is not compulsory for Class II.

IV. PROVISIONS CONCERNING TOLERANCES

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

A. Quality tolerances

(i) "Extra" Class

A total tolerance of 5 per cent, by number or weight, of sweet peppers not satisfying the requirements of the class but meeting those of Class I is allowed. Within this tolerance not 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 number or weight, of sweet peppers 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 satisfying neither 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.

(ii) Class II

A total tolerance of 10 per cent, by number or weight, of sweet peppers satisfying neither 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.

B. Size tolerances

For all classes (if sized):

10 per cent, by number or weight, of sweet peppers not satisfying the requirements as regards sizing,
[alternative (a): but excluding sweet peppers having a diameter of 10 mm greater or less than the size marked]
[alternative (b): and the size specified]

V. PROVISIONS CONCERNING PRESENTATION

A. Uniformity

The contents of each package must be uniform and contain only sweet peppers of the same origin, variety or commercial type, quality, size (if sized) and, in the case of Classes “Extra” and I, of appreciably the same degree of ripeness and colouring.

Package containing fruit of the same degree of ripeness and colouring. Acceptable in Class I (photo 61).

However, a mixture of sweet peppers of different colours is allowed as long as origin, variety or commercial type, quality and size (if sized) are uniform.

Mixed sales packages in wholesale pack (photo 62).

For packages of sweet peppers with a maximum weight of 1 kg, uniformity is only required with respect to origin and quality.

Sales package containing fruit uniform in origin and quality. Typical supermarket tricoloured pack (photo 63).

The visible part of the contents of the package must be representative of the entire contents (photo 64).

Careful presentation – Class I (photo 65).

Suitable presentation – Class II (photo 66).

Sales package containing miniature sweet peppers uniform in size (photo 67).

B. Packaging

The sweet peppers 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 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 to the produce shall be such that, when removed, they neither leave visible traces of glue nor lead to skin defects.

Packages must be free of all foreign matter.

Class II sales package (photo 68).

VI. PROVISIONS CONCERNING MARKING

Each package¹ 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, if
and/or	different from the country of origin, the country) or
Dispatcher	a code mark officially recognized by the national authority ² .

B. Nature of produce

- If the contents are not visible from the outside:
 - “Sweet peppers”
 - Colour, or number of peppers of each colour when the numbers of peppers of each colour are not the same
 - Commercial type or name of the variety.

¹ 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”.

² 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.

C. Origin of produce

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

D. Commercial specifications

- Class
- Size (if sized) expressed as minimum and maximum diameters
- Number of units (optional).

E. Official control mark (optional)

On each package, all particulars must be grouped on the same side of the package, either printed on it or attached by a label. Name and address or officially recognized code mark should be indicated (photos 69, 70, 71).
